



Stafford County Fire and Rescue Department Office of the Fire Marshal

1225 Courthouse Road, PO BOX 339, Stafford, VA 22555
(540) 658-8648 · www.staffordfireandrescue.com/fm



Guidelines and Specifications For: **Fire Department Access**

Applicable Codes and Standards:

- VSFPC - Virginia Statewide Fire Prevention Code (2018)
- IFC – International Fire Code (2018) Appendix D
- SCC – Stafford County Code
- NFPA 1901 – National Fire Protection Association Standard for Automotive Fire Apparatus (2016)

Fire Department Access Roads	Code Section
<p>Fire Department access roads must be provided on properties as approved. Fire Department access roads are also required on construction and demolition sites. Per County Attorney determination, typically these requirements do not extend to private, single family residential structures and their access driveways.</p>	<p>VSFPC 503.1 SCC 12-22</p>
<p>Fire Department access roads must be provided within 150ft of all exterior portions of any building or facility as measured along an approved, walkable route (typically level and 10 feet wide). At least one exterior entrance/exit door should be within about 50ft of such road as measured along an unobstructed route.</p>	<p>VSFPC 503.1.1</p>
<p>Fire Department access roads must have an unobstructed width of 20ft, a vertical clearance of 13.5ft, grade not exceeding 10%, on asphalt, concrete or another approved surface capable supporting a 75,000lb fire apparatus (typically 450psi loading with no point less than 75psi) during all weather conditions.</p>	<p>VSFPC 503.2 IFC D102.1 NFPA 1901, 19.21.4.2</p>
<p>Fire Department access roads must be provided with an approved turn-around area where a dead-end condition exceeds 150ft.</p>	<p>VSFPC 503.2.5</p>
<p>Approved apparatus turn-around areas must provide at least a 90ft diameter cul-de-sac or an approved “T”, “Y” or other approved arrangement. See IFC D103.3.</p> <div style="text-align: center;"> <p>120' HAMMERHEAD ACCEPTABLE ALTERNATIVE TO 120' HAMMERHEAD 96' DIAMETER CUL-DE-SAC 60' "Y"</p> </div> <p><i>General fire apparatus road specifications include a 47ft long ladder truck (detail attached) or as otherwise required by the Fire Official. Minimum turning radii are 25ft inside and 45ft outside with an angle of approach and departure no greater than 8 degrees.</i></p>	<p>VSFPC 503.2.4 NFPA 1901, 12.3.2.3</p>
<p>Fire Department access roads must be marked in accordance with Stafford County Fire Lane Sign and Pavement Marking Standards.</p>	<p>VSFPC 503.3</p>
<p>Residential development areas of more than 200 dwelling units or non-residential development with building (“foot-print”) areas of greater than 124,000 square feet shall be provided with at least two separate and approved Fire Department Access routes. The two routes must be separated a distance of at least one-half the maximum diagonal of the affected area such that the routes are independent for ingress/egress.</p>	<p>VSFPC 503.1.2 IFC D104 IFC D106.2</p>
<p>Buildings greater than 3 stories or where the vertical distance between the grade plane and the highest roof surface exceeds 50 feet must be provided with “aerial fire apparatus access” per IFC D105. Fire Department access roadways must be provided with a minimum of 15ft and a maximum of 30 feet from the building along the <u>Front AND Rear</u> (or largest two where approved) sides of a building.</p> <p><i>Where approved, alternatives to this rear access requirement may include protection upgrades that are otherwise not required such as: completely non-combustible construction materials with an approved fire sprinkler system; an NFPA 13 fire sprinkler system throughout the building and standpipes in multiple, fire-rated stairwells; or compliance with high-rise building construction standards.</i></p>	<p>VSFPC 503.1.2 IFC D104 IFC D105</p>



Stafford County Fire and Rescue Department Office of the Fire Marshal

1225 Courthouse Road, PO BOX 339, Stafford, VA 22555
(540) 658-8648 · www.staffordfirerescue.com/fm



Alternative Fire Department Access Roads	Code Section
The use of alternative Fire Department Access Road designs (sidewalks, grass pavers, etc.) must ensure that all minimum requirements are met and that use of the space or nearby fixtures will not create unauthorized obstructions. The boundaries of the path must be delineated by an approved means such as low-level landscaping or curbing.	VSFPC 503.4
Alternative Fire Department Access Road designs must be certified by the manufacturer or a licensed professional engineer to be capable of supporting a 75,000lb fire apparatus during all-weather conditions. Access to unoccupied structures such as telecommunication towers may be 12ft wide and gravel where approved.	VSFPC 503.2.3
The entrance to alternative Fire Department Access Roads shall include bollards or other approved means of establishing the entrance point accompanied by fire lane signs on either side and fire lane pavement markings across the entrance point.	VSFPC 503.3
Gates, chains or other approved barriers that are secured by a "Knox" padlock, gate switch or box, are typically required to restrict alternative Fire Department Access roads to "Emergency Access Only". Where such devices are provided across the roadway shall be painted 'safety' yellow or have equivalent visibility and an unobstructed width of not less than 12 feet when open.	VSFPC 503.5 VSFPC 503.6
<p>Sample Detail:</p>	

Rapid Access "Knox Box" Key Box	Code Section
Where access is restricted for emergency operations, the fire official may require the installation of a key box. Buildings equipped with a non-household fire alarm system are required to have a key box and for large or high hazard buildings, a larger repository box may be required. Buildings equipped with an elevator are required to also have an elevator key box in the main elevator lobby. See www.staffordfirerescue.com/fm for ordering information.	VSFPC 506.1
Where required, the key box must be installed at the primary fire department entrance (i.e. the main entrance or sprinkler room if multiple main entrances exist). The box should be securely mounted in a visible location at about 4ft from grade.	VSFPC 506.1
The contents of a key box must include the following items and LABELED keys (high-rise buildings must have at least 5 sets): <ol style="list-style-type: none"> 1) a master key (preferably at least 3 sets for multistory buildings) 2) fire alarm system keys 3) elevator keys for firefighter operations (preferably also a door drop key) 4) any other keys to emergency equipment or areas 5) emergency contact information 	VSFPC 506.1
It is the building tenant or owner's responsibility to update the contents of the key box when information is outdated or locks are changed/re-keyed.	VSFPC 506.2

