

# DEKALB COUNTY FIRE RESCUE DEPARTMENT Darnell D. Fullum Director/Fire Chief Fire Marshal Division-Chief Larry Labbe Fire Marshal 1950 W. Exchange Place, Tucker, GA 30084 Phone: 404-371-2776 Fax: 404-687-2430



## Fire Marshal Site Plan Review Checklist

		ppendix D Fire Apparatus
	ccess Roads for details [adopted April 12, 2005] for	**
I. □ <u>N</u>	MINIMUM ACCESS ROAD REQUIREMENTS	
	☐ (A.) Load Capacity	75,000 lbs.* (Ref: IFC, D102.1)
	☐ (B.) Unobstructed Width	For buildings less than 30 ft. in height; otherwise see IFC, D105.2
	□ (D.) Turning Radii	
	☐ (E.) Slope/Grade	10% (maximum) **
	☐ (F.) Building Perimeter Proximity	Service Features, Sec 503.1 & 503.1.1
	□ (G.) Aerial Apparatus Fire Roads □ (A.) Where Required	IFC, Sec D105.2 IFC, Sec D105.3
II. □	FIRE HYDRANTS  ☐ (A.) Hydrants must be on the property side of the travel distance from all grade level portions of the See IFC, Chap 5, and/or 507.5.1 (exception) an ☐ (B.) Fire Hydrant Systems	structures perimeter. nd/or IFC C103.1 and IFC D103.1IFC, Sec. 507.5IFC, Sec. 507.5.2IFC, Sec. 507.5.3



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	☐ (F.) Clear Spaces Around Hydrants. ☐ (G.) Physical Protection	
III. IV.	☐ Gate Policy	IFC, Sec D-103.5 NFPA 24, 2019 Ed.
V.	☐ Building Address	IFC, Sec. 505.1
VI.	☐ Dead-End Fire Lanes	IFC, Sec. D103.4
VII.	☐ Dead-End Fire Apparatus Access Road Turnarounds	IFC, Sec. Table D103.4
VIII.	☐ Fire Lane Signs	IFC, Sec. D103.6
IX.	☐ Parking Space Designation for Persons with Disabilities	sGAC 120-3-2006
	☐ Quantity	GAC 120-3-2003(11) (a) &
		OCGA Title 30-3-2 (10) (A)
	☐ Location	GAC 120-3-2006
	☐ Signage	GAC 120-3-2006
X.	☐ Transformer Pad Location	IFC 604.12 <sup>+</sup>
XI.	☐ Demolition Permits	IFC, Chap 33/NFPA#241
XII.	☐ Storage Tanks	GSFC/DKFM Approval
XIII.	☐ High-Piled Combustible Storage	IFC, Chap. 32
XIV	☐ Fire Department Connections	IFC, Sec903.3.7 & 912/NFPA#24
XV XVI	☐ Standpipes	DCFM Approval/Mfrs'
XVII	☐ Miscellaneous	

<sup>\* =</sup> Per 2018 International Fire Code [IFC] as indicated within ( ).

Please Note: The word "should" does not diminish the necessity of any of the above requirements.

<sup>\*\* =</sup> Per DKCO. Fire & Rescue Services policy requirement

<sup>+ =</sup> Per Chapter 120-3-3 Rules And Regulations For The State Minimum Fire Safety Standards



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☐ FOR FIRE INSPECTION APPPOINTMENT:	PLEASE CALL 404/371-6208 FOR PERMITS ISSUED BY
DEKALB COUNTY.	

**Revision:** tp: 4/10/2020



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## APPENDIX C

## FIRE HYDRANT LOCATIONS AND DISTRIBUTION

The provisions contained in this appendix are not mandatory unless specifically referenced in the adopting ordinance or legislation of the jurisdiction.

#### User note:

**About this appendix:** Appendix: Appendix C focuses on the location and spacing of fire hydrants, which is important to the success of fire-fighting operations. The difficulty with determining the spacing of fire hydrants is that every situation is unique and has unique challenges. Finding one methodology for determining hydrant spacing is difficult. This particular appendix gives one methodology based on the required fire flow that fire departments can work with to set a policy for hydrant distribution around new buildings and facilities in conjunction with Section 507.5.

### SECTION C101 GENERAL

## SECTION C102 NUMBER OF FIRE HYDRANTS

C101.1 Scope. In addition to the requirements of Section 507.5.1, fire hydrants shall be provided in accordance with this appendix for the protection of buildings, or portions of buildings, hereafter constructed or moved into the jurisdiction.

C102.1 Minimum number of fire hydrants for a building. The number of fire hydrants available to a building shall be not less than the minimum specified in Table C102.1.

## TABLE C102.1 REQUIRED NUMBER AND SPACING OF FIRE HYDRANTS<sup>h</sup>

The state of the s					
FIRE-FLOW REQUIREMENT (gpm)	MINIMUM NUMBER OF HYDRANTS	AVERAGE SPACING BETWEEN HYDRANTS <sup>a, b, c, f, g</sup> (feet)	MAXIMUM DISTANCE FROM ANY POINT ON STREET OR ROAD FRONTAGE TO A HYDRANT <sup>4, f, g</sup>		
1,750 or less	1	500	250		
1,751-2,250	2	450	225		
2,251-2,750	3	450	225		
2,751-3,250	3	400	225		
3,251-4,000	4	350	210		
4,001-5,000	5	300	180		
5,001-5,500	6	300	180		
5,501-6,000	6	250	150		
6,001-7,000	7	250	150		
7,001 or more	8 or more	200	120		

For SI: 1 foot = 304.8 mm, 1 gallon per minute = 3.785 L/m.

- a. Reduce by 100 feet for dead-end streets or roads.
- b. Where streets are provided with median dividers that cannot be crossed by fire fighters pulling hose lines, or where arterial streets are provided with four or more traffic lanes and have a traffic count of more than 30,000 vehicles per day, hydrant spacing shall average 500 feet on each side of the street and be arranged on an alternating basis.
- c. Where new water mains are extended along streets where hydrants are not needed for protection of structures or similar fire problems, fire hydrants shall be provided at spacing not to exceed 1,000 feet to provide for transportation hazards.
- d. Reduce by 50 feet for dead-end streets or roads.
- e. One hydrant for each 1,000 gallons per minute or fraction thereof.
- f. A 50-percent spacing increase shall be permitted where the building is equipped throughout with an approved automatic sprinkler system in accordance with Section 903.3.1.1 of the International Fire Code.
- g. A 25-percent spacing increase shall be permitted where the building is equipped throughout with an approved automatic sprinkler system in accordance with Section 903.3.1.2 or 903.3.1.3 of the International Fire Code or Section P2904 of the International Residential Code.
- h. The fire code official is authorized to modify the location, number and distribution of fire hydrants based on site-specific constraints and hazards.



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## FIRE APPARATUS ACCESS ROADS

The provisions contained in this appendix are not mandatory unless specifically referenced in the adopting ordinance or legislation of the jurisdiction.

### User note:

**About this appendix:** Appendix D contains more detailed elements for use with the basic access requirements found in Section 503, which gives some minimum criteria, such as a maximum length of 150 feet and a minimum width of 20 feet, but in many cases does not state specific criteria. This appendix, like Appendices B and C, is a tool for jurisdictions looking for guidance in establishing access requirements and includes criteria for multiple-family residential developments, large one- and two-family subdivisions, specific examples for various types of turnarounds for fire department apparatus and parking regulatory signage.

## SECTION D101 GENERAL

**D101.1 Scope.** Fire apparatus access roads shall be in accordance with this appendix and all other applicable requirements of the *International Fire Code*.

## SECTION D102 REQUIRED ACCESS

**D102.1** Access and loading. Facilities, buildings or portions of buildings hereafter constructed shall be accessible to fire department apparatus by way of an *approved* fire apparatus access road with an asphalt, concrete or other *approved* driv-

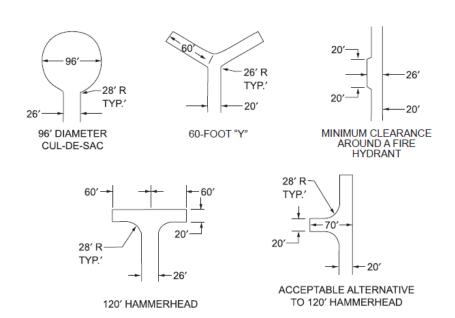
ing surface capable of supporting the imposed load of fire apparatus weighing up to 75,000 pounds (34 050 kg).

# SECTION D103 MINIMUM SPECIFICATIONS

D103.1 Access road width with a hydrant. Where a fire hydrant is located on a fire apparatus access road, the minimum road width shall be 26 feet (7925 mm), exclusive of shoulders (see Figure D103.1).

D103.2 Grade. Fire apparatus access roads shall not exceed 10 percent in grade.

**Exception:** Grades steeper than 10 percent as *approved* by the *fire code official*.



For SI: 1 foot = 304.8 mm.

FIGURE D103.1
DEAD-END FIRE APPARATUS ACCESS ROAD TURNAROUND

2018 INTERNATIONAL FIRE CODE®



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#### APPENDIX D

D103.3 Turning radius. The minimum turning radius shall be determined by the *fire code official*.

D103.4 Dead ends. Dead-end fire apparatus access roads in excess of 150 feet (45 720 mm) shall be provided with width and turnaround provisions in accordance with Table D103.4.

# TABLE D103.4 REQUIREMENTS FOR DEAD-END FIRE APPARATUS ACCESS ROADS

LENGTH (feet)	WIDTH (feet)	TURNAROUNDS REQUIRED
0-150	20	None required
151–500	20	120-foot Hammerhead, 60-foot "Y" or 96-foot diameter cul-de-sac in accor- dance with Figure D103.1
501–750	26	120-foot Hammerhead, 60-foot "Y" or 96-foot diameter cul-de-sac in accor- dance with Figure D103.1
Over 750	Special approval required	

For SI: 1 foot = 304.8 mm.

D103.5 Fire apparatus access road gates. Gates securing the fire apparatus access roads shall comply with all of the following criteria:

- Where a single gate is provided, the gate width shall be not less than 20 feet (6096 mm). Where a fire apparatus road consists of a divided roadway, the gate width shall be not less than 12 feet (3658 mm).
- 2. Gates shall be of the swinging or sliding type.
- Construction of gates shall be of materials that allow manual operation by one person.
- Gate components shall be maintained in an operative condition at all times and replaced or repaired when defective.
- Electric gates shall be equipped with a means of opening the gate by fire department personnel for emergency access. Emergency opening devices shall be approved by the fire code official.
- Methods of locking shall be submitted for approval by the fire code official.
- Electric gate operators, where provided, shall be listed in accordance with UL 325.
- Gates intended for automatic operation shall be designed, constructed and installed to comply with the requirements of ASTM F2200.

D103.6 Signs. Where required by the *fire code official*, fire apparatus access roads shall be marked with permanent NO PARKING—FIRE LANE signs complying with Figure D103.6. Signs shall have a minimum dimension of 12 inches (305 mm) wide by 18 inches (457 mm) high and have red letters on a white reflective background. Signs shall be posted

on one or both sides of the fire apparatus road as required by Section D103.6.1 or D103.6.2.

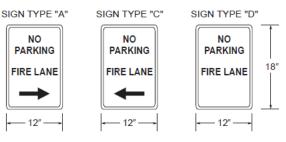


FIGURE D103.6 FIRE LANE SIGNS

D103.6.1 Roads 20 to 26 feet in width. Fire lane signs as specified in Section D103.6 shall be posted on both sides of fire apparatus access roads that are 20 to 26 feet wide (6096 to 7925 mm).

D103.6.2 Roads more than 26 feet in width. *Fire lane* signs as specified in Section D103.6 shall be posted on one side of fire apparatus access roads more than 26 feet wide (7925 mm) and less than 32 feet wide (9754 mm).

## SECTION D104 COMMERCIAL AND INDUSTRIAL DEVELOPMENTS

D104.1 Buildings exceeding three stories or 30 feet in height. Buildings or facilities exceeding 30 feet (9144 mm) or three stories in height shall have not fewer than two means of fire apparatus access for each structure.

D104.2 Buildings exceeding 62,000 square feet in area. Buildings or facilities having a gross building area of more than 62,000 square feet (5760 m<sup>2</sup>) shall be provided with two separate and approved fire apparatus access roads.

Exception: Projects having a gross building area of up to 124,000 square feet (11 520 m²) that have a single approved fire apparatus access road where all buildings are equipped throughout with approved automatic sprinkler systems.

D104.3 Remoteness. Where two fire apparatus access roads are required, they shall be placed a distance apart equal to not less than one half of the length of the maximum overall diagonal dimension of the lot or area to be served, measured in a straight line between accesses.

## SECTION D105 AERIAL FIRE APPARATUS ACCESS ROADS

D105.1 Where required. Where the vertical distance between the grade plane and the highest roof surface exceeds 30 feet (9144 mm), approved aerial fire apparatus access roads shall be provided. For purposes of this section, the highest roof surface shall be determined by measurement to the eave of a pitched roof, the intersection of the roof to the exterior wall, or the top of parapet walls, whichever is greater.



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D105.2 Width. Aerial fire apparatus access roads shall have a minimum unobstructed width of 26 feet (7925 mm), exclusive of shoulders, in the immediate vicinity of the building or portion thereof.

D105.3 Proximity to building. One or more of the required access routes meeting this condition shall be located not less than 15 feet (4572 mm) and not greater than 30 feet (9144 mm) from the building, and shall be positioned parallel to one entire side of the building. The side of the building on which the aerial fire apparatus access road is positioned shall be approved by the *fire code official*.

D105.4 Obstructions. Overhead utility and power lines shall not be located over the aerial fire apparatus access road or between the aerial fire apparatus road and the building. Other obstructions shall be permitted to be placed with the approval of the *fire code official*.

# SECTION D106 MULTIPLE-FAMILY RESIDENTIAL DEVELOPMENTS

D106.1 Projects having more than 100 dwelling units. Multiple-family residential projects having more than 100 dwelling units shall be equipped throughout with two separate and approved fire apparatus access roads.

Exception: Projects having up to 200 dwelling units shall have not fewer than one approved fire apparatus access road where all buildings, including nonresidential occupancies, are equipped throughout with approved automatic sprinkler systems installed in accordance with Section 903.3.1.1 or 903.3.1.2.

D106.2 Projects having more than 200 dwelling units. Multiple-family residential projects having more than 200 dwelling units shall be provided with two separate and approved fire apparatus access roads regardless of whether they are equipped with an approved automatic sprinkler system.

D106.3 Remoteness. Where two fire apparatus access roads are required, they shall be placed a distance apart equal to not less than one-half of the length of the maximum overall diagonal dimension of the property or area to be served, measured in a straight line between accesses.

- 903.3.1.3, access from two directions shall not be required.
- The number of dwelling units on a single fire apparatus access road shall not be increased unless fire apparatus access roads will connect with future development, as determined by the fire code official.

D107.2 Remoteness. Where two fire apparatus access roads are required, they shall be placed a distance apart equal to not less than one-half of the length of the maximum overall diagonal dimension of the property or area to be served, measured in a straight line between accesses.

## SECTION D108 REFERENCED STANDARDS

ASTM F2200—14 Standard Specification for Automated Vehicular Gate Construction

UL 325—02 Door, Drapery, Gate, Louver, and Window Operators and Systems, with Revisions through May 2015

## SECTION D107 ONE- OR TWO-FAMILY RESIDENTIAL DEVELOPMENTS

D107.1 One- or two-family dwelling residential developments. Developments of one- or two-family dwellings where the number of dwelling units exceeds 30 shall be provided with two separate and approved are apparatus access roads.

## Exceptions:

 Where there are more than 30 dwelling units on a single public or private fire apparatus access road and all dwelling units are equipped throughout with an approved automatic sprinkler system in accordance with Section 903.3.1.1, 903.3.1.2 or Section D107 - Not Adopted