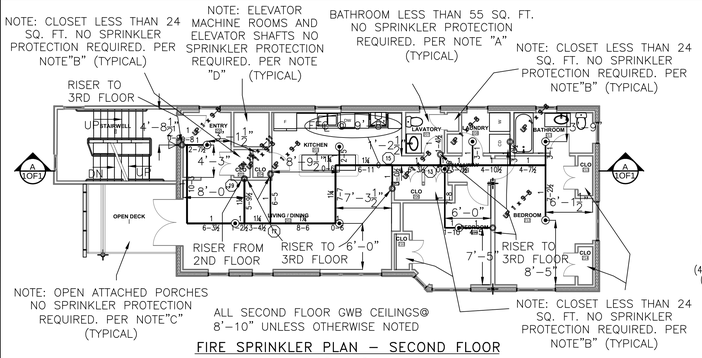
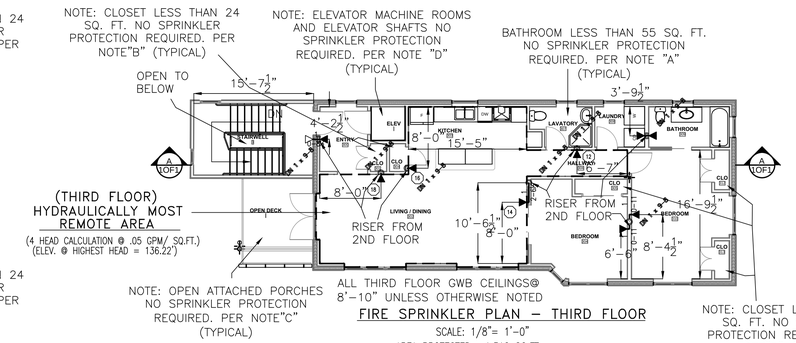


FIRE SPRINKLER PLAN – SECOND FLOOR

SCALE: 1/8"= 1'-0"
AREA PROTECTED: 1,312 SQ.FT.
FINISH FLOOR ELEVATION: 117.84'



FIRE SPRINKLER PLAN – THIRD FLOOR

SCALE: 1/8"= 1'-0"
AREA PROTECTED: 1,312 SQ.FT.
FINISH FLOOR ELEVATION: 127.76'

HYDRAULIC–SYSTEM

THIS BUILDING IS PROTECTED BY A HYDRAULICALLY DESIGNED AUTOMATIC SPRINKLER SYSTEM.

LOCATION: 3RD FLOOR NFPA #13R

BASIS OF DESIGN:

1. GPM PER HEAD	16
2. NUMBER OF HEADS CALCULATED	4

SYSTEM DEMAND AT BASE:

1. WATER FLOW RATE	68.45 (GPM)
2. RESIDUAL PRESSURE AT NODE BASE	56.147 (PSI)

HYDRAULIC DATA NAMEPLATES TO BE MOUNTED AT SYSTEM RISER

NOTE: HIGHEST SPRINKLER IS 136.22'

⬡ = HYDRAULIC REFERENCE POINT

RELIABLE F1Res 44 HSW

F1RES 44 RESIDENTIAL HORIZONTAL SIDEWALL SPRINKLER DESIGN REQUIREMENTS

MODEL	COVERAGE AREA WIDTH LENGTH FT. x FT.	MAXIMUM SPACING FT. (M)	MINIMUM DESIGN FLOW AND RESIDUAL PRESSURE TOP OF DEFLECTOR TO CEILING: 4 TO 6 INCHES	TOP OF DEFLECTOR TO CEILING: 6 TO 12 INCHES
			155'F/68'C 175'F/79'C	155'F/68'C 175'F/79'C
F1 RES 44 HORIZONTAL SIDEWALL	12 x 12	12'	12GPM(7.5psi)	14GPM(10.2psi)
	14 x 14	14'	14GPM(10.2psi)	16GPM(13.3psi)
	16 x 16	16'	16GPM(13.3psi)	17GPM(15.0psi)
	16 x 18	16'	18GPM(16.8psi)	20GPM(20.7psi)
	18 x 18	16'	19GPM(18.7psi)	N/A
	16 x 20	16'	23GPM(27.4psi)	23GPM(27.4psi)

FOR HORIZONTAL CEILING (MAXIMUM 8 INCH RISE FOR 12 INCH RUN)
K–FACTOR = 4.4 , ¾" N.P.T. SIN#R3531

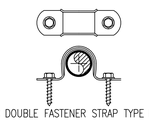
MAXIMUM HEAD SPACING 8'–0" FROM SIDE WALL; 16'–0" BETWEEN HEADS
MAXIMUM THROW 16'–0" MINIMUM SPACING 8'–0" BETWEEN HEADS

RELIABLE RFC49

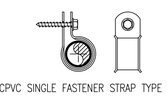
RFC49 RESIDENTIAL CONCEALED PENDENT SPRINKLER DESIGN REQUIREMENTS

MODEL	COVERAGE AREA MAX. SPACE BETWEEN SPRINKLERS	COVERAGE AREA MAXIMUM LOCATION FROM WALL	MINIMUM DESIGN FLOW (PRESSURE) MINIMUM FLOW & PRESSURE FOR HORIZONTAL CEILING (MAX. 2" RISE FOR 12" RUN)
			155'/175'F/68'C
RFC49 LL CONCEALED PENDENT	12 x 12	6'(OR LESS)	13GPM(7.0psi)
	14 x 14	7'	13GPM(7.0psi)
	16 x 16	8'	13GPM(7.0psi)
	18 x 18	9'	17GPM(12.0psi)
	20 x 20	10'	20GPM(16.7psi)

K–FACTOR = 4.9 , ½" N.P.T.
MINIMUM SPACING 8'–0"
MAXIMUM HEAD SPACING FROM ANY WALL 9'–0"
MAXIMUM SPACING BETWEEN HEADS 18'–0"



CPVC DOUBLE FASTENER STRAP TYPE HANGER



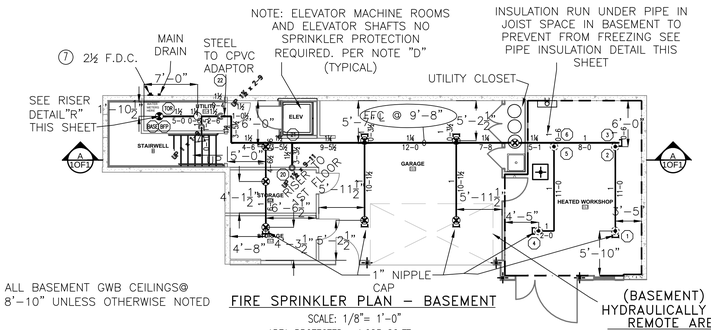
CPVC SINGLE FASTENER STRAP TYPE HANGER

Second Floor Sprinkler Head Schedule

Symbol	Count	Thread	K–Factor	Description	Note
⊙	9	1/2"	4.9	RELIABLE RFC49 MOD# RA0616 FAST RESPONCE 165° BRASS CONCELED PENDENT	on Drop
◁	1	1"	4.4	RELIABLE F3RES44 MOD# R5231 175° DRY WHITE HORIZONTAL SIDEWALL	on Line
10 = Total Number of Heads This Floor					

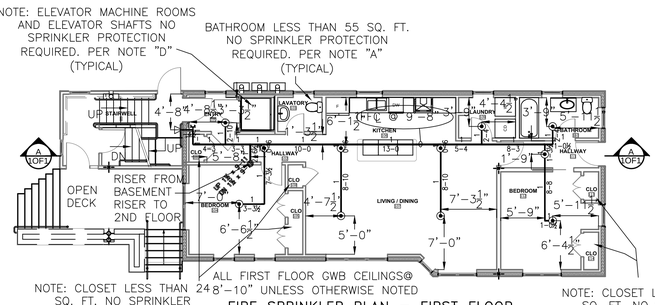
Third Floor Sprinkler Head Schedule

Symbol	Count	Thread	K–Factor	Description	Note
◀	9	1/2"	4.4	RELIABLE F1RES44 MOD# R3531 FAST RESPONSE 175° WHITE HORIZONTAL SIDEWALL	on Line
◁	1	1"	4.4	RELIABLE F3RES44 MOD# R5231 175° DRY WHITE HORIZONTAL SIDEWALL	on Line
10 = Total Number of Heads This Floor					



FIRE SPRINKLER PLAN – BASEMENT

SCALE: 1/8"= 1'-0"
AREA PROTECTED: 1,283 SQ.FT.
FINISH FLOOR ELEVATION: 98.0'



FIRE SPRINKLER PLAN – FIRST FLOOR

SCALE: 1/8"= 1'-0"
AREA PROTECTED: 1,304 SQ.FT.
FINISH FLOOR ELEVATION: 107.92'

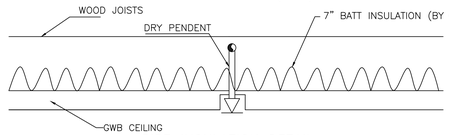
First Floor Sprinkler Head Schedule

Symbol	Count	Thread	K–Factor	Description	Note
⊙	11	1/2"	4.9	RELIABLE RFC49 MOD# RA0616 FAST RESPONCE 165° BRASS CONCELED PENDENT	on Drop
◁	1	1"	4.4	RELIABLE F3RES44 MOD# R5231 175° DRY WHITE HORIZONTAL SIDEWALL	on Line
12 = Total Number of Heads This Floor					

Sprinkler Head Schedule

Symbol	Count	Thread	K–Factor	Description	Note
○	1	1/2"	5.6	RELIABLE F1FR MOD# RA1425 QUICK RESPONCE 200° BRASS UPRIGHT	on Line
⊙	4	1/2"	5.6	RELIABLE F1FR56 SIN#RA1414 QUICK RESPONSE 200° WHITE RECESSED PENDENT	on Drop
⊗	8	1"	5.6	RELIABLE F3QR MOD# R5714 QUICK RESPONSE 200° DRY WHITE PENDENT	on Line
◁	1	1"	4.4	RELIABLE F3RES44 MOD# R5231 175° DRY WHITE HORIZONTAL SIDEWALL	on Line
14 = Total Number of Heads This Floor					

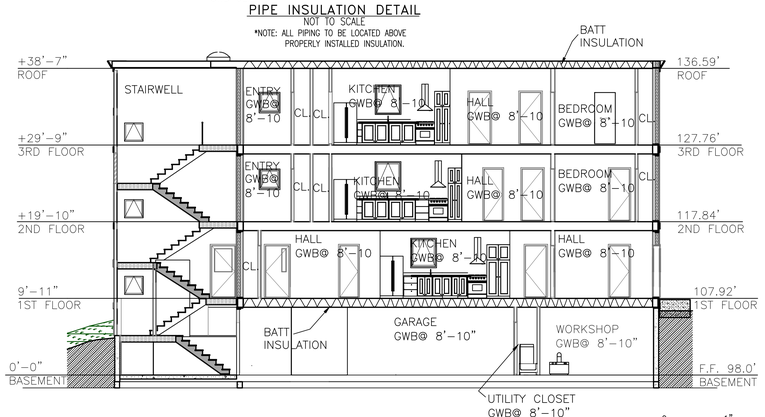
NOTE: THIS IS A SUGGESTED METHOD WHICH HAS BEEN USED QUITE OFTEN IN THIS APPLICATION. HOWEVER, EASTERN FIRE PROTECTION CANNOT GUARANTEE THAT PIPING WILL NOT FREEZE. THE OWNER SHOULD CONSULT WITH HIS ENGINEER OR BUILDER TO DETERMINE THAT THERE WILL BE SUFFICIENT HEAT AT THE PIPING (40° MIN) AT ALL TIMES.



PIPE INSULATION DETAIL

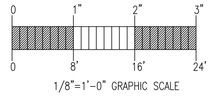
NOT TO SCALE
*NOTE: ALL PIPING TO BE LOCATED ABOVE PROPERLY INSTALLED INSULATION.

USE SPEARS BLUE 75 PIPE JOINT COMPOUND OR TEFLON TAPE ON ALL STEEL OR BRASS PIPE THREADS.

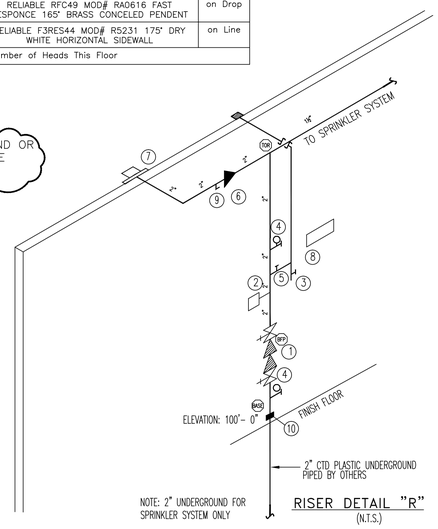


BUILDING SECTION "A–A"

NOT TO SCALE



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



RISER DETAIL "R"

(N.T.S.)

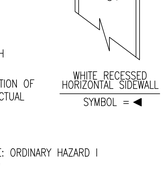
HYDRAULIC–SYSTEM

THIS BUILDING IS PROTECTED BY A HYDRAULICALLY DESIGNED AUTOMATIC SPRINKLER SYSTEM.

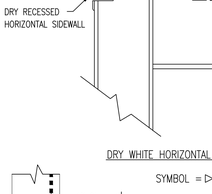
LOCATION: BASEMENT

NO. OF SPRINKLERS: (CALCULATED)	9
BASIS OF DESIGN:	
1. DENSITY (GPM/SQ.FT.)	.15
2. DESIGNED AREA OF DISCHARGE (sq.ft.)	378
SYSTEM DEMAND:	
1. WATER FLOW RATE (GPM)	78.14
2. RESIDUAL PRESSURE AT NODE HDR2	46.3 (PSI)

HYDRAULIC DATA NAMEPLATE
TO BE MOUNTED AT SYSTEM RISER



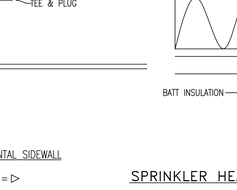
HANGER # 18



HANGER # 17

CPVC HANGER

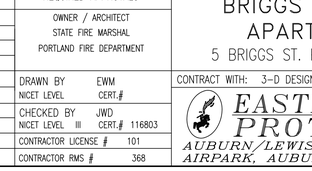
N.T.S.



HANGER DETAILS

NOT TO SCALE

NOTE: HANGERS TO BE PROVIDED AND INSTALLED AS PER NFPA # 13R
3/8" ROD 1'–4" PIPE



CONCEALED BRASS PENDENT WITH WHITE COVER PLATE
SYMBOL = ⊙

BRASS UPRIGHT ON LINE
SYMBOL = ○

WHITE RECESSED HORIZONTAL SIDEWALL
SYMBOL = ◀

DRY WHITE HORIZONTAL SIDEWALL
SYMBOL = ▷

WHITE DRY PENDENT
SYMBOL = ⊗

GENERAL NOTES

ALL WIRING TO BE DONE BY OTHERS

SPRINKLER SYSTEM INSTALLATION TO COMPLY WITH NFPA PAMPHLET # 13R (2007 EDITION),

ALL DIMENSIONS ARE SHOWN FOR GENERAL LOCATION OF SPRINKLER HEADS ; PIPING MAY VARY TO SUIT ACTUAL FIELD CONDITIONS.

OCCUPANCY DESCRIPTION AND CLASSIFICATION:
DWELLING UNITS: RESIDENTIAL LIGHT HAZARD
BASEMENT, GARAGE, MECHANICAL SPACE, STORAGE: ORDINARY HAZARD I
STORAGE OF MATERIAL SHALL NOT EXCEED 8'–0" IN HEIGHT.

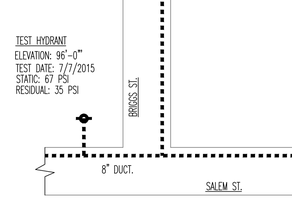
⬡ = INDICATES HYDRAULIC REFERENCE POINTS.

F.F. ℄ INDICATES FINISH FLOOR UP TO CENTERLINE OF PIPE.

LEGEND

1. 2" AMES 2000B BACKFLOW W/2" BALL VALVES CHAINED AND LOCKED OPEN
2. 2" POTTER MOD. VSR–S (IPT) FLOW SWITCH. (TO BE WIRED TO ALARMS (BY OTHERS)
3. ¾" AUXILIARY DRAIN VALVE.
4. WATER PRESSURE GAUGE W/ ¼" THREE–WAY VALVE.
5. 1" MAIN DRAIN & ALARM TEST VALVE. (PIPE TO EXTERIOR)
6. 2" SWING CHECK VALVE.
7. 2½" FIRE DEPARTMENT CONNECTION W/ PLATE & CAP. (SEE BASEMENT PLAN)
8. SPARE HEAD BOX WITH WRENCH & 3 SPARE SPRINKLERS OF EACH TYPE.
9. ½ AUTOMATIC BALL DRIP
10. 2" FORD FITTING

NOTE: ALL WIRING BY OTHERS



TEST HYDRANT
ELEVATION: 96'–0"
TEST DATE: 7/7/2015
STATIC: 67 PSI
RESIDUAL: 35 PSI

FLOW HYDRANT
ELEVATION: 100'–0"
TEST DATE: 7/7/2015
FLOW: 887 GPM

DISTANCE BETWEEN NODE (BASE) AND NODE (TEST) IS APPROX. 40'–0"

NOTE: UNDERGROUND TO BE INSTALLED, TESTED AND FLUSHED BY OTHERS IN ACCORDANCE WITH NFPA # 24

EASTERN FIRE PROTECTION CO. TO START @ 2" OUTLET INSIDE BUILDING (INSTALLED BY OTHERS).

INFORMATION PROVIDED BY: PORTLAND WATER DISTRICT

STATIC: 67 PSI
RESIDUAL: 35 PSI
FLOW: 887 GPM
ELEVATION: 96'–0"
TEST DATE: 7/7/2015

WATER SUPPLY PLAN

SCALE: N.T.S.

SPRINKLER HEAD DETAILS

NOT TO SCALE

GENERAL NFPA #13R NOTES

1. SPRINKLERS ARE NOT REQUIRED IN THE FOLLOWING AREAS AS PER NFPA 13R, 2007 EDITION.
   * A. BATHROOMS NOT EXCEEDING 55 SQ. FT.
   * B. SMALL CLOSETS WITHIN THE DWELLING UNIT LESS THAN 24 SQ. FT. IN AREA W/THE LEAST DIMENSION NOT EXCEEDING 3'0"
   * C. OPEN ATTACHED PORCHES, BALCONIES, CORRIDORS AND STAIRS
   * D. CRAWL SPACES, ATTICS, PENTHOUSE EQUIPMENT & ELEVATOR MACHINE ROOMS, FLOOR/CEILING SPACES AND ELEVATOR SHAFTS AND OTHER CONCEALED SPACES THAT ARE NOT INTENDED FOR LIVING PURPOSES AND DO NOT CONTAIN FUEL–FIRED EQUIPMENT.
   E. CLOSETS ON EXTERIOR BALCONIES W/NO DIRECT ACCESS FROM THE DWELLING UNIT.

SPRINKLER SYSTEM INSTALLATION TO COMPLY WITH NFPA PAMPHLET # 13R 2007

BASEMENT PIPING (1½"–2") TO BE BLACK SCHEDULE 40 JOINED BY THREADED DUCTILE IRON FITTINGS

BASEMENT, 1ST, 2ND, AND 3RD FLOOR PIPING (1"–1½") TO BE CPVC PLASTIC PIPE, JOINED WITH GLUED CPVC FITTINGS.

OWNER TO PROVIDE SUFFICIENT HEAT THROUGHOUT BUILDING TO PREVENT FREEZING OF WATER FILLED SPRINKLER PIPING AND EQUIPMENT. (MIN 40° F)

ALL WIRING TO BE DONE BY OTHERS

DATE	REVISIONS

REQUIRED APPROVALS
OWNER / ARCHITECT
STATE FIRE MARSHAL
PORTLAND FIRE DEPARTMENT

DRAWN BY EWM
NICET LEVEL CERT.#
CHECKED BY JWD
NICET LEVEL III CERT.# 116803
CONTRACTOR LICENSE # 101
CONTRACTOR RMS # 368

BRIGGS STREET APARTMENTS

5 BRIGGS ST. PORTLAND, MAINE

CONTRACT WITH: 3–D DESIGN

EASTERN FIRE PROTECTION
AUBURN/LEWISTON INDUSTRIAL AIRPARK, AUBURN, MAINE 04210

FIRE SPRINKLER PLANS & DETAILS
DWG. NO. 1 OF 1
JOB NUMBER AU–5364–15
SCALE AS NOTED
DATE 5/16/16