



CITY OF
SANTA ROSA

FIRE DEPARTMENT

Fire & Life Safety Plan Review Division

100 Santa Rosa Avenue, Room 5

Santa Rosa, CA 95404

Phone: 707-543-4351

Fax: 707-543-3218

www.santarosafd.com

FIRE DEPARTMENT INFORMATION BULLETIN

SUBJECT: GENERAL DEVELOPMENT BULLETIN

Bulletin Number: 01- 013
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Code Reference:
2001 CA Uniform Fire Code (UFC) Part II, III, IV, Article 9, 10
2001 CA Uniform Fire Code (UFC) Appendix III-A
Santa Rosa City Code, Chapter 18-44
City of Santa Rosa, Design and Construction Standard
City of Santa Rosa Design Guidelines

Note: This bulletin is a summary of Fire Department interpretations of City Codes and information contained herein applies to typical instances and may not address all circumstances.

This Information Bulletin has been created to provide an overview of Fire Department requirements related to the development process and creation of an Improvement Plan and Final Map.

1. PLAN SUBMITTAL

A site plan shall be submitted and reviewed by the Fire Department prior to submittal of the building permit. The building permit submittal shall require compliance with Fire Department conditions. (CFC 901.2.2.1)

2. ACCESS

- a. Approved apparatus access roads shall be provided to within 150 feet of all exterior portions of the first story of every building as measured by an approved route around the exterior of the building.
- b. Access roads extending beyond this point shall meet the minimum Fire Department access road requirements, including width, distance, turnarounds and height limitations (SRCC 18-44 902.2.2.1)

Exception: Roads that are identified as "lanes" in the City of Santa Rosa Street Design Standard 200-C.

3. CONSTRUCTION

- a. Public streets shall comply with the City's adopted Street Design Standards and Design Guidelines. Specific requirements associated with Fire Department access are addressed in this bulletin.
- b. Private streets and drives shall comply with the applicable City Street Design Standards and this Information Bulletin. See Information Bulletin 002 "Fire Access Roads."

4. WIDTH

- a. Fire apparatus roads shall be provided as follows (CFC 902.2.2.1):
 - i. Roads serving buildings two stories or less in height:

Access roads must be a minimum of 25 feet in width. This road width provides the required access needed to accommodate operating fire apparatus as well as room for emergency egress of private vehicles.
 - ii. Roads serving buildings three or more stories, or in excess of 35 feet in height:

Access roads must be a minimum of 28 feet in width. This road width provides the required access needed to accommodate aerial apparatus required for structures of this height as well as room for emergency exiting of private vehicles.

NOTE: Public streets shall comply with the City's Street Design Standards.

- iii. Additional width may be required for special circumstances, such as high-rise buildings.

5. VERTICAL CLEARANCE

Minimum unobstructed vertical clearance of all Fire Department Access Roads shall be, at least 13 feet 6 inches in width. (SRCC 902.2.2.1)

6. SURFACE

Fire Department Access Roads shall be designed to support the imposed loads of fire apparatus, shall be paved, and shall meet City Street Design Standards. (SRCC 18-44 902.2.2.1)

7. SECONDARY ACCESS

A secondary means of emergency vehicle access is required when the road serves more than 50 residential units or exceeds 500 feet in length; or when, in the opinion of the Fire Chief, access by a single road might be impaired or unsafe due to vehicle congestion, condition of terrain, climatic conditions, very high fire severity zones or other such local conditions (City Design Guideline Appendix E, CFC 902.2.1).

8. ROAD / STREET / DRIVE LENGTH

a. Public Streets:

- i. Dead-end streets exceeding 150 feet in length shall be provided with an approved cul-de-sac.

Exception: Fire Department turnarounds approved as an alternate method to the required cul-de-sac, which have been approved in writing by the Fire Marshal prior to plan submittal.

- ii. Public streets exceeding 500 feet in length shall have two dedicated fire access points.
- iii. Emergency Vehicle Access (EVA) points are not permitted as a second means of access.

b. Private Roads, Streets and Drives (CFC 902.2.2.4):

- i. Dead-end streets and drives exceeding 150 feet in length and which serve less than 25 units shall be provided with an approved Fire Department turnaround.
- ii. Dead-end streets and drives exceeding 150 feet in length and which serve in excess of 25 units shall be provided with an approved cul-de-sac with a minimum radius of 45 feet.
- iii. Dead-end streets and drives exceeding 500 feet in length or providing access to more than 50 units shall have two dedicated access points for fire equipment.
- iv. Emergency Vehicle Access (EVA) points are not permitted as a second point of access.

9. TURNING RADIUS

- a. Inside radius shall be a minimum of 20 feet; outside radius shall be a minimum of 40 feet, and shall meet approval of the Fire Department. Turning radius shall be identified on submitted site plans for Fire Department review and approval. (CFC 902.2.2.3)
- b. Turning radius shall be identified on submitted site plans for Fire Department review and approval and shall be measured from the traffic

lane of responding apparatus so as to avoid driving in the opposite lane, against the traffic flow or across intersections.

10. TURNAROUNDS

- a. Dead-end roads in excess of 150 feet in length shall be provided with an approved cul-de-sac turnaround that meets Fire Department standards (Street Design Standard 203-A, B, C). (CFC 902.2.2.4)
- b. Cul-de-sacs shall meet City Street Design Standards with a minimum of a 45-foot radius (Street Design Standards 203-A, 203-B).
- c. Dead-end drives in excess of 150 feet in length and less than 500 feet and serving a single building may be provided with an approved Fire Department Turnaround.
- d. Turnarounds for driveways serving no more than four single family residences may be an approved Fire Department hammerhead turnaround. (Street Standard 203-F)

11. GRADE

The maximum grade of a Fire Apparatus Road shall not exceed 15 percent. (Street Design Standard, Section VI, A3 and CFC 902.2.2.6)

12. OBSTRUCTION

The required width of any fire apparatus access road shall not be obstructed in any manner, including but not limited to, the parking of vehicles, placement of dumpsters, stacking of building materials or other items. Where required, approved signs or other notices prohibiting parking or obstructions shall be provided and maintained by the property owner or developer during construction. (CFC 901.5)

13. BRIDGES

Bridges shall be constructed and maintained in accordance with nationally recognized standards. Bridges shall be designed for a live load sufficient to carry the imposed loads of fire apparatus. (HS 20-44 and CFC 902.2.2.5)

14. TURNOUTS

Where driveways exceed 500 feet, emergency turnouts may be required as dictated by site-specific conditions. (Santa Rosa Street Design Standard 205 and CFC 902.2.2)

15. FIRE LANES

Refer to Fire Department Information Bulletin 003. (CFC 901.4)

16. FIRE APPARATUS ACCESS ROADS AND FIRE PROTECTION WATER SUPPLY DURING CONSTRUCTION

- a. All fire apparatus access roads and all required fire department water supplies shall be installed and made serviceable prior to bringing combustible construction materials onto the project site. Driveways and access roads must meet construction conditions as specified in the City Street Design Standards, "Requirements for Emergency Access during Construction". (CFC 901.3)
 - i. Sub-grade Conditions, Summer (April 1 thru September 30):
 - 1. Good: Excavated and drained sub-grade.
 - 2. Poor: Excavated and drained sub-grade.
 - ii. Sub-grade Conditions, Winter (October 1 thru March 31):
 - 1. Good: Six (6) inches rock.
 - 2. Poor: Six (6) inches rock and fabric.
- b. For structures with a ridge line of at least 35 feet above adjacent rough fire access grade, or for structures three or more stories, 1½ inches of asphalt base over four inches of aggregate base shall be provided in all proposed and approved fire access areas.
- c. Winter conditions shall take effect and be enforced by the City Engineer on October 1. The City Engineer shall have the authority to move this date up to as early as September 1, depending on the particular rainfall and projections.
- d. Sub-grade is defined as native soil at the bottom of the street section (base and paving), excavated to the approximate lines and grades shown on the project grading plan, and provided with a discharge for collected water, as approved by the City Engineer.
- e. Base shall be Class II aggregate base or alternative recommended by the soils engineer and approved by the City Engineer.
- f. Poor sub-grade defined as "R" Value of 10 or less.
- g. Base shall be placed only on an unyielding excavated and drained sub-grade, and to be compacted to at least 90 percent relative compaction.
- h. Fabric to be a ground stabilization fabric such as Mirafi 600X or equivalent.

17. GATES

Gates proposed on Fire Department Access Roads shall be reviewed and approved by the Fire Department prior to a permit being issued. Approved gates shall comply with the following: (CFC 902.2.4.2 & 901.5)

- a. A powered gate with strobe-actuated controller, activated from both the exterior and interior sides of the gate (providing automatic ingress and egress for fire apparatus), and a sub-mastered Knox key override shall be provided.
- b. All gates shall be set back a minimum of 20' from street.

18. WATER SUPPLY AND FIRE HYDRANTS

- a. A public fire hydrant shall be provided to within 150 feet of all exterior portions of the first story or additional private fire hydrant(s) will be required. (CFC 903.3)
- b. Fire hydrants in commercial, multi-family or industrial areas and single family homes within the designated Very High Fire Severity Zones shall be nominally spaced every 300 linear feet maximum and shall provide the fire flow required by UFC Appendix III-A. Minimum fire flow is 2,500 gallons per minute with 30 psi residual in the main.
- c. Fire hydrants in single and two-family residential areas shall be nominally spaced every 500 linear feet and shall provide the fire flow required by UFC Appendix III-A. Minimum fire flow is 1,500 gallons per minute with 30 psi residual in the main.
- d. Fire hydrants in commercial, multi-family or industrial areas shall be one of two types: Long Beach Model 435, Long Beach Model 615 or Clow Model 865, with (2) 4 ½" outlets and (1) 2 ½ " outlet.
- e. Fire hydrant placement shall meet the Fire Department approval to satisfy the tactical needs for fire fighting equipment.
- f. Fire hydrants are required for remodels exceeding 25 percent of the existing square footage and \$50,000.00 in value when the existing fire hydrants do not meet the current adopted Fire Code.
- g. Fire hydrants shall be installed along both sides of divided streets.
- h. Fire hydrants shall be in service prior to the delivery of combustible materials to the jobsite.
- i. Fire flow calculations shall be provided showing compliance with UFC Appendix III-A.
- j. Minimum water main sizes shall meet City Standards and provide fire flow requirements.
- k. Projects requiring an encroachment permit need to be approved and signed by the Fire Department and City Utility Department.

19. AUTOMATIC FIRE SPRINKLERS

- a. Fire sprinkler systems shall be provided as required in the California Building Code as adopted by the City. (CFC 1003.1)
- b. A licensed fire protection contractor shall submit plans and obtain approval from the Fire Department prior to the installation of the fire sprinkler system.
- c. Fire Department Connections (FDC's) are to be located on the street address side of the project.
- d. Fire sprinklers may be required for remodels exceeding 25 percent of the existing construction or for changes in use of the building.
- e. Standpipes shall be provided in buildings 3 or more stories in height and over 5000 square feet.
- f. **A separate approval and permit is required for the installation of the fire protection underground water supply.**

20. FIXED EXTINGUISHING SYSTEMS

- a. Fixed extinguishing systems shall be installed where required by the Fire Code. (CFC 1005)
- b. Contractors shall submit plans for approval and obtain a permit from the Fire Department prior to installation.

21. FIRE ALARM SYSTEMS

- a. Fire alarm systems shall be installed where required by the Fire Code. (CFC 1006)
- b. The contractor shall submit plans for approval and obtain a permit from the Fire Department prior to installation or alteration.

22. FIRE DEPARTMENT PERMITS

Fire Department permits are required for certain hazardous operations or conditions such as blasting. See Information Bulletin #018. (CFC 105.8)

23. FIRE DEPARTMENT INSPECTIONS

- a. Contact the Fire Department at least 24 hours in advance to schedule an appointment for a progress inspection. Telephone (707) 543-3500.
- b. An approved set of plans shall be on site at all times.

24. HAZARDOUS MATERIALS

- a. The Fire Department shall be contacted immediately if hazardous materials are discovered during construction.
- b. New businesses must submit a proposed inventory of hazardous materials.
- c. The use or handling of certain hazardous materials may initiate special building requirements.

25. FIRE MANAGEMENT PLAN

- a. In areas of severe fire danger or within the High Fire Severity Zone, the developer shall provide a fire management plan acceptable to the Fire Department prior to approval of the parcel or subdivision map.
- b. A specific implementation plan shall be provided at building permit submittal for projects required to provide protection.