

W-1835
SERVICE 34011

F.S.
NEW BEDFORD WATER WORKS
APPLICATION FOR SERVICE AND METER
NEW BEDFORD

EXPIRES 6-27-19
I HEREBY ACKNOWLEDGE the receipt of a copy of the Regulations prescribed in the Ordinance of the City, for the use of Water, and I request that the water may be furnished through a

8" inch D.I. meter at 325 Church Street

(Nye Lubricants)
at such rates as may from time to time be established by the City.

I hereby agree to pay promptly the bill for the Service pipe laid down for my premises, and to pay all dues for water, and I agree to conform to the said Regulations and to all provisions of the Water Ordinances, until written notice is given by me or my agent to cut off the supply.

P 113 (Dep't. Eng. W.C. Smith)
2-2 (Contractor) E.P. Lawson
TELEPHONE 12 Howland Rd Fairhaven MA 02719

Service laid _____ Size and kind of pipe _____

From Commercial St.

Turned on _____ Meter Set _____

Reading _____ Location _____

Building rates _____ Paid _____

Cost of Service \$2165.00 ck# 5278 Paid _____

31-727

N x N Line Irvington St 60.0'

E x W Line Church St 184.0'

N x S Line Building 49.0'

E x E Line Building 129.4'

Main to Property line 20.0'

Pipe inside property 115.0'

Contractor WC SMITH: Inspector P. Reynolds

9-11-18: inspected PSI Pressure Test Complete 200 PSI



CITY OF NEW BEDFORD
Jonathan F. Mitchell, Mayor

Department of Public Infrastructure

Jamie Ponte
Commissioner

Water
Wastewater
Highways
Engineering
Cemeteries
Park Maintenance
Forestry
Energy

To Whom It May Concern:

Erik Lawson Nye Lurbicants, Inc 12 Howland Road, Fairhaven MA 02719, being
(Name) (Mailing Address)

Owner of property located at

(Lessee) 325 Church Street, New Bedford MA 02745

Plot 113, Lot 2, hereby agree to allow Dupre Inc.
(Name)

369 Nash Road, New Bedford MA, to act on my behalf including affixing my
(Mailing Address)

Signature in securing permit for:

☐ Sewer/Drain Service Permits
☒ Water Service Permits
☐ Driveway Installation Permits
☐ Sidewalk Installation Permits

I further agree to conform to, and abide by, All City rules and ask regulations applicable to the permit (s) being applied for:

Name

Signature

12 Howland Road, Fairhaven MA 02719
Address

06/13/2019
Date

508-996-6721
Telephone Number

Fire Protection Services
Professional Fire Protection Engineers
Madison, NH 03849

HYDRAULIC CALCULATIONS

COVER SHEET

Nye Lubricants, Plant 4, Church St. New Bedford, MA 2080-NYE 9/22/17

WATER SUPPLY

STATIC PRESSURE (psi) 58
RESIDUAL PRESSURE (psi) 55
RESIDUAL FLOW (gpm) 2310

BOOSTER PUMPS

NUMBER OF BOOSTER PUMPS 0

SPRINKLERS

MAXIMUM SPACING OF SPRINKLERS (ft) 7.834
MAXIMUM SPACING OF SPRINKLER LINES (ft) 12.34
SPECIFIED DISCHARGE DENSITY (gpm/sq. ft.) .5

THIS SPRINKLER SYSTEM WILL DELIVER A DENSITY OF .5 gpm/sq. ft.
FOR A DESIGN AREA OF 3000 SQ. FT. OF FLOOR AREA

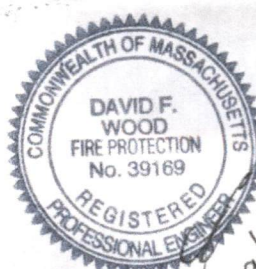
THIS SYSTEM OPERATES AT A FLOW OF 1631.71 gpm AT A PRESSURE OF 31.73 psi
AT THE BASE OF THE RISER (REF. PT. 4)

PIPES USED FOR THIS SYSTEM

=====

101	CAST IRON CEMENT LINED	(150)
001	SCHEDULE 40	
002	SCHEDULE 10	

□&l00□&k12H



Fire Protection Services
Professional Fire Protection Engineers

Nye Lubricants, Plant 4, Church St. New Bedford, MA 2080-NYE 9/22/17

PAGE 1

HYDRAULIC CALCULATIONS AT SPECIFIED DENSITY

THE FOLLOWING SPRINKLERS ARE OPERATING IN:

☒ TEST AREA 1 ☐ TEST AREA 2 ☐ TEST AREA 3 ☒ REMOTE AREA

Elevation of sprinklers = Elevation above water test.

REF. PT.	K	ELEV. ft	FLOW gpm	PRESSURE psi
100	16.80	27.50	53.85	10.27
101	16.80	27.50	53.53	10.15
102	16.80	27.50	53.43	10.12
103	16.80	27.50	51.53	9.41
104	16.80	27.50	51.15	9.27
105	16.80	27.50	51.06	9.24
106	16.80	27.50	50.13	8.90
107	16.80	27.50	49.71	8.75
108	16.80	27.50	49.60	8.72
109	16.80	27.50	49.46	8.67
110	16.80	27.50	49.00	8.51
111	16.80	27.50	48.88	8.46
112	16.80	27.50	57.39	11.67
113	16.80	27.50	48.96	8.49
114	16.80	27.50	48.43	8.31
115	16.80	27.50	48.34	8.28
116	16.80	27.50	56.76	11.41
117	16.80	27.50	48.94	8.49
118	16.80	27.50	48.45	8.32
119	16.80	27.50	48.36	8.28
120	16.80	27.50	56.58	11.34
121	16.80	27.50	49.07	8.53
122	16.80	27.50	48.52	8.34
123	16.80	27.50	48.38	8.29
124	16.80	27.50	56.61	11.35
125	16.80	27.50	49.64	8.73
126	16.80	27.50	49.04	8.52
127	16.80	27.50	48.86	8.46
128	16.80	27.50	56.95	11.49
129	16.80	27.50	50.91	9.18
130	16.80	27.50	50.20	8.93
131	16.80	27.50	50.01	8.86

THE SPRINKLER SYSTEM FLOW IS

1631.71 gpm

10010H

Fire Protection Services
Professional Fire Protection Engineers

Nye Lubricants, Plant 4, Church St. New Bedford, MA 2080-NYE 9/22/17

PAGE 2

THE OUTSIDE HOSE FLOW AT REFERENCE POINT NO. 1 IS 500.00 gpm
[] THE INSIDE HOSE [] RACK SPKLR'S.
[] YARD HYDT. FLOW IS 0.00 gpm
THE MINIMUM DENSITY PROVIDED BY THIS SYSTEM IS 0.500 gpm/sq. ft.

THE FOLLOWING PRESSURES & FLOWS OCCUR
---> AT REF. PT. 1 <---

STATIC PRESSURE	58.00 psi	
RESIDUAL PRESSURE	55.00 psi	AT 2310.00 gpm
TOTAL SYSTEM FLOW	2131.71 gpm	
AVAILABLE PRESSURE	55.41 psi	AT 2131.71 gpm
OPERATING PRESSURE	44.09 psi	AT 2131.71 gpm
PRESSURE REMAINING	11.33 psi	

THE ABOVE RESULTS INCLUDE 4.00 psi FRICTION LOSS AT REF. PT. # 3 FOR A

☒ BACKFLOW PREVENTER [] METER
[] DETECTOR CHECK VALVE [] OTHER DEVICE

Fire Protection Services
Professional Fire Protection Engineers

Nye Lubricants, Plant 4, Church St. New Bedford, MA 2080-NYE 9/22/17

PAGE 3

FITTING Equivalent Length per NFPA 13 1994, 6-4.3

'-' Indicates Equivalent Length. 'T' Indicates Threaded Fitting

1=45 Elbow, 2=90 Elbow, 3='T'/Cross, 4=Butterfly Valve, 5=Gate Valve, 6=Swing Check Valve

FROM	TO	FLOW (gpm)	PIPE (ft)	FITS	EQV. (ft)	H-W C	PIPE TYPE	DIA. (in)	FRIC. (psi)	ELEV. (psi)	FROM (psi)	TO (psi)	DIFF (psi)
1	2	1631.71	250.00	352	69.18	140	101	7.980	0.017	1.517	44.09	37.05	5.52
2	3	1631.71	2.00	2	13.00	120	1	7.981	0.023	0.650	37.05	36.06	0.35
3	4	1631.71	6.00	55	8.00	120	1	7.981	0.023	0.000	36.06	31.73	4.32
4	5	1631.71	17.50	36	86.58	120	2	8.249	0.020	7.583	31.73	22.11	2.04
5	6	68.02	2.00	3	36.63	120	2	8.249	0.000	0.000	22.11	22.11	0.00
5	7	1563.69	10.15	3	36.63	120	2	8.249	0.018	0.000	22.11	21.27	0.85
7	8	1513.92	12.25	0	0.00	120	2	8.249	0.017	0.000	21.27	21.06	0.21
8	9	1469.12	12.25	0	0.00	120	2	8.249	0.016	0.000	21.06	20.86	0.20
9	10	1428.19	12.25	0	0.00	120	2	8.249	0.015	0.000	20.86	20.67	0.19
10	11	1389.24	12.25	0	0.00	120	2	8.249	0.015	0.000	20.67	20.49	0.18
11	12	1350.19	18.25	22	28.86	120	2	8.249	0.014	0.000	20.49	19.87	0.62
12	13	1309.89	8.50	0	0.00	120	2	8.249	0.013	0.000	19.87	19.76	0.11
13	14	1266.87	8.50	0	0.00	120	2	8.249	0.012	0.000	19.76	19.66	0.10
14	15	1219.84	10.25	0	0.00	120	2	8.249	0.011	0.000	19.66	19.54	0.12
15	16	1166.20	11.75	0	0.00	120	2	8.249	0.011	0.000	19.54	19.41	0.12
16	17	1102.90	12.15	0	0.00	120	2	8.249	0.009	0.000	19.41	19.30	0.12
17	18	1027.59	12.34	0	0.00	120	2	8.249	0.008	0.000	19.30	19.20	0.10
18	19	938.00	12.34	0	0.00	120	2	8.249	0.007	0.000	19.20	19.11	0.09
19	20	778.90	12.34	0	0.00	120	2	8.249	0.005	0.000	19.11	19.03	0.08
20	21	520.63	12.15	0	0.00	120	2	8.249	0.002	0.000	19.03	18.99	0.04
21	22	260.57	12.00	0	0.00	120	2	8.249	0.001	0.000	18.99	18.98	0.01
23	24	68.02	12.25	0	0.00	120	2	4.260	0.001	0.000	20.20	20.20	0.01
24	25	117.79	12.25	0	0.00	120	2	4.260	0.004	0.000	20.20	20.18	0.02
25	26	162.59	12.25	0	0.00	120	2	4.260	0.007	0.000	20.18	20.11	0.06
26	27	203.52	12.25	0	0.00	120	2	4.260	0.010	0.000	20.11	19.99	0.12
27	28	242.47	12.25	0	0.00	120	2	4.260	0.014	0.000	19.99	19.82	0.18
28	29	281.53	18.25	22	17.96	120	2	4.260	0.019	0.000	19.82	19.13	0.68
29	30	321.82	8.50	0	0.00	120	2	4.260	0.024	0.000	19.13	18.93	0.21
30	31	364.84	8.50	0	0.00	120	2	4.260	0.031	0.000	18.93	18.67	0.26
31	32	411.87	10.25	0	0.00	120	2	4.260	0.038	0.000	18.67	18.28	0.39
32	33	465.51	11.75	0	0.00	120	2	4.260	0.048	0.000	18.28	17.71	0.56
33	34	528.82	12.15	0	0.00	120	2	4.260	0.061	0.000	17.71	16.97	0.74
34	35	604.13	12.34	0	0.00	120	2	4.260	0.078	0.000	16.97	16.02	0.96
35	36	693.71	12.34	0	0.00	120	2	4.260	0.100	0.000	16.02	14.78	1.24
36	37	568.53	12.34	0	0.00	120	2	4.260	0.069	0.000	14.78	13.88	0.90
37	38	374.32	12.15	0	0.00	120	2	4.260	0.032	0.000	13.88	13.48	0.41
38	39	186.37	12.00	0	0.00	120	2	4.260	0.009	0.000	13.48	13.37	0.10
6	23	68.02	82.00332222		53.16	120	2	2.635	0.014	0.000	22.11	20.20	1.91
7	24	49.77	82.00332222		53.16	120	2	2.635	0.008	0.000	21.27	20.20	1.07
8	25	44.80	82.00332222		53.16	120	2	2.635	0.007	0.000	21.06	20.18	0.88
9	26	40.94	82.00332222		53.16	120	2	2.635	0.006	0.000	20.86	20.11	0.75

Fire Protection Services

**Fire Protection Engineering
Hydraulics Specialists
Code Consultants**

**571 Maple Grove Road, P.O. Box 452
Madison, NH 03849**

Tel: (603) 367-8497 E-Mail: FIREWOOD@RCN.COM

September 1, 2017

Clifford Souza
Department of Public Infrastructure
1105 Shawmut Avenue
New Bedford, MA 02746

RE: Fire Flow Test
Church Street @ Irvington Street
New Bedford, MA

Dear Cliff,

Thank you very much for your assistance in completing this hydrant flow test. The test was performed on the 12" main located on the west side of Church Street using hydrants between Irvington Street and Brooklawn Avenue. The test was completed as a fire service design base for the building presently occupied by Nye Lubricants.

The test was performed on Thursday, August 31, 2017 between 9:50 and 11:00 AM. The test was completed using three hydrants located on the west side of Church Street, all fed directly by the 12" CICL main also located in the west side of Church Street. Hydrants used in the test are as follows: #1 located in front of the Nye Lubricants building at Irvington Street, #2 located in front of the Julius Koch facility, and #3 located in front of the Plumbers Supply Warehouse just south of Brooklawn Avenue. Flow was maintained concurrently through four calibrated 1 3/4" test nozzles with coefficients of 1.0, two each on hydrants #1 and #3. Static and residual gauge readings were taken at hydrant #2. This hydrant is approximately level with the building finished floor.

The results of the flow test are as follows:

Static Pressure – 58 psi

Residual Pressure – 55 psi

The pitot/flow readings as follows:

Hydrant #1: 2 @ 42 psi = 592 gpm + 592 gpm = 1,184 gpm

Hydrant #3: 2 @ 38 psi = 563 gpm + 563 gpm = 1,126 gpm

Total Flow: 2,310 gpm

Very truly yours,

David F. Wood

David F. Wood, P.E.

1cc: Victor Montero, Nye Lubricants, Inc.



Fire Protection Services
Professional Fire Protection Engineers

Nye Lubricants, Plant 4, Church St. New Bedford, MA 2080-NYE 9/22/17

PAGE 4

FITTING Equivalent Length per NFPA 13 1994, 6-4.3

'-' Indicates Equivalent Length. 'T' Indicates Threaded Fitting

1=45 Elbow, 2=90 Elbow, 3='T'/Cross, 4=Butterfly Valve, 5=Gate Valve, 6=Swing Check Valve

FROM	TO	FLOW (gpm)	PIPE (ft)	FITS	EQV. (ft)	H-W C	PIPE TYPE	DIA. (in)	FRIC. (psi)	ELEV. (psi)	FROM (psi)	TO (psi)	DIFF (psi)
10	27	38.95	82.00	332222	53.16	120	2	2.635	0.005	0.000	20.67	19.99	0.68
11	28	39.05	82.00	332222	53.16	120	2	2.635	0.005	0.000	20.49	19.82	0.68
12	29	40.29	82.00	332222	53.16	120	2	2.635	0.005	0.000	19.87	19.13	0.74
13	30	43.03	82.00	332222	53.16	120	2	2.635	0.006	0.000	19.76	18.93	0.83
14	31	47.03	82.00	332222	53.16	120	2	2.635	0.007	0.000	19.66	18.67	0.99
15	32	53.64	82.00	332222	53.16	120	2	2.635	0.009	0.000	19.54	18.28	1.26
16	33	63.30	82.00	332222	53.16	120	2	2.635	0.012	0.000	19.41	17.71	1.70
17	34	75.31	82.00	332222	53.16	120	2	2.635	0.017	0.000	19.30	16.97	2.33
18	35	89.59	82.00	332222	53.16	120	2	2.635	0.024	0.000	19.20	16.02	3.18
19	112	159.10	45.00	3222	32.47	120	2	2.635	0.068	2.167	19.11	11.67	5.28
20	100	258.27	12.83	322	26.58	120	2	2.635	0.167	2.167	19.03	10.27	6.58
21	101	260.06	12.83	322	26.58	120	2	2.635	0.169	2.167	18.99	10.15	6.67
22	102	260.57	12.83	322	26.58	120	2	2.635	0.170	2.167	18.98	10.12	6.69
36	128	125.18	5.00	32	20.69	120	2	2.635	0.044	2.167	14.78	11.49	1.12
37	129	194.21	5.00	32	20.69	120	2	2.635	0.099	2.167	13.88	9.18	2.53
38	130	187.96	5.00	32	20.69	120	2	2.635	0.093	2.167	13.48	8.93	2.38
39	131	186.37	5.00	32	20.69	120	2	2.635	0.091	2.167	13.37	8.86	2.35
100	103	204.41	7.83	0	0.00	120	2	2.635	0.108	0.000	10.27	9.41	0.87
101	104	206.54	7.83	0	0.00	120	2	2.635	0.110	0.000	10.15	9.27	0.88
102	105	207.13	7.83	0	0.00	120	2	2.635	0.111	0.000	10.12	9.24	0.88
103	106	152.89	7.83	0	0.00	120	2	2.635	0.063	0.000	9.41	8.90	0.50
104	107	155.39	7.83	0	0.00	120	2	2.635	0.065	0.000	9.27	8.75	0.51
105	108	156.08	7.83	0	0.00	120	2	2.635	0.066	0.000	9.24	8.72	0.52
106	109	102.76	7.83	0	0.00	120	2	2.635	0.030	0.000	8.90	8.67	0.24
107	110	105.68	7.83	0	0.00	120	2	2.635	0.032	0.000	8.75	8.51	0.25
108	111	106.47	7.83	0	0.00	120	2	2.635	0.032	0.000	8.72	8.46	0.25
109	113	53.30	8.00	22	11.78	120	2	2.635	0.009	0.000	8.67	8.49	0.18
110	114	56.68	8.00	22	11.78	120	2	2.635	0.010	0.000	8.51	8.31	0.20
111	115	57.59	8.00	22	11.78	120	2	2.635	0.010	0.000	8.46	8.28	0.19
112	116	101.71	7.83	0	0.00	120	2	2.635	0.030	0.000	11.67	11.41	0.26
113	117	4.35	7.83	0	0.00	120	2	2.635	0.000	0.000	8.49	8.49	0.01
114	118	8.25	7.83	0	0.00	120	2	2.635	0.000	0.000	8.31	8.32	-0.01
115	119	9.25	7.83	0	0.00	120	2	2.635	0.000	0.000	8.28	8.28	-0.01
116	120	44.96	7.83	0	0.00	120	2	2.635	0.007	0.000	11.41	11.34	0.07
117	121	-44.59	7.83	0	0.00	120	2	2.635	0.006	0.000	8.49	8.53	-0.04
118	122	-40.20	7.83	0	0.00	120	2	2.635	0.005	0.000	8.32	8.34	-0.02
119	123	-39.10	7.83	0	0.00	120	2	2.635	0.005	0.000	8.28	8.29	-0.01
120	124	-11.62	7.83	0	0.00	120	2	2.635	0.001	0.000	11.34	11.35	-0.01
121	125	-93.66	7.83	0	0.00	120	2	2.635	0.026	0.000	8.53	8.73	-0.20
122	126	-88.72	7.83	0	0.00	120	2	2.635	0.023	0.000	8.34	8.52	-0.18
123	127	-87.49	7.83	0	0.00	120	2	2.635	0.023	0.000	8.29	8.46	-0.17
124	128	-68.23	7.83	0	0.00	120	2	2.635	0.014	0.000	11.35	11.49	-0.14

Fire Protection Services
Professional Fire Protection Engineers

Nye Lubricants, Plant 4, Church St. New Bedford, MA 2080-NYE 9/22/17

PAGE 5

FITTING Equivalent Length per NFPA 13 1994, 6-4.3

'-' Indicates Equivalent Length. 'T' Indicates Threaded Fitting

1=45 Elbow, 2=90 Elbow, 3='T'/Cross, 4=Butterfly Valve, 5=Gate Valve, 6=Swing Check Valve

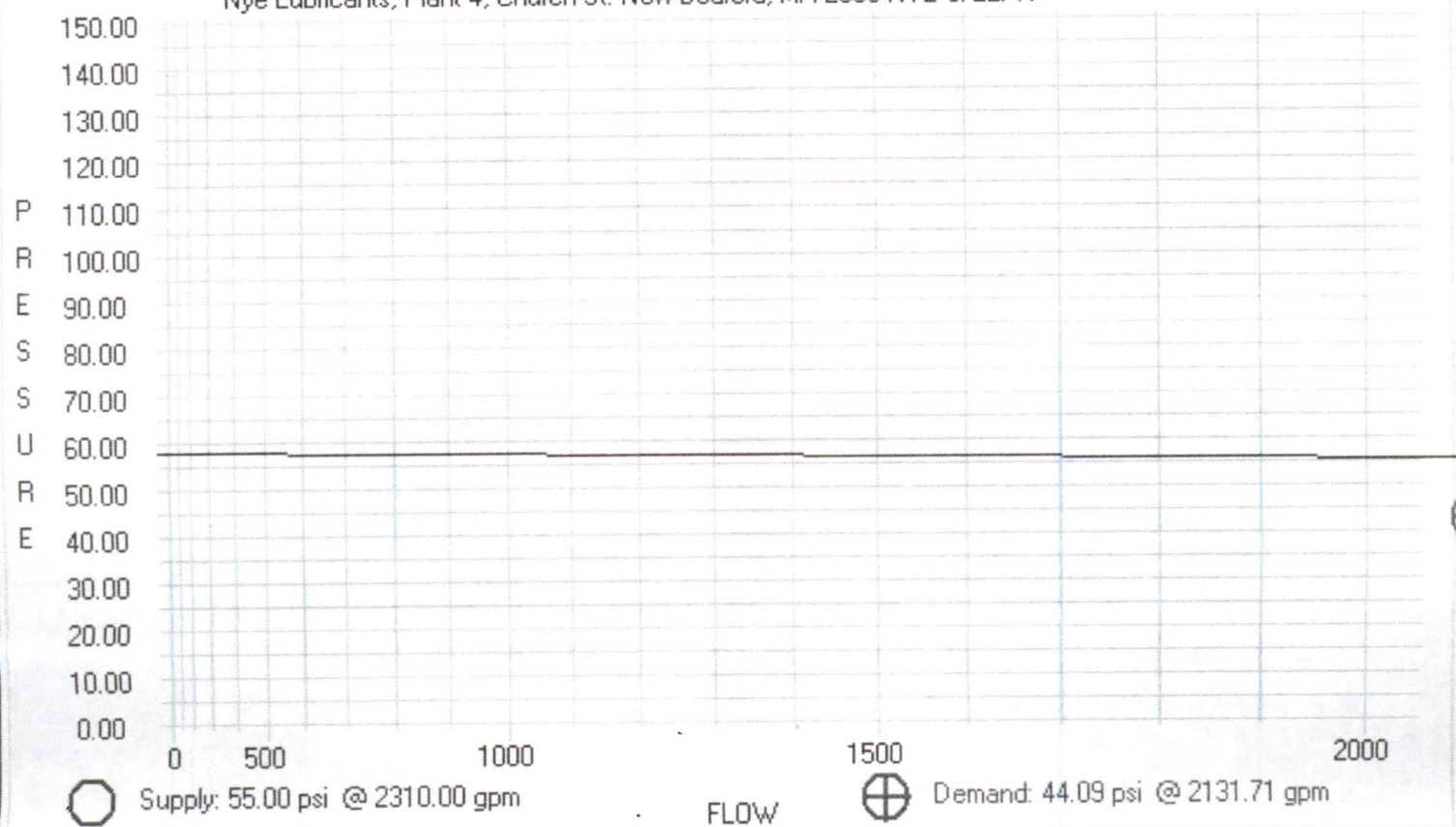
FROM	TO	FLOW (gpm)	PIPE (ft)	FITS	EQV. (ft)	H-W C	PIPE TYPE	DIA. (in)	FRIC. (psi)	ELEV. (psi)	FROM (psi)	TO (psi)	DIFF (psi)
125	129	-143.30	7.83	0	0.00	120	2	2.635	0.056	0.000	8.73	9.18	-0.45
126	130	-137.76	7.83	0	0.00	120	2	2.635	0.052	0.000	8.52	8.93	-0.41
127	131	-136.35	7.83	0	0.00	120	2	2.635	0.051	0.000	8.46	8.86	-0.40

A MAX. VELOCITY OF 15.61 ft./sec. OCCURS BETWEEN REF. PT. 35 AND 36

Sprinkler-CALC Release 7.2 Win
By Walsh Engineering Inc.
North Kingstown R.I. U.S.A.

WATER SUPPLY/DEMAND GRAPH

Nye Lubricants, Plant 4, Church St. New Bedford, MA 2080-NYE 9/22/17



Sprinkler-CALC 7.2 Win