



## Kerrville Fire Marshal

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## Section 7

### The Inspection Process Details

The Fire Marshal and/or Fire Inspector may request additional inspections as needed.

See Inspection Requests and Procedures, for the guidelines to use when calling for inspection requests.

#### Governing Documents

All tests and installation must comply with, but not limited to, City of Kerrville Ordinance, the *International Fire Code* and applicable *NFPA* Codes.

#### 1. Fire Sprinkler Underground

- a. Visual: All underground piping and joints must be uncovered and exposed, with labeling of the pipe legible from grade. All thrust blocks will be visually inspected and must be uncovered and exposed to grade. Depth of bury of the pipe shall be measured and verified. All ductile iron, retaining rods, and other non-plastic components shall be externally coated for corrosion and poly wrapped.
- b. Hydrostatic Test: Underground piping will have to passed the visual inspection. The test will be at 200 psi or at 50-psi pressure in excess of the maximum static pressure when the maximum static pressure exceeds 150 psi, for a minimum of two hours. Testing to be from the gate valve to the top of the spigot, plus or minus 5 psi allowed.
- c. Flush: Upon completion of the underground hydrostatic test, the underground piping will be flushed, witnessed by the Fire Department. Proper methods and equipment to perform the flush must be used. All piping used to flush must be properly secured or retrained. Hoses may be used. Field Fire Inspector must approve of flushing method and equipment. **The flushing must be completed prior to stacking the riser to the overhead piping.**
- d. Fire Sprinkler Underground Final: Final Fire Marshal sign-off of completion of all inspections and the receipt of all State require paperwork.

#### 2. Fire Sprinkler Overhead

**Do not stack the riser until the underground flushing has been completed.** Check Fire Sprinkler Underground permit for verification of completion.

- a. Visual: All overhead piping and joints must be uncovered and exposed, with labeling of the pipe legible from the floor. All hangers will be visually inspected and must be uncovered and exposed to the floor.
- b. Overhead Hydrostatic Test: Overhead piping will be visually inspected with all joints exposed and labeling of the pipe turned downward. The test will be at 200 psi for a minimum of two hours. Plus or Minus 5 psi allowed.
  1. A hydrostatic test is required for all new installations.
  2. A hydrostatic test is required for all modifications/tenant finish-out with twenty or more sprinkler heads added and/or relocated.
- c. 24-hour air test: The test will be conducted at 40 psi of air for 24-hours with less than 1.5 psi loss.
- d. Trip Test: Operational test of the dry-pipe valve is performed and the quick opening device (500+ gallon systems) is tested, 750+ gallon systems must trip within 90 seconds.
- e. Compressor Test: Dry system compressor fills the system within 30 minutes.

- f. Riser Main Flush: Upon completion of the overhead hydrostatic test, the overhead piping will be drained and witnessed by the Fire Marshal.
- g. Riser Room: Verify riser room requirements, including floor drain for fire pumps, heat, light, markings, spare sprinkler head box and wrench, etc.
- h. Standpipe and Fire Department Connection (FDC): Hydrostatic testing if not already done, the test will be at 200 psi for a minimum of two hours. Plus or minus 5 psi allowed. A flow test at hydraulically most remote standpipe through FDC to verify required pressure and flow.
- i. Fire Pump: Hydrostatic testing (if not already done, the test will be at 200 psi for a minimum of two hours. No pressure drop or gain allowed.), all piping flushed, pump room requirements verified, and operational test conducted by manufacturer witnessed by the fire marshal.
- j. Fire Sprinkler Final: Final Fire Marshal sign-off at completion of all inspections and the receipt of all State required paperwork. *The inspection shall be conducted when all sheet rock and millwork is completed. The objective of this inspection is to verify that coverage is adequate after the initial hydrostatic test. This will give the Fire Marshal and the contractor(s) the opportunity to make any changes before there is a request for a Certification of Occupancy. Sprinkler heads must be clean and free from paint, construction debris, or other conditions that would affect the proper operation of the sprinkler-heads.*

3. **Fire Alarm**

- a. Rough Wiring/ above ceiling: All fire alarm wiring will be inspected for proper installation and penetration of any firewalls. *Fire alarm wiring shall not be tied to ceiling grid wire.*
- b. Audible Device Test: Ensure audible notification devices provide occupant notification for all areas without strobe devices.
- c. Visual Device Test: Ensure that all areas that do not have audible notification have visual coverage.
- d. Initiating Device Test: Test all smoke detectors and/or fire alarm initiating devices for Alarm and/or Standby conditions.
- e. Water flow: The water flow alarm will be tested by opening the inspectors test connection. The time delay feature on the flow switch switches must be set to a maximum delay of 90 seconds.
- f. Central Station Monitoring: Alarms and/or trouble signals are required to be monitored by a UL listed Central Station. Standard response to contact Fire Department shall be within 90 seconds.
- g. Device Address Test: All analog or addressable system will have all devices pulled and/or activated. The print out must comply with the devices that were pulled.
- h. Final: Final inspection.

4. **Kitchen Hood**

- a. Air Test: The nozzles protecting the cooking appliance shall be tested with compressed air to simulate activation.
- b. Utility Shut-off Test: All utilities connected to the protected cooking devices, shall have automatic shut-off valves.
- c. Manual Pull Station Test: Operation of the manual pull station shall bring about full system operation.
- d. Audible/Visual Notification: Audible and/or visual notification devices shall be tested.
- e. Fire Alarm Connection: Automatic fire-extinguishing systems shall be monitored by the building fire alarm system in accordance with NFPA 72.
- f. Final: Final inspection.

5. **Underground Storage Tank**

- a. See Installation Checklist for Underground Storage Tanks for all required inspections.

6. **Aboveground Storage Tank**

- a. See Installation Checklist for Aboveground Storage Tanks for all required inspections.

7. **Access Control Gates**

- a. Fire Lane Unobstructed. The fire lane shall have a clear width of 24-feet.
- b. Fail-Safe/Manual mode Verified. Test operation of Fail-safe/manual mode.
- c. Know Box Key Switch. Test the operation of the Knox Box Key switch.
- d. Emergency Ingress system Tested. Test openers and receivers.
- e. Access Control Gates Final: Final inspection.

8. **Access Control**

- a. Magnetic-Lock/Push Bar Test: Magnetic locks will be tested.
- b. Back-up Power Verification: Test emergency backup power to the access control system, where provided
- c. Fail Safe Verification: Loss of power, or function to that part of the access control system, which locks the doors, shall automatically unlock.
- d. Connection to Fire Sprinkler/Alarm System: Activation of the building fire alarm or automatic sprinkler system, if provided, shall automatically unlock the doors. In addition, remain unlocked until the fire alarm system is reset.
- e. Manual Operation: Manual operation of the access control system, independent of any automatic function, will be tested.
- f. Egress: Electric strike, or designated access doors shall be tested to verify free egress

9. **Hazardous Materials**

- a. Permit Posted: Permit is clearly posted near the entrance to the occupancy.
- b. Permitted Quantity is not exceeded: The quantities permitted are not exceeded.
- c. Controls in Place: Administrative and/or containment controls are in place. Proper storage requirements are provided for the quantity of materials stored. Non-compatible materials shall be properly segregated.
- d. Placard: Required NFPA 704 diamond placard posted.
- e. Date of Issue: Permit is valid for one year from date of issue.

10. **High-Piled/High-Racked Storage**

- a. Permit Posted: Permit is clearly posted near the entrance to the occupancy.
- b. Permitted Quantity is not exceeded: The quantities permitted are not exceeded.
- c. Controls in Place: Administrative and/or containment controls are in place. Proper storage requirements are provided for the quantity of materials stored. Non-compatible materials shall be properly segregated.
- d. Date of Issue: Permit is valid for one year from date of issue.

11. **Building Construction Items**

- a. Fire rated walls and sealant. Inspect all fire rated walls and sealant at the deck.
- b. Fire Wall penetrations. Inspect all fire rated wall penetrations and sealant of those penetrations.
- c. Fire curtains or smoke barriers. Inspect any fire curtains or smoke barriers.
- d. Fire/Smoke Dampers. Inspect all fire/smoke dampers in fire rated walls.
- e. Labeling. Inspect labeling on ceiling grid, which indicates fire, and smoke dampers. (Fire Damper / Smoke Damper)
- f. Fire Rated Doors. Inspect all fire rated doors jambs, doors, smoke seals, and door closures on fire rated doors.
- g. Stage Curtains. Inspect any stage curtains for fire rating.
- h. Exit Signs. Inspect all exit signs and test.
- i. Emergency Lighting. Inspect all emergency lighting and test.
- j. Portable Fire Extinguishers. Inspect all portable fire extinguishers size, location of devices, and for state tag.
- k. Door Hardware. Inspect all door hardware on means of egress. (Panic hardware, thumb latch, locks, etc.)
- l. Fire Lane. Inspect fire lane striping.
- m. Fire Hydrants. Inspect all fire hydrants for color-coding, obstructions, and protective barriers if applicable.

- n. Knox Box. Inspect Knox box placement and place master key and all other emergency keys inside it.
- o. Elevator. Inspect elevator and all operational equipment. Firefighter re-call tested. Must have State Elevator inspection record and certificate posted.
- p. Designated smoking areas. Inspect all designated smoking areas for signage and proper ashtrays.
- q. Boilers. Inspect any boilers and boiler room. Must have State boiler inspection posted.

12. **Certificate of Occupancy (C.O.)**

- a. Completed Inspections: All required fire protection inspections completed.
- b. Additional Information: As-built drawings or additional requested material provided.
- c. Project Complete: Project is 100% completed. Section 6 contains the inspection requirements for performing a C.O. Inspection.