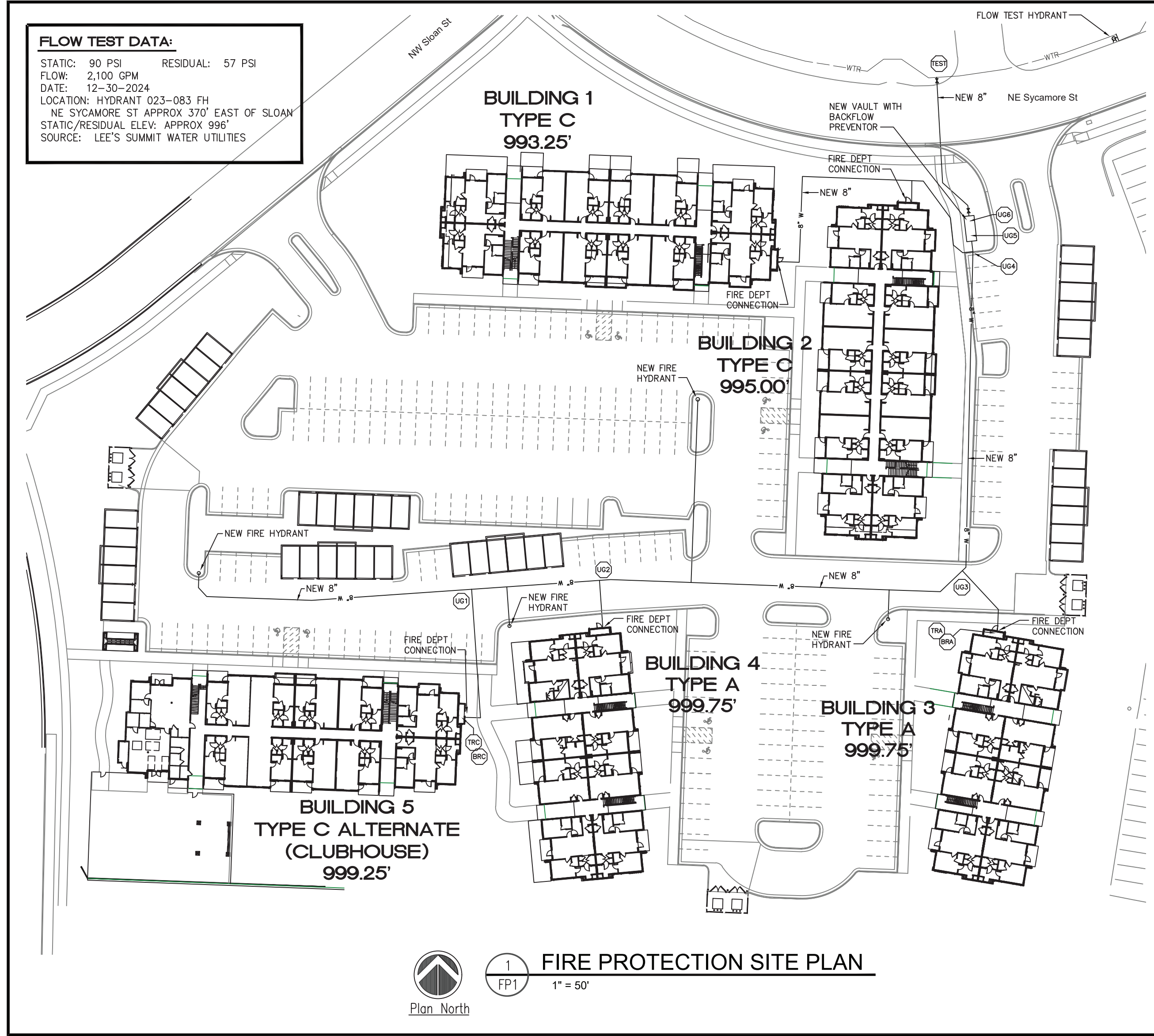
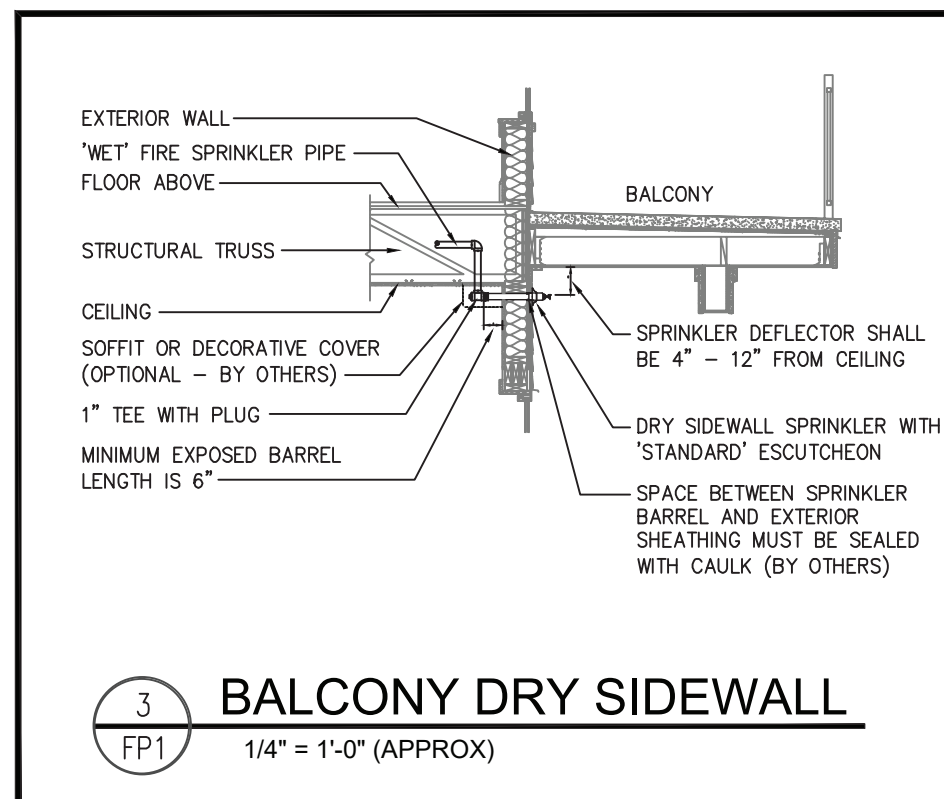


FLOW TEST DATA:
STATIC: 90 PSI RESIDUAL: 57 PSI
FLOW: 2100 GPM
DATE: 12-30-2024
LOCATION: HYDRANT 023-083 FH
NE SYCAMORE ST APPROX 370' EAST OF SLOAN
STATIC/RESIDUAL ELEV. APPROX 996'
SOURCE: LEE'S SUMMIT WATER UTILITIES



FIRE PROTECTION SITE PLAN
1" = 50'



BALCONY DRY SIDEWALL
1/4" = 1'-0" (APPROX)

RELEASED FOR CONSTRUCTION
As Noted on Plan Review

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

05/22/2025

NOTE:
SEE 2/FP3 AND 3/FP3 FOR THE 2nd AND 3rd FLOORS RESPECTIVELY OF BUILDING TYPE 'C'.

NOTE:
All vertical pipes up to 2nd Floor are 1".

SPRINKLER LEGEND - BUILDING 'A' (TYPICAL OF 2)											
SYMBOL	QUANTITY	MANUFACTURE	MODEL	RESPONSE	TYPE	SPRINKLER ID	FRESH	THREAD	K FACTOR	TEMP	NOTES
187	1	Reliable	F1Res44	Residential	HSW	R3531	White	1/2"	4.4	155	Semi-Recessed White
24	1	Reliable	F1Res44	Residential	HSW	R3531	Chrome	1/2"	4.4	175	Semi-Recessed Chrome
1	1	Reliable	F1FR	Quick	HSW	R3635	Brass	1/2"	5.6	200	None N.A.
12	1	Reliable	F3QR56	Quick	Dry HSW	R5734	Chrome	1"	5.6	200	Standard Chrome
12	1	Reliable	DH56	Quick	EC Dry HSW	RA1664	Chrome	1"	5.6	200	Standard Chrome
										Total Sprinklers (single Building 'A' only)	236
										Total Sprinklers (all 2 'A' Buildings)	472

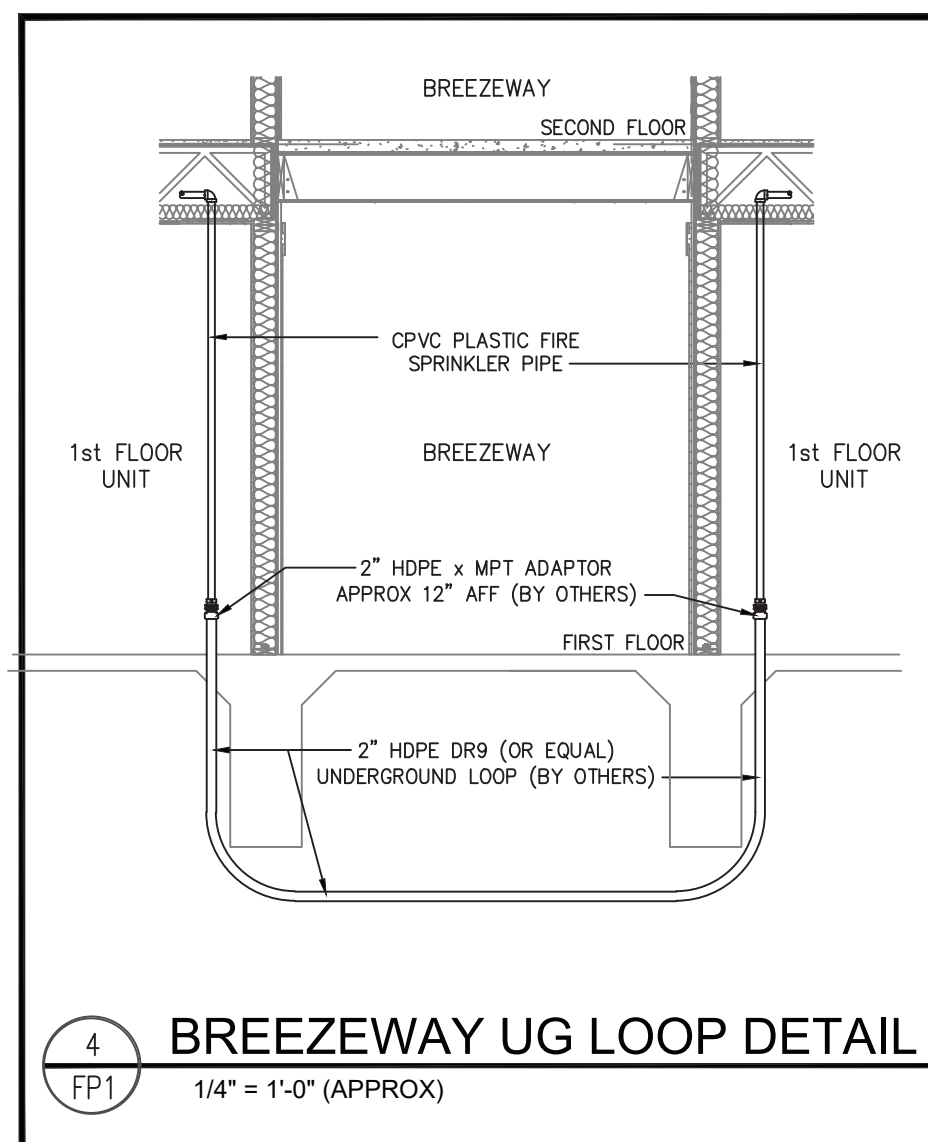
1 Note 1 here

SPRINKLER LEGEND - BUILDING 'C' (TYPICAL OF 2)											
SYMBOL	QUANTITY	MANUFACTURE	MODEL	RESPONSE	TYPE	SPRINKLER ID	FRESH	THREAD	K FACTOR	TEMP	NOTES
260	1	Reliable	F1Res44	Residential	HSW	R3531	White	1/2"	4.4	155	Semi-Recessed White
34	1	Reliable	F1Res44	Residential	HSW	R3531	Chrome	1/2"	4.4	175	Semi-Recessed Chrome
1	1	Reliable	F1FR	Quick	HSW	R3635	Brass	1/2"	5.6	200	None N.A.
12	1	Reliable	F3QR56	Quick	Dry HSW	R5734	Chrome	1"	5.6	200	Standard Chrome
24	1	Reliable	DH56	Quick	EC Dry HSW	RA1664	Chrome	1"	5.6	200	Standard Chrome
										Total Sprinklers (single Building 'C' only)	333
										Total Sprinklers (all 2 'C' Buildings)	666

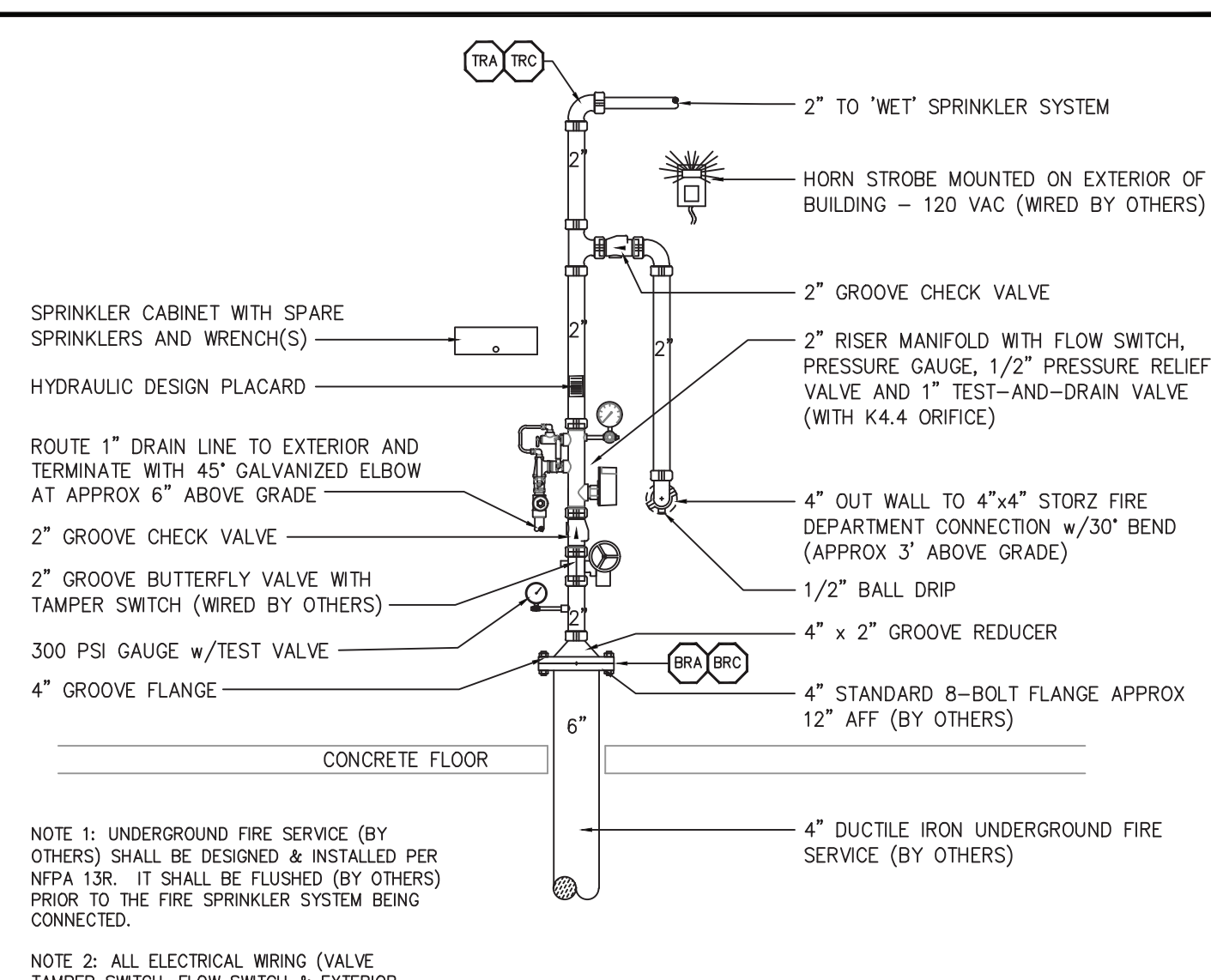
1 Note 1 here

SPRINKLER LEGEND - BUILDING 'CLUBHOUSE'											
SYMBOL	QUANTITY	MANUFACTURE	MODEL	RESPONSE	TYPE	SPRINKLER ID	FRESH	THREAD	K FACTOR	TEMP	NOTES
242	1	Reliable	F1Res44	Residential	HSW	R3531	White	1/2"	4.4	155	Semi-Recessed White
34	1	Reliable	F1Res44	Residential	HSW	R3531	Chrome	1/2"	4.4	175	Semi-Recessed Chrome
1	1	Reliable	F1FR	Quick	HSW	R3635	Brass	1/2"	5.6	200	None N.A.
13	1	Reliable	F3QR56	Quick	Dry HSW	R5734	Chrome	1"	5.6	200	Standard Chrome
24	1	Reliable	DH56	Quick	EC Dry HSW	RA1664	Chrome	1"	5.6	200	Standard Chrome
4	1	Reliable	F1FR56	Quick	PENDENT	RA1414	Chrome	1/2"	5.6	155	2-Pc Extended Chrome 1
18	1	Reliable	F1FR56	Quick	PENDENT	R3516	White	1/2"	4.9	155	2-Pc Extended White 1
										Total Sprinklers (single 'Clubhouse' only)	336
										Total Sprinklers (all 1 'Clubhouse' Buildings)	336

1 This sprinkler installed at bottom of a 1" CPVC pipe drop.



BREEZEWAY UG LOOP DETAIL
1/4" = 1'-0" (APPROX)



SYSTEM RISER DETAIL
1/2" = 1'-0" (APPROX)

KEY NOTES*

- 1) Total area being sprinklered: Building 'A' is approx 22,650 sq ft (total of 1st, 2nd and 3rd floors). Building 'C' is approx 32,240 sq ft (total of 1st, 2nd and 3rd floors). Building 5 (Clubhouse) is approx 32,240 sq ft (total of 1st, 2nd and 3rd floors). Total area being sprinklered this contract (2 'A' buildings plus 2 'C' buildings plus 1 'Clubhouse' building) = 117,130 sq ft.
- 2) The sprinkler contractor's work does NOT include the following:
 - A) Underground fire service stubbed into the building. Underground service must be designed, installed, tested and flushed (by others) to the requirements of NFPA #13R. It shall terminate with a stand-off flange approximately 12" AFF installed pump and 2" hose.
 - B) Electrical power & wiring of: Flow switches, valve tamper switches and alarm devices.
- 3) Materials and installation must meet the requirements of NFPA #13R "Standard for the Installation of Sprinkler Systems in Residential Occupancies up to and Including Four Stories in Height". In addition, any specially listed materials or devices must be installed in accordance with their listing.
- 4) The fire sprinkler system has been hydraulically designed using internal pipe diameters and C-factors of listed CPVC pipe (sized 1" - 2"), and schedule 40 steel pipe (pipe located in the Water Room). Listed CPVC pipe (size 1" - 2") shall be used throughout the project except in locations where 1 1/2" listing does not allow it. In locations where CPVC is not allowed, schedule 40 steel pipe shall be used.
- 5) Location and installation of pipe supports (hangers, vertical restraints and guides) must meet the requirements of NFPA #13R and the special listing requirements (if applicable) of the pipe and supports.
- 6) Seismic protection is not required on this project.
- 7) Pipe lengths shown on these plans are "center-to-center" lengths.
- 8) Pipe elevations shown on the drawings are approximate and must be field verified.
- 9) Sprinkler and pipe locations shown on the drawings are approximate. Minor field changes may be necessary. All changes must be design criteria outlined on these plans and meet the criteria of NFPA 13R.
- 10) This sprinkler system is designed as a "wet" system and will be filled with water while in service. It must be maintained at or above 40°F at all times.
- 11) The fire sprinkler contractor is responsible for performing all acceptance tests as required by NFPA #13R (See Chapter 10) and complete the "Contractor's Material and Test Certificate(s)".
- 12) Upon "Final Acceptance", the owner is responsible for proper maintenance of the fire sprinkler system as established in the latest edition of NFPA #25 "Standard for the Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems". Upon "Final Acceptance", the owner is responsible for providing adequate heat to prevent "wet" sprinkler pipe from freezing.

*Not all notes are used on every sheet.

GENERAL NOTES

- 1) Total area being sprinklered: Building 'A' is approx 22,650 sq ft (total of 1st, 2nd and 3rd floors). Building 'C' is approx 32,240 sq ft (total of 1st, 2nd and 3rd floors). Building 5 (Clubhouse) is approx 32,240 sq ft (total of 1st, 2nd and 3rd floors). Total area being sprinklered this contract (2 'A' buildings plus 2 'C' buildings plus 1 'Clubhouse' building) = 117,130 sq ft.
- 2) The sprinkler contractor's work does NOT include the following:
 - A) Underground fire service stubbed into the building. Underground service must be designed, installed, tested and flushed (by others) to the requirements of NFPA #13R. It shall terminate with a stand-off flange approximately 12" AFF installed pump and 2" hose.
 - B) Electrical power & wiring of: Flow switches, valve tamper switches and alarm devices.
- 3) Materials and installation must meet the requirements of NFPA #13R "Standard for the Installation of Sprinkler Systems in Residential Occupancies up to and Including Four Stories in Height". In addition, any specially listed materials or devices must be installed in accordance with their listing.
- 4) The fire sprinkler system has been hydraulically designed using internal pipe diameters and C-factors of listed CPVC pipe (sized 1" - 2"), and schedule 40 steel pipe (pipe located in the Water Room). Listed CPVC pipe (size 1" - 2") shall be used throughout the project except in locations where 1 1/2" listing does not allow it. In locations where CPVC is not allowed, schedule 40 steel pipe shall be used.
- 5) Location and installation of pipe supports (hangers, vertical restraints and guides) must meet the requirements of NFPA #13R and the special listing requirements (if applicable) of the pipe and supports.
- 6) Seismic protection is not required on this project.
- 7) Pipe lengths shown on these plans are "center-to-center" lengths.
- 8) Pipe elevations shown on the drawings are approximate and must be field verified.
- 9) Sprinkler and pipe locations shown on the drawings are approximate. Minor field changes may be necessary. All changes must be design criteria outlined on these plans and meet the criteria of NFPA 13R.
- 10) This sprinkler system is designed as a "wet" system and will be filled with water while in service. It must be maintained at or above 40°F at all times.
- 11) The fire sprinkler contractor is responsible for performing all acceptance tests as required by NFPA #13R (See Chapter 10) and complete the "Contractor's Material and Test Certificate(s)".
- 12) Upon "Final Acceptance", the owner is responsible for proper maintenance of the fire sprinkler system as established in the latest edition of NFPA #25 "Standard for the Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems". Upon "Final Acceptance", the owner is responsible for providing adequate heat to prevent "wet" sprinkler pipe from freezing.

MISC SYMBOL LEGEND

- 1) [7-2] Approximate elevation of centerline of pipe above finish floor.
- 2) [7-8] Approximate distance from roof deck down to centerline of pipes.
- 3) Hydraulic reference number - refer to hydraulic calculations.
- 4) Key note - see Key Notes.
- 5) Fabrication mark - identifies entire main or branchline.
- 6) Fire sprinkler - see Sprinkler Legend for details.
- 7) Vertical section of sprinkler pipe.
- 8) Upper number is the nominal pipe diameter. Bottom number is the center-of-fitting to center-of-fitting pipe length in feet and inches.
- 9) Location of hanger.
- 10) Height of finish ceiling.

SPECIALLY LISTED MATERIALS AND DEVICES

The following specially listed materials and devices will be used on this project:

Reliable model "F1Res44" (R3516, K4.9) Residential pendant sprinkler. The sprinkler pipe on this project has been hydraulically sized to allow this sprinkler to cover a maximum area of 16' x 16' with a maximum distance from adjacent walls of 8'. Minimum spacing between these sprinklers is 8'. Sprinklers shall be installed so deflector-to-ceiling distance is 1" to 4". See Reliable Bulletin 135 for complete design/installation details.

Reliable model F1Res44 HSW (R3531, K4.4) Residential sidewall sprinkler. Except as noted, the sprinkler pipe on this project has been hydraulically sized to allow this sprinkler to cover a maximum area of 16' wide x 16' throw with a maximum distance from adjacent side walls of 8'. In the Kitchen area of the B1, B1A, and C1 Units, this sprinkler can protect a maximum area of 16' wide x 16' throw with a maximum distance from adjacent side walls of 8'. In Bedroom 1 of the B1, B1A, and C1 Units, this sprinkler can protect a maximum area of 16' wide x 16' throw with a maximum distance from adjacent side walls of 8'. Minimum spacing between these sprinklers is 8'. Sprinklers shall be installed so deflector-to-ceiling distance is 4" to 6". See Reliable Bulletin 135 for complete design/installation details.

Reliable model "TD56" (K5.6) Dry Quick Response, Extended Coverage, Horizontal Sidewall Sprinkler. The sprinkler pipe on this project has been hydraulically sized to allow this sprinkler to cover a maximum area of 26' wide x 8' throw with a maximum distance from adjacent walls of 14". Minimum spacing between these sprinklers is 16'. Sprinklers shall be installed so deflector-to-ceiling distance is 4" to 12". See Reliable Bulletin 016 for complete design/installation details.

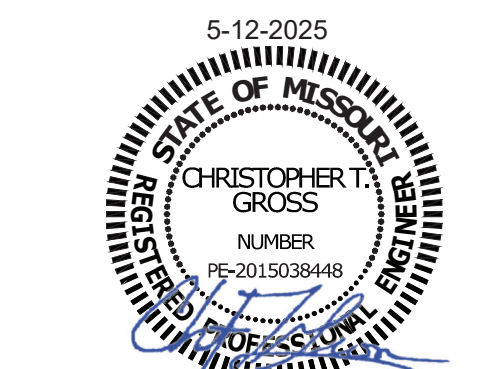
Listed CPVC plastic pipe & fittings. All manufacturers' installation restrictions and installation requirements must be followed. Restrictions and/or special requirements apply (but are not limited to) exposed installations, ordinary hazard occupancies, vertical installations, longer spacing & location, rated wall penetrations and chemical compatibility. Visit <https://www.lubrizol.com/en/CPVC/FBC2020system2020Compatible2020program> for a current list of compatible and incompatible products. Read and follow all restrictions and requirements.

SPECIFIC DESIGN CRITERIA & APPROVAL INFO

- 1) The fire sprinkler systems shown on these plans are "wet-pipe systems" designed to the requirements of NFPA #13R (2016 edition). Occupancies are 3-story apartment buildings. IRC occupancy classification "R-2" and NFPA 13R "Residential" hazard.
- 2) Except for balconies/patios and a few rooms in the Clubhouse area, sprinklers throughout this project are residential type. All other sprinklers are quick-response type.
- 3) Per section 6.5, sprinklers are not required in: small bathrooms; small clothes closets; linen closets and pantries within the dwelling unit; porches; some balconies; corridors; porta cocheres; porte cocheres and stairs that are open and attached; attics; penthouse equipment rooms; elevator machine rooms; crawl spaces; floor/ceiling spaces; noncombustible elevator shafts and other concealed spaces not used or intended for living purposes or storage; and closets on exterior balconies and exterior breezeways/corridors. *See section 6.6 for complete text.
- 4) Design Criteria - Design Area #A1 (Building A 3rd Floor B1 Unit): "Residential" Hazard. Per section 7.1.1.3.1, calc all sprinklers within the compartment, up to a maximum of 4.
- 5) Design Criteria - Design Area #A2 (Building A 3rd Floor B1 Unit): "Residential" Hazard. Per section 7.1.1.3.1, calc all sprinklers within the compartment, up to a maximum of 4.
- 6) Design Criteria - Design Area #A3 (Building A 3rd Floor B1 Unit): "Residential" Hazard. Per section 7.1.1.3.1, calc all sprinklers within the compartment, up to a maximum of 4.
- 7) Design Criteria - Design Area #A4 (Building A 3rd Floor B1 Unit): "Residential" Hazard. Per section 7.1.1.3.1, calc all sprinklers within the compartment, up to a maximum of 4.
- 8) The Authority Having Jurisdiction is: Lee's Summit Fire Department, 237 E. Douglas Street, Lee's Summit, MO 64063, (816) 969-1300.
- 9) Approvals must be obtained from: Local AIA Owner.

Frank C. Kramer, CET
NICET Cert # 75202
Automatic Sprinkler System Layout
Level III

Engineering, LLC
1624 N Glen Ellyn
Independence, MO 64056
816-516-9540



DATE DRAWN: 5-5-2025
REVISION DATE: 5-5-2025
PROJECT: DOUGLAS STATION APARTMENTS
NW SLOAN & NE SYCAMORE ST
LEE'S SUMMIT, MISSOURI

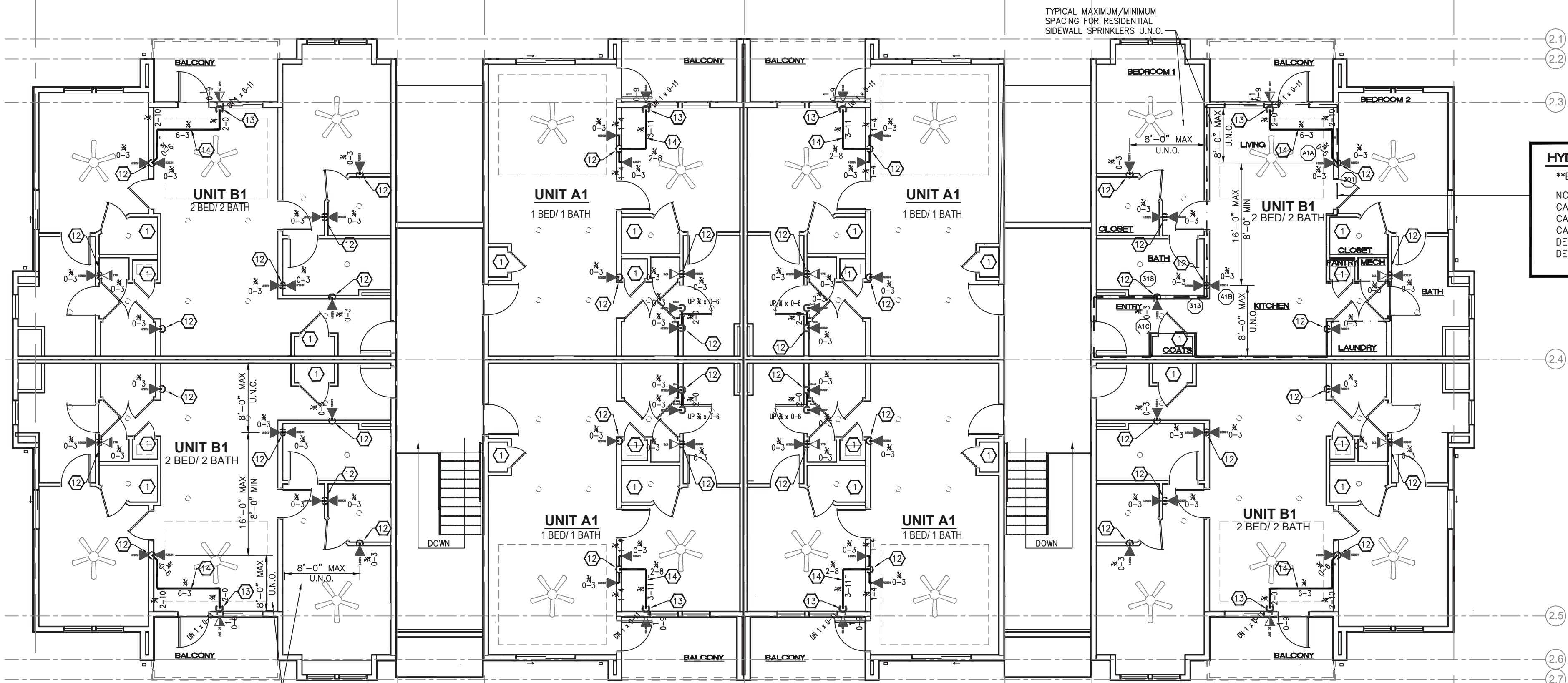
DESIGN CRITERIA:
NFPA STANDARD #13R (2016 EDITION)

DESIGN BY: FRANK C. KRAMER, CET
CHECKED BY: JEFFREY L. GROSS
TOTAL SPRINKLERS: 1,474
AS NOTED
DATE: 5-5-2025
BY: JEFFREY L. GROSS

BAMFORD FIRE SPRINKLER Co., Inc.
5134 MERRIAM DRIVE - SHAWNEE MISSION, KANSAS 66203
(913) 432-6686 FAX: (913) 432-6294 E-MAIL: markm@bamfordfire.com

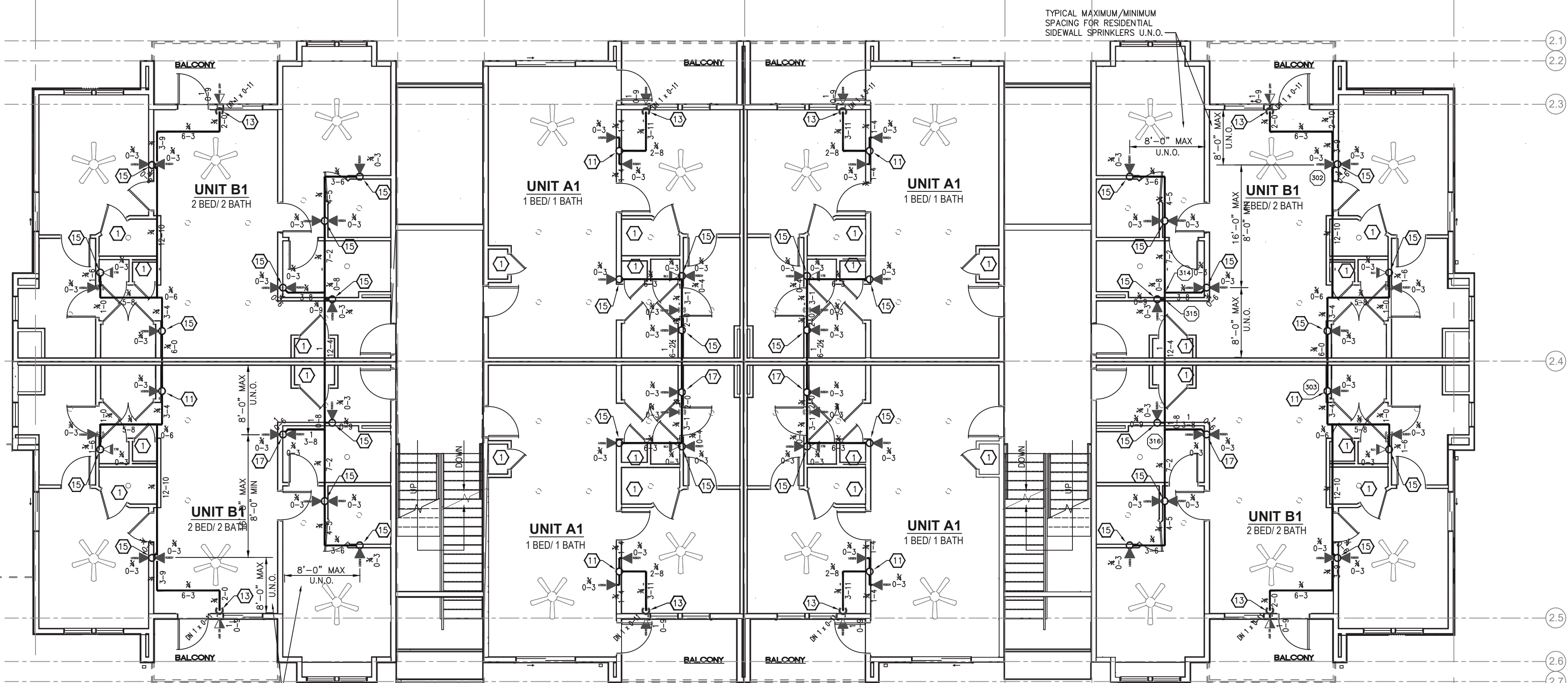
MISSOURI PE COA #2016025677
NICET Cert # 75202
Automatic Sprinkler System Layout
Level III

13



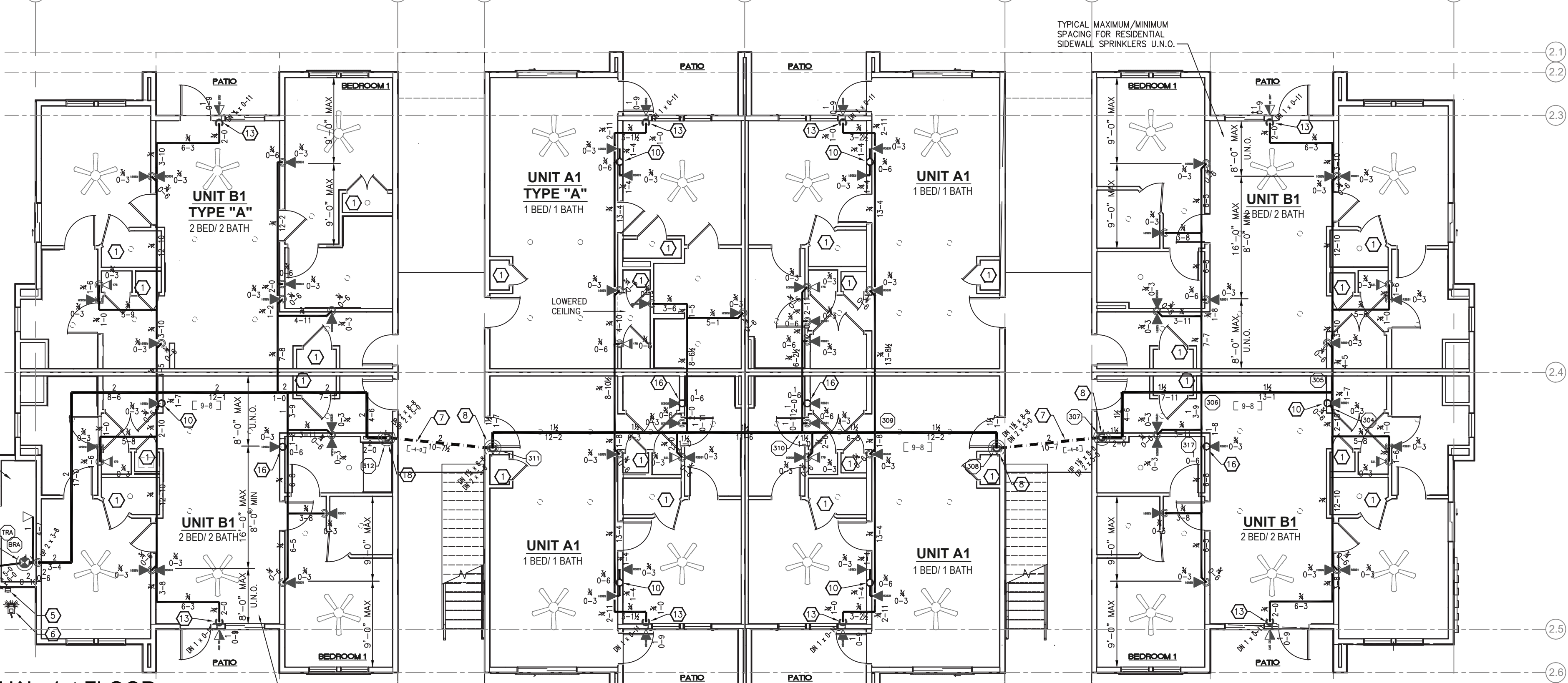
NOTE:
All vertical pipes up from 2nd Floor are 3/4".

BUILDING TYPE 'A' - 3rd FLOOR
1/8" = 1'-0" (Finish Floor = 121' - 4.29')
Buildings 3 and 4



NOTE:
Vertical pipes up from 1st Floor are 3/4" (Keynote 11) or 1" (Keynote 17). All vertical pipes up to 3rd floor are 3/4".

BUILDING TYPE 'A' - 2nd FLOOR
1/8" = 1'-0" (Finish Floor = 110' - 8.5')
Buildings 3 and 4



NOTE:
Vertical pipes up to 2nd Floor are 3/4" (Keynote 10) or 1" (Keynote 16).

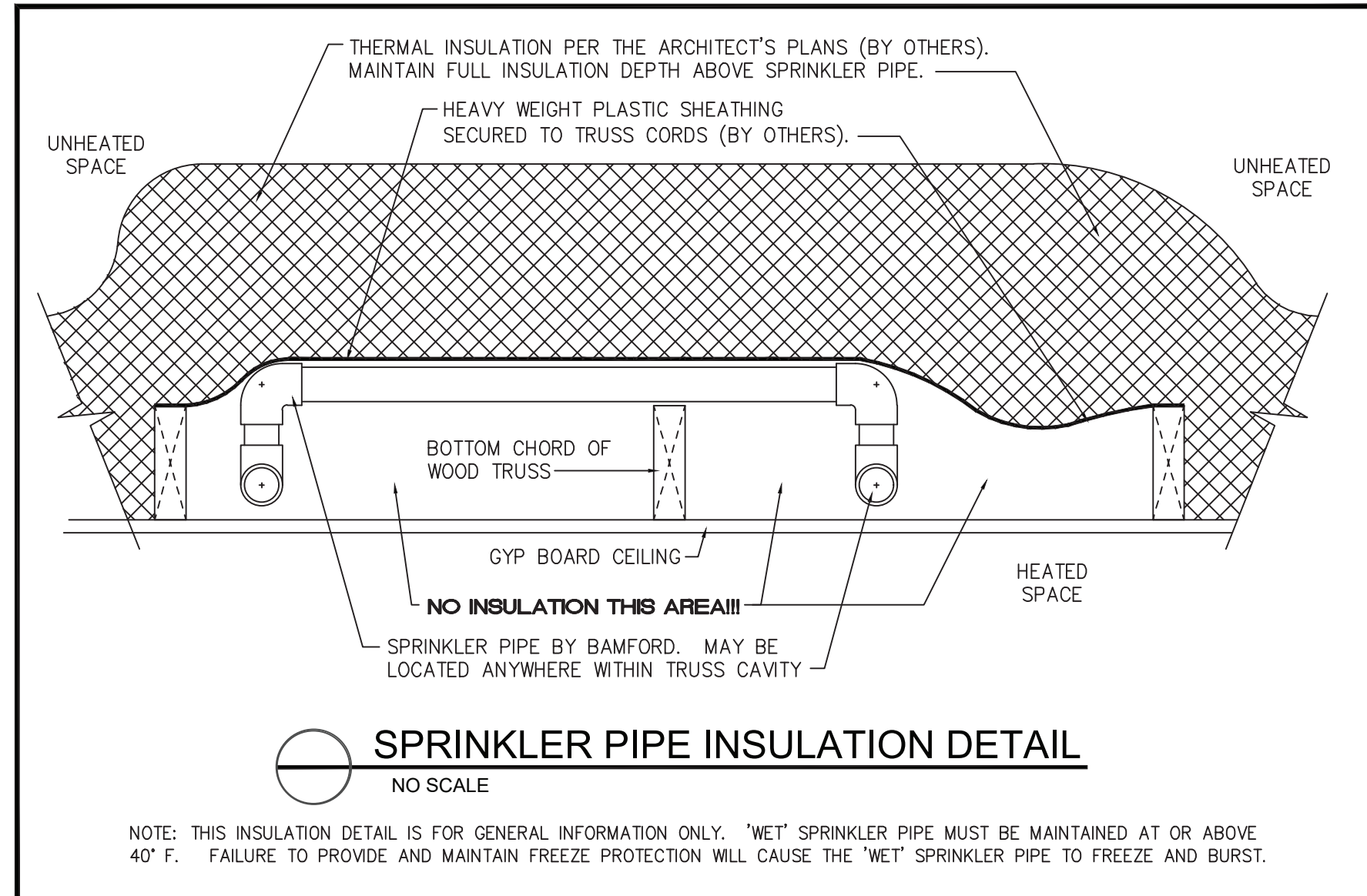
BUILDING TYPE 'A' - 1st FLOOR
1/8" = 1'-0" (Finish Floor = 100' - 0")
Building 3, Building 4 is similar

HYDRAULIC DESIGN AREA #A1
BUILDING A 3rd FLOOR B1 UNIT
NODES A1A, A1B, A1C
CALC OUTLET A1A @ 16 GPM (16'x16" SPACING)
CALC OUTLET A1B @ 18 GPM (16'x18" SPACING)
CALC 3 TOTAL SPRINKLERS
DEMAND @ NODE "B1A" = 56 GPM @ 72.0 PSI
DEMAND @ NODE "PC3" = 56 GPM @ 83.1 PSI

SPRINKLER LEGEND - BUILDING 'A' (TYPICAL OF 2)													
SYMBOL	QUANTITY	MANUFACTURE	MODEL	RESPONSE	TYPE	SPRINKLER Ø	FINISH	THREAD	K-FACTOR	TEMP	TYPE	ESCUTCHION	NOTES
187	Reliable	F1Res44	Residential	HSW	R3531	White	1/2"	4.4	155	Semi-Recessed	White		
24	Reliable	F1Res44	Residential	HSW	R3531	Chrome	1/2"	4.4	175	Semi-Recessed	Chrome		
1	Reliable	F1FR	Quick	HSW	R3635	Brass	1/2"	5.6	200	None	N.A.		
12	Reliable	F3QR56	Quick	Dry HSW	R5734	Chrome	1"	5.6	200	Standard	Chrome		
12	Reliable	DH56	Quick	EC Dry HSW	RA1664	Chrome	1"	5.6	200	Standard	Chrome		
Total Sprinklers (single Building 'A' only)											236		
Total Sprinklers (all 2 'A' Buildings)											472		

- KEY NOTES***
- Closet/pantry not sprinklered per NFPA 13R section 6.6.3.
 - Bathroom not sprinklered per NFPA 13R section 6.6.2.
 - 4" underground fire protection service (by others). See site plan for continuation.
 - 2" system riser - see detail on sheet FP1.
 - 4" Storz (on 30' bend) x 4" NPT fire department connection installed approximately 3' above finish grade. @ plate to read "AUTO SPRK". 4" Storz plug. Locate FDC on side of Water Room that is nearest to the closest fire hydrant.
 - Horn/strobe alarm mounted above FDC - 120 VAC (wiring by others).
 - 2" HDPE under-slab transfer pipe. This pipe installed under the Stair/Corridor concrete slab (by others). Both ends shall terminate with a 2" male NPT adapter approximately 1'-0" AFF.
 - 1-1/2" up/down to HDPE under-slab transfer pipe. See keynote 7.
 - 1-1/4" up/down to HDPE under-slab transfer pipe. See keynote 7.
 - 3/4" up to 2nd Floor.
 - 3/4" up from 1st Floor and 3/4" up to 3rd Floor.
 - 3/4" up from 2nd Floor.
 - Sprinkler pipe down through ceiling and out to 'dry' sidewall sprinkler protecting patio/balcony. This section of sprinkler pipe will be 'exposed to view' unless concealed by a soffit or decorative cover (soffit or decorative cover by others). See detail.
 - Install this sprinkler pipe in attic space as low as possible. All thermal insulation must be installed ABOVE this pipe, NOT BELOW IT. Sprinkler pipe may need to be 'tented' to prevent thermal insulation from falling below it. Insulation and tenting is by others. See detail.
 - 3/4" up to 3rd Floor.
 - 1" up to 2nd Floor.
 - 1" up from 1st Floor and 3/4" up to 3rd Floor.
 - 2" up/down to HDPE under-slab transfer pipe. See keynote 7.
 - 1" up from 1st Floor and 1" up to 3rd Floor.
 - 1" up to 3rd Floor.
 - 1" up from 2nd Floor.

*Not all notes are used on every sheet.



NOTE: THIS INSULATION DETAIL IS FOR GENERAL INFORMATION ONLY. 'WET' SPRINKLER PIPE MUST BE MAINTAINED AT OR ABOVE 40° F. FAILURE TO PROVIDE AND MAINTAIN FREEZE PROTECTION WILL CAUSE THE 'WET' SPRINKLER PIPE TO FREEZE AND BURST.

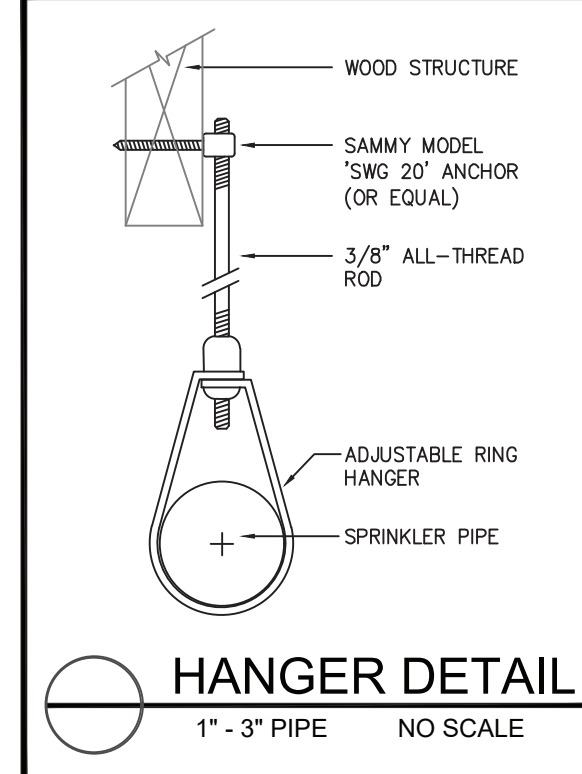


TABLE 9.2.2.1(g) MAXIMUM DISTANCE BETWEEN HANGERS (FT-IN.)													
		NOMINAL PIPE SIZE (IN)											
PIPE TYPE		3/4	1	1 1/4	1 1/2	2	2 1/2	3	3 1/2	4	5	6	8
STEEL PIPE EXCEPT THREADED LIGHTWALL	N/A	12-0	12-0	15-0	15-0	15-0	15-0	15-0	15-0	15-0	15-0	15-0	15-0
THREADED LIGHTWALL	N/A	12-0	12-0	12-0	12-0	12-0	12-0	N/A	N/A	N/A	N/A	N/A	N/A
COPPER TUBE	8-0	8-0	10-0	10-0	10-0	12-0	12-0	15-0	15-0	15-0	15-0	15-0	15-0
CPVC	5-6	6-0	6-6	7-0	8-0	9-0	10-0	N/A	N/A	N/A	N/A	N/A	N/A

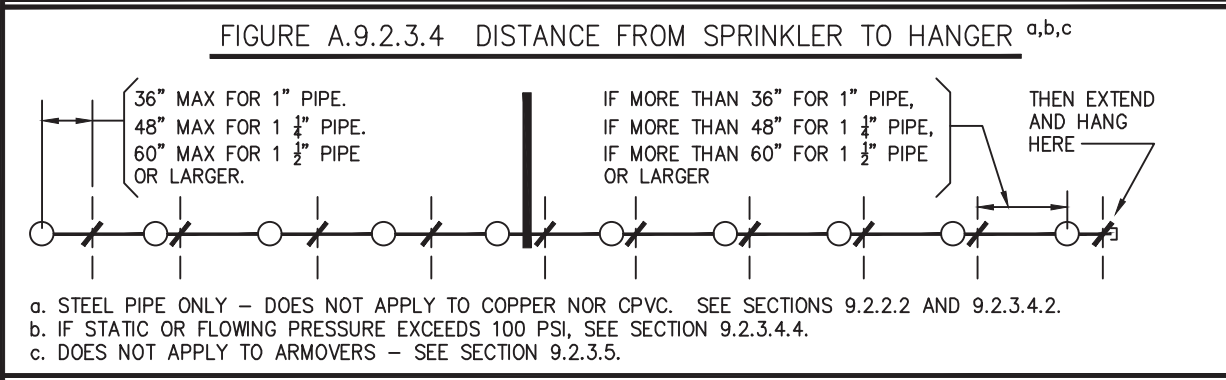
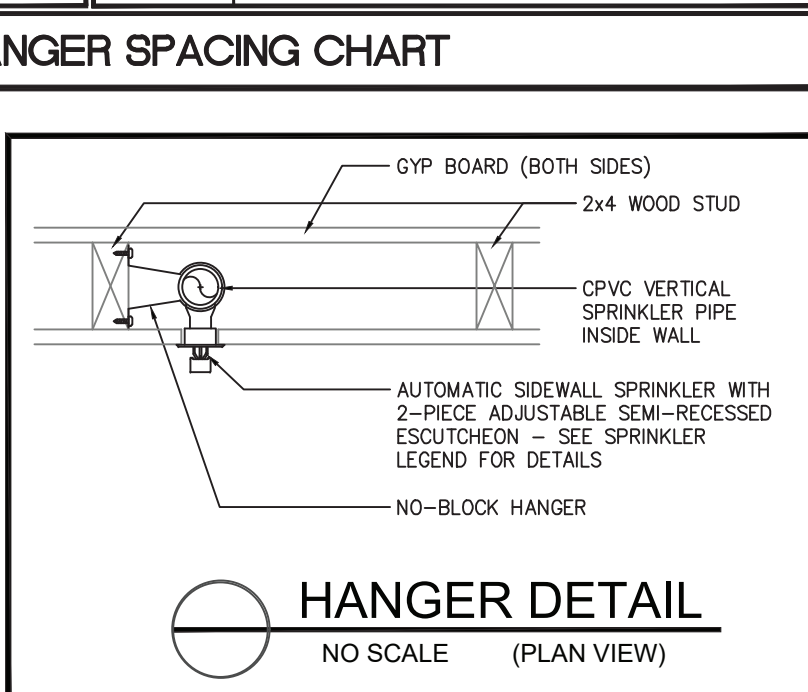


TABLE 9.1.2.1 HANGER ROD SIZE				MAXIMUM DISTANCE BETWEEN VERTICAL SUPPORTS	
PIPE SIZE	ROD DIAMETER	PIPE TYPE		MAXIMUM DISTANCE	
UP TO AND INCLUDING 4"	3/8"	STEEL	25'	(SEE NFPA 13 FOR ADDITIONAL REQUIREMENTS)	
5", 6" AND 8"	1/2"	CPVC	10'	(OR AT EACH FLOOR LEVEL, WHICHEVER IS LESS)	



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

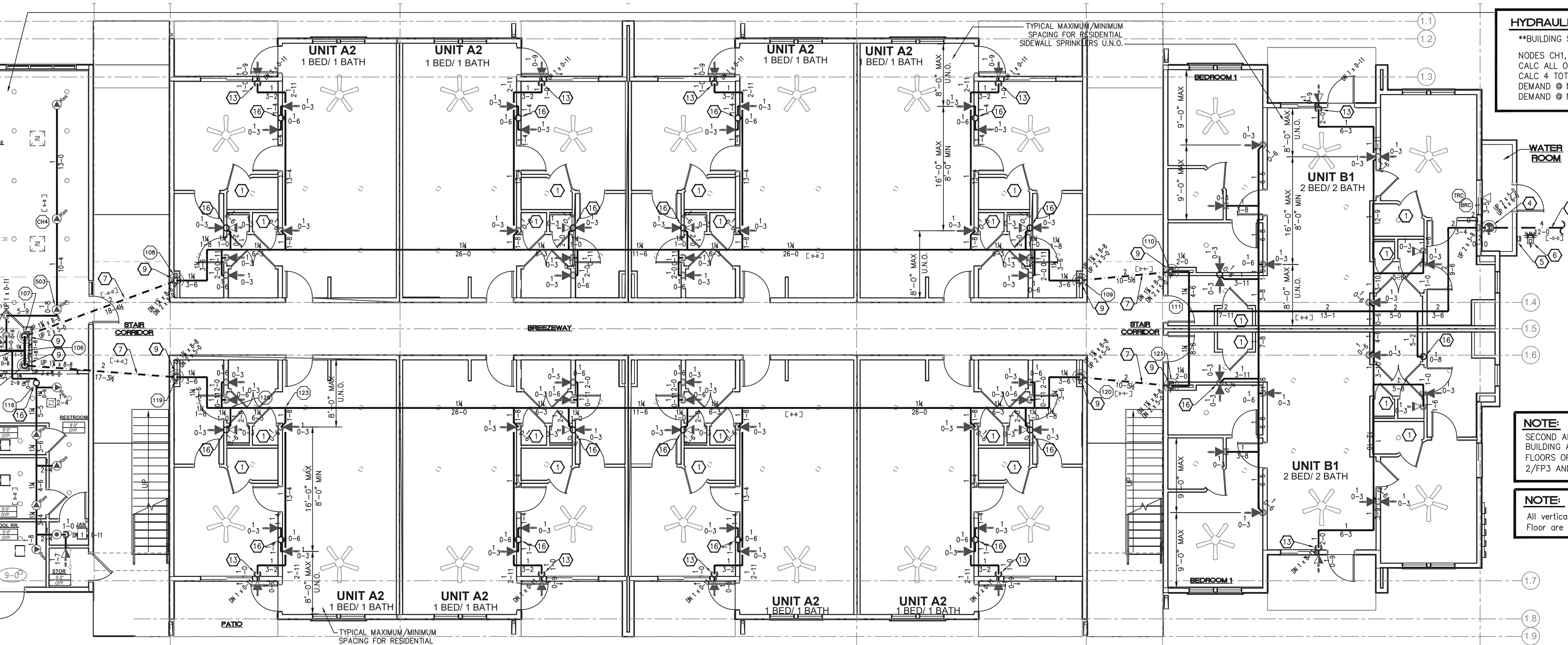
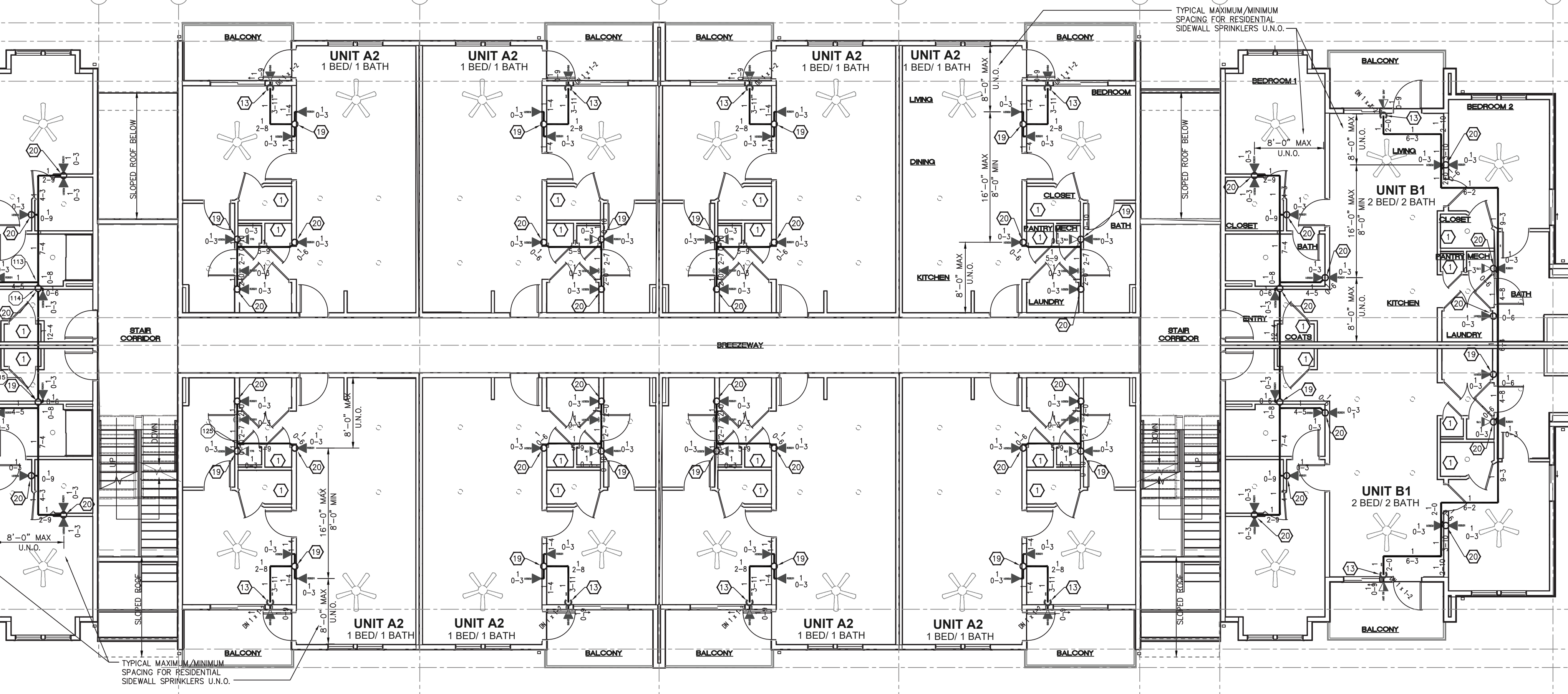
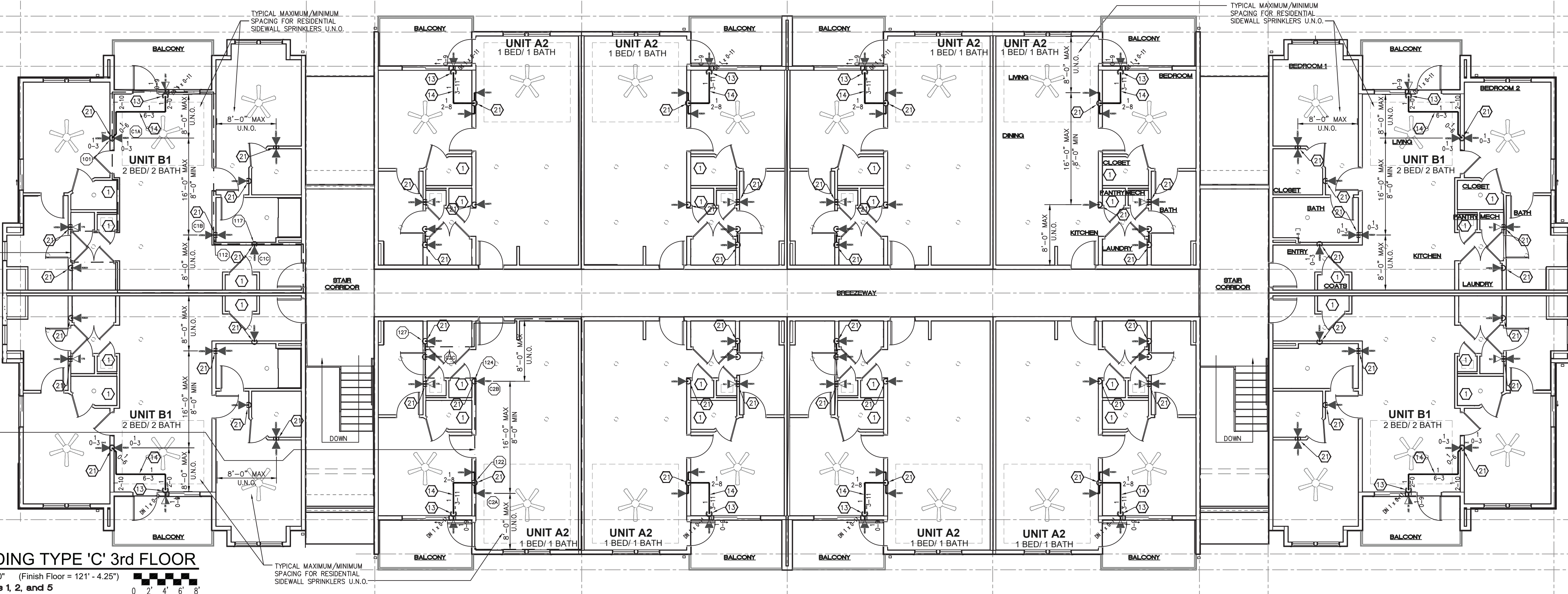
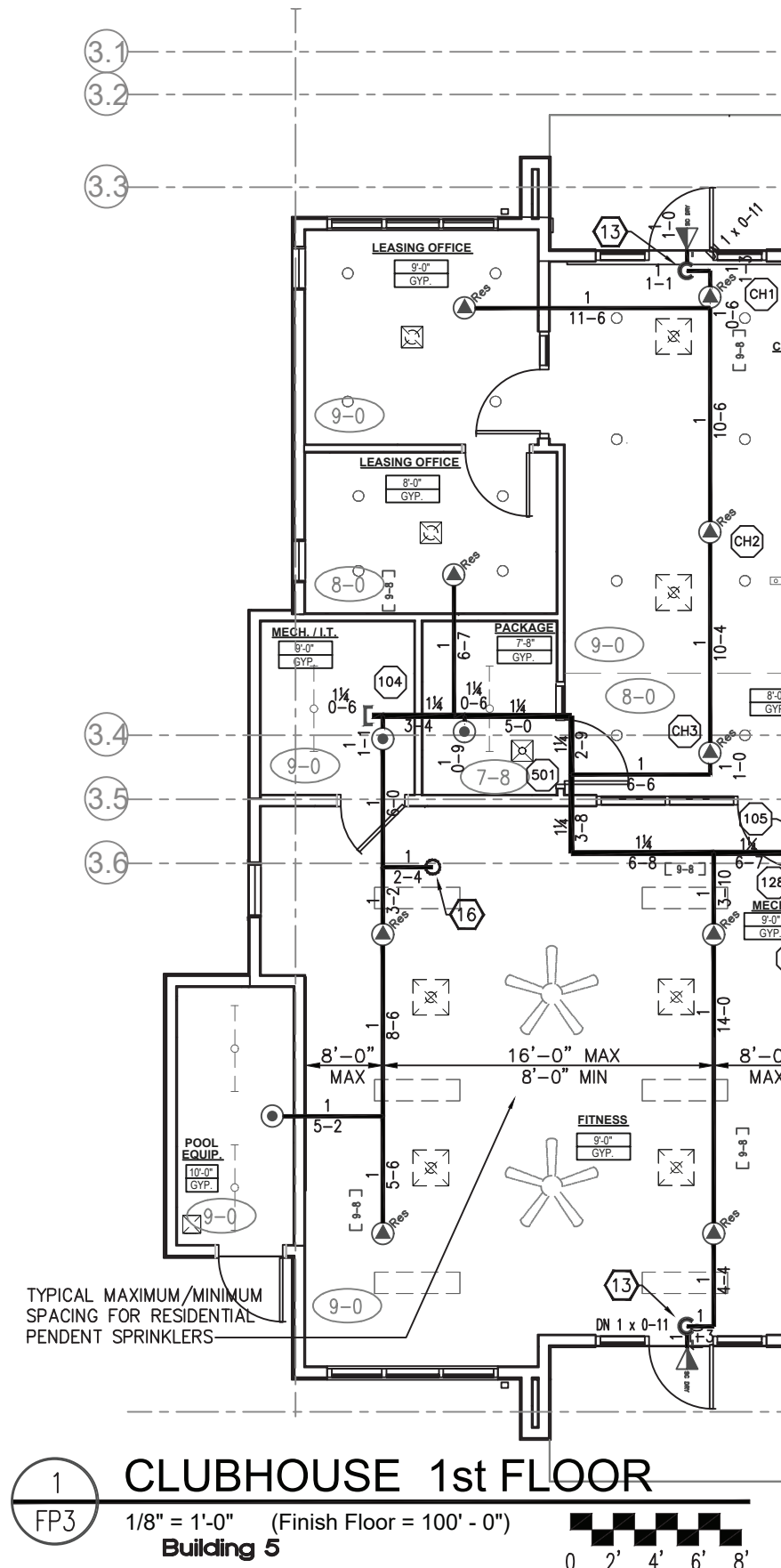
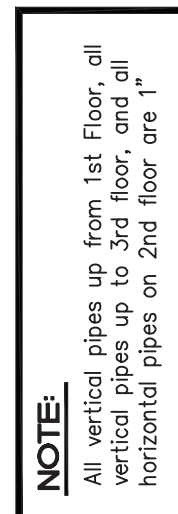
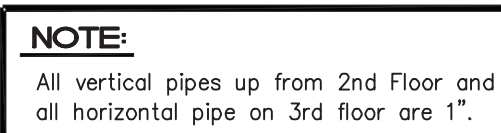
DATE: 5-5-2025
REVISION: 5-5-2025
PROJECT: DOUGLAS STATION APARTMENTS
NW SIOUAN & NE SYCAMORE ST
LEE'S SUMMIT, MISSOURI






DATE: 5-5-2025
REVISION: 5-5-2025
PROJECT: DOUGLAS STATION APARTMENTS
NW SIOUAN & NE SYCAMORE ST
LEE'S SUMMIT, MISSOURI








DESIGN CRITERIA:
NFPA STANDARD (FOR DOWN DOWN)

DATE: 5-5-2025
REVISION: 5-5-2025
PROJECT: DOUGLAS STATION APARTMENTS
NW SIOUAN & NE SYCAMORE ST
LEE'S SUMMIT, MISSOURI

DATE: 5-5-2025
REVISION: 5-5-2025
PROJECT: DOUGLAS STATION APARTMENTS
NW SIOUAN & NE SYCAMORE ST
LEE'S SUMMIT, MISSOURI



SPRINKLER LEGEND - BUILDING 'C' (TYPICAL OF 2)													
SYMBOL	QUANTITY	MANUFACTURE	MODEL	RESPONSE	TYPE	SPRINKLER O.D.	FINISH	THREAD	K-FACTOR	PROTECTION		NOTES	
										TYPE	F-RATE		
	260	Reliable	F18E44	Residential	HSW	R3531	White	1/2"	4.4	155	Semi-Recessed	White	
	36	Reliable	F18E44	Residential	HSW	R3531	Chrome	1/2"	4.4	175	Semi-Recessed	Chrome	
	1	Reliable	F1FR	Quick	HSW	R3635	Bross	1/2"	5.6	200	None	N.A.	
	12	Reliable	F3QR56	Quick	Dry HSW	R5734	Chrome	1"	5.6	200	Standard	Chrome	
	24	Reliable	DH56	Quick	EC Dry HSW	RA1664	Chrome	1"	5.6	200	Standard	Chrome	
Note 1 here										Total Sprinklers (single Building 'C' only) =		331	

SPRINKLER LEGEND - BUILDING 'CLUBHOUSE'													
SYMBOL	QUANTITY	MANUFACTURE	MODEL	TYPE	TEMPERATURE	ORIFICE	WATER	WSP	WSP	WSP	REMARKS	NOTES	
	242	Releco	F1RRes44	Residential	HSW	R3531	White	1/2"	4.4	155	Semi-Recessed	White	
	34	Releco	F1RRes44	Residential	HSW	R3531	Chrome	1/2"	4.4	175	Semi-Recessed	White	
	1	Releco	F1FR	Quick	HSW	R3635	Brass	1/2"	5.6	200	None	N.A.	
	13	Releco	F3GR56	Quick	Dry HSW	R5734	Chrome	1"	5.6	200	Standard	Chrome	
	24	Releco	DH56	Quick	EC Dry HSW	RA1664	Chrome	1"	5.6	200	Standard	Chrome	
	4	Releco	F1FR56	PENDENT	HSW	RA1414	Chrome	1/2"	5.6	200	2-Pc. Enlisted	Chrome	
	18	Releco	F1GR49	Residential	PENDENT	R3516	White	1/2"	4.9	155	2-Pc. Enlisted	White	
										Total Sprinklers (single 'Clubhouse' only)			336
										Total Sprinklers (all 'Clubhouse' Buildings)			336

¹ This sprinkler installed at bottom of a 1" CPVC pipe drop.

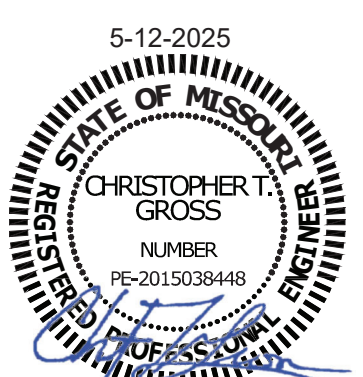
- ## KEY NOTES*
- ① Closet/pantry not sprinklered per NFPA 13R section 6.6.3.
 - ② Bathroom not sprinklered per NFPA 13R section 6.6.2.
 - ③ 4" underground fire protection service (by others). See site plan for continuation.
 - ④ 2" system riser – see detail on sheet PFI.
 - ⑤ Horn/Storm alarm mounted above FDC – 120 VAC (wiring by others).
 - ⑥ 2" HDPE under-slab transfer pipe. This pipe installed under the Stair/Corridor concrete slab (by others). Both ends shall terminate with a 2" male NPT adapter approximately 1'-0" AFF.
 - ⑦ 1-1/2" up/down to HDPE under-slab transfer pipe. See keynote 7.
 - ⑧ 1-1/4" up/down to HDPE under-slab transfer pipe. See keynote 7.
 - ⑨ 3/4" up to 2nd Floor.
 - ⑩ 3/4" up from 1st Floor and 3/4" up to 3rd Floor.
 - ⑪ 3/4" up from 2nd Floor.
 - ⑫ Sprinkler pipe down through ceiling and out to "dry" sidewall sprinkler protecting patio/balcony. This section of sprinkler pipe will be "exposed to view" unless concealed by a soffit or decorative cover (soffit or cover by others). See detail.
 - ⑬ Install this sprinkler pipe in attic space as low as possible. All thermal insulation must be installed ABOVE this pipe, NOT BELOW it. Sprinkler pipe may need to be "tented" to prevent thermal insulation from falling below it. Insulation and tenting is by others'. See detail.
 - ⑭ 3/4" up to 3rd Floor.
 - ⑮ 1" up to 2nd Floor.
 - ⑯ 1" up from 1st Floor and 5/4" up to 3rd Floor.
 - ⑰ 2" up/down to HDPE under-slab transfer pipe. See keynote 7.
 - ⑱ 1" up from 1st Floor and 1" up to 3rd Floor.
 - ⑲ 1" up to 3rd Floor.
 - ⑳ 1" up from 2nd Floor.

*Not all notes are used on every sheet.

HYDRAULIC DESIGN AREA #CH1
****BUILDING 5 CLUBHOUSE****
 NODES CH1, CH2, CH3, CH4
 CALC ALL OUTLETS @ 13 GPM (16'x16' SPACING)
 CALC 4 TOTAL SPRINKLERS
 DEMAND @ NODE 'BRC' = 59 GPM @ 39.5 PSI
 DEMAND @ NODE 'PC1' = 59 GPM @ 50.4 PSI

NOTE:
SECOND AND 3rd FLOORS OF THE CLUBHOUSE BUILDING ARE IDENTICAL TO THE 2nd AND 3rd FLOORS OF THE TYPE 'C' BUILDING. SEE 2/FP3 AND 3/FP3 RESPECTIVELY.

NOTE:
All vertical pipes up to 2nd Floor are 1".



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Engineering, LLC
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Independence, MO 64056
816-516-9540

DRAWN BY: <i>FEK</i>
HEADS THIS SHEET:
TOTAL SPRINKLERS: <i>1,474</i>
SCALE <i>AS NOTED</i>
CONTRACT NO: <i>25M-3554</i>

DESIGN CRITERIA: NFPA STANDARD #13R (2)

BAMFORD FIRE SPRINKLER Co., Inc.

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PROJECT: *DOUGLAS' STATION APARTMENTS*
NW SLOAN & NE SYCAMORE ST
LEE'S SUMMIT, MISSOURI

DATE DRAWN: 5-5-2025
REVISION DATE:
SHEET NO: 3 OF 3