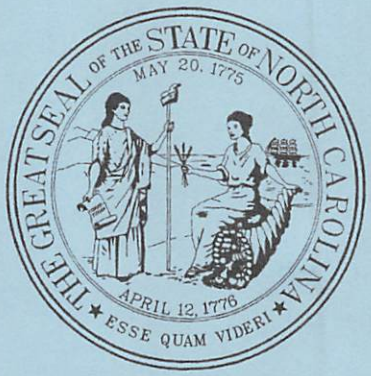
North Carolina State Building Code



Volume IX - Existing Buildings

1996 Revisions To the 1995 Edition

Adopted through June 13, 1995

North Carolina Building Code Council
and
North Carolina Department of Insurance
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North Carolina
State Building Code

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PREFACE

This Code establishes life-safety requirements for all existing buildings that undergo alteration or a change in use. Its provisions offer alternative methods of achieving safety so that the inventory of existing buildings can be preserved.

The development of an "Existing Building Code" was authorized by the North Carolina Building Code Council in 1991. It's creation is a formal acknowledgement of the growing need for a code that is sensitive to the conditions and circumstances which are encountered by persons who are involved in renovating or altering existing buildings. The state's stock of older buildings, including those of historic significance represent the largest category of buildings. In the past, the approach has been to apply the code for new construction to alterations and renovations that were undertaken to modernize and/or to repair existing buildings. In certain cases, because of the "50 %" rule and/or the change of occupancy rule, the effect of applying these standards resulted in the unwarranted demise of buildings.

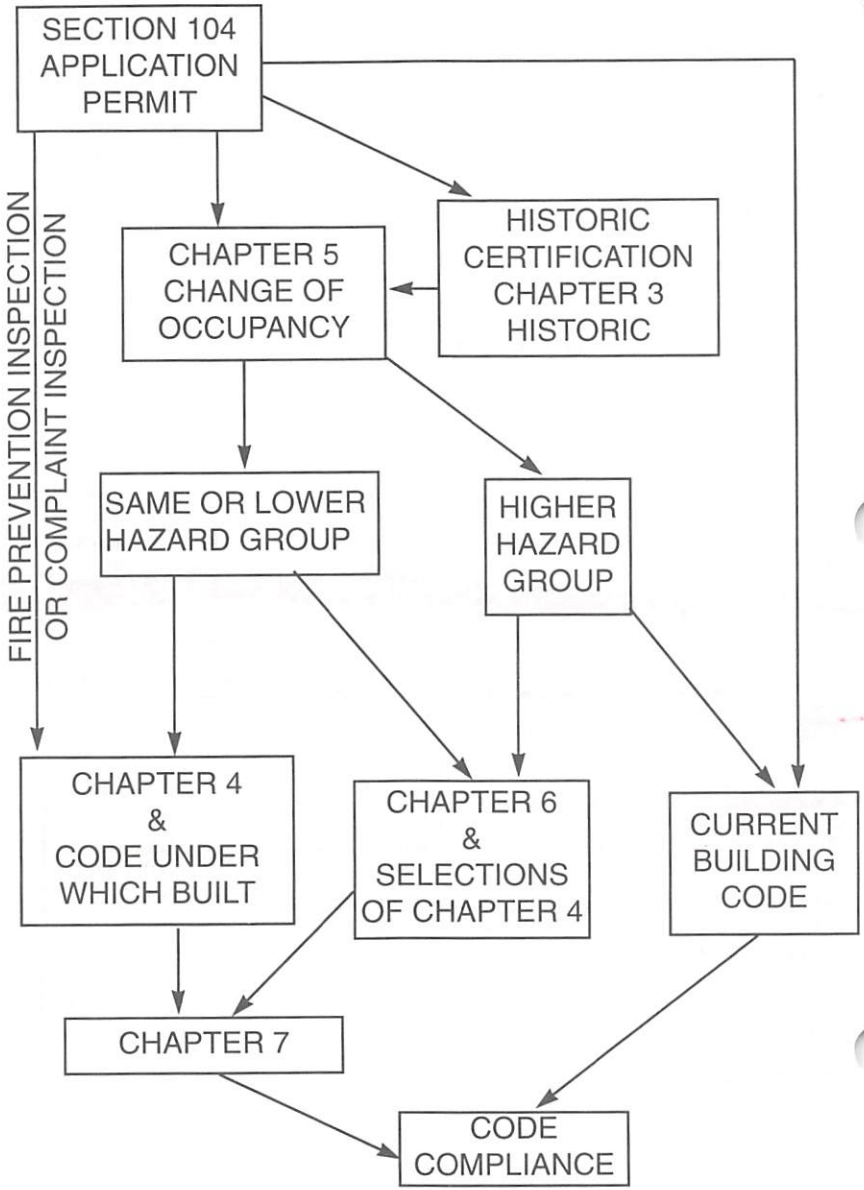
The committee appointed to develop the existing building code adopted as its mission statement the objective to produce a code that encourages the continued use and re-use of existing buildings. Additionally, the committee intended that this new code be "user friendly" and the users have access to the "intent" of regulations when possible. Toward these goals, information is included in the appendices which will be of use to those who must utilize this code.

As the committee reviewed relevant information pertaining to existing buildings, it became apparent that since adoption of the first state Building Code in 1936, life safety standards have not changed significantly. In cases where there have been changes, most have been a shift from passive systems to active systems in recognition of better detection and fire suppression methods and technology. Included in the body of this code are charts listing standards from the 1936, 1953, 1958, 1967, and 1978 Editions of the North Carolina State Building Code. Portions of these codes are reprinted as appendices and are intended to assist users with determining what standards applied to the building at the time of its construction. The standards from the North Carolina State Building Code,1936 Edition or NFiPA 101, Life Safety Code for existing building are the minimum requirements for buildings which predate the first state building code.

This code recognizes that buildings built pursuant to any of the codes mentioned above were safe or in compliance with the code at the time of construction for their intended use and as long as reasonable maintenance has been performed on such buildings, they are still considered in compliance. The standards which were in force at the time the building was constructed will apply. The Code Enforcement Officer (CEO) has authority to inspect and to require that unsafe conditions be corrected. Many of these standards are stated in the body of the code and/or are included as appendices for easy reference. The responsibility for research on a code regulation which may have been changed between code cycles rests with the owner of the building. The CEO will utilize the standards contained in the body of this code as minimum standards for alterations and any additions permitted by this code. The owner will have the option of conforming to either this code or the Building Code in effect for new construction.

All users are reminded of the objective of this code which is "to promote the safe continued use and re-use of existing buildings".

The intent of this diagram is to graphically illustrate the path which the user should follow in this code. Read Section 104 to determine the application. Determine if the building is certified as Historic using Section 302. Determine the change of occupancy or change of Hazard Group using Table 501. All buildings must comply with either (1) Chapters 4 and 7 or (2) Chapters 6 and 7 or (3) the current Building Code.



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CHAPTER 1
ADMINISTRATION

101 TITLE

These regulations shall be known as the North Carolina State Building Code, Volume IX - Existing Buildings, may be cited as such, and will be referred to herein as "this code".

102 PURPOSE

102.1 The purpose of this code is to encourage the continued use or reuse of existing buildings and to provide a minimun standard of life safety as established in this code. The intent of this code is to serve as a construction code and not a maintenance code for existing buildings.

102.2 The current and previous editions of the Building Code are to be used in conjunction with this code, as referenced.

103 SCOPE

The provisions of this code shall constitute the minimum standards for change of occupancy, alteration or repair of existing buildings. This code shall not apply to buildings classified as Day Care Centers, Farm Buildings, Hazardous, High Rise, Institutional, One-and-Two Family Dwellings, or Residential Care Facilities. For these occupancies, use the Building Code. The appendices are intended to assist users with determining what standards applied to the building at the time of its construction.

104 APPLICATION

104.1 General

All existing buildings undergoing additions, alternations, repairs, rehabilitations, or changes of occupancy shall meet the provisions of this code, the requirements of the code under which the building was built, or the Building Code as outlined in this Section. When the provisions of Chapter 4 can not be met, alternative life safety provisions may be installed in accordance with Chapter 6. The requirements of Chapter 4 and Chapter 6 are not intended to be intermingled, except where specifically noted in Chapter 6. Nothing in this code shall be construed to allow the degradation of those systems, devices, and equipment required by the code under which the building was constructed.

104.2 Continued Use

104.2.1 Existing buildings may continue their existing occupancy, provided such buildings are maintained in a safe, sanitary, and usable condition and provided such occupancy was legal at the time of construction.

104.2.2 Buildings which were in existence prior to 1936 may have their existing occupancy continued provided such continued use is not dangerous to life and meet Chapters 4 and 7.

104.3 Alterations, Repairs, and Rehabilitations

104.3.1 Alterations, repairs, or rehabilitations may be made to any existing building without requiring the entire building to comply with the requirements of the Building Code provided that the minimum standards of Chapters 4 and 7 and the requirements of the code under which the building was built are met.

104.3.2 Alterations, repairs, or rehabilitations shall not cause an existing building to become unsafe or overloaded.

104.3.3 Alterations, repairs, or rehabilitations may be made with the same materials with which the existing building was built, provided such use has no adverse effect on any structural member or required fire resistance of any component.

104.4 Additions

104.4.1 Additions to existing buildings shall conform to the requirements of the Building Code.

104.4.2 Additions shall not cause an existing building to become unsafe or overloaded.

104.4.3 Any existing building plus additions shall not exceed the height, number of stories, and area specified by the code under which the building was constructed.

104.4.4 Small additions to existing buildings which add unoccupied space or exit components (vestibules, stair shafts, elevator shafts, ancillary mechanical rooms, etc.), may be constructed as permitted by the Code under which the building was built. Where seismic design is required by the Building Code, the addition must be structurally independent and sufficiently separated to preclude seismic damage to the existing building. Such additions will not be considered an increase in area for the existing building.

104.5 Change of Occupancy

104.5.1 If the occupancy classification of an existing building is changed within the same hazard group or to a lower hazard group (see Chapter 5), then all work performed shall meet the requirements for Alterations, Repairs, and Rehabilitations.

104.5.2 An existing building shall comply with the requirements of the Building Code or the Building Code as modified by Chapter 6, when a change in occupancy will place it in a higher hazard group.

104.6 Historic Buildings

104.6.1 Historic buildings shall meet all the provisions of this code except as modified by Chapter 3.

104.7 Relocated Buildings

104.7.1 Relocated buildings shall meet all the provisions of this code.

EXCEPTION: The foundation system and utility connections shall conform to the requirements of the Building Code.

104.8 Fire Districts

A first or secondary fire district may be established by ordinance in accordance with the general statutes. All buildings located within a fire district shall comply with the specific fire district requirements of the Building Code.

104.9 Fire Prevention Inspections

104.9.1 All buildings regulated by this Code shall also comply with the provisions of the North Carolina State Building Code, Volume V - Fire Prevention. Where conflicts exist between this code and the Fire Prevention Code, this code shall prevail.

104.9.2 All buildings undergoing periodic inspections by the Fire Official shall meet the minimum standards of Chapters 4, and 7.

104.10 Other Codes and Authority

The provisions of this code shall not be held to deprive any federal or state or local government of any power or authority which it had on the effective date of the adoption of this code or of any remedy then existing for the enforcement of its orders, nor shall it deprive any individual or corporation of its legal rights as provided by law, nor shall it prevent enforcement of other ordinances or regulations which prescribe standards other than provided herein.

105 MAINTENANCE

All portions of existing buildings, both interior and exterior, shall be maintained in such manner that structural strength, stability, sanitation, adequate light and safety to life and property from fire and other hazards are provided for public safety, health and general welfare. All systems, devices or safeguards which were required by the code under which the building was constructed shall be maintained in conformance with the requirements of that code and the Fire Prevention Code. The owner or the owner's designated agent shall be responsible for maintenance of buildings. To determine compliance with this section, the Code Enforcement Official (CEO) may cause any structure to be reinspected.

106 ALTERNATE MATERIALS, DESIGNS AND METHODS OF CONSTRUCTION

The provisions of this code are not intended to prevent the use of any alternate material, design or method of construction, provided any alternate has been reviewed and its use authorized by the CEO at his sole discretion. The CEO shall approve any such alternate, provided the CEO finds that the proposed design is satisfactory and complies with the provisions of this code and that the material and method of work offered is, for the purpose intended, at least the equivalent of that prescribed in this code in suitability, strength, effectiveness, fire resistance, durability, safety and sanitation. The CEO shall require that evidence or proof be submitted to substantiate any claims that may be made regarding use of an alternate. The details of any action granting approval of an alternate shall be recorded and entered in the files of the Inspection Department.

107 TESTS

Whenever there is insufficient evidence of compliance with any of the provisions of this code or evidence that any material or construction does not conform to the requirements of this code, the CEO may require tests as proof of compliance to be made at no expense to the Inspection Department. Test methods shall be as specified by this code, the Building Code or by other recognized test standards. The CEO may accept as supporting data to assist in this determination duly authenticated reports from the Building Officials and Code Administrators International, Inc., Southern Building Code Congress International, Inc., International Conference of Building Officials, or the National Evaluation Service Committee of the Council of American Building Officials. If there are no recognized and accepted test methods for the proposed alternate, the CEO shall determine test procedures. All tests shall be made by an approved agency.

108 ADMINISTRATION

The CEO is hereby authorized to enforce the provisions of this code. The CEO shall have the power to render interpretations as deemed necessary in order to clarify the application of the provisions of this code. Such interpretations shall be in conformity with the intent and purpose of this code.

109 PERMITS REQUIRED

Buildings regulated by this code shall not be enlarged, altered, repaired, improved or converted unless a separate permit for each building or structure has first been obtained from the inspection department in accordance with and in the manner prescribed in the North Carolina State Building Code, Volume IA - Administration and Enforcement.

110 INSPECTION OF WORK

All buildings for which a permit is required shall be subject to inspection by the CEO in accordance with and in the manner prescribed in the North Carolina State Building Code, Volume IA - Administration and Enforcement.

111 APPEALS AND INTERPRETATIONS

See the North Carolina State Building Code, Volume IA - Administration and Enforcement.

112 VALIDITY

If any section, subsection, sentence, clause or phrase of this code is for any reason held to be unconstitutional, such decision shall not affect the validity of the remaining portions of this code.

CHAPTER 2
DEFINITIONS AND STANDARDS

201 GENERAL

201.1 Tense, Gender and Number

For the purpose of this Code, certain abbreviations, terms, phrases, words, and their derivatives, shall be construed as set forth in this Chapter. Words used in the present tense include the future. Words in the masculine gender include the feminine and neuter. The singular number includes the plural and the plural number includes the singular.

201.2 Words Not Defined

Words not defined herein shall have the meanings stated in the Building Code. Words not defined in this Code or the Building Code shall have the meanings in Webster's Ninth New Collegiate Dictionary, as revised. Where conflicts exist between the Building Code and the code under which the building was built, the code under which the building was built shall prevail.

202 DEFINITIONS

ADDITION - an extension or increase in floor area or height of a building or structure beyond the existing building envelope.

ALTER OR ALTERATION - any change or modification in construction or Occupancy..

APPLICABLE GOVERNING BODY - a city, county, state, state agency or other political government subdivision or entity authorized to administer and enforce the provisions of this Code, as adopted or amended.

APPROVED - approved by the Code Enforcement Official having jurisdiction.

BUILDING - any structure that encloses a space used for sheltering any occupancy. Each portion of a building separated from other portions by a fire wall shall be considered as a separate building.

SHED - a structure in which its exterior walls have uniformly distributed openings on two or more sides totalling not less than 75% of its perimeter. Interior wall lines and column lines shall be at least 20% open and uniformly distributed.

OPEN SHED - any structure that has no enclosing walls.

BUILDING CODE - where this phrase is used in this code, it shall mean the current editions of the North Carolina State Building Code as follows:

Volume I - General Construction,
Volume IA - Administration and Enforcement,
Volume IC - Accessibility,
Volume II - Plumbing,
Volume III - Mechanical,
Volume IV - Electrical,
Volume V - Fire Prevention, and
Volume VI - Gas.

BUILDING SERVICE EQUIPMENT - the equipment, including but not limited to electrical, fire protection, gas, mechanical and plumbing systems, which is necessary to preserve and protect public health, safety and welfare.

CODE ENFORCEMENT OFFICIAL (CEO) - the officer or other designated authority, or their duly authorized representative, charged with the administration and enforcement of this Code. All persons empowered with the administration and enforcement of this code shall possess an appropriate valid certificate issued by the North Carolina Code Officials Qualification Board.

CHANGE OF HAZARD GROUP - a change in use where the use of an existing building is changed to a new hazard group classification (See Chapter 5).

DEAD END - a hallway, corridor or other space so arranged that a person therein is able to travel in one direction only in order to reach an exit.

DWELLING UNIT - a single unit providing complete, independent living facilities for one or more persons including permanent provisions for living, sleeping, eating, cooking and sanitation.

EDITIONS OF THE NORTH CAROLINA STATE BUILDING CODE - the publications of the codes as adopted by the North Carolina State Building Code Council.

EXISTING BUILDING - any structure erected prior to the adoption of the Building Code Edition presently enforced. This definition is for the sole purpose of enforcing this Code only.

EXIT - that portion of the means of egress which is separated from all other spaces of a building or structure by construction and opening protectives, as required for exits, to provide a protected way of travel to the exit discharge. Exits include exterior exit doors, separated exit stairs, exit passageways and horizontal exits.

EXIT ACCESS - that portion of a means of egress which leads to an entrance to an exit.

EXIT DISCHARGE - that portion of a means of egress between the termination of an exit and a public way.

HABITABLE SPACE-a space in a structure for living, sleeping, eating or cooking. Bathrooms, toilet compartments, closets, halls, storage or utility space, and similar areas are not considered habitable space.

HAZARD GROUP - a grouping of similar occupancies based upon hazards (See Chapter 5).

HISTORIC BUILDING - a building or structure identified and classified by the North Carolina Department of Cultural Resources, Division of Archives and History, as historic.

HISTORIC MUSEUM BUILDING - a historic building restored or recreated to display the building itself and associated artifacts.

MEANS OF EGRESS - a continuous and unobstructed way of exit travel from any point in a building or structure to a public way, consisting of three separate and distinct parts:

(1) the way of exit access,
(2) the exit, and
(3) the way of exit discharge.

A means of egress comprises the vertical and horizontal ways of travel and shall include the intervening room space, doors, corridors, passageways, balconies, stairs, ramps, enclosures, lobbies, escalators, horizontal exits, courts and yards (See Exit and Exit Access).

MEZZANINE - one or more intermediate levels between the floor and ceiling of a story. Refer to the Building Code for area limitations.

OCCUPANCY - the purpose for which a building, or part thereof, is used or intended to be used (See Hazard Group).

OCCUPIABLE ROOM-a room or enclosed space designed for human occupancy in which individuals congregate for amusement, educational or similar purposes, or in which occupants are engaged at labor; and which is equipped with means of egress, light, and ventilation facilities meeting the requirements of this code.

OWNER - any person, agent, firm or corporation having a legal or equitable interest in the property.

PERMIT - an official document or certificate issued by the Code Enforcement Official authorizing performance of a specified activity.

REHABILITATE - to restore a building or structure to a former state or condition. As applied to historic structures, it includes the preservation of those portions or features that are of historical, architectural and cultural value.

REPAIR - the reconstruction or renewal of any part of an existing building for the purpose of its maintenance.

REQUIRED - as specified by some provision of this Code.

SHALL - as used in this Code, is mandatory.

STORY - that portion of a building included between the upper surface of a floor and upper surface of the floor or roof next above.

STRUCTURE - that which is built or constructed.

THIS CODE - the current edition of the North Carolina State Building Code, Volume IX - Existing Buildings.

TRAVEL DISTANCE - the distance from the most remote point in a building or structure to the nearest exit measured along the natural path of travel. Where any part of an exit stair is within 10 ft horizontal distance of an unprotected opening, the distance to the exit shall include the length of travel to the ground level.

WRITTEN NOTICE - a notification in writing delivered in person to the individual or parties intended, or delivered at, or sent by certified or registered mail to the last resident or business address of legal record.

203 STANDARDS

National Fire Protection Association
Battery March Park
Quincy, MA 02269

NFiPA STANDARDS
72 Protective Signaling Systems, 1990
80 Fire Doors and Windows, 1990
80A Protection of Buildings from Exterior Fire Exposures, 1987

101 Life Safety Code, 1991
101M Alternative Approaches to Life Safety, 1992

703 Fire Retardant Coatings for Building Materials, 1992

Southern Building Code Congress International, Inc.
900 Montclair Road
Birmingham, Alabama 35213-1206

SBCCI STANDARDS
Standard Test Method for Evaluating Room Fire Growth Contribution of Texile Wallcovering

CHAPTER 3
HISTORIC BUILDINGS AND STRUCTURES

301 PURPOSE

It is the intent of this chapter to provide means for the preservation of historic buildings and structures.

302 GENERAL

The provisions of this chapter be applicable to buildings identified and classified by the Division of Archives and History, North Carolina Department of Cultural Resources as historic. "Request for Certification as a Historic Building" applications shall be obtained from and submitted to the State Historic Preservation Officer. The State Historic Preservation Officer certifies a structure is historic for the purposes of the Building Code. The CEO takes that certification into consideration when making decisions about a property's compliance with this Code. The State Historic Preservation Officer's authority ends with certification.

This chapter shall apply only to historic commerical buildings or structures constructed prior to 1936 and to historic dwellings used for commercial purposes constructed prior to 1972. Historic buildings constructed after these dates shall comply with the code in effect at the time of construction.

Historic buildings shall meet the following:

1. Compliance with the minimum standards required by Chapter 4 or Chapter 6, except as modified by this chapter, and
2. Compliance with the minimum standards required by Chapter 5 when a change of occupancy group occurs, except as modified by this chapter.

The rehabilitated building shall be no more hazardous, based on life safety and sanitation, than the building was before rehabitation.

Consideration may be given by local authorities when adherence to this code would require destructive alteration or demolition of building features identifiable as contributing to the significance of the building.

303 REPAIRS

Repairs, maintenance, and restoration to any portion of a historic building may be made with original materials and original methods of construction.

304 RELOCATED BUILDINGS

Historic buildings may be relocated. Foundations of relocated historic buildings shall comply with the Building Code. Relocated historic buildings shall be so sited that exterior wall and opening requirements comply with the Building Code.

305 FIRE SAFETY

305.1 General

Every historic building which does not conform to the construction requirements specified in this Code for the occupancy or use and which constitutes a distinct fire or life safety hazard shall be provided with an approved automatic fire-suppression system. However, an automatic fire-extinguishing system shall not be used to substitute for, or act as an alternate to, the required number of exits from any facility except as modified by Chapter 4.

305.2 Exits

Existing door openings and corridor and stairway widths of less than that specified elsewhere in this Code may be approved, provided that there is sufficient width and height for a person to pass through the opening or traverse the exit. When approved by the CEO, the front or main exit doors need not swing in the direction of exit travel, provided other approved exits having sufficient capacity to serve the total occupant load are provided.

306 SPECIAL HISTORIC MUSEUM BUILDING PROVISIONS

306.1 General

The installation of approved automatic sprinkler systems in historic museum buildings shall permit new Assembly occupancies to be located in stories above the level of exit discharge.

306.2 Additions

Additions which increase the areas of historic museum buildings to areas which exceed the values allowed by the provisions of the Building Code are permitted, provided the addition is only used for maintenance and administration of the historic museum building.

306.3 Single Exits

A single exit is permitted for historic museum buildings where the building and conditions comply with all of the following provisions:

1. Visitors are admitted by guided tours or there are supervisory attendants in all areas accessible to the visitors.
2. Visitors are not permitted below the level of exit discharge.
3. The building is not more than three stories in height.
4. The number of occupants per story is less than 100.
5. Lunch counters and concessions for the sale of gifts are not located above the level of exit discharge.

306.4 Guardrail Height

The height of existing guardrails shall be accepted.

306.5 Guardrail Openings

The spacing between existing intermediate railings or openings in existing ornamental patterns shall be accepted. Missing elements or members of a guardrail may be replaced in a manner which will preserve the historic appearance of the building or structure.

306.6 Catastrophes

In the case of fire or other catastrophe to a historic museum building, it may be rebuilt, in total or in part, using original materials and original methods of construction as are necessary to restore it to the condition prior to the fire or catastrophe and use as a totally preserved building.

307 CEILING HEIGHTS

Where existing ceiling heights are less than 7 feet, such rooms may not be used as habitable or occupiable rooms.

CHAPTER 4
MINIMUM STANDARDS FOR EXISTING BUILDINGS

401 GENERAL

The provisions of this chapter are intended to provide a minimun standard of life safety to persons occupying existing buildings that do not conform with the Building Code. Refer to Appendices for excerpts of previous editions of the code. **For the purpose of using this chapter, buildings constructed prior to 1936 shall meet either the North Carolina State Building Code, 1936 Edition or NFiPA 101, Life Safety Code for existing buildings and the provisions of this code.**

The CEO shall take into account the code requirements under which the building was built, occupancy classification, and fire protection systems. All elements of the exit system shall be of sufficient height, width, arrangement and operation to provide safe and adequate means of egress in accordance with this code. Every required exit shall have access to a public way, directly or through yards, courts or similar spaces, and such access shall be permanently maintained clear of any obstruction which would impede exiting.

402 ARRANGEMENT AND NUMBER OF EXITS

402.1 Minimum Number of Exits

402.1.1 There shall be not less than two approved independent exits accessible to each tenant area, serving every floor or story, except as permitted by 402.1.3 or Table 402.1. One of the exits may be an existing exterior fire escape complying with 406. A fire escape shall not be substituted for a stairway which was required by the code under which the building was constructed.

402.1.2 The minimum number of exits for all occupancies, except as modified by the Code under which the building was constructed, shall be as follows:

TABLE 402.1
REQUIRED EXITS

Minimum Number of Exits	Occupant Load Per Story
2	1 - 500
3	501 - 1000

402.1.3 Single Exit Exceptions

In no case can an existing exit be eliminated to use these single exit provisions.

402.1.3.1 In Group R occupancies three (3) stories or less in height, one common exit is permitted provided all of the following conditions are met:

1. Maximum distance of travel to reach the exit from the entrance door to any dwelling unit shall not exceed 35 feet.
2. Maximum number of dwelling units served by the exit shall not exceed four per floor.
3. The stairway is completely enclosed by construction having a fire resistance rating of at least 1 hour with self-closing 1-hour fire protection rated doors protecting all openings between the stairway enclosure and the building.

4. The stairway does not extend more than 1/2 story below the level of exit discharge.
5. All corridors serving as access to exits have at least a 1-hour fire resistance rating.
6. Three-quarter (3/4) hour fire rated horizontal and vertical separation between living units is provided.

402.1.3.2 In Group B occupancies having a per floor area not over 3500 sq ft served by that exit and not over two stories in height, provided the occupant content shall not exceed 40 persons above the street floor. Maximum distance of travel to the exit shall not exceed 75 feet.

402.1.3.3 In Group M occupancies at street floor level having a floor area less than 2250 sq ft and a travel distance to an exit not exceeding 50 feet.

402.1.3.4 In Group S occupancies, one story only, and having a floor area less than 2500 sq ft with a travel distance 50 ft or less.

402.1.3.5 Owners of buildings whose occupancy classification is not changed and which do not meet the minimum number of exitways required by this section, which do not meet the egress requirements required by General Statutes and Building Code regulations which were in effect at the time of their construction, or for which documentation cannot be provided to verify that alternate methods of compliance have previously been approved shall submit to the Code Enforcement Official having jurisdiction a plan to bring the building into compliance by January 1, 1997. Work required to meet the provisions of the plan shall be completed by January 1, 1999.

402.1.3.5.1 Install second means of egress, or

402.1.3.5.2 Provide an evaluation and design by a design professional registered in North Carolina who is qualified in fire protection engineering. The evaluation and design shall meet the following:

1. Provide a design of fire protection systems and/or devices which provide life safety features which are equivalent or better than those provided by an additional exitway, and
2. at the completion of work, the design professional shall certify in writing that based on his inspection all work performed complies with the requirements of their alternate design and
3. when the building is required by Volume IA to be submitted to the Department of Insurance for approval, the design professional shall submit the evaluation and design for approval prior to work commencing and shall provide a copy of completed work certification, or

402.1.3.5.3 A building of business occupancy only built prior to the adoption of the 1953 edition of the Building Code may have a single exit remain when complying with either of the following:

3.1. A building of any type of construction not exceeding four stories when:

1. the building has a supervised sprinkler system with quick response sprinklers.
2. the single exit stair enclosure shall have a 1-hour fire rating with all openings protected.
3. the single exit stair shaft shall be equipped with a smoke pressurization system activated by the sprinkler system water flow in compliance with the Building Code.
4. travel distance does not exceed 175 feet, or

3.2 A building of noncombustible construction over four stories, but not greater than 75 feet when:

1. the building has a supervised sprinkler system with quick response sprinklers.
2. the single exit stair enclosure shall have a 2-hour fire rating with all openings protected.
3. the single exit stair shaft shall be equipped with a smoke pressurization system activated by the sprinkler system water flow in compliance with the Building Code.
4. travel distance does not exceed 150 feet.
5. a supervised smoke detection system complying with NFiPA 72 including a detector head in every exit corridor, mechanical, electrical, telephone, elevator equipment, janitor's closet and similar rooms and storage rooms.

402.2 Travel Distance

Exits shall be so located that the distance from the most remote point in the floor area, room or space served by them to the nearest exit, measured along the line of travel, shall not be more than specified in Table 402.2.

TABLE 402.2
TRAVEL DISTANCE (Feet)

EDITION	1936	1953	1958	1967	1978
GROUP A	100/150	100/150	100/150	100/150	150/225
B	100/150	100/150	100/150	150/225	150/225
E	100/150	100/150	100/150	125/187	150/225
F	100/150	100/150	100/150	100/150	150/225
M	100/150	100/150	100/150	100/150	100/150
R	100/150	100/150	100/150	100/150	100/150
S	100/150	100/150	100/150	100/150	150/225

Unsprinklered/Sprinklered maximum travel distance.

402.3 Dead Ends

Exits and exit access shall be so arranged that dead end corridors shall not exceed that specified in Table 402.3.

TABLE 402.3
DEAD ENDS (Feet)

EDITION	1936[1]	1953	1958	1967	1978
GROUP A	50/75	50/75	50/75	0	0
B	50/75	50/75	50/75	50	50
E	25	25	25	20	20
F	50/75	50/75	50/75	50/150	50
M	50/75	50/75	50/75	50	50
R	25	25	25	35	35
S	50/75	50/75	50/75	50/150	0

Unsprinklered/Sprinklered maximum dead end.

[1] No value shown in the 1936 Code, these values were established from the 1953 Code.

402.4 Means of Egress Width

The width of the means of egress shall be not less than the required width specified in Table 402.4(a), Table 402.4(b) and Table 402.4(c).

TABLE 402.4(a)
CORRIDOR/AISLE WIDTH (Inches)

EDITION	1936[1]	1953[1]	1958[1]	1967	1978
GROUP A	44	44	44	36	36[2]
B	44	44	44	36[2]	36[2]
E	44	60	60	72	72
F	44	44	44	36[2]	36[2]
M	44	44	44	36[2]	36[2]
R	44	44	44	36[2]	36[2]
S	44	44	44	36[2]	36[2]

1 44" may be reduced to 36" if less than 40 occupants.
2 36" may be reduced to 30" if less than 30 occupants.

TABLE 402.4(b)
EXIT/STAIR WIDTH (Inches)

EDITION	1936[1]	1953[1]	1958[1]	1967	1978
GROUP A	44	44	44	44	44
B	44	44	44	44[2]	44[2]
E	44	44	44	44	44
F	44	44	44	44[2]	44[2]
M	44	44	44	44[2]	44[2]
R	44	44	44	44[2]	44[2]
S	44	44	44	44[2]	44[2]

1 44" may be reduced to 36" if less than 40 occupants.
2 44" may be reduced to 36" if less than 30 occupants.

TABLE 402.4(c)
EXIT DOOR WIDTH (Inches)

EDITION	1936	1953	1958	1967	1978
GROUP A	36	36	36	36	32 CLEAR
B	36	36	36	36	32 CLEAR
E	36	36	36	36	32 CLEAR
F	36	36	36	36	32 CLEAR
M	36	36	36	36	32 CLEAR
R	36	36	36	36	32 CLEAR
S	36	36	36	36	32 CLEAR

403 SHAFT ENCLOSURES

403.1 General

All shaft enclosures (including, but not limited to stairways, exits, elevators, service shafts, and utility shafts) shall be provided with a fire rated enclosure in accordance with this Code, unless otherwise permitted by the Building Code.

403.2 Fire Ratings

Shaft enclosures connecting three stories or less shall be provided with a fire resistance rating of at least 1 hour. Shaft enclosures connecting four or more stories shall be provided with a fire resistance rating of 2 hours.

403.3 Openings

Door openings into exit stairway enclosures shall be limited to those necessary for egress from the building. All openings shall be protected by approved fire doors and windows in accordance with NFiPA 80.

404 CORRIDORS

404.1 Existing Corridors

Exit access corridors may be continued in use subject to the requirements of this Code.

EXCEPTION: those serving Group B, M, and R occupancies, which are required to be of fire resistant construction by the Building Code may be accepted without a fire resistance rating by the CEO provided:

1. the existing assembly is surfaced with wood lath and plaster or 1/2 inch gypsum wallboard, and
2. the existing assembly establishes an effective smoke barrier between the corridor and the adjacent space, and
3. doors opening into the corridors shall be self-closing or automatic closing by smoke detection.

404.2 Existing Transoms

Exit access corridors which are required to have a fire resistance rating must have the transoms fixed in the closed position and protected with one layer of 5/8" fire rated type X gypsum board on the room side or replaced with rated glass.

405 EXIT ILLUMINATION AND SIGNS

All means of egress shall be provided with exit signs and illumination in accordance with the Building Code.

406 EXISTING FIRE ESCAPES

406.1 General

406.1.1 Existing fire escapes shall be permitted to be maintained. Fire escapes shall not provide more than 50% of the required exit capacity. Fire escapes shall not take the place of stairways required by the code under which the building was constructed.

406.1.2 When located on the front of the building and projecting beyond the building line, the lowest landing shall be not less than 7 ft nor more than 12 ft above grade, equipped with a counterbalanced stairway to the street. In alleyways and thoroughfares less than 30 ft wide, the clearance under the lowest landing shall be not less than 12 ft.

406.1.3 The fire escape shall be maintained to support a live load of 100 psf and shall be of steel or other approved noncombustible materials.

406.1.4 All openings located within 10 ft of fire escapes shall be protected with approved opening protectives of at least 3/4-hour fire resistance.

407 HANDRAILS AND GUARDRAILS

407.1 Handrails

Existing handrails shall be permitted to remain provided they are located not less than 30 inches above the ramp or leading edge of a tread.

407.2 Guardrails

Existing guardrails shall be permitted to remain provided they are not less than 36 inches high.

408 SPECIAL MIXED OCCUPANCIES

A building may be used for more than one occupancy or tenancy provided the areas are separated in accordance with the Building Code.

EXCEPTIONS:

1. Required occupancy separations of more than 1-hour may be reduced to 1-hour fire-resistive construction with all openings protected by not less than 3/4 hour fire-resistive assemblies of the self-closing or automatic closing type when the building is provided with an approved automatic sprinkler system throughout the entire building in accordance with the Building Code. Automatic closing devices shall be of a type which will function upon activation of a device which responds to either visible or invisible particles of combustion, or
2. Required occupancy separations of 1-hour may be omitted when the building is provided with an approved automatic sprinkler system throughout.

409 PROPERTY PROTECTION

409.1 Fire Resistance of Walls

Existing exterior walls shall be protected as required by the code under which the building was built.

EXCEPTION: When the occupancy is changed to higher hazard group, exterior walls shall have fire resistance as set forth in the Building Code.

409.2 Opening Protection

Openings in exterior walls shall be protected as required by the code under which the building was constructed.

EXCEPTION: When the occupancy is changed to a higher hazard group, openings shall be protected as required by the Building Code.

410 FIRE PROTECTION

410.1 Sprinklers

410.1.1 Required Systems Approved automatic sprinkler protection systems shall be provided in any building or portion thereof when specified by the code under which it was built or when meeting at least one of the conditions specified in 410.1.2.

410.1.2 Building Criteria

410.1.2.1 Basements An approved automatic sprinkler system shall be installed in basements having floor areas exceeding 2500 sq ft when a change of use to Assembly, Educational, or Factory-Industrial occurs.

410.1.2.2 High Piled Combustible Stock An approved automatic sprinkler system shall be provided throughout buildings used for high piled combustible storage in accordance with the Building Code.

410.1.3 Supervisory Facilities

410.1.3.1 Where an automatic sprinkler system is provided either as a requirement or as an alternate to another requirement of this code, the system shall be supervised to assure reliable operation. Existing systems may be supervised as required by the code under which the building was constructed.

410.1.3.2 Where building fire alarm facilities are provided, actuation of the extinguishing system shall cause the building alarm to sound.

410.2 FIRE ALARM

410.2.1 Manual Fire Alarm and Detection Systems Approved manual fire alarm and detection systems shall be provided in all occupancies as specified by the Building Code.

EXCEPTION: Automatic sprinkler protection throughout the building may serve to activate the fire alarm system in lieu of manual pull stations. Provision shall be made to manually activate the internal evacuation alarm at a minimum of one centrally located station.

410.2.2 Smoke Detector Approved smoke detectors shall be provided in all Group R occupancies specified in the Building Code.

EXCEPTION: In Group R occupancies constructed prior to January 1, 1975, battery powered smoke detectors shall be permitted.

410.3 RESTRICTIONS ON INTERIOR USE OF COMBUSTIBLE MATERIALS

410.3.1 General

410.3.1.1 Combustible materials may be used for ceilings, floor finish or other interior finish of buildings as provided in 410.3. Show windows in the first story of buildings may be of wood or of unprotected metal framing.

410.3.1.2 Interior finish means the exposed interior surfaces of buildings including, but not limited to, fixed or movable walls and partitions, columns, and ceilings. Requirements for finishes shall not apply to trim, defined as picture molds, chair rails, baseboards, and handrails; to doors and windows or their frames, nor to materials which are less than 1/28-inch thick cemented to the surface of walls or ceilings, if these materials have flamespread characteristics no greater than paper of this thickness cemented to a noncombustible or fire retardant treated wood backing.

410.3.2 Classification Interior finish materials shall be classified in accordance with ASTM E-84. Interior finish materials shall be grouped in the following classes in accordance with their flame and smoke development.

Class A Interior Finish Flame Spread 0-25, Smoke Developed 0-450. Includes any material classified at 25 or less on the flame spread test scale and 450 or less on the smoke test scale. Any element thereof when so tested shall not continue to propagate fire.

Class B Interior Finish Flame Spread 26-75, Smoke Developed 0-450. Includes any material classified at more than 25 but not more than 75 on the flame spread test scale and 450 or less on the smoke test scale.

Class C Interior Finish Flame Spread 76-200, Smoke Developed 0-450. Includes any material classified at more than 75 but not more than 200 on the flame spread test scale and 450 or less on the smoke test scale.

410.3.3 Interior Finish Requirements Based on Occupancy

410.3.3.1 The minimum flame spread classification of interior finish shall be based on the use or occupancy as set forth in Table 410.3.3.

410.3.3.2 Existing interior finishes in buildings constructed prior to the adoption of this Code shall comply with the minimum flame spread classification in Table 410.3.3 as included for the appropriate occupancy.

TABLE 410.3.3 MINIMUM INTERIOR FINISH CLASSIFICATION — EXISTING BUILDINGS

Occupancy	Unsprinklered			Sprinklered		
	Exit[1]	Access to Exits	Other Spaces	Exits[1]	Access to Exits	Other Spaces
ASSEMBLY	A	B	C	C	C	C
BUSINESS	B	B	C	C	C	C
EDUCATIONAL	A	B	C	B	C	C
FACTORY - INDUSTRIAL	C	C	C	C	C	C
MERCANTILE	B	B	C	C	C	C
RESIDENTIAL	B	B	C	C	C	C
STORAGE	C	C	C	C	C	C

1. In vertical exitways of buildings three stories or less in height, the interior finish may be Class B for unsprinklered buildings and Class C for sprinklered buildings.

EXCEPTIONS TO TABLE 410.3.3

1. Class C interior finish material may be used in access to exits and/or other spaces as wainscoting extending not more than 48 inches above the floor and for tack and bulletin boards covering not more than 5% of the gross wall area of the room.
2. The exposed faces of Type III structural members, including decking and planking, where otherwise permitted by this Code, are excluded from flame spread requirements.

410.3.4 Fire Retardant Paints

410.3.4.1 In existing buildings, the required flamespread or smoke developed classification of surfaces may be secured by applying approved fire retardant paints or solutions to surfaces having a higher flamespread rating than permitted. Such treatments shall conform to the requirements of NFiPA 703.

410.3.4.2 Fire retardant paints or solutions shall be renewed at such intervals as necessary to maintain the necessary fire retardant properties.

410.3.5 Foam Plastics Foam plastic of low density, such that its weight is not greater than 2 oz per sq ft, may be used as ceiling finish when the flame spread is not greater than 25 and the foam plastic is mounted in such a way that it will remain in place at an ambient room temperature of 175^{O} F for a period of not less than 15 minutes.

410..4 Carpet on Walls and Ceilings

410.4.1 Textile materials having a napped, tufted, looped, woven, nonwoven, or similar surface may be used as interior finish on ceilings only when they have a flamespread rating of 25 or less in accordance with ASTM E 84.

410.4.2 Textile wall coverings, including materials such as those having a napped, tufted, looped, nonwoven, woven or similar surface, shall comply with one of the following:

1. Textile wallcoverings shall have a flamespread rating of 25 or less in accordance with ASTM E 84 and shall be protected by automatic sprinklers, or
2. Textile wallcoverings shall meet the acceptance criteria of SBCCI Standard Test Method for Evaluating Room Fire Growth Contribution of Textile Wallcovering when tested using the product mounting system, including adhesive, of actual use.

411 HANDICAP ACCESSIBILITY

Accessibility requirements shall meet the Edition of the Code under which the building was constructed **(this does not relieve the building owner of the responsibility to comply with federal laws, such as the Americans with Disabilities Act)**.

412 ELEVATORS

The Commissioner of Labor has enforcement authority over the construction, installation or alterations of elevators [G.S. 143-139(c)].

413 STRUCTURAL SAFETY

413.1 Vertical Loads

Buildings and structures shall comply with the requirements of the Building Code for floor and roof live loads.

EXCEPTION: The CEO may accept existing floor assemblies and approve operational controls that limit the live load.

413.2 Seismic and Wind Loads

Buildings and structures shall comply with the requirements of the code under which the building or structure was built for seismic and wind loading.

EXCEPTION: When a change of occupancy results in an existing building or structure being reclassified as Essential Facilities (Table 501), the building or structure shall comply with the requirements of the Building Code for seismic and wind loading.

414 FIRESTOPPING AND DRAFTSTOPPING

Firestopping and draftstopping shall be installed and maintained in accordance with the code under which the building was constructed.

CHAPTER 5
MINIMUM STANDARDS FOR CHANGE OF OCCUPANCY

501 GENERAL

501.1 Change of Occupancy

The occupancy of existing buildings and structures may be changed, provided the building or structure meets the requirements of this chapter and either the requirements of either Chapter 4 or Chapter 6.

501.2 Hazard Category Classifications

The relative degree of hazard between different occupancy groups or between divisions of the same group shall be as set forth in the hazard category classification, Table No. 501. An existing building may have its occupancy changed to an occupancy within the same hazard group or to an occupancy in a lesser hazard group by complying with the provisions of this code.

501.3 Change of Hazard Group

An existing building shall comply with the requirements of the Building Code or the Building Code as modified by Chapter 6, when a change in occupancy will place it in a higher hazard group.

TABLE NO. 501
Hazard Categories and Classifications

RELATIVE HAZARD	OCCUPANCY CLASSIFICATION
1 (Highest Hazard)	Essential Facilities[1]
2	Large Assembly
3	Small Assembly, Educational
4	Residential[2]
5	Business, Mercantile
6	Factory-Industrial, Storage-1 (Moderate hazard)
7	Auto Parking Structure, Storage-2 (Low hazard)
8	Private garages, Carports, Sheds
9 (Lowest Hazard)	Agricultural buildings

[1] Essential Facilities include:
- -Fire, rescue, and police stations.
- -Earthquake and hurricane emergency preparedness centers.
- -Post earthquake and huricane recovery vehicle garages.
- -Power generating stations and other utilities required as emergency backup facilities.
- -Primary communication facilities.
- -Designated shelters for hurricanes.

[2] Mixed Residential occupancy (Apartments or Condominiums) may be included in Relative Hazard Category 5 along with Business and Mercantile, provided the Apartment or Condominium meets the requirements of the Building Code.

502 HEIGHTS AND AREAS

Existing buildings exceeding the maximum allowable heights and areas permitted by the Building Code may undergo a change of occupancy if:

1. the hazard level of the new occupancy is equal to or less than the existing hazard group as shown in Table No. 501, and
2. the height and area of the new use does not exceed that permitted by the code under which the building was built.

CHAPTER 6
EVALUATION OF BUILDING PERFORMANCE

601 GENERAL

The provisions of this chapter shall maintain or increase public safety, health and general welfare in existing buildings while permitting repair, alteration, addition and/or change of use without requiring full compliance with other provisions of the Building Code. This chapter shall not apply to buildings classified as Large Assembly with a working stage.

602 IMPLEMENTATION

602.1 Investigation and evaluation

For all proposed work covered by this chapter, the building owner shall cause the existing building to be investigated and evaluated in accordance with the provisions of this chapter and the following provisions from Chapter 4:

1. 407 Handrails and Guardrails,
2. 409 Property Protection
3. 410.3 Restrictions on Interior Use of Combustible Materials,
4. 411 Handicap Accessibility,
5. 412 Elevator Alterations,
6. 413 Structural Safety, and
7. 414 Firestopping and Draftstopping.

602.2 Structural analysis The owner shall have a structural analysis of the existing building made when determined by the CEO, or when higher loading conditions will exist, to determine adequacy of all structural systems for the proposed alteration, addition or change of use. The existing building shall be capable of supporting the minimum load as required by Chapter 4.

602.3 Submittal The results of the investigation and evaluation as required in 602.1, and 602.2 along with all proposed compliance alternatives, shall be submitted to the CEO.

602.4 Determination of compliance The CEO shall determine whether the existing building, with the proposed additions, alterations or change of use, complies with the provisions of this chapter in accordance with the evaluation process in 603.2.1 through 603.2.17.

603 EVALUATION

603.1 General

Seventeen Safety parameters are evaluated in Table 604 and each of these parameters are comprised of three categories: fire safety, means of egress and general safety. The total minimum score in each of the three categories must meet Table 605 for the building to be in compliance with this code.

603.1.1 Fire safety Included within the fire safety category are the structural fire resistance, automatic fire detection, fire protective signaling and fire suppression system features of the building.

603.1.2 Means of egress Included within the means of egress category are the configuration, characteristics and support features for means of egress in the building.

603.1.3 General safety Included within the general safety category are the fire safety parameters and the means of egress parameters.

603.2 Evaluation process

The evaluation process specified herein shall be followed in its entirety to evaluate existing buildings. Table 604 shall be used for tabulating the results of the evaluation. References to other chapters of this code indicate that compliance with those chapters is required in order to gain credit in the evaluation herein outlined. Section 607 shall be used when applying this chapter to mixed occupancies in existing buildings.

603.2.1 Building height The value for building height shall be determined by the formula in 603.2.1.1. The Building Code shall be used to determine the allowable height of the building. Subtract the actual building height from the allowable and divide by 12.5 feet. Enter the height value and its sign (positive or negative) in Table 604 under Safety Parameter-Building Height, for fire safety, means of egress and general safety. In determining the height value, the following conditions shall apply:

1. Round off the value to the nearest whole number.
2. The maximum score for a building of unlimited height is 10.
3. If an automatic sprinkler system and standpipe are not provided where required the maximum score is 5.

603.2.1.1 Height formula The following formula shall be used in computing the building height value.

$$\text{Height value} = \frac{(\text{AH}) - (\text{EBH}) \times \text{CF}}{12.5}$$

AH = Allowable height from the Building Code in feet
EBH = Existing building height in feet
CF = If (AH) - (EBH) is zero or positive, then CF = 1
CF = If (AH) - (EBH) is negative, then use factor shown in Table 603.2.6B

603.2.2 Building area The value for building area shall be determined by the formula in 603.2.2.2. The Building Code and the formula in 603.2.2.1 shall be used to determine the allowable area of the building. This shall include any allowable increases due to open perimeter. Subtract the actual building area from the allowable area and divide by 1,200 square feet. Enter the area value and its sign (positive or negative) in Table 604 under Safety Parameter-Building Area, for fire safety, means of egress and general safety. In determining the area value, the following conditions shall apply:

1. Round off the value to the next whole number.
2. The maximum permitted positive value for area is 50 percent of the fire safety score as listed in Table 605, Mandatory Safety Scores.

603.2.2.1 Allowable area formula The following formula shall be used in computing allowable area.

$$AA = \frac{(SP + OP + 100) \times (\text{base area})}{100}$$

AA = Allowable area
SP = Percent increase for sprinklers
OP = Percent increase for open perimeter
base area = The unsprinklered area shown in the Building Code. Where the base area is listed as "unlimited", #2 listed in 603.2.2 shall apply.

603.2.2.2 Area formula The following formula shall be used in computing the area value.

$$\text{Area value} = \frac{\text{Allowable area - Actual area}}{1{,}200 \text{ square feet}}$$

603.2.3 Fire area Evaluate the fire areas created by fire separation assemblies which comply with 603.2.3.1 and 603.2.3.2 and which are exclusive of the wall elements considered under 603.2.4 and 603.2.5. Conforming fire areas shall be figured as the net area and do not include shafts, chases, stairways, walls or columns. Under the categories and use groups in Table 603.2.3, determine the appropriate value and enter that value into Table 604 under Safety Parameter-Fire Area, for fire safety, means of egress and general safety.

603.2.3.1 Wall construction Walls used for compartmenting a building shall have a fire resistance rating of not less than 2 hours. Duct penetrations of this wall shall be properly protected. Piping and conduit shall only penetrate or pass through the wall if the openings around such piping and conduit are sealed in accordance with the Building Code.The fire door serving as an exit between compartments shall be installed, fitted and gasketed that such fire door will provide a substantial barrier to the passage of smoke and shall comply with the Building Code.

603.2.3.2 Floor/ceiling construction The fire resistive floor or the floor/ceiling construction shall extend to and be tight against the exterior wall so that the fire resistive integrity between stories is maintained. Penetrations or other installations which will impair the fire resistive integrity of the floor or floor/ceiling assembly shall be in accordance with the Building Code.

603.2.3.3 Categories The categories for fire area are:

1. Greater than 15,000 square feet.
2. 10,001 to 15,000 square feet.
3. 7,501 to 10,000 square feet.
4. 7,500 square feet or less.

Table 603.2.3
Fire Area Values

Category	1	2	3	4
	>15,000 (sq ft)	10,001 to 15,000(sq ft)	7,501 to 10,000(sq ft)	<7,500 (sq ft)
A	-8	-2	2	3
A Large	-12	-6	-2	-1
B, E, S-2	-6	-1	4	5
F, M, R, S-1	-4	0	6	8

603.2.4 Space division Evaluate the subdivision of a fire area by fire separation assemblies which are not included in the evaluation under 603.2.3 and 603.2.5. Under the categories and use groups in Table 603.2.4, determine the appropriate value and enter that value into Table 604 under Safety Parameter-Space Division, for fire safety, means of egress and general safety.

Exception: If the partitions being evaluated do not provide any protection to the occupants from the spread of smoke and/or flames, Category 1 shall be entered into Table 604.

603.2.4.1 Categories The categories for space division are:

1. No partitions; or partial partitions only.
2. Fixed partitions to ceilings, with self-closing doors.
3. Floor-to-deck partitions with doors that are not self-closing.
4. Floor-to-deck partitions with self-closing doors.

Table 603.2.4
Space Division Values

Category	1	2	3	4
Use Group	No partitions; or partial partitions only	Fixed partitions to ceilings, with self-closing doors	Floor-to-deck partitions with doors that are not self-closing	Floor-to-deck partitions with self-closing doors
A	0	0	0	0
A Large	-6	-4	-1	0
E, B, F, M, R, S-1	0	1	4	6
S-2	1	4	6	8

603.2.5 Corridor Walls Evaluate the fire resistance rating and degree of completeness of fire partitions which separate corridors from other spaces on the floor in accordance with the Building Code. This evaluation shall not include the wall elements considered under 603.2.3 and 603.2.4. Under the categories and use groups in Table 603.2.5, determine the appropriate value and enter that value into Table 604 under Safety Parameter-Corridor Walls, for fire safety, means of egress and general safety.

603.2.5.1. Categories The categories for corridor walls are:

1. No fire partitions; incomplete fire partitions; missing door or cased openings; or doors not self-closing.
2. Less than 1 hour (or not floor-to-deck).
3. Fire partitions having a fire resistance rating from 1 hour to less than 2 hours, with conforming doors.
4. Fire partitions having a fire resistance rating of 2 hours or greater, with conforming doors.

Table 603.2.5
Corridor Wall Values

Category	1	2	3	4
Use Groups	No fire partitions: incomplete fire partitions; missing door or cased openings; or doors not self-closing	Less than 1 hour (or not floor-to-deck)	Fire partitions having a fire resistance rating from 1 hour to less than 2 hours, with conforming doors	Fire partitions having a fire resistance rating of 2 hours or greater, with conforming doors
A	-10	-4	0	2
A Large	-30	-12	0	2
F, M, R, S-1	-7	-3	0	2
B, E, S-2	-5	-2	0	5

603.2.6 Vertical openings Evaluate the fire resistance rating of vertical exit enclosures, hoistways, escalator openings and other shaft enclosures within the building, and all openings between two or more floors. Table 603.2.6A contains the appropriate protection values. Multiply that value by the construction type factor found in Table 603.2.6B. Enter the vertical opening value and its sign (positive or negative) in Table 604 under Safety Parameter-Vertical Openings, for fire safety, means of egress and general safety. If the structure is a one-story building, enter a value of 2. Unenclosed vertical openings that conform to the requirements of the Building Code shall not be considered in the evaluation of vertical openings. The vertical opening value shall be rounded off to the next whole number.

603.2.6.1 Vertical opening formula The following formula shall be used in computing the vertical opening value.

$$VO = PV \times CF$$

VO = Vertical opening value
PV = Protection value (Table 603.2.6A)
CF = Construction-type factor (Table 603.2.6B)

Table 603.2.6A
Vertical Opening Protection Value

Protection	None (unprotected opening)	Less than 1 hour	1 to 2 hours	2 hours or more
Value	-10	-5	1	2

Table 603.2.6.B
Construction-Type Factor

Type of construction (refer to the Building Code)	I	II	III	IV-P	IV-NP	V-P	V-NP	VI-P	VI-NP
Factor	1	1.2	2.3	2.2	3.5	2.5	3.5	3.3	7

603.2.7 HVAC systems Evaluate the number of floors served by an individual HVAC system. Under the categories and use groups in Table 603.2.7 determine the appropriate value and enter that value into Table 604 under Safety Parameter-HVAC Systems, for fire safety, means of egress and general safety.

603.2.7.1 Categories The categories for HVAC systems are:

1. Greater than five floors; or combustible materials are located in air plenums; or corridors are used as air plenums.
2. Three to five floors.
3. Two floors
4. One floor or a central boiler/chiller system without ductwork is used which connects two or more floors.

Table 603.2.7
HVAC System Values

Category	1	2	3	4
Use groups	Greater than five floors; or combustible materials are located in air plenums; or corridors are used as air plenums	Three to five floors	Two floors	One floor or a central boiler/chiller system without ductwork is used which connects two or more floors
A B, E, S-2	0	2	5	7
A Large	-10	-5	0	2
F, M, R, S-1	-5	0	2	5

603.2.8 Automatic fire detection Evaluate the smoke detection capability based on the location and operation of automatic fire detectors in accordance with the Building Code. Under the categories and use groups in Table 603.2.8, determine the appropriate value and enter that value into Table 604 under Safety Parameter-Automatic Fire Detection, for fire safety, means of egress and general safety.

603.2.8.1 Categories The categories for automatic fire detection are:

1. None.
2. HVAC return only.
3. Elevator lobby only.
4. Elevator lobbies and in HVAC returns; and in residential uses, single station units.
5. All corridors including elevator lobby.
6. Total space.

Table 603.2.8
Automatic Fire Detection Values

Category	1	2	3	4	5	6
Use groups	None	HVAC return only	Elevator lobby only	Elevator lobbies and in HVAC returns; and in residential uses, single station units	All corridors including elevator lobby	Total space
A,F, M, R, S-1	-10	-5	0	2	4	6
A Large	-30	-10	-5	0	2	4
B, E, S-2	0	2	4	6	8	12

603.2.9 Fire protective signaling systems Where a fire protective signaling system is provided, evaluate the capability of the system in accordance with NFiPA 72. Under the categories and use groups in Table 603.2.9, determine the appropriate value and enter that value into the Table 604, under Safety Parameter-Fire Protective Signaling System, for fire safety, means of egress and general safety.

603.2.9.1 Categories The categories for fire protective systems are:

1. None.
2. Manual fire alarm.
3. Manual fire alarm and a one-way voice communication system.

Table 603.2.9
Fire Protective Signaling System Values

Category	1	2	3
Use groups	None	Manual fire alarm boxes	Manual fire alarm and a one-way voice communication system
A, E	-10	-5	0
B, M, R	-5	0	5
F, S	0	5	10

603.2.10 Smoke control Evaluate the ability of a natural or mechanical venting, exhaust or pressurization system to control the movement of smoke from a fire. Under the categories and use groups in Table 603.2.10, determine the appropriate value and enter that value into Table 604 under Safety Parameter-Smoke Control, for means of egress and general safety.

603.2.10.1 Categories The categories for smoke control are:

1. None.
2. Windows throughout the building which are operable without special keys or tools.
3. One smokeproof enclosure and building having operable windows.
4. One stairway having operable exterior windows and building having operable windows.
5. Smoke control systems designed to exhaust the fire area in accordance with the Building Code.
6. Smokeproof enclosures in accordance with the Building Code and/or all required stairways pressurized in accordance with the Building Code and/or all stairways having operable exterior windows.

Table 603.2.10
Smoke Control Value

Category	1	2	3	4	5	6
Use group	None	Windows throughout the building which are operable without special keys or tools	One smokeproof enclosure and building having operable windows	One stairway having operable exterior windows and building having operable windows	Smoke control systems designed to exhaust the fire area	Smokeproof enclosures and/or all required stairways pressurized and/or all stairways having operable exterior windows
A	-6	-5	-4	-3	0	0
E	-3	-3	-3	-2	0	2[a]
B, M, R	0	2[a]	3[a]	3[a]	3[a]	4[a]
F, S	0	2[a]	2[a]	3[a]	3[a]	3[a]

Note a. This value shall be considered Zero (0) if compliance with Table 603.2.8 has not been obtained. Compliance means Zero or positive number.

603.2.11 Exit capacity Evaluate the capacity of and the number of exit routes available to the building occupants. The Building Code shall be used to determine the adequacy of the means of egress routes leading to a safe area. Under the categories and use groups in Table 603.2.11, determine the appropriate value and enter that value into Table 604 under Safety Parameter-Exit Capacity, for means of egress and general safety.

603.2.11.1 Categories The categories for exit capacity are:

1. Minimum number of exits are provided as required in the Building Code or Chapter 4 for single exits.
2. Exit capacity exceeds the requirement of the Building Code.
3. Horizontal exits are provided in compliance with the Building Code.
4. Number of exits exceeds the minimum requirements of the Building Code.

Table 603.2.11
Exit Capacity Values

Category	1	2	3	4
Use Groups	Minimum number of exits provided	Exit capacity exceeded	Horizontal exits provided	Minimum number of exits exceeded
A, E, R	0	5	10	20
B, M	0	2	5	10
F, S	5	10	20	30

603.2.12 Dead ends Evaluate the length of the exit access travel path in which the building occupants are confined to a single path of travel. Under the categories and use groups in Table 603.2.12, determine the appropriate value and enter that value into Table 604 under Safety Parameter-Dead Ends, for means of egress and general safety.

603.2.12.1 Categories The categories for dead ends are:

1. Dead end 20 feet or less.
2. Dead end more than 20 feet and not exceeding 30 feet.
3. Dead end more than 30 feet and not exceeding 40 feet.
4. Dead end more than 40 feet and not exceeding 50 feet.

Table 603.2.12
Dead End Values

Category	1	2	3	4
Use Groups	20 feet or less	> 20 feet and ≤ 30 feet	> 30 feet and ≤ 40 feet	>40 feet and ≤ 50 feet
A , E, R	0	-1	-3	-5
A Large	0	-3	-7	-10
B, F, M, S	5	1	0	0

603.2.13 Maximum travel distance to an exit Evaluate the length of exit access travel to an approved exit. Under the categories and use groups in Table 603.2.13, determine the appropriate value and enter that value into Table 604 under Safety Parameter-Maximum Exit Access Travel Distance, for means of egress and general safety.

603.2.13.1 Categories The categories for maximum exit access travel distance to an exit are:

1. Exceeds the limitations of the Building Code.
2. Complies with the limitations of the Building Code.
3. Is less than half of the limitations of the Building Code.

Table 603.2.13
Maximum Exit Access Travel Distance Values

Category	1	2	3
Use groups	Exceeds	Complies	Is less than half
A, E, R	-10	0	5
B, F, M, S	-5	0	10

603.2.14 Elevator Control Evaluate the elevator equipment and controls that are available to the fire department to rescue building occupants from upper floors during a fire when such equipment is installed in accordance with the Building Code. Under the categories and use groups in Table 603.2.14, determine the appropriate value and enter that value into Table 604 under Safety Parameter, Elevator Control, for fire safety, means of egress and general safety.

603.2.14.1 Categories The categories for elevator controls are:

1. Controls are not provided or an elevator is not present in buildings of four stories or more in height.
2. Fire department control is provided or an elevator is not present in buildings less than four stories in height.
3. Automatic recall.
4. Fire department control and automatic recall is provided, or the building is only one story in height.

Table 603.2.14
Elevator Control Values

Category	1	2	3	4
Use groups	Controls are not provided or an elevator is not present in buildings of four stories or more in height	Fire department control or an elevator is not present in buildings less than four stories in height	Automatic recall	Fire department control and automatic recall, or the building is only one story in height
A	0	3	6	9
B, E, F, M, R	-7	0	3	6
S	-10	-7	0	3

603.2.15 Means of egress emergency lighting Evaluate the presence of and reliability of means of egress emergency lighting. Under the categories and use groups in Table 603.2.15, determine the appropriate value and enter that value into Table 604 under Safety Parameter-Means of Egress Emergency Lighting, for means of egress and general safety.

603.2.15.1 Categories The categories for means of egress emergency lighting are:

1. None.
2. Lighting provided in compliance with the Building Code but without emergency power.
3. Lighting and emergency power provided in full compliance with the Building Code.

Table 603.2.15
Means of Egress Emergency Lighting Values

Category	1	2	3
Use groups	None	Lighting in compliance but without emergency power	Lighting in compliance and with emergency power
A, E	-20	-10	0
B, M, R	-10	0	2
F, S-1	-5	0	2
S-2	0	2	7

603.2.16 Mixed uses When a building is used for two or more occupancies (not included in the same occupancy group, Table No. 5), the evaluation of this section shall be based on conformance with the provisions of the Building Code. Under the categories and use groups in Table 603.2.16, determine the appropriate value and enter that value into Table 604 under Safety Parameter-Mixed Uses, for fire safety and general safety.

603.2.16.1 Categories The categories for mixed uses are:

1. Not in compliance with the Building Code.
2. In compliance with the Building Code.

Table 603.2.16
Mixed Use Values

Category	1	2
Use groups	Not in compliance	In compliance
A , R	-10	0
B, E, F, M, S	-5	0

603.2.17 Sprinklers Evaluate the ability to suppress a fire based on the installation of an automatic sprinkler system in accordance with the Building Code. Under the categories and use groups in Table 603.2.17, determine the appropriate value and enter that value into Table 604 under Safety Parameter-Automatic Sprinklers, for fire safety, means of egress divided by 2 and general safety.

603.2.17.1 Categories The categories for automatic sprinkler system protection are:

1. None or partial protection.
2. Equipped throughout with an automatic sprinkler system in accordance with the Building Code.
3. Category 2 above automatic sprinkler system equipped with quick-response heads.

Table 603.2.17
Sprinkler System Values

Category	1	2	3
Use groups	None or partial protection	Equipped throughout with an automatic sprinkler system	Category 2 (Sprinkler System) equipped with Quick-response Heads
A, F, M, R, S-1	0	6	8
A Large	0	4	5
B, E, S-2	0	12	15

604 BUILDING SCORE

After determining the appropriate data from 603, enter that data in Table 604 and total the building score.

Table 604
Summary Sheet - Building Score

Existing use _____ Proposed use _____
Mixed uses: Yes_____ No_____ Year bldg. was constructed _____
No. of stories _____ Height in ft. _____
Type of construction _____ Area per floor_____
Percentage of open perimeter _____ % Percentage of height reduction _____%
Sprinklered: Yes_____ No_____ Corridor wall rating _____
Compartmentation: Yes ____ No____ Required door closers: Yes ___ No ___
Fire resistance rating of vertical opening enclosures _____
Type of HVAC system _____, serving number of floors _____
Automatic fire detection: Yes ____ No _____, type and location _____
Fire protective signaling system: Yes _____ No _____ , type _____
Smoke control: Yes _____ No _____ , type _____
Adequate exit routes: Yes ____ No _____ Dead ends: Yes _____ No .
Max. exit access travel distance_____ Elevator controls: Yes ___ No ____
Means of egress emergency lighting: Yes _____ No _____

Safety parameters	Fire safety (FS)	Means of egress (ME)	General safety (GS)
603.2.1 Building height			
603.2.2 Building area			
603.2.3 Fire area			
603.2.4 Space division			
603.2.5 Corridor walls			
603.2.6 Vertical openings			
603.2.7 HVAC systems			
603.2.8 Automatic fire detection			
603.2.9 Fire protective signaling sys.			
603.2.10 Smoke control	****		
603.2.11 Exit capacity	****		
603.2.12 Dead ends	****		
603.2.13 Max. exit access travel dist.	****		
603.2.14 Elevator control			
603.2.15 Means of egress emer. light.	****		
603.2.16 Mixed uses		****	
603.2.17 Automatic sprinklers		divide by 2 =	
Building score — total value			

****No applicable value to be inserted.

605 SAFETY SCORES

The values in Table 605 are the required mandatory safety scores for the evaluation process listed in 603.2.

Table 605
Mandatory Safety Score

Use groups	Fire safety (MFS)	Means of egress (MME)	General safety (MGS)
A	10	24	24
A Large	5	19	19
E	17	29	29
B	28	40	40
F, S-1	26	53	53
M, R	23	35	35
S-2	38	65	65

606 EVALUATION OF BUILDING SAFETY

The mandatory safety score in Table 605 shall be subtracted from the building score in Table 604 for each category. Where the final score for any category equals zero or more, the building is in compliance with the requirements of this chapter for that category.

Where the final score for any category is less than zero, the building is not in compliance with the requirements of this chapter. Where a building evaluation score is less than Zero in any category, points may be increased by adding additional safety factors.

Table 606
Evaluation Formulas

Formula	FS- MFS > 0	ME- MME > 0	GS - MGS > 0
Table 604	(FS)	(ME)	(GS)
Table 605	- (MFS)	- (MME)	- (MGS)
Score	=	=	=
Pass (Zero or positive)	(+)	(+)	(+)
Fail (negative)	(-)	(-)	(-)

FS = Fire Safety
ME = Means of Egress
GS = General Safety
MFS = Mandatory Fire Safety
MME = Mandatory Means of Egress
MGS = Mandatory General Safety

607 MIXED OCCUPANCIES

607.1 Where the occupancies are not separated by a fire separation assembly or a fire rated wall as required by the Building Code, the mandatory safety scores for the occupancy with the lowest general safety score in Table 605 shall be used.

607.2 Where the occupancies are separated as required by the Building Code, the mandatory safety scores for each occupancy shall be placed against the evaluation scores for the appropriate occupancy and the most restrictive height and area limitations in this code shall be used in the calculation of the height value in 603.2.1 and the area value in 603.2.2 and the values so determined shall apply to both occupancies.

607.3 Where the occupancies are separated as required by the Building Code, the mandatory safety scores for each occupancy shall be placed against the evaluation scores for the appropriate occupancies.

CHAPTER 7
BUILDING SERVICE SYSTEMS

701 SCOPE

Every existing building shall have properly operating service systems as provided herein, to afford adequate heat, ventilation, sanitation and lighting. Building service systems or portions thereof of an existing building which complied with the minimum safety standards of the code in effect at the time of construction, or installation, which have been properly maintained shall be deemed in compliance with this code. Building service systems shall be required to comply with the Building Code as follows:

1. All additions shall comply with the Building Code.
2. When alterations which affect structural strength, exits, fire hazards, service systems, or sanitary conditions are made, such alterations shall comply with the Building Code.
3. When a change of hazard group occurs (Table 501), the existing building services shall be upgraded to the requirements of the Building Code.

   EXCEPTION: Certain occupancies within the same or lower hazard group of Table 501 may be required to be upgraded by Volume IV - Electrical.

702 EVALUATION OF SERVICE SYSTEMS

All alterations, repairs, or additions to existing service systems shall comply with the current requirements of the Building Code. The suitability of portions of the service systems to remain in use, and any alterations or additions thereto shall be made by qualified personnel pursuant to the provisions of the General Statutes for Architects (GS 83A), Contractors (GS 87), or Professional Engineers (GS 89C) and the written evaluation shall be submitted to the CEO for approval.

703 MECHANICAL SYSTEMS

703.1 Heating Equipment

All new heating equipment shall be installed in accordance with the Building Code. Heating systems, when required, shall be maintained in safe and good working condition. Buildings or structures which are equipped with wet plumbing systems, shall be provided with heating equipment/systems to prevent freezing.

703.2 Cooking Equipment

All cooking equipment shall be installed in accordance with the Building Code. Existing equipment shall be maintained in a safe and good working condition. Listed portable cooking equipment employing flame shall be installed in accordance with the Building Code and the manufacturer's installation instructions.

703.3 Water Heating

All water heating facilities shall be installed in accordance with the Building Code and shall be maintained in a safe and good working condition.

703.4 Accessibility for Service

Appliances and equipment shall be located with respect to building construction to permit access for servicing.

703.5 Clearances to Combustibles

703.5.1 Clearances for listed heat producing appliances and equipment and their accessories, when listed for greater or less clearances than stipulated in the Building Code, shall conform to their listings.

703.5.2 Clearances for unlisted heat producing appliances and their accessories shall conform to requirements in the Building Code.

703.6 Combustion and Ventilation Air

Fuel-burning appliances shall be vented to the outside in accordance with their label and manufacter's installation instructions, unless listed for unvented use. Provisions shall be made for adequate air for complete combustion of the fuel used in accordance with the Building Code.

704 PLUMBING SYSTEMS

704.1 Sanitation

704.1.1 Every plumbing fixture and water and waste pipe shall be properly installed and maintained in good sanitary working condition free from defects, leaks, and obstructôns.

704.1.2 Toilet rooms shall not open directly into a room used for the preparation of food for service to the public.

EXCEPTION: Existing employee toilet rooms where no change of occupancy occurs.

704.1.3 The walls, partitions, and floors of all public toilet rooms shall have a nonabsorbent surface material to a height of 4 feet above the floor.

704.1.4 Shower compartment shall have floors and walls constructed of smooth, corrosion resistant and nonabsorbent water resistant materials to a height of not less than 70 inches above the compartment floor at the drain.

704.1.5 Built-in tubs with showers shall have waterproofed joints between the tub and water resistant wall.

704.2 Fixtures Required

The number and division of facilities shall be determined by the code under which the building was constructed. Where no minimum number of fixtures were specified by the code under which the building was constructed, an evaluation shall be preformed as specified by Section 702.

EXCEPTION: Auditoriums or stadiums being renovated shall be provided with toilet fixtures in accordance with the Building Code.

704.3 Water Supply

All buildings and structures intended for human occupancy, or used for the preparation or processing of food, drinks or other materials for human consumption shall be provided with an adequate, safe and potable water supply through a system of piping to all fixtures and appliances.

704.4 Sewer Connection

Every sink, lavatory, bathtub or shower, drinking fountain, water closet or other facility shall be properly connected to either a public sewer system or to an approved private sewage disposal system.

APPENDIX A
REHABILITATION GUIDELINES

THE REHABILITATION GUIDELINE SERIES

The Rehabilitation Guidelines contained in this Appendix were prepared by the National Institute of Building Sciences for the Department of Housing and Urban Development in response to the requirements of Section 903 of the Housing and Community Development Amendments of 1978.

As Congress intended, the Rehabilitation Guidelines are not a code, nor are they written in code language. Rather, they are designed for voluntary adoption and use by states and communities as a means to update and preserve the nation's building stock, while maintaining reasonable standards for health and safety. The term "rehabilitation", as used in the guidelines, includes any set of activities related to the general view of existing buildings as a resource to be conserved, rehabilitated, or reused.

The initial edition of the Rehabilitation Guidelines was published in eight separate volumes. The first four guidelines are designed for use by building officials, members of the executive and legislative branches of government, and related commissions and organizations involved in developing or implementing building regulations. These guidelines cover the following topics:

1. The Guideline for Setting and Adopting Standards for Building Rehabilitation provides an introduction and background to the building regulations that affect rehabilitation. It describes methods for identifying regulatory problems in a community, and recommends ways to amend, modify, or supplement existing regulations to encourage rehabilitation.
2. The Guide line for Municipal Approval of Building Rehabilitation examines the inherent differences between regulating new construction and regulating rehabilitation, and presents specific recommendations for dealing with rehabilitation within municipal building departments.
3. The Statutory Guideline for Building Rehabilitation contains enabling legislation that can be directly adopted by communities to provide the legal basis for promoting rehabilitation through more effective regulation.
4. The Guideline for Managing Official Liability Associated with Building Rehabilitation addresses the liability of code officials involved with the administration and enforcement of rehabilitation, and provides recommendations for minimizing liability problems

The remaining four guidelines are technical in nature, and are intended for use by code officials, inspectors, designers, and builders. They cover the following topics:

5. The Egress Guideline for Residential Rehabilitation lists design alternatives for the components of egress that are required by current codes such as number and arrangement of exits, corridors, and stairs, travel distance, dead-end travel, and exit capacity and width.

6. The Electrical Guideline for Residential Rehabilitation outlines procedures for conducting inspections of electrical systems in existing buildings, and presents solutions to common problems associated with electrical rehabilitation such as eliminating hazardous conditions, grounding, undersized service, number of receptacle outlets, and incompatible materials.
7. The Plumbing DWV Guideline for Residential Rehabilitation presents criteria and methods for inspecting and testing existing drain, waste, and vent (DWV) systems, relocating fixtures, adding new fixtures to existing DWV systems, extending existing DWV systems, and installing new DWV systems in existing buildings.
8. The Guideline of Fire Ratings of Archaic Materials and Assemblies contains the fire ratings of building materials and assemblies that are no longer listed in current building codes or related reference standards. Introductory material discusses flame spread, the effects of penetrations, and methods for determining the ratings of assemblies not listed in the guideline.

Because of the value to the building rehabilitation community provided by the intitial eight Rehabilitation Guidelines published in 1980, two additional guidelines were developed as the the Rehabilitation Guideline, 1982. As with Guidelines 4 through 8, Guidelines 9 and 10 are technical in nature and are intended for use by those involved in the building rehabilitation process. These guidelines cover the following topics:

9. The Guideline for Structural Assessment addresses the methods and approaches used to evaluate structural systems in existing buildings. This guideline describes the assessment of common building structural systems such as masonry bearing walls, and simple wood, steel and concrete frames.
10. The Guideline on the Rehabilitation of Walls, Windows, and Roofs describes typical methods and procedures and appropriate cautions attendant to rehabilitating many common examples of these building components for many existing structures.

The Rehabilitation Guidelines are available from HUD USER, P.O. Box 6091, Rockville, Maryland 20850. Phone 1-800-245-2691. Contact HUD USER for cost and ordering information.

APPENDIX B

REPRINTS OF SELECTED PORTIONS OF THE NORTH CAROLINA STATE BUILDING CODE 1936 EDITION

B1 - DEFINITIONS

Section 2.1. DEFINITIONS. For the purpose of this code, certain terms, phrases and words and their derivatives shall be construed as set out in this section. Words used in the singular include the plural and the plural the singular. Words used in the masculine gender include the feminine, and the feminine the masculine. Wherever a chapter, section or part is referred to in this code by number it shall be understood to refer to a chapter, section or part of this code.

"Alteration." Alter or alteration means any change, addition or modification in construction or occupancy.

"Apartment" means a room, or a suite of two or more rooms, in a residence-building occupied as the home or residence of an individual, family, or household.

"Approved." The term "approved" refers to a device, material or construction which has been approved by the Building Code Council as a result of tests or investigations made under its direction; or approval issued by it upon satisfactory evidence of competent and impartial tests or investigations conducted by others.

"Area," as applied to a form of construction, means an uncovered sub-surface space adjacent to a building.

"Area," as applied to the dimensions of a building, means the maximum horizontal projected area of the building at grade.

"Automatic," as applied to a fire door or other opening protective, means normally held in an open position and automatically closed by a releasing device that is actuated by abnormal high temperature or by a predetermined rate of rise in temperature.

"Basement" means a story the floor of which is not less than two feet below and the ceiling of which is not less than four feet six inches above grade.

"Bearing-wall" means a wall which supports any vertical load in addition to its own weight.

"Building" means a combination of materials to form a construction that is safe and stable, and adapted to permanent or continuous occupancy for

residence, business, assembly or storage purposes; the term "building" shall be construed as if followed by the words "or part thereof."

"Building-line" means the line, established by law, beyond which a building shall not extend, except as specifically provided by law.

"Building official" means the officer or other person charged with the administration and enforcement of this code, or his duly authorized representative.

"Bulkhead" means a structure above the roof of any part of a building enclosing a stairway, tank, elevator machinery or ventilating apparatus, or such part of a shaft as extends above the roof.

"Cellar" means a story the ceiling of which is entirely below or less than four feet six inches above grade.

"Court" means an open, uncovered and unoccupied space within the lot-lines of a lot and includes a yard.

"Curb" shall be construed to mean the curb level or established grade at the center of the principal front of the building, fronting on one street; or, in the case of a building fronting on two or more streets, the curb level at the center of the front facing on the highest curb shall be taken, unless the highest curb is more than ten feet higher than the lowest curb, in which case the average level of the two curbs shall be taken.

"Curtain wall" means a non-bearing wall between columns or piers, which is not supported by beams or girders at each story.

"Dead-load" means the weight of walls, partitions, floors, roofs and all other permanent construction of a building.

"Display-sign" means a structure that is arranged, intended, designed or used as an advertisement, announcement or direction; and includes a sign, sign screen, billboard and advertising devices of every kind.

"Dwelling" means a building occupied exclusively for residence purposes and having not more than two apartments.

"Division-wall" means any interior load bearing wall in a building.

"Buildings—types of"

(a) "Business building."
(b) "Institutional building."
(c) "Public building."
(d) "Residence building."
(e) "Storage building."
(f) "Private building."

(a) "Business building" means a building occupied for the transaction of business, for the rendering of professional services, for the display, sale or storage, if not exclusively storage, of goods, wares or merchandise, for the supplying of food, drink or other bodily needs or comforts, or for the performance of work or labor; including among others, office buildings, stores, markets, restaurants, garages, hotels, factories, workshops, laboratories.

(b) "Institutional building" means a building in which persons are harbored to receive medical, charitable, or other care or treatment, or in which persons are held

or detained by reason of public or civic duty, or for correctional purposes; including among others, hospitals, asylums, sanatariums, fire houses, police stations, jails.

(c) "Public building" means a building in which persons congregate for civic, political, educational, religious, social or recreational purposes; including among others, courthouses, schools, colleges, libraries, museums, exhibition buildings, lecture halls, churches, assembly halls, lodge rooms, dance halls, theatres, bath houses, armories, recreational piers.

(d) "Residential building," except when classed as an institutional building, means a building in which sleeping accommodations are provided; including among others, dwellings, tenements, multi-family houses, lodging houses, dormitories, convents, studios, club houses.

(e) "Storage building" means a building for the housing, except for purely display purposes, of airplanes, automobiles, carriages, railway cars or other vehicles of transportation, for the sheltering of horses, livestock or other animals, or exclusively for the storage of goods, wares or merchandise, not excluding in any case offices incidental to such uses; including among others, garages, carriage houses, stables, barns, hangars, storage warehouses, freight depots, grain elevators.

(f) "Private building" means a building not included within the term "public building."

"Elevator" means a device within or in connection with a building used for carrying persons or things upward or downward; and includes dumbwaiter, escalator, and similar devices.

(a) "Passenger elevator" means an elevator designed and used for carrying persons.

(b) "Freight elevator" means an elevator designed and ;used for the carrying of things and such persons only as are necessary for its safe operation or the handling of things carried by it.

"Firelimits" means that territory or those districts within a municipality in which, with certain specified exceptions, frame-construction and unprotected metal construction are prohibited. The fire limits as used in this code shall be that territory fixed as such by the governing body of any incorporated city or town, and which shall include the principal business portions of such city or town.

"Fireproof construction" as applied to buildings, means that in which walls are of approved masonry, reinforced concrete or reinforced brick masonry; and the structural members of which have fire-resistive ratings sufficient to withstand the hazard involved in the occupancy, but not less than a four-hour rating for bearing walls, fire walls, party walls, isolated piers, columns and wall-supporting girders; a three-hour rating for walls and girders other than already specified, and for beams, floors, roofs and floor fillings; and a two-hour rating for fire partitions.

"Fire partition" means a wall or partition which subdivides a story of a building to restrict the spread of fire or to provide an area of refuge.

"Fire Resistive Ratings." The following tables gives the minimum protection of structural parts based on time periods for various incombustable materials:

STRUCTURAL PARTS TO BE PROTECTED	INSULATING MATERIAL USED	MINIMUM THICKNESS OF MATERIAL IN INCHES FOR THE FOLLOWING FIRE-RESISTIVE PERIODS			
		4 Hrs.	3 Hrs.	2 Hrs.	1 Hr.
Steel or Cast Iron Columns: Projecting steel beam and girder flanges: top and bottom chords and all primary truss members.	*Grade A Concrete	3	2	1 1/2	1
	†Grade B Concrete	4	3	2	1 1/2
	Gunite	2 1/2	1 1/2	1	3/4
	Brick of clay, shale, concrete, or sand-lime	4	4	2 1/2	2 1/2
	Clay tile or clay tile and concrete	3	3	1 1/2	1 1/2
	Solid gypsum blocks	4	3	2	1 1/2
	±Metal lath and gypsum or Indirect Portland cement plaster	3	2 1/2	2	1
Webs of steel beams and girders.	*Grade A Concrete	2 1/2	1 1/2	1	1
	†Grade B Concrete	3 1/2	2 1/2	1 1/2	1
	Gunite	2	1	3/4	3/4
	Brick of clay, shale, concrete or sand-lime	4	2 1/2	2 1/2	2 1/2
	Clay tile or clay tile and concrete	2	2	1 1/2	1 1/2
	Solid gypsum blocks	3	2	1 1/2	1
	±Metal lath and gypsum or Indirect Portland cement plaster	2 1/2	2	1 1/2	3/4

*Grade A concrete shall mean concrete with a coarse aggregate of limestone, calcareous pebbles or trap rock.
†Grade B concrete shall mean concrete with a coarse aggregate of granite, sandstone, chert pebbles or quartz.
±Provided there is an air space of one inch between the structural steel and the protective coat of metal lath and plaster.

"Fire walls" means a wall which subdivides a building or separates buildings to restrict the spread of fire, and which starts at the foundation and extends continuously through all stories to and above the roof.

"Foundation wall" means a wall or pier below curb level serving as a support for a wall, pier, column, or other structural part of a building.

"Frame Construction" includes frame buildings of metal construction and all those in which exterior or party walls are wholly or partly of wood.

NOTE: Buildings of exterior masonry veneer or stucco or wooden frame, constituting wholly or in part the structural supports of the building or its loads, are frame buildings within the meaning of this definition.

"Garage" means a building, shed or enclosure, or a part thereof, in which a motor vehicle containing volatile inflammable oil in its fuel storage tank, is stored, housed or kept.

"Private garage" means a garage, for not more than three motor vehicles, in which no business or industry connected directly or indirectly with motor vehicles is carried on.

"Public garage" means a garage not included within the term private garage.

"Grade," with reference to a building, means, when the curb level has been established, the mean elevation of the curb level opposite those walls that are located on, or parallel with and within fifteen feet of, street lines; or, when the curb

level has not been established, or all of the walls of the building are more than fifteen feet from street lines, "grade" means the mean elevation of the ground adjoining the building on all sides.

"Gypsum mortar" means a mixture of one part of retarded gypsum and not more than two parts of sand, proportioned by weight, to which a fibrous binding material is added when necessary.

"Heavy timber or Mill Construction," as applied to buildings, means that in which walls are of brick, concrete, or reinforced concrete; and in which the interior structural elements, including posts, floor, and roof construction, consist of heavy timbers with smooth flat surfaces assembled to avoid thin sections, sharp projections and concealed or inaccessible spaces; and in which wall supporting girders and structural members of steel or of reinforced concrete, if used in lieu of timber construction, have a fire resistance rating of not less than three hours.

"Height," as applied to a building, means the vertical distance from grade to the highest point of such building.

"Height," as applied to a court, means the vertical distance from the level of the floor of the lowest story served by that court to the level under consideration.

"Height," as applied to a story, means the vertical distance from top to top of two successive tiers of floor beams.

"Height," as applied to a wall, means the vertical distance to the top measured from the foundation wall, or from a girder or other immediate support of such wall.

"Hereafter" means after the time that this code becomes effective.

"Heretofore" means before the time that this code becomes effective.

"Hollow block" means a cellular building unit of burnt clay or concrete, the gross cubic content of which is not less than fifty per cent greater than the standard size of brick and the cellular spaces of which are in excess of twenty-five per cent of the gross cubic content of the unit.

"Lime mortar" means a mixture of one part slaked lime or hydrated lime and not more than four parts of sand, proportioned by volume.

"Cement mortar" means a mixture of one part of cement and not more than three parts of sand, proportioned by volume, with an allowable addition of hydrated lime not to exceed fifteen per cent of the cement by volume.

"Cement lime mortar" means a mixture of one part of cement, one part of slaked lime or dry hydrated lime, and not more than six parts of sand, proportioned by volume.

"Live load" means all loads except dead load.

"Lot corner." A corner lot is a lot situated at the junction of two streets, or of a street and public alley not less than ten feet in width.

"Lot, front of." The front of a lot is that boundary line which borders on the street. In the case of a corner lot the front shall be taken as that property line bordering on a street which is at right angles, or as nearly as possible, to the long dimension of the lot.

"Lot, interior." A lot other than a corner lot is an interior lot.

"Lot, rear of." The rear of a lot is the side opposite to the front. In case of a triangular lot the rear shall be the boundary line not bordering on a street.

"Multi-family house" means a building occupied as the home or residence of individuals, families or households living independently of each other, of which three or more are doing cooking within their apartments; including tenement house, apartment house, flat, but does not include hotels.

"Occupied," as applied to a building, shall be construed as though followed by the words "or intended, arranged or designed to be occupied."

"Ordinary construction," as applied to buildings, means that in which the exterior walls are of approved masonry or of reinforced concrete; and in which the interior structural elements are, wholly or partly, of wood of smaller dimensions than required for heavy timber construction, or of steel or iron that is not protected as required for fireproof construction or semifireproof construction.

"Owner" includes his duly authorized agent or attorney, a purchaser, devisee, fiduciary, and a person having a vested or contingent interest in the property in question.

"Party wall" means a wall used or adapted for joint use between two buildings.

"Passageway" means an enclosed hallway or corridor connecting a required exit to a street or other open space communicating with a street when such required exit does not lead directly to a street.

"Pent house" means an enclosed structure, other than a bulkhead, extending not more than twelve feet above a roof.

"Person" includes corporation and copartnership as well as individual.

"Reinforced brick masonry" means brick masonry in which steel is embedded in such a manner that the two materials act together in resisting forces.

"Reinforced concrete" means a special Portland cement concrete in which steel is embedded in such a manner that the two materials act together in resisting forces.

"Repair" means the replacement of existing work with the same kind of material used in the existing work not including additional work that would affect the structural safety of the building, or that would affect or change required exit facilities, or that would affect a vital element of an elevator, plumbing, gaspiping, wiring or heating installations, or increase the total cubical contents.

"Required" means required by some provision of the code.

"Self closing," as applied to a fire door or other opening protective, means normally closed and equipped with an approved device which will insure closing after having been opened for use.

"Semi-fireproof construction," as applied to buildings, means that in which all walls are of approved masonry or of reinforced concrete; and the structural members of which have fire resistance rating not less than a four-hour rating for fire walls and party walls; a three-hour rating for other walls, isolated piers, columns, trusses, and wall-supporting girders; and a two-hour rating for fire partitions, girders not otherwise specified, exposed beams, floors, roofs, and floor fillings.

"Shaft" means an enclosed shaftway or space, extending through one or more stories of a building, connecting a series of two or more openings in successive floors, or floors and roof.

"Solid block" means a building unit of burnt clay or of stone, gravel or cinder concrete, the gross cubic content of which is not less than fifty per cent greater than the standard size of brick, and in which there are no cellular spaces exceeding in the aggregate twenty-five per cent of the gross cubic content of the unit.

"Sprinklered" means equipped with an approved automatic sprinkler system.

"Stairway" means one or more flights of stairs and the necessary landings and platforms connecting them, to form a continuous and uninterrupted passage from one story to another in a building or structure.

"Standard fire test" means the fire test formulated under the procedure of the American Standards Association as "American Standard" or as "Tentative American Standard" as approved by the National Board of Fire Underwriters and/or the United States Bureau of Standards.

"Story" means that part of a building comprised between a floor and the floor or roof next above, and includes basement and cellar.

"Street" means a highway or thoroughfare dedicated or devoted to public use by legal mapping, user or other lawful manner; and includes avenue, road, alley, lane, boulevard, terrace, concourse, driveway, sidewalk.

"Street line" means a lot line dividing a lot from a street.

"Structure" means a combination of materials, other than a building, to form a construction that is safe and stable; including among others, stadiums, gospel and circus tents, reviewing stands, platforms, stagings, observation towers, radio towers, sheds, coal bins, fences and display signs; the term "Structure" shall be construed as if followed by the words "or part thereof."

"Unprotected metal construction," as applied to buildings, is that in which the structural supports are metal and in which the roofing and walls or other enclosures are of sheet metal, or other incombustible materials, or of masonry deficient in thickness or otherwise not conforming to approved masonry.

"Width," as applied to a court, means the minimum average width taken along all sides, including lot lines, of the court, the widths along each side being measured at right angles or normal to and from such side to the opposite side at the point of measurement.

"Yard" means a court that extends along the entire length of a lot line.

B2 - TYPE OF CONSTRUCTION, HEIGHT, AND AREA

Section 3.2. CLASSIFICATION OF BUILDINGS BY TYPE OF CONSTRUCTION.

Section 3.21. Types Designated. For the purposes of this code, construction as used in buildings shall be classified as follows:

Class A	Fireproof construction
Class A'	Semi-fireproof construction
Class B	Heavy timber construction
Class C	Ordinary construction
Class D	Frame construction
Class E	Unprotected metal construction

Section 4.2. RESTRICTIONS AS TO HEIGHT.

Section 4.21. New Buildings.

(a) Except as may be otherwise provided by this code, no building hereafter erected shall exceed in height the limits fixed in this chapter.

(b) Each part of a building included within fire walls required to conform to the area limitations prescribed for its type of construction, shall be limited in height as though such part were a separate building.

Section 4.22. Alterations. No building shall hereafter be altered so as to exceed the limits of height fixed by this chapter.

Section 4.23. Public Buildings. For public buildings, semi-fireproof construction shall not exceed seventy-five feet; ordinary construction and heavy timber construction shall not exceed forty feet, provided that churches of such construction may be forty-five feet but not more than two stories, and that schools of such construction shall be not more than two stories high; and frame construction shall not exceed thirty feet, provided that churches and schools of such construction shall be not more than one story high.

Section 4.24. Institutional Buildings. For institutional buildings semi-fireproof construction shall not exceed seventy-five feet; ordinary and heavy timber construction shall not exceed two stories nor forty feet; and frame construction shall not exceed one story nor thirty-five feet.

Section 4.25. Residence Buildings. For residence buildings semi-fireproof construction and heavy timber construction shall not exceed seventy-five feet; ordinary construction shall not exceed three stories nor forty-five feet; provided that when the floors immediately over the basement and over cellars are of a construction having a fire-resistance rating of not less than two hours and in which there are no openings between floors, ordinary construction may exceed these heights but shall not exceed four stories nor fifty-five feet; and when in addition, in multi-family houses which are subdivided by fire partitions into floor areas not exceeding twenty-five hundred square feet, all other floors have a fire resistance rating of not less than one hour, ordinary construction may be, but shall not exceed, five stories nor sixty-five feet.

Section 4.26. Business Buildings. For business buildings semi-fireproof construction and heavy timber construction shall not exceed seventy-five feet; ordinary construction shall not exceed fifty feet; and frame construction shall not exceed twenty-five feet.

Section 4.27. Storage Buildings. For storage buildings semi-fireproof construction shall not exceed fifty feet; ordinary construction and heavy timber construction shall not exceed thirty-five feet, provided that in buildings which are sprinklered heavy timber construction may be, but shall not exceed, seventy-five feet; and frame construction shall not exceed one story nor twenty-five feet.

Section 4.28. Exceptions.

(a) For the purpose of this chapter, the following appurtenances shall not be deemed parts of buildings: church spires, water tanks and their supports, bulkheads, chimneys, and parapets that do not extend more than four feet above the roof surface at their point of contact.

(b) For the purpose of this chapter, neither a basement nor a cellar shall be deemed a story.

(c) Outside the fire limits, public buildings, business buildings, or storage buildings may, in the discretion of the Insurance Commissioner, be erected to greater heights than otherwise fixed by this chapter, on written recommendation of the local building inspector.

Section 4.29. Unprotected Metal Construction. Buildings of unprotected metal construction shall be not more than one story high and limited to a height of twenty-five feet unless otherwise authorized; provided that this shall not prohibit mezzanine stories the aggregate floor area of which does not exceed twenty-five per cent of the area of the building.

Section 4.3. RESTRICTIONS AS TO FLOOR AREAS.

Section 4.31. New Buildings. No building hereafter erected shall exceed in area in any story above grade, the limits fixed in this section.

Section 4.32. Use of Fire Walls. No building shall be limited in area if it is divided by fire walls into sections, none of which exceeds the limits of area fixed in this section for its type of construction. Buildings exceeding 25,000 square feet in undivided area shall be of Class A construction, Class A′ construction, or Class E construction; provided that buildings of Class A′ whose occupancy comes under the classification of "Business" or "Storage," shall not exceed 25,000 square feet in undivided area.

The maximum area undivided by fire walls in buildings of Class B construction whose occupancy comes under the classification "Public," shall not exceed 15,000 square feet for buildings one story in height, 10,000 square feet for buildings two stories in height, and 7,500 square feet for buildings three stories in height, except that public assembly occupancies not more than one story in height may have an unlimited area if not subdivided or with only minor subdivision along the walls; for occupancies coming under the classification "Institutional," the area shall not exceed 15,000 square feet for buildings one story in height, and 10,000 square feet for buildings two stories in height; and 10,000 square feet for buildings two stories in height; for occupancies coming under the classification "Residential," the area shall not exceed 10,000 square feet; for occupancies coming under the classification "Business," the area shall not exceed 20,000 square feet for buildings one story in height, 15,000 square feet for buildings two or three stories in height, and 10,000 square feet for buildings over three stories in height; for occupancies coming under the classification "Storage," the area shall not exceed 20,000 square feet for buildings one story in height, and 10,000 square feet for buildings two stories in height.

The maximum area undivided by fire walls in buildings of Class C whose occupancy comes under the classification "Public," shall not exceed 7,500 square feet for buildings one story in height and 5,000 square feet for buildings two or three stories in height except that "Public Assembly" occupancies in buildings not more than one story in height may have an area not to exceed 20,000 square feet; for occupancies coming under the classification "Institutional," the area shall not exceed 7,500 square feet for buildings one story in height and 5,000 square feet for buildings two stories in height; for occupancies coming under the classification "Residential," the area shall not exceed 7,500 square feet; for occupancies coming under the classification "Business," the area shall not exceed 10,000 square feet for buildings one story in height, 7,500 square feet for buildings two or three stories in height, and 6,000 square feet for buildings four stories in height; for occupancies coming under the classification "Storage," the area shall not exceed 10,000 square feet.

The maximum area undivided by fire walls in buildings of Class D, whose occupancy comes under the classification "Public" or "Institutional," shall not exceed 3,000 square feet; for occupancies coming under the classification "Residential," the area shall not exceed 3,000 square feet; for occupancies coming under the classification "Business," the area shall not exceed 5,000 square feet for buildings one story in height and 3,000 square feet for buildings two stories in height; for occupancies coming under the classification "Storage," the area shall not exceed 3,000 square feet.

The allowable areas appear in the following table:

Allowable Area of Buildings in Square Feet

CLASS OF OCCUPANCY	CLASS A	CLASS A'	CLASS B	CLASS C	CLASSES D AND E
Public	No restrictions	No restrictions	1 story* 15,000; 2 stories 10,000; 3 stories 7,500.	1 story† 7,500; 2 or 3 stories 5,000.	3,000
Institutional	No restrictions	No restrictions	1 story 15,000; 2 stories 10,000.	1 story 7,500; 2 stories 5,000.	3,000
Business	No restrictions	25,000	1 story 20,000; 2 or 3 stories 15,000; over 3 stories 10,000.	1 story 10,000; 2 or 3 stories 7,500; 4 stories 6,000.	1 story 5,000; 2 stories 3,000.
Residential	No restrictions	No restrictions	10,000	7,500	3,000
Storage	No restrictions	25,000	1 story 20,000; 2 stories 10,000.	10,000	3,000

* Public assembly occupancies in buildings not more than 1 story in height may be of unlimited area if not subdivided or with only minor subdivisions along the walls.

† Public assembly occupancies in buildings not more than 1 story in height may have an area not to exceed 20,000 square feet, if not subdivided or with only minor subdivisions along the walls.

No building shall hereafter be extended on any side so as to exceed the limits of undivided area fixed in this section, but this shall not prohibit such extension of a building heretofore lawfully erected which already exceeds the limiting area, provided such extension does not exceed the area limitations fixed by this section and such extension is separated from the existing building by a fire wall.

The limiting areas of this section for "Business" occupancies and for "Storage" occupancies may be increased by 50 per cent when the building has a frontage on two streets, and by 100 per cent when it has a frontage on three or more streets. The same allowances may be made when the building is not located on a street line, but is directly accessible to fire apparatus on two or more sides.

The limiting areas fixed in this section, as modified on account of street frontage, for "Business" and for "Storage," may be increased by 100 per cent when the building has an approved automatic sprinkler system installed and capable of operation.

B3 - PROPERTY PROTECTION

Section 10.6. PROTECTION OF WALL AND PARTITION OPENINGS.

Section 10.61. Exterior Openings. Every window or other opening above the first story, except show windows on the second story, in the exterior walls of every building, shall be protected by an approved fire door, fire shutter, fire window, open sprinkler, or other approved device.

In buildings whose occupancy or use brings them within the classification of business or storage (except private garages), windows vertically above each other and not required to be protected against fire shall have a distance of at least 3 feet between the top window sill and bottom of lintel of the window directly beneath.

B4 - MINIMUM NUMBER OF EXITS

Section 6.2. GENERAL.

Section 6.21. Kinds of Exits. Exits shall consist of interior stairways, fire towers, horizontal exits, exterior stairways, passageways or doorways, constructed and arranged as specified in this chapter. Exterior spiral fire escapes, tubular fire escapes and chute fire escapes may, under special provisions, be installed on certain types of buildings.

Section 6.22. Number of Occupants.

(a) The dimensions and capacity of exits shall be proportioned to the number of persons to be accommodated.

(b) The number of persons used in determining the necessary exit facilities of any given floor shall be the actual number to occupy the floor, but in no case less than that determined by dividing the following areas per person into the gross area (no deduction for corridors, closets or other subdivisions) within the perimeter of the building serving each particular occupancy at the given floor level; for occupancies not specified the building official shall, by rule, establish the ratio to be used:

Kind or use of building	Number of square feet of floor space allowed per person
Dance halls, lodge rooms and places of assembly	10 square feet per person
Courtrooms, restaurants, classrooms in schools and colleges, rooms in public buildings not otherwise provided for	15 square feet per person
Stores, markets, lodging houses, and reading rooms	25 square feet per person
Factories and workrooms	35 square feet per person
Offices and showrooms	50 square feet per person
Hospitals, asylums, hotels and other residence buildings	100 square feet per person
Warehouses and garages	150 square feet per person

Section 6.23. Number of Exits.

(a) **From Rooms.** Every room having an occupancy of more than seventy-five persons shall have at least two doorways, remote from each other, leading to an exit or exits.

(b) **From Ground Floor.** Every floor-area having direct exit to a street and occupied by more than seventy-five persons, shall have at least two means of exit.

(c) **From Floor Areas.** Every story not having direct exit to a street shall have at least one interior stairway or fire tower connected thereto. Every such story shall have at least one additional exit when it exceeds two thousand five hundred square feet in area.

(d) **From Places of Assembly.** In buildings occupied as places of assembly for seventy-five or more persons for recreation or amusement, each and every room, gallery, tier or other space, where such assembly occurs shall have direct access to separate and independent exits as follows: not less than two exits when six hundred persons or less are accommodated in such room, gallery, tier or other space; not less than three exits when more than six hundred but not more than one thousand persons are accommodated; and not less than four exits when more than one thousand persons are accommodated.

(e) **From Theatres, etc.** Exits in every theatre, opera-house, moving picture show, and other like places of public amusement, including dance halls the buildings in which boxing matches, wrestling matches and other forms of

athletic contests, matches and engagements are given, held or performed, shall be so arranged and located that two-thirds of all occupants of such building (allowing six square feet of floor area for each occupant) may leave such building via either side of such building, either end of such building or either side and end of such building and shall be of sufficient number to allow a number equal to two thirds of all occupants of such building (allowing six square feet of floor area for each occupant) travelling at the rate of fourteen persons per minute per lineal foot of exit area to leave, via either side of such building, either end of such building or either end and side of such building in from

4 to 6 minutes when building is of Class A construction
3 to 4 minutes when building is of Class A' construction
2 to 3 minutes when building is of Class B or Class C construction
1 to 2 minutes when building is of Class D or Class E construction

In order that the objects of this requirement, which is primarily a safety to life requirement, will be complied with, any theatre, opera-house, auditorium, assembly hall, moving picture show, or other building in which public entertainment is shown, given, produced or performed in which special scenery is used or in which special acts or performances are given, shown, produced or performed, shall, if not properly equipped with approved proscenium wall and approved fire-curtain, for the purpose of affording safety in keeping with the objects of this requirement, be deemed a building of Class C construction.

And it is further provided that in order to safeguard the public from the dangers of fire and other contingencies arising and resulting in places of this kind, to see that the provisions of this law are complied with, and to save the owner or owners from unnecessary confusion and expense, plans for all theatres, opera-houses, moving picture shows, and other like places of amusement to be hereafter erected shall be submitted to and approved as to the safety of the building and the occupants in case of fire, by the Insurance Commissioner before work is begun on the building. This requirement is to apply also when and/or where any building now standing or part thereof is to be used as a theatre, opera-house, moving picture show or other like place of amusement.

Section 6.24. Fire Towers Required. In buildings exceeding sixty feet in height, at least one stairway shall be a fire tower; provided that in sprinklered buildings in which two or more stairways conforming to the requirements of this chapter are provided, such fire tower shall not be required unless the building exceeds one hundred feet in height.

Section 6.25. Location.

(a) **Distance to Exits.** Exits shall be so located that no point in a floor-area, room or space served by them is more than one hundred feet distant from an exit, measured along the line of travel; except that when a floor-area is subdivided into smaller areas, such as rooms in hotels and office buildings, the distance from the door of any room, along an unobstructed hallway, to an exit, shall be not more than one hundred and twenty-five feet.

(b) **Remoteness.** Where separate exits are required for a floor-area, they shall be placed as remote from each other as practicable.

(c) **Uniform Distribution.** Where more than two exits are required, they shall be distributed as uniformly as practicable within or around the floor-area, room or space they are to serve, to effect a rapid discharge of occupants.

(d) **Outlets.**

1. Every required stairway, except in dwellings, shall lead, either directly or through a passageway or hallway, to a street, or to an open space that communicates with a street.
2. In buildings more than two stories high above grade with roofs having a pitch of not more than one in four, at least one required stairway shall continue to the roof.
3. In buildings more than three stories high above grade, when there are two or more required stairways, at least two shall continue to the roof; provided that in case of roofs having a pitch exceeding one in four, such stairways shall be connected by a communicating hallway in the top story.

Section 6.96. Modification of Exit Requirements.

(a) **Auditoriums and Assembly Rooms.** In churches, Sunday schools and in assembly rooms not generally thrown open to the public and which do not contain more than two hundred seats or twelve hundred square feet of seat area, the Insurance Commissioner may allow exit and aisle areas less than prescribed in this chapter when he deems it advisable.

When a theatre, moving picture show, auditorium or assembly room is a part of a building, the type of construction governing the exit and aisle areas shall be based on the type of walls surrounding the same and the formula used shall be for the type wall least fire resistive. Example: If a theatre is a part of a building of ordinary construction and separated from the remainder of the building by a frame wall, then the exit and aisle area in such theatre shall be the same as required for a frame building. The same to apply in moving picture shows, auditoriums, and assembly rooms.

(b) **Special Exit Requirements for School Buildings.**

1. All school buildings over one story in height, except those of Class A or Class A′ construction, hereafter erected shall have the stairways and exits so constructed, arranged and located as to form, without the use of automatic or self-operating devices, a positive barrier to the rapid spread of heat, smoke and/or flame.
2. Exits for auditoriums and gymnasiums in school buildings shall, unless it is established to the satisfaction of the Insurance Commissioner that such auditorium or gymnasium will not be used for entertainment purposes, be of the same size and number as that required for theatres.

(c) **Churches.** Same as theatres except with the approval of the Insurance Commissioner the exit and aisle areas may be reduced one fourth or more if he deems it advisable.

(d) **Schools and Sunday Schools.** Note: Auditorium areas in such buildings must comply with requirements for auditoriums and assembly rooms. Plans for all school buildings of all types of construction and plans for Sunday school buildings, except those of not more than one story and accommodating not more than fifty children and teachers, shall be submitted to and approved by the Insurance Commissioner before any work of any kind is begun on such building.

Section 6.97. Special Requirements for Location of Exits of Hotels, Hospitals, Dormitories, Apartments, Flats and Other Buildings in Which Rooms are Rented for Living and Sleeping Purposes.

(a) All hotels, lodging houses, school dormitories, hospitals, sanatoriums, apartment houses, flats, tenement houses and all other buildings in which rooms are to be rented or leased or let or offered for rent, let or leased for living or sleeping purposes, hereafter constructed in this State shall be constructed so that the occupants of all rooms above the first floor shall have unobstructed access to two separate and distinct ways of egress extending from the uppermost floor to the ground, such ways of egress to be so arranged in reference to rooms that in case of fire on one stairway the other stairway can be reached by the occupant without his or her having to pass the stairway involved. Entrance to all such ways of egress aforementioned in this section shall be from corridors or hallways of not less than five feet in width, and in no case shall entrance to such ways of egress be through a room or closet, and where such building is, in the opinion of the Insurance Commissioner, of sufficient size to require more than two ways of egress, the standard established by this code shall be adhered to.

(b) Every hotel, lodging house, school dormitory, hospital, sanatorium, apartment house, flat, tenement house or other building in which rooms are rented, leased, let or offered for rent, leased or let for living or sleeping purposes, shall be provided with such additional ways of egress as the Insurance Commissioner shall deem practicable in order that the objects of this code may be accomplished and that existing dangers shall not be perpetuated.

(c) The requirements of the two preceding subsections shall not apply to buildings used as private dwellings, unless such private dwelling exceeds three stories in height and the location of stairways with reference to rooms shall not apply to buildings of Class A or Class A' construction.

B5 - PLUMBING FIXTURES

REGULATED BY NORTH CAROLINA BOARD OF HEALTH, NO NORTH CAROLINA STATE BUILDING CODE REQUIREMENTS

APPENDIX C

REPRINTS OF SELECTED PORTIONS OF THE NORTH CAROLINA STATE BUILDING CODE 1953 EDITION

C1 - DEFINITIONS

(a). Unless otherwise expressly stated, the following terms shall, for the purpose of this code, have the meaning indicated in this section.

(b). Words used in the present tense include the future; words in the masculine gender include the feminine and neuter; the singular number includes the plural and the plural the singular.

(c). Where terms are not defined in this section, they shall have their ordinarily accepted meanings or such as the context may imply.

Alley means any public space or thoroughfare less than 20 feet in width which has been dedicated or deeded for public use.

Alteration, as applied to a building or structure, means a change or rearrangement in the structural parts or in the exit facilities; or an enlargement, whether by extending on a side or by increasing in height; or the moving from one location or position to another; the term "alter" in its various moods and tenses and its participial forms, refers to the making of an alteration.

Amusement device means a mechanically operated device which is used to convey persons in any direction as a form of amusement.

Apartment means a room, or a suite of two or more rooms, in a residence building occupied as the home or residence of an individual, family or household.

Approved, as applied to a material, device or mode of construction, means approved by the city building inspector under the provisions of this code, or by other authority designated by law to give approval in the matter in question.

Area, as applied to a form of construction, means an uncovered subsurface space adjacent to a building.

Area, as applied to the dimensions of a building, means the maximum horizontal projected area of the building at grade.

ACI means American Concrete Institute.

ASA means the American Standards Association.

ASTM means the American Society for Testing Materials.

Automatic, as applied to a fire door or other opening protective, means normally held in an open position and automatically closed by a releasing

device that is actuated by abnormal high temperature or by a predetermined rate of rise in temperature.

Automatic fire alarm system means a system which automatically detects a fire condition and actuates a fire alarm signal device.

Basement means a story with 40 per cent or more of its cubical contents below finished grade.

Brick means a solid masonry unit having a shape approximating a rectangular prism, not larger than 12 by 4 by 4 inches. A brick may be made of burned clay or shale, of lime and sand, of cement and suitable aggregates, or of fire clay or other approved materials.

Building means a combination of materials to form a construction that is safe and stable, and adapted to permanent or continuous occupancy for public, institutional, residence, business or storage purposes; the term "building" shall be construed as if followed by the words "or part thereof." For the purposes of this code, each portion of a building separated from other portions by a fire wall shall be considered as a separate building.

Building line means the line, established by law, beyond which a building shall not extend, except as specifically provided by law.

Building official means the officer or other designated authority charged with the administration and enforcement of this code, or his duly authorized representative.

Concrete means a mixture of portland cement, aggregate and water, of such materials, proportions, and manipulation as to give specified results;

average concrete means a mixture of one part of portland cement and not more than 6 parts of aggregate proportioned by volume, with the necessary water;

controlled concrete means concrete where the materials are scientifically selected, graded and proportioned to give specified results;

reinforced concrete means a portland cement concrete in which steel is embedded in such a manner that the two materials act together in resisting forces.

Court means an open, uncovered and unoccupied space within the lot lines of a lot, and includes a yard.

Curb level means the elevation of the street grade as established in accordance with law;

referring to a building, it means the elevation at that point of the street grade that is opposite the center of the wall nearest to and facing the street;

referring to an excavation, it means the elevation at that point of the street grade which is nearest to the point of the excavation under consideration.

Dead load means the weight of walls, partitions, floors, roofs and all other permanent construction of a building.

Display sign means a structure that is arranged, intended, designed or used as an advertisement, announcement or direction; and includes a sign, sign screen, billboard and advertising devices of every kind.

Dwelling means a building occupied exclusively for residence purposes and having not more than two apartments, or as a boarding or rooming house serving not more than 5 persons with meals or sleeping accommodations or both.

Elevator means a device within or in connection with a building used for carrying persons or things upward or downward; and includes dumbwaiter and similar devices;

freight elevator means an elevator designed and used for the carrying of freight and such persons only as are necessary for its safe operation or the handling of freight carried by it;

passenger elevator means an elevator designed and used for carrying persons.

Fire door means a door and its assembly, so constructed and assembled in place as to give protection against the passage of fire.

Fire partition—see "Walls."

Fire resistance rating means the time in hours that the material or construction will withstand the standard fire exposure as determined by a fire test made in conformity with the "Standard Methods of Fire Tests of Building Construction and Materials," ASTME 119-47.

Fire retardant ceiling means a ceiling construction which has been proved by test as satisfactory for use as ceiling protection for a floor or roof construction which has a fire resistance rating of not less than one hour.

Fire retardant treated lumber means lumber which has been treated by a pressure impregnation process to give a flame spread classification of 50 or less according to the method for the "Fire Hazard Classification of Building Materials" of Underwriters' Laboratories, Inc., and which is shown to be so classified by a certificate or label issued by Underwriters' Laboratories, Inc.

Fire walls—see "Walls."

Freight elevator—see "Elevator."

Garage means a building, shed or enclosure, or a part thereof, in which a motor vehicle containing a flammable fluid in its fuel storage tank, is stored, housed, kept or repaired.

Gasoline service station means a structure, building, or premise or any portion thereof where a flammable fluid for retail supply to motor vehicles is stored, housed, or sold.

Grade, with reference to a building, means, when the curb level has been established, the mean elevation of the curb level opposite those walls that are located on, or parallel with and within 15 feet of, street lines; or, when the curb level has not been established, or all the walls of the building are more than 15 feet from street lines; "grade" means the mean elevation of the ground adjoining the building on all sides.

Gypsum mortar when used in the laying of unit construction means a mixture of one part neat gypsum and not more than three parts of clean, sharp, well-graded sand by weight.

Habitable room means a room occupied by one or more persons for living, eating or sleeping; and includes kitchens serving apartments or individual

households, but does not include bathrooms, toilet compartments, laundries, serving and storage pantries, corridors, basement and other spaces that are not used frequently or during extended periods.

Height as applied to a building, means the vertical distance from grade to the highest finished roof surface in the case of flat roofs, or to a point at the average height of roofs having a pitch of more than one foot in 4 1/2 feet; "height" of a building in stories does not include basements, except that in school buildings of ordinary, noncombustible or wood frame construction, the basement shall be deemed a story when used for purposes other than storage or heating.

height, as applied to a court, means the vertical distance from the level of the floor of the lowest story served by that court to the level under consideration;

height, as applied to a story means the vertical distance from top to top of two successive tiers of floor beams or finished floor surfaces;

height, as applied to a wall, means the vertical distance to the top measured from the foundation wall, or from a girder or other immediate support of such wall.

Hereafter means after the time that this code becomes effective.

Heretofore means before the time that this code becomes effective.

Hollow masonry unit means a masonry unit whose net cross-sectional area in any plane parallel to the bearing surface is less than 75 per cent of its gross cross-sectional area measured in the same plane.

Live load means all loads except dead load.

Lot means a portion or parcel of land considered as a unit, devoted to a certain use or occupied by a building or a group of buildings that are united by a common interest or use, and the customary accessories and open spaces belonging to the same.

Lot line means a line dividing one lot from another, or from a street or other public space.

Masonry means brick, stone, plain concrete, hollow block, solid block or other similar building units or materials, or combinations of them, bonded together with mortar. Reinforced concrete is not classed as masonry.

Multifamily house means a building occupied as the home or residence of individuals, families or households living independently of each other, of which three or more are doing cooking within their apartments; including tenement house, apartment house, flat.

Municipality means the governmental unit which has adopted this code under due legislative authority.

Noncombustible as applied to a building construction material means a material which, in the form in which it is used, falls in one of the following groups (a) through (d). No material shall be classed as noncombustible which is subject to increase in combustibility or flame spread rating beyond the limits herein established, through the effects of age, moisture or other atmospheric conditions as, for example, various types of treated wood. Flame spread rating

as used herein refers to rating obtained according to the method for fire hazard classification of Underwriters Laboratories, Inc. For data on such ratings see Underwriters' Laboratories Fire Protection Equipment List under the heading Building Materials—Hazard Classification (Fire) (40 U8).

(a) Materials no part of which will ignite and burn when subjected to fire. Examples asbestos fiber, brick, clay tile, concrete, glass, gypsum, iron, portland cement, slate, steel, stone.

(b) Materials having a structural base of noncombustible material, as defined in (a), with a surfacing not over 1/8-inch thick which has a flame spread rating not higher than 50. Examples: certain types of protected steel sheets, gypsum wall board.

(c) Materials made up of noncombustible material as defined in (a) together with combustible components in such form that cross-sections of the material in any plane present a similar composition, and having a surface flame spread rating not higher than 25 without evidence of continued progressive combustion. Examples: certain insulation materials as, blocks of cellular glass, boards of glass fiber, slabs of wood excelsior impregnated with portland cement.

(d) Materials, other than as described in (b), made up of layers with no layer having a surface flame spread rating higher than 25 without evidence of continued progressive combustion. Examples: certain sandwich type materials.

Occupied, as applied to a building, shall be construed as though followed by the words "or intended, arranged or designed to be occupied."

Owner includes his duly authorized agent or attorney, a purchaser, devisee, fiduciary, and a person having a vested or contingent interest in the property in question.

Passenger elevator—see "Elevator."

Pent house means an enclosed structure other than a roof structure, located on the roof, extending not more than twelve feet above a roof and used primarily for living or recreational accommodations.

Person includes corporation and copartnership as well as individual.

Place of assembly means a room or space in which provision is made for the seating of one hundred or more persons for religious, recreational, educational, political, social or amusement purposes or for the consumption of food or drink. Such room or space shall include any occupied connecting room or space in the same story, or in a story or stories above or below, where entrance is common to the rooms or spaces.

Prefabricated means composed of sections or panels fabricated prior to erection on the building foundation.

Repair means the replacement of existing work with the same kind of material used in the existing work not including additional work that would affect the structural safety of the building, or that would affect or change required exit facilities, or that would affect a vital element of an elevator, plumbing, gas piping, wiring or heating installation, or that would be in violation of a provision of law or ordinance.

Required means required by some provision of this code.

Roof means the roof slab or deck with its supporting members.

Roofing means the covering applied to the roof for weather resistance, fire resistance, or appearance.

Roof structure means a structure above the roof of any part of a building enclosing a stairway, tank, elevator machinery or ventilating apparatus, or such part of a shaft as extends above the roof and not housing living or recreational accommodations.

Self closing, as applied to a fire door or other opening protective, means normally closed and equipped with an approved device which will insure closing after having been opened for use.

Shaft means a vertical opening or passage through two or more floors of a building or through floors and roof.

Solid masonry means masonry consisting of solid masonry units laid contiguously with the joints between the units filled with mortar, or consisting of plain concrete.

Solid masonry unit means a masonry unit whose net cross-sectional area in every plane parallel to the bearing surface is 75 per cent or more of its gross cross-sectional area measured in the same plane.

Sprinklered means equipped with an approved automatic sprinkler system properly maintained.

Stairway means one or more flights of stairs and the necessary landings and platforms connecting them, to form a continuous and uninterrupted passage from one story to another in a building or structure.

Story means that part of a building comprised between a floor and the floor or roof next above. A mezzanine shall be considered a story if it exceeds 25 per cent of the area of the floor immediately below.

Street means any public thoroughfare, street, avenue, boulevard, park, lane, terrace, concourse or space 20 feet or more in width which has been dedicated or deeded to the public for public use.

Street line means a lot line dividing a lot from a street.

Structural clay tile means a hollow masonry unit composed of burned clay, shale, fireclay or mixtures thereof and having parallel cells.

Structure means a combination of materials to form a construction that is safe and stable; including among others, buildings, stadiums, gospel and circus tents, reviewing stands, platforms, stagings, observation towers, radio towers, water tanks and towers, trestles, piers, wharves, sheds, coal bins, fences and display signs; the term structure shall be construed as if followed by the words "or part thereof."

Walls:

bearing wall means a wall which supports any vertical load in addition to its own weight;

cavity wall means a wall built of masonry units or of plain concrete, or a combination of these materials, so arranged as to provide an air space within the

wall, and in which the inner and outer parts of the wall are tied together with metal ties;

curtain wall means a non-bearing wall between columns or piers and which is not supported by girders or beams;

faced wall means a wall in which the masonry facing and backing are so bonded as to exert common action under load;

fire partition means a partition constructed in accordance with section 918, for the purpose of restricting the spread of fire or to provide an area of refuge, but not necessarily continuous through all stories nor extended through the roof;

fire wall means a wall constructed in accordance with section 909 for the purpose of subdividing a building or separating buildings to restrict the spread of fire and which starts at the foundation and extends continuously through all stories to and above the roof, except where the roof is fireproof or semifireproof and the wall is carried up tightly against the under side of the roof slab;

foundation wall means a wall below the first floor extending below the adjacent ground level and serving as support for a wall, pier, column or other structural part of a building;

hollow wall of masonry means a wall built of masonry units so arranged as to provide an air space within the wall, and in which the inner and outer parts of the wall are bonded together with masonry units;

non-bearing wall means a wall which supports no load other than its own weight;

panel wall means a non-bearing wall built between columns or piers and wholly supported at each story;

party wall means a wall used or adapted for joint service between two buildings;

veneered wall means a wall having a facing which is not attached and bonded to the backing so as to form an integral part of the wall for purposes of load bearing and stability.

Writing includes printing and typewriting.

Written notice shall be considered to have been served if delivered in person to the individual or to the parties intended, or if delivered at or sent by registered mail to the last business address known to the party giving the notice.

Yard means a court that extends along the entire length of a lot line.

Zoning means the reservation of certain specified areas within a community or city for buildings and structures for certain purposes with other limitations such as height, lot coverage and other stipulated requirements.

C2 - TYPE OF CONSTRUCTION, HEIGHT, AND AREA

SECTION 301. CLASSIFICATION OF CONSTRUCTION.

1. Types designated. For the purposes of this code, construction as used in buildings shall be classified as follows:

(a). Fireproof Construction.
(b). Seimfireproof Construction.
(c). Heavy Timber Construction.
(d). Ordinary Construction.
(e). Noncombustible Construction.
(f). Wood Frame Construction.
(g). Unprotected Metal Construction.

Section 402

3. Schools, churches, colleges, assembly halls, dance halls, bowling alleys, and auditoriums over one story in height, shall have floors and structural members of not less than one-hour fire resistance.

SECTION 403. HEIGHT RESTRICTIONS.

1. New buildings. Except as may be otherwise provided in subsection 3 of this section, no building hereafter erected shall exceed in height the limits fixed by table 403.

2. Alterations. No building shall hereafter be altered so as to exceed the limits of height fixed by table 403.

3. Exceptions.

(a). For the purpose of this section, the following appurtenances shall not be deemed parts of buildings: church spires, tanks and their supports, roof structures, chimneys, signs attached to the building, radio masts, water cooling towers for air conditioning or other apparatus, and parapets that do not extend more than 4 feet above the roof surface at their point of contact.

(b). Outside the fire limits, public buildings, business buildings, or storage buildings may, in the discretion of the Commissioner of Insurance, be erected to greater heights than fixed by this section.

SECTION 404. AREA RESTRICTIONS.

1. New Buildings. Except as otherwise provided in subsection 4 of this section, the building area permitted without suitable subdivisions by fire walls shall be limited as indicated in Table 404.

2. Street. Under this section a street shall be deemed to include any avenue, boulevard, street, alley or lane, 20 feet or greater in width, or any court, parking space or yard, with direct connection to a street, and not less than 20 feet wide. Such court, parking space or yard shall be the property of the owner of the building and shall not be enclosed or roofed over.

3. Alteration. No building shall be hereafter altered so as to exceed in area in any story the limits fixed in this section.

4. Area Modification.

(a) *Area Increase for Sprinklers*

The allowable floor areas for business, industrial and storage buildings specified in Section 404 and in Table 404 may be increased by 100 per cent if the building is equipped throughout with automatic sprinklers, except that such increase shall not be permitted in buildings where, because of occupancy or conditions, sprinkler equipment is a requirement of the Code, or where in the opinion of the Insurance Commissioner the nature of the hazard involved is such that sprinkler equipment does not substantially reduce the fire hazard or where application of water may cause an explosion.

(b) *Area Increase for One-Hour Fire Resistance*

Where the interior of a building, including roof, floors over all usable spaces, and their supports, also walls and partitions, is provided with 1-hour fire protection that is not required by this code, the area limit specified in Sec. 404 and Table 404 may be increased by 33 1/3 per cent if the building is of ordinary or wood frame or unprotected metal construction and by 50 per cent if the building is of non-combustible construction.

(c) *Area Increase for Tobacco Warehouses*

Outside the fire limits the area between fire walls of one story tobacco storage and sales warehouses of non-combustible, ordinary, frame and unprotected metal construction may be increased as per the following table when separated on all sides by the following distances from the lot line or an existing building on the same lot and further provided the building is located at least one hundred feet from any fire district.

Distance	Area
75 Feet	25,000 Square Feet
100 Feet	100,000 Square Feet

All property in the required distance must be owned or controlled by the owner of the proposed building or in the form of established streets or alleys.

(d) *Area Increase for Buildings Remotely Located*

Outside the congested areas of the city, when a hazardous condition is not created thereby, the area of a one-story building used for business, storage or industrial occupancy, may be increased in excess of the areas fixed by this section in the discretion of the Commissioner of Insurance provided the following conditions are met:

1. Proper safeguards must be taken in connection with hazardous materials and processes (see Section 1504).
2. The building must be equipped with approved automatic sprinklers throughout.
3. The distance of travel to an exit or protected exitway passage from any part of the building cannot exceed that specified in Article VI. In such

buildings, sufficient exitways to accommodate all the occupants shall lead to the outside of the building on each of two sides or more.

4. Curtain boards or draft stops must be installed as required by enforcing authority.
5. Building must be surrounded on all sides by streets or public places of width not less than specified in the following table.

WIDTH OF SEPARATION

Type of Building	*Minimum Width of Separation*
Fireproof Construction	50 feet
Semi-Fireproof Construction	60 feet
Non-Combustible Construction	90 feet
Heavy Timber Construction	90 feet
Ordinary Construction	100 feet

TABLE 403—BUILDING HEIGHT LIMITS

See section 401 for height limits on wood frame construction and unprotected metal construction within the fire limits.
See section 402 for height limits for certain special occupancies.
See section 1702 for sprinkler requirements based on occupancy.
See section 403—8 (b).

CLASSIFICATION OF OCCUPANCY	FIRE-PROOF	SEMI-FIREPROOF	NONCOM-BUSTIBLE 2	NONCOM-BUSTIBLE 1	HEAVY TIMBER	ORDINARY	WOOD FRAME	UNPROTECTED METAL
Public	No Limit	75 Feet (Note A)	3 Stories 40 Feet (Note B)	3 Stories 40 Feet (Note B)	3 Stories 40 Feet	3 Stories 40 Feet (Note B)	1 Story 25 Feet	1 Story 25 Feet
Institutional	No Limit	75 Feet	2 Stories 35 Feet	2 Stories 35 Feet	2 Stories 35 Feet	2 Stories 35 Feet	1 Story 35 Feet	1 Story 35 Feet
			See section 402 for special occupancy requirements.					
Residence	No Limit	No Limit	3 Stories 45 Feet (Note C)	3 Stories 45 Feet (Note C)	75 Feet	3 Stories 45 Feet (Note C)	2 Stories 35 Feet (Note H)	2 Stories 35 Feet (Note H)
Business	No Limit	75 Feet (Note D)	4 Stories 50 Feet	4 Stories 50 Feet	75 Feet	4 Stories 50 Feet	2 Stories 35 Feet	2 Stories 35 Feet
Storage	No Limit (Note E)	6 Stories 75 Feet (Note F)	2 Stories 35 Feet	2 Stories 35 Feet	3 Stories 35 Feet (Note G)	2 Stories 35 Feet (Note G)	1 Story 25 Feet	1 Story 25 Feet

Industrial	No Limit	8 Stories 100 Feet (Note F)	3 Stories 35 Feet	3 Stories 35 Feet	3 Stories 35 Feet	2 Stories 35 Feet	1 Story 25 Feet	1 Story 25 Feet
			See section 403–8–(b) and Section 404–(d)					
Hazardous	Heights cannot be established due to various types of hazardous uses. Hazardous locations must be protected in accordance with good practice as recommended in Section 1504. (See section 403–8–(b) and section 404–(d).							

Note A. No limit if less than 100 persons above 75 feet

Note B. Churches: 2 Stories, 45 feet
Schools: 2 Stories

Note C. With 2 hour non-combustible first floor, height may be increased to 4 stories or 55 feet; in multi-family building with 2 hour noncombustible first floor and other floors of one hour fire resistance and with fire partitions sub-dividing floors into areas not exceeding 3500 square feet the height may be 5 stories or 65 feet.

Note D. Office buildings not limited.

Note E. Automatic sprinklers required when height exceeds 6 stories.

Note F. Automatic sprinklers required when height exceeds 4 stories.

Note G. Automatic sprinkler installation will allow height increase to 50 feet.

Note H. Dormitories: 1 story.

TABLE 404—AREA LIMITS PER FLOOR OF BUILDINGS IN SQUARE FEET

OCCUPANCY CLASSIFICATION	FIRE-PROOF	SEMI-FIREPROOF	NONCOM-BUSTIBLE 2	NONCOM-BUSTIBLE 1	HEAVY TIMBER	ORDINARY	WOOD FRAME	UNPROTECTED METAL
Public	No Limit	No Limit	(3) 6,500 (2) 8,000 (1) 10,000	(3) 7,500 (2) 10,000 (1) 15,000	(3) 7,500 (2) 10,000 (1) 15,000	(3) 6,500 (2) 8,000 (1) 10,000	(1) 4,000	(1) 4,000
Institutional	No Limit	No Limit	(2) 5,000 (1) 7,500	(2) 10,000 (1) 15,000	(2) 10,000 (1) 15,000	(2) 5,000 (1) 7,500	(1) 3,000	(1) 3,000
Residence	No Limit	No Limit	(3) 6,500 (2) 8,000 (1) 10,000	(3) 6,500 (2) 8,000 (1) 10,000	(3) 6,500 (2) 8,000 (1) 10,000	(3) 6,500 (2) 8,000 (1) 10,000	(2) 3,000 (1) 4,000	(2) 3,000 (1) 4,000
Business	No Limit	No Limit	(4) 6,000 (3) 7,500 (2) 7,500 *(1) 10,000	(4) 10,000 (3) 10,000 (2) 10,000 *(1) 15,000	(5) 10,000 (4) 10,000 (3) 15,000 (2) 15,000 *(1) 20,000	(4) 6,000 (3) 7,500 (2) 7,500 *(1) 10,000	(2) 3,000 *(1) 5,000	(2) 3,000 *(1) 5,000
Storage	No Limit	(6) 18,000 (5) 19,000 (4) 20,000 (3) 22,000 (2) 24,000 (1) 25,000	(2) 5,000 (1) 10,000	(3) 5,000 (2) 10,000 (1) 15,000	(3) 5,000 (2) 10,000 (1) 20,000	(2) 5,000 (1) 10,000	(1) 5,000	(1) 5,000

Industrial	No Limit	(8) 21,000 (7) 22,500 (6) 24,000 (5) 25,500 (4) 27,000 (3) 28,500 (2) 30,000 (1) No Limit	(2) 7,500 (1) 10,000	(3) 10,000 (2) 15,000 (1) 20,000	(3) 10,000 (2) 15,000 (1) 20,000	(2) 7,500 (1) 10,000	(1) 6,500	(1) 6,500
		See section 404–(d)						
Hazardous	Areas cannot be established due to various types of hazardous uses. Hazardous locations must be protected in accordance with good practice as recommended in Section 1504. See section 404–(d).							

*The limiting areas of this section for business, storage and industrial occupancies may be increased by 50 per cent when the building has frontage on two streets and by 100 per cent when it has frontage on three or more streets. The same allowance may be made when the building is not located on a street line, but is directly accessible to fire apparatus on two or more sides.

SECTION 701. FIREPROOF CONSTRUCTION.

1. General.

(a). All structural members shall be of approved noncombustible construction.

(b). No pipes, wires, cables or other service equipment shall be embedded in the required fireproofing of columns or other structural members.

SECTION 702. SEMIFIREPROOF CONSTRUCTION.

1. **General.**

(a). All structural members shall be of approved noncombustible construction.

(b). No pipes, wires, cables or other service equipment shall be embedded in the required fireproofing of columns or other structural members, nor shall they be between the required fireproofing and the member protected, except in the case of members protected by a fire resisting ceiling, and columns protected by fire resistive plaster encasement of the required fire resistance rating.

SECTION 703. HEAVY TIMBER CONSTRUCTION.

1. **Walls.**

(a). Exterior walls and all bearing walls shall be of masonry or of reinforced concrete or have a fire resistive rating of four hours.

(b). Exterior walls which are within 3 feet of a lot line along an adjoining area which is or may be built upon, or which are within 6 feet of another building of other than fireproof or semifireproof construction on the same lot, shall have a fire resistance rating of not less than 4 hours; except that where the total area of the buildings does not exceed 1 1/2 times the allowable area for any one of the buildings considered, such fire resistance rating shall not be required.

(c). Walls over openings shall be supported by masonry arches, or by lintels of steel or reinforced concrete. Lintels over openings more than 6 feet wide shall have a fire resistance rating of not less than 3 hours.

(d). All structural members supporting masonry or reinforced concrete walls shall have a fire resistance rating of not less than three hours.

SECTION 704. ORDINARY CONSTRUCTION.

1. **Definition.** Ordinary construction, as applied to buildings, means that in which exterior walls and bearing walls are of masonry or of reinforced concrete, and in which the structural members, including columns, floors and roof construction, are wholly or partly of wood of smaller dimensions than required for heavy timber construction, or of steel or iron not protected as required for semifireproof construction.

2. **Walls.**

(a). Exterior walls and all bearing walls shall be of masonry or of reinforced concrete or have fire resistive rating of 3 hours.

(b). Exterior walls which are within 3 feet of a lot line along an adjoining area which is or may be built upon or which are within 6 feet of another building of other than fireproof or semifireproof construction on the same lot, shall have a fire resistance rating of not less than 3 hours; except that where the total area of the building does not exceed 1 1/2 times the allowable area for any one of the buildings considered such fire resistance rating shall not be required.

SECTION 705. NONCOMBUSTIBLE CONSTRUCTION.

1. **Definition.** Noncombustible construction, as applied to buildings, means that in which all structural members, including floors, roofs and their supports, are of steel, iron, concrete, or of other noncombustible materials, having fire resistive rating as specified in Table 700, and in which the exterior walls are of noncombustible construction having a fire resistance rating as specified in Table 700.

SECTION 706. WOOD FRAME CONSTRUCTION.

1. **Definition.** Wood frame construction, as applied to buildings, means that in which walls and interior construction are wholly or partly of wood.

2. **Walls.**

(a). Framing for exterior walls shall be constructed to develop a strength and rigidity equivalent to wooden studding, not less than 2 by 4 inches, nominal dimension, spaced 16 inches on centers with the larger dimension perpendicular to the wall, and braced with sheathing, or diagonal bracing at the corners, to secure the necessary rigidity; except that in one-story buildings studs not over 10 feet in length may be spaced not to exceed 24 inches on centers.

(b). In buildings except private garages, an exterior wall which is less than 3 feet distant from the lot line along an adjoining area which is or may be built upon shall be of noncombustible construction having a fire resistance rating of not less than two hours; except that the material of the weather surface may be similar to that of other exterior walls of the building.

(c). An exterior wall which is less than 6 feet distant from a wall of another building of wood frame construction on the same lot, shall be of noncombustible construction having a fire resistance rating of not less than two hours; except that the material of the weather surface may be similar to that of other exterior walls of the building; and except that when the aggregate area of the two buildings does not exceed 1 1/2 times the limiting area fixed by this code for either building, such fire resistance rating shall not be required.

SECTION 707. UNPROTECTED METAL CONSTRUCTION.

Unprotected metal construction, as applied to buildings, means that in which the structural supports are unprotected metal and in which floors and roofs are of noncombustible construction, and the exterior walls are of noncombustible construction having a fire resistance rating of less than 2 hours.

TABLE 700. FIRE PROTECTION REQUIREMENTS

DESCRIPTION	FIRE-PROOF	SEMI-FIREPROOF	NONCOMBUSTIBLE 2	NONCOMBUSTIBLE 1	HEAVY TIMBER	ORDINARY	WOOD FRAME	UNPROTECTED METAL
Structural Parts	Non-comb.	Non-comb.	Non-comb.	Non-comb.	Wood	Wood	Wood	Non-comb.
Floors—Slabs, Beams	3	2	(I)	2 (I)	None Sec. 703	None (H) (I)	None (H) (I)	None (H) (I)
Roofs—Slabs, Beams, Girders	3	2	None (I)	None (I)	None Sec. 703	None	None	None
Roofs—High Above Floor	3	2 (E)	None	None	2" None Sec. 703	None	None	None
Columns—Supporting Floors	4	3	None (I)	2 (I)	8"x 8" or 1-HR (I)	None (I)	None (I)	None (I)
Columns—Supporting Roof Only	3	2	None	1	8"x8" or 1-HR	None	None	None
Girders—Supporting 1 Floor Only	4	3	None (I)	2	6"x10" or 1-HR	None (I)	None (I)	None (I)
Girders—Supporting More than 1 Floor	4	3	None (I)	2	6"x10" or 1-HR(I)	(I)	None (I)	None (I)
Trusses—Supporting Roof Only	3	2 (E)	None	None	4"x4" or 1-HR. (C)	None	None	None
Trusses—Supporting 1 Floor Only	3	2	None (I)	2	6"x6" or 1-HR	None (I)	None (I)	None (I)

Trusses—Supporting more Than One Floor	4	3	None (I)	2	6"x6" or 1-HR. (I)	None (I)	None (I)	None (I)
Ext. Walls—Load Bearing	4	4	2 N. C. (J)	4 (J)	4 N. C. (J)	3 N. C. (J) Sec. 704-2	None Sec. 706-2	None Sec. 706-2
Panel Walls—(0-10 Ft. Frome Line)	4	4	2 N. C. (J)	4 N. C. (J)	4 N. C. (J)	3 N. C. (J) Sec. 704-2	None Sec. 706-2	None Sec. 706-2
Panel Walls—(10-30 Ft. From Line)	3 (C) (D)	2 (C) (D)	2 N. C. (D) (J)	2 N. C. (D) (J)	2 N. C. (D) (J)	2 N. C. (D) (J)	None Sec. 706-2	None Sec. 706-2
Panel Walls—(Over 30 Ft. From Line)	2 (D)	1 (D)	(D) N.C.	1 N. C. (D)	1 N. C.	1 N. C.	None	None
Party Walls	(A)	(A)	(A)	(A)	(A)	(A)	(A)	(A)
Fire Walls	(A)	(A)	(A)	(A)	(A) (B)	(A) (B)	(A) (B)	(A) (B)
Penthouses	(F)	(F)	(F)	(F)	(F)	(F)	None	None
Partitions—Load Bearing	3 N. C. (I)	2 N. C. (I)	N.C. (G) (I)	N. C. 2 (G) (I)	3 (I)	(I)	(I)	(I)
Partitions—Non-Bearing	N. C. 1 (G)	1 (G)	(G)	1 (G)	(G)	(G)	(G)	(G)

Numerals refer to fire resistive rating of structural parts in hours as established by Standard Fire Test. (See appendix A of National Board of Fire Underwriters).

Panel Walls are non-load-bearing exterior walls supported at every floor level. For reference not (A) (B) (C), etc. See following notes.

REFERENCE NOTES FOR TABLE 700

Notes (A), (B), (C), etc., refer to the corresponding designations in table 700 and modify the requirements of that table as indicated.

Supplementary fire protection requirements related to the size and use of the building are given in tables 403 and 404; special requirements for fire districts are in Sec. 401 and note (J).

"Non-comb." or "N. C." designates that the construction shall be of non-combustible material.

"None" designates that no fire protection is required.

(A) For fire walls and party walls, see Sec. 909.

(B) For height wall extends above roof, see Sections 909-6 and 923.

(C) For panel wall used as fire wall, see Sec. 909-5.

(D) The distance "from line" refers to the distance of the wall from the line which it faces; the distance from the opposite building line on a street, or from common property line, or from interior lot line or from an existing building on the same lot.

(E) For omission of fire protection of trusses, see Section 702-6.

(F) For Penthouses and roof structures, see Section 921.

(G) For partitions enclosing vertical openings, see Section 921.
For enclosures and protection of elevators and moving stairways, see Section 604.
For partitions enclosing exit ways see Section 609.
For separation of mixed occupancies, see Section 300-2.
For construction of Non-load bearing partitions, see Section 924.
For fire partitions, see Section 918.
For basement partitions, see Section 925.

(H) For fire retardant ceilings of basements, see Section 926.

(I) In buildings over 1-story in height, structural members which support masonry walls shall have same fire protection rating as wall.

(J) Inside the fire district, all exterior walls, except walls facing street of 30 feet or more in width shall be constructed of solid masonry not less than 12 inches in thickness and in conformance with section 907.

C4 - MINIMUM NUMBER OF EXITS

601. GENERAL.

1. **Kind of Exits.** Exits shall consist of interior stairways, fire towers, horizontal exits, exterior stairways, passageways or doorways, constructed and arranged as specified in this article. Exterior spiral fire escapes, tubular fire escapes and chute fire escapes may, under special provisions, be installed on certain types of buildings.

2. **Number of Occupants.**

(a) The dimensions and capacity of exits shall be proportioned to the number of persons to be accommodated.

(b) The number of persons used in determining the necessary exit facilities of any given floor shall be the actual number to occupy the floor, but in no case less than that determined by dividing the following areas per person into the gross area (no deduction for corridors, closets or other subdivisions) within the perimeter of the building serving each particular occupancy at the given floor level; for occupancies not specified the building official shall, by rule, establish the ratio to be used:

Kind or use of building	*Number of square feet of floor space allowed per person*
Dance halls, lodge rooms and places of assembly	6 to 10 square feet per person
Classrooms in schools and colleges, rooms in public buildings not otherwise provided for	25 square feet per person
Stores, markets, lodging houses, and reading rooms	25 square feet per person
Factories and workrooms	35-100 square feet per person
Offices and showrooms	50 square feet per person
Hospitals, asylums, hotels and other residence buildings	100 square feet per person
Warehouses and garages	150 square feet per person

SECTION 602. NUMBER OF EXITS.

(a) **From Rooms.** Every room having an occupancy of more than seventy-five persons shall have at least two doorways, remote from each other, leading to an exit or exits.

(b) **From Floor Areas.** Every floor-area occupied by more than seventy-five persons, shall have at least two means of exit.

(c) **From Floor Areas.** Every story shall have at least one interior stairway or fire tower connected thereto. Every such story shall have at least one additional exit when it exceeds two thousand five hundred square feet in area.

(d) **From Places of Assembly.** In buildings occupied as places of assembly for seventy-five or more persons for recreation or amusement, each and every room, gallery, tier or other space, where such assembly occurs shall have direct access to separate and independent exits as follows: not less than two exits when six hundred persons or less are accommodated in such room, gallery, tier or other space; not less than three exits when more than six hundred but not more than one thousand persons are accommodated; and not less than four exits when more than one thousand persons are accommodated.

(e) **From Theatres, etc.** Exits in every theatre, opera-house, moving picture show, and other like places of public amusement, including dance halls and buildings in which boxing matches, wrestling matches and other forms of athletic contests, matches and engagements are given, held or performed, shall be so arranged and located that two-thirds of all occupants of such building (allowing six square feet of floor area for each occupant) may leave such building via either side of such building, either end of such building or either side and end of such building and shall be of sufficient number to allow a number equal to two-thirds of all occupants of such building (allowing six square feet of floor area for each occupant) traveling at the rate of fourteen persons per minute per lineal foot of exit area to leave, via either side of such building, either end of such building or either end and side of such building in from

4 to 6 minutes when building is of Fireproof Construction
3 to 4 minutes when building is of Semifireproof Construction
2 to 3 minutes when building is of Heavy Timber Construction
Ordinary Construction
Noncombustible Construction
1 to 2 minutes when building is of Unprotected Metal Construction
Wood Frame Construction

The following formula applies

$$W = \frac{2LB}{3EMS}$$

in which:
L indicates length of room
B indicates breadth of room
S indicates sq. ft. required per person
E indicates 14 persons per minute per lineal foot
M indicates number of minutes req'd for class of construction
W indicates lineal ft. of exits required for 2/3 rds. of room.

Example: For 90 ft x 70 ft seating area of an auditorium of Semifireproof Construction

$$W = \frac{2LB}{3EMS} = \frac{2 \times 90 \times 70}{3 \times 14 \times 3.5 \times 6} = \frac{12{,}600}{882} =$$

14.29 lin. ft. of exit width in any 2/3 area of building

In order that the objects of this requirement, which is primarily a safety to life requirement, will be complied with, any theatre, opera-house, auditorium, assembly hall, moving picture show, or other building in which public entertainment is shown, given, produced or performed in which special scenery is used or in which special acts or performances are given, shown, produced or performed, shall, if not properly equipped with approved proscenium wall and approved fire-curtain, for the purpose of affording safety in keeping with the objects of this requirement, be deemed a building of Ordinary Construction.

And it is further provided that in order to safeguard the public from the dangers of fire and other contingencies arising and resulting in places of this kind, to see that the provisions of this law are complied with, and save the owner or owners from unnecessary confusion and expense, plans for all theatres, opera-houses, moving picture shows, and other like places of amusement to be hereafter erected shall be submitted to and approved as to the safety of the building and the occupants in case of fire, by the Insurance Commissioner before work is begun on the building. This requirement is to apply also when and/or where any building now standing or part thereof is to be used as a theatre, opera-house, moving picture show or other like place of amusement.

(f). **Fire Towers Required.** In buildings exceeding sixty feet in height except office buildings of light occupancy at least one stairway shall be a fire tower; provided that in sprinklered buildings in which two or more stairways conforming to the requirements of this chapter are provided, such fire tower shall not be required unless the building exceeds one hundred feet in height.

SECTION 603. LOCATION.

(a) **Distance to Exits.** Exits shall be so located that no point in a floor-area, room or space served by them is more than 100 feet distant from an exit, measured along the line of travel; except that when a floor-area is subdivided into smaller areas, such as rooms in hotels and office buildings, the distance from the door of any room, along an unobstructed hallway, to an exit, shall be not more than one hundred and twenty-five feet. Hallways above the first story shall not extend beyond an exit as a dead end more than 50 feet except where the building is of fireproof construction, or semifireproof construction, or the building is sprinklered, the above distances may be increased by 50 per cent. (See Section 612 (b) 1, and Section 613 for special occupancy.)

(b) **Remoteness.** Where separate exits are required for a floor-area, they shall be placed as remote from each other as practicable.

(c) **Uniform Distribution.** Where more than two exits are required, they shall be distributed as uniformly as practicable within or around the floor-area, room or space they are to serve, to effect a rapid discharge of occupants.

(d) **Outlets.**

1. Every required stairway, except in dwellings, shall lead either directly or through a passageway or hallway, to a street, or to an open space that communicates with a street.

2. In buildings more than two stories high above grade with roofs having a pitch of not more than one in four, at least one required stairway shall continue to the roof.

3. In buildings more than three stories high above grade, when there are two or more required stairways, at least two shall continue to the roof; provided that in case of roofs having a pitch exceeding one in four, such stairways shall be connected by a communicating hallway in the top story.

SECTION 612. MODIFICATION OF EXIT REQUIREMENTS.

(a) **Auditoriums and Assembly Rooms.** In churches, Sunday schools and in assembly rooms not generally thrown open to the public and which do not contain more than two hundred seats or twelve hundred square feet of seat area, the Insurance Commissioner may allow exit and aisle areas less than prescribed in this article when he deems it advisable.

When a theatre, moving picture show, auditorium or assembly room is a part of a building, the type of construction governing the exit and aisle areas shall be based on the type of walls surrounding the same and the formula used shall be for the type wall least fire resistive. Example: If a theatre is a part of a building of ordinary construction and separated from the remainder of the building by a frame wall, then the exit and aisle area in such theatre shall be the same as required for a frame building. The same to apply in moving picture shows, auditoriums, and assembly rooms.

(b) **Special Exit Requirements for School Buildings and Sunday School Buildings.**

1. All school buildings and Sunday School buildings over one story in height shall have two means of egress so located with reference to rooms that in case of fire on one stairway, the other stairway can be reached by the occupant without his or her having to pass the stairway involved. In fireproof and semifireproof construction the maximum dead end distance of any corridor may be 25 feet, if in the opinion of the Insurance Commissioner life safety is not endangered thereby.

2. All school buildings over one story in height, except those of Fireproof or Semi-fireproof construction, hereafter erected shall have the stairways and exits so constructed, arranged and located as to form, without the use of automatic or self-operating devices, a positive barrier to the rapid spread of heat, smoke and/or flame. All stairways in school buildings over one story in height of fireproof or semifireproof construction shall be enclosed with noncombustible partition having a fire resistance of not less than one hour.

3. Exits for auditoriums and gymnasiums in school buildings shall, unless it is established to the satisfaction of the Insurance Commissioner that such auditorium or gymnasium will not be used for entertainment purposes, be of the same size and number as that required for theatres.

(c) **Churches.** Same as theatres except with the approval of the Insurance Commissioner the exit and aisles may be reduced one fourth or more if he deems it advisable.

(d) **Schools and Sunday Schools.** Note: Auditorium areas in such buildings must comply with requirements for auditoriums and assembly rooms. Plans for all school buildings of all types of construction and plans for Sunday school buildings,

except those of not more than one story and accommodating not more than fifty children and teachers, shall be submitted to and approved by the Insurance Commissioner before work of any kind is begun on such building.

SECTION 613. SPECIAL REQUIREMENTS FOR LOCATION OF EXITS OF HOTELS, HOSPITALS, DORMITORIES, APARTMENTS, FLATS AND OTHER BUILDINGS IN WHICH ROOMS ARE RENTED FOR LIVING AND SLEEPING PURPOSES.

(a) All hotels, lodging houses, school dormitories, hospitals, sanatoriums, apartment houses, flats, tenement houses and all other buildings in which rooms are to be rented or leased or let or offered for rent, let or leased for living or sleeping purposes, hereafter constructed in this State shall be constructed so that the occupants of all rooms above the first floor shall have unobstructed access to two separate and distinct ways of egress extending from the uppermost floor to the ground, such ways of egress to be so arranged in reference to rooms that in case of fire on one stairway the other stairway can be reached by the occupant without his or her having to pass the stairway involved. Entrance to all such ways of egress aforementioned in this section shall be from corridors or hallways of not less than five feet in width, and in no case shall entrance to such ways of egress be through a room or closet, and where such building is, in the opinion of the Insurance Commissioner, of sufficient size to require more than two ways of egress, the standard established by this code shall be adhered to.

(b) Every hotel, lodging house, school dormitory, hospital, sanatorium, apartment house, flat, tenement house or other building in which rooms are rented, leased, let or offered for rent, leased or let for living or sleeping purposes, shall be provided with such additional ways of egress as the Insurance Commissioner shall deem practicable in order that the objects of this code may be accomplished and that existing danger shall not be perpetuated.

(c) The requirements of the two preceding subsections shall not apply to buildings used as private dwellings, unless such private dwelling exceeds three stories in height. In fireproof and semi-fireproof construction the maximum dead end distance of any corridor may be 25 feet, if in the opinion of the Insurance Commissioner life safety is not endangered thereby.

C5 - PLUMBING FIXTURES

REGULATED BY NORTH CAROLINA BOARD OF HEALTH, NO NORTH CAROLINA STATE BUILDING CODE REQUIREMENTS.

APPENDIX D

REPRINTS OF SELECTED PORTIONS OF THE NORTH CAROLINA STATE BUILDING CODE 1958 EDITION

D1 - DEFINITIONS

Section 200. DEFINITIONS.

(a). Unless otherwise expressly stated, the following terms shall, for the purpose of this code, have the meaning indicated in this section.

(b). Words used in the present tense include the future; words in the masculine gender include the feminine and neuter; the singular number includes the plural and the plural the singular.

(c). Where terms are not defined in this section, they shall have their ordinarily accepted meanings or such as the context may imply.

Alley means any public space or thoroughfare less than 20 feet in width which has been dedicated or deeded for public use.

Alteration, as applied to a building or structure, means a change or rearrangement in the structural parts or in the exit facilities; or an enlargement, whether by extending on a side or by increasing in height; or the moving from one location or position to another; the term "alter" in its various moods and tenses and its participal forms, refers to the making of an alteration.

Amusement device means a mechanically operated device which is used to convey persons in any direction as a form of amusement.

Apartment means a room, or a suite of two or more rooms, in a residence building occupied as the home or residence of an individual, family or household.

Approved, as applied to a material, device or mode of construction, means approved by the city building inspector under the provisions of this code, or by other authority designated by law to give approval in the matter in question.

Area, as applied to a form of construction, means an uncovered subsurface space adjacent to a building.

Area, as applied to the dimensions of a building, means the maximum horizontal projected area of the building at grade.

ACI means American Concrete Institute.

ASA means the American Standards Association.

ASTM means the American Society for Testing Materials.

Automatic, as applied to a fire door or other opening protective, means normally held in an open position and automatically closed by a releasing device that is actuated by abnormal high temperature or by a predetermined rate of rise in temperature.

Automatic fire alarm system means a system which automatically detects a fire condition and actuates a fire alarm signal device.

Basement means a story with 40 per cent or more of its cubical contents below finished grade.

Brick means a solid masonry unit having a shape approximating a rectangular prism, not larger than 12 by 4 by 4 inches. A brick may be made of burned clay or shale, of lime and sand, of cement and suitable aggregates, or of fire clay or other approved materials.

Building means a combination of materials to form a construction that is safe and stable, and adapted to permanent or continuous occupancy for public, institutional, residence, business or storage purposes; the term "building" shall be construed as if followed by the words "or part thereof." For the purposes of this code, each portion of a building separated from other portions by a fire wall shall be considered as a separate building.

Building line means the line, established by law, beyond which a building shall not extend, except as specifically provided by law.

Building inspector means the officer or other designated authority charged with administration and enforcement of this code, or his duly authorized representative.

Concrete means a mixture of portland cement, aggregate and water, of such materials, proportions, and manipulation as to give specified results;

average concrete means a mixture of one part of portland cement and not more than 6 parts of aggregate proportioned by volume, with the necessary water;

controlled concrete means concrete where the materials are scientifically selected, graded and proportioned to give specified results;

reinforced concrete means a portland cement concrete in which steel is embedded in such a manner that the two materials act together in resisting forces.

Court means an open, uncovered and unoccupied space within the lot lines of a lot, and includes a yard.

Curb level means the elevation of the street grade as established in accordance with law;

referring to a building, it means the elevation at that point of the street grade that is opposite the center of the wall nearest to and facing the street line;

referring to an excavation, it means the elevation at that point of the street grade which is nearest to the point of the excavation under consideration.

Dead load means the weight of walls, partitions, floors, roofs and all other permanent construction of a building.

Display sign means a structure that is arranged, intended, designed or used as an advertisement, announcement or direction; and includes a sign, sign screen, billboard and advertising devices of every kind.

Dwelling means a building occupied exclusively for residence purposes and having not more than two apartments, or as a boarding or rooming house serving not more than 5 persons with meals or sleeping accommodations or both.

Elevator means a device within or in connection with a building used for carrying persons or things upward or downward; and includes dumbwaiter and similar devices;

freight elevator means an elevator designed and used for the carrying of freight and such persons only as are necessary for its safe operation or the handling of freight carried by it;

passenger elevator means an elevator designed and used for carrying persons.

Fire door means a door and its assembly, so constructed and assembled in place as to give protection against the passage of fire.

Fire partition—see "Walls."

Fire resistance rating means the time in hours that the material or construction will withstand the standard fire exposure as determined by a fire test made in conformity with the "Standard Methods of Fire Tests of Building Construction and Materials," ASTM E 119-47.

Fire retardant ceiling means a ceiling construction which has been proved by test as satisfactory for use as ceiling protection for a floor or roof construction which has a fire resistance rating of not less than one hour.

Fire retardant treated lumber means lumber which has been treated by a pressure impregnation process to give a flame spread classification of 50 or less according to the method for the "Fire Hazard Classification of Building Materials" of Underwriters' Laboratories, Inc., and which is shown to be so classified by a certificate or label issued by Underwriters' Laboratories, Inc.

Fire walls—see "Wall."

Freight elevtor—see "Elevator."

Garage means a building, shed or enclosure, or a part thereof, in which a motor vehicle containing a flammable fluid in its fuel storage tank, is stored, housed, kept or repaired.

Gasoline service station means a structure, building or premise or any portion thereof where a flammable fluid for retail supply to motor vehicles is stored, housed, or sold.

Grade, with reference to a building, means, when the curb level has been established, the mean elevation of the curb level opposite those walls that are located on, or parallel with and within 15 feet of, street lines; or, when the curb level has not been established, or all the walls of the building are more than 15 feet from street lines; "grade" means the mean elevation of the ground adjoining the building on all sides.

Gypsum mortar when used in the laying of unit construction means a mixture of one part neat gypsum and not more than three parts of clean, sharp, well-graded sand by weight.

Habitable room means a room occupied by one or more persons for living, eating or sleeping; and includes kitchens serving apartments or individual households, but does not include bathrooms, toilet compartments, laundries, serving and storage pantries, corridors, basement and other spaces that are not used frequently or during extended periods.

Height as applied to a building, means the vertical distance from grade to the highest finished roof surface in the case of flat roofs, or to a point at the average heigh of roofs having a pitch of more than one foot in 4 1/2 feet; "height" of a building in stories does not include basements, except that in school buildings of ordinary, noncombustible or wood frame construction, the basement shall be deemed a story when used for purposes other than storage or heating.

height, as applied to a court, means the vertical distance from the level of the floor of the lowest story served by that court to the level under consideration;

height, as applied to a story means the vertical distance from top to top of two successive tiers of floor beams or finished floor surfaces;

height, as applied to a wall, means the vertical distance to the top measured from the foundation wall, or from a girder or other immediate support of such wall.

Hereafter means after the time that this code becomes effective.

Heretofore means before the time that this code becomes effective.

Hollow masonry unit means a masonry unit whose net cross-sectional area in any plane parallel to the bearing surface is less than 75 per cent of its gross cross-sectional area measured in the same plane.

Live load means all loads except dead loads.

Lot means a portion or parcel of land considered as a unit, devoted to a certain use or occupied by a building or a group of buildings that are united by a common interest or use, and the customary accessories and open spaces belonging to the same.

Lot line means a line dividing one lot from another, or from a street or other public space.

Masonry means brick, stone, plain concrete, hollow block, solid block or other similar building units or materials, or combinations of them, bonded together with mortar. Reinforced concrete is not classed as masonry.

Multifamily house means a building occupied as the home or residence of individuals, families or households living independently of each other, of which three or more are doing cooking within their apartments; including tenement house, apartment house, flat.

Municipality means a governmental unit under due legislative authority.

Noncombustible as applied to a building construction material means a material which, in the form in which it is used, falls in one of the following groups (a) through (d). No material shall be classed as noncombustible which is subject to

increase in combustibility or flame spread rating beyond the limits herein established, through the effects of age, moisture or other atmospheric conditions as, for example, various types of treated wood. Flame spread rating as used herein refers to rating obtained according to the method for fire hazard classification of Underwriters Laboratories, Inc. For data on such ratings see Underwriters' Laboratories Fire Protection Equipment List under the heading Building Materials—Hazard Classification (Fire) (40 U8).

(a) Materials no part of which will ignite and burn when subjected to fire. Examples; asbestos fiber, brick, clay tile, concrete, glass, gypsum, iron, portland cement, slate, steel, stone.

(b) Materials having a structural base of noncombustible material, as defined in (a), with a surfacing not over 1/8-inch thick which has a flame spread rating not higher than 50. Examples: certain types of protected steel sheets, gypsum wall board.

(c) Materials made up of noncombustible material as defined in (a) together with combustible components in such form that cross-sections of the material in any plane present a similar composition, and having a surface flame spread rating not higher than 25 without evidence of continued progressive combustion. Examples: certain insulation materials as, blocks of cellular glass, boards of glass fiber, slabs of wood excelsior impregnated with portland cement.

(d) Materials, other than as described in (b), made up of layers with no layer having a surface flame spread rating higher than 25 without evidence of continued progressive combustion. Examples: certain sandwich type materials.

Occupied, as applied to a building, shall be construed as though followed by the words "or intended, arranged or designed to be occupied."

Owner includes his duly authorized agent or attorney, a purchaser, devisee, fiduciary, and a person having a vested or contingent interest in the property in question.

Passenger elevator—see "Élevator."

Pent house means an enclosed structure other than a roof structure, located on the roof, extending not more than twelve feet above a roof and used primarily for living or recreational accommodations.

Person includes corporation and copartnership as well as individual.

Place of assembly means a room or space in which provision is made for the seating of one hundred or more persons for religious, recreational, educational, political, social or amusement purposes or for the consumption of food or drink. Such room or space shall include any occupied connecting room or space in the same story, or in a story or stories above or below, where entrance is common to the rooms or spaces.

Prefabricated means composed of sections or panels fabricated prior to erection on the building foundation.

Repair means the replacement of existing work with the same kind of material used in the existing work not including additional work that would affect the structural safety of the buildling, or that would affect or change required exit

facilities, or that would affect a vital element of an elevator, plumbing, gas piping, wiring or heating installation, or that would be in violation of provision of law or ordinance.

Required means required by some provision of this code.

Roof means the roof slab or deck with its supporting member.

Roofing means the covering applied to the roof for weather resistance, fire resistance, or appearance.

Roof structure means a structure above the roof of any part of a building enclosing a stairway, tank, elevator machinery or ventilating apparatus, or such part of a shaft as extends above the roof and not housing living or recreational accommodations.

Self closing, as applied to a fire door or other opening protective, means normally closed and equipped with an approved device which will insure closing after haivng been opened for use.

Shaft means a vertical opening or passage through two or more floors of a building or through floors and roof.

Solid masonry means masonry consisting of solid masonry units laid contiguously with the joints between the units filled with mortar, or consisting of plain concrete.

Solid masonry unit means a masonry unit whose net cross-sectional area in every plane parallel to the bearing surface is 75 per cent or more of its gross cross-sectional area measured in the same plane.

Sprinklered means equipped with an approved automatic sprinkler system properly maintained.

Stairway means one or more flights of stairs and the necessary landings and platforms connecting them, to form a continuous and uninterrupted passage from one story to another in a building or structure.

Story means that part of a building comprised between a floor and the floor or roof next above. A mezzanine shall be considered a story if it exceeds 25 per cent of the area of the floor immediately below.

Street means any public thoroughfare, street, avenue, boulevard, park, lane, terrace, concourse or space 20 feet or more in width which has been dedicated or deeded to the public for public use.

Street line means a lot line dividing a lot from a street.

Structural clay tile means a hollow masonry unit composed of burned clay, shale, fireclay or mixtures thereof and having parallel cells.

Structure means a combination of materials to form a construction that is safe and stable; including among others, buildings, stadiums, gospel and circus tents, reviewing stands, platforms, stagings, observation towers, radio towers, water tanks and towers, trestles, piers, wharves, sheds, coal bins, fences and display signs; the term structure shall be construed as if followed by the words "or part thereof."

Walls:

bearing wall means a wall which supports any vertical load in addition to its own weight;

cavity wall means a wall built of masonry units or of plain concrete, or a combination of these materials, so arranged as to provide an air space within the wall, and in which the inner and outer parts of the wall are tied together with metal ties;

curtain wall means a non-bearing wall between columns or piers and which is not supported by girders or beams;

faced wall means a wall in which the masonry facing and backing are so bonded as to exert common action under load;

fire partition means a partition constructed in accordance with section 918, for the purpose of restricting the spread of fire or to provide an area of refuge, but not necessarily continuous through all stories nor extended through the roof;

fire wall means a wall constructed in accordance with section 909 for the purpose of subdividing a building or separating buildings to restrict the spread of fire and which starts at the foundation and extends continuously through all stories to and above the roof, except where the roof is fireproof or semifireproof and the wall is carried up tightly against the under side of the roof slab;

foundation wall means a wall below the first floor extending below the adjacent ground level and serving as support for a wall, pier, column or other structural part of a building;

hollow wall of masonry means a wall built of masonry units so arranged as to provide an air space within the wall, and in which the inner and outer parts of the wall are bonded together with masonry units;

non-bearing wall means a wall which supports no load other than its own weight;

panel wall means a non-bearing wall built between columns or piers and wholly supported at each story;

party wall means a wall used or adapted for joint service between two buildings;

veneered wall means a wall having a facing which is not attached and bonded to the backing so as to form an integral part of the wall for purposes of load bearing and stability.

Writing includes printing and typewriting.

Written notice shall be considered to have been served if delivered in person to the individual or to the parties intended, or if delivered at or sent by registered mail to the last business address known to the party giving the notice.

Yard means a court that extends along the entire length of a lot line.

Zoning means the reservation of certain specified areas within a community or city for buildings and structures for certain purposes with other limitations such as height, lot coverage and other stipulated requirements.

D2 - TYPE OF CONSTRUCTION, HEIGHT, AND AREA

SECTION 301. CLASSIFICATION OF CONSTRUCTION.

1. Types designated. For the purposes of this code, construction as used in buildings shall be classified as follows:

(a). Fireproof Construction.
(b). Semifireproof Construction.
(c). Heavy Timber Construction.
(d). Ordinary Construction.
(e). Noncombustible Construction.
(f). Wood Frame Construction.
(g). Unprotected Metal Construction.

SECTION 402. SPECIAL OCCUPANCY REQUIREMENTS.

3. Schools, churches, colleges, assembly halls, dance halls, bowling alleys, and auditoriums over one story in height, shall have floors and structural members of not less than one-hour fire resistance.

SECTION 403. HEIGHT RESTRICTIONS.

1. New buildings. Except as may be otherwise provided in subsection 3 of this section, no building hereafter erected shall exceed in height the limits fixed by table 403.

2. Alterations. No building shall hereafter be altered so as to exceed the limits of height fixed by table 403.

3. Exceptions.

(a). For the purpose of this section, the following appurtenances shall not be deemed parts of buildings: church spires, tanks and their supports, roof structures, chimneys, signs attached to the building, radio masts, water cooling towers for air conditioning or other apparatus, and parapets that do not extend more than 4 feet above the roof surface at their point of contact.

(b). Outside the fire limits, public buildings, business buildings, or storage buildings may, in the discretion of the Commissioner of Insurance, be erected to greater heights than fixed by this section.

SECTION 404. AREA RESTRICTIONS.

1. New Buildings. Except as otherwise provided in subsection 4 of this section, the building area permitted without suitable subdivisions by fire walls shall be limited as indicated in Table 404.

2. Street. Under this section a street shall be deemed to include any avenue, boulevard, street, alley or lane, 20 feet or greater in width, or any court, parking space or yard, with direct connection to a street, and not less than 20 feet wide. Such court, parking space or yard shall be the property of the owner of the building and shall not be enclosed or roofed over.

3. Alteration. No building shall be hereafter altered so as to exeed in area in any story the limits fixed in this section.

4. Area Modification.

(a) *Area Increase for Sprinklers*

The allowable floor areas for business, industrial and storage buildings specified in Section 404 and in Table 404 may be increased by 100 per cent if the building is equipped throughout with automatic sprinklers, except that such increse shall not be permitted in buildings where, because of occupancy or conditions, sprinkler equipment is a requirement of the Code, or where in the opinion of the Insurance Commissioner the nature of the hazard involved is such that sprinkler equipment does not substantially reduce the fire hazard or where application of water may cause an explosion.

(b) *Area Increase for One-Hour Fire Resistance*

Where the interior of a building, including roof, floors over all usable spaces, and their supports, also walls and partitions, is provided with 1-hour fire protection the area limit specified in Table 404 may be increased by 33 1/3 per cent if the building is of ordinary or wood frame or unprotected metal construction and by 50 per cent if the building is of non-combustible construction.

(c) *Area Increase for Tobacco Warehouses*

Outside the fire limits the area between fire walls of one story tobacco storage and sales warehouses of non-combustible, ordinary, frame and unprotected metal construction may be increased as per the following table when separated on all sides by the following distances from the lot line or an existing building on the same lot and further provided the building is located at least one hundred feet from the district.

Distance	Area
75 Feet	25,000 Square Feet
100 Feet	100,000 Square Feet

All property in the required distance must be owned or controlled by the owner of the proposed building or in the form of established streets or alleys.

(d) *Area Increase for Buildings Remotely Located*

Outside the congested areas of the city, when a hazardous condition is not created thereby, the area of a one-story building used for business, storage or industrial occupancy, may be increased in excess of the areas fixed by this section in the discretion of the Commissioner of Insurance provided the following conditions are met:

1. Proper safeguards must be taken in connection with hazardous materials and processes (see Section 1504).
2. The building must be equipped with approved automatic sprinklers throughout.
3. The distance of travel to an exit or protected exitway passage from any part of the building cannot exceed that specified in Article VI. In such buildings, sufficient exitways to accommodate all the occupants shall lead to the outside of the building on each of two sides or more.
4. Curtain boards or draft stops must be installed as required by enforcing authority.
5. Building must be surrounded on all sides by streets or public places of width not less than specified in the following table.

TABLE 403—BUILDING HEIGHT LIMITS

See section 401 for restrictions on wood frame construction and unprotected metal construction within the fire limits.
See section 402 for height limits for certain special occupancies.
See section 1702 for sprinkler requirements based on occupancy.
See section 403–8 (b).

CLASSIFICATION OF OCCUPANCY	FIRE-PROOF	SEMI-FIREPROOF	NONCOM-BUSTIBLE 2	NONCOM-BUSTIBLE 1	HEAVY TIMBER	ORDINARY	WOOD FRAME	UNPROTECTED METAL
Public	No Limit	75 Feet (Note A)	3 Stories 40 Feet (Note B)	3 Stories 40 Feet (Note B)	3 Stories 40 Feet	3 Stories 40 Feet (Note B)	1 Story 25 Feet	1 Story 25 Feet
Institutional	No Limit	75 Feet	2 Stories 35 Feet	2 Stories 35 Feet	2 Stories 35 Feet	2 Stories 35 Feet	1 Story 35 Feet	1 Story 35 Feet
			See section 402 for special occupancy requirements.					
Residence	No Limit	No Limit	3 Stories 45 Feet (Note C)	3 Stories 45 Feet (Note C)	75 Feet	3 Stories 45 Feet (Note C)	2 Stories 35 Feet (Note H)	2 Stories 35 Feet (Note H)
Business	No Limit	75 Feet (Note D)	4 Stories 50 Feet	4 Stories 50 Feet	75 Feet	4 Stories 50 Feet	2 Stories 35 Feet	2 Stories 35 Feet
Storage	No Limit (Note E)	6 Stories 75 Feet (Note F)	2 Stories 35 Feet	2 Stories 35 Feet	3 Stories 35 Feet (Note G)	2 Stories 35 Feet (Note G)	1 Story 25 Feet	1 Story 25 Feet

Industrial	No Limit	8 Stories 100 Feet (Note F)	3 Stories 35 Feet	3 Stories 35 Feet	3 Stories 35 Feet	2 Stories 35 Feet	1 Story 25 Feet	1 Story 25 Feet
			See section 403–8–(b) and Section 404–(d)					
Hazardous	Heights cannot be established due to various types of hazardous uses. Hazardous locations must be protected in accordance with good practices as recommended in Section 1504. (See section 403–8–(b) and Section 404–(d).							

Note A. No limit if less than 100 persons above 75 feet.
Note B. Churches: 2 Stories, 45 feet.
Schools: 2 Stories
Note C. With 2 hour non-combustible first floor, height may be increased to 4 stories or 55 feet; in multi-family building with 2 hour noncombustible first floor and other floors of one hour fire resistance and with fire partitions sub-dividing floors into areas not exceeding 3500 square feet the height may be 5 stories or 65 feet.
Note D. Office buildings not limited.
Note E. Automatic sprinklers required when height exceeds 6 stories.
Note F. Automatic sprinklers required when height exceeds 4 stories.
Note G. Automatic sprinkler installation will allow height increase to 50 feet.
Note H. Dormitories: 1 story.

TABLE 404—AREA LIMITS PER FLOOR OF BUILDINGS IN SQUARE FEET

OCCUPANCY CLASSIFICATION	FIRE-PROOF	SEMI-FIREPROOF	NONCOM-BUSTIBLE 2	NONCOM-BUSTIBLE 1	HEAVY TIMBER	ORDINARY	WOOD FRAME	UNPROTECTED METAL
*Public	No Limit	No Limit	(3) 6,500 (2) 8,000 (1) 10,000	(3) 7,500 (2) 10,000 (1) 15,000	(3) 7,500 (2) 10,000 (1) 15,000	(3) 6,500 (2) 8,000 (1) 10,000	(1) 4,000	(1) 4,000
Institutional	No Limit	No Limit	(2) 5,000 (1) 7,500	(2) 10,000 (1) 15,000	(2) 10,000 (1) 15,000	(2) 5,000 (1) 7,500	(1) 3,000	(1) 3,000
Residence	No Limit	No Limit	(3) 6,500 (2) 8,000 (1) 10,000	(3) 6,500 (2) 8,000 (1) 10,000	(3) 6,500 (2) 8,000 (1) 10,000	(3) 6,500 (2) 8,000 (1) 10,000	(2) 3,000 (1) 4,000	(2) 3,000 (1) 4,000
*Business	No Limit	No Limit	(4) 6,000 (3) 7,500 (2) 7,500 (1) 10,000	(4) 10,000 (3) 10,000 (2) 10,000 (1) 15,000	(5) 10,000 (4) 10,000 (3) 15,000 (2) 15,000 (1) 20,000	(4) 6,000 (3) 7,500 (2) 7,500 (1) 10,000	(2) 3,000 (1) 5,000	(2) 3,000 (1) 5,000
*Storage	No Limit	(6) 18,000 (5) 19,000 (4) 20,000 (3) 22,000 (2) 24,000 (1) 25,000	(2) 5,000 (1) 10,000	(3) 5,000 (2) 10,000 (1) 15,000	(3) 5,000 (2) 10,000 (1) 20,000	(2) 5,000 (1) 10,000	(1) 5,000	(1) 5,000

*Industrial	No Limit	(8) 21,000 (7) 22,500 (6) 24,000 (5) 25,500 (4) 27,000 (3) 28,500 (2) 30,000 (1) No Limit	(2) 7,500 (1) 10,000	(3) 10,000 (2) 15,000 (1) 20,000	(3) 10,000 (2) 15,000 (1) 20,000	(2) 7,500 (1) 10,000	(1) 6,500	(1) 6,500
		See section 404–(d)						
Hazardous	Areas cannot be established due to various types of hazardous uses. Hazardous locations must be protected in accordance with good practice as recommended in Section 1504. See section 404–(d).							

*The limiting areas of this section for public, business, storage and industrial occupancies may be increased by 50 per cent when the building has frontage on two streets and by 100 per cent when it has frontage on three or more streets.
The same allowances may be made when the building is not located on a street line, but is directly accessible to fire apparatus on two or more sides. This area increase shall not apply to Public buildings exceeding one story in height.

Note: (1) The numerals in paranthesis refer to height of building in stories. Please see Table 404 and definition of area and height in Section 200.
(2) Please see Table 700 for fire protection of structural parts for different types of construction.

WIDTH OF SEPARATION

Types of Building	*Minimum Width of Separation*
Fireproof Construction	50 feet
Semi-Fireproof Construction	60 feet
Non-Combustible Construction	90 feet
Heavy Timber Construction	90 feet
Ordinary Construction	100 feet

SECTION 701. FIREPROOF CONSTRUCTION.

1. **General.**

(a). All structural members shall be of approved noncombustible construction.

(b). No pipes, wires, cables or other service equipment shall be embedded in the required fireproofing of columns or other structural members.

SECTION 702. SEMIFIREPROOF CONSTRUCTION.

1. **General.**

(a). All structural members shall be of approved noncombustible construction.

(b). No pipes, wires, cables or other service equipment shall be embedded in the required fireproofing of columns or other structural members, nor shall they be between the required fireproofing and the member protected, except in the case of members protected by a fire resisting ceiling, and columns protected by fire resistive plaster encasement of the required fire resistance rating.

SECTION 703. HEAVY TIMBER CONSTRUCTION.

1. **Walls.**

(a). Exterior walls and all bearing walls shall be of masonry or of reinforced concrete or have a fire resistive rating of four hours.

(b). Exterior walls which are within 3 feet of a lot line along an adjoining area which is or may be built upon, or which are within 6 feet of another building of other than fireproof or semi-fireproof construction on the same lot, shall have a fire resistance rating of not less than 4 hours; except that where the total area of the buildings does not exceed 1 1/2 times the allowable area for any one of the buildings considered, such fire resistance rating shall not be required.

(c). Walls over openings shall be supported by masonry arches, or by lintels of steel or reinforced concrete. Lintels over openings more than 6 feet wide shall have a fire resistance rating of not less than 3 hours.

(d). All structural members supporting masonry or reinforced concrete walls shall have a fire resistance rating of not less than three hours.

SECTION 704. ORDINARY CONSTRUCTION.

1. **Definition.** Ordinary construction, as applied to buildings, means that in which exterior walls and bearing walls are of masonry or of reinforced concrete, and in which the structural members, including columns, floors and roof

construction, are wholly or partly of wood of smaller dimensions than required for heavy timber construction, or of steel or iron not protected as required for semifireproof construction.

2. **Walls.**

(a). Exterior walls and all bearing walls shall be of masonry or of reinforced concrete or have fire resistive rating of 3 hours.

(b). Exterior walls which are within 3 feet of a lot line along an adjoining area which is or may be built upon or which are within 6 feet of another building of other than fireproof or semifireproof construction on the same lot, shall have a fire resistance rating of not less than 3 hours; except that where the total area of the building does not exceed 1 1/2 times the allowable area for any one of the buildings considered such fire resistance rating shall not be required.

SECTION 705. NONCOMBUSTIBLE CONSTRUCTION.

1. **Definition.** Noncombustible construction, as applied to buildings, means that in which all structural members, including floors, roofs and their supports, are of steel, iron, concrete, or of other noncombustible materials, having fire resistive rating as specified in Table 700 for noncombustible number 1 and 2, and in which the exterior walls are of noncombustible construction having a fire resistance rating as specified in Table 700.

SECTION 706. WOOD FRAME CONSTRUCTION.

1. **Definition.** Wood frame construction, as applied to buildings, means that in which walls and interior construction are wholly or partly of wood.

2. **Walls.**

(a). Framing for exterior walls shall be constructed to develop a strength and rigidity equivalent to wooden studding, not less than 2 by 4 inches, nominal dimension, spaced 16 inches on centers with the larger dimension perpendicular to the wall, and braced with sheathing, or diagonal bracing at the corners, to secure the necessary rigidity; except that in one-story buildings studs not over 10 feet in length may be spaced not to exceed 24 inches on centers.

(b). In buildings except private garages, an exterior wall which is less than 3 feet distant from the lot line along an adjoining area which is or may be built upon shall be of noncombustible construction having a fire resistance rating of not less than two hours; except that the material of the weather surface may be similar to that of other exterior walls of the building.

(c). An exterior wall which is less than 6 feet distant from a wall of another building of wood frame construction on the same lot, shall be of noncombustible construction having a fire, resistance rating of not less than two hours; except that the material of the weather surface may be similar to that of other exterior walls of the building; and except that when the aggregate area of the two buildings does not exceed 1 1/2 times the limiting area fixed by this code for either building, such fire resistance rating shall not be required.

SECTION 707. UNPROTECTED METAL CONSTRUCTION.

Unprotected metal construction, as applied to buildings, means that in which the structural supports are unprotected metal and in which floors and roofs are of noncombustible construction, and the exterior walls are of noncombustible construction having a fire resistance rating of less than 2 hours.

D3 - PROPERTY PROTECTION

TABLE 700. FIRE PROTECTION REQUIREMENTS

DESCRIPTION	FIRE-PROOF	SEMI-FIREPROOF	NON-COMB. 2 (M) (N)	NON-COMB. 1 (M) (N)	HEAVY TIMBER (M)	ORDINARY (M)	WOOD FRAME (M) (O)	UNPROTECTED METAL (M) (O)
Structural Parts	Non-comb.	Non-comb.	Non-comb.	Non-comb.	Wood	Wood	Wood	Non-comb.
Floors—Slabs, Beams	3	2	(I)	1 (I)	None Sec. 703	None (H) (I)	None (H) (I)	None (H) (I)
Roofs—Slabs, Beams, Girders	3	2	None (I)	1 (I)	None Sec. 703	None	None	None
Roofs—High Above Floor	3	2	None	1 (E)	2" None Sec. 703	None	None	None
Columns—Supporting Floors	4	3	None (I)	2 (I)	8"x8" or 1—HR (I)	None (I)	None (I)	None (I)
Columns—Supporting Roof Only	3	2	None	1	8"x8" or 1—HR	None	None	None
Girders—Supporting 1 Floor Only	4	3	None (I)	1	6"x10" or 1—HR	None (I)	None (I)	None (I)
Girders—Supporting More than 1 Floor	4	3	None (I)	2	6"x10" or 1—HR (I)	(I)	None (I)	None (I)
Trusses—Supporting Roof Only	3	2 (E)	None	1 (E)	4"x4" or 1—HR (C)	None	None	None
Trusses—Supporting 1 floor only	3	2	None (I)	1	6"x6" or 1—HR	None (I)	None (I)	None (I)
Trusses—Supporting more Than One Floor	4	3	None (I)	2	6"x6" or 1—HR (I)	None (I)	None (I)	None (I)
Ext. Walls—Load Bearing	4	4	2 N. C. (J)	4 (J)	4 N. C. (J)	3 N. C. (J) Sec. 704-2	None Sec. 706-2	None Sec. 706-2

Panel Walls (With distance of horizontal *separation** from other buildings or property lines in feet)								
0–10**	3	3	2	3	3	3	2	2
10–20**	2	2	2 (J)	2 (J)	2 (J)	2 (J)	2	2
20–30***	1 (K) (L)	1 (K) (L)	1 (J) (L)	1 (J) (L)	1 (J) (L)	1 (J) (L)	1	1
Over 30	NC (K) (L)	NC (K) (L)	NC (K) (L)	NC (K) (L)	NC (K) (L)	NC (K) (L)	None	NC
Party Walls	(A)	(A)	(A)	(A)	(A)	(A)	(A)	(A)
Fire Walls	(A)	(A)	(A)	(A)	(A) (B)	(A) (B)	(A) (B)	(A) (B)
Penthouses	(F)	(F)	(F)	(F)	(F)	(F)	None	None
Partitions—Load Bearing	3 N. C. (I)	2 N. C. (I)	N. C. (G) (I)	N. C. (G) 2 (I)	3 (I)	(I)	(I)	(I)
Partitions—Non-Bearing	N. C. 1 (G)	1 (G)	(G)	1 (G)	(G)	(G)	(G)	(G)

Numerals refer to fire resistive rating of structural parts in hours as established by Standard Fire Test. (See Article XXI Fire Resistance Ratings).

Panel Walls are non-load-bearing exterior walls supported at every floor level. For reference note (A) (B) (C), etc. See following notes.

**Horizontal Separation* means a permanent open space between the building wall under consideration and the nearest line to which a building is or may be legally built. One-half of the street width shall be used in determining the distance of horizontal separation for walls facing on a street and one-half of the narrowest space between two buildings on the same lot shall be used in determining the distance of horizontal separation between walls of buildings on the same lot. (See Note "K" below applying to panel walls when no fire resistance rating is required).

***The total area of windows in such portion of an exterior wall shall not exceed 40% of the total wall area.

****The total area of windows in such portion of an exterior wall shall not exceed 60% of the total wall area.

REFERENCE NOTES FOR TABLE 700

Notes (A), (B), (C), etc., refer to the corresponding designations in table 700 and modify the requirements of that table as indicated.

Supplementary fire protection requirements related to the size and use of the building are given in tables 403 and 404; special requirements for fire districts are in Sec. 401 and note (J).

"Non-comb." or "N. C." designates that the construction shall be of non-combustible material.

"None" designates that no fire protection is required.

(A) For fire walls and party walls, see Sec. 909.

(B) For height wall extends above roof, see Sections 909-6 and 923.

(C) For panel wall used as fire wall, see Sec. 909-5.

(D) The distance "from line" refers to the distance of the wall from the line which it faces; the distance from the opposite building line on a street, or from common property line, or from interior lot line or from an existing building on the same lot.

(E) For omission of fire protection of trusses, see Section 702-6.

(F) For Penthouses and roof structures, see Section 921.

(G) For partitions enclosing vertical openings, see Section 921.
For enclosures and protection of elevators and moving stairways, see Section 604.
For partitions enclosing exit ways see Section 609.
For separation of mixed occupancies, see Section 300-2.
For construction of Non-load bearing partitions, see Section 924.
For fire partitions, see Section 918.
For basement partitions, see Section 925.

(H) For fire retardent ceilings of basements, see Section 926.

(I) In buildings over 1-story in height, structural members which support masonry walls shall have same fire protection rating as wall.

(J) Inside the fire district, all exterior walls, except walls facing street of 30 feet or more in width shall be constructed of solid masonry not less than 12 inches in thickness and in conformance with section 907.

(K) Only streets legally dedicated to public use shall be deemed a permanent open space for buildings inside the Fire District. For buildings outside the Fire District, a permanent open space must be a street dedicated to public use or, in the case of schools, colleges and other buildings where 50 feet of actual distance between buildings is permanently maintained, the space between buildings may be deemed permanent open space at the discretion of the authority having jurisdiction.

(L) See Section 920.1 for protection of openings in exterior walls and Section 920.3 for required vertical separation between openings in exterior walls.

(M) See Section 402 for Special Occupancy Requirements.

(N) Non-Combustible number 1 construction is protected (1 hour) and number 2 has no protection on structural parts but both are constructed with structural members as per Section 705.

(O) Wood frame and unprotected metal construction not permitted inside fire district. (See Section 401).

D4 - MINIMUM NUMBER OF EXITS

601. GENERAL.

1. **Kind of Exits.** Exits shall consist of interior stairways, fire towers, horizontal exits, exterior stairways, passageways or doorways, constructed and arranged as specified in this article. Exterior spiral fire escapes, tubular fire escapes and chute fire escapes may, under special provisions, be installed on certain types of buildings.

2. **Number of Occupants.**

(a) The dimensions and capacity of exits shall be proportioned to the number of persons to be accommodated.

(b) The number of persons used in determining the necessary exit facilities of any given floor shall be the actual number to occupy the floor, but in no case less than that determined by dividing the following areas per person into the gross area (no deduction for corridors, closets or other subdivisions) within the perimeter of the building serving each particular occupancy at the given floor level; for occupancies not specified the building official shall, by rule, establish the ratio to be used:

Kind or use of building	*Number of square feet of floor space allowed per person*
Dance halls, lodge rooms and places of assembly	6 to 10 square feet per person
Classrooms in schools and colleges, rooms in public buildings not otherwise provided for	25 square feet per person
Stores, markets, lodging houses, and reading rooms	25 square feet per person
Factories and workrooms	35-100 square feet per person
Offices and showrooms	50 square feet per person
Hospitals, asylums, hotels and other residence buildings	100 square feet per person
Warehouses and garages	150 square feet per person

SECTION 602. NUMBER OF EXITS.

(a) **From Rooms.** Every room having an occupancy of more than seventy-five persons shall have at least two doorways, remote from each other, leading to an exit or exits.

(b) **From Floor Areas.** Every floor-area occupied by more than seventy-five persons, shall have at least two means of exit.

(c) **From Floor Areas.** Every story shall have at least one interior stairway or fire tower connected thereto. Every such story shall have at least one additional exit when it exceeds two thousand five hundred square feet in area.

(d) **From Places of Assembly.** In buildings occupied as places of assembly for seventy-five or more persons for recreation or amusement, each and every

room, gallery, tier or other space, where such assembly occurs shall have direct access to separate and independent exits as follows: not less than two exits when six hundred persons or less are accommodated in such room, gallery, tier or other space; not less than three exits when more than six hundred but not more than one thousand persons are accommodated; and not less than four exits when more than one thousand persons are accommodated.

(e) **From Theatres, etc.** Exits in every theatre, opera-house, moving picture show, and other like places of public amusement, including dance halls and buildings in which boxing matches, wrestling matches and other forms of athletic contests, matches, and engagements are given, held or performed, shall be so arranged and located that two-thirds of all occupants of such building (allowing six square feet of floor area for each occupant) may leave such building via either side of such building, either end of such building or either side and end of such building and shall be of sufficient number to allow a number equal to two-thirds of all occupants of such building (allowing six square feet of floor area for each occupant) traveling at the rate of fourteen persons per minute per lineal foot of exit area to leave, via either side of such building, either end of such building or either end and side of such building in from

4 to 6 minutes when building is of Fireproof Construction

3 to 4 minutes when building is of Semifireproof Construction

2 to 3 minutes when building is of Heavy Timber Construction
Ordinary Construction
Noncombustible Construction

1 to 2 minutes when building is of Unprotected Metal Construction
Wood Frame Construction

The following formula applies

$$W = \frac{2LB}{3EMS}$$

in which:

L indicates length of room
B indicates breadth of room
S indicates sq. ft. required per person
E indicates 14 persons per minute per lineal foot
M indicates number of minutes req'd for class of construction
W indicates lineal ft. of exits required for 2/3rds. of room.

Example: For 90 ft x 70 ft seating area of an auditorium of Simifireproof Construction

$$W = \frac{2\,LB}{3EMS} = \frac{2 \times 90 \times 70}{3 \times 14 \times 3.5 \times 6} = \frac{12{,}600}{882} = 14.29 \text{ lin. ft. of exit width in any 2/3 area of building.}$$

In order that the objects of this requirement, which is primarily a safety to life requirement, will be complied with, any theatre, opera-house, auditorium, assembly hall, moving picture show, or other building in which public entertainment is shown, given, produced or performed in which special scenery is used or in which special acts or performances are given, shown, produced or performed, shall, if not properly equipped with approved proscenium wall and approved fire-curtain, for the purpose of affording safety in keeping with the objects of this requirement, be deemed a building of Ordinary Construction.

And it is further provided that in order to safeguard the public from the dangers of fire and other contingencies arising and resulting in places of this kind, to see that the provisions of this law are complied with, and save the owner or owners from unnecessary confusion and expense, plans for all theatres, opera-houses, moving picture shows, and other like places of amusement to be hereafter erected shall be submitted to and approved as to the safety of the building and the occupants in case of fire, by the Insurance Commissioner before work is begun on the building. This requirement is to apply also when and/or where any building now standing or part thereof is to be used as a theatre, opera-house, moving picture show or other like place of amusement.

(f) **Fire Towers Required.** In buildings exceeding sixty feet in height except office buildings of light occupancy at least one stairway shall be a fire tower; provided that in sprinklered buildings in which two or more stairways conforming to the requirements of this chapter are provided, such fire tower shall not be required unless the building exceeds one hundred feet in height.

SECTION 612. MODIFICATION OF EXIT REQUIREMENTS.

(a) **Auditoriums and Assembly Rooms.** In churches, Sunday schools and in assembly rooms not generally thrown open to the public and which do not contain more than two hundred seats or twelve hundred square feet of seat area, the Insurance Commissioner may allow exit and aisle areas less than prescribed in this article when he deems it advisable.

When a theatre, moving picture show, auditorium or assembly room is a part of a building, the type of construction governing the exit and aisle areas shall be based on the type of walls surrounding the same and the formula used shall be for the type wall least fire resistive. Example: If a theatre is a part of a building of ordinary construction and separated from the remainder of the building by a frame wall, then the exit and aisle area in such theatre shall be the same as required for a frame building. The same to apply in moving picture shows, auditoriums, and assembly rooms.

(b) **Special Exit Requirements for School Buildings and Sunday School Buildings.**

1. All school buildings and Sunday School buildings over one story in height shall have two means of egress so located with reference to rooms that in case of fire on one stairway, the other stairway can be reached by the occupant without his or her having to pass the stairway involved. In fireproof and semifireproof construction the maximum dead end distance of any corridor may be 25 feet, if in the opinion of the Insurance Commissioner life safety is not endangered thereby.

2. All school buildings over one story in height, except those of Fireproof or Semi-fireproof construction, hereafter erected shall have the stairways and exits so constructed, arranged and located as to form, without the use of automatic or self-operating devices, a positive barrier to the rapid spread of heat, smoke and/or flame. All stairways in school buildings over one story in height of fireproof or semifireproof construction shall be enclosed with noncombustible partition having a fire resistance of not less than one hour.

3. Exits for auditoriums and gymnasiums in school buildings shall, unless it is established to the satisfaction of the Insurance Commissioner that such auditorium or gymnasium will not be used for entertainment purposes, be of the same size and number as that required for theatres.

(c) **Churches.** Same as theatres except with the approval of the Insurance Commissioner the exit and aisles may be reduced one fourth or more if he deems it advisable.

(d) **Schools and Sunday Schools.** Note: Auditorium areas in such buildings must comply with requirements for auditoriums and assembly rooms. Plans for all school buildings of all types of construction and plans for Sunday school buildings, except those of not more than one story and accommodating not more than fifty children and teachers, shall be submitted to and approved by the Insurance Commissioner before work of any kind is begun on such building.

SECTION 613. SPECIAL REQUIREMENTS FOR LOCATION OF EXITS OF HOTELS, HOSPITALS, DORMITORIES, APARTMENTS, FLATS AND OTHER BUILDINGS IN WHICH ROOMS ARE RENTED FOR LIVING AND SLEEPING PURPOSES.

(a) All hotels, lodging houses, school dormitories, hospitals, sanatoriums, apartment houses, flats, tenement houses and all other buildings in which rooms are to be rented or leased or let or offered for rent, let or leased for living or sleeping purposes, hereafter constructed in this State shall be constructed so that the occupants of all rooms above the first floor shall have unobstructed access to two separate and distinct ways of egress extending from the uppermost floor to the ground, such ways of egress to be so arranged in reference to rooms that in case of fire on one stairway the other stairway can be reached by the occupant without his or her having to pass the stairway involved. Entrance to all such ways of egress aforementioned in this section shall be from corridors or hallways of not less than five feet in width, and in no case shall entrance to such ways of egress be through a room or closet, and where such building is, in the opinion of the Insurance Commissioner, of sufficient size to require more than two ways of egress, the standard established by this code shall be adhered to.

(b) Every hotel, lodging house, school dormitory, hospital, sanatorium, apartment house, flat, tenement house or other building in which rooms are rented, leased, let or offered for rent, leased or let for living or sleeping purposes, shall be provided with such additional ways of egress as the Insurance Commissioner shall deem practicable in order that the objects of this code may be accomplished and that existing dangers shall not be perpetuated.

(c) In fireproof and semi-fireproof construction the maximum dead end distance of any corridor may be 25 feet, if in the opinion of the Insurance Commissioner life safety is not endangered thereby.

D5 - PLUMBING FIXTURES

REGULATED BY NORTH CAROLINA BOARD OF HEALTH UNTIL SEPTEMBER 26, 1963. THE FOLLOWING TABLE 922.2 WAS EFFECTIVE FROM SEPTEMBER 26, 1963 UNTIL SEPTEMBER 12, 1967.

TAB LE 922.2 - MINIMUM FACILITIES[1]

Type of Building or Occupancy[2]	Water Closets	Urinals	Lavatories	Bathtubs or Showers	Drinking Fountains[3]
Dwelling or Apt. Houses[4]	1 for each Dwelling or Apartment Unit	----------	1 for Each Apartment or Dwelling Unit.	1 for Each Apartment or Dwelling Unit.	
Schools[5]	Male / Female				
Elementary	1 per 60 / 1 per 35	1 per 30 Male	1 per 60 Persons.		1 per 75 Persons.
Secondary	1 per 100 / 1 per 45	1 per 30 Male	1 per 100 Persons.		1 per 75 Persons.
Office or Public Buildings	No. of Persons / No. of Fixtures: 1 - 15 / 1; 16 - 35 / 2; 36 - 55 / 3; 56 - 80 / 4; 81-110 / 5; 111 - 150 / 6; 1 Fixture for each 40 Additional Persons	Wherever urinals are provided for men or women, one water closet less than the number specified may be provided for each urinal installed except that the number of water closets in such cases shall not be reduced to less than 2/3 of the minimum specified for men and 3/4 of the minimum specified for women.	No. of Persons / No. of Fixtures: 1-15 / 1; 16-35 / 2; 36-60 / 3; 61-90 / 4; 91-125 / 5; Fixture for Each 45 Additional Persons.		1 for Each 75 Persons.

TABLE 922.2 — MINIMUM FACILITIES[1] (Continued)

Type of Building or Occupancy[2]	Water Closets	Urinals	Lavatories	Bathtubs or Showers	Drinking Fountains[3]
Manufacturing, Warehouses, Workshops, Loft Buildings, Foundries and Similar Establishments[6]	No. of Persons — No. of Persons 1 - 9 — 1 10 - 24 — 2 25 - 49 — 3 50 - 74 — 4 75 - 100 — 5 1 Fixture for Each Additional 30 Employees	Same substitution as above.	1-100 Persons 1 Fixture for Each 10 Persons. Over 100, 1 for Each 15 Persons.[7,8]	1 shower for each 15 persons exposed to excessive heat or to skin contamination, with poisonous, infectious, or irritating material.	1 for Each 75 Persons.
Dormitories[9]	Male: 1 for Each 10 Persons Female: 1 for Each 8 Persons Over 10 Persons, Add 1 Fixture for Each 25 Additional Males and 1 for Each 20 Additional Females.	1 for Each 25 Men. Over 150 Persons Add 1 Fixture for Each 50 Men.	1 for Each 12 Persons. (Separate dental lavatories should be provided in community toilet rooms Ratio of dental lavatories for each 50 persons is recommended.) Add 1 Lavatory for Each 20 Males, 1 for Each 15 Females.	1 for each 8 persons In the case of women's dormitories additional bathtubs should be installed at the ratio of 1 for each 30 females Over 150 persons, add 1 fixture for each 20 persons.	1 for Each 75 Persons.

TAB LE 922.2 — MINIMUM FACILITIES[1] (Continued)

Type of Building or Occupancy[2]	Water Closets	Urinals	Lavatories	Bathtubs or Showers	Drinking Fountains[3]
Theatres, Auditoriums	No. of Persons / No. of Fixtures M. F. 1-100 2 2 101-200 3 3 201-400 4 4 Over 400, Add 1 Fixture for Each Additional 500 Males and 1 for Each 300 Females.	No. of Persons / No. of Fixtures M. 1-200 2 201-400 3 401-600 4 Over 600, Add 1 for Additional 300 Males.	No. of Persons / No. of Fixtures 1-200 1 201-400 2 401-750 3 Over 750, 1 for Each Additional 500 Persons.	No. of	
Restaurant Clubs and Lounges	No. of Persons / No. of Fixtures M. F. 1-50 1 1 51-150 2 2 151-300 3 4 Over 300 Add 1 Fixture for Each 200 Additional Persons.	No. of Persons / No. of Fixtures M. 1-150 1 Over 150 Persons, Add One Fixture for Each 150 Men.	No. of Persons / No. of Fixtures 1-150 1 151-200 2 200-400 3 Over 400, 1 Fixture for Each Additional 400 People		

M—Male, F—Female

TABLE 922.2 – MINIMUM FACILITIES[1] (CONCLUDED)

[1]The figures shown are based upon one fixture being the minimum required for the number of persons indicated or any fraction thereof.

[2]Building category not shown on this table. Will be considered separately by the Plumbing Official.

[3]Drinking fountains shall not be installed in toilet rooms.

[4]Laundry-trays — one single compartment tray for each dwelling unit or 2 compartment trays for each 10 apartments. Kitchen sinks — 1 for each dwelling or apartment unit.

[5]This schedule has been adopted (1958) by the National Council on Schoolhouse Construction.

[6]As required by the American Standard Safety Code for Industrial Sanitation in Manufacturing Establishments (ASA Z4.1-1955).

[7]Where there is exposure to skin contamination with poisonous, infectious, or irritating materials, provide 1 lavatory for each 5 persons.

[8]4-lineal-inches of wash sink or 18-inches of a circular basin, when provided with water outlets for such space, shall be considered equivalent to 1 lavatory.

[9]Laundry trays, 1 for each 50 persons. Slop sinks, 1 for each 100 persons.

General. In applying this schedule of facilities, consideration must be given to the accessibility of the fixtures. Conformity purely on a numerical basis may not result in an installation suited to the need of the individual establishment. For example, schools should be provided with toilet facilities on each floor having classrooms.

Temporary workingmen facilities:

1 water closet and 1 urinal for each 30 workmen.

24-in. urinal trough — 1 urinal
36-in. urinal trough — 2 urinals
48-in. urinal trough — 2 urinals
60-in. urinal trough — 3 urinals
72-in. urinal trough — 4 urinals

APPENDIX E

REPRINTS OF SELECTED PORTIONS OF THE NORTH CAROLINA STATE BUILDING CODE 1967 EDITION

E1 - DEFINITIONS

201.1

For the purpose of this Code, certain abbreviations, terms, phrases, words, and their derivatives, shall be construed as set forth in this Section.

201.2

Words used in the present tense include the future. Words in the masculine gender include the feminine and neuter. Words in the feminine and neuter gender include the masculine. The singular number includes the plural and the plural number includes the singular.

Where terms are not defined in this section, they shall have their ordinarily accepted meanings or such as the context may imply.

ADDITION—as applied to a building, means any construction which increases the area or the height of any portion of the building.

ALLEY—means any public space or thoroughfare twenty (20) feet or less in width which has been dedicated or deeded for public use.

ALTERATION—as applied to a building, means any change or modification in construction, exit facilities, building equipment or permanent fixtures which does not include an addition to the building.

AMUSEMENT DEVICE—means a mechanically operated device which is used to convey persons in any direction as a form of amusement.

APARTMENT—means a room or a suite of rooms occupied, or which is intended or designed to be occupied, as the home or residence of one individual, family or household, for housekeeping purposes.

APARTMENT HOUSE—means any building, or portion thereof, which is designed, built, rented, leased, let or hired out to be occupied, or which is occupied as the home or residence of more than two (2) families living independently of each other and doing their own cooking in the said building, and shall include flats and apartments.

APPLICABLE GOVERNING BODY—a city, county, state, state agency or other political government subdivision or entity authorized to administer and enforce the provisions of this code, as adopted or amended.

APPROVED—as applied to a material, device or mode of construction, means approved by the building official in accordance with the provisions of this code, or by other authority designated by law to give approval in the matter in question.

ARCHITECT—within the meaning of this Code, shall be deemed to be a duly registered and licensed architect.

AREA—as applied to the dimensions of a building, means the maximum horizontal projected area of the building at grade.

AREA—(See FLOOR AREA).

AREAWAY—means an unroofed subsurface space adjacent to a building.

A.S.A.—means American Standards Association.

A.S.T.M.—means American Society for Testing and Materials.

ASSEMBLY OCCUPANCY—(Defined in Section 408.1).

ATTIC—means the space between the ceiling beams of the top habitable story and the roof rafters.

ATTIC STORY—means any story situated wholly or partly in the roof, so designated, arranged or built as to be used for business, storage or habitation.

AUTOMATIC—as applied to a fire door or other opening protective, means normally held in open position and automatically closed by a releasing device actuated by abnormal high temperature, or by a pre-determined rate of rise in temperature.

AUTOMOTIVE SERVICE STATION—(Defined in Section 505).

BALCONY—means that portion of the seating space of an assembly room, the lowest part of which is raised four (4) feet or more above level of the main floor.

BASEMENT—means a story of a building of structure having one-half or more of its clear height below grade. Also see "Story".

BEAM—a primary structural member supporting secondary structural members, floors, roof, joists, and the like.

BRICK—means a solid masonry unit having a shape approximately a rectangular prism, usually not larger than 12 by 4 by 4 inches. A brick may be made of burned clay or shale, of fire clay or mixtures thereof, of lime and sand, of cement and suitable aggregates, or of other approved materials.

BUILDING—means any structure built for the support, shelter or enclosure of persons, animals, chattels, or property of any kind which has enclosing walls for 50% of its perimeter. The term "building" shall be construed as if followed by the words "or part thereof". (For the purpose of this Code each portion of a building separated from other portions by a fire wall shall be considered as a separate building).

SHED—means any structure built for the support, shelter or enclosure of persons, animals, chattels, or property of any kind which has enclosing walls for less than 50% of its perimeter.

OPEN SHED—means any structure that has no enclosing walls.

EXISTING BUILDING—means a building erected prior to the adoption of this Code, or one for which a legal building permit has been issued.

BUILDING LINE—means the line, established by law, beyond which a building shall not extend, except as specifically provided by law.

BUILDING OFFICIAL (Building Inspector)—means the officer, or other person, charged with the administration and enforcement of this Code, or his duly authorized representative. (See Sections 103 and 105)

BUSINESS OCCUPANCY—(Defined in Section 405.1).

CAST STONE—is a building stone manufactured from cement concrete precast and used as a trim, veneer or facing on or in buildings or structures.

CELLAR—means that portion of a building, the ceiling of which is entirely below grade or less than four (4) feet six (6) inches above grade. (See STORY).

CITY—(See definition APPLICABLE GOVERNING BODY.)

COMBUSTIBLE MATERIAL—a material which cannot be classified as non-combustible in accordance with that definition.

COMMON-PROPERTY LINE—means a line dividing one lot from another when said lots are not of one ownership.

CONCRETE—(See Chapter XVI.)

CURB LEVEL—referring to a building, means the elevation at that point of the street grade that is opposite the center of the wall nearest to and facing the street line.

DEAD LOAD—(See Section 1202.)

DISPLAY SIGN—means a structure that is arranged, intended, designed or used as an advertisement announcement or direction, and includes a sign, sign screen, billboard and advertising devices of every kind.

DWELLING—means a building occupied exclusively for residence purposes and having:

(1) One dwelling unit; or

(2) Two dwelling units; or

(3) One dwelling unit with not more than five boarders or roomers served with meals or sleeping accommodations or both.

DWELLING UNIT—means one or more rooms arranged for the use of one or more individuals living together as a single housekeeping unit, with cooking, living, sanitary and sleeping facilities.

ENGINEER—within the meaning of this Code, shall be deemed to be a duly registered and licensed engineer.

EXISTING—means an existence before the time that this code becomes effective.

EXISTING BUILDING—(See BUILDING—EXISTING BUILDING.)

EGRESS, MEANS OF—See Definition, Section 1102.

EXIT—See Definition, Section 1102.

EXIT ACCESS—See Definition, Section 1102.

FAMILY—means one or more persons living together, whether related to each other by birth or not, and having common housekeeping facilities.

FIRE DISTRICTS—(See Section 301.)

FIRE DOOR—means a door and its assembly, so constructed and assembled in place as to give the specified protection against the passage of fire.

FIRE PARTITION—means a partition of construction which subdivides a building to restrict the spread of fire or to provide areas of refuge, but is not necessarily continuous through all stories nor extended through the roof, and which has a fire-resistance rating as required by the Code.

FIREPROOF CONSTRUCTION—(Defined in Section 602).

FIRE-RESISTANCE RATING—means the time in hours that the material or construction will withstand the standard fire exposure as determined by a fire test made in conformity with the "Standard Methods of Fire Tests of Building Construction and Materials" of the American Society for Testing Materials (ASTM Designation E119-61).

FIRE-RESISTIVE CONSTRUCTION—(Defined in Section 603).

FIRE RETARDANT (Pressure treated) WOOD—means wood chemically impregnated in accordance with A. W. P. A. Specification C1-61. Which must have a flame spread rating not exceeding 25, with no evidence of significant progressive combustion when tested for 30 minutes in accordance with A. S. T. M. Specification E84-61. Such material must be permanently identified as to compliance with the above definition by an approved testing agency having a reexamination service.

FIRE WALL—(See Walls).

FLAME SPREAD RATING—is that numerical value assigned to a material tested in accordance with ASTM E84-61 (Steiner Tunnel Test).

FLOOR AREA—means the area included within surrounding walls of a building exclusive of vent shafts and courts.

FRONT OF LOT—means the front boundary line of a lot bordering on the street, and in the case of a corner lot, may be either frontage.

GALLERY—means that portion of the seating space of an assembly room having a seating capacity of more than ten (10) located above a balcony.

GARAGE—means a building or structure or a portion thereof, in which a motor vehicle containing a flammable fluid in its fuel storage tank, is stored, housed, kept, repaired or serviced;

AUTOMOTIVE SERVICE GARAGE—means a garage where no repair-work is done except exchange of parts and maintenance requiring no open flame, cutting, welding or the use of highly flammable liquids;

BASEMENT PARKING GARAGE—means an enclosed parking garage located in a basement, and includes an underground parking garage;

CARPORT—means a garage attached to a dwelling and having one or more open sides;

ENCLOSED PARKING GARAGE—means a garage having exterior enclosure walls and used for the parking of motor vehicles;

MOTOR VEHICLE SERVICE GARAGE—means a garage in which a flammable fluid for retail supply to motor vehicles is stored, housed or sold;

OPEN AIR PARKING GARAGE—means a garage having not less than 50 per cent of two sides of the garage open to the air at each story and used for the parking of motor vehicles;

REPAIR GARAGE—means a garage wherein major repairs may be made to more than two motor vehicles at a time.

GARAGE—PRIVATE GARAGE—(Defined in Section 506).

GARAGE—PUBLIC GARAGE—means any garage other than a private garage.

GRADE—with reference to a building means, when the curb level has been established, the main elevation of the curb level opposite those walls that are located on, or parallel with and within fifteen (15) feet of, street lines; or, when the curb level has not been established, or all the walls of the building are more than fifteen (15) feet from street lines, GRADE means the average of the finished ground level at the center of all walls of a building.

GRADE—with reference to lumber, means the division of sawn lumber into quality classes with respect to its physical and mechanical properties as defined in published lumber manufacturers' standard grading rules.

HABITABLE ROOM—means a room occupied by one or more persons for living, eating, sleeping, or working purposes. It does not include toilets, laundries, serving and storage pantries, corridors, cellars, and spaces that are not used frequently or during extended periods.

HEATING—(All definitions in Chapter VIII).

HEAVY TIMBER CONSTRUCTION—(Defined in Section 604).

HEIGHT—as applied to a building, means the vertical distance from grade to the highest finished roof surface in the case of flat roofs or to a point at the average height of roofs having a pitch of more than one (1) foot in four and one-half (4 1/2) feet; HEIGHT of a building in stories does not include basements and cellars, except as specifically provided otherwise.

HEIGHT—as applied to a story, means the vertical distance from top to top of two successive finished floor surfaces.

HEIGHT—as applied to a wall, means the vertical distance to the top measured from the foundation wall, or from a girder or other immediate support of such wall.

HORIZONTAL SEPARATION—means a permanent open space between the building wall under consideration and the lot line or the center line of a facing street, alley or publicway. Where two or more buildings are on a lot, the horizontal separation of the wall under consideration shall be measured from an imaginary line drawn at a distance form the facing wall equal to the horizontal separation required for that wall.

INCOMBUSTIBLE MATERIAL—is synonymous with NONCOMBUSTIBLE MATERIAL.

INDUSTRIAL OCCUPANCY—(Defined in Section 410.1).

INNER COURT—an open unoccupied space bounded by the walls of the building, but located within the exterior walls of the building.

INSTITUTIONAL OCCUPANCY—(Defined in Section 407.1).

INTERIOR LOT LINE—is synonymous with COMMON-PROPERTY LINE.

LINTEL—means the beam or girder placed over an opening in a wall which supports the wall construction above.

LIVE LOAD—(See Section 1203).

LOAD, DEAD—means the weight of all permanent construction including walls, floors, roofs, partitions, stairways and of fixed service equipment.

LOAD, LIVE—means the weight superimposed by the use and occupancy of the building or structure, not including the wind load, earthquake load or dead load.

LOT—a parcel of land considered as a unit.

LOT LINE—means a line dividing one lot from another, or from a street or other public space.

MALL—means an area composed of sidewalks and landscaping which serves as a pedestrian thoroughfare between buildings but is not dedicated to public use.

MASONRY—means that form of construction, composed of stone, brick, concrete, gypsum, hollow clay tile, concrete block or tile, or other similar building units or materials or a combination of these materials laid up unit by unit and set in mortar. For the purpose of this Code, plain monolithic concrete shall be considered as masonry. (See Section 1402.6).

HOLLOW MASONRY UNIT—means a masonry unit whose net cross-sectional area in any plane parallel to the bearing surface is less than 75 per cent of its gross cross-sectional area measured in the same plane;

MASONRY OF HOLLOW UNITS—means masonry consisting wholly or in part of hollow masonry units laid contiguously in mortar;

REINFORCED MASONRY—means unit masonry in which reinforcement is imbedded in such a manner that the two materials act together in resisting forces.

SOLID MASONRY—means masonry consisting of solid masonry units laid contiguously in mortar, or consisting of plain concrete;

SOLID MASONRY UNIT—means a masonry unit whose net cross-sectional area in every plane parallel to the bearing surface is 75 per cent or more of its gross cross-sectional area measured in the same plane.

MEZZANINE OR MEZZANINE FLOOR—means an intermediate floor placed in any story or room. When the total area of any "MEZZANINE FLOOR" exceed thirty three and one-third (33 1/3) percent of the total floor area in that room, it shall be considered as constituting an additional "story." The floor height above or below a "MEZZANINE FLOOR" construction shall be not less than seven (7) feet.

MIXED TYPES OF CONSTRUCTION—has the meaning as set forth in Section 609 of this Code.

MULTIPLE DWELLING—has the same meaning as APARTMENT HOUSE.

MULTIFAMILY HOUSE—means a building or portion thereof containing three or more dwelling units; including tenement house, apartment house, flat.

NONCOMBUSTIBLE—as applied to a building construction material means a material which, in the form in which it is used, falls in one of the following groups (a) through (c). It does not apply to surface finish materials nor to the determination of whether a material is noncombustible from the standpoint of clearances to heating appliances, flues or other sources of high temperature. No material shall be classed

as noncombustible which is subject to increase in combustibility or flame spread rating beyond the limits herein established, through the effects of age, moisture or other atmospheric condition. Flame spread rating as used herein refers to ratings obtained according to the Standard Test Method for Fire Hazard Classification of Buildings Materials of Underwriters' Laboratories, Inc., ASTM E84.

(a) Materials no part of which will ignite when subjected to fire. Any material which liberates flammable gas when heated to any temperature up to 1380°F., for five minutes under any approved test conditions shall not be considered noncombustible within the meaning of this paragraph.

(b) Materials having a structural base of noncombustible material, as defined in (a), with a surfacing not over 1/8-inch thick which has a flame spread rating not higher than 50.

(c) Materials in the form and thickness used, other than as described in (a) or (b), having a flame spread of 25 without evidence of continued progressive combustion and of such composition that surfaces that would be exposed by cutting through the material in any way would not have a flame spread rating higher than 25 without evidence of continued progressive combustion.

NON-COMBUSTIBLE CONSTRUCTION—(Defined in Section 605.1).

OCCUPANCY—means the purpose for which a building is used or intended to be used. Change of occupancy is not intended to include change of tenants or proprietors.

OCCUPIED—as applied to a building, shall be construed as though followed by the words "or intended, arranged or designed to be occupied."

MIXED OCCUPANCY—means mixed occupancy as set forth in Section 412 of this Code.

SPECIAL OCCUPANCY—means Group H Occupancy, as set forth in Section 411 of this Code.

ORDINARY CONSTRUCTION—(Defined in Section 606).

OWNER—includes his duly authorized agent or attorney, a purchaser, devisee, fiduciary, and a person having a vested or contingent interest in the property in question.

PERMANENT AWNING—means a roof sheltering a sidewalk, platform or paved area.

PENTHOUSE—means an enclosed structure other than a roof structure, located on the roof, extending not more than twelve (12) feet above a roof.

PERSON—means a natural person, his heirs, executors, administrators, or assign, and also includes a firm, partnership, or corporation, its or their successors or assigns, or the agent of any of the aforesaid.

PLACE OF ASSEMBLY—means a room or space used for assembly or educational occupancy for 100 or more occupants.

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

PUBLIC PARKING DECKS—means a special structure limited in use only to the temporary parking of motor vehicles.

PREFABRICATED—means fabricated prior to erection or installation on a building or structure foundation.

PUBLIC PLACE—means a thoroughfare or open space over 21 feet wide which is dedicated to a governmental body maintaining accessibility to the fire department and other public services.

PUBLICWAY—means a thoroughfare over 21 feet wide on privately owned, privately maintained property but designated for public use and which by agreement is kept accessible at all times to the fire department and other public services.

REPAIR—means the replacement of existing work with the same kind of material used in the existing work, not including additional work that would change the structural safety of the building, or that would affect or change required exit facilities, a vital element of an elevator, plumbing, gas piping, wiring or heating installations, or that would be a violation of a provision of law or ordinance. The term "Repair" or "Repairs" shall not apply to any change of construction.

REQUIRED—means required by some provision of this Code.

RESIDENTIAL OCCUPANCY—(Defined in Section 404.1).

ROOF STRUCTURE—means a structure above a roof or any part of a building enclosing a stairway, tank, elevator machinery or ventilating apparatus, or such part of a shaft as extends above the roof.

ROOM CAPACITY—(See Chapter XI).

SCHOOL OCCUPANCY—(Defined in Section 406.1).

SEATING CAPACITY—(See Chapter XI).

SELF-CLOSING—as applied to a fire door or other opening protectives, means normally closed and equipped with an approved device which will insure closing after having been opened for use.

SERVICE STATION—(Defined in Section 505).

SHAFT—means a vertical opening extending through one or more stories of a building, for elevators, dumbwaiter, light, ventilation, or similar purpose.

SHALL—as used in this Code, is mandatory.

SIGNS—(See Chapter XXIII).

SPECIAL OCCUPANCY—(Defined in Section 411.1).

SPRINKLERED—means equipped with an approved automatic sprinkler system properly maintained. See Chapter IX.

STAGE—GENERAL—a stage is a partially enclosed portion of an Assembly Building, cut off from the audience section by a proscenium wall, which is designed or used for the presentation of plays, demonstrations, or other entertainment. "Stages" shall be classified as "working stage" and "non-working stage".

STAGE—WORKING—(Also Theatrical Stage—See Section 512.10)—a working stage is a partially enclosed portion of an Assembly Building, cut off from the audience section by a proscenium wall of masonry of not less than 4 hour fire-resistance construction, and which is equipped with scenery loft, gridiron, fly-gallery, and lighting equipment, and the proscenium opening shall be equipped with a fire-proof and smoke-proof curtain, and the depth from the proscenium curtain to the back wall shall be not less than fifteen (15) feet.

STAGE—NON-WORKING—a non-working stage is a partially enclosed portion of an Assembly Building, cut off from the audience section by a proscenium wall of not less than one-hour fire-resistive construction, without the equipment common to the Working Stage (such as fly gallery and gridiron) and of such dimensions that such equipment cannot be installed (but flat scenery may be used on such stage).

A fireproof curtain is not required for a non-working stage, but if there is a fabric or other curtain it shall be of incombustible materials or treated with an approved fire retardant. The depth of the stage may be more or less than fifteen (15) feet.

STAGE, PLATFORM—a platform is a raised section of floor within the assembly hall or auditorium area, and setting on the floor thereof, not enclosed above the platform floor level, and usually or relatively small area as compared to the auditorium seating area. A platform may be of permanent, temporary, or portable construction, it may have "flat" movable scenery and draw curtains.

STAGE, ROSTRUM—(See "platform"). Usually used for single or small group of persons such as lecturers, no scenery or curtains. May be permanent, temporary, or portable.

STAGE, DAIS—a small and low "platform" or "rostrum" may be placed on a "stage". May be permanent, temporary, or portable.

STAGE, PODIUM—a small "dais" of size sufficient to accommodate one or two persons, such as a band or orchestra conductor or a soloist. A "podium" may be located on a Stage, Platform, Rostrum, or Dais, or the floor of the audience section of a place of assembly. A podium is almost always a portable construction.

STAIRWAY—means one or more flights of stairs and the necessary landings and platforms connecting them, to form a continuous and uninterrupted passage from one story to another in a building or structure.

STANDARD FIRE TEST—means the fire test formulated under the procedure of the American Standards Association as "American Standard." This "American Standard" is the "Standard Methods of Fire Tests of Building Construction and Materials" of the American Society for Testing Materials (ASTM Designation E119-61).

STORY—means that part of a building comprised between a floor and the floor or roof next above. A mezzanine shall be considered a story if it exceeds 33 1/3 per cent of the area of the floor immediately below. A pent house shall be considered a story if it exceeds 1,000 square feet or 33 1/3 per cent of the roof area. The basement of a building used for educational occupancy shall be considered a story if it is used for purposes other than storage or heating.

STREET—means any public thoroughfare (street, avenue, boulevard, park) or space more than twenty (20) feet in width which has been dedicated or deeded to the public for public use.

STREET LINE—means a lot line dividing a lot from a street.

STRUCTURE—means a combination of material to form a construction that is safe and stable; including among others, buildings, stadiums, reviewing stands, platforms, stagings, observation towers, radio towers, water tanks and towers, trestles, piers, wharves, sheds, coal bins, shelters, fences and display signs; the term structure shall be construed as if followed by the words "or part thereof."

SURVEYOR—within the meaning of this Code, shall be deemed to be duly registered and licensed surveyor or Civil Engineer.

THEATER—means a building, or part thereof, which contains an assembly hall with or without stage which may be equipped with curtains and permanent stage scenery or mechanical equipment adaptable to the showing of plays, operas, motion pictures, performances, spectacles and similar forms of entertainment. (See Section 408.)

VALUATION OR VALUE—as applied to a building, means the estimated cost to replace the building in kind.

VENEER—means a facing of brick, concrete, metal, stone, tile or similar material attached to a wall for the purpose of providing ornamentation, protection, or insulation, but not counted as adding strength to the wall.

WALL, BEARING—means a wall which supports any vertical load in addition to its own weight.

WALL, CAVITY—means a wall built of masonry units or of plain concrete, or a combination of these materials, so arranged as to provide an air space within the wall, and in which the inner and outer parts of the wall are tied together with metal ties.

WALL, CURTAIN—means a non-bearing wall between columns or piers and which is not supported by girders or beams, but is supported on the ground.

WALL, FACED—means a wall in which the masonry facing and backing are so bonded as to exert common action under load.

WALL, EXTERIOR—means a wall, bearing or non-bearing, which is used as an enclosing wall for a building, but which is not necessarily suitable for use as a Party Wall or Fire Wall.

FIRE PARTITION—(See FIRE WALL).

WALL, FIRE—means a wall of incombustible construction which subdivides a building or separates buildings to restrict the spread of fire and which starts at the foundation and extends continuously through all stories to and above the roof, except where the roof is of fireproof or fire-resistive construction and the wall is carried up tightly against the underside of the roof slab. (See Section 716).

WALL, FOUNDATION—means a wall below the first floor extending below the adjacent ground level and serving as support for a wall, pier, column or other structural part of a building.

WALL OF MASONRY, HOLLOW—means a wall built of masonry units so arranged as to provide an air space within the wall, and in which the inner and outer parts of the wall are bonded together with masonry units.

WALL, NON-BEARING—means a wall which supports no load other than its own weight.

WALL, PANEL—means a non-bearing wall in skeleton or framed construction, built between columns or piers and wholly supported at each story.

WALL, PARAPET—means that part of any wall entirely above the roof line.

WALL, PARTY—means a wall used or adapted for joint service between two (2) buildings.

WALL, RETAINING—means any wall used to resist the lateral displacement of any material.

WOOD FRAME CONSTRUCTION—(Defined in Section 607).

WRITING—includes printing and typewriting.

WRITTEN NOTICE—shall be considered to have been served if delivered in person to the individual, or to the parties intended, or if delivered at or sent by registered mail to, the last business address of the party given the notice.

E2 - TYPE OF CONSTRUCTION, HEIGHT, AND AREA

402.6—HEIGHT INCREASE FOR SPRINKLERS

The maximum allowable number of stories for Group A, B, F and G occupancies may be increased by one story if the building is provided with automatic sprinklers throughout in accordance with Section 901 of Chapter IX, except such height increase shall not be permitted in buildings where the installation of automatic sprinkler equipment is a mandatory requirement of this code, or when the provisions of Section 403.4 are used.

403.4—AREA INCREASE FOR SPRINKLERS

(Inside and Outside of Fire Limits)

(a) Where a building is equipped with an approved automatic sprinkler system, the floor area limits for any story may be increased by 200 percent except where the average height to the roof, or to a fire retardant ceiling does not exceed 25 feet in a one story building, the floor area limits may be increased by 300 percent. The percentage increase shall be applied to the areas allowed in Table 402. This Section cannot apply where Section 402.6 is used.

403.5—RATE OF INCREASE FOR SEPARATION

(a) Where a building has more than 25 percent of its perimeter fronting on a street, public place or public way 21 feet or more in width and such frontage has the access openings in each story above the basement as required in Section 717 the limiting areas in Table 402 may be increased by one of the following:

Formula

$$I = \frac{2AF}{P} \text{ minus } \frac{A}{2}$$

in which

I - increase in area in square feet but shall not exceed A.

A = area limit in table 402 in square feet.

P= building perimeter in feet.

F - length in feet of the frontage facing on a street, public way or public place 21 feet or more in width, unencumbered and accessible from street.

(b) Where a building of rectangular shape is erected on a corner lot so that 2 of its sides front on a street or on a public place 21 feet or more in width, unencumbered and accessible from a street, the limiting areas in Table 402 may be increased by 50 percent.

(c) Where a building is erected on a lot so that all of its sides front on a street or on a public place 21 feet or more in width, unencumbered and accessible from a street, the limiting areas in Table 402 may be increased by 100 percent.

403.6—AREA INCREASE FOR ONE HOUR CONSTRUCTION

The limiting areas of buildings may be increased as shown in Table 402 for 1-hour protected when all structural members including walls, columns, piers, beams, girders, joists, trusses, floors and roofs have a fire resistance rating of not less than one hour.

403.7—UNLIMITED AREAS FOR GROUP B, F AND G

Buildings of noncombustible construction, and havey timber construction in which all wood members are of approved fire retardant treated lumber, may be unlimited in area when complying with all the following provisions:

(a) Buildings of protected noncombustible construction shall not exceed 2 stories in height without basement, and buildings of unprotected noncombustible construction and of heavy timber construction in which all wood members are of approved fire retardant treated lumber shall not exceed one story in height without basement.

(b) The entire building shall be equipped with an approved automatic sprinkler system except that buildings occupied exclusively by stocks of noncombustible material not packed or crafted in combustible material need not be sprinklered.

(c) A permanent accessible open space of 60 feet shall be provided between the building wall under consideration and another building on the same lot or the nearest line to which a building is or may be legally built on another lot. The required 60 feet open space may be reduced to not less than 30 feet on one side provided the building wall facing the reduced open space is built as a fire wall, is not more than 25 percent of the total perimeter in length and there are fire department access openings required by Section 717, protected by approved fire doors.

(d) Means of egress shall be provided in accordance with Chapter XI.

(e) Proper safeguards must be taken in connection with the handling of materials and processing equipment in compliance with the appropriate N.F.P.A. standard. See Chapter V and Appendix H.

TABLE 402—HEIGHT AND AREA RESTRICTION
(Area per floor shown beside number of stories)

USE GROUP	TYPE OF CONSTRUCTION								
				TYPE IV—noncombustible		TYPE V—Ordinary		TYPE VI—Wood Frame	
	TYPE I Fireproof	TYPE II Fire Resist.	TYPE III Heavy Timber	1-Hour Protected	Unprotected	1-Hour Protected	Unprotected	1-Hour Protected	Unprotected
Height Limitations		(80 Feet)	(65 Feet)	(75 Feet)	(35 Feet)	(45 Feet)	(45 Feet)	(35 Feet)	(35 Feet)
A Residential	No Limits	No Area Limit 80 Feet Height Limit	(3) 8,000 (2) 10,000 (1) 15,000	(a) (3) to (5) 10,000 (2) 15,000 (1) 20,000	(2) 10,000 (1) 12,000	(a) (3) to (5) 8,000 (2) 10,000 (1) 15,000	(2) 6,000 (1) 9,000	(2) 6,000 (1) 9,000	(2) 4,000 (1) 6,000
B-1 Business	No Limits	(b) No Area Limit 80 Feet Height Limits	(3) to (5) 10,000 (2) 15,000 (1) 20,000	(a) (3) to (5) 10,000 (2) 15,000 (1) 20,000	(a) (f) (3) to (5) 8,000 (2) 10,000 (1) 12,000	(a) (o) (3) to (5) 8,000 (2) 10,000 (1) 15,000	(a) (f) (o) (3) to (5) 6,000 (2) 8,000 (1) 9,000	(2) 6,000 (1) 9,000 (o)	(2) 4,000 (1) 6,000 (o)
B-2 Mercantile (n) (o)	(o) 100,000	100,000 (o) 80 Feet Height Limits	(o) (3) to (5) 8,000 (2) 10,000 (1) 15,000	(a) (o) (3) to (5) 8,000 (2) 15,000 (1) 20,000	(a) (f) (o) (3) to (5) 6,000 (2) 8,000 (1) 12,000	(3) to (5) 8,000 (2) 10,000 (1) 15,000	(a) (f) (3) to (5) 4,000 (2) 6,000 (1) 9,000	(2) 4,500 (1) 9,000	(2) 3,000 (1) 6,000
C School (k)	No Limits	NoArea Limits 80 Feet Height Limits	(i) (2) 10,000 (1) 15,000	(c) (i) (2) 15,000 (1) 20,000	(c) (i) (1) 12,000	(c) (i) (2) 10,000 (1) 15,000	(c) (i) (1) 9,000	(c) (1) 9,000	(c) (1) 6,000
D-1 Institutional	No Limits	NoArea Limits 80Feet Height Limit	Not Permitted	Not Permitted	Not Permitted	Not Permitted	Not Permitted	Not Permitted	Not Permitted
D-2 Institutional (l)	No Limits	NoArea Limits 80 Feet Height Limits	(2) 10,000 (1) 15,000	(1) 18,000	Not Permitted	(2) 6,000 (1) 9,000	Not Permitted	(1) 5,000	Not Permitted

TABLE 402—HEIGHT AND AREA RESTRICTION
(Area per floor shown beside number of stories)

USE GROUP	TYPE OF CONSTRUCTION								
				TYPE IV—noncombustible		TYPE V—Ordinary		TYPE VI—Wood Frame	
	TYPE I Fireproof	TYPE II Fire Resist.	TYPE III Heavy Timber	1-Hour Protected	Unprotected	1-Hour Protected	Unprotected	1-Hour Protected	Unprotected
Height Limitations		(80 Feet)	(65 Feet)	(75 Feet)	(35 Feet)	(45 Feet)	(45 Feet)	(35 Feet)	(35 Feet)
E-1 Large Assembly (Working) Stage)	No Limits	No Area Limit 80 Feet Height Limit	Not Permitted	Not Permitted	(d) Not Permitted	Not Permitted	(d) Not Permitted	Not Permitted	Not Permitted
E-1 Large Assembly (Non-Working Stage)	No Limits	No Area Limits 80 Feet Height Limits	(1) 15,000	(1) 18,000	(d) (1) 10,000	(1) 12,000	(d) (1) 8,000	Not Permitted	Not Permitted
E-2 Small Assembly (Working Stage)	No Limits	No Area Limits 80 Feet Height Limits	(1) 15,000	(1) 18,000	(d) (1) 10,000	(1) 12,000	(d) (1) 8,000	(d) (1) 5,000	(d) (1) 3,000
E-2 Small Assembly (Non-Working Stage)	No Limits	No Area Limits 80 Feet Height Limits	(2) 10,000 (1) 15,000	(2) 12,000 (1) 18,000	(d) (1) 10,000	(2) 10,000 (1) 15,000	(d) (e) (1) 8,000	(d) (e) (1) 9,000	(d) (e) (1) 6,000
F Storage (n) (o)	(o) 100,000	(o) (3) to (6) 20,000 (2) 30,000 (1) 30,000	(m) (g) (o) (3) to (6) 10,000 (2) 15,000 (1) 20,000	(m) (o) (4) 10,000 (3) 10,000 (2) 15,000 (1) 20,000	(m) (o) (3) 6,000 (2) 10,000 (1) 12,000	(m) (o) (4) 8,000 (3) 8,000 (2) 12,000 (1) 15,000	(m) (o) (3) 4,000 (2) 6,000 (1) 9,000	(o) (1) 9,000	(o) (1) 6,000
G Industrial (n) (o)	(o) 100,000	(o) (3) to (8) 20,000 (2) 30,000 (1) No Limit	(g) (o) (3) to (6) 10,000 (2) 15,000 (1) 20,000	(m) (o) (3) to (6) 10,000 (2) 15,000 (1) 20,000	(m) (o) (3) 6,000 (2) 10,000 (1) 12,000	(m) (o) (3) 9,000 (2) 12,000 (1) 15,000	(m) (3) 4,000 (2) 7,000 (1) 9,000	(o) (1) 9,000	(o) (1) 6,000
H Special Hazardous (h) (o) (j)	(4) 5,000 (3) 5,000 (2) 7,500 (1) 11,500	(3) 4,000 (2) 6,000 (1) 8,300	(2) 6,000 (1) 7,500	(1) 5,000	(1) 5,000	(1) 5,000	(1) 5,000	Not Permitted	Not Permitted

TABLE 402—NOTES

(a) When over four stories in height 2-hour fire-resistive floors shall be required over the basement or cellar.
(b) The height of Type II Fire-Resistive construction for buildings of Group (B) Business Occupancies shall not be limited provided the fire-resistance of all columns shall be not less than 3 hours and of the other structural members including floors shall not be less than shown in Chapter VI, but in no case less than 2 hours except that roofs shall be of not less than 1-1/2 hours fire-resistive construction.
(c) Floors located immediately above useable space in basement or cellars shall have a fire-resistive rating of not less than 1-hour except where an approved automatic sprinkler system is provided. Basements or cellars used as classrooms or assembly rooms shall be counted as a story.
(d) 1-hour fire-resistive floors shall be provided.
(e) May be increased 33-1/3 percent for places of worship.
(f) When over two stories in height an approved automatic sprinkler system shall be installed throughout the building, or all walls, partitions, floors, roofs and their supporting structural members shall provide not less than one (1) hour fire resistance within the building except that roofs of Type IV construction need not be protected.
(g) When over 3 stories in height an approved automatic sprinkler system shall be installed throughout the building.
(h) No modification in area shall be permitted in Group "H" special hazardous occupancies.
(i) The area of a one-story Type III, IV or V building may be increased (100%) one hundred percent if the building is surrounded on all sides by a permanent open space of not less than (60) sixty feet, and there are not less than two exits provided from each classroom, one of which opens directly to the exterior of the building.
(j) See Chapter V for special detail requirements of Group "H" Special Hazardous Occupancies.
(k) At least one-hour interior fire resistive construction shall be used throughout in all buildings two or more stories in height.
(l) At least one-hour fire resistive construction shall be provided throughout all buildings.
(m) When over two stories in height an approved automatic sprinkler system shall be installed throughout the building.
(n) See Section 403.7 for unlimited area provisions.
(o) See Table 901.7 for sprinkler requirements.

403.8—AREA INCREASE FOR FIRE RETARDANT LUMBER

(a) One story buildings of ordinary construction in which all wood members are of approved fire retardant lumber and roof assemblies have been tested and listed by a nationally recognized testing laboratory as not permitting any greater propagation of flame on the underside of the roof assembly than a metal deck roof with combustible insulation board mechanically fastened to the top of the metal deck may be of 100,000 square feet in area when complying with all of the conditions in Section 403.7.

(b) The limiting areas of one-story buildings of heavy timber and ordinary construction may be increased by 33 1/3 percent provided all wood members are of approved fire retardant treated lumber and roof assemblies have been tested and listed by a nationally recognized testing laboratory as not permitting any greater propagation of flame on the underside of the roof assembly than a metal deck roof with combustible insulation board mechanically fastened to the top of the metal deck.

(c) The limiting areas of one-story buildings of Type VI wood frame construction may be increased 25 percent provided all wood members are of approved fire retardant treated lumber.

512.2—EXCEPTION TO AREA LIMITATIONS

Where there are no balconies or galleries in Group E-2, Small Assembly Places, and the assembly floor is located at, or within, 21 inches of street or grade level and all exits meet the street or grade level by ramps having a slope not exceeding 1 foot in 10 feet, the maximum allowable areas of Type III, IV, and V construction may be increased 50 percent over those specified for Group E Assembly occupancies in Table 402.

TABLE 600—FIRE PROTECTIVE REQUIREMENTS
Required Fire Resistance in Hours (See Volume I-A)

Structural Member	Type I Fireproof	Type II Fire Resistive	Type III Heavy Timber	Type IV—Noncombustible		Type V—Ordinary		Type VI—Wood Frame	
				1-Hour Protected	Unprotected	1-Hour Protected	Unprotected	1-Hour Protected	Unprotected
	Section 602	Section 603	Section 604	Section 605		Section 606		Section 607	
Party and Fire Walls	(a) Min. 8" 75% Solid Masonry (Sec. 716)	(a) Min. 8" 75% Solid Masonry (Sec. 716)	(a) Min. 12" 75% Solid Masonry (Sec. 716)	(a) Min. 8" 75% Solid Masonry (Sec. 716)	(a) Min. 8" 75% Solid Masonry (Sec. 716)	(a) Min. 12" 75% Solid Masonry (Sec. 716)	(a) Min. 12" 75% Solid Masonry (Sec. 716)	(a) Min. 12" 75% Solid Masonry (Sec. 716)	(a) Min. 12" 75% Solid Masonry (Sec. 716)
Exterior Bearing Walls Horizonta l Separation*			(Percent Indicates Percentage of Window Opening Allowed) (For openings to be protected with wire glass, See 703.1 (a))						
	NC	NC	NC (b)	NC (c) (b)	NC (c) (b)	(b) (d) NC (e)	(b) (d) NC (e)		
0'—3'	4(0%)	4 (0%)	3 (0%)	3 (0%)	3 (0%)	3 (0%)	3 (0%)	1 (0%)	1 (20%)
3'—20'	4 (20%)	3 (20%)	2 (20%)	2 (20%)	2 (20%)	2 (20%)	2 (20%)	1 (30%)	0 (30%)
20'—30'	4 (30%)	3 (30%)	2 (30%)	2 (30%)	1 (30%)	2 (30%)	1 (40%)	1 (40%)	0 (40%)
Over 30'	4 (40%)	2 (40%)	2 (40%)	2 (40%)	NC (40%)	2 (40%)	1 (40%)	1 No Limit	0 No Limit
Exterior Non-Bearing Walls Horizontal Separation*			*(Horizontal Separation is distance from property line or another building) (Percent Indicates Percentage of Window Opening Allowed)						
					(c) (b)	(e) (d)	(d) (c)		
0'—3'	3 (0%)	3 (0%)	3 (0%) (b) (h)	2 (0%)	2 (0%)	3 (0%) (b)	3 (0%) (b)	1 (0%)	1 (20%)
3'—20'	2 (30%)	2 (30%)	2 (30%) (b)	1 (30%)	1 (30%)	2 (30%) (b)	2 (30%) (b)	0 (30%)	0 (30%)
20'—30'	1 (40%)	1 (40%)	1 (40%) (b)	NC (40%)	NC (40%)	1 (40%) (b)	1 (40%) (b)	0 (40%)	0 (40%)
Over 30'	NC	NC	NC	NC	NC	NC	NC	No Limit	No Limit
Inner Court Walls	3	2	3	3	1	1	1	1	None
Penthouse Walls	2 (f)	2 (f)	2 (f)	1 (f)	NC (f)	None (f)	None (f)	None (f)	None
Partitions Interior Bearing	4	3	3	1	NC	1 (g)	None (g)	1	None
Interior Non-Bearing					See Sections 412, 701, and 702				

TABLE 600—FIRE PROTECTIVE REQUIREMENTS (Continued)
Required Fire Resistance in Hours (See Volume I-A)

Structural Member	Type I Fireproof	Type II Fire Resistive	Type III Heavy Timber	Type IV—Noncombustible		Type V—Ordinary		Type VI—Wood Frame	
				1-Hour Protected	Unprotected	1-Hour Protected	Unprotected	1-Hour Protected	Unprotected
	Section 602	Section 603	Section 604	Section 605		Section 606		Section 607	
Columns									
Supporting Masonry or Bearing Walls	4	3 (j)	2 (j) 6 x 8 or	2 (i) (j)	2 (i) (j)	(j)	(j)	1 (i)	1 (i)
Supporting Roof only	3	2	1 (h)	1	NC	1	None	1	None
Other Columns	4	3	8 x 8 or 1 (j) (h)	1	NC	1	None	1	None
Trusses, Girders and Beams: Supporting Masonry or Bearing Walls, Columns, Girders, Trusses	4	3	2 (i)	2 (i)	2 (i)	2 (i)	2 (i)	1 (i)	1 (i)
Supporting Roofs	2 (k)	1 1/2 (m) (k)	4 x 6 or 1 (h)	1	NC	1	None	1	None
Other Trusses Girders and Beams	4	3	8 x 8 or 1 (h)	1	NC	1	None	1	None
Arches	2	1 1/2 (k)	(h) Section 604.6	1	NC	1	None	1	None
Floors	3	2	Section 604.4	1	NC	1	None	1	None
Roofs									
Deck Construction	2	1 1/2	(h) Section 604.5	1	NC (l)	1 (n)	None (n)	1 (n)	None (n)
High above floor	2 (k)	1 1/2 (k) (m)	Section 604.5	1 (k)	NC (l)	1	None	1	None

(a) Party and Fire Walls shall extend not less than three (3) feet above the roof, except that fire walls need not extend above the roof where the roof and all structural supports are of noncombustible construction. (See Section 718.)
(b) Inside any fire district, all exterior walls, except walls facing a street 30 feet or more in width shall be constructed of 75% Solid Masonry Units (12" min. thickness) in conformance with Section 716. See note (c) and (g) for exception.
(c) For Type IV buildings located within the fire districts, exterior walls shall provide the following fire resistance against outside exposure when building does not exceed 3500 square feet:

0 10 Feet	1 Hour
Over 10 Feet	None

(d) Exterior walls shall not extend less than twenty-four (24) inches above the roof, except that parapet walls need not be constructed on buildings where the roof slopes more than four (4) inches vertical to twelve (12) inches horizontal from the back of the exterior wall of such buildings or where the exterior wall of such building is located on an alley or public way of fifteen feet or more in width.
(e) For Type V buildings less than 2,000 square feet in area located within the fire districts, exterior walls shall provide 2 hour fire resistance.
(f) Where penthouse walls are set back less than five (5) feet from exterior walls, they shall conform to the fire resistance requirements for exterior walls.
(g) The use of combustible construction for interior bearing partitions shall be limited to the support of not more than 2 floors and a roof.
(h) Where horizontal separation of twenty (20) feet or more is provided, wood columns, arches, beams and roof deck conforming to heavy timber sizes may be used externally.
(i) This requirement applies only to structural member supporting masonry walls, except that this does not apply in one (1) story buildings or where the only masonry supported is a masonry veneer.
(j) Same rating as required for wall it supports.
(k) In buildings of Group C and E (School and Assembly occupancies, where structural steel members supporting a roof only are not less than twenty feet clear above any floor or balcony used for any purpose other than seating, fire protection of structural steel members supporting roof construction only may be omitted.
(l) In one story buildings, approved Fire-Retardant Treated Wood may be used as an alternate to noncombustible in buildings of Group C and E (School and Assembly) occupancies.
(m) Fire-proofing of structural members may be omitted in buildings of Group C and E (School and Assembly) occupancies where structural members support a roof only and are twenty feet or more clear above any floor or balcony. In (1) one-story buildings approved fire-retardant (pressure-treated) wood may be used as an alternate to such unprotected structural steel members.
(n) Combustible roof construction must be subdivided into areas not exceeding 3000 square feet. (See Section 705(f).)

SECTION 703—PROTECTION OF WALL OPENINGS

703.1(a)—WHERE PROTECTION IS REQUIRED

For the purpose of this section, when a building is divided by fire walls into two or more sections, each section shall be regarded as a separate building.

Every building (except one and two family dwellings which are less than three (3) stories in height, churches, buildings of Type VI, Wood Frame construction, and public parking decks as defined in Section 507.2), shall have approved fire windows, fire doors or other approved protectives, in every opening in the exterior walls under the following conditions:

1. In buildings where the distance is fifteen (15) feet or less from the property line.

2. In buildings where such opening is above and less than thirty (30) feet distance from any part of a neighboring roof of combustible construction.

3. In buildings where such openings are within 30 feet of each other except where the total area of the buildings does not exceed the area allowed for type of construction.

Exceptions: Such protection shall not be required for show windows facing on a street or public place which do not extend above the second full story above grade nor shall such protection be required when the opening to be protected and the opening against which it is to be protected are facing in the same direction being located in walls in the same or parallel lines. All required opening protection shall be of approved type as defined elsewhere in this section.

E4 - MINIMUM NUMBER OF EXITS

1103.2—MINIMUM NUMBER OF EXITS

(a) *General*— Every room or floor space of a building, occupied by seventy-five *(75) persons or more*, or occupied by a Group A, C, D or H, Hazardous occupancy, shall have not less than two (2) *independent exits*, located as remote as practicable from each other except where one exit is permitted by this Code. A school plan with outside doors or stairways at both ends of a central corridor meets this requirement. Pockets may be created where stairways are not at the end of corridors but at intermediate points.

(b) *Assembly*—In *Group E-2*, Small Assembly Places, there shall be at least *two exit ways*, and in *Group E-1*, Large Assembly Places, there shall be not less than three *(3) exitways*, except that where more than 1,000 persons are accommodated there shall be at least four (4) exitways. Exits shall be located as *remotely* from one another as practicable. The units of *Exit width* shall be as *equally divided* among the exitways as practicable.

(c) *Exceptions for one Exit for Group A, Residential and Group B-1 Office*— There shall be not less than two (2) exits serving every floor area, except that in the following cases there may be *one (1) exit.*

(1) Every living unit shall have access to at least 2 separate exits which are remote from each other and are reached by travel in different directions, except that a common path of travel may be permitted for the first 35 feet (i.e., a dead-end corridor up to 35 feet long may be permitted) provided that a single exit may be permitted under any of the following conditions:

(a) Any *living unit* which has direct exit to the street or yard at grade, or by way of an outside stairway or an enclosed stairway (with fire resistance rating of 1 hour or more) serving that apartment only and not communicating with any basement or other area not a part of the apartment served.

(b) Any building of fire-resistive construction of any height with not more than *2 living units per floor*, with a smokeproof tower or an outside stairway as the exit, immediately accessible to all apartments served thereby.

(2) Any *residential building* not more than 2 stories in height with no basement, or, in case there is a basement, with the street floor construction at least 2 hours fire resistance and with street floor level not more than 8 feet 6 inches above grade at any point next to building, excluding areaways or driveways not more than 10 percent of the perimeter, subject to the following conditions:

(a) The stairway is completely enclosed (walls and ceilings) with 2 hour fire-resistive construction with self-closing fire doors protecting all openings between the stairway enclosure and the building and the stairway is ventilated on each floor with free net area of 20 sq. ft.

(b) Access to the basement is only from the exterior of the building if the basement contains a heating plant, group storage, incinerator room, or paint shop, or other hazardous occupancy.

(c) All corridors serving as access to exits are of fire-resistive construction.

(d) There is not more than 20 feet of travel distance to reach an exit from the entrance door of any living unit.

(e) The building or fire section served by the single exit contains a total of not more than 16 living units on the first and second floors, or not more than 12 units with a maximum gross area per floor of 4,000 square feet if any part of the structure is of combustible construction.

(3) In Group B-1, Office Buildings having no floor over twenty-five hundred (2,500) sq. ft. in area and not over two stories in height provided the occupant content shall not exceed 40 persons above the street floor. Maximum distance of travel to an exit shall not exceed 75 feet.

(d) Sufficient exit facilities shall be provided so that the aggregate capacity of all such exits, determined in accordance with the Chapter, shall not be less than the occupant content as determined from Section 1105.1.

(e) It shall be unlawful to occupy any part of a building by a greater number of persons than that for which exit capacity, as prescribed in this Chapter, has been provided.

SECTION 1104—SPECIAL EXIT REQUIREMENTS

1104.1—SPECIAL MEANS OF EGRESS REQUIREMENTS FOR GROUP A AND D OCCUPANCIES

(a) Special Requirements for Location of Exits of *hotels, hospitals, dormitories, apartments*, flats and other buildings in which rooms are rented for living and sleeping purposes:

(1) All hotels, lodging houses, school dormitories, hospitals, sanatoriums, apartment houses, flats, tenement houses and all other buildings in which rooms are to be rented or leased or let or offered for rent, let or leased for living or sleeping purposes, hereafter constructed in this State shall be constructed so that the occupants of all rooms above the first floor shall have unobstructed access to two separate and distinct ways of egress extending from the uppermost floor to the ground, such ways of egress to be so arranged in reference to rooms that in case of fire on one stairway the other stairway can be reached by the occupant withou his or her having to pass the stairway involved. Entrance to all such ways of egress aforementioned in this section shall be from corridors or hallways of not less than five feet in width, and in no case shall entrance to such ways of egress be through a room or closet, and where such building is, in the opinion of the Insurance Commissioner, of sufficient size to require more than two ways of egress, the standard established by this code shall be adhered to. (See Section 1103.2(c) where one exit is permitted for apartment houses)

(2) Every hotel, lodging house, school dormitory, hospital, sanatorium, apartment house, flat, tenement house or other building in which rooms are rented, leased, let or offered for rent, leased or let for living or sleeping purposes, shall be provided with such additional ways of egress as the Insurance Commissioner shall deem practicable in order that the objects of this code may be accomplished and that existing dangers shall not be perpetuated.

(3) The maximum dead end distance of any corridor may be in accordance with Section 1103.

(b) In Group D-2, *Institutional* occupancies all *doorways* to areas housing patients and doorways between patient occupied spaces and the required exit and all exit doorways leading to the exterior shall be not less than 44 inches in clear width except that exit doors so located as not to be subject to use by patients may be not less than 36 inches in clear width. Required corridors, ramps, or passageways shall be not less than 8 feet in clear width in all areas occupied by patients or serving as part of the means of egress from patient areas. Corridor dead ends shall not exceed thirty (30) feet in length.

(c) In rooms in which are located steam boilers, oil-fired incinerators, or apparatus using or producing gas or vapor, the maximum distance of travel to an exit shall not exceed 50 feet.

1104.2—FIRE TOWERS REQUIRED FOR BUILDINGS EXCEEDING 60 FEET IN HEIGHT

In buildings exceeding sixty (60) feet in height, (except office buildings of light occupancy) at least one stairway shall be a *fire tower*; provided that in sprinklered buildings in which two or more stairways conforming to the requirements of this Chapter are provided, such fire tower shall not be required unless the building exceeds one hundred (100) feet in height.

1104.3—SPECIAL EXIT REQUIREMENTS FOR SCHOOL BUILDINGS AND SUNDAY SCHOOL BUILDINGS

(a) All school buildings and Sunday School buildings over one story in height shall have two means of egress so located with reference to rooms that in case of fire on one stairway, the other stairway can be reached by the occupant without his or her having to pass the stairway involved. The maximum dead end distance of any corridor may be in accordance with Section 1103, for Type I or Type II Buildings.

(b) All public owned school buildings over one story in height, except those of Type I or Type II construction, hereafter erected shall have the stairways and exits so constructed, arranged and located as to form, without the use of automatic or self-operating devices, a positive barrier to the rapid spread of heat, smoke and/or flame (a smoke tower in conformance with 1115.7 will meet this requirement). All stairways in school buildings over one story in height of Type I or Type II construction shall be enclosed with non-combustible partition having a fire resistance of not less than one hour.

(c) Exits for auditoriums and gymnasiums in school buildings shall, unless it is established to the satisfaction of the Building Official that such auditorium or gymnasium will not be used for entertainment purposes, be of the same size and number as that required for theatres.

(d) Churches. Same as theatres except the exit and aisles may be reduced one-fourth.

SECTION 1105—MEANS OF EGRESS CAPACITY REQUIREMENTS

1105.1—OCCUPANT CONTENT

For determining the exits required, the minimum number of persons or the occupant content of any floor area shall in no case be taken less than specified below:

Occupancy	Min. Occupant Content Floor Area Sq. ft per Person
Group A —Residential	125Gross
Group B2—Stores—street floor and sales basements	30 Net
—upper sales floors	60 Net
Office Buildings and other Group B-1 occupancies	100 Gross
Group C —Schools—classrooms	20 Net
—laboratories, museums, libraries, and similar rooms	30 Net
—shops, vocational, administrative rooms	50 Net
—gymnasiums	15 Net
Group D —Institutional	125 Gross
Group E —Assembly—with fixed seats	6 Net
Assembly—without fixed seats	15 Net
Group F —Storage	300 Gross
Group G —Industrial	100 Gross
Group H —Hazardous	100 Gross
Group I —Fallout Shelters	10 Net

1105.2—MEASUREMENT OF MEANS OF EGRESS WIDTH

(a) The *width* of the means of egress shall be measured in *units of 22 inches.* Fractions of a unit shall not be counted except that 12 inches added to one or more full units shall be counted as one-half a unit.

(b) The width shall be measured in the clear at its narrowest point. *Handrails* may project 3 1/2 inches and door jambs 1 inch on each side of the measured width.

1105.3—CAPACITY OF MEANS OF EGRESS

(a) The *capacity of a unit* (22 inches) of means of egress through doors, corridors, stairs and other paths of exit travel shall be in accordance with the following Table:

Occupancy	Persons Per Unit of Exit Width	
	Level Travel (Corridors, doors, etc.)	Stairs
Group A—Residential	60	45
B—Business	100	60
C—Schools	100	60
D—Institutional	30	22
E—Assembly	100	75
F—Storage	60	45
G—Industrial	60	45
H—Hazardous	60	45
I—Fallout Shelters	100	60

(b) The minimum aggregate width of main street entrance doorways shall be 6 feet for Group E, Assembly occupancy and churches. Main street entrance doorways shall be considered as part of the requirements for the means of egress.

(c) The *capacity of exit stairways* constructed in accordance with Section 1115 shall not exceed the limits specified herein and may be used as a required exit from all floors which they serve. (If, for example, three (3) stairways are required to serve the third floor of a building and a like number are required for the second floor, the total number of stairways required shall be three, not six, and the capacity of the stairway shall be determined by the floor having the highest occupant content and not the total occupant content of the building.)

(d) The *aggregate width* of passageways, aisles or corridors serving as access to exits shall be at least equal to the required width of the exit. Where all travel to any exit is along the same access to the exit, the width of the access shall be at least equal to the exit; where there are several accesses to an exit each shall have a width suitable for the travel which it may be called on to accommodate. (6' Min. req. for Group C, D and E)

(e) The *minimum width* of any means of egress shall be 36" in the clear except for Group A, B, F, G, H, (where less than thirty people are accommodated) the minimum is 30 inches. (See Section 1104 for special requirements.)

(f) Where *exits serve more than one floor*, only the occupant content of each floor, considered individually, need be used in computing the required capacity of the exits at that floor: provided that such capacity shall not be decreased at any point along the exit facility in the direction of exit travel. When exits from floors above and below converge at an intermediate floor, the capacity of the exit from such intermediate floor shall not be less than the sum of the widths of the exits converging on such intermediate floor. There shall be no reduction in the capacity of the exits along the means of egress from the building.

(g) In the case of a stairway, the *exit includes* the door to the stairway enclosure, stairs and landings inside the enclosure, the door from the stairway enclosure to the street or open air, or any passageway and door necessary to provide a path of travel from the stairway enclosure to the street or open air. In case of a door leading

directly from the street floor to the street or open air, the exit comprises only the doorway.

NOTE: Doors of small individual rooms, as a in hotels, while constituting means of escape from the room, are not referred to as exits except when they lead directly to the outside of the building or other place of safety, but in a large room, such as a school auditorium, the doors constitute an integral part of the exit system and are referred to as exits from the room. An interior aisle, corridor or hallway used to reach a stair or door exit is not an exit except where it is so located, arranged, and enclosed as to constitute an integral part of a system of travel.

The following Table 922.2 was effective from June 1, 1968 until January 1, 1980.

TABLE 922.2—MINIMUM FACILITIES[1]

Type of Building or Occpancy[2]	Water Closets	Urinals	Lavatories	Bathtub or Showers	Drinking Fountain[3]
Dwelling or Apt. House[4 10]	1 for each Dwelling or Apartment Unit	----------	1 for Each Apartment or Dwelling Unit.	1 for Each Apartment or Dwelling Unit.	
Schools[5]	Male / Female				
Elementary	1 per 60 / 1 per 35	1 per 30 Male	1 per 60 Persons.		1 per 75 Persons.
Secondary	1 per 100 / 1 per 45	1 per 30 Male	1 per 100 Persons.		1 per 75 Persons.
College—Academic	Male 1 per 100 / Female 1 per 60	1 per 110 Male	Male 1 per 150 / Female 1 per 100		1 per 75 Persons.
Office or Public Buildings[11] or Institutions (other than for patient use)	No. of Persons / No. of Fixtures: M. / F. 1-15: 1 / 1 16-35: 2 / 2 36-55: 3 / 4 56-80: 4 / 5 81-100: 5 / 6 101-150: 6 / 8 1 Fixture for each 40 Additional Persons	Wherever urinals are provided for men or women, one water closet less than the number specified may be provided for each urinal installed except that the number of water closets in such cases shall not be reduced to less than 2/3 of the minimum specified for men and 3/4 of the minimum specified for women.	No. of Persons / No. of Fixtures 1-15: 1 16-35: 2 36-60: 3 61-90: 4 91-125: 5 1 Fixture for Each 45 Additional Persons.		1 for Each 75 Persons.
Manufacturing, Warehouses, Workshops, Loft Buildings, Foundries and similar Establishments[6 11]	No. of Persons / No. of Fixtures: M. / F. 1-9: 1 / 1 10-24: 2 / 2 25-49: 3 / 4 50-74: 4 / 5 75-100: 5 / 6 1 Fixture for Each Additional 30	Same substitution as above.	1-100 Persons 1 Fixture for Each 10 Persons. Over 100, 1 for Each 15 Persons[7 8]	1 shower for each 15 persons exposed to excessive heat or to skin contamination with posinous, infectious, or irritating material.	1 for Each 75 Persons.

Type of Building or Occpancy[2]	Water Closets	Urinals	Lavatories	Bathtub or Showers	Drinking Fountain[3]
Dormitories[9 11]	Male: 1 for Each 10 Persons Female: 1 for Each 8 Persons Over 10 Persons, Add 1 Fixture for Each 25 Additional Males and 1 for Each 20 Additional Females.	More than 100 persons—1 fixture for each 10 males or each eight females plus one additional fixture for each 25 additional males or each 20 additional females.	1 for Each 12 Persons. (Separate dental lavatories should be provided in community toilet rooms. Ratio of dental lavatories for each 50 persons is recommended.) Add 1 Lavatory for Each 20 Males, 1 for Each 15 Females.	1 for each 8 persons. In the case of women's dormitories, additional bathtubs should be installed at the ratio of 1 for each 30 females. Over 150 persons, add 1 fixture for each 20 persons.	1 for each 75 Persons.
Theatres, and Churches[11]	No. of Persons / No. of Fixtures M. F. 1-100 2 2 101-200 3 3 201-400 4 4 Over 400, Add 1 Fixture for Each Additional 500 Males and for Each 300 Females.	No. of Persons / No. of Fixtures 1-200 2 201-400 3 401-750 4 Over 600, Add 1 for Additional 300 Males.	No. of Persons / No. of Fixtures M. 1-200 1 201-400 2 401-600 3 Over 750, 1 for Each Additional 500 Person.		
Restaurant, Clubs Auditoriums, and Churches[11]	No. of Persons / No. of Fixtures M. F. 1-50 1 1 51-150 2 2 151-300 3 4 Over 300, Add 1 Fixture for Each 200 Additional Persons.	No. of Persons / No. of Fixtures M. 1-150 1 Over 150 Persons, Add One Fixture for Each 150 Men.	No. of Persons / No. of Fixtures 1-150 1 151-200 2 201-400 3 Over 400, 1 Fixture for Each Additional 400 People		

M—Male, F—Female.

[1]The figures shown are based upon one fixture being the minimum required for the number of persons indicated or any fraction thereof.

[2]Building category not shown on this table. Will be considered separately by the Plumbing Official.

[3]Drinking fountains shall not be installed in toilet rooms.

[4]Kitchen Sinks—1 for each dwelling or apartment unit.

[5]This schedule has been adopted (1958) by the National Council on Schoolhouse Construction.

[6]As required by the American Standard Safety Code for Industrial Sanitation in Manufacturing Establishments (ASA Z4.1-1955).

[7]Where there is exposure to skin contamination with poisonous, infectious, or irritating materials, provide 1 lavatory for each 5 persons.

[8]4-lineal-inches of wash sink or 18-inches of a circular basin, when provided with water outlets for such space, shall be considered equivalent to 1 lavatory.

[9]Laundry trays, 1 for each 50 persons. Slop sinks, 1 for each 100 persons.

[10]Washing Machine—Water and drain connections in each dwelling or apartment unit unless central washing facilities are provided.

[11]The installation of female urinals shall be optional.

General. In applying this schedule of facilities, consideration must be given to the accessibility of the fixtures. Conformity purely on a numerical basis may not result in an installation suited to the need of the individual establishment. For example, schools should be provided with toilet facilities on each floor having classrooms.

Temporary workingmen facilities:

1 water closet and 1 urinal for each 30 workmen.

24-in. urinal trough — 1 urinal 48-in. urinal trough — 2 urinals

36-in. urinal trough — 2 urinals 60 in. urinal trough — 3 urinals

72-in. urinal trough — 4 urinals

APPENDIX F

REPRINTS OF SELECTED PORTIONS OF THE NORTH CAROLINA STATE BUILDING CODE 1978 EDITION

F1 - DEFINITIONS

201.1—GENERAL

For the purpose of this Code, certain abbreviations, terms, phrases, words, and their derivatives, shall be construed as set forth in this Section.

201.2—TENSE, GENDER AND NUMBER

Words used in the present tense include the future. Words in the masculine gender include the feminine and neuter. Words in the feminine and neuter gender include the masculine. The singular number includes the plural and the plural number includes the singular.

ADDITION—is an extension or increase in floor area or height of a building or structure.

ALLEY—means any public space or thoroughfare twenty (20) feet or less in width which has been dedicated or deeded for public use.

ALTER OR ALTERATION—means any change or modification in construction or occupancy.

AMUSEMENT DEVICE—means a mechanically operated device which is used to convey persons in any direction as a form of amusement.

APARTMENT—shall mean a dwelling unit as defined in this code.

APARTMENT HOUSE—is any building or portion thereof used as a multiple dwelling for the purpose of providing three (3) or more separate dwelling units which may share means of egress and other essential facilities.

APPLICABLE GOVERNING BODY—a city, county, state, state agency or other political government subdivision or entity authorized to administer and enforce the provisions of this code, as adopted or amended.

APPROVED—means approved by the building official or other authority having jurisdiction.

APPROVED PLASTIC—(Defined in Section 2201.2(a))

ARCHITECT—within the meaning of this Code, shall be deemed to be a duly registered and licensed architect.

AREA (building)—is the maximum horizontally projected area of the building at or above grade, exclusive of court and vent shafts.

AREA (Gross Floor)—is the area within the inside perimeter of the exterior walls with no deduction for corridors, stairs, closets, thickness of walls, colums or other features, exclusive of court and vent shafts.

AREA (Net Floor)—is the area actually occupied not including accessory unoccupied areas such as corridors, stairs, closets, thickness of walls, columns, toilet room, mechanical aea or other features.

AREAWAY—means an unroofed subsurface space adjacent to a building.

A.S.T.M.—means American Society for Testing and Materials.

ASSEMBLY OCCUPANCY—(Defined in Section 404).

ATRIUM—An open patio or court, with or without a roof or ceiling around which a building is built.

ATTIC—means the space between the ceiling beams of the top habitable story and the roof rafters.

ATTIC STORY—means any story situated wholly or partly in the roof, so designated, arranged or built as to be used for business, storage or habitation.

AUTOMATIC—as applied to fire protection devices, is a device or system providing an emergency function without the necessity for human intervention and activated as a result of a predetermined temperature rise, rate of rise of temperature, or combustion products, such as incorporated in an automatic sprinkler system, automatic fire door, automatic fire shutter, or automatic fire vent.

AUTOMOBILE PARKING STRUCTURE—means a structure used for the parking or storage of automobiles.

AUTOMOTIVE SERVICE STATION—(Defined in Section 405.4).

AWNING—(Defined in Chapter XXVI).

BALCONY—means that portion of the seating space of an assembly room, the lowest part of which is raised four (4) feet or more above level of the main floor.

BALCONY—(Exterior) A platform that projects from the wall of a building or structure and is enclosed by a parapet or railing no less than 42" in height (See 1108.4).

BASEMENT—means a story of a building or structure having one-half or more of its clear height below grade. Also see "Story". A basement used as habitable space shall be considered a story.

BEAM—a primary structural member supporting secondary structural members, floors, roof, joists, and the like.

BLEACHERS—(Defined in Section 503.2).

BOILER—is a heating appliance intended to supply hot water or steam.

BRICK—means a solid masonry unit having a shape approximately a rectangular prism, usually not larger than 12 by 4 by 4 inches. A brick may be made of burned clay or shale, of fire clay or mixtures thereof, of lime and sand, of cement and suitable aggregates, or of other approved materials.

BUILDING—means any structure built for the support, shelter or enclosure of persons, animals, chattels, or property of any kind which has enclosing walls for fifty (50) percentof its perimeter. The term "building" shall be construed as if followed by the words "or part thereof". (For the purpose of this Code each portion of a building separated from other portions by a fire wall shall be

considered as a separate building.) For the purpose of area and height limitations this definition shall be applicable to sheds and open sheds.

SHED—means any structure built for the support, shelter or enclosure of persons, animals, chattels, or property of any kind which has enclosing walls for less than fifty (50) percent of its perimeter.

OPEN SHED—means any structure that has no enclosing walls.

BUILDING AND STRUCTURE (existing)—is any structure erected prior to the adoption of this Code, or one for which a legal building permit has been issued.

BUILDING COMPONENT—(Defined in Section 2101.2(1))

BUILDING, FARM—(Defined in Section 504).

BUILDING LINE—means the line, established by law, beyond which a building shall not extend, except as specifically provided by law.

BUILDING OFFICIAL—is the officer or other designated authority charged with the administration and enforcement of this code, or his duly authorized representative.

BUILDING SYSTEM—(Defined in Section 2101.2 (2))

BUILDING OCCUPANCY—(Defined in Section 405).

CANOPY—(See Chapter XXVI).

CAST STONE—is a building stone manufactured from cement concrete precast and used as a trim, veneer or facing on or in buildings or structures.

CELLAR—means that portion of a building, the ceiling of which is entirely below grade or less than four (4) feet six (6) inches above grade. (See STORY).

CHIMNEY CONNECTOR—is the pipe which connects a fuel burning appliance to a chimney.

CITY—(See definition APPLICABLE GOVERNING BODY.)

CLOSED CONSTRUCTION—(Defined in Section 2101.2(3))

COMBUSTIBLE MATERIAL—A material which cannot be classified as noncombustible in accordance with that definition.

COMMON-PROPERTY LINE—means a line dividing one lot from another when said lots are of one ownership.

COMPLIANCE ASSURANCE PROGRAM—(Defined in Section 2101.2(4))

CONCRETE—(See Chapter XVI.)

CONDOMINIUM DWELLING UNIT—for the purpose of this code is an apartment as defined in this Code.

CONSTRUCTION—(See Chapter VI)

CONSTRUCTION TYPES—(See Chapter VI)

COVERED MALL—is a covered or roofed interior area used as a pedestrian public way and connecting tenant spaces and/or groups of tenant spaces housing individual or multiple tenants.

CURB LEVEL—referring to a building, means the elevation at that point of the street grade that is opposite the center of the wall nearest to and facing the street line.

DEAD LOAD—(See Section 1202.)

DISPLAY SIGN—means a structure that is arranged, intended, designed or used as an advertisement announcement or direction, and includes a sign, sign screen, billboard and advertising devices of every kind.

DORMITORY—is a space in a unit where group sleeping accommodations are provided with or without meals for persons not members of the same family group, in one room, or in a series of closely associated rooms under joint occupancy and single management, as in college dormitories, fraternity houses, military barracks, and ski lodges.

DWELLING—(Defined in Section 2101.2 (5)).

DWELLING UNIT—is a single unit providing complete, independent living facilities for one or more persons including permanent provisions for living, sleeping, eating, cooking and sanitation.

EGRESS, MEANS OF—See Definition, Section 1102.

ENGINEER—within the meaning of this Code, shall be deemed to be a duly registered and licensed engineer.

ESCALATOR ENCLOSURES—(Defined in Section 1106.2 & 1106.4).

EVALUATION AND INSPECTION AGENCY—(Defined in Section 2101.2(6)).

EXISTING BUILDING—(See BUILDING—EXISTING).

EXIT—(Defined in Section 1102 (a) (2))

EXIT ACCESS—(Defined in Section 1102 (a) (1))

EXIT DISCHARGE, EXIT OUTLET—(Defined in Section 1102 (a) (3))

EXTRA HAZARD OCCUPANCIES—Extra hazard-occupancies or portions of other occupancies where quantity and combustibility of contents is very high, flammable liquids, dust, lint or other materials are present introducing the probability of rapidly developing fires with high rates of heat release.

Extra Hazard Occupancies include occupancies such as:

Aircraft Hangars
Chemical Works (Extra Hazard)
Cotton Pickers and Opening Operations
Explosives and Pyrotechnics
Woodworking with Flammable Finishing

Under favorable conditions and subject to the approval of the authority having jurisdiction, a reduction of requirements to the next less restrictive occupancy classification may be applied to the following occupancies:

Cold Storage Warehouses
Cotton Picker & Opening Operations
Feed Mills
Leather Goods Manufacturing
Machine Shops
Mercantiles
Metal Working
Paper & Pulp Mills

FALLOUT SHELTER—(Defined in Section 511.2)

FALLOUT SHELTER, DUAL-USE—(Defined in Section 511.2)

FALLOUT SHELTER, SINGLE-USE—(Defined in Section 511.2)

FAMILY—means one or more persons living together, whether related to each other by birth or not, and having common housekeeping facilities.

FIRE DISTRICT—(See Section 301.)

GRADE—is a reference plane representing the average of finished ground level adjoining the building at all exterior walls.

GRADE—with reference to lumber, means the division of sawn lumber into quality classes with respect to its physical and mechanical properties as defined in published lumber manufacturers' standard grading rules.

GRANDSTANDS—(Defined in Section 503.2)

GRANDSTANDS, OPEN AIR—(Defined in Section 503.2)

GROUND SIGN—(Defined in Section 2301.2(b))

FIRE DOOR—means a door and its assembly, so constructed and assembled in place as to give the specified protection against the passage of fire.

FIRE PARTITION—means a partition of construction which subdivides a building to restrict the spread of fire or to provide areas of refuge, but is not necessarily continuous through all stories nor extended through the roof, and which has a fire-resistance rating as required by the Code.

FIRE-RESISTANCE RATING—means the time in hours that the material or construction will withstand the standard fire exposure as determined by a fire test made in conformity with the "Methods of Fire Tests of Building Construction and Materials, ASTM E119."

FIRE RETARDANT (PRESSURE TREATED) WOOD—means wood chemically impregnated in accordance with A.W.P.A. Specifications C1-61 which must have a flame spread rating not exceeding 25, with no evidence of significant progressive combustion when tested for 30 minutes in accordance with Methods of Test for Surface Burning Characteristics of Building Materials, ASTM E84-A. All materials shall bear identification showing the fire performance rating thereof issued by an approved agency having a re-examination service and when exposed to the weather or sustained high humidity shall be identified as "Exterior." Exterior grade shall comply with the requirements of the Method of Test for Durability of Fire Retardant Treatment of Wood ASTM D 2898. Subsequent to treatment, fire retardant treated lumber and plywood shall be dried to a moisture content of 19% or less for lumber and 15% or less for plywood.

FIRE WALL—is a fire resistive wall, having protected openings, which restricts the spread of fire and extends continuously from the foundation to or through the roof.

FLAME SPREAD—is the propagation of flame over a surface.

FLAME SPREAD RATING—is that numerical value assigned to a material tested in accordance with "Method of Test for Surface Burning Characteristics of Building Materials, ASTM E84."

FLOOR AREA—See Area (floor).

FOOTBOARDS—(Defined in Section 503.2)

FRONT OF LOT—means the front boundary line of a lot bordering on the street, and in the case of a corner lot, may be either frontage.

GALLERY—means that portion of the seating space of an assembly room having a seating capacity of more than ten (10) located above a balcony.

GARAGE—means a building or structure or a portion thereof, in which a motor vehicle containing a flammable fluid in its fuel storage tank, is stored, housed, kept, repaired or serviced;

AUTOMOTIVE SERVICE GARAGE—means a garage where no repairwork is done except exchange of parts and maintenance requiring no open flame, cutting, welding or the use of highly flammable liquids;

BASEMENT PARKING GARAGE—means an enclosed parking garage located in a basement, and includes an underground parking garage;

CARPORT—means a garage attached to a dwelling and having one or more open sides;

ENCLOSED PARKING GARAGE—means a garage having exterior enclosure walls and used for the parking of motor vehicles;

MOTOR VEHICLE SERVICE GARAGE—means a garage in which a flammable fluid for retail supply to motor vehicles is stored, housed or sold;

OPEN AIR PARKING GARAGE—means a garage having not less than 50 percent of two sides of the garage open to the air at each story and used for the parking of motor vehicles;

REPAIR GARAGE—means a garage wherein major repairs may be made to more than two motor vehicles at a time.

GARAGE—PRIVATE GARAGE—(Defined in Section 412.6).

GARAGE—PUBLIC GARAGE—means any garage other than a private garage.

GLASS & GLAZING—(See Chapter 20)

GLASS FIBER REINFORCED PLASTIC—(Defined in Section 2201.2(f))

HABITABLE SPACE—is a space in a structure for living, sleeping, eating or cooking. Bathrooms, toilet compartments, closets, halls, storage or utility space, and similar areas are not considered habitable space.

HEATING—(All definitions in Chapter XXIX and Mechanical Code.)

HEIGHT—as applied to a building, means the vertical distance from average grade to the highest finished roof surface in the case of flat roofs or to a point at the average height of roofs having a pitch of more than one (1) foot in four and one-half (4 1/2) feet; HEIGHT of a building in stories does not include basements and cellars, except as specifically provided otherwise.

HEIGHT—as applied to a story, means the vertical distance from top to top of two successive finished floor surfaces.

HEIGHT—as applied to a wall, means the vertical distance to the top measured from the foundation wall, or from a girder or other intermediate support of such wall.

HISTORIC BUILDINGS—(Defined in Section 1009.1)

HORIZONTAL SEPARATION—means a permanent open space between the building wall under consideration and the lot line or the center line of a facing street,

alley or publicway. Where two or more buildings are on a lot, the horizontal separation of the wall under consideration shall be measured from an imaginary line drawn at a distance from the facing wall equal to the horizontal separation required for that wall.

HOTEL—is any building containing six (6) or more guest rooms intended or designed to be used, or which are used, rented or hired out to be occupied or which are occupied for sleeping purposes by guests.

INCOMBUSTIBLE MATERIAL—is synonymous with NON-COMBUSTIBLE MATERIAL.

INDEPENDENCE OF JUDGEMENT—(Defined in Section 2101.2 (7))

INDUSTRIAL OCCUPANCY—(Defined in Section 408).

INNERCOURT—an open unoccupied space bounded by the walls of the building, but located within the exterior walls of the building.

INSTALLATION—(Defined in Section 2101.2 (8))

INSTITUTIONAL OCCUPANCY—(Defined in Section 409).

INTERIOR LOT LINE—is synonymous with COMMON-PROPERTY LINE.

INSPECTION DEPARTMENT—refer to Building Official.

INSPECTOR—refer to Building Official..

KIOSK—A small light structure with one or more open sides.

LABEL—(Defined in Section 2102.2 (9))

LIGHT DIFFUSING SYSTEM—(Defined in Section 2201.2 (b))

LIGHT HAZARD OCCUPANCIES—Light Hazard—Occupancies or portions of other occupancies where the quantity and/or combustibility of contents flow and fires with relatively low rates of heat release are expected. Light Hazard Occupancies include occupancies such as:

Churches	Museums
Clubs	Nursing or Convalescent Homes
Educational	Office, including Data Processing
Hospitals	Residential
Institutional	Restaurant seating areas
Libraries, except large stack rooms	Theaters and Auditoriums excluding stages and prosceniums

LINTEL—means the beam or girder placed over an opening in a wall which supports the wall construction above.

LISTED: Equipment or materials included in a list published by a nationally recognized testing laboratory, inspection agency or other organization concerned with product evaluation that maintains periodic inspection of production of listed equipment or materials, and whose listing states either that the equipment or material meets nationally recognized standards or has been tested and found suitable for use in a specified manner. The means for identifying listed equipment may vary for each testing laboratory, inspection agency, or other organization concerned with product evaluation, some of which do not recognize equipment as listed unless it is also labeled. The authority having jurisdiction should utilize the system employed by the listing organization to identify a listed product. (Note: Refer to North

Carolina General Statutes 66-23 through 66-27 entitled "Electrical Materials, Devices, Appliances and Equipment.")

LOAD, DEAD—means the weight of all permanent construction including walls, floors, roofs, partitions, stairways and of fixed service equipment. (See Section 1202)

LOAD LIVE—is the weight superimposed by the use and occupancy of the building, not including the wind load, earthquake load, or dead load. (See Section 1203)

LOCAL ENFORCEMENT AGENCY—(Defined in Section 2101.2 (10))

LOCAL GOVERNMENT—(Defined in Section 2101.2 (11))

LOT—a parcel of land considered as a unit.

LOT LINE—means a line dividing one lot from another, or from a street or other public space.

MCSC—Model Codes Standardization Council.

MALL(enclosed)—is a covered or roofed interior area used as a pedestrian promenade and connecting tenant spaces and/or groups of tenant spaces housing individual or multiple tenants.

MALL(open)—means an area composed of sidewalks and landscaping which serves as a pedestrian thoroughfare between buildings but is not dedicated to public use.

MANUFACTURED BUILDING—(Defined in Section 2101.2 (12))

MARQUEE SIGN—(Defined in Section 2301.2 (f))

MASONRY—means that form of construction, composed of stone, brick, concrete, gypsum, hollow clay tile, concrete block or tile, or other similar building units or materials or a combination of these materials laid up unit by unit and set in mortar. For the purpose of this Code, plain monolithic concrete shall be considered as masonry. (See Section 1402.6).

HOLLOW MASONRY UNIT—means a masonry unit whose net cross-sectional area in any plane parallel to the bearing surface is less than 75 per cent of its gross cross-sectional area measured in the same plane;

MASONRY OF HOLLOW UNITS—means masonry consisting wholly or in part of hollow masonry units laid contiguously in mortar.

REINFORCED MASONRY—means unit masonry in which reinforcement is imbedded in such a manner that the two materials act together in resisting forces.

SOLID MASONRY—means masonry consisting of solid masonry units laid contiguously in mortar, or consisting of plain concrete.

SOLID MASONRY UNIT—means a masonry unit whose net cross-sectional area in every plane parallel to the bearing surface is 75 percent or more of its gross cross-sectional area measured in the same plane.

MEANS OF EGRESS—(Defined in Section 1102 (a))

MEZZANINE—is an intermediate level between the floor and ceiling of any story, and covering less than thirty-three and one-third (33 1/3) percent of the floor area immediately beneath.

MIXED TYPES OF CONSTRUCTION—has the meaning as set forth in Section 609 of this Code.

MOBILE HOME—(Defined in Section 2101.2 (13))

MOTEL—shall mean hotel as defined in this Code.

MULTIPLE DWELLING—has the same meaning as APARTMENT HOUSE.

MULTIFAMILY HOUSE—means a building or portion thereof containing three or more dwelling units; including tenement house, apartment house, flat.

NONCOMBUSTIBLE BUILDING MATERIAL—is one which, in the form and thickness in which it is used, meets any of the following requirements:

1. Materials which pass the test procedure for defining noncombustibility of elementary materials set forth in ASTM E 136 when exposed to a furnace temperature of thirteen hundred eighty-two (1382) degrees F. for a period of five (5) minutes, and do not cause a temperature rise of the surface or interior thermocouples in excess of fifty-four (54) degrees F. above the furnace air temperature at the beginning of the test and which do not flame after an exposure of thirty (30) seconds.

2. Materials having a structural base of noncombustible materials as defined in paragraph one, with a surfacing not more than one-eighth (1/8) inch thick which has a flamespread rating not greater than fifty (50) when tested in accordance with the method of test for surface burning characteristics of building materials set forth in ASTM E 84.

The term noncombustible does not apply to the flamespread characteristics of interior finish or trim materials. A material shall not be classed as noncombustible building construction material which is subject to increase in combustibility or flamespread rating beyond the limits herein established through the effects of age, moisture or other atmospheric conditions.

OCCUPIED—as applied to a building, shall be construed as though followed by the words "or intended, arranged or designed to be occupied.--

OCCUPANCY—is the purpose for which a building, or part thereof, is used or intended to be used.

MIXED OCCUPANCY—means mixed occupancy as set forth in Section 403 of this Code.

SPECIAL OCCUPANCY—means Group H Occupancy, as set forth in Section 411 of this Code.

OPEN CONSTRUCTION—(Defined in Section 2101.2 (14))

ORDINARY CONSTRUCTION—(Defined in Section 606).

ORDINARY HAZARD OCCUPANCIES—Ordinary Hazard (Group 1)—Occupancies or portions of other occupancies where combustibility is low, quantity of combustibles is moderate, stock piles of combustibles do not exceed eight feet and fires with moderate rates of heat release are expected.

Ordinary Hazard Occupancies (Group 1) include occupancies such as:

Automobile Parking Garages
Bakeries
Beverage Manufacturing
Canneries
Dairy Products Mfg. and Processing
Electronic Plants
Glass and Glass Products Manufacturing
Laundries

Ordinary Hazard (Group 2)—Occupancies or portions of other occupancies where quantity and combustibility of contents is moderate, stock piles do not exceed 12 feet and fires with moderate rate of heat release are expected.

Ordinary Hazard Occupancies (Group 2) include occupancies such as:

Cereal Mills
Chemical Plants—Ordinary
Cold Storage Warehouses
Confectionery Products
Distilleries
Leather Goods Mfg.
Libraries-Large Stack Room Areas
Mercantiles
Machine Shope
Metal Working
Printing and Publishing
Textile Mfg.
Tobacco Products Mfg.
Wood Product Assembly

Ordinary Hazard (Group 3)—Occupancies or portions of other occupancies where quantity and/or combustibility of contents is high, and fires of high rate of heat release are expected.

Ordinary Hazard Occupancies (Group 3) include occupancies such as:

Exhibition Halls
Feed Mills
Paper and Pulp Mills
Paper Process Plants
Piers and Wharves
Repair Garages
Tire Manufacturing
Warehouses (having moderate to higher combustibility of content, such as paper, household furniture, paint, general storage, whiskey, etc.)
Wood Machining

OWNER—is any person, agent, firm or corporation having a legal or equitable interest in the property.

PARTITION—means an interior wall, other than folding or portable, that subdivides spaces within any story, attic or basement of a building.

PENTHOUSE—is an enclosed structure above the roof of a building, other than a roof structure or bulkhead, occupying not more than one-third (1/3) of the roof area.

PERMANENT AWNING—means a roof sheltering a sidewalk, platform or paved area.

PERMIT—is an official document or certificate issued by the authority having jurisdiction authorizing performance of a specified activity.

PERSON—means a natural person, his heirs, executors, administrators, or assigns, and also includes a firm, partnership, or corporation, its or their successors or assigns, or the agent of any of the aforesaid.

PLACE OF ASSEMBLY—means a room or space used for assembly or educational occupancy for 100 or more occupants.

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

PLASTIC GLAZING—(Defined in Section 2201.2 (c))

PLASTIC ROOF PANELS—(Defined in Section 2201.2 (d))

PLASTIC WALL PANELS—(Defined in Section 2201.2 (e))

PLENUM—is an air compartment or chamber to which one or more ducts are connected and which forms part of an air distribution system.

PREFABRICATED CONSTRUCTION—(Defined in Section 2101.2 (15))

PREFABRICATED SUBASSEMBLY—(Defined in Section 2101.2 (16))

PREFABRICATED UNIT—(Defined in Section 2101.2 (17))

PROJECTION SIGN—(Defined in Section 2301.2 (e))

PROTECTION FACTOR—(Defined in Section 511.2)

PUBLIC SPACE—is a legal open space twenty-one (21) feet or more in width on the premises, accessible to a public way or street, such as yards, courts or open spaces permanently devoted to public use which abuts the premises, and that is permanently maintained accessible to the Fire Department and free of all incumbrances that might interfere with its use by the Fire Department.

RAIL(guard)—a bar extending from one post or support to another and serving as a guard or barrier.

RAIL(hand)—a narrow rail for grasping with the hand as a support.

REPAIR—is the reconstruction or renewal of any part of an existing building for the purpose of its maintenance.

REQUIRED—means required by some provision of this Code.

RESIDENTIAL CARE FACILITIES—(Defined in Section 510).

RESIDENTIAL OCCUPANCY—(Defined in Section 411).

REVIEWING STANDS—(Defined in Section 503.2)

ROOF SIGN—(Defined in Section 2301.2 (c))

ROOF STRUCTURE—is an enclosed structure on or above the roof of any part of a building.

ROOM CAPACITY—(See Chapter XI).

SAFE DISPERSAL AREA—(Defined in Section 503.2)

SCHOOL OCCUPANCY—(Defined in Section 406).

SEATING CAPACITY—(See Chapter XI).

SELF-CLOSING—as applied to a fire door or other opening, means normally closed and equipped with an approved device which will insure closing after having been opened for use.

SERVICE STATION—(Defined in Section 405.4).

SHAFT—means a vertical opening extending through one or more stories of a building, for elevators, dumbwaiters, light, ventilation, or similar purpose.

SHALL—as used in this Code, is mandatory.

SHINGLE SIGN—(Defined in Section 2301.2 (g))

SIGNS—(See Chapter XXIII).

SMOKE DETECTOR—A smoke detector is an approved listed detector sensing either visible or invisible particles of combustion.

SMOKEPROOF TOWER—(See Section 1104.2)

SPECIAL OCCUPANCY—means Group H Hazardous occupancy, as set forth in Section 407 of this Code.

SPECTACULAR SIGNS—(Defined in Section 2301.2 (a))

SPRINKLERED—means equipped with an approved automatic sprinkler system properly maintained. See Chapter IX.

STAGE—is a partially enclosed portion of an assembly building which is designed or used for the presentation of plays, demonstrations or other entertainment wherein scenery, drops, or other effects may be installed or used, and where the distance between the top of the proscenium opening and the ceiling above the stage is more than five (5) feet.

STAGE—WORKING—(Also Theatrical Stage—See Section 404.9 and 404.10)—a working stage is a partially enclosed portion of an Assembly Building, cut off from the audience section by a proscenium wall of masonry of not less than four (4) hour fire-resistive construction, and which is equipped with scenery, loft, gridiron, fly-gallery, and lighting equipment, and the proscenium opening shall be equipped with a fire-proof and smoke-proof curtain, and the depth from the proscenium curtain to the back wall shall be not less than fifteen (15) feet.

STAGE—NON-WORKING—a non-working stage is a partially enclosed portion of an Assembly Building, cut off from the audience section by a proscenium wall of not less than one (1) hour fire-resistive construction, without the equipment common to the Working Stage (such as fly gallery and gridiron) and of such dimensions that such equipment cannot be installed (but flat scenery may be used on such stage).

A fireproof curtain is not required for a non-working stage, but if there is a fabric or other curtain it shall be of noncumbustible materials or treated with an approved fire retardant. The depth of the stage may be more or less than fifteen (15) feet.

STAGE, PLATFORM—a platform is a raised section of floor within the assembly hall or auditorium area, and setting on the floor thereof, not enclosed above the platform floor level, and usually or relatively small area as compared to the auditorium seating area. A platform may be of permanent, temporary, or portable construction; it may have "flat" movable scenery and draw curtains.

STAGE, ROSTRUM—(See "platform") usually used for single or small group of persons such as lecturers, no scenery or curtains. May be permanent, temporary, or portable.

STAGE, DAIS—a small and low "platform" or "rostrum" may be placed on a "stage." May be permanent, temporary, or portable.

STAGE, PODIUM—a small "dais" of size sufficient to accommodate one or two persons, such as a band or orchestra conductor or a soloist. A "podium" may be located on a Stage, Platform, Rostrum, or Dais, or the floor of the audience section of a place of assembly. A podium is almost always a portable construction.

STAIRWAY—means one (1) or more flights of stairs and the necessary landings and platforms connecting them, to form a continuous and uninterrupted passage from one (1) story to another in a building or structure.

STANDARD FIRE TEST—means the fire test formulated under the procedure of the American National Standards Institute as the "Methods of Fire Tests of Building Construction and Materials, ASTM E119," ANSI A2.1.

STORY—is that portion of a building included between the upper surface of a floor and upper surface of the floor or roof next above. The basement of a building shall be considered a story if it is used for purposes other than storage or heating.

STREET—means any public thoroughfare (street, avenue, boulevard, park) or space more than twenty (20) feet in width which has been dedicated or deeded to the public for public use.

STREET LINE—means a lot line dividing a lot from a street.

STRUCTURE—is that which is built or constructed.

SURVEYOR—within the meaning of this Code, shall be deemed to be a duly registered and licensed surveyor or Civil Engineer.

THEATER—means a building, or part thereof, which contains an assembly hall with or without stage which may be equipped with curtains and permanent stage scenery or mechanical equipment adaptable to the showing of plays, operas, motion picture, performances, spectacles and similar forms of entertainment. (See Section 404).

THERMOPLASTIC MATERIAL—(Defined in Section 2201.2 (h))

THERMOSETTING MATERIALS—(Defined in Section 2201.2 (g))

TOWNHOUSE—is a single-family dwelling unit constructed in a series or group of attached units with property lines separating such units.

UNIT OF EGRESS WIDTH—(Defined in Section 511.2 & 1105.2)

VALUATION OR VALUE—as applied to a building, means the estimated cost to replace the building in kind.

VENEER—means a facing attached to a wall for the purpose of providing ornamentation, protection, or insulation, but not counted as adding strength to the wall.

VERTICAL OPENING—is an opening through a floor or roof.

WALKWAY, COVERED—(Defined in Section 505.2)

WALKWAY, ENCLOSED—(Defined in Section 505.2)

WALKWAY, TUNNELED—(Defined in Section 505.2)

WALL (bearing)—is a wall supporting any vertical load in addition to its own weight.

WALL(nonbearing)—is a wall which supports no vertical load other than its own weight.

WALL, CAVITY—means a wall built of masonry units or of plain concrete, or a combination of these materials, so arranged as to provide an air space within the wall, and in which the inner and outer parts of the wall are tied together with metal ties.

WALL, CURTAIN—means a non-bearing wall between columns or piers and which is not supported by girders or beams, but is supported on the ground.

WALL, FACED—means a wall in which the masonry facing and backing are so bonded as to exert common action under load.

WALL, EXTERIOR—means a wall, bearing or non-bearing, which is used as an enclosing wall for a building, but which is not necessarily suitable for use as a Party Wall or Fire Wall.

WALL, FOUNDATION—means a wall below the first floor extending below the adjacent ground level and serving as support for a wall, pier, column or other structural part of a building.

WALL OF MASONRY, HOLLOW—means a wall built of masonry units so arranged as to provide an air space within the wall, and in which the inner and outer parts of the walls are bonded together with masonry units or steel.

WALL, NON-BEARING—means a wall which supports no load other than its own weight.

WALL, PANEL—means a non-bearing wall in skeleton or framed construction, built between columns or piers and wholly supported at each story.

WALL, PARAPET—means that part of any wall entirely above the roof line.

WALL, PARTY—A wall on an interior lot line, used or adapted for joint service between two (2) buildings.

WALL(retaining)—is a wall designed to prevent the lateral displacement of soil or other material.

WALL SIGN—(Defined in Section 2301.2 (d))

WOOD FRAME CONSTRUCTION—(Defined in Section 607).

WRITING—includes printing and typewriting.

WRITTEN NOTICE—is a notification in writing delivered in person to the individual or parties intended, or delivered at, or sent by certified or registered mail to the last residential or business address of legal record.

YARD—is an unoccupied open space other than a court.

LIMITED-COMBUSTIBLE MATERIAL—as applied to a building construction material, means a material, not complying with the definition of noncombustible material, which has a potential heat value not exceeding 3,500 Btu per pound, and falls into the following paragraph. Materials which are subject to an increase in combustibility or flame spread rating beyond the limits herein established through the effects of age, moisture, or other atmospheric condition shall be classed as combustible materials.

Materials, in the form and thickness used, having a flame spread rating not greater than 25 without evidence of continued progressive combustion and of such composition that surfaces that would be exposed by cutting through the material on any plane would not have a flame spread rating greater than 25 without evidence of continued progressive combustion.

F2 - TYPE OF CONSTRUCTION, HEIGHT, AND AREA

402.3—AREA MODIFICATIONS

(a) Application—The exceptions and requirements of this Section shall modify the area limits set forth in Table 400 and the specific use provisions of this Chapter.

(b) Exceptions to Area Increases—The increase of floor areas permitted by this Section & Table 400 may be additive when applicable, except that in buildings where because of occupancy, type of construction, automatic sprinkler equipment is required as specified in Section 901, no increase of area shall be permitted because of such equipment.

(c) Area Increase for Fire Division Walls

1. For the purpose of this Code, each part of a building included within fire walls shall be deemed to be a separate building. "Exception: Group H Occupancies. See Sec. 407.3 (c)."
2. No building shall be limited in area when divided into sections by fire walls, provided no section exceeds the maximum allowable floor area in this Chapter.

(d) Area Increase for Separation

1. Where streets or public spaces not less than 21 feet in width, or horizontal separation from property lines of total width of not less than thirty (30) feet (or 30 feet between buildings on commonly owned property) extend along more than twenty-five (25) percent of the building perimeter, except for hazardous occupancies, the unsprinklered areas permitted by Table 400 may be increased by the following formula:

$$\text{Where } I = 4/3 \left(\frac{F}{P} - 25\%\right)$$

I =Per cent increase of unsprinklered areas

F = Building perimeter in feet which fronts on streets or public spaces not less than 21 feet in width, or horizontal separation not less than thirty (30 feet wide.

P = Total perimeter of building in feet.

2. Where a building of rectangular shape is erected on a corner lot so that the full length of 2 of its sides front on a street or on a public space 21 feet or more in width, or a horizontal separation of 30 feet, the unsprinklered areas in Table 400 may be increased by 50 percent.
3. Where a building is erected on a lot so that the full length of all of its sides front on a street or on a public space 21 feet or more in width, or a horizontal separation of 30 feet, the unsprinklered areas in Table 400 may be increased by 100 percent.
4. Section 402.3(d) does not apply to Group R and I occupancy or to Group E and A occupancy over one story in height.

(e) Unlimited Areas for Business (B), Factory-Industrial (F), Mercantile (M), or Storage (S) Occupancies Outside the First Fire District—Buildings of Type III and Type IV construction in which all wood members are of approved fire retardant treated lumber, may be unlimited in area when complying with all the following provisions:

1. Buildings of Type IV — Protected construction shall not exceed 2 stories in height without basement, and buildings of Type IV — Unprotected construction and of Type III construction in which all wood members are of approved fire retardant treated lumber shall not exceed one story in height without basement.
2. The entire building shall be equipped with an approved automatic sprinkler system except where water may cause or increase a fire, other fire extinguishing systems shall be required in rooms or buildings used for the manufacture or storage of hazardous materials including but not limited to, aluminum powder, calcium carbide, calcium phosphate, metallic sodium and potassium, quicklime, magnesium powder and sodium peroxide. Buildings occupied exclusively by stocks of non-combustible material not packed or crafted in combustible material need not be sprinklered.
3. A permanent accessible horizontal separation of 60 feet shall be provided between the building wall under consideration and another building on the same lot or the nearest line to which a building is or may be legally built on another lot. The required 60 feet open space may be reduced to not less than 30 feet on one side provided the building wall facing the reduced open space is built as a fire wall, is not more than 25 percent of the total perimeter in length and there are fire department access openings required by Section 717 protected by approved fire doors.
4. Means of egress shall be provided in accordance with Chapter XI.
5. Proper safeguards must be taken in connection with the handling of materials and processing equipment in compliance with the appropriate N.F.P.A. standard.

Note: See Section 407.1(b) for Storage and Handling of Hazardous Materials and Processes.

(f) Area Increase for Fire Retardant Lumber

1. One story buildings of Type V construction in which all wood members are of approved fire retardant lumber and roof assemblies have been tested and listed by a nationally recognized testing laboratory as not permitting any greater propagation of flame on the underside of the roof assembly than a metal deck roof with combustible insulation board mechanically fastened to the top of the metal deck may be of 100,000 square feet in area when complying with all of the conditions in Section 402.3(e).
2. The limiting areas of one-story buildings of Type III and Type V construction may be increased by 33 1/3 percent provided all wood members are of approved fire retardant treated lumber and roof assemblies have been tested and listed by a nationally recognized testing laboratory as not permitting any greater propagation of flame on the underside of the roof assembly than a metal deck roof with combustible insulation board mechanically fastened to the top of the metal deck.

3. The limiting areas of one-story buildings of Type VI construction may be increased 25 percent provided all wood members are of approved fire retardant treated lumber.

(g) Assembly Occupancy Area Modification

1. Assembly Buildings (non-working stage) of Type III, IV, or V construction which are surrounded on all sides by a permanent open space of not less than sixty (60) feet, and are provided with an approved automatic sprinkler system shall not be limited in area.
2. Where there are no balconies or galleries in Small Assembly Places, with or without a working stage, and the assembly floor is located at, or within twenty-one (21) inches of street or grade level and all exits meet the street or grade level by ramps having a slope not exceeding one (1) foot in 10 (10) feet, the maximum allowable areas of Type III, IV, and V construction may be increased fifty (50) percent over those specified for Assembly occupancies in Table 400.
3. One (1) story buildings used for participation sport activities such as swimming, tennis, skating and similar activities, limited in occupant content to those participating in the sports activity, and with no spectator seating permitted, may be unlimited in area when of Types III, IV or V construction and are surrounded on all sides by not less than thirty (30) feet of permanent open space.
4. For sprinkler requirements see Section 901.

(h) Educational Occupancy Area Modification—The area of a one-story Type III, IV or V building may be increased one hundred (100) percent if the building is surrounded on all sides by a permanent open space of not less than sixty (60) feet, and there are not less than two exits provided from each classroom, one of which opens directly to the exterior of the building.

TABLE 400—HEIGHT AND AREA LIMITS

Letters in Table refer to "Notes to Table 400."

Height for types of construction is limited to the number of stories shown, or height in feet.

Allowable areas are shown in thousands of square feet per floor. The area indicated for highest story of any given building is the maximum area for each floor for entire height of building.

For Modifications to allowable heights and areas see:

402.2 Height Modifications 402.3 Area Modifications

UA = No limit of floor area

UH = No height limit

NP = Not permitted

* = Model Codes Standardization Council (See * Notes under Table 400 Notes)

OCCUPANCY	HEIGHT	TYPE OF CONSTRUCTION																	
		TYPE I		TYPE II		TYPE III		TYPE IV				TYPE V				TYPE VI			
								1-Hour (0)		Unprotected		1-Hour(0)		Unprotected		1-Hour (0)		Unprotected	
		P		P		P		P		P		P		P		P		P	
		Unspk	Spk	Unspk	Spk	Unspk	Spk	Unspk	Spk	Unspk	Spk	Unspk	Spk	Unspk	Spk	Unspk	Spk	Unspk	Spk
*MCSC Designation		443		332		3 HH		211		100		311		300		111		100	
Maximum Height in Feet		No Limit		80		65		75		35		45		45		35		35	
(A-1)	UH	UA	UA	NP	NP														
Assembly-Large	2-8	UA	UA	UA	UA														
(Working Stage)	1	UA	UA	UA	UA	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP
a,b,c,f																			
(A-1)	UH	UA	UA	UA	UA					(e)	(e)			(e)	(e)				
Assembly-Large	2-8	UA	UA	UA	UA	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP
(Non-Working Stage)	1	UA	UA	UA	UA	15.0	45.0	18.0	54.0	10.0	30.0	12.0	36.0	8.0	24.0	NP	NP	NP	NP
a,b,c,f																			

TABLE 400 (continued)

OCCUPANCY	HEIGHT	TYPE OF CONSTRUCTION																	
		TYPE I		TYPE II		TYPE III		TYPE IV				TYPE V				TYPE VI			
								1-Hour (0)		Unprotected		1-Hour(0)		Unprotected		1-Hour (0)		Unprotected	
		P		P		P		P		P		P		P		P		P	
		Unspk	Spk	Unspk	Spk	Unspk	Spk	Unspk	Spk	Unspk	Spk	Unspk	Spk	Unspk	Spk	Unspk	Spk	Unspk	Spk
*MCSC Designation		443		332		3 HH		211		100		311		300		111		100	
Maximum Height in Feet		No Limit		80		65		75		35		45		45		35		35	
(A-2)										(e)	(e)			(e)	(e)	(e)	(e)	(e)	(e)
Assembly-Small	UH	UA	UA	NP	NP														
(Working Stage)	3-8	UA	UA	UA	UA	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP
a,b,f	1	UA	UA	UA	UA	15.0	45.0	18.0	54.0	10.0	30.0	12.0	36.0	8.0	24.0	5.0	15.0	3.0	9.0
(A-2)	UH	UA	UA	NP	NP	(d)	(d)	(d)	(d)	(e,d)	(e,d)	(d)	(d)	(e,d)	(e,d)	(e,d)	(e,d)	(e,d)	(e,d)
Assembly-Small	2-8	UA	UA	UA	UA	NP	NP	NP	NP			NP	NP						
Non-Working Stage)	2	UA	UA	UA	UA	10.0	20.0	12.0	24.0	NP	NP	10.0	20.0	NP	NP	NP	NP	NP	NP
a,b	1	UA	UA	UA	UA	15.0	45.0	18.0	54.0	10.0	30.0	15.0	45.0	8.0	24.0	9.0	27.0	6.0	18.0
(B)	UH	UA	UA	NP	NP			(h)	(h)	(h,q)	(h,q)	(h)	(h)	(h,q)	(h,q)				
Business	6-8	UA	UA	UA	UA	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP				
a,b,f,g	5	UA	UA	UA	UA	10.0	20.0	10.0	20.0	8.0	16.0	8.0	16.0	6.0	12.0				
	4	UA	UA	UA	UA	10.0	20.0	10.0	20.0	8.0	16.0	8.0	16.0	6.0	12.0				
	3	UA	UA	UA	UA	10.0	20.0	10.0	20.0	8.0	16.0	8.0	16.0	6.0	12.0	NP	NP	NP	NP
	2	UA	UA	UA	UA	15.0	30.0	15.0	30.0	10.0	20.0	10.0	20.0	8.0	16.0	6.0	12.0	4.0	8.0
	1	UA	UA	UA	UA	20.0	60.0	20.0	60.0	12.0	36.0	15.0	45.0	9.0	27.0	9.0	27.0	6.0	8.0
(E)	UA	UA	UA	NP	NP			(i)	(i)	(i)	(i)	(i)	(i)	(i)	(i)	(i)	(i)	(i)	(i)
Educational	3-8	UA	UA	UA	UA	NP	NP	NP	NP	NP		NP	NP						
a,b,f,s	2	UA	UA	UA	UA	10.0	20.0	15.0	30.0	NP	NP	10.0	20.0	NP	NP	NP	NP	NP	NP
	1	UA	UA	UA	UA	15.0	45.0	20.0	60.0	12.0	36.0	15.0	45.0	9.0	27.0	9.0	27.0	6.0	18.0
(H)	4	5.0	5.0	NP	NP														
Hazardous	3	5.0	5.0	4.0	4.0	NP	NP												
b,f,j	2	7.5	7.5	6.0	6.0	6.0	6.0	NP	NP	NP	NP	NP	NP	NP	NP				
	1	11.5	11.5	8.3	8.3	7.5	7.5	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	NP	NP	NP	NP

TABLE 400 (continued)

OCCUPANCY	HEIGHT	TYPE OF CONSTRUCTION																	
		TYPE I		TYPE II		TYPE III		TYPE IV				TYPE V				TYPE VI			
								1-Hour (0)		Unprotected		1-Hour(0)		Unprotected		1-Hour (0)		Unprotected	
		P		P		P		P		P		P		P		P		P	
		Unspk	Spk	Unspk	Spk	Unspk	Spk	Unspk	Spk	Unspk	Spk	Unspk	Spk	Unspk	Spk	Unspk	Spk	Unspk	Spk
*MCSC Designation		443		332		3 HH		211		100		311		300		111		100	
Maximum Height in Feet		No Limit		80		65		75		35		45		45		35		35	
(F)																			
Factory-	UH	100.0	UA	NP	NP	(r)	(r)	(t)	(t)	(t)	(t)	(t)	(t)	(t)	(t)				
Industrial	7-8	100.0	UA	20.0	UA	NP	NP	NP	NP										
a,b,c,f,g	t	100.0	UA	20.0	UA	10.0	20.0	10.0	20.0										
	5	100.0	UA	20.0	UA	10.0	20.0	10.0	20.0										
	4	100.0	UA	20.0	UA	10.0	20.0	10.0	20.0	NP	NP	NP	NP	NP	NP				
	3	100.0	UA	20.0	UA	10.0	20.0	10.0	20.0	6.0	12.0	9.0	18.0	4.0	8.0				
	2	100.0	UA	30.0	UA	15.0	30.0	15.0	30.0	10.0	20.0	16.0	32.0	7.0	14.0	NP	NP	NP	NP
	1	100.0	UA	UA	UA	20.0	60.0	20.0	60.0	12.0	36.0	15.0	45.0	9.0	27.0	9.0	27.0	6.0	18.0
(I)	UH	UA	UA	NP	NP														
Institutional-	2-9	UA	UA	UA	UA														
Restrained	1	UA	UA	UA	UA	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP
(f)																			
(I)	UH	UA	UA	NP	NP														
Institutional-	3-9	UA	UA	UA	UA	NP	NP	NP	NP			NP	NP						
Un-Restrained	2	UA	UA	UA	UA	10.0	20.0	NP	24.0	NP	NP	NP	12.0	NP	NP	NP	NP	NP	NP
b,c,f,l,o	1	UA	UA	UA	UA	15.0	45.0	18.0	54.0	NP	NP	9.0	27.0	NP	NP	2.5	7.5	NP	NP
(M)	UH	100.0	UA	NP	NP			(h)	(h)	(h,q)	(h,q)			(h,q)	(h,q)				
Mercantile	6-8	100.0	UA	100.0	100.0	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP				
a,b,c,f,g,n	5	100.0	UA	100.0	100.0	8.0	16.0	8.0	16.0	6.0	12.0	8.0	16.0	4.0	8.0				
	4	100.0	UA	100.0	100.0	8.0	16.0	8.0	16.0	6.0	12.0	8.0	16.0	4.0	8.0				
	3	100.0	UA	100.0	100.0	8.0	16.0	8.0	16.0	6.0	12.0	8.0	16.0	4.0	8.0	NP	NP	NP	NP
	2	100.0	UA	100.0	100.0	10.0	20.0	15.0	30.0	8.0	16.0	10.0	20.0	6.0	12.0	4.5	9.0	3.0	6.0
	1	100.0	UA	100.0	100.0	15.0	45.0	20.0	60.0	12.0	36.0	15.0	45.0	9.0	27.0	9.0	27.0	6.0	18.0

TABLE 400 (continued)

OCCUPANCY	HEIGHT	TYPE OF CONSTRUCTION																	
		TYPE I		TYPE II		TYPE III		TYPE IV				TYPE V				TYPE VI			
								1-Hour (0)		Unprotected		1-Hour(0)		Unprotected		1-Hour (0)		Unprotected	
		P		P		P		P		P		P		P		P		P	
		Unspk	Spk	Unspk	Spk	Unspk	Spk	Unspk	Spk	Unspk	Spk	Unspk	Spk	Unspk	Spk	Unspk	Spk	Unspk	Spk
*MCSC Designation		443		332		3 HH		211		100		311		300		111		100	
Maximum Height in Feet		No Limit		80		65		75		35		45		45		35		35	
(R)	UH	UA	UA	NP	NP			(h)	(h)			(h)	(h)			(u)	(u)	(u)	(u)
Residential	6-9	UA	UA	UA	UA			NP	NP			NP	NP						
a,b,f	5	UA	UA	UA	UA			10.0	20.0			8.0	16.0						
	4	UA	UA	UA	UA	NP	NP	10.0	20.0			8.0	16.0						
	3	UA	UA	UA	UA	8.0	16.0	10.0	20.0	NP	NP	8.0	16.0	NP	NP	NP	NP	NP	NP
	2	UA	UA	UA	UA	10.0	20.0	15.0	30.0	10.0	20.0	10.0	20.0	6.0	12.0	6.0	12.0	4.0	8.0
	1	UA	UA	UA	UA	15.0	45.0	20.0	60.0	12.0	36.0	15.0	45.0	9.0	27.0	9.0	27.0	6.0	18.0
(S)	UH	100.0	UA	NP	NP	(r,t)	(r, t)	(t)	(t)	(t)	(t)	(t)	(t)	(t)	(t)				
Storage	6	100.0	UA	20.0	UA	10.0	20.0												
a,b,c,f,g,k,m	5	100.0	UA	20.0	UA	10.0	20.0	NP	NP			NP	NP						
	4	100.0	UA	20.0	UA	10.0	20.0	10.0	20.0	NP	NP	8.0	16.0	NP	NP				
	3	100.0	UA	20.0	UA	10.0	20.0	10.0	20.0	6.0	12.0	8.0	16.0	4.0	8.0				
	2	100.0	UA	30.0	UA	15.0	30.0	15.0	30.0	10.0	20.0	12.0	24.0	6.0	12.0	NP	NP	NP	NP
	1	100.0	UA	30.0	UA	20.0	60.0	20.0	60.0	12.0	36.0	15.0	45.0	9.0	27.0	9.0	27.0	6.0	18.0

TABLE 400 NOTES

a. For height modifications and limitations by occupancy, see:

1. Story Increase for Sprinklers	402.2(f)
2. Mezzanines	402.2(c)
3. Basements	402.2(d)
4. Assembly-Basements	402.2(e)
5. Business	402.2(g)
6. Educational-Basements	402.2(e)
7. Mercantile	402.2(g)
8. Residential	404.2(b)

b. For area modifications and limitations by occupancy, see:

1. Area increase for separation	402.3(d)
2. Assembly	402.3(g)
3. Business	402.3(e)
4. Educational	402.3(h)
5. Hazardous	402.3(I)
6. Factory-Industrial	402.3(e), 901.7
7. Institutional-Unrestrained	409
8. Mercantile	402.3(e), 901.7
9. Storage	402.3(e), 901.7

c. See Section 901.7 for maximum unsprinklered areas.

d. May be increased 33 1/3 per cent for places of worship.

e. One (1) hour fire-resistive floors shall be provided

f. See Section 506 for High Rise Requirements

g. See Section 402.3(e) herein for unlimited area provisions

h. When five (5) or more stories in height, two (2) hour fire-resistive floors shall be required over the basement or cellar.

i. Floors located immediately above usable space in basement or cellars shall have a fire resistive rating of not less than one (1) hour except where an approved automatic sprinkler system is provided in such basement.

j. Modifications in height and area shall not be permitted in hazardous occupancies. For detail requirements, see Section 407.

k. See 412.7 for allowable height and floor areas of automobile parking structures.

l. See 901.6 for sprinkler requirements in basements and for buildings without access openings.

m. See 901.7 for sprinkler requirements for public garages.

n. Total area after increase permitted by 402.2(b) shall not exceed 15,000 sq. ft.

o. At least one-hour fire resistive construction shall be provided throughout all buildings.

p. When buildings listed under this column are sprinklered, the height may be increased one story.

q. When over stories in height, an approved automatic sprinkler system shall be installed throughout the building, or all walls, partitions, floors, roofs and their supporting structural members shall provide not less than one (1) hour fire resistance within the building except that roofs of Type IV Construction need not be protected.

r. When over three (3) stories in height, an approved automatic sprinkler system shall be installed throughout the building.

s. At least one hour interior fire resistance construction shall be used throughout in all building two or more stories in height.

t. When over two (2) stories in height, an approved automatic sprinkler system shall be installed throughout the Building.

u. Wood frame one hour protected residential buildings may be three stories in height except when basement level is used as a habitable space.

* These references are to the Model Codes Standardization Council's recommended types of construction and are for informational purposes only.

For example — MCSC Designation 4 4 3

This digit indicates the maximum fire protection rating for floors.

This digit indicates the maximum fire protection rating for columns.

This digit indicates the maximum fire protection rating for exterior walls.

TABLE 600—FIRE PROTECTIVE REQUIREMENTS
Required Fire Resistance in Hours

STRUCTURAL ELEMENT	TYPE I	TYPE II	TYPE III	TYPE IV 1-Hour Protected	TYPE IV Unprotected	TYPE V 1-Hour Protected	TYPE V Unprotected	TYPE VI 1-Hour Protected	TYPE VI Unprotected
MCSC DESIGNATION	443	332	3HH	211	100	311	300	111	100
	Section 602	Section 603	Section 604		Section 605		Section 606		Section 607
Party and Fire Walls	(a) Min. 8" 75% Solid Masonry (Sec. 716)	(a) Min. 8" 75% Solid Masonry (Sec. 716)	(a) Min. 8" 75% Solid Masonry (Sec. 716)	(a) Min. 8" 75% Solid Masonry (Sec. 716)	(a) Min. 8" 75% Solid Masonry (Sec. 716)	(a) Min. 12" 75% Solid Masonry (Sec. 716)	(a) Min. 12" 75% Solid Masonry (Sec. 716)	(a), (o,q) Min. 12" 75% Solid Masonry (Sec. 716)	(a), (o,q) Min. 12" 75% Solid Masonry (Sec. 716)
Exterior Bearing Walls				(Percent Indicates Percentage of Window Opening Allowed) (For openings to be protected with wire glass, see 703.1 (a))				(o)	(p)
Horizontal Separation*	NC	NC	NC(b)	NC (c)(b)	NC(c)(b)	NC(b)(d)(e)	NC(b)(d)(e)		
0'- 3'	4(0%)	3(0%)	3(0%)	2(0%)	1(0%)	3(0%)	3(0%)	1(0%)	1(0%)
3'-10'	4(10%)	3(10%)	2(10%)	1(10%)	1(10%)	2(10%)	2(10%)	1(20%)	0(20%)
10'-20'	4(20%)	3(20%)	2(20%)	1(20%)	NC(20%)	2(20%)	2(20%)	1(40%)	0(40%)
20-30'	4(30%)	3(30%)	2(30%)	1(40%)	NC(40%)	1(40%)	1(40%)	1(60%)	0(60%)
Over 30'	4(40%)	2(40%)	2(40%)	1(40%)	NC(NL)	1(NL)	1(NL)	1(NL)	0(NL)
Exterior Non-Bearing Walls				*(Horizontal Separation is distance from property line or another building) (Percent Indicates Percentage of Window Opening Allowed)				(o)	(o)
Horizontal Separation*	NC	NC			(c) (b)	(e) (d)	(d) (e)		
0' - 3'	3(0%)	3(0%)	3(0%) (b) (h)	2(0%)	1(0%)	3(0%) (b)	3(0%) (b)	1(0%)	1(20%)
3'-10'	2(10%)	2(10%)	2(10%)	1(10%)	1(10%)	2(10%)	2(10%)	1(20%	0(20%)
10'-20'	2(20%)	2(20%)	2(20%)	1(20%)	NC(20%)	2(20%)	2(20%)	1(40%)	0(40%)
20'-30'	1(40%)	1(40%)	1(40%)	NC(40%)	NC(40%)	1(40%)	1(40%)	0(60%)	0(60%)
Over 30'	NC (NL)	NC (NL)	NC (NL)	NC (NL)	NC (NL)	NC (NL)	NC (NL)	0(NL)	0(NL)
Inner Court Walls	3	2	3	3	1	1	1	1	None
Penthouse Walls	2(f)	2(f)	2(f)	1(f)	NC(f)	None (f)	None (f)	None (f)	None

TABLE 600—FIRE PROTECTIVE REQUIREMENTS
Required Fire Resistance in Hours

STRUCTURAL ELEMENT	TYPE I	TYPE II	TYPE III	TYPE IV		TYPE V		TYPE VI	
				1-Hour Protected	Unprotected	1-Hour Protected	Unprotected	1-Hour Protected	Unprotected
MCSC DESIGNATION	443	332	3HH	211	100	311	300	111	100
	Section 602	Section 603	Section 604		Section 605		Section 606		Section 607
Interior Bearing Walls									
supporting more than one floor, columns or other	(q)	(q)							
bearing walls supporting one	4	3	2	1	NC	1 (g)	0 (g)	1	0
floor only supporting a	3	2	1	1	NC	1 (g)	0 (g)	1	0
roof only	3	2	1	1	NC	1 (g)	0 (g)	1	0
Interior Non-Bearing Partitions				See Sections 412, 701 and 702					
Columns Supporting									
Masonry or Bearing Walls	4	3 (j)	H (j)	1 (i)(j)	NC (i) (j)	(j)	(j)	1 (i)	(i)
Supporting Roof Only	3	2	H (h)	1	NC	1	0	1	0
Other Columns	2	3	H (h)(j)	1	NC	1	0	1	0
Trusses, Girders and Beams, Arches									
Supporting Masonry or Bearing Walls, Columns, Girders									
Trusses	4	3	H (i)	2 (i)	2 (i)	2 (i)	2 (i)	1 (i)	1 (i)
Supporting Roofs	2 (k)	1 1/2(m)(k)(l)	H(h)	1	NC	1	None	1	None
Other Trusses Girders and									
Beams and Arches	4	3	H(h) Section 604.4	1	NC	1	None	1	None

TABLE 600—FIRE PROTECTIVE REQUIREMENTS
Required Fire Resistance in Hours

				TYPE IV		TYPE V		TYPE VI	
STRUCTURAL ELEMENT	TYPE I	TYPE II	TYPE III	1-Hour Protected	TYPE IV Unprotected	1-Hour Protected	TYPE V Unprotected	TYPE VI 1-Hour Protected	TYPE VI Unprotected
MCSC DESIGNATION	443	332	3HH	211	100	311	300	111	100
	Section 602	Section 603	Section 604		Section 605		Section 606	Section 607	
Floor Construction	3	2	Section 604.3	1	NC	1	0	1	0
Roof Construction Deck Construction	2	1 1/2	(h) Section 604.3	1	NC (1)	1 (n)	None (n)	1 (n)	None (n)
Hight Above Floor	2 (k)	1 1/2 (k) (m)	Section 604	1 (k)	NC (1)	1	None	1	None

TABLE 600—REFERENCE NOTES

(a) Party and fire walls shall extend not less than three (3) feet above the roof, except that they need not extend above the roof, where the roof and all structural supports are of noncombustible construction. (See Section 718).

(b) Inside any fire district, all exterior walls, except walls facing a street 30 feet or more in width shall be constructed at 75% Solid Masonry Units (12" min. Thickness) in conformance with Section 716. See Note (c) and (e) for exception.

(c) For Type IV buildings located within the fire districts, exterior walls shall provide the following fire resistance against outside exposure when building does not exceed 3500 square feet:

0 to 10 feet 1 hour

Over 10 feet None

(d) Exterior walls shall not extend less than twenty-four (24) inches above the roof, except that parapet walls need not be constructed on buildings where the roof slopes more than four (4) inches vertical to twelve (12) inches horizontal from the back of the exterior wall of such buildings or where the exterior wall of such building is located on an alley or public way of fifteen feet or more in width.

(e) For Type V buildings less than 2,000 square feet in area located within the fire districts, exterior walls shall provide 2 hour fire resistance.

(f) Where penthouse walls are set back less than five (5) feet from exterior walls, they shall conform to the fire resistance requirements for exterior walls.

(g) The use of combustible construction for interior bearing partitions shall be limited to the support of not more than 2 floors and a roof.

(h) Where horizontal separation of twenty (20) feet or more is provided, wood columns, arches, beams and roof deck conforming to heavy timber sizes may be used externally.

(i) This requirement applies only to a structural member supporting masonry walls, except that this does not apply in one (1) story buildings or where the only masonry supported is a masonry veneer.

(j) Same rating as required for wall it supports.

(k) In buildings of Group E and A (School and Assembly occupancies), where structural steel members supporting a roof only are not less than twenty feet clear above any floor or balcony used for any purpose other than seating, fire protection of structural members supporting roof construction only may be omitted. If the building has 20,000 square feet or more of floor area where combustible materials could be displayed, this section does not apply.

(l) In one story buildings, approved Fire-Retardant Treated Wood may be used as an alternate to combustible in buildings or Group E and A (School and Assembly) occupancies. In one story buildings, approved fire retardant treated wood may be used for structural members supporting roofs including the Trusses, Arches and Roof Decks.

(m) Fire-proofing of structural members may be omitted in buildings of Group E and A (School and Assembly) occupancies where structural members support a roof only and are twenty-feet or more clear above any floor or balcony. In one (1) story buildings approved fire-retardant (pressure-treated) wood may be used as an alternate to such unprotected structural steel members.

(n) Combustible roof construction must be subdivided into areas not exceeding 2000 square feet. (See Section 705 (f)).

(o) Buildings over 3500 square feet in area, 0 to 3 feet - 3 hours (20%), 3 to 10 feet - 2 hours (20%); 10 to 20 feet - 2 hours (30%); 20 to 30 feet - 1 .hour (40%).

(p) Separation of Single Family Attached Dwellings - See Section 403.3.

(q) In buildings of Group A where either concrete or masonry bearing partitions are not spaced more than 16'-0" and where each dwelling unit is limited to 1600 square feet, interior bearing partition shall provide 2 hour fire resistance.

*These references are to the Model Codes Standardization Council's recommended types of construction and are for information purposes only. For example:

MCSC Designation 4 4 3

This digit indicates the maximum fire protection rating for floors.

This digit indicates the maximum fire protection rating for columns.

This digit indicates the maximum fire protection rating for exterior walls.

SECTION 610—BUILDINGS LOCATED ON THE SAME LOT

Where the exterior walls of two (2) or more buildings located on the same lot face one another, and one of the walls is not constructed as required for a fire wall, a common-property line shall be assumed between them. The fire resistance requirements for such facing walls and for the protection of openings therein shall be the same as required by this code for walls and openings facing common-property lines, as provided in Table 600.

SECTION 703—PROTECTION OF WALL OPENINGS

703.1(a)—WHERE PROTECTION IS REQUIRED

For the purpose of this section, when a building is divided by fire walls into two or more sections, each section shall be regarded as a separate building.

Every building (except churches, buildings of Type VI, and public parking decks as defined in Section 507.2), shall have approved fire windows, fire doors or other approved protectives, in every opening in the exterior walls, under the following conditions:

1. In buildings where the distance is fifteen (15) feet or less from the property line.

2. In buildings where such opening is above and less than fifteen (15) feet distance from any part of a neighboring roof of combustible construction.

3. In buildings where such openings are within fifteen (15) feet of each other except when the total area of the buildings does not exceed the area allowed for type of construction.

Exceptions: Such protection shall not be required for show windows facing on a street or public place which do not extend above the second full story above grade nor shall such protection be required when the opening to be protected and the opening against which it is to be protected are facing in the same direction being located in walls in the same or parallel lines. All required opening protection shall be of approved type as defined elsewhere in this section.

F4 - MINIMUM NUMBER OF EXITS

1103.2—MINIMUM NUMBER OF EXITS

(a) There shall be not less than two (2) approved independent exits, accessible to each tenant area, serving every story (except as modified in Section 1103.2(c)) as follows:

Minimum No. of Exits	Occupancy Load
2	50-500
3	501-1000
4	more than 1000

(b) Hazardous occupancies shall have not less than two (2) independent exits accessible to each such room or space.

(c) *Exceptions* for one Exit for Residential and Office—There shall be not less than two (2) exits serving every floor area, except that in the following cases there may be one (1) exit.

(1) Every living unit shall have access to at least 2 separate exits which are remote from each other and are reached by travel in different directions, except that a common path of travel may be permitted for the first 20 feet (i.e., a dead-end corridor up to 20 feet long may be permitted) provided that a single exit may be permitted under any of the following conditions:

Exception 1: Any living unit, which has an exit directly to the street or yard at ground level or by way of an outside stairway or an enclosed stairway with fire-resistance rating of 1 hour or more serving that apartment only and not communicating with any floor below the floor of exit discharge or other area not a part of the apartment served may have a single exit.

Exception 2: Any building not more than 3 stories in height with no floor below the floor of exit discharge or, in case there is such a floor, with the street floor construction of at least 1-hour fire resistance, may have a single exit, under the following conditions:

(a) The stairway is completely enclosed with floors, walls and ceilings having a fire-resistance rating of at least 2 hours with self-closing fire doors protecting all openings between the stairway enclosure and the building.

(b) The stairway does not serve any floor below the floor of exit discharge.

(c) All corridors serving as access to exits have at least a 1-hour fire-resistance rating.

(d) There is not more than 20 feet of travel distance to reach an exit from the entrance door of any living unit.

(2) In Office Buildings having no floor over three thousand five hundred (3,500) sq. ft. in area and not over two stories in height provided the occupant content shall not exceed 40 persons above or below the street floor. Maximum distance of travel to an exit shall not exceed 75 feet.

(3) In Mercantile Occupancies at street floor level having a floor area less than 2250 sq. ft. and a distance of travel to an exit not exceeding fifty (50) feet.

(4) In Storage Occupancies, one story only, and having a floor area less than 2,500 sq. ft., with a distance of travel 50 ft. or less.

(5) Each mezzanine used for other than storage purposes, if greater in area than 2,000 sq. ft. or if more than 60 feet in any dimension shall have not less than two stairways to an adjacent floor.

(d) Sufficient exit facilities shall be provided so that the aggregate capacity of all such exits, determined in accordance with this Chapter, shall not be less than the occupant content as determined from Section 1105.1.

(e)It shall be unlawful to occupy any part of a building by a greater number of persons than that for which exit capacity, as prescribed in this Chapter, has been provided.

(f) Industrial occupancies over 5000 sq. ft. in area on any floor must have two means of egress regardless of number of people occupying such floor.

(g) All rooms for sleeping purposes in Group R and I (except jails) shall have an outside window that can be opened without the use of tools to provide a clear opening not less than 16' in least dimensions and 432 Sq. In. in area or, if of fixed glass, must be at least 24" x 24" with the bottom of the opening not more than 4' above the floor.

1105.1—OCCUPANT CONTENT

(a) For determining the exits required, the minimum number of persons or the occupant content of any floor area shall in no case be taken less than specified below:

Occupancy	Minimum Occupant Content Floor Area per Person*
ASSEMBLY	
Concentrated Use (without fixed seats) Includes among others: Auditoriums, Churches, Dance Floors, Lodge Rooms, Reviewing Stands, Stadiums	7 sq. ft. Net
Less Concentrated Use Includes among others: Restaurants (over 100 persons), Conference and Dining Rooms, Drinking Establishments, Exhibit Rooms, Gymnasiums, Lounges, Skating Rinks	15 sq. ft. Net
Fixed seats	Count the seats
Standing	3 sq. ft. Net
BUSINESS	
Office Buildings, Banks, Undertaking Parlors and other business occupancies.	100 sq. ft. Gross
Bowling Alleys—5 persons for each	

alley (to include 15 feet or runway)	
Viewing Areas (without fixed seats)	7 sq. ft. Net
Libraries (Other than School)	
Reading Room	50 sq. ft. Net
Stack Areas	100 sq. ft. Gross
EDUCATIONAL	
Schools—Classrooms and Recreation	20 sq. ft. Net
Laboratories, Museums, Libraries, Shops	
Vocational and similar occupancies	50 sq. ft. Net
Gymnasiums	15 sq. ft. Net
HAZARDOUS	100 sq. ft. Gross
INDUSTRIAL	100 sq. ft. Gross
INSTITUTIONAL	
Sleeping Area	120 sq. ft. Gross
In-Patient Area	240 sq. ft. Gross
Treatment and Out-Patient Area	100 sq. ft. Gross
MERCANTILE	
Stores—Street floor and sales basement	30 sq. ft. Gross
Stories—Upper sales floor	60 sq. ft. Gross
Restaurants (Less than 100 persons—without stage—no entertainment or dancing)	15 sq. ft. Net
RESIDENTIAL	200 sq. ft. Gross
STORAGE	300 sq. ft. Gross
MECHANICAL EQUIPMENT ROOM	300 sq. ft. Gross

*The occupant content of floor areas of the building shall be computed on the basis of the specific occupancy classification of the building. Where mixed occupancies occur, the occupant content of each occupancy area shall be computed on the basis of that specific occupancy.

(b) Seating Capacity Posted. When required by the Building Official, signs stating the maximum seating capacity determined in accordance with occupant content specified in Section 1105.1 shall be conspicuously posted by the owner of the building in each assembly room, auditorium or room used for a similar purpose where fixed seats are not installed. It shall be unlawful to remove or deface such notice or to permit more than this legal number of people within such space.

1105.2—MEASUREMENT OF MEANS OF EGRESS WIDTH

(a) The width of the means of egress shall be measured in units of 22 inches. Fractions of a unit shall not be counted except that 12 inches added to one or more full units shall be counted as one-half a unit.

(b) The width shall be measured in the clear at its narrowest point. Handrails may project 3 1/2 inches and door jambs 1 inch on each side of the measured width.

1105.3—CAPACITY OF MEANS OF EGRESS

(a) The capacity or number of persons per unit (22 inches) of means of egress through doors, corridors, stairs and other paths of exit travel shall be in accordance with Table 1105.3:

TABLE 1105.3

OCCUPANCY	Person Per Unit (22 inches) of Exit Width	
	Level Travel (Corridors, doors, ramps, etc.)	Stairs
Residential	60	45
Business	100	60
Educational	100	60
Institutional	30	22
Mercantile	100	60
Assembly	100	75
Storage	60	45
Industrial	100	60
Hazardous	60	45

(b) The minimum aggregate width of main entrance doorways for Assembly occupancies shall be sufficient to accommodate 50 percent of the occupant content but in no case less than 36 inches. Main entrance doorways shall be considered as part of the requirements for the means of egress.

(c) The capacity of exit stairways constructed in accordance with Section 1115 shall not exceed the limits specified herein and may be used as a required exit from all floors which they serve. If, for example, three (3) stairways are required to serve the third floor of a building and a like number are required for the second floor, the total number of stairways required shall be three, not six, and the capacity of the stairway shall be determined by the floor having the highest occupant content and not the total occupant content of the building.

(d) The aggregate width of passageways, aisles or corridors serving as access to exits shall be at least equal to the required widthof the exit. Where all travel to any exit is along the same access to the exit, the width of the access shall be at least equal to the exit; where there are several accesses to an exit each shall have a width suitable for the travel which it may be called on to accommodate.

(e) The minimum width of any means of egress shall be 36" in width.

Exception: Residential, Business, Storage, Industrial, Hazardous and Mercantile Occupancies (where less than thirty people are accommodated) the minimum shall be 30 inches. (See Section 1104 for special requirements.)

(f) Where exits serve more than one floor, only the occupant content of each floor, considered individually, need be used in computing the required capacity of the exits at that floor; provided that such capacity shall not be decreased at any point along the exit facility in the direction of exit travel. When exits from floors above and below converge at an intermediate floor, the capacity of the exit from such intermediate floor shall not be less than the sum of the widths of

the exits converging on such intermediate floor. There shall be no reduction in the capacity of the exits along the means of egress from the building.

(g) In the case of a stairway, the exit includes the door to the stairway enclosure, stairs and landings inside the enclosure, the door from the stairway enclosure to the street or open air, or any passageway and door necessary to provide a path of travel from the stairway enclosure to the street or open air. In case of a door leading directly from the street floor to the street or open air, the exit comprises only the doorway.

NOTE: Doors of small individual rooms, as in hotels, while constituting means of escape from the room, are not referred to as exits except when they lead directly to the outside of the building or other place of safety, but in a large room, such as a school auditorium, the doors constitute an integral part of the exit system and are referred to as exits from the room. An interior aisle, corridor or hallway used to reach a stair or door exit is not an exit except where it is so located, arranged, and enclosed as to constitute an integral part of a system of travel.

THE FOLLOWING TABLE 922.2 WAS EFFECTIVE FROM JANUARY 1, 1980 UNTIL MARCH 1, 1990.

TABLE 922.2—MINIMUM FACILITIES[1]

Type of Building or Occpancy[2]	Water Closets	Urinals	Lavatories	Bathtub or Showers	Drinking Fountain[3]
Dwelling or Apt. House[4, 10]	1 for each Dwelling or Apartment Unit	----------	1 for Each Apartment or Dwelling Unit.	1 for Each Apartment or Dwelling Unit.	
Schools[5]	Male / Female				
Elementary	1 per 60 / 1 per 35	1 per 30 Male	1 per 60 Persons.		1 per 75 Persons.
Secondary	1 per 100 / 1 per 45	1 per 30 Male	1 per 100 Persons.		1 per 75 Persons.
College—Academic	Male 1 per 100 / Female 1 per 60	1 per 110 Male	Male 1 per 150 / Female 1 per 100		1 per 75 Persons.
Office or Public Buildings[11, 12] or Institutions (other than for patient use)	No. of Persons: M. / F. 1-15: 1 / 1 16-35: 2 / 2 36-55: 3 / 4 56-80: 4 / 5 81-100: 5 / 6 101-150: 6 / 8 1 Fixture for each 40 Additional Persons	Wherever urinals are provided for men or women, one water closet less than the number specified may be provided for each urinal installed except that the number of water closets in such cases shall not be reduced to less than 2/3 of the minimum specified for men and 3/4 of the minimum specified for women.	No. of Persons / No. of Fixtures 1-15: 1 16-35: 2 36-60: 3 61-90: 4 91-125: 5 1 Fixture for Each 45 Additional Persons.		1 for Each 75 Persons.
Manufacturing, Warehouses, Workshops, Loft Buildings, Foundries and similar Establishments[6, 11, 12]	No. of Persons: M. / F. 1-9: 1 / 1 10-24: 2 / 2 25-49: 3 / 4 50-74: 4 / 5 75-100: 5 / 6 1 Fixture for Each Additional 30 Employees	Same substitution as above.	1-100 Persons 1 Fixture for Each 10 Persons. Over 100 1 for Each 15 Persons[7, 8]	1 shower for each 15 persons exposed to excessive heat or to skin contamination with posinous, infectious, or ifritating material.	1 for Each 75 Persons.

THE FOLLOWING TABLE 922.2 WAS EFFECTIVE FROM JANUARY 1, 1980 UNTIL MARCH 1, 1990.

TABLE 922.2—MINIMUM FACILITIES[1] (continued)

Type of Building or Occpancy[2]	Water Closets	Urinals	Lavatories	Bathtub or Showers	Drinking Fountain[3]
Dormitories[9] [11]	Male: 1 for Each 10 Persons Female: 1 for Each 8 Persons Over 10 Persons, Add 1 Fixture for Each 25 Additional Males and 1 for Each 20 Additional Females.	More than 100 persons—1 fixture for each 10 males or each eight females plus one additional fixture for each 25 additional males or each 20 additional females.	1 for Each 12 Persons. (Separate dental lavatories should be provided in community toilet rooms. Ratio of dental lavatories for each 50 persons is recommended.) Add 1 Lavatory for Each 20 Males, 1 for Each 15 Females.	1 for each 8 persons. In the case of women's dormitories, additional bathtubs should be installed at the ratio of 1 for each 30 females. Over 150 persons, add 1 fixture for each 20 persons.	1 for each 75 Persons.
Theatres, Auditoriums, and Churches[11]	No. of Persons / No. of Fixtures M. F. 1-100 2 2 101-200 3 3 201-400 4 4 Over 400, Add 1 Fixture for Each Additional 500 Males and 1 for Each 300 Females.	No. of Persons / No. of Fixtures M 1-200 2 201-400 3 401-600 4 Over 600, Add 1 for Additional 300 Males.	No. of Persons / No. of Fixtures 1-200 1 201-400 2 401-750 3 Over 750, 1 for Each Additional 500 Person.		
Restaurant, Clubs and Lounges[11]	No. of Persons / No. of Fixtures M. F. 1-50 1 1 51-150 2 2 151-300 3 4 Over 300, Add 1 Fixture for Each 200 Additional Persons.	No. of Persons / No. of Fixtures M. 1-150 1 Over 150 Persons, Add One Fixture for Each 150 Men.	No. of Persons / No. of Fixtures 1-150 1 151-200 2 201-400 3 Over 400, 1 Fixture for Each Additional 400 People		
Shopping Center and Mercantile[13]	No. of Persons / No. of Fixtures M. F. 1-100 1 1 101-400 1 2 Over 400 persons, add 1 fixture for each additional 500 males and 300 females.	No. of Males / No. of Fixtures 1-300 1 301-600 2 Over 600, add one urinal for each additional 300 males.	No. of Persons / No. of Fixtures 1-400 1 401-1000 2 Over 1000 persons, add 1 fixture for each additional 500 persons.		1 for each 1000 persons with a minimum of 1 fixture for each floor level.

M—Male, F—Female.

[1]The figures shown are based upon one fixture being the minimum required for the number of persons indicated or any fraction thereof.

[2]Building category not shown on this table. Will be considered separately by the Plumbing Official.

[3]Drinking fountains shall not be installed in toilet rooms.

[4]Kitchen Sinks—1 for each dwelling or apartment unit.

[5]This schedule has been adopted (1958) by the National Council on Schoolhouse Construction.

[6]As required by the American Standard Safety Code for Industrial Sanitation in Manufacturing Establishments (ASA Z4.1-1955).

[7]Where there is exposure to skin contamination with poisonous, infectious, or irritating materials, provide 1 lavatory for each 5 persons.

[8]4-lineal-inches of wash sink or 18-inches of a circular basin, when provided with water outlets for such space, shall be considered equivalent to 1 lavatory.

[9]Laundry trays, 1 for each 50 persons. Slop sinks, 1 for each 100 persons.

[10]Washing Machine—Water and drain connections in each dwelling or apartment unit unless central washing facilities are provided for the specific use of the occupants on the premises.

[11]The installation of female urinals shall be optional.

[12]For each small commercial building housing a business and each rentable space in mall-type shopping centers which has five or less employees, one toilet room with lockable door may be provided. If plumbing fixtures are provided, for more than five employees, separate male and female toilet rooms shall be provided.

[13]The number of persons shall be calculated on the basis of 100 square feet of net area per person. For determining the number of fixtures required, the total number of persons shall be divided into 70% females and 30% males. Net area is 75% of the total gross area of the store or leasable areas. For mall-type centers, areas with individual facilities and arcade areas are not to be included in the total gross area. Single leased spaces located in mall-type centers having an area of 50,000 gross square feet or more shall have individual public facilities provided within its leased area. Restaurants, clubs, and lounges located within a mall-type center shall have individual public facilities sized in accordance with the proper section of this table. Public toilet facilities in mall-type centers other than individual public facilities shall be located on the arcade and no person shall have to travel more than 200 feet to have access to a public toilet room. On multi-story malls, public facilities shall be provided on each floor level. Individual public toilets may be used as toilet facilities for employees of that specific area.

General. In applying this schedule of facilities, consideration must be given to the accessibility of the fixtures. Conformity purely on a numerical basis may not result in an installation suited to the need of the individual establishment. For example, schools should be provided with toilet facilities on each floor having classrooms.

Temporary workingmen facilities:

1 water closet and 1 urinal for each 30 workmen.

24-in. urinal trough — 1 urinal
36-in. urinal trough — 2 urinals
48-in. urinal trough — 2 urinals
60 in. urinal trough — 3 urinals
72-in. urinal trough — 4 urinals

THE FOLLOWING TABLE 922.2 WAS EFFECTIVE FROM MARCH 1, 1990 UNTIL JANUARY 1, 1991.

TABLE 922.2—MINIMUM FACILITIES[1]

Occupancy[18]	Water Closets	Urinals	Lavatories[8]	Showers/Tubs	Drinking Fountains[3]
Dwelling or Apartment[4, 10]	1 for each dwelling or apartment unit	----------	1 for each dwelling or apt. unit.	1 for each dwelling or apt. unit	
Pre-School, Day Care, Nursery	1 for ea. 15 children or fraction thereof		1 for ea. 25 children or fraction thereof		
K thru 9	M: 1 per 60 F: 1 per 30	M: 1 per 30	1 per 60 students		1 per 75 students, minimum 1 per floor
10 thru 12	1 per 100 1 per30	1 per 30	1 per 100		1 per 75 students, minimum 1 per floor
College Educ. Buildings	1 per 100 1 per 45	1 per 60	1 per 125		1 per 75 students, minimum 1 per floor
Dormitories[9, 11, 13]	1 per 10 1 per 8 Over 10 males, add 1 fixture for ea. additional 25. Over 8 females add 1 fix. for ea. additional 20.	1 per ea. 25 males. More than 150 males provide 1 fixture for ea. additional 50 males.	1 for ea. 12 persons. Add 1 fixture for ea. additional 20 males & 15 females.	1 for each 8 persons. For women's dorms, add 1 for each 80 females.	
Office, Public Buildings and Public Areas of Institutions. (Includes common toilet facilities for commercial buildings of multiple tenants)[13, 14, 20]	# of Persons / M.- F. 1-15 / 1 - 2 16-40 / 2 - 2 41-75 / 3 - 4 76-125 / 4 - 5 126-200 / 6 - 8 Over 200 add 1 fixture for ea. 40 additional males and 30 additional females	Urinals may be substituted for water closets. The number of water closets shall not be reduced to less than 2/3 for males and 3/4 for females.	# of Persons / # of Fixtures 1-15 / 1 16-35 / 2 36-60 / 3 61-90 / 4 91-125 / 5 Add 1 fixture for each additonal 45 persons		# of Persons / # of Fixtures 15-100 / 1 101-250 / 2 251-500 / 3 Over 500, add 1 fixture for additional 500 persons.
Mercantile, Shopping Centers, Retail Stores, Supermarkets' Exhibition Facilities[13, 15, 16]	# of Persons / # of Fixtures M -F 1-10 / 1 -1 11-50 / 1 - 2 51-150 / 2 - 3 Over 150, add 1 fixture for ea. additional 200 males and ea. additional 100 females	# of Males / # of Fixtures 51-150 / 1 Over 150, add 1 fixture for ea. additional 250 males	# of Persons / # of Fixtures 1-50 / 1 51-150 / 2 Over 150, add 1 fixture for ea. additional 200 persons.		# of Persons / # of Fixtures 51-100 / 1 101-250 / 2 251-500 / 3 501-1,000 / 4 Over 1,000, add 1 fixture for each additional 400 persons.[19]

THE FOLLOWING TABLE 922.2 WAS EFFECTIVE FROM MARCH 1, 1990 UNTIL JANUARY 1, 1991.

TABLE 922.2—MINIMUM FACILITIES[1] (continued)

Occupancy[18]	Water Closets	Urinals	Lavatories[8]	Showers/Tubs	Drinking Fountains[3]
Manufacturing, Workshops, Loft Buildings, Foundries, and Similar Establishments.[5, 6, 11, 12, 13]	# of Persons M.- F. 1-10 1 - 1 11-25 2 - 3 26-50 3 - 4 51-75 4 - 6 76-100 5 - 8 Over 100, add 1 fixture for ea. 30 additional male employees and ea. 15 female employees.	Urinals may be substituted for water closets. The number of water closets shall not be reduced to less than 2/3 for males and 3/4 for females.	# of Persons # of Fixtures 1-15 1 16-35 2 36-60 3 61-90 4 91-125 5 Over 125, add 1 fixture for ea. additional 25 persons.	1 shower for each 15 persons exposed to excessive heat or to skin contamination with poisonous, infectious or irritating material.	1 for each 75 persons.
Storage, Aircraft Hangers, Garages[12, 13]	# of Persons M.- F. 1-50 1 - 2 51-100 2 - 4 101-200 3 - 6 Over 200 persons, add 1 fixture for ea. additional 75 males and 40 females	Urinals may be substituted for water closets. The number of water closets shall not be reduced to less than 2/3 for males and 3/4 for females.	# of Persons # of Fixtures 1-50 1 51-100 2 101-200 4 Over 200 persons add 1 fixture for ea. 50 additional persons.	1 shower for each 15 persons exposed to excessive heat or to skin contamination with poisonous, infectious or irritating material.	1 for each 75 persons.
Auditoriums, Stadiums Theaters[13]	# of Persons M -F 1-100 3- 4 101-200 4- 6 201-400 6- 8 Over 400, add 1 fixture for each additional 300 males and 100 females.	# of Persons M 1-200 4 201-400 6 401-600 8 Over 600, add 1 fixture for each additional 200 males.	# of Persons # of Fixtures 1-50 1 51-100 2 101-200 3 201-400 4 Over 400, add 1 fixture for each additional 200 persons.		1 per 500 persons—over 1000 2 fixtures plus 1 additional fixture for each 400 additional persons.

THE FOLLOWING TABLE 922.2 WAS EFFECTIVE FROM MARCH 1, 1990 UNTIL JANUARY 1, 1991.

TABLE 922.2—MINIMUM FACILITIES[1] (continued)

Occupancy[18]	Water Closets	Urinals	Lavatories[8]	Showers/Tubs	Drinking Fountains[3]
Restaurants, Clubs, and Lounges [11, 13]	# of Persons M -F 1-50 1- 2 51-150 2- 5 151-300 3- 8 Over 300 persons, add 1 fixture for ea. additional 100 males and 60 females.	# of Persons M 1-50 1 51-150 2 151-300 3 Over 300, add 1 fixture for ea. additional 150 males.	# of Persons # of Fixtures 1-150 1 151-200 2 201-400 3 Over 400 persons, add 1 fixture for each additional 200 persons.		
Airport, Railroad Stations and Bus Station Waiting Rooms. [13]	# of Persons M -F 1-100 2- 4 101-200 3- 6 201-400 4- 8 Over 400, add 1 fixture for each additional 200 males & 100 females.	# of Persons M 1-100 1 101-200 2 201-400 3 401-600 4 Over 600 persons, add 2 fixtures for ea. additional 300 males.	# of Persons # of Fixtures 1-100 1 101-200 2 201-400 3 401-750 4 Over 750 persons, add 1 fixture for ea. additional 300 persons.		1 per 500 persons—over 1000 2 fixtures plus 1 additional fixture for each 400 additional persons.
Do-It-Yourself Laundries [13]	# of Persons M -F 1-50 1- 1 51-100 1- 2		# of Persons # of Fixtures 1-100 1		1 per facility [13]
Beauty Shops and Barber Shops [13]	# of Persons M -F 1-35 1- 1 36-75 1- 2		One fixture for ea. sex when located in the toilet rooms and one fixture if accessible outside of both toilet rooms.		
Churches (Sanctuaries and Educational Buildings)[11, 13, 17]	# of Persons 1-100 1- 1 101-200 1- 2 201-400 2- 4 Over 400 persons, add 1 fixture for each additional 400 males and 200 females.	# of Persons M 50-150 1 151-400 2 Over 400 persons, add 1 fixture for ea. additional 300 males.	# of Persons # of Fixtures 1-200 1 201-400 2 Over 400, add 1 fixture for ea. additional 400 persons.		#of Persons # of Fixtures 1-100 1 101-350 2 Over 350, add 1 fixture for each additional 400 persons.

Footnotes for Table 922.2

[1] The figures shown are based upon one fixture being the minimum required for the number of persons indicated or any fraction thereof.

[2] The occupant content and the number of required facilities for occupancies other than listed shall be determined by the Plumbing official. Plumbing facilities in the occupancies or tenancies of similar use may be determined by the Plumbing Official from this table.

[3] Drinking fountains shall not be installed in toilet rooms.

[4] Kitchen Sinks—1 for each dwelling or apartment unit.

[5] For other than industrial areas of the occupancy, see other applicable type occupancies (applicable to facilities provided due to inaccessibility of those in main or initial occupancy).

[6] As required by the American Standard Safety Code for Industrial Sanitation in Manufacturing Establishments (ANSI Z4.1-1955).

[7] Where there is exposure to skin contamination with poisonous, infectious, or irritating materials, provide 1 lavatory for each 5 persons.

[8] 24 linear inches of wash sink or 18 inches of a circular basin, when provided with water outlets for each space, shall be considered equivalent to 1 lavatory.

[9] Laundry trays, 1 for each 50 persons. Slop sinks, 1 for each 100 persons.

[10] When central washing facilities are provided, in lieu of washing machine connections in each living unit, central facilities shall be located for the building served at the ratio of not less than one washing machine for each 12 living units, but in no case less than two machines for each building of 15 living units or less. See 914.5.

[11] The installation of female urinals shall be optional.

[12] Unheated storage buildings which are used periodically are not required to have toilet rooms.

[13] See Table 922.3.

[14] Common toilet facilities (separate for male and female) for each floor are acceptable in lieu of separate facilities required by this section only when the applicable building occupant content has common access from within the building. When tenancies, rental units, etc., are to be provided with separate facilities of a partial nature, such facilities are not deductible from the total common facilities required.

[15] The number of occupants shall be calculated on the basis of 100 square feet of net area per person. Net area is 70% of the total gross area of the building. For Exhibition Facilities, the number of occupants shall be considered to consist of 40% females and 60% males. For mall type centers and exhibition facilities, leased areas with individual toilet facilities and arcade areas shall not be included in the total gross area. Single leased areas of 50,000 gross square feet or more shall have individual public toilet facilities within the leased area. Restaurants, clubs and lounges located within a mall type center and exhibition facilities shall have individual public toilet facilities sized in accordance with the proper occupancy section of this table. Public toilet facilities other than those in individual leased areas shall be located on the arcade. Public toilet facilities shall be located so that no person will have to travel more than 200 feet for access. On multi-story buildings, public toilet facilities for employees of that specific area. For exhibition facilities used periodically, employees may use the public toilet facilities.

[16] Leased areas, except those having a gross area of 1,000 square feet and less and located within 200 feet of public toilet shall provide employee toilets within the leased area.

[17] The number of fixtures provided shall be based on either the capacity of the church sanctuary or the church educational building, whichever is larger.

[18] Any building of any occupancy classification which is used primarily for other purposes, may be used as temporary shelter for the homeless if it is equipped with a minimum of one water closet and one lavatory and the capacity of the building's exits meet the requirements of Section 1105.3 of Volume I for the total number of homeless persons to be housed.

[19] When gross area is 2,500 square feet and less, drinking fountains are optional.

[20] Number of occupants based on net area. Net area is the gross area of the building less 25%.