

1997 SOUTHERN NEVADA FIRE CODE AMENDMENTS

Endorsed By

SOUTHERN NEVADA ASSOCIATION of FIRE CHIEFS SOUTHERN NEVADA FIRE PREVENTION ASSOCIATION SOUTHERN NEVADA FIRE CODE COMMITTEE

Certain parts, articles, divisions, sections and subsections of Volume 1 of the Uniform Fire Code, 1997 Edition, are amended or deleted as is provided for in this Supplemental Document. If a conflict exists between any provisions of this Supplemental Document and any provisions of the Uniform Fire Code, 1997 Edition, or the Uniform Building Code, 1997 Edition, the provisions of this Supplemental Document shall prevail.

1. **Section 103.1.4 Appeals** is deleted.
2. A new **Section 103.3.5 Fees** is added as follows:

103.3.5.1 Inspection Fees.* Inspections or re-inspections requested outside of normal business hours or inspections, re-inspections, file searches, fire flows, or plan reviews which require additional work to be performed by the Fire Prevention Bureau shall be charged a fee as follows:

1. Requested inspection outside of normal business hours \$60.00 per hour per inspector. This shall include travel time, with a minimum charge of three hours per inspector.
2. Additional inspections or re-inspections for renewable permits, new construction permits, fire protection systems due to system inspection deficiencies, cancellations with less than four hours notice, or requiring additional inspections due to inspecting partial systems shall be charged \$60.00 per hour per inspector. This shall include travel time.
3. File Searches: For requested information contained in files, including "Environmental Assessments." The minimum charge is \$60.00 per hour with a minimum of one-hour.
4. Fire Flows: For requested information contained in files related to "Fire Flows" and to assist or witness "Fire Flows". The minimum charge is \$60.00 per hour per inspector with a minimum of one-hour.
5. Additional plan reviews required by changes, additions, or revisions to submitted plans shall be charged \$60.00 per hour with a one-hour minimum.

6. Requested inspections for the same day \$120.00 per inspector. (I.e., less than 1 full day notice - not applicable when more than 1 day's notice is given) Note! Fee is in addition to any other applicable fee(s) specified above.

* This section shall not be used to determine the minimum number of overtime hours nor shall it be used to determine the hourly wages of employees.

103.3.5.2 Renewable Permits, Fees. The fees for renewable permits required in Section 105.8 as amended, shall be \$60.00 each.

103.3.5.2.1 No permit fees will be charged to federal, state and local governments.

103.3.5.2.2 Renewable Permits, Penalties

103.3.5.2.3 Failure to renew required permits, which require renewal, will result in the permit fee being doubled.

103.3.5.2.4 Failure to obtain a required permit prior to engaging in said operation, practice, function or activity will result in the permit fee being doubled.

103.3.5.2.5 Other Permit Inspection Fees. The initial inspection which is required prior to the issuance of a permit(s) is included in the permit fee. Additional inspections, re-inspections, or inspections requested outside of normal business hours will be charged in accordance with 103.3.5.1(2).

103.3.5.3 New Construction Permits and Plan Review Fees.

Reserved, see individual amendments by each Authority having Jurisdiction.

3. A new **Section 103.3.6 Service Charges for Special Occurrences** is added as follows:

103.3.6 Service Charges for Special Occurrences. Emergency Apparatus or Unit Standby - \$250.00 per hour with a 4 hour minimum per apparatus or unit.

4. **Section 103.4.1.1 Authorization to Issue Corrective Orders and Notices** is amended as follows:

When the Chief finds in any building or on any premises combustible, hazardous or explosive materials or dangerous accumulations of rubbish; or finds unnecessary accumulations of wastepaper, boxes, shavings or any highly flammable materials which are so situated as to endanger life or property; or finds obstructions to or on fire escapes, stairs, passageways, doors or windows that reasonably tend to interfere with the operations of the Fire Department or the egress of the occupants of such buildings or premises; or finds that the effectiveness of any exit door, attic separation or any fire separation wall is reduced; or finds that this code is being violated, the Chief is authorized to issue orders as necessary for the enforcement of the fire prevention laws and ordinances governing the same and for the safeguarding of life and property.

5. **Section 103.4.1.3 Stopping Uses Evacuation** is amended as follows:

The Chief is authorized to order an operation or use stopped or the evacuation of any premises, building or vehicle or portion thereof which has or is a fire hazard, hazard to life, property or the environment.

6. **Section 105.6 Permits for the same Location** is amended by numbering the existing text as Sub-section 1 and adding a new Sub-section 2 as follows:

105.6.2. Other Required Permits. The requirements for permits from other agencies or departments shall not waive the requirements for permits required by this Code. Where other agencies or departments require a permit, such permit shall be obtained prior to or simultaneous with the issuance of a permit required by this Code.

7. **Section 105.8 Permit Required** is amended by adding six new sub-sections as follows:

g.1. Gates. A Fire Department permit is required to install or alter a gate(s) or gate operator(s), which obstructs a fire apparatus access road.

x.1 Fire Extinguishing System(s) and Equipment. A Fire Department permit is required to install, extend, or alter fire extinguishing system(s) and equipment.

x.2 Alarm System(s), Equipment, and Monitoring. A Fire Department permit is required to install, extend, or alter an alarm system(s), equipment, and monitoring.

x.3 Smoke Control System(s) and Equipment. A Fire Department permit is required to install, extend, or alter smoke control system(s) and equipment.

x.4 Spray Booth. A Fire Department permit is required to install, extend, or alter a spray booth.

8. **Article 2 "Definitions",** is amended to include the following definitions:

SECTION 207 - F

FALSE ALARM is the activation or reporting of an alarm for which no such alarm condition, fire or emergency actually exists.

FIRE LANES are Fire Apparatus Access Roads per UFC Article 9, Sections 901 and 902, which are designated by the Fire Department as those areas located on public or private property which are required to be marked per Section 901.4.2.

FIREWOOD SALES & STORAGE OF WOOD is any lot used for the sale and/or storage of wood.

SECTION 214 - M

MINISTORAGE WAREHOUSE is a Group S, Division 1 Occupancy partitioned into areas which are rented or leased by individuals or companies for the purpose of storing personal or business items.

SECTION 215 - N

NUISANCE ALARM is any alarm caused by mechanical failure, malfunction, improper installation, or lack of proper maintenance, or any alarm activated by a cause that cannot be determined.

SECTION 220 - S

SMOKE CONTROL, DEDICATED SYSTEMS. Dedicated smoke-control systems are intended for the purpose of smoke control only. They are separate systems of air moving and distribution equipment that do not function under normal building operating conditions. Upon activation, these systems operate specifically to perform the smoke-control function.

SMOKE CONTROL, NON-DEDICATED SYSTEMS. Non-dedicated systems are those that share components with some other system(s) such as the building HVAC system. Activation causes the system to change its mode of operation to achieve the smoke-control objectives

SECTION 221 - T

TUNNEL is any thoroughfare, public way, walk way, or mechanical/electrical service conduit of dimensions to permit human occupancy for the purpose of service or repair, or conveyance of goods and persons, and which is constructed below grade and cannot be classified as the basement or first story of a building.

9. **Section 901.4.2 Fire Apparatus Access Roads** is amended and a 2nd paragraph added as follows:

When required by the Chief, approved signs or other approved notices, or both, shall be provided and maintained for fire apparatus access roads to identify such roads and prohibit the obstruction thereof.

Fire apparatus access roads shall be marked by placing approved signs at the start of the designated fire lane, one sign at the end of the fire lane and with signs at intervals of 100 feet along all designated fire lanes. Signs to be placed on both sides of an access roadway if needed to prevent parking on either side. Signs to be installed no higher than 10 feet or less than 6 feet from the surface of the roadway. The curb along the roadway, or if a curb is not present, then the edge of the pavement or the roadway, shall be painted with a red weather resistant paint.

10. A new **Section 901.7 Access Gates** is added as follows:

901.7 Access Gates

901.7.1 Permit. A Fire Department permit is required to install a gate(s) or gate operator(s), which obstructs a fire department access road.

901.7.2 General. Fire apparatus access roads that are secured by gates shall comply with the specifications of the Fire Department.

Electronically controlled gates shall be provided with an approved vehicle detector/receiver system in accordance with rules and regulations specified by the Fire Department. Access gate systems shall be maintained operational at all times. When electronically controlled gates are out of service, they shall be secured in the open position until repairs are complete. Repairs shall be in accordance with original specifications.

EXCEPTION: When approved by the Chief, electronically controlled gates that are manned on a 24-hour basis.

When required by the Chief, the installing contractor or the owner of the property shall provide the Fire Department transmitter(s) or approved alternative, without cost to the Fire Department.

The Chief may provide transmitter(s), at no cost to the Fire Department, to local law enforcement agencies and/or an ambulance service for use in emergencies.

901.7.3 Existing facilities. All existing facilities with electronically controlled gates installed across access roads shall comply with Fire Department guidelines. Noncomplying gates shall be secured in the open position in a manner approved by the Fire Department.

901.7.4 Plans and Specifications. Three sets of plans and specifications for fire apparatus access road gates shall be submitted for review and approval prior to construction. Included in the submittal shall be the following information.

1. Site plan with north arrow, roadway and gate dimensions.
2. Location of underground roadway detector loop.
3. Manufacturers' specification sheets detailing the voltage, current, radio frequency, power cable and coding for the proposed system.
4. Contractors statement of compatibility with existing installations.
5. Detailed vicinity map.

901.7.5 Operational Testing. An operational test shall be requested by the installer and conducted prior to placing the system into operation to establish that the final installation complies with this code, the specified design, and is functioning properly.

11. A new **Section 901.8 Directory Required** is added as follows:

When required by the Chief, an approved permanent directory shall be provided.

12. **Section 902.2.2.1 Fire Apparatus Access Roads, Specifications** the 1st paragraph is amended as follows:

902.2.2.1 Dimensions. Fire apparatus access roads shall have an unobstructed width of not less than ___ feet provided no parking is allowed, not less than ___ feet if parallel parking is allowed on one side, and not less than ___ if parallel parking is allowed on both sides. Vertical clearance shall be not less than 13 feet 6 inches.

EXCEPTION: When approved by the Chief, vertical clearance may be reduced, provided such reduction does not impair access by fire apparatus and approved signs are installed and maintained, indicating the established vertical clearance.

Vertical clearances or widths shall be increased when, in the opinion of the Chief, vertical clearances or widths are not adequate to provide fire apparatus access.

13. **Section 902.2.2.2 Fire Apparatus Access Roads, Specifications** is amended as follows:

902.2.2.2 Surface. Fire apparatus access roads shall be designed and maintained to support the imposed loads of fire apparatus and shall be provided with an approved "paved" surface so as to provide all-weather driving capabilities.

14. **Section 902.2.2.3 Fire Apparatus Access Roads, Specifications** is amended as follows:

902.2.2.3 Turning radius. The turning radius of a fire apparatus access road shall be no less than 45 feet outside and 21 feet inside turning radius.

EXCEPTION: When the Chief determines that aerial/ladder fire apparatus access is necessary, the minimum turning radius shall be no less than 52 feet outside and 28 feet inside turning radius.

15. **Section 902.2.2.6 Fire Apparatus Access Roads, Specifications** is amended as follows:

902.2.2.6 Grade. The gradient for a fire apparatus access road shall not exceed 12 percent. Angles of approach and angles of departure shall not exceed 6 percent for 25 feet prior to or after the grade change.

16. **Section 903.2 Required Water Supply for Fire Protection** is amended by adding a 2nd paragraph as follows:

All hydrants used to calculate the required fire flow shall be within 750 feet of the structure being protected as measured along the approved fire apparatus access road.

17. **Section 1001.3 Plans** is amended as follows:

1001.3.1 General. Complete plans and specifications for alarm systems; fire-extinguishing systems, including automatic sprinklers and wet/dry standpipes; halon systems and other special types of automatic fire extinguishing systems; basement pipe inlets; and other fire protection systems and appurtenances thereto shall be submitted to the fire department for review and be approved prior to system installation.

Approved plans shall be kept readily available on the job site.

All high rise, covered mall and atrium buildings, in addition to other major facilities as determined by the Chief, shall have a Fire and Life Safety Package Report submitted to the Fire Prevention Bureau and be approved prior to construction.

1001.3.2 Plans, Alarm Systems. Complete plans and specifications for alarm systems shall include, but not be limited to, a floor plan; location of all alarm-initiating and alarm-signaling devices; alarm control and trouble-signaling equipment; annunciation; power connection; battery calculations; conductor type and sizes; voltage drop calculations; and manufacturer, model numbers and listing information for all equipment, devices and materials.

The maximum allowable voltage drop for a fire alarm circuit shall not exceed 15% of the normal voltage of the fire alarm panel or the power expansion panel.

18. **Section 1001.5.2 Inspection and Testing** is amended by adding two new sub-sections as follows:

1001.5.2.1 Private Fire Hydrants. All private fire hydrant systems shall be serviced to the satisfaction of the Fire Department on a yearly basis. Service records shall be kept on-site and shall be readily available to the inspection authority. A copy of said service record shall be mailed within 48 hours, to the Fire Prevention Bureau when any deficiency of the system or violation of the Fire Code is noted.

1001.5.2.2 Fire Protection Systems. All Fire Protection Systems shall be maintained in accordance with the provisions of the Nevada State Fire Marshal's Office Regulations. A copy of said inspection shall be mailed within 48 hours, to the Fire Prevention Bureau only when any deficiency of the system or violation of the Fire Code is noted. In the event a service/maintenance contract is canceled or not renewed, the Fire Prevention Bureau shall be notified by the service company within 24 hours.

19. **Section 1001.5.3.1 Problematic Systems and Systems Out of Service** is amended as follows:

In the event of a failure of a fire protection system or recurring false or nuisance alarm activation's, the Chief is authorized to require the building owner or occupant to provide firewatch personnel until the system is repaired.

20. **Section 1001.5.5 Smoke Control Systems** is amended by deleting the 2nd sentence and inserting a 2nd paragraph as follows:

Mechanical smoke-control systems, such as those in high-rise buildings, buildings containing atria, covered mall buildings and mechanical ventilation systems utilized in smokeproof enclosures and for smoke-removal systems utilized in high-piled combustible storage occupancies, shall be maintained in an operable condition at all times. A written record shall be maintained and shall be made available to the inspection authority.

The smoke control system shall be tested in accordance with NFPA 92A by a qualified company and individuals that have been pre-approved by the Chief. Dedicated smoke control systems shall be tested semiannually. Non-dedicated smoke control systems shall be tested annually. Tests shall also be conducted under standby power, if applicable.

21. A new **Section 1001.11 Central Control Station (Fire Control Room)** is added as follows:

A Central Control Station shall be provided when required by the Chief or Building Official. Location, size, accessibility and design of the Central Control Station shall be approved by the Fire Department.

The Central Control Station room shall be separated from the remainder of the building by not less than a two-hour fire-resistive occupancy separation with a door opening directly to the exterior of the building. The minimum size of the Central Control Station shall be 150 square feet with a minimum dimension of 10 feet. When doors to the interior of the building are provided they shall open into hallways, corridors or exit passageways.

In addition to the items required by any other code, a Central Control Station shall contain the following items:

1. A blackboard or marker board of a minimum size of three feet (3') by four feet (4') capable of easy erasure, with a marking device and an eraser attached.
2. Current building plans, approved life safety package, fire emergency preplans for said complex, manufacturers' operational manuals for all systems and a work table of a minimum size of three feet (3') by seven feet (7') capable of holding such plans in an opened position.
3. Flexible cord or cords to all fire department communication systems of a sufficient length to reach all panels.
4. An approved annunciator panel containing indicators, controls and graphic annunciation, must be provided in a location acceptable to the Fire Department whenever a mechanical smoke control system is installed.

22. **Section 1003.1.1 Fire Extinguishing Systems, Installation Requirements** is amended by adding 5th and 6th paragraphs as follows:

In storage occupancies and areas designated for storage in all other occupancies, the fire-extinguishing system shall be designed and installed with a minimum density of Ordinary Hazard Group II per NFPA 13, 1996 Edition, to protect to the available storage height.

Main control valves for fire-extinguishing systems shall be:

- Located in a room with a one-hour occupancy separation and an exterior door;
- OR
- Equipped with exterior indicator posts (wall control valves).

23. **Section 1003.1.2 Fire Extinguishing Systems**, is amended as follows:

1003.1.2 Standards. Fire-extinguishing systems shall be in accordance with the applicable NFPA Standards.

EXCEPTIONS: 1. No change - same as published in 97 UFC.

2. Change the word "Building Official" to "Chief".

3. **Group R Division 1 Occupancies, Two Stories or Less.** Group R Division 1 Occupancies less than three stories in height may be designed and installed in accordance with the provisions of NFPA 13-R, 1996 edition.

4. **Group R Division 1 Occupancies, More than Two Stories.** Group R Division 1 Occupancies three or more stories in height shall be designed and installed in accordance with the provisions of NFPA 13, 1996 edition.

5. **Water Supplies.** Hydraulically calculated fire sprinkler systems shall be designed to ensure the required system pressure is a minimum of ten- (10) p.s.i. below the available pressure.

6. **Casinos.** The sprinkler design for Casinos shall be designed for not less than Ordinary Hazard, Group I Occupancy per 1996 NFPA 13.

24. **Section 1003.2.2 Fire Extinguishing Systems, Required Installations** Item No. 5 is amended and Item No. 6 is added as follows:

5. An automatic sprinkler system shall be installed throughout all buildings with a floor level located 55 feet or more above the lowest level of fire department vehicle access or more than 2 stories above grade at any point.

EXCEPTIONS: 1. Airport control towers.

2. Open parking structures, which meet the definition in UBC Sec. 311.9.2.1 and which do not contain mixed occupancies.

3. Group F, Division 2 Occupancies.

6. An automatic sprinkler system shall be installed throughout all buildings 10,000 square feet or greater in total area which has any area 5,000 square feet or greater in total area not separated by an approved area separation wall.

EXCEPTION: Any open parking structure, which meets the definition in UBC Sec. 311.9.2.1 and which does not contain mixed occupancies.

25. **Section 1003.2.4.1 Fire Extinguishing Systems, Group E Occupancies** is amended and exceptions one and two are deleted as follows:

An automatic fire sprinkler system shall be installed throughout all buildings containing Group E, Division 1 and 3 occupancies with an occupant load of 50 or more.

26. A new **Section 1003.2.10 Fire Extinguishing Systems, Group S Occupancies** is added as follows:

An automatic sprinkler system shall be installed in Group S, Division 1 Occupancies greater than 2,500 square feet and Group S, Divisions 2 and 5 Occupancies greater than 5,000 square feet.

27. **Section 1003.3.1 Sprinkler System Monitoring and Alarms, Where Required**, the 2nd paragraph is amended and a new 3rd, 4th, 5th, and 6th paragraphs are added as follows:

Valve monitoring, water-flow alarm, and system trouble signals shall be distinctly different and shall be automatically transmitted to an approved supervising station (central, remote, or proprietary) or, when approved by the Chief, shall sound an audible signal at a constantly attended location.

EXCEPTION: Underground key or hub valves in roadway boxes provided by the municipality or public utility need not be monitored.

Occupancies that are not electrically monitored shall provide an approved identification sign below each outside horn and strobe which reads WHEN ALARM SOUNDS - CALL 9-1-1. This sign shall be of durable material with permanent lettering having a 2" minimum height on a contrasting background.

Multistory facilities shall provide zone annunciation on a floor by floor basis.

In occupancies provided with a supervised sprinkler system, the following three distinctly different alarm signals shall be transmitted to an approved supervising station:

1. Water Flow Alarm
2. Valve Tamper Alarm
3. System Trouble

The supervising station shall retransmit to the Fire Department only the following two distinctly different alarms.

1. Water Flow Alarm
2. Valve Tamper Alarm

28. **Section 1003.3.2 Sprinkler System Monitoring and Alarms** is amended as follows:

An approved audible and visual notification device shall be provided on the exterior of the building in an approved location. An approved audible and visual sprinkler flow alarm to alert the occupants shall be provided in the interior of the building in a normally occupied location. Multi-tenant facilities shall provide approved audible and visual notification devices within each space. Actuation of the alarm shall be as set forth in the Building Code. (See UBC Standard 9-1).

29. **Section 1004.1.1 Standpipes, Installation Standards** is amended by adding one new paragraph as follows:

When approved by the Chief, hose is not required to be provided for Class II Standpipes or small hose stations.

30. **Table 1004.A Standpipe Required Systems** is amended by adding a new item 7 as follows:

OCCUPANCY	NONSPRINKLERED BUILDING ¹		SPRINKLERED BUILDING ^{2,3}	
	Standpipe Class	Hose Requirement	Standpipe Class	Hose Requirement
7. Groups A; B; E; F-1; M; R-1 & S Occupancies with any floor area greater than 200 foot travel distance from the nearest fire apparatus access road.	III	NO	III	NO

31. **Section 1006.2.7 Portable Fire Extinguishers** is amended by adding an exception as follows:

EXCEPTION: Approved extinguishers utilizing other extinguishing agents that are compatible for use in the control of cooking grease fires.

32. **Section 1006.2.8 Protection of Commercial Cooking Operations, Operations and Maintenance** paragraph four is amended as follows:

Fire extinguishing systems shall be serviced at least every six months or after activation of the system. Inspection shall be conducted by personnel licensed by the State of Nevada, Fire Marshal's Office, and a Certificate of Inspection shall be kept on-site and shall be readily available to the inspection authority.

33. **Section 1007.2.3 Group B Occupancies** is amended as follows:

An automatic or manual fire alarm system shall be installed in Group B occupancies, three or more stories but less than 55 feet in height above the lowest level of Fire Department access (See Section 1007.2.12).

34. A new **Section 1007.2.4.4 Group E Occupancies, Locking of Manual Fire Alarm Boxes** is added as follows:

When buildings are protected throughout by an approved automatic sprinkler system, manual fire alarm boxes are allowed to be locked utilizing listed institutional style devices in areas occupied by students, provided that staff members are present within the subject area and have keys readily available to operate the manual fire alarm boxes.

35. **Section 1007.2.9.1.1 New Group R Occupancies, General Exception No. 2** is amended as follows:

EXCEPTION 2: A manual fire alarm system is not required when the building is protected throughout by an approved automatic sprinkler system, which is monitored, in accordance with the provisions of the Fire Code; and the building is protected by an approved automatic fire alarm system.

36. **Section 1007.2.9.1.4 New Group R Occupancies, Heat Detectors** is amended as follows:

Heat detectors shall only be installed in areas where the installation of smoke detectors may not be appropriate due to the high probability of nuisance alarms or environmental conditions. Heat detectors may not be utilized where smoke detectors are required for smoke management systems.

37. **Section 1007.2.9.1.6 New Group R. Occupancies, Single-station Smoke Detectors** is amended by adding a new 3rd paragraph as follows:

All smoke detectors in dwelling units shall be interconnected, so that operation of any smoke detector shall cause the alarm in all smoke detectors within the dwelling to sound, as required by Section 2-2.2.1 of NFPA 72, 1996 edition.

38. **Section 1007.2.12.2.1 High-rise Buildings, General** is amended as follows:

This section shall apply to Group A, all divisions; Group B; Group E, all divisions; Group I, all divisions; Group M; and Group R, Division 1 buildings, each having floors used for human occupancy located more than 55 feet above the lowest level of fire department vehicle access, shall be provided with an automatic fire alarm system and a communication system in accordance with Section 1007.2.12.2.

39. **Section 1007.2.12.2.3 Emergency Voice Alarm-Signaling System** is amended as follows:

The operation of any automatic fire detector, sprinkler or water-flow device shall automatically sound an alert tone followed by voice instructions giving appropriate information and directions on a general or selective basis to the following terminal areas:

1. Elevators

EXCEPTION: Elevators shall be manually activated only.

2. Elevator lobbies
3. Corridors
4. Exit stairways

EXCEPTION: Stairwells shall be manually activated only.

5. Rooms and tenant spaces exceeding 1,000 square feet in area
6. Dwelling units in apartment houses
7. Hotel guest rooms and/or suites, and
8. Areas of refuge (as defined in the Building Code).

40. **Section 1007.3.3.1 Manual Fire Alarm Boxes** is amended by deleting paragraph two and substituting the following:

Manual fire alarm systems which are not connected to an approved supervising station shall be provided with approved signs in the following locations: Directly below the horn and strobe located on the exterior of the building and adjacent to each manual pull station, a sign which reads WHEN ALARM SOUNDS - CALL 9-1-1.

The sign below the horn and strobe shall be of durable material with permanent lettering having a 2" minimum height on a contrasting background. The sign adjacent to each pull station shall be of durable material with permanent lettering having a "¼" minimum height on a contrasting background.

41. **Section 1007.3.3.3.3 Audibility** is amended by adding a new sentence at the end of the paragraph as follows:

Sound levels for alarm signals shall be 120 decibels maximum. The minimum sound levels of alarm signals shall be 80 decibels for all Occupancies.

- EXCEPTIONS:**
1. Group I Occupancies.
 2. Group R, Division 3 Occupancies.

42. **Section 1007.3.3.6.1 Monitoring, General** is amended as follows:

All automatic alarm systems shall be monitored by an approved supervising station (central, proprietary or remote) or a local alarm which gives audible and visual signals at an approved constantly attended location.

In occupancies provided with a fire alarm system, the following four distinctly different alarm signals shall be transmitted to an approved supervising station:

1. Water Flow Alarm, if provided with a fire sprinkler system
2. Fire Alarm
3. Valve Tamper Alarm, if provided with a fire sprinkler system
4. System Trouble

The supervising station shall retransmit to the Fire Department only the following three distinctly different alarms.

1. Water Flow Alarm, if provided with a fire sprinkler system
2. Fire Alarm
3. Valve Tamper Alarm, if provided with a fire sprinkler system

43. A new **Section 1007.3.3.6.3 Monitoring, Supervising Station Requirements** is added as follows:

Supervising stations shall process and notify the Fire Department dispatch center within 270 seconds (4½ minutes) after initiation of a fire alarm device.

- EXCEPTIONS:**
1. Group R-3 occupancies.
 2. Positive alarm sequence.

Supervising stations shall not transfer accounts to any other location without notification to the Fire Department. Notification must be received in writing within 30 days of transfer.

In the event a monitoring contract is canceled or not renewed, the Fire Department shall be notified in writing within 24 hours.

Supervising stations shall not provide emergency notification service for a subscriber until final acceptance and approval is granted by the Fire Department

44. A new **Section 1007.3.5 Acceptance Test and Certification, Minimum Service Requirements** is added as follows:

All fire alarm systems shall be tested and inspected in accordance with nationally recognized standards and the State of Nevada Fire Marshals' Regulations. The alarm contractor shall also provide proof of a license to do business within the Authority Having Jurisdiction. A maintenance contract from an approved fire alarm company is required.

Inspection reports shall be kept on-site and shall be readily available to the inspection authority. A copy of said inspection shall be mailed within 48 hours, to the Fire Prevention Bureau only when any deficiency of the system or violation of the Fire Code is noted.

Prior to service or testing of any equipment, the Fire Department's Dispatch Center shall be notified of the location of the test and the approximate time that the equipment will be inoperable. Upon the completion of the test and inspection, the Fire Department Dispatch Center shall be notified that the system is operable.

In the event a service/maintenance contract is canceled or not renewed, the Fire Department shall be notified by the service company within 24 hours.

45. A new **Section 1102.6 Outdoor Cooking and Cooking Equipment Storage** is added as follows:

Outdoor cooking at apartment, condominium and other residential occupancies with portable barbecuing equipment is prohibited within 10 feet of any overhang, balcony or opening. The storage of LPG fueled barbecues and equipment is prohibited above the first story and within 10 feet of any exterior building wall.

- EXCEPTIONS:** 1. Electric Barbecues.
2. Group R, Division 3 Occupancies, including townhouses.

Adult supervision is required at all times while the barbecue is generating heat.

46. A new **Section 1302.4 Nuisance Alarms** is added as follows:

Nuisance alarms shall not be given, signaled or transmitted or caused or permitted to be given, signaled or transmitted in any manner.

47. A new **Section 1302.5 Phones in Tunnels** is added as follows:

Tunnels in excess of 300 feet shall be provided with approved 2-way communication devices located at intervals of 300 feet.

48. A new **Section 2403.7 Heliports and Helistops, Fire Alarms** is added as follows:

Communication facilities shall be provided from the roof area to notify the Fire Department. Alternatively, a fire alarm pull station may be installed and connected to the fire alarm system installed within the building as a separate zone.

49. A new **Article 31 Firewood Sales & Storage Yards** is added as follows:

Section 3101 Scope. Firewood Sales & Storage Yards shall be in accordance with Article 31, as amended.

Section 3102 – Permits. For a permit to store firewood in excess of 50 cords see Section 105.8 of the UFC.

Section 3103 - Access Roads. Fire apparatus access roadways shall be provided to within 150 feet of all portions of the yard in accordance with Section 902 of the UFC.

Section 3104 – Storage. Firewood shall be piled with due regard to stability of the piles and in no case higher than 10 feet. Where firewood is piled next to a property line on which a building has been erected, the distance from the pile to the property line shall be not less than one half the height of the pile and in no case less than 5 feet.

3104.1. Width Driveways between and around lumber piles shall be at least 20 feet wide and maintained free from accumulation of rubbish, equipment or other articles or materials.

Driveways shall be so spaced that a maximum grid system unit of 50 feet by 150 feet is provided.

3104.2. Fencing Permanent firewood storage, operating under a permit, shall be surrounded with an approved fence at least 6 feet high

Section 3105 - Smoking and Open Flame

3105.1. Burning of any type is prohibited.

3105.2 Smoking shall be prohibited except in areas or structures designated by the Fire Department. "NO SMOKING" signs shall be posted on exterior of all structures and erected at driveways edges.

Section 3106 – Housekeeping

3106.1. Weeds shall be kept down throughout entire year and shall be sprayed as often as needed with a satisfactory weed killer or cut or grubbed out. Dead weeds shall be removed.

3106.2. Debris such as sawdust, chips and bark shall be removed regularly. Proper housekeeping shall be maintained at all times

Section 3107 - Fire Extinguishing Appliances

3107.1. Approved water supply and fire hydrants capable of supplying the required fire flow shall be provided to within 150 feet of all portions of the yard in accordance with Section 903.

3107.2. Portable fire extinguisher(s) shall be provided at approved locations.

50. **Section 3204 Temporary Membrane Structures, Tents and Canopies, Use Period, is amended as follows:**

3204.1 - Use Period The duration of intended use must be declared at the time of application for permit.

3204.2 - Use Period of 180 Days or Less. Temporary membrane structures, tents and canopies shall be used for a period of not more than 180 days within a 12-month period on a single premise.

3204.3 - Use Period of Greater Than 180 Days. A permit may be issued for more than a 180-day period when all of the following are provided:

1. Applicant shall state in advance the exact amount of time needed, but not to exceed an additional 180-day period.
2. The structure shall be equipped with a sprinkler system designed to meet light hazard requirement as defined by NFPA 13, 1996 Edition..
3. A public address system shall be provided and include a master microphone for Fire Department use at an approved location.
4. Grandstands, bleachers, chairs and other type seating must be constructed of fire-resistive material. The entire space under the seating area must be fully enclosed with fire-resistive material and shall not be used for storage or any other purpose.
5. Standby personnel shall be provided for the exterior and interior of the structure as outlined in UFC Section 2501.18. In addition, radio communications shall be maintained between standby personnel and an approved central control point.

6. For assembly uses see Article 25.

51. **Section 3206 Temporary Membrane Structures, Tents and Canopies, Structural Stability**, is amended by adding a new section as follows:

Section 3206.3 Structures exceeding the 180 day use period. Structural stability shall be designed to withstand 100-mph wind load. Structural plans calculations and quality assurance agency contracts must be submitted to the Building Department for approval. The Building Department shall review all quality assurance agency inspection records and provide comments to the Fire Department. All electrical, mechanical and plumbing installations are required to be permitted and inspected by the Building Department.

52. A new **Section 4501.3.1 Permits for Spray Booths** is added as follows:

Section 4501.3.1 Permits for Spray Booths. A permit is required for the construction and/or installation of a spray booth designed for utilizing flammable or combustible liquids, or the application of combustible powders regulated by Article 45. See Section 103.3.5.3 as amended for permit and plan review fee(s).

53. A new **Section 4502.2.11 Location Prohibited** is added as follows:

Section 4502.2.11 Location Prohibited. Spray booth(s) designed for utilizing flammable or combustible liquids, or the application of combustible powders regulated by Article 45 shall not be located outside of buildings.

54. **Section 4901.1 Hot Work, Scope** is amended by adding a new second exception as follows:

EXCEPTION 2. Group R-3 and U occupancies.

55. **Section 7404.2.1.1 Medical Gas Systems, Interior Supply Location** is amended as follows:

Medical gases shall be stored as specified in the 1997 Uniform Building Code, Section 410.

Medical gases shall be stored in areas dedicated to the storage of such gases without other storage or uses.

56. A new **Section 7404.2.4 Medical Gas Systems, Testing** is added as follows:

All medical gas systems shall be certified by an independent medical gas-testing agency prior to use of the system. Copies of the system certification shall be forwarded to the Fire Prevention Bureau.

57. **Section 7701.7.1 Explosive Materials, Manufacturing** is amended as follows:

Explosive materials shall not be manufactured within the ---- of ----- for wholesale or retail sale.

58. **Section 7701.7.2 Explosive Materials, Limits Established by Law** is amended as follows:

Explosive materials shall be stored only in areas zoned and approved for such use and shall be subject to approval by the Fire Prevention Bureau.

59. A new **Section 7801.3.3 Fireworks, Permits for Sale and Storage of Fireworks** is added as follows:

A permit is required for the sale and storage of all fireworks.

60. **Section 7802.3 Fireworks** is amended by adding an Exception No. 3 as follows:

EXCEPTION 3. The sale, storage and use of Fireworks 1.4G (Class C) when in accordance with the Southern Nevada Fire Prevention Association's Approved Guidelines for Fireworks.

61. **Section 7901.7.1, Flammable and Combustible Liquids, Unauthorized Discharges** Exception No. 2 is deleted.

62. **Section 7902.1.7.2.3 Flammable and Combustible Liquids, Underground Tanks Out of Service for One Year** is amended as follows:

Underground tanks that have been out of service for a period of one year shall be removed from the ground in accordance with Section 7902.1.7.4 and the Environmental Health Division of Clark County Health District and the site shall be restored in an acceptable manner.

63. **Section 7902.2.2.1 Flammable and Combustible Liquids, Locations Where Aboveground Tanks Are Prohibited** is amended as follows:

Storage of Class I and II liquids in aboveground tanks outside of buildings is prohibited within the ---- of -----.

- EXCEPTIONS:** 1. Areas zoned industrial and subject to approval of the Chief.
2. "Protected Tanks" in accordance with the provisions of Appendix II-F.
3. Aboveground generator storage tanks when installed in accordance with Southern Nevada Fire Code Committee Approved Guidelines.

64. **Section 7904.2.5.5.1 Flammable and Combustible Liquids, Type of Tank, General** is amended as follows:

Tanks shall be provided with top openings only.

65. **Section 7904.2.5.5.3 Flammable and Combustible Liquids, Type of Tank, Tanks for Gravity Discharge** is deleted.

66. **Section 7904.2.8.1 Flammable and Combustible Liquids, Dispensing from Tank Vehicles** is amended by adding a new 1st paragraph and the existing 1st paragraph is redesignated as a 2nd paragraph as follows:

Dispensing liquids from tank vehicles and tank cars into the fuel tanks of motor vehicles shall be prohibited unless allowed by Section 7904.5.4 and conducted in accordance with Section 7904.2.8.

67. A new **Section 7904.5.4.2.7 Flammable and Combustible Liquids, Mobile fueling of vehicles at commercial sites** is added as follows:

Transfer of liquids from tank vehicles to motor vehicles for commercial use on sites zoned or otherwise approved for the parking, storage or use of vehicles or fleets of vehicles may be permitted by the Fire Department. Permits shall be obtained as required by UFC Article 1, Section 105.8(f.3.)(5).

Dispensing from tank vehicles shall be in accordance with Article 79, section 7904.2.8 and the following:

1. Dispensing may only occur at sites that have been permitted to conduct mobile fueling.

2. The dispensing nozzle will not pump unless it is in proper contact with the fuel opening of the motor vehicle to be filled.

3. Persons responsible for dispensing operations shall be familiar with the appropriate mitigating actions necessary in the event of a fire, leak or spill.

4. Absorbent materials and an approved container shall be provided to mitigate a minimum 5-gallon fuel spill.

5. A fire extinguisher with a minimum rating of 40BC shall be provided on the vehicle with signage clearly indicating its location.

68. The exception for **Section 8001.5.1 Hazardous Materials, Release of Hazardous Materials** is deleted.

69. A new **Section 8004.5 Hazardous Materials, Parking of Vehicles** is added as follows:

Parking of vehicles displaying hazardous materials placards shall be in accordance with the provisions of Section 7904.6.5.

EXCEPTION: In cases of accident, breakdown or other emergencies, vehicles are allowed to be parked and left unattended at any location while the operator is obtaining assistance.

70. **Section 8102.9.1 High-Piled Combustible Storage, Hose Stations and Hose Connections** is amended as follows:

When hose valves and stations are required by Table 81-A, approved 2 ½ inch hose valves, 2 ½ inch piping and 1½ inch adapters with caps shall be provided at approved locations. When required by the Chief, hose, nozzles, hose racks, and cabinets or covers shall be provided.

71. **Section 8212.9 Liquefied Petroleum Gas, Storage within Buildings Accessible to the Public** is amended to add a second paragraph as follows:

When 2-1/2 pound cylinders are in use as fuel for self-contained torches the storage of spare LP-gas cylinders is limited to 2 cylinders.

72. **Section 8506.2.3 Electrical Equipment and Wiring, Power Supply** is amended as follows:

Extension cords shall be plugged directly into an approved receptacle or power tap and shall serve only one portable appliance.

73. **Section 8507 Electrical Equipment and Wiring, Multiplug Adapters** is amended as follows:

Multiplug adapters, such as multiplug extension cords, and cube adapters, shall not be used.

EXCEPTION: Group R, Division 3 Occupancies.

74. **Article 90 Standards** is amended by adding a new Section as follows:

SECTION 9004 - NFPA Standards.

The National Fire Protection Association (NFPA) Standards referenced in this section are declared to be part of this code as if set forth in full herein.

NATIONAL FIRE PROTECTION ASSOCIATION STANDARDS

NFPA 10; Portable Fire Extinguishers, 1998 Edition.

NFPA 12; Carbon Dioxide Systems, 1998 Edition.

NFPA 12A; Halon 1301 Systems, 1997 Edition.

NFPA 13; Installation of Sprinkler Systems, 1996 Edition.

NFPA 13D; Installation of Sprinkler Systems in One- and Two- Family Dwellings and Mobile Homes, 1996 Edition.

NFPA 13R; Sprinkler Systems in Residential Occupancies up to and including four Stories in Height, 1996 Edition.

NFPA 14; Installation of Standpipe and Hose Systems, 1996 Edition.

NFPA 17; Dry Chemical Extinguishing Systems, 1998 Edition

NFPA 17A; Wet Chemical Extinguishing Systems, 1998 Edition

NFPA 20; Installation of Centrifugal Fire Pumps, 1996 Edition

NFPA 22; Water Tanks for Private Fire Protection, 1996 Edition.

NFPA 24; Installation of Private Fire Service Mains and Their Appurtenances, 1995 Edition

NFPA 25; Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems, 1998 Edition

NFPA 72; National Fire Alarm Code, 1996 Edition

NFPA 92A; Smoke Control Systems, 1996 Edition.

NFPA 92B; Smoke Management Systems in Malls, Atria, Large Areas, 1995 Edition.

NFPA 96; Ventilation Control and Fire Protection of Commercial Cooking Operations, 1994 Edition.

NFPA 110; Emergency and Standby Power Systems, 1996 Edition.

NFPA 231; General Storage, 1995 Edition.

NFPA 231C; Rack Storage of Materials, 1995 Edition.

NFPA 231D; Storage of Rubber Tires, 1994 Edition.

NFPA 231F; Storage of Rolled Paper, 1996 Edition.

NFPA 1123; Outdoor Display of Fireworks, 1995 Edition.

NFPA 1126; Use of Pyrotechnics before a Proximate Audience, 1996 Edition.

NFPA 2001; Clean Agent Fire Extinguishing Systems, 1996 Edition.

75. **Section 9004-NFPA Standard 13** is amended as follows:

Section 1-4.2 General Definitions is amended by deleting the last sentence as follows:

SMALL ROOMS. Rooms of Light Hazard Occupancy classification having unobstructed construction and floor areas not exceeding 800 sq. ft. (74.3 m²) (See 1-4.7.1.). Small rooms shall be enclosed by walls and a ceiling.

Section 2-3.1 Pipe and Tube is amended by adding a new last sentence as follows:

Pipe or tube used in sprinkler systems shall meet or exceed one of the standards in table 2-3.1 or be in accordance with 2-3.5. In addition, steel pipe must be in accordance with 2-3.2 and 2-3.3, copper tube must be in accordance with 2-3.4, and nonmetallic pipe must be in accordance with 2-3.5 and with the portions of the ASTM standards specified in Table 2-3.5 that apply to fire protection service. Pipe or tube shall have a minimum Corrosion Resistant Ratio (CRR) of one (1) or greater.

Section 2-6.3 Powder-Driven Studs and Welding Studs is amended as follows:

2-6.3.1 Welding studs, and the tools used for installing these devices shall be listed. Piping size, installation position, and construction material into which they are installed shall be accordance with individual listings.

2-6.3.2 Powder-driven fasteners shall not be used.

Exception: Branch lines less than or equal to two (2) inches in diameter, installed in concrete with a minimum strength of 3,000 psi.

2-6.3.3 Is repealed in its entirety.

2-6.3.4 Increaser couplings shall be attached directly to the welding studs.

Section 3-2.2 Dry Pipe Systems, Upright Sprinklers is amended by deleting Exception No. 3 in its entirety:

Section 3-3.2.4 Preaction Systems, Upright Sprinklers is amended by deleting Exception No. 3 in its entirety.

Section 3-4.1.4 Combined Dry Pipe and Preaction Systems, Upright Sprinklers is amended by deleting Exception No. 3 in its entirety.

A new **Section 3-5.1.1 Antifreeze Systems**, is added as follows:

3-5.1.1 Size. Anti-freeze systems shall not exceed a total system capacity of 40 gallons.

Section 3-9.3 Commercial Type Cooking Equipment and Ventilation is amended by deleting Exception No. 2 in its entirety.

Section 4-13.1.1 Concealed Spaces is amended by deleting Exception Nos. 8 and 9 in their entirety.

Section 4-13.5.1 Elevator Hoistways, Escalators and Machine Rooms is amended by revising the title and deleting the Exception.

Section 4-13.5.3 Elevator Hoistways and Machine Rooms is amended as follows:

Upright or pendent spray sprinklers shall be installed at the top of elevator hoistways and under escalators.

EXCEPTION is deleted.

Section 4-13.8.1 Dwelling Units is amended as follows:

Sprinklers are required in bathrooms.

EXCEPTION: Sprinklers are not required when construction, fixtures and furnishings are noncombustible.

Section 4-13.8.2 Dwelling Units is deleted in its entirety.

Section 4-13.10 Electrical Equipment is amended by deleting the Exception in its entirety.

Section 4-13.18.2 Piping to Sprinklers below Ceilings is amended by deleting Exception No. 2 in its entirety.

Section 4-13.18.3 Piping to Sprinklers below Ceilings is amended by deleting Exception No. 2 in its entirety.

Section 4-14.1.1.1 Valves Controlling Sprinkler Systems is amended as follows:

Each system shall be provided with a listed indicating valve in an accessible location, so located as to control all automatic sources of water supply. Separate control valves shall be provided for every floor or portion thereof and every tenant space in covered mall buildings.

Section 4-14.4.3.5.18 Sway Bracing is amended by deleting the Exception in its entirety:

Section 4-15.2.2 Fire Department Connections is amended by deleting Exception No. 2 in its entirety.

Section 4-15.4.2 System Connections, Wet Pipe Systems is amended as follows:

An alarm test connection not less than 1 inch in diameter, terminating in a smooth bore corrosion-resistant orifice, giving a flow equivalent to one sprinkler of a type having the smallest orifice installed on the particular system, shall be provided to test each waterflow alarm device for each system. The test connection valve shall be piped from the most hydraulically demanding area and shall be readily accessible.

The discharge shall be to the outside, to a drain connection capable of accepting full flow under system pressure, or to another location where water damage will not result.

EXCEPTION: The test connection may be piped from another less remote location with written approval from the authority having jurisdiction.

Section 5-2.3.1.3 Water Demand Requirements – Hydraulic Calculation Methods is amended by revising Exception No. 2 to subsection (b) and deleting Exception No. 3 of subsection (b) as follows:

EXCEPTION 2: Light or Ordinary Hazard Occupancies where noncombustible ceilings are directly attached to the bottom of solid wood joists so as to create enclosed joist spaces 160 cu ft (4.8m³) or less in volume.

Section 5-3.2.2 Special Design Approaches, Residential Sprinklers is deleted in its entirety.

A new **Section 6-4.4.9 Calculation Procedures** is added as follows:

6-4.4.9 Maximum Velocity The maximum velocity limit for use in hydraulic calculations is 32 ft. per sec (6.1 m/sec).

Section 7-2.2.1 Pumps is amended as follows:

7-2.2.1 Acceptability Automatically controlled fire pump(s) installed in accordance with NFPA 20, 1996 Edition, Standard for the Installation of Centrifugal Fire Pumps, shall be an acceptable water supply source.

Section 8-2.2.1 System Acceptance, Hydrostatic Tests is amended by revising Exception Nos. 3 and 4 as follows:

EXCEPTION 3: When an addition or modifications is made to an existing system, the new installation may be isolated and tested at 200 PSI (13.8 bars) and shall maintain that pressure without loss for 2 hours.

EXCEPTION 4: Modifications of 10 heads or less do not require testing in excess of normal static pressure.

Section 8-2.4.1 System Acceptance, System Operational Tests is amended as follows:

Waterflow detecting devices including the associated alarm circuits shall be flow tested through the inspector's test connection and shall result in a audible alarm on the premises within 1 min after such flows begins and until such flow stops. See specific requirements for dry systems.

76. **Appendix II-F Protected Aboveground Tanks for Motor Vehicle Fuel-Dispensing Stations outside Buildings, Section 4.5** is amended as follows:

4.5 Projectile Protection. "Protected Tanks" shall be provided with projectile protection that is tested in accordance with the requirements for bullet resistance as specified in Section 7702.3.4.3.

77. **Appendix III-A Fire-Flow Requirements for Buildings, Section 5.2**, the exception is amended as follows:

EXCEPTION: When a building(s) is provided with an approved automatic sprinkler system throughout, a reduction in the required fire flow of 50% is permitted.

A reduction in the required fire flow of 25% is permitted in buildings with: floors used for human occupancy more than 3 stories in height or more than 55 feet above the lowest level of fire apparatus access; OR containing high piled combustible storage; OR flammable/combustible liquids in excess of the exempt amount; OR hazardous materials in excess of the exempt amount.

The resulting fire flow for all buildings shall not be less than 1,500 gallons per minute.

78. **Appendix III-B Fire Hydrants and Distribution** is amended in its entirety as follows:

Section 1. Scope

Fire hydrants shall be provided in accordance with this Section for the protection of buildings or portions of buildings, or facilities hereafter constructed.

Section 2. Plans

Water main/hydrant plans drawn to scale are to be submitted to the Fire Prevention Bureau for approval prior to the installation of fire hydrants. Plans must include the information contained in the Fire Prevention Bureau's Guidelines for Fire Hydrant Location and Distribution.

Section 3. Fire Hydrant Distribution

The number and spacing of fire hydrants shall meet the approval of the Fire Chief. Fire hydrants shall be located adjacent to and accessible from fire apparatus access roads. Fire hydrants shall be spaced along fire apparatus access roads as follows:

1. The spacing of fire hydrants shall normally start by placing fire hydrants at all intersections.

2. In all residential areas, hydrants will be spaced not to exceed 500 feet or 600 feet if protected by an approved automatic fire sprinkler system.

3. In all commercial and industrial areas hydrants will be spaced not to exceed 300 feet or 400 feet if protected by an approved automatic fire sprinkler system.

4. The maximum distance from a Group R, Division 3 Occupancy to a fire hydrant shall not be more than 300 feet, as measured from an approved point on a street or road frontage to a fire hydrant.

An approved point is measured from the property line furthest from the hydrant, at a right angle to the street.

5. The maximum distance from a fire hydrant to a fire department sprinkler connection and/or a standpipe connection shall be 100 feet, measured by an approved route.

6. The required fire flow and spacing requirements for fire hydrants are both utilized to determine the number of fire hydrants to be installed, based on a maximum of _____ gallons per minute per fire hydrant.

7. Fire hydrants on adjacent properties shall not be considered unless fire apparatus access roads extend between properties and easements are established to prevent obstruction of such roads & fire hydrants and a written contractual agreement exists.

8. Where streets are provided with median dividers or arterial streets are provided with four or more traffic lanes and have a traffic count of more than 30,000 vehicles per day, the Chief may require hydrants to be spaced an average of 1,000 feet on each side of the street and be arranged at 500 feet on an alternating basis.

When a street has a high degree of traffic volume, all hydrants being utilized to deliver fire flow to the proposed development must be located on the same side of the street as the proposed development.

Streets with high traffic volume are usually defined as Section and half section line streets; streets with 4 or more travel lanes and federal or state highways regardless of the number of travel lanes.

9. Where new water mains are extended along streets or new streets are installed where hydrants are not needed for protection of structures or other fire problems, the Chief may require hydrants at not less than 1,000 feet spacing and at all intersections in order to provide for transportation hazards.

10. For looped water main systems, an approved sectional control valve shall be installed after every two- (2) hydrants on a water system. No more than two (2) hydrants are allowed to be out of service, due to a break in a water main.

11. For any project or facility where there are 4 or more fire hydrants/sprinkler lead-ins, two sources of supply are required.

Section 4. Fire Hydrant Installation Specifications

At any building construction site, accessible fire hydrants shall be installed and shall be approved for use before combustible materials are delivered to the site and construction commences. Fire hydrant installation specifications shall be in accordance with the Fire Prevention Bureau's Guidelines for Fire Hydrant Installation and Specifications.

Section 5. Fire Hydrant Specifications

Fire hydrants shall conform to the 1994 Edition of the American Water Works Association's Standard, C502, entitled "Standard for Dry-Barrel Fire Hydrant." All fire hydrants shall comply with the specifications of the Fire Prevention Bureau's Guidelines for Fire Hydrant Installation and Specifications

All private fire hydrants shall be painted red. To identify the fire hydrant location, a blue reflective marker shall be installed at the centerline of the street adjacent to the fire hydrant.

79. The following appendices are adopted by reference.

I-C Stairway Identification; II-B Protection of Flammable and Combustible Liquid Tanks in Locations Subject to Flooding; II-C Marinas; II-D Rifle Ranges; II-E Hazardous Materials Management Plans and Hazardous Materials Inventory Statements; II-F Protected Aboveground Tanks for Motor Vehicle Fuel-Dispensing Stations Outside Buildings; II-G Secondary Containment for Underground Tank Systems Containing Flammable or Combustible Liquids; II-H Site Assessments for Determining Potential Fire and Explosion Risks from Underground Flammable or Combustible Liquid Tank Leaks; II-I Ozone Gas-Generating Equipment; II-J Storage of Flammable and Combustible Liquids in Tanks Located within Below-Grade Vaults; III-A Fire-Flow Requirements for Buildings; III-B Fire Hydrant Locations and Distribution; VI-A Hazardous Materials Classifications; VI-B Hazard Ranking; VI-C Emergency Relief Venting for Fire Exposure for Aboveground Tanks; and VI-F Recommended Separation Distances for Explosive Materials.