DESIGN CRITERIA:

PER NFPA-13, 2016 EDITION, ORDINARY HAZARD GR. II:
0.20 GPM/SQ. FT. FOR 1500 SQ. FT.
OUTSIDE HOSE ALLOWANCE = 250 GPM.

GENERAL NOTES:

ALL FITTINGS CONFORM TO SECTION 2-4 OF NFPA PAMPHLET 13.

VALVES ON CONNECTIONS TO WATER SUPPLIES, SECTIONAL CONTROL VALVES AND OTHER VALVES IN SUPPLY PIPES TO SPRINKLERS SHALL BE SUPERVISED OPEN BY AN APPROVED METHOD.

IT IS THE OWNERS RESPONSIBILITY TO PROVIDE ADEQUATE HEAT TO KEEP THE SPRINKLER SYSTEM FROM FREEZING.

ALL ELECTRICAL WIRING OF ALARM BELLS, FLOW SWITCHES AND TAMPER SWITCHES OF REQUIRED TO BE DONE BY OTHERS.

THE SPRINKLER SYSTEM TO BE INSTALLED IN ACCORDANCE WITH NFPA 13.

HANGERS TO BE SPACED TO MEET NFPA REQUIREMENTS

℄ = CENTER LINE OF PIPE BELOW TOP OF STEEL

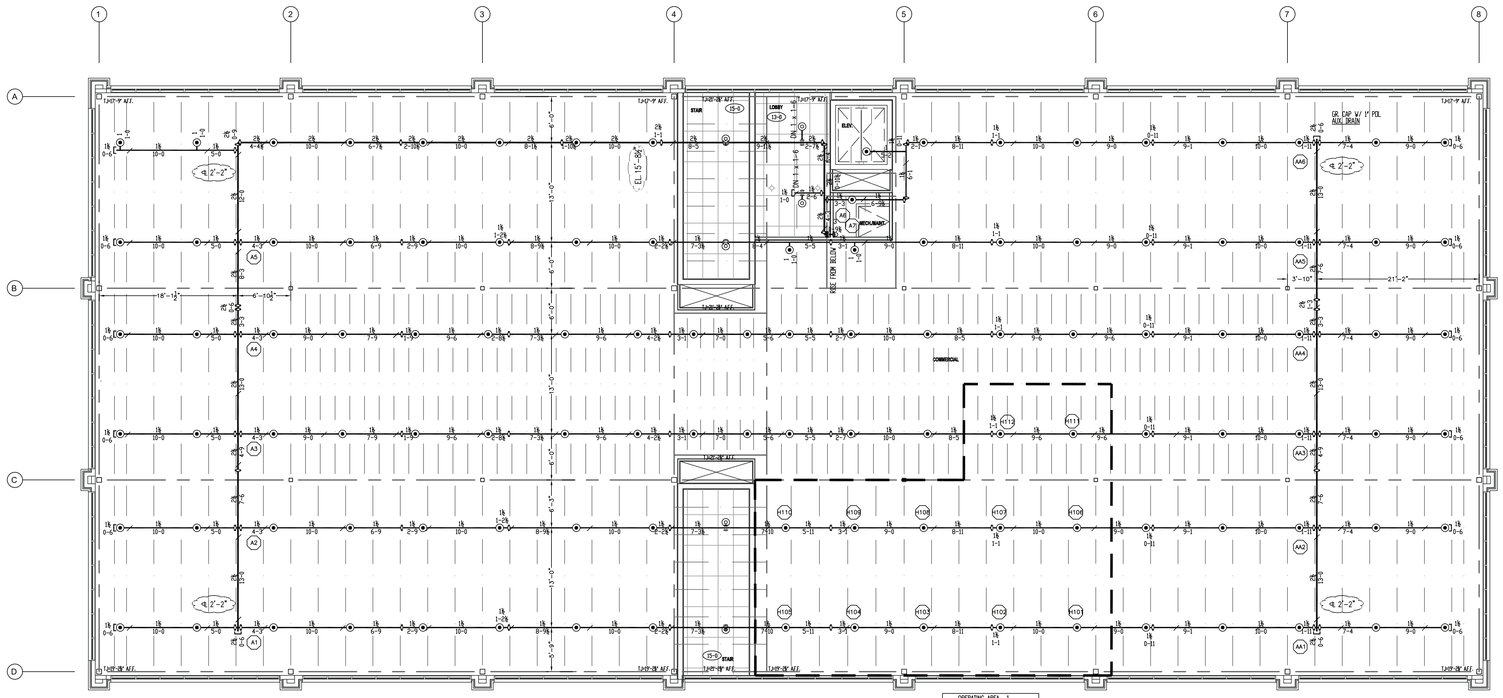
EL = CENTER LINE OF PIPE ABOVE FINISHED FLOOR

PIPE TYPE:

ALL WELDED/GROOVED PIPING TO BE SCHED. 10
ALL THREADED PIPING TO BE SCHED 40

CONSTRUCTION:

STEEL BEAMS & JOISTS



OPERATING AREA 1
0.20 GPM/SQ FT OVER 1500 SQ FT
DEMAND @ BASE OF RISER:
530.04 GPM @ 97.53 PSI
DEMAND @ CITY MAIN:
537.04 GPM @ 102.29 PSI
SAFETY: 15.1 PSI 14 %

2nd FLOOR

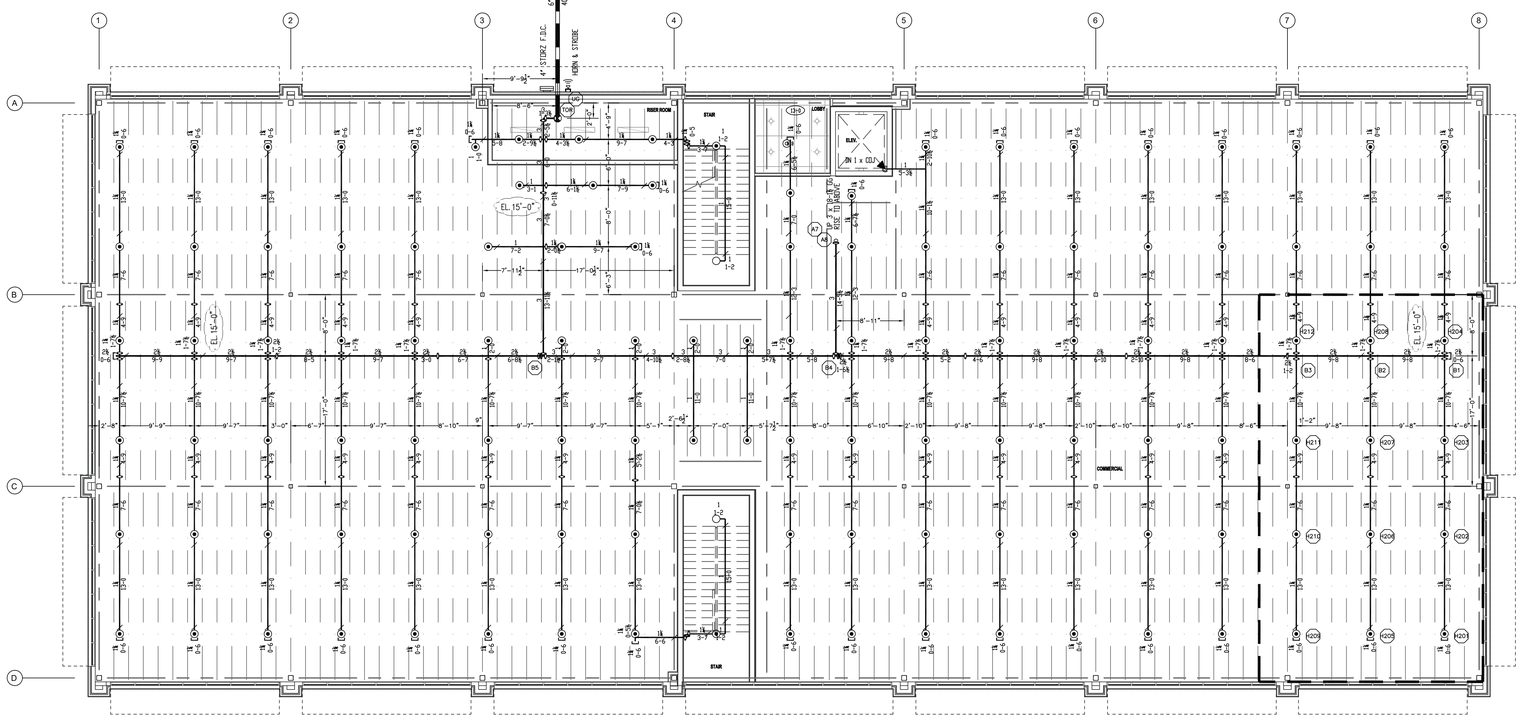
F.F. EL. 18'-0"
ALL HANGERS TO BE SPACED PER NFPA - 13 (SEE CHART)
ALL HANGERS TO BE CDJ
ALL SPRIGS TO BE 1 x CDJ
PENDENT HEADS TO BE DN 40° ARGCO FLEX DROPS

8" LOOPED MAIN

* FLOW TEST DATA *

STATIC:	115 PSI
RESIDUAL:	70 PSI
FLOW	1501 GPM

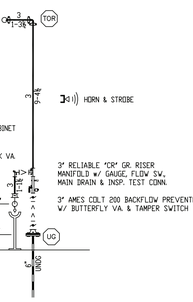
DATE: 6-3-2025
LOCATION: LOOPED CITY MAIN
ELEV.: SAME AS 1st F.F.
SOURCE: GOAL FIRE PROTECTION



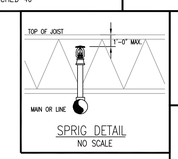
OPERATING AREA 2
0.20 GPM/SQ FT OVER 1500 SQ FT
DEMAND @ BASE OF RISER:
533.13 GPM @ 72.75 PSI
DEMAND @ CITY MAIN:
563.13 GPM @ 73.54 PSI
SAFETY: 33.6 PSI 31 %

1st FLOOR

F.F. EL. 0'-0"
BS/FJ = 17'-6"
ALL HANGERS TO BE SPACED PER NFPA - 13 (SEE CHART)
ALL HANGERS TO BE CDJ
ALL SPRIGS TO BE 1 x CDJ
PENDENT HEADS TO BE DN 40° ARGCO FLEX DROPS
* SYSTEM PIPING TO BE @ EL. 15'-0" U.N.O. *



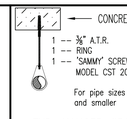
RISER DETAIL
SCALE: ⅛" = 1'-0"



SPRIG DETAIL
NO SCALE

Maximum Distance between Hangers (ft-in.) Per NFPA-13

NOMINAL PIPE SIZE	1"	1¼"	1½"	2"	2½"	3"	4"	6"	8"
STEEL PIPE EXCEPT THREADED LIGHTWALL	12-0	12-0	15-0	15-0	15-0	15-0	15-0	15-0	15-0
THREADED LIGHTWALL STEEL PIPE	12-0	12-0	12-0	12-0	12-0	12-0	N/A	N/A	N/A
CPVC	6-0	6-6	7-0	8-0	9-0	10-0	N/A	N/A	N/A



TYP. HANGER #01
NO SCALE

TYP. HANGER #56
NO SCALE

SPRINKLER LEGEND

Symbol	Description	SIN #	FINISH	TEMP	ORIFICE	K-FACTOR	COUNT
⊛	RELIABLE "FVFR 56" QR. UPRIGHT (ON SPRIG)	RA1435	BRASS	200°	1/2"	5.6	230
◎	RELIABLE "FVFR 56" QR. RECESSED PENDENT	RA1414	CHROME	200°	1/2"	5.6	7
○	RELIABLE "FVFR 56" QR. UPRIGHT (UNDER STAIR)	RA1435	BRASS	200°	1/2"	5.6	2
◀	RELIABLE "FVFR 56" BRASS RKR. SIDEWALL	RA1435	BRASS	200°	1/2"	5.6	1
						TOTAL THIS SHEET	240

Symbols

Symbol	Description
⬡	Hydraulic Reference Points
[18 IN]	Elev. Below Top of Steel
[8"+]	Elev. Above Finished Floor
+ (TOS 20-0)	Elev. of Top of Steel
10'-6"	Ceiling Height
	Denotes Hanger Location
o	Rise up or down

RELEASED FOR CONSTRUCTION
As Noted on Plan Review

Lee's Summit Fire Department
Lee's Summit, Missouri

10/20/2025

Plan Notes

1. All Pipe Locations are to be Field Measured Prior to Fabrication and Installation by Sprinkler Contractor.
2. All Pipe Dimensions Shown are Center to Center.
3. High Temperature Heads are to be Field Located Where Required.
4. All Pipes and Hangers are to be Installed per NFPA #13.
5. Hangers are to be U.L. Listed and F.M. Approved.

8-25-2025
STATE OF MISSOURI
REGISTERED PROFESSIONAL ENGINEER
CHRISTOPHER T. GROSS
NUMBER PE-2010038448
PROFESSIONAL ENGINEER

MISSOURI PE COA #2016025677
CG Engineering, LLC
1624 N Glen Ellyn
Independence, MO 64056
816-516-9540

NORTH

Drawing Title

Revisions: Date:

Contract No.:

Drawn By: B & K

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

Date: 7-28-2025

Job: THE VILLAGE AT DISCOVERY
LOT 1
221 NE ALURA WAY
LEE'S SUMMINT, MO

Goal Fire Protection, llc
"Reliable Service Is our Goal"
20920 147th Street
Bosehor, KS. 66007
(913) 441-3390

SHEET 1 OF 1