## RATTLESNAKE

## Fire Protection District



# Residential Road and Driveway Guide

Written by:

Fire Bureau

**Rattlesnake Fire Protection District** 

**Planning and Development** 

#### **Notice**

This document is a cooperative effort undertaken at the direction of Rattlesnake Fire Department, Planning and Development Division for the benefit of the Rattlesnake Fire Protection District's Board of Directors, Developers and Builders planning to operate, construct, or develop property under the influence of the Rattlesnake Fire Department. Neither Rattlesnake Fire Department nor any other participating entity is responsible for any liability of any nature whatsoever resulting from or arising out of use or reliance upon this Guide by any party. This document is furnished on an "AS IS" basis and neither Rattlesnake Fire

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#### **Purpose and Scope**

- The information contained in this guide book is intended to assist developers, designers, planners and builders to determine the minimum requirements for roadways, driveways, and related subjects during the design phase. This guide Shall apply to all new construction, building site and subdivision development within the Rattlesnake Fire Protection District boundaries.
- It should be noted that the information contained in this document is specific to the Rattlesnake Fire Protection District and is not intended to address the requirements of any other jurisdiction or Authority Having Jurisdiction (A.H.J.) (i.e. County Building Inspectors, Planning Department, or other Fire Departments).
- This Guide Book is designed to assist you in preparing submittal packages for the Rattlesnake Fire Department's review. This guide in no way should be considered as a grant for a noncompliance with a local codes, ordinances, or standards, nor is it in any way a written approval for your project.

#### **Document Maintenance**

- This is a living document and is subject to change. This document is kept up- to-date through the review of proposed changes submitted by code enforcing officials, District Board members, Firefighters and other interested parties.
- Proposed changes are carefully considered by the District's Fire Bureau and submitted to the RFPD Board of Directors for adoption.
- The contents of this work are subject to change both through the Code adoption cycles by the RFPD and the Elbert County Commissioners that enacts the code into law and empowers the Fire Protection District for enforcement.

#### 1. 0 Administration

#### 1.1 Scope:

1.1.1 This standard defines the minimum requirements for the fire department access to single-family dwelling units with in Elbert County in order facilitate and immediate response from fire and EMS agencies.

#### 1.2 Purpose:

1.1.2 The sole purpose of this document is to create a consistent construction method for use when building or remodeling single-family dwellings. It is the intent of the local emergency agencies to gain access to all buildings, structures or gathering areas, in case of emergency, using methods allowed herein.

1.1.3

#### 1.3 Definitions:

- 1.4.1 **Approved or Approval** Allowed and or determined acceptable by the authority having jurisdiction.
- 1.1.4 <u>Authority Having Jurisdiction</u> Approving agency, in this case, the county agency qualified to review and approve such project and local fire protection Chief.
- 1.1.5 <u>Chief</u> is the chief officer of the fire department serving the jurisdiction or the chief officer's authorized representative.
- 1.1.6 <u>Driveway</u> Any approved vehicular access serving a single-family dwelling or any two single-family dwelling unit. Less than 150 feet from the nearest Roadway access point.
- 1.1.7 <u>Access Driveway</u> Any approved vehicular access serving 2-3 single family dwelling unit. Access driveway status diminishes when single family driveways separate to individual dwelling units or the structure is over 150 feet from the nearest Roadway access point.

- 1.1.8 **Roadway** Any approved access road serving 4 or more driveways and or single-family dwellings or multi-tenet dwelling unit (not addressed with in this standard).
- 1.1.9 <u>Dwelling unit</u> is any building or portion thereof which contains living facilities, including provisions for sleeping, eating, cooking, and sanitation as required by the Building Code, for not more than one family, or a congregate residence of 10 or less persons.
- 1.1.10 <u>National Fire Protection Association</u> NFPA The latest fire protection regulations imposed by the National Association governing fire department personnel and their safety.
- 1.1.11 <u>Elbert County Roadway Design and Construction Manual</u> The latest version of the manual written and adopted by Elbert County.

#### 1.4 Application:

- 1.1.13 See IFC, section 503
- 1.1.14 This standard Shall apply to all new single family dwelling access drives that exceed 50 feet in length as measured from the edge of the roadway with in Elbert County.
- 1.1.15 Fire service access or other means of emergency access Shall be required when any point of the building is more than 150 feet from a roadway.
- 1.1.16 Prior to any combustibles (lumber, construction materials) being stored on the premises. A driveway Shall be installed with an all weather surface, meeting the requirements of the Elbert County Driveway Standards. This Standard is based upon Fire Code requirements. The County Inspectors will inspect driveways to meet this County standard. The Rattlesnake Fire Protection District will also inspect driveways in the district to maintain this standard, allowing for the ingress and egress of emergency vehicles in the district per the Fire Code.

#### 2.0 Design Specifications

#### 2.1 Width:

#### **2.1.1. Driveway**;

- 2.1.1.1. Shall provide for a minimum 14 foot all weather driving surface (not including shoulders). A 16 foot surface is encouraged to facilitate larger fire apparatus
- 2.1.1.2. Entrance width Shall be minimum 24 foot at the intersection of the road edge and driveway, with a taper back no less than 15 foot to the minimum driveway width as specified in 2.1.1.1.

#### 2.1.2. Access Driveway;

- 2.1.2.1. Shall provide for a minimum 18 foot all weather driving surface (not including shoulders). A 20 foot surface is encouraged to facilitate larger fire apparatus.
- 2.1.2.2. Entrance width Shall be minimum 24 foot at the intersection of the road edge and access driveway, with a taper back no less than 15 foot to the minimum driveway width as specified in 2.1.2.1.

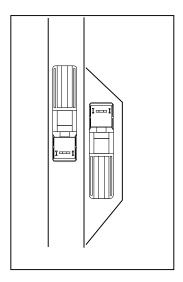
#### **2.1.3.** Roadway;

2.1.3.1. Shall be designed and constructed to meet the provisions of the 2018 International Fire Code, National Fire Protection Association (NFPA) and the Elbert County Roadway Design and Construction Manual.

#### 2.2 Distances

- 2.1.3.2. Driveway and Access Driveways longer than 500 feet, Shall have a turn out not less than every 500 feet in length.
- 2.1.3.3. This turn out Shall be wide enough to allow for the passage of fire apparatus. As of 2001 Rattlesnake Fire Protection District has apparatus in length of 40 feet and width of 13 feet.

#### 2.1.3.4. Typical turn out



#### 2.3 Surface:

#### 2.1.4. Driveway:

- 2.1.4.1. All road-base material Shall be a minimum 4 inches thick and Shall provide an all-weather driving surface, capable of handling the imposed loads of fire apparatus (67,000 pounds).
- 2.1.4.2. Surface Shall be compacted

#### 2.1.5. Access Driveway:

- 2.1.5.1. All road-base material Shall be a minimum 6 inches thick and Shall provide an all-weather driving surface, capable of handling the imposed loads of fire apparatus (67,000 pounds).
- 2.1.5.2. Surface Shall be compacted using vibratory compaction.

#### **2.1.6.** Roadway;

2.1.6.1. Shall be designed and constructed to meet the provisions of the Uniform Fire Code, National Fire Protection Association (NFPA) and the Elbert County Roadway Design and Construction Manual.

#### 2.4 Approach:

- 2.1.7. All driveway(s) Shall approach the roadway at a 70-90 degree angle, perpendicular to the intersecting roadway.
- 2.1.8. All Access Driveway(s) Shall approach the roadway at a 70-90 degree angle, perpendicular to the intersecting roadway.
- 2.1.9. All Roadway approaches Shall be designed and constructed to meet the provisions of the Uniform Fire Code, NFPA and the Elbert County Roadway Design and Construction Manual.

#### 2.2. Gated Approaches

- 2.2.1. Locking devices
  - 2.2.1.1. Fire department personnel Shall have ready access to locking mechanisms on any gate restricting access.
- 2.2.2. Gated approach driveways
  - 2.2.2.1. Shall be set back from the edge of the roadway right-of-way no less than 30 feet.
  - 2.2.2.2. Provide a turning radius of no less than 36 feet from centerline of the driveway and centerline of the road.

- 2.2.2.3. No less than 14 feet "post to post" access, or provide a clear opening of not less than 2 feet wider than the traveled roadway
- 2.2.2.4. All gates Shall open inward, outward opening gates are prohibited.
- 2.2.3. Gated approach access driveways
  - 2.2.3.1. Shall be set back from the edge of the roadway right-of-way no less than 30 feet.
  - 2.2.3.2. Provide a turning radius of no less than 40 feet from centerline of the driveway and centerline of the road.
  - 2.2.3.3. No less than 18 feet "post to post" access, or provide a clear opening of not less than 2 feet wider than the traveled roadway
- 2.2.4. Gated approach for private roads
  - 2.2.4.1. Shall be designed and constructed to meet the provisions of the Uniform Fire Code, National Fire Protection Association (NFPA) and the Elbert County Roadway Design and Construction Manual.

#### 2.3. Terminations:

- 2.3.1. All residential driveways 150 feet or longer in developed length Shall provide a complete turnaround cul-de-sac (see Turning Radii Section).
- 2.3.2. The use of a "Hammerhead-T" turn around will not be permitted.

#### 2.4. Vertical Clearance:

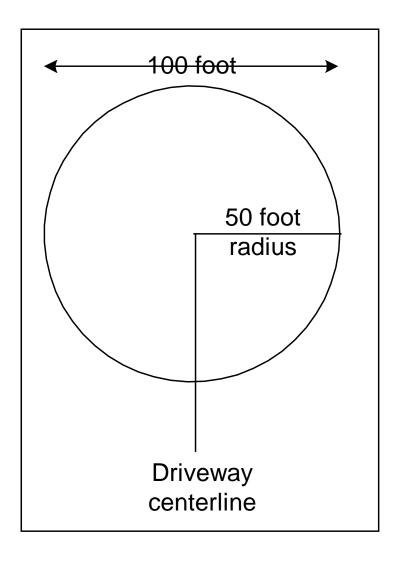
- 2.4.1. All Driveways
  - 2.4.1.1. Shall have unobstructed vertical height of 13 feet 6 inches.
  - 2.4.1.2. Additional requirements should be noted for driveway clearances (see National Electrical Safety Code).

#### Exceptions:

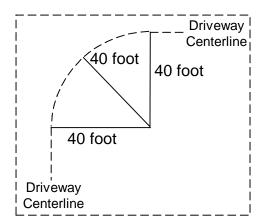
Vertical clearances may be reduced, provided such reduction does not impair access by fire apparatus and approved signs are installed and maintained indicating the established clearance when approved by the AHJ.

#### 2.5. Turning Radii:

2.5.1. All residential driveways 150 feet or longer in developed length Shall provide a complete turnaround, constructed with a minimum 50 foot center line radius as shown on the attached diagram.



# Turning Radius Diagram 1



2.5.2. All turns associated with the driveway system (with the exception of a complete turnaround as described in section 2.5.1) shall provide a minimum 40-foot center line radius as shown on the attached diagram.

#### Exceptions:

Turning radius may be modified when approved by the Authority Having Jurisdiction.

#### 2.6. Obstruction(s)

- 2.6.1. The required width of a fire access road Shall not be obstructed in any manner, including parking of vehicles.
- 2.6.2. Minimum required widths and clearances established Shall be maintained at all times.

#### 2.7. Cattle grates

- 2.7.1. Shall be capable of handling the imposed weight (67,000 pounds.) of fire apparatus traveling over the grate.
  - 2.7.1.1. When approved alternate means of access are provided around the grate, the provisions of 2.10.1 may be modified.
- 2.7.2. Shall be designed and constructed to meet the provisions of the Uniform Fire Code, National Fire Protection Association (NFPA) and the Elbert County Roadway Design and Construction Manual.

#### **2.8.** *Slope:*

2.8.1. The maximum slope of a residential driveway Shall not exceed 10 percent once on private property.

#### Exceptions:

Houses equipped with an approved automatic sprinkler system installed and maintained in accordance with the NFPA 13D, Standard for the installation of sprinkler systems in single family dwellings.

Turning radius may be modified when approved by the AHJ.

#### 2.9. Premises Identification:

- 2.9.1. Approved numbers or addresses will be provided by Elbert County
- 2.9.2. Markers for all new and existing dwellings Shall be in such a position as to be plainly visible and legible from the street or road fronting the property.
- 2.9.3. All though not required the use of red fiberglass post with white reflective numbering is preferred.

#### 2.10. Bridges and Water Crossings:

Shall be designed and constructed to meet the provisions of the Uniform Fire Code, National Fire Protection Association (NFPA) and the Elbert County Roadway Design and Construction Manual.

In many cases, bridges and crossings may require the approval stamp of a Professional Engineer.

- 2.10.1. All bridges Shall be designed and constructed of hard, all weather surface capable of supporting the heaviest piece of fire apparatus likely to be operated on the bridge,
  - 2.10.1.1. Capable of handling the imposed loads of fire apparatus (67,000 pounds).
- 2.10.2. Vehicle load limits Shall be posted at both entrances to bridges on all driveways and private roads.