



Salinas Fire Department * 65 W. Alisal Street * Salinas, CA 93901
(831)758-7261- (831)758-7938fax * Website: www.ci.salinas.ca.us
Office Hours: Monday–Thursday: 10am-4pm



NEW CONSTRUCTION & FIRE DEPARTMENT REVIEW GUIDELINES

COMMERCIAL CONSTRUCTION / TENANT IMPROVEMENTS:

This guideline is being provided to assist you with expediting your building plan review. The following items shall be incorporated into the original building plan submittal. All requirements shall be addressed by comment(s), and/or plan detail(s), and/or attachment(s). To expedite your plan/application ensure you include all the requirements of **2010 CBC, 2010**

CFC <http://publicecodes.cyberregs.com/st/ca/st/index.htm> and the most current **NFPA** standard <http://www.nfpa.org/codes-and-standards> required by currently adopted codes.

Submit completed building permit application to [Permit & Inspection Services](#) at 65 West Alisal Street, Ste 101, Salinas, CA 93901.

Besides the anticipated fire permits, plan check, and inspection fees for the fire systems, there may also be a separate “Fire Mitigation” fee for fire apparatus and equipment. This fee will be applied at time of building construction submittal. Contact the Permit Center regarding this fee.

A comprehensive building code study expedites the plan review process. It provides essential information about a project, which enables the plan reviewer to review and apply the correct sections of the relevant codes to that project. Also, consider using CBC section on "Effective Use of the IBC/CBC" http://publicecodes.cyberregs.com/st/ca/st/b200v10/st_ca_st_b200v10_effuse.htm

Code study information establishes the requirements for fire department water flow demands, the number of hydrants, fire detection and suppression systems, egress requirements, and occupant load restrictions.

The following information should be included in a basic code study for new building projects:

1. Group and division designation of the occupancy classifications and uses within the building.
2. Construction type of the building.
3. Number of stories, square footage and occupancy type for each floor, and the height of the building.
4. Fire area of specific occupancies. See the definition for “Fire area” in CFC Section 902.1.
5. Calculations for determining increases in basic allowable areas.
6. Occupant load matrix for occupant use areas and different occupancy classifications.
7. Egress width calculations. Provide egress travel distance for exit access.
8. Indicate if automatic sprinklers protection is provided. **CFC Section 903**

9. Fire protection systems that will be incorporated into the building should be indicated on the design drawings or specifications. **CFC Chapter 9** http://publicecodes.cyberregs.com/st/ca/st/b300v10/st_ca_st_b300v10_9_sec001.htm

FIRE DEPARTMENT PLAN REVIEW INCLUDES:

FIRE FLOW REQUIREMENTS (CFC Appendix B)

Provide a copy of the current water flow (within the last year) is to be provided to the Building Department with the building application. This may be obtained from the water purveyor.

Fire flow shall be obtained from a hydrant within 400' (600' for Group R-3 & U occupancies, and for buildings equipped with an approved automatic fire sprinkler system) of the site ([CFC Table B105.1](#)).

Cal Water Fireflow Request Alco Fireflow Request

Provide the total floor area of all floor levels within the exterior walls, and under the horizontal projections of the roof of a building, except as modified in [CFC Section B104.3](#)

Portions of buildings which are separated by fire walls without openings, constructed in accordance with the *CBC*, are allowed to be considered as separate fire-flow calculation areas.

Total Square Footage: _____

One- and two-family dwellings. The minimum fire-flow requirements for one- and two-family dwellings having a fire-flow calculation area which does not exceed 3,600 square feet shall be 1,000 gallons per minute. Fire-flow and flow duration for dwellings having a fire-flow calculation area in excess of 3,600 square feet shall not be less than that specified in [CFC Table B105.1](#)

FIRE FLOW _____ GPM @20 psi

FIRE ACCESS (CFC Section 503 & Appendix D)

ALSO SEE SFD DEVELOPMENT REVIEW GUIDELINE FOR FIRE ACCESS, FIRE PROTECTION WATER SUPPLIES & HYDRANTS

Fire Apparatus Access Roads shall have an unobstructed width of not less than 20ft and an unobstructed vertical clearance of not less than 13 feet 6 inches. The road shall be capable of supporting 67,000 lbs. and shall have an all-weather surface, to within 150 feet of all sides of the building. **CFC 503 & CFC Appendix D**

Approved fire apparatus access roads shall extend to within 150 feet all portions of the facility and all portions of the exterior walls of the first story of the building as measured by an approved route around the exterior of the building or facility. **CFC 503.1.1**

Additional access may be required based on the potential for impairment of a single road by vehicle congestion, condition of terrain, climatic conditions or other factors that could limit access.

High Piled Storage - A minimum of one access door shall be provided in each 100 lineal feet, or fraction thereof, of the exterior walls that face required fire apparatus access roads. The required access doors shall be distributed such that the lineal distance between adjacent access doors does not exceed 100 feet. **CFC 2306.1.1**

Security Gates - Where security gates are installed, they shall have an approved means of emergency operation. The security gates and the emergency operation shall be maintained operational at all times. Electric gate operators, where provided, shall be listed in accordance with UL 325. Gates intended for automatic operation shall be designed, constructed and installed to comply with the requirements of ASTM F 2200. <http://www.knoxbox.com/> **CFC 503.6**

Stairway to Roof - New buildings four or more stories above grade plane shall be provided with a stairway to the roof. Stairway access to the roof shall be in accordance with **CBC Section 1009.13**. Such stairway shall be marked at street and floor levels with a sign indicating that the stairway continues to the roof. Where roofs are used for roof gardens or for other purposes, stairways shall be provided as required for such occupancy classification.

Building Address

Public Works and SFD approved numbers and/or letters shall be placed on all buildings 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. 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.

References: **CFC Section 505 and Salinas City Code, Part II, Ch. 9, Article IV.**

<http://library.municode.com/index.aspx?clientId=16597> and

http://publicecodes.cyberregs.com/st/ca/st/b300v10/st_ca_st_b300v10_5_sec005.htm

Building address posting includes, but not limited to, the following:

- Illuminated directory at main entrance.
- Address posted on rear exit door
- Individual room/suite numerals to be minimum 4 inches high X ½” stroke.
- 4 inches high X ½” stroke when 0’ – 30’ from access.
- 6 inches high X ¾” stroke when 31’ – 50’ from access.
- 12 inches high X 1¼” stroke from access when over 50 feet from access.

Fire Department Key Boxes

Where access to or within a structure or an area is restricted because of secured openings or where there is a fire alarm, fire sprinkler, or other automatic fire protection system, or hazardous materials or operations, where immediate access is necessary for life-saving or fire-fighting purposes, the fire code official is authorized to require a key box to be installed in an approved location. The key box shall be of an approved type and shall contain keys to gain necessary access as required by the fire code official. **CFC 506**

- Fire Department key boxes and other security products may be ordered from <http://www.knoxbox.com/>
- Key boxes and cabinets shall be mounted near main exterior building entrance at a height of 6 - 8 ft. above finished floor.
- Other items for knox box: Fire Protection Equipment Keys Elevator Key
 Point of contacts Utility Room Keys
- Industrial and Commercial sites containing Haz-Mat shall provide cabinet for vital HMMP/HMIS/MSDS, floor plans, shut off valve locations, and evacuation procedures.

Vehicle Impact Protection

Guard posts shall be detailed on the plans for hydrants, tanks, generators, gas meters, etc., subject to vehicular damage. **CFC 312.1**

Guard posts shall comply with all of the following requirements:

1. Constructed of steel not less than 4 inches in diameter and concrete filled.
2. Spaced not more than 4 feet between posts on center.
3. Set not less than 3 feet deep in a concrete footing of not less than a 15-inch diameter.
4. Set with the top of the posts not less than 3 feet above ground.
5. Located not less than 3 feet from the protected object. **CFC 312.2 Posts.**

Physical barriers shall be a minimum of 36 inches in height and shall resist a force of 12,000 pounds applied 36 inches above the adjacent ground surface. **CFC 312.3 Other barriers.**

EGRESS (CBC/CFC Chapter 10)

Provide construction documents that show in sufficient detail the location, construction, size and character of all portions of the means of egress in compliance with the provisions of this code. The construction documents shall designate the number of occupants to be accommodated on every floor, and in all rooms and spaces. In other than occupancies in Groups R-2, R-3, and I-1, the construction documents shall designate the number of occupants to be accommodated on every floor, and in all rooms and spaces. **CBC 107.2.3 Means of egress.**

Egress doors shall be readily openable from the egress side without the use of a key or special knowledge or effort. **CBC/CFC 1008.1.9.**

Door handles, pulls, latches, locks and other operating devices on doors required to be accessible by Chapter 11 of the California Building Code shall not require tight grasping, tight pinching or twisting of the wrist to operate. **CBC/CFC 1008.1.9.1.**

In buildings in occupancy Group A having an occupant load of 300 or less, Groups B, F, M and S, and in places of religious worship approved locks and latches shall be permitted to prevent operation of doors, including key-operated locking devices from the egress side provided the following exists: 1. The locking device is readily distinguishable as locked; 2. A readily visible durable sign is posted on the egress side on or adjacent to the door stating: THIS DOOR TO REMAIN UNLOCKED WHEN BUILDING IS OCCUPIED. The sign shall be in letters 1 inch (25 mm) high on a contrasting background; and 3. The use of the key-operated locking device is revocable by the building official for due cause. **CBC/CFC 1008.1.9.3.**

The unlatching of any door or leaf shall not require more than one operation. **CBC/CFC 1008.1.9.5.**

Exterior doors and openings required by this code or the California Building Code shall be maintained readily accessible for emergency access by the fire department. An approved access walkway leading from fire apparatus access roads to exterior openings shall be provided and maintained to the satisfaction of the Fire Inspector. **CFC 504.1.**

PORTABLE FIRE EXTINGUISHERS

Indicate type, size, mounting height, and travel distance for the hazard and detail on the plans.

CFC 906, and CC of R Title 19.

- 2A:10BC; one per 3000 square feet or fraction thereof ; maximum travel distance 75'; mounted on a wall 3-5 feet above finished floor. CFC Table 906.3(1)
- "K" for Commercial Kitchen. CFC Section 904.11.5.2
- 40BC Located for use at gas station pumps. CFC Table 906.3(2)
- OTHER_____

Show room use or type of hazard and/or process shall be detailed on the plans.

For a hazardous-type business or use area, 50 ft. travel distance or 30 ft. depending on the size of the extinguisher.

ELEVATORS

Elevators shall be provided with Phase I emergency recall operation and Phase II emergency in-car operation in accordance with ASME A17.1. **CFC 607.1.**

An approved pictorial sign of a standardized design shall be posted adjacent to each elevator call station on all floors instructing occupants to use the exit stairways and not to use the elevators in case of fire. The sign shall read: IN FIRE EMERGENCY, DO NOT USE ELEVATOR. USE EXIT STAIRS. **CFC 607.2.**

Fire service access elevators is required by **CBC 3007** of the International Building Code, fire service access elevator lobbies shall be maintained free of storage and furniture. **CFC 607.3.**

Keys for the elevator car doors and firefighter service keys shall be kept in an approved location for immediate use by the fire department. **CFC 607.4.** Where elevator hoistways or elevator machine rooms containing elevator control equipment are protected with automatic sprinklers, a means installed in accordance with NFPA 72, Section 6.16.4, Elevator Shutdown, shall be provided to disconnect automatically the main line power supply to the affected elevator prior to the application of water. This means shall not be self-resetting. The activation of sprinklers outside the hoistway or machine room shall not disconnect the main line power supply. **CFC 607.5.**

REQUIRED FIRE DEPARTMENT CONSTRUCTION PERMITS

Construction permits from the SFD are required for construction as set forth in CFC Sections 105.7.1 through 105.7.14. **CFC 105.7**

Provide SFD fire alarm and fire protection plans, calculations, and specifications prior to any installations. Construction documents and calculations for all fire protection systems, and fire permits shall be issued for the installation, rehabilitation or modification of any fire protection system.

The following systems, uses, and processes are typically deferred submittals to the fire department, and systems included with your building application and shown or noted on the plans are typically used for bid purposes. Systems requiring fire submittal shall be deferred, unless you specify that each system is part of the building plans, and are a complete submittal, with detailed drawings, specifications, and calculation sheets.

Fire Systems require separate plans, application, review, **permit and fees.** Any of the following named systems shall include the building construction permit application number, and shall be shown or noted on the plans. Fire Department approval of the Building Construction Permit Application does not include any of the following named systems.

Submit Fire Plan Check application to [Permit & Inspection Services](#), and three (3) complete sets of plans & calculations (min scale: 1/8" = 1') stamped & wet signed by a licensed/registered design professional. Submit four (4) sets of plans for underground firelines. Include two (2) sets of equipment listings and calculations.

The following plans and specifications shall be sent to:

Fire Plan Check
 c/o City Permit Center
 65 W. Alisal St
 Salinas, CA 93901

1. Automatic Fire-Extinguishing Systems.

- a. **Fire Sprinkler Systems** per CFC 903 and currently adopted NFPA 13. Salinas City Code Section 13-9 (U) through (EE)
<http://library.municode.com/index.aspx?clientId=16597>
- b. **Wet Chemical Systems** per CFC 904.5 and currently adopted NFPA 17A.
- c. **Dry Chemical Systems** per CFC 904.6 and currently adopted NFPA 17.
- d. **Foam Systems** per CFC 904.7 and currently NFPA 11 and NFPA 16.
- e. **Carbon Dioxide Systems** per CFC 904.8 and currently adopted NFPA 12.
- f. **Halon 1301 Systems** per CFC 904.9 and currently adopted NFPA 12A.
- g. **Clean-Agent Systems** per CFC 903.10 and currently adopted NFPA 2001 and their listing.
- h. **Commercial Cooking Systems** that produce grease laden vapors shall be provided with a Type I Hood, in accordance with the California Mechanical Code, and an automatic fire extinguishing system that is in compliance with UL 300, CFC 609, CFC 904.11

2. Battery Systems. Stationary storage battery systems having a liquid capacity of more than 50 gallons. **CFC 608**

3. Compressed gases. Amounts listed in **CFC Table 105.6.8**

TYPE OF GAS	AMOUNT (cubic feet at NTP)
Corrosive	200
Flammable (except cryogenic fluids and liquefied petroleum gases)	200
Highly toxic	Any Amount
Inert and simple asphyxiant	6,000
Oxidizing (including oxygen)	504
Pyrophoric	Any Amount
Toxic	Any Amount

4. Cryogenic fluids. Outdoor stationary storage systems amounts listed in **CFC Table 105.6.10.**

TYPE OF CRYOGENIC FLUID	INSIDE BUILDING (gallons)	OUTSIDE BUILDING (gallons)
Flammable	More than 1	60
Inert	60	500
Oxidizing (includes oxygen)	10	50

Physical or health hazard not indicated above	Any Amount	Any Amount
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5. **Emergency Responder Radio Coverage** in buildings per **CFC 510 and CFC Appendix J**.
6. **Fire alarm and detection systems and related equipment. CFC 907 &** currently adopted NFPA 72.
7. **Fire pumps and related equipment.** Fuel tanks, jockey pumps, controllers and generators. **CFC 913 &** currently adopted NFPA 20.
8. **Flammable and combustible liquids.** 1. To install, repair or modify a pipeline for the transportation of flammable or *combustible liquids*. 2. To install, construct or alter tank vehicles, equipment, tanks, plants, terminals, wells, fuel-dispensing stations, refineries, distilleries and similar facilities where flammable and *combustible liquids* are produced, processed, transported, stored, dispensed or used. 3. To install, alter, remove, abandon or otherwise dispose of a flammable or *combustible liquid* tank.
9. **Hazardous materials.** Install, repair damage to, abandon, remove, place temporarily out of service, or close or substantially modify a storage facility or other area regulated by **CFC Chapter 27** when the hazardous materials in use or storage exceed the amounts listed in **CFC Table 105.6.20**.

TYPE OF MATERIAL	AMOUNT
Combustible liquids	See Section 105.6.16
Corrosive materials	
Gases	See Section 105.6.8
Liquids	55 gallons
Solids	500 pounds
Explosive materials	See Section 105.6.14
Flammable materials	
Gases	See Section 105.6.8
Liquids	See Section 105.6.16
Solids	100 pounds
Highly toxic materials	
Gases	See Section 105.6.8
Liquids	Any Amount
Solids	Any Amount
Oxidizing materials	
Gases	See Section 105.6.8
Liquids	
Class 4	Any Amount
Class 3	1 gallon ^a
Class 2	10 gallons
Class 1	55 gallons

Solids	
Class 4	Any Amount
Class 3	10 pounds ^b
Class 2	100 pounds
Class 1	500 pounds
Organic peroxides	
Liquids	
Class I	Any Amount
Class II	Any Amount
Class III	1 gallon
Class IV	2 gallons
Class V	No Permit Required
Solids	
Class I	Any Amount
Class II	Any Amount
Class III	10 pounds
Class IV	20 pounds
Class V	No Permit Required
Pyrophoric materials	
Gases	Any Amount
Liquids	Any Amount
Solids	Any Amount
Toxic materials	
Gases	See Section 105.6.8
Liquids	10 gallons
Solids	100 pounds
Unstable (reactive) materials	
Liquids	
Class 4	Any Amount
Class 3	Any Amount
Class 2	5 gallons
Class 1	10 gallons
Solids	
Class 4	Any Amount
Class 3	Any Amount
Class 2	50 pounds
Class 1	100 pounds

Water-reactive materials	
Liquids	
Class 3	Any Amount
Class 2	5 gallons
Class 1	55 gallons
Solids	
Class 3	Any Amount
Class 2	50 pounds
Class 1	500 pounds

10. **Industrial Ovens** and furnaces per CFC Chapter 21, currently adopted NFPA 86, and the *California Mechanical Code*.

11. **Liquid Petroleum Gas (LPG)** system per CFC 38 and currently adopted NFPA 58.

12. **Private fire hydrants** per CFC 507.5 and CFC Appendix C, and currently adopted NFPA 24 & NFPA 291.

All new fire hydrants shall meet the following requirements:

- * New hydrant will be: Clow 950 (Residential) or Clow 960 (Commercial/Industrial)
- * Color will be safety yellow enamel for public right-of-way and private hydrants. Hydrants to be safety red for yard hydrants. All hydrants will be painted prior to final inspection.
- * All hydrants to have “Blue Dot” highway reflector installed on the adjacent street or driveway to clearly identify the fire hydrant location.
- * Hydrant tops and nozzle caps shall be painted using reflective-type paint, with the following rated capacities at 20 psi residual pressures as follows:
 - o Class AA- 1500 gpm or greater - Light blue
 - o Class A - 1000-1499 gpm - Green
 - o Class B - 500-999 gpm - Orange
 - o Class C - less than 500 gpm - Red
- * If combustible building materials are used (including framing) the water supply (including mains and hydrants) shall be designed, installed, tested and approved by the Fire Department prior to stockpiling combustible building materials.
- * Water supply systems for phased construction shall provide required fire flows at all phases.

PW Fire Hydrant Location Plan 33

PW Fire Hydrant Construction Plan 34

13. **Private Fire Service Mains** per CFC 507.2.1, and currently adopted NFPA 24

Fire Department Connections (FDC)

Ensure landscaping does not obstruct access for firefighter and fire apparatus. With respect to hydrants, driveways, buildings and landscaping, fire department connections shall be so located that fire apparatus and hose connected to supply the system will not obstruct access to the buildings for other fire apparatus. The location of fire department connections shall be approved by the fire chief. **CFC 912.2 Location.**

Standpipes and fire sprinkler connections shall be within 100 feet of a fire hydrant.

(2012) CFC 507.5.1.1 Hydrant for standpipe systems

The potable water supply to automatic sprinkler and standpipe systems shall be protected against backflow as required by Health and Safety Code Section 13114.7. The backflow preventer shall be the non-pressure reducing type. **CFC 912.5 Backflow protection.**

14. **Spraying or Dipping.** CFC Chapter 15 and currently adopted NFPA 33 & 34.

15. **Standpipe systems.** CFC 905 and currently adopted NFPA 14

16. **Temporary membrane structures and tents.** Erect an air-supported temporary membrane structure or a tent having an area in excess of 400 square feet. CFC Chapter 24

Exceptions:

- a. Tents used exclusively for recreational camping purposes.
- b. Funeral tents and curtains or extensions attached thereto, when used for funeral services.
- c. Tents and awnings open on all sides which comply with all of the following:
 - i. Individual tents shall have a maximum size of 700 square feet.
 - ii. The aggregate area of multiple tents placed side by side without a fire break clearance of not less than 12 feet shall not exceed 700 square feet total.
 - iii. A minimum clearance of 12 feet (3658 mm) to structures and other tents shall be maintained.

EMERGENCY PLANNING AN PREPAREDNESS CFC 401 THRU 408

An approved fire safety and evacuation plan is required to be prepared and maintained for the following occupancies and buildings: A, B: >500 or 100 above or below grade, E, F: >500 or 100 above or below grade, I, R-1, R-2, M > 500 or 100 above or below grade, malls > 50,000sf, and occupancy w/ atrium and as based on specific criteria, 404.2. Provide plans to fire inspector for review and approval of the plan prior to issuing a Certificate of Occupancy.

OTHER FIRE DEPARTMENT REQUIREMENTS

Provide a **Hazardous Materials Management Plan (HMMP) and Hazardous Materials Inventory Statement (HMIS)** following the California Fire Code sample format. Examples of qualified preparer may be a Fire Protection Engineer, Professional Engineer of related field, Chemist, Firm or Corporation approved by the Fire Code Official (CFC Section 104.7.2). The opinion and report shall meet the requirements of the **CFC Section 2701.5.1. & 5.2**

This project requires a Haz Mat Data & Key Control Storage Cabinet as located by the Fire Department. "Data cabinets shall be mounted between four and six feet above ground (floor) level, readily visible and not more than 12 feet from the main entry to the premises. All building keys shall conform to a master key system. Master keys shall be permanently tagged and labeled." Begin application processing with Fire Department when the building permit is issued.

The following items shall be provided:

- () All Material Safety Data Sheets" () General Facility Site Plan"
- () Building Floor Plans" () _____

ALL SITE INSPECTIONS REQUIRE A MINIMUM 24 HOURS NOTICE.

ALL FIRE DEPARTMENT INSPECTIONS ARE TO BE REQUESTED THROUGH THE PERMIT CENTER, PLEASE BE SPECIFIC AS TO TYPE OF INSPECTION.

Inspection Request Line: 831-758-7902.

FIRE SAFETY DURING CONSTRUCTION AND DEMOLITION

During the course of construction, alteration or demolition, including those in underground locations shall comply with **CFC 14, and NFPA 241** for items not specifically addressed herein.

Provide SFD with one 8 1/2" x 11" final site plan for firefighting crews. It shall include fire hydrants, fire department connections, fire access, knox box location, fire protections & alarm systems, and gas and electrical meter shutoff locations. An electronic version is preferred.

10/18/13 rgm