DISPLAY THIS CARD ON PRINCIPAL FRONTAGE OF WORK

CITY OF PORTLAND

BUILDING PERMIT

This is to certify that
FREEDOM FIRE PROTECTION
209 QUAKER RIDGE RD
CASCO, ME 04015

For installation at
606 CONGRESS ST

Job ID: 2011-11-2699-FAFS

CBL: 039- A-010-001

has permission to install an automatic 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

B Crandall (58)

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.**

Final Fire

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 OCCUPIED.

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: 2011-11-2699-FAFS
install an automatic sprinkler system

For installation at:
606 CONGRESS ST

CBL: 039- A-010-001

Conditions of Approval:

Fire

The sprinkler system shall be installed in accordance with NFPA 13. A signed compliance letter will be required.

A separate sprinkler permit is required from the State Fire Marshal's Office.

Sprinkler protection shall be maintained. Where the system is to be shut down for maintenance or repair, the system shall be checked at the end of each day to insure the system has been placed back in service.

Fire department connection shall be single 2 ½ inch. The Fire Department will require a Knox locking cap on the Fire Department Connection.

System acceptance and commissioning must be coordinated with alarm and suppression system contractors and the Fire Department. Call 874-8703 to schedule.

A 4100 series Knox Box is required.

City of Portland, Maine - Building or Use Permit Application

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

Job No:	Date Applied:	CBL:	
2011-11-2699-FAFS	**10/28/2011**	**039- A-010-001**	
Location of Construction: **606 CONGRESS ST**	Owner Name: **GEOFFREY I RICE**	Owner Address: **658 CONGRESS ST 1ST FLOOR PORTLAND, ME 04101**	Phone:
Business Name:	Contractor Name: **William Wales @ Freedom Fire Protection, Inc.**	Contractor Address: **209 Quaker Ridge, Casco, ME 04015**	Phone: **(207)671 -8639**
Lessee/Buyer's Name:	Phone:	Permit Type: **FIRE ALARM - Fire Alarm**	Zone: **B-3**
Past Use: **1st floor restaurant with 2 dwelling units above**	Proposed Use: **Same: 1st floor restaurant with 2 dwelling units above – to install fire suppression system**	Cost of Work: **$19,000.00**	CEO District:
		Fire Dept: 1 Approved w/ conditions ___ Denied ___ N/A Signature: [signature] (58)	Inspection: Use Group: Type: Signature:
Proposed Project Description: **Mixed Commercial Use**		Pedestrian Activities District (P.A.D.)	
Permit Taken By: Lannie			

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 electrial 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.

Zoning Approval

Special Zone or Reviews	Zoning Appeal	Historic Preservation
___ Shoreland	___ Variance	within
___ Wetlands	___ Miscellaneous	___ Not in Dist or Landmark
___ Flood Zone	___ Conditional Use	___ Does not Require Review
___ Subdivision	___ Interpretation	___ Requires Review
___ Site Plan	___ Approved	___ Approved
	___ Denied	___ Approved w/Conditions
___ Maj ___Min ___ MM		___ Denied
Date: OK 11/17/11	Date:	Date: Any exterior work requires a separate review & Approval

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 appication 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

2011-11-2699

Water-Based Fire Suppression System 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.

1st floor Rest.

Installation address: 606 Congress Street CBL: 039 A 010

Exact location: (within structure) Basement, First, Second, and Third levels

Type of occupancy(s) (NFPA & ICC): Mixed - Mercantile & Apartment

Building owner: Geoffrey Rice (Rice Management)

Managing Supervisor (RMS): Timothy Vess License No: 348

Supervisor phone: 207/627-4109 E-mail: wwales@maine.rr.com

Installing contractor: Freedom Fire Protection, Inc. License No: 295

Contractor phone: 207/671-8639 E-mail: wwales@maine .rr.com

The suppression work to be done will be: New: (●) Renovation: ( ) Addition to existing system: ( )

This is an amendment to an existing permit: Yes: ( ) NO ( ) Permit no:

NFPA Standard this system is designed to: 13 & 13R Edition: 2007

*Non-NFPA systems are not approved for use within the City of Portland.

Download a new copy of this document from www.portlandmaine.gov/fire for every submittal. Attach all working documents and complete approved submittals as may be required by the State Fire Marshal's Office on electronic PDF's in addition to full sized plans.

Contractor shall verify location and type of all FDCs shall be approved in writing by the Fire Prevention Bureau.

COST OF WORK: $18,669.00

PERMIT FEE: $210

($10 PER $1,000 + $30 FOR THE FIRST $1,000)

RECEIVED

OCT 28 2011

Dept. of Building Inspections
City of Portland Maine

11.17.11

Submit all information to the Building Inspections Department, 389 Congress Street, Room 315, Portland, Maine 04101.

Prior to acceptance of any fire protection system, a complete commissioning and acceptance test must be coordinated with all fire system contractors and the Fire Department, and proper documentation of such test(s) provided.

All installation(s) must comply with NFPA and the Fire Department Technical Standard(s).

Applicant signature: William W. Wales Date: July 6, 2011

Freedom Fire Prot.
209 Quaker Ridge Rd Casco ME 04015

Freedom Fire Protection, Inc.

30 Years of Fire Protection Experience
209 Quaker Ridge Road
Casco, Maine 04015
Phone (207) 627-4109 Fax (207) 627-7340

July 6, 2011

Portland City Hall
Third Floor Room #315
Portland, Maine 04101

Attention: Captain Keith Gautreau

Ref: 606 Congress Street
Portland, Maine 04101

Subject: Fire Sprinkler Plan Review

Enclosed please find for your review and comment the following sprinkler information.

- Fire Suppression System Permit
- Permit Fee check
- Freedom Fire Protections drawings FP1, FP2
- 1 set of 8-1/2 x 11 PDF sprinkler plans.
- Hydraulic Calculations Area #1 and Area #2.
- Copy of the State Fire Marshall's sprinkler permit (to follow).

Please get in touch with me to discuss any questions or if you need additional information.

Regards,

William Wales

(O) 207-627-4109
(F) 207-627-7340
(C) 207-671-8639
E-mail wwales@maine.rr.com

State of Maine
Department of Public Safety
Fire Sprinkler System Permit

9571

606 CONGRESS STREET

Located at: 606 CONGRESS STREET
In the Town of: Portland
Occupancy/Use: TAVERN
Type of System: NFPA 13

Permission is hereby given to:

Freedom Fire Protection, Inc.
209 Quaker Ridge Road
Casco, ME 04015
Contractor License # **295**

to begin installation according to plans submittal approved by the Office of State Fire Marshal.
The submittal is filed under log # **2111229** , and no departure from the application submittal shall be made without prior approval in writing. This permit is issued under the provisions of Title 32, Chapter 20, Section 12004-I. Nothing herein shall excuse the holder of this permit from failure to comply with local ordinances, zoning laws, or other pertinent legal restrictions. This permit shall be displayed at the construction site or be made readily available.

This permit was issued on **7/13/2011** for a fee paid of **$100.00**

This permit will expire at midnight on ***Monday, January 09, 2012***

The expiration date applies only if the installation has not begun by that date and no permission has been granted to extend the date. Once installation begins, then the permit is valid for however long it takes to complete the installation, assuming that the work is fairly continuous.

John E Morris

John E. Morris
Commissioner

The type of Fire Department Connection and its location is to be according to the Local Fire Department

Within 30 days of the completion of a new fire sprinkler system or an addition to an existing fire sprinkler system, a fire sprinkler system contractor shall provide to the Office of State Fire Marshal a copy of this permit signed and dated by the certified Responsible Managing Supervisor representing that the fire sprinkler system has been installed according to specifications of the approved plan to the best of the supervisor's knowledge, information, and belief. This requirement is part of the sprinkler law, and neglect of this duty is grounds to not renew the contractor's license to do work in the State of Maine. All renewed sprinkler licenses are good for two years and expire on a June 30th.

Job completed, tested and verified by date of _____

RMS for this job: Vess Timothy L.

RMS Signature: _____

. . . Fire Protection by Computer Design

FREEDOM FIRE PROTECTION INC.
209 QUAKER RIDGE ROAD
CASCO, MAINE 04015
207-627-4109

Job Name : 606 CONGRESS STREET HC1
Building : 606 CONGRESS STREET
Location : PORTLAND, MAINE 04101
System : #1 AREA #1
Contract :
Data File :

Computer Programs by Hydratec Inc. Route 111 Windham N.H. USA 03087

Water Supply Curve (C)

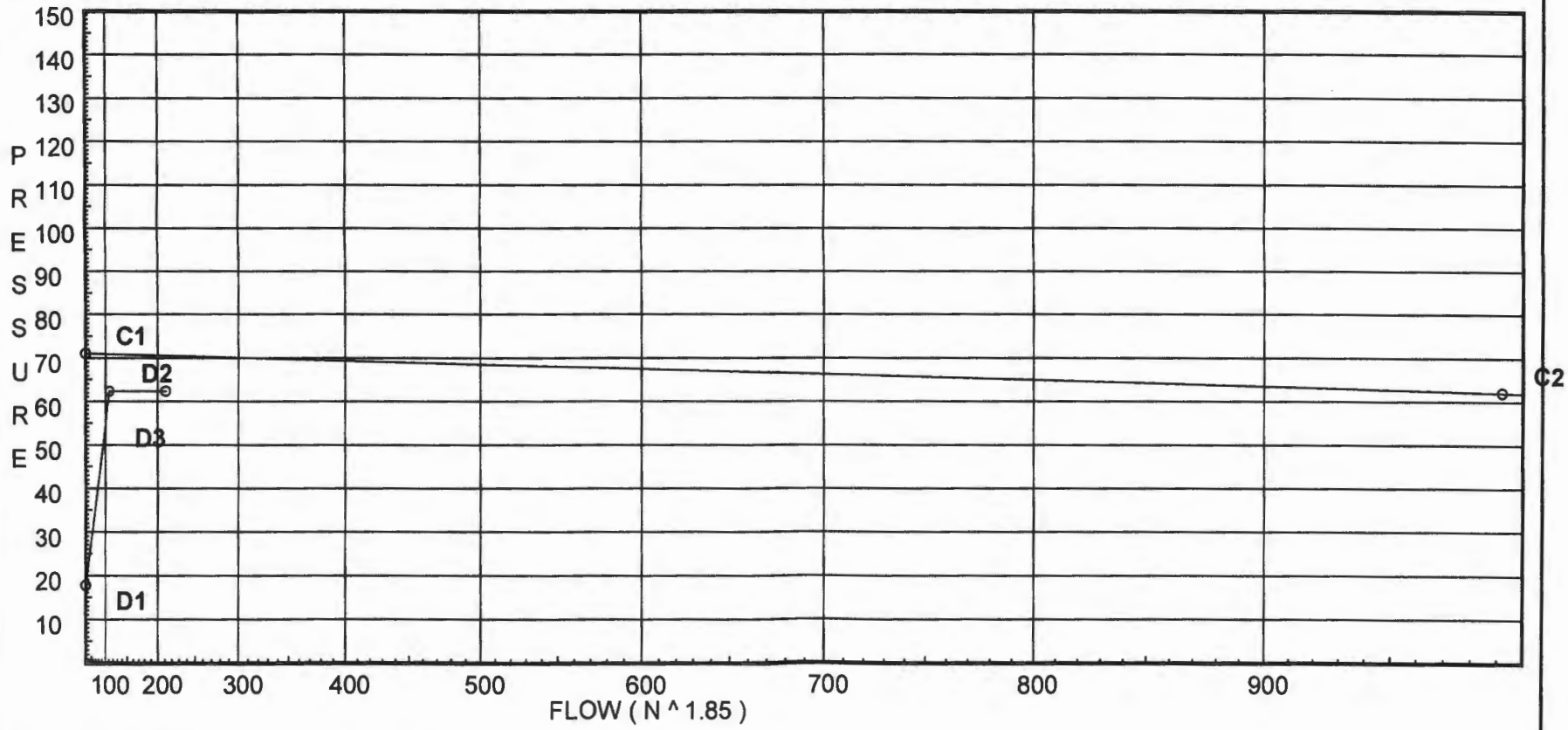
FREEDOM FIRE PROTECTION INC.
606 CONGRESS STREET HC1

Date 3/2/12

City Water Supply:
C1 - Static Pressure : 71
C2 - Residual Pressure: 62
C2 - Residual Flow : 992

Demand:

D1 - Elevation	:	17.610
D2 - System Flow	:	111.678
D2 - System Pressure	:	62.307
Hose (Adj City)	:	
Hose (Demand)	:	100
D3 - System Demand	:	211.678
Safety Margin	:	8.177



FREEDOM FIRE PROTECTION INC.
606 CONGRESS STREET HC1

Node No.	Elevation	K-Fact	Pt Actual	Pn	Flow Actual	Density	Area	Press Req.
102	40.66	4.2	12.53	na	14.87	0.1	0.001	11.1
101	40.66	4.2	13.34	na	15.34	0.1	0.001	11.1
30	40.66		19.61	na				
103	40.66	4.2	21.4	na	19.43	0.1	0.001	11.1
104	40.66	4.2	18.82	na	18.22	0.1	0.001	11.1
105	40.66	4.2	13.61	na	15.49	0.1	0.001	11.1
106	40.66	4.2	11.65	na	14.34	0.1	0.001	11.1
107	40.66	4.2	11.1	na	13.99	0.1	0.001	11.1
22	40.66		11.48	na				
21	40.66		12.25	na				
20	40.66		14.07	na				
19	40.66		19.43	na				
18	40.66		22.1	na				
17	40.66		24.31	na				
16	31.66		30.2	na				
15	31.66		32.35	na				
14	31.66		33.92	na				
13	22.66		38.66	na				
12	20.0		40.55	na				
11	20.0		41.67	na				
10	8.5		47.35	na				
9	8.5		50.44	na				
8	8.5		51.98	na				
7	0.0		56.21	na				
6	0.0		59.52	na				
5	8.5		56.39	na				
4	8.5		57.96	na				
3	2.5		61.11	na				
2	0.0		62.22	na				
1	0.0		62.22	na				
TEST	0.0		62.31	na	100.0			

The maximum velocity is 16.27 and it occurs in the pipe between nodes 20 and 19

FREEDOM FIRE PROTECTION INC.
606 CONGRESS STREET HC1

Hyd. Ref. Point	Qa Qt	Dia. "C" Pf/Ft	Fitting or Eqv.	Ln.	Pipe Ftng's Total	Pt Pe Pf	Pt Pv Pn	******* Notes ******
102	14.87	1.049	1E	2.0	8.660	12.534		K Factor = 4.20
to		120		0.0	2.000	0.0		
101	14.87	0.0752		0.0	10.660	0.802		Vel = 5.52
101	15.34	1.049	1E	2.0	15.481	13.336		K Factor = 4.20
to		120	1T	5.0	7.000	0.0		
30	30.21	0.2790		0.0	22.481	6.273		Vel = 11.21
30	0.0	1.049	1E	2.0	14.830	19.609		
to		120		0.0	2.000	0.0		
17	30.21	0.2791		0.0	16.830	4.697		Vel = 11.21
	0.0							
	30.21					24.306		K Factor = 6.13
103	19.43	1.049	1T	5.0	0.660	21.400		K Factor = 4.20
to		120		0.0	5.000	0.0		
18	19.43	0.1233		0.0	5.660	0.698		Vel = 7.21
	0.0							
	19.43					22.098		K Factor = 4.13
104	18.22	1.049	1T	5.0	0.660	18.815		K Factor = 4.20
to		120		0.0	5.000	0.0		
19	18.22	0.1095		0.0	5.660	0.620		Vel = 6.76
	0.0							
	18.22					19.435		K Factor = 4.13
105	15.49	1.049	1T	5.0	0.660	13.610		K Factor = 4.20
to		120		0.0	5.000	0.0		
20	15.49	0.0813		0.0	5.660	0.460		Vel = 5.75
	0.0							
	15.49					14.070		K Factor = 4.13
106	14.34	1.049	1T	5.0	3.583	11.650		K Factor = 4.20
to		120		0.0	5.000	0.0		
21	14.34	0.0703		0.0	8.583	0.603		Vel = 5.32
	0.0							
	14.34					12.253		K Factor = 4.10
107	13.99	1.049	1T	5.0	0.660	11.100		K Factor = 4.20
to		120		0.0	5.000	0.0		
22	13.99	0.0671		0.0	5.660	0.380		Vel = 5.19
22	0.0	1.049	2E	4.0	7.500	11.480		
to		120		0.0	4.000	0.0		
21	13.99	0.0672		0.0	11.500	0.773		Vel = 5.19
21	14.34	1.049		0.0	7.330	12.253		
to		120		0.0	0.0	0.0		
20	28.33	0.2479		0.0	7.330	1.817		Vel = 10.52
20	15.49	1.049		0.0	9.660	14.070		
to		120		0.0	0.0	0.0		
19	43.82	0.5554		0.0	9.660	5.365		Vel = 16.27

FREEDOM FIRE PROTECTION INC.
606 CONGRESS STREET HC1

Hyd. Ref. Point	Qa Qt	Dia. "C" Pf/Ft	Fitting or Eqv.	Ln.	Pipe Ftng's Total	Pt Pe Pf	Pt Pv Pn	******* Notes ******
19	18.22	1.38		0.0	9.583	19.435		
to		120		0.0	0.0	0.0		
18	62.04	0.2779		0.0	9.583	2.663		Vel = 13.31
18	19.43	1.61	1T	8.0	2.166	22.098		
to		120		0.0	8.000	0.0		
17	81.47	0.2172		0.0	10.166	2.208		Vel = 12.84
17	30.21	2.157	1T	12.307	9.000	24.306		
to		120		0.0	12.307	3.898		
16	111.68	0.0936		0.0	21.307	1.995		Vel = 9.81
16	0.0	2.157	1T	12.307	10.660	30.199		
to		120		0.0	12.307	0.0		
15	111.68	0.0937		0.0	22.967	2.151		Vel = 9.81
15	0.0	2.157	1E	6.153	10.583	32.350		
to		120		0.0	6.153	0.0		
14	111.68	0.0937		0.0	16.736	1.568		Vel = 9.81
14	0.0	2.157		0.0	9.000	33.918		
to		120		0.0	0.0	3.898		
13	111.68	0.0937		0.0	9.000	0.843		Vel = 9.81
13	0.0	2.157	1E	9.298	2.660	38.659		
to		150		0.0	9.298	1.152		
12	111.68	0.0620		0.0	11.958	0.741		Vel = 9.81
12	0.0	2.157	1E	6.153	5.830	40.552		
to		120		0.0	6.153	0.0		
11	111.68	0.0936		0.0	11.983	1.122		Vel = 9.81
11	0.0	2.635	1E	8.237	11.500	41.674		
to		120		0.0	8.237	4.981		
10	111.68	0.0353		0.0	19.737	0.697		Vel = 6.57
10	0.0	2.635	2E	16.474	54.330	47.352		
to		120	1T	16.474	32.948	0.0		
9	111.68	0.0353		0.0	87.278	3.084		Vel = 6.57
9	0.0	2.635	2E	16.474	10.660	50.436		
to		120	1T	16.474	32.948	0.0		
8	111.68	0.0353		0.0	43.608	1.541		Vel = 6.57
8	0.0	2.635	1E	8.237	7.500	51.977		
to		120		0.0	8.237	3.681		
7	111.68	0.0353		0.0	15.737	0.556		Vel = 6.57
7	0.0	2.635	1E	8.237	2.000	56.214		
to		120	1Zac	0.0	8.237	2.940		* Fixed loss = 2.94
6	111.68	0.0354		0.0	10.237	0.362		Vel = 6.57
6	0.0	2.635	1E	8.237	7.500	59.516		
to		120		0.0	8.237	-3.681		
5	111.68	0.0353		0.0	15.737	0.556		Vel = 6.57

FREEDOM FIRE PROTECTION INC.
606 CONGRESS STREET HC1

Hyd. Ref. Point	Qa Qt	Dia. "C" Pf/Ft	Fitting or Eqv.	Ln.	Pipe Ftng's Total	Pt Pe Pf	Pt Pv Pn	******* Notes ******
5	0.0	2.635	3E	24.711	19.660	56.391		
to		120		0.0	24.711	0.0		
4	111.68	0.0353		0.0	44.371	1.567		Vel = 6.57
4	0.0	2.635	1B	9.61	6.000	57.958		
to		120		0.0	9.610	2.599		
3	111.68	0.0354		0.0	15.610	0.552		Vel = 6.57
3	0.0	6.16	1T	43.037	15.000	61.109		
to		140	1G	4.304	47.341	1.083		
2	111.68	0.0004		0.0	62.341	0.026		Vel = 1.20
2	0.0	16.41	1T	166.859	100.000	62.218		
to		140	2E	164.8	331.660	0.0		
1	111.68	0.0		0.0	431.660	0.001		Vel = 0.17
1	0.0	8.27	1T	55.354	750.000	62.219		
to		140	2E	56.936	112.290	0.0		
TEST	111.68	0.0001		0.0	862.290	0.088		Vel = 0.67
	100.00							Qa = 100.00
	211.68					62.307		K Factor = 26.82

. . . Fire Protection by Computer Design

FREEDOM FIRE PROTECTION INC.
209 QUAKER RIDGE ROAD
CASCO, MAINE 04015
207-627-4109

Job Name	:	606 CONGRESS STREET HC2
Building	:	606 CONGRESS STREET
Location	:	PORTLAND, MAINE 04101
System	:	#1 AREA #2
Contract	:	
Data File	:	606 CONGRESS STREET HC2.WXF

Computer Programs by Hydratec Inc. Route 111 Windham N.H. USA 03087

Hydraulic Design Information Sheet

Name - 606 CONGRESS STREET
Location - PORTLAND, MAINE 04101
Building - 606 CONGRESS STREET
Contractor -
Calculated By - MIKE NOBLIT
Construction: (X) Combustible ( ) Non-Combustible
Occupancy - TAVERN

Date - 1/2/12
System No. - #1 AREA #2
Contract No. -
Drawing No. - FP-2
Ceiling Height - 11'-5"

SYSTEM DESIGN

(X) NFPA 13 ( ) Lt. Haz. Ord.Haz.Gp. ( ) 1 (X) 2 ( ) 3 ( ) Ex.Haz.
( ) NFPA 231 ( ) NFPA 231C ( ) Figure Curve
Other
Specific Ruling Made By Date

Area of Sprinkler Operation - ROOM	System Type	Sprinkler/Nozzle	
Density - 0.20	(X) Wet	Make TYCO	
Area Per Sprinkler - 130	( ) Dry	Model TY-FRB	
Elevation at Highest Outlet - 22'-8"	( ) Deluge	Size 1/2"	
Hose Allowance - Inside -	( ) Preaction	K-Factor 5.6	
Rack Sprinkler Allowance -	( ) Other	Temp.Rat.155	
Hose Allowance - Outside - 250			

Note

Calculation Summary: Flow Required - 387.311 Press Required - 60.340 At Test
C-Factor Used: 120 Overhead 140 Underground

WATER SUPPLY

Water Flow Test:
Date of Test - 5/8/2010
Time of Test -
Static Press - 71
Residual Press - 62
Flow - 992
Elevation - 0

Pump Data:
Rated Cap.-
@ Press -
Elev. -

Tank or Reservoir:
Cap. -
Elev.-

Well
Proof Flow

Location -

Source of Information - PORTLAND WATER DISTRICT

Water Supply Curve (C)

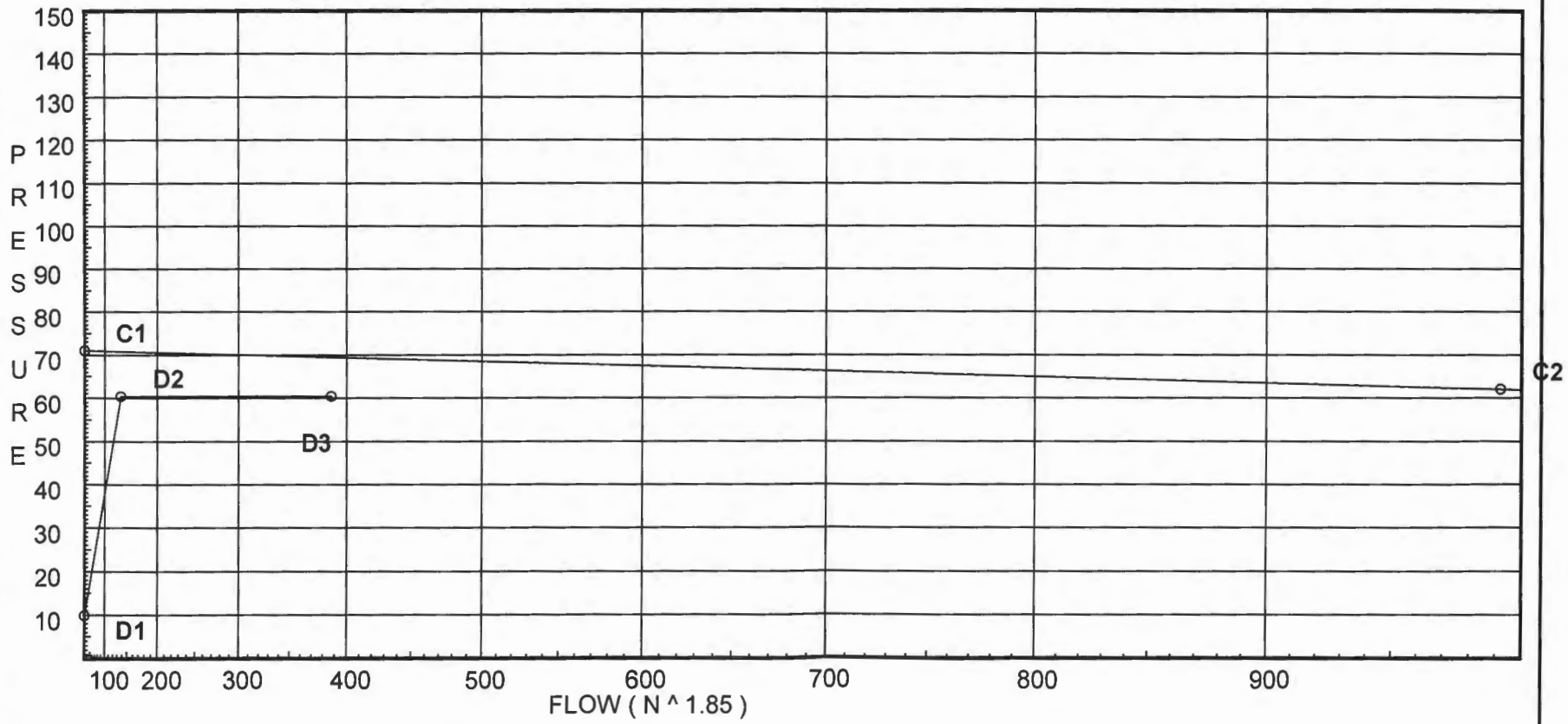
FREEDOM FIRE PROTECTION INC.
606 CONGRESS STREET HC2

Page 2
Date 1/2/12

City Water Supply:
C1 - Static Pressure : 71
C2 - Residual Pressure: 62
C2 - Residual Flow : 992

Demand:

D1 - Elevation	9.814
D2 - System Flow	137.311
D2 - System Pressure	60.340
Hose (Adj City)	
Hose (Demand)	250
D3 - System Demand	387.311
Safety Margin	9.080



FREEDOM FIRE PROTECTION INC.
606 CONGRESS STREET HC2

Fitting Legend

Abbrev.	Name	½	¾	1	1¼	1½	2	2½	3	3½	4	5	6	8	10	12	14	16	18	20	24
B	Generic Butterfly Valve	0	0	0	0	0	0	7	10	0	12	9	10	12	19	21	0	0	0	0	0
E	90' Standard Elbow	2	2	2	3	4	5	6	7	8	10	12	14	18	22	27	35	40	45	50	61
G	Generic Gate Valve	0	0	0	0	0	1	1	1	1	2	2	3	4	5	6	7	8	10	11	13
T	90' Flow Thru Tee	3	4	5	6	8	10	12	15	17	20	25	30	35	50	60	71	81	91	101	121
Zac	Ames 2000SS	Fitting generates a Fixed Loss Based on Flow																			

Pressure / Flow Summary - STANDARD

FREEDOM FIRE PROTECTION INC.
606 CONGRESS STREET HC2

Node No.	Elevation	K-Fact	Pt Actual	Pn	Flow Actual	Density	Area	Press Req.
205	22.66	5.6	21.56	na	26.0	0.2	130	7.0
204	22.66	5.6	22.75	na	26.71	0.2	130	7.0
203	22.66	5.6	23.9	na	27.38	0.2	130	7.0
202	22.66	5.6	25.09	na	28.05	0.2	130	7.0
201	22.66	5.6	27.15	na	29.18	0.2	130	7.0
30	22.66		30.57	na				
13	22.66		31.74	na				
12	20.0		33.98	na				
11	20.0		35.63	na				
10	8.5		41.63	na				
9	8.5		46.15	na				
8	8.5		48.41	na				
7	0.0		52.9	na				
6	0.0		56.25	na				
5	8.5		53.38	na				
4	8.5		55.68	na				
3	2.5		59.09	na				
2	0.0		60.21	na				
1	0.0		60.21	na				
TEST	0.0		60.34	na	250.0			

The maximum velocity is 17.04 and it occurs in the pipe between nodes 202 and 201

Hyd. Ref. Point	Qa Qt	Dia. "C" Pf/Ft	Fitting or Eqv.	Ln.	Pipe Ftng's Total	Pt Pe Pf	Pt Pv Pn	******* Notes ******
205	26.00	1.049		0.0	8.500	21.556		K Factor = 5.60
to		150		0.0	0.0	0.0		
204	26.0	0.1400		0.0	8.500	1.190		Vel = 9.65
204	26.71	1.38		0.0	8.500	22.746		K Factor = 5.60
to		150		0.0	0.0	0.0		
203	52.71	0.1360		0.0	8.500	1.156		Vel = 11.31
203	27.38	1.61		0.0	8.500	23.902		K Factor = 5.60
to		150		0.0	0.0	0.0		
202	80.09	0.1392		0.0	8.500	1.183		Vel = 12.62
202	28.04	1.61		0.0	8.500	25.085		K Factor = 5.60
to		150		0.0	0.0	0.0		
201	108.13	0.2427		0.0	8.500	2.063		Vel = 17.04
201	29.18	2.067	1T	15.111	15.538	27.148		K Factor = 5.60
to		150		0.0	15.111	0.0		
30	137.31	0.1118		0.0	30.649	3.426		Vel = 13.13
30	0.0	2.067	1E	7.555	2.916	30.574		
to		150		0.0	7.555	0.0		
13	137.31	0.1117		0.0	10.471	1.170		Vel = 13.13
13	0.0	2.157	1E	9.298	2.660	31.744		
to		150		0.0	9.298	1.152		
12	137.31	0.0909		0.0	11.958	1.087		Vel = 12.06
12	0.0	2.157	1E	6.153	5.830	33.983		
to		120		0.0	6.153	0.0		
11	137.31	0.1373		0.0	11.983	1.645		Vel = 12.06
11	0.0	2.635	1E	8.237	11.500	35.628		
to		120		0.0	8.237	4.981		
10	137.31	0.0517		0.0	19.737	1.021		Vel = 8.08
10	0.0	2.635	2E	16.474	54.330	41.630		
to		120	1T	16.474	32.948	0.0		
9	137.31	0.0518		0.0	87.278	4.520		Vel = 8.08
9	0.0	2.635	2E	16.474	10.660	46.150		
to		120	1T	16.474	32.948	0.0		
8	137.31	0.0518		0.0	43.608	2.258		Vel = 8.08
8	0.0	2.635	1E	8.237	7.500	48.408		
to		120		0.0	8.237	3.681		
7	137.31	0.0519		0.0	15.737	0.816		Vel = 8.08
7	0.0	2.635	1E	8.237	2.000	52.905		
to		120	1Zac	0.0	8.237	2.815		* Fixed loss = 2.815
6	137.31	0.0518		0.0	10.237	0.530		Vel = 8.08
6	0.0	2.635	1E	8.237	7.500	56.250		
to		120		0.0	8.237	-3.681		
5	137.31	0.0517		0.0	15.737	0.814		Vel = 8.08

Hyd. Ref. Point	Qa Qt	Dia. "C" Pf/Ft	Fitting or Eqv.	Ln.	Pipe Ftng's Total	Pt Pe Pf	Pt Pv Pn	******* Notes ******
5	0.0	2.635	3E	24.711	19.660	53.383		
to		120		0.0	24.711	0.0		
4	137.31	0.0518		0.0	44.371	2.298		Vel = 8.08
4	0.0	2.635	1B	9.61	6.000	55.681		
to		120		0.0	9.610	2.599		
3	137.31	0.0518		0.0	15.610	0.808		Vel = 8.08
3	0.0	6.16	1T	43.037	15.000	59.088		
to		140	1G	4.304	47.341	1.083		
2	137.31	0.0006		0.0	62.341	0.039		Vel = 1.48
2	0.0	16.41	1T	166.859	100.000	60.210		
to		140	2E	164.8	331.660	0.0		
1	137.31	0.0		0.0	431.660	0.002		Vel = 0.21
1	0.0	8.27	1T	55.354	750.000	60.212		
to		140	2E	56.936	112.290	0.0		
TEST	137.31	0.0001		0.0	862.290	0.128		Vel = 0.82
	250.00							Qa = 250.00
	387.31					60.340		K Factor = 49.86

CITY OF PORTLAND, MAINE
Department of Building Inspections

Original Receipt

Oct 20 11

Received from

Location of Work

Cost of Construction $_____ Building Fee:_____

Permit Fee $_____ Site Fee: _____

Certificate of Occupancy Fee: _____

Total: _____

Building (IL) ___ Plumbing (I5) ___ Electrical (I2) ___ Site Plan (U2) ___

Other

CBL: 029 A011

Check #: 15916 **Total Collected $**

No work is to be started until permit issued.
Please keep original receipt for your records.

Taken by:

WHITE - Applicant's Copy
YELLOW - Office Copy
PINK - Permit Copy