

STANDARD 508 COMMERCIAL FIRE 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 Purpose. This standard is prepared for the use and guidance of those charged with designing, installing, inspecting, approving or maintaining commercial fire sprinklers systems and associated appurtenances.

1.2 Scope. This standard applies to the design and installation of automatic fire sprinkler systems in commercial. Industrial and multi-family structures within the jurisdiction of the Ventura County Fire Protection District (VCFPD). This standard shall be used in conjunction with the current adopted editions of the Ventura County Fire Code (VCFC), National Fire Protection Association (NFPA) Standard 13 /13R and any other applicable standards.

1.3 Responsibility.

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

1.3.2 Overhead Design. Overhead fire 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 plans shall be stamped and signed by the licensed individuals.

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

1.3.4 Underground Installation / Design. Underground fire protection plan shall be designed and installed 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 plans shall be stamped and signed by the licensed individuals.

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 12-months of being issued.

1.4.2 Construction permits shall require an inspection at a minimum of every 12-months, or such permit shall become invalid.

1.4.3 Construction permits that have become invalid may be re-issued if all 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's Fire Prevention Bureau.
- (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 purpose 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 current adopted VCFPD Ordinance consisting of the current adopted edition of the California Fire Code; portions of the current adopted edition of the International Fire Code; and the VCFPD amendments thereto.

2.5 Water Purveyor. A public utility, a mutual water company, a governmental body, or other entity, owning and operating a water system and holding a valid permit to purveyor water from the State Department of Public Health or Ventura County Environmental Health Division. In the case of a public utility, it must also hold a valid "certificate of convenience and necessity" from the California Public Utilities Commission.

CHAPTER 3 UNDERGROUND FIRE LINES

3.1 General. All fire 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 regulated by the water company supplying the system.

3.3 Ferrous Metal Pipe. All ferrous metal pipe shall be lined, and 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 of 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.

3.4.1 Steel pipe fittings shall be coated, wrapped, and lined.

3.5 Thrust Blocks. Thrust blocks shall be placed between undisturbed earth and fitting to be restrained.

3.5.1 Thrust blocks shall be placed so that the joints will be accessible for repair. T-bolts, nuts, and glands should not be covered with concrete.

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

3.7 Pipe Joints. The pipe under the building or building foundation shall be continuous and not contain joints.

3.8 Annular Space. A minimum 2" annular space shall be provided with a sleeve (PVC) for pipes passing through walls or building foundations 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 no system side fire hydrants.

4.1.1 Indicating backflow valve 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 yolk (OS&Y) valves, approved check valves and FDC are required for every connection from a private service main to the building.

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

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

4.3.2 All sprinkler control valves and sectional valves shall be painted red.

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 the 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 the most remote area.

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

4.5.3 Inspector test valves and/or auxiliary drains 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.

4.6 Automatic Air Vent. Automatic Air Vent required per NFPA standards for all wet systems utilizing metallic pipe. Remote inspectors test valve could be installed to satisfy this requirement.

CHAPTER 5 FIRE DEPARTMENT CONNECTIONS (FDC)

5.1 General. Each building shall be provided with a dedicated Fire Department Connection (FDC) per NFPA 13.

5.2 Access. FDC shall be accessible.

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

5.2.2 Maintain a 3-foot clear radius around the fire department connection.

5.2.3 FDC's shall be provided with a minimum 3' x 3' 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 shall be visible.

5.3.1 FDC shall have a permanent identification sign attached indicating the building address, and what it controls. Nonmetal straps and chains are not approved. Signs shall be attached using solid metal hardware.

5.3.2 FDC 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 single 2 $\frac{1}{2}$ " inch backflow assembly.

(2) 13R systems are permitted to be provided with a single $2 \frac{1}{2}$ " 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.

CHAPTER 6 – OVERHEAD SYSTEMS

6.1 General. Automatic fire sprinkler systems shall comply with this chapter where applicable.

6.2 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 **"Fire Sprinkler Riser"** identification sign posted on the outside.

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

6.4 Fastening Methods. 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's Fire Prevention Bureau.

6.5 Alarm Bells. Water flow alarm bells shall be visible from the address side of the building.

6.6 Mechanical Tees. All cutouts' "tokens" must be attached to mechanical tees and will be verified during rough fire sprinkler inspection.

CHAPTER 7 – NFPA 13R SYSTEMS

7.1 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 as amended by the Ventura County Fire Code.

7.2 Attic Sprinklers. Attic Sprinklers required as amended by Ventura County Fire Code.

7.3 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 8 – SPECIAL DESIGNS

8.1 Spec Buildings. When fire sprinklers are required in buildings of undetermined use with a 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 Ordinary Group 2 with a minimum design area of 3,000 square feet. For buildings of undetermined use with ceiling height over 20 feet, the system shall be designed a Extra Hazard Group 1, with a density of 0.33 square feet and a minimum design area of 3,000 square feet.

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

CHAPTER 9 – LIMITED AREA SYSTEMS

9.1 General. Limited area systems shall comply with the requirements of the VCFC.

9.2 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.

9.3 Design Area. Design shall be by the room design as described in NFPA13. Attic spaces shall be considered rooms.

CHAPTER 10 – PLANS SUBMITTAL

10.1 General. Plans and specifications shall be submitted to VCFPD's Fire Prevention Bureau as indicated elsewhere in this document.

10.2 Buildings Permits. Obtain any applicable permits from the appropriate Building and Safety Department to install the fire sprinkler system.

10.3 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 to review and approval. In addition to the information required by the appropriate standard, the submittal shall include the information specified herein. Once approved, a copy of the approved plan shall be maintained on the premises.

10.3.1 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 100 sprinklers or less to an existing sprinklered building. Permits, inspections, and fees shall be required regardless of the number of fire sprinklers.

10.3.2 The use of flex drops may require hydraulic proof calculation, which will be determined at the time of rough inspection.

10.4 Submittal Requirements. Submit a minimum of one set of digital plans, hydraulic calculations, incoming transmittal form, and the appropriate fees to the VCFPD's Fire Prevention Bureau located at

2400 Conejo Spectrum St, Thousand Oaks, CA 91320. Fire Prevention counter hours are Monday through Friday 7:30a.m. to 5:00 p.m.

10.5 Fees. Appropriate fees can be found in the VCFPD's Fee Schedule at vcfd.org or by calling the Fire Prevention Bureau at (805) 389-9738. Fees can be paid by check/money order, or by credit card. 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.

10.6 Plan Approval. Plans will be checked and if approved, will be stamped "**Acceptable**", signed and dated. The VCFPD will retain a digital copy of the plans.

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

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

CHAPTER 11 – PLAN SPECIFICATIONS

11.1 Review and Certification. Design and installation of systems shall be performed only by persons properly trained and qualified to design and/or install specific systems being provided. The installer shall provide certification to the authority having jurisdiction that the installation complies with the terms of the listing and the manufacturer's instructions and/or approved design.

11.2 Size and Scale. Paper 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. Electronic plans submittals are acceptable in a pdf format or on a flash drive.

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

- (1) Scope of work for the project.
- (2) Name of owner and/or occupant.
- (3) Location of the project, including the assessor's parcel number (APN), Street name, address 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 (including OS&Y), fire hydrants, and sprinkler riser.
- (6) Piping plan showing point of supply, pipe, and structure elevations as they relate to each other.

- (7) Building elevations and full height cross-sections showing building construction types.
- (8) Riser detail showing main drain, pressure gauges, 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. Sprinkler head cut sheets shall be attached to the plans.
- (13) Type and size of each pipe.
- (14) Complete hanger detail.
- (15) Complete sway brace detail.
- (16) Provide complete thrust block details in accordance with NFPA 24 on underground plans.
- (17) Indicate type of fitting used.
- (18) Water flow information including flow location, static pressure (psi), residual pressure (psi), flow (gpm), date, time and who conducted the test or supplied the information.

11.4 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.
- (5) The test data shall be reduced by 10% for future use in all hydraulic calculations.

CHAPTER 12 – VERBATIM NOTES

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

12.1.1 Construction Permits. Construction permits shall automatically become invalid unless an inspection authorized by such permit is commenced within 12-months of being issued.

12.1.2 Compliance with the Code. The issuance or granting of a permit shall not be construed to be a permit for, or an approval of, any violation of any of the provisions of the VCFC or of any other ordinance of this jurisdiction. Permits presuming to give authority to violate or cancel the provisions of the VCFC or other ordinances of this jurisdiction shall not be valid. The issuance of a permit based on construction documents and other data shall not prevent the fire code official from requiring the correction of errors in the construction documents and other data. Any addition to or alteration of approved construction documents shall be approved in advance by the fire code official, as evidenced by the issuance of a new or amended permit.

12.1.3 Current 5-Year Inspection Certification. 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 VCFPD's Fire Prevention BureauFire per the VCFC and NFPA 25. Any open violations will need to be corrected prior to final approval.

12.2 Underground Notes. The following notes shall be completed and placed on verbatim on the plans.

12.2.1 Thrust Blocks. Thrust blocks to be designed, located, and installed per NFPA 13, NFPA 24, and VCFPD requirements.

12.2.2 Underground Piping 4" or Greater. Underground supply piping 4 inches or greater shall be PVC C900, minimum DR18 rated, or lined and sleeved ductile iron with a minimum bury of 36" inches.

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

12.2.4 Bolted Joints. All bolted joints 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.

12.2.5 Underground Mains. Underground mains and lead in connections to system risers shall be flushed before connection is made to the sprinkler, standpipe, or other fire protection system piping to remove foreign material. Flushing shall be in the presence of a VCFPD's Fire Prevention Bureau representative and in accordance with NFPA 13.

12.2.6 Private Service Mains. All new private service mains shall be pressurized to 200 psi, or 50 psi above the maximum static pressure, when the maximum static pressure exceeds 150 psi. The pressure shall be provided for at least 2 hours prior to the scheduled inspection time.

12.2.7 Center Loading. The trench shall be backfilled between pipe joints before pressure testing to prevent movement of the pipe.

12.2.8 Inspection Prior to Bury. Underground pipe joints, thrust blocks, and other anchors shall be left exposed for inspection.

12.2.9 Control Valves. All control valves shall be of the indicating type with an electronically supervised tamper switch.

12.2.10 A Contractor's Material and Test Certificate for Underground Piping shall be provided to VCFD prior to final inspection.

12.2.11 Fire Department Connection. Fire Department Connection (FDC) shall comply with the following:

- (1) Shall be clearly visible and accessible.
- (2) Shall face the public street or fire lane and be set back 2 feet from the curb face or rear of the sidewalk, and at a height of 2 to 3 feet above finished grade.
- (3) Maintain a 3-foot clear radius around FDC's.
- (4) Provide a 3' x 3' square concrete pad around FDC.
- (5) Where subject to mechanical damage, protection shall be provided.
- (6) Shall have an identification sign permanently attached indicating building address and what it controls.
- (7) Shall be all brass construction with two inlets, each with a clapper and a protective metal cover or plug (no plastic).
- (8) FDC shall be painted red.
- (9) FDC shall be within 150 feet of a hydrant.
- (10) FDC shall be located a minimum of 25 feet from the building.

12.3 Overhead Notes. The following notes shall be completed and placed verbatim on the plans.

12.3.1 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 VCFPD's Fire Prevention Bureau representative and in accordance with NFPA 13.

12.3.2 Air venting is required on all wet pipe systems utilizing metallic pipe.

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

12.3.4 Inspector test valves shall be installed on all automatic fire sprinkler systems

12.3.5 Inspector test valves shall be located inside the building in a readily accessible location.

12.3.6 Test values 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 Value"** identification sign posted on the outside.

12.3.7 Lag screws or power-driven fasteners shall not be used to attach sway braces to the building.

12.3.8 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's Fire Prevention Bureau.

12.3.9 A Contractor's Material and Test Certificate for Aboveground Piping shall be provided to VCFD prior to final inspection.

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

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

12.3.12 All commercial automatic fire sprinkler systems with 20 or more fire sprinklers shall be monitored by a UL listed central station.

12.3.13 Systems shall be designed not to exceed 90% demand of available water supply.

12.3.14 Fire protection for spray booths shall be hydraulically calculated based on Extra Hazard Group 2.

CHAPTER 13 – INSPECTIONS

13.1 General. The inspection fee that is paid at the time of plan submittal will provide you with a predetermined 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.

13.2 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.

13.3 Inspection Requests. Inspection requests can only be fielded from the installing contractor. Inspections shall be requested Monday through Friday prior to 3:30 p.m., one business day prior to the inspection.

13.3.1 It is the intent of the VCFPD's Fire Prevention Bureau to perform inspections one business day after the inspection has been requested. However, do 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.

13.4 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.am. and 3:30 p.m.

13.5 Schedule by E-mail. Schedule by e-mail at <u>fire.inspections@ventura.org</u> one business day prior to the inspection.

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

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

CHAPTER 14 APPROVAL OF SPRINKLER SYSTEM AND PRIVATE FIRE SERVICE MAINS

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

14.2 Underground Piping. The installing contractor shall be responsible for performing all required inspections with the VCFPD's Fire Prevention Bureau representative.

14.2.1 All underground fire lines shall be pressurized to 200 psi, or 50 psi above the maximum static pressure, when the maximum static pressure is more than 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.

14.2.2 All private service mains shall be flushed prior to connection to the overhead piping.

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

14.3 Overhead Piping.

14.3.1 The sprinkler system shall be field tested and inspected at the rough plumbing stage (i.e., exposed pipe and fitting stage) by the VCFPD's Fire Prevention Bureau.

14.3.2 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 of150 psi. The pressure shall be provided for at least 2 hours prior to the scheduled inspection time.

14.3.3 A hydrostatic test is required only on tenant improvement projects involving pipe size 2 ½" inches or larger.

14.4 Final Inspection. The fire sprinkler system and all the related components shall be tested and inspected by a VCFPD Fire Prevention Bureau representative at the final inspection stage, prior to any occupancy being granted

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

14.4.2 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 VCFPD's Fire Prevention Bureau in accordance with NFPA 25. All reports and tags shall be completed using the forms available in Annex B of NFPA 25.

CHAPTER 15 SPRINKLER SYSTEM MONITORING AND ALARM

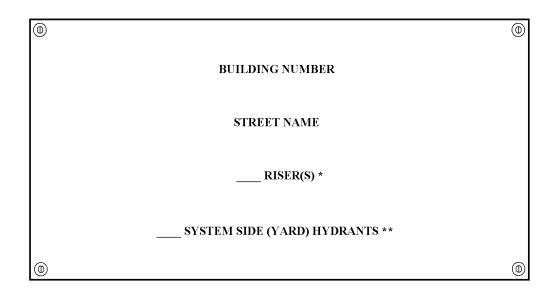
15.1 General. All commercial automatic fire sprinkler systems with 20 or more fire sprinklers shall be monitored by a UL listed central station.

15.2 Installation. Installation of the fire sprinkler monitoring system shall be in accordance with the current VCFD Fire Alarm standard.

<u>EXHIBIT A</u>

VENTURA COUNTY FIRE PROTECTION DISTRICT

SPECIFICATIONS FOR FIRE DEPARTMENT CONNECTION ADDRESS PLACARD



NOTE:

MATERIAL: 18 Gage Metal

SIZE: Minimum 6" x 8"

LETTERS: 3/4" White Letters on Red Background

- Number of Riser(s)
- Number of system side (yard) hydrants (If Applicable)