

BOARD OF COUNTY COMMISSIONERS
NASSAU COUNTY FIRE RESCUE

Fire Prevention

96160 Nassau Place, Yulee, Florida 32097
(904) 530-6605 or (855) 305-3905 Fax (904) 321-5748



Nassau County Fire Rescue Site Plan Checklist

General Information:

1. Provide the owner's name, address and phone number on the plan
2. Provide engineer's name, address, phone and fax number on plan
3. Indicate the number of structures on site (New and Existing)
4. Provide construction type for each structure, include truss and frame type
5. Indicate number of floor per building
6. Provide square footage per building per floor
7. Provide proposed building and eave height
8. Indicate address(es) for each existing structure
9. *Place the minimum required fire flow upon the proposed site plan, use FFPC 1-18.4 and table 18.4.5.1.2 include specific construction type*

Provide the following comments:

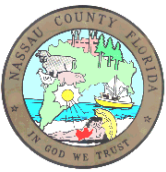
10. Water for firefighting purposes shall be indicated with a blue roadway reflector placed one foot off the center line of the road facing the fire hydrant. This includes new AND existing sources (NFPA I: 18.5.10.1)

A 36 in. (914 mm) clear space shall be maintained around the circumference of fire hydrants except as otherwise required or approved (NFPA I: 18.5.3)

A clear space of not less than 60 in. (1524 mm) shall be provided in front of each hydrant connection having a diameter greater than 2 1/2 in. (64 mm). **18.5.7.2**

Water for firefighting purposes shall be available at the time combustibles are brought onsite.

New fire hydrant(s) shall be installed so that a four and one-half (4½) inch port is facing the roadway by which it is accessed. Hydrant(s) shall be positioned not more than five (5) feet away from the curb or berm of the roadway. Also, all hydrants shall be readily accessible without the need to transverse swales, ditches etc.



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Building Access

Provide the following notation:

Access shall be provided by an unobstructed, 20 foot wide, all weather driving surface capable of supporting a 32 –ton emergency vehicle. The driving surface shall be maintained during all phases of construction

Fire department access roads shall have an unobstructed width of not less than 20 ft

A fire department access road shall extend to within 50 ft (15 m) of at least one exterior door that can be opened from the outside and that provides access to the interior of the building.

Fire department access roads shall be provided such that any portion of the facility or any portion of an exterior wall of the first story of the building is located not more than 150 ft (46 m) from fire department access roads as measured by an approved route around the exterior of the building or facility.

Fire department access roads shall have an unobstructed vertical clearance of not less than 13 ft 6 in.

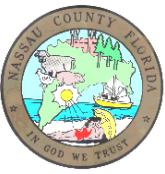
Dead-end fire department access roads in excess of 150 ft (46 m) in length shall be provided with approved provisions for the fire apparatus to turn around.

For fire rescue access, a minimum roadway radii on a county maintained road shall be no less than 25 feet.

For fire rescue access, a minimum roadway radii on a State maintained road shall be no less than 35 feet.

A cul-de-sac shall have a minimum radius of 50 feet depending on ordinance

Access Box(es). The AHJ shall have the authority to require an access box(es) to be installed in an accessible location where access to or within a structure or area is difficult because of security. The access box(es) shall be of an approved type listed in accordance with UL 1037. NFPA 1 **18.2.2.1**



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Access to Gated Subdivisions or Developments. The AHJ shall have the authority to require fire department access be provided to gated subdivisions or developments through the use of an approved device or system NFPA 1.2.2.2

All gates shall have a clear width of 20 feet

Access Maintenance. The owner or occupant of a structure or area, with required fire department access as specified in 18.2.2.1 or 18.2.2.2, shall notify the AHJ when the access is modified in a manner that could prevent fire department access. NFPA 1 **18.2.2.3**

Bridges.

When a bridge is required to be used as part of a fire department access road, it shall be constructed and maintained in accordance with nationally recognized standards.

18.2.3.4.5.1

The bridge shall be designed for a live load sufficient to carry the imposed loads of fire apparatus. 18.2.3.4.5.2

Vehicle load limits shall be posted at both entrances to bridges where required by the AHJ. 18.2.3.4.5.3

Marking of Fire Apparatus Access Road.

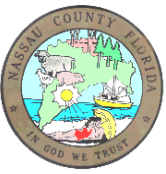
18.2.3.5.1 Where required by the AHJ, approved signs, approved roadway surface markings, or other approved notices shall be provided and maintained to identify fire department access roads or to prohibit the obstruction thereof or both. 18.2.3.5.2

A marked fire apparatus access road shall also be known as a fire lane.

Fire lanes shall be marked with a freestanding signs with the wording, "NO PARKING FIRE LANE BY ORDER OF THE FIRE DEPARTMENT". Sign shall be 12 in. by 18 in. with white background and red lettering and shall be a maximum of seven feet in height from the roadway to the bottom part of the sign. The signs shall be within sight of traffic flow and be a maximum of 60 feet apart

Water Supply, Water Mains, Fire Hydrants and Fire Department Connections

Indicate on and off site water main sizes supplying the sprinkler and standpipe systems



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Indicate proposed and existing fire hydrants within the required travel distance to the most remote accessible point of the structure. (Per code maximum travel distance is 500 feet)

Show the location, type, and capacity of any alternative water sources such as cisterns, dry hydrants and any static water sources to be used for fire flow requirements.

Show location of all Fire Department Connections.

There shall be a hydrant within 100 feet of a Fire Department Connection

Fire Department Connections shall NOT be located on building but must be remotely located on the site.

If multiple FDC's are required they must be marked as to which building or area they supply.

Locking FDC caps required

FDC sign required must state "No Parking FDC " or "FDC" on a white Sign with 6in red letters

Note:

Water models may be required for higher fire flow requirements, systems that have long pipe runs, unusual or questionable layouts or as deemed necessary by this office. To help expedite your plans, engineers are encouraged to submit water models before formal submittals are made to the fire prevention office.

18.4 Fire Flow Requirements for Buildings.

18.4.1* Scope.

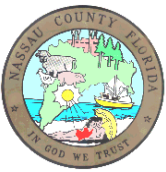
18.4.1.1* The procedure determining fire flow requirements for buildings hereafter constructed or moved into the jurisdiction shall be in accordance with Section 18.4.

18.4.1.2 Section 18.4 shall not apply to structures other than buildings.

18.4.2 Definitions. See definitions 3.3.14.4, Fire Flow Area, and 3.3.119, Fire Flow.

18.4.3 Modifications.

18.4.3.1 Decreases in Fire Flow Requirements.



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18.4.3.1.1* Fire flow requirements shall be permitted to be decreased by the AHJ for isolated buildings or a group of buildings in rural areas or suburban areas where the development of full fire flow requirements is impractical as determined by the AHJ.

18.4.3.1.2 The AHJ shall be authorized to establish conditions on fire flow reductions approved in accordance with 18.4.3.1.1 including, but not limited to, fire sprinkler protection, type of construction of the building, occupancy, development density, building size, and setbacks.

18.4.3.2 Increases in Fire Flow Requirements. The minimum required fire flow shall be permitted to be increased by the AHJ where conditions indicate an unusual susceptibility to group fires or conflagrations. An upward modification shall not be more than twice that required for the building under consideration.

18.4.4 Fire Flow Area.

18.4.4.1 General. The fire flow area shall be the total floor area of all floor levels of a building except as modified in 18.4.4.2.

18.4.4.2 Type I (443), Type I (332), and Type II (222) Construction.

The fire flow area of a building constructed of Type I (443), Type I (332), and Type II (222) construction shall be the area of the three largest successive floors.

18.4.5 Fire Flow Requirements for Buildings.

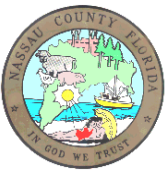
18.4.5.1 One- and Two-Family Dwellings Not Exceeding 5000 ft² (464.5 m²).

18.4.5.1.1 The minimum fire flow and flow duration requirements for one- and two-family dwellings having a fire flow area that does not exceed 5000 ft²(464.5 m²) shall be 1000 gpm (3785 L/min) for 1 hour.

18.4.5.1.2* A reduction in required fire flow of 75 percent shall be permitted where the one- and two-family dwelling is provided with an approved automatic sprinkler system.

18.4.5.1.3* Where one- and two-family dwellings are proposed to be constructed in areas where water distribution systems providing fire flow were designed and installed prior to the effective date of this Code, the AHJ shall be authorized to accept the previously designed system fire flow where the one and two-family dwellings are provided with approved automatic sprinkler systems

18.4.5.1.4 A reduction in fire flow shall be permitted for building separation distance in accordance with 18.4.5.1.4 and Table 18.4.5.1.4.



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18.4.5.1.4.1 Where multiple buildings are located on a single lot, the building separation distance shall be the distance between the buildings.

18.4.5.1.4.2 Where a building abuts a lot line, the building separation distance shall be the distance between the building and the lot line.

18.4.5.1.4.3 Where a building is contiguous to a public right of way or no-build easement, the separation distance shall be the distance between the building to the opposite side of the right of way or no-build easement.

18.4.5.1.4.4 Where multiple buildings are located on a single lot and abut a lot line, the building separation distance for determining fire flow reduction shall be the smallest of the two distances.

Table 18.4.5.1.4 Permitted Fire Flow Reduction for Building

Separation Distance between buildings on a single lot	Separation Distance to lot line or easement	Permitted Fire Flow Reduction
Greater than 30 ft. but = 50 ft.	Greater than 15 ft. but = 25 ft.	25%
Greater than 50 ft.	Greater than 25 ft.	40%

18.4.5.3 Buildings Other Than One- and Two-Family Dwellings.

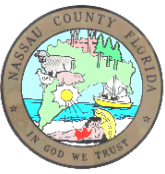
18.4.5.3.1 The minimum fire flow and flow duration for buildings other than one- and two-family dwellings shall be as specified in Table 18.4.5.2.1.

18.4.5.3.2 Required fire flow shall be reduced by 75 percent when the building is protected throughout by an approved automatic sprinkler system. The resulting fire flow shall not be less than 1000 gpm (3785 L/min).

18.4.5.3.3 Required fire flow shall be reduced by 75 percent when the building is protected throughout by an approved automatic sprinkler system, which utilizes quick response sprinklers throughout. The resulting fire flow shall not be less than 600 gpm (2270 L/min).

18.4.5.3.4* Required fire flow for buildings protected by an approved automatic sprinkler system shall not exceed 2000 gpm (7571 L/min) for 2 hours.

18.4.5.3.5 Required fire flow for open parking structures that are not protected throughout by an approved automatic sprinkler system shall be reduced by 75 percent where all of the following conditions are met:



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- (1) The structure complies with the building code.
- (2) The structure is of Type I or Type II construction.
- (3) The structure is provided with a Class I standpipe system in accordance with NFPA 14. Class I standpipe systems of the manual dry type shall be permitted.
- (4) The resulting fire flow is not less than 1000 gpm (3785 L/min).

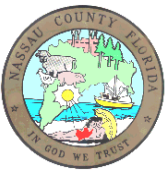
18.5.4 Minimum Number of Fire Hydrants for Fire Flow.

18.5.4.1 The minimum number of fire hydrants needed to deliver the required fire flow for new buildings in accordance with Section 18.4 shall be determined in accordance with Section 18.5.4.

18.5.4.2 The aggregate fire flow capacity of all fire hydrants within 1000 ft (305 m) of the building, measured in accordance with 18.5.1.4 and 18.5.1.5, shall be not less than the required fire flow determined in accordance with Section 18.4.

18.5.4.3* The maximum fire flow capacity for which a fire hydrant shall be credited shall be as specified by Table 18.5.4.3. Capacities exceeding the values specified in Table 18.5.4.3 shall be permitted when local fire department operations have the ability to accommodate such values as determined by the fire department.

18.5.4.4 Fire hydrants required by 18.5.2 and 18.5.3 shall be included in the minimum number of fire hydrants for fire flow required by 18.5.4.



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FIRE DEPARTMENT ACCESS AND WATER SUPPLY

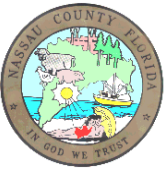
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Table 18.4.5.2.1 Minimum Required Fire Flow and Flow Duration for Buildings

Fire Flow Area ft ² (x 0.0929 for m ²)					Fire Flow gpm† (x 3.785 for L/min)	Flow Duration (hours)
I(443), I(332), II(222)*	II(111), III(211)*	IV(2HH), V(111)*	II(000), III(200)*	V(000)*		
0-22,700	0-12,700	0-8200	0-5900	0-3600	1500	2
22,701-30,200	12,701-17,000	8201-10,900	5901-7900	3601-4800	1750	
30,201-38,700	17,001-21,800	10,901-12,900	7901-9800	4801-6200	2000	
38,701-48,300	21,801-24,200	12,901-17,400	9801-12,600	6201-7700	2250	
48,301-59,000	24,201-33,200	17,401-21,300	12,601-15,400	7701-9400	2500	
59,001-70,900	33,201-39,700	21,301-25,500	15,401-18,400	9401-11,300	2750	3
70,901-83,700	39,701-47,100	25,501-30,100	18,401-21,800	11,301-13,400	3000	
83,701-97,700	47,101-54,900	30,101-35,200	21,801-25,900	13,401-15,600	3250	
97,701-112,700	54,901-63,400	35,201-40,600	25,901-29,300	15,601-18,000	3500	
112,701-128,700	63,401-72,400	40,601-46,400	29,301-33,500	18,001-20,600	3750	
128,701-145,900	72,401-82,100	46,401-52,500	33,501-37,900	20,601-23,300	4000	4
145,901-164,200	82,101-92,400	52,501-59,100	37,901-42,700	23,301-26,300	4250	
164,201-183,400	92,401-103,100	59,101-66,000	42,701-47,700	26,301-29,300	4500	
183,401-203,700	103,101-114,600	66,001-73,300	47,701-53,000	29,301-32,600	4750	
203,701-225,200	114,601-126,700	73,301-81,100	53,001-58,600	32,601-36,000	5000	
225,201-247,700	126,701-139,400	81,101-89,200	58,601-65,400	36,001-39,600	5250	
247,701-271,200	139,401-152,600	89,201-97,700	65,401-70,600	39,601-43,400	5500	
271,201-295,900	152,601-166,500	97,701-106,500	70,601-77,000	43,401-47,400	5750	
Greater than 295,900	Greater than 166,500	106,501-115,800	77,001-83,700	47,401-51,500	6000	
		115,801-125,500	83,701-90,600	51,501-55,700	6250	
		125,501-135,500	90,601-97,900	55,701-60,200	6500	
		135,501-145,800	97,901-106,800	60,201-64,800	6750	
		145,801-156,700	106,801-113,200	64,801-69,600	7000	
		156,701-167,900	113,201-121,300	69,601-74,600	7250	
		167,901-179,400	121,301-129,600	74,601-79,800	7500	
		179,401-191,400	129,601-138,300	79,801-85,100	7750	
		Greater than 191,400	Greater than 138,300	Greater than 85,100	8000	

*Types of construction are based on NFPA 220.

†Measured at 20 psi (139.9 kPa).



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