



## STANDARD 14.7.2

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### INSTALLATION OF COMMERCIAL SPRINKLERS

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*Please note that the District assumes no liability for any damages incurred directly or indirectly as a result of any errors, omissions, or discrepancies between this standard and any applicable law. It is the sole responsibility of the person or persons conducting any work pursuant to this standard to ensure their work complies with any and all applicable codes, ordinances, and regulations.*

#### CHAPTER 1 ADMINISTRATION

**1.1 Scope.** This standard applies to the design and installation of automatic fire sprinkler systems within the Jurisdiction of the Ventura County Fire Protection District (VCFPD). This standard shall be used in conjunction with the Ventura County Fire Code (VCFC), the 2010 California Building Code (CBC) and NFPA 13-2010 and any other applicable standards.

**1.2 Purpose.** This standard is prepared for the use and guidance of those charged with designing, installing, testing, and maintaining commercial sprinkler systems and associated appurtenances.

#### **1.3 Responsibility.**

**1.3.1 General.** All individuals and companies who intend to engage in the installation or alteration of sprinkler systems are subject to the requirements of this standard.

**1.3.2 Overhead Design.** Overhead sprinkler plans shall be designed by a C-16 licensed contractor or by a Registered Professional Engineer (Civil, Mechanical, or Fire Protection), licensed by the State of California (Board of Professional Engineers). All copies of the plans shall be stamped and signed by the licensed individuals.

**1.3.3 Underground Design.** Underground fire protection plans shall be designed by a licensed contractor (A, C-16, C-36 or C-34) or by a Registered Professional Engineer (Civil, Mechanical, or Fire Protection), licensed by the State of California (Board of Professional Engineers). All copies of the plans shall be stamped and signed by the licensed individuals.

**1.3.4 Overhead Installation.** The overhead sprinkler system shall be installed by an individual or firm that holds a State of California Contractors License (C-16).

**1.3.5 Underground Installation.** The underground fire protection system shall be installed by an individual or firm that holds a State of California Contractors License (A, C-16, C-36 or C-34).

**1.3.6 Installing Contractor.** Contractors may only design systems that the firm has a contract to install.

**1.4 Permits.** A construction permit is required for the installation of or modification to automatic fire sprinkler systems.

**1.4.1** Construction permits shall automatically become invalid unless an inspection authorized by such permit is commenced within 6 months of being issued.

**1.4.2** Construction permits shall require an inspection at a minimum of every 6 months or such permit shall become invalid.

**1.4.3** Construction permits that have become invalid may be re-issued, if all of the following conditions are met:

- (1) The permit was issued or an inspection has occurred within the previous 12 months.
- (2) No changes have been made or will be made in the original construction documents.
- (3) Previously approved construction documents shall be provided to VCFPD.
- (4) Fees equal to one-half the amount for a new permit have been paid.

## **CHAPTER 2 DEFINITIONS**

**2.1 General.** The following words and terms shall, for the purposes of this standard and permit requirements of the VCFC, have the meanings shown herein.

**2.2 System Side (yard) Hydrants.** Connected to underground piping between the FDC and the sprinkler riser of a fire sprinkler system.

**2.3 Underground Fire Line.** The underground fire protection line between the backflow device and the first joint above grade shall be considered the underground fire line.

**2.4 Ventura County Fire Code (VCFC).** The specified portions of the California Building Standards Codes known as California Code of Regulations, Title 24, Part 9, "California Fire Code (CFC)" as adopted by the State Fire Marshal (SFM) and; portions of The International Fire Code (IFC), 2009 Edition referenced by the California Building Standards Code and not adopted or modified by the SFM and; the VCFPD amendments contained in Ordinance 27 to the above-referenced codes.

## **CHAPTER 3 UNDERGROUND FIRE LINES**

**3.1 General.** All sprinkler systems shall have a single supply main serving as a dedicated fire line to the automatic sprinkler system.

**3.2 Backflow Prevention Devices.** Backflow devices are not a requirement of the Fire Department. Please check with the appropriate water company for information.

**3.3 Ferrous Metal Pipe.** All ferrous metal pipe shall be lined and additionally, steel pipe shall be coated and wrapped. For buried pipe, galvanizing, internally or externally, does not meet the requirements of this section.

***Exception:** Internal galvanizing shall be permitted as the lining for the pipe between the check valve and the FDC.*

**3.4 Buried Joints.** Buried joints and fittings shall be of an approved type and compatible with the pipe being used. Steel pipe fittings shall be coated, wrapped and lined.

**3.5 Ductile Iron.** Ductile iron pipe installed at or below grade shall be continuously sleeved to inhibit corrosion.

**3.6** Pipe joints shall not be located under foundation footings. ***The pipe under the building or building foundation shall not contain mechanical joints. 2010 NFPA 13 as amended by California.***

**3.7** An annular space shall be provided for pipes passing through walls or slabs in accordance with NFPA 13.

## CHAPTER 4 VALVES

**4.1 Backflow Valves.** Indicating valves on backflow devices are acceptable for the system shut-off valves on installations with only one riser and with no system side hydrants.

**4.1.1** Indicating valves on backflow devices shall be chained and locked in the open position prior to final inspection.

**4.2 Multiple Service Connections.** When one fire service line serves multiple buildings and/or hydrants, post indicator valves (PIV) or outside screw and yoke (OS&Y) valves, approved check valves and FDC are required for every connection from a private service main to a building.

**4.3 Control Valves.** All automatic fire-sprinkler systems shall be provided with a dedicated indicating exterior control valve.

**4.3.1** All sprinkler control valves and sectional valves shall be painted red.

**4.3.2** All control valves, including sectional control valves, shall have a permanent identification sign to indicate their function prior to final.

**4.4 Floor Control Valves.** Floor control valves (indicating type) are required on each floor when the building has three floor levels or more. The valves shall be readily accessible to Fire Department personnel, and shut off the entire floor without affecting other floors. Floor control valves shall be locked in the open position. Each floor shall be provided with an auxiliary drain valve, flow switch, and an inspector's test valve.

**4.5 Inspectors Test Valve.** Inspectors test valves shall be installed on all automatic fire-sprinkler systems.

**4.5.1** Inspectors test valves shall be located in an approved remote area.

**4.5.2** Inspectors test valves shall be located inside the building in a readily accessible location.

**4.5.3** Test valves located within a wall shall be protected by a wall panel door with a simple turn knob. Panel doors kept closed by screws or locks may be acceptable. The panel door shall have an "Inspector Test Valve" identification sign posted on the outside.

## CHAPTER 5 FIRE DEPARTMENT CONNECTIONS (FDC)

**5.1 General.** Each building shall be provided with a dedicated Fire Department Connection (FDC).

***Exception:*** Unless approved by the Ventura County Fire Department

**5.2 Access.** FDC shall be accessible.

**5.2.1** FDC's shall be facing the public street and shall be set back a maximum of 2 feet from the face of the curb or the rear of the sidewalk, and at a height of 2 to 3 feet above the finished grade.

**5.2.2** Maintain 3 feet clear radius around fire department connections.

**5.2.3** When installed in planters FDC's shall be provided with a minimum 3'x3' square concrete pad.

**5.2.4** Where subject to mechanical damage, protection shall be provided. The means of approved protection shall be arranged in a manner that will not interfere with the connection to the inlets.

**5.3 Visibility.** FDC's shall be visible.

**5.3.1** FDC shall have a permanent identification sign to indicate building address, and what it controls. (See Exhibit A)

**5.3.2** FDC heads shall be painted red.

**5.4 Proximity to Hydrant.** FDC's shall be located within 150 feet of a hydrant.

**5.5 Construction.** FDC connections shall be of all brass construction.

**5.5.1** All FDC's shall have two inlets, each with a clapper.

*Exceptions: The following shall apply:*

(1) *Systems that have been hydraulically designed with a 2 ½ inch backflow assembly.*

(2) *13R systems are permitted to be provided with a single 2 ½ inch inlet.*

**5.5.2** Protective metal covers or plugs shall be provided on the inlets. (No plastic)

**5.6 Standpipe Connection.** When standpipes are connected to the fire sprinkler piping, a UL listed 6 inch FDC with four 2 ½ inch inlets shall be provided. Each inlet shall be equipped with its own clapper.

**5.7 System Side Hydrants.** When system side (yard) hydrants are connected to the underground fire sprinkler piping, a UL listed 6 inch FDC with four 2 ½ inch inlets shall be provided. Each inlet shall be equipped with its own clapper.

## CHAPTER 6 FIRE HYDRANTS

**6.1 General.** Prior to construction, fire hydrant type, location, and required fire flow are determined by this department for each building, in accordance with the Ventura County Fire Code 2010 (VCFC). (See Fire Prevention Standard 14.5.3)

**6.2 Control Valves.** Fire hydrants shall be provided with shut-off valves located in the street or driveway, within 4 to 10 feet of the hydrant.

**6.3 System Side Hydrants.** Require Fire Department approval and are only permitted when design constraints provide no other alternative.

**6.3.1** If system side hydrants are used, the mains must be sized to meet the fire flow determined by this department. Hydraulic calculations shall be submitted to verify that the pipe size will provide the required gpm at 20 psi residual pressure.

**6.3.2** System side hydrants shall require a UL listed 6 inch FDC with four 2 ½ inch inlets. Each inlet shall be equipped with its own clapper.

**6.3.3** System side hydrants shall be painted yellow with blue caps.

**6.3.4** Each system side hydrant shall have “SS” stenciled on the barrel to indicate it is on the system side. Following the “SS” shall be the total number of system side hydrants. For example, if there are four system side hydrants, each shall be stenciled with “SS-4”. The letters and numbers shall be blue and a minimum of 1 ½ inch high.

**6.3.5** System side hydrants shall be provided with shut-off valves located in the street or driveway, within 4 to 10 feet of the hydrant.

## CHAPTER 7 OVERHEAD SYSTEMS

**7.1 General.** Automatic fire-sprinkler systems shall comply with this chapter where applicable.

**7.2 Clearance from Obstructions.** For maintenance and repair purposes, a clearance of 3 feet shall be provided around all risers. If a riser is to be concealed by a wall or closet, access to the riser shall be provided by a door with minimum dimensions of 2 feet by 6 feet 8 inches. The door shall have a “**Sprinkler Riser**” identification sign posted on the outside.

**7.3 Trash Enclosures.** All trash areas designed for storage in excess of 1.5 cubic yards (40.5 cubic feet) that are located within 5 feet of combustible walls, openings or combustible roof eave lines, shall be protected by an automatic sprinkler system.

**7.4 Sway Bracing.** Plans submitted for plan check must show complete hanger and sway bracing details.

**7.4.1** Lag screws or power-driven fasteners shall not be used to attach braces to the building structure.

**7.4.2** Fastening methods other than those identified in NFPA 13 shall be acceptable for use if certified by a registered Professional Structural Engineer to support the loads determined and submitted to VCFPD.

**7.5 End of Line Restraints.** Branch lines that exceed 30 feet shall require end of line restraints.

**7.6 Alarm Bells.** Water flow alarm bells shall be visible on the address side of the building.

**7.7 Sprinkler Omissions.** Subject to the approval of the building official and with the concurrence of the fire code official, sprinklers may be omitted.

**7.7.1** When sprinklers are considered undesirable because of the nature of the contents or in rooms or areas, which are of noncombustible construction or contains electrical equipment.

**7.7.2** Sprinklers shall not be installed when the application of water, or flame and water, to the contents may constitute a serious life or fire hazard, as in the manufacture or storage of quantities of aluminum powder, calcium carbide, calcium phosphate, metallic sodium and potassium, quicklime, magnesium powder, and sodium peroxide.

**7.7.3** Safe deposit or other vaults of fire-resistive construction, when used for the storage of records, files, and other documents, and the files are stored in metal cabinets.

**7.7.4** Communication equipment areas under the exclusive control of a public communication utility agency, provided all of the following requirements:

- (1) The equipment areas are separated from the remainder of the building by one-hour fire resistive occupancy separation.
- (2) Such areas are used exclusively for such equipment.
- (3) An approved automatic smoke detection system is installed in such areas and is supervised by an approved central, proprietary or remote station service, or a local alarm which will give an audible signal at a constantly attended location.
- (4) Other approved fire protection equipment such as portable fire extinguishers or Class II standpipes are installed in such areas.

**7.7.5** Other approved automatic fire extinguishing systems may be installed to protect special hazards or occupancies in lieu of automatic sprinklers.

**7.7.6** The top of elevator shafts and elevator equipment rooms when machine rooms, shafts, and passenger cars meet ASME A17.1 requirements for fire resistive construction.

## **CHAPTER 8 NFPA 13R-2010 SYSTEMS**

**8.1 General.** Requirements for or design and installation of automatic sprinkler systems to protect against fires in residential occupancies up to and including four stories in height, refer to NFPA 13R-2010 and this chapter.

**8.2 Attic Sprinklers.** Sprinklers installed in attics on exposed CPVC piping to protect fuel fired equipment shall be listed for such use.

**8.3 Bathrooms.** All bathrooms, regardless of size, shall be protected by sprinklers, with the exception of the shower area.

**8.4 Dedicated Fire Lines.** Dedicated fire lines serving a fire sprinkler system shall be equipped with an approved 2 ½ inches or larger backflow prevention device.

## **CHAPTER 9 SPECIAL DESIGNS**

**9.1 Spec Buildings.** When fire sprinkler systems are required in buildings of undetermined use with ceiling height of 20 feet or less, they shall be designed and installed to have a sprinkler density of no less than that required for an Ordinary Hazard Group 2 with a minimum design area of 3,000 square feet. For buildings of undetermined use with ceiling height of over 20 feet, the system shall be designed as Extra Hazard Group 1, with a density of 0.33 square feet and a minimum design area of 3,000 square feet.

**9.2 Spray Booths.** Fire protection for spray booths shall be hydraulically calculated based on Extra Hazard Group 2. Pipe schedule is not allowed.

## **CHAPTER 10 LIMITED AREA SYSTEMS**

**10.1 General.** Limited area systems shall comply with the requirements of the Ventura County Fire Code 2010 (VCFC) 903.3.5.1.

**10.2 Domestic Service.** Limited area systems are permitted to be connected to the domestic service and shall require a control valve on the common main water supply line above grade at the structure and a control valve on the supply to the fixtures. There shall not be a valve on the sprinkler supply. Consult the water purveyor for alternative piping arrangements.

**10.3 Design Area.** Design shall be by the room design method as described in NFPA 13. Attic spaces shall be considered rooms.

## CHAPTER 11 PLANS SUBMITTAL

**11.1 General.** Plans and specifications shall be submitted to VCFPD, Fire Prevention Bureau as indicated elsewhere in this document.

**11.1.1** Obtain any permits from the appropriate **Building & Safety Department** to install the automatic fire-extinguishing system.

**11.2 Plans and Specifications Submittal.** At the time of building permit application for new structures designed to accommodate automatic fire sprinklers, or for any installation of or modification to an automatic fire sprinkler system, plans and specifications shall be submitted for review and approval. In addition to the information required by the applicable standard, the submittal shall include the information specified herein. Once approved, a copy of the approved plan shall be maintained on the premises.

**11.2.1** Plans and specifications shall not be required to be submitted for review and approval when there is an addition or a modification (i.e. T.I) of 30 sprinklers or less to an existing sprinklered building. Permits, inspections and fees shall be required regardless of number of sprinklers.

**11.3 Submittal Requirements.** Submit a minimum of three sets of plans, hydraulic calculations, Fire Prevention Bureau incoming transmittal form and the appropriate fees to the Ventura County Fire Prevention Bureau located at 165 Durley Avenue, Camarillo CA 93010. Fire Prevention Counter hours are Monday through Friday, 8:00 a.m. to 5:00 p.m.

**11.4 Fees.** Appropriate fees can be found in the Ventura County Fire Protection District's Fee Schedule at <http://fire.countyofventura.org> or by calling the Fire Prevention Counter at (805)389-9738. Fees can be paid by check/money order, Visa or MasterCard. Plan Check fees include the original plan check and one re-check. Please ensure that all corrections are made prior to re-submission to avoid additional fees. All fees shall be paid at the time of plan submittal.

**11.5 Plan Approval.** Plans will be checked and if approved, will be stamped "**Acceptable**", signed and dated. The Fire Department will retain one set.

**11.6 Case Number.** The Fire Department has instituted the use of a "**Case Number**" for tracking all projects submitted for review. To provide faster customer service, please refer to your Case Number when contacting this Department. Your Case Number will also be listed on the Fire Department approved plans.

**11.7 Field Changes.** Field changes may require re-submittal of plans along with additional plan check fees.

## CHAPTER 12 PLANS SPECIFICATIONS

**12.1 Specifications.** Specifications for Commercial Automatic Fire Sprinkler Systems shall be drawn with care by a trained person.

**12.2 Size and Scale.** Plans shall be drawn on a minimum of 24" x 36" paper and shall be drawn to an indicated scale of not less than 1/8 inch = 1 foot for overhead plans and 1 inch = 20 feet for underground plans.

**12.3 Plans.** The following items shall be included in all Commercial Automatic Fire Sprinkler System plan specifications:

- (1) Scope of work of the project
- (2) Name of owner and/or occupant.
- (3) Location of project, including parcel #, street, number, and city.
- (4) Name of sprinkler installer, address, phone number, type of license and license number.
- (5) Plot plan showing structures, roads and driveways, underground pipe size and type, point of supply connections, depth of bury, type and size of any valves.
- (6) Piping plan showing point of supply, pipe, and structure elevations as they relate to each other.
- (7) Full height cross-section showing building construction types.
- (8) Riser detail showing main drain, pressure gauge, flow switch, and relief valve (where applicable).
- (9) Detailed calculations.
- (10) Sprinkler head spacing.
- (11) Show clearly all non-sprinklered areas.
- (12) Indicate manufacturer, style, model, orifice size, and "K" factor of each sprinkler used.
- (13) Type and size of each pipe.
- (14) Hanger detail.
- (15) Sway brace detail.
- (16) Indicate type of fitting used.
- (17) Water flow information including: Flow location, static pressure (psi), residual pressure (psi), flow (gpm), date, time and test conducted by or information supplied by \_\_\_\_\_.

**12.4 Hydraulic calculations.** The following information shall be contained in the hydraulic calculations:

- (1) Calculations must conform to manufacturer's specifications.
- (2) "K" factors for all sprinklers.
- (3) "C" values for the type of pipe used.
- (4) A pump curve or city supply curve, where the total demand point is clearly plotted.

## **CHAPTER 13 VERBATIM NOTES**

**13.1 Verbatim Notes.** The following notes shall be completed and placed verbatim on the working plans.

**13.1.1** Construction permits shall automatically become invalid unless an inspection authorized by such permit is commenced within 6 months of being issued.



**13.1.2** Construction permits shall require an inspection at a minimum of every 6 months or such permit shall become invalid.

**13.1.3** A current 5-year inspection certification tag shall be affixed to the system riser(s) and a copy of the inspection report shall be on file with this department per the VCFC and NFPA 25-2006 California Edition.

**13.2 Underground Notes.** The following notes shall be completed and placed verbatim on the working underground plans.

**13.2.1** Thrust blocks to be designed, located, and installed per NFPA 13-2010, and Ventura County Fire Department requirements.

**13.2.2** Underground supply piping 4 inches or greater shall be PVC C900, Class 150, or lined and sleeved ductile iron with a minimum bury of 36 inches.

**13.2.3** Underground supply piping less than 4 inches shall be CPVC or Type-L copper with a minimum bury of 36 inches.

**13.2.4** All bolted joint accessories shall be cleaned and thoroughly coated with asphalt or other corrosion retarding material, and then wrapped in plastic after installation and prior to backfill.

**13.2.5** Underground mains and lead-in connections to system risers shall be flushed before connection is made to sprinkler, standpipe, or other fire protection system piping to remove foreign materials. Flushing shall be in the presence of a Fire Prevention representative and in accordance with NFPA 13-2010.

**13.2.6** All new private fire service mains shall be pressurized to 200 psi, or 50 psi above the maximum static pressure, when the maximum static pressure is in excess of 150 psi. The pressure shall be provided for at least 2 hours prior to the scheduled inspection time.

**13.2.7** The trench shall be backfilled between joints before testing to prevent movement of pipe.

**13.2.8** Underground pipe joints, thrust blocks, and other anchors shall be left exposed for inspection.

**13.2.9** Tests shall be made by the contractor in the presence of a Fire Prevention representative.

**13.2.10** All control valves shall be indicating, with a tamper switch.

**13.2.11** Fire department connection (FDC):

- (1) Shall be accessible and visible.
- (2) Shall be facing the public street and set back a maximum of 2 feet from the curb face or rear of the sidewalk, and at a height of 2 to 3 feet above the finished grade.
- (3) Maintain a 3 foot clear radius around FDC's.
- (4) Provide a minimum 3'x3' square concrete pad.
- (5) Where subject to mechanical injury, protection shall be provided.
- (6) Shall have an identification sign to indicate building address and what it controls.

- (7) Shall be of all brass construction with two inlets, each with a clapper and protective metal cover or plug (no plastic).
- (8) Shall be painted red.
- (9) Shall be within 150 feet of a fire hydrant.

**13.3 Overhead Notes.** The following notes shall be completed and placed verbatim on the working overhead plans.

**13.3.1** Underground mains and lead-in connections to system risers shall be flushed before connection is made to sprinkler, standpipe, or other fire protection system piping to remove foreign materials. Flushing shall be in the presence of a Fire Prevention representative and in accordance with NFPA 13-2010.

**13.3.2** All overhead fire lines shall be pressurized to 200 psi, or 50 psi above the maximum static pressure, when the maximum static pressure is in excess of 150 psi. The pressure shall be provided for at least 2 hours prior to the scheduled inspection time.

**13.3.3** Inspectors test valves shall be installed on all automatic fire-sprinkler systems.

**13.3.4** Inspectors test valves shall be located inside the building in a readily accessible location.

**13.3.5** Test valves located within a wall shall be protected by a wall panel door with a simple turn knob. Panel doors kept closed by screws or locks may be acceptable. The panel door shall have an “**Inspector Test Valve**” identification sign posted on the outside.

**13.3.6** Lag screws or power-driven fasteners shall not be used to attach braces to the building structure.

**13.3.7** Fastening methods other than those identified in NFPA 13 shall be acceptable for use if certified by a registered professional engineer to support the loads determined and submitted to VCFPD.

**13.3.8** Branch lines that exceed 30 feet shall require end of line restraints.

**13.3.9** Water flow alarm bells shall be visible on the address side of the building.

**13.3.10** At the time of new system acceptance, an installation tag shall be affixed to the riser as prescribed by Title 19, California Code of Regulations, Chapter 5.

## **CHAPTER 14 INSPECTIONS**

**14.1 General.** The inspection fee that is paid at the time of plan submittal will provide you with a pre-determined number of inspections to complete the project. For projects that exceed this limit, inspection requests will not be accepted unless additional fees are paid prior to scheduling an inspection.

**14.2 Responsibility.** It is the responsibility of the installing contractor to be on the job site during the inspection with approved plans. Failure to do so will result in the cancellation of the inspection. Cancelled inspections will be counted as one inspection.

**14.3 Inspection Requests.** Inspection requests can only be taken from the installing contractor. Inspections shall be requested Monday through Friday prior to 3:00 p.m., one business day prior to inspection.

**14.3.1** It is the intent of the Ventura County Fire Prevention Bureau to perform inspections one business day after the inspection has been requested. However, due to training requirements, meetings, emergency services and other scheduled and non-scheduled events it cannot be guaranteed that all inspections will be conducted the next business day.

**14.4 Schedule by Phone.** Call (805) 389-9744 one business day prior to inspection for scheduling an inspection. The inspection request line is open Monday through Friday between 8:00 a.m. and 3:00 p.m.

**14.5 Schedule by Fax.** Inspections can also be scheduled via fax at (805) 388-4356. Ventura County Fire Prevention Bureau form FP13.1.3, found at <http://fire.countyofventura.org>, must be used to request inspections. Fax inspection requests must be received prior to 3:00 p.m.

**14.6 Contact Information.** Be sure to leave your phone number, when you schedule an inspection by phone or fax, where the inspector can call you back, after 7:30 a.m. the day of the inspection, to notify you of your inspection time.

**14.7 Inspection Times.** Inspection times are approximate and may vary because of delays at previous inspections or emergency response by Fire Department personnel. Please allow time on either side of the inspection time for the inspector to arrive.

## **CHAPTER 15 APPROVAL OF SPRINKLER SYSTEMS AND PRIVATE FIRE SERVICE MAINS**

**15.1 General.** Inspections of underground and overhead piping will not be conducted prior to plans being approved.

**15.2 Underground Piping.** The installing contractor shall be responsible for performing all required inspections.

**15.2.1** All underground fire lines shall be pressurized to 200 psi, or 50 psi above the maximum static pressure, when the maximum static pressure is in excess of 150 psi. The pressure shall be provided for at least 2 hours prior to the scheduled inspection time. Underground pipe joints, thrust blocks, and other anchors shall be left exposed for inspection.

**15.2.2** All private fire service mains shall be flushed prior to connection to the overhead piping.

**15.2.3** All sectional control valves shall be verified to be in the open position in the presence of a Fire Prevention representative at final inspection.

### **15.3 Overhead Piping.**

**15.3.1** The sprinkler system shall be field tested and inspected at the rough plumbing stage (i.e. exposed pipe and fitting stage) by the Fire Prevention Bureau.

**15.3.2** All overhead fire lines shall be pressurized to 200 psi, or 50 psi above the maximum static pressure, when the maximum static pressure is in excess of 150 psi. The pressure shall be provided for at least 2 hours prior to the scheduled inspection time.

**15.3.3** A hydrostatic test is required only on tenant improvement projects involving pipe sizes 2 ½ inches or larger.

**15.4 Final Inspection.** The sprinkler system and all of the related components shall be tested and inspected by the Fire Prevention Bureau at the final inspection stage, prior to occupancy being granted.

**15.4.1** At the time of new system acceptance, an installation tag shall be affixed to the riser as prescribed by Title 19, California Code of Regulations, Chapter 5.

**15.4.2** At the time of tenant improvement acceptance a current 5-year certification tag shall be affixed to the system riser and a copy of the inspection report shall be filed with this department in accordance with NFPA 25-2006 California Edition. All reports and tags shall be completed using the forms available in Annex B of NFPA 25.

## **EXHIBIT A**

### **VENTURA COUNTY FIRE PROTECTION DISTRICT SPECIFICATIONS FOR FIRE DEPARTMENT CONNECTION ADDRESS PLACARD**

ⓐ		ⓐ
	BUILDING NUMBER	
	STREET NAME	
	___ RISER(S) *	
ⓐ		ⓐ

**NOTE:**

MATERIAL: 18 Gage metal

SIZE: 6" x 8"

LETTERS: 3/4" White letters on red background

\* Number of Riser(s)