

DISPLAY THIS CARD ON PRINCIPAL FRONTAGE OF WORK



CITY OF PORTLAND BUILDING PERMIT

This is to certify that
DEAN & ALLYN, INC.
PO BOX 709
GRAY, ME 04039

For Installation At
12 VESPER ST
SINGLE-FAMILY HOME

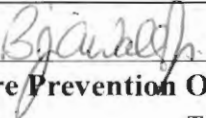
Job ID: 2012-01-3178-FAFS

CBL: 003- K-006-001

has permission to install NFPA 13D tank & pump sprinkler system
provided that the person or persons, firm or corporation accepting this permit shall comply with all of the provisions of the Statues of Maine and of the Ordinances of the City of Portland regulating the construction, maintenance and use of the buildings and structures, and of the application on file in the department.

Notification of inspection and written permission procured before this building or part thereof is lathed or otherwise closed-in. 48 HOUR NOTICE IS REQUIRED.

A final inspection must be completed by owner before this building or part thereof is occupied. If a certificate of occupancy is required, it must be


Fire Prevention Officer

58

Code Enforcement Officer / Plan Reviewer

THIS CARD MUST BE POSTED ON THE STREET SIDE OF THE PROPERTY
PENALTY FOR REMOVING THIS CARD



PORTLAND MAINE

Strengthening a Remarkable City, Building a Community for Life • www.portlandmaine.gov

Director of Planning and Urban Development
Penny St. Louis

Job ID: 2012-01-3178-FAFS
install NFPA 13D tank & pump
sprinkler system

For Installation At:
12 VESPER ST
SINGLE-FAMILY HOME

CBL: 003- K-006-001

Conditions of Approval:

Fire

The sprinkler system shall be installed in accordance with NFPA 13D. A compliance letter is required. All control valves shall be supervised in accordance with NFPA 13D. Pad locks shall only be installed on valves designed to be secured in the open position by pad lock.

City of Portland, Maine - Building or Use Permit Application

389 Congress Street, 04101 Tel: (207) 874-8703, FAX: (207) 8716

Job No: 2012-01-3178-FAFS	Date Applied: 1/31/2012	CBL: 003- K-006-001	
Location of Construction: 12 VESPER ST	Owner Name: AMY E ALWARD	Owner Address: 12 VESPER ST PORTLAND, ME 04101	Phone:
Business Name:	Contractor Name: Dean & Allyn, Inc.	Contractor Address: 116 Lewiston Rd., PO Box 709, Gray, ME 04039	Phone: 657-5646
Lessee/Buyer's Name:	Phone:	Permit Type: Fire Sprinkler - Fire Sprinkler - 1 & 2 Family	Zone: R-6
Past Use: Single family dwelling	Proposed Use: Same: Single family dwelling - to install sprinkler system	Cost of Work: \$8,000.00	CEO District:
		Fire Dept: <input checked="" type="checkbox"/> Approved w/ conditions <input type="checkbox"/> Denied <input type="checkbox"/> N/A	Inspection: Use Group: Type:
		Signature: <i>[Signature]</i> (58)	Signature:
Proposed Project Description: Install a Fire Sprinkler System Dean & Allyn Inst		Pedestrian Activities District (P.A.D.)	
Permit Taken By: Lannie		Zoning Approval	

1. This permit application does not preclude the Applicant(s) from meeting applicable State and Federal Rules.
2. Building Permits do not include plumbing, septic or electrical work.
3. Building permits are void if work is not started within six (6) months of the date of issuance. False informatin may invalidate a building permit and stop all work.

Special Zone or Reviews	Zoning Appeal	Historic Preservation
<input type="checkbox"/> Shoreland	<input type="checkbox"/> Variance	<input checked="" type="checkbox"/> Not in Dist or Landmark
<input type="checkbox"/> Wetlands	<input type="checkbox"/> Miscellaneous	<input type="checkbox"/> Does not Require Review
<input type="checkbox"/> Flood Zone	<input type="checkbox"/> Conditional Use	<input type="checkbox"/> Requires Review
<input type="checkbox"/> Subdivision	<input type="checkbox"/> Interpretation	<input type="checkbox"/> Approved
<input type="checkbox"/> Site Plan	<input type="checkbox"/> Approved	<input type="checkbox"/> Approved w/Conditions
<input type="checkbox"/> Maj <input type="checkbox"/> Min <input type="checkbox"/> MM	<input type="checkbox"/> Denied	<input type="checkbox"/> Denied
Date: <i>01-31-12</i>	Date:	Date: <i>[Signature]</i>

CERTIFICATION

I hereby certify that I am the owner of record of the named property, or that the proposed work is authorized by the owner of record and that I have been authorized by the owner to make this application as his authorized agent and I agree to conform to all applicable laws of this jurisdiction. In addition, if a permit for work described in the application is issued, I certify that the code official's authorized representative shall have the authority to enter all areas covered by such permit at any reasonable hour to enforce the provision of the code(s) applicable to such permit.

SIGNATURE OF APPLICANT	ADDRESS	DATE	PHONE
RESPONSIBLE PERSON IN CHARGE OF WORK, TITLE		DATE	PHONE

One- or Two-family Fire Sprinkler Permit

If you or the property owner owes real estate or property taxes or user charges on any property within the city, payment arrangements must be made before permits of any kind are accepted.

R-6

Installation address: 12 VESPER ST -003-K-006

Building owner: AMY ALLWARD Phone: 207-838-8829

Installer: DEAN & ALLYN, INC. Phone: 207-657-5646

Total sq/ft of building floor space per unit: 3,372 Single-family home

Sq/ft of sprinklered floor space per unit: 3,372 Two-family home

Is this a multipurpose piping system? Y / N Sprinkler piping uses Pex? Y / N

Water supply: Municipal Water Well pump Stored water Other

Include electronic copy of approved State Sprinkler Permit plans:

Additional cost to the owner for the home fire sprinkler system for each dwelling unit minus costs necessary for domestic needs (See below): **A=** 7,850

Attach cost breakdown: A City plumbing permit has been pulled:

SYSTEM IS STAND ALONE &
NOT CONNECTED TO PLUMBING

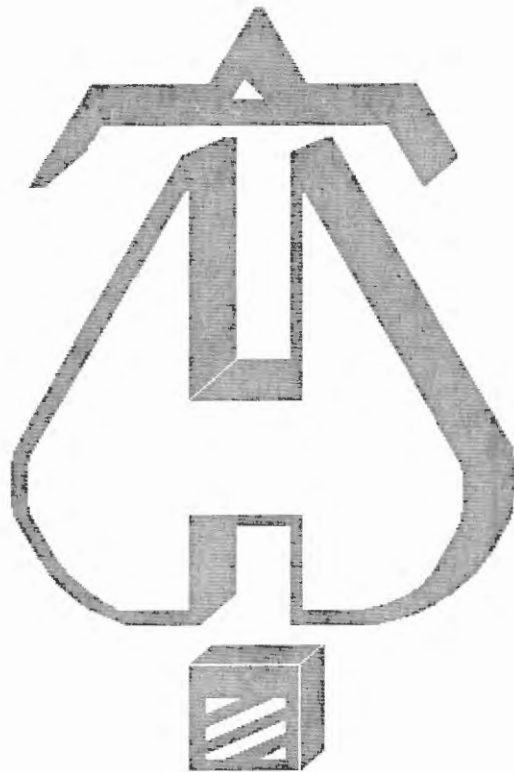
116 Lewiston Rd
P.O. Box 709
Gray ME 04039.

COST OF WORK: <u>\$7,850</u> (A times number of units)
NO FEE REQUIRED

Additional information and Frequently asked questions about home fire sprinkler systems may be found at www.portlandmaine.gov/fireprevention.

Sprinkler system cost must deduct costs that would have been incurred if the system did not provide sprinkler service. In a well pump system it would include the difference between the well pump to be installed and the one that would have been installed if there were no sprinkler demand on the system. Includes additional piping and valves that are required only because of NFPA Standard 13B and not already required for domestic needs. Includes cost of sprinkler heads and additional installation costs.

RECEIVED
JAN 31 2012
Dept. of Building Inspections
City of Portland Maine



... Fire Protection by Computer Design

DEAN & ALLYN, INC.
PO BOX 709
116 LEWISTON ROAD
GRAY, MAINE 04039
207-657-5646

Job Name : 12 VESPER STREET 2 HEAD CALC
Building :
Location : 12 VESPER STREET PORTLAND MAINE
System : ONE
Contract : C111035
Data File : VESPER 2 HEAD .WXF

HYDRAULIC DESIGN INFORMATION SHEET

Name - 12 VESPER STREET Date - 1-22-12
 Location - 12 VESPER STREET PORTLAND MAINE
 Building - System No. - ONE
 Contractor - DEAN AND ALLYN, INC. Contract No. - C111035
 Calculated By - H. KING Drawing No. - 1 OF 1
 Construction: (X) Combustible () Non-Combustible Ceiling Height 8'
 OCCUPANCY - RESIDENCE

S Type of Calculation: ()NFPA 13 Residential ()NFPA 13R (X)NFPA 13D
 Y Number of Sprinklers Flowing: ()1 (X)2 ()4 ()
 S ()Other
 T ()Specific Ruling Made by Date
 E
 M Listed Flow at Start Point - 13 Gpm System Type
 Listed Pres. at Start Point - 7 Psi (X) Wet () Dry
 D MAXIMUM LISTED SPACING 16 x 16 () Deluge () PreAction
 E Domestic Flow Added - Gpm Sprinkler or Nozzle
 S Additional Flow Added - Gpm Make VIKING Model FREEDOM
 I Elevation at Highest Outlet - 20' Feet Size K-Factor 4.9
 G Note:CUSHION 13.24PSI Temperature Rating 155
 N

Calculation Gpm Required 26.7 Psi Required 40.2 PUMP
 Summary C-Factor Used: Overhead 120 Underground 120

W Water Flow Test: Pump Data: Tank or Reservoir:
 A Date of Test - Rated Cap. Cap.
 T Time of Test - @ Psi Elev.
 E Static (Psi) - 55 Elev.
 R Residual (Psi) - 50 Other Well
 Flow (Gpm) - 50 Proof Flow Gpm
 S Elevation - 0

P Location: GOULDS PUMP CURVE

P Source of Information:
 L
 Y

Fittings Used Summary

DEAN & ALLYN, INC.
12 VESPER STREET 2 HEAD CALC

Page 2
Date 1-22-12

Fitting Legend		1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	3 1/2	4	5	6	8	10	12	14	16	18	20	24	
Abbrev.	Name																					
E	NFPA 13 90' Standard Elbow	1	2	2	3	4	5	6	7	8	10	12	14	18	22	27	35	40	45	50	61	
S	NFPA 13 Swing Check	0	0	5	7	9	11	14	16	19	22	27	32	45	55	65						
T	NFPA 13 90' Flow thru Tee	3	4	5	6	8	10	12	15	17	20	25	30	35	50	60	71	81	91	101	121	

Units Summary

Diameter Units Inches
 Length Units Feet
 Flow Units US Gallons per Minute
 Pressure Units Pounds per Square Inch

Note: Fitting Legend provides equivalent pipe lengths for fittings types of various diameters. Equivalent lengths shown are standard for actual diameters of Sched 40 pipe and CFactors of 120 except as noted with *. The fittings marked with a * show equivalent lengths values supplied by manufacturers based on specific pipe diameters and CFactors and they require no adjustment. All values for fittings not marked with a * will be adjusted in the calculation for CFactors of other than 120 and diameters other than Sched 40 per NFPA.

Pressure / Flow Summary - STANDARD

DEAN & ALLYN, INC.
12 VESPER STREET 2 HEAD CALC

Page 3
Date 1-22-12

Node No.	Elevation	K-Fact	Pt Actual	Pn	Flow Actual	Density	Area	Press Req.
2	20.0	4.9	7.0	na	12.96	0.09	144	7.0
3	20.0	4.9	7.92	na	13.79	0.05	256	7.0
16	20.0		7.7	na				
17	20.0		8.46	na				
11	20.0		11.8	na				
12	20.0		14.92	na				
13	10.0		22.15	na				
14	10.0		25.38	na				
15	10.0		29.17	na				
TR	8.0		31.37	na				
FF	0.0		38.63	na				
PUMP	0.0		40.19	na				

The maximum velocity is 9.93 and it occurs in the pipe between nodes 17 and 11

Hyd. Ref. Point	Qa Qt	Dia. "C" Pf/Ft	Fitting or Eqv. Ln.	Pipe Ftnng's Total	Pt Pe Pf	Pt Pv Pn	*****	Notes	*****
2 to 16	12.96	1.049 120.0	1T 5.0 0.0	7.000 5.000	7.000 0.0			K Factor = 4.90	
	12.96	0.0583	0.0	12.000	0.700			Vel = 4.81	
	0.0 12.96				7.700			K Factor = 4.67	
3 to 17	13.79	1.049 120.0	1T 5.0 0.0	3.300 5.000	7.916 0.0			K Factor = 4.90	
	13.79	0.0654	0.0	8.300	0.543			Vel = 5.12	
	0.0 13.79				8.459			K Factor = 4.74	
16 to 17	12.96	1.049 120.0	0.0 0.0	13.000 0.0	7.700 0.0				
	12.96	0.0584	0.0	13.000	0.759			Vel = 4.81	
17 to 11	13.79	1.049 120.0	1T 5.0 0.0	10.000 5.000	8.459 0.0				
	26.75	0.2229	0.0	15.000	3.343			Vel = 9.93	
11 to 12	0.0	1.049 120.0	1E 2.0 0.0	12.000 2.000	11.802 0.0				
	26.75	0.2229	0.0	14.000	3.120			Vel = 9.93	
12 to 13	0.0	1.049 120.0	1E 2.0 0.0	11.000 2.000	14.922 4.331				
	26.75	0.2228	0.0	13.000	2.897			Vel = 9.93	
13 to 14	0.0	1.049 120.0	1E 2.0 1T 5.0	7.500 7.000	22.150 0.0				
	26.75	0.2229	0.0	14.500	3.232			Vel = 9.93	
14 to 15	0.0	1.049 120.0	1E 2.0 1T 5.0	10.000 7.000	25.382 0.0				
	26.75	0.2228	0.0	17.000	3.788			Vel = 9.93	
15 to TR	0.0	1.049 120.0	1E 2.0 0.0	4.000 2.000	29.170 0.866				
	26.75	0.2230	0.0	6.000	1.338			Vel = 9.93	
TR to FF	0.0	1.049 120.0	2S 10.0 0.0	7.000 10.000	31.374 3.465				
	26.75	0.2228	0.0	17.000	3.788			Vel = 9.93	
FF to PUMP	0.0	1.049 120.0	2E 4.0 0.0	3.000 4.000	38.627 0.0				
	26.75	0.2230	0.0	7.000	1.561			Vel = 9.93	
	0.0 26.75				40.188			K Factor = 4.22	

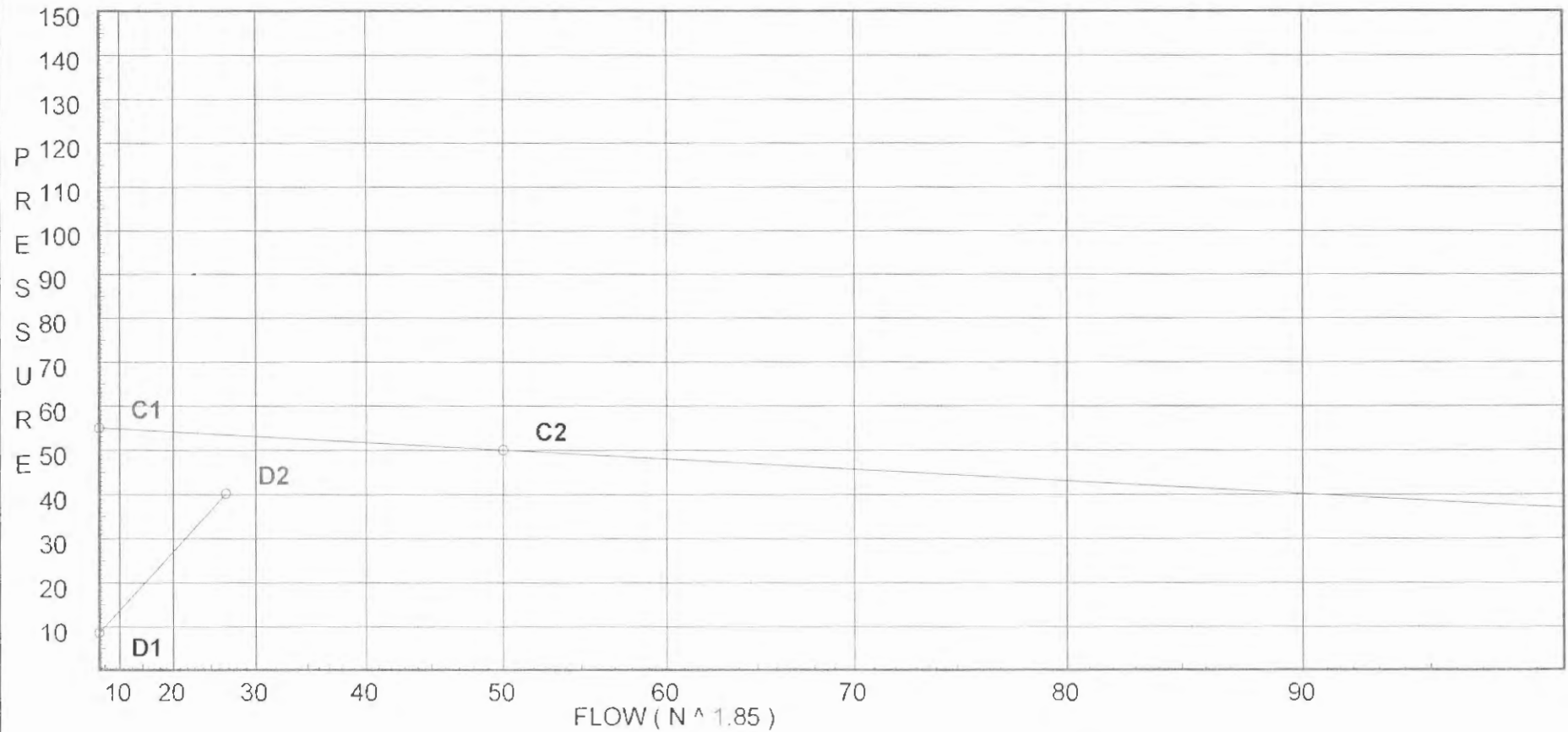
Water Supply Curve (C)

DEAN & ALLYN, INC.
12 VESPER STREET 2 HEAD CALC

Page 5
Date 1-22-12

City Water Supply:
C1 - Static Pressure : 55
C2 - Residual Pressure: 50
C2 - Residual Flow : 50

Demand:
D1 - Elevation : 8.662
D2 - System Flow : 26.751
D2 - System Pressure : 40.188
Hose (Demand) :
D3 - System Demand : 26.751
Safety Margin : 13.241





... Fire Protection by Computer Design

DEAN & ALLYN, INC.
PO BOX 709
116 LEWISTON ROAD
GRAY, MAINE 04039
207-657-5646

Job Name : 12 VESPER STREET SINGLE HEAD
Building :
Location : 12 VESPER STREET PORTLAND MAINE
System : ONE
Contract : C111035
Data File : VESPER.WXF

Fittings Used Summary

DEAN & ALLYN, INC.
12 VESPER STREET SINGLE HEAD

Page 2
Date 1-22-12

Fitting Legend		1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	3 1/2	4	5	6	8	10	12	14	16	18	20	24
Abbrev.	Name																				
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S	NFPA 13 Swing Check	0	0	5	7	9	11	14	16	19	22	27	32	45	55	65					
T	NFPA 13 90' Flow thru Tee	3	4	5	6	8	10	12	15	17	20	25	30	35	50	60	71	81	91	101	121

Units Summary

Diameter Units	Inches
Length Units	Feet
Flow Units	US Gallons per Minute
Pressure Units	Pounds per Square Inch

Note: Fitting Legend provides equivalent pipe lengths for fittings types of various diameters. Equivalent lengths shown are standard for actual diameters of Sched 40 pipe and CFactors of 120 except as noted with *. The fittings marked with a * show equivalent lengths values supplied by manufacturers based on specific pipe diameters and CFactors and they require no adjustment. All values for fittings not marked with a * will be adjusted in the calculation for CFactors of other than 120 and diameters other than Sched 40 per NFPA.

Pressure / Flow Summary - STANDARD

DEAN & ALLYN, INC.
12 VESPER STREET SINGLE HEAD

Page 3
Date 1-22-12

Node No.	Elevation	K-Fact	Pt Actual	Pn	Flow Actual	Density	Area	Press Req.
1	30.0	4	16.0	na	16.0	0.06	256	16.0
10	20.0		22.14	na				
11	20.0		24.9	na				
12	20.0		26.1	na				
13	10.0		31.55	na				
14	10.0		32.8	na				
15	10.0		34.26	na				
TR	8.0		35.65	na				
FF	0.0		40.58	na				
PMP	0.0		41.18	na				

The maximum velocity is 5.94 and it occurs in the pipe between nodes 1 and 10

Final Calculations - Hazen-Williams

DEAN & ALLYN, INC.
12 VESPER STREET SINGLE HEAD

Page 4
Date 1-22-12

Hyd. Ref. Point	Qa Qt	Dia. "C" Pf/Ft	Fitting or Eqv. Ln.	Pipe Ftng's Total	Pt Pe Pf	Pt Pv Pn	***** Notes *****
1	16.00	1.049	1E 2.0	9.000	16.000		K Factor = 4.00
to		120.0	2T 10.0	12.000	4.331		
10	16.0	0.0861	0.0	21.000	1.809		Vel = 5.94
10	0.0	1.049	1T 5.0	27.000	22.140		
to		120.0	0.0	5.000	0.0		
11	16.0	0.0861	0.0	32.000	2.755		Vel = 5.94
11	0.0	1.049	1E 2.0	12.000	24.895		
to		120.0	0.0	2.000	0.0		
12	16.0	0.0861	0.0	14.000	1.206		Vel = 5.94
12	0.0	1.049	1E 2.0	11.000	26.101		
to		120.0	0.0	2.000	4.331		
13	16.0	0.0862	0.0	13.000	1.120		Vel = 5.94
13	0.0	1.049	1E 2.0	7.500	31.552		
to		120.0	1T 5.0	7.000	0.0		
14	16.0	0.0861	0.0	14.500	1.248		Vel = 5.94
14	0.0	1.049	1E 2.0	10.000	32.800		
to		120.0	1T 5.0	7.000	0.0		
15	16.0	0.0861	0.0	17.000	1.464		Vel = 5.94
15	0.0	1.049	1E 2.0	4.000	34.264		
to		120.0	0.0	2.000	0.866		
TR	16.0	0.0862	0.0	6.000	0.517		Vel = 5.94
TR	0.0	1.049	2S 10.0	7.000	35.647		
to		120.0	0.0	10.000	3.465		
FF	16.0	0.0861	0.0	17.000	1.464		Vel = 5.94
FF	0.0	1.049	2E 4.0	3.000	40.576		
to		120.0	0.0	4.000	0.0		
PMP	16.0	0.0861	0.0	7.000	0.603		Vel = 5.94
	0.0						
	16.00				41.179		
							K Factor = 2.49

Water Supply Curve (C)

DEAN & ALLYN, INC.
12 VESPER STREET SINGLE HEAD

Page 5
Date 1-22-12

City Water Supply:
C1 - Static Pressure : 55
C2 - Residual Pressure: 50
C2 - Residual Flow : 50

Demand:
D1 - Elevation : 12.993
D2 - System Flow : 16
D2 - System Pressure : 41.179
Hose (Demand) :
D3 - System Demand : 16
Safety Margin : 13.214

