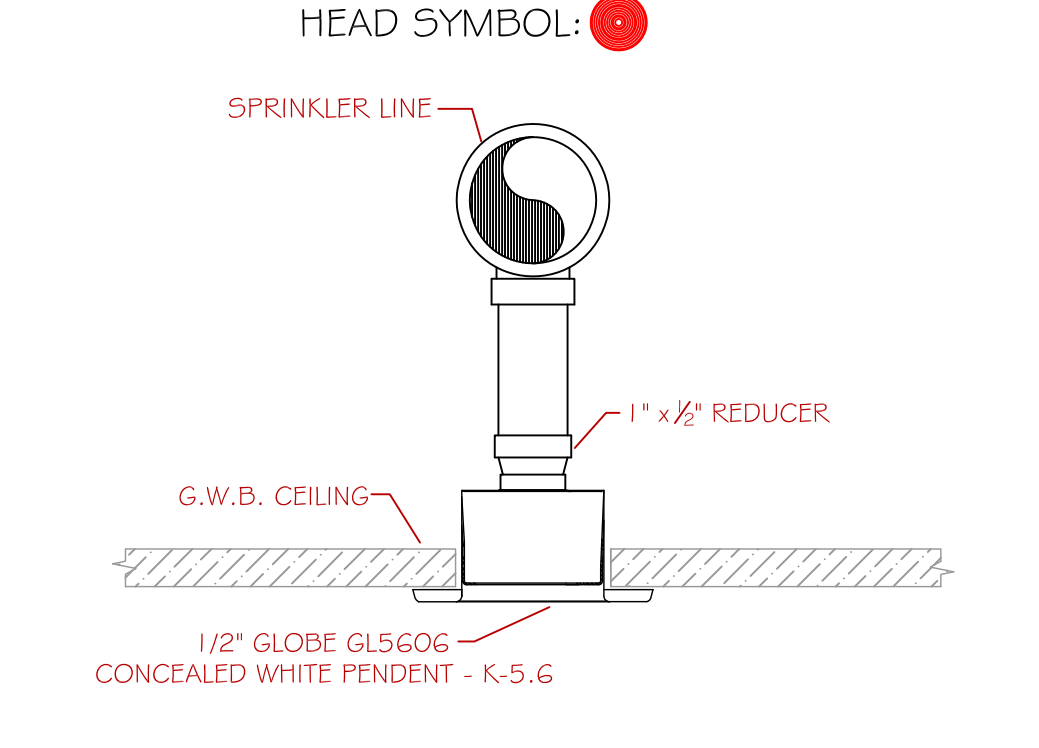
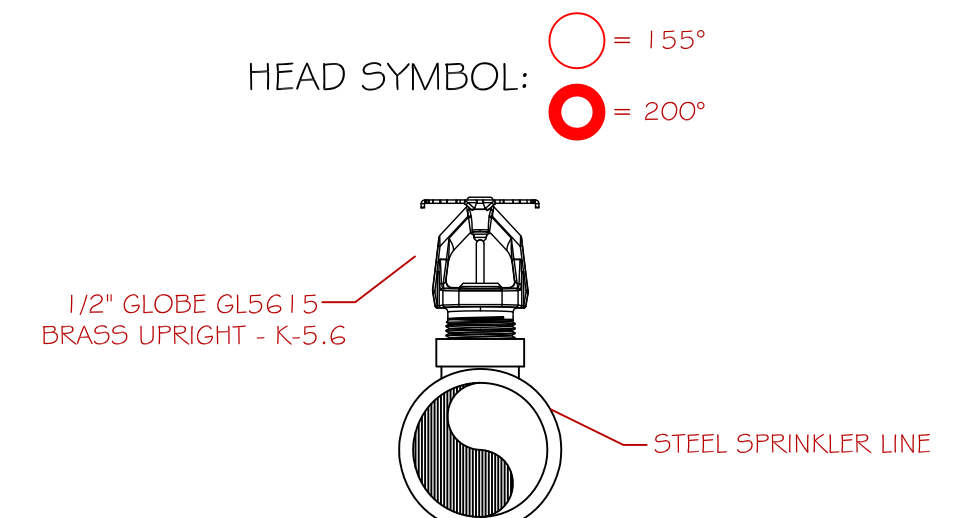


**PENDENT HEAD DETAIL**  
 SCALE: N.T.S.



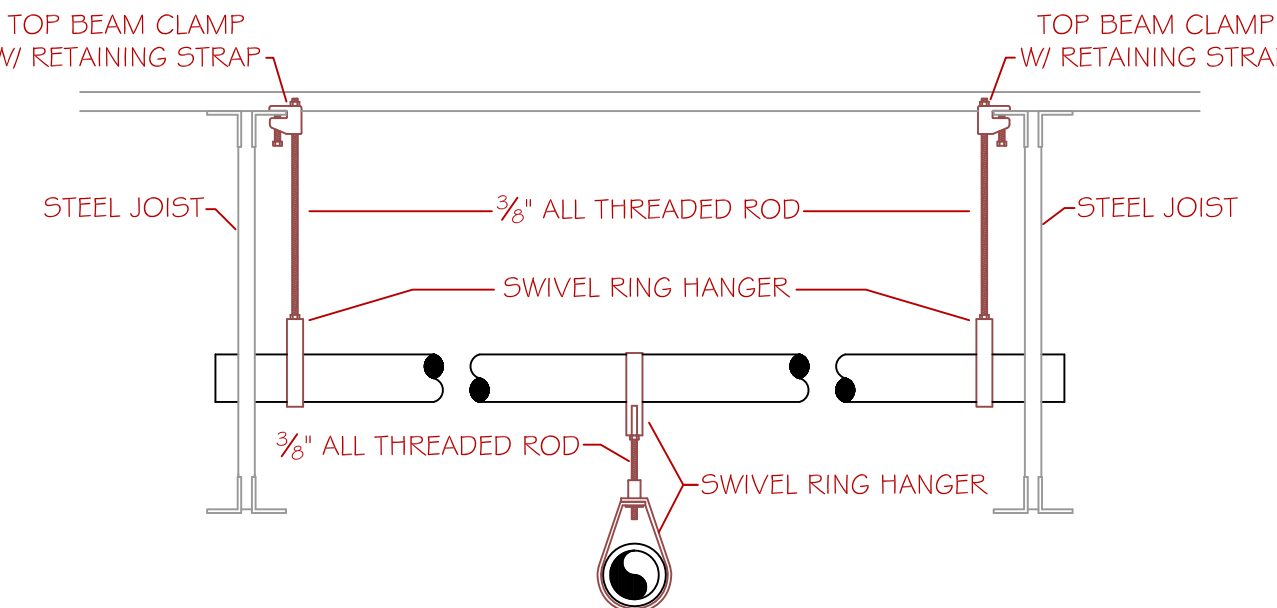
**CONCEALED HEAD DETAIL**  
 SCALE: N.T.S.



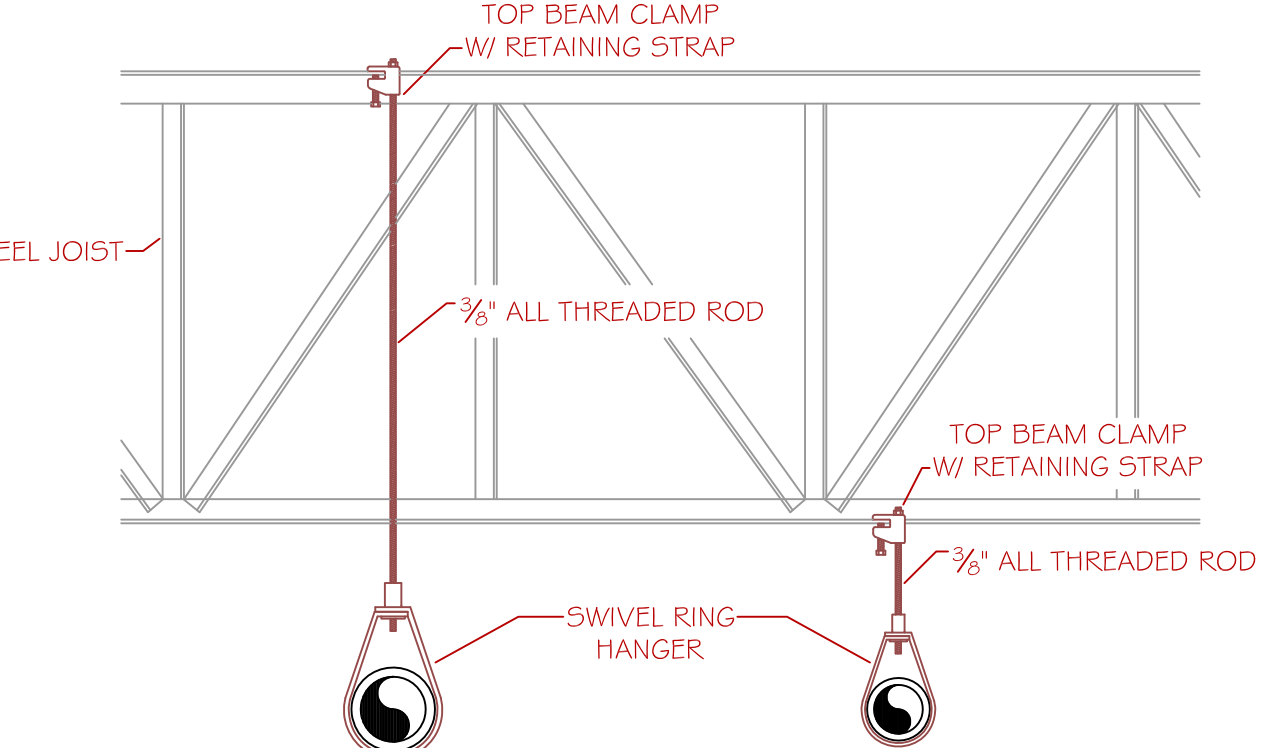
**UPRIGHT HEAD DETAIL**  
 SCALE: N.T.S.



**AREA "A"**  
**FIRST FLOOR PLAN**  
 SCALE: 1/8" = 1'-0"  
 PROTECTED AREA: 60,440 SQ. FT.



**TRAPEZE HANGER DETAIL**  
 SCALE: N.T.S.



**RING HANGER DETAIL**  
 SCALE: N.T.S.

**ZONE 1A GYMNASIUM CALC STICKER**  
**HYD. DESIGN CRITERIA**  
 (NFPA 13 2016 ed. - WET)

LOCATION: GYMNASIUM - FIRST FLOOR  
 HAZARD CLASSIFICATION: LIGHT  
 DENSITY: 1 GPM/SQ.FT.  
 AREA OF OPERATION: 1,500 SQ. FT.  
 HOSE DEMAND: 100 GPM  
 NO. OF SPRINKLERS: 14

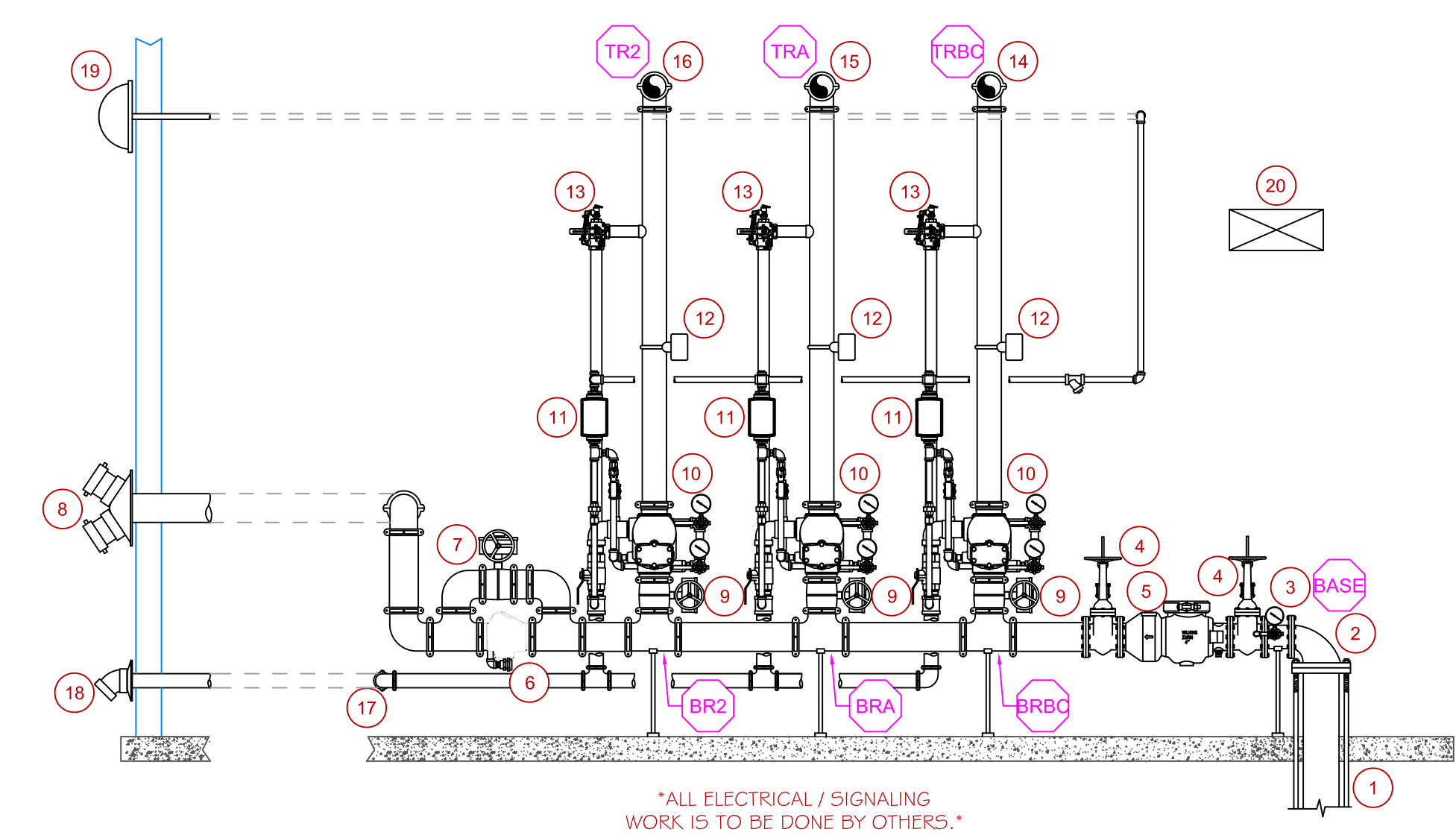
SYSTEM DEMAND (INCLUDING HOSE) @  
 BASE OF RISER: 431 GPM @ 64 PSI  
 SAFETY MARGIN: 23 PSI

THIS DRAWING HAS BEEN REVIEWED FOR GENERAL COMPLIANCE WITH THE 2016 ed. OF NFPA 13 - STANDARD FOR AUTOMATIC SPRINKLER SYSTEMS. ANY DEVIATIONS FROM THIS DRAWING SHALL BE MADE UNDER THE SUPERVISION OF A QUALIFIED DESIGN PROFESSIONAL.

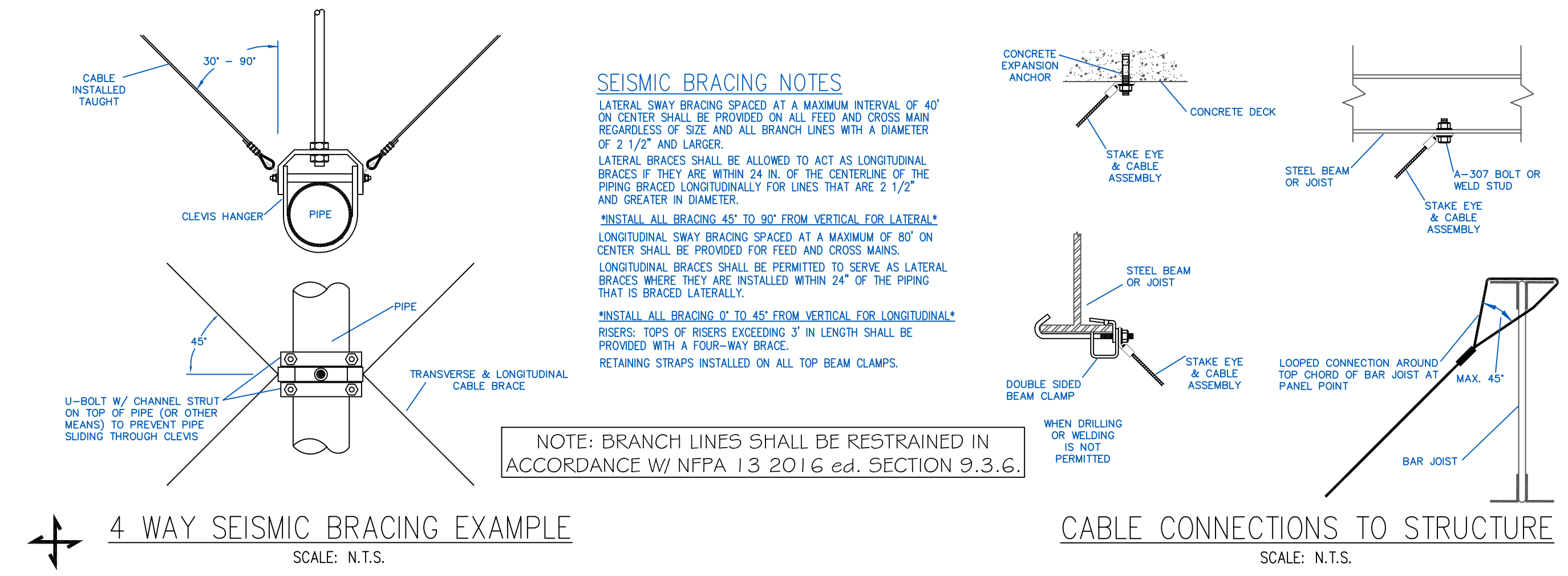
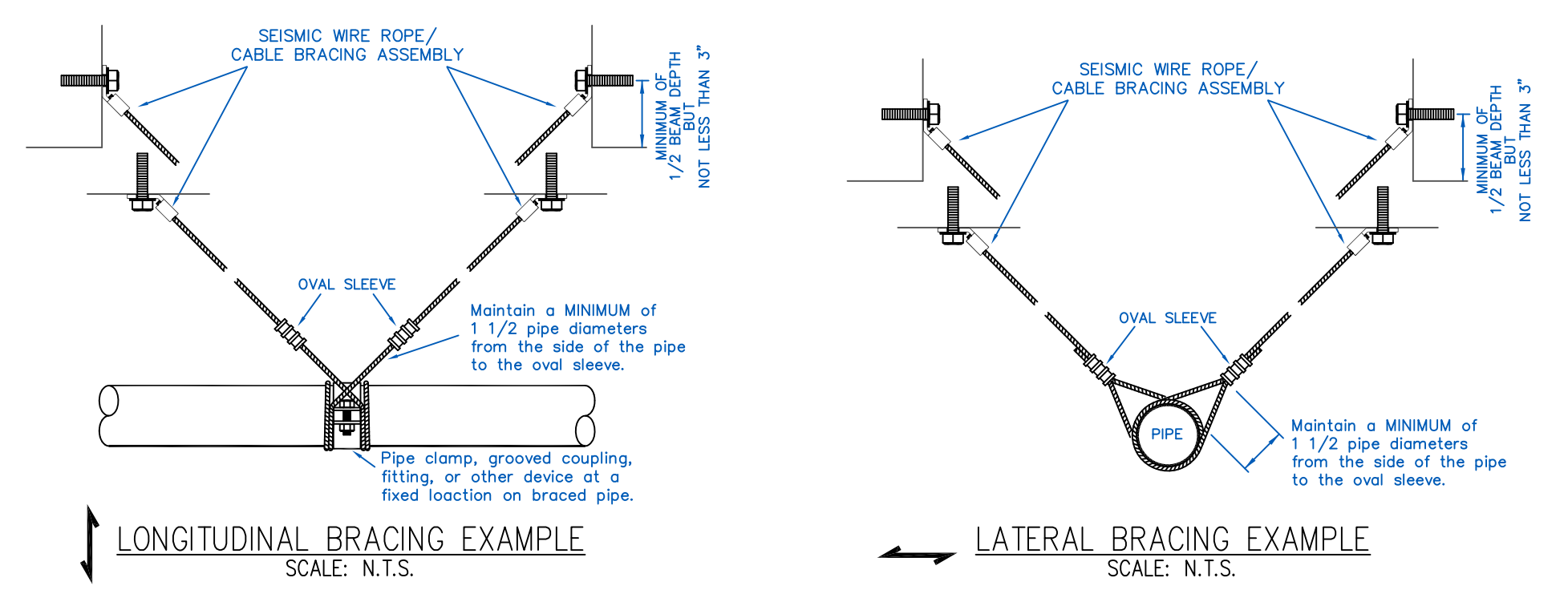
REVIEW COMPLETED BY:  
 JEREMY A. FOSS  
 NICET LEVEL IV  
 CERTIFICATION #126801  
 SIGNED: \_\_\_\_\_

**RISER DETAIL LEGEND**

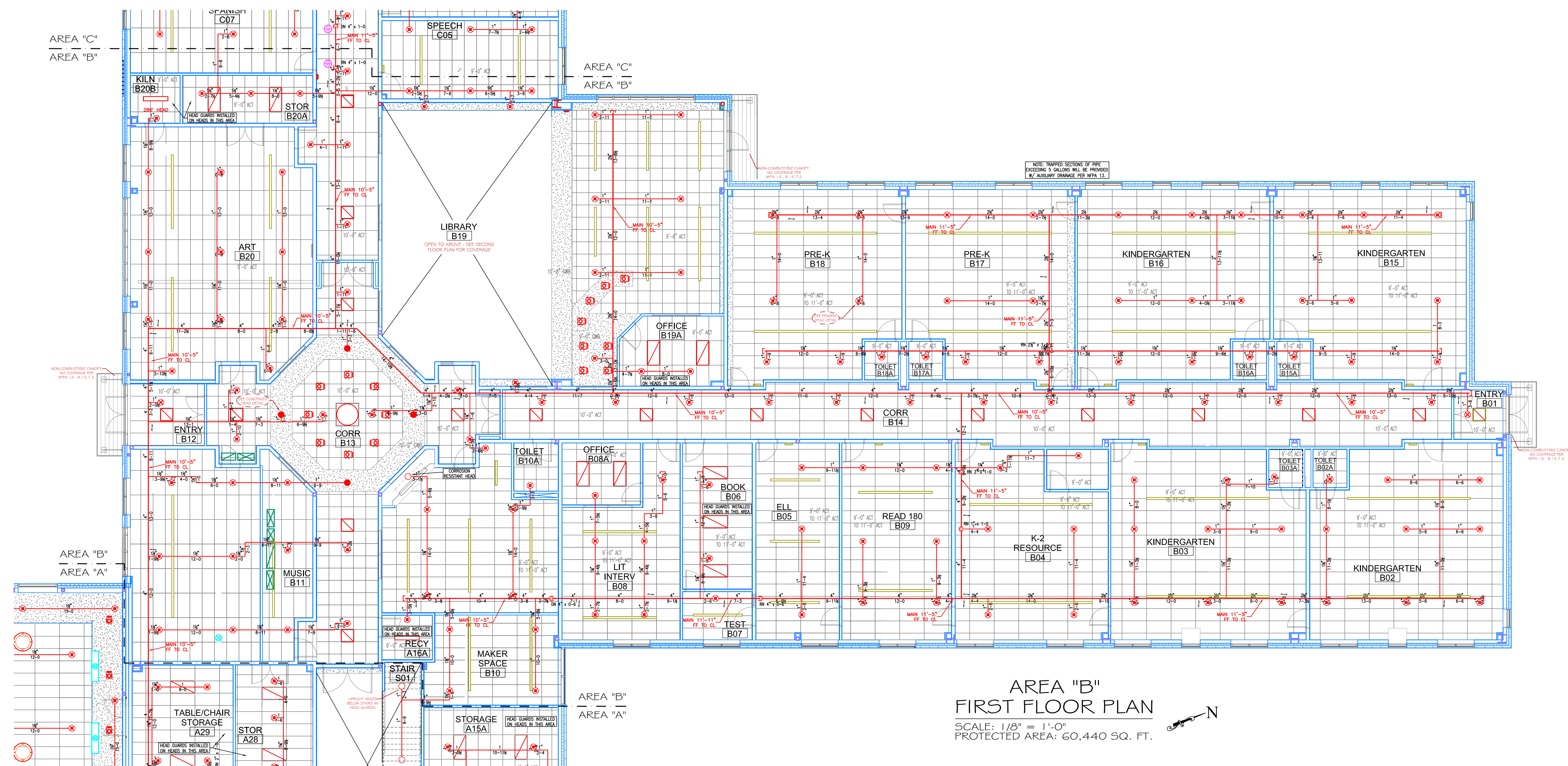
1) 6" DI. CL. FIRE SERVICE (BY OTHERS)	11) RETARD CHAMBER
2) 6" x 4" FLANGED REDUCING ELL.	12) VANE FLOW SWITCH (ELECTRICAL ALARM)
3) 1/4" PRESSURE GAUGE (SUPPLY)	13) INSPECTORS TEST W/ 1/2" TEST & RELIEF VALVE
4) GATE VALVE W/ TAMPER SWITCH	14) FEED TO ZONE 1A
5) WILKINS 350 BACKFLOW PREVENTER	15) FEED TO ZONE 1B & C
6) CHECK VALVE W/ BALL DRIP	16) FEED TO ZONE 2
7) BUTTERFLY VALVE (NORMALLY CLOSED)	17) MAIN DRAIN FEED TO EXTERIOR
8) 2 - 2 1/2" FIRE DEPARTMENT CONNECTION	18) MAIN DRAIN DISCHARGE
9) BUTTERFLY VALVE W/ TAMPER SWITCH	19) WATER MOTOR GONG (MECH. ALARM)
10) RELIABLE WET ALARM CHECK VALVE	20) SPARE SPRINKLER HEAD BOX



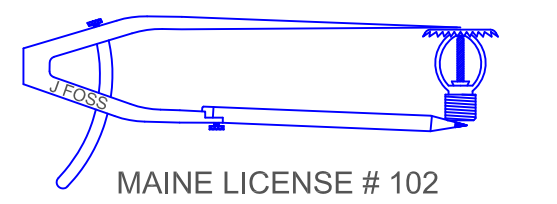
**SYSTEM RISER DETAIL**  
 SCALE: N.T.S.



**SEISMIC BRACING DETAILS**  
 SCALE: N.T.S.



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 REVIEW COMPLETED BY:  
 JEREMY A. FOSS  
 NICET LEVEL IV  
 CERTIFICATION #126801  
 SIGNED: [Signature]



MAINE LICENSE # 102

ARCHITECT:  
**OAK POINT ASSOCIATES**  
 BIDDEFORD, ME

CONTRACTOR:  
**ART DUDLEY CONSTRUCTION**  
 STANDISH, ME

- LEGEND:
- Riser Pipe Riser Up
  - Riser Pipe Riser Down
  - Steel Pipe (Wet)
  - △ Wet System Riser
  - Hydraulic Calc. Point
  - Pipe Elevation A.F.F.

DESIGN NOTES:

- \* ALL PIPING 2" AND LARGER TO BE SCHEDULE 40 STEEL W/ GROOVED FITTING.
- \* ALL PIPING 1 1/2" AND SMALLER TO BE SCHEDULE 40 STEEL WITH THREADED OR GROOVED FITTING.
- \* POSITION, LOCATION, SPACING, AND USE OF SPRINKLERS AND HANGERS SHALL BE IN ACCORDANCE WITH NFPA 13 2016 ed.
- \* HYDRAULIC CALCULATION PROCEDURES HAVE BEEN DONE IN ACCORDANCE WITH NFPA 13 2016 ed. (SEE PLANS FOR LOCATION OF REMOTE AREAS, HYDRAULIC REFERENCE POINTS, AND SYSTEM DEMANDS)
- \* ALL ELECTRICAL WORK TO BE DONE BY OTHERS.
- \* DIMENSIONS AND LOCATIONS GIVEN FOR SPRINKLER HEADS AND PIPE MAY VARY TO ACCOMMODATE ACTUAL FIELD CONDITIONS.
- \* OWNER TO PROVIDE SUFFICIENT HEAT TO PREVENT FREEZING IN WATER FILLED SPRINKLER PIPE AND EQUIPMENT.
- \* OTHER TRADES TO COORDINATE THEIR WORK WITH SPRINKLER CONTRACTOR.
- \* ALL NEWLY INSTALLED SPRINKLER HEADS ARE TO BE QUICK RESPONSE U.A.O.
- \* OWNER IS RESPONSIBLE FOR MAINTAINING THE SPRINKLER SYSTEMS IN ACCORDANCE WITH THE CURRENT EDITION OF NFPA 25.
- \* INSPECTIONS TESTING AND MAINTENANCE OF WATER BASED FIRE PROTECTION SYSTEMS AND/OR ALL APPLICABLE FEDERAL, STATE, AND LOCAL LAWS, CODES AND ORDINANCES.

HEAD LEGEND:

- GLOBE® MODEL GL5641  
 1 / 200" K=5.6  
 1" FLUSH MOUNT DRY BARREL WHITE HORIZONTAL SIDEWALL (196 SQ. FT. LIGHT HAZARD)
- GLOBE® MODEL GL5615  
 4 / 200" K=5.6  
 1/2" BRASS UPRIGHT (130 SQ. FT. ORD. HAZARD)
- GLOBE® MODEL GL5601  
 109 / 155" K=5.6  
 1/2" SEMI-RECESSED WHITE PENDENT (130 SQ. FT. ORDINARY HAZARD) \*CENTERED IN A.C.T.\*
- GLOBE® MODEL GL5606  
 24 / 155" K=5.6  
 1/2" CONCEALED WHITE PENDENT (225 SQ. FT. LIGHT HAZARD) \*CENTERED IN A.C.T.\*
- GLOBE® MODEL GL5626  
 1 / 200" K=5.6  
 1/2" HORIZONTAL BRASS SIDEWALL (100 SQ. FT. ORDINARY HAZARD)
- GLOBE® MODEL GL5635  
 5 / 155" K=5.6  
 1" SEMI-RECESSED DRY BARREL WHITE PENDENT (225 SQ. FT. LIGHT HAZARD)

\* OR APPROVED EQUAL  
 TOTAL HEADS ON SHEET: 144  
 SCALE: 1/8" = 1'-0"  
 DATE: NOVEMBER 28, 2017  
 DESIGNER: JEREMY A. FOSS  
 MAINE RMS #808  
 NICET LEVEL IV CERT. #126801  
 CHECKED BY: E. POULIN (RMS# 515)  
 NICET LEVEL IV CERT. # 108534

LOCATION:  
 23 ORONO ROAD  
 PORTLAND, ME

DRAWING TITLE:  
**FRED P. HALL ELEMENTARY**  
 (FIRST FLOOR AREA C)  
 FIRE PROTECTION PLAN  
 (NFPA 13 2016 ed.)

DRAWING NO.:  
**FP-1.3**

**PROJECT DESCRIPTION**

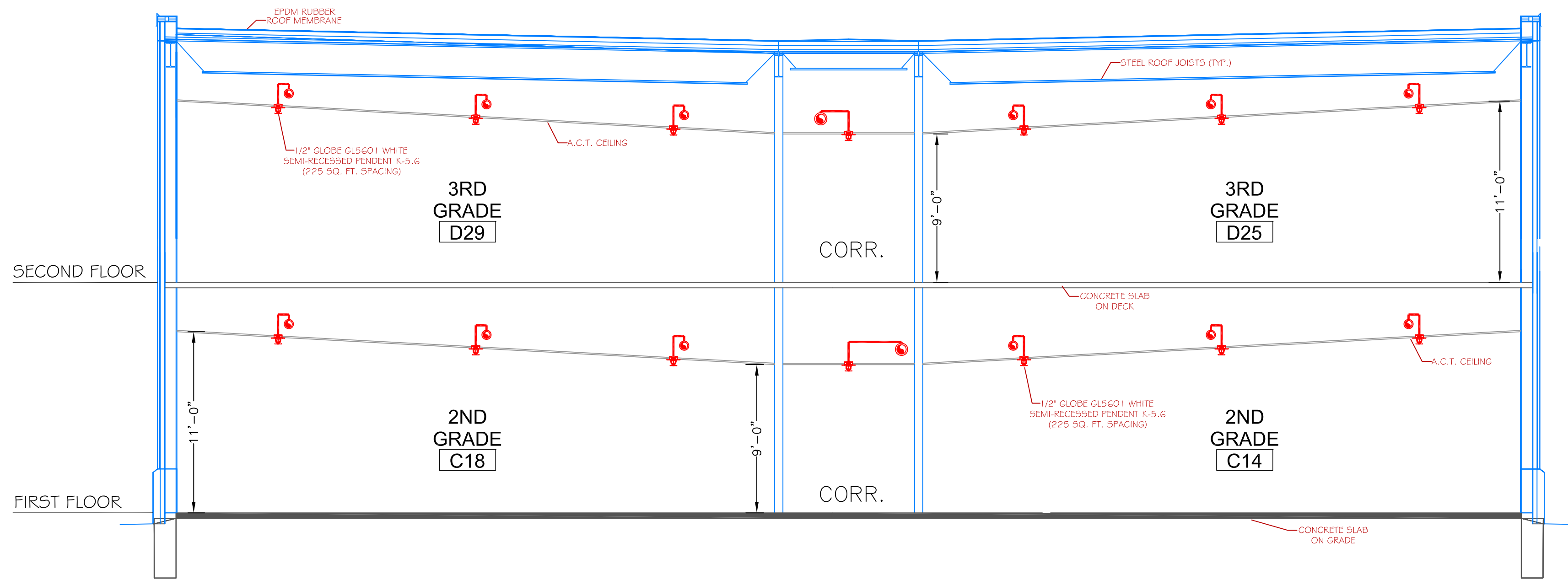
**BUILDING CONST.:** THE BUILDING IS CONSTRUCTED OF TYPE II NON COMBUSTIBLE CONSTRUCTION THROUGHOUT. THE BUILDING IS CONSTRUCTED OF STEEL JOISTS AND I-BEAMS WITH A STEEL ROOF DECK. THE ROOF STRUCTURE IS FINISHED WITH AN EPDM RUBBER MEMBRANE. INTERIOR WALLS ARE TO BE FRAMED WITH METAL STUDS AND FINISHED WITH G.W.B. CEILING ARE EITHER A.C.T. OR G.W.B. AS INDICATED.

**BUILDING OCCUP.:** THE BUILDING IS DESIGNED FOR EDUCATIONAL USE AND IS INTENDED TO REPLACE THE CURRENT FRED P. HALL ELEMENTARY SCHOOL.

**SPRINKLER DESIGN:** THE SPRINKLER SYSTEM CONTAINS THREE WET PIPE SYSTEMS PROTECTING THE ENTIRE STRUCTURE. ONE OF THE WET PIPE SYSTEMS PROVIDES COVERAGE FOR THE FIRST FLOOR AREA A (ZONE A), THE REMAINING FIRST FLOOR, AREAS B AND C ARE PROTECTED FROM ANOTHER WET PIPE SYSTEM (ZONE BC), AND THE SECOND FLOOR OF THE STRUCTURE IS PROTECTED BY A SEPARATE WET PIPE SYSTEM (ZONE 2). EACH WET PIPE SYSTEM CONSISTS OF AN ALARM CHECK VALVE WHICH OPERATES THE MECHANICAL SPRINKLER ALARM. EACH SYSTEM RISER CONTAINS A WANE FLOW SWITCH ALONG WITH A TEST N DRAIN VALVE TO PROVIDE AN ELECTRONIC SPRINKLER ALARM.

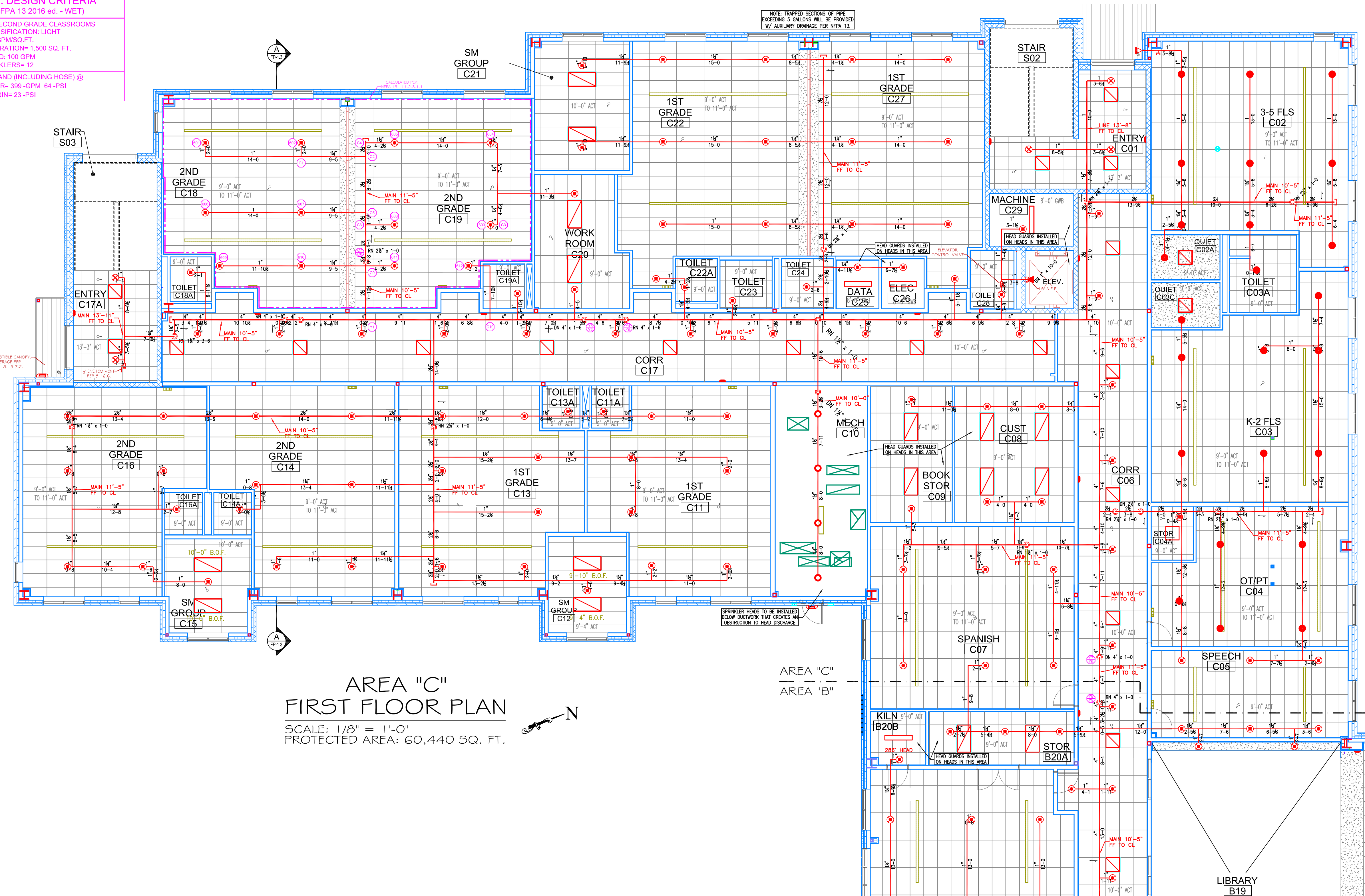
THE ENTIRE BUILDING HAS BEEN DESIGNED USING A LIGHT HAZARD CLASSIFICATION THROUGHOUT WITH THE EXCEPTION OF A FEW AREAS THAT HAVE BEEN IDENTIFIED ON THE CONSTRUCTION DRAWINGS WHICH HAVE BEEN DESIGNED USING AN ORDINARY HAZARD CLASSIFICATION.

THE SPRINKLER SYSTEM HAS BEEN DESIGNED TO MEET ALL APPLICABLE CODES AND STANDARDS REGARDING AN NFPA 13 2016 ed SYSTEM AS WELL AS THE DRAWINGS AND SPECIFICATIONS PROVIDED BY OAK POINT ASSOCIATES.



NOTE: ELEVATION @ SLAB = 0'-0"  
 FOR ALL HYDRAULIC CALCULATIONS  
**SECTION DETAIL "A"**  
 SCALE: N.T.S.

**ZONE 1BC CLASSROOM CALC STICKER**  
**HYD. DESIGN CRITERIA**  
 (NFPA 13 2016 ed. - WET)  
 LOCATION: SECOND GRADE CLASSROOMS  
 HAZARD CLASSIFICATION: LIGHT  
 DENSITY: 1.1 GPM/SQ. FT.  
 AREA OF OPERATION: 1,500 SQ. FT.  
 HOSE DEMAND: 100 GPM  
 NO. OF SPRINKLERS: 12  
 SYSTEM DEMAND (INCLUDING HOSE) @  
 BASE OF RISER: 399 GPM @ 64 PSI  
 SAFETY MARGIN: 23 PSI



**AREA "C"**  
**FIRST FLOOR PLAN**  
 SCALE: 1/8" = 1'-0"  
 PROTECTED AREA: 60,440 SQ. FT.

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 REVIEW COMPLETED BY:  
 JEREMY A. FOSS  
 NICET LEVEL IV  
 CERTIFICATION # 126801  
 SIGNER: *[Signature]*

ARCHITECT:  
**OAK POINT  
ASSOCIATES  
BIDDEFORD, ME**

CONTRACTOR:  
**ART DUDLEY  
CONSTRUCTION  
STANDISH, ME**

LEGEND:

- RN PIPE RISER UP
- DN PIPE RISER DOWN
- STEEL PIPE (WET)
- △ WET SYSTEM RISER
- HYDRAULIC CALC. POINT
- PIPE ELEVATION A.F.F.

DESIGN NOTES:

- \* ALL PIPING 2" AND LARGER TO BE SCHEDULE 40 STEEL W/ GROOVED FITTING.
- \* ALL PIPING 1 1/2" AND SMALLER TO BE SCHEDULE 40 STEEL WITH THREADED OR GROOVED FITTING.
- \* POSITION, LOCATION, SPACING, AND USE OF SPRINKLERS AND HANGERS SHALL BE IN ACCORDANCE WITH NFPA 13 2016 ed.
- \* HYDRAULIC CALCULATION PROCEDURES HAVE BEEN DONE IN ACCORDANCE WITH NFPA 13 2016 ed. (SEE PLANS FOR LOCATION OF REMOTE AREAS, HYDRAULIC REFERENCE POINTS, AND SYSTEM DEMANDS)
- \* ALL ELECTRICAL WORK TO BE DONE BY OTHERS.
- \* DIMENSIONS AND LOCATIONS GIVEN FOR SPRINKLER HEADS AND PIPE MAY VARY TO ACCOMMODATE ACTUAL FIELD CONDITIONS.
- \* OWNER TO PROVIDE SUFFICIENT HEAT TO PREVENT FREEZING IN WATER FILLED SPRINKLER PIPE AND EQUIPMENT.
- \* OTHER TRADES TO COORDINATE THEIR WORK WITH SPRINKLER CONTRACTOR.
- \* ALL NEWLY INSTALLED SPRINKLER HEADS ARE TO BE QUICK RESPONSE U.A.O.
- \* OWNER IS RESPONSIBLE FOR MAINTAINING THE SPRINKLER SYSTEMS IN ACCORDANCE WITH THE CURRENT EDITION OF NFPA 25.
- \* INSPECTIONS TESTING AND MAINTENANCE OF WATER BASED FIRE PROTECTION SYSTEMS AND/OR ALL APPLICABLE FEDERAL, STATE, AND LOCAL LAWS, CODES AND ORDINANCES.

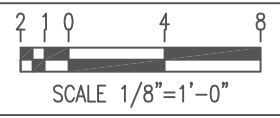
HEAD LEGEND:

GLOBE®  
MODEL GL5615  
47 / 200"  
K=5.6  
1/2" BRASS UPRIGHT  
(130 SQ. FT. ORD. HAZARD)

GLOBE®  
MODEL GL5601  
22 / 155"  
K=5.6  
1/2" SEMI-RECESSED  
WHITE PENDENT  
(130 SQ. FT. ORDINARY HAZARD)  
(225 SQ. FT. LIGHT HAZARD)  
\* CENTERED IN A.C.T.\*

\* OR APPROVED EQUAL

TOTAL HEADS ON SHEET: 69

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

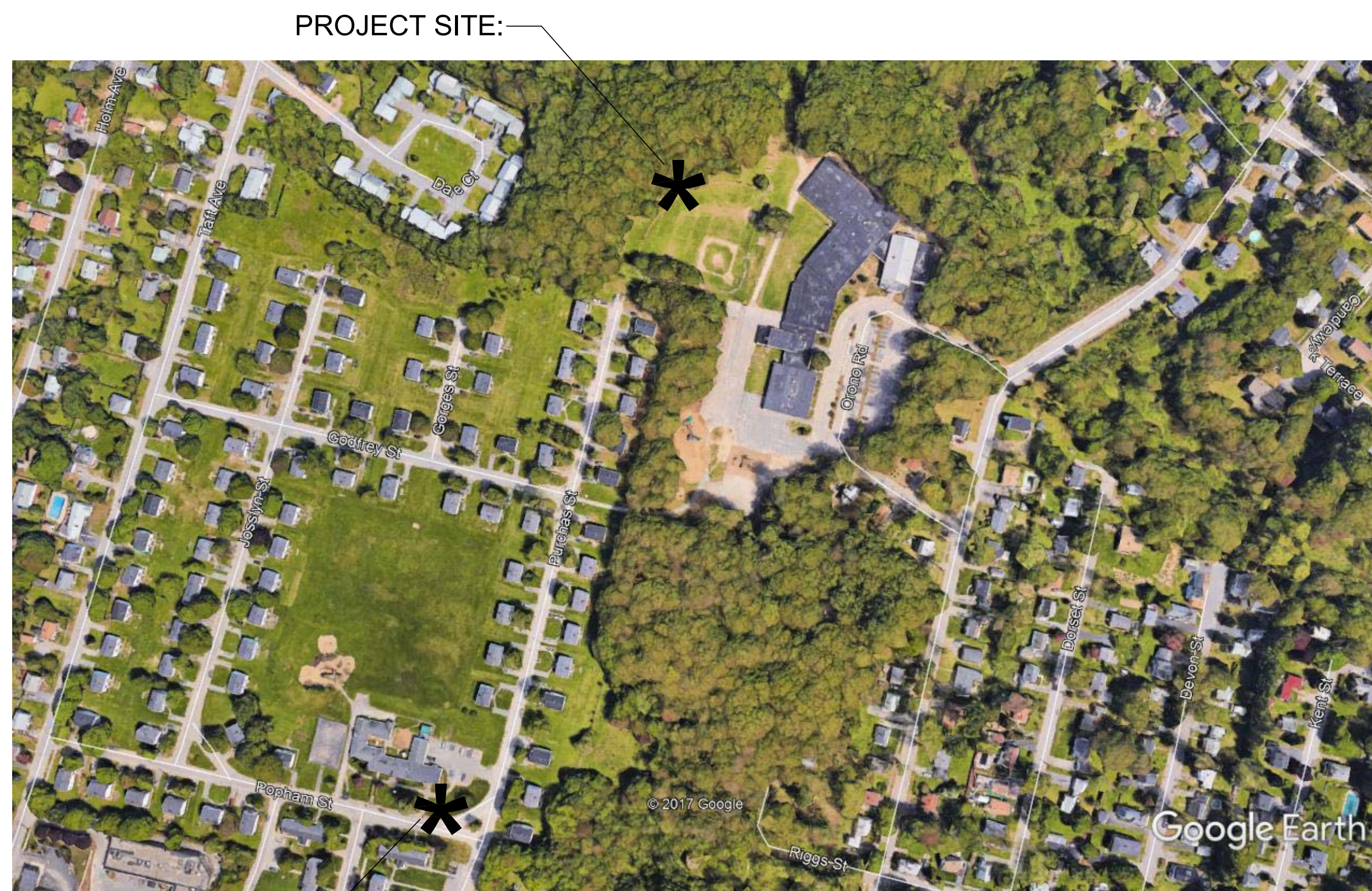
DATE: NOVEMBER 28, 2017

DESIGNER: JEREMY A. FOSS  
MAINE RMS #808  
NICET LEVEL IV CERT. #126801  
CHECKED BY: E. POULIN (RMS# 515)  
NICET LEVEL IV CERT. # 108534

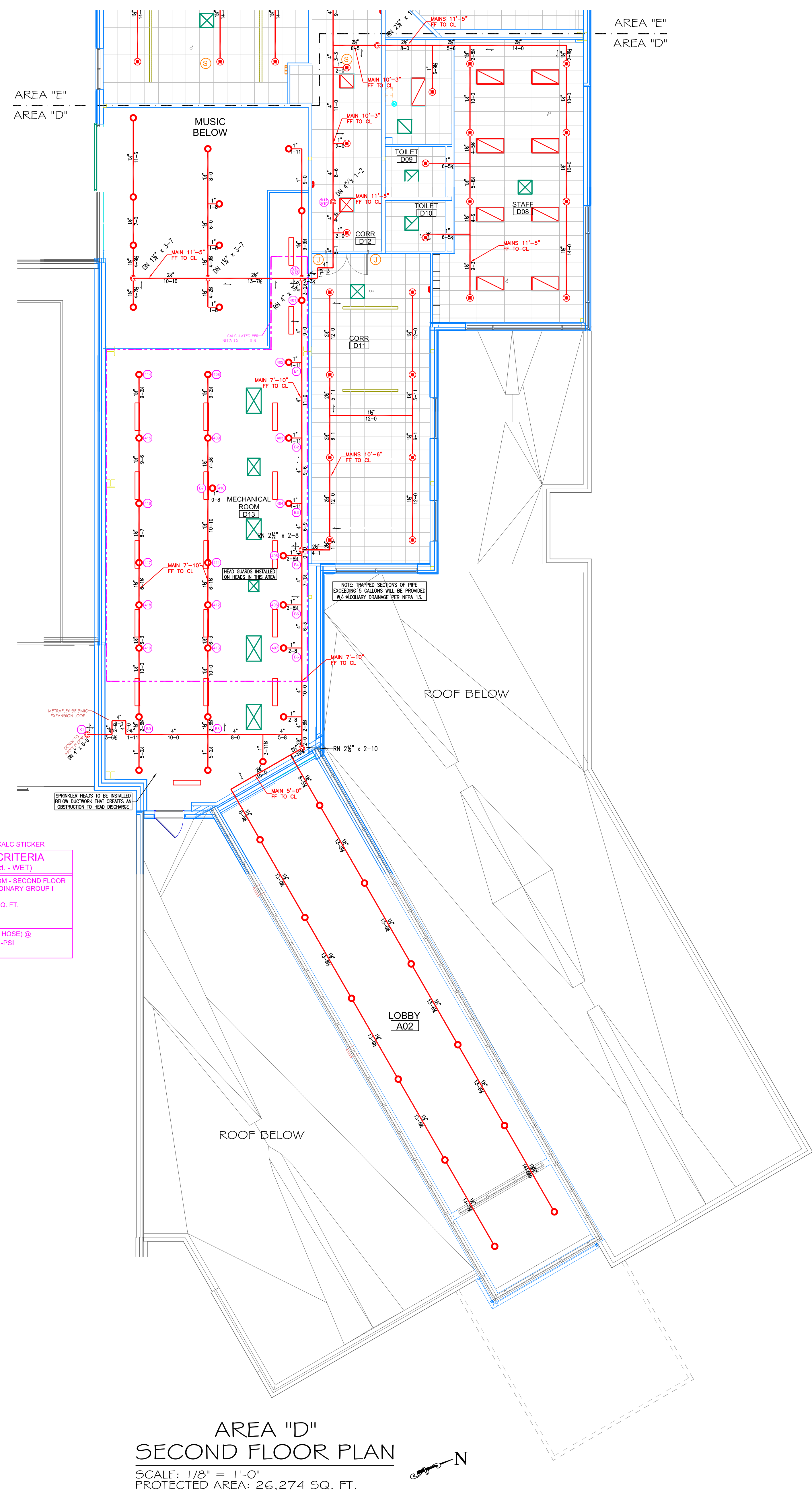
LOCATION:  
23 ORONO ROAD  
PORTLAND, ME

DRAWING TITLE:  
**FRED P. HALL  
ELEMENTARY  
(SEC. FLOOR AREA D)**  
FIRE PROTECTION PLAN  
(NFPA 13 2016 ed.)

DRAWING NO.:  
**FP-1.4**



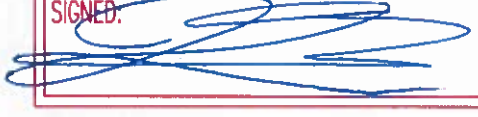
**SITE PLAN**  
SCALE: N.T.S.



ZONE 2 - MECH ROOM CALC STICKER  
**HYD. DESIGN CRITERIA**  
(NFPA 13 2016 ed. - WET)

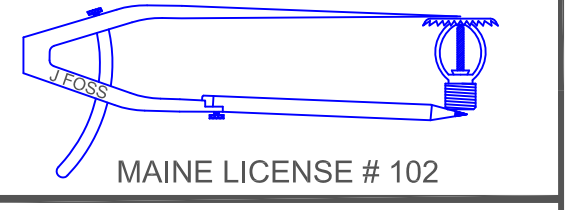
LOCATION: MECHANICAL ROOM - SECOND FLOOR  
HAZARD CLASSIFICATION: ORDINARY GROUP I  
DENSITY = 15 GPM/SQ. FT.  
AREA OF OPERATION = 1,500 SQ. FT.  
HOSE DEMAND: 250 GPM  
NO. OF SPRINKLERS = 19  
SYSTEM DEMAND (INCLUDING HOSE) @  
BASE OF RISER = 693 GPM @ 68 PSI  
SAFETY MARGIN = 19 PSI

THIS DRAWING HAS BEEN REVIEWED FOR GENERAL COMPLIANCE WITH THE 2016 ed. OF NFPA 13 - STANDARD FOR AUTOMATIC SPRINKLER SYSTEMS. ANY DEVIATIONS FROM THIS DRAWING SHALL BE MADE UNDER THE SUPERVISION OF A QUALIFIED DESIGN PROFESSIONAL.

REVIEW COMPLETED BY:  
JEREMY A. FOSS  
NICET LEVEL IV  
CERTIFICATION #126801  
SIGNED: 

**HIGH TECH  
FIRE PROTECTION**

P.O. BOX 156  
MINOT, ME. 04258-0258  
TEL.(207) 998-2551 FAX:(207) 998-4187



MAINE LICENSE # 102

ARCHITECT:  
**OAK POINT  
ASSOCIATES  
BIDDEFORD, ME**

CONTRACTOR:  
**ART DUDLEY  
CONSTRUCTION  
STANDISH, ME**

- LEGEND:
- RN PIPE RISER UP
  - DN PIPE RISER DOWN
  - STEEL PIPE (WET)
  - △ WET SYSTEM RISER
  - HYDRAULIC CALC. POINT
  - [x-x] PIPE ELEVATION A.F.F.

DESIGN NOTES:

- \* ALL PIPING 2" AND LARGER TO BE SCHEDULE 40 STEEL W/ GROOVED FITTING.
- \* ALL PIPING 1 1/2" AND SMALLER TO BE SCHEDULE 40 STEEL WITH THREADED OR GROOVED FITTINGS.
- \* POSITION, LOCATION, SPACING, AND USE OF SPRINKLERS AND HANGERS SHALL BE IN ACCORDANCE WITH NFPA 13 2016 ed.
- \* HYDRAULIC CALCULATION PROCEDURES HAVE BEEN DONE IN ACCORDANCE WITH NFPA 13 2016 ed. (SEE PLANS FOR LOCATION OF REMOTE AREAS, HYDRAULIC REFERENCE POINTS, AND SYSTEM DEMANDS)
- \* ALL ELECTRICAL WORK TO BE DONE BY OTHERS.
- \* DIMENSIONS AND LOCATIONS GIVEN FOR SPRINKLER HEADS AND PIPE MAY VARY TO ACCOMMODATE ACTUAL FIELD CONDITIONS.
- \* OWNER TO PROVIDE SUFFICIENT HEAT TO PREVENT FREEZING IN WATER FILLED SPRINKLER PIPE AND EQUIPMENT.
- \* OTHER TRADES TO COORDINATE THEIR WORK WITH SPRINKLER CONTRACTOR.
- \* ALL NEWLY INSTALLED SPRINKLER HEADS ARE TO BE QUICK RESPONSE U.A.C.
- \* OWNER IS RESPONSIBLE FOR MAINTAINING THE SPRINKLER SYSTEMS IN ACCORDANCE WITH THE CURRENT EDITION OF NFPA 25.
- \* INSPECTIONS TESTING AND MAINTENANCE OF WATER BASED FIRE PROTECTION SYSTEMS AND/OR ALL APPLICABLE FEDERAL, STATE, AND LOCAL LAWS, CODES AND ORDINANCES.

HEAD LEGEND:

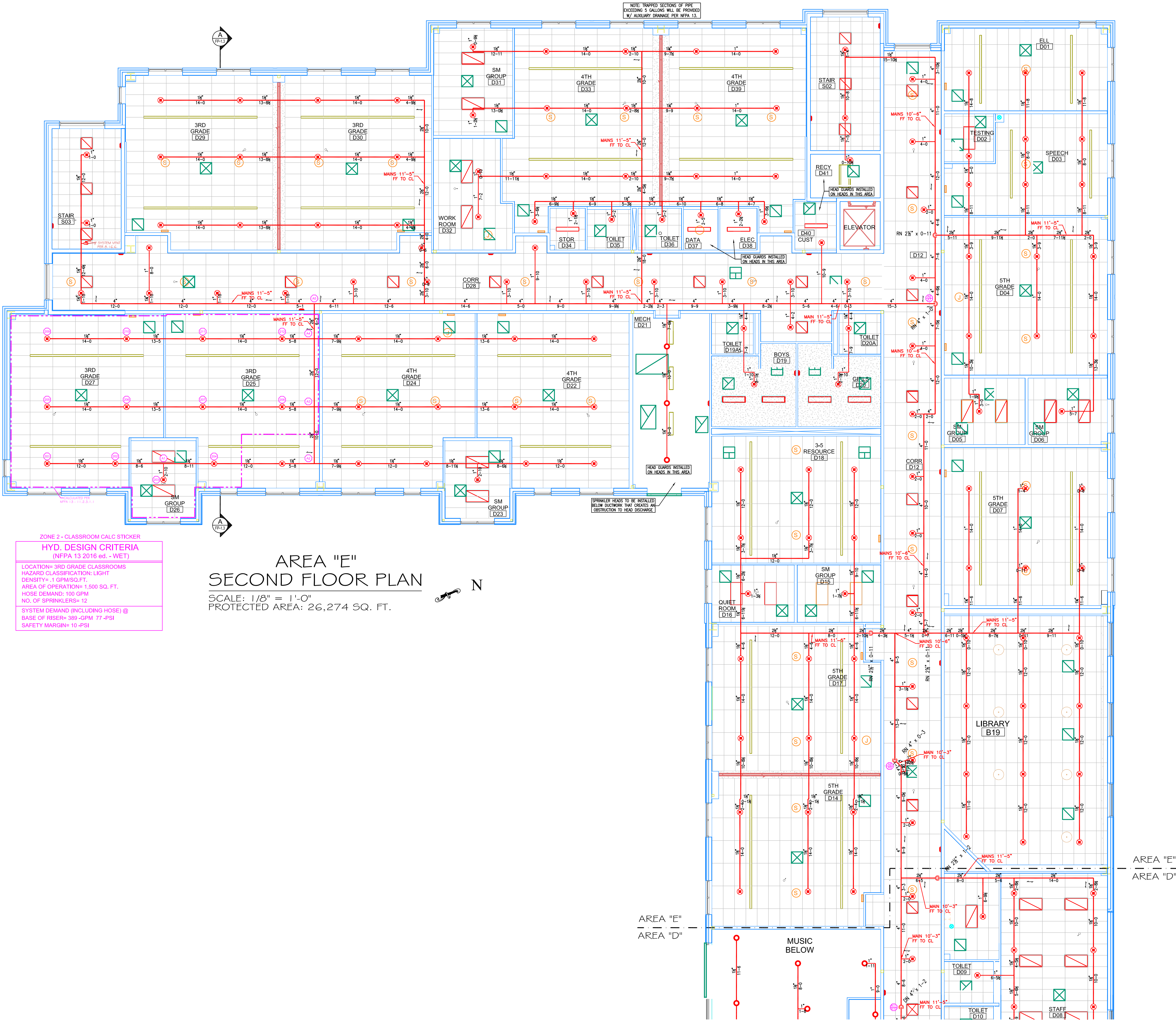
- GLOBE\*  
MODEL GL5615  
3 / 200"  
K=5.6  
1/2" BRASS UPRIGHT  
(130 SQ. FT. ORD. HAZARD)
- GLOBE\*  
MODEL GL5601  
154 / 155"  
K=5.6  
1/2" SEMI-RECESSED  
WHITE PENDENT  
(130 SQ. FT. ORDINARY HAZARD)  
(225 SQ. FT. LIGHT HAZARD)  
\*CENTERED IN A.C.T.\*

\* OR APPROVED EQUAL  
TOTAL HEADS ON SHEET: 157  
SCALE: 1/8"=1'-0"  
DATE: NOVEMBER 28, 2017  
DESIGNER: JEREMY A. FOSS  
MAINE RMS #808  
NICET LEVEL IV CERT. #126801  
CHECKED BY: E. POULIN (RMS# 515)  
NICET LEVEL IV CERT. # 108534

LOCATION:  
23 ORONO ROAD  
PORTLAND, ME

DRAWING TITLE:  
**FRED P. HALL  
ELEMENTARY  
(SEC. FLOOR AREA E)**  
FIRE PROTECTION PLAN  
(NFPA 13 2016 ed.)

DRAWING NO.:  
**FP-1.5**



ZONE 2 - CLASSROOM CALC STICKER  
**HYD DESIGN CRITERIA**  
(NFPA 13 2016 ed. - WET)  
LOCATION= 3RD GRADE CLASSROOMS  
HAZARD CLASSIFICATION: LIGHT  
DENSITY= .1 GPM/SQ.FT.  
AREA OF OPERATION= 1,500 SQ.FT.  
HOSE DEMAND: 100 GPM  
NO. OF SPRINKLERS= 12  
SYSTEM DEMAND (INCLUDING HOSE) @  
BASE OF RISER= 389 GPM/ 17-#SI  
SAFETY MARGIN= 10-#SI

**AREA "E"**  
**SECOND FLOOR PLAN**  
SCALE: 1/8" = 1'-0"  
PROTECTED AREA: 26,274 SQ. FT.

THIS DRAWING HAS BEEN REVIEWED FOR GENERAL COMPLIANCE WITH THE 2016 ed. OF NFPA 13 - STANDARD FOR AUTOMATIC SPRINKLER SYSTEMS. ANY DEVIATIONS FROM THIS DRAWING SHALL BE MADE UNDER THE SUPERVISION OF A QUALIFIED DESIGN PROFESSIONAL.  
REVIEW COMPLETED BY:  
JEREMY A. FOSS  
NICET LEVEL IV  
CERTIFICATION #126801  
SIGNER: