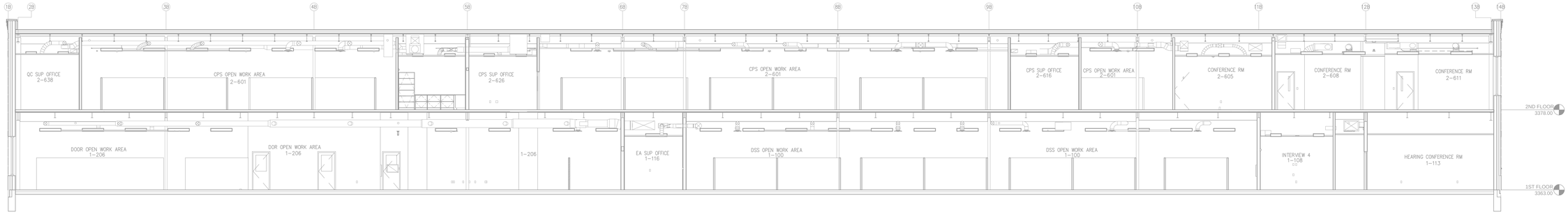
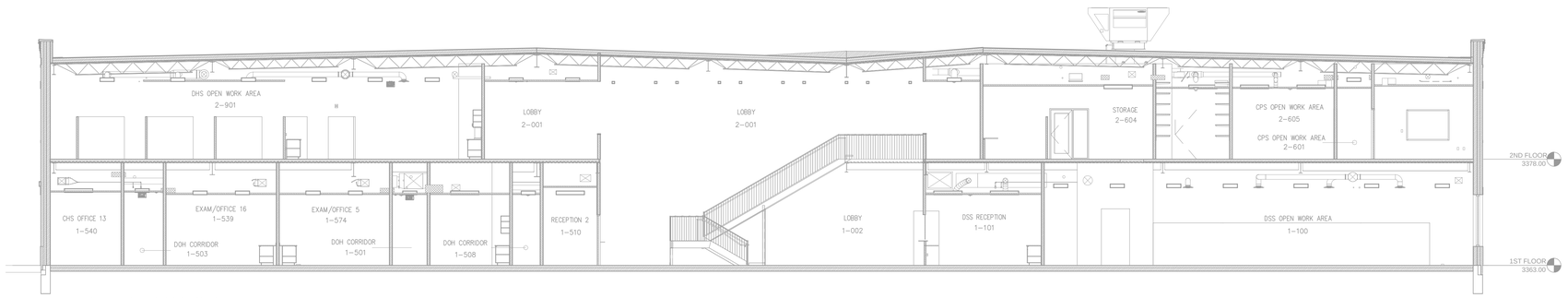


A BUILDING SECTION
SCALE: 1/8" = 1'-0"



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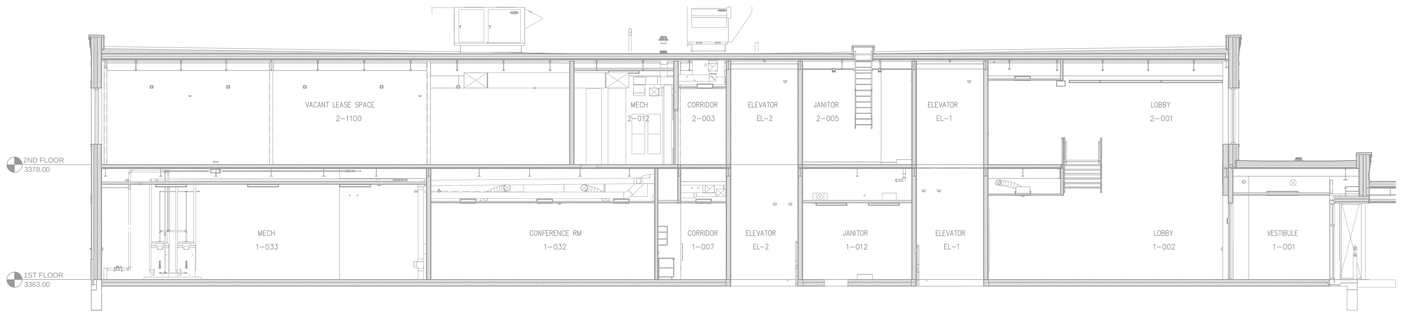
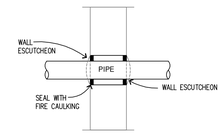
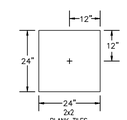


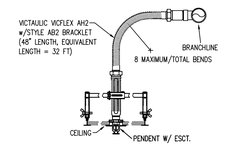
C BUILDING SECTION
SCALE: 1/8" = 1'-0"



FIRE RATED WALL PENETRATION



SPRINKLER PLACEMENT DETAIL



FLEXIBLE SPRINKLER DROP ASSEMBLY
NOTE: UTILIZED ON STEEL BRANCH LINES ONLY

INSTALLATION DETAILS
SCALE: NONE

SPRINKLER LEGEND

SYM	CNT	TYPE	FINISH	TEMP °F	INPT PSIG	MFG. MODEL #	ESCUTCHEON	COVERAGE (LIT/ORD)
	1,036	UPR	BRASS	200	5.60	1/2" RA1441	DUAL-RECESSED	148 SF/100 SF
	1,538	UPR	BRASS	200	5.60	1/2" RA1426	RELIABLE F1FR56	NONE 148 SF/100 SF
	4	SIDE	CHROME	200	5.60	1/2" RA1435	RELIABLE F1FR56	NONE 148 SF/100 SF
	4	PEND	CHROME	200	5.60	1" R5714	RELIABLE F1QR56	SEMI-RECESSED 148 SF/100 SF
	845	TOTAL						

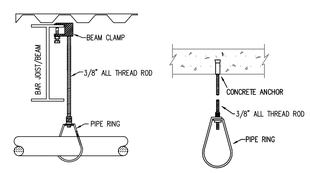
REVISIONS

DATE	DESCRIPTION	BY

PIPE LEGEND

- STEEL FIRE SPRINKLER PIPING
- FDC (STEEL) FIRE SPRINKLER PIPING
- CPVC SPRINKLER PIPING
- UNDERGROUND PIPING

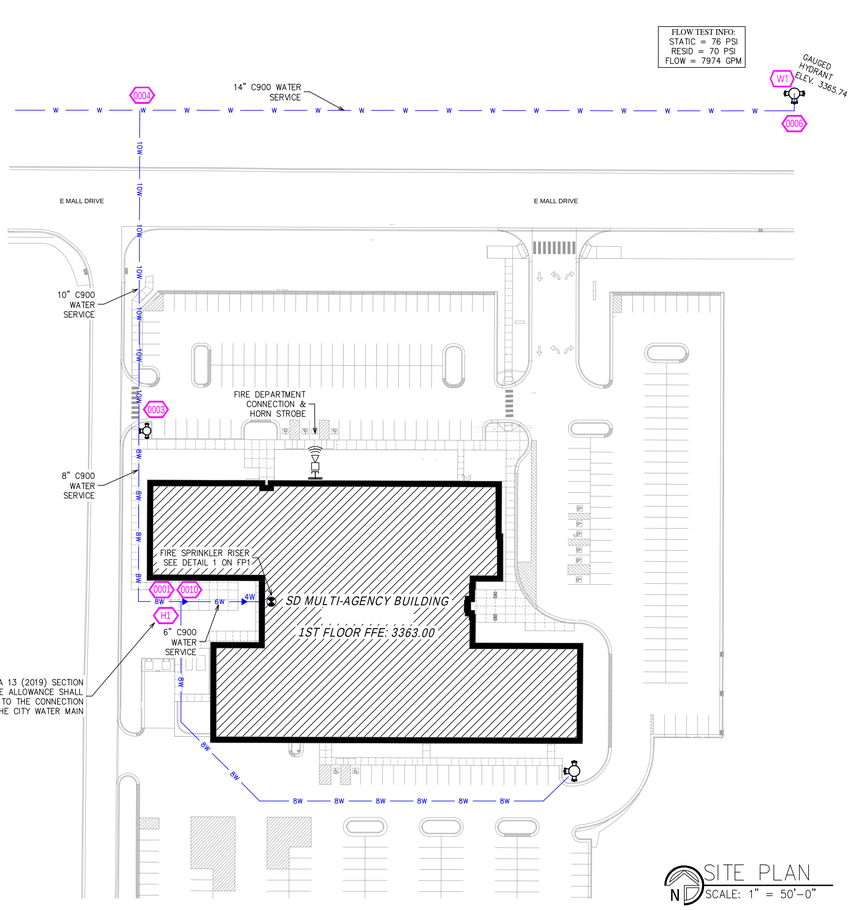
MAXIMUM DISTANCE BETWEEN HANGERS (FT.-IN.)						
	NOMINAL PIPE SIZE (IN.)					
	1"	1 ¼"	1 ½"	2"	2 ½"	3"
STEEL PIPE	12-0	12-0	15-0	15-0	15-0	15-0
CPVC PIPE	6-0	6-6	7-0	8-0	9-0	10-0



BEAM CLAMP ANCHOR AND HANGER DETAIL

DRILLED CONCRETE ANCHOR HANGER

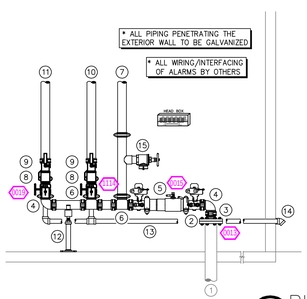
HANGER DETAILS
SCALE: NONE



SITE PLAN
N SCALE: 1" = 50'-0"

GENERAL NOTES

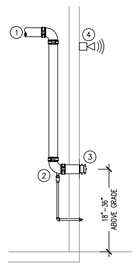
1. INTERNATIONAL BUILDING CODE (2018), INTERNATIONAL FIRE CODE (2003 WITH AMENDMENTS)
   - 1.1. OCCUPANCY: B-BUSINESS
   - 1.2. TYPE OF CONSTRUCTION: IIB (NONCOMBUSTIBLE)
   - 1.3. SPRINKLERED AREAS ZONED PER FLOOR (APPROXIMATE - SEE ARCHITECTURAL PLANS FOR ACTUAL)
     1ST FLOOR (ZONE 1) = 49,500 S.F.
     2ND FLOOR (ZONE 2) = 47,500 S.F.
     TOTAL = 97,000 S.F.
   - 1.4. INSTALLATION STANDARDS: SPRINKLER SYSTEM DESIGNED AND INSTALLED PER NFPA-13 (2019)
2. SPRINKLER PIPE TYPES:
   - 2.1. 1" BRANCH LINES TO BE BLK SCHEDULE 40 PIPING WITH THREADED FITTINGS AND/OR CPVC WITH GLUED FITTINGS
   - 2.2. 1-1/4" THROUGH 2" MAIN & BRANCH LINES TO BE BLK SCHEDULE 10 PIPING WITH SHORT RADIUS GROOVED FITTINGS AND/OR CPVC WITH GLUED FITTINGS
   - 2.3. 2-1/2" THROUGH 3" MAIN & BRANCH LINES TO BE BLK SCHEDULE 10 PIPING WITH SHORT RADIUS GROOVED FITTINGS
3. DESIGN CRITERIA
   - 3.1. ROOMS, CORRIDORS, LOBBYS AND SIMILAR AREAS DESIGNED TO LIGHT HAZARD
   - 3.2. MECH ROOMS, STORAGE ROOMS AND SIMILAR AREAS DESIGNED TO ORDINARY HAZARD GROUP 1
   - 3.3. REMOTE AREA REDUCTIONS HAVE BEEN TAKEN WHERE APPLICABLE PER NFPA 13 SEC. 19.3.3.2.3
4. NOTES:
   - 4.1. ALL MATERIAL TO BE NEW AND MEET U.L. STANDARDS
   - 4.2. HANGERS TO BE INSTALLED IN ACCORDANCE WITH NFPA 13 - SEE PLAN FOR HANGING REQUIREMENTS
5. SYMBOLS USED ON DRAWINGS:
   - 9'6" PIPE ELEVATION A.F.F
   - +12" PIPE ELEVATION BELOW B.O.D
   - OH1 ROOM HAZARD CLASSIFICATION (ALL ROOMS ARE CONSIDERED LIGHT HAZARD UNLESS NOTED)
   - F1 HYDRAULIC CALCULATION JUNCTION POINT
   - 10'0" CEILING HEIGHT
6. SCOPE OF WORK:
   - 6.1. PROVIDE WET FIRE SPRINKLER SYSTEM ZONED PER FLOOR FOR NEW BUILDING
   - 6.2. ALL AREAS OF THE BUILDING TO BE INSTALLED AND COVERED IN ACCORDANCE WITH THE LOCAL AUTHORITY HAVING JURISDICTION AND PER NFPA 13



RISER LEGEND

1. 4" WATER SERVICE (BY OTHERS)
   (FLUSHING & TESTING OF THE UNDERGROUND SHALL BE COMPLETED PRIOR TO THE SPRINKLER SYSTEM HOOKUP. UNDERGROUND PAPERS ARE TO BE SUPPLIED TO THE "FP" CONTRACTOR BY THE G.C.)
2. 4" GROOVED FLANGE
3. 4"x3" GROOVED REDUCER
4. 3" GROOVED 90 ELBOW
5. 3" AMES C200 BACKFLOW PREVENTER w/ SUPERVISED BUTTERFLY VALVES
6. 3" GROOVED TEE
7. 3" TO REMOTE FDC (SEE DETAIL 2 ON FP1)
8. 3" GROOVED VICTAULIC 705 SUPERVISED BUTTERFLY VALVE
9. 3" GROOVED VICTAULIC COMMERICAL RISER MANIFOLD w/ FLOW SWITCH, PRESSURE GAUGE, & TEST AND DRAIN w/ PRV
10. 3" TO 1ST FLOOR (ZONE 1)
11. 3" TO 2ND FLOOR (ZONE 2)
12. PIPE STAND
13. 1-1/4" COMBINED MAIN DRAIN
14. 1-1/4" COMBINED MAIN DRAIN DISCHARGE WITH GALV. WALL PLATE AND GALV. THREADED 45 DEGREE ELBOW
15. 2-1/2" HOSE VALVE (A MEANS FOR BACKFLOW PREVENTER FORWARD FLOW TESTING PER NFPA 13, 16.14.5.1)

1 RISER DETAIL
SCALE: 1/2" = 1'-0"



REMOTE FDC LEGEND

1. 3" TO RISER
2. 3" GROOVED DRAIN 90 ELBOW w/ AUTOMATIC BALL DRIP VALVE PIPED TO BUILDING EXTERIOR
3. 2-1/2" SINGLE INLET FDC
4. HORN STROBE (BY OTHERS)

2 REMOTE FDC DETAIL
SCALE: 1/2" = 1'-0"

SD MULTI-AGENCY BUILDING

FIRE SPRINKLER PLAN

PERMIT NO.
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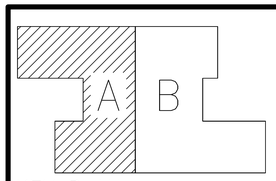
SUBMITTED
PLOTTED

FP - 1 OF 5



KEY PLAN

NTS

CALC PLACARD

Design Area #: 2 HAZARD: LH
Zone: 1 System Type: WET
Location: 1ST FLOOR NORTH WEST

Flowing Outlets: 6
Density: 0.10 Remote Area: 1060
Flow 229.2 gpm @ 64.5 psi
Calculation Safety: 5.4 psi
Includes 100 gpm Hose allowance

NOTE:
1500 S.F. DECREASED BY 33% PER NFPA FIGURE 19.3.3.2.3.1 FOR A DESIGN AREA OF 1001 S.F. BASED ON A CEILING HEIGHT OF 14'6

FIRE SPRINKLER PLAN – 1ST FLOOR AREA A

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

PIPE LEGEND

- STEEL FIRE SPRINKLER PIPING
- FDC (STEEL) FIRE SPRINKLER PIPING
- CPVC SPRINKLER PIPING
- UNDERGROUND PIPING

MAXIMUM DISTANCE BETWEEN HANGERS (FT.–IN.)						
	NOMINAL PIPE SIZE (IN.)					
	1"	1 ¼"	1 ½"	2"	2 ½"	3"
STEEL PIPE	12–0	12–0	15–0	15–0	15–0	15–0
CPVC PIPE	6–0	6–6	7–0	8–0	9–0	10–0

SPRINKLER LEGEND

SYM	CNT	TYPE	FINISH	TEMP °F	1/2"	SIN	MFG.	MODEL#	ESCUTCHEON	COVERAGE (SF/CNT)
●	1358	UPR	BRASS	200	5.60	1/2"	RALEIGH	TY1156	NONE-RECESSED	148 SF/100 SF
●	1358	UPR	BRASS	200	5.60	1/2"	RALEIGH	TY1156	NONE-RECESSED	148 SF/100 SF
◁	4	SIDE	CHROME	200	5.60	1/2"	RALEIGH	TY1856	NONE	148 SF/100 SF
◆	4	PEND	CHROME	200	5.60	1"	RELIABLE	F1QR56	SEMI-RECESSED	148 SF/100 SF
	845	TOTAL								

REVISIONS

DATE	DESCRIPTION	BY

SD MULTI-AGENCY BUILDING

FIRE SPRINKLER PLAN

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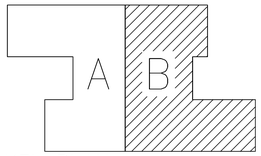
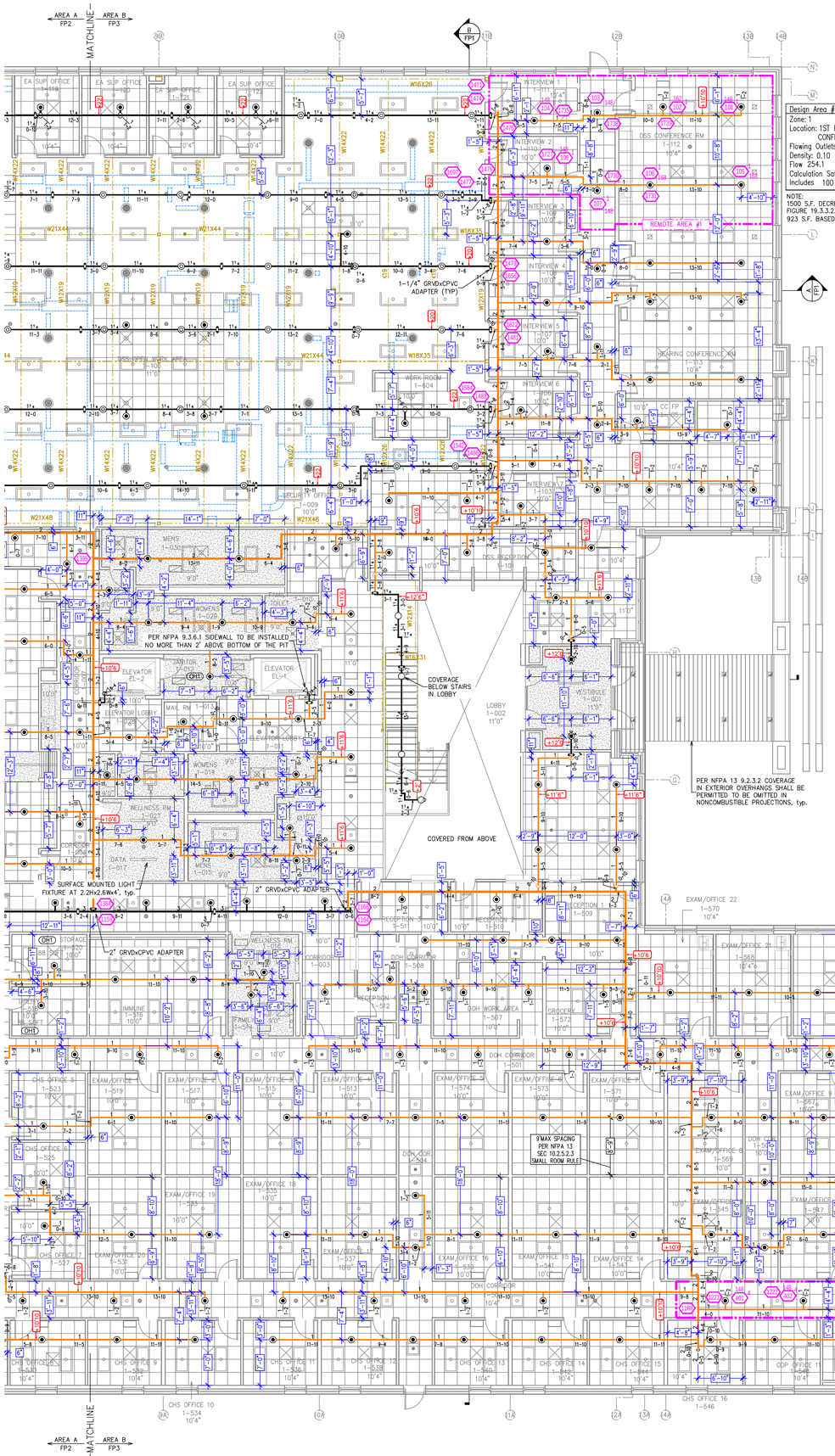


KEY PLAN
NTS



INSTALLATION NOTE:
UPRIGHT SPRINKLERS TO BE INSTALLED WITH THE DEFLECTOR 1" TO 6" BELOW THE BOTTOM OF BEAMS BUT NO MORE THAN 22" BELOW THE DECK (TYP)

MAXIMUM DISTANCE BETWEEN HANGERS (FT.–IN.)						
	NOMINAL PIPE SIZE (IN.)					
	1"	1 ¼"	1 ½"	2"	2 ½"	3"
STEEL PIPE	12–0	12–0	15–0	15–0	15–0	15–0
CPVC PIPE	6–0	6–6	7–0	8–0	9–0	10–0

PIPE LEGEND

- STEEL FIRE SPRINKLER PIPING
- FDC (STEEL) FIRE SPRINKLER PIPING
- CPVC SPRINKLER PIPING
- UNDERGROUND PIPING

FIRE SPRINKLER PLAN – 1ST FLOOR AREA B

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

SPRINKLER LEGEND

SYM	CNT	TYPE	FINISH	TEMP °F	INPT	SIN	MFG.	MODEL#	ESCUTCHEON	COVERAGE (SF/SPK)
	1	SIDE	CHROME	200	5.60	1/2"	RALEIGH	F1FR56	NONE-RECESSED	148 SF/100 SF
	1258	UPR	BRASS	200	5.60	1/2"	RALEIGH	F1FR56	NONE	148 SF/100 SF
	4	SIDE	CHROME	200	5.60	1/2"	RALEIGH	F1FR56	NONE	148 SF/100 SF
	4	PEND	CHROME	200	5.60	1"	RELIABLE	F1QR56	SEMI-RECESSED	148 SF/100 SF
	845	TOTAL								

REVISIONS

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SD MULTI-AGENCY BUILDING

FIRE SPRINKLER PLAN

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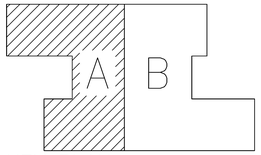
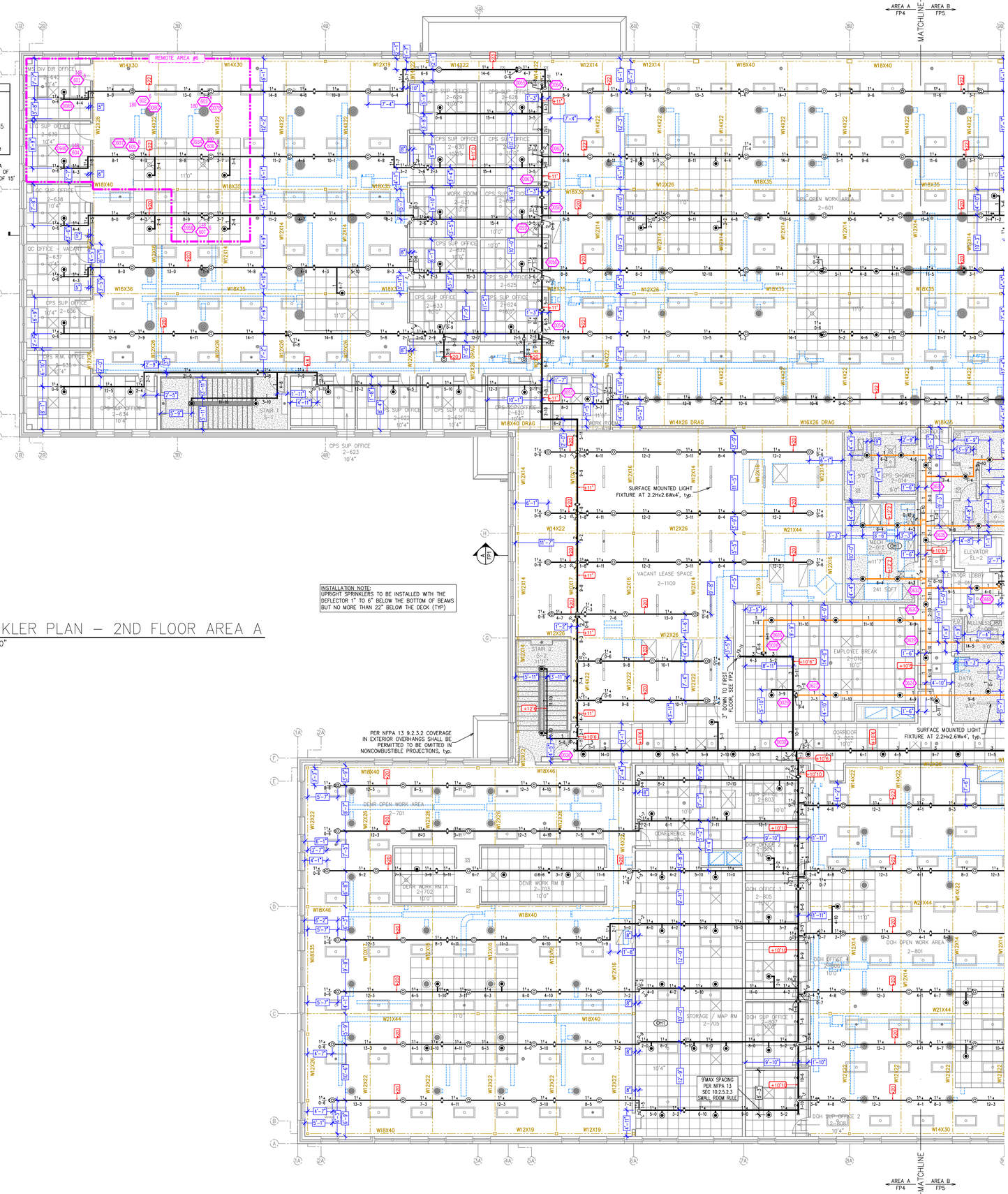


KEY PLAN
NTS

Design Area #: 6	HAZARD: LH
Zone: 2	System Type: WET
Location: 2ND FLOOR NORTH WEST	
Flowing Outlets: 7	
Density: 0.10	Remote Area: 1145
Flow 241.7 gpm @ 55.8 psi	
Calculation Safety: 14.2 psi	
Includes 100 gpm Hose allowance	

NOTE:
1500 S.F. DECREASED BY 32% PER NFPA FIGURE 19.3.3.2.3.1 FOR A DESIGN AREA OF 1013 S.F. BASED ON A CEILING HEIGHT OF 15'



FIRE SPRINKLER PLAN – 2ND FLOOR AREA A
SCALE: 1/8" = 1'-0"

PIPE LEGEND

- STEEL FIRE SPRINKLER PIPING
- FDC (STEEL) FIRE SPRINKLER PIPING
- CPVC SPRINKLER PIPING
- UNDERGROUND PIPING

MAXIMUM DISTANCE BETWEEN HANGERS (FT.–IN.)						
	NOMINAL PIPE SIZE (IN.)					
	1"	1 ¼"	1 ½"	2"	2 ½"	3"
STEEL PIPE	12–0	12–0	15–0	15–0	15–0	15–0
CPVC PIPE	6–0	6–6	7–0	8–0	9–0	10–0

SPRINKLER LEGEND

SYM	CNT	TYPE	FINISH	TEMP °F	ORIFICE INCH	MODEL # SIN	MFG.	ESCUTCHEON	COVERAGE (SF/CPV)
	1358	UPR	BRASS	200	5.60	1/2" R4A	RELIABLE	SEMI-RECESSED	148 SF/100 SF
	4	SIDE	CHROME	200	5.60	1/2" RA1435	RELIABLE	NONE	148 SF/100 SF
	4	PEND	CHROME	200	5.60	1" R5714	RELIABLE	SEMI-RECESSED	148 SF/100 SF
	845	TOTAL							

REVISIONS

DATE	DESCRIPTION	BY

SD MULTI-AGENCY BUILDING

FIRE SPRINKLER PLAN

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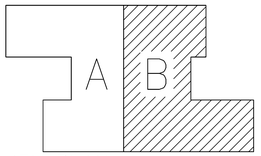
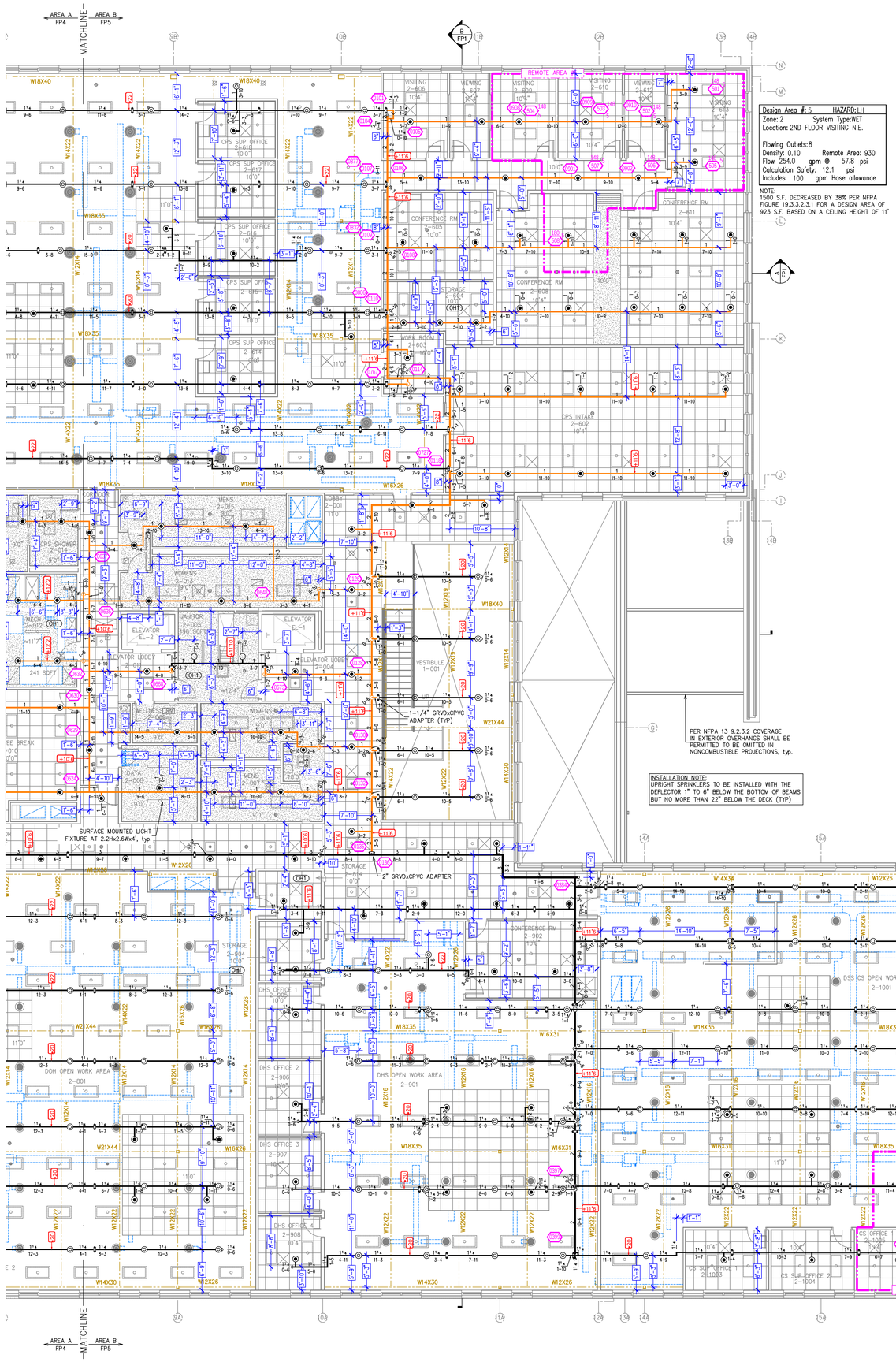


KEY PLAN
NTS



Design Area #: 5 HAZARD: LH
Zone: 2 System Type: WET
Location: 2ND FLOOR VISITING N.E.

Flowing Outlets: 8
Density: 0.10 Remote Area: 930
Flow 254.0 gpm @ 57.8 psi
Calculation Safety: 12.1 psi
Includes 100 gpm Hose allowance

NOTE:
1500 S.F. DECREASED BY 38% PER NFPA FIGURE 19.3.3.2.3.1 FOR A DESIGN AREA OF 923 S.F. BASED ON A CEILING HEIGHT OF 11'

Design Area #: 7 HAZARD: LH
Zone: 2 System Type: WET
Location: 2ND FLOOR SOUTH EAST

Flowing Outlets: 7
Density: 0.10 Remote Area: 1020
Flow 227.6 gpm @ 55.8 psi
Calculation Safety: 10.3 psi
Includes 100 gpm Hose allowance

NOTE:
1500 S.F. DECREASED BY 32% PER NFPA FIGURE 19.3.3.2.3.1 FOR A DESIGN AREA OF 1013 S.F. BASED ON A CEILING HEIGHT OF 15'

CALC PLACARD

INSTALLATION NOTE:
UPRIGHT SPRINKLERS TO BE INSTALLED WITH THE DEFLECTOR 1" TO 6" BELOW THE BOTTOM OF BEAMS BUT NO MORE THAN 22" BELOW THE DECK (TYP)

MAXIMUM DISTANCE BETWEEN HANGERS (FT.–IN.)

	NOMINAL PIPE SIZE (IN.)					
	1"	1 ¼"	1 ½"	2"	2 ½"	3"
STEEL PIPE	12–0	12–0	15–0	15–0	15–0	15–0
CPVC PIPE	6–0	6–6	7–0	8–0	9–0	10–0

PIPE LEGEND
- STEEL FIRE SPRINKLER PIPING
- FDC (STEEL) FIRE SPRINKLER PIPING
- CPVC SPRINKLER PIPING
- UNDERGROUND PIPING

FIRE SPRINKLER PLAN – 2ND FLOOR AREA B
SCALE: 1/8" = 1'-0"

SPRINKLER LEGEND

SYM	CNT	TYPE	FINISH	TEMP °F	K	MFG.	MODEL#	ESCUTCHEON	COVERAGE (LH/OH)
	1358	UPR	BRASS	200	5.60	1/2"	R4414 RELIABLE	F1FR56	NONE-RECESSED 148 SF/100 SF
	1358	UPR	BRASS	200	5.60	1/2"	R4425 RELIABLE	F1FR56	NONE-RECESSED 148 SF/100 SF
	4	SIDE	CHROME	200	5.60	1/2"	R4435 RELIABLE	F1FR56	NONE 148 SF/100 SF
	4	PEND	CHROME	200	5.60	1"	R5714 RELIABLE	F1QR56	SEMI-RECESSED 148 SF/100 SF
	815	TOTAL							

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DATE	DESCRIPTION	BY

SD MULTI-AGENCY BUILDING

FIRE SPRINKLER PLAN

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