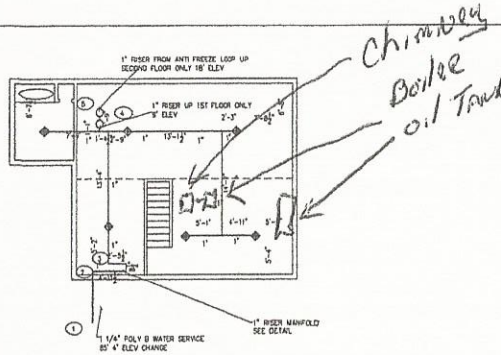
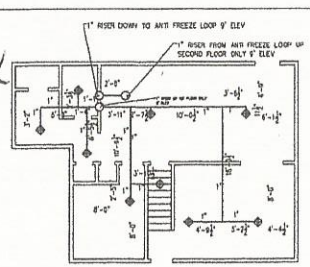
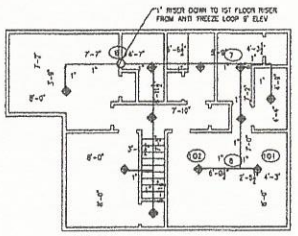






TEST # 1
IS DESIGNED TO DISCHARGE AT THE RATE OF 13 GPM PER HEAD OVER A MAXIMUM AREA OF 3 HEADS FLOWING WHEN SUPPLIED WITH WATER AT THE RATE OF 28.11 GPM AT 43.02 PSI AT THE BASE OF THE RISER.
HOSE STREAM ALLOWANCE OF -0- GPM IS INCLUDED IN THE ABOVE.

HYDRAULIC CALCULATIONS

HYDRAULIC CALCULATIONS FOR

LOT# C DEDHAM STREET
PORTLAND MAINE
CONTRACT NO. 212076
10-14-2012

DESIGN DATA

OCCUPANCY CLASSIFICATION:	RESIDENTIAL
DENSITY:	SEE HEAD LISTING
AREA OF APPLICATION:	513 SQFT MAX
COVERAGE PER SPRINKLER:	256 SQFT MAX
SPECIAL SPRINKLERS:	RESIDENTIAL
NO. OF SPRINKLERS CALCULATED:	2
IN RACK DEMAND:	-0-
HOSE STREAM:	-0-GPM
TOTAL WATER REQUIRED:	28.51
NAME OF CONTRACTOR:	TIM DAVIS
NAME OF DESIGNER:	ATLANTIC DESIGN RESOURCES LTD
ADDRESS:	P.O. BOX 496 GREENLAND, NH 03840
AUTHORITY HAVING JURISDICTION:	STATE OF MAINE/PORTLAND MAINE

SAMPLE NAMEPLATE

THIS SYSTEM, AS SHOWN ON ATLANTIC DESIGN RESOUCERS LTD PRINT NO. 212076-FP-1 DATED 10-14-2012 FOR:

LOT# C DEDHAM STREET
PORTLAND MAINE
CONTRACT NO. 212076
10-14-2012

TEST # 1
IS DESIGNED TO DISCHARGE AT THE RATE OF 13 GPM PER HEAD OVER A MAXIMUM AREA OF 3 HEADS FLOWING WHEN SUPPLIED WITH WATER AT THE RATE OF 28.11 GPM AT 43.03 PSI AT THE BASE OF THE RISER.
HOSE STREAM ALLOWANCE OF -0- GPM IS INCLUDED IN THE ABOVE.

BASEMENT FLOOR 6 K= 4.9 RESIDENTIAL QB-QR 155f PENDENT SPRINKLER HEADS REQ.

SCALE: 1/8"=1'-0"

FIRST FLOOR 9 K= 4.9 RESIDENTIAL QB-QR 155f PENDENT SPRINKLER HEADS REQ.

SCALE: 1/8"=1'-0"

SECOND FLOOR 10 K= 4.9 RESIDENTIAL QB-QR 155f PENDENT SPRINKLER HEADS REQ.

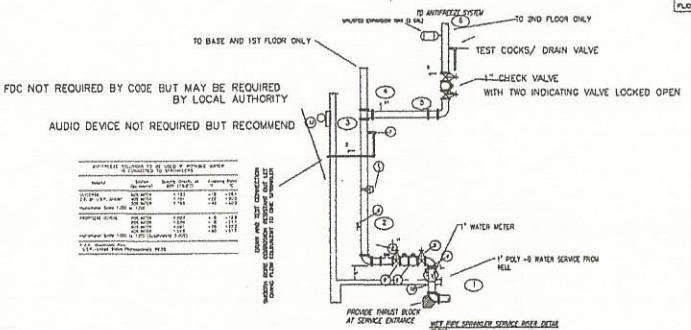
SCALE: 1/8"=1'-0"

WATER PRESSURE INFORMATION SUPPLIED BY PORTLAND WATER DEPARTMENT 9-10-2012 11:00 AM

WATER PRESSURE INFORMATION	
STATIC	75 psi
RESIDUAL	35 psi
PITOT	n/a
COEFFICIENT	.09
OUTLET	N/A
FLOW	1321 gpm

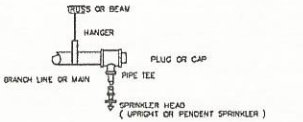
NOTE: ANTI FREEZE TO MEET THE REQUIRMENTS OF THE STATE OF MAINE
PREMIXES GLYCERINE BASED ANTIFREEZE ONLY

NOTE APPROX. 12 GAL OF ANTIFREEZE CAPACITY IN SYSTEM

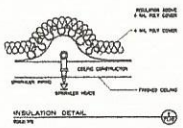


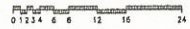
WET PIPE SPRINKLER SYSTEM RISER DETAIL
N.T.S

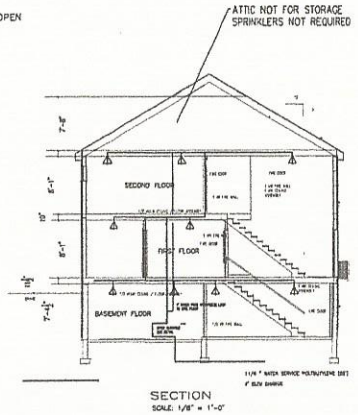
ITEM	DESCRIPTION
1.	FLOW SWITCH (WITH 30 SEC DELAY)
4.	WATER PRESSURE GAUGE (TYP. FOR 2)
5.	CHECK VALVE
6.	1" REDUCED PRESSURE ZONE CHECK /BACKFLOW PREVENTER ASSEMBLY WITH BYPASS METER
7.	1 " MAIN DRAIN VALVE
8.	1" MAIN DRAIN
9.	OS&Y VALVE WITH SUPERVISORY SWITCH
10.	RISER FROM MAIN WATER SUPPLY
11	1" INSPECTORS TEST VALVE
12	1" INSPECTORS TEST
13	ELEC BELL



TYPICAL END FLUSHING/DRAIN DETAIL
N.T.S







SECTION
SCALE: 1/8" = 1'-0"

SECTION
SCALE: 1/8"=1'-0"

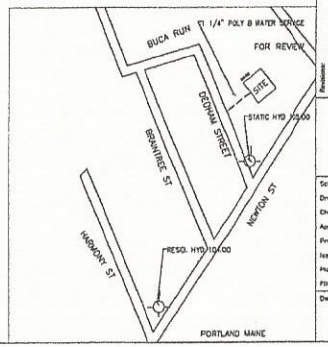
MAXIMUM DISTANCE BETWEEN HANGERS (FT-IN)												
Nominal Pipe Size (in.)	1/2	3/4	1	1-1/4	1-1/2	2	2-1/2	3	3-1/2	4	5	6
Steel Pipe (Schedule Threaded and Lightwall Threaded Steel Pipe)	6-0	8-0	10-0	12-0	12-0	15-0	15-0	15-0	15-0	15-0	17-0	17-0
Copper Tube (CPVC Polybutylene (PB))	5-0	6-0	7-0	8-0	8-0	9-0	9-0	10-0	10-0	10-0	10-0	10-0
Polybutylene (PB)	2-6	3-0	3-6	4-0	4-6	5-0	5-6	6-0	6-6	7-0	8-0	9-0

FOR SI UNITS: 1 in = 25.4 mm, 1 ft = 0.3048 m.

LEGEND

- RESIDENTIAL PENDENT SPRINKLER HEAD
- PENDENT SPRINKLER HEAD (VIEWED IN SECTION)
- NEW SPRINKLER PIPING
- RISER UP OR DOWN
- HANGERS
- (1) HYDRAULIC REFERENCE POINT

LOCATION MAP
SCALE: N.T.S



NOTES

1. SYSTEM DESIGNED TO THE REQUIREMENTS OF THE NFPA 13-D 2010 EDITION, STATE OF MAINE AND THE PORTLAND ,MAINE
2. ALL PIPING SHOULD BE ARRANGED, WHERE PRACTICABLE, TO DRAIN TO THE MAIN DRAIN VALVE.
3. READILY REMOVABLE FITTINGS SHALL BE PROVIDED AT THE END OF ALL CROSS MAINS TO PROVIDE FOR FLUSHING SYSTEM.
4. HANGERS AND PIPE SHALL BE INSTALLED IN ACCORDANCE WITH THE REQUIREMENTS OF NFPA 13, 2010 EDITION.
5. ALL PIPE LOCATIONS TO BE FIELD MEASURED PRIOR TO FABRICATION AND INSTALLATION.
6. HIGH TEMPERATURE HEADS TO BE FIELD LOCATED WHERE REQUIRED.
7. SINGLE HEADS IN ROOMS WITHOUT MEASUREMENTS ARE TO BE CENTERED IN ROOM.
8. PIPE AND FITTINGS MAY BE CPVC PLASTIC OR EQUAL.
9. SPRINKLERS ARE NOT REQUIRED IN BATHROOMS NOT MORE THEN 55 SQ.FT.

NOTE: THESE PLANS ARE INTENDED FOR SPRINKLER PURPOSES ONLY. WHERE THESE PLANS AND DRAWINGS ARE A RESULT OF ARCHITECTURAL DRAWINGS SUPPLIED BY THE OWNER OR OWNER'S AGENT, ATLANTIC DESIGN RESOURCES, LTD. TAKES NO RESPONSIBILITY FOR THE ACCURACY OF THE DIMENSIONS OR MODIFICATIONS TO THE DESIGN RESULTING FROM CHANGED DIMENSIONS. IN ALL CASES , IT IS THE RESPONSIBILITY OF THE INSTALLER TO FIELD VERIFY ALL DIMENSIONS PRIOR TO INSTALLATION. ANY MODIFICATIONS TO THIS SYSTEM AS DESIGNED WITHOUT THE EXPRESS APPROVAL OF ATLANTIC DESIGN RESOURCES LTD. IS THE SOLE RESPONSIBILITY OF THE OWNER OR OWNER'S AGENT. WHERE THIS SYSTEM, IN PART OR IN WHOLE, MAY BE EXPOSED TO FREEZING TEMPERATURES, OR WHERE CHANGES IN THE FLOW PATTERN OR PIPING MAY AFFECT THE HYDRAULIC CHARACTERISTICS, THESE CHANGES SHALL BE APPROVED BY THE OWNER PRIOR TO INSTALLATION. ATLANTIC DESIGN RESOURCES, LTD., TAKES NO RESPONSIBILITY FOR ANY ARCHITECTURAL DESIGN, INCLUDING DESIGN RELATING TO HEAT DISTRIBUTION OR RETENTION. IT IS THE OWNER'S RESPONSIBILITY TO PROVIDE HEAT WHERE HEAT IS REQUIRED. WET OR DRY PIPE SPRINKLER SYSTEMS, IN PART OR IN WHOLE, REQUIRES HEAT (+40 DEGREES F. MIN.) TO PREVENT DAMAGE FROM FREEZING OR CONDENSATION.

NOTE: CPVC PLASTIC TO BE INSTALLED PER LISTING REQUIREMENTS SEE CUT SHEET
NOTE: ANTIFREEZE TO BE INSTALLED PER LISTING REQUIREMENTS SEE CUT SHEET
50% PREMIXED GLYCERINE BASED ANITFREEZE ONLY PER STATE OF MAINE 2ND FLOOR ONLY

ATLANTIC DESIGN RESOURCES, LLC
P.O.BOX 496 / GREENLAND NH 03840
603.418.0764 voice / 603.418.6375 fax
asdmlh@gmail.com

TIM DAVIS P & H INC
P.O. BOX 255
ALFRED 04002

LOT# C DEDHAM STREET
PORTLAND MAINE

No.	Date	By	Description

Scale:	AS NOTED
Drawn By:	RM / MD
Checked By:	RM
Approved By:	
Project No.	212076
Issued:	FOR REVIEW
Plot Date:	SEE HEADER
File:	212076 FP-1
Dwg No.	FP-1