

## CHAPTER 1 - ADMINISTRATION

### 101.0. TITLE, SCOPE AND GENERAL.

**101.1. Title.** This article shall be known as the “**Los Angeles Plumbing Code**”, a portion of the Los Angeles Municipal Code, and wherever the word “**Code**” is used in this article, it shall mean the “**Los Angeles Plumbing Code**” and whenever “**LAMC**” is used, it shall mean the Los Angeles Municipal Code.

**101.2. Purpose.** The purpose of this Code is to safeguard health, life, property and public welfare by regulating the design, alteration, construction, installation, repair, and quality of materials for plumbing, fire sprinkler, rainwater piping, standpipe, subsurface drainage piping, swimming pool piping, reclaimed water piping, underground fire-protection piping, and gray water piping systems installed in the City.

### 101.3. Plans Required.

**101.3.1. General.** Before starting any work and at any time during the progress of any work regulated by this Code, the Department may require the submission of plans, specifications, drawings and other information it deems necessary. The issuance of a permit upon approved plans shall not prevent the Department from requiring the correction of errors in them and stopping work on construction based on these plans when in violation of this Code or of any other applicable ordinance or statute, or from revoking any approval when issued in error.

**101.3.2. Signature.** Plans and specifications shall bear the signature and registration or license number of an engineer, contractor or other person licensed in the appropriate classification by the State of California.

**101.3.3. Risers and Isometrics.** System riser or isometric diagrams shall be provided for all drainage, waste and vent, fuel gas, potable water, storm drain, rain water, sump pump, combination waste and vent and standpipe systems. Plans shall be suitable for use by office engineers and field inspectors.

**101.3.4. Quality of Plans.** Plans shall be legible, clear, of 1/8 inch per foot scale or larger, except risers and isometrics need not be to scale.

**101.3.5. Stamped Plans on Job.** The set of plans and specifications stamped and issued to the applicant by the Department shall be kept at the site of the construction or work and shall be available to the authorized representative of the Department. There shall be no deviation from the stamped or approved application, plans or specifications without Department approval.

**101.3.6. Types of Plans Required to be Submitted.** Plans signed by a qualified submitter shall be filed with and approved by the Department before any work listed below is started:

1. Drainage systems.
  - a. Drainage and vent systems for a building or structure involving fixtures that discharge 217 or more drainage fixture units.
  - b. Drainage pumps and ejectors.
2. Combination waste and vent systems.
3. Fuel gas piping with any of the following:
  - a. Systems having more than ten outlets.
  - b. Medium pressure gas systems.
  - c. High pressure gas systems.
  - d. Methane gas extraction systems.
4. Potable water piping with any of the following:
  - a. Systems requiring a 2-inch or larger supply.
  - b. Systems designed from the procedure in Section 610.5 of the Code.

**EXCEPTION:** Plan check is not required for existing systems that are added to or altered, with branch lines that serve fewer than 20 fixture units and sized by Table 6-4.
5. Rainwater piping systems with more than ten interconnected rainwater or overflow drains, or a rainwater pump.
6. Special water piping systems for reclaimed water piping.

- 7. Subsurface drainage piping.
- 8. Swimming pool circulating water systems.
- 9. Fire Protection.
  - a. Class H Standpipes.
  - b. Standpipes: Class I, II, III
  - c. Fire pump systems.
  - d. Fire hydrant systems.
  - e. Hand hose systems connected to fire sprinkler piping.
  - f. Monitor nozzle systems.
  - g. Underground fire protection piping.
  - h. Fire sprinkler systems

**EXCEPTIONS:**

- 1. Raising or lowering of sprinklers due to change in ceiling height.
- 2. Replacing of sprinklers of the same type, orifice size and temperature rating.
- 3. Relocation of sprinklers in previously occupied buildings or tenant spaces.

**101.3.7. Plan Check Fee Schedules.**

**101.4. Scope.** Section 101.4 of the C.P.C. is hereby adopted by reference.

**101.5. Application to Existing Plumbing System.** Section 101.5 of the C.P.C. is hereby adopted by reference.

**101.6. Prohibited Acts.**

**101.6.1.** No person shall add, alter, change, construct, install, locate, maintain, move, occupy, relocate, remove, renovate, repair, replace, or use any plumbing system, water-connected appliances, products or devices, fire sprinkler system, rainwater piping, standpipe, subsurface drainage piping, swimming pool piping, reclaimed water piping, underground fire protection piping, or gray water piping systems except as provided by this Code.

**101.6.2.** No person shall use or maintain any private sewage disposal system on any lot or parcel of land, that has failed, is in an overflowing condition or, in the judgment of the Department, is unsanitary or is a menace to life, health or property. If the private system fails, all drainage piping shall be connected to the public or private sewer when the lot or parcel of land abuts any public way or sewer easement in which a public or private sewer exists and is available.

**101.6.3.** No person shall alter, add to or relocate any private sewage-disposal system on any lot or parcel of land that abuts on any public way or sewer easement in which a public sewer exists and is ready for use.

**101.6.4.** No person shall sell, offer for sale, display for sale, advertise for sale, loan, rent or lease, dispose of by way of gift or premium or otherwise for reuse or use, the following:

- 1. Any plumbing fixture, appliance, apparatus, equipment, device, material or domestic gas appliance that has not been approved as to its fitness and safety for its intended use or purpose.

**EXCEPTION:** The sale of used gas ranges and used gas ovens is not prohibited.

- 2. Any water-operated or water-using device, mechanism or equipment, the use of which may cause the pollution or contamination of the domestic water supply. Any such device, mechanism or equipment may be allowed when properly equipped with approved backflow protection.

**101.7. Exemptions from Code.** The provisions of this Code shall not apply to the following:

**101.7.1. Public Sewers.** Any sewer entirely within a public way or any private sewer installed under the jurisdiction of the Los Angeles City Department of Public Works or the Los Angeles County Flood Control District as an incident to improvement of a public way when no portion of the private sewer extends more than six feet into private property, as measured from the property line abutting the public way.

**101.7.2. Street Water Mains.** Any water main, water service or water meter of the Los Angeles City Department of Water and Power or other utility.

**101.7.3. Street Gas Mains.** Any street gas main or any gas service piping.

**101.7.4. Refineries and Wells (Gas Piping).** Fuel gas piping that is part of a refinery or gas well, provided piping for fuel gas used on the premises shall conform to the provisions of this Code.

**101.7.5. Portable Gas Cooking Appliances.** Any portable gas cooking appliance designed for outdoor use and installed outdoors.

**101.7.6. Vehicles.** Any work within an aircraft, railroad car, ship or other vehicle, which is not classified as a building or structure.

**101.7.7. Manufactured Homes, Recreational Vehicles, Commercial Coaches, Special Purpose Commercial Coaches, Mobile Homes, Mobile Home Parks.** Any work within any manufactured home, recreational vehicle, commercial coach, special purpose commercial coach, mobile home or any mobile home park, including accessory buildings, permanent buildings and on-site piping outside of buildings.

## **102.0. ORGANIZATION AND ENFORCEMENT.**

Section 102.0 of the C.P.C. is hereby adopted by reference.

## **103.0. PERMITS AND INSPECTIONS.**

### **103.1. Permits Required.**

**103.1.1. General.** Except as otherwise provided in this Code, no person shall add, alter, construct, install, move, reconstruct, relocate, remove, repair or replace any plumbing, fire sprinkler, rainwater piping, standpipe, subsurface drainage piping, swimming pool piping, reclaimed water piping, underground fire protection piping, or gray water piping system unless a plumbing or fire sprinkler permit for it has been obtained from the Department.

**103.1.1.1.** A permit shall be required where the Department has determined that the gas piping shall be retested for the following:

(1) The system has been out of service for a period of one year.

(2) Where the Department has determined there is system leakage creating an immediate hazard to persons or property.

**103.1.1.2. Relocated Buildings.** Except as otherwise provided in this Code, no person shall connect any work in a relocated building to a supply pipe or drain pipe unless a permit for all the work in the relocated building has been obtained from the Department.

**103.1.1.3. Separate Permits Required.** A separate plumbing and/or fire sprinkler permit shall be obtained for the work indicated on each building permit.

**103.1.1.4.** No person shall be subject to fine, imprisonment, or payment of an investigation fee for starting or doing work without a permit being first obtained, if a permit is obtained for the work on or before 12:00 noon of the third day the office of the Department is open for public business after the work was started.

**103.1.1.5. Transfer of Permits and Plan Checks.** No permit shall be transferable from the original permittee to any other person unless the property owner authorizes the transfer in writing. Upon authorization, the new permittee shall file with the Department a new permit and pay to the Department a fee as specified in Section 98.0415 of the

Los Angeles Municipal Code for issuing the new permit. This fee includes the issuing permit fee as specified in Section 103.4 of this Code. No plan check is transferable from one contractor to another unless prepared and signed by a state-licensed engineer in the proper classification.

### **103.1.2. Permits Not Required.**

**103.1.2.1. General.** The work described in this section shall not require a permit, however this waiver of permit shall not be deemed to allow any work to be added, altered, constructed, demolished, installed, reconstructed, relocated, removed, repaired or replaced contrary to the provisions of this Code.

**103.1.2.2. General Repairs.** No permit shall be required for the repairing or replacement of faucets, ball cocks, exposed fixture traps or shut-off valves, or a residential garbage disposal.

**103.1.2.3. Stoppages and Leaks.** No permit shall be required for the clearing of stoppages or repairing of leaks, except in gas piping, when the repairs do not require the removal and replacement of plumbing fixtures or any portion of the drainage system.

**103.1.2.4. Gas Piping.** No permit shall be required for the installation or repair of a gas utility meter, nor for gas piping between the main and the nearest gas utility meter, nor for gas piping installed by the gas utility outside of private property, nor for the gas utility to disconnect defective gas piping and/or equipment when authorized by 1207, nor for any piping connection less than six feet in length between an existing gas outlet and a gas appliance in the same room.

**103.1.2.5.** A separate plumbing permit shall not be required for the installation of any plumbing system for which a combined building-mechanical permit has been obtained pursuant to Section 107.2.1.1.1 of the Building Code.

**103.1.2.6.** No permit shall be required for the capping of a private sewage disposal system where a grading permit is required.

**103.1.2.7. Water Heater Repair.** No permit shall be required for the repair of any gas-fired water heater, provided the water heater is not disconnected.

**103.1.2.8. Resetting of Fixtures.** No permit shall be required for the resetting of existing plumbing fixtures on existing rough-in, which have been removed for the sole purpose of repairing or replacing walls or floors.

**103.1.2.9. Water Closets.** No permit shall be required for installation of low-consumption water closets in existing residential dwelling units when done as part of the City's "Water Conservation Retrofit Program" pursuant to the City's water conservation regulations. These exempted installations shall be limited to the replacement of nonconforming water closets with new low-consumption water closets installed on the existing rough-in plumbing. The provisions set forth in this subsection shall not apply to water closet installations in new construction, relocations, additions, or remodeling projects and shall not waive the requirement for a licensed plumbing contractor to perform the installation of a low-consumption water closet in an apartment unit or non-owner-occupied single-family dwellings.

**103.1.2.10. Rainwater Systems.** No permit shall be required for exterior exposed rainwater leaders.

**103.1.2.11. Exhibition.** No permit shall be required for work set up for exhibition or for a television or motion picture set without any direct connection to any system for which a permit is required.

**103.1.2.12. Certified Licensed Contractors.** No permit shall be required for the replacement of the following items when the work is done on a detached, single-family dwelling and the work is performed by a contractor with a valid Certificate of Registration as a Certified Licensed Contractor pursuant to Section 1716 of the Building Code:

- (1) Replacement of defective hot water heaters with one of equivalent gallonage, BTU rating, and vent capacity when the vent does not require relocation or replacement;
- (2) Replacement of plumbing fixtures and solar panels with equal kind and quality;

- (3) Replacement of defective domestic water piping within a dwelling with piping of equivalent size and quality; and
- (4) Replacement of defective metallic water service piping with piping of equivalent size, quality, and conductivity. Metallic water service piping cannot be replaced with PVC under this provision.
- (5) Replacement of shower pans with the same size and capacity.

A Certificate of Compliance pursuant to Section 108.12.3.1 of the Building Code must be filed with the City in lieu of a permit.

**103.2. Application for Permit.** Section 103.2 of the C.P.C. is hereby adopted by reference.

**103.3. Permit Issuance.** Section 103.3 of the C.P.C. is hereby adopted by reference.

**103.4. Fees.**

**103.4.1. Permit Fees.** Before any permit required by this Code is issued, the applicant shall pay to the Department the fees specified in Table 1-A for each building or structure.

**TABLE 1-A  
PLUMBING PERMIT FEE SCHEDULE**

<b>Permit:</b>	<b>Fee</b>
<b>1.</b> For issuing permits:	
a. Permit issuing fee	\$17.00
b. Supplementary permit issuing fee	\$14.00
<b>Plumbing fixtures and water systems:</b>	
<b>2.</b> For each plumbing fixture and waste discharging device, such as, toilet, urinal, bathtub, shower, lavatory, kitchen sink and other type of sink, garbage disposal, clothes washer, drinking fountain, floor drain, laundry tray, floor sink, dental cuspidor and chemical waste fixture:	
a. Original installation	\$16.00
b. Replacement or Removal	\$7.00
<b>3.</b> For each piece of water treating, dispensing equipment or trap primer connected to a potable water system	\$12.00
<b>4.</b> For replacing water piping in a building, each fixture, each water treating device or each water using device	\$10.00
<b>5.</b> For each water pressure regulator	\$12.00
<b>6.</b> For atmospheric-type vacuum breakers not included in Item 2, each	\$5.00
<b>7.</b> For each backflow protective device other than atmospheric-type vacuum breakers, each	\$17.00
<b>8.</b> For each water heater and vent or heat exchanger	\$20.00
<b>9.</b> For each thermal expansion tank	\$11.00
<b>10.</b> For booster pumps for potable water systems (including tanks that are an integral part of the pump package), each system	\$60.00
<b>11.</b> For water storage tanks for potable water systems that are not part of a listed appliance or part of a booster pump package, each tank	\$50.00
<b>12.</b> a. On-site water distribution system (Multiple buildings)	\$135.00
b. Water service (Single building)	\$45.00
<b>Waste systems:</b>	
<b>13.</b> For repair or alteration of drainage and/or vent piping, per fixture	\$7.00
<b>14.</b> For each sewage ejector	\$55.00
<b>15.</b> For each industrial waste, pretreatment clarifier, sand or grease interceptor	\$25.00
<b>16.</b> a. For each complete private sewage disposal system, each system	\$110.00
b. For each separate septic tank, cesspool, seepage pit or drain field	\$45.00
<b>17.</b> For building sewer installations:	
a. For each connection to the public sewer or dry sewer, each building drain	\$28.00
b. For each on-site manhole	\$110.00

<b>Permit:</b>	<b>Fee</b>
c. For sewer alterations, repairing or capping, each building or structure	\$17.00
<b>18.</b> For graywater piping system; includes a maximum of two inspections	\$55.00
<b>Rainwater systems:</b>	
<b>19.</b> For each rainwater drain (including roof, overflow, area and deck drains, etc.)	\$16.00
<b>20.</b> For each subsurface drainage piping system (not including sump pumps)	\$55.00
<b>21.</b> For each sump pump	\$55.00
<b>Gas systems:</b>	
<b>22.</b> For each gas system outlet	\$7.00
<b>23.</b> For each earthquake valve or each gas pressure regulator (not applicable to appliance regulator)	\$16.00
<b>24.</b> Methane Gas Extraction System: includes a maximum of two inspections	\$84.00
<b>Other plumbing systems:</b>	
<b>25.</b> Lawn sprinklers, each valve	\$5.00
<b>26.</b> Solar systems components: (including collectors, related storage tanks piping and regulating devices)	\$15.00
<b>27.</b> Each public swimming pool or spa (per system)	\$168.00
<b>Fire protection:</b>	
<b>28.</b> Standpipes: wet, dry or combination (Class I, II or III) Class H or hand hoses for fire protection:	
Each outlet that has an integral pressure regulator	\$50.00
Other outlets without pressure regulators	\$35.00
Capping of outlets (each outlet)	\$7.50
<b>29.</b> Water pressure regulators for fire protection systems (except regulators that are part of a standpipe outlet valve), each regulator	\$44.00
<b>30.</b> Fire sprinkler piping removal or alteration, or the replacement or addition of valves, attachments or devices, each	\$42.50
<b>31.</b> Underground fire sprinkler piping, or yard piping system for fire sprinklers (when permit has not been obtained for complete fire sprinkler system)	\$100.00
<b>32.</b> Replacing fire sprinkler heads (except fused or broken heads):	
1 to 10 heads	\$20.00
11 to 50 heads	\$40.00
51 to 100 heads	\$81.50
Plus \$81.50 for each 100 heads or fraction thereof over 100 heads.	
<b>33.</b> Fire sprinkler piping installations:	
From 1 to 10 sprinkler heads	\$45.00
From 11 to 25 sprinkler heads	\$85.00
From 26 to 50 sprinkler heads	\$135.00
From 51 to 100 sprinkler heads	\$250.00
From 101 to 200 sprinkler heads	\$380.00
From 201 to 300 sprinkler heads	\$450.00
From 301 to 500 sprinkler heads	\$850.00
From 501 to 1000 sprinkler heads	\$1,200.00
From 1001 to 2000 sprinkler heads	\$2,000.00
From 2001 to 3000 sprinkler heads	\$3,000.00
From 3001 to 4000 sprinkler heads	\$3,500.00
From 4001 to 5000 sprinkler heads	\$4,000.00
From 5001 to 6000 sprinkler heads	\$4,500.00
Over 6000 fire sprinkler heads	\$5,500.00
Plus \$100.00 for each 100 heads or fraction of 100 heads over 6000 heads.	
<b>34.</b> Fire hydrant:	
1 to 3 hydrants	\$242.00
Over 3, each	\$81.50
<b>35.</b> The fee for relocation of heads or for converting a system from upright to pendant heads, or from pendant heads to upright heads, shall be as set forth for a new installation.	
<b>36.</b> Fire pumps:	

<b>Permit:</b>	<b>Fee</b>
Serving Class II (wet) or Class H standpipes:	
For each installation pump	\$80.00
Original test of pump	\$80.00
Additional test of pump	\$80.00
Serving Class III (combination) combined and/or Fire sprinkler systems:	
For each installation of pump	\$200.00
Test of each pump (each test)	\$375.00
<b>37. Tanks for fire protection systems, each tank</b>	<b>\$44.00</b>
<b>38. Class I (dry) standpipe flush:</b>	
One or two risers	\$93.00
Each additional riser	\$56.00
<b>39. Minimum Inspection Fee:</b> A permittee shall pay a minimum fee as specified in Section 98.0412(a) of the Los Angeles Municipal Code to the Department for each plumbing installation for which a permit is required by this Code. Where the cumulative fees set forth in this Code are less than the minimum fee, the minimum fee shall be paid. The fee required by this section shall include the issuing fee required by Item 1 of this Table.	
(a) Minimum inspection fee	\$65.00
(b) Single fixtures	\$40.00

**103.4.2. Plan Check Fees.** Before plans are checked, the applicant shall pay the following plan check fees to the Department:

**103.4.2.1.** Plumbing drainage and vent piping, fuel gas piping, gas vents, rainwater piping, subsurface drainage piping and water piping.

Apartments and condominiums, three or fewer stories, and dwellings:  
 40% of the permit fee,  
 \$65.00 minimum per building.

All others:  
 70% of the permit fee,  
 \$65.00 minimum per building.

**EXCEPTION:** Portions of installations:

Hot and cold water:  
 60% of the above fee,  
 \$65.00 minimum per building.

Hot water or cold water:  
 40% of the above fee,  
 \$65.00 minimum per building.

Conventional waste and vent systems, only:  
 50% of the above fee,  
 \$65.00 minimum per building.

**103.4.2.2.** For plan checking individual systems not included in Section 103.4.2.1:

Combination waste and vent piping systems, each .....	\$150.00	
Potable water piping systems, each .....	\$85.00	
		\$425.00 maximum
Irrigation sprinkler piping systems, each:		
..... One lot		\$60.00

.....2 or 3 lots	\$100.00
.....4 or 5 lots	\$120.00
.....6 or 7 lots	\$140.00
.....8 or 9 lots	\$160.00
.....10 lots	\$180.00
.....Over 10 lots	\$180.00
	plus \$10.00 for each lot over 10

Soil remediation systems, each..... \$150.00

Methane gas venting systems, each ..... \$150.00

Hydraulic calculations of standpipe systems serving  
2-1/2 inch fire hose valves and fire sprinklers, each  
fire protection zone ..... \$500.00

Fire protection, swimming pool piping and all other systems not covered by Section 103.4.2.1:  
70% of the permit fee,  
\$65.00 minimum per building.

**103.4.3. Expiration of Permit and Plan Check.** Permits may expire as provided in Section 98.0602 of the Los Angeles Municipal Code. Plans may expire as provided in Section 98.0603 of the Los Angeles Municipal Code.

**103.4.4. Investigation Fees.** Investigation Fees may be assessed as provided in Section 98.0402 of the Los Angeles Municipal Code.

**103.4.5. Refund of Fees.** Refund of fees may be requested as provided in Section 98.0420 of the Los Angeles Municipal Code.

**103.4.6. Additional Permit and Inspection Fees.**

**103.4.6.1. Miscellaneous Equipment.** A minimum fee as specified in Section 98.0412(c) of the Los Angeles Municipal Code shall be paid for inspection of any installation of equipment regulated by this Code which requires inspection for determination of Code compliance and where the installation inspection is not provided for in the permit fee schedule specified in Section 103.4.1. This fee is in addition to the permit issuing fee specified in Table 1-A.

**103.4.6.2. Miscellaneous Piping.** When special permission has been obtained from the Department, a miscellaneous permit shall be issued for fire sprinkler, fire protection underground, domestic water, waste or vent piping installed underground or in walls or ceilings of installations where a fire protection or a plumbing permit cannot be issued until the required plans have been approved. The miscellaneous permit shall not be an authorization to install any additional piping. A fee as specified in Section 98.0412(c) of the Los Angeles Municipal Code shall be collected for the inspection of this installation and shall be limited to one inspection trip and one reinspection trip. This fee is in addition to the permit issuing fee specified in Table 1-A.

**103.4.6.3. Additional Inspections.** If more inspection trips than specified in this article are found necessary due to fault or error on the part of the qualified installer or his employees, the permittee shall pay an additional fee as specified in Section 98.0412(b) of the Los Angeles Municipal Code for each additional inspection trip. This fee is in addition to the permit issuing fee specified in Table 1-A.

**103.4.6.4. Off-Hour Inspections.** The Department may, at its discretion, make inspections at other than normal working hours upon application by a permittee as specified in Section 98.0406 of the Los Angeles Municipal Code.

**103.4.6.5. Off-Site Inspection.** The Department may, at its discretion, make inspections at locations other than the site upon which a building will be located, provided the location is within 60 miles of the Los Angeles City Hall. A

fee as specified in Section 98.0412(e) of the Los Angeles Municipal Code, in addition to fees charged elsewhere in this Code, shall be charged for the inspections. The time shall include travel to and from the place of inspections.

**103.4.6.6. Change of Address and Transfer of Permit or Plan Checks.** Applications for plan check and permits shall indicate the correct legal street address. If the Department determines a job address or the location of a job is incorrect, then the permit becomes void. If the applicant files a separate application (showing the correct information) and pays a filing fee as specified in Section 98.0415(a) of the Los Angeles Municipal Code, then no additional permit fee will be required.

**103.4.6.7. Critical Soil Survey.** The fee for a survey of location for a proposed private sewage disposal system, and/or percolation test, shall be \$92.00. On premises where a public sewer is not available for use, a survey and percolation test may be required to determine if a private sewer disposal system can be installed to adequately serve the intended use.

**103.4.7. Additional Plan Check Fees.**

**103.4.7.1. Hourly Plan Check Fee.** The Department may collect a plan check fee, based on an hourly rate, for any item not included in the plan check schedule as provided in Section 98.0415(e) of the Los Angeles Municipal Code.

**103.4.7.2. Off-hour Plan Check Fee.** The Department may, at its discretion, provide plan check at other than normal working hours upon application by an applicant as specified in Section 98.0422 of the Los Angeles Municipal Code.

**103.4.7.3. Energy Plan Check Fee.** The Department shall impose an energy plan check fee of 10 percent of the permit fee for the service of checking plans when the work is required to comply with Title 24, Part 6, of the California Building Standards Code, the State's energy conservation requirements.

**103.4.8. Systems Development Surcharge.** A permittee shall pay a surcharge for the development and implementation of a City-wide automated permit processing service as provided in Section 98.0416 of the Los Angeles Municipal Code.

**103.4.9. One-Stop Surcharge.** A permittee shall pay a surcharge as provided in Section 98.0410 of the Los Angeles Municipal Code.

**103.5. Inspections.** Section 103.5 of the C.P.C. is hereby adopted by reference with the following additions and amendments.

**103.5.1. General.** Section 103.5.1 of the C.P.C. is hereby adopted by reference.

**103.5.2. Operation of Plumbing Equipment.** Section 103.5.2 of the C.P.C. is hereby adopted by reference.

**103.5.3. Testing of Systems.** Section 103.5.3 of the C.P.C. is hereby adopted by reference.

**103.5.4. Inspection Requests.** Section 103.5.4 of the C.P.C. is hereby adopted by reference.

**103.5.4.1. Advance Notice.** Section 103.5.4.1 of the C.P.C. is hereby adopted by reference.

**103.5.4.2. Responsibility.** Section 103.5.4.2 of the C.P.C. is hereby adopted by reference.

**103.5.4.3. Test Equipment.** The equipment, material, and labor necessary for inspection or tests shall be furnished at no cost to the City.

**103.5.5. Other Inspections.** Section 103.5.5 of the C.P.C. is hereby adopted by reference.

**103.5.6. Reinspections.** Section 103.5.6 of the C.P.C. is hereby adopted by reference.

**103.6. Connection Approval.** Section 103.6 of the C.P.C. is hereby adopted by reference.

**103.7. Unconstitutionality.** Section 103.7 of the C.P.C. is hereby adopted by reference.

**103.8. Validity.** Section 103.8 of the C.P.C. is hereby adopted by reference.

**103.9. Certificate of Occupancy.** Section 103.9 of the C.P.C. is hereby adopted by reference.

**103.10. Certificate of Final Inspection.**

**103.10.1. Fees.** No Certificate of Final Inspection shall be issued until all fees required by the Code have been paid to the Department.

**103.10.2. Approval.** A Certificate of Final Inspection shall be issued for work that has been inspected and approved, upon demand, provided that no Certificate of Final Inspection for gas piping shall be issued until all required fire sprinklers, standpipes and fire hydrants are approved and ready for use.

**103.10.3. To Whom Issued.** No Certificate for Final Inspection shall be issued to any person, other than the owner of the building, structure, or premises, the person who did the work, or the agent of the owner or person.

**103.11. Qualified Installer.** It is unlawful for any person who is not a Qualified Installer as defined in Chapter 2 of this Code to alter, install, or repair any plumbing regulated by this Code, except as provided in Sections 103.12.1 and 103.13.0 of this chapter.

**103.12.0. Maintenance Certificate of Registration.**

**103.12.1.** A Maintenance Certificate of Registration as defined in Chapter 2 of this Code may be issued to the owner or occupant of specified premises for the sole purpose of adding to, altering, maintaining or repairing existing plumbing only on the premises designated.

**103.12.2. Issuance.** Every applicant who passes the required examination or has in his employ a qualified maintenance supervisor as defined in Chapter 2 of this Code who is properly registered with the Department shall be issued a Maintenance Certificate of Registration for specified premises upon payment of a fee.

**103.12.3. Validity.** A Maintenance Certificate of Registration issued to an owner or occupant of premises by virtue of the fact that an employee of that person is registered with the Department as a holder of a valid Certificate of Qualification as a maintenance supervisor shall become invalid when the owner or occupant ceases to have in his or her employ a certified maintenance supervisor properly registered with the Department.

**103.12.4. Maintenance Permits.** Permits may be issued to the holder of a valid Maintenance Certificate of Registration for the addition to, alteration, maintenance or repair of existing plumbing on premises owned by or under the legal control of the applicant, provided all work authorized by the permit is performed by or is under the direct supervision of the holder of a Certificate of Qualification as a Maintenance Supervisor, registered with the Department for the premises.

**103.13.0. Certificate of Qualification Required.**

**103.13.1. Scope.** No person except a Qualified Installer as defined in Chapter 2 of this Code shall supervise or perform the labor of altering, installing or repairing any plumbing regulated by this Code.

**EXCEPTION:** A person in the employ of a Qualified Installer and who supervises plumbing work shall be required to have a Certificate of Qualification.

**103.13.1.1. Apprentices and Helpers.** No Certificate of Qualification shall be required for an apprentice or helper, as defined in Chapter 2 of this Code, who is working under the continuous supervision of a Qualified Installer or journeylevel plumber. Supervision shall be considered continuous if the Qualified Installer or journeylevel plumber

is not absent for more than one hour continuously nor more than two hours total during any one day. No more than three apprentices or helpers shall be employed for each Qualified Installer or journeylevel plumber on any lot.

**103.13.2. Gas Fitting.** A person who holds a valid Certificate of Qualification as a journeylevel gas fitter may perform the labor of gas fitting in the employ of and under the supervision of a Qualified Installer.

**103.13.3. Maintenance Supervisor.** No person shall act as a Maintenance Supervisor unless that person holds a valid Certificate of Qualification in the proper classification issued pursuant to the provisions of this chapter. No person shall act in the capacity of a Maintenance Supervisor for more than one firm at any one time.

**103.13.4. Employment.** No Qualified Installer, Maintenance Supervisor or any other person shall employ any journeylevel plumber for the installation of plumbing work covered in this Code unless that journeylevel plumber holds a valid Certificate of Qualification in the proper classification except by special permission of the Department. No person shall hire or employ an apprentice or helper in violation of any provision of this Code.

**103.14. Applications.**

**103.14.1. Forms.** Application for any certificate shall be made on a form furnished by the Department.

**103.14.2. Information Necessary.** The application shall bear the name and address of the applicant, and if a corporation, the names of the principal officers. The application shall carry other information deemed necessary by the Department.

**103.14.3. Notarization.** The application shall be verified under oath by the applicant.

**103.14.4. Fees.** The application shall be accompanied by the required examination fee as follows:

**FEE SCHEDULE**

<b>Application</b>	<b>Fees</b>
For application for Certificate of Registration	\$115.00
For Certificate of Qualification issued as a result of examination given by Board of Examiners of Plumbing and Gas Fitters	\$42.00
For Certificate of Qualification issued under a reciprocal licensing agreement	\$42.00

**103.15. Examinations.**

**103.15.1. Examination Required.** Before any person shall be issued a Certificate of Registration or Qualification, he or she shall have successfully passed the examination required for the issuance of the Certificate within 90 days preceding the date of issuance.

In lieu of an examination, the Superintendent of Building may accept a valid journeylevel plumber qualification certificate issued pursuant to an examination by other organizations or governmental agencies within the County of Los Angeles, provided that the examination shall be, in the opinion of the Department, equivalent in scope and character to the examination for journeylevel plumbers given by the City of Los Angeles. The Department's acceptance of this certificate shall be in writing and renewable every three years.

**103.15.2. Experience Required.** To be eligible for the examination for a Certificate of Registration, the applicant shall have had at least two years experience as a journey level plumber.

To be eligible for the examination for journeylevel plumber, the applicant shall have had at least four years experience as an apprentice or helper.

Special training or education acceptable to the Department may be credited as the equivalent of up to one year of the required experience.

The applicant shall be required to furnish satisfactory evidence of his or her experience and training.

**103.15.3. Board of Examiners.** Examinations may be conducted by a Board of Examiners composed of three qualified persons appointed by the Superintendent of Building.

The results of every examination shall be subject to the approval of the Superintendent of Building.

Each examiner shall be appointed by the Superintendent of Building. Each Examiner shall serve for a period of two years unless reappointed by the Superintendent.

**103.15.4. Scope of the Examination.** The examination shall, in the judgment of the Department, be designed to fairly determine the ability of the applicant to perform properly the work which he or she would be authorized to do by the certificate. The examination shall include a written part and may also include the following:

- (1) Practical test as may be required.
- (2) An oral interview as may be required.
- (3) Other tests as may be required by the Department.

**103.15.5. Rules and Regulations.** The Department shall have the authority to establish rules and regulations for the conduct of examinations.

**103.15.6. Fitness of Applicant.** Any applicant for a Certificate may be required to submit satisfactory proof of his or her fitness to carry out the intent of this Code.

**103.16. Issuance of Certificate.**

**103.16.1. Certificate of Registration.** Every applicant who passes the required examination for a Maintenance Certificate of Registration or who registers with the Department the holder of a valid Certificate of Qualification as a maintenance supervisor shall be issued a Maintenance Certificate of Registration upon the payment of a fee.

**103.16.2. Certificate of Qualification.** Every applicant who passes the required examination for journeylevel plumber, journeylevel gas fitter or Maintenance Supervisor shall be issued a Certificate of Qualification upon the payment of a fee.

**103.16.3.** Every Certificate of Registration or Qualification shall be issued only by the Department.

**103.16.4. Public Utility Corporation.** A public utility corporation engaged in the distribution or sale of gas in the City shall be issued, without examination, a Certificate of Registration as Master Gas Fitter upon the payment of a fee as specified in Section 98.0414 (b) 1 of the Los Angeles Municipal Code. That public utility corporation shall be subject to this Code with respect to the certifying and examination of journeylevel gas fitters.

**103.16.5. Partnership, Firm and Corporation.** Upon the payment of a fee as specified in Section 98.0414 (b) 1 of the Los Angeles Municipal Code, a partnership firm or corporation may be issued a Certificate of Registration as a Master Gas Fitter. If a person in effective authority and control over all work regulated by Chapter 5 and 12 of this Code has passed the required examination within the time prescribed by Section 98.0406(a) of the Los Angeles Municipal Code.

**103.17. Renewal of Certificates.**

**103.17.1. Certificate of Registration.** Every Certificate of Registration shall expire three years from the date of issuance. The certificate may be renewed, upon application, within the 30 days following the date of expiration upon the payment of a renewal fee.

**103.17.2. Certificate of Qualification.** Every Certificate of Qualification shall expire three years from the date of issuance. Applications for renewal shall be made within 30 days following the date of expiration.

**103.17.3. Delinquent Certificates.** Expired certificates may be renewed at any time within 12 months following the date of expiration provided that, after the first month, the renewal fee shall be increased by 10% for each month after the first.

After a certificate has been expired for one year, it may not be renewed.

**103.18. Exhibition of Certificate.**

**103.18.1.** All persons having a fixed place of business shall keep their Certificates of Registration posted in some conspicuous portion of their place of business during the time the Certificate is in force.

**103.18.2.** Every person not having a fixed place of business shall carry his or her Certificate of Registration at all times while doing any construction or work regulated by this Code.

**103.18.3.** Every journeylevel plumber shall carry his or her Certificate of Qualification at all times while doing any construction or work regulated by this Code.

**103.19. Revocation of Certificate.** Any Certificate may be suspended or revoked in accordance with the provisions of Article 8 of this chapter.

**103.20. Transfer of Certificate.** No Certificate shall be transferable. A Certificate of Registration issued to a firm or corporation shall be the property of that firm and may be transferred along with the other assets but may not be transferred separately. The dissolution of a firm, partnership, or corporation renders the Certificate void.

**CHAPTER 2 - DEFINITION OF TERMS**

**201.0. GENERAL.**

Section 201 of the C.P.C. is hereby adopted by reference.

**202.0. DEFINITION OF TERMS.**

Section 202 of the C.P.C. is hereby adopted by reference.

**203.0. A.**

Section 203 of the C.P.C. is adopted by reference with the following additions and amendments.

**Administrative Authority.** The Superintendent of Building or an authorized agent.

**Applicant.** The person signing the application and paying the fees.

**Apprentice.** A person who is enrolled in an apprenticeship program approved by the Department of Industrial Relations of the State of California.

**Authority Having Jurisdiction.** The City of Los Angeles Department of Building and Safety.

**204.0. B.**

Section 204 of the C.P.C. is hereby adopted by reference with the following additions and amendments.

**Board.** The Board of Building and Safety Commissioners.

**205.0. C.**

Section 205 of the C.P.C. is adopted by reference with the following additions and amendments.

**California Plumbing Code (C.P.C.).** The 2007 Edition of the California Plumbing Code, also known as the California Code of Regulations (C.C.R), Title 24, Part 5, a portion of the California Building Standards Code. The California Plumbing Code adopts the 2006 Edition of the Uniform Plumbing Code by reference with required state amendments.

**206.0. D.**

Section 206 of the C.P.C. is hereby adopted by reference with the following additions and amendments.

**Department.** The Department of Building and Safety.

**207.0. E.**

Section 207 of the C.P.C. is hereby adopted by reference with the following additions and amendments.

**Equipment.** A general term including materials, fittings, devices, appliances, fixtures or apparatus used in connection with installations covered in this Code.

**208.0. F.**

Section 208 of the C.P.C. is hereby adopted by reference with the following additions and amendments.

**Fire Separation Area.** A fire separation area is an area enclosed by construction having a fire-resistive rating of at least one hour with all openings protected by minimum three-fourths-hour self-closing fire assemblies or a water curtain.

**209.0. G.**

Section 209 of the C.P.C. is hereby adopted by reference.

**210.0. H.**

Section 210 of the C.P.C. is adopted by reference with the following additions and amendments.

**Health Officer.** The person representing the Los Angeles County Health Department.

**Helper.** A person who is employed full-time by a qualified installer and whose primary duty is to assist a qualified installer or journeylevel plumber in the installation or repair of plumbing systems.

**High-Rise Building.** A building (over 75 feet high) included within the scope of Section 403 of the Building Code.

**211.0. I.**

Section 211 of the C.P.C. is hereby adopted by reference.

**212.0. J.**

Section 212 of the C.P.C. is hereby adopted by reference with the following additions and amendments.

**Journeylevel Gas Fitter.** A person who has a valid Certificate of Qualification as provided in this Code, to perform the labor of gas fitting, when in the employ of and under the supervision of a qualified installer.

**Journeylevel Plumber.** A person who has a valid Certificate of Qualification, to install, alter, construct or repair any plumbing when in the employ of and under the supervision of a qualified installer.

**213.0. K.**

Section 213 of the C.P.C. is hereby adopted by reference.

**214.0. L.**

Section 214 of the C.P.C. is hereby adopted by reference.

**215.0. M.**

Section 215 of the C.P.C. is hereby adopted by reference with the following additions and amendments.

**Maintenance Certificate of Registration.** A certificate issued to the owner or occupant of specified premises for the sole purpose of adding to, altering, maintaining or repairing existing plumbing, only on the premises specified.

**Maintenance Supervisor.** A person holding a valid Certificate of Qualification as a maintenance supervisor and who is in the employ of a person holding a valid Maintenance Certificate of Registration.

**Monitor Nozzle.** A monitor nozzle is a water spray nozzle that is connected to a fixed piping system or hydrant and discharges over 250 g.p.m. but is not part of a water spray system.

**216.0. N.**

Section 216 of the C.P.C. is hereby adopted by reference.

**217.0. O.**

Section 217 of the C.P.C. is hereby adopted by reference.

**218.0. P.**

Section 218 of the C.P.C. is hereby adopted by reference.

**219.0. Q.**

Section 219 of the C.P.C. is adopted by reference with the following additions and amendments.

**Qualified Installer.** A qualified installer is:

- (a) A person who holds a valid contractor's license in the proper classification issued by the State of California; or
- (b) A person who holds a valid Maintenance Certificate of Registration issued pursuant to the provisions of this Code; or
- (c) A person who is the owner of a single-family dwelling and has demonstrated to the satisfaction of the Department his or her qualifications to satisfactorily perform plumbing work in the dwelling which is occupied by the owner, and their accessory buildings, provided that all of the following conditions are met:
  - 1. The work is performed prior to sale of the dwelling.
  - 2. The homeowner has actually resided in the residence for the 12 months prior to completion of the work.
  - 3. The homeowner has not availed himself or herself of this exemption on more than two structures during any three-year period; or
- (d) A person who is employed by a governmental agency that is required to comply with the provisions of this Code, and who is qualified, as determined by the Department, to supervise or control any work regulated by this Code.

**220.0. R.**

Section 220 of the C.P.C. is hereby adopted by reference with the following additions and amendments.

**Rainwater Drains.** Drains that serve roofs or other drains for the purpose of conveying rainwater. This definition does not include emergency drains, site drains or subsurface drains.

**Reclaimed Water.** Water which is a result of treatment of wastewater by an authorized agency which is suitable for a direct beneficial use or a controlled use as defined under State of California Title 22 requirements.

**221.0. S.**

Section 221 of the C.P.C. is hereby adopted by reference.

**222.0. T.**

Section 222 of the C.P.C. is hereby adopted by reference.

**223.0. U.**

Section 223 of the C.P.C. is hereby adopted by reference with the following additions and amendments.

**Urinal.** A plumbing fixture which is used for urination.

**224.0. V.**

Section 224 of the C.P.C. is hereby adopted by reference.

**225.0. W.**

Section 225 of the C.P.C. is hereby adopted by reference.

**226.0. X.**

Section 226 of the C.P.C. is hereby adopted by reference.

**227.0. Y.**

Section 227 of the C.P.C. is hereby adopted by reference.

**228.0. Z.**

Section 228 of the C.P.C. is hereby adopted by reference.

### **CHAPTER 3 - GENERAL REGULATIONS**

Chapter 3 of the C.P.C. is hereby adopted by reference.

### **CHAPTER 4 - PLUMBING FIXTURES**

Chapter 4 of the C.P.C. is hereby adopted by reference.

### **CHAPTER 5 - WATER HEATERS**

Chapter 5 of the C.P.C. is hereby adopted by reference.

### **CHAPTER 6 - WATER SUPPLY AND DISTRIBUTION**

Chapter 6 of the C.P.C. is hereby adopted by reference.

### **CHAPTER 7 - SANITARY DRAINAGE**

Chapter 7 of the C.P.C. is hereby adopted by reference.

### **CHAPTER 8 - INDIRECT AND SPECIAL WASTE**

Chapter 8 of the C.P.C. is hereby adopted by reference.

### **CHAPTER 9 - VENTS**

Chapter 9 of the C.P.C. is hereby adopted by reference.

### **CHAPTER 10 – TRAPS AND INTERCEPTORS**

Chapter 10 of the C.P.C. is hereby adopted by reference, with the following addition to read:

#### **1018.0. WATER SOFTENER USING DRY WELLS FOR DISCHARGE.**

Water softener systems using dry wells for the discharge of effluents are prohibited.

**EXCEPTION:** Systems with regeneration cycles discharging quantities of total dissolved solids that do not exceed those stipulated in the water quality objectives set by the Regional Water Quality Control Board when approved by the Building Official.

### **CHAPTER 11 - STORM DRAINAGE**

Chapter 11 of the C.P.C. is adopted by reference, except for Sections 1101.11.2.2.2 and 1104.3, which are not adopted.

### **CHAPTER 12 - FUEL PIPING**

Chapter 12 of the C.P.C. is adopted by reference, with the following addition to read:

#### **1219.0. SEISMIC GAS SHUTOFF VALVES.**

**1219.1. Definitions.** For purposes of this section, certain terms shall be defined as follows:

**Downstream of the Gas Utility Meter** shall refer to all customer owned gas piping.

**Residential Building** shall mean any single family dwelling, duplex, apartment building, condominium, townhouse, lodging house, congregate residence, hotel, or motel.

**Seismic Gas Shutoff Valve** shall mean a system consisting of a seismic sensing means and actuating means designed to automatically actuate a companion gas shutoff means installed in a gas piping system in order to shut off the gas downstream of the location of the gas shutoff means in the event of a severe seismic disturbance. The system may consist of separable components or may incorporate all functions in a single body. The terms “**Seismically Activated Gas Shutoff Valves**” and “**Earthquake Sensitive Gas Shutoff Valves**” are synonymous.

**Upstream of the Gas Utility Meter** shall refer to all gas piping installed by the utility up to and including the meter and the utility’s bypass tee at the connection to the customer owned piping.

**1219.2. Scope.** An approved seismic gas shutoff valve shall be installed downstream of the gas utility meter on each fuel gas line where the gas line serves the following buildings or structures:

**1219.2.1.** A building or structure containing fuel gas piping for which a building permit was first issued on or after September 1, 1995.

**1219.2.2.** An existing building or structure which is altered or added to; and

**1219.2.2.1.** That building or structure has fuel gas piping supplying the existing building or structure or the addition to the building or structure; and

**1219.2.2.2.** The alteration or addition is valued at more than \$10,000 and a building permit for the work in commercial buildings was first issued on or after September 1, 1995. Alterations or additions to individual units or tenant spaces shall require a seismic gas shutoff valve to be installed for all gas piping serving that individual unit or tenant space; or

**1219.2.2.3.** The alteration or addition is valued at more than \$10,000 and a building permit for the work in residential buildings, including condominium units, is first issued on or after January 10, 1998. Alterations or additions to an individual condominium unit shall require a seismic gas shutoff valve to be installed for all gas piping serving that individual condominium unit; or

**1219.2.2.4.** The alteration or addition is to the fuel gas piping system and involves the alteration or replacement of the gas meter.

**1219.2.3.** Prior to entering into an agreement of sale, or prior to the close of escrow when an escrow agreement has been executed in connection with the sale,

(1) Buildings or structures which contain fuel gas piping shall have a seismic gas shutoff valve installed.

(2) The sale of an individual condominium unit in a building shall require the installation of a seismic gas shutoff valve for all gas piping serving that individual unit.

**EXCEPTIONS:**

(1) Seismic gas shutoff valves may be installed upstream of a gas utility meter provided they meet the requirements of this section.

(2) Seismic gas shutoff valves installed on a building or structure prior to September 1, 1995, are exempt from the requirements of this section provided they remain installed on the building or structure and are maintained for the life of the building or structure.

(3) Notwithstanding Subsections 1219.2.1, 1219.2.2 and 1219.2.3 above, these provisions shall not apply to a building or structure if the Department determines that a building or structure satisfies all three of the following criteria:

- (A) That the building or structure is owned, operated, and maintained by a governmental entity or public utility; or that the building or structure is owned by a private concern and provides a public benefit, such as a co-generation facility which shares its excess power with a public utility or with a large industrial facility which has governmental contracts;
- (B) That the building or structure has available 24-hour, year-round, maintenance staffing; and
- (C) That the gas piping system contained in the building or structure is designed to withstand seismic effects of earthquakes.

(4) A single seismic gas shutoff valve may be installed upstream of the gas utility meter at the discretion of the gas utility.

**1219.3. General Requirements.** Seismic gas shutoff valves installed either in compliance with Section 1219.2, *et seq.*, or voluntarily with a permit issued on or after September 1, 1995, shall comply with the following requirements:

**1219.3.1.** Seismic gas shutoff valves shall be installed by a contractor licensed in the appropriate classification by the State of California.

**EXCEPTIONS:**

(1) A person who has been determined by the Department to meet the qualification of a Qualified Installer pursuant to the definition of a Qualified Installer set forth in Chapter 2 of this Code may install a seismic gas shutoff valve to a single family dwelling which is or is intended to be occupied by the Qualified Installer.

(2) Seismic gas shutoff valves may be installed, without a permit, by a gas utility or a contractor authorized by the gas utility when the valves are installed upstream of the gas utility meter and the valves are installed and approved in accordance with this section.

**1219.3.2.** Seismic gas shutoff valves shall be mounted rigidly to the exterior, or other approved location, of the building or structure containing the fuel gas piping.

**EXCEPTION:** If the Department determines that the seismic gas shutoff valve has been tested and listed for an alternate method of installation, then a seismic gas shutoff valve need not be mounted rigidly to the exterior of the building or structure containing the fuel gas piping.

**1219.3.3.** Be certified by the Office of the State Architect.

**1219.3.4.** Be approved by the Department of Building and Safety, Mechanical Testing Laboratory.

**1219.3.5.** Have a thirty year warranty which warrants that the valve is free from defects and will continue to properly operate for thirty years from the date of installation.

**1219.3.6.** Where seismic gas shutoff valves are installed as required by this section, they shall be maintained for the life of the building or structure or be replaced with a valve complying with the requirements of this section.

**1219.3.7.** Be in compliance with all requirements of California Referenced Standard 12-16-1.

**CHAPTER 13 - HEALTH CARE FACILITIES AND MEDICAL GAS AND VACUUM SYSTEMS**

Chapter 13 of the C.P.C. is not adopted.

**CHAPTER 14 - MANDATORY REFERENCED STANDARDS**

Chapter 14 of the C.P.C. is hereby adopted by reference.

**CHAPTER 15 - FIRESTOP PROTECTION**

Chapter 15 of the California Plumbing Code is adopted by reference.

## CHAPTER 16 - APPENDICES

Chapter 16 of the C.P.C. is not adopted. Delete all requirements of Chapter 16 of the C.P.C. , but keep the title of Chapter 16 and underneath the title place “Not Adopted by the City of Los Angeles.”

Appendices A, B, D, G and I of the C.P.C. are adopted by reference. Please place the following sentence underneath each heading of each appendix adopted as stated above, “This appendix chapter is adopted by the City of Los Angeles.”

### APPENDIX K PRIVATE SEWAGE DISPOSAL SYSTEMS

Appendix K is adopted by reference with the following changes:

The definitions in Appendix K of the C.P.C. are adopted, except that:

**AUTHORITY HAVING JURISDICTION** shall mean the Administrative Authority and/or the Health Officer.

#### **K 1. Private Sewage Disposal - General.**

Section K 1 of Appendix K of the C.P.C. is adopted by reference.

#### **K 2. Capacity of Septic Tanks.**

Section K 2 of Appendix K of the C.P.C. is adopted by reference.

#### **K 3. Area of Disposal Fields and Seepage Pits.**

Section K 3 of Appendix K of the C.P.C. is adopted by reference.

#### **K 4. Percolation Test.**

Section K 4 of Appendix K of the C.P.C. is adopted by reference.

#### **K 5. Septic Tank Construction.**

Section K 5 of Appendix K of the C.P.C. is adopted by reference with the following change:

##### **(k) Structural Design.**

(1) **General.** Each tank shall be structurally designed to withstand all anticipated earth or other loads. All septic tank covers shall be capable of supporting an earth load of not less than 300 pounds per square foot (14.4 kPa) when the maximum coverage does not exceed three feet (914 mm).

(2) **Flood Loads.** In flood hazard areas, tanks shall be anchored to counter buoyant forces during conditions of the design flood. The vent termination and service manhole of the tank shall be a minimum of two feet (610 mm) above the design flood elevation or fitted with covers designed to prevent the inflow of floodwater or the outflow of the contents of the tanks during conditions of the design flood.

#### **K 6. Disposal Fields.**

(a) **Subsection (A) of Section K 6 of Appendix K of the C.P.C. is adopted by reference.**

(b) Before drain lines are laid, clean stone, gravel, slag, or similar filter material acceptable to the Administrative Authority, varying in size from 3/4 to 2-1/2 inches, shall be placed in the trench to the depth and

grade required by this section. Drain pipe shall be placed on filter material in an approved manner. The drain line shall then be covered with filter material to the minimum depth required by this section and then covered with untreated building paper, straw, or similar porous material to prevent closure of voids with earth backfill. No earth backfill shall be placed over the filter material cover until after inspection and acceptance.

**EXCEPTION:** Listed or approved plastic leaching chambers may be used in lieu of pipe and filter material. Chamber installations shall follow the rules of disposal fields, where applicable, and shall conform to the manufacturer's installation instructions.

(c) Subsection (C) of Section K 6 of Appendix K of the C.P.C. is adopted by reference.

(d) Subsection (D) of Section K 6 of Appendix K of the C.P.C. is adopted by reference.

(e) Where two or more drain lines are installed, an approved distribution box of sufficient size to receive lateral lines shall be installed at the head of each disposal field. The inverts of all outlets shall be level and the invert of the inlet shall be at least one inch (25.4 mm) above the outlets. Distribution boxes shall be designed to insure equal flow and shall be installed on a level concrete slab in natural or compacted soil.

Distribution boxes shall be coated on the inside with a bituminous coating or other approved method acceptable to the Administrative Authority.

(f) Subsection (F) of Section K 6 of Appendix K of the C.P.C. is adopted by reference.

(g) Subsection (G) of Section K 6 of Appendix K of the C.P.C. is adopted by reference.

(h) Automatic siphon or dosing tanks shall be installed when required or as permitted by the Administrative Authority and the Health Officer.

(i) Subsection (I) and the Chart of Section K 6 of Appendix K of the C.P.C. are adopted by reference.

(j) Subsection (J) of Section K 6 of Appendix K of the C.P.C. is adopted by reference.

#### **K 7. Seepage Pits.**

Section K 7 of Appendix K of the C.P.C. is adopted by reference with the following change:

(b) Multiple seepage pit installations shall be served through an approved distribution box or be connected in series. When connected in series, the effluent shall leave each pit through an approved vented leg extending at least 12 inches (305 mm) downward into the existing pit and having its outlet flow line at least six inches (152 mm) below the inlet. All pipe between pits shall be laid with approved water tight joints.

#### **K 8. Cesspools.**

Section K 8 of Appendix K of the C.P.C. is adopted by reference.

#### **K 9. Commercial or Industrial Special Liquid Waste Disposal.**

Section K 9 and the chart of Section K 9 of Appendix K of the C.P.C. is adopted by reference.

#### **K 10. Inspection and Testing.**

(a) Inspection.

(1) The Applicant shall comply with applicable provisions of the California Plumbing Code and this appendix. Plans shall be required for each private sewage disposal system.

(2) System components shall be properly identified as to manufacturer. Septic tanks or other primary systems shall have the rated capacity permanently marked on the unit.

(3) Septic tanks or other primary systems shall be installed on dry, level, well-compacted soil.

(4) Disposal fields and seepage pits shall not be installed in uncompacted fill.

(5) If design is predicated on soil tests, the system shall be installed at the same location and depth as the tested area.

(b) Subsection (B) of Section K 10 of Appendix K of the C.P.C. is adopted by reference.

#### **K 11. Abandoned Sewers and Sewage Disposal Facilities.**

(a) Subsection (A) of Section K 11 of Appendix K of the C.P.C. is adopted by reference.

(b) Subsection (B) of Section K 11 of Appendix K of the C.P.C. is adopted by reference.

(c) The top cover or arch over the cesspool, septic tank, or seepage pit shall be removed before filling and the filling shall not extend above the top of the vertical portions of the side walls or above the levels of any outlet pipe until an inspection has been called and the cesspool or seepage pit has been inspected. After the inspection, the cesspool, septic tank, or seepage pit shall be filled to level of the top of the ground.

(d) No person owning or controlling any cesspool or seepage pit located on private property or in any public street, alley or other public property, shall fail, refuse or neglect to comply with the provisions of this section.

(e) Subsection (E) of Section K 11 of Appendix K of the C.P.C. is adopted by reference.

(f) No excavation shall be left unattended at any time unless the Applicant first provides a suitable and adequate barricade to assure public safety.

#### **K 12. Drawings and Specifications.**

Section K 12 of Appendix K of the C.P.C. is adopted by reference.

**TABLE K-1  
LOCATION OF SEWAGE DISPOSAL SYSTEM.**

<b>Minimum Horizontal Distance In Clear Required From</b>	<b>Building Sewer</b>	<b>Septic Tank</b>	<b>Disposal Fields</b>	<b>Seepage Pit or Cesspool</b>
Buildings or Structures <sup>1</sup>	2 feet (610 mm)	5 feet (1524 mm)	8 feet (2438 mm)	8 feet (2438 mm)
Property Lines Adjoining Private Property	Clear <sup>2</sup>	5 feet (1524 mm)	5 feet (1524 mm)	8 feet (2438 mm)
Water Supply Wells <sup>8</sup>	50 feet (15420 mm)	50 feet (15240 mm)	100 feet (30.5 m)	150 feet (45.7 m)
Streams and Other Bodies of Water <sup>8</sup>	50 feet (15240 mm)	50 feet (15240 mm)	100 feet <sup>7</sup> (30.5 m)	150 feet <sup>7</sup> (45.7 m)
Trees	-	10 feet (3048 mm)	-	10 feet (3048 mm)
Seepage Pits or Cesspools	-	5 feet (1524 mm)	5 feet (1524 mm)	12 feet (3658 mm)
Disposal Fields	-	5 feet (1524 mm)	4 feet <sup>4</sup> (1219 mm)	5 feet (1524 mm)
On Site Domestic Water Service Lines	1 foot <sup>5</sup> (305 mm)	5 feet (1524 mm)	5 feet (1524 mm)	5 feet (1524 mm)
Distribution Boxes	-	-	5 feet (1524 mm)	5 feet (1524 mm)
Pressure Public Water Mains	10 feet <sup>6</sup> (3048 mm)	10 feet (3048 mm)	10 feet (3048 mm)	10 feet (3048 mm)

**NOTE:** When disposal fields and/or seepage pits are installed in sloping ground, the minimum horizontal distance between any part of the leaching system and ground surface shall be 15 feet (4572 mm).

1. Including porches and steps, whether covered or uncovered, breezeways, roofed porte-cocheres, roofed patios, carports, covered walks, covered driveways and similar structures or appurtenances.
2. See also Section 313.3 of this Code.
3. All drainage piping shall clear domestic water supply wells by at least 50 feet (15240 mm). This distance may be reduced to not less than 25 feet (7620 mm) when the drainage piping is constructed of materials approved for use within a building.
4. Plus two feet (610mm) for each additional foot (305 mm) of depth in excess of one foot (305 mm) below the bottom of the drain line. (See also Section K 6.)
5. See Section 720.0 of this Code.
6. For parallel construction - For crossings, approval by the Health Department shall be required.
7. These minimum clear horizontal distances shall also apply between disposal fields, seepage pits, and the ocean mean higher high tide line.
8. Where special hazards are involved, the distance required shall be increased as may be directed by the Health Officer or the Administrative Authority.

**TABLE K-2  
CAPACITY OF SEPTIC TANKS.<sup>1</sup>**

Single-Family Dwelling <sup>2</sup> - Number of Bedrooms	Multiple-Dwelling Units of Apartments - One Bedroom Each	Other Uses: Maximum Fixture Units Served per Table 7-3	Minimum Septic Tank Capacity	
			Gallons	Liters
1 or 2		15	750	2838
3		20	1000	3785
4	2 Units	25	1200	4542
5 or 6	3	33	1500	5678
	4	45	2000	7570
	5	55	2250	8516
	6	60	2500	9463
	7	70	2750	10,409
	8	80	3000	11,355
	9	90	3250	12,301
	10	100	3500	13,248

Extra bedroom, 150 gallons (568 liters) each.

Extra dwelling units over 10, 250 gallons (946 liters) each.

Extra fixtures units over 100, 25 gallons (95 liters) per fixture unit.

1. Septic tank sizes in this table include sludge storage capacity and the connection of domestic food waste disposal units without further volume increase.
2. Applies to mobile homes not installed in a mobile home park.

**TABLE K-3  
ESTIMATED WASTE/SEWAGE FLOW RATES.**

Because of the many variables encountered, it is not possible to set absolute values for waste/sewage flow rates for all situations. The designer should evaluate each situation and, if figures in this table need modification, they should be made with the concurrence of the Administrative Authority.

TYPE OF OCCUPANCY	GALLONS (LITERS) PER DAY
1. Airports	15 (56.8) per employees 5 (18.9) per passenger
2. Auto washers	Check with equipment manufacturer
3. Bowling alleys (snack bar only)	75 (283.9) per lane
4. Camps:	
Campground with central comfort station	35 (132.5) per person
Campground with flush toilets, no showers	25 (94.6) per person
Day camps (no meals served)	15 (56.8) per person
Summer and seasonal	50 (189.3) per person
5. Churches (Sanctuary)	5 (18.9) per seat
with kitchen waste	7 (26.5) per seat
6. Dance halls	4 (18.9) per person
7. Factories	
No showers	2 (94.6) per employee
With showers	35 (132.5) per employee
Cafeteria, add	5 (18.9) per employee
8. Hospitals	250 (946.3) per bed
Kitchen waste only	25 (96.4) per bed
Laundry waste only	40 (151.4) per bed
9. Hotels (no kitchen waste)	60 (227.1) per bed (2 person)

TYPE OF OCCUPANCY	GALLONS (LITERS) PER DAY
10. Institutions (Resident)	75 (283.9) per person
Nursing home	125 (473.1) person
Rest home	125 (473.1) person
11. Laundries, self service (minimum 10 hours per day)	300 per machine
Commercial	per manufacturer's specifications
12. Motel	50 (189.3) per bed space
with kitchen	60 (227.1) per bed space
13. Offices	20 (75.7) per employee
14. Deleted	
15. Restaurants - cafeterias	50 per seat
16. Schools - staff and office	20 (75.7) per person
Elementary students	15 (56.8) per person
Intermediate and high	20 (75.7) per student
with gym and showers, add	5 (18.9) per student
with cafeteria, add	3 (11.4) per student
Boarding, total waste	100 (378.5) per person
17. Service station, toilets	1000 (3785) for first bay
	500 (1892.5) for each additional bay
Recreational Vehicle dump stations	750
18. Stores	20 (75.7) per employee
public restrooms, add	1 per 10 sq. ft. (4.1m <sup>2</sup> ) of floor space
19. Swimming pools, public	10 (37.9) per person
20. Theaters, auditoriums	5 (18.9) per seat
drive-in	10 (37.9) per space

(a) **Recommendation Design Criteria.** Sewage disposal systems sized using the estimated waste/sewage flow rates should be calculated as follows:

(1) Waste/sewage flow, up to 1500 gallons/day (5677.5 L/day)

Flow  $\times$  1.5 = septic tank size.

(2) Waste/sewage flow, over 1500 gallons/day (5677.5 L/day)

Flow  $\times$  0.75 + 1125 = septic tank size.

(3) Secondary system shall be sized for total flow per 24 hours.

(b) Also see Section K 2 of this appendix.

**TABLE K-4**  
**DESIGN CRITERIA OF SIX TYPICAL SOILS.**

Type of Soil	Required Square Feet of Area/100 Leaching Gallons (m <sup>2</sup> /L)	Maximum absorption capacity in gallons/square feet of leaching area for a 24 hour period (L/m <sup>2</sup> )
Coarse sand or gravel	20 (0.005)	5.0 (203.7)
Fine sand	25 (0.006)	4.0 (162.9)
Sandy loam or sandy clay	40 (0.010)	2.5 (101.8)
Sandy Clay	60 (0.015)	1.66 (68.1)
Clay with considerable sand or gravel	90 (0.022)	1.1 (44.8)
Clay with small amount of sand or gravel	120 (0.030)	0.8 (32.6)

**TABLE K-5**

<b>Required Square Feet of Leaching Area /</b> 100 gallons Septic Tank Capacity		<b>Maximum Septic Tank Size Allowable</b>	
	(m <sup>2</sup> /L)	Gallons	(Liters)
20 - 25	(0.005 - 0.006)	7500	(28,387.5)
40	(0.010)	5000	(18,925.0)
60	(0.015)	3500	(13,247.5)
90	(0.022)	3500	(13,247.5)
120	(0.030)	3000	(11,355.0)

**CHAPTER 17 - UNIFORM SWIMMING POOL, SPA, AND HOT TUB**

**1700.0. BASIC PROVISIONS.**

The 2007 Uniform Swimming Pool, Spa and Hot Tub Code is adopted by reference.

**CHAPTER 20 - FIRE PROTECTION SYSTEMS**

**2000.0. GENERAL.**

**2001.0. SCOPE.**

The standards of this chapter provide the minimum requirements for the design and installation of automatic fire protection systems. The design of all fire protection systems shall be in conformity with accepted engineering practices and the provisions of this Code.

Automatic fire sprinkler systems shall be installed in locations required by the Building Code, and all fire sprinkler systems shall be in conformance with the approved plans and this Code.

**2002.0. ADOPTED STANDARDS.**

All fire sprinkler and standpipe design, installation and materials shall be in conformity with the 2007 Edition of the California Building Code and to the applicable portions of standards as specified in Table 20.1 of this chapter, except when specified in this chapter as modified or not adopted.

**TABLE 20-1  
FIRE PROTECTION STANDARDS**

<b>FIRE PROTECTION STANDARDS</b>	<b>STANDARD*</b>
Installation of Sprinkler Systems	NFPA 13-2002
Installation of Sprinkler Systems in Group R Occupancies Four or Fewer Stories	NFPA 13R-2002
Installation of Sprinkler Systems in One- and Two-Family Dwellings	NFPA 13D-2002
Standpipe and Hose Systems	NFPA 14-2003
Centrifugal Fire Pumps	NFPA 20-2003
Water Tanks for Private Fire Protection	NFPA 22-2003
Private Fire Service Mains	NFPA 24-2002
Cutting and Welding Processes	NFPA 51B-1999
Hose Threads	NFPA 1963-1998
Power Piping	ANSI/ASME B31-1-2001

\*NFPA - Published by the National Fire Protection Association.

\*ANSI/ASME - Published by the American Society of Mechanical Engineers.

Other NFPA Standards as applicable in Section 13-1.1 of NFPA 13-2002 may be used by reference except when specified in this chapter as modified or not adopted. Wherever reference is made to the Uniform Fire Code it shall mean the Los Angeles Fire Code.

### **2002.1. Fire Protection Standards.**

Fire extinguishing systems shall comply with the standards listed in Table 20.1 of this chapter.

**EXCEPTION:** Automatic fire extinguishing systems not covered by the Los Angeles Plumbing Code shall be approved and installed in accordance with the Los Angeles City Fire Code.

### **2003.0. DEFINITIONS.**

The terms defined here shall apply to this chapter and shall be in addition to the terms defined by NFPA in the Fire Protection Standards adopted in Table 20-1 of this chapter unless otherwise stated.

**Acceptance** is acceptance by the building official or Administrative Authority.

**Arm-over** is a horizontal pipe that extends from the branch line to a single sprinkler or a sprinkler above and below a ceiling.

**Authority Having Jurisdiction** is the building official or the Administrative Authority.

**Building Official** is the Superintendent of Building and Safety, or an authorized representative, charged with the administrative and enforcement of this Code.

**Compact Storage** is a system of mobile shelving units, mounted on rails, and designed to provide the maximum number of rows in a minimum area of floor space.

**Compartment** is a space completely enclosed by walls and a ceiling. The compartment enclosure is permitted to have openings in walls to an adjoining space if the openings have a minimum lintel depth of eight inches from the ceiling and the openings do not exceed eight feet in width. A single opening of 36 inches or less in width without a lintel is permitted when there are no other openings to adjoining spaces

**Pilot Heads** are wet fire sprinklers installed over piping in unsprinklered areas to protect them from fire damage.

**Residential Occupancies** are Group R Occupancies.

**Sprinkler Alarm** is a local alarm unit assembly or apparatus constructed and installed so that any flow of water from a sprinkler system equal to or greater than that from a single automatic sprinkler will result in an audible alarm signal on the premises.

**Small Room** is a room of light hazard occupancy classification having unobstructed construction and floor areas not exceeding 800 ft<sup>2</sup> that are enclosed by walls and a ceiling. Openings in walls not exceeding eight feet in width to adjoining spaces are permitted if the minimum lintel depth is eight inches from the ceiling. A single opening of 36 inches or less in width without a lintel is permitted when there are no other openings to adjoining spaces.

**Sprinkler System** for fire-protection purposes is an integrated system of underground and overhead piping designed in accordance with fire protection engineering standards. The installation includes a water supply, such as a gravity tank, fire pump, reservoir or pressure tank and/or connection by underground piping to a City main.

The portion of the sprinkler system above ground is a network of specially sized or hydraulically designed piping installed in a building, structure or area, generally overhead and to which sprinklers are connected in a systematic pattern. The system includes a controlling valve and a device for actuating an alarm when the system is in operation. The system is activated by heat or smoke from a fire and discharges water over the fire area.

**Standard** is a document containing only mandatory provisions, using the word “shall” to indicate requirements. Explanatory material may be included only in the form of fine print notes, in footnotes, or in an appendix.

**Standpipe System** is a wet or dry system of piping, valves, outlets and related equipment designed to provide water at specified pressures and installed exclusively for the fighting of fires, including the following:

**Class I** is a standpipe system equipped with 2 ½-inch outlets.

**Class II** is a wet standpipe system directly connected to a water supply and equipped with 1 ½-inch outlets intended for use by the building occupants.

**Class III** is a combination standpipe system directly connected to a water supply and equipped with both 1 ½-inch outlets for use by the building occupants and 2 ½-inch outlets for use by the Fire Department or other trained personnel. Hose connections for Class III systems may be made through 2 ½-inch hose valves with easily removable 2 ½-inch by 1 ½-inch reducers.

**Water Curtain** is a line of closely spaced fire sprinklers (or a single sprinkler) aligned adjacent to openings to keep fire from penetrating those openings.

#### **2004.0. MATERIAL AND DEVICES, ALL FIRE PROTECTION SYSTEMS.**

All material and equipment used in the construction and installation of fire protection systems shall be new and free from defects, and shall be listed and/or approved for their intended use.

**EXCEPTION:** The following need not be listed:

- 1. Fittings.** Ferrous fittings conforming to the standards listed in Table 6.4.1 of NFPA-13.
- 2. Pipe.** Steel pipe that conforms to the standards listed in Table 6.3.1.1 of NFPA-13 for pressures up to 300 psi. Steel pipe that conforms to ANSI/ASME Standard B31.1-2001 for pressures of 300 psi or more.
- 3. Underground Pipe.** Underground pipe three inches and smaller may be unlisted galvanized steel that has an additional protective coating or may be other material approved pursuant to Section 301.1.1 for potable water.

#### **2005.0. LOCATION.**

No fire protection system shall be located on any lot other than the lot that is the site of the building, structure or premises served by that system.

#### **2006.0. PROTECTION FROM MECHANICAL DAMAGE.**

All fire-protection equipment and piping shall be adequately protected from mechanical damage.

#### **2010.0 NFPA-13.**

NFPA 13-2002 is adopted by reference with the following exceptions, modifications and additions.

1. Section 1.4 is not adopted.
2. Section 3.2 is adopted by reference except that the following sections are not adopted:
  - 3.2.2. AUTHORITY HAVING JURISDICTION**
  - 3.2.6. STANDARD**
3. Section 3.3 is adopted by reference except that the following sections are not adopted:

**3.3.6. COMPARTMENT**

**3.3.20. SMALL ROOM**

**4. Section 5.1.3 is added to read:**

**5.1.3. Classification of Occupancies.** For the purpose of determining the level of protection to be provided by required sprinkler system installations, Table No. **5.1** of this chapter shall be used.

For hazard classifications other than those indicated, see appropriate nationally recognized standards for design criteria.

When fire sprinkler systems are required in buildings of undetermined use, they shall be designed and installed to have a sprinkler density of not less than that required for an Ordinary Hazard Group 2 use with a minimum design area of 3,000 square feet. Use is considered undetermined if not specified at the time the permit is issued.

Where a subsequent occupancy requires a system with greater capability, it shall be the responsibility of the occupant and/or owner to upgrade the system to the required density for the new occupancy.

**TABLE NO. 5.1  
HAZARD CLASSIFICATION**

OCCUPANCY OF BUILDING OR PORTION OF BUILDING	HAZARD CLASSIFICATION
<p>Group A Occupancies used as meeting rooms, library reading rooms, restaurant seating areas, clubs, theaters, museums, health clubs, educational classrooms and churches.</p> <p>Group B Occupancies used as offices, data processing areas, colleges and universities.</p> <p>Group E Occupancies other than shops and laboratories.</p> <p>Group I Occupancy living and sleeping areas</p> <p>Group R, Division I Occupancies<sup>1</sup>. Typically, one would expect that these uses are such that the quantity and combustibility of contents results in relatively low-rate-of-heat-release fires.</p>	<p>Light</p>
<p>Groups B, F, S and U Occupancies used for light manufacturing, commercial kitchens, laundries, automobile parking garages, bakeries, canneries, electronic plants, beverage manufacturing and glass products manufacturing plants not producing dust or fibers. Typically these uses are such that the quantity of combustibles is relatively low, the combustibility of contents is moderate, storage does not exceed eight feet in height, and moderate-rate-of-heat-release fires would be expected.</p>	<p>Ordinary</p> <p>Group I</p>
<p>Groups B, F, M, and S Occupancies used for chemical plant laboratories, mercantile, machine shops, printing plants, library stack areas, metal working, wood product assembly, textile manufacturing, confectionery products, cold storage warehouses,<sup>2</sup> cereal mills, service stations and repair garages. Typically these uses are such that the quantity of combustibles is moderate. The combustibility of contents is moderate, storage does not exceed 12 feet in height<sup>2</sup> and moderate-rate-of-heat-release fires would be expected.</p>	<p>Ordinary</p> <p>Group 2</p>

Also:  Group A Occupancies such as exhibition halls.  Groups B, F and S Occupancies used as tobacco products manufacturing, paper and pulp mills, piers and wharfs, and warehousing <sup>2</sup> of higher combustible contents (including packaging).  Group H Occupancies used as feed mills, tire manufacturing, chemical plants, repair garages and woodworking. Group H, Division 6 Occupancies (except extra-hazard areas). Typically these uses are such that high-rate-of-heat-release fires would be expected and the spread of fire would be rapid.		
Group H Occupancies used for printing (using inks with flashpoints below 100 degrees F.) combustible hydraulic fluid-use areas such as die casting and metal extruding, upholstering with plastic foam, rubber reclaiming, compounding, drying, milling, vulcanizing, plywood and particle board manufacturing, saw mills, textile picking, opening, blending, ginning, carding and combining of cotton, synthetics, wool shoddy or burlap. Typically these uses are such that a significant fire hazard exists.	Extra Hazard  Group I	
Group H Occupancies used as asphalt saturating, flammable liquids spraying, flow coating, open oil quenching, varnish and paint dipping, solvent cleaning and manufactured home or modular building manufacturing (where the finished building enclosure is present and has combustible interiors). These uses are such that a severe fire hazard exists.	Extra Hazard  Group 2 <sup>3</sup>	

<sup>1</sup> See also Section 8.4.5 of NFPA 13-2002.

<sup>2</sup> For high-piled storage, see NFPA 13-2002.

<sup>3</sup> For additional and more stringent criteria, see California Fire Code Chapter 27, and the Los Angeles Fire Code.

5. Section 6.1.1.2 is not adopted and Section 6.1.1.1 is modified to read:

**6.1.1.1.** All materials and devices shall be listed and approved.

6. Section 6.3.6.1 is modified to read:

**6.3.6.1.** Other types of pipe or tube, such as plastic, may be used if it is investigated and found to be listed for this service.

7. Section 6.7.1.3.3 is not adopted.

8. Section 6.9.1 is modified to read:

**6.9.1.** Waterflow alarm apparatus shall be listed for the service and constructed and installed so that any flow of water from a sprinkler system equal to or greater than that from a single automatic sprinkler of the smallest orifice size installed on the system shall result in an audible alarm on the premises within two minutes after the flow begins.

9. Section 6.9.4.1 is modified to read:

**6.9.4.1.** Electrically operated alarm attachments forming part of an auxiliary, proprietary, remote station or local signaling system shall be installed in accordance with the Los Angeles Fire Code.

10. Section 8.14.1.2.9 is modified to read:

**8.14.1.2.9.** Concealed spaces with volumes not exceeding 160 cubic feet above a room or aggregate of rooms not exceeding 55 square feet in area, shall not require sprinkler protection.

11. Sections 8.14.4.1 through 8.14.4.5 are not adopted and Section 8.14.4 is modified to read:

**8.14.4.** Water curtains shall consist of closely spaced sprinklers in combination with draft stops.

The draft stops shall be located immediately adjacent to the opening, shall be at least 18 inches deep and shall be of noncombustible or limited-combustible material that will stay in place before and during sprinkler operation. Sprinklers shall be spaced not more than six feet apart and placed six to 12 inches from the draft stop on the side away from the opening. Where sprinklers are closer than six feet, cross baffles shall be provided in accordance with Section 8.6.3.4.2 of NFPA-13.

12. Section 8.15.1.1.2.5 is added to read:

**8.15.1.1.2.5.** All valves controlling the water supply for automatic sprinkler systems and water-flow switches on all sprinkler systems shall be electrically monitored where the number of sprinklers are:

1. Twenty or more in Group I, Division 1.1 and 1.2 Occupancies.

2. One hundred or more in all other occupancies. Valve monitoring and water-flow alarm and trouble signals shall be distinctly different and shall be automatically transmitted to an approved central station, remote station or proprietary monitoring station as defined by national standards, or, when approved by the Building Official with the concurrence of the Chief of the Fire Department, 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.

13. Section 8.15.1.1.7 is modified to read:

**8.15.1.1.7. Valve Access.** All valves controlling water supplies for sprinkler systems or portions of the system shall be accessible. These valves shall be within six feet six inches of the floor or shall be operable from fixed ladders or clamped tread ladders on risers, or use chains within six feet six inches of the floor connected to valve hand wheels or other suitable means. All valves shall be provided with adequate clearance for normal operation.

14. Section 8.15.1.1.9 is added to read:

**8.15.1.1.9. Floor (Level) Control Valves.**

**1. Where required.** In buildings with over two levels or two floors, a supervised valve capable of independently controlling the fire sprinkler system on each level, penthouse, roof structure, mezzanine and basement level shall be installed. The maximum area covered by a single floor control valve shall not exceed the areas specified in section 8.2 of NFPA 13.

**EXCEPTIONS:**

1. Floor control valves need not be provided for levels, penthouses, roof structures, mezzanines and basement levels with 20 or fewer fire sprinklers.

2. In partially sprinklered buildings, sprinklers serving window openings along an exitway or property line, or stair shafts and adjacent doors may have a sectional control valve to control the system in each of these areas instead of a floor control valve.

3. Valves required for hazardous locations may be located downstream of floor control valves.

4. One- and two-family dwellings.

**2. Locations.** Floor control valves shall be within a stairway enclosure or within the vestibule or on the access balcony of a smokeproof enclosure.

**EXCEPTIONS:**

1. In buildings with three or fewer stories or where there is no stairway that serves a floor, control valves may be located elsewhere on the floor level.

2. Unenclosed stairways in parking garages.

15. Section 8.15.1.1.10 is added to read:

**8.15.1.1.10. Special Hazard Locations and Hazardous Occupancies.** The piping serving each linen chute, each paint spray booth, each trash chute, including trash room, and each separate trash room shall be controlled by valves that control no other sprinklers.

16. Section 8.15.1.2.6 is added to read:

**8.15.1.2.6. Identification Pressure Regulators.** Signs shall be posted at pressure regulators for fire sprinklers stating the required setting of the pressure regulator.

17. Section 8.16.1.1 is modified to read:

**8.16.1.1.** Local water-flow alarms shall be provided on each sprinkler system having more than five sprinklers and shall be located in an area approved by the Administrative Authority.

18. Sections 9.1.1.2 and 9.1.1.3 are not adopted and Section 9.1.1.1 is modified to read:

**9.1.1.1. General.** Types of hangers shall be in accordance with the requirements of Section 9.1 of NFPA-13.

**EXCEPTION:** Hangers designed by a registered structural or civil engineer for lateral loads in accordance with Section 1613 of the Building Code and the requirements of Section 9.3.7 of NFPA-13 shall be acceptable.

19. Section 9.3.5.6.1 is modified to read:

**9.3.5.6.1.** Unless the requirements of Section 9.3.5.6.2 are met, the horizontal loads for braces shall be determined by analysis based on a horizontal force of  $F_p = 0.76 W_p$ , where  $F_p$  is the horizontal force factor and  $W_p$  is 1.15 times the weight of the water-filled piping.

20. Section 9.3.5.8.9 is modified to read:

**9.3.5.8.9.** Where pipe is used for sway bracing, it shall have a wall thickness of not less than Schedule 40. The loads determined in Section 9.3.5.6 shall not exceed the lesser of the maximum allowable loads provided in Table 9.3.5.8.9(a), Table 9.3.5.8.9(b), and Table 9.3.5.8.9(c) of NFPA 13 or the manufacturer's certified maximum allowable horizontal loads for 30- to 44-degree, 45- to 59- degree, 60- to 89-degree, and 90-degree brace angles.

21. Figure 9.3.5.9.1 is modified by deleting the portion related to Lag Bolts and Lag Screws.

22. Section 9.3.5.9.4 is not adopted.

23. Section 9.3.7.8 is modified to read:

**9.3.7.8.** Lag Screws or powder-driven fasteners shall not be used to attach braces to the building structure.

24. Section 9.3.7.9 is modified to read:

**9.3.7.9.** Lag Screws or powder-driven fasteners shall not be used to attach hangers to the building structure where the systems are required to be protected against earthquakes using a horizontal force factor exceeding  $0.50 W_p$ , where  $W_p$  is the weight of the water-filled pipe.

25. Section 11.2.3.1.8 (8) is modified to read:

**11.2.3.1.8 (8).** When hose valves for Fire Department use are attached to wet pipe sprinkler system risers in accordance with Section 8.16.5.2 of NFPA-13:

(a) The water supply shall not be required to be added to the standpipe demand as set forth in Section 2020 of this chapter.

(b) In combined systems, when the sprinkler system demand and hose stream allowance of Table 11.2.3.1.1 of NFPA-13 exceeds the requirements of Section 2020 of this chapter, the higher demand shall be used.

(c) For partially sprinklered buildings, the sprinkler demand, not including hose stream allowance, as indicated in Table 11.2.3.1.1 of NFPA-13, shall be added to the requirements set forth in Section 2020 of this chapter.

26. Section 11.2.3.8.5 is added to read:

**11.2.3.8.5.** When the water curtain is located in an otherwise un-sprinklered area, the design shall include all the sprinklers in each fire separation area being protected.

27. Section 15.1.7 is not adopted.

#### **2011.0. PILOT HEADS.**

**2011.1.** Pilot head systems shall be hydraulically designed. The design area shall include all the pilot heads flowing within each fire-separation area.

**2011.2.** Pilot heads shall be installed no farther than ten feet apart (on center) along the piping being protected.

**2011.3.** Valves shall be installed so that pilot heads may be serviced without interrupting the supply to the piping being protected.

#### **2012.0. COMPACT STORAGE (MOVEABLE FILES).**

**2012.1.** The maximum area of the compact storage compartment shall be limited to 1500 square feet for systems designed as Ordinary Hazard Group 2 and 5000 square feet for systems designed as Extra Hazard Group 1. The design area shall be the entire compact storage compartment.

**2012.2.** Clear space below sprinklers shall be a minimum of 18 inches between the top of the storage and the ceiling sprinkler deflector.

#### **2013.0. NFPA 13R**

NFPA 13R-2002 is adopted by reference with the following exceptions and modifications:

1. Section 3.2 is adopted by reference, except that the following sections are not adopted:

**3.2.2 AUTHORITY HAVING JURISDICTION**

**3.2.7 STANDARD**

2. Section 3.3 is adopted by reference, except that the following sections are not adopted:

**3.3.2 COMPARTMENT**

**3.3.6 RESIDENTIAL OCCUPANCY**

**3.3.8 SPRINKLER SYSTEM**

3. Section 5.3.3 is modified by changing the reference “NFPA 13” to “Section 2010 of this chapter.”

4. Sections 6.3.2.1 and 6.3.2.2 are modified by changing the reference “NFPA 13” to “Section 2010 of this chapter.”

5. Section 6.5.3 is modified by changing the reference “NFPA 13” to “Section 2010 of this chapter.”

6. Section 6.5.6 is modified by changing the reference “NFPA 13” to “Section 2010 of this chapter.”

7. Section 6.6.4.2 is modified to read:

**6.6.4.2. Fire Department Connection.** See Section 2020 of this chapter for requirements.

8. Section 6.6.6 is modified by changing the reference “NFPA 13” to “Section 2010 of this chapter.”

9. Section 6.7.2 is modified by changing the reference “NFPA 13” to “Section 2010 of this chapter.”

10. Section 6.7.4 is modified by changing the reference “NFPA 13” to “Section 2010 of this chapter.”

11. Section 6.8.3 is modified by changing the reference “NFPA 220” to “the Building Code.”

12. Sections 6.8.4 and 6.8.5 are not adopted.

**2014.0. NFPA 13D**

NFPA 13D-2002 is adopted by reference with the following exceptions, modifications and additions:

1. Section 3.2 is adopted by reference, except that the following sections are not adopted:

**3.2.2 AUTHORITY HAVING JURISDICTION**

**3.2.7 STANDARD**

2. Section 3.3.9 is adopted by reference, except that the following section is not adopted:

**3.3.9.7 SPRINKLER SYSTEM**

3. Section 4.1.2 is modified to read:

**4.1.2.** A compartment enclosure is permitted to have openings in walls to an adjoining space if the openings have a minimum lintel depth of eight inches from the ceiling and the openings do not exceed eight feet in width. A single opening of 36 inches or less in width without a lintel is permitted when there are no other openings to adjoining spaces.

4. Section 5.1.2 is not adopted.

5. Section 5.1.3 is not adopted.

6. Section 5.1.4 is added to read:

**5.1.4. Fire Department Connections.** Fire Department connections for one- and two-family dwellings shall meet the following requirements:

1. A Fire Department connection shall be provided for any system protecting over 10,000 square feet of habitable space.
2. A single Fire Department connection pipe may be as small as the sprinkler riser, provided the riser is three inches or smaller.
3. The hose inlet fitting may be 1 ½ inches with 1.5-9 N.H. threads instead of 2.5-7.5 N.H. standard threads.

7. Section 7.5.1 is modified to read:

**7.5.1.** Listed residential sprinklers shall be used unless another type is permitted by Sections 7.5.3 or 7.5.4.

**EXCEPTION:** Listed quick response commercial sprinklers may be installed with approval of the Authority Having Jurisdiction, when installed in all areas of the dwelling and the hydraulic design is in accordance with Section 8.1.2 as set forth in Subsection 8 of Section 2014 of this chapter.

8. Section 8.1.2 is modified to read:

**8.1.2. Number of Design Sprinklers.** The number of design sprinklers shall include all sprinklers within a compartment, up to a maximum of two sprinklers, under a flat, smooth, horizontal ceiling. For compartments containing two or more sprinklers, calculations shall be provided to verify the single operating sprinkler criteria and the two operating sprinkler criteria.

**EXCEPTIONS:**

1. Single-family dwellings having more than 10,000 square feet of habitable space shall follow the design requirements of Section 2013 of this chapter.
2. Attached private garages with floor areas of greater than 1,500 square feet shall follow the design requirements of Section 2010 of this chapter.
3. When listed quick response sprinklers are utilized within a dwelling, the hydraulic design shall follow the requirements of Section 2010 of this chapter.

9. Section 8.6.4 of NFPA-13D is not adopted.

**2020.0. NFPA 14**

NFPA 14-2003 is adopted by reference with the following exceptions, modifications and additions:

1. Sections 1.3 through 1.3.3 are not adopted.
2. Chapter 2 is not adopted.
3. Section 3.2 is adopted by reference, except that the following section is not adopted:

**3.2.2 AUTHORITY HAVING JURISDICTION**

4. Sections 3.3.6 through 3.3.6.2 are not adopted.

5. Section 4.4 is modified to read:

**4.4. Joining of Pipe and Fittings.** Joining, hanging, and bracing of pipe and fittings shall be in accordance with Section 2010 of this chapter.

6. Section 4.6.4 is modified to read:

**4.6.4. Nozzles.** Nozzles provided for Class II standpipe outlets shall be listed variable fog nozzles.

7. Section 4.8.2, including the exception, is modified to read:

**4.8.2.** Each Fire Department connection shall have at least two 2½-inch internal threaded swivel fittings having NH standard threads, as specified in NFPA 1963, Standard for Screw Threads and Gaskets for Fire Hose Connections.

The number of Fire Department hose connection inlets shall be installed at least as required in Table No. 4.8.2 of this chapter. Fire Department connections shall be equipped with caps to protect against entry of debris into the system.

**TABLE 4.8.2  
NUMBER OF FIRE  
DEPARTMENT CONNECTIONS**

<b>HEIGHT OF HIGHEST OUTLET ABOVE FIRE DEPARTMENT CONNECTION, FEET</b>	<b>NUMBER OF FIRE DEPARTMENT CONNECTIONS</b>	
	<b>1 or 2 Risers</b>	<b>3 or more Risers</b>
Less than 50	2	2
50 and over	4	6

8. Section 5.1.3 is modified to read:

**5.1.3.** The spacing and location of standpipes and hose connections shall be in accordance with Section 905 of the Building Code.

9. Section 5.1.4 is not adopted.

10. Section 5.3.3 is modified to read:

**5.3.3. Class III Systems.** Class III is a standpipe system directly connected to a water supply and equipped with 2½-inch outlets or 2½-inch and 1½-inch outlets when a 1½-inch hose is required. Hose connections for Class III systems may be made through 2½-inch hose valves with easily removable 2½-inch by 1½-inch reducers.

11. Section 5.6.2 is modified to read:

**5.6.2.** A valved outlet for a pressure gauge shall be installed on the upstream and downstream sides of every pressure regulating device.

**EXCEPTION:** Class I and Class III hose outlets.

12. Section 6.1.2.5 is modified to read:

**6.1.2.5.** To minimize or prevent pipe breakage where subject to earthquakes, standpipe systems shall be protected in accordance with Section 2010 of this chapter.

13. Section 6.2.4.1 is added to read:

**6.2.4.1.** Valves shall be within six feet six inches of the floor or shall be operable from fixed ladders or clamped tread ladders on risers, or use chains within six feet six inches of the floor connected to valve hand wheels or other suitable means.

14. Section 6.3.5.3 is modified to read:

**6.3.5.3.** Fire Department inlets shall supply all Class I and Class III standpipes except for buildings with multiple zones.

In buildings which have multiple zones, each zone shall be provided with separate inlet connections.

Where the Fire Department inlet connection does not serve the entire building, the portions served shall be suitably identified.

The Fire Department connection shall be adequate to supply the required flow and pressure.

**EXCEPTION:** When the risers are at least six-inch size and there are at least six Fire Department inlets, the supply shall be considered adequate.

15. Section 7.3.1 is modified to read:

**7.3.1. Fire Department Outlets.** Fire Department outlets shall be installed so as to be easily accessible for use by the Fire Department. Hose connections and hose stations shall be located not less than three feet or more than five feet above the floor. A wrench clearance on all sides of the outlet shall be provided to ensure that a 12-inch long wrench can be used to connect hose to outlet. There shall be at least a one-inch clearance around the hose valve handle.

Outlets shall be provided with a listed hose valve protected by a 2½-inch by 1½-inch reducer and 1½-inch cap and attachment chain.

16. Section 7.3.2 is not adopted.

17. Section 7.9 is modified to read:

#### **7.9. System Zoning Requirements.**

**7.9.2. Height Limit.** Buildings shall be zoned so that standpipe system risers do not exceed 275 feet in height unless control of the nozzle pressure under both flow and static conditions is attained at each standpipe outlet by the installation of a listed pressure-regulating device and provided further that all of the following three limitations are met:

1. The pressure on the listed pressure-regulating device inlet side is not in excess of the rated working pressure of the listed pressure-regulating device and the remaining portions of the standpipe system are rated for not less than the maximum system pressure.
2. The hose valve outlet pressure is limited as required in Section 7.2.1.2 of NFPA-14.
3. The zone height does not exceed 400 feet.

**7.9.3.** Zoned systems shall comply with Alternate 1 or 2, below.

1. **Alternate 1.** The pumping system shall be adequate when three pumps are out of operation.
2. **Alternate 2.** Design shall comply with the following:

When fire pumps are required, separate fire pumps shall be required to serve each zone. Fire pumps that individually serve separate zones and which are located at the same level may be installed in series.

**7.9.3.1 and 7.9.3.1.1** are not adopted.

**7.9.4.** Direct supply piping from the higher-zone fire pump to the higher-zone system piping shall be provided when the fire pump for the higher zone is on the same level as the fire pump serving the lower zone. Two direct supply lines shall be provided to each zone with two or more standpipes. The size of the direct supply piping to each zone shall be not less than the size of the largest standpipe riser served.

Lower-zone standpipe piping may be used to supply the higher zone and shall not be less than the size of the largest standpipe riser of the higher-zone system that is being supplied. The two zones shall be connected by a minimum of two supply pipes of which one shall be automatically providing water to the higher zone from the lower zone. A secondary method of supply is required when a residual pressure of 100 psi cannot be provided.

**7.9.4.1** is not adopted.

**18.** Section 7.10.1.3.1.1 is modified to read:

**7.10.1.3.1.1.** Where the sprinkler system water supply requirement, including the hose stream allowance as determined in accordance with Section 2010 of this chapter, exceeds the system demand established by Sections 7.7 and 7.10.1 of NFPA-14, the larger of the two values shall be provided.

**19.** Subsections (3) and (5) of Section 9.1.4 are not adopted.

**20.** Section 9.2.1 is added to read:

**9.2.1. Buildings Over 150 Feet High.**

1. **Redundancy.** The system shall be adequate when either one pump, one pump driver, one riser or zone pressure regulator is out of operation.

2. **Power.** Pumps shall be either diesel engine or electric motor driven. Electric fire pump motors shall be supplied from both normal and the emergency standby power system. At least 750 g.p.m. shall be supplied by an electric motor driven pump.

**21.** Section 11.2.3 is added to read:

**11.2.3. Flushing the System Risers.** Water shall flow from the topmost outlet of each riser until the system is clear of all debris.

**11.2.3.1. Roof Outlets.** Standpipe systems shall be designed so that all risers can be flushed through outlets located on the roof.

**11.2.3.2. Flow.** All standpipe risers shall be flushed individually through the roof at a residual pressure of at least 65 psi until the system is clear of debris. The flow for Class I and Class III standpipes shall be at least 500 gpm through each riser.

**22.** Section 11.5.6.3 is added to read:

**11.5.6.3. Pressure Regulator Valve Test.**

**11.5.6.3.1. Test Required.** When required by the Department, 2 ½-inch pressure-regulator valves installed on standpipe outlets shall be tested for proper operation at a flow of 300 gpm in the presence of a representative of the Department.

**11.5.6.3.2. Safety.** Test nozzles and other equipment shall be adequately secured so as to eliminate danger to personnel.

**11.5.6.3.3. Opening.** An accessible 2 ½-inch capped or plugged test opening shall be installed adjacent to each pressure regulator valve.

**11.5.6.3.4. Drain.** The test openings shall drain to a minimum 3-inch drain line constructed and installed as required for fire sprinkler drains. The drains shall not discharge where they may cause damage.

**11.5.6.3.5. Interconnection.** The test drain shall either be separate, connect to a fire sprinkler drain, combine with a rainwater drain or drain to a fire protection tank.

23. Chapter 12 is modified to read:

### **Chapter 12. Buildings Under Construction.**

**12.1. General.** During the construction of a building and until the permanent fire-extinguishing system has been installed and is in service, fire protection shall be provided in accordance with this section.

**12.2. Where required.** Every building four stories or more in height shall be provided with at least one standpipe for use during construction. The standpipes shall be installed when the progress of construction is not more than 35 feet (10,668 mm) in height above the lowest level of Fire Department access. The standpipe shall be provided with Fire Department hose connections at accessible locations adjacent to usable stairs and the standpipe outlets shall be located adjacent to those usable stairs. The standpipe systems shall be extended as construction progresses to within one floor of the highest point of construction having secured decking or flooring.

In each floor there shall be provided a 2½-inch (63.5 mm) valve outlet for Fire Department use. Where construction height requires installation of a Class III standpipe, fire pumps and water main connections shall be provided to serve the standpipe.

**12.3. Temporary standpipes.** Temporary standpipes may be provided in place of permanent systems if they are designed to furnish a minimum of 500 gallons (1893 L) of water per minute at 50 pounds per square inch (345 kPa) pressure with a standpipe size of at least four inches (102 mm). All outlets shall be at least 2½ inches (63.5 mm). Pumping equipment sufficient to provide this pressure and volume shall be available at all times when a Class III standpipe system is required.

**12.4. Detailed requirements.** Standpipe systems for buildings under construction shall be installed as required for permanent standpipe systems.

### **2021.0. CLASS H STANDPIPES.**

**2021.1.** Class H standpipes are fire lines equipped with 1½-inch hose outlets and intended for use by trained personnel in fighting fires on helicopter landing pads.

**2021.2.** At least one Class H standpipe outlet shall be located outdoors to serve each helicopter landing facility. Every point shall be covered with a 20-foot stream of water from a nozzle connected to not more than 100 feet of hose.

**2021.3.** Class H standpipe outlets shall be located below the glide path. The glide path shall be based on 1-foot vertical to 8-foot horizontal travel.

**2021.4.** Class H standpipe hose outlets shall be readily accessible to the Fire Department.

**2021.5.** Class H standpipe components, material, identification, protection and installation shall comply with the applicable requirements for standpipe systems.

**2021.6.** Class H standpipes shall be flushed for at least one minute.

## **2021.7. Water Supply.**

**2021.7.1.** Class H standpipes shall be designed to automatically provide a flow of at least 100 g.p.m. at 65 psi residual pressure.

**2021.7.2.** The emergency supply for Class H standpipes in buildings over 75 feet in height shall have at least 2500 gallons usable capacity in case of failure of the normal power and water services. A Fire Department inlet connection shall be acceptable as this source, provided it complies with the requirements for the Fire Department connection for automatic sprinklers.

**2021.7.3.** When the maximum working pressure exceeds 175 psi at a Class H standpipe outlet, a pressure regulator shall be installed to reduce the static pressure from the outlet to 175 psi or less.

**2021.8.** A minimum 2-inch bypass shall be made between the City water main and the downstream side of any pump when that connection will provide the minimum required flow and pressure for a Class H standpipe.

## **2021.9. Hoses.**

**2021.9.1.** Each Class H standpipe outlet shall have a hose valve, fire hose and nozzle.

**2021.9.2.** Fire hoses shall be listed.

**2021.9.3.** Fire hoses shall be 1½ inches in diameter and not over 100 feet long.

**2021.9.4.** Fire hoses shall be lined.

**2021.9.5.** Hose nozzles shall be listed 1½ inch combination fog and straight stream type and shall be of a design acceptable to the Fire Department.

**2021.9.6.** Fire hoses exposed to the weather shall be protected by hose cabinets.

## **2021.10. Hose Racks, Reels and Cabinets.**

**2021.10.1.** Hose racks and reels shall be listed.

**2021.10.2.** Any hose cabinet that can be locked shall have an opening with a pane of single-strength glass at least seven inches high and as wide as the construction of the door will permit.

**2021.10.3.** Hose cabinets that can be locked shall be labeled "CAUTION – FOR FIRE FIGHTING BY TRAINED PERSONNEL ONLY" in contrasting letters at least three inches high.

**2021.11.** Outlets shall not be under control of fire sprinkler floor control valves.

## **2030.0. FIRE PUMPS AND DRIVERS.**

Fire pumps, their drivers and associated piping and equipment shall conform to the requirements set forth in NFPA 20-2003 with the following exceptions, modifications and additions:

1. Sections 1.4 through 1.4.3 are not adopted.

2. Section 5.7.1 is modified to read:

**5.7.1.** Fire pumps, equipment used with fire pumping systems, devices and attachments shall be listed. A copy of the manufacturer's certified pump test characteristic curve shall be available for comparison of results of

field acceptance tests. The fire pump as installed shall equal the performance as indicated on the manufacturer's certified shop test characteristic curve within the accuracy limits of the test equipment.

3. Section 5.11.1.4 is modified to read:

**5.11.1.4.** The relief valve shall discharge to an approved location.

4. Section 5.14.2.1 is added to read:

**5.14.2.1. General.** Installation of above-ground suction piping shall conform to the requirements for fire sprinkler piping.

5. Section 5.14.4.1 is modified to read:

**5.14.4.1. Pump Bypass.** A fullway pump bypass with check valve shall be connected downstream of the fire pump shutoff valve when available pressure will supply useful protection with the pump off. There shall be two control valves to isolate check valves in each bypass.

6. Section 5.14.11 is added to read:

**5.14.11. Fire Department Connections.** Fire Department connections shall not be connected on the suction side of a fire pump.

7. Section 5.17 is modified to read:

**5.17. Protection of Piping Against Damage Due to Movement.** Clearance for the piping shall conform to the requirements of Section 9.3.4 of NFPA 13-2002.

8. Sections 5.19.2 through 5.19.2.3.3 are not adopted.

9. Section 5.19.3.5 is added to read:

**5.19.3.5. Label.** Test header hose valves shall be labeled "TEST CONNECTIONS."

**EXCEPTION:** Temporary fire pumps and standpipe outlets.

10. Section 5.24.8 is added to read:

**5.24.8. Pressure Maintenance (Jockey or Makeup) Pumps.** A pressure maintenance pump shall be installed with each fire pump system.

**EXCEPTION:** Fire pump serving Class II standpipes, temporary standpipes and fire pumps serving fire sprinkler systems in one-and two-family dwellings.

11. Chapter 9 of NFPA-20 is not adopted.

12. Sections 10.1 through 10.4.8 are not adopted.

13. Sections 10.6 through 10.9.5 are not adopted.

14. Section 11.4 is modified to read:

**11.4. Fuel Supply and Arrangement.** Fuel supply and arrangement shall be installed as required by the Los Angeles Fire Code.

15. Sections 11.4.1 through 11.4.8 are not adopted.

## **2040.0. UNDERGROUND FIRE PROTECTION PIPING.**

This section regulates underground fire protection piping between the City water main or other source of supply and fire hydrants, fire sprinkler risers and monitor nozzles. Above ground standpipe piping and water spray system risers shall conform to all applicable code requirements for fire sprinkler piping and to the requirements set forth in NFPA 24-2002 with the following exceptions, modifications and additions:

1. Chapter 2 is not adopted.

2. Section 5.9.1 is modified to read:

**5.9.1. General.** Fire Department connections shall comply with the applicable requirements for fire sprinkler systems.

3. Section 5.9.1.5 is added to read:

**5.9.1.5. Control Valve.** A control valve shall be installed between the City check valve and the point of connection of the Fire Department connection to the underground piping.

4. Section 7.1.1.1 is modified to read:

**7.1.1.1. Hydrant Valves.** Each fire hydrant shall be isolated by a listed key-type gate valve located at least four feet and not more than ten feet from the fire hydrant. The valve shall not be located in a parking space. No fire sprinkler riser valve shall control any fire hydrant.

5. Section 7.1.5 is added to read:

**7.1.5. Water Supplies.** Water supplies for fire hydrant, monitor nozzle and water spray systems shall be approved by the Fire Department.

## **2050.0. FIRE PROTECTION TANKS.**

Tanks for water storage for fire protection systems and associated piping shall conform to the requirements of NFPA 22-2003 with the following exceptions, modifications and additions:

1. Section 4.1.1 is modified to read:

**4.1.1. Size.** Tanks shall be designed to supply the required water flow for the required duration.

2. Section 7.2.6.4 is added to read:

**7.2.6.4. Air Pressure Gage.** The minimum required air pressure of the tank shall be clearly and permanently posted next to the air pressure gage.

3. Section 13.2.3 is modified to read:

**13.2.3. Pipe Material.** Water fill and tank discharge, piping and valves shall conform to the material and installation requirements for fire sprinkler piping.

4. Section 13.2.12.4 is added to read:

**13.2.12.4. Valve.** A readily accessible indicating-type control valve shall be installed in the water filling piping so as to isolate each tank.

5. Section 13.4.1 is modified to read:

**13.4.1 Tank Fill.** Each tank shall be equipped with an automatic tank fill line that shall be sized to fill the tank in eight hours but shall not be smaller than two inches in diameter.

For high-rise buildings see Section 2060 of this chapter.

6. Sections 13.4.1.1 through 13.4.1.4 are not adopted.

7. Section 13.8.3 is added to read:

**13.8.3. Monitor.** High and low level alarms shall be closed circuit electric alarms that sound an alarm and turn on an indication light at a permanently staffed location when the water level is not within ten percent of the design volume.

## **2060.0. HIGH-RISE BUILDINGS.**

**2060.1.1.** One or more water tanks shall be installed to serve the fire sprinklers and standpipes in a high-rise building. No tank shall serve more than one building, however, one water service may supply tanks for more than one building, structure or tower.

**2060.1.2.** The capacity of the tank shall be based on the required standpipe demand capacity for the duration as specified in Table No. 11.2.3.1.1 of NFPA 13 but not less than 30,000 gallons.

**2060.1.3.** The tank shall be supplied from the City water main via a fill line. The fill line shall be sized to replenish the water in the tank at a rate equal to, or greater than, the required fire pump capacity. The fill line shall be a minimum of two inches in diameter and may have multiple inlets into the tank. Each fill line inlet shall be provided with a manual shut off valve in the open position as well as an automatic valve. The fill line bypass shall be provided around all fill lines with a shut off valve that is normally closed. Means shall be provided to flow test the automatic fill lines.

An approved tank-fill line connected to the Fire Department connection shall also be installed. These fill lines shall have listed shutoff valves that are normally closed. The tank need not be on the roof.

For systems with multiple fill lines, the overflow system may be designed based on the failure of the largest fill valve serving the tank.

**2060.1.4.** In buildings over 275 feet high, fire sprinklers serving each floor shall be supplied from two standpipe risers. The supply shall be adequate with one connection shut off. Each connection to a riser shall have a shutoff valve and a check valve.