NORTH CAROLINA GENERAL ASSEMBLY
1981 SESSION

CHAPTER 713
SENATE BILL 520

AN ACT TO INCORPORATE SECTION 1008 OF CHAPTER X OF VOLUME 1 BUILDING CODE, TITLED "SPECIAL SAFETY TO LIFE REQUIREMENTS APPLICABLE TO EXISTING HIGH-RISE BUILDINGS" INTO THE GENERAL STATUTES OF NORTH CAROLINA.

The General Assembly of North Carolina enacts:

Section 1. G.S. 143-138 is hereby amended by adding a new subsection as follows:

"(i) Section 1008 of Chapter X of Volume 1 of the North Carolina State Building Code, Title 'Special Safety to Life Requirements Applicable to Existing High-Rise Buildings' as adopted by the North Carolina State Building Code Council on March 9, 1976, as ratified and adopted as follows:

SECTION 1008-SPEC1AL SAFETY TO LIFE REQUIREMENTS APPLICABLE TO EXISTING HIGH-RISE BUILDINGS

1008 – GENERAL.

(a) Applicability. Within a reasonable time, as fixed by 'written order' of the building official, and except as otherwise provided in subsection (j) of this section every building the existing, that qualifies for classification under Table 1008.1 shall be considered to be a high-rise building and shall be provided with safety to life facilities as hereinafter specified. All other buildings shall be considered as low-rise. NOTE: The requirements of Section 1008 shall be considered as minimum requirements to provide for reasonable safety to life requirements for existing buildings and where possible, the owner and designer should consider the provisions of Section 506 applicable to new high-rise buildings.

(b) Notification of Building Owner. The Department of Insurance will send copies of amendments adopted to all local building officials with the suggestion that all local building officials transmit to applicable building owners in their jurisdiction copies of adopted amendments, within six months from the date the amendments are adopted, with the request that each building owner respond to the local building official how he plans to comply with these requirements within a reasonable time.

NOTE: Suggested reasonable time and procedures for owners to respond to the building official's request is as follows:

(1) The building owner shall, upon receipt of written request from the building official on compliance procedures within a reasonable time, submit an overall plan required by 1008(c) below within one year and within the time period specified in the approved overall plan, but not to exceed five years after the overall plan is approved, accomplish compliance with this section, as evidenced by completion of the work in accordance with approved working drawings and specifications and by issuance of a new Certificate of Compliance by the building official covering the work. Upon approval of building owner's overall plan, the building official shall issue a 'written order', as per 1008(a) above, to comply with Section 1008 in accordance with the approved overall plan.

(2) The building official may permit time extensions beyond five years to accomplish compliance in accordance with the overall plan when the owner can show just cause for such extension of time at the time the overall plan is approved.

(3) The local building official shall send second request notices as per 1008(b) to building owners who have made no response to the request at the end of six months and a third request notice to no response building owners at the end of nine months.

(4) If the building owner makes no response to any of the three requests for information on how the owner plans to comply with Section 1008 within 12 months from the first request, the building official shall issue a 'written order' to the building owner to provide his building with the safety to life facilities as required by this section and to submit an overall plan specified by (1) above within six months with the five-year time period starting on the date of the 'written order'.

(5) For purposes of this section, the Construction Section of the Division of Facility Services, Department of Human Resources, will notify all non-State owned I-Institutional buildings requiring licensure by the Division of Facility Services and coordinate compliance requirements with the Department of Insurance and the local building official.

(c) Submission of Plans and Time Schedule for Completing Work. Plans and specifications, but not necessarily working drawings covering the work necessary to bring the building into compliance with this section shall be submitted to the building official within a reasonable time. (See suggested time in NOTE of Section 1008(b) above). A time schedule for accomplishing the work, including the preparation of working drawings and specifications shall be included. Some of the work may require longer periods of time to accomplish than others, and this shall be reflected in the plan and schedule.

NOTE: Suggested Time Period For Compliance:

SUGGESTED TIME PERIOD FOR COMPLIANCE

ITEM	CLASS I (SECTION)	CLASS II (SECTION)	CLASS III (SECTION)	TIME FOR COMPLETION
Signs in Elevator Lobbies and Elevator Cabs	1008.2(h)	1008.3(h)	1008.4(h)	180 days
Emergency Evacuation Plan	1008(b)	NOTE:		180 days
Corridor Smoke Detectors (Includes alternative door closers)	1008.2(c)	1008.3(c)	1008.4(c)	1 year
Manual Fire Alarm	1008.2(a)	1008.3(a)	1008.4(a)	1 year
Voice Communication System Required	1008.2(b)	1008.3(b)	1008.4(b)	2 years
Smoke Detectors Required	1008.2(c)	1008.3(c)	1008.4(c)	1 year
Protection and Fire Stopping for Vertical Shafts	1008.2(f)	1008.3(f)	1008.4(f)	3 years
Special Exit Requirements-Number, Location and Illumination				

to be in accordance with Section 1007	1008.2(e)	1008.3(e)	1008.4(e)	3 years
Emergency Electrical Power Supply	1008.2(d)	1008.3(d)	1008.4(d)	4 years
Special Exit Facilities Required	1008.2(e)	1008.3(e)	1008.4(e)	5 years
Compartmentation for Institutional Buildings	1008.2(f)	1008.3(f)	1008.4(f)	5 years
Emergency Elevator Requirements	1008.2(h)	1008.3(h)	1008.4(h)	5 years
Central Alarm Facility Required		1008.3(i)	1008.4(i)	5 years
Areas of Refuge Required on Every Eighth Floor			1008.4(j)	5 years
Smoke Venting			1008.4(k)	5 years
Fire Protection of Electrical Conductors			1008.4(l)	5 years
Sprinkler System Required			1008.4(m)	5 years

(d) Building Official Notification of Department of Insurance. The building official shall send copies of written notices he sends to building owners to the Engineering and Building Codes Division for their files and also shall file an annual report by August 15th of each year covering the past fiscal year setting forth the work accomplished under the provisions of this section.

(e) Construction Changes and Design of Life Safety Equipment. Plans and specifications which contain construction changes and design of life safety equipment requirements to comply with provisions of this section shall be prepared by a registered architect in accordance with provisions of Chapter 83 of the General Statutes or by a registered engineer in accordance with provisions of Chapter 89 of the General Statutes or by both an architect and engineer particularly qualified by training and experience for the type of work involved. Such plans and specifications shall be submitted to the Engineering and Building Codes Division of the Department of Insurance for approval. Plans and specifications for I-Institutional buildings licensed by the Division of Facility Services as noted in (b) above shall be submitted to the Construction Section of that Division for review and approval.

(f) Filing of Test Reports and Maintenance on Life Safety Equipment. The engineer performing the design for the electrical and mechanical equipment, including sprinkler systems, must file the test results with the Engineering and Building Codes Division of the Department of Insurance, or to the agency designated by the Department of Insurance, that such systems have been tested to indicate that they function in accordance with the standards specified in this section and according to design criteria. These test results shall be a prerequisite for the Certificate of Compliance required by (b) above. Test results for I-Institutional shall be filed with the Construction Section, Division of Facility Services. It shall be the duty and responsibility of the owners of Class I, II and III buildings to maintain smoke detection, fire detection, fire control, smoke removal and venting as required by this section and similar emergency systems in proper operating condition at all times. Certification of full tests and inspections of all emergency systems shall be provided by the owner annually to the Fire Department.

(g) Applicability of Chapter X and Conflicts with Other Sections. The requirements of this section shall be in addition to those of Sections 1001 through 1007; and in case of conflict, the requirements affording the higher degree of safety to life shall apply, as determined by the building official.

(h) Classes of Buildings and Occupancy Classifications. Buildings shall be classified as Class I, II or III according to Table 1008.1. In the case of mixed occupancies, for this purpose, the classification shall be the most restrictive one resulting from the application of the most prevalent occupancies to Table 1008.1.

FOOTNOTE: Emergency Plan. Owners, operators, tenants, administrators or managers of high-rise buildings should consult with the fire authority having jurisdiction and establish procedures which shall include but not necessarily be limited to the following:

(1) Assignment of a responsible person to work with the fire authority in the establishment, implementation and maintenance of the emergency pre-fire plan.

(2) Emergency plan procedures shall be supplied to all tenants and shall be posted conspicuously in each hotel guest room, each office area, and each schoolroom.

(3) Submission to the local fire authority of an annual renewal or amended emergency plan.

(4) Plan should be completed as soon as possible.

1008.1 - ALL EXISTING BUILDINGS SHALL BE CLASSIFIED AS CLASS I, II AND III ACCORDING TO TABLE 1008.1.

TABLE 1008.1
Scope

CLASS (1)	OCCUPANCY GROUP (3)(4)	OCCUPIED FLOOR ABOVE AVERAGE GRADE EXCEEDING HEIGHT (2)
CLASS I	Group R-Residential Group B-Business Group E-Educational Group A-Assembly Group H-Hazardous Group I-Institutional-Restrained	60' but less than 120' above average grade or 6 but less than 12 stories above average grade.
	Group I-Institutional-Unrestrained	36' but less than 60' above average grade or 3 but less than 6 stories above average grade.
CLASS II	Group R-Residential Group B-Business Group E-Educational Group A-Assembly Group H-Hazardous Group I-Institutional-Restrained	120' but less than 250' above average grade grade or 12 but less than 25 stories above average grade.
	Group I-Institutional-Unrestrained	60' but less than 250' above average grade or 6 but less than 25 stories above

		average grade.
CLASS III	Group R-Residential Group B-Business Group E-Educational Group I-Institutional Group A-Assembly Group H-Hazardous	250' or 25 stories above average grade.

NOTE 1: The entire building shall comply with this section when the building has an occupied floor above the height specified, except that portions of the buildings which do not exceed the height specified are exempt from this section, subject to the following provisions:

(a) Low-rise portions of Class I buildings must be separated from high-rise portions by one-hour construction.

(b) Low-rise portions of Class II and III buildings must be separated from high-rise portions by two-hour construction.

(c) Any required exit from the high-rise portion which passes through the low-rise portions must be separated from the low-rise portion by the two-hour construction.

NOTE 2: The height described in Table 1008.1 shall be measured between the average grade outside the building and the finished floor of the top occupied story.

NOTE 3: Public parking decks meeting the requirements of Section 412.7 and less than 75 feet in height are exempt from the requirements of this section when there is no other occupancy above or below such deck.

NOTE 4: Special purpose equipment buildings, such as telephone equipment buildings housing the equipment only, with personnel occupant load limited to persons required to maintain the equipment may be exempt from any or all of these requirements at the discretion of the Engineering and Building Codes Division provided such special purpose equipment building is separated from other portions of the building by two-hour fire rated construction.

1008.2 – REQUIREMENTS FOR EXISTING CLASS I BUILDINGS.

All Class I buildings shall be provided with the following:

(a) An approved manual fire alarm system, meeting the requirements of Section 1125 and applicable portions of NFPA 71, 72A, 72B, 72C or 72D, shall be provided unless the building is fully sprinklered or equipped with an approved automatic fire detection system connected to the Fire Department.

(b) All Class I buildings shall meet the requirements of Sections 1001-1007.

(c) Smoke Detectors Required. At least one approved listed smoke detector tested in accordance with UL-167, capable of detecting visible and invisible particles of combustion shall be installed as follows:

(1) All buildings classified as institutional, residential and assembly occupancies shall be provided with listed smoke detectors in all required exit corridors spaced no further than 60' on center or more than 15' from any wall. Exterior corridors open to the outside are not required to comply with this requirement. If the corridor walls have one-hour fire resistance rating with all openings protected with 1-3/4 inch solid wood core or hollow metal door or equivalent and all corridor doors are equipped with approved self-closing devices, the smoke detectors in the corridor may be omitted. Detectors in corridors may be omitted when each dwelling unit is equipped with smoke detectors which activate the alarm system.

(2) In every mechanical equipment, boiler, electrical equipment, elevator equipment or similar room unless the room is sprinklered or the room is separated from other areas by two-hour fire resistance construction with all openings therein protected with approved fire dampers and Class B fire doors. (Approved listed fire (heat) detectors may be submitted for these rooms.)

(3) In the return air portion of every air conditioning and mechanical ventilation system that serves more than one floor.

(4) The activation of any detector shall activate the alarm system, and shall cause such other operations as required by this Code.

(5) The annunciator shall be located near the main entrance or in a central alarm and control facility.

NOTE 1: Limited area sprinklers may be supplied from the domestic water system provided the domestic water system is designed to support the design flow of the largest number of sprinklers in any one of the enclosed areas. When supplied by the domestic water system, the maximum number of sprinklers in any one enclosed room or area shall not exceed 20 sprinklers which must totally protect the room or area.

(d) Emergency Electrical Power Supply. An emergency electrical power supply shall be provided to supply the following for a period of not less than two hours. An emergency electrical power supply may consist of generators, batteries, a minimum of two remote connections to the public utility grid supplied by multiple generating stations, a combination of the above.

(1) Emergency, exit and elevator cab lighting.

(2) Emergency illumination for corridors, stairs, etc.

(3) Emergency Alarms and Detection Systems. Power supply for fire alarm and fire detection. Emergency power does not need to be connected to fire alarm or detection systems when they are equipped with their own emergency power supply from float or trickle charge battery in accordance with NFPA Standards.

(e) Special Exit Requirements. Exits and exitways shall meet the following requirements:

(1) Protection of Stairways Required. All required exit stairways shall be enclosed with noncombustible one-hour fire rated construction with a minimum of 1-3/4 inch solid core wood door or hollow metal door or 20 minute UL listed doors as entrance thereto. (See Section 1007.5).

(2) Number and Location of Exits. All required exit stairways shall meet the requirements of Section 1007 to provide for proper number and location and proper fire rated enclosures and illumination of and designation for means of egress.

(3) Exit Outlets. Each required exit stair shall exit directly outside or through a separate one-hour fire rated corridor with no openings except the necessary openings to exit into the fire rated corridor and from the fire rated corridor and such openings shall be protected with 1-3/4 inch solid wood core or hollow metal door or equivalent unless the exit floor level and all floors below are equipped with an approved automatic sprinkler system meeting the requirements of NFPA No. 13.

(f) Smoke Compartments Required for I-Institutional Buildings. Each occupied floor shall be divided into at least two compartments with each compartment containing not more than 30 institutional occupants. Such compartments shall be subdivided with one-half hour fire rated partitions which shall extend from outside wall to outside wall and from floor to and

through any concealed space to the floor slab or roof above and meet the following requirements:

(1) Maximum area of any smoke compartment shall be not more than 22,500 square feet in area with both length and width limited to 150 feet.

(2) At least one smoke partition per floor regardless of building size forming two smoke zones of approximately equal size.

(3) All doors located in smoke partitions shall be properly gasketed to insure a substantial barrier to the passage of smoke and gases.

(4) All doors located in smoke partitions shall be no less than 1-3/4 inch thick solid core wood doors with UL, 1/4 inch wire glass panel in metal frames. This glass panel shall be a minimum of 100 square inches and a maximum of 720 square inches.

(5) Every door located in a smoke partition shall be equipped with an automatic closer. Doors that are normally held in the open position shall be equipped with an electrical device that shall, upon actuation of the fire alarm or smoke detection system in an adjacent zone, close the doors in that smoke partition.

(6) Glass in all corridor walls shall be 1/4", UL approved, wire glass in metal frames in pieces not to exceed 1296 square inches.

(7) Doors to all patient rooms and treatment areas shall be a minimum of 1-3/4 inch solid core wood doors except in fully sprinklered buildings.

(g) Protection and Fire Stopping for Vertical Shafts. All vertical shafts extending more than one floor including elevator shafts, plumbing shafts, electrical shafts and other vertical openings shall be protected with noncombustible one-hour fire rated construction with shaft wall openings protected with 1-3/4 inch solid core wood door or hollow metal door. Vertical shafts (such as electrical wiring shafts) which have openings such as ventilated doors on each floor must be fire stopped at the floor slab level with noncombustible materials having a fire resistance rating not less than one hour to provide an effective barrier to the passage of smoke, heat and gases from floor to floor through such shafts.

EXCEPTION: Shaft wall openings protected in accordance with NFPA No. 90A and openings connected to metal ducts equipped with approved fire dampers within the shaft wall openings do not need any additional protection.

(h) Signs in Elevator Lobbies and Elevator Cabs. Each elevator lobby call station on each floor shall have an emergency sign located adjacent to the call button and each elevator cab shall have an emergency sign located adjacent to the floor status indicator. The required emergency sign shall be readable at all times and shall be a minimum of 1/2" high block letters with the words: 'IN CASE OF FIRE DO NOT USE ELEVATOR - USE THE EXIT STAIRS' or other words to this effect.

1008.3 – REQUIREMENTS FOR EXISTING CLASS II BUILDINGS.

All Class II buildings must meet the following requirements:

(a) Manual Fire Alarm. Provide manual fire alarm system in accordance with Section 1008.2(a). In addition, buildings so equipped with sprinkler alarm system or automatic fire detection system must have at least one manual fire alarm station near an exit on each floor as a part of such sprinkler or automatic fire detection and alarm system. Such manual fire alarm systems shall report a fire by floor.

(b) Voice Communication System Required. An approved voice communication system or systems operated from the central alarm and control facilities shall be provided and shall consist of the following:

(1) One-Way Voice Communication Public Address System Required. A one-way voice communication system shall be established on a selective basis which can be heard clearly by all occupants in all exit stairways, elevators, elevator lobbies, corridors, assembly rooms and tenant spaces.

NOTE 1: This system shall function so that in the event of one circuit or speaker being damaged or out of service, the remainder of the system shall continue to be operable.

NOTE 2: This system shall include provisions for silencing the fire alarm devices when the loud speakers are in use, but only after the fire alarm devices have operated initially for not less than 15 seconds.

(c) Smoke Detectors Required. Smoke detectors are required as per Section 1008.2(c). The following are additional requirements:

(1) Storage rooms larger than 24 square feet or having a maximum dimension of over eight feet shall be provided with approved fire detectors or smoke detectors installed in an approved manner unless the room is sprinklered.

(2) The actuation of any detectors shall activate the fire alarm system.

(d) Emergency Electrical Power Supply. An emergency electrical power supply shall be provided to supply the following for a period of not less than two hours. An emergency electrical power supply may consist of generators, batteries, a minimum of two remote connections to the public utility grid supplied by multiple generating stations, a combination of the above. Power supply shall furnish power for items listed in Section 1008.2(d) and the following:

(1) Pressurization Fans. Fans to provide required pressurization, smoke venting or smoke control for stairways.

(2) Elevators. The designated emergency elevator.

(e) Special Exit Facilities Required. The following exit facilities are required:

(1) The special exit facilities required in 1008.2(e) are required. All required exit stairways shall be enclosed with noncombustible two-hour fire rated construction with a minimum of 1-1/2 hour Class B-labeled doors as entrance thereto: (See Section 1007.5)

(2) Smoke-Free Stairways Required. At least one stairway shall be a smoke free stairway in accordance with Section 1104.2 or at least one stairway shall be pressurized to between 0.15 inch and 0.35 inch water column pressure with all doors closed. Smoke-free stairs and pressurized stairs shall be identified with signs containing letters a minimum of 1/2 inch high containing the words 'PRIMARY EXIT STAIRS' unless all stairs are smoke free or pressurized. Approved exterior stairways meeting the requirements of Chapter XI or approved existing fire excapes meeting the requirements of Chapter X with all openings within 10 feet protected with wire glass or other properly designed stairs protected to assure similar smoke-free vertical egress may be permitted. All required exit stairways shall also meet the requirements of Section 1008.2(e).

(3) If stairway doors are locked from the stairway side, keys shall be provided to unlock all stairway doors on every eighth floor leading into the remainder of the building and the key shall be located in a glass enclosure adjacent to the door at each floor level (which may sound an alarm when the glass is broken). When the key unlocks the door, the hardware shall be of the type that remains unlocked after the key is removed. Other means, approved by the building official may be approved to enable occupants and fire fighters to readily unlock stairway doors on every eighth floor that may be locked from the stairwell side. The requirements of this section may be eliminated in smoke-free stairs and pressurized stairs provided fire department access keys are provided in locations acceptable to the local fire authority.

(f) Compartmentation for I-Institutional Buildings Required. See Section 1008.2(f).

(g) Protection and Fire Stopping for Vertical Shafts. All vertical shafts extending more than one floor including elevator shafts, plumbing shafts, electrical shafts and other vertical

openings shall be protected with noncombustible two-hour fire rated construction with Class B-labeled door except for elevator doors which shall be hollow metal or equivalent. All vertical shafts which are not so enclosed must be fire stopped at each floor slab with noncombustible materials having a fire resistance rating of not less than two hours to provide an effective barrier to the passage of smoke, heat and gases from floor to floor through such shaft.

EXCEPTION: Shaft wall openings protected in accordance with NFPA No. 90A and openings connected to metal ducts equipped with approved fire dampers within the shaft wall opening do not need any additional protection.

(h) Emergency Elevator Requirements.

(1) Elevator Recall. Each elevator shall be provided with an approved manual return. When actuated, all cars taking a minimum of one car at a time, in each group of elevators having common lobby, shall return directly at normal car speed to the main floor lobby, or to a smoke free lobby leading most directly to the outside. Cars that are out of service are exempt from this requirement. The manual return shall be located at the main floor lobby.
NOTE: Manually operated cars are considered to be in compliance with this provision if each car is equipped with an audible or visual alarm to signal the operator to return to the designated level.

(2) Identification of Emergency Elevator. At least one elevator shall be identified as the emergency elevator and shall serve all floor levels. NOTE: This elevator will have a manual control in the cab which will override all other controls including floor call buttons and door controls.

(3) Signs in Elevator Lobbies and Elevator Cabs. Each elevator lobby call station on each floor shall have an emergency sign located adjacent to the call button and each elevator cab shall have an emergency sign located adjacent to the floor status indicator. These required emergency signs shall be readable at all times and shall be a minimum of 1/2 inch high block letters with the words: 'IN CASE OF FIRE DO NOT USE ELEVATOR – USE THE EXIT STAIRS' or other words to this effect.

(i) Central Alarm Facility Required. A central alarm facility accessible at all times to Fire Department personnel or attended 24 hours a day, shall be provided and shall contain the following:

(1) Facilities to automatically transmit manual and automatic alarm signals to the Fire Department either directly or through a signal monitoring service.

(2) Public service telephone.

(3) Fire detection and alarm systems annunciator panels to indicate the type of signal and the floor or zone from which the fire alarm is received. These signals shall be both audible and visual with a silence switch for the audible.
NOTE: Detectors in HVAC systems used for fan shut down need not be annunciated.

(4) Master keys for access from all stairways to all floors.

(5) One-way voice emergency communications system controls.

1008.4 – REQUIREMENTS FOR EXISTING CLASS III BUILDINGS.

All Class III Buildings shall be provided with the following:

(a) Manual Fire Alarm System. A manual fire alarm system meeting the requirements of Section 1008.3(a).

(b) Voice Communication System Required. An approved voice communication system or systems operated from the central alarm and control facilities shall be provided and shall consist of the following:

(1) One-Way Voice Communication Public Address System Required. A one-way voice communication system shall be established on a selective or

general basis which can be heard clearly by all occupants in all elevators, elevator lobbies, corridors, and rooms or tenant spaces exceeding 1,000 sq. ft. in area.

NOTE 1: This system shall be designed so that in the event of one circuit or speaker being damaged or out of service the remainder of the system shall continue to be operable.

NOTE 2: This system shall include provisions for silencing the fire alarm devices when the loud speakers are in use, but only after the fire alarm devices have operated initially for not less than 15 seconds.

(2) Two way system for use by both fire fighters and occupants at every fifth level in stairways and in all elevators.

(3) Within the stairs at levels not equipped with two-way voice communications, signs indicating the location of the nearest two-way device shall be provided.

NOTE: The one-way and two-way voice communication systems may be combined.

(c) Smoke Detectors Required. Approved listed smoke detectors shall be installed in accordance with Section 1008.3(c) and in addition, such detectors shall terminate at the Central Alarm and Control Facility and be so designed that it will indicate the fire floor or the zone on the fire floor.

(d) Emergency Electrical Power Supply. Emergency electrical power supply meeting the requirements of Section 1008.3(d) to supply all emergency equipment required by Section 1008.3(d) shall be provided and in addition, provisions shall be made for automatic transfer to emergency power in not more than ten seconds for emergency illumination, emergency lighting and emergency communication systems. Provisions shall be provided to transfer power to a second designated elevator located in a separate shaft from the Primary Emergency Elevator. Any standpipe or sprinkler system serving occupied floor areas 400 feet or more above grade shall be provided with on-site generated power or diesel driven pump.

(e) Special Exit Requirements. All exits and exitways shall meet the requirements of Section 1008.3(e).

(f) Compartmentation of Institutional Buildings Required. See Section 1008.2(f).

(g) Protection and Fire Stopping for Vertical Shafts. Same as Class II buildings. See Section 1008.3(g).

(h) Emergency Elevator Requirements.

(1) Primary Emergency Elevator. At least one elevator serving all floors shall be identified as the emergency elevator with identification signs both outside and inside the elevator and shall be provided with emergency power to meet the requirements of Section 1008.3(c).

NOTE: This elevator will have a manual control in the cab which will override all other controls including floor call buttons and door controls.

(2) Elevator Recall. Each elevator shall be provided with an approved manual return. When actuated, all cars taking a minimum of one car at a time, in each group of elevators having common lobby, shall return directly at normal car speed to the main floor lobby or to a smoke-free lobby leading most directly to the outside. Cars that are out of service are exempt from this requirement. The manual return shall be located at the main floor lobby.

NOTE: Manually operated cars are considered to be in compliance with this provision if each car is equipped with an audible or visual alarm to signal the operator to return to the designated level.

(3) Signs in Elevator Lobbies and Elevator Cabs. Each elevator lobby call station on each floor shall have an emergency sign located adjacent to the

call button and each elevator cab shall have an emergency sign located adjacent to the floor status indicator. These required emergency signs shall be readible at all times and have a minimum of 1/2" high block letters with the words: 'IN CASE OF FIRE, UNLESS OTHERWISE INSTRUCTED, DO NOT USE THE ELEVATOR-USE THE EXIT STAIRS' or other words to this effect.

(4) Machine Room Protection. When elevator equipment located above the hoistway is subject to damage from smoke particulate matter, cable slots entering the machine room shall be sleeved beneath the machine room floor to inhibit the passage of smoke into the machine room.

(5) Secondary Emergency Elevator. At least one elevator located in separate shaft from the Primary Emergency Elevator shall be identified as the 'Secondary Emergency Elevator' with identification signs both outside and inside the elevator. It will serve all occupied floors above 250 feet and shall have all the same facilities as the primary elevator and will be capable of being transferred to the emergency power system.

NOTE: Emergency power supply can be sized for nonsimultaneous use of the primary and secondary emergency elevators.

(i) Central Alarm and Control Facilities Required.

(1) A central alarm facility accessible at all times to Fire Department personnel or attended 24 hours a day, shall be provided. The facility shall be located on a completely sprinklered floor or shall be enclosed in two-hour fire resistive construction. Openings are permitted if protected by listed 1-1/2 hour Class B-labeled closures or water curtain devices capable of a minimum discharge of three gpm per lineal foot of opening. The facility shall contain the following:

(i) Facilities to automatically transmit manual and automatic alarm signals to the Fire Department either directly or through a signal monitoring service.

(ii) Public service telephone.

(iii) Direct communication to the control facility.

(iv) Controls for the voice communication systems.

(v) Fire detection and alarm system annunciator panels to indicate the type of signal and the floor or zone from which the fire alarm is received, those signals, shall be both audible and visual with a silence switch for the audible.

NOTE: Detectors in HVAC systems used for fan shut down need not be annunciated.

(2) A control facility (fire department command station) shall be provided at or near the fire department response point and shall contain the following:

(i) Elevator status indicator.

NOTE: Not required in buildings where there is a status indicator at the main elevator lobby.

(ii) Master keys for access from all stairways to all floors.

(iii) Controls for the two-way communication system.

(iv) Fire detection and alarm system annunciator panels to indicate the type of signal and the floor or zone from which the fire alarm is received.

(v) Direct communication to the central alarm facility.

(3) The central alarm and control facilities may be combined in a single approved location. If combined, the duplication of facilities and the direct communication system between the two may be deleted.

(j) Areas of Refuge Required. Class III buildings shall be provided with a designated 'area of refuge' at the 250 ft. level and on at least every eighth floor or fraction thereof above that level to be designed so that occupants above the 250 ft. level can enter at all times and be safely accommodated in floor areas meeting the following requirements unless the building is completely sprinklered:

(1) Identification and Size. These areas of refuge shall be identified on the plans and in the building as necessary. The area of refuge shall provide not less than 3 sq. ft. per occupant for the total number of occupants served by the area based on the occupancy content calculated by Section 1105. A minimum of two percent (2%) of the number of occupants on each floor shall be assumed to be handicapped and no less than 16 sq. ft. per handicapped occupant shall be provided. Smoke proof stairways meeting the requirements of Section 1104.2 and pressurized stairways meeting the requirements of Section 1108.3(e)(2) may be used for ambulatory occupants at the rate of 3 sq. ft. of area of treads and landings per person, but in no case shall the stairs count for more than one-third of the total occupants. Doors leading to designated areas of refuge from stairways or other areas of the building shall not have locking hardware or shall be automatically unlocked upon receipt of any manual or automatic fire alarm signal.

(2) Pressurized. The area of refuge shall be pressurized with 100% fresh air utilizing the maximum capacity of existing mechanical building air conditioning system without recirculation from other areas or other acceptable means of providing fresh air into the area.

(3) Fire Resistive Separation. Walls, partitions, floor assemblies and roof assemblies separating the area of refuge from the remainder of the building shall be noncombustible and have a fire resistance rating of not less than one hour. Duct penetrations shall be protected as required for penetrations of shafts. Metallic piping and metallic conduit may penetrate or pass through the separation only if the openings around the piping or conduit are sealed on each side of the penetrations with impervious noncombustible materials to prevent the transfer of smoke or combustion gases from one side of the separation to the other. The fire door serving as a horizontal exit between compartments shall be so installed, fitted and gasketed to provide a barrier to the passage of smoke.

(4) Access Corridors. Any corridor leading to each designated area of refuge shall be protected as required by Sections 1104 and 702. The capacity of an access corridor leading to an area of refuge shall be based on 150 persons per unit width as defined in Section 1105.2. An access corridor may not be less than 44 inches in width. The width shall be determined by the occupant content of the most densely populated floor served. Corridors with one-hour fire resistive separation may be utilized for area of refuge at the rate of three sq. ft. per ambulatory occupant provided a minimum of one cubic ft. per minute of outside air per square foot of floor area is introduced by the air conditioning system.

(5) Penetrations. The continuity of the fire resistance at the juncture of exterior walls and floors must be maintained.

(k) Smoke Venting.

Smoke venting shall be accomplished by one of the following methods in nonsprinklered buildings:

(1) In a nonsprinklered building, the heating, ventilating and air conditioning system shall be arranged to exhaust the floor of alarm origin at its maximum exhausting capacity without recirculating air from the floor of alarm origin to any other floor. The system may be arranged to accomplish this either automatically or manually. If the air conditioning system is also used to pressurize the areas of refuge, this function shall not be compromised by using the system for smoke removal.

(2) Venting facilities shall be provided at the rate of 20 square feet per 100 lineal feet or 10 square feet per 50 lineal feet of exterior wall in each story and distributed around the perimeter at not more than 50 or 100 foot intervals openable from within the fire floor. Such panels and their controls shall be clearly identified.

(3) Any combination of the above two methods or other approved designs which will produce equivalent results and which is acceptable to the building official.

(l) Fire Protection of Electrical Conductors. New electrical conductors furnishing power for pressurization fans for stairways, power for emergency elevators and fire pumps required by Section 1008.4(d) shall be protected by a two-hour fire rated horizontal or vertical enclosure or structural element which does not contain any combustible materials. Such protection shall begin at the source of the electrical power and extend to the floor level on which the emergency equipment is located. It shall also extend to the emergency equipment to the extent that the construction of the building components on that floor permit. New electrical conductors in metal raceways located within a two-hour fire rated assembly without any combustible therein are exempt from this requirement.

(m) Automatic Sprinkler Systems Required.

(1) All areas which are classified as Group M-mercantile and Group H-hazardous shall be completely protected with an automatic sprinkler system.

(2) All areas used for commercial or institutional food preparation and storage facilities adjacent thereto shall be provided with an automatic sprinkler system.

(3) An area used for storage or handling of hazardous substances shall be provided with an automatic sprinkler system.

(4) All laboratories and vocational shops in Group E, Educational shall be provided with an automatic sprinkler system.

(5) Sprinkler systems shall be in strict accordance with NFPA No. 13 and the following requirements:

The sprinkler system must be equipped with a water flow and supervisory signal system that will transmit automatically a water flow signal directly to the Fire Department or to an independent signal monitoring service satisfactory to the Fire Department."

Sec. 2. G.S. 143-138 is further amended by adding a new subsection (j) at the end thereof to read as follows:

"(j) Subsection (i) of this section does not apply to business occupancy buildings as defined in the North Carolina State Building Code except that evacuation plans as required on page 8, lines 2 through 16, and smoke detectors as required for Class I Buildings as required in Section 1008.2, page 11, lines 5 through 21; Class II Buildings as required by Section 1008.3, page 17, lines 17 through 28 and page 18, lines 1 through 10; and Class III Buildings, as required by Section 1008.4, lines 21 through 25 shall not be exempted from operation of this act as applied to business occupancy buildings."

Sec. 3. Severability. If any provision or part of this act or application thereof is held invalid, the invalidity shall not affect other provisions, parts or applications of the Article which can be given effect without the invalid provisions or application, and to this end the provisions of this act are severable.

Sec. 4. This act is effective upon ratification.

In the General Assembly read three times and ratified, this the 29th day of June, 1981.