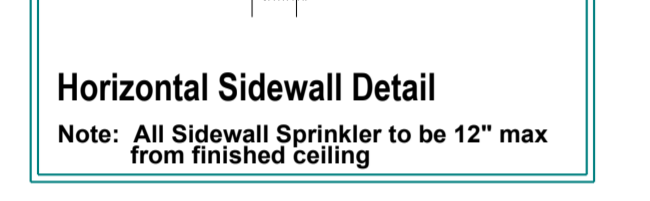
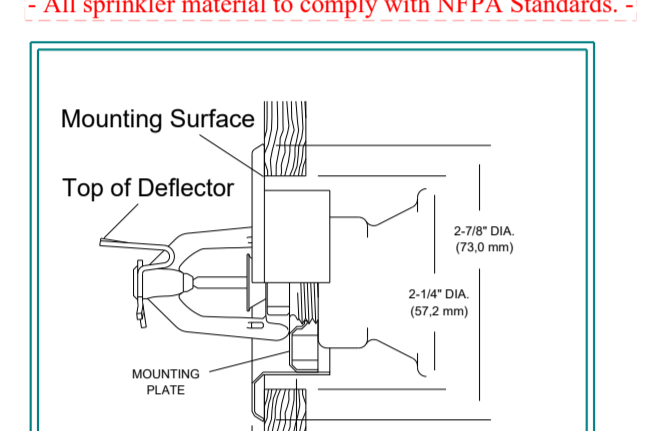


CPVC Pipe Hanger Details
- All sprinkler material to comply with NFPA Standards -

Hanger Schedule for Steel Pipe

Pipe Size	Min. Hanger Spacing
1/2"	12'-0"
3/4"	12'-0"
1"	12'-0"
1 1/4"	12'-0"
1 1/2"	12'-0"
2"	12'-0"
2 1/2"	12'-0"
3"	12'-0"
4"	12'-0"
6"	12'-0"



6.4.6.5.5.1 Shadow Areas: Shadow areas shall be permitted in the protection area of a sprinkler as long as the cumulative dry area does not exceed 150 ft² (14 m²) per sprinkler.

-NFPA 13R - Shadow Area Code Section

8.13.3 Stairways
8.13.3.1 Combustible Construction: Sprinklers shall be installed beneath all stairways of combustible construction.
8.13.3.2 Sprinkler action: Sprinklers shall be installed on the top of combustible stair shafts.
8.13.3.3 Sprinklers shall be installed under the landings at each floor level.
8.13.3.4 Sprinklers at each floor level landing shall be protected to prevent both the floor level landing and any interstitial landing.
8.13.3.5 Sprinklers shall be installed beneath the lowest interstitial landing.

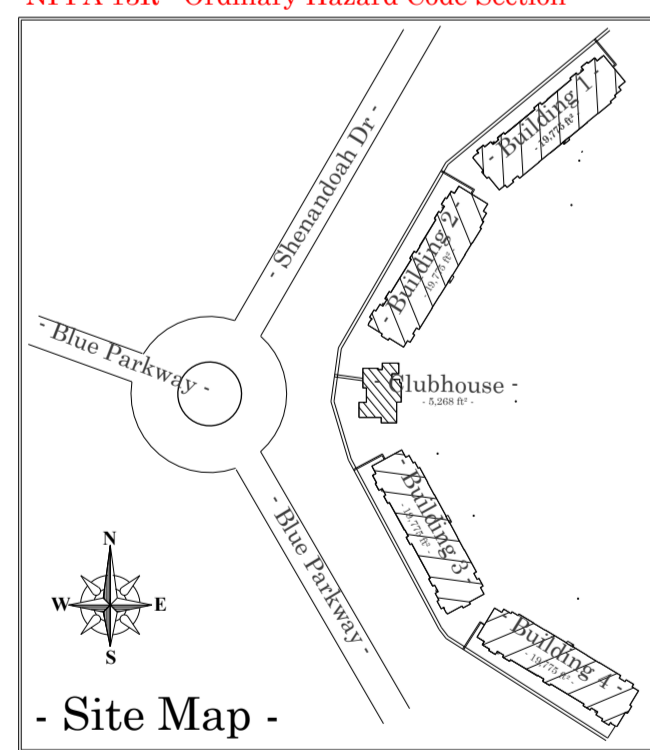
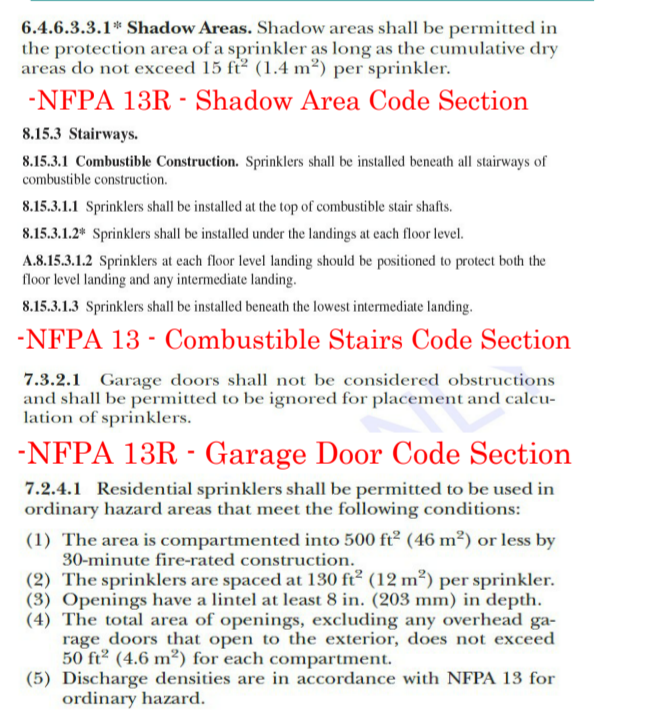
NFPA 13 - Combustible Stairs Code Section

7.2.4.1.1 Garage doors shall not be considered obstructions and shall be permitted to be ignored for placement and calculation of sprinklers.

-NFPA 13R - Garage Door Code Section

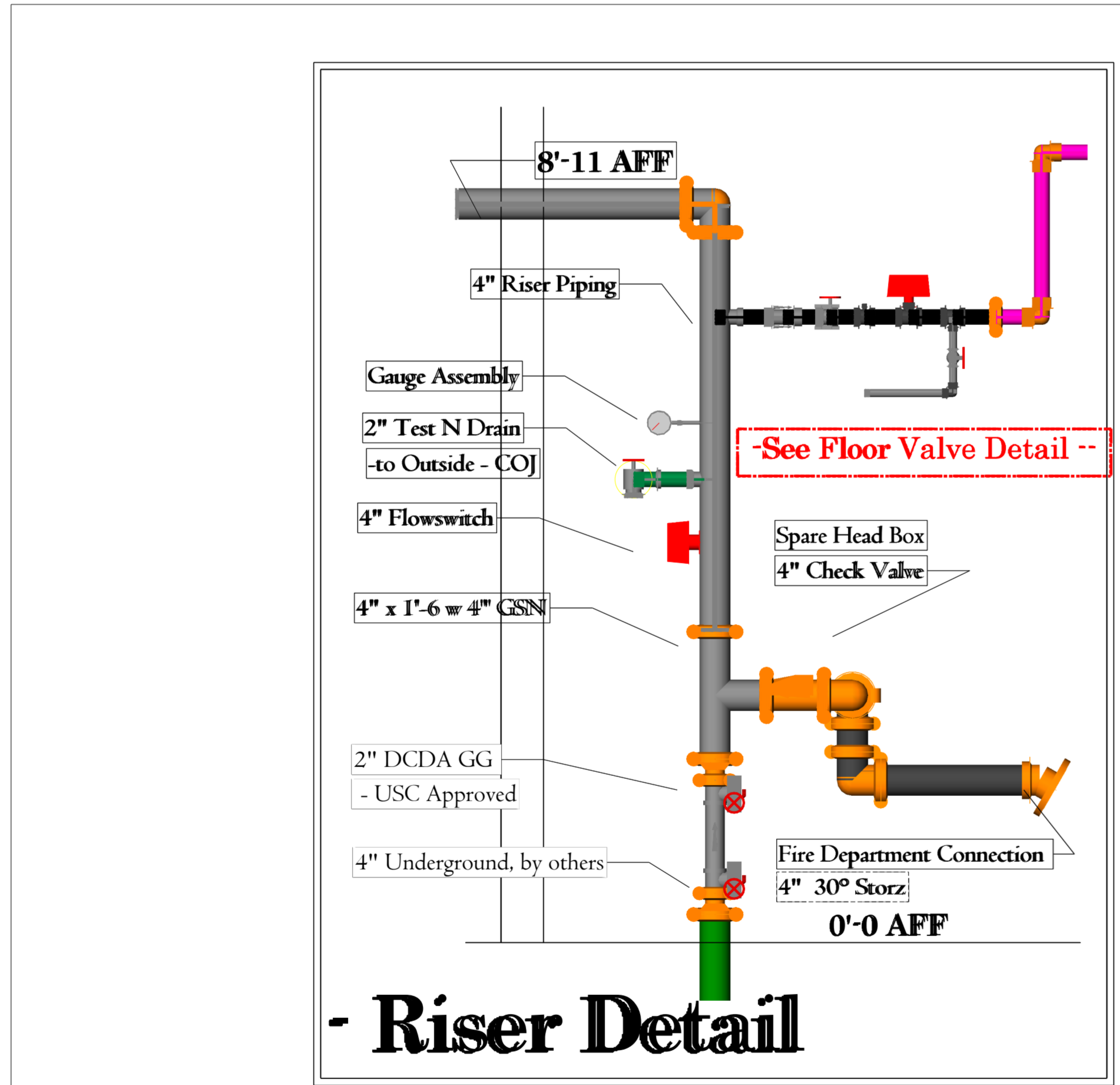
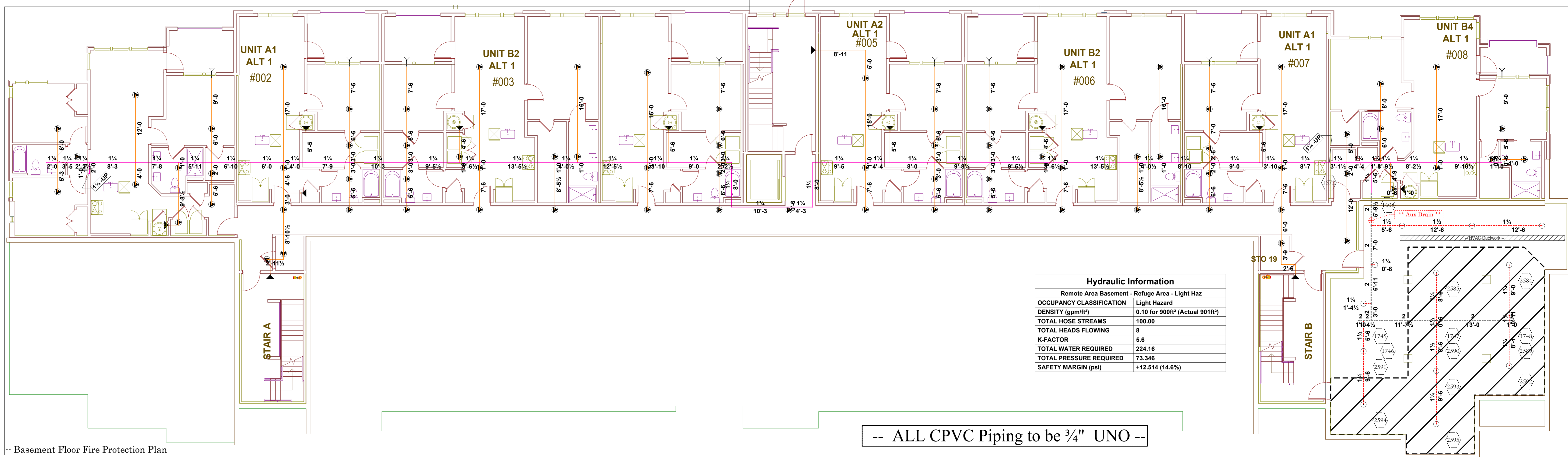
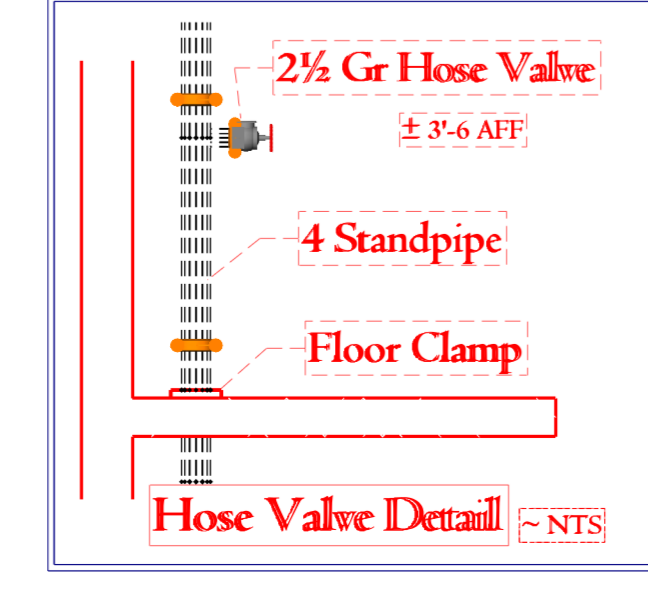
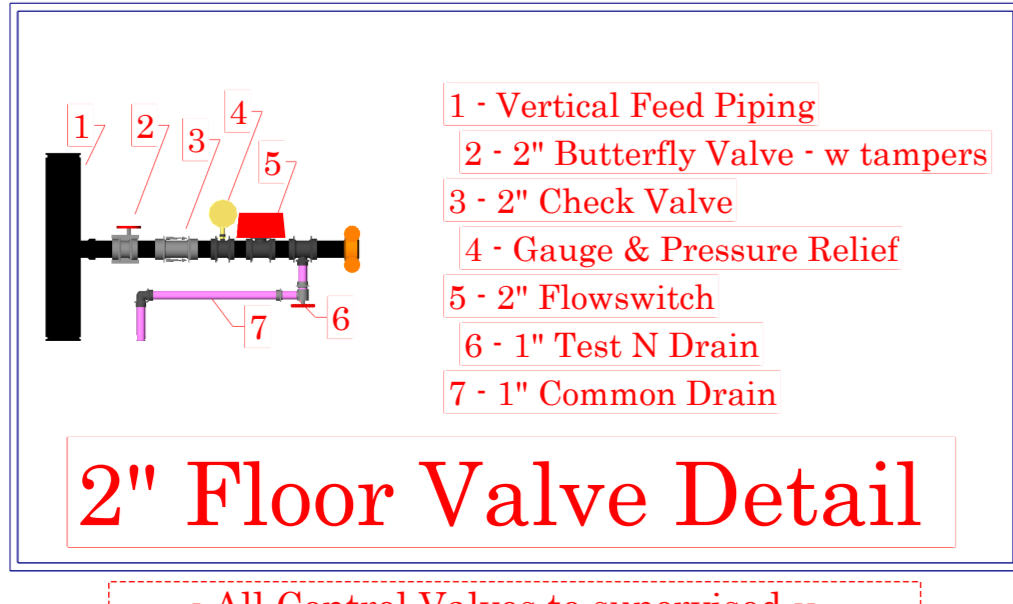
7.2.4.1 Residential sprinklers shall be permitted to be used in ordinary hazard areas that meet the following conditions:
(1) The area is compartmented into 500 ft² (46 m²) or less by 20-minute fire-rated construction.
(2) The sprinklers are spaced at 130 ft² (12 m²) per sprinkler.
(3) Operating time is at least 10 min. (20 min) in depth.
(4) The total area of openings, including any overhead garage doors that open to the exterior, does not exceed 50 ft² (4.6 m²) for each compartment.
(5) Discharge densities are in accordance with NFPA 13 for ordinary hazard.

-NFPA 13R - Ordinary Hazard Code Section



-- ALL CPVC Piping to be < Solid >
-- ALL Steel Piping to be < Dashed >

**** All Exposed Piping to be Steel - UNO ****



RELEASED FOR CONSTRUCTION
As Noted on Plan Review

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

01/20/2026

Supply Flow Test Data

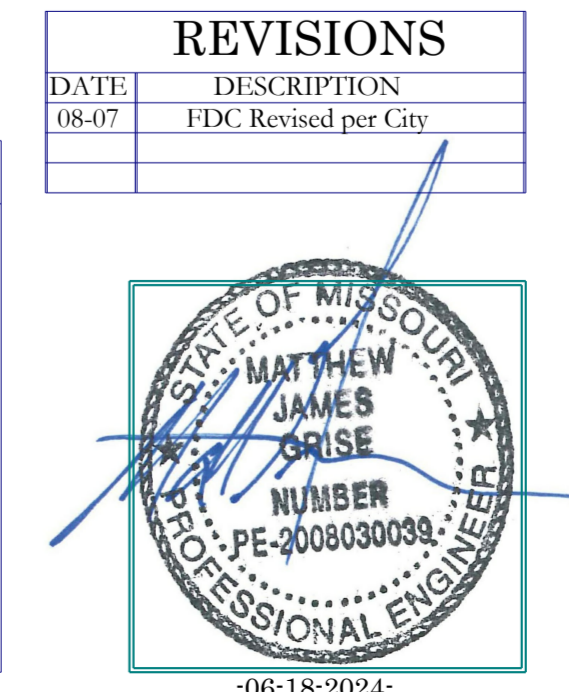
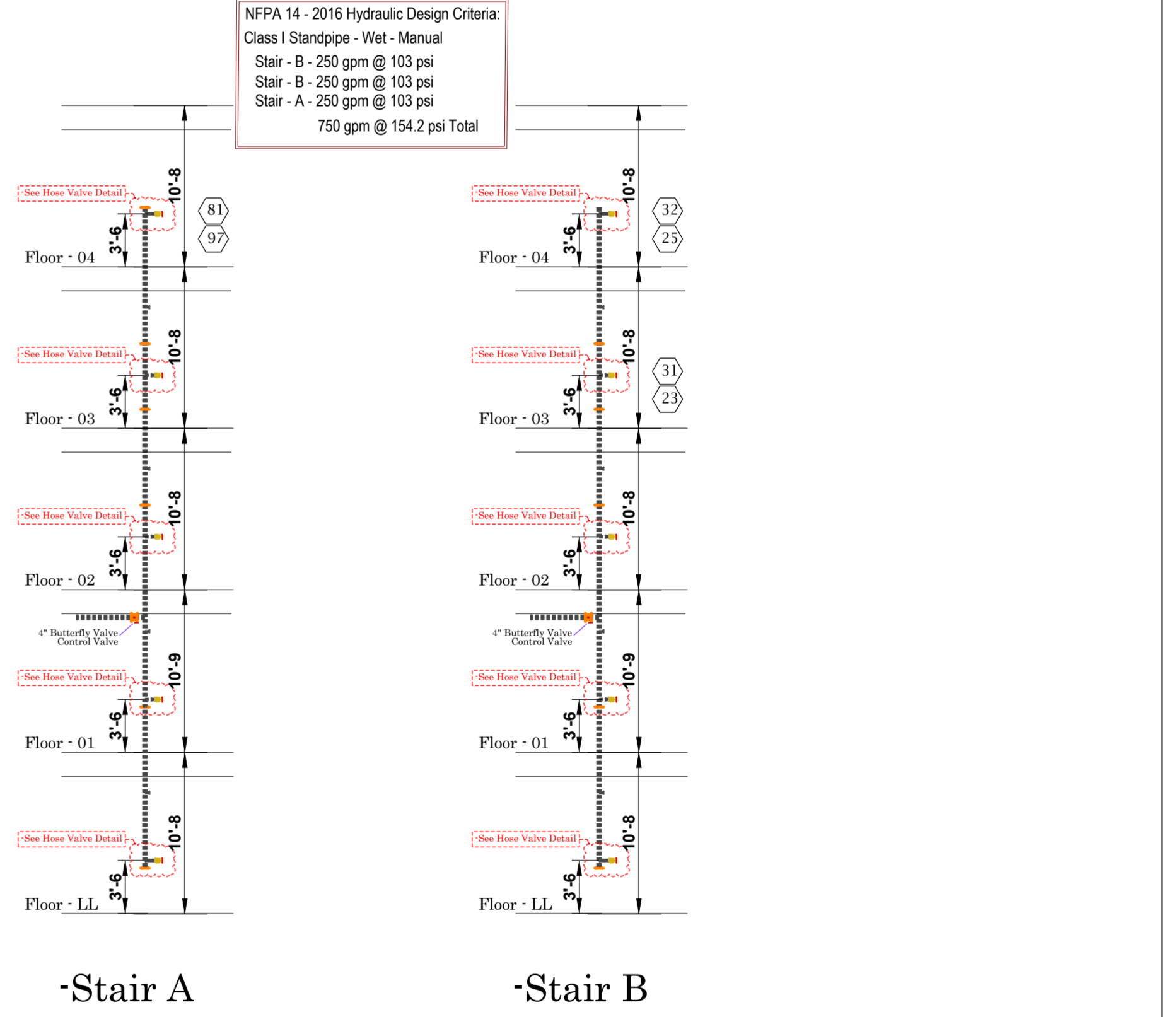
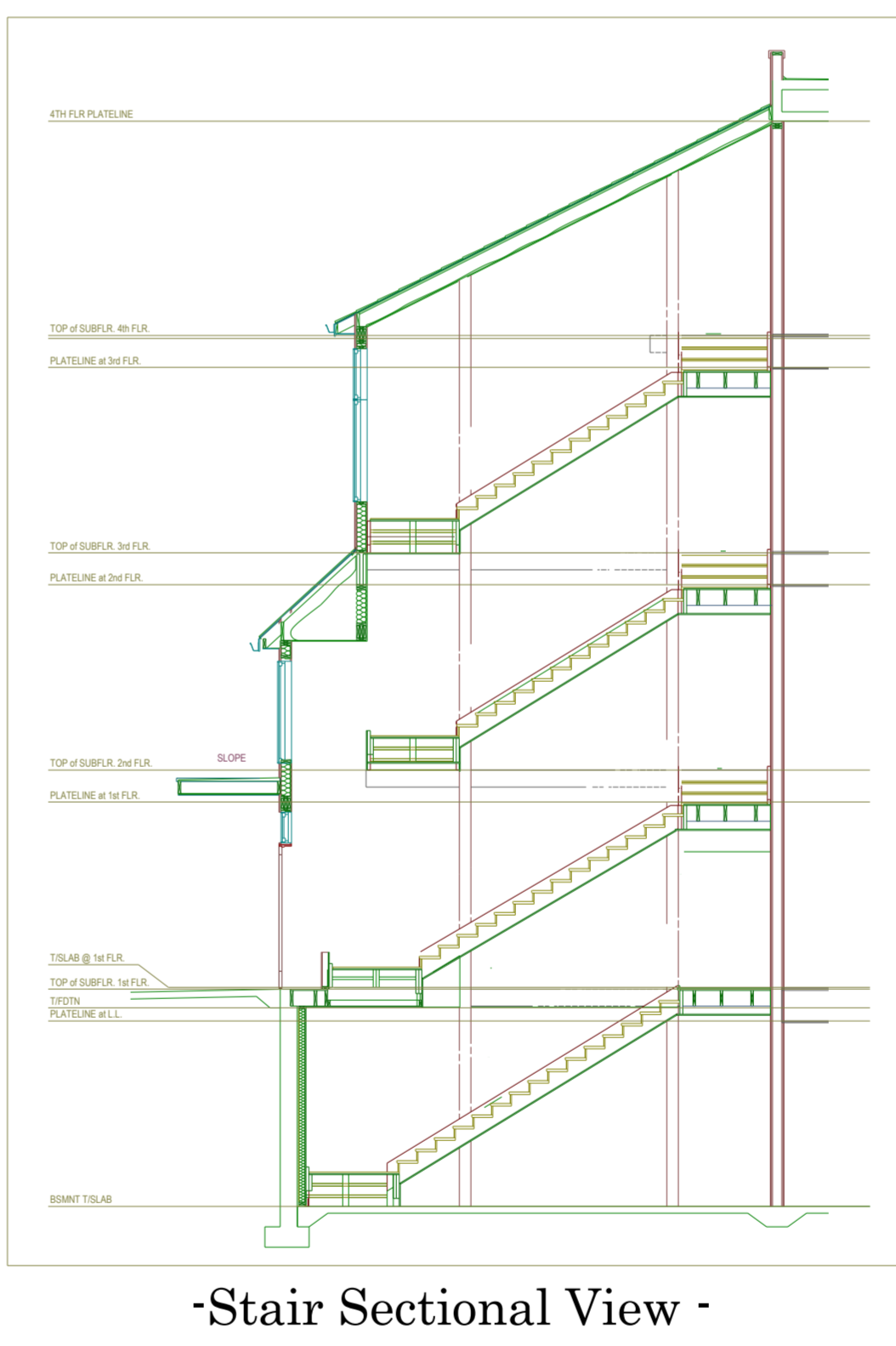
Date of Test	1/24/2024
Location	5501 W 115th St
Hydrant Numbers	110010216
Static Pressure	86.000
Residual Pressure	78.000
Flow	2000.00

Sprinkler Legend

Symbol	Make	SIN	Quantity	K	Type	Size	Response	Finish	Temp	Note	
○	Viking	VK3001	14	5.6	Upright	1/2"	Quick	Brass	175°F		
◐	Tyco	TY2335	8	4.4	Horizontal Sidewall	1"	Past	White RAL 9003	155°F		
◑	Viking	VK186	12	4	Horizontal Sidewall	1/2"	Past	White Polyester	175°F	16" x 18"	
▲	Viking	VK108	77	4.9	Pendent	1/2"	Past	White Polyester	175°F	18" x 18"	
			Total =	111							

GENERAL NOTES

- This design is based upon the owner's acceptance of NFPA 13R 2016 & NFPA 14 2016.
- All threaded piping to be SCH 40.
- All residential piping to be CPVC.
- All sprinkler material to comply with all local requirements and applicable NFPA Standards.
- Continuous central monitoring of sprinkler systems per NFPA 72 to be by others.
- All electrical wiring to be by others.
- All painting of sprinkler pipe to be by others.
- All patching and/or painting of penetrated drywall and masonry walls to be by others.
- Building to be provided with adequate heat to prevent piping from freezing.
- All marking or labeling of sprinkler piping to be by others.
- All piping at exterior wall penetrations to be Galv w/ Galv plate.
- All Control Valves to supervised.



REVIEWING AUTHORITY
LS Codes

TOTAL HEADS FOR JOB: 795

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

DRAWN BY: JJR

DATE DRAWN: -06-18-2024-

CONTRACT NUMBER: NC-1429

DRAWING NUMBER: FP 1 of 3

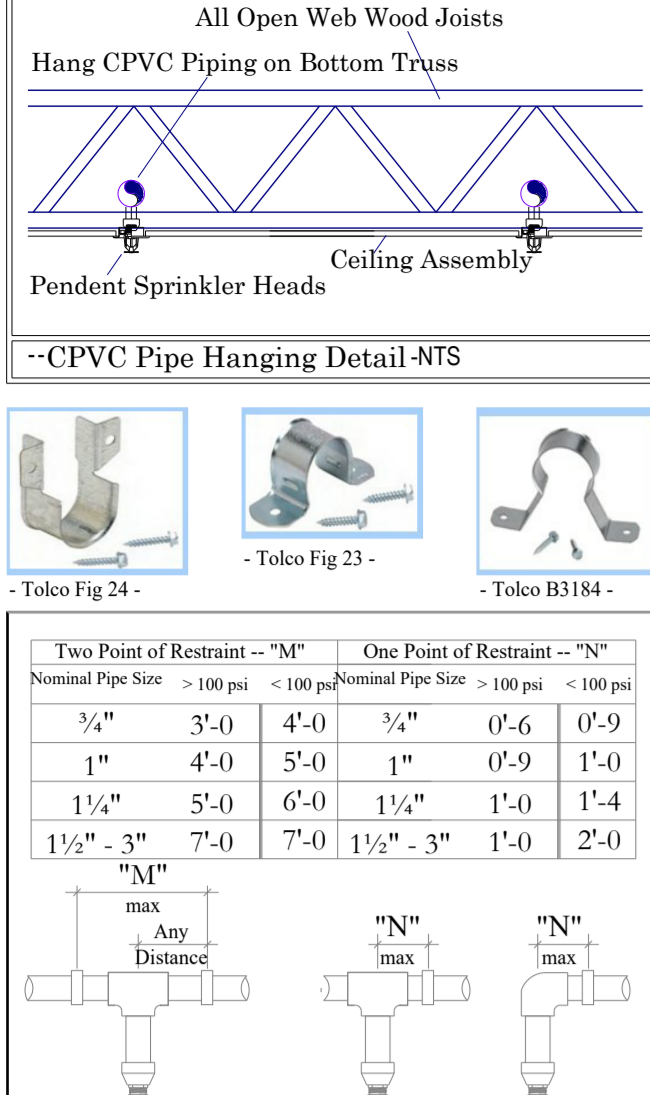
Building 1.2.3.4

Fire Protection Plan < Submittal >

-Residences @ Blackwell -
2840 SE Blue Pkwy
Lee's Summit, MO 64063

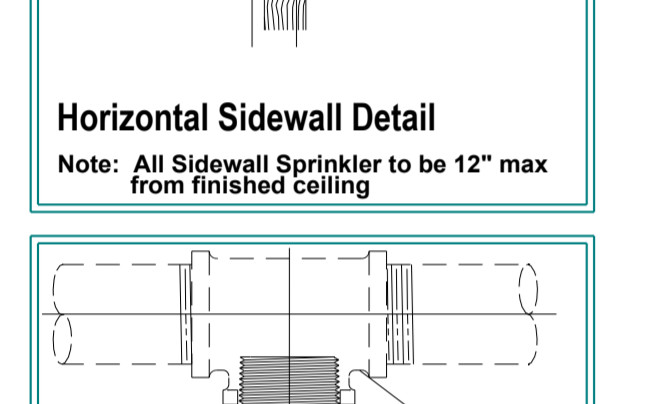
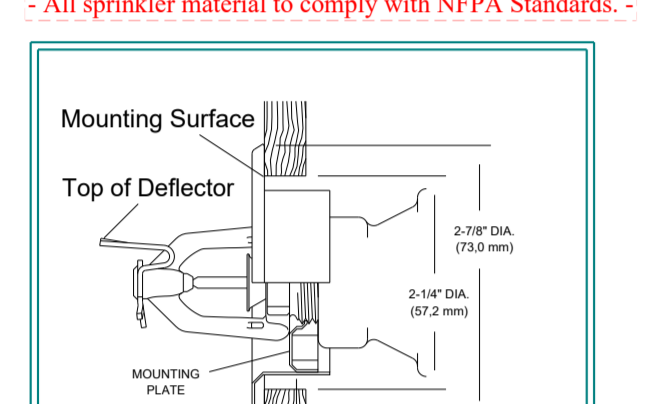
Contract with:
- Streamline Construction -
Fire Protection Plan

Alliance Fire Protection
130 W 9th Ave
Suite 101
NORTH KANSAS CITY, MO 64116
PHONE (913) 888-0647
FAX (913) 888-0618



CPVC Pipe Hanger Details
- All sprinkler material to comply with NFPA Standards -

Hanger Schedule for Steel Pipe	Standpipe Hanger Detail
1/2"	1/2"
3/4"	3/4"
1"	1"
1 1/4"	1 1/4"
1 1/2"	1 1/2"
2"	2"
2 1/2"	2 1/2"
3"	3"
3 1/2"	3 1/2"
4"	4"
4 1/2"	4 1/2"
5"	5"
5 1/2"	5 1/2"
6"	6"
6 1/2"	6 1/2"
7"	7"
7 1/2"	7 1/2"
8"	8"
8 1/2"	8 1/2"
9"	9"
9 1/2"	9 1/2"
10"	10"
10 1/2"	10 1/2"
11"	11"
11 1/2"	11 1/2"
12"	12"
12 1/2"	12 1/2"
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13 1/2"	13 1/2"
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14 1/2"	14 1/2"
15"	15"
15 1/2"	15 1/2"
16"	16"
16 1/2"	16 1/2"
17"	17"
17 1/2"	17 1/2"
18"	18"
18 1/2"	18 1/2"
19"	19"
19 1/2"	19 1/2"
20"	20"



6.4.6.5.5.1 Shadow Areas: Shadow areas shall be permitted in the protection area of a sprinkler as long as the cumulative dry area does not exceed 150 ft² (14 m²) per sprinkler.

-NFPA 13R - Shadow Area Code Section

6.4.6.5.5.2 Standpipes: Standpipes shall be installed in all areas of occupancy.

6.4.6.5.5.3 Standpipes: Standpipes shall be installed in all areas of occupancy.

6.4.6.5.5.4 Standpipes: Standpipes shall be installed in all areas of occupancy.

6.4.6.5.5.5 Standpipes: Standpipes shall be installed in all areas of occupancy.

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6.4.6.5.5.11 Standpipes: Standpipes shall be installed in all areas of occupancy.

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6.4.6.5.5.95 Standpipes: Standpipes shall be installed in all areas of occupancy.

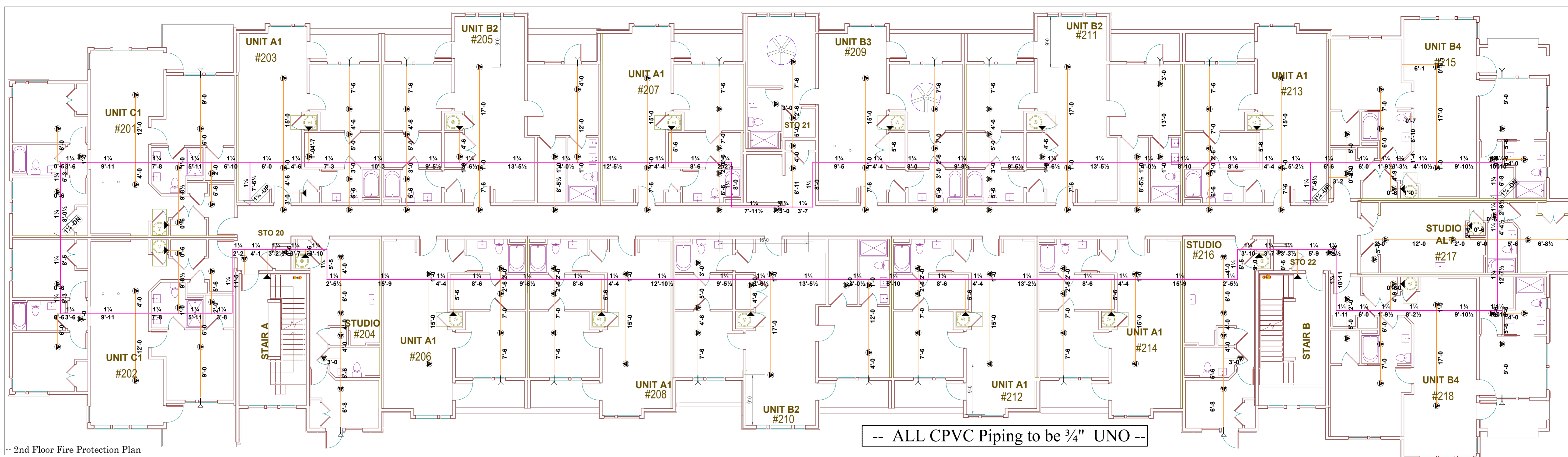
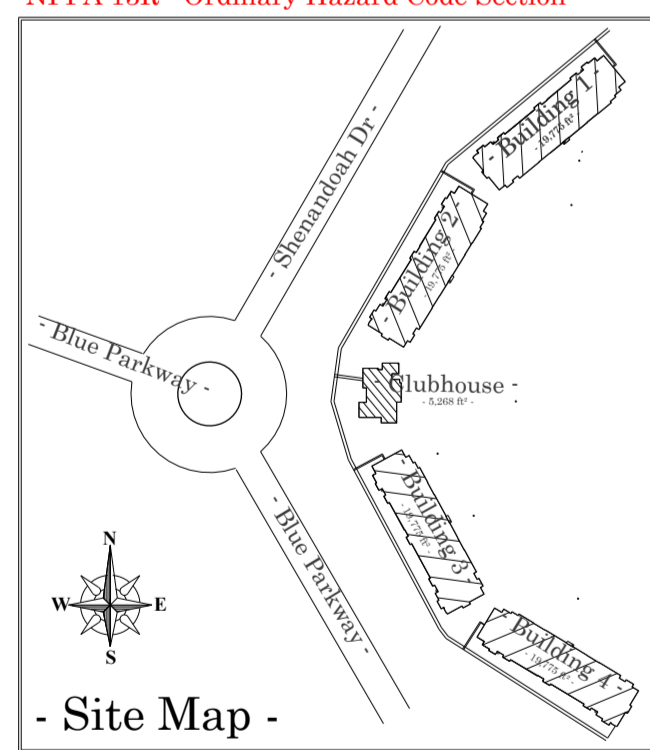
6.4.6.5.5.96 Standpipes: Standpipes shall be installed in all areas of occupancy.

6.4.6.5.5.97 Standpipes: Standpipes shall be installed in all areas of occupancy.

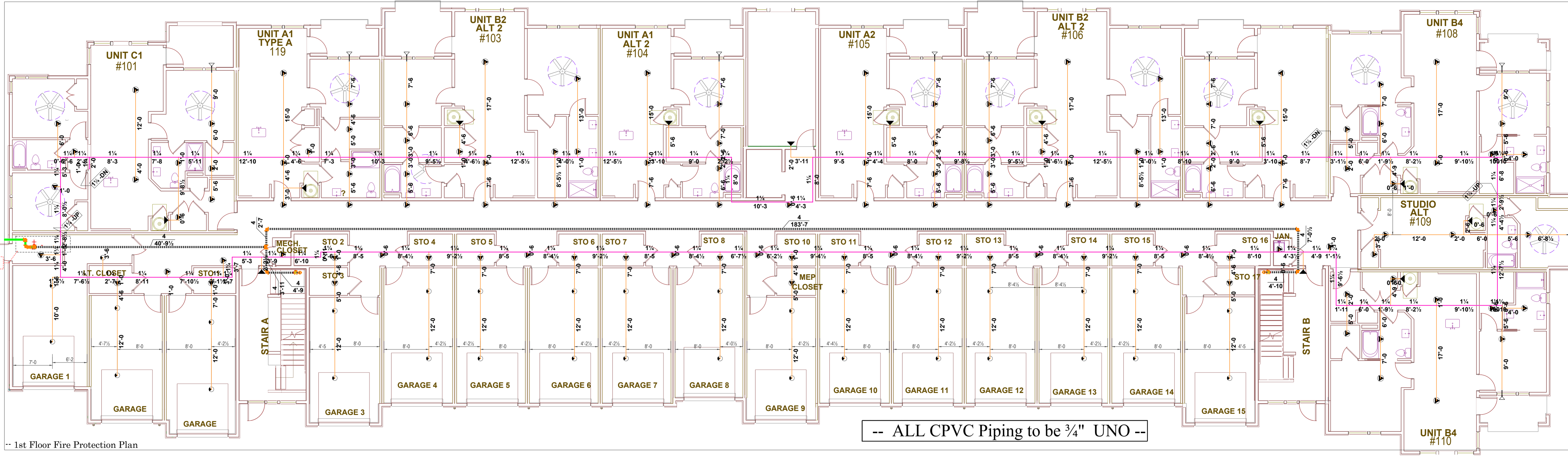
6.4.6.5.5.98 Standpipes: Standpipes shall be installed in all areas of occupancy.

6.4.6.5.5.99 Standpipes: Standpipes shall be installed in all areas of occupancy.

6.4.6.5.5.100 Standpipes: Standpipes shall be installed in all areas of occupancy.



-- ALL CPVC Piping to be 3/4" UNO --



-- ALL CPVC Piping to be 3/4" UNO --

-- ALL CPVC Piping to be < Solid > --
 -- ALL Steel Piping to be < Dashed > --
 ** All Exposed Piping to be Steel - UNO **

Air Venting shall be provided for each system, per NFPA.

Sprinkler Legend

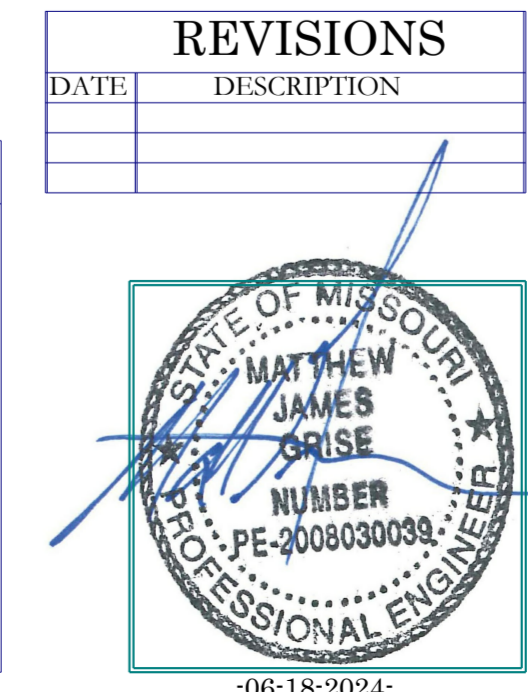
Symbol	Make	SIN	Quantity	-K-	Type	Size	Response	Finish	Temp	Note
	Tyco	TY2335	31	4.4	Horizontal Sidewall	1	Fast	White RAL 9003	155°F	
	Viking	VK486	34	4	Horizontal Sidewall	1/2	Fast	White Polyester	175°F	16" x 18"
	Viking	VK468	266	4.9	Pendent	1/2	Fast	White Polyester	175°F	18" x 18"
	Tyco	TY2236	33	4.9	Pendent	1/2	Fast	White RAL 9010	175°F	Dry Res P
			Total = 364							

GENERAL NOTES

- This design is based upon the owner's acceptance of NFPA 13R 2016 & NFPA 14 2016.
- All threaded piping to be SCH 40.
- All residential piping to be CPVC.
- All sprinkler material to comply with all local requirements and applicable NFPA Standards.
- Continuous central monitoring of sprinkler systems per NFPA 72 to be by others.
- All electrical wiring to be by others.
- All underground work to be by others.
- All painting of sprinkler pipes to be by others.
- All patching and/or painting of penetrated drywall and masonry walls to be by others.
- Building to be provided with adequate heat to prevent piping from freezing.
- All marking or labeling of sprinkler piping to be by others.
- All piping at exterior wall penetrations to be Gable w/ Gable plate.
- All Control Valves to be supervised.

Supply Flow Test Data

Date of Test	1/24/2024
Location	5801 W 115th St
Hydrant Numbers	110010216
Static Pressure	86.000
Residual Pressure	78.000
Flow	2000.00



REVISIONS

DATE	DESCRIPTION

REVIEWING AUTHORITY
LS Codes

TOTAL HEADS FOR JOB
795

SCALE
1/8" = 1'-0"

DRAWN BY
JJR

DATE DRAWN
-06-18-2024-

CONTRACT NUMBER
NC-1429

DRAWING NUMBER
FP 2 of 3

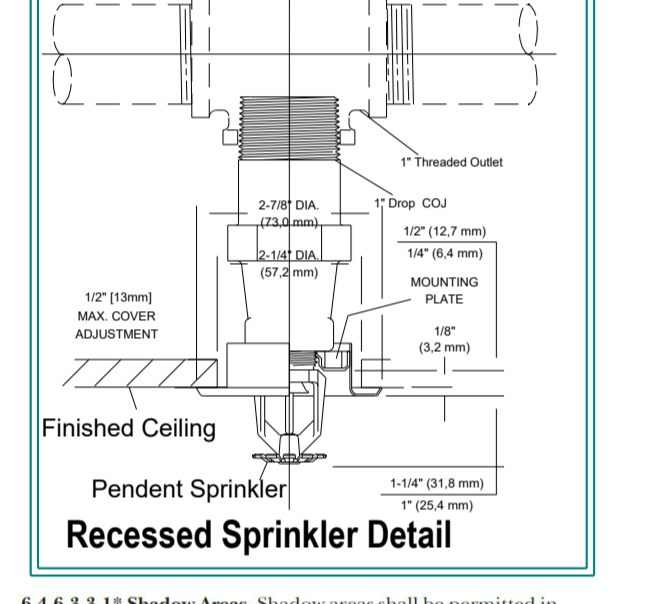
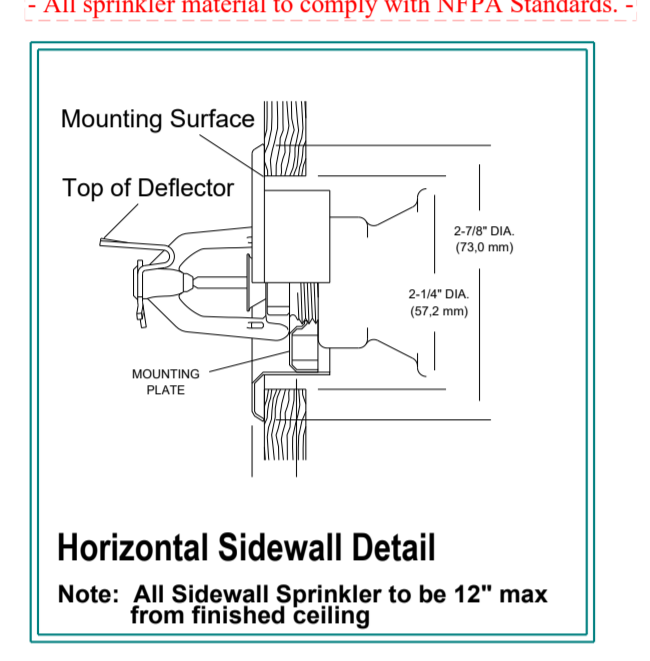
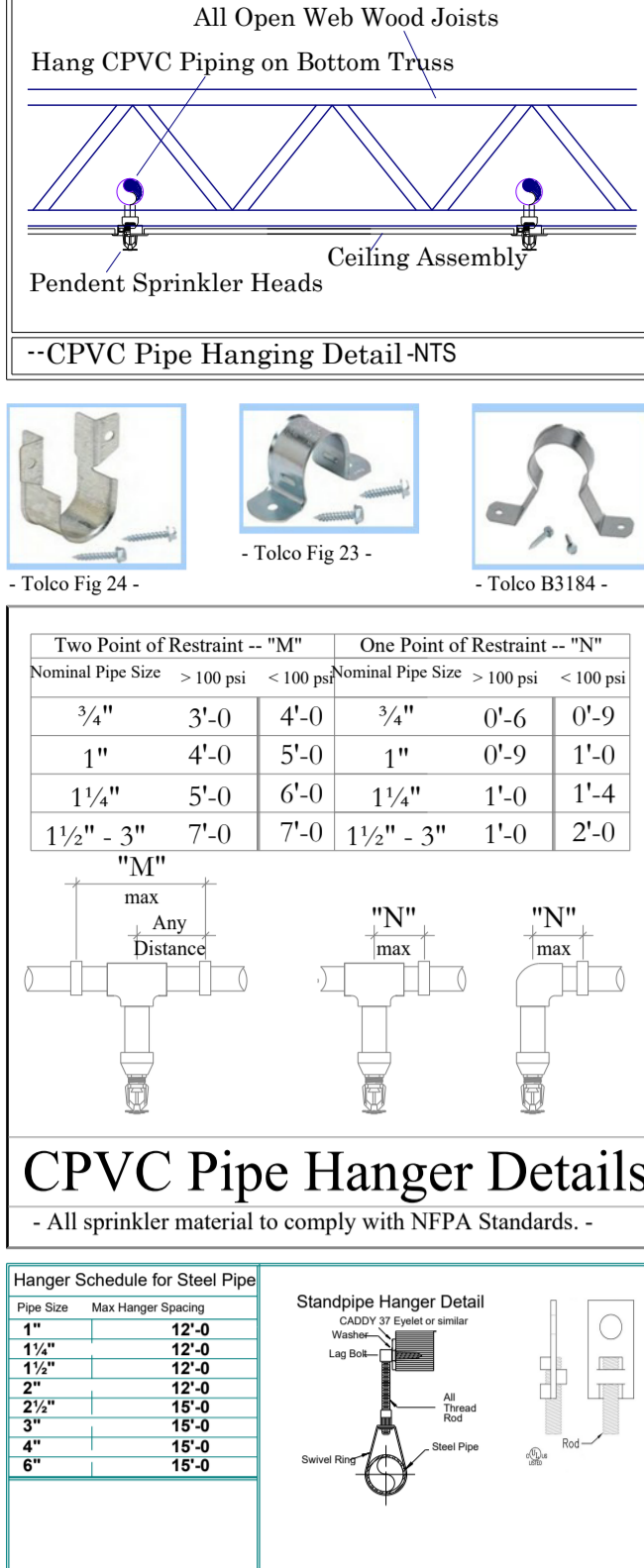
Building 1.2.3.4

Fire Protection Plan < Submittal >

-Residences @ Blackwell -
2840 SE Blue Pkwy
Lee's Summit, MO 64063

Contract with:
- Streamline Construction -
Fire Protection Plan

Alliance Fire Protection
130 W 9th Ave
Suite 101
NORTH KANSAS CITY, MO 64116
PHONE (913) 888-0647
FAX (913) 888-0618



6.4.6.5.5.1 Shadow Areas. Shadow areas shall be permitted in the protection area of a sprinkler as long as the cumulative dry area does not exceed 150 ft² (14 m²) per sprinkler.

-NFPA 13R - Shadow Area Code Section

8.13.3 Stairways.
8.13.4 Combustible Curbside. Sprinklers shall be installed beneath all stairways of combustible construction.
8.13.4.1 Sprinklers shall be installed on the top of combustible walls.
8.13.4.2 Sprinklers shall be installed under the landing at each floor level.
8.13.4.3 Sprinklers at each floor level shall be protected to prevent the fire from landing on the next level.
8.13.4.4 Sprinklers shall be installed beneath the lower intermediate landing.

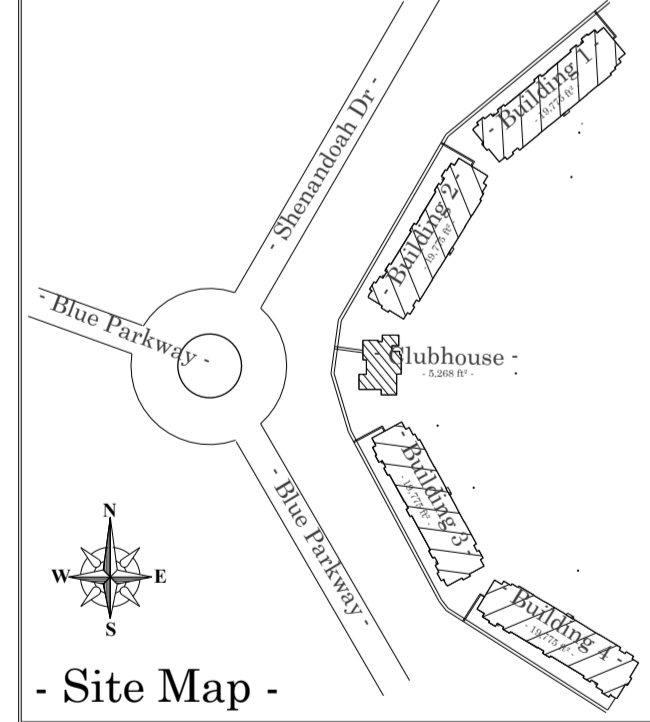
NFPA 13 - Combustible Stairs Code Section

7.2.4.2.1 Garage doors shall use fire-rated observation windows and shall be permitted to be ignored for protection and calculation of sprinklers.

-NFPA 13R - Garage Door Code Section

7.2.4.1.1 Residential sprinklers shall be permitted to be used in ordinary hazard areas that meet the following conditions:
(1) The area is compartmented into 500 ft² (46 m²) or less by 20-minute fire-rated construction.
(2) The sprinklers are spaced at 130 ft² (12 m²) per sprinkler.
(3) Sprinklers are spaced at a minimum of 120 ft (36 m) diagonal.
(4) The total area of openings, including any overhead garage doors that open to the exterior, does not exceed 50 ft² (4.6 m²) for each compartment.
(5) Other hazards are in accordance with NFPA 13 for ordinary hazard.

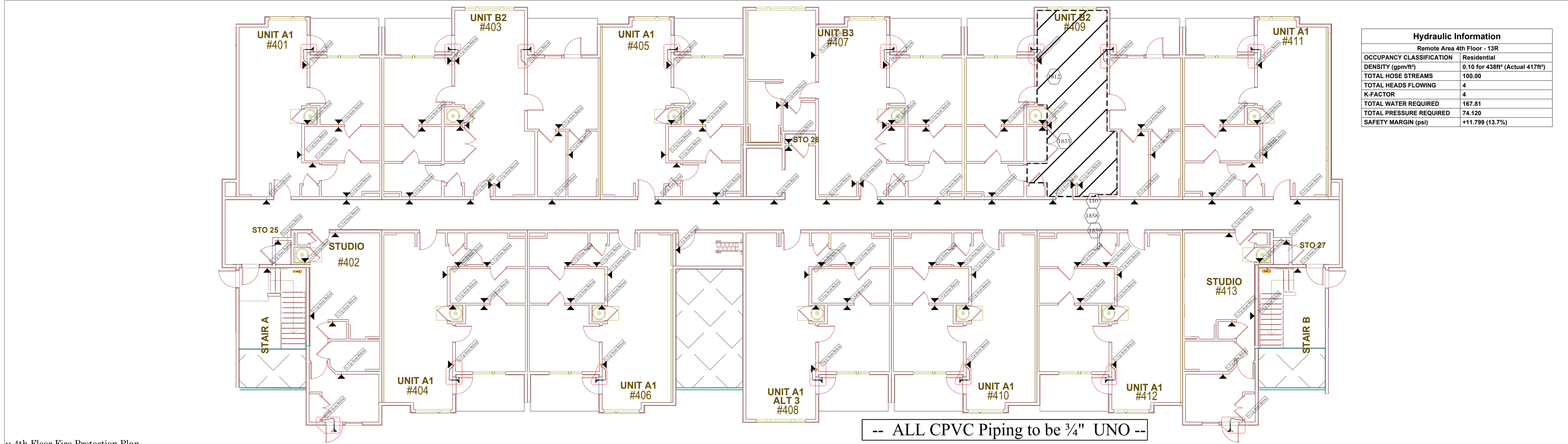
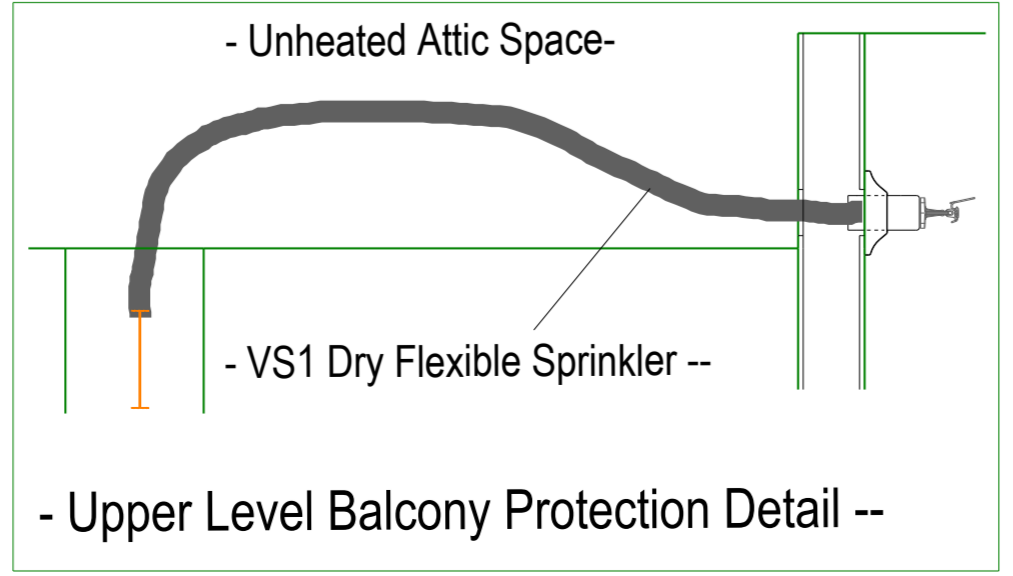
-NFPA 13R - Ordinary Hazard Code Section



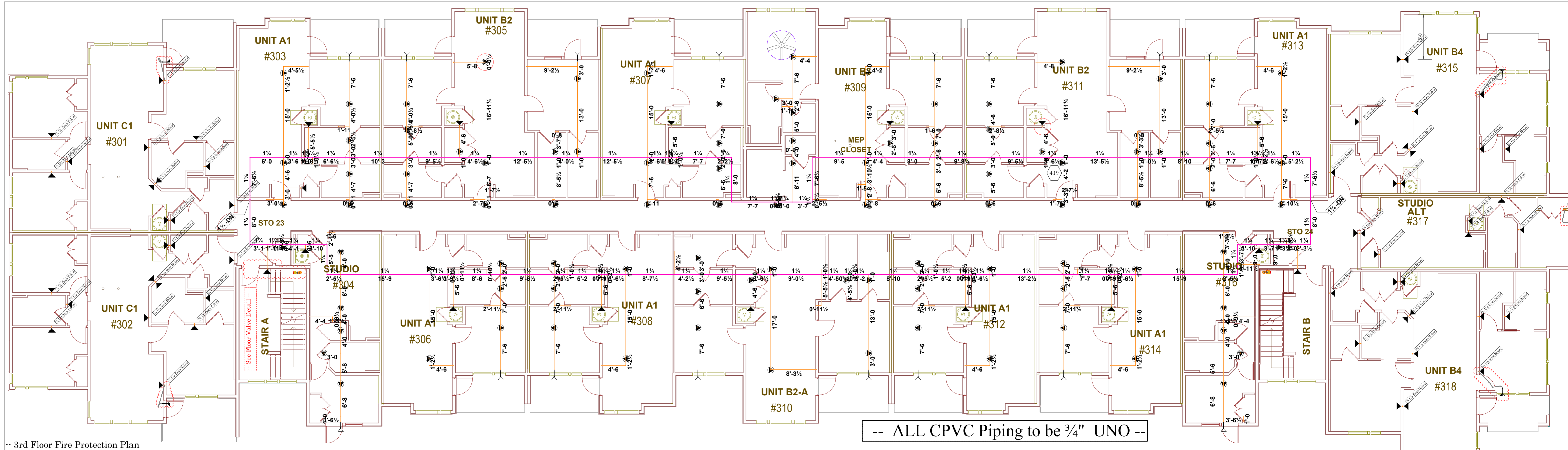
-- ALL CPVC Piping to be < Solid >

-- ALL Steel Piping to be < Dashed >

** All Exposed Piping to be Steel - UNO **



Hydraulic Information	
Remote Area 4th Floor - 13R	Residential
OCCUPANCY CLASSIFICATION	0.10 for 438ft ² (Actual 417ft ²)
DENSITY (ppm/ft ²)	100.00
TOTAL HOSE STREAMS	4
TOTAL HEADS FLOWING	4
K-FACTOR	167.81
TOTAL WATER REQUIRED	74.120
TOTAL PRESSURE REQUIRED	+11.799 (13.7%)

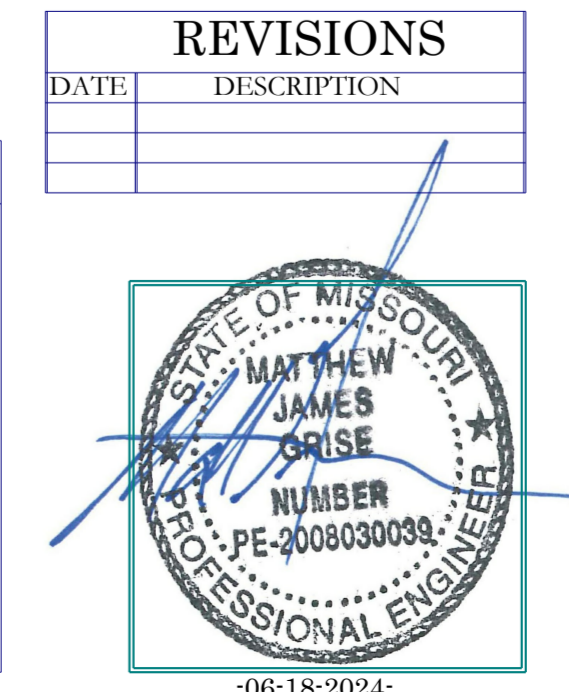


Air Venting shall be provided for each system, per NFPA.

Sprinkler Legend										
Symbol	Make	SIN	Quantity	K-	Type	Size	Response	Finish	Temp	Note
	Vietacnic	V3510	20	5.6	Horizontal Sidewall	1"	Quick	White RAL 9010	175°F	14" x 14"
	Tyco	TY2335	16	4.4	Horizontal Sidewall	1"	Fast	White RAL 9003	155°F	
	Viking	VK186	196	4	Horizontal Sidewall	3/4"	Fast	White Polyester	175°F	16" x 18"
	Viking	VK468	99	4.9	Pendent	3/4"	Fast	White Polyester	175°F	18" x 18"
			Total = 331							

- GENERAL NOTES**
- This design is based upon the owner's acceptance of NFPA 13R 2016 & NFPA 14 2016.
 - NFPA 25 for maintenance.
 - All grooved piping to be SCH 10.
 - All threaded piping to be SCH 40.
 - All Residential Piping to be CPVC.
 - All sprinkler material to comply with all local requirements and applicable NFPA Standards.
 - Continuous central monitoring of sprinkler systems per NFPA 72 to be by others.
 - All electrical wiring to be by others.
 - All underground work to be by others.
 - All painting of sprinkler pipe to be by others.
 - All patching and/or painting of penetrated drywall and masonry walls to be by others.
 - Building to be provided with adequate heat to prevent piping from freezing.
 - All marking or labeling of sprinkler piping to be by others.
 - All piping at exterior wall penetrations to be Galv w/ Galv plate.
 - All Control Valves to be supervised.

Supply Flow Test Data	
Date Conducted By	Lee's Summit H20
Date of Test	1/24/2024
Location	5801 W 115th St
Hydrant Numbers	110010216
Static Pressure	86.000
Residual Pressure	78.000
Flow	2000.00



REVISIONS	
DATE	DESCRIPTION

REVIEWING AUTHORITY
LS Codes

TOTAL HEADS FOR JOB
795

SCALE
1/8" = 1'-0"

DRAWN BY
JJR

DATE DRAWN
-06-18-2024-

CONTRACT NUMBER
NC-1429

DRAWING NUMBER
FP 3 of 3

Building 1.2.3.4

Fire Protection Plan < Submittal >

-Residences @ Blackwell -
2840 SE Blue Pkwy
Lee's Summit, MO 64063

Contract with:
- Streamline Construction -
Fire Protection Plan

Alliance Fire Protection
130 W 9th Ave
Suite 101
NORTH KANSAS CITY, MO 64116
PHONE (913) 888-0647
FAX (913) 888-0618