Fire Prevention Code Policy

Office of the Fire Marshal • Roanoke Fire-EMS Department

	Subject: Knox Rapid Access System	
	Date: July 1, 2019	**Revision:** A
	Fire Marshal: David Guynn	
	Fire Chief: David Hoback	

Purpose

Fire Prevention Code Policy documents are promulgated by the Office of the Fire Marshal of the Roanoke Fire-EMS Department, acting as the Fire Code Official for the City of Roanoke. This document is intended to provide guidance to stakeholders for compliance with the currently adopted edition of the City of Roanoke Fire Prevention Code ("the Code") and compatibility with the standards and practices of the Roanoke Fire-EMS Department. In the event of a conflict with any provision of the currently adopted Code, the Code shall prevail.

Scope

This policy applies to:

- Construction of new buildings or structures within the City of Roanoke or buildings or structures for which a comprehensive plan review is otherwise required.
- Alterations of required fire apparatus access roads.
- Retroactive installations.

Authority/References

- 2015 Statewide Fire Prevention Code, §506

Policy

Adoption

Roanoke Fire-EMS has adopted the Knox Rapid Entry System (KRES) as its standard system for fire department key boxes as described in §506.1 of the Statewide Fire Prevention Code. Other KRES products may be required to protect fire department connections or provide fire department access and control of electric gate openers.

Key Boxes: When required

Fire department key boxes shall be required whenever:

- A proposed building will have a fire alarm system or fire sprinkler system;
- A proposed building will have an elevator;

- A proposed building has hazardous materials in amounts exceeding the applicable maximum allowable quantity as set out in Table 5003.1.1(1) of the current edition of the Statewide Fire Prevention Code;
- A proposed building has unreasonable delays for fire department access as determined by the Fire Marshal or his/her designee

A key box may be required retroactively whenever an existing building meets these requirements and the Fire Marshal or his/her designee considers the installation of a key box to be necessary for lifesaving or firefighting purposes.

Key Boxes: Size, Location, and Installation

The provisions of this section are a minimum requirement that may be superseded during the comprehensive planning process. In some cases, the Fire Marshal or his/her designee may accept performance-based alternatives or require a greater level of building access for lifesaving or firefighting purposes.

The size of the required key box is dependent on building size and/or configuration:

- Less than seven stories, less than 50,000 sq ft: Knox 3200 Series
- Less than seven stories, greater than 50,000 sq ft: Knox 4400 Series
- High-rise building: Knox 4400 Series

All key boxes shall be of the hinged type; "lift-off" lids are not permitted.

Key boxes shall be located at the main entrance to the building or other location approved by the Fire Marshal or his/her designee. Key boxes are preferred to be at a height of six (6) feet above finished grade, but must be no lower than five (5) feet or no higher than six (6) feet above finished grade. All measurements shall be to the centerline of the box.

Key Boxes: Contents

Each key set must include:

- Keys to provide access to all portions of the building
- One (1) electrical panel key
- If the building is equipped with a fire alarm system: One (1) fire alarm key
- If the building is equipped with an elevator: One (1) elevator key

The following number of key sets shall be required based on the building size and/or configuration:

- Single story, less than 50,000 sq ft: One set
- Single story, greater than 50,000 sq ft: Three sets
- Two to six stories, less than 50,000 sq ft: Two sets
- Two to six stories, greater than 50,000 sq ft: Three sets
- High-rise building/greater than seven stories: Five sets

The Fire Marshal or his/her designee may require a different number of key sets dependent on the building size, configuration, or to provide a greater level of building access for lifesaving or firefighting purposes.

Elevator Boxes: Location and Installation

The provisions of this section are a minimum requirement that may be superseded during the comprehensive planning process. In some cases, the Fire Marshal or his/her designee may accept performance-based alternatives or require a greater level of building access for lifesaving or firefighting purposes.

Buildings equipped with elevators are required to be equipped with a Knox 1404 Series Elevator Box. The elevator box shall be located in the primary elevator lobby or other location approved by the Fire Marshal or his/her designee.

Elevator Boxes: Contents

An elevator box set shall be defined as the following:

- One (1) elevator door drop key
- One (1) key set as described in *Key Boxes: Contents*, above

The following number of elevator box sets shall be required based on the building size and/or configuration:

- Low-rise building/six stories or less: One set
- High-rise building/seven stories or greater: Two sets

Fire Apparatus Access Roads: Gate Controls

Detailed requirements for Fire Apparatus Access Roads are located in Fire Prevention Code Policy FP-3, *Fire Department Access Roads.* This section shall be applicable to access control systems for security gates as described in §503.6 of the Statewide Fire Prevention Code.

Where a security gate is installed in such a manner to obstruct a required Fire Apparatus Access Road, the gate must be provided with hardware that is compatible with the City's KRES. If the gate is a manually operated gate, the gate must be equipped with a Knox 3770 or 3772 series padlock. If the gate is automatically operated via an electrical or mechanical opener, the gate must be equipped with a Knox 3501 or 3502 series electrical key switch that is configured to override the gate controller and hold the gate open for fire department access.

Fire Department Connections: Protective Locking Caps

Detailed requirements for Fire Department Connections are located in Fire Prevention Code Policy FP-4, *Fire Department Connections.* All fire department connections installed as a part of a new construction or renovation project shall be equipped with an appropriately sized and threaded Knox locking FDC cap that protects each connection.

The Fire Marshal or his/her designee is authorized to require retroactive installation of a Knox locking FDC cap in accordance with §912.4.1 of the Statewide Fire Prevention Code. This requirement shall be invoked when a building or structure located within the City of Roanoke

has a second documented instance where a non-locking fire department connection cap is identified as missing or damaged.

The Fire Marshal or his/her designee is authorized to require the immediate retroactive installation of a Knox locking FDC cap when debris is visualized in a fire department connection or evidence of tampering exists that poses an immediate hazard to the building or its occupants.