

General Fire Code Requirements Within Commercial Tenant Spaces

Scope:

This handout is designed to assist owners, architects, contractors and others in understanding and complying with the applicable fire safety standards for office and mercantile tenant spaces within the County of Merced. This handout clarifies the general requirements found within the Fire Code for such uses. **This handout is not intended to address specific site issues related to individual projects.**

Codes and Standards: (as currently adopted)

1. 2010 California Fire Code
2. 2010 California Building Code
3. 2010 California Electrical Code
4. California Mechanical Code
5. 2010 NFPA Standard No. 13- Fire Sprinkler Installation
6. 2010 NFPA Standard No. 72 - Fire Alarm Code

Plans:

Plans shall be submitted to the Merced County Fire Department for review and approval prior to installation and/or modification of any fire protection systems.

Permits Required:

The Merced County Fire Department requires a wide variety of permits. Consultation with the fire department is highly recommended. Refer to the current fee schedule that is located at: www.co.merced.ca.us

Premises Identification:

New and existing buildings shall have approved address numbers, building numbers or approved building identification placed in a position that is plainly legible and visible from the street or road fronting the property. These numbers shall contrast with their background. Address numbers shall be Arabic numbers or alphabetical letters. Numbers shall be a minimum of 4 inches high with a minimum stroke width of 0.5 inch. Where access is by means of a private road and the building cannot be viewed from the public way, a monument, pole or other sign or means shall be used to identify the structure.

Portable Fire Extinguishers:

1. Portable fire extinguishers shall be installed in all businesses and locations as set forth in Section 906 of the California Fire Code.
2. Portable fire extinguishers located in general office and mercantile areas shall be provided with a multiple-purpose dry chemical agent that provides a minimum rating classification of 2A-10B:C.

3. The maximum travel distance to a portable fire extinguisher within general office and mercantile areas shall not exceed 75-feet. Extinguishers shall be located adjacent to emergency exits where possible.
4. A minimum of one (1) "K – Type" portable fire extinguisher shall be located within 30- feet of commercial hood and duct fire suppression system locations.
5. Portable fire extinguishers shall be installed on the hangers provided or within an approved storage cabinets. Cabinets housing extinguishers shall not be locked unless they are provided with a means of emergency access.
6. Portable fire extinguishers shall be installed so that the top of the extinguisher is no more than 5 feet, and no less than 3 feet above the floor. Portable fire extinguishers having a gross weight greater than 40 pounds shall be so installed that the top of the extinguisher is not more than 3-feet, 6-inches from the floor.
7. Portable fire extinguishers mounted in cabinets or on brackets shall be placed in such a manner such that the extinguisher operating instructions face outward.
8. Portable fire extinguishers shall not be obstructed or obscured from view. In large rooms, and in certain locations where visual obstruction cannot completely be avoided, an approved sign, which states FIRE EXTINGUISHER, shall be located above the extinguisher.
9. Portable fire extinguishers installed shall have a service tag, and internal maintenance tag affixed to them from a California State Fire Marshal registered fire extinguisher concern prior to final occupancy approval by the fire department. Fire extinguishers shall be serviced on an annual basis in accordance with California Code of Regulations, Title 19.

Fire-Sprinkler System Modifications:

1. Automatic fire sprinkler systems shall be installed and maintained in accordance with Section 903 of the California Fire Code. Automatic fire sprinkler systems shall be extended, altered or augmented as necessary to maintain and continue protection whenever the building is altered, remodeled or increased in size.
2. Automatic fire sprinkler system modifications shall be designed and installed in accordance with NFPA 13 - Fire Sprinkler Installation, and Fire Department standards. All necessary work to an automatic fire sprinkler system shall be reviewed and approved by the Fire Department prior to final occupancy of the project.
3. All work associated with modification to an existing automatic fire sprinkler system shall be performed by a State of California Licensed C-16 (Fire Protection) contractor.
4. A fire department plan review fee shall be paid prior to submittal of plans and specifications for all changes to the system.
5. Existing automatic fire sprinkler systems that have been modified with the addition or replacement of system risers, mains, branch lines and other equipment, except for fire sprinkler drops into tenant spaces, shall be hydrostatically tested at 150 PSI for a 2 hour test period. No loss of pressure or water leakage is permitted in the system.

Fire Extinguishing System Alarm Modifications:

1. Fire alarm systems shall be installed and maintained in accordance with NFPA 72 and Sections 901 and 907 of the California Fire Code. Fire alarms shall be extended, altered or augmented as necessary to maintain and continue protection whenever the building is altered, remodeled or increased in size.
2. Fire alarms shall be designed, installed and maintained in accordance with the protective premises fire alarm system requirements found within Chapter 4 of NFPA 72 - National Fire Alarm Code, and Fire Department standards. All necessary work to a fire alarm shall be reviewed and approved by the Fire Department prior to final occupancy of the project.
3. All work associated with modification to an existing fire extinguishing system alarms shall be performed by a State of California Licensed C-10 (Electrical) contractor.
4. A fire department plan review fee shall be paid prior to submittal of plans and specifications for all changes to the system.

HVAC System Fire Alarm Modifications:

1. A single HVAC system, or a combination of units that are capable of moving 2000 CFM's and serve one tenant space, shall be equipped with a smoke duct detector. Multiple HVAC units that combined move 2000 CFM's or more and serve multiple tenant spaces that are not separated by full height walls shall also be equipped with a smoke duct detector.
2. Smoke duct detectors shall be monitored by the fire alarm control panel.
Exception: Not required if fire alarm system only monitors water flow and valve supervision of fire sprinkler systems.
3. Smoke duct detectors; when activated, shall report to the fire alarm panel as a supervisory signal.
4. Smoke duct detectors shall be tested for HVAC shutdown and notification at the fire alarm panel. Shutdown for the smoke detector may be demonstrated with the use of a magnet or application of canned smoke. Flow through the detector shall be measured with a Magnehelic or Manometer device, provided by an HVAC technician or the general contractor.
5. All work associated with modification to an existing fire alarm system shall be performed by a State of California Licensed C-10 (Electrical) contractor.
6. A fire department plan review fee shall be paid prior to the submittal of plans and specifications for all changes to the system.

Knox Access

The building containing your tenant improvement project may need to have a Knox key box located on the exterior of the building for fire department access in the event of an emergency. It will be necessary to place a key(s) related to your project within the Knox box. Please consult your fire inspector for the Knox box requirements.

Combustible Storage in Buildings:

1. Storage in buildings shall be maintained 2-feet or more below the ceiling in non-fire sprinklered areas of buildings.
2. Storage shall be maintained 18-inches or more below sprinkler head deflectors in fire sprinklered areas of buildings.
3. Combustible material shall not be stored in exits or exit enclosures.
4. Combustible materials shall not be stored in boiler rooms, mechanical rooms or electrical equipment rooms.

Use of Combustible Decorative Materials:

1. Combustible decorative materials, including drapes, curtains, textile and film materials, wood materials less than ¼-inch, and foam plastics, used in Group A, and Group M wholesale and retail stores shall be flame resistant in accordance with the requirements of Section 807 of the California Fire Code.
2. All flame resistant treatment materials used to render materials flame resistant shall be listed by the California Fire Marshal, and shall be renewed as often as necessary to maintain the materials flame resistance.

Maintenance of Fire-Resistive Construction:

1. Required fire-resistive construction, including occupancy separations, area separation walls, exit corridors, draft-stop partitions and roof coverings shall be maintained as specified in the California Building Code.
2. When required fire-rated gypsum walls or ceilings are penetrated to the extent that openings exist, the damaged wallboard shall be replaced or returned to the required level of fire resistance using a listed repair system or using materials equivalent to the original construction.
3. Required fire assemblies, including fire-rated doors and window openings, shall be maintained as specified by the California Building Code and the installation manufacturer. The fire rated assembly shall bear an approved label or other identification showing the rating thereof, and shall be properly repaired, restored or replaced when damaged, altered, penetrated, removed or improperly installed.

Maintenance of Emergency Exits:

1. All exits in buildings and structures used or intended to be used for human occupancy shall comply with the provisions of Chapter 10 of the California Fire Code.
2. Aisles leading to required exits must be provided from all portions of buildings and tenant spaces.
3. In areas serving employees only, the minimum aisle width shall be 24-inches minimum, but not less than the width required by the number of employees served.
4. In public areas of office and mercantile occupancies, the minimum clear aisle width shall be 36-inches where tables, counters, chairs, furnishings, merchandise and

other similar obstructions are placed on one side of the aisle only. Where such materials are placed on both sides of the aisle, a minimum aisle width of 44-inches shall be maintained at all times.

5. Obstructions, including storage, shall not be placed in the required width of an exit. Exits shall not be obstructed in any manner and shall remain free of any material or matter where its presence would obstruct or render an exit hazardous.

6. Exit doors shall be maintained in an operable condition in accordance with Section 1008 of the California Fire Code.

7. Doors leading from the tenant space into fire-rated exit corridors shall not be obstructed in any manner, including wedges, to prevent the door from closing and latching against the doorframe as required by 1028.2 of the California Fire Code.

8. Exit doors must be operable from the inside without the use of a key or any special knowledge or effort except as noted in Section 1008.1.8 of the California Fire Code.

9. In office and mercantile tenant spaces, key locking hardware may be used on the main exit only if there is a durable sign on or adjacent to the door which reads THIS DOOR TO REMAIN UNLOCKED DURING BUSINESS HOURS. The sign must be in letters not less than 1-inch high on a contrasting background. When unlocked, the door must be free to swing without operation of any latching device.

Compressed Gas Storage:

1. Storage, use and handling of compressed gases in containers, tanks and systems shall be in accordance with Chapter 30 of the California Fire Code.

2. Compressed gas containers, tanks and systems shall be marked in accordance with Sections 3003.4.1 through 3003.4.3 of the California Fire Code. Markings shall be visible from any direction. Markings used for piping systems shall consist of the content's name and include a direction of flow arrow.

3. Compressed gas containers, cylinders and systems, which could be exposed to physical damage shall be protected.

4. Compressed gas containers, cylinders and tanks shall be secured to prevent falling due to contact, vibration or seismic activity. Secure all gas containers, cylinders and tanks by an approved hook and chain device located 2/3 of the way up from the floor.

5. Compressed medical gas storage shall be located in areas dedicated to the storage of such gases without other storage or uses. When containers of medical gases in quantities greater than the permit amount are located inside buildings, they shall be in a 1-hour exterior room, or a 1-hour interior room, or a gas cabinet in accordance with Section 3006.2.3 of the California Fire Code. A fee for the plan review and inspection of such a system will be applied and is payable upon submittal of said plans.

6. Medical facilities storing less than 1,000 cubic feet of compressed gas are exempt from the business plan requirement pursuant to the H&SC 6.95. When quantities exceed this amount at a medical facility, a business plan must be submitted.

Flammable Liquids:

1. The storage and use of flammable liquids in excess of ten (10) gallons within office and mercantile tenant spaces shall be in accordance with Chapter 34 of the California Fire Code.
2. Quantities of flammable and combustible liquids permitted within an office or mercantile tenant space shall not exceed the provisions listed within Section 3404.3.4 and Table 3404.3.4.1 of the California Fire Code.
3. Contact the fire department regarding a permit when the quantity of flammable liquids exceeds 25 gallons (flash point < 100 degrees), or when combustible liquids (including motor oil and used oil combined) exceeds 110 gallons.

Hazardous Materials:

1. The storage and use of hazardous materials within office and mercantile tenant spaces shall be in accordance with Chapter 27 of the California Fire Code.
2. Permits are required to store, dispense, use or handle hazardous materials in excess of the quantities specified in Section 105, Permit h.1 of the California Fire Code.
3. When required by the Fire Department, a Hazardous Materials Business Plan (HMBP) shall be prepared for the facility in accordance with Chapter 6.95 of the California Health & Safety Code.
4. Contact this office for applicable permit and fee information.

Fire Safety During Construction, Alteration or Demolition:

1. Buildings and tenant spaces under construction, alteration or demolition shall be provided with approved safety measures as required by Chapter 14 of the California Fire Code.
2. A minimum of one (1) portable fire extinguisher with a rating of 2A-10B:C shall be provided within the construction area. Said fire extinguisher shall be located in an area that is readily accessible by all workers, and shall remain unobstructed at all times. Said fire extinguisher shall have been serviced within the last 1 year by a CSFM licensed fire extinguisher concern.
3. Combustible debris shall not be accumulated within buildings or tenant spaces. Combustible debris, rubbish and waste material shall be removed from buildings prior to the end of daily construction work.
4. Temporary heating devices, including dry-wall heaters, shall be of an approved type. Said heating device shall be located away from combustible materials in accordance with the manufacturer-supplied specifications.
5. Temporary heating devices, including dry-wall heaters, shall not be left in operation after construction hours unless an approved fire-watch is provided on an hourly basis. A Fire Department Permit to Operate shall be obtained prior to the use of such heating appliances after hours.
6. Smoking is prohibited within the construction area. A suitable number of NO SMOKING signs shall be posted in the construction area to warn all occupants.

7. When a building is protected by an automatic fire-sprinkler system, such systems shall be maintained operational at all times during construction or alterations to the building or tenant space. When alterations to the building or tenant space involve the automatic fire sprinkler system, a fire watch shall be kept on site until the system is returned to service.

Fire Department Construction Inspection Process:

1. Construction or work for which fire department approval is required shall be subject to inspection by a Fire Inspector, and such construction or work shall remain accessible and exposed for inspection purposes until approved.
2. It shall be the duty of the person doing the work authorized by a permit to notify the fire department that such work is ready for inspection. A request for inspection shall provide a minimum of **48-hours advance** notice to the Fire Department.
3. All requests for inspection shall be made directly to the Fire Department.
4. A complete set of Merced County Building Inspection Division approved construction drawings shall be available at the project site for review by the Fire Inspector.
5. The Merced County Building Construction Permit Sign-off Card, and the Fire Department Permit Card shall be available on-site for use by the Fire Inspector.