DISPLAY THIS CARD ON PRINCIPAL FRONTAGE OF WORK



CITY OF PORTLAND LDING PERMIT



This is to certify that SCHOOL SPURWINK

Job ID: 2011-04-846-FAFS

Located At 899 RIVERSIDE Street

CBL: 326 - - B - 004 - 002 - - - - -

has permission to Fire suppression 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.

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

Fire Prevention Officer

Code Enforcement Officer / Plan Reviewer

THIS CARD MUST BE POSTED ON THE STREET SIDE OF THE PROPERTY.

PENALTY FOR REMOVING THIS CARD

BUILDING PERMIT INSPECTION PROCEDURES

Please call 874-8703 or 874-8693 (ONLY)

or email: buildinginspections@portlandmaine.gov

With the issuance of this permit, the owner, builder or their designee is required to provide adequate notice to the city of Portland Inspections Services for the following inspections. Appointments must be requested 48 to 72 hours in advance of the required inspection. The inspection date will need to be confirmed by this office.

- Please read the conditions of approval that is attached to this permit!! Contact this office if you have any questions.
- Permits expire in 6 months. If the project is not started or ceases for 6 months.
- If the inspection requirements are not followed as stated below additional fees may be incurred due to the issuance of a "Stop Work Order" and subsequent release to continue.

The project cannot move to the next phase prior to the required inspection and approval to continue, REGARDLESS OF THE NOTICE OF CIRCUMSTANCES.

IF THE PERMIT REQUIRES A CERTIFICATE OF OCCUPANCY, IT MUST BE PAID FOR AND ISSUED TO THE OWNER OR DESIGNEE BEFORE THE SPACE MAY BE OCCUOPIED.



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

Director of Planning and Urban Development Penny St. Louis

Job ID: 2011-04-846-FAFS

Located At: 899 RIVERSIDE

CBL: <u>326 - - B - 004 - 002 - - - - -</u>

Conditions of Approval:

This permit is being approved on the basis of the plans submitted. Any deviation from the plans Fire would require amendments and approval.

Application requires State Fire Marshal approval.

The Fire alarm and Sprinkler systems shall be reviewed by a licensed contractor[s] for code compliance. Compliance letters are required.

Installation of a sprinkler or fire alarm system requires a Knox Box to be installed per city ordinance.

The sprinkler system shall be installed in accordance with NFPA 13D.

Capt. Gautreau

City of Portland, Maine - Building or Use Permit Application

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

b No: 11-04-846-FAFS	Tel: (207) 874-8703, FAX Date Applied: 4/20/2011		BL. 326 B - 004 - 002			Phone:	
ocation of Construction: 09 RIVERSIDE ST	Owner Name: SPURWINK SCHOOL	1	Owner Address: 899 RIVERSIDE ST PORTLAND, ME - MAI	NE 04103		N	
susiness Name:	Contractor Name: Eastern Fire Protection Co.,In	nc,	Contractor Address: P.O Box 1390 AUBUR	N MAINE 04211		Phone: (207) 784-1507	
_essee/Buyer's Name:	Phone:		Permit Type: FIRE SYS WB - Fire S	uppression Water	Based	Zone:	
	Proposed Use:		Cost of Work: \$6,000.00			CEO District:	
Spurwink School and Group Home Same: Spurwink Sci Group Home - To i water based fire sup		tall	- D	Approved \(\) Denied N/A	Conditions	Use Group: Type:	
- Describ	system		Signature: CAPT. Pedestrian Activit	V Lant	ows	Signature:	
Proposed Project Descrip 899 Riverside Street – sprink	der system			Zoning Appr	roval		
Permit Taken By: Gaylo	e	Special	Zone or Reviews	Zoning Appea	al Historic	Preservation	
 This permit application does not preclude the Applicant(s) from meeting applicable State and Federal Rules. Building Permits do not include plumbing, septic or electrial work. 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. 			eland ands d Zone division Plan aj _Min _ MM	Variance Miscellaneou Conditional Interpretatio Approved Denied	Use — Does — Requested — App	n Dist or Landmark not Require Review nires Review roved proved w/Conditions	
		Cond	TIFICATION 4 1	Date:		been authorized by	

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.

to enforce the provision of			
SIGNATURE OF APPLICANT	ADDRESS	DATE	PHONE
RESPONSIBLE PERSON IN CHARGE	OF WORK, TITLE	DATE	PHON

4/20/11

Job Summary Report Job ID: 2011-04-846-FAFS

Report generated on Apr 21, 2011 11:18:33 AM 2011 Job Year: 899 Riverside Street Job Description: Fire Alarm / Suppression Job Type: **Tenant Name:** 1187 Pin Value: Initiate Plan Review **Building Job Status Code: Tenant Number:** Public Building Flag: N **Job Application Date: Square Footage:** 6,000 **Estimated Value:** Property Owner SCHOOL SPURWINK **Related Parties:** SPRINKLER CONTRACTOR Eastern Fire Protection Co., Inc - Eastern Fire Protection Co., Inc Eastern Fire Protection Co., Inc Job Charges Outstanding Payment Adjustment **Net Payment** Payment Receipt **Balance** Payment Amount **Net Charge Permit Charge Amount** Amount Charge Fee Code Number Date Adjustment Amount **Amount** Description Location ID: 34602 **Location Details** Census Tract GIS X GIS Y GIS Z GIS Reference Longitude Latitude **Parcel Number** Alternate Id -70.318345 43.705405 326 B 004 002 S43927 Location Type Subdivision Code Subdivision Sub Code Related Persons Address(es) 899 RIVERSIDE STREET WEST 1 Jurisdiction **Inspection Area General Location** District **Inside Outside** Code Fire Zone Code Use Zone Code **Variance Location Use Code** Code Code Code Code RIVERSIDE Code DISTRICT 8 NOT APPLICABLE BENEVOLENT & CHARITABLE **Structure Details** Structure: office building Occupancy Type Code: Structure Status Type Square Footage Estimated Value **Address Structure Type Code** 899 RIVERSIDE STREET WEST Office & Professional Buildings 0 Value User Defined Property Longitude Latitude GIS X GIS Y GIS Z GIS Reference Spin and School 1 Alarms Commercial 22 Fixtures-Fluorescent 3 Fixtures-Incandescent Number of Showers (standalone)

Not in Q

Page 1



Applicant signature: Mull

Water-Based Fire Suppression System Permit

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

	226 7 00400)
Installation address: 899 REVEASENCE CONFLECTION	CBL: 300
Installation address: 2011 ADDET SOU	FERST SOLUMD, THEND
Exact location: (within structure) 2011 ADDEPTION,	RUSS PEAR SOL
Type of occupancy(s) (NFPA & ICC).	
D 'Illing owner'	License No:368
Managing Supervisor (RMS): WELL PLYNT	ELLIFORTHANDASTOUN COM
Supervisor phone: 784-1507	E-mail:
Installing contractor: GREGAN PENO	License No:
704-100/	E-mail: FUYNTWACTORMUSSTOUN COM
Contractor phone: Renova	tion: Addition to existing system:
The suppression work to be done will be.	Permit no:
This is an amendment to an existing permit. Test	Edition: 2010
NFPA Standard this system is designed to:	
*Non-NFPA systems are not approved for use within the City of Portland.	COST OF WORK: \$\\ 6000, \(\frac{\partial}{200}\)
_g a ^c	PERMIT FEE: 47 90, 703
Download a new copy of this document from www.portlandmaine.gov/fire for every submittal. Attach all working	(\$10 PER \$1,000 + \$30 FOR THE FIRST \$1,000)
documents and complete approved submittals as may be required by	\$1.00 \$1.00
the State Fire Marshal's Office on electronic PDF's in addition to	APR 2 0 2011
full sized plans.	Dept. of Building Inspections
	City of Portland Maine
Contractor shall verify location and type of all FDCs shall	
be approved in writing by the Fire Prevention Bureau.	215 Partland Maine 04101.
Submit all information to the Building Inspections Department, 389 Co	ngress Street, Room 315, Forumut, Maine 5 1251
from the protection system, a complete commi	SSIOINING and accept the
Prior to acceptance of any fire protection system all fire system contractors and the Fire Department, and proper docu	mentation of such test(s) provided.
all fire system contractors and the Fire Departmen All installation(s) must comply with NFPA and the Fire Departmen	t Technical Standard(s).
All installation(s) must comply with NFI A and the	

EASTERN FIRE PROTECTION



COPY TO __

P.O. Box 1390 Kittyhawk Ave. Auburn, ME 04210

		PH # (207) 78	4-1507	RE: Sa	SAN WATCHE A	10050
		FAX # ((207) 73	32-0566	201	1 ADDETEON.	
o Po	ITCAND B	CECNEN	7, 4	rispocteons.			
				00m 315			
				24/01			
VE ARI	E SENDING Shop drawings Copy of letter	YOU [] Atta	ched 🔲 Under ser iptive data 🖳 Hydr	parate cover \ aulic calculation	via the f	
QUANTITY	T	DATE		DE	SCRIPTION		STATUS
	100-1	4/13/11		SPREWATOR S	140P DU	156-	0/0
2	SON	1/19.5		HYDDAU(EC C	PALENCA	reore	
7	3013			PRIMOS A	presoner	N	
				PUIMET CH	GUE.		
			,				
	Status code	e	A.	Approved		Corrected & resubmitted	
	Oldido oca		В. С.	Approved as noted Submitted for approval	E. F.	For your files Refer to remarks	
	Please retu	urn		_ copies each indicating you	ur approval and/	or comments.	
REMA	RKS						

LETTER OF TRANSMITTAL

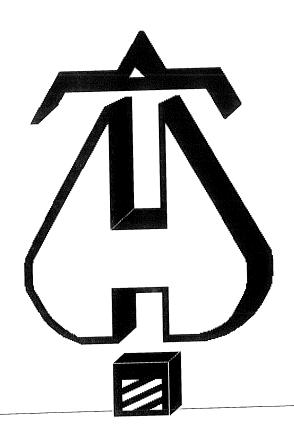
ATTENTION

KOTH

JOB NO. GPGE-OW.

GAUMORU.

SIGNED WILL VI



. . . Fire Protection by Computer Design

EASTERN FIRE PROTECTION 170 KITTYHAWK AVE. P.O. BOX 1390 AUBURN, MAINE 04211-1390 800-274-1507

Job Name

Drawing

: WOOD FRAME

Location

: THIRD FLOOR

Remote Area : WET

Contract

: EFSI-DW

Data File

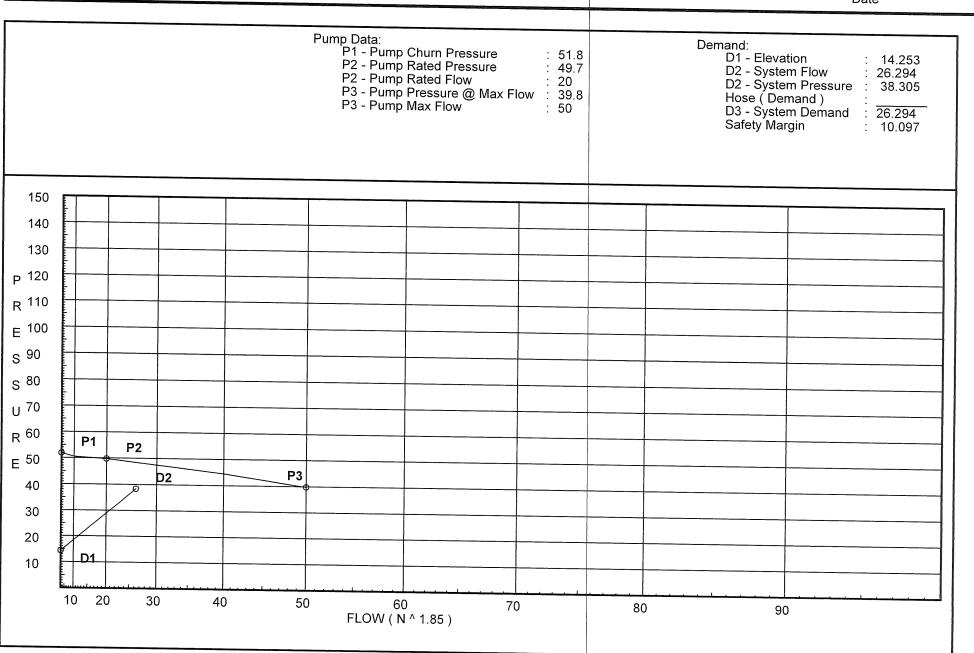
SUE WRIGHT THIRD FLOOR PENDENTS WXF

Dragrams by Hydratec Inc. Route 111 Windham N.H. USA 03087

HYDRAULIC DESIGN INFORMATION SHEET

Loc Bu: Co: Ca: Co:	me - SUSAN WHITE HOUSE THIRD F cation - THIRD FLOOR ilding - WOOD FRAME ntractor - EASTERN FIRE SERVIC lculated By - WAF nstruction: () Combustible CUPANCY - DWELLING UNIT	S: CES C: D.	Date - 04/14/11 ystem No WET pntract No EFSI-DW rawing No 1 OF 1 Ceiling Height 7'-7	
S Y S T E	Type of Calculation: ()NFPA Number of Sprinklers Flowing ()Other ()Specific Ruling	: ()1 (X)2 ()4 Made by		
M D E S I G N	Listed Flow at Start Point Listed Pres. at Start Point MAXIMUM LISTED SPACING 16 Domestic Flow Added Additional Flow Added Elevation at Highest Outlet Note:	- 7 Psi (X) x 16 () - 0 Gpm Spr - 0 Gpm Make TYC - 134.91Feet Size 1/		
	culation Gpm Required 26.3 mary C-Factor Used:			
W A I E R	Water Flow Test: Date of Test - Time of Test - Static (Psi) - Residual (Psi) - Flow (Gpm) - Elevation -	Pump Data: Rated Cap. 30 GPM @ Psi 47.5 Elev. 102 Other	Tank or Reservoir: Cap. 900 GALLONS Elev. 102 Well Proof Flow Gpm	
P P	Location: GT 15 PUMP LOCATED Source of Information: GOULD			

EASTERN FIRE PROTECTION



Fittings Used Summary

EASTERN FIRE PROTECTION

													Same and the same					Da	ite		
Fitting Le	egend Name	1/2	3/4	1	11⁄4	1½	2	2½	3	3½	4	5	6	8	10	12	14	16	18	20	24
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
Fsp S T	Flow Switch Potter VSR NFPA 13 Swing Check Valve NFPA 13 90' Flow thru Tee	Fittin 4 3	ig gener 5 4	ates a F 5	Fixed Los 7 6	ss Based 9 8	d on Flo	w 14 12	16 15	19 17	22 20	27 25	32 30	45 35	55 50	65 60	76 71	87 81	98 91	109 101	130 121

Page 3

Units Summary

Diameter Units Length Units Flow Units Pressure Units Inches Feet

US Gallons per Minute 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.

Page 4 Date

SUPPLY ANALYSIS										
Node at Source	Static Pressure	Residual Pressure	Flow	Available Pressure	Total Demand	Required Pressure				
PUMP	See Info	rmation on Pump	Curve		0.0	38.305				

NODE ANALYSIS

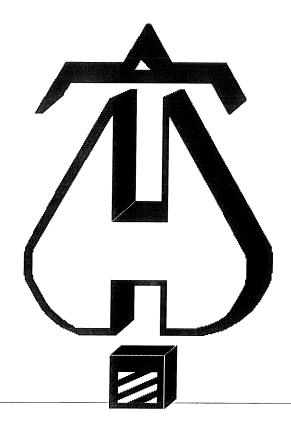
Node Tag	Elevation	Node Type	Pressure at Node	Discharge at Node	Notes
D1	0.0	4.9	7.0	12.96	
1	134.91	4.74	7.47	12.96	K=K @ L1
2	134.91	4.74	7.9	13.33	K=K @ L1
4	134.91		12.63		•
5	126.0		17.05		
6	126.0		17.45		
9	126.0		17.67		
10	116.92		22.29		
11	116.92		22.63		
12	107.0		28.14		
TOR	107.0		32.0		
PUMP	102.0		38.31		

Final Calculations - Hazen-Williams - 2007

EASTERN FIRE PROTECTION

Page 5 Date

Node1 to	Elev1	K	Qa	Nom	Fitting or		Pipe Ftng's	CFact	Pt Pe	****** Notes	*****
Node2	Elev2	Fact	Qt	Act	Eqv.	Ln.	Total	Pf/Ft	Pf		
D1	0	4.90	12.96	1	1E	3.825	2.000	150	7.000		
to					1T	9.563	13.387		0.0		
L1	0		12.96	1.101		0.0	15.387	0.0305	0.469	Vel = 4.37	
L1			0.0 12.96						7.469	K Factor = 4.74	
1 to	134.910	4.74	12.96	1		0.0 0.0	14.000 0.0	150	7.469 0.0	K = K @ L1	
2	134.910		12.96	1.101		0.0	14.000	0.0306	0.428	Vel = 4.37	
2 to	134.910	4.74	13.33	1	2E 2T	7.65 19.125	15.120 26.776	150	7.897 0.0	K = K @ L1	
4	134.910		26.29	1.101		0.0	41.896	0.1129	4.729	Vel = 8.86	
4 to	134.910		0.0	1.25	1E	3.0 0.0	7.000 3.000	120	12.626 3.859		
5	126		26.29	1.38	***************************************	0.0	10.000	0.0567	0.567	Vel = 5.64	
5 to	126		0.0	1.25		0.0	7.040	120	17.052		
6	126		26.29	1.38		0.0	0.0 7.040	0.0568	0.0 0.400	Vel = 5.64	
6 to	126		0.0	1.25	1E	3.0 0.0	0.870 3.000	120	17.452 0.0		
9	126		26.29	1.38		0.0	3.870	0.0568	0.220	Vel = 5.64	
9 to	126		0.0	1.25	1E	3.0 0.0	9.080 3.000	120	17.672 3.933		
10	116.920		26.29	1.38		0.0	12.080	0.0567	0.685	Vel = 5.64	
10 to	116.920		0.0	1.25	1E	3.0 0.0	3.000 3.000	120	22.290 0.0		
11	116.920 116.920		26.29 0.0	1.38 1.25	1E	3.0	6.000 12.420	0.0568 120	0.341 22.631	Vel = 5.64	
to 12	107		26.29	1.38	1T	6.0 0.0	9.000 21.420	0.0568	4.296 1.216	Vel = 5.64	
12	107		0.0	1.25	5E	15.0	40.000	120	28.143	VEI - 0.04	
to TOR					1S	7.0	28.000		0.0	V-1 - 5.04	
	107		26.29	1.38	1T	6.0	68.000	0.0568	3.861	Vel = 5.64	
TOR to PUMP	107 102		0.0 26.29	1.25 1.38	1Fsp 1S 2E	0.0 7.0 6.0	7.000 13.000 20.000	120 0.0568	32.004 5.166 1.135	* Fixed loss = 3	
PUMP	102		0.0 26.29	1.00	<u> </u>	0.0	20.000	0.0000	38.305	Vel = 5.64 K Factor = 4.25	



. . . Fire Protection by Computer Design

EASTERN FIRE PROTECTION 170 KITTYHAWK AVE. P.O. BOX 1390 AUBURN, MAINE 04211-1390 800-274-1507

Job Name

Drawing

Location

: WOOD FRAME : THIRD FLOOR

Remote Area : WET

Contract

: EFSI-DW

Data File

: SUE WRIGHT THIRD FLOOR PENDENTS.WXF

Date

Name - SUSAN WHITE HOUSE THIRD FLOOR PENDENTS Date - 04/14/11 Location - THIRD FLOOR Building - WOOD FRAME System No. - WET Contractor - EASTERN FIRE SERVICES Contract No. - EFSI-DW Calculated By - WAF D Construction: () Combustible (X) Non-Combustible Drawing No. - 1 OF 1 Ceiling Height 7'-7 OCCUPANCY - DWELLING UNIT Type of Calculation: ()NFPA 13 Residential ()NFPA 13R (X)NFPA 13D S Number of Sprinklers Flowing: ()1 (X)2 ()4 () Υ S ()Other () Specific Ruling Made by Do+

HYDRAULIC DESIGN INFORMATION SHEET

Ē	() Specific Rulling	маф	e by	Date	
D E S I G		- 7 Psi x 16 - 0 Gpm - 0 Gpm - 134.91Feet	(X) Wet () Deluge Sprinkler Make TYCO	Model LF II K-Factor 4.9	

Psi Required 38.3

AT PUMP

Sur _	nmary C-Fa	actor Used:	Overhe	ad 120		Underground NA	
W A	Water Flow Test		Pump Data			k or Reservoir:	***************************************
T	Time of Test		Rated Cap. @ Psi	30 GPM 47.5	-	900 GALLONS	
Ē	Static (Psi)		Elev.	102	Elev.	102	
R	Residual (Psi)) -	Other			Well	
	Flow (Gpm)	_			Proof	Flow Gpm	
S	Elevation	_				zzon opm	
P	Location: GT 1	L5 PUMP LOCATED	IN BSMT.				
_							

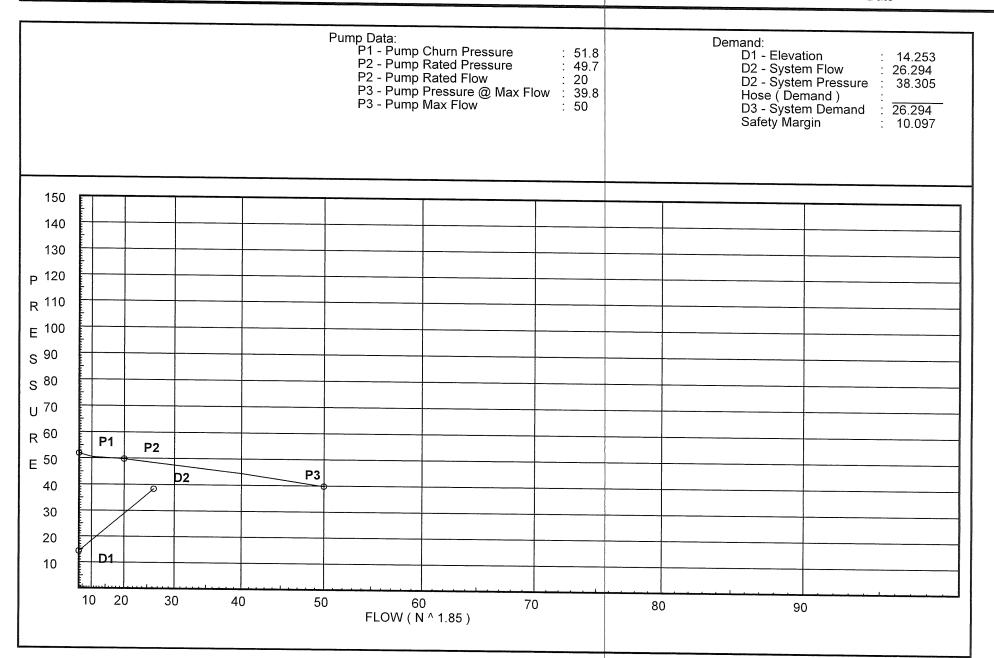
Ρ

Calculation

Source of Information: GOULD DATA SHEET

Gpm Required 26.3

L



Fittings Used Summary

EASTERN FIRE PROTECTION

NFPA 13 90' Standard Elbow

NFPA 13 Swing Check Valve

NFPA 13 90' Flow thru Tee

Flow Switch Potter VSR

Page 3 Date										
12	14	16	18	20	24	_				
27	35	40	45	50	61					

Units Summary

Fitting Legend Abbrev. Name

Ε

S

Т

Fsp

Diameter Units Length Units

Inches Feet

3/4

11/4

Fitting generates a Fixed Loss Based on Flow

11/2

21/2

31/2

Flow Units
Pressure Units

US Gallons per Minute 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.

Page 4 Date

			SUPPLY	ANALYSIS		
Node at Source	Static Pressure	Residual Pressure	Flow	Available Pressure	Total Demand	Required Pressure
PUMP	See Info	rmation on Pump	Curve		0.0	38.305

NODE ANALYSIS

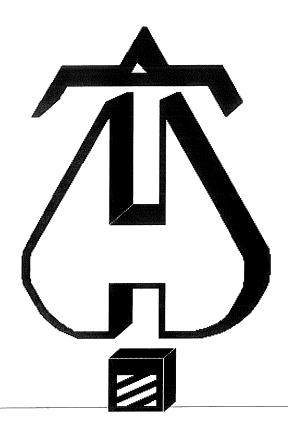
Node Tag	Elevation	Node Type	Pressure at Node	Discharge at Node	Notes
D1	0.0	4.9	7.0	12.96	
1	134.91	4.74	7.47	12.96	K=K @ L1
2	134.91	4.74	7.9	13.33	K=K @ L1
4	134.91		12.63		•
5	126.0		17.05		
6	126.0		17.45		
9	126.0		17.67		
10	116.92		22.29		
11	116.92		22.63		
12	107.0		28.14		
TOR	107.0		32.0		
PUMP	102.0		38.31		

Final Calculations - Hazen-Williams - 2007

EASTERN FIRE PROTECTION

Page 5 Date

Node1 to Node2	Elev1 Elev2	K Fact	Qa Qt	Nom Act	Fitting or Eqv.	Ln.	Pipe Ftng's Total	CFact Pf/Ft	Pt Pe Pf	*****	Notes	****
	Section (Section Control Contr			_				4.50	7.000			
D1	0	4.90	12.96	1	1E	3.825	2.000	150	7.000 0.0			
to L1	0		12.96	1.101	1T	9.563 0.0	13.387 15.387	0.0305	0.0 0.469	Vel = 4.37	,	
			0.0	1,,,,,,								
L1			12.96						7.469	K Factor =	4.74	
1	134.910	4.74	12.96	1		0.0	14.000	150	7.469	K = K @ L1		
to						0.0	0.0		0.0			
2	134.910		12.96	1.101		0.0	14.000	0.0306	0.428	Vel = 4.37		
2	134.910	4.74	13.33	1	2E	7.65	15.120	150	7.897	K = K @ L1		
to				4 404	2T	19.125	26.776	0.4400	0.0	\/-I 0.00		
4	134.910		26.29	1.101		0.0	41.896	0.1129	4.729	Vel = 8.86	i	
. 4	134.910		0.0	1.25	1E	3.0	7.000	120	12.626			
to	126		26.29	1.38		0.0 0.0	3.000 10.000	0.0567	3.859 0.567	Vel = 5.64		
5			0.0	1.25		0.0	7.040	120	17.052	VCI - 0.04		
5 to	126		0.0	1.25		0.0	0.0	120	0.0			
6	126		26.29	1.38		0.0	7.040	0.0568	0.400	Vel = 5.64		
6	126		0.0	1.25	1E	3.0	0.870	120	17.452			
to	.20					0.0	3.000		0.0			
9	126		26.29	1.38		0.0	3.870	0.0568	0.220	Vel = 5.64		
9	126		0.0	1.25	1E	3.0	9.080	120	17.672			
to						0.0	3.000	0.0507	3.933	504		
10	116.920		26.29	1.38		0.0	12.080	0.0567	0.685	Vel = 5.64		
10	116.920		0.0	1.25	1E	3.0	3.000	120	22.290 0.0			
to 11	116.920		26.29	1.38		0.0 0.0	3.000 6.000	0.0568	0.0	Vel = 5.64		
11	116.920		0.0	1.25	1E	3.0	12.420	120	22.631	VC1 0.01		
to	110.920		0.0	1.20	1T	6.0	9.000	120	4.296			
12	107		26.29	1.38	, .	0.0	21.420	0.0568	1.216	Vel = 5.64		
12	107		0.0	1.25	5E	15.0	40.000	120	28.143			
to					1S	7.0	28.000		0.0			
TOR	107		26.29	1.38	1T	6.0	68.000	0.0568	3.861	Vel = 5.64		
TOR	107		0.0	1.25	1Fsp	0.0	7.000	120	32.004			
to	400		00.00	4.00	1S	7.0	13.000	0.0500	5.166	* Fixed loss		
PUMP	102		26.29	1.38	2E	6.0	20.000	0.0568	1.135	Vel = 5.64		
DUMD			0.0						38.305	K Factor =	1 25	
PUMP			26.29	490					30,303	K FACIOI -	4.20	



. . . Fire Protection by Computer Design

EASTERN FIRE PROTECTION 170 KITTYHAWK AVE. P.O. BOX 1390 AUBURN, MAINE 04211-1390 800-274-1507

Job Name : SUSAN WHITE HOUSE THIRD FLOOR SIDEWALLS

Drawing : WOOD FRAME Location : THIRD FLOOR

Remote Area : WET Contract : EFSI-DW

Data File : SUE WRIGHT THIRD FLOOR SIDEWALLS.WXF

Elevation

Location: GT 15 PUMP LOCATED IN BSMT.

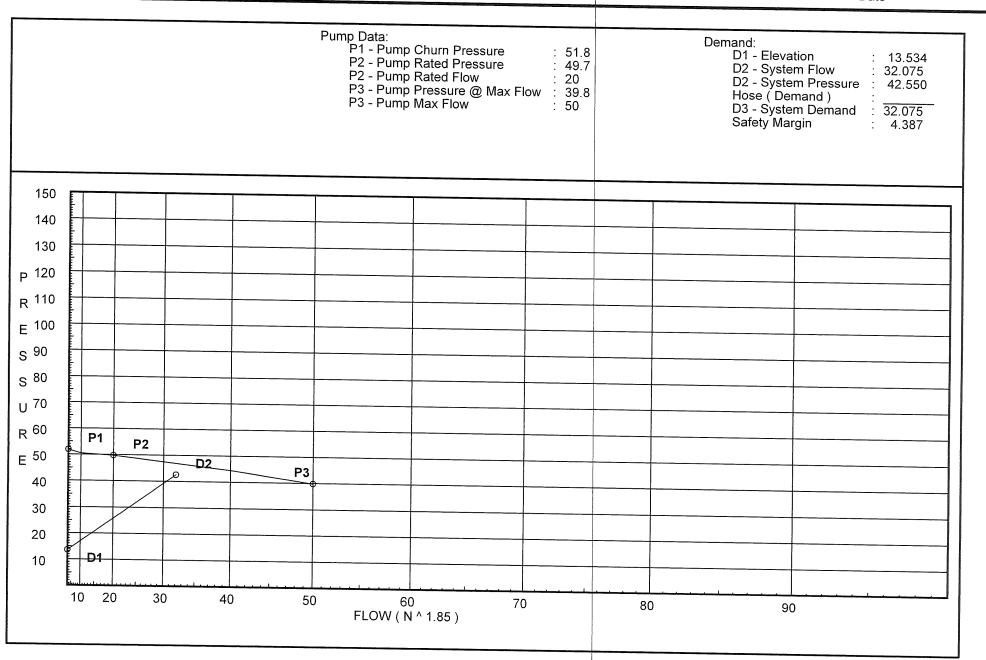
Source of Information: GOULD DATA SHEET

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Ρ \mathbf{L}

Date

HYDRAULIC DESIGN INFORMATION SHEET Name - SUSAN WHITE HOUSE THIRD FLOOR SIDEWALLS Date - 04/14/11 Location - THIRD FLOOR Building - WOOD FRAME System No. - WET Contractor - EASTERN FIRE SERVICES Contract No. - EFSI-DW Calculated By - WAF Drawing No. - 1 OF 1 Construction: () Combustible (X) Non-Combustible Ceiling Height VARIES OCCUPANCY - STAIRWELL S Type of Calculation: ()NFPA 13 Residential ()NFPA 13R (X)NFPA 13D Number of Sprinklers Flowing: ()1 (X)2 ()4 () Υ ()Other S Τ ()Specific Ruling Made by Date Ε Listed Flow at Start Point - 16 M Gpm System Type Listed Pres. at Start Point - 14.5 Psi (X) Wet () Dry D MAXIMUM LISTED SPACING 14 x 14 () Deluge () PreAction Ε Domestic Flow Added - 0 Gpm Sprinkler or Nozzle - 0 Additional Flow Added S Gpm Make TYCO Model LF II Elevation at Highest Outlet - 133.25Feet Size 1/2" Ι K-Factor 4.2 Note: Temperature Rating 155 G Ν Calculation Gpm Required 32 Psi Required 42.5 AT PUMP Summary C-Factor Used: Overhead 120 Underground NA W Water Flow Test: Pump Data: Tank or Reservoir: Α Date of Test -Rated Cap. 30 GPM Cap. 900 GALLONS Т Time of Test 0 Psi 47.5 Elev. 102 Ε Static (Psi) -Elev. 102 R Residual (Psi) -Other Well Flow (Gpm) Proof Flow Gpm



Page 3 Date

				Jo - wall tribe to a series	OF COMPLETE	and the state of t		minima anno antico	MANAGEMENT TO A STATE OF THE ST	Marie Constant and a commence of the law of	The second secon	and the lateral latera									
Fitting L Abbrev.		1/2	3/4	11	11/4	1½	2	21/2	3	3½	4	5	6	8	10	12	14	16	18	20	24
E Fsp	NFPA 13 90' Standard Elbow Flow Switch Potter VSR	1 Fittin	2 g gener	2 rates a F	3 Fixed Los	4 ss Based	5 d on Flov	6 w	7	8	10	12	14	18	22	27	35	40	45	50	61
S T	NFPA 13 Swing Check Valve NFPA 13 90' Flow thru Tee	4 3	5 4	5 5	7 6	9 8	11 10	14 12	16 15	19 17	22 20	27 25	32 30	45 35	55 50	65 60	76 71	87 81	98 91	109 101	130 121

Units Summary

Diameter Units Length Units Inches

Feet

Length Units
Flow Units
Pressure Units

US Gallons per Minute

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.

Page 4 Date

SUPP	LY	A٨	IΑ	L	YSIS
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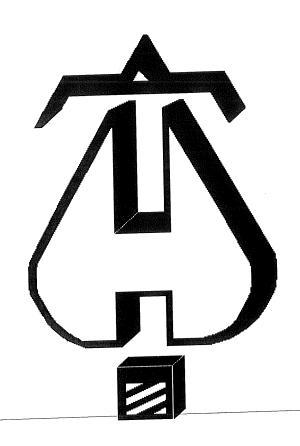
Node at Source	Static Pressure	Residual Pressure	Flow	Available Pressure	Total Demand	Required Pressure
PUMP	See Info	rmation on Pump	Curve		0.0	42.55

NODE ANALYSIS

Node Tag	Elevation	Node Type	Pressure at Node	Discharge at Node	Notes
3	133.25	4.2	14.66	16.08	
7	133.25	4.2	14.5	15.99	
8	133.25		15.0		
4	134.91		14.18		
5	126.0		18.22		
6	126.0		18.38		
9	126.0		18.7		
10	116.92		23.62		
11	116.92		24.12		
12	107.0		30.17		
TOR	107.0		35.74		
PUMP	102.0		42.55		

Page 5 Date

	· · · · · · · · · · · · · · · · · · ·	, , , , , , , , , , , , , , , , , , ,	III(D L	0011011)					Date		
Node1 to Node2	Elev1 Elev2	K Fact	Qa Qt	Nom Act	Fitting or Eqv.	Ln.	Pipe Ftng's Total	CFact Pf/Ft	Pt Pe Pf	*****	Notes	*****
3	133.250	4.20	16.08	1	1E	2.0	0.790	120	14.661			
to						0.0	2.000		-0.719			
4	134.910		16.08	1.049		0.0	2.790	0.0867	0.242	Vel = 5.9	7	
4			0.0 16.08						14.184	K Factor =	4.07	
7	133.250	4.20	15.99	1	1T	5.0	0.790	120	14.500	N Facior -	4.21	
to	133.230	4.20	15.55	1	1 1	0.0	5.000	120	0.0			
8	133.250		15.99	1.049		0.0	5.790	0.0860	0.498	Vel = 5.9	4	
8	133.250		0.0	1.25	1T	6.0	4.830	120	14.998			
to						0.0	6.000		3.140			
6	126	·	15.99	1.38		0.0	10.830	0.0226	0.245	Vel = 3.4	3	
			0.0									
_6			15.99				W. I. I.		18.383	K Factor =	3.73	
4	134.910		16.08	1.25	1E	3.0	4.830	120	14.184			
to	400		40.00	4 00		0.0	3.000		3.859			
5	126		16.08	1.38		0.0	7.830	0.0229	0.179	Vel = 3.45	5	
5	126		0.0	1.25		0.0	7.040	120	18.222			
to 6	126		16.08	1.38		0.0 0.0	0.0 7.040	0.0229	0.0 0.161	Vel = 3.45		
6	126		15.99	1.25	1E	3.0	0.870	120	18.383	Vei - 3.45)	
to	120		13.33	1.20	1 -	0.0	3.000	120	0.0			
9	126		32.07	1.38		0.0	3.870	0.0822	0.318	Vel = 6.88	}	
9	126		0.0	1.25	1E	3.0	9.080	120	18.701			
to						0.0	3.000		3.933			
10	116.920		32.07	1.38		0.0	12.080	0.0820	0.990	Vel = 6.88		
10	116.920		0.0	1.25	1E	3.0	3.000	120	23.624			
to	440.000			4.00		0.0	3.000		0.0			
11	116.920		32.07	1.38		0.0	6.000	0.0820	0.492	Vel = 6.88		
11 to	116.920		0.0	1.25	1E	3.0	12.420	120	24.116			
to 12	107		32.07	1.38	1T	6.0 0.0	9.000 21.420	0.0820	4.296 1.757	Val = 6 00		
12	107		0.0	1.25	5E	15.0	40.000		1.757	Vel = 6.88		
to	101		0.0	1.20	1S	7.0	40.000 28.000	120	30.169 0.0			
TOR	107		32.07	1.38	1T	6.0	68.000	0.0820	5.576	Vel = 6.88		
TOR	107	Park Physics I was a fellow through the second of the seco	0.0	1.25	1Fsp	0.0	7.000	120	35.745			
to			· · · ·	· · - · · ·	1S	7.0	13.000		5.166	* Fixed loss	= 3	
PUMP	102		32.07	1.38	2E	6.0	20.000	0.0820	1.639	Vel = 6.88		
PUMP			0.0 32.07									
I- OIVIP			32.01						42.550	K Factor =	4.92	



. . . Fire Protection by Computer Design

EASTERN FIRE PROTECTION 170 KITTYHAWK AVE. P.O. BOX 1390 AUBURN, MAINE 04211-1390 800-274-1507

Job Name

: SUSAN WHITE HOUSE THIRD FLOOR SIDEWALLS

Drawing Location

: WOOD FRAME

Remote Area : WET

: THIRD FLOOR

Contract

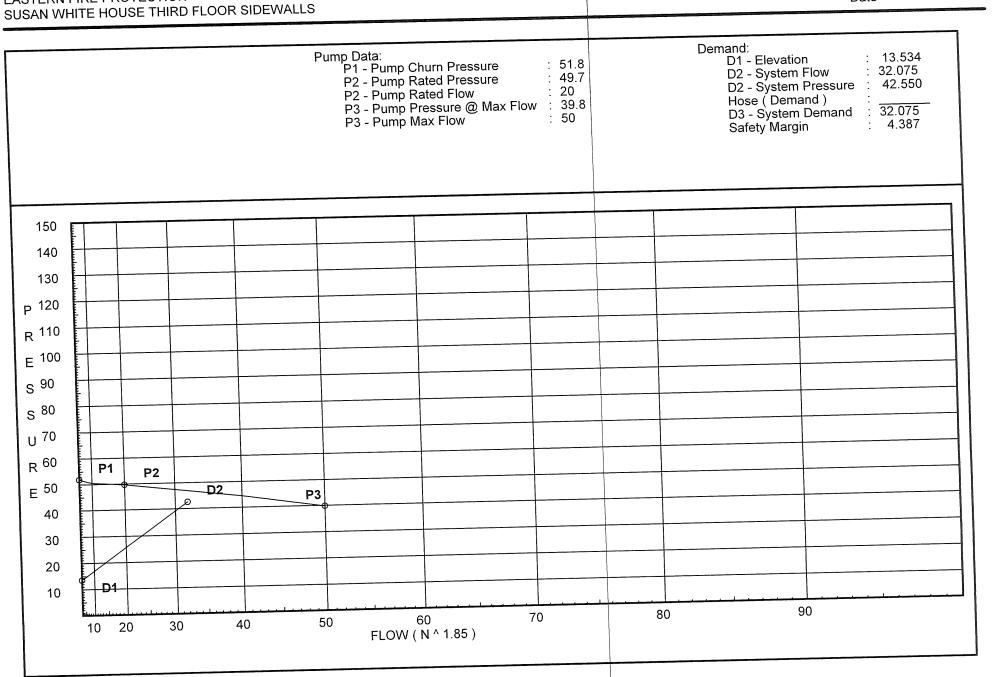
: EFSI-DW

Data File

SUE WRIGHT THIRD FLOOR SIDEWALLS WXF

HYDRAULIC DESIGN INFORMATION SHEET

```
Date - 04/14/11
Name - SUSAN WHITE HOUSE THIRD FLOOR SIDEWALLS
Location - THIRD FLOOR
                                                   System No. - WET
Building - WOOD FRAME
                                                   Contract No. - EFSI-DW
Contractor - EASTERN FIRE SERVICES
                                                   Drawing No. - 1 OF 1
Calculated By - WAF
                                                       Ceiling Height VARIES
Construction: ( ) Combustible (X) Non-Combustible
OCCUPANCY - STAIRWELL
                                                 ( )NFPA 13R
                                                               (X)NFPA 13D
    Type of Calculation: ( )NFPA 13 Residential
S
    Number of Sprinklers Flowing: ( )1 (X)2
                                                 ( ) 4 ( )
Y
    ( )Other
                                                              Date
S
                                         Made by
    ( )Specific Ruling
Т
                                                           System Type
Ε
     Listed Flow at Start Point - 16
                                        Gpm
                                                               ( ) Dry
Μ
     Listed Pres. at Start Point - 14.5 Psi
                                                   (X) Wet
                                                               ( ) PreAction
                                                  ( ) Deluge
     MAXIMUM LISTED SPACING 14 x 14
                                                  Sprinkler or Nozzle
D
                                 - 0
                                        Gpm
     Domestic Flow Added
     Additional Flow Added - 0
                                             Make TYCO Model LF II
Ε
                                        Gpm
     Elevation at Highest Outlet - 133.25Feet Size 1/2"
                                                              K-Factor 4.2
S
                                              Temperature Rating 155
Ι
     Note:
G
Ν
                                                          AT PUMP
                                    Psi Required 42.5
              Gpm Required 32
 Calculation
                                                           Underground NA
                                     Overhead 120
              C-Factor Used:
 Summary
                                                         Tank or Reservoir:
                                  Pump Data:
    Water Flow Test:
                                                       Cap. 900 GALLONS
                                 Rated Cap. 30 GPM
    Date of Test -
                                                       Elev. 102
 Α
                                            47.5
                                 @ Psi
    Time of Test
 Τ
                                            102
                                 Elev.
    Static (Psi)
                                                             Well
 Ε
                                 Other
    Residual (Psi) -
 R
                                                       Proof Flow Gpm
     Flow (Gpm)
     Elevation
     Location: GT 15 PUMP LOCATED IN BSMT.
 P
 Ρ
     Source of Information: GOULD DATA SHEET
 L
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Fittings Used Summary

EASTERN FIRE PROTECTION SUSAN WHITE HOUSE THIRD FLOOR SIDEWALLS

Page 3 Date

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Fitting Le	gend Name	1/2	3/4	1	11/4	11/2	2	2½	3	3½	4	5	6	8	10	12	14	16	18	20	24
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
Fsp	Flow Switch Potter VSR	Fittin	g gener	ates a F	ixed Los	s Based	l on Flow	/												400	400
S	NFPA 13 Swing Check Valve NFPA 13 90' Flow thru Tee	4	5 4	5 5	7 6	9 8	11 10	14 12	16 15	19 17	22 20	27 25	32 30	45 35	55 50	65 60	76 71	87 81	98 91	109 101	130 121

Units Summary

Diameter Units Length Units Flow Units Pressure Units Inches Feet

US Gallons per Minute 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.

Page 4 Date

SI	J	P	P	L	Υ	A	N	Α	L	γ	'S	1	S
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Node at Source	Static Pressure	Residual Pressure	Flow	Available Pressure	Total Demand	Required Pressure
000,00					0.0	42.55
PUMP	See Info	rmation on Pump	Curve		0.0	

NODE ANALYSIS

Node Tag	Elevation	Node Type	Pressure at Node	Discharge at Node	Notes
3 7 8 4 5 6 9 10 11 12 TOR PUMP	133.25 133.25 134.91 126.0 126.0 126.0 116.92 116.92 107.0 107.0	4.2 4.2	14.66 14.5 15.0 14.18 18.22 18.38 18.7 23.62 24.12 30.17 35.74 42.55	16.08 15.99	

Davida 444 Windham N.H. USA 03087

Page 5 Date

Node1 to	Elev1	K	Qa	Nom	Fitting or		Pipe Ftng's	CFact	Pt Pe	****** Notes *****
Node2	Elev2	Fact	Qt	Act	Eqv.	Ln.	Total	Pf/Ft	Pf	
3	133.250	4.20	16.08	1	1E	2.0	0.790	120	14.661	
to 4	134.910		16.08	1.049		0.0 0.0	2.000 2.790	0.0867	-0.719 0.242	Vel = 5.97
	134.510		0.0	1.043		0.0	2.700	0.0001	U.Z.72	0.07
4			16.08						14.184	K Factor = 4.27
7	133.250	4.20	15.99	1	1T	5.0	0.790	120	14.500	
to 8	133.250		15.99	1.049		0.0 0.0	5.000 5.790	0.0860	0.0 0.498	Vel = 5.94
8	133.250		0.0	1.25	1T	6.0	4.830	120	14.998	VOI 0.01
to						0.0	6.000		3.140	
6	126		15.99	1.38		0.0	10.830	0.0226	0.245	Vel = 3.43
6			0.0 15.99						18.383	K Factor = 3.73
4	134.910		16.08	1.25	1E	3.0	4.830	120	14.184	
to						0.0	3.000		3.859	
5	126		16.08	1.38		0.0	7.830	0.0229	0.179	Vel = 3.45
5 to	126		0.0	1.25		0.0 0.0	7.040 0.0	120	18.222 0.0	
6	126		16.08	1.38		0.0	7.040	0.0229	0.161	Vel = 3.45
6	126		15.99	1.25	1E	3.0	0.870	120	18.383	
to	126		32.07	1.38		0.0 0.0	3.000 3.870	0.0822	0.0 0.318	Vel = 6.88
9	126		0.0	1.25	1E	3.0	9.080	120	18.701	VCI - 0.00
to	120		0.0	1.20	,	0.0	3.000	120	3.933	
_10	116.920		32.07	1.38		0.0	12.080	0.0820	0.990	Vel = 6.88
10	116.920		0.0	1.25	1E	3.0	3.000	120	23.624 0.0	
to 11	116.920		32.07	1.38		0.0 0.0	3.000 6.000	0.0820	0.0	Vel = 6.88
11	116.920	70.00	0.0	1.25	1E	3.0	12.420	120	24.116	
to					1T	6.0	9.000	0.0000	4.296	\/-I = 0.00
12	107		32.07	1.38		0.0	21.420	0.0820	1.757	Vel = 6.88
12 to	107		0.0	1.25	5E 1S	15.0 7.0	40.000 28.000	120	30.169 0.0	
TOR	107		32.07	1.38	1T	6.0	68.000	0.0820	5.576	Vel = 6.88
TOR	107		0.0	1.25	1Fsp	0.0	7.000	120	35.745	
to	400		22.07	1.38	1S 2E	7.0 6.0	13.000 20.000	0.0820	5.166 1.639	* Fixed loss = 3 Vel = 6.88
PUMP	102		32.07 0.0	1.30	<u> </u>	0.0	20.000	0.0020	1.000	y G1 = 0,00
PUMP			32.07						42.550	K Factor = 4.92