

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

LOCATION: BASEMENT
NFPA # 13R

BASIS OF DESIGN:
1. GPM PER HEAD .15
2. NUMBER OF HEADS (CALCULATED) 4

SYSTEM DEMAND:
1. WATER FLOW RATE (GPM) 82.381
2. RESIDUAL PRESSURE AT THE BASE OF THE RISER 85.378 (PSI)

HYDRAULIC DATA NAMEPLATE
TO BE MOUNTED AT SYSTEM RISER

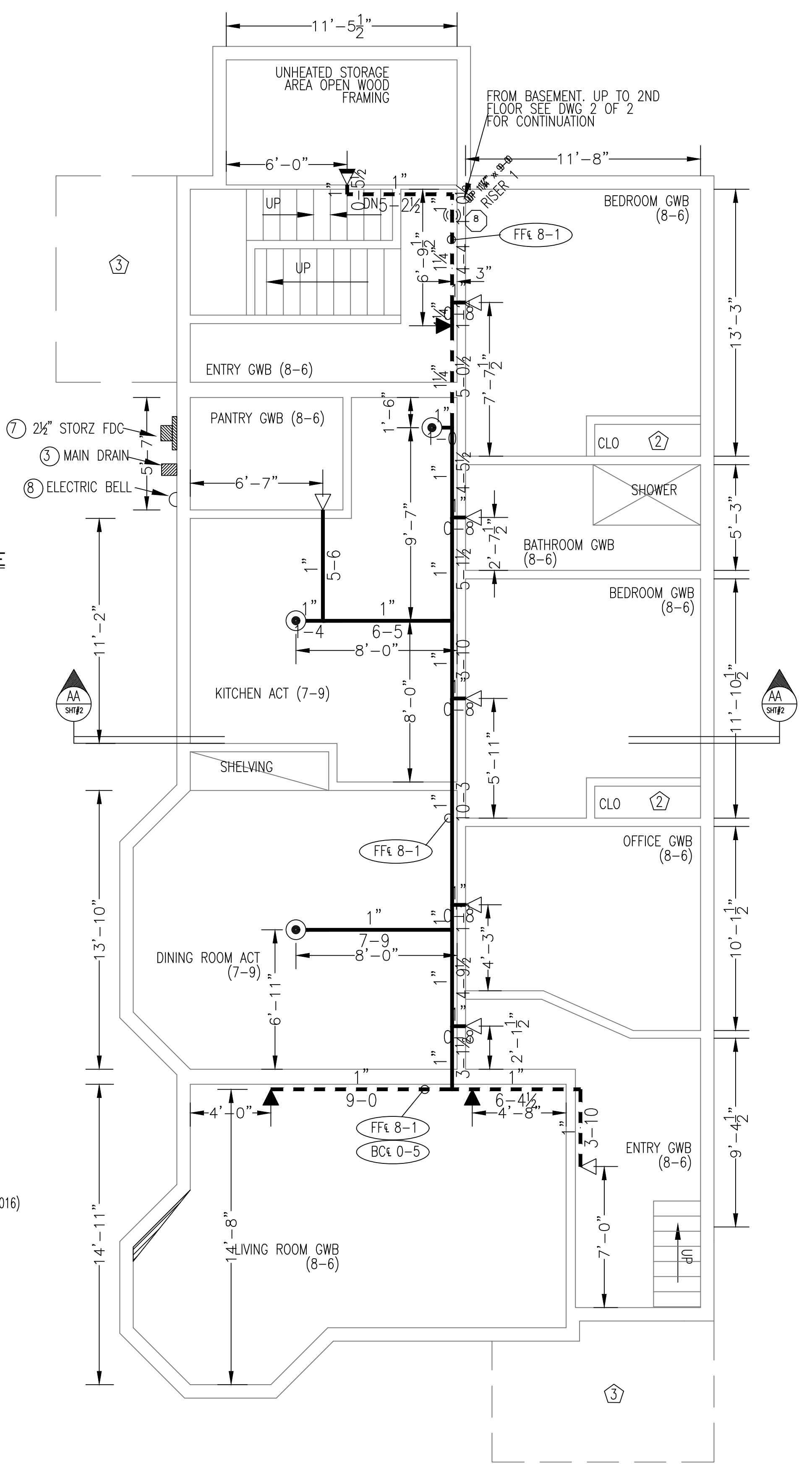
BASEMENT FLOOR PROOF CALCULATION
(15 GPM/SQ.FT. / 4 HEADS)
(ELEV. @ HIGHEST HEAD = 98.666)
REMOTE AREA REDUCED PER NFPA 13R(2016) SECTION 7.2.3.1

SCALE: 1/4"=1'-0"
AREA PROTECTED: 1485 SQ.FT.
FINISH FLOOR ELEVATION : 92'-0"
COLOR CODE: WHITE

BASEMENT Sprinkler Head Schedule

Symbol	Count	Thread	K-Factor	Description	Note
○	17	1/2"	5.6	RELIABLE F1FR56 QR BRASS UPRIG SIN#RA1425 200'	on Line

17 = Total Number of Heads This Floor

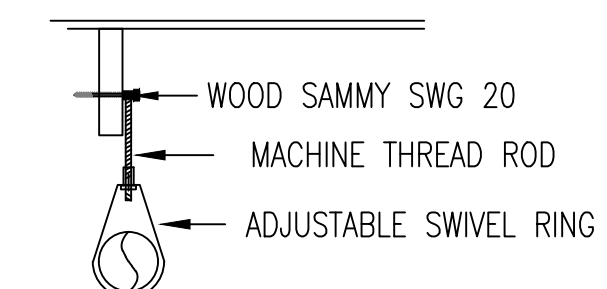
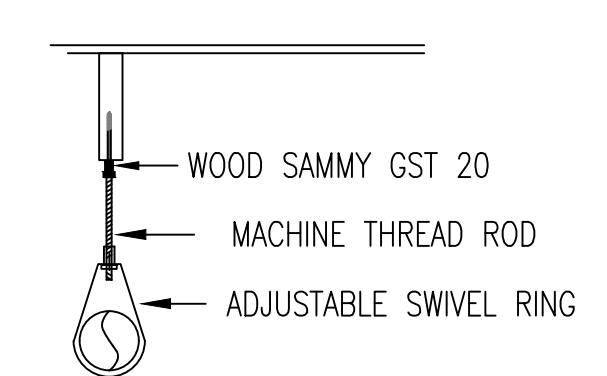
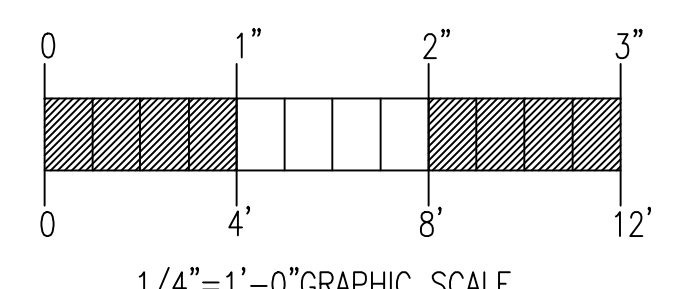


SCALE: 1/4"=1'-0"
AREA PROTECTED: 1485 SQ.FT.
FINISH FLOOR ELEVATION : 100'-0"
COLOR CODE:

1ST FLOOR Sprinkler Head Schedule

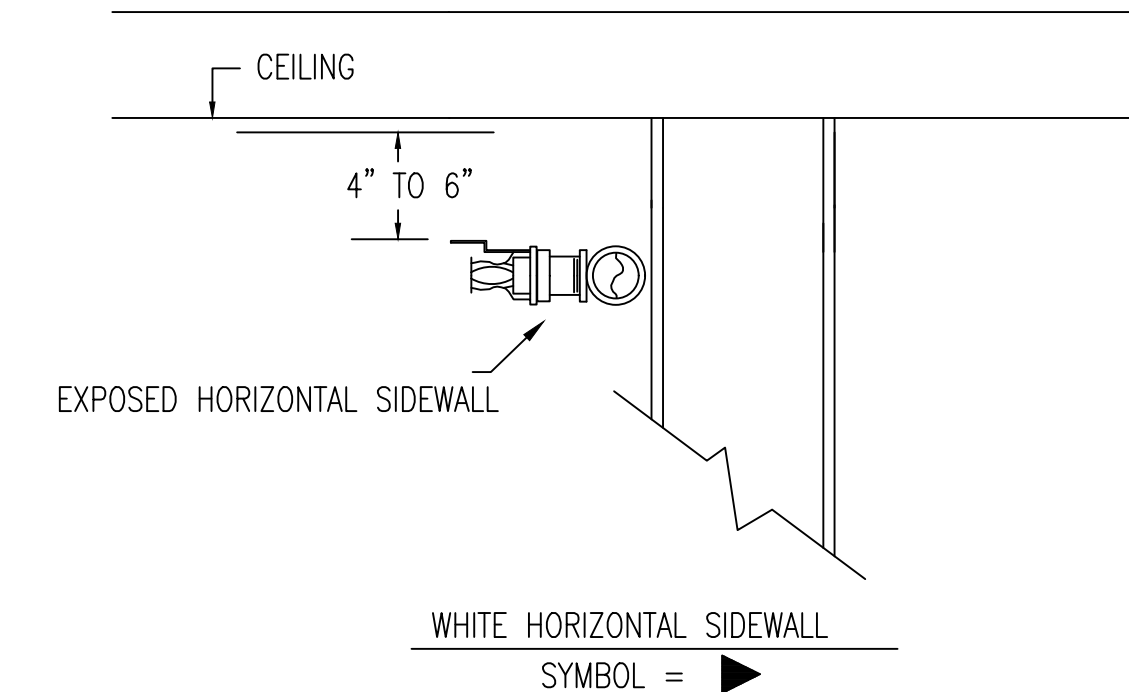
Symbol	Count	Thread	K-Factor	Description	Note
○	3	1/2"	4.9	RELIABLE F1RES49 WHI QR RECESS R3516 200'	on Drop
◀	3	1/2"	4.4	RELIABLE F1RES44 WHI HSW QR SIN# R3531 175'	on Drop
◀	7	1/2"	4.4	RELIABLE F1RES44 QR RECESS WHI HSW SIN# R3531 175'	on Line
◀	1	1"	5.6	RELIABLE F3QR DRY QR HSW WHI SIN#R5734 200'	on Line

14 = Total Number of Heads This Floor

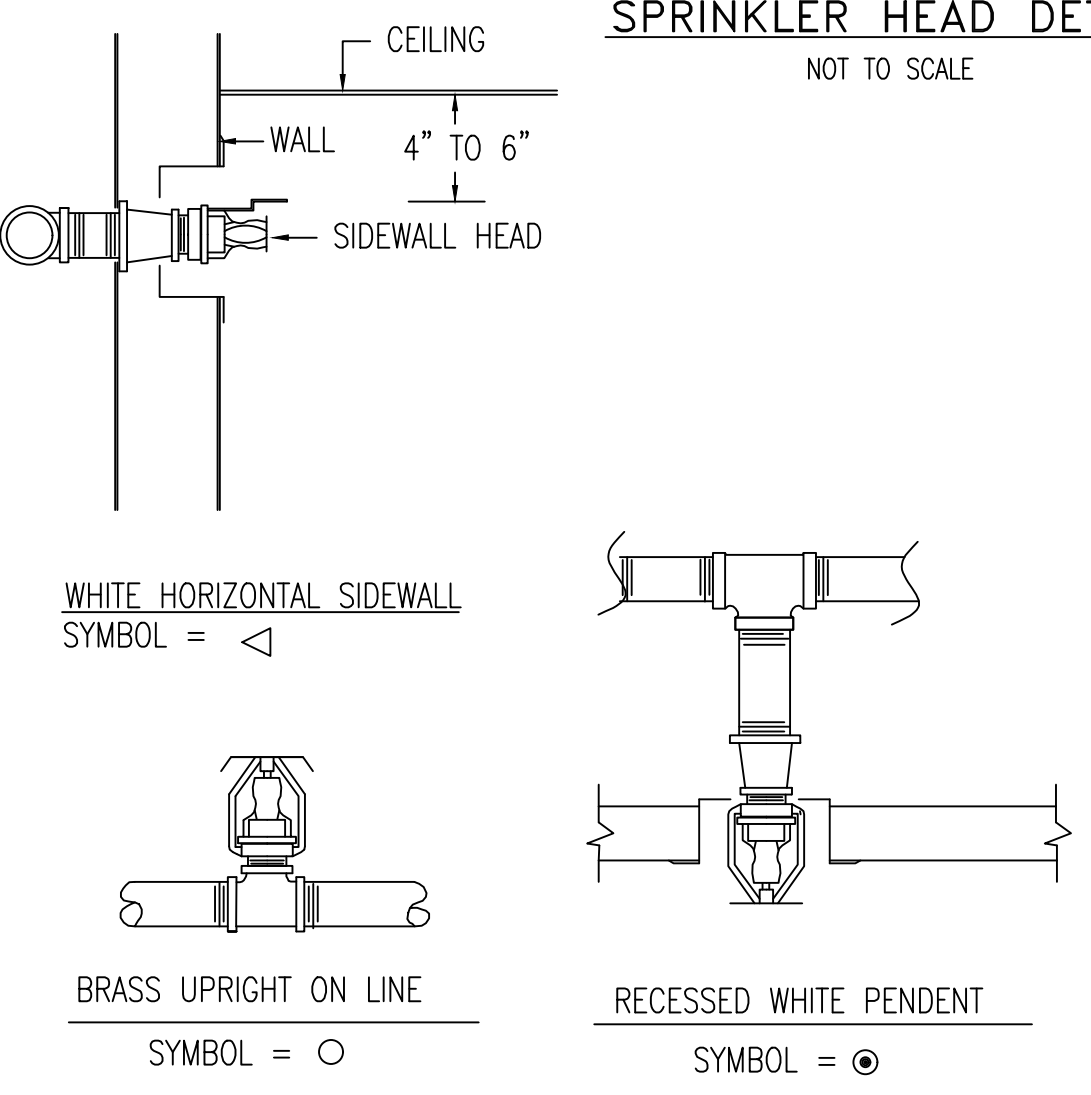


HANGER DETAILS
NOT TO SCALE

ALL HANGERS TO BE PROVIDED AND INSTALLED AS PER NFPA # 13 3/8" ROD FOR 1" TO 4" PIPE

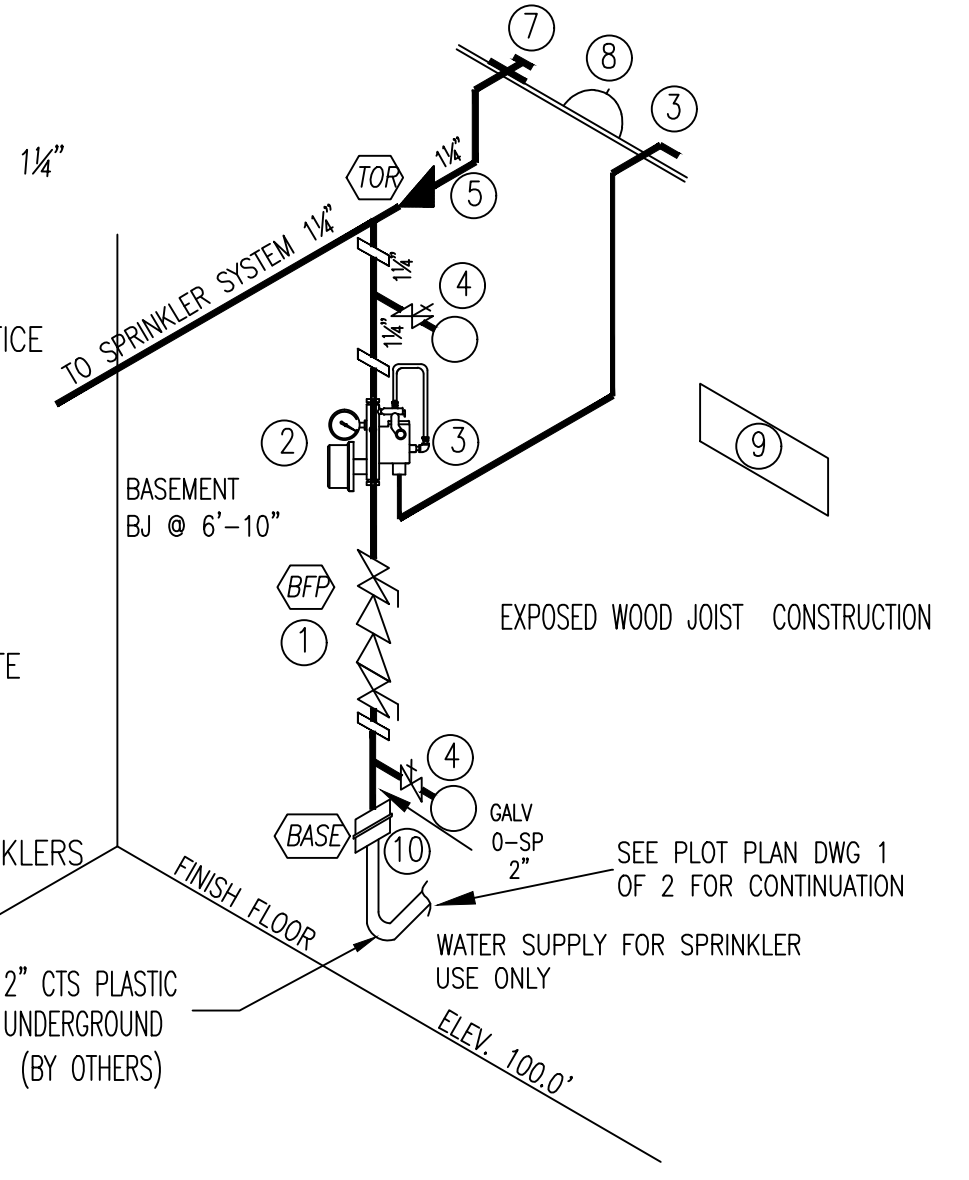


SPRINKLER HEAD DETAILS
NOT TO SCALE

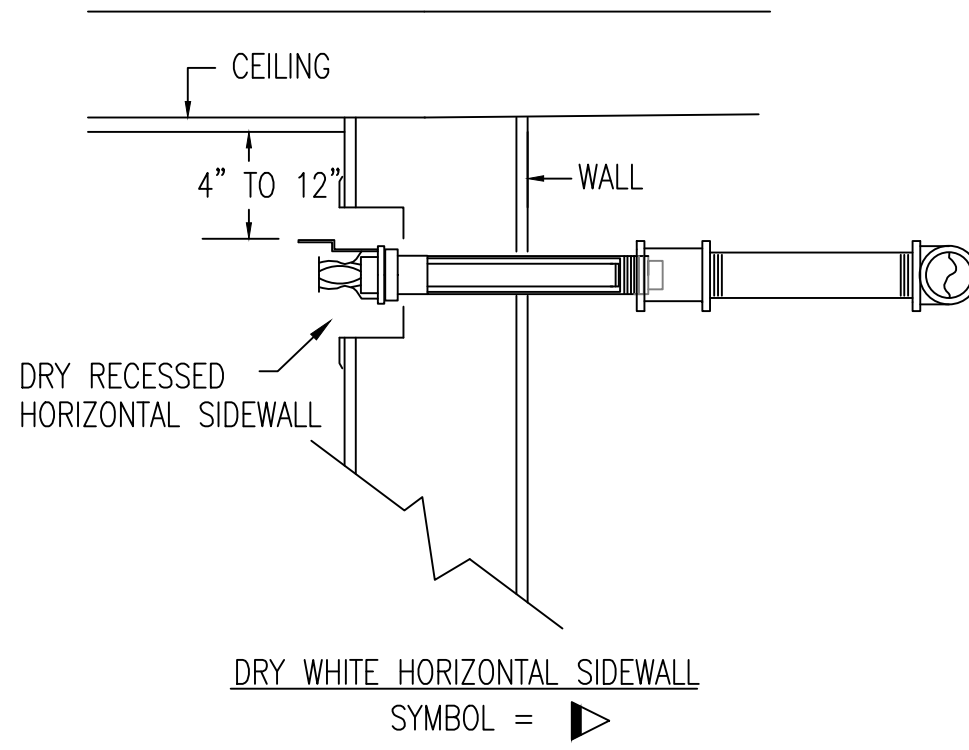


LEGEND

- 1 1/4" AMES MODEL 2000B BACKFLOW PREVENTER W/ 1/4" BALL VALVES W/CHAIN & LOCK (N.O.)
- 2 1/4" VICTAULIC 247M RISER MODULE
- 3 1/4" SYSTEM SENSOR FLOW SWITCH
- 4 1" TEST AND MAIN DRAIN VALVE W/ 7/16 ORIFICE
- 5 WATER PRESSURE GAUGE
- 6 1" MAIN DISCHARGE (SEE 1ST FLOOR)
- 7 WATER PRESSURE GAUGE W/ 1/4" THREE-WAY VALVE.
- 8 1/2" AUTOMATIC BALL DRIP
- 9 1/4" SWING CHECK VALVE.
- 10 2x2" STORZ FIRE DEPARTMENT CONNECTION W/ PLATE & CAP (SEE FIRST FLOOR PLAN)
- 11 ELECTRIC BELL. (SEE FIRST FLOOR PLAN)
- 12 SPARE HEAD BOX WITH WRENCH & 3 SPARE SPRINKLERS OF EACH TYPE.
- 13 2" FORD FITTING



SYSTEM RISER DETAIL "B"
NOT TO SCALE



GENERAL NFPA #13R NOTES

ALL DIMENSIONS ARE SHOWN FOR GENERAL LOCATIONS OF SPRINKLER HEADS, PIPING MAY VARY TO SUIT ACTUAL FIELD CONDITIONS.
OCCUPANCY DESCRIPTIONS AND CLASSIFICATIONS:
ALL DWELLING UNITS-RESIDENTIAL NFPA13 (2016)
BASEMENT STORAGE AREAS-ORDINARY HAZARD 1
MAXIMUM HEIGHT OF STORAGE 18" BELOW CEILING
THE CLEARANCE BETWEEN DEFLECTOR AND TOP OF STORAGE SHALL BE GREATER THAN 18"
STORAGE OF MATERIAL SHALL NOT EXCEED 8'-0"

◊ = HYDRAULIC REFERENCE POINT
F.F. C = FINISH FLOOR UP TO CENTERLINE OF PIPE.
C.D. C = CEILING DOWN TO CENTERLINE OF PIPE.
ACOUSTICAL CEILING TILE (ACT) TO BE LISTED NON-COMBUSTIBLE WITH A UL FLAME SPREAD OF LESS THAN 25
ALL EXPOSED PIPING SHALL BE THREADED, STEEL PIPE, WITH DUCTILE IRON FITTINGS (C = 120)
SPRINKLER SYSTEM INSTALLATION TO COMPLY WITH NFPA PHAMPLET # 13R (2016)
OWNER TO PROVIDE SUFFICIENT HEAT THROUGHOUT BUILDING TO PREVENT FREEZING OF WATER FILLED SPRINKLER PIPING AND EQUIPMENT (40°F MIN.).

--- INDICATES EXPOSED SPRINKLER PIPE
--- INDICATES CONCEALED SPRINKLER PIPE

SCOPE OF WORK

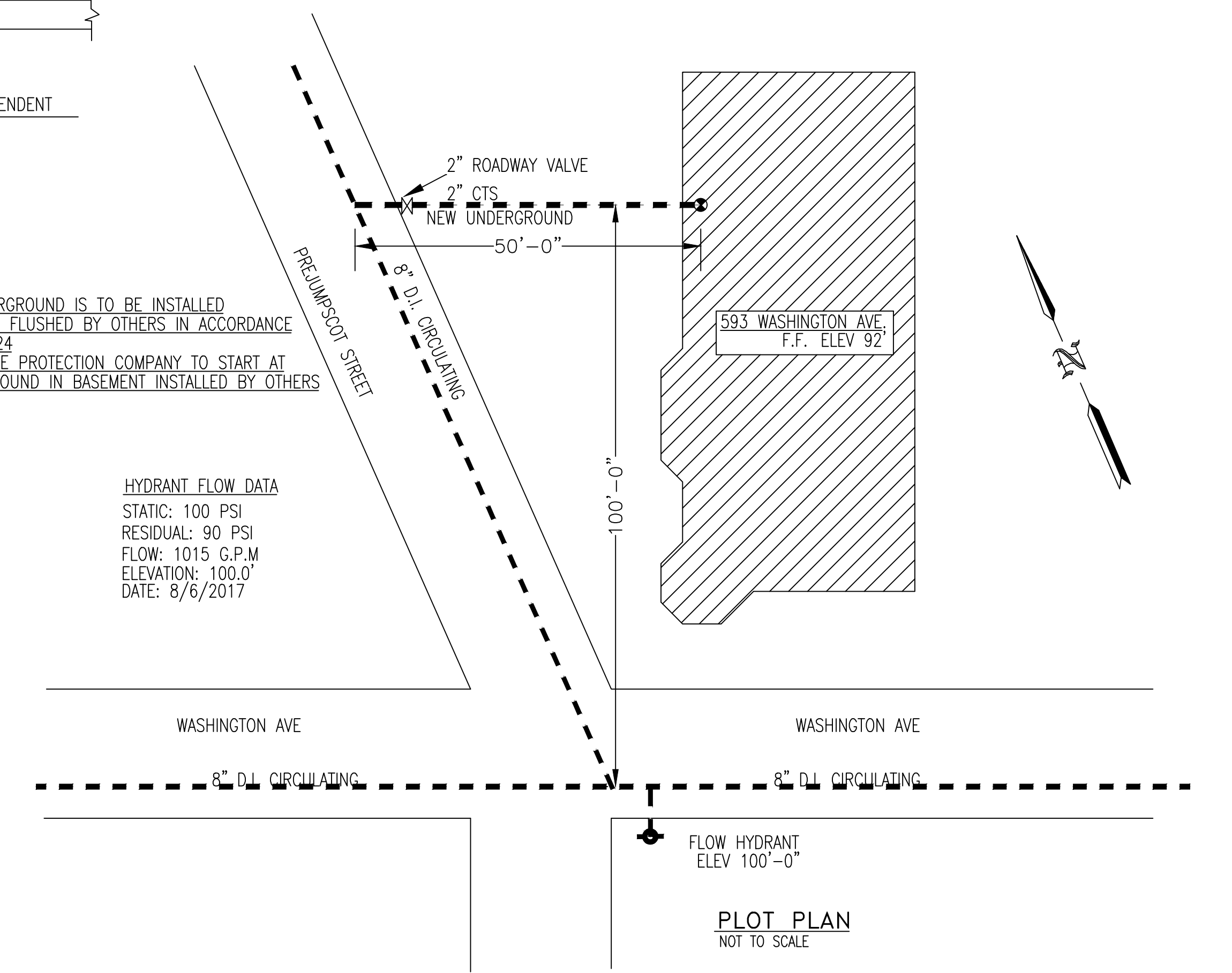
COMPLETE DESIGN, PERMITTING AND INSTALL OF ONE WET SPRINKLER SYSTEM FOR THE BUILDING LOCATED AT 593 WASHINGTON AVE PORTLAND, MAINE. WET SPRINKLER DESIGN PER NFPA 13R 2016 EDITION.

WORK BY OTHERS

- 1-DRAFT STOPPING OF BASEMENT INTO 500 SQ. FT. SECTIONS MAXIMUM.
- 2-ALL CUTTING AND PATCHING OF G.W.B. WALLS
- 3-ALL ELECTRICAL WIRING
- 4-INSTALLATION, TESTING, FLUSHING, AND CHLORINATING OF ALL UNDERGROUND PIPE IN COMPLIANCE W/ NFPA 24

NOTE: UNDERGROUND IS TO BE INSTALLED TESTED, AND FLUSHED BY OTHERS IN ACCORDANCE WITH NFPA 24
EASTERN FIRE PROTECTION COMPANY TO START AT 2" UNDERGROUND IN BASEMENT INSTALLED BY OTHERS

HYDRANT FLOW DATA
STATIC: 100 PSI
RESIDUAL: 90 PSI
FLOW: 1015 G.P.M
ELEVATION: 100.0'
DATE: 8/6/2017



PLOT PLAN
NOT TO SCALE

GENERAL NFPA #13R NOTES

SPRINKLER SYSTEM INSTALLATION TO COMPLY WITH NFPA PHAMPLET # 13R-2016
PIPING IN THROUGHOUT TO BE BLACK SCHEDULE 40, JOINED WITH THREADED DUCTILE IRON FITTINGS. (C = 120)
SECOND FLOOR PIPING TO BE CPVC (C = 150)
OWNER TO PROVIDE SUFFICIENT HEAT THROUGHOUT BUILDING TO PREVENT FREEZING OF WATER FILLED SPRINKLER PIPING AND EQUIPMENT (40°F MIN.).
ALL WIRING TO BE DONE BY OTHERS

- SPRINKLERS ARE NOT REQUIRED IN THE FOLLOWING AREAS AS PER NFPA 13R: 2016
- 1) BATHROOMS NOT EXCEEDING 55 SQ. FT. WITH NON-COMBUSTIBLE CONSTRUCTION & FIXTURES
 - 2) CLOTHES CLOSETS, LINEN CLOSETS, AND PANTRIES WITHIN THE DWELLING UNITS WHERE THE AREA OF THE SPACE DOES NOT EXCEED 24 SQ. FT. WITH THE WALLS AND CEILINGS SURFACED WITH NON-COMBUSTIBLE OR LIMITED-COMBUSTIBLE MATERIALS AS DEFINED BY NFPA 220.
 - 3) ANY PORCHES, BALCONIES, CORRIDORS, AND STAIRS THAT ARE OPEN AND ATTACHED.
 - 4) ATTICS, PENTHOUSES, EQUIPMENT ROOMS, CRAWL SPACES, FLOOR/CEILING SPACES, ELEVATOR SHAFTS, AND ANY OTHER CONCEALED SPACES THAT ARE NOT USED OR INTENDED FOR FOR LIVING PURPOSES OR STORAGE.
 - 5) CLOSETS ON EXTERIOR BALCONIES REGARDLESS OF SIZE AS LONG AS THERE ARE NO DOORS OR UNPROTECTED PENETRATIONS FROM THE CLOSET DIRECTLY INTO THE DWELLING.

REQUIRED APPROVALS

OWNER / ARCHITECT
STATE FIRE MARSHAL
PORTLAND FIRE DEPARTMENT

DRAWN BY: SEC
NICET LEVEL I CERT.# 141357

CHECKED BY: GRD
NICET LEVEL III CERT.# 090388

CONTRACTOR LICENSE # 101
CONTRACTOR RMS # 291

593 WASHINGTON AVE
PORTLAND, ME

CONTRACT WITH: OWNER

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

FIRE SPRINKLER PLANS & DETAILS

DWG. NO. 1 OF 2

JOB NUMBER 1-05652-SPN-17

SCALE AS NOTED

DATE 8/28/2017