



FIRE DEPARTMENT INFORMATION BULLETIN



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**SUBJECT: FIRE APPARATUS ACCESS ROADS AND
EMERGENCY VEHICLE ACCESS (EVA'S)**

Code References:

2007 California Fire Code (CFC), Chapter 3; Santa Rosa City Code 18-44;
Santa Rosa City Street Design Standards

NOTE: This Information Bulletin is a summary of Fire Department interpretations of City and State Codes. Information contained herein applies to typical instances and may not address all individual circumstances.

This Information Bulletin is being provided in order to establish clear policy with respect to Fire Code requirements for primary Fire Department access roads.

1. WHERE REQUIRED:

Fire 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 (CFC 503.1.1).

Access roads extending beyond this point shall meet minimum Fire Department Access Road requirements, including width, distance, turnarounds and height limitations (CFC 503.1.1):

2. WIDTH:

Fire apparatus roads shall be provided as follows (CFC 503.2):

Unless otherwise specified, roads shall be a minimum of 20 feet in width.

Roads serving buildings two (2) 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 and room for emergency exiting of private vehicles.

Roads serving buildings three (3) 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 and room for emergency exiting of private vehicles.

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

3. 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 503.6):

- a. A powered gate with strobe-actuated controller, activated from both the exterior and interior sides of the gate (providing automatic entry and exiting for fire apparatus), and a Knox key override shall be provided for all gates on roads that serve residential and commercial properties. Gates on roads that serve areas and buildings that are not normally occupied, such as service roads leading to utility buildings, may be locked using an approved Fire Department lock.
- b. Gates shall be placed with a minimum set back distance of 20 feet from the beginning of the roadway controlled by the gate.
- c. For exiting only, the powered gate may be activated by means of an approved magnetic loop detector, installed in accordance with applicable City Street Design Standards.
- d. In the event of a power failure, all powered gates shall unlock and release to manual opening, without the use of any special device, key or tools.

4. SECONDARY ACCESS:

A secondary means of emergency vehicle access is required when the road serves in excess of 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 hazard severity zones or other such local conditions (City Street Design Standards, CFC 503.1.2).

5. VERTICAL CLEARANCE:

Minimum unobstructed vertical clearance of all Fire Department Access Roads shall be a minimum of 13 feet 6 inches (CFC 503.2).

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 (CFC 503.2).

7. **STREET / DRIVE LENGTH:**

Public Streets:

Dead-end streets exceeding 150 feet in length shall be provided with an approved cul-de-sac (CFC 503.2.5).

Exception: Fire Department turnaround's approved as an alternate method to the required cul-de-sac, and approved in writing by the Fire Marshal prior to plan submittal.

Public streets exceeding 500 feet in length shall have two dedicated fire access points. Emergency Vehicle Access (EVA) points are not permitted as a second point of access (CFC 503.1.2)

Private Roads and Drives:

Dead-end streets and drives exceeding 150 feet in length and serving less than 25 units shall provide an approved Fire Department Turnaround.

Dead-end streets and drives exceeding 150 feet in length and serving in excess of 25 units shall provide an approved cul-de-sac with a minimum radius of 45 feet.

Dead-end streets and drives exceeding 500 feet in length or providing access to more than 50 units shall have two dedicated fire access points. Emergency Vehicle Access (EVA) points are not permitted as a second point of access.

8. **TURNING RADIUS:**

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 503.2.4).

9. **GRADE:**

The maximum grade of a Fire Apparatus Road shall not exceed 15 percent (Street Design Standard, Section VI, A3, CFC 503.2.7).

10. **TURNAROUNDS:**

Turnarounds shall meet Fire Department standards (Street Design Standard 203F).

Cul-de-sacs shall meet City Street Design Standards with a minimum of 45 foot radius (Street Design Standards 203A, 203B).

11. **OBSTRUCTION:**
The required width of any fire apparatus access road shall not be obstructed in any manner, including but not limited to, 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 (CFC 503.3, 503.4, 503.6).
12. **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 (SRCC 18-44.503.2.6).
13. **TURNOUTS:**
Where driveways are in excess of 500 feet, emergency turnouts may be required as dictated by site-specific conditions (CFC 503.1.2).
14. **FIRE LANE MARKING:**
Refer to Fire Department Information Bulletin 003 (CFC 503.3).
15. **FIRE APPARATUS ACCESS ROADS AND FIRE PROTECTION WATER SUPPLY DURING CONSTRUCTION:**
All Fire Apparatus Access Roads and all required fire protection water supplies shall be installed and made serviceable prior to bringing combustible construction materials onto the project site (CFC 501.4).

Driveways and access roads must meet construction conditions as specified in the City Street Design Standards, "Requirements for Emergency Access During Construction" (CFC 503.1).

Good Subgrade Conditions,

Summer (April 1 thru September 30): Excavated and drained subgrade.

Winter (October 1 thru March 31): Six (6) inches rock.

Poor Subgrade Conditions,

Summer (April 1 thru September 30): Excavated and drained subgrade.

Winter (October 1 thru March 31): Six (6) inches rock and fabric.

15. FIRE APPARATUS ACCESS ROADS AND FIRE PROTECTION WATER SUPPLY DURING CONSTRUCTION (continued):

1. *For structures with a ridgeline of at least 35 feet above adjacent rough fire access grade, or for structures with three (3) or more stories, one and one half (1.5) inches of asphalt base over four (4) inches of aggregate base shall be provided in all proposed and approved fire access areas.*
2. *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.*
3. *Subgrade defined as native soil at bottom of 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.*
4. *Base shall be Class II aggregate base or alternative recommended by the soils engineer and approved by the City Engineer.*
5. *Poor subgrade defined as "R" Value of 10 or less.*
6. *Base shall be placed only on an unyielding excavated and drained subgrade, and to be compacted to at least 90 percent relative compaction.*
7. *Fabric to be a ground stabilization fabric such as Mirafi 600X or equivalent.*