

HYDRAULIC CALCULATIONS

704 EGAN STREET

Calculation Procedure per Section 8.4.4

NET PRESSURE AVAILABLE

1. The system flow rate shall be established in accordance with section 8.1, and it shall be determined that the flow allowed by the water meter is adequate to supply the system demand and that the total demand flow does not exceed the maximum flow allowed by the piping system components.

Required No. Operating Sprinklers: 2
 Sprinkler Model: Viking VK435
 Listed Required Flow: (gpm) 10
 Listed Required Pressure: (psi) 10.4
 Total Required Flow: (gpm) 20

2. The water pressure in the street shall be determined

Street Pressure: (psi) 58 58 psi

3. Pipe Sizes shall be selected

See attached plan/sketch

4. Meter pressure losses, if any shall be deducted.

Meter Size: 2 inch
 Meter Model/Mfr.: S-JET
 Meter Loss: (psi) - per table 8.4.4(g) negligible 1.00 psi 57 psi

5. Pressure loss for elevation shall be deducted:

Change in elevation: (feet) 22.500 feet
 Pressure drop multiplier: (psi/feet) 0.434 psi/ft
 Total Pressure drop: (psi) 9.765 psi/ft 47.24 psi

6. Pressure losses from city main to the inside control valve shall be deducted by multiplying the factor from Table 8.4.4(a) or Table 8.4.4(b) by the total length of pipe in feet.

Service Pipe Size: (inches) 2 in
 Service Length: (feet) *note - 30' of 1-1/2" added below 10 ft
 Service Fittings: (List all): Curb Valve, (4) 2" OS&Y Valves, Watts 007, Check Valve, Tyco Diverter
 Service Fitting Eq. Length: (feet) 57.00 ft
 Total Length: 67.00 ft
 Backflow Device + Diverter Valve + Paddle Device Loss = 8.50 psi
 Factor from Table 8.4.4(a) or (b) 0.01
 Pressure Loss in 30' of 1-1/2" Pipe: 0.60 psi
 Total Service Pressure Loss: 9.17 psi 38.07 psi

Piping Materials:

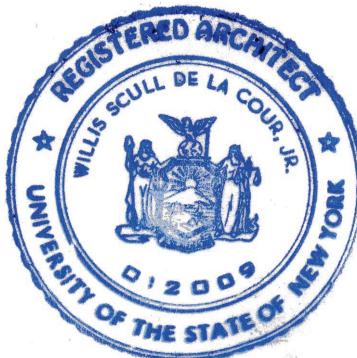
Diameter	Length	Multiplier	Pressure Loss
3/4"	9.5	0.3403	3.23
1"	23	0.1106	2.54
1-1/4"	0		
1-1/2"	40	0.018	0.72

Total Pressure Loss: 6.50

31.57 psi

8. Valve and fitting pressure losses shall be deducted. The valves and fittings from the control valve to the farthest sprinkler shall be counted.

Total Friction Loss from Fittings: (psi) 6.24 psi 25.33 psi



[Handwritten Signature]

Willis S. DeLaCour Jr.
 3/16/2017



Vincent Sapienza, P.E.
Acting Commissioner

Anastasios Georgelis, P.E.
Acting Deputy Commissioner
Bureau of Water &
Sewer Operations

59-17 Junction Boulevard
Flushing, NY 11373

3/10/2017

Monadnock Construction, Inc.
155 Third Street
Brooklyn, New York 11231
Attn: Michael Cavolo

To Whom It May Concern:

The hydrant flow test you requested in the vicinity of **714 Egan Street, Brooklyn** was performed on **3/9/2017** at **10:38 AM** with the following results:

The static pressure taken on a 12 inch water main which is fed from two directions on the north side of Egan Street 1st hydrant west of Milford Street was **60** pounds per square inch. The residual pressure at this point was **58** pounds per square inch when 500 gallons of water per minute were flowing from the north side of Egan Street 1st hydrant east of Milford Street.

This Department cannot guarantee that this pressure will be maintained in the future because a change may be needed in conformity with good engineering practices.

If you have any questions regarding engineering, and application status, please call (718) 595-7135.

Very truly yours,

A handwritten signature in black ink, appearing to read 'Urszula Krajewski'.

Urszula Krajewski, P.E.
Water Distribution Engineer
City Wide Hydraulic Testing Unit

File: FT2017-0212-331532

All hydrant flow test requests are to be addressed to: NYCDEP-BWSO; 59-17 Junction Blvd, 12th Fl., Flushing; NY 11373-5108, Attn: Citywide Hydraulic Flow Test Unit

Enclose payment for \$500 payable to NYC Water Board for each test. Indicate the test street, cross streets and borough for each test. All requests are to be made by US or overnight mail, no hand deliveries accepted.