

GENERAL NOTES & LEGEND

THESE SHOP DRAWINGS ARE BASED ON THE OWNER'S ACCEPTANCE OF NFPA 25 AS THE OWNER'S STANDARD FOR THE INSPECTION, TESTING AND MAINTENANCE OF WATER-BASED FIRE PROTECTION SYSTEMS.

OWNER TO PROVIDE ADEQUATE HEAT THROUGHOUT THE ENTIRE BUILDING TO PREVENT ALL SPRINKLER PIPING FROM FREEZING.

ALL DESIGN, MATERIAL & INSTALLATION TO COMPLY WITH ALL LOCAL REQUIREMENTS AND APPLICABLE NFPA STANDARDS.

REMOTE STATION MONITORING OF SPRINKLER SYSTEM PER NFPA 101B 7.2.1 TO BE BY OTHERS.

ALL ELECTRICAL WIRING TO BE BY OTHERS.

ALL SPRINKLER PIPING IS TO BE SUPPORTED IN ACCORDANCE WITH NFPA-13 STANDARDS.

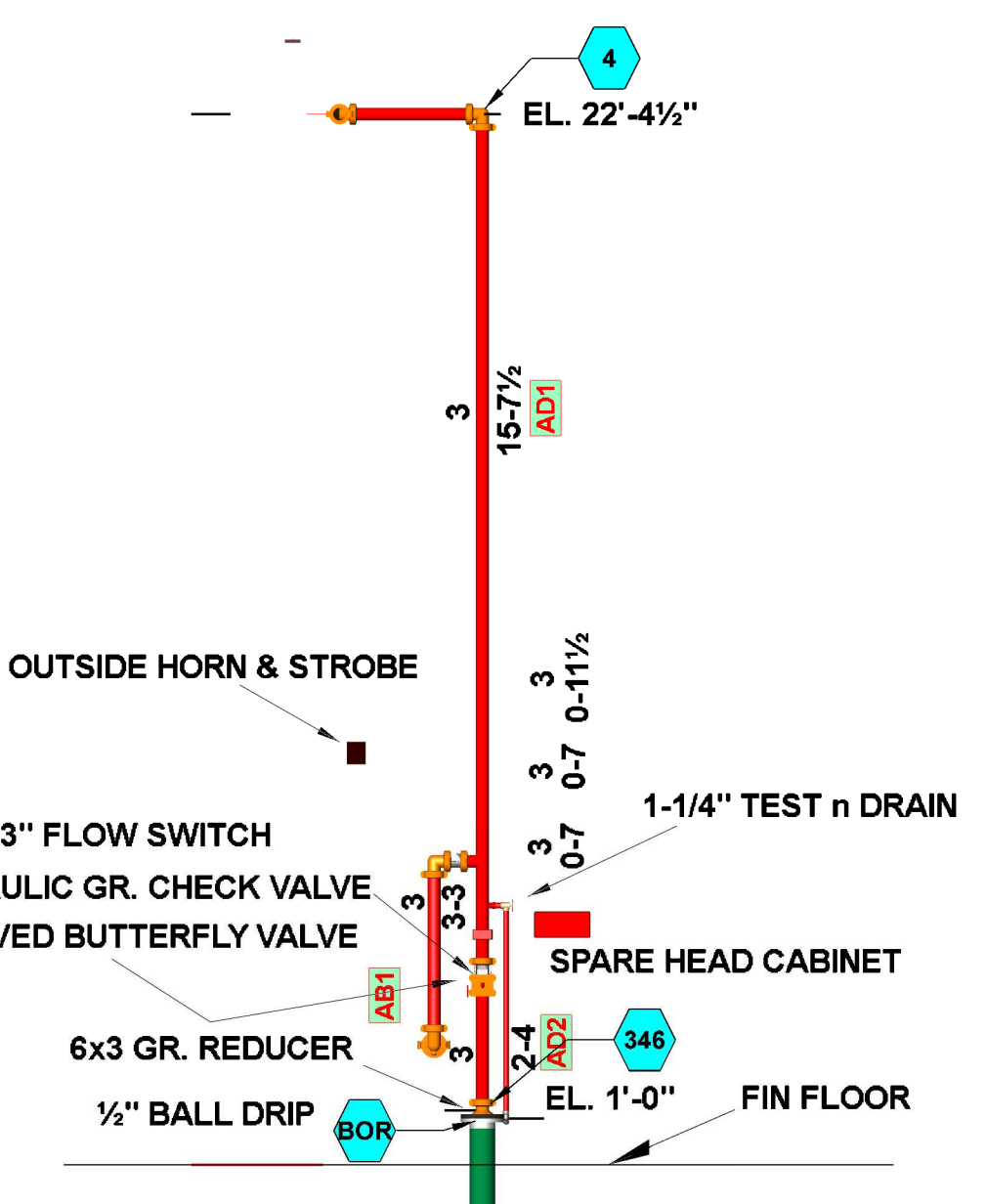
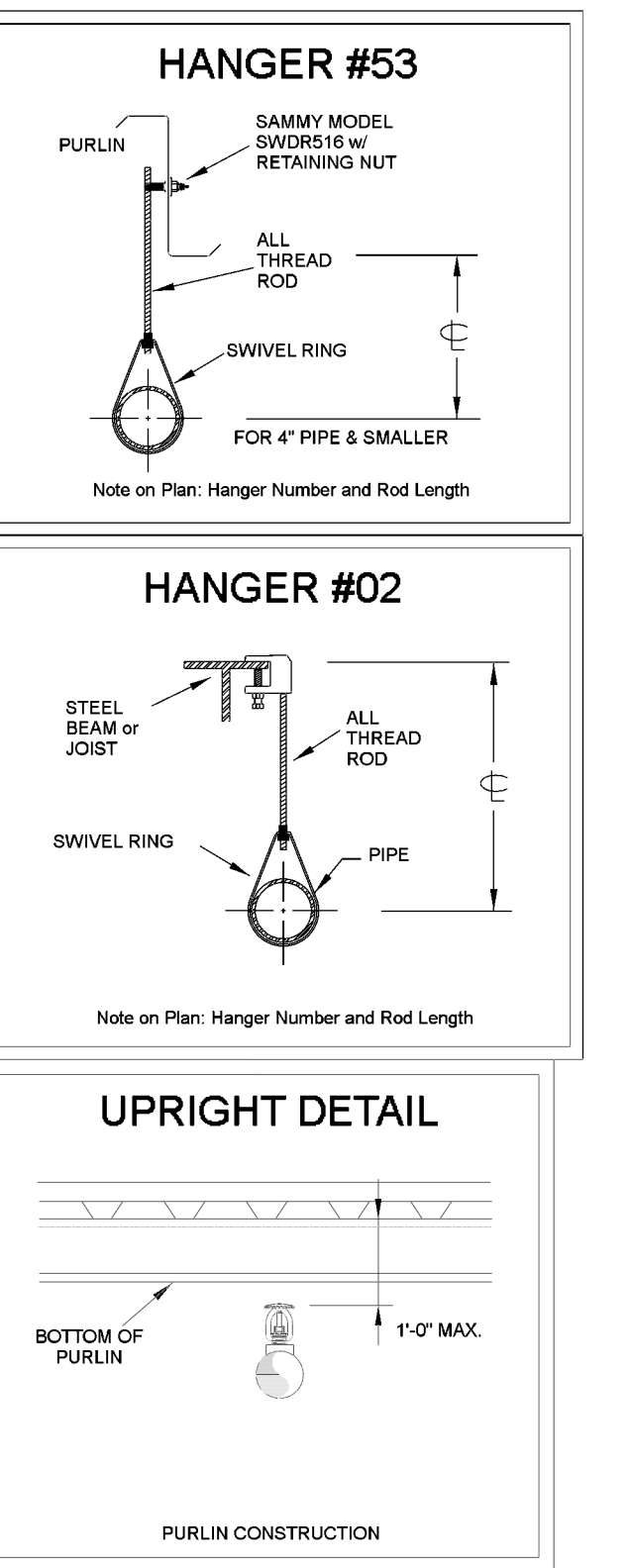
ALL PENETRATIONS THROUGH FIRE RATED PARTITIONS & FLOORS ARE TO BE FIRE STOPPED IN ACCORDANCE WITH LOCAL STANDARDS.

P.O.L. - PIPE OR L. S.N. - SHAPED NIPPLE
D.N. - DOWN OR DROP NIPPLE R.N. - RISER NIPPLE
H.T. - TO BE HUNG IN FIELD C.O.J. - CUT ON JOBS
U.N.D. - UNLESS NOTED OTHERWISE N.T.S. - NOT TO SCALE

ALL SPRINKLER PIPING IS TO BE SUPPORTED IN ACCORDANCE WITH NFPA-13 STANDARDS.

0'-0" C. - FROM BOTTOM OF CONCRETE/TOP OF BEAM TO CENTER OF PIPE
0'-0" FF - FROM FINISHED FLOOR TO CENTER OF PIPE
C. - CEILING HEIGHT

AIR VENTS TO BE INSTALLED NEAR HIGH POINT IN SYSTEM. VENT SHALL BE EITHER:
1. MANUAL VALVE (1/2" MIN.)
2. AUTOMATIC
3. OTHER APPROVED TYPE MEANS.



RISER DETAIL LOOKING SOUTH

1/4"=1'-0"



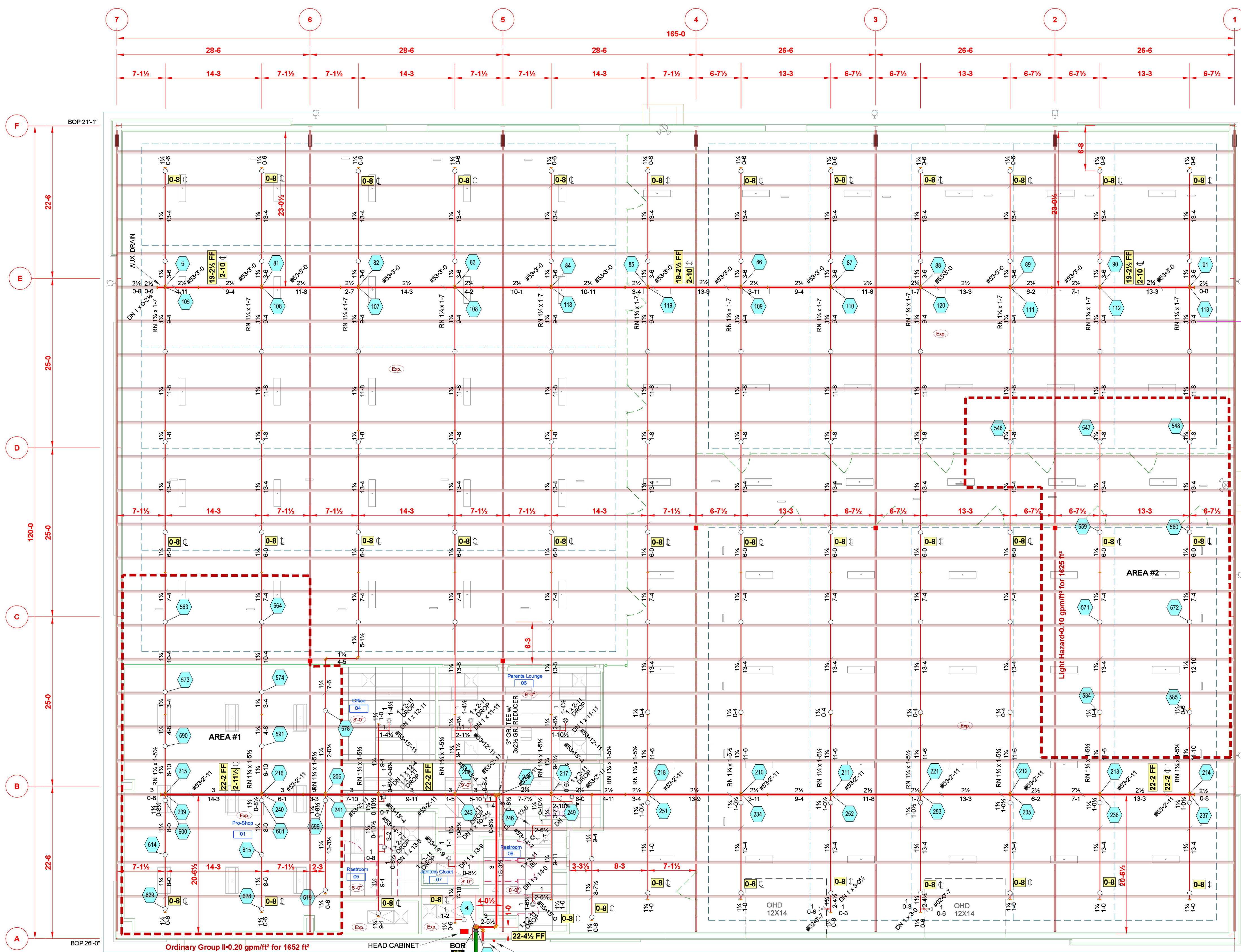
FOR INSTALLATION



D-Bat - Town Centre
540 NE Town Centre Blvd
Lee's Summit, Missouri

CONTRACT NO.	DATE	REVISIONS	DESIGNED BY	CHECKED BY	DATE
1	11/14/22	CHANGES PER CITY REVIEWER			
NO.	DATE	REVISIONS			

PROJECT	OWNER	DATE
FIRE SPRINKLER PIPING PLAN	Owner	11/14/22
1/8"=1'-0"	#21-0348	FP-2 of 2



Hydraulic Information	
Remote Area 2	
OCCUPANCY CLASSIFICATION	Light Hazard
DENSITY (gpm/ft²)	0.10 for 1500 ft² (Actual 1625 ft²)
TOTAL HOSE STREAMS	250.00
TOTAL HEADS FLOWING	8
K-FACTOR	5.6
TOTAL WATER REQUIRED	425.88
TOTAL PRESSURE REQUIRED	33.927
BASE OF RISER (gpm)	176.88
BASE OF RISER (psi)	30.289
SAFETY MARGIN (psi)	+41.890 (86.3%)

Hydraulic Information	
Remote Area 1	
OCCUPANCY CLASSIFICATION	Ordinary Group II
DENSITY (gpm/ft²)	0.20 for 1500 ft² (Actual 1652 ft²)
TOTAL HOSE STREAMS	250.00
TOTAL HEADS FLOWING	16
K-FACTOR	5.6
TOTAL WATER REQUIRED	869.43
TOTAL PRESSURE REQUIRED	66.258
BASE OF RISER (gpm)	419.43
BASE OF RISER (psi)	60.714
SAFETY MARGIN (psi)	+4.703 (8.2%)

FIRE SPRINKLER PLAN

1/8"=1'-0"
ALL LINE HANGERS TO BE #53-0-11 U.N.O.
FINISHED FLOOR EL. 0'-0" U.N.O.
BOTTOM OF PURLIN (AS NOTED)

DESIGN CRITERIA

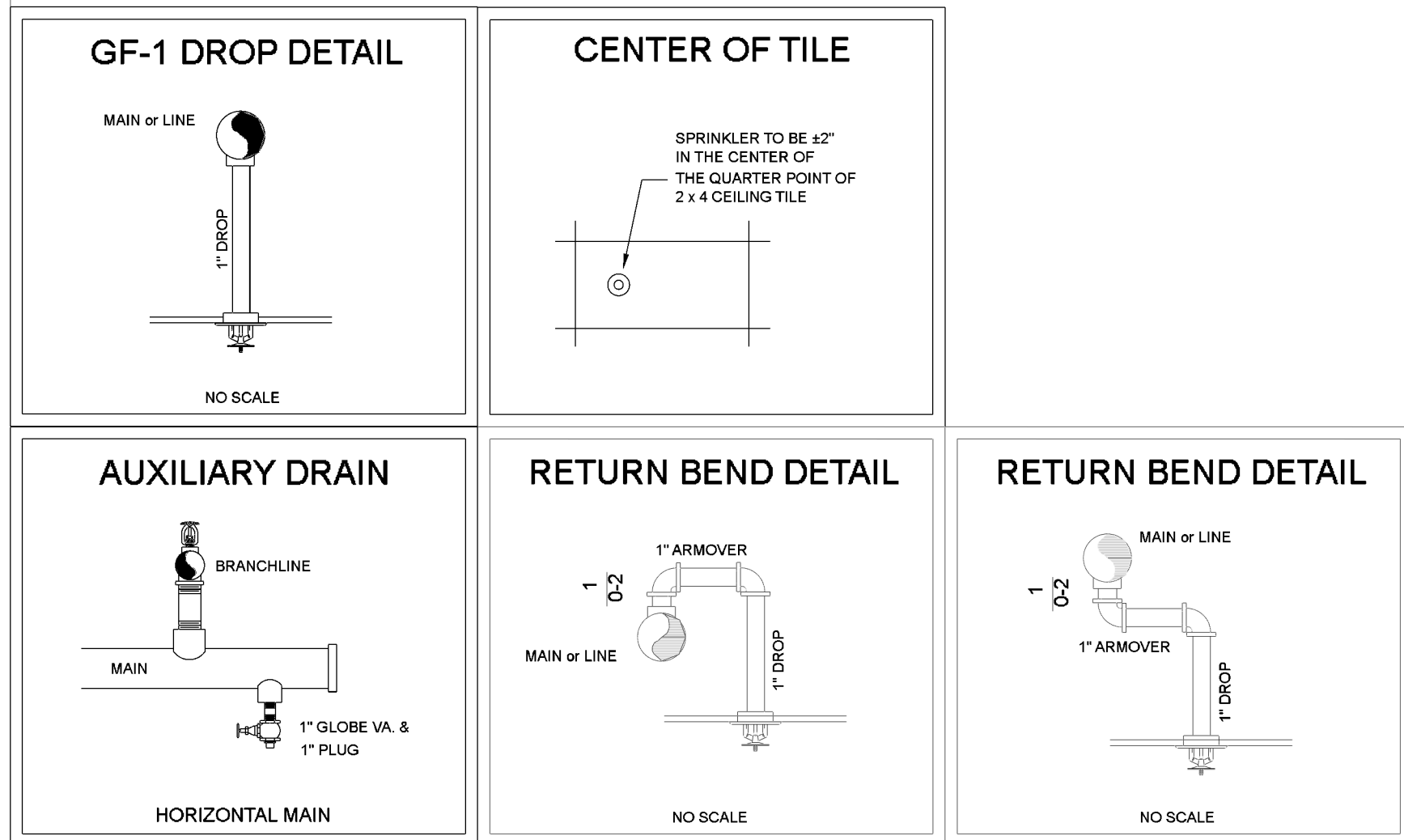
DESIGN CRITERIA FOR LIGHT HAZARD AREAS:
DESIGN IS IN ACCORDANCE WITH THE DENSITY/AREA HYDRAULIC CALCULATION METHOD OF NFPA 13, 2016 EDITION, SECTION 11.2.3.2 FOR LIGHT HAZARD OCCUPANCY. THE DESIGN DENSITY IS 0.10 GPM/SQ. FT. AND THE AREA OF SPRINKLER OPERATION IS 1500 SQ. FT. TOTAL ALLOWANCE FOR HOSES IS 100 GPM IN ACCORDANCE WITH TABLE 11.2.3.1.2.

DESIGN CRITERIA FOR ORDINARY HAZARD GROUP 2 AREAS: (Mercantile)
DESIGN IS IN ACCORDANCE WITH THE DENSITY/AREA HYDRAULIC CALCULATION METHOD OF NFPA 13, 2016 EDITION, SECTION 11.2.3.2 FOR ORDINARY HAZARD GROUP 2 OCCUPANCY. THE DESIGN DENSITY IS 0.20 GPM/SQ. FT. AND THE AREA OF SPRINKLER OPERATION IS 1500 SQ. FT. TOTAL ALLOWANCE FOR HOSES IS 250 GPM IN ACCORDANCE WITH TABLE 11.2.3.1.2.

BUILDING CONSTRUCTION

INSULATED METAL DECK ROOF ON STEEL PURLINS & BEAMS @ ELEVATION (BOP) AS NOTED ON PLANS.

Sprinkler Legend										
Symbol	Manufacturer	SIN	Model	Quantity	K-Factor	Type	Size	Response	Finish	Temperature
○	Viking	VK300	Microfast	110	5.6	Upright	1/2"	Quick	Brass	155 °F
○	Viking	VK302	Microfast	10	5.6	Pendent	1/2"	Quick	Chrome	155 °F
○	Viking	VK305	Microfast	2	5.6	Sidewall	1/2"	Quick	Brass	155 °F
				Total = 122						



PIPE TYPE:
1" AND LARGER THREADED PIPING TO BE SCHEDULE 40
1 1/4" AND LARGER GROOVED PIPING TO BE SCHEDULE 10

HANGER SPACING TABLE	
PIPE SIZE	HANGER SPACING
1", 1 1/4"	12'
1 1/2" & LARGER	15'
HANGER SPACING FOR STEEL PIPE (THINWALL)	
PIPE SIZE	HANGER SPACING
1" - 3"	12'
4" & LARGER	15'



B.I.C. DESIGN CO. ASSUMES NO LIABILITY FOR USE OF UNLISTED OR UNSPECIFIED MATERIAL, AND FOR ANY ALTERATIONS MADE TO THIS DESIGN DURING THE INSTALLATION.