

# COMPUTING WORKSHEET

## Summary of required Fire Flow

### 1. Site Data

Structure	Bldg Floor Area	Fire Flow Area
<b>Building 1</b>		
Residential	14,803 SF	14,803 SF (Max. with 1 hr rated fire wall separation)
<b>Building 2</b>		
Residential	6,998 SF	6,998 SF (Max. with 1 hr rated fire wall separation)
<b>Building 3</b>		
Residential	9,257 SF	9,257 SF (Max. with 1 hr rated fire wall separation)
<b>Building 4</b>		
Residential	14,964 SF	14,964 SF (Max. with 1 hr rated fire wall separation)

### Building 1, 2, 3, & 4

Type of Construction - II(000) - from NFPA 220; Unprotected Non-Combustible

### 2. Determine Required Fire Flow per Florida Fire Prevention Code (NFPA 1 as amended) (Unsprinkled Building)

#### Building 1

Required Fire Flow (RFF) = **2,500 gpm @ 20 PSI** per NFPA 1 Ch 18 table 18.4.5.1.2  
Duration = **2 Hours**

#### Building 2

Required Fire Flow (RFF) = **1,750 gpm @ 20 PSI** per NFPA 1 Ch 18 table 18.4.5.1.2  
Duration = **2 Hours**

#### Building 3

Required Fire Flow (RFF) = **2,000 gpm @ 20 PSI** per NFPA 1 Ch 18 table 18.4.5.1.2  
Duration = **2 Hours**

#### Building 4

Required Fire Flow (RFF) = **2,500 gpm @ 20 PSI** per NFPA 1 Ch 18 table 18.4.5.1.2  
Duration = **2 Hours**

### 3. Determine Required Fire Flow per Florida Fire Prevention Code (NFPA 1 as amended) (For NFPA compliant Automatic Sprinkled Building)

#### Building 1

Sprinkled Bldg Required Fire Flow reduce RFFby 75% = **625 gpm @ 20 PSI**  
Minimum Required Flow for Sprinkled Bldg = **1000 gpm @ 20 PSI** USE **1000 gpm**  
Minimum Required Flow for Quick Response Heads = **600 gpm @ 20 PSI** USE **1000 gpm**

#### Building 2

Sprinkled Bldg Required Fire Flow reduce RFFby 75% = **437.5 gpm @ 20 PSI**  
Minimum Required Flow for Sprinkled Bldg = **1000 gpm @ 20 PSI** USE **1000 gpm**  
Minimum Required Flow for Quick Response Heads = **600 gpm @ 20 PSI** USE **1000 gpm**

#### Building 3

Sprinkled Bldg Required Fire Flow reduce RFFby 75% = **500 gpm @ 20 PSI**  
Minimum Required Flow for Sprinkled Bldg = **1000 gpm @ 20 PSI** USE **1000 gpm**  
Minimum Required Flow for Quick Response Heads = **600 gpm @ 20 PSI** USE **1000 gpm**

#### Building 4

Sprinkled Bldg Required Fire Flow reduce RFFby 75% = **625 gpm @ 20 PSI**  
Minimum Required Flow for Sprinkled Bldg = **1000 gpm @ 20 PSI** USE **1000 gpm**  
Minimum Required Flow for Quick Response Heads = **600 gpm @ 20 PSI** USE **1000 gpm**

Total Required Fire Flow **4000 gpm**

### 4. Determine Available Flow from Flow Test

Total Flow at 20 psi using test data Residual Pressure:

FH **7,848 gpm**  
Total Available Flow @Test Static (76 psi) **7,848 gpm** Exceeds Required Fire Flow (RFF)

### Available flow exceeds Required Fire Flow unsprinkled building

Total Flow at 20 psi with Design System Residual Pressure Adjusted to 50 psi:

FH **5,602 gpm**  
Total Available Flow @ 50 psi Static **5,602 gpm** Exceeds Sprinkled Bldg R

### Available flow exceeds Required Fire Flow for sprinkled Building

**AAC**

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