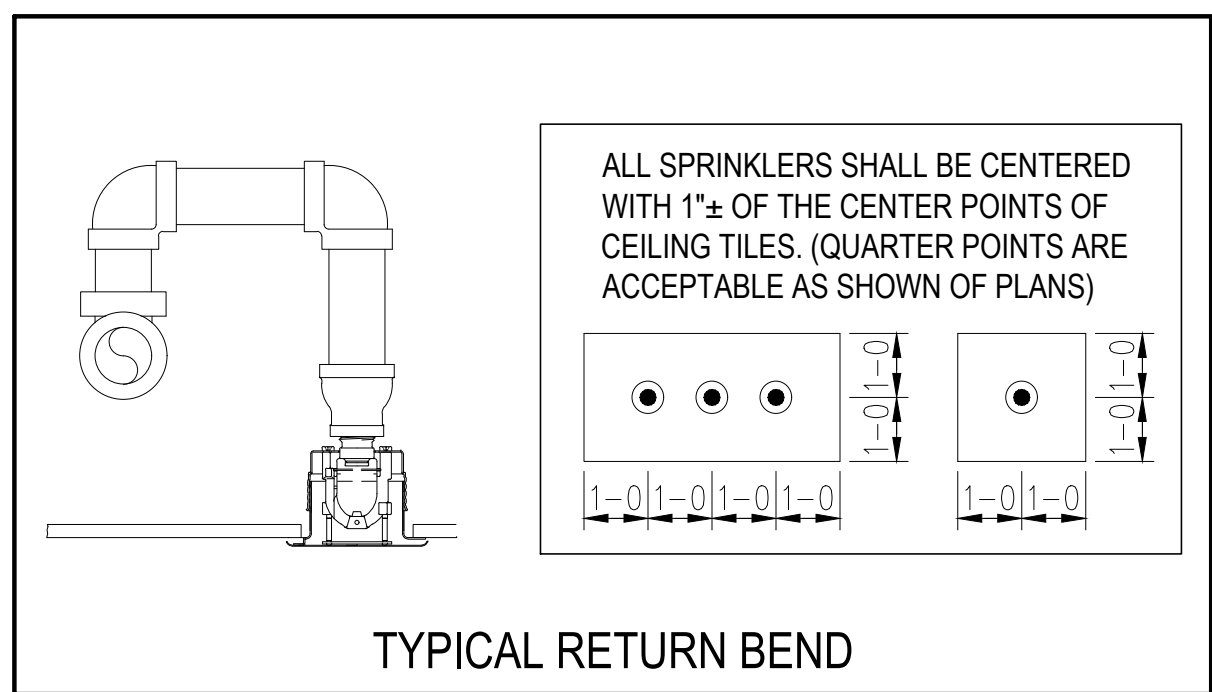


SEISMIC BRACING REQUIREMENTS	
EARTHQUAKE BRACING SHALL CONFORM WITH N.F.P.A. #13 (2013 EDITION), NEHRP, AND ASCE/SEI 7-10 CRITERIA.	
DESCRIPTION OF SITE CONDITIONS	
MAPPED SPECTRAL ACCELERATION FOR SHORT PERIODS	$S_s = 2.79$
MAPPED SPECTRAL ACCELERATION FOR A 1-SECOND PERIOD	$S_1 = 0.68$
SITE CLASS	D
SEISMIC OCCUPANCY CATEGORY OF BUILDING	III
MAXIMUM SPECTRAL RESPONSE ACCELERATION AT SHORT PERIODS	$S_{MS} = 1.86$
MAXIMUM SPECTRAL RESPONSE ACCELERATION AT 1-SECOND PERIODS	$S_{M1} = 0.59$
SEISMIC DESIGN CATEGORY BASED ON SDS	D
SEISMIC DESIGN CATEGORY BASED ON SD1	D
SEE CALCULATIONS BELOW FOR DETERMINATION OF FORCE FACTOR FOR SEISMIC DESIGN CATEGORY 'C' & 'D'	
COMPONENT IMPORTANCE FACTOR	$I_p = 1.50$
COMPONENT RESPONSE MODIFICATION FACTOR	$R_d = 4.50$
COMPONENT AMPLIFICATION FACTOR	$A_0 = 2.50$
HEIGHT IN STRUCTURE OF POINT OF ATTACHMENT W/ RESPECT TO THE BASE	$Z = 10.0$
AVERAGE ROOF HEIGHT OF STRUCTURE WITH RESPECT TO THE BASE	$H = 10.0$
$C_e =$ FORCE FACTOR $F_p =$ SEISMIC DESIGN FORCE, $W_e = 1.15$ TIMES WEIGHT OF WATER FILLED PIPE $F_p = C_e \cdot W_e$	
$F_p = 0.4 \cdot A_s \cdot S_{MS} \cdot W_e \cdot (1+2 \cdot \frac{Z}{H})$ $R_d$ $I_p$	
$F_p = 1.86 \cdot W_e$	

- GENERAL NOTES**
- SPRINKLER SYSTEM SHALL BE DESIGNED, INSTALLED, TESTED, AND FLUSHED IN ACCORDANCE WITH:
    - NFPA 13 (STANDARD FOR THE INSTALLATION OF SPRINKLER SYSTEMS) - 2013 EDITION
    - UFC 3-600-01 - FIRE PROTECTION ENGINEERING FOR FACILITIES- CHANGE 3, 1 MARCH 2013
  - NO INSTALLATION OF ANY PIPING OR EQUIPMENT IS TO BEGIN PRIOR TO APPROVAL OF PLANS BY THE DEPARTMENT OF PUBLIC WORKS.
  - THE FIRE SPRINKLER SYSTEM SHOWN IS CONCEPTUAL. THE EQUIPMENT IS SHOWN IN SUGGESTED LOCATIONS. FINAL QUANTITY AND LAYOUT SHALL BE IN ACCORDANCE WITH APPLICABLE CODES, MANUFACTURER'S RECOMMENDATIONS, AND EQUIPMENT LISTING. SHOP SUBMITTALS SHALL SHOW SPRINKLER DETAILS IN ACCORDANCE WITH NFPA 13 AND THE MANUFACTURER'S EQUIPMENT LISTING INSTALLATION REQUIREMENTS.
  - PROVIDE SPLIT-CHROME WALL PLATES AT ALL EXPOSED WALL PENETRATIONS.

PIPE SIZE	PIPE	FITTINGS AND OUTLETS
1" TO 2"	SCHEDULE-40	BLACK CLASS-125 CAST IRON THREADED FITTINGS (175 PSI RATED)
2.5" TO 4"	SCHEDULE-40	WELDED OUTLETS WITH GROOVED ENDS AND PAINTED DUCTILE IRON GROOVED FITTINGS (300 PSI RATED)



**FIRE PUMP**

BUILDING HAS AN EXISTING ELECTRIC DRIVEN HORIZONTAL SPLIT-CASE FIRE PUMP WITH THE FOLLOWING RATINGS BASED UPON NAME PLATE DATA:

MODEL: AURORA 3-481-10 (S/N 1183012)  
 RATED: 70 PSI AT 500 GPM

SEISMIC CLEARANCE REQUIREMENTS	
PROVIDE CLEARANCE AT ALL PIPING EXTENDING THROUGH WALLS, FLOORS, FOUNDATIONS. NO CLEARANCE REQUIRED AT GYPSUM BOARD OR EQUALLY FRANGIBLE CONSTRUCTION THAT IS NOT REQUIRED TO HAVE A FIRE RESISTANCE RATING.	
NOMINAL PIPE SIZE	CORE DRILL HOLE OR PIPE SLEEVE SIZE
1 INCH	3 INCH
1.25	4
1.5	4
2	4
2.5	6
3	6
4	8
6	10

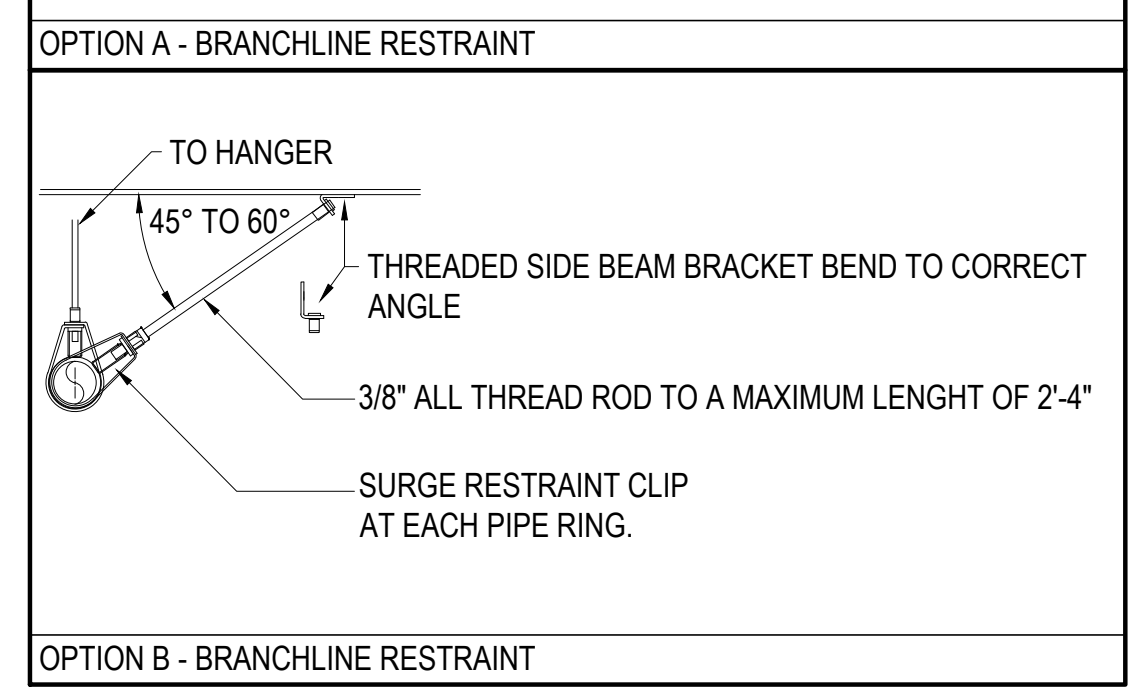
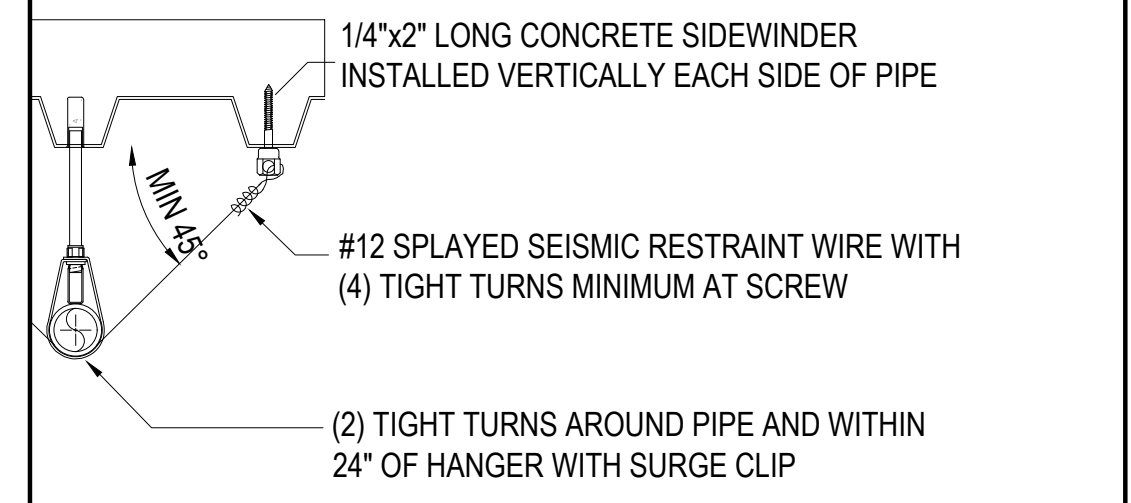
AT CONTRACTORS OPTION FLEXIBLE COUPLINGS MAY BE INSTALLED WITHIN 12" OF THE WALL SURFACE ON EACH SIDE AND THE CLEARANCES NOTED ARE NOT REQUIRED.

FIRE CAULK HOLE AND PROVIDE SPLIT CHROME WALL PLATES AT ALL EXPOSED WALL LOCATIONS.

(NOTE THAT AT NON-RATED FRANGIBLE GYPSUM BOARD WALLS NO CLEARANCE IS REQUIRED)

BRANCHLINE RESTRAINT REQUIREMENTS	
PER N.F.P.A. 2013, CHAPTER 9.3.6	
SEISMIC COEFFICIENT, $C_e = 0.132$	STEEL BRANCHLINE SIZE
SEE SEISMIC CALCULATIONS FOR $C_e$ VALUES	1"   1.25"   1.5"   2"
MAXIMUM SPACING OF BRANCHLINE RESTRAINTS	26'   27'   29'   31'

- WHERE NOT REQUIRED:  
 NO RESTRAINT REQUIRED IF HANGER ROD IS LESS THAN 6" LONG MEASURED BETWEEN THE TOP OF THE PIPE AND THE POINT OF ATTACHMENT TO THE BUILDING STRUCTURE.
- WHERE REQUIRED:  
 -ON ALL BRANCH LINES (WITH HANGER ROD >6") AT INTERVALS NOT EXCEEDING THOSE SPECIFIED IN TABLE ABOVE BASED ON BRANCH LINE DIAMETER AND THE VALUE OF  $C_e$ .
- SPRING-UPS 4'-0" OR LONGER SHALL BE RESTRAINED AGAINST LATERAL MOVEMENT.
- RESTRAINT SHALL BE PROVIDED BY USE OF ONE OF THE FOLLOWING:
- A LISTED SWAY BRACE ASSEMBLY
  - A WRAPAROUND U-HOOK
  - #12, 440-LB WIRE INSTALLED AT LEAST 45° FROM THE VERTICAL PLANE AND ANCHORED ON BOTH SIDES OF THE PIPE.
  - A HANGER NOT LESS THAN 45 DEGREES FROM VERTICAL INSTALLED WITHIN 6" OF THE VERTICAL HANGER ARRANGED FOR RESTRAINT AGAINST UPWARD MOVEMENT. PROVIDED IT IS UTILIZED SUCH THAT L/R DOES NOT EXCEED 300, WHERE THE ROD SHALL EXTEND TO THE PIPE OR HAVE A SURGE CLIP RESTRAINT.
  - OTHER APPROVED MEANS
- WIRES USED FOR PIPING RESTRAINTS SHOULD BE ATTACHED TO THE BRANCH LINE WITH TWO TIGHT TURNS AROUND THE PIPE AND FASTENED WITH FOUR TIGHT TURNS WITHIN 1.5" AND ATTACHED TO THE STRUCTURE WITH MEANS APPROVED BY NFPA.
- WIRE USED FOR RESTRAINT SHALL BE LOCATED WITHIN 2 FT OF A HANGER. THE HANGER CLOSEST TO A WIRE RESTRAINT SHALL BE OF A TYPE THAT RESISTS UPWARD MOVEMENT OF A BRANCH LINE SUCH AS A TOLCO FIG. 25 SURGE CLIP OR EQUAL.



FIRE SPRINKLER LEGEND	
SYMBOL	DESCRIPTION
*ALTERNATE SPRINKLER TEMPERATURES MAYBE NOTED NEXT TO SYMBOL (I.E. INT = INTERMEDIATE; HIGH = HIGH TEMPERATURE)	
●	PENDENT SPRINKLER ON - LINE
○	PENDENT SPRINKLER ON - LINE
●	PENDENT SPRINKLER ON - LINE
●	PENDENT SPRINKLER ON - LINE
●	PENDENT SPRINKLER ON - LINE
○	PENDENT SPRINKLER ON - DROPP
○	PENDENT SPRINKLER ON - DROPP
○	PENDENT SPRINKLER ON - DROPP
○	PENDENT SPRINKLER ON - DROPP
○	UPRIGHT SPRINKLER ON - LINE
○	UPRIGHT SPRINKLER ON - SPRIG
○	UPRIGHT SPRINKLER ON - LINE
○	UPRIGHT SPRINKLER ON - LINE
○	UPRIGHT SPRINKLER ON - LINE
○	DOUBLE COMPLIMENT SPRINKLER
▶	SIDEWALL SPRINKLER HEAD
▶	SIDEWALL SPRINKLER HEAD
▶	SIDEWALL SPRINKLER HEAD
○	EXISTING PENDENT SPRINKLER
○	EXISTING UPRIGHT SPRINKLER
↔	LATERAL OR LONGITUDINAL SWAY BRACE
↔	COMBINATION LATERAL AND LONGITUDINAL SWAY BRACE
FS	FLOW SWITCH
TS	TAMPER SWITCH
SV	SOLENOID VALVE
[LAA]	LOW AIR ALARM
[PRV]	PRESSURE REDUCING VALVE
[PS]	PRESSURE SWITCH
☑	CHECK VALVE
OR	BUTTERFLY VALVE (GROOVED OR SCREWED)
∠	ANGLE VALVE
○	GLOBE VALVE
∠	OUTSIDE STEM & YOKE GATE VALVE
∠	POST INDICATOR VALVE
∠	FREE STANDING FIRE DEPARTMENT CONNECTION
[XX-XX]	PIPE CENTERLINE FROM FINISHED FLOOR
XXX	HYDRAULIC NODE POINT
XX-XX	CEILING HEIGHT
↕	RISER
•	DISTANCE PIPE FROM DECK
—	FLANGE
○	GROOVED ELBOW UP
○	GROOVED ELBOW DOWN
—	GROOVED COUPLING
○	SCREWED ELBOW DOWN
○	SCREWED ELBOW UP
○	HANGER SYMBOL #1
○	HANGER SYMBOL #2
○	HANGER SYMBOL #3
○	HANGER SYMBOL #4
○	HANGER SYMBOL #5
•	SEISMIC RESTRAINT
AFF	ABOVE FINISHED FLOOR
ATR	ALL THREAD ROD
A.S.	AUTOMATIC SPRINKLER
CIF	CUT IN FIELD
DN	DOWN
FG	FINISHED GRADE
GALV	GALVANIZED
GBE	GROOVE BOTH ENDS
GOE	GROOVE ONE END
GMI	GALVANIZED MALLEABLE IRON
OS&Y	OUTSIDE STEM & YOKE
RN	RISER NIPPLE
TBE	THREAD BOTH ENDS
TOE	THREAD ONE END
T&G	THREAD AND GROOVE
UON	UNLESS OTHERWISE NOTED
W/	WITH



PERMIT SET

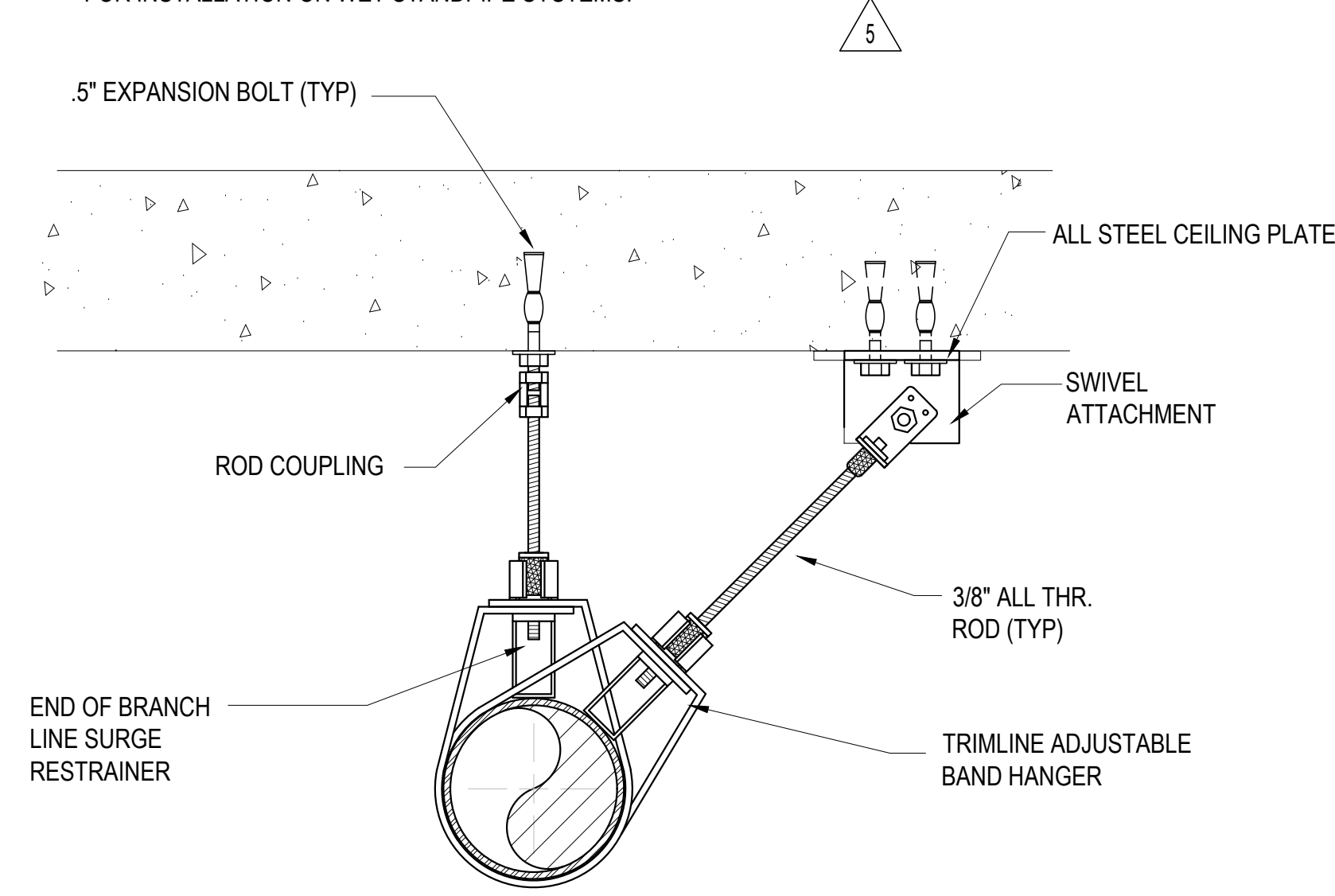
MCH RENOVATION PROJECT, GMHA 007-2014  
 GMHA FAMILY BIRTH CENTER  
 850 GOVERNOR CAMACHO ROAD, OKA, TAMUNING, GUAM 96913  
 GUAM MEMORIAL HOSPITAL AUTHORITY  
 FIRE SPRINKLER NOTES, LEGEND AND ABBREVIATIONS

PROJECT TITLE:	OWNER:	SHEET TITLE:
5	03-05-17	BKGN UPDATE
4	12-15-16	AG
2	8-1-16	DPW
1	10-27-16	IFC
MARK	DATE	DESCRIPTION
DATE	: 2015.08.31	
PROJECT NO	: 144052	
DRAWN BY	: RJL	
CHECKED BY	: RJL	
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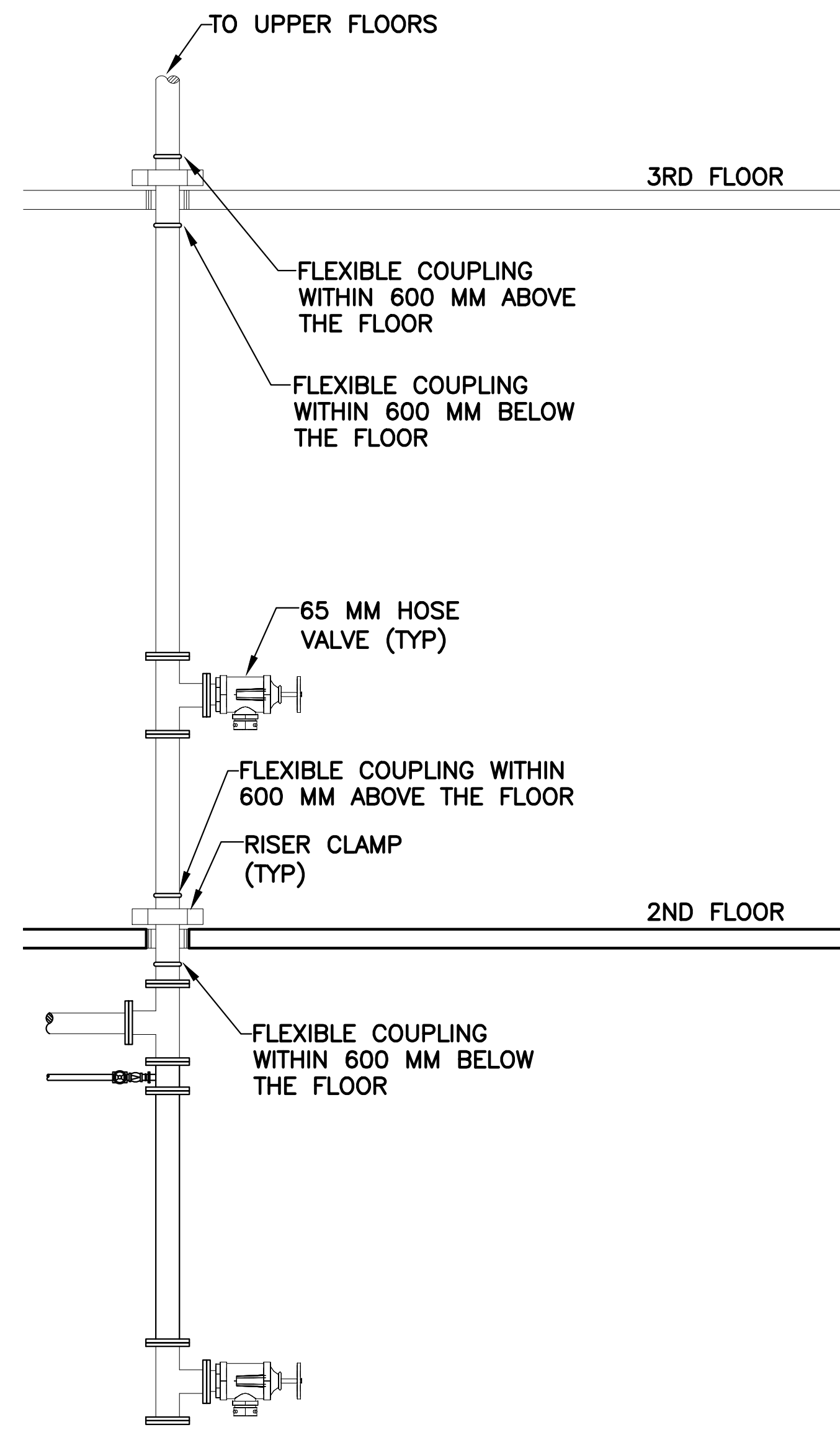
DWG NO: FP001

**GENERAL NOTES:**

1. THE FIRE SPRINKLER SYSTEM SHOWN IS CONCEPTUAL. THE EQUIPMENT IS SHOWN IN SUGGESTED LOCATIONS. FINAL QUANTITY AND LAYOUT SHALL BE IN ACCORDANCE WITH APPLICABLE CODES, MANUFACTURER'S RECOMMENDATIONS, AND EQUIPMENT LISTING. SHOP SUBMITTAL SHALL SHOW SPRINKLER DETAILS IN ACCORDANCE WITH NFPA 13 AND THE MANUFACTURER'S EQUIPMENT LISTING INSTALLATION REQUIREMENTS.
2. ALL COUPLINGS TO BE ZERO FLEX/RIGID UNLESS OTHERWISE NOTED AND/OR REQUIRED BY CODE.
3. SPRINKLER HEADS ARE TO BE CENTERED IN THE ALL SUSPENDED CEILING TILES.
4. PROVIDE SPLIT CHROME WALL PLATES AT ALL EXPOSED PENETRATIONS.
5. ALL ROOMS ARE CLASSIFIED AS ORDINARY HAZARD (0.10 GPM/SQ FT OVER THE REMOTE AREA - 100 GPM HOSE ALLOWANCE) PER NFPA 13 UNLESS OTHERWISE NOTED WITH SYMBOLS BELOW. SEE REMOTE AREA NOTES FOR REMOTE AREA MODIFICATIONS AS APPLICABLE.
6. ALL NEW STANDPIPE HOSE VALVES SHALL BE SUITABLE AND UL LISTED FOR INSTALLATION ON WET STANDPIPE SYSTEMS.



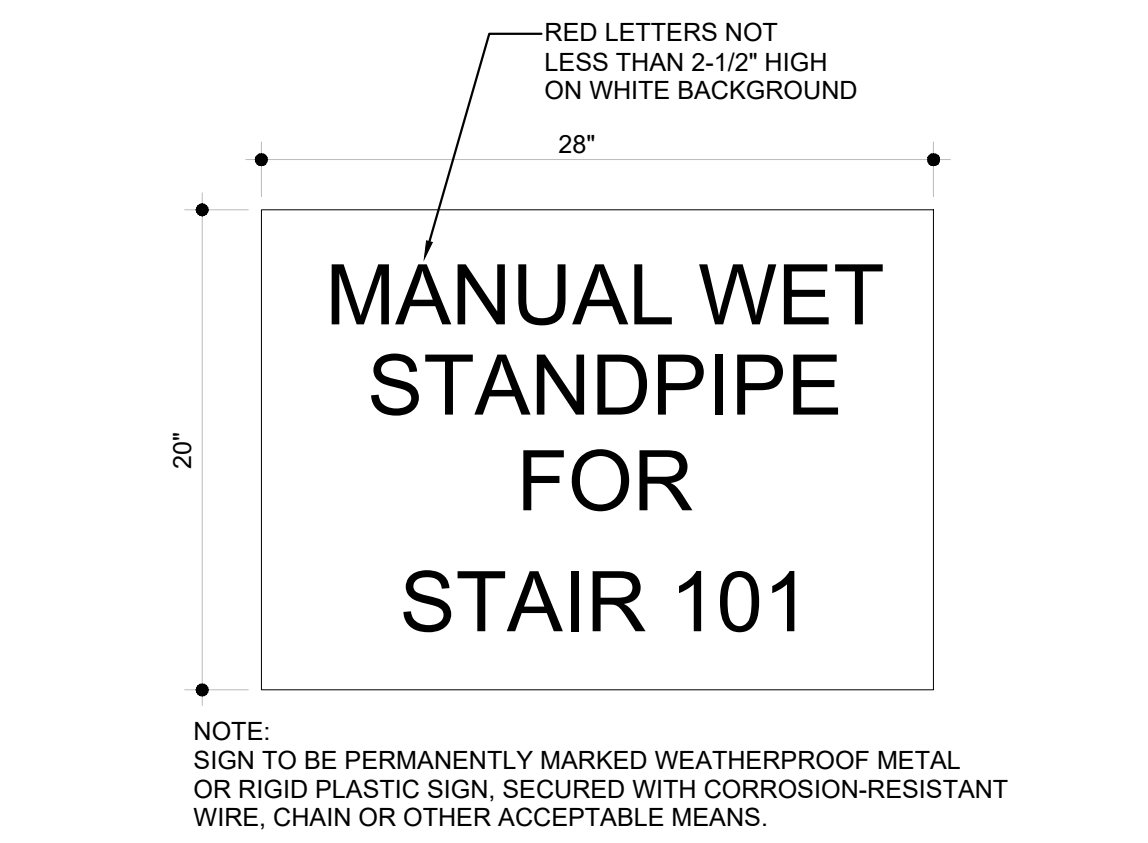
2 PIPE END SUPPORT  
FP101



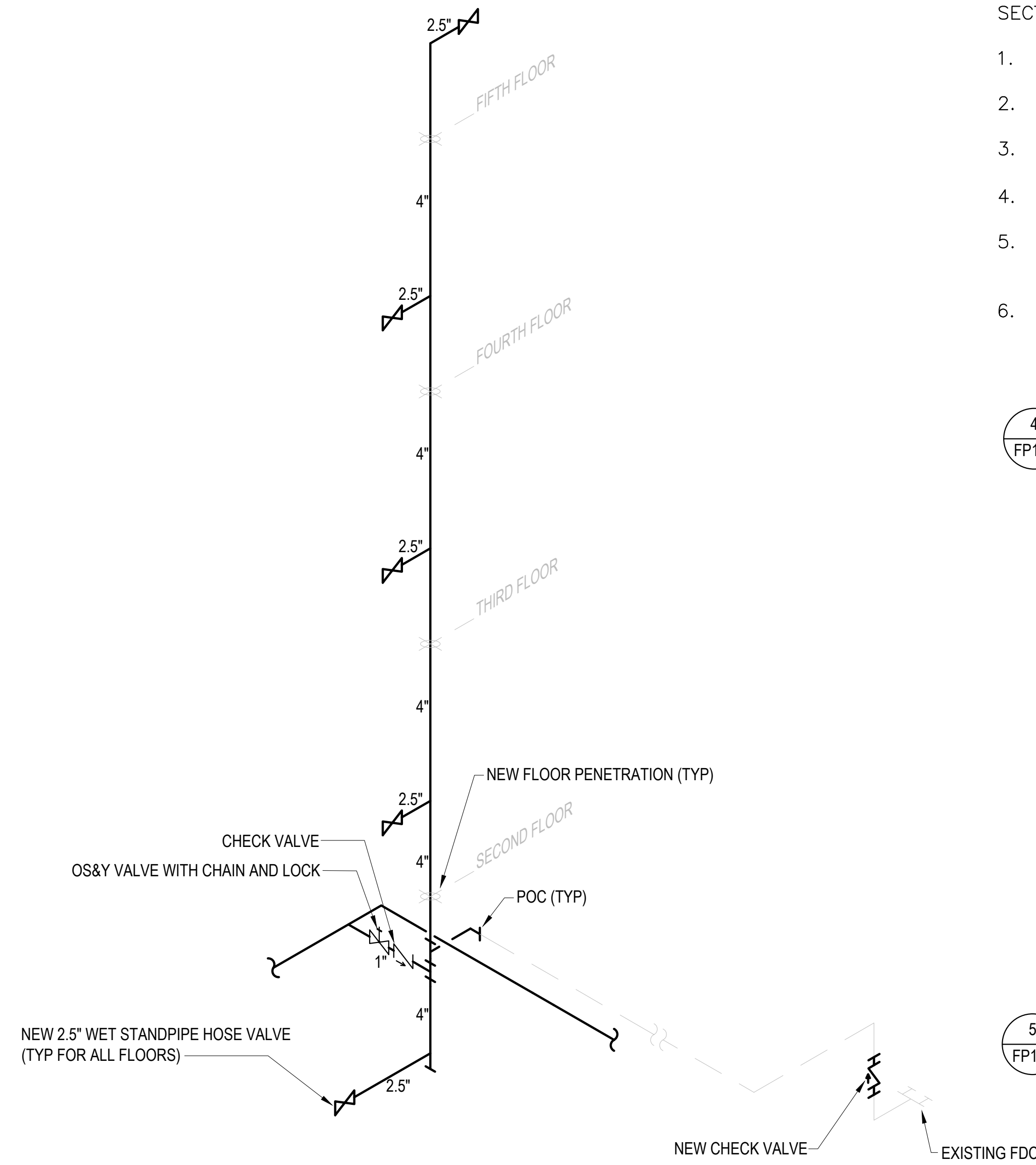
FLEXIBLE COUPLING NOTE:  
PROVIDE FLEXIBLE COUPLINGS WHERE REQUIRED BY NFPA 13, SECTION 9.3.2 AND AS INDICATED BELOW:

1. WITHIN 600MM (24 INCHES) OF TOP AND BOTTOM OF FIRE SPRINKLER RISERS.
2. RISERS 900MM TO 2.1M (3FT TO 7FT), ONE FLEXIBLE COUPLING REQUIRED.
3. WITHIN 300MM (12 INCHES) ABOVE AND 600MM (24 INCHES) BELOW THE FLOOR IN MULTISTORY BUILDINGS.
4. WITHIN 600MM (24 INCHES) OF A BUILDING EXPANSION JOINT.
5. WITHIN 600MM (24 INCHES) OF THE TOP OF A DROP EXCEEDING 4.6M (15 FEET) WHERE THE DROP FEEDS MORE THAN 1 FIRE SPRINKLER.
6. ON THE HORIZONTAL PORTION OF WITHIN 600MM (24 INCHES) OF THE TIE-IN WHERE THE TIE-IN IS HORIZONTAL. THIS LOCATION IS ON EVERY FLOOR.

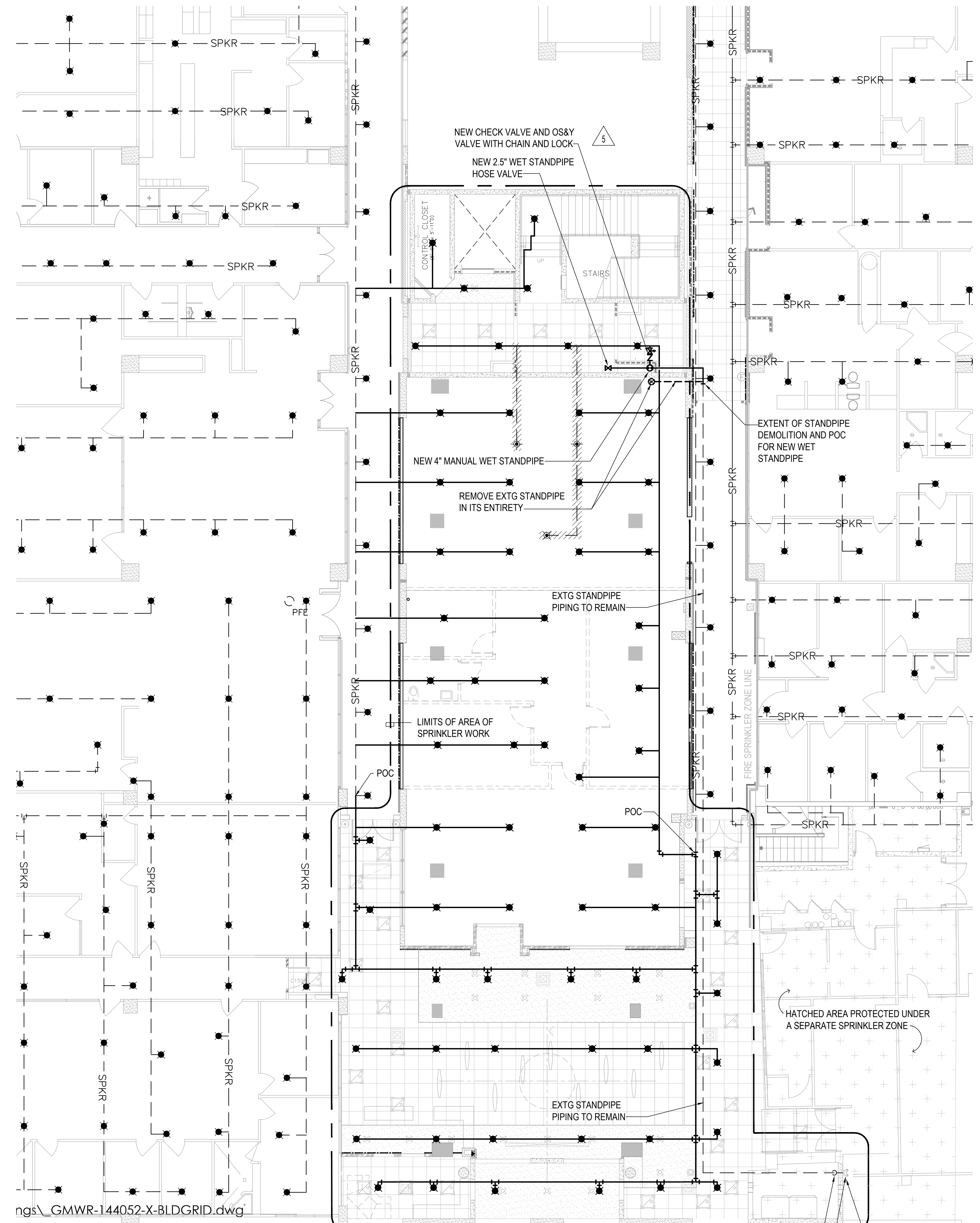
4 WET STANDPIPE SUPPORT DETAIL  
FP101



5 SIGN DETAIL  
FP101 1-1/2\"/>

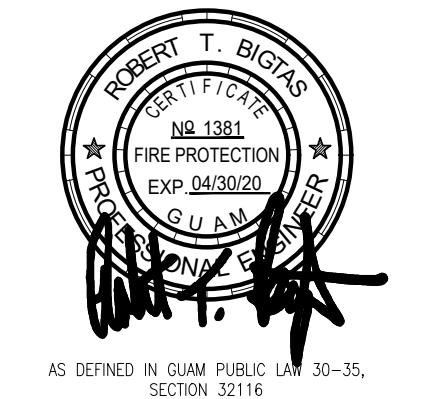


3 STAIR VESTIBULE 101  
MANUAL WET STANDPIPE RISER DIAGRAM  
FP101



1 PARTIAL FIRST FLOOR SPRINKLER PLAN  
FP101 1/8\"/>

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**MCH RENOVATION PROJECT, GMHA 007-2014**  
**GMHA FAMILY BIRTH CENTER**  
850 GOVERNOR CAMACHO ROAD, OKA, TAMUNING, GUAM 96913  
GUAM MEMORIAL HOSPITAL AUTHORITY  
PARTIAL FIRST FLOOR SPRINKLER PLAN

PROJECT TITLE: OWNER: SHEET TITLE:

MARK	DATE	DESCRIPTION
5	03-05-17	BKGN UPDATE
4	12-15-16	AC
1	10-27-16	IFC

DATE : 2015.08.31  
PROJECT NO : 144052  
DRAWN BY : PAG  
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DWG NO: **FP101**

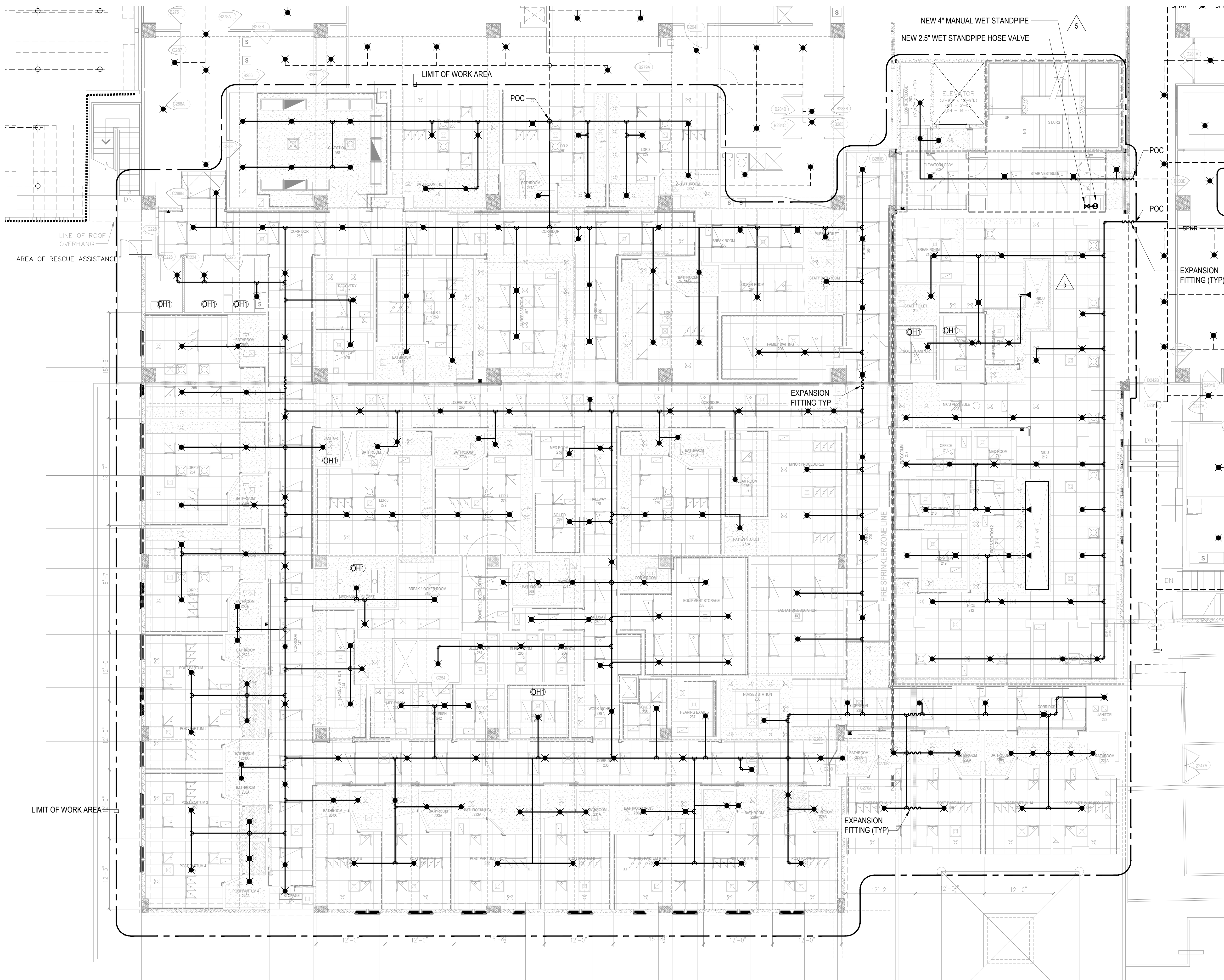


**GENERAL NOTES:**

1. THE FIRE SPRINKLER SYSTEM SHOWN IS CONCEPTUAL. THE EQUIPMENT IS SHOWN IN SUGGESTED LOCATIONS. FINAL QUANTITY AND LAYOUT SHALL BE IN ACCORDANCE WITH APPLICABLE CODES, MANUFACTURER'S RECOMMENDATIONS, AND EQUIPMENT LISTING. SHOP SUBMITTAL SHALL SHOW SPRINKLER DETAILS IN ACCORDANCE WITH NFPA 13 AND THE MANUFACTURER'S EQUIPMENT LISTING INSTALLATION REQUIREMENTS.
2. ALL COUPLINGS TO BE ZERO FLEX/RIGID UNLESS OTHERWISE NOTED AND/OR REQUIRED BY CODE.
3. SPRINKLER HEADS ARE TO BE CENTERED IN THE ALL SUSPENDED CEILING TILES.
4. PROVIDE SPLIT CHROME WALL PLATES AT ALL EXPOSED PENETRATIONS.
5. ALL ROOMS ARE CLASSIFIED AS ORDINARY HAZARD (0.10 GPM/SQ FT OVER THE REMOTE AREA - 100 GPM HOSE ALLOWANCE) PER NFPA 13 UNLESS OTHERWISE NOTED WITH SYMBOLS BELOW. SEE REMOTE AREA NOTES FOR REMOTE AREA MODIFICATIONS AS APPLICABLE.

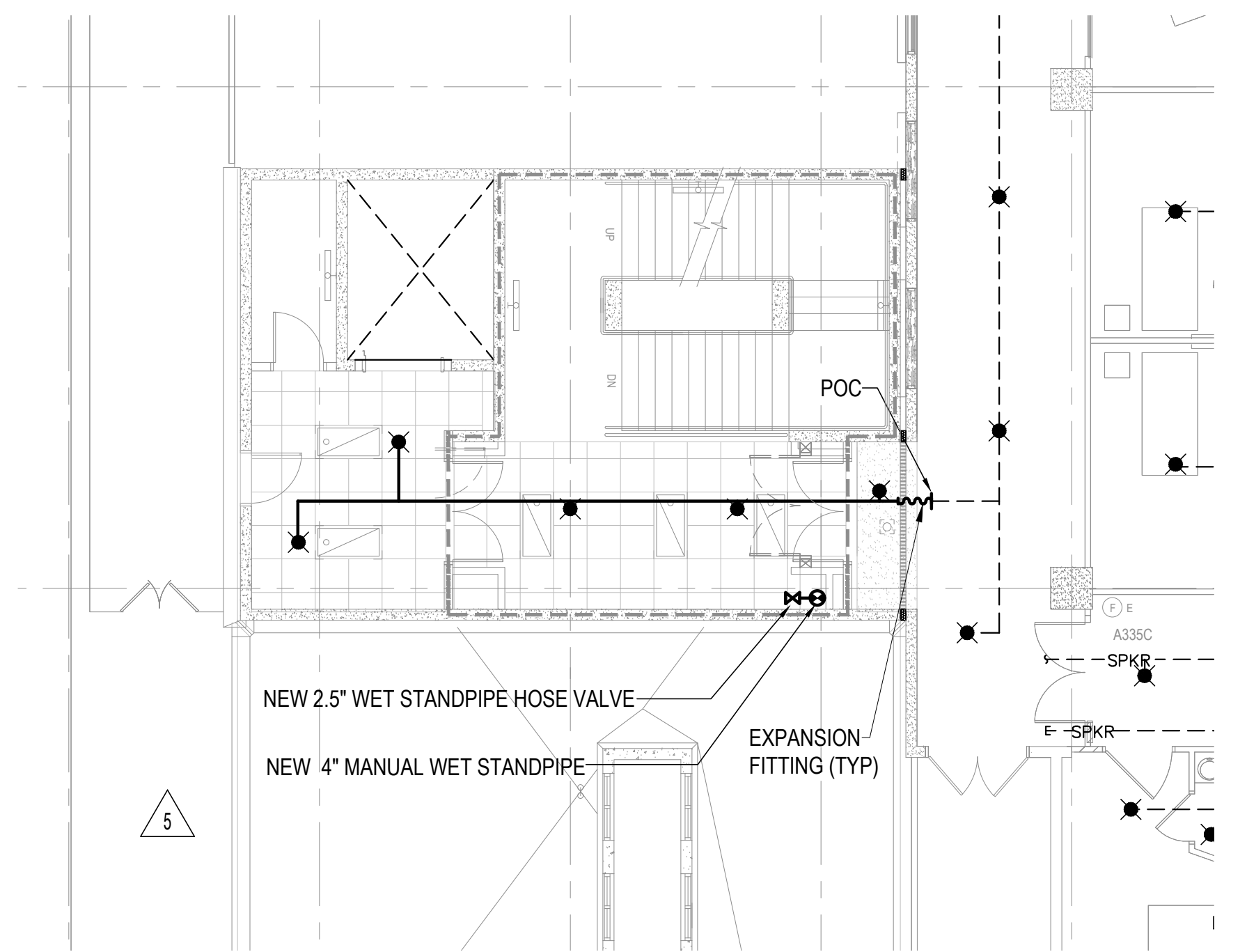
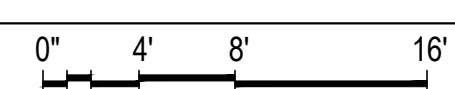
OH1) ORDINARY HAZARD GROUP 1 - 0.15 GPM/SQ FT OVER REMOTE AREA - 250 GPM HOSE  
 OH2) ORDINARY HAZARD GROUP 2 - 0.20 GPM/SQ FT OVER REMOTE AREA - 250 GPM HOSE

6. ALL NEW STANDPIPE HOSE VALVES SHALL BE SUITABLE AND UL LISTED FOR INSTALLATION ON WET STANDPIPE SYSTEMS.



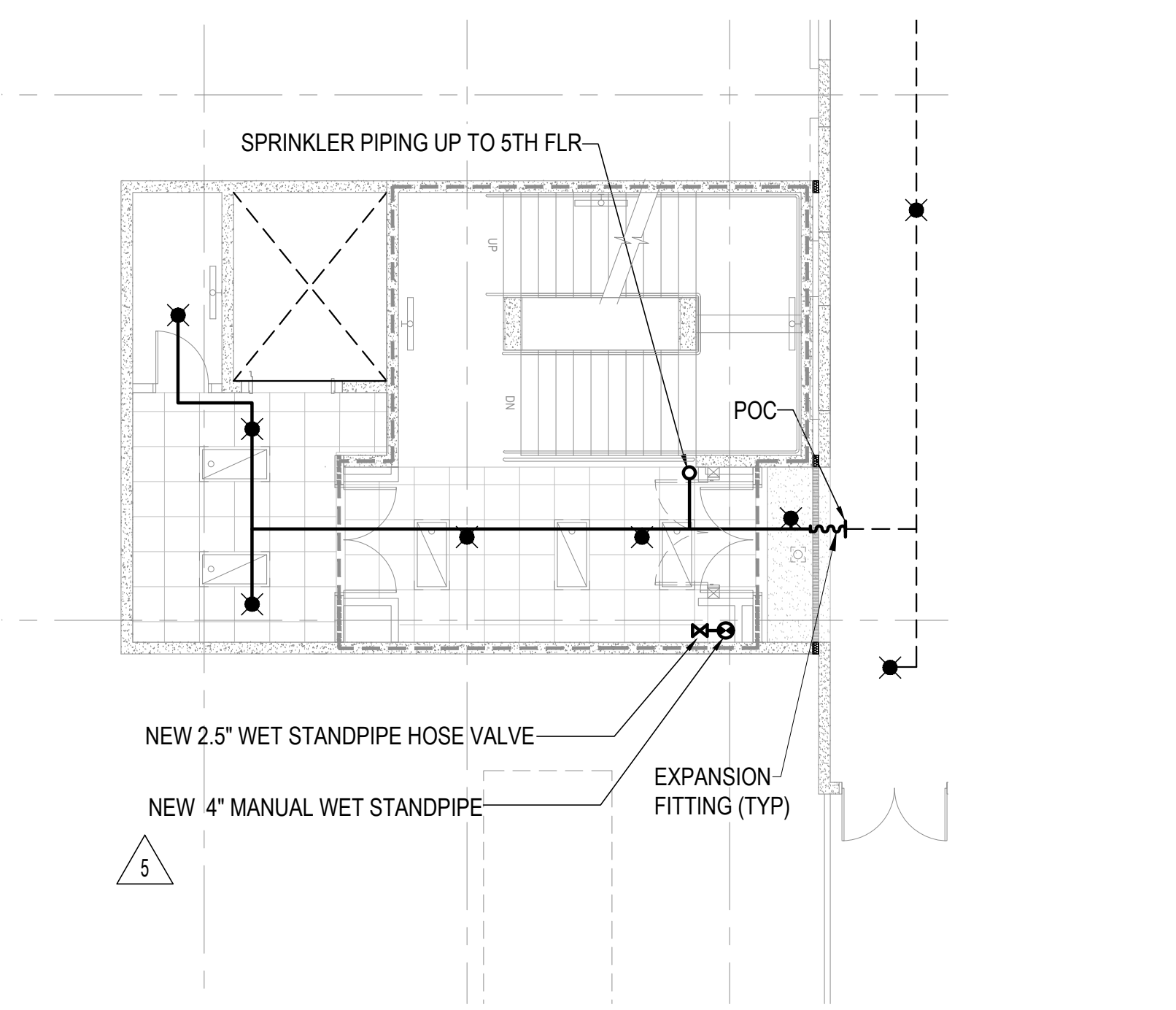
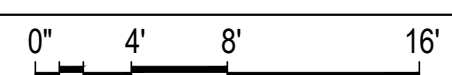
**1 PARTIAL SECOND FLOOR SPRINKLER PLAN**

FP201 1/8" = 1'-0"



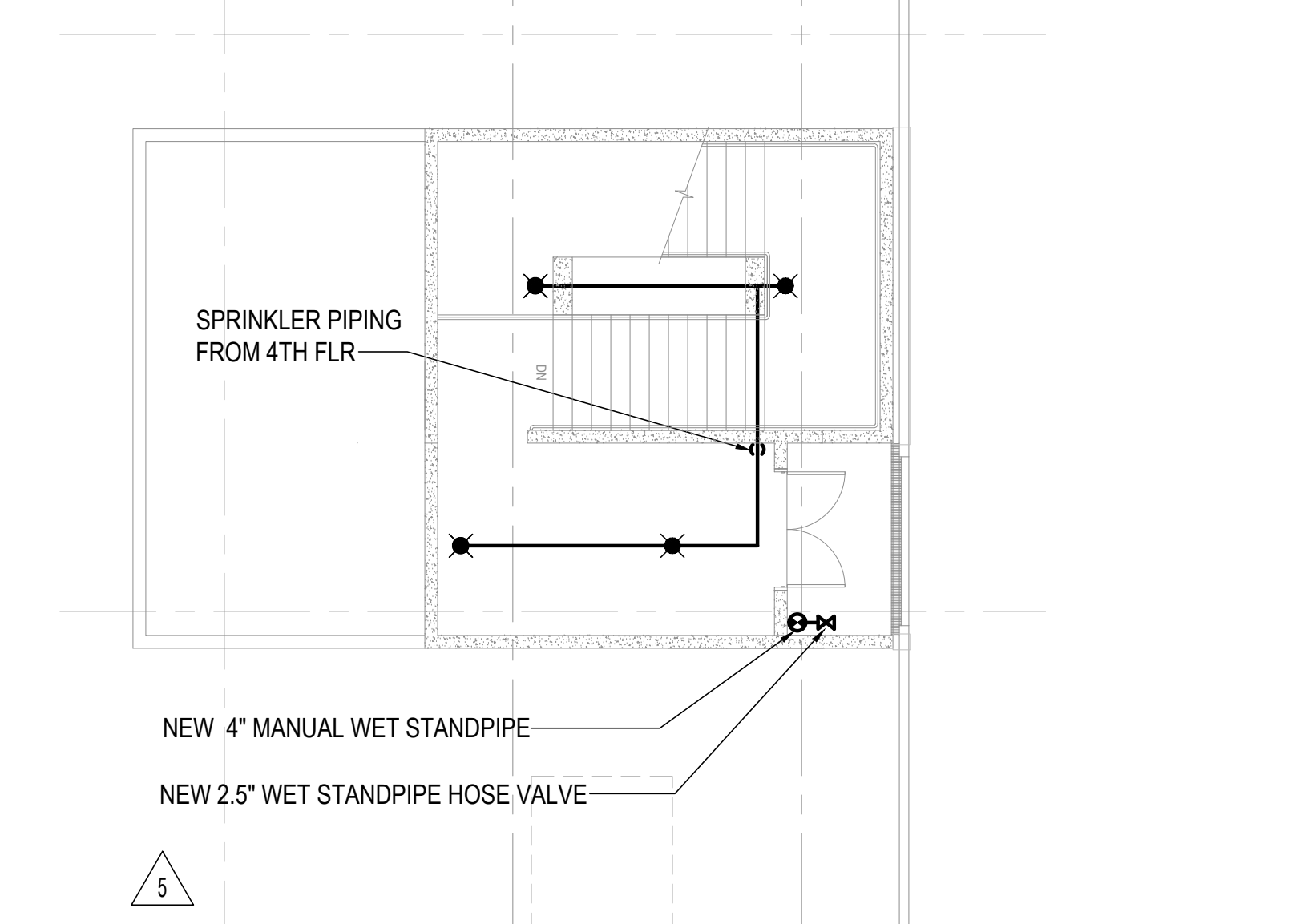
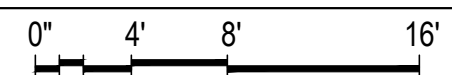
**2 PARTIAL THIRD FLOOR SPRINKLER PLAN**

FP201 1/8" = 1'-0"



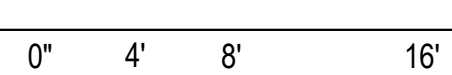
**3 PARTIAL FOURTH FLOOR SPRINKLER PLAN**

FP201 1/8" = 1'-0"

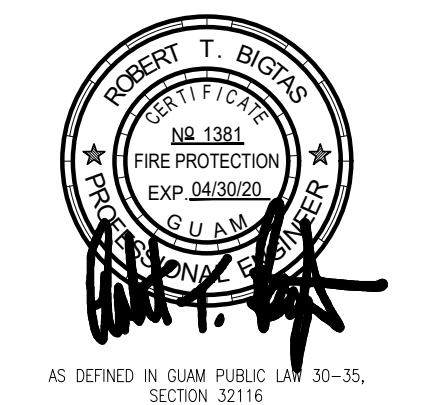


**4 PARTIAL FIFTH FLOOR SPRINKLER PLAN**

FP201 1/8" = 1'-0"



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**PERMIT SET**

**MCH RENOVATION PROJECT, GMHA 007-2014**  
**GMHA FAMILY BIRTH CENTER**  
 850 GOVERNOR CAMACHO ROAD, OKA, TAMUNING, GUAM 96913  
 GUAM MEMORIAL HOSPITAL AUTHORITY  
**PARTIAL 2ND, 3RD, 4TH & 5TH FLOOR SPRINKLER PLANS**

PROJECT TITLE: OWNER: SHEET TITLE:

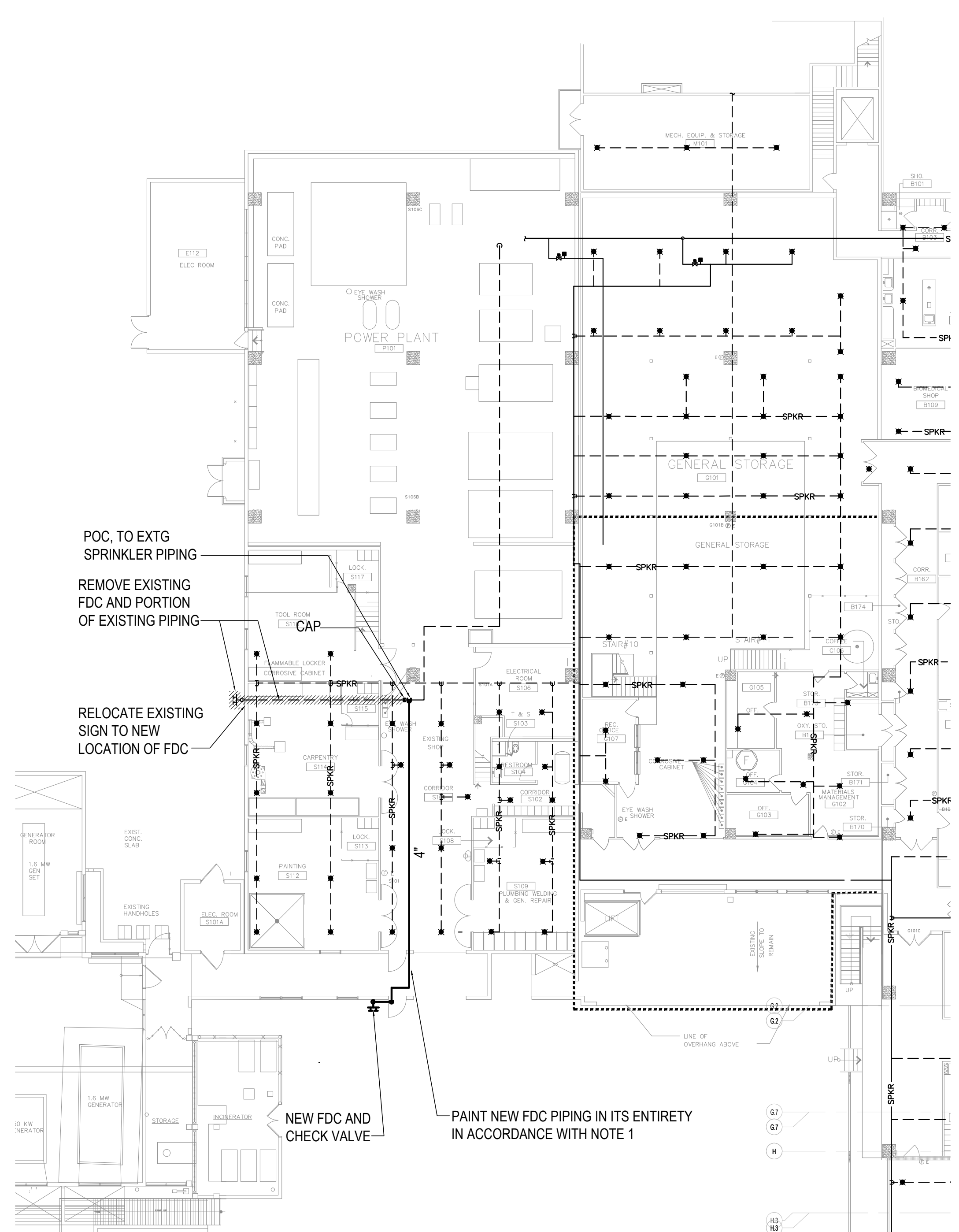
MARK	DATE	DESCRIPTION
5	03-05-17	BKGN UPDATE
1	10-27-16	IFC

DATE : 2015.08.31  
 PROJECT NO : 144052  
 DRAWN BY : PAG  
 CHECKED BY : WPL  
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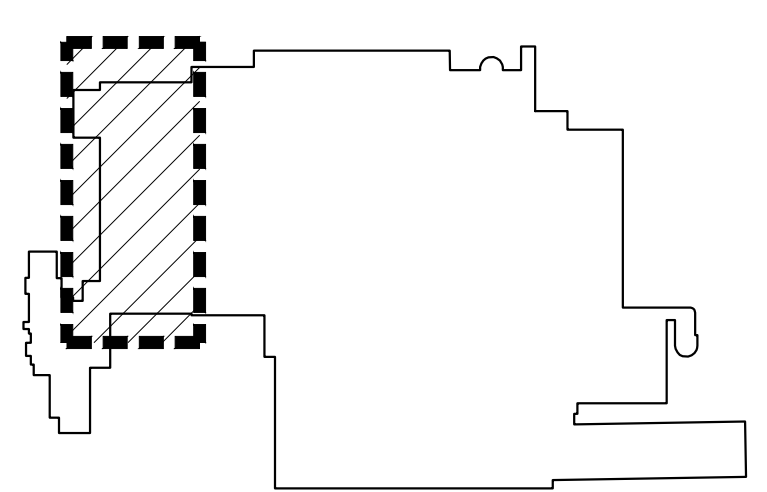
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**FP201**

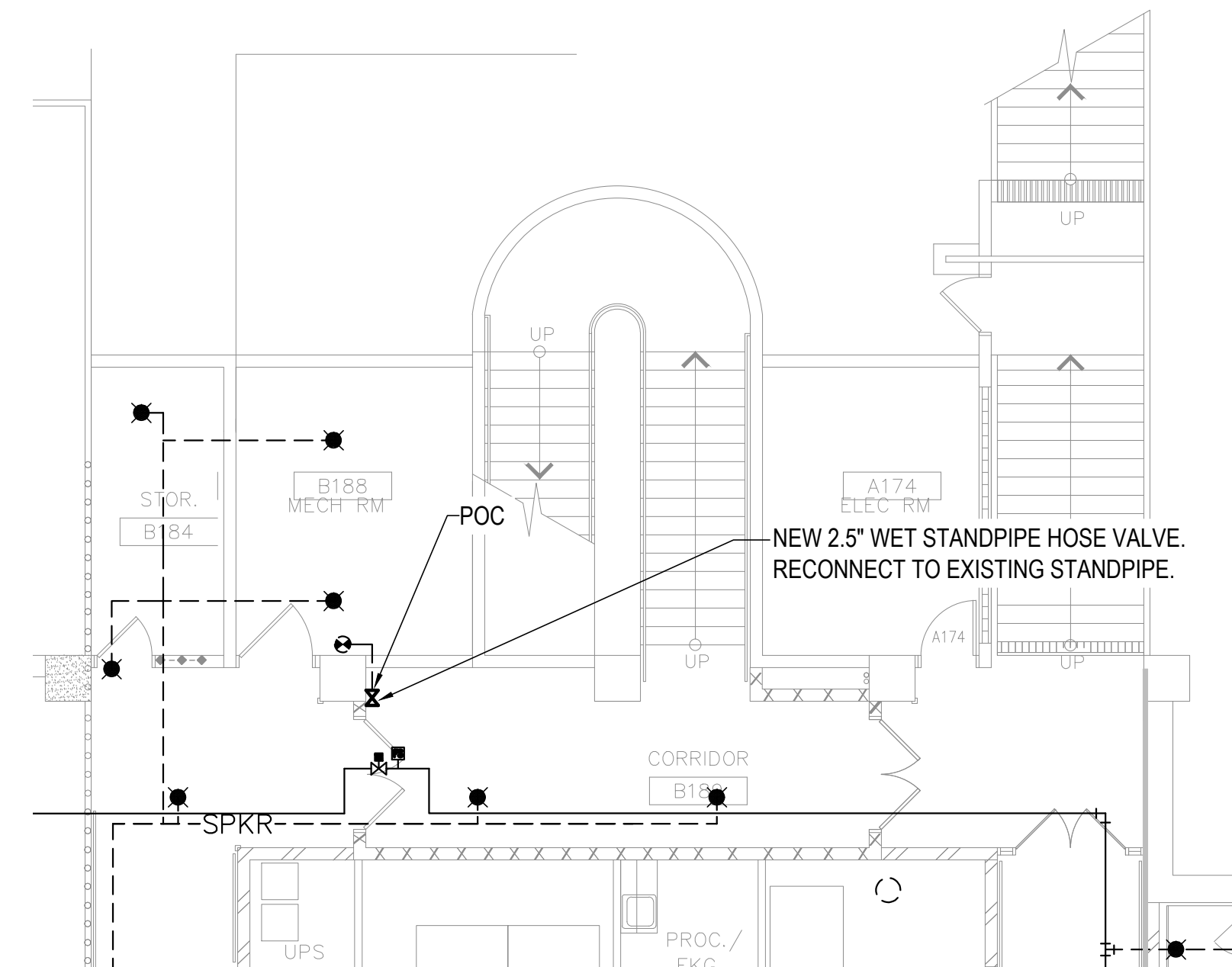




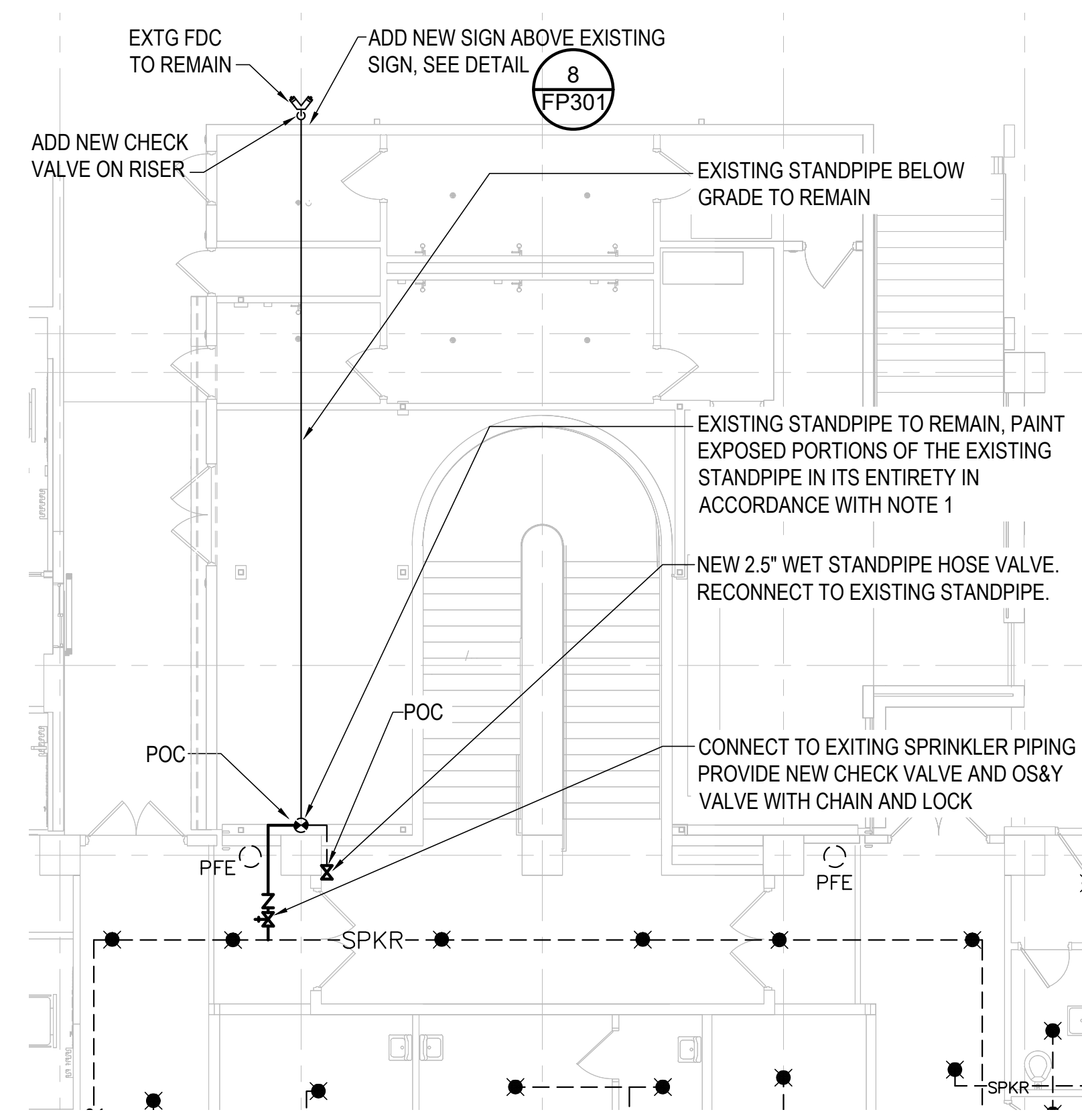
1  
FP301 1/16" = 1'-0"  
0' 4' 8' 16' 32'



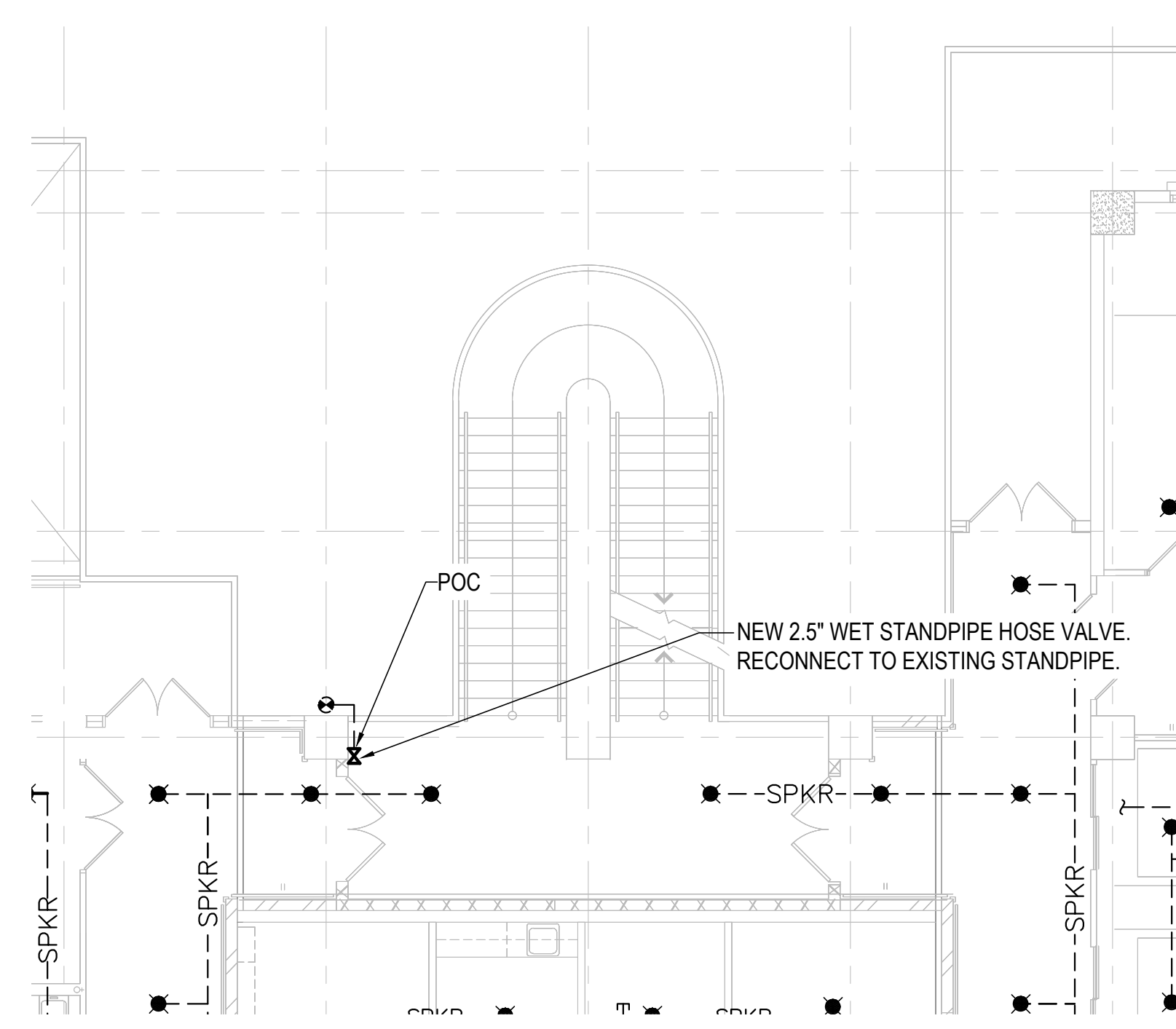
KEY PLAN - POWER PLANT  
NOT TO SCALE



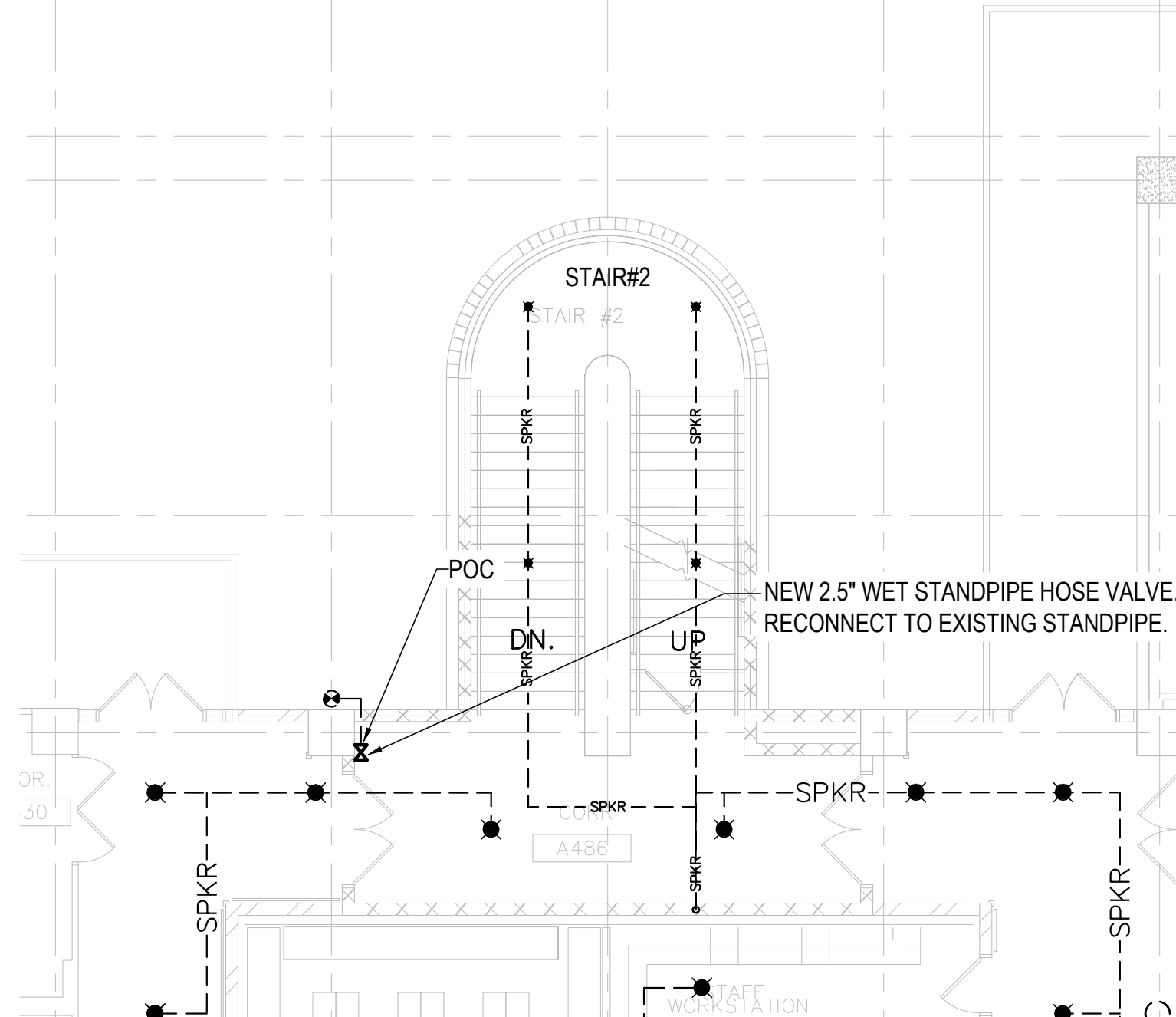
2  
FP301 1/8" = 1'-0"  
0' 4' 8' 16'



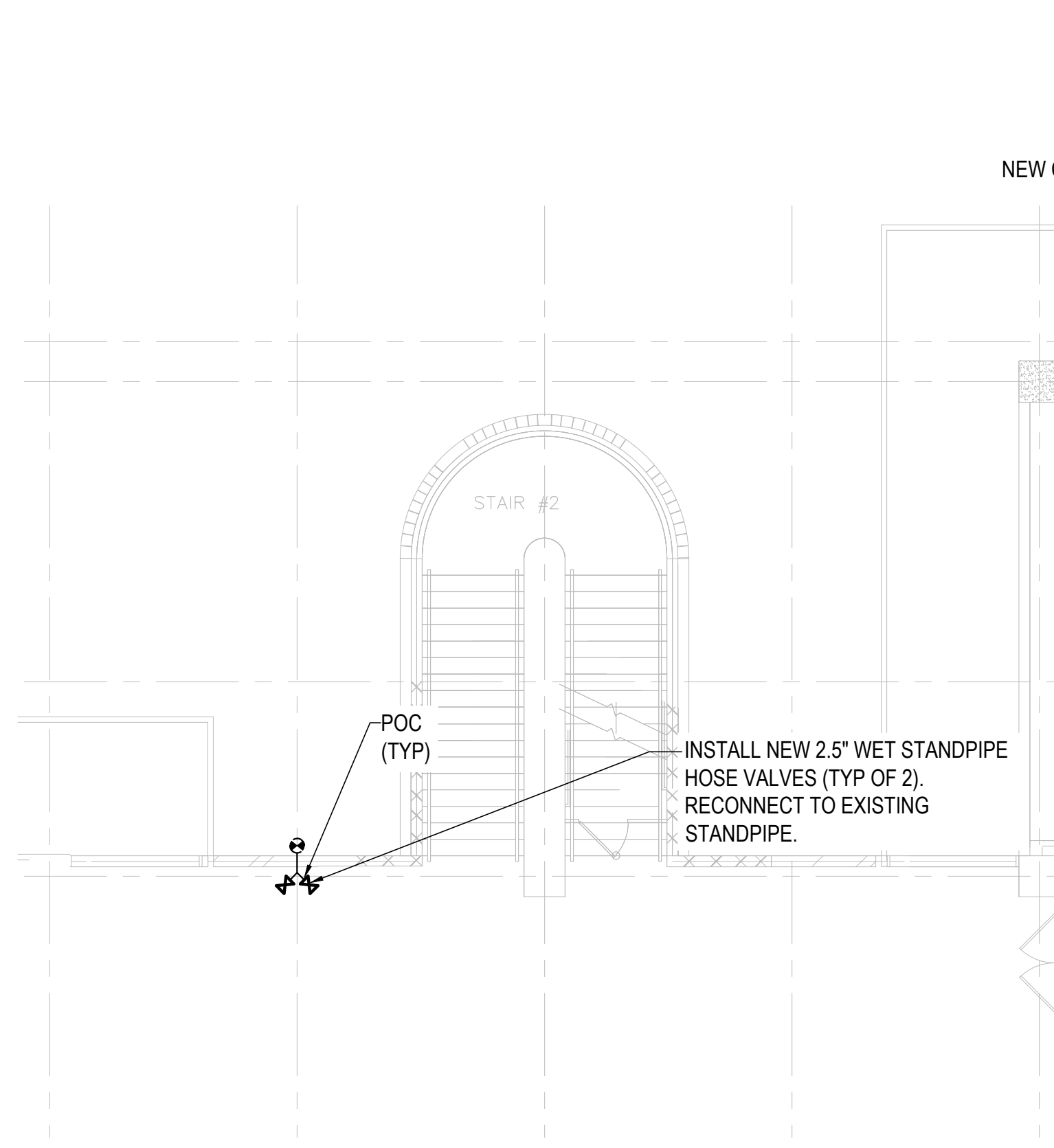
3  
FP301 1/8" = 1'-0"  
0' 4' 8' 16'



4  
FP301 1/8" = 1'-0"  
0' 4' 8' 16'

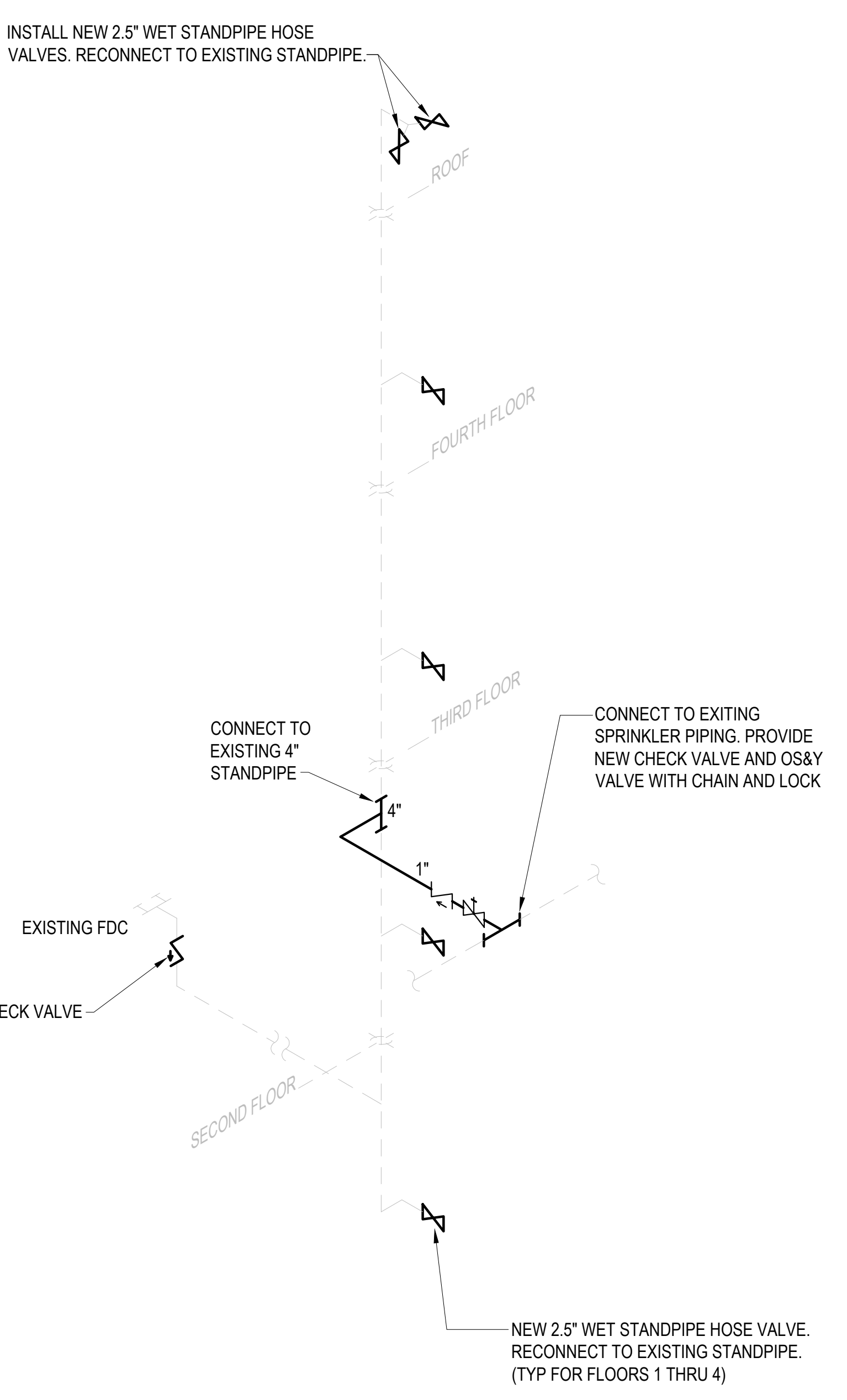


5  
FP301 1/8" = 1'-0"  
0' 4' 8' 16'

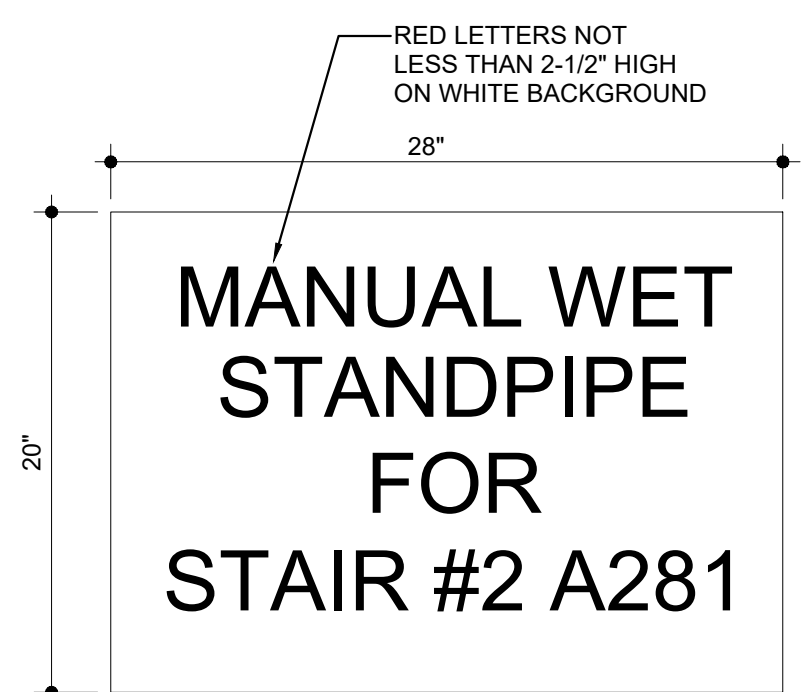


6  
FP301 1/8" = 1'-0"  
0' 4' 8' 16'

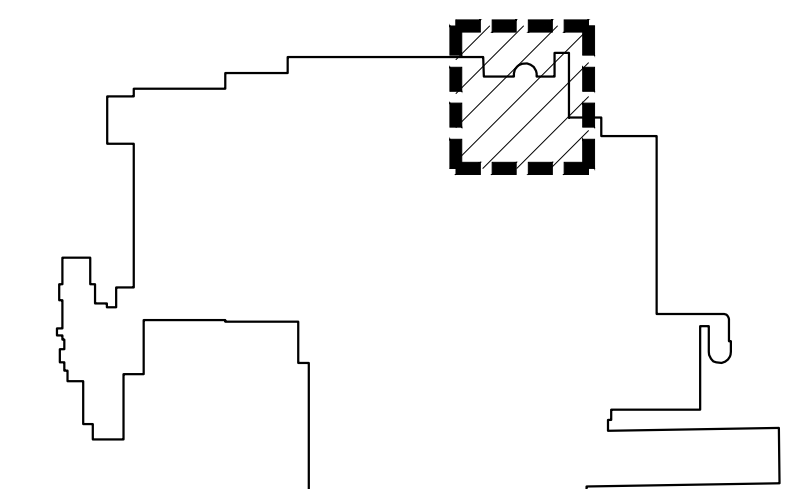
NOTE:  
1. FIELD PAINTING - CLEAN, PRETREAT, PRIME AND PAINT PIPING. APPLY COATINGS TO CLEAN DRY SURFACES USING CLEAN BRUSHES. CLEAN THE SURFACES TO REMOVE DUST, DIRT, RUST AND LOOSE MILL SCALE. IMMEDIATELY AFTER CLEANING, PROVIDE THE METAL SURFACES WITH ONE COAT OF PRETREATMENT PRIMER APPLIED TO A MINIMUM DRY FILM THICKNESS OF 0.3 MIL AND ONE COAT OF PRIMER APPLIED TO A MINIMUM DRY FILM THICKNESS OF 1.0 MIL. PROVIDE PRIME SURFACES WITH TWO COATS OF PAINT, EXCEPT PROVIDE VALVES AND OPERATING ACCESSORIES WITH ONE COAT OF RED ALKYD GLOSS ENAMEL APPLIED TO A MINIMUM DRY FILM THICKNESS OF 1.0 MIL.



7  
FP301



8  
FP301 1-1/2" = 1'-0"  
0' 3' 6' 1' 2'








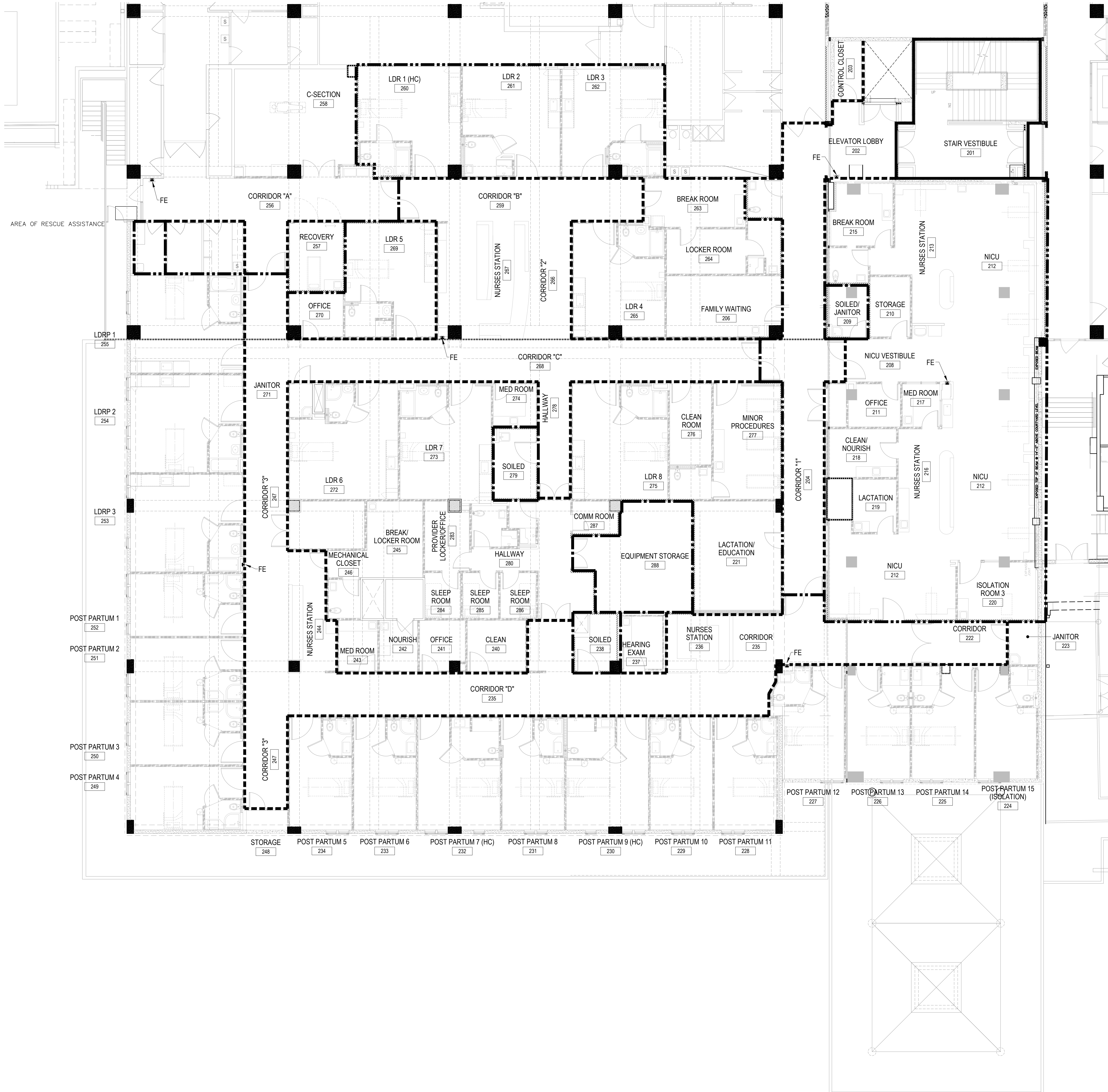
KEY PLAN - CORRIDOR BY STAIR #2 A281  
NOT TO SCALE

PROJECT TITLE:	OWNER:	SHEET TITLE:
5 03-05-17 BKN UPDATE		
1 10-27-16 IFC		
MARK DATE DESCRIPTION		
DATE : 2015.08.31		
PROJECT NO : 144052		
DRAWN BY : JBP		
CHECKED BY : RTB		
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DWG NO:		

EGRESS TABLE		
TOTAL FLOOR AREA	9,500 SQUARE FEET	
TOTAL NUMBER OF OCCUPANTS	80 PERSONS (CALCULATED)	
EXIT WIDTH REQUIRED	LEVEL - 12 INCHES	STAIRS - 16 INCHES
EXIT WIDTH PROVIDED	LEVEL - 84 INCHES	STAIRS - 76 INCHES
MAXIMUM TRAVEL DISTANCE	115 FEET	
MAXIMUM DEAD END CORRIDOR	14 FEET	
MAXIMUM COMMON PATH OF TRAVEL	57 FEET	

**LIFE SAFETY PLAN LEGEND**

-  SMOKE TIGHT PARTITION
-  ONE HOUR RATED FIRE PARTITION
-  ONE HOUR RATED FIRE/SMOKE PARTITION
-  TWO HOUR RATED FIRE PARTITION
-  10lb ABC EXTINGUISHER IN SEMI-RECESSED CABINET



**PARTIAL SECOND FLOOR LIFE SAFETY PLAN**

1/8" = 1'-0"

0' 4' 8' 16'

I CERTIFY THAT THIS DRAWING WAS PREPARED BY ME OR UNDER MY RESPONSIBLE CONTROL.



AS DESIGNED BY GUAM PUBLIC LAW 30-35, SECTION 23116.

**PERMIT SET**

**MCH RENOVATION PROJECT, GMHA 007-2014**  
**GMHA FAMILY BIRTH CENTER**  
 850 GOVERNOR CAMACHO ROAD, OKA, TAMUNING, GUAM 96913

GUAM MEMORIAL HOSPITAL AUTHORITY

**PARTIAL SECOND FLOOR LIFE SAFETY PLAN**

PROJECT TITLE: \_\_\_\_\_ OWNER: \_\_\_\_\_ SHEET TITLE: \_\_\_\_\_

MARK	DATE	DESCRIPTION
5	03-05-17	BKGN UPDATE
2	8-1-16	DPW
1	10-27-16	IFC

DATE : 2015.08.31  
 PROJECT NO : 144052  
 DRAWN BY : RJL  
 CHECKED BY : RJL  
 COPYRIGHT :

DWG NO:

**LS201**