

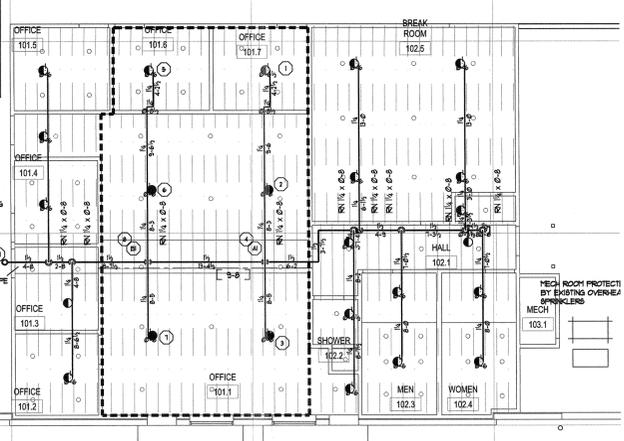
**HANGER SPACING TABLE**

HANGER SPACING FOR PLASTIC PIPE		HANGER SPACING FOR STEEL PIPE (SCH. 40)	
PIPE SIZE	HANGER SPACING	PIPE SIZE	HANGER SPACING
1/2"	5 1/2'	1", 1 1/4"	12'
3/4"	6'	1 1/2" & LARGER	15'
1"	6 1/2'		
1 1/4"	7'	HANGER SPACING FOR STEEL PIPE (THINWALL)	
1 1/2"	7'	PIPE SIZE	HANGER SPACING
2"	8'	1" - 3"	12'
2 1/2"	9'	4" & LARGER	15'
3"	10'		

**SYSTEM DESIGN SUMMARY**

CALCULATED AREA AREA 1  
 OCCUPANCY OFFICE  
 HAZARD LIGHT HAZARD  
 AREA 1 SPRINKLER 24334  
 DENSITY 0.50 GPM / SQFT (MAX)  
 AREA OF OPERATION 5000 SQFT  
 NUMBER OF OPERATING HEADS 4  
 SYSTEM DEMAND 15,125 GPM @ 84,865 PSI  
 TEST

INSIDE HOSE DEMAND: N/A GPM  
 OUTSIDE HOSE DEMAND: 100 GPM  
 SPRINKLER HEAD: VIKING W334 ECGREG PENDANT  
 ORIFICE 3/4"  
 K FACTOR 1.3K  
 TEMPERATURE 160°  
 NOTE: AREA REDUCED FOR OR PENDANTS AND CEILING HEIGHT PER NFPA 13  
 CALCULATION DATA FILE: AREA 1.DWG



**11.2.3.2.3 Quick-Response Sprinklers**

11.2.3.2.3.1 Where listed quick-response sprinklers, including extended coverage quick-response sprinklers, are used throughout a system or portion of a system having the same hydraulic design basis, the system area of operation shall be permitted to be reduced without revising the density as indicated in Figure 11.2.3.2.3.1 when all of the following conditions are satisfied:

- (1) Wet pipe system
- (2) Light hazard or ordinary hazard occupancy
- (3) 20-ft (6.1-m) maximum ceiling height
- (4) There are no unprotected ceiling pockets as allowed by 8.6.7 and 8.8.7 exceeding 32 ft<sup>2</sup> (3 m<sup>2</sup>)

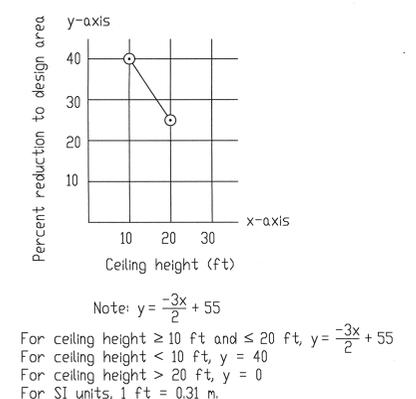


Figure 11.2.3.2.3.1 Design Area Reduction for Quick-Response Sprinklers

**GENERAL NOTES**

1. THE SYSTEM DESIGN CRITERIA COMPLIES WITH THE REQUIREMENTS OF NFPA 13 2016 EDITION.
2. ALL PIPING SHALL CONFORM WITH THE REQUIREMENTS OF NFPA 13 2016 EDITION.
3. ALL FITTINGS SHALL CONFORM WITH THE REQUIREMENTS OF NFPA 13 2016 EDITION.
4. ALL HANGERS SHALL CONFORM TO THE REQUIREMENTS OF NFPA 13 2016 EDITION.
5. FITTINGS FOR 1" THRU 2" SHALL BE CAST IRON THREADED. FITTINGS FOR 2 1/2" THRU 4" PIPING ARE TO BE GROOVED OR WELDED OUTLETS.
6. LENGTHS OF PIPING 1" THRU 2" ARE SHOWN AS THREAD TO THREAD UNLESS NOTED AS: G - GROOVE OR C - CENTER. 2 1/2" THRU 4" PIPE LENGTHS ARE SHOWN AS CENTER TO CENTER UNLESS NOTED AS: G - GROOVE, W - WELD, F - FACE OR FLANGE OR T - THREAD.
7. ALL SECTIONS OF TRAPPED PIPING SHALL HAVE AUXILIARY DRAINS WHERE REQUIRED.
8. THE OWNER SHALL BE RESPONSIBLE FOR PROVIDING ADEQUATE HEAT TO PREVENT THE PIPING FROM FREEZING.
9. ALL SWITCHBOARDS, PANEL BOARDS, DISTRIBUTION BOARDS AND MOTOR CONTROL CENTERS SHALL BE PROTECTED FROM DAMAGE BY OTHERS.



**DESIGN AREA REDUCTION FOR QUICK-RESPONSE SPRINKLERS**

(NFPA 13, 2010 EDITION)

**RELEASED FOR CONSTRUCTION**  
 As Noted on Plan Review

Lee's Summit Fire Department  
 Lee's Summit, Missouri  
 01/20/2026

**CONSTRUCTION: EXISTING CONSTRUCTION**  
 INSULATED METAL DECK ROOF ON STEEL BEAMS 4 BAR JOIST • ELEV. AS NOTED ON PLAN

**PIPE TYPE:**  
 SCHEDULE 40 AND SMALLER TO BE SCH. 40 PIPE WELDED 2" AND LARGER TO BE SCH. 40 PIPE  
 PIPING BELOW MEZZANINE TO BE CPVC PIPE

**DESIGN CRITERIA:**  
 PER NFPA 13, LIGHT HAZARD, 0.50 GPM/SQFT FOR 5000 SQFT, OPERATING  
 MAX 225 SOFT/HEAD SPACING • 100 GPM FOR HOSE ALLOWANCE  
 NOTE: REDUCE OPERATING AREA FOR QUICK RESPONSE SPRINKLER HEADS PER NFPA 13  
 ALL SPRINKLERS TO BE QUICK RESPONSE TYPE, APPROVED FOR SPECIFIC OCCUPANCY.

**FLOW TEST DATA:**

STATIC	125	PSI
RESIDUAL	76	PSI
	2200	GPM

DATE	REVISION
4-19-2024	SYSTEM NOW INCLUDES 50% SAFETY

Symbol	Description
○	Hydraulic Reference Points
⊖	Elev. Below Top of Steel
⊕	Elev. Above Finished Floor
⊕	Elev. of Top of Steel
⊕	Ceiling Height
⊕	Denotes Hanger Location
⊕	Rise up or down
⊕	ALL PIPE CUTS ARE CENTER TO CENTER

**Sprinkler Head Summary**

Symbol	Count	NPT	Orif.	Make	Model	Finish	Style	Temp.	K	RIN
⊕	34	3/4"	REL	GR	BR485	EXISTING UPRIGHT GFR VELO ECGH	22°	14	R6553	
⊕	7	3/4"	3/4"	REL	GR	BR485	EXISTING HOR SDEWALL	220°	5.6	VC509
⊕	10	1/2"	1/2"	YKNG	GR	BR485	NEW UPRIGHT GFR VELO ECGH	22°	14	R6553
⊕	30	1/2"	1/2"	YKNG	GR	CHROPE	OR CHROPE PENDANT w/ CAR REC EBC	200°	5.6	VC302
⊕	4	3/4"	3/4"	YKNG	EGGREG	OR EG PENDANT w/ CAR REC EBC	200°	1.2K	YK34	

**NOTICE OF NONRESPONSIBILITY**

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TENANT FINISH PLAN

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 LEE'S SUMMIT, MISSOURI 64064

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REVIEW AUTHORITY  
 L&S FIRE DEPT.  
 HEADS THIS SHEET  
 31  
 TOTAL HEADS FOR JOB  
 31  
 SCALE  
 1/8" = 1'-0"  
 DRAWN BY  
 MATT KNOX  
 REVISION DATE  
 DATE DRAWN  
 1/17/25  
 CONTRACT NUMBER  
 J-25  
 DRAWING NUMBER  
 1 OF 1

