



March 5, 2024

**RE: 4791 N Federal Highway, Pompano Beach, FL**

Required Fire Flow Calculation

The following equation was used to calculate the fire flow:

$$NFF = (C)(O)[1.0 + (X + P)]$$

NFF = the needed fire flow in gallons per minute (gpm)

C = a factor related to the type of construction (gpm) – Limited Combustibility = 0.85

O = a factor related to the type of occupancy

X = a factor related to the exposure buildings

P = a factor related to the communication between buildings

$$C = 18F(A)^{0.5}$$

F = 0.8 for Construction Class 3 (noncombustible construction)

A = effective area

The effective area is the sum of the square footage of the largest floor in the building and ½ the area of the other floors:

Effective Area = 5210 sq. ft.

$$C = 18 F (A)^{0.5} = 18 \times 0.8 \times 5210^{0.5} = 1040$$

$$NFF = (C)(O)[1.0 + (X + P)]$$

$$NFF = (1040)(0.85)[1.0 + 0.0]$$

$$NFF = 885 \text{ GPM}$$

Sincerely,

**BOTEK THURLOW ENGINEERING, INC.**

**Stephen F. Botek, P.E.**  
**Fla. Registration #55335**