



HOME2 SUITES BY HILTON 4-STORY HOTEL CONSTRUCTION FIRE PROTECTION

475 Hospitality Blvd, Greenwood, SC 29649

JOHN M CAMPBELL COMPANY
CONTRACTOR

Reviewed

<u>X</u>	Reviewed with corrections as noted on submittal data and/or attached sheet(s)
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Signed by: Miles Campbel

Title: Project Manager **Date:** 10/29/2025

DRAWING INDEX

SHEET NO.	SHEET TITLE
33	6,7/ 3/51 '(6,*1 127/6
33	6,/60,8 *(1/5\$/ 127/6
33	),5/ 3803' (7\$/6
33	FIRE SUPPRESSION PLAN - FIRST FLOOR
33	),5/ 68335(66,21 3/51 6(821')/225
33	),5/ 68335(66,21 3/51 7+,5')/225
33	FIRE SUPPRESSION PLAN - FOURTH FLOOR
33	6751' 3,3(<< 548/; 8,8\$/88(\$7,21 5/)(5/18(

OVERALL FIRE SPRINKLER DESIGN CRITERIA

SYMBOL	OCCUPANCY	TYPE	' (16,7 < *30 6)	REMOTE AREA (SQFT)	HOSE ALLOWANCE
LH	/,*+7 +\$=5' 5(,6' (17,\$/	WET		REMOTE +(\$' 6	
LH	/,*+7 +\$=5' OTHERS	WET		*	
2 +	25',1\$<+&=5' GROUP 1	WET	✓	*	✓

MAX COVERAGE PER SPRINKLER (SF)

$\frac{1}{2}, *+7 +\$ \$5'$	$\sim 67\$1' \$5' 829(5\$*(\quad ; 7 829(5\$*($
$25', 1\$5 < +\$ =\$5' *5283,$	
$5(6, ' (17,\$ / 635,1. / (56$	

$$\begin{aligned} & 5\$5\$ (5' 887,216 \$/2: (')^2 5 48,8. 5(63216(635,1./((563(5 1)3\$ \\ & 25 86(5220 ' (6,*1 0(7+2' 3(5 1)3\$: +5(\$33/,86\%(\\ & 25 3(5/,67,1* 2) 5(6, (17,3/ +(\$' \end{aligned}$$

FIRE SPRINKLER DESIGN CRITERIA

SYSTEM TYPE	WET SYSTEM
AREA OF APPLICATION	" 64)7 \$5(\$ 5' 8&7,216 \$/2: (3' 5)38
HOSE ALLOWANCE	*30)25 /, +7 +48\$5' ")25 25',165 +48\$5'
5/6, (17,5) \$5(\$ 2 \$33/8&7,21	0267 5(027/ 820 03\$570(17 83 72 +(\$ 6
5/6, (17,5) +26(\$ /2: \$18(	*30
FACILITY USAGE	5/6, (17,5)

CODE SUMMARY

```

1)38 5
1)38
1)38
1)38
1)38 81' (5°52'81" 96°27+(56
1)38 +
NFPA 25
1)38
,17(5157,215/ 98,J' ,1° 82' ( : 68 80(1' 0(176
,17(5157,215/ 1,5/ 82' ( : 68 80(1' 0(176

```

USE GROUP & CONSTRUCTION

CONSTRUCTION TYPE:	V-A
OCCUPANCY GROUP:	35,0\$5<5 : \$ \$ %
%8,'1' \$ 4,'*7,1)((7,	" 6+2: 1 21 3/81
NUMBER OF STORIES:	4 STORIES
SPRINKLER SYSTEM:	1)3# : (7
67\$1' 3/3: 6+57/0.	<6 : (7 0\$18\$/ 8\$/566

ZONE AREA OF PROTECTION

ZONE NUMBER	LOCATION	TOTAL SQFT
ZONE P	PUMP ROOM	232 SQFT
=21{	67)/225	^ 64/7
ZONE 2	1')/225	^^ 64/7
ZONE 3	5')/225	^^ 64/7
ZONE 4	4TH FLOOR	^^ 64/7
PROJECT TOTAL		58,296 SQFT

SEISMIC NOTES

$3.3(6^2, 2^1) \cdot 7458 \cdot 28(1^2, 2^1)(5^2, 2^1) \cdot 2255(7^2, 4^2) \cdot 9(1^2, 1^2) \cdot (g, 8283, 1^1, 6, 21) \cdot (8, 6) \cdot 2(7^4, 5^1) \cdot 1256(2, 5, 35, 35, 2) \cdot 2(1, 2, 5, 2) \cdot 2(6, 3, 15, 15)$
 $8 \cdot 3(3, 7^4) \cdot 2(9, 56, 6^1) \cdot 2(21, 6+51, 9^1) \cdot (8, 5^1)(5^1, 5^1, 7+41, 7+1) \cdot 34(7, 15^1)(5^1, 5^1, 3, 7^4) \cdot 2(9, 56, 6^1) \cdot 2(21, 6+51, 9^1) \cdot (8, 5^1)(5^1, 5^1, 7+41, 7+1) \cdot 34(7, 15^1)$
 $5, 6(5, 1, 3, 6, 7) \cdot 6(7, 1^1) \cdot (1^1 \cdot 8^1) \cdot (1^1, 1^1, 7+7) \cdot +9(2, 21)(7, 9, 8283, 1^1, \cdot, 7, 1) \cdot 2(7^4, 5^1)$
 TOP OR BOTTOM OF THE RISSER NIPPLE
 $\cdot 6(81+8, 1^1) \cdot (6, 6832532, 9^1) \cdot 52(6^1, 6, 67+41, 1^1) \cdot 2(1^1, 6+67) \cdot 12(7, 5, 48, 5, 8^1, \cdot, 7, 21, 5^1) \cdot 6(75, 17, 3, 15, 13)$
 ALL RISSERS OVER 3' LONGS TO HAVE A 4-WAY BRACE
 $6, 5(56^2, 2^1) \cdot 127, 118(8^1, 5, 6(5, 1, 3, 6, 7) \cdot 6(1^1, \cdot, 1^1) \cdot 1(3, 8^1)$
 $5(78, 1^1, 1^1) \cdot 6(75, 36, 72, 9^1, 1678(1^1, 21, 5, 8^1) \cdot 7(3, 8^1) \cdot 8(50, 36)$

SEISMIC DESIGN INFORMATION

5(1)(5/18/ 86(' ,9& \$68(^ ^ 5(1)(5/18/ 6 *(1(5/ 127(6
6,7/ 8/ \$66, '
6(,60,&' (6,*1 8\$7(*25< D, &
SEISMIC OCCUPANCY CATEGORY (b): III
SEISMIC RISK CATEGORY (c): II
6(,60,& 82('),&17 6V 8S ^

OWNERS RESPONSIBILITY

3529(. / \$' (4897 / \$7 5 92/80 \$1' 35/6685 72 7+ 635.1 / 5 6-67/0
3529(. / \$6/1' 61 67580785; 86389(21, 5+1' 1,1' 51 648,5' / 9, 12/5 6 1' 6, 60, 8/2/5 6 6
3529(. / \$6/1' 92/82'
127(. / 635.1 / 5 12 75168725.1 2, 5+1' 2) 352(- 5/7 548,8' / 8, 6+5+1' (6 72 68+ / 8' (4
62 67, 61/27, 7,216 51' 67588785; 7 67 828/ , 0380 205) 8+61' 1, 6767/57,21
2, 15-5+ / 05,175; 1, 9+ 1, 9+ 1, 70/3 557876 5 6+929/ ' *5((6) \$+5(1+7, -+5(7, 3, 3,
-670 06+54, 1676/1/ 72 35 91/ 7 21 70/3 557876 5 6+929/ 2, 1, 2, 3, 3,

CONTRACT RESPONSIBILITIES

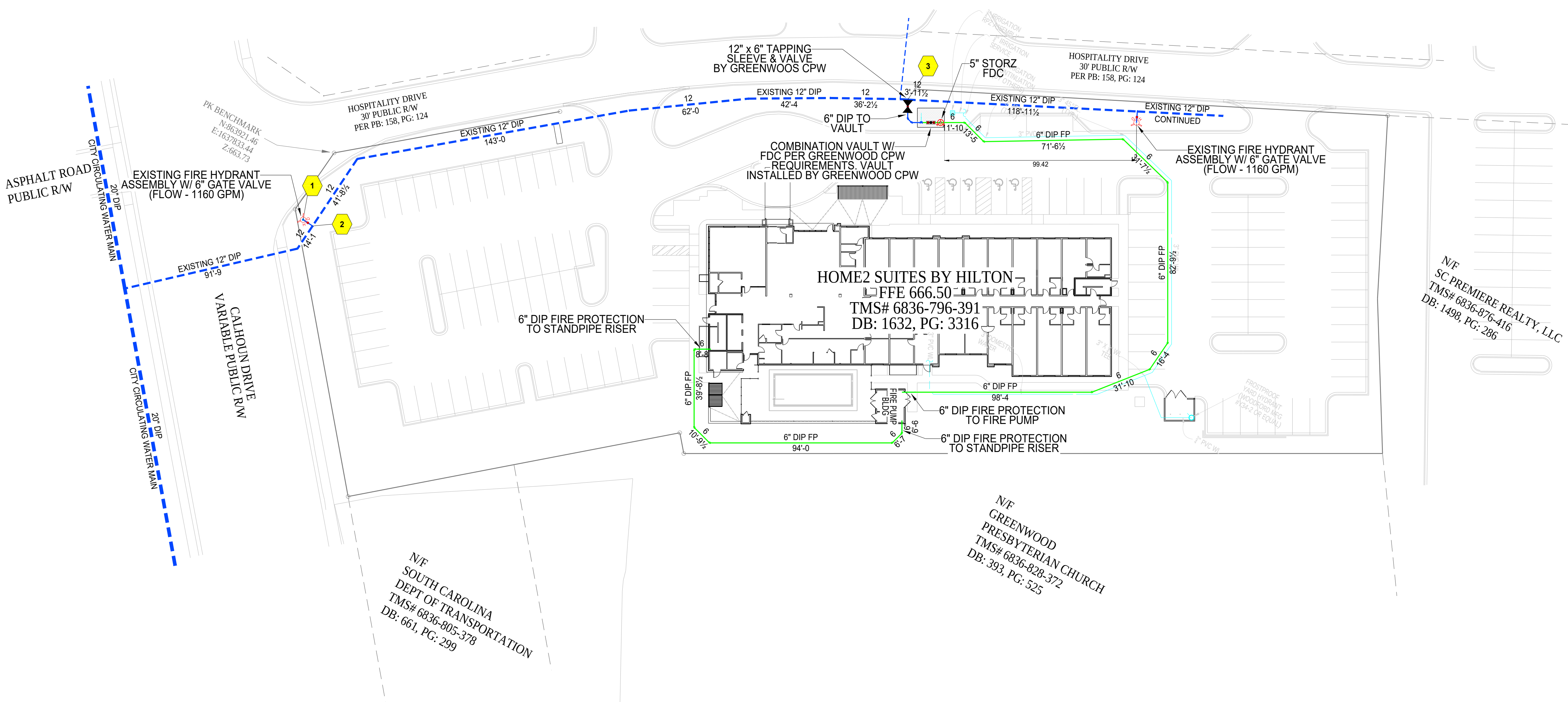
ITEM	MILLER	(:,67 27+56
STREET WATER CONNECTION	☐	☒
81' (5*5281' : \$7(5 05,16 72 ~ 2876,(	☐	☒
\$7 678*883 \$529.1),1,64')/225	☒	☐
WIRING	☐	☒
3,3(: (17),867,21 0\$5.(56 25 38,17,1*	☐	☒
),5((:7,1*8,6456 56 1) 25 +266 548.6	☐	☒
),5' (3\$570(17 8211(8,21)	☐	☒
8877,1 3578+,1* 2) 8(,1*,1*6	☐	☒

SUBMITTALS

JOB NAME:	Home2 Suites by Hilton 4-Story Hotel Construction 475 Hospitality Blvd. Greenwood, SC 29649
CONTRACT WITH:	John M. Campbell Company 102 Winchester Avenue Monroe, NC 28110

PHONE: (704) 254-3214	 FP-01 of 1
DRAWING NAME: SITE PLAN & DESIGN NOTES	
DRAWN BY: TWH	
AHJ: LLR / Greenwood FM	
DATE: 10/10/25	
SCALE: AS NOTED	
CONTRACT NO.: CF0588	

FP-01 of 08



SITE PLAN GENERAL NOTES

1. ALL UG PIPING AND UNDERGROUND APPURTENANCES BY OTHERS, THE HILLER COMPANIES TO START 1'-0" ABOVE FINISHED FLOOR.
2. UNDERGROUND PIPE, INCLUDING FIRE SPRINKLER FLANGED SPIGOT PIPE, SHALL BE HYDROSTATICALLY TESTED FOR TWO HOURS AT 200 PSI OR 50 PSI IN EXCESS OF NORMAL WORKING PRESSURE WHEN NORMAL WORKING PRESSURE EXCEEDS 150 PSI PER NFPA 24; 10.10.2.2 AND FLUSHED PER 24; 10.10.2.1 PRIOR TO CONNECTION TO SPRINKLER RISER, (TEST CONDUCTED BY OTHERS)

Sprinkler Legend - Total Project

[illegible]

JUAN OCHOA
NICET #139445
LEVEL IV
WATER BASED SYSTEMS LAYOUT

SIGNED: 
VALID THROUGH 01/01/2027

GENERAL NOTES:

- 1) SYSTEMS ARE DESIGNED AND INSTALLED PER NPFA 13 (1999 EDITION) WITH 100% HYDRO-PNEUMATIC TESTING.
- 2) ALL FITTINGS SHALL BE 1/2" AND SMALLER TO BE CPVC WITH 1/2" CPVC FITTINGS. CONVERT TO BLACK STEEL PIPE AND FITTINGS WHERE EXISTING.
- 3) STEEL SYSTEM PIPE 2" AND SMALLER TO BE SCH. 40 BLACK STEEL PIPE AND FITTINGS ARE THREADED / GROOVED / FLANGED / WELDED.
- 4) STEEL SYSTEM PIPE 2" AND SMALLER TO BE SCH. 10 BLACK STEEL PIPE. FITTINGS ARE GROOVED / FLANGED / WELDED.
- 5) ALL HANGERS ARE TO MEET THE CRITERIA SET FORTH BY NPFA 13 (2001 EDITION) AND THE CRITERIA SET FORTH BY THE ELECTRICAL CODE.
- 6) WIRING OF ELECTRICAL EQUIPMENT IS TO BE BY OTHERS.
- 7) PAINTING OF PIPE OR COMPONENTS SHALL BE BY OTHERS.
- 8) (a) RADIANT PANELS SHALL BE INSTALLED BY OTHERS.
- 9) THE HILLER COMPANIES TO START 3'-0" ABOVE FINISHED FLOOR.
- 10) ALL UNDERGROUND PIPING BY OTHERS.
- 11) STEEL PIPE SHALL BE 1/4" OR LESS FROM FLOOR TO PROTECT FROM DAMAGE.

WITH APPROVED GARDING.

WATER SUPPLY INFORMATION			
STATIC PRESSURE	53	FIRE PUMP	
RESIDUAL PRESSURE	51	SIZE GPM @ PSI	3
FLOW G.P.M.	1160	TYPE OF DRIVER	
DATE OF TEST	09/30/2025	ELECTRICAL REQ.S	
HYDRANT LOCATION	@ TEST NODE (SEE SITE PLAN)		
TEST TAKEN BY	GREENWOOD CPW		(80)

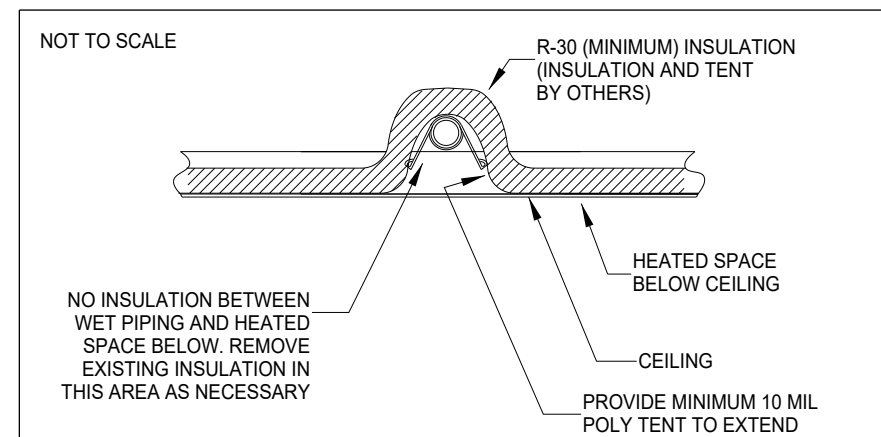
NOTES:
TESTED BY - MIKE PROCTOR
WITNESSED BY - RUSSELL HOLLEY
CONTACT EMAIL - RHOLLEY@GREENWOODCPW.COM
HYDRANT LOCATION - SEE FP-01

THE Hiller
COMPANIES

CONTRACTOR LICENSE NUMBER: NC # 36018 / SC # FSC. 1078-
P O BOX 1090 PH: 704-784-4218
CONCORD, N.C. 28026 FAX: 704-784-4405

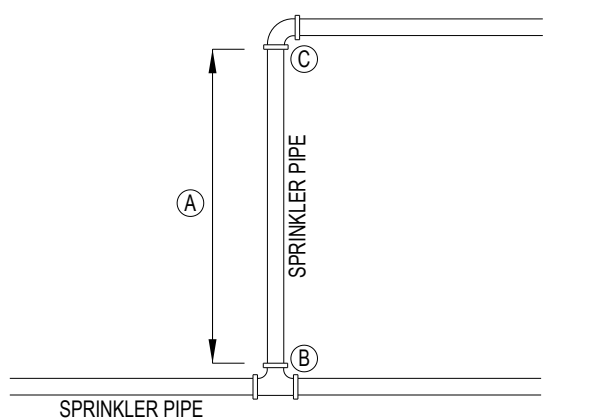
☒ P O BOX 458 PH: 757-391-0050
PORTSMOUTH VA. 23705 FAX: 757-391-0098

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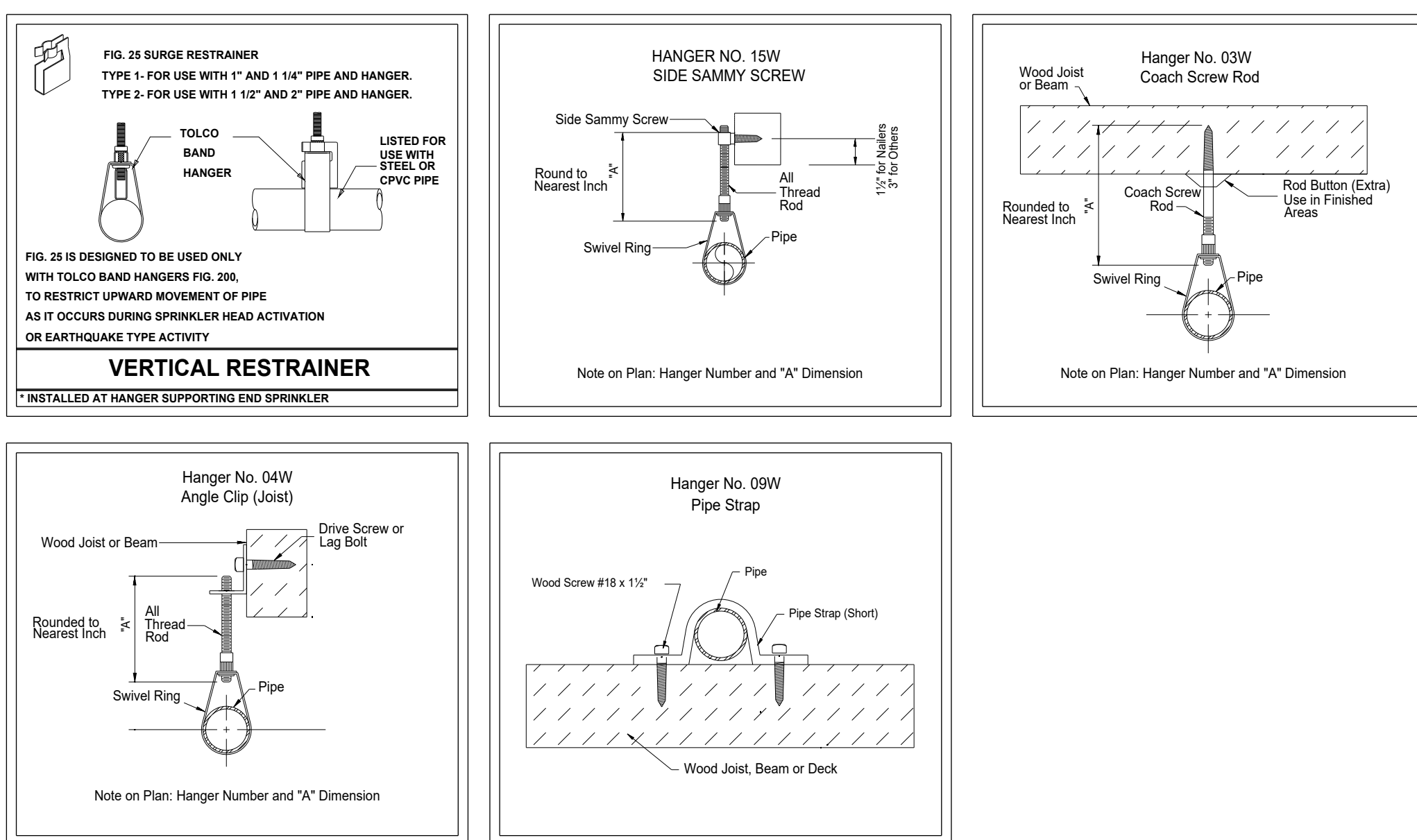
FREEZE PROTECTION DETAIL FOR WET ATTIC PIPING

FLEXIBLE COUPLINGS



- FLEXIBLE COUPLING NOTES:**
1. INSTALL WITHIN 12" ABOVE AND WITHIN 24" BELOW THE FLOOR IN MULTISTORY BUILDINGS.
 2. INSTALL ON BOTH SIDES OF MASONRY OR CONCRETE WALL WITHIN 12" OF THE WALL SURFACE UNLESS CLEARANCE HAS BEEN PROVIDED.
 3. INSTALL WITHIN 24" OF BUILDING EXPANSION JOINTS.
 4. LENGTHS OF PIPE WITH MORE FLEXIBLE COUPLINGS THAN REQUIRED SHALL HAVE ADDITIONAL SWAY BRACING INSTALLED.
 5. COUPLINGS SHALL BE RIGID UNLESS WHERE REQUIRED.
 6. SYMBOL DENOTES FLEXIBLE COUPLING.
- FLEXIBLE COUPLINGS TO BE INSTALLED ON ALL VERTICAL PIPES 2-1/2" AND LARGER AS FOLLOWS:**
- WHEN "X" IS LESS THAN 7'-0", NO COUPLINGS REQUIRED.
 - WHEN "X" IS MORE THAN 7'-0" BUT LESS THAN 12'-0", INSTALL FLEXIBLE COUPLING AT "B".
 - WHEN "X" IS GREATER THAN 12'-0", INSTALL FLEXIBLE COUPLINGS AT "B" AND "C".

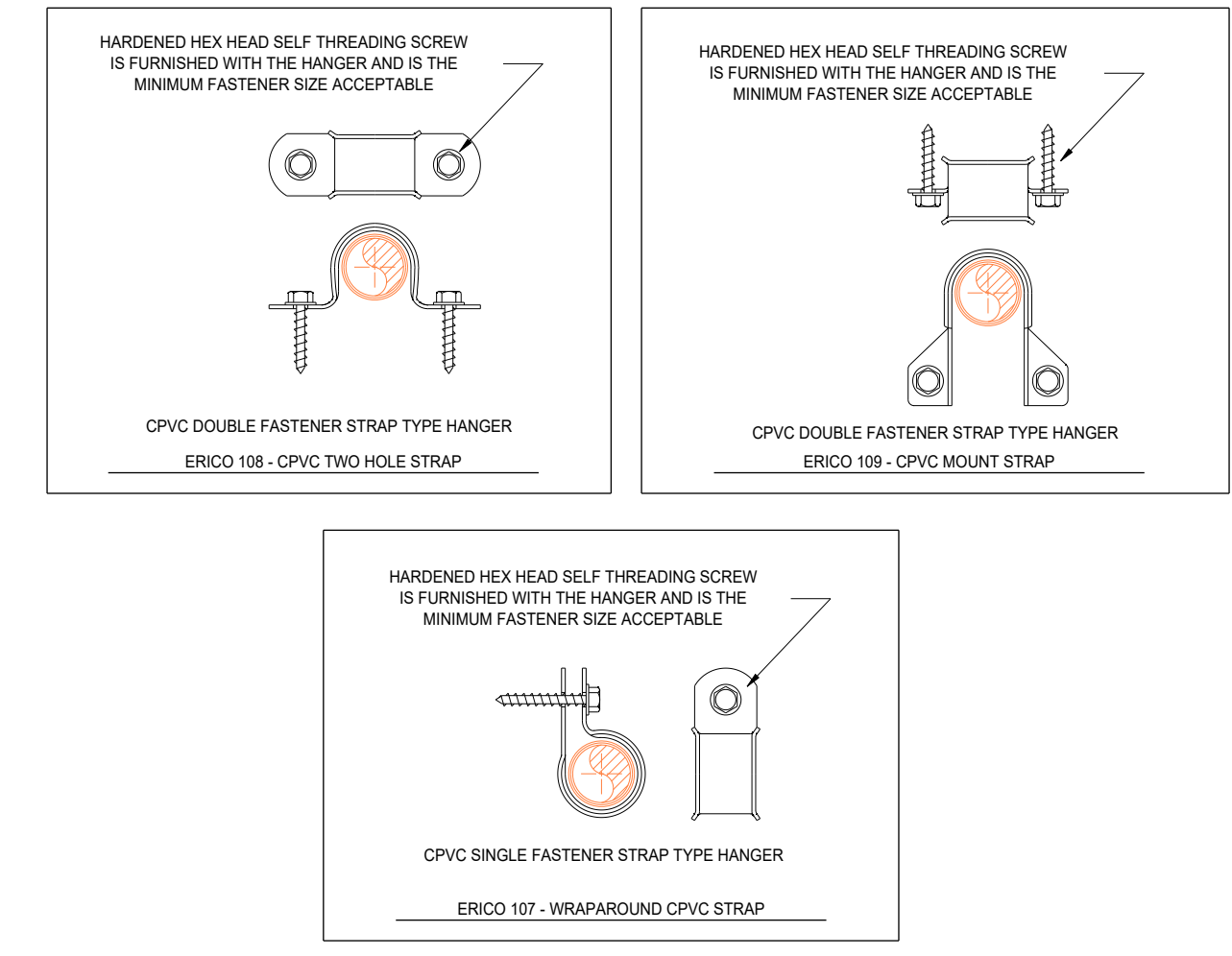
CONCRETE & WOOD HANGER DETAILS



MAXIMUM DISTANCE BETWEEN HANGERS (ft.-in.)

NOMINAL PIPE SIZE (in.)	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 CPVC	N/A	12'-0"	12'-0"	15'-0"	15'-0"	15'-0"	15'-0"	15'-0"	15'-0"	15'-0"	15'-0"	15'-0"
	5'-0"	6'-0"	6'-0"	7'-0"	8'-0"	9'-0"	10'-0"	N/A	N/A	N/A	N/A	N/A

CPVC PLASTIC HANGER DETAILS



SPECIAL FIRE PROTECTION MATERIAL NOTES

1. ALL SYSTEM COMPONENTS AND HARDWARE SHALL BE IN COMPLIANCE WITH NFPA 13.
2. ALL MATERIAL & EQUIPMENT USED SHALL BE U.L. LISTED.
3. WHERE NON-METALLIC PIPE IS USED IN COMBINATION SYSTEMS UTILIZING STEEL PIPE, CUTTING OILS AND LUBRICANTS USED FOR FABRICATION OF THE STEEL PIPING SHALL BE COMPATIBLE WITH THE NON-METALLIC PIPE MATERIALS.
4. WHERE NON-METALLIC PIPE IS USED IN COMBINATION SYSTEMS UTILIZING STEEL PIPE, CUTTING OILS AND LUBRICANTS USED FOR FABRICATION OF THE STEEL PIPING SHALL BE COMPATIBLE WITH THE NON-METALLIC PIPE MATERIALS.
5. POWER DRIVEN ANCHORS SHALL NOT BE USED. REFER TO THE STRUCTURAL PLANS AND DETAILS FOR ACCEPTABLE LOCATIONS TO ATTACH HANGERS AND SUPPORTS TO THE BUILDING STRUCTURE. HANGERS SHALL NOT ATTACH TO THE ROOF DECK.
6. SPRINKLER PIPE PASSING THROUGH SMOKE/FIRE BARRIERS (INCLUDING WALLS, FLOORS & CEILINGS) SHALL BE FIRESTOPPED TO MAINTAIN THE INTEGRITY OF THAT BARRIER. PROVIDE ESCUTCHEON PLATES AT EACH SIDE OF PENETRATIONS IN FINISHED AREAS. SEE ARCHITECTURAL DRAWINGS FOR LOCATIONS. ALL SMOKE/FIRE BARRIERS: ALL NON-RATED FLOOR PENETRATIONS SHALL BE SEALED WATER TIGHT WITH A FLEXIBLE SEALANT.
7. PIPE AND FITTINGS:
 - CPVC PIPE AND CPVC FITTINGS WHERE ALLOWED BY NFPA 13 AND MFG. DATA SHEETS.
 - BLACK SCH. 40 PIPE WITH WELDED OUTLETS AND GROOVED FITTINGS.
 - BLACK SCH. 40 PIPE WITH THREADED DUCTILE IRON FITTINGS.

FIRE PROTECTION GENERAL NOTES

1. THE HILLER COMPANIES STARTS 1'-0" ABOVE FINISHED FLOOR. ALL UNDERGROUND PIPING BY OTHERS.
2. SPRIGS 4 FT (1.2M) OR LONGER SHALL BE RESTRAINED AGAINST LATERAL MOVEMENT.
3. SYSTEM DRAINS SHALL BE INSTALLED AS REQUIRED PER NFPA 13 AND EXTENDED OUTSIDE THE BUILDING.
4. ALL CORRIDOR CEILING HEIGHTS AT 8'-6" AND UP TO CEILING HEIGHTS AT 10'-0" UNLESS NOTED OTHERWISE.
5. FIRE SPRINKLERS SHALL NOT BE REQUIRED IN BATHROOMS THAT ARE LESS THAN 55 FT² IN AREA IN ACCORDANCE WITH NFPA 13, 9.2.4.1.3.
6. FIRE SPRINKLERS ARE NOT REQUIRED PER NFPA 13, 9.2.4.2, IN CLOSETS, LINEN CLOSETS AND PANTRIES WITH DWELLING UNITS THAT MEET ALL THE FOLLOWING CONDITIONS:
 - THE AREA OF THE SPACE DOES NOT EXCEED 24 FT².
 - THE WALLS AND CEILING ARE SURFACED WITH NONCOMBUSTIBLE OR LIMITED-COMBUSTIBLE MATERIALS AS DEFINED BY NFPA 220.
7. THE ATTIC AND INTERSTITIAL SPACES ARE TO BE FILLED WITH NONCOMBUSTIBLE INSULATION. FIRE SPRINKLERS ARE NOT REQUIRED FOR THIS CONCEALED SPACE WITH THE REQUIREMENTS OF NFPA 13, 9.2.4.1.3.
8. CPVC USED ABOVE CEILINGS IN ALL RESIDENTIAL AREAS CONVEY PIPING TO STEEL IN EXPOSED AREAS AND ROOMS OF ORDINARY HAZARD OCCUPANCIES EXCEEDING 450 FT².
9. SPRINKLERS SHALL BE INSTALLED AT THE TOP OF COMBUSTIBLE STAIR SHAMTS, UNDER THE LANDINGS AT EACH FLOOR LEVEL AND BENEATH THE LOWEST INTERMEDIATE LANDING PER NFPA 13, 9.3.4.1.
10. ALL PIPING VALVES AND APPURTENANCES SHALL BE INSTALLED SUCH AS NOT TO OBSTRUCT ANY PORTION OF WINDOWS, DOORWAYS, STAIRS, PASSAGEWAYS OR ACCESS TO EQUIPMENT.

RESIDENTIAL AREA NOTES PER NFPA 13 2019:

- 19.4 SPECIAL DESIGN APPROACHES.**
- 19.4.1 RESIDENTIAL SPRINKLERS.**
- 19.4.1.1* THE DESIGN AREA SHALL BE THE AREA THAT INCLUDES THE FOUR ADJACENT SPRINKLERS THAT PRODUCE THE GREATEST HYDRAULIC DEMAND.
- 19.4.1.3 UNLESS THE REQUIREMENTS OF 19.4.1 ARE MET, THE MINIMUM REQUIRED DISCHARGE FROM EACH DESIGN AREA SPRINKLER SHALL BE THE GREATER OF THE FOLLOWING:
- (1) IN ACCORDANCE WITH MINIMUM FLOW RATES INDICATED IN THE SPRINKLER LISTINGS
 - (2) IN ROOMS OR COMPARTMENTS GREATER THAN 800 FT² (74 M²), CALCULATED BASED ON DELIVERING A MINIMUM OF 0.1 GPM/FT² (4.1 L/MIN) OVER THE DESIGN AREA IN ACCORDANCE WITH THE PROVISIONS OF 9.5.2.1
 - (3) IN ROOMS OR COMPARTMENTS 800 FT² (74 M²) OR LESS CALCULATED BASED ON DELIVERING A MINIMUM OF 0.1 GPM/FT² (4.1 L/MIN) OVER THE ROOM OR THE COMPARTMENT USING THE AREA OF THE ROOM DIVIDED BY THE NUMBER OF SPRINKLERS IN THE ROOM

DESIGN CRITERIA DETERMINATION

SMALL ROOM METHOD
COMPARTMENT AREA = 484 FT² (KING ONE BEDROOM 429)
484 FT² x 121 FT² x 10 = 12.1 GPM
PER MANUFACTURE CUT SHEET, THIS IS LESS DEMANDING
USE TABLE BELOW FOR VK468 RES PENDENT DESIGN CRITERIA.

CALCULATIONS USED

MAX SPACING 18 x 18
17 GPM @ 12.0 PSI

Approval Chart

Viking VK468, 4.9 K-Factor Residential Pendent Sprinkler

For systems designed to NFPA 13D or NFPA 13R. For systems designed to NFPA 13, refer to the design criteria. For ceiling types refer to current editions of NFPA 13, 13R or 13D.

Sprinkler Base Part Number ¹	SIN	NPT Thread Size		Nominal K-Factor	Maximum Water Working Pressure	Overall Length			
		Inches	mm			Inches	mm		
13637	VK468	1/2	15	4.9	70.6	175 psi (12 bar)	2-1/4	58	
Max. Coverage Area ²		Ordinary Temp Rating (155°F/68°C)		Intermediate Temp Rating (175°F/79°C)		Deflector to Ceiling	Installation Type	Listings and Approvals ³	Minimum Spacing Ft. (m)
Fl X Ft. (m X m)	Flow ⁴ GPM (L/min)	Pressure ³ PSI (bar)	Flow ⁴ GPM (L/min)	Pressure ³ PSI (bar)					
12 X 12 (3.7 X 3.7)	13 (49.2)	7.0 (0.48)	13 (49.2)	7.0 (0.48)	1-1/8 to 2 inch	Standard surface-mounted escutcheons, or recessed with the Micromatic® Model E-1, E-2, or E-3 Recessed Escutcheon	See Foot-notes 6 and 8	See Foot-note 6.	8 (2.4)
14 X 14 (4.3 X 4.3)	13 (49.2)	7.0 (0.48)	13 (49.2)	7.0 (0.48)					
16 X 16 (4.9 X 4.9)	13 (49.2)	7.0 (0.48)	13 (49.2)	7.0 (0.48)					
18 X 18 (5.5 X 5.5)	17 (64.4)	12.0 (0.83)	17 (64.4)	12.0 (0.83)					
20 X 20 (6.1 X 6.1)	20 (75.7)	16.7 (1.15)	20 (75.7)	16.7 (1.15)					

- Footnotes**
1. Part number shown is the base part number. For complete part number, refer to Viking's current price schedule.
 2. Metric K-factor measurement shown is when pressure is measured in kPa. When pressure is measured in psi, divide the metric K-factor shown by 10.0.
 3. This chart shows the listings and approvals available at the time of printing. Other approvals may be in process. Check with the manufacturer for any additional approvals. Refer also to Design Criteria.
 4. For areas of coverage smaller than shown, use the "Flow" and "Pressure" for the next larger area listed. Flows and pressures listed are per sprinkler. The distance from sprinklers to walls shall not exceed one-half the sprinkler spacing indicated for the minimum "Flow" and "Pressure" used.
 5. Listed by Underwriters Laboratories, Inc. for use in the U.S., Canada, and European Union.
 6. Approved Finishes are: Brass, Chrome, White Polyester, and Black Polyester. Other point colors are available on request with the same C-UL-US-EU listings as the standard finish colors.
 7. U.L. Classified to NSF/ANSI/Canadian Standard 61, Drinking Water System Components (NSF/ANSI 372 (MH48034)).
 8. Approved finish is Electroless Nickel PTFE (ENT). White Polyester, and Black Polyester finishes are C-UL-US-EU Listed as corrosion-resistant. ENT is available with standard surface-mounted escutcheons or the Micromatic Model E-1 Recessed Escutcheon.

DESIGN CRITERIA DETERMINATION

SMALL ROOM METHOD
COMPARTMENT AREA = 484 FT² (KING ONE BEDROOM 429)
484 FT² x 121 FT² x 10 = 12.1 GPM
PER MANUFACTURE CUT SHEET, THIS IS LESS DEMANDING
USE TABLE BELOW FOR VK468 HSW DESIGN CRITERIA.

CALCULATIONS USED

MAX SPACING 18 x 18
20 GPM @ 11.9 PSI

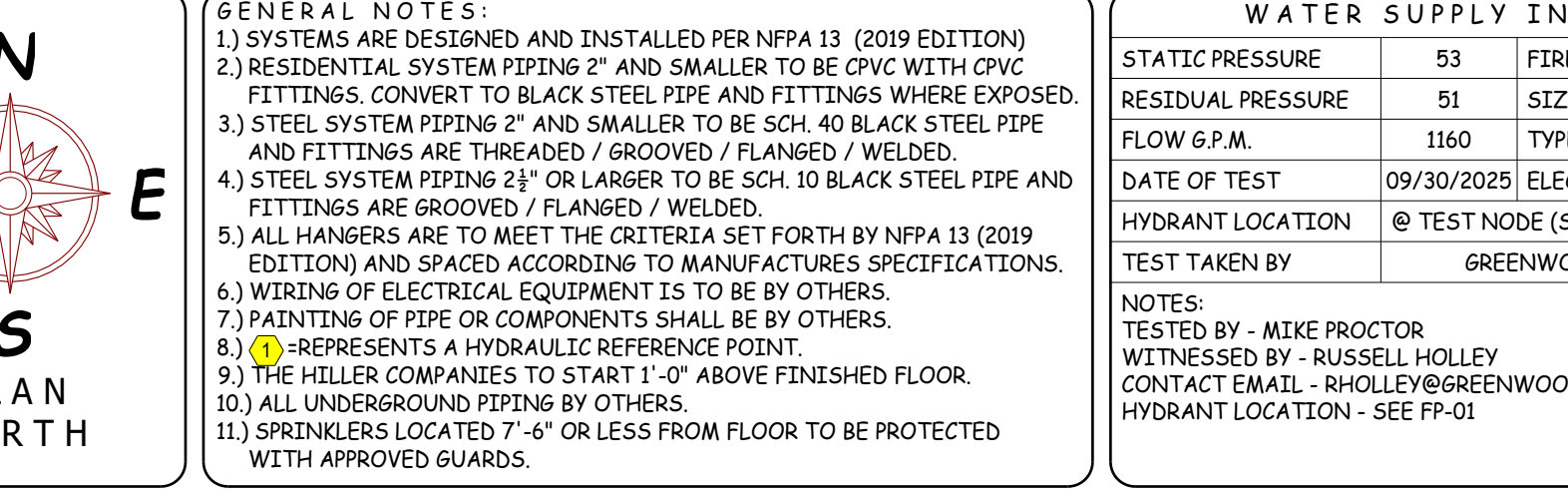
Approval Chart

Viking VK460, 5.8 K-Factor Residential Horizontal Sidewall Sprinkler

For systems designed to NFPA 13D or NFPA 13R. For systems designed to NFPA 13, refer to the design criteria. For ceiling types refer to current editions of NFPA 13, 13R or 13D.

Sprinkler Base Part Number ¹	SIN	NPT Thread Size		Nominal K-Factor	Maximum Water Working Pressure	Overall Length							
		Inches	mm			Inches	mm						
13933	VK460	1/2	15	5.8	83.6	175 psi (12 bar)	2-1/2 63.5						
Max. Coverage Area ² Width X Length Ft. X Ft. (m x m)	Max. Spacing Ft. (m)	Ordinary Temp Rating (155° F/68° C)		Intermediate Temp Rating (175° F/79° C)		Top of Deflector to Ceiling	Installation Type	Listings and Approvals ⁴			Minimum Spacing Ft. (m)		
		Flow ⁵ GPM (L/min)	Pressure ³ (bar)	Flow ⁵ GPM (L/min)	Pressure ³ (bar)			C-U-L- S-U-E-U ⁶	VdS	NYC		NSF ⁷	
12 X 12 (3.7 X 3.7)	12 (3.7)	16 (6.06)	7.6 (5.52)	16 (6.06)	7.6 (5.52)	4 to 6 inches	Standard surface-mounted escutcheons or recessed with the Micromatic Model E-1, E-2, or E-3 Recessed Escutcheon, or G-1 Adjustable Escutcheon	See Foot-note 7 and 10	See Foot-note 7	See Foot-note 6	See Foot-note 8	See Foot-note 7	
14 X 14 (4.3 X 4.3)	14 (4.3)	16 (6.06)	7.6 (5.52)	16 (6.06)	7.6 (5.52)								
16 X 16 (4.9 X 4.9)	16 (4.9)	20 (7.6)	11.0 (8.2)	20 (7.6)	11.0 (8.2)								
18 X 18 (5.5 X 5.5)	18 (4.9)	22 (8.3)	14.4 (9.09)	22 (8.3)	14.4 (9.09)								
20 X 20 (6.1 X 6.1)	16 (4.9)	26 (9.8)	21.3 (1.39)	26 (9.8)	21.3 (1.39)								
22 X 22 (6.9 X 6.7)	16 (4.9)	31 (11.7)	26.8 (1.97)	31 (11.7)	26.8 (1.97)								
24 X 24 (7.3 X 7.3)	16 (4.9)	31 (11.7)	15.7 (1.1)	31 (11.7)	15.7 (1.1)								
24 X 24 (7.3 X 7.3)	16 (4.9)	31 (11.7)	25.0 (1.7)	31 (11.7)	25.0 (1.7)								
20 X 20 (6.1 X 6.1)	20 (6.1)	30 (11.3)	26.8 (1.5)	30 (11.3)	26.8 (1.5)								
24 X 24 (7.3 X 7.3)	16 (4.9)	38 (14.6)	42.9 (2.98)	38 (14.6)	42.9 (2.98)								
24 X 26 (7.3 X 7.9)	14 (4.3)	42 (159)	52.4 (3.83)	42 (159)	52.4 (3.83)								

It is the sole responsibility of owner and owners representative to insure that this building/buildings has proper heat and insulation to prevent fire sprinkler pipe, fittings and devices from freezing.



SEISMIC CALCULATIONS - CPVC PIPING

LATERAL SEISMIC BRACING CALCULATIONS (CPVC PIPE)				LONGITUDINAL SEISMIC BRACING CALCULATIONS (STEEL PIPE)			
Project: Home2 Suites By Hilton	Contractor: The Hiller Companies, LLC.	Address: 475 Hospitality Blvd. Greenwood, SC 29649	Telephone: (704) 784-4218	Project: Home2 Suites By Hilton	Contractor: The Hiller Companies, LLC.	Address: 475 Hospitality Blvd. Greenwood, SC 29649	Telephone: (704) 784-4218
BRACE INFORMATION				BRACE INFORMATION			
Length of brace: 7'-0"	Structure attachment fittings: Make: AFCON Model: AF077	Listed load rating: 1000	Adj. load rating: 707	Length of brace: 7'-0"	Structure attachment fittings: Make: PHD Model: Fig. 030	Listed load rating: 2015	Adj. load rating: 1425
Diameter of brace: 1 in.	Sway brace (pipe attachment) fittings: Make: AFCON Model: AF035	Listed load rating: 1000	Adj. load rating: 707	Diameter of brace: 1 in.	Sway brace (pipe attachment) fittings: Make: PHD Model: Fig. 015	Listed load rating: 2015	Adj. load rating: 1425
Type of brace: Schedule 40	Least radius of gyration: 0.421	In value: 200	Maximum horizontal load: 1.310 lb.	Type of brace: Schedule 40	Least radius of gyration: 0.421	In value: 200	Maximum horizontal load: 1.310 lb.
Angle of brace: 45° to 59°	Fastener information: Orientation of connecting surface: "E"	Fastener Type: Through-Bolt w/ Fender Washer	Diameter: 3/4"	Angle of brace: 45° to 59°	Fastener Type: Through-Bolt w/ Fender Washer	Diameter: 3/4"	Length: 5-1/2"
Least radius of gyration: 0.421	Maximum load: 620 lb.			Least radius of gyration: 0.421	Maximum load: 620 lb.		
In value: 200				In value: 200			
Maximum horizontal load: 1.310 lb.				Maximum horizontal load: 1.310 lb.			

SEISMIC CALCULATIONS - STEEL PIPING

LATERAL SEISMIC BRACING CALCULATIONS (STEEL PIPE)				LONGITUDINAL SEISMIC BRACING CALCULATIONS (STEEL PIPE)			
Project: Home2 Suites By Hilton	Contractor: The Hiller Companies, LLC.	Address: 475 Hospitality Blvd. Greenwood, SC 29649	Telephone: (704) 784-4218	Project: Home2 Suites By Hilton	Contractor: The Hiller Companies, LLC.	Address: 475 Hospitality Blvd. Greenwood, SC 29649	Telephone: (704) 784-4218
BRACE INFORMATION				BRACE INFORMATION			
Length of brace: 7'-0"	Structure attachment fittings: Make: PHD Model: Fig. 030	Listed load rating: 2015	Adj. load rating: 1425	Length of brace: 7'-0"	Structure attachment fittings: Make: PHD Model: Fig. 030	Listed load rating: 2015	Adj. load rating: 1425
Diameter of brace: 1 in.	Sway brace (pipe attachment) fittings: Make: PHD Model: Fig. 015	Listed load rating: 2015	Adj. load rating: 1425	Diameter of brace: 1 in.	Sway brace (pipe attachment) fittings: Make: PHD Model: Fig. 015	Listed load rating: 2015	Adj. load rating: 1425
Type of brace: Schedule 40	Least radius of gyration: 0.421	In value: 200	Maximum horizontal load: 1.310 lb.	Type of brace: Schedule 40	Least radius of gyration: 0.421	In value: 200	Maximum horizontal load: 1.310 lb.
Angle of brace: 45° to 59°	Fastener information: Orientation of connecting surface: "E"	Fastener Type: Through-Bolt w/ Fender Washer	Diameter: 3/4"	Angle of brace: 45° to 59°	Fastener Type: Through-Bolt w/ Fender Washer	Diameter: 3/4"	Length: 5-1/2"
Least radius of gyration: 0.421	Maximum load: 620 lb.			Least radius of gyration: 0.421	Maximum load: 620 lb.		
In value: 200				In value: 200			
Maximum horizontal load: 1.310 lb.				Maximum horizontal load: 1.310 lb.			

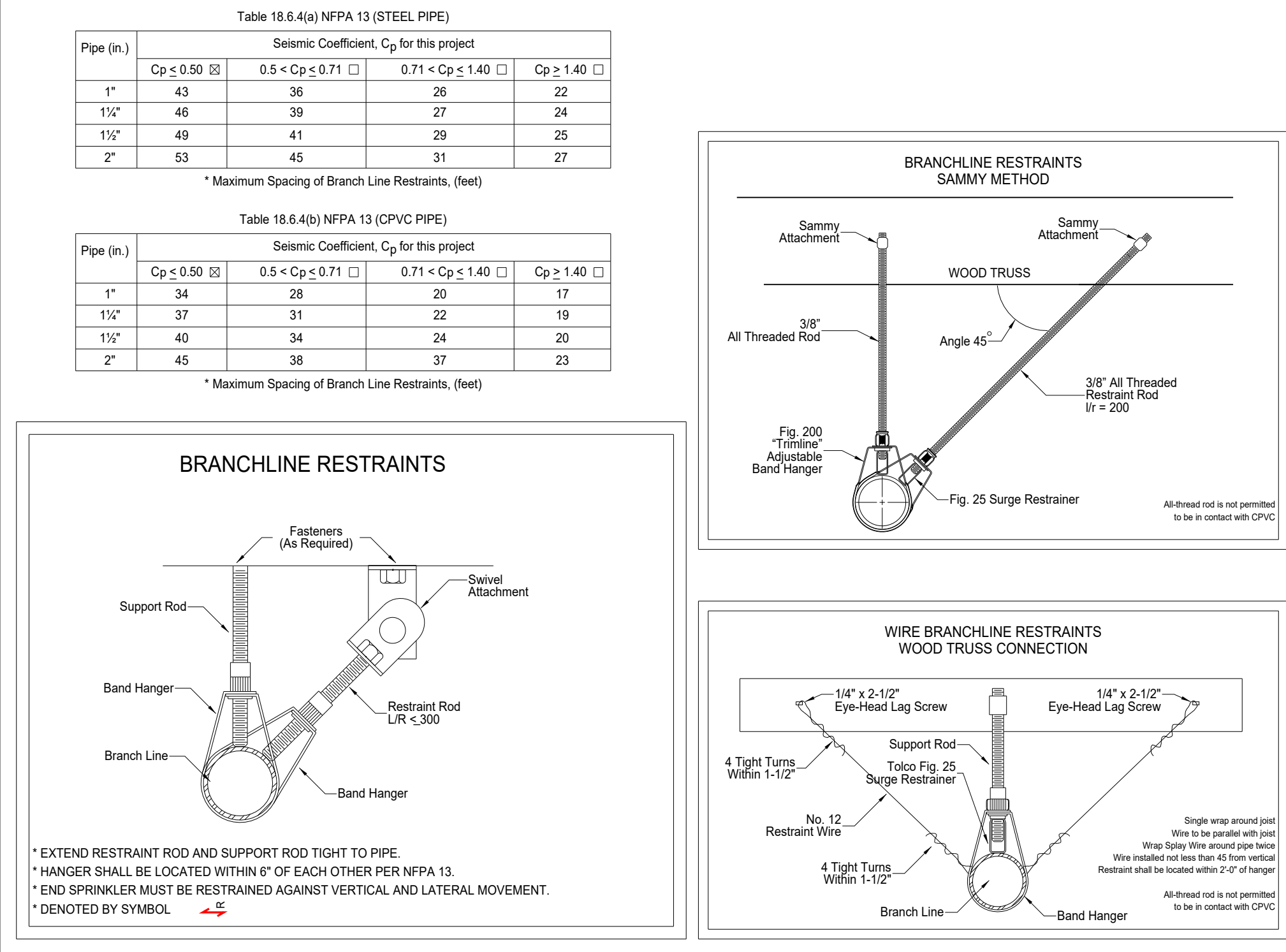
SEISMIC CALCULATIONS - STEEL PIPING

4-WAY SEISMIC BRACING CALCULATIONS (STEEL PIPE)				4-WAY SEISMIC BRACING CALCULATIONS (STEEL PIPE)			
Project: Home2 Suites By Hilton	Contractor: The Hiller Companies, LLC.	Address: 475 Hospitality Blvd. Greenwood, SC 29649	Telephone: (704) 784-4218	Project: Home2 Suites By Hilton	Contractor: The Hiller Companies, LLC.	Address: 475 Hospitality Blvd. Greenwood, SC 29649	Telephone: (704) 784-4218
BRACE INFORMATION				BRACE INFORMATION			
Length of brace: 7'-0"	Structure attachment fittings: Make: PHD Model: Fig. 030	Listed load rating: 2015	Adj. load rating: 1425	Length of brace: 7'-0"	Structure attachment fittings: Make: PHD Model: Fig. 030	Listed load rating: 2015	Adj. load rating: 1425
Diameter of brace: 1 in.	Sway brace (pipe attachment) fittings: Make: PHD Model: Fig. 015	Listed load rating: 2015	Adj. load rating: 1425	Diameter of brace: 1 in.	Sway brace (pipe attachment) fittings: Make: PHD Model: Fig. 015	Listed load rating: 2015	Adj. load rating: 1425
Type of brace: Schedule 40	Least radius of gyration: 0.421	In value: 200	Maximum horizontal load: 1.310 lb.	Type of brace: Schedule 40	Least radius of gyration: 0.421	In value: 200	Maximum horizontal load: 1.310 lb.
Angle of brace: 45° to 59°	Fastener information: Orientation of connecting surface: "E"	Fastener Type: Through-Bolt w/ Fender Washer	Diameter: 3/4"	Angle of brace: 45° to 59°	Fastener Type: Through-Bolt w/ Fender Washer	Diameter: 3/4"	Length: 5-1/2"
Least radius of gyration: 0.421	Maximum load: 620 lb.			Least radius of gyration: 0.421	Maximum load: 620 lb.		
In value: 200				In value: 200			
Maximum horizontal load: 1.310 lb.				Maximum horizontal load: 1.310 lb.			

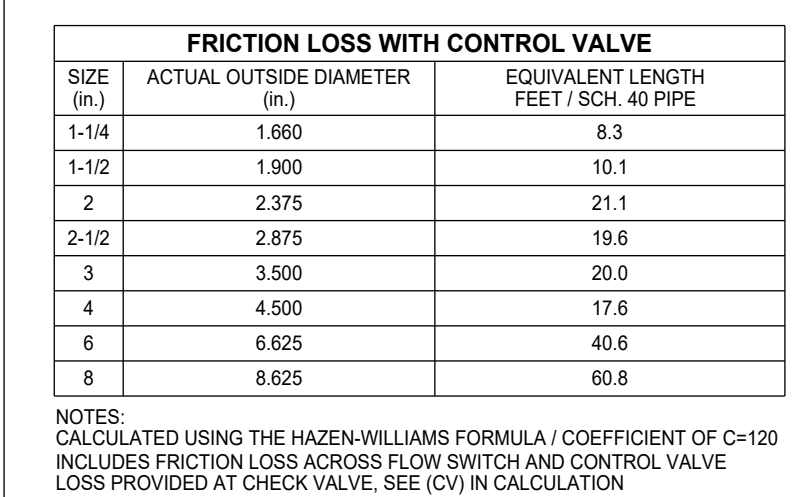
4-WAY SEISMIC BRACING CALCULATIONS (STEEL PIPE)				4-WAY SEISMIC BRACING CALCULATIONS (STEEL PIPE)			
Project: Home2 Suites By Hilton	Contractor: The Hiller Companies, LLC.	Address: 475 Hospitality Blvd. Greenwood, SC 29649	Telephone: (704) 784-4218	Project: Home2 Suites By Hilton	Contractor: The Hiller Companies, LLC.	Address: 475 Hospitality Blvd. Greenwood, SC 29649	Telephone: (704) 784-4218
BRACE INFORMATION				BRACE INFORMATION			
Length of brace: 7'-0"	Structure attachment fittings: Make: PHD Model: Fig. 030	Listed load rating: 2015	Adj. load rating: 1425	Length of brace: 7'-0"	Structure attachment fittings: Make: PHD Model: Fig. 030	Listed load rating: 2015	Adj. load rating: 1425
Diameter of brace: 1 in.	Sway brace (pipe attachment) fittings: Make: PHD Model: Fig. 015	Listed load rating: 2015	Adj. load rating: 1425	Diameter of brace: 1 in.	Sway brace (pipe attachment) fittings: Make: PHD Model: Fig. 015	Listed load rating: 2015	Adj. load rating: 1425
Type of brace: Schedule 40	Least radius of gyration: 0.421	In value: 200	Maximum horizontal load: 1.310 lb.	Type of brace: Schedule 40	Least radius of gyration: 0.421	In value: 200	Maximum horizontal load: 1.310 lb.
Angle of brace: 45° to 59°	Fastener information: Orientation of connecting surface: "E"	Fastener Type: Through-Bolt w/ Fender Washer	Diameter: 3/4"	Angle of brace: 45° to 59°	Fastener Type: Through-Bolt w/ Fender Washer	Diameter: 3/4"	Length: 5-1/2"
Least radius of gyration: 0.421	Maximum load: 620 lb.			Least radius of gyration: 0.421	Maximum load: 620 lb.		
In value: 200				In value: 200			
Maximum horizontal load: 1.310 lb.				Maximum horizontal load: 1.310 lb.			

4-WAY SEISMIC BRACING CALCULATIONS (STEEL PIPE)				4-WAY SEISMIC BRACING CALCULATIONS (STEEL PIPE)			
Project: Home2 Suites By Hilton	Contractor: The Hiller Companies, LLC.	Address: 475 Hospitality Blvd. Greenwood, SC 29649	Telephone: (704) 784-4218	Project: Home2 Suites By Hilton	Contractor: The Hiller Companies, LLC.	Address: 475 Hospitality Blvd. Greenwood, SC 29649	Telephone: (704) 784-4218
BRACE INFORMATION				BRACE INFORMATION			
Length of brace: 7'-0"	Structure attachment fittings: Make: PHD Model: Fig. 030	Listed load rating: 2015	Adj. load rating: 1425	Length of brace: 7'-0"	Structure attachment fittings: Make: PHD Model: Fig. 030	Listed load rating: 2015	Adj. load rating: 1425
Diameter of brace: 1 in.	Sway brace (pipe attachment) fittings: Make: PHD Model: Fig. 015	Listed load rating: 2015	Adj. load rating: 1425	Diameter of brace: 1 in.	Sway brace (pipe attachment) fittings: Make: PHD Model: Fig. 015	Listed load rating: 2015	Adj. load rating: 1425
Type of brace: Schedule 40	Least radius of gyration: 0.421	In value: 200	Maximum horizontal load: 1.310 lb.	Type of brace: Schedule 40	Least radius of gyration: 0.421	In value: 200	Maximum horizontal load: 1.310 lb.
Angle of brace: 45° to 59°	Fastener information: Orientation of connecting surface: "E"	Fastener Type: Through-Bolt w/ Fender Washer	Diameter: 3/4"	Angle of brace: 45° to 59°	Fastener Type: Through-Bolt w/ Fender Washer	Diameter: 3/4"	Length: 5-1/2"
Least radius of gyration: 0.421	Maximum load: 620 lb.			Least radius of gyration: 0.421	Maximum load: 620 lb.		
In value: 200				In value: 200			
Maximum horizontal load: 1.310 lb.				Maximum horizontal load: 1.310 lb.			

BRANCHLINE RESTRAINTS



CURE



FP-05 SCALE: N.T.S.
2" ASSEMBLY USED FOR ZONE 2 (SECOND FLOOR)

FRICTION LOSS WITH CONTROL VALVE		
SIZE (in.)	ACTUAL OUTSIDE DIAMETER (in.)	EQUIVALENT LENGTH FEET / SCH. 40 PIPE
1-1/4	1.860	8.3
1-1/2	1.900	10.1
2	2.375	21.1
2-1/2	2.875	19.6
3	3.500	20.0
4	4.500	17.6
6	6.625	40.6
8	8.625	60.8

NOTES:
CALCULATED USING THE HAZEN-WILLIAMS FORMULA / COEFFICIENT OF C=120
INCLUDES FRICTION LOSS ACROSS FLOW SWITCH AND CONTROL VALVE
LOSS PROVIDED AT CHECK VALVE, SEE (CV) IN CALCULATION

2 HR FIRE RATED ASSEMBLY _____

24 IN FIRE RATED ASSEMBLY

1. ALL EXTERIOR BEARING WALLS ARE 1-HOUR RATED UNLESS OTHERWISE NOTED.
2. ALL INTERIOR WOOD BEARING WALLS TO BE 1-HOUR RATED.
3. ALL INTERSTITIAL TRUSS CAVITIES SHALL BE COMPLETELY FILLED WITH NON-COMBUSTIBLE BLOWN INSULATION. SPRINKLERS ARE NOT PROVIDED IN THIS AREA.

Remote Area Zone 2 - King One Bedroom 229

OCCUPANCY CLASSIFICATION	Residential
DENSITY (gpm/ft²)	0.10 for 484ft² (Actual 484ft²)
TOTAL HOSE STREAMS	100.00
TOTAL HEADS FLOWING	4
K-FACTOR	5.8, 4.9
P-BOR BASE OF RISER (gpm)	86.42
P-BOR BASE OF RISER (psi)	16.991
Zone 2 BASE OF RISER (gpm)	86.42
Zone 2 BASE OF RISER (psi)	76.556
SAFETY MARGIN (psi)	+26.278 (49.6%)

HYDRAULIC DESIGN NOTES:

USE OF VK468 RESIDENTIAL PENDENT HEADS

Max Spacing: 18x18

Minimum Flow: 17 GPM

Minimum Pressure: 12.0 PSI

USE OF VK460 RESIDENTIAL

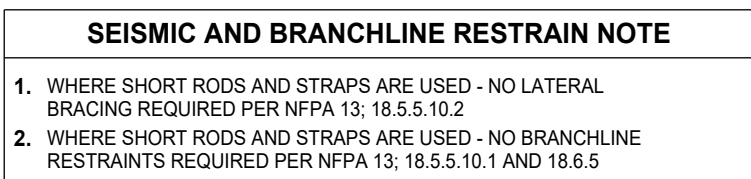
Max Spacing: 16x16

Minimum Flow: 20 GPM

Minimum Pressure: 11.9 PSI

- ① SPRINKLERS AT TOP AND BOTTOM OF ELEVATOR SHAFT NOT REQUIRED PER ASME A14.1 & NFPA 13; 9.3.6.
- ② EXPOSED 4" MANUAL CLASS-I COMBINATION STANDPIPE W/ 2" FCA (ZONE 1) AND 2½" HOSE ANGLE VALVE.
- ③ EXPOSED 4" MANUAL CLASS-I STANDPIPE SYSTEM.

- 1. THE HELLER COMPANIES SHALL INSTALL 1" OR FASTER FINISHED FLOOR ALL UNDERGROUND PIPING BY OTHERS.
- 2. SPRIGS 4' (20') OR LONGER SHALL BE RESTRAINED AGAINST LATERAL MOVEMENT.
- 3. SYSTEM DRAINS SHALL BE INSTALLED AS REQUIRED PER PAF 13 AND EXTENDED OUTSIDE THE BUILDING.
- 4. ALL CORRIDOR CEILING HEIGHTS AT 8'-0" AND UNTIL CEILING HEIGHTS AT 10'-0" UNLESS NOTED OTHERWISE.
- 5. FIRE SPRINKLERS SHALL NOT BE REQUIRED IN BATHROOMS THAT ARE LESS 55 FT IN AREA IN ACCORDANCE WITH THE 2009 IBC.
- 6. FIRE SPRINKLERS ARE NOT REQUIRED PER PAF 13.9.2.2. IN CLOSETS, LINEN CLOSETS AND PANTRIES WITH DWELLING UNITS THAT MEET ALL THE FOLLOWING CONDITIONS:
 - a. THE AREA OF THE SPACE IS 200 SQ. FT. OR LESS.
 - b. THE WALLS AND CEILINGS ARE SURFACED WITH NONCOMBUSTIBLE OR LIMITED-COMBUSTIBLE MATERIALS AS SPECIFIED.
- 7. THE ATTIC AND INTERSTITIAL SPACES ARE TO BE FILLED WITH NONCOMBUSTIBLE INSULATION. FIRE SPRINKLERS ARE NOT REQUIRED FOR THIS CONCEALED SPACE WITH THE REQUIREMENTS OF PAF 13.9.2.1.7.1.7.1.
- 8. CPVC USED ABOVE CEILING LINES IN ALL RESIDENTIAL AREAS, CONVERT PIPING TO STEEL IN EXPOSED AREAS AND ROOMS. THE PIPING SHALL BE PROTECTED AGAINST MECHANICAL DAMAGE.
- 9. ALL PIPING SHALL BE INSTALLED AT THE TOP OF CONCEALED AIR SHAFTS (UNDER THE LANDING) AT EACH FLOOR LEVEL AND BENEATH THE LOWEST INTERMEDIATE LANDING PER PAF 13.9.3.4.1.
- 10. ALL PIPING VALVES AND APPURTENANCES SHALL BE INSTALLED SUCH AS NOT TO OBSTRUCT ANY PORT OR ACCESS TO THE PIPING.



FD-05	SCALE 100 1100
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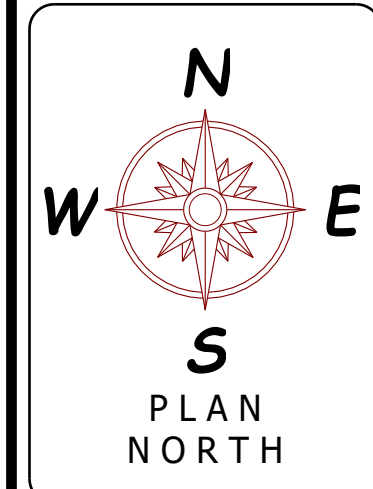
SCALE: 1/8" = 1'-0"



Symbol	Manufacturer	SIN	Model	Quantity	K-Factor	Type	Size	Response	Finish	Temperature	Note	Max Spacing
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Part Number	Part Name	Quantity	Unit Price	Material	Finish	Coating	Notes
Viking VK468	Freedom	69	4.9	Pendent	%	Fast	Chrome 155°F
Viking VK460	Freedom	29	5.8	Horizontal SideWall	%	Fast	Chrome 155°F
Viking VK302	Microfast	3	5.6	Pendent	%	Quick	Chrome 200°F
Viking VK434	Microfast	17	4.9	Concealed Pendent	%	Fast	Brass 150°F
MFG	Chairs	2	5.6	Horizontal SideWall	%	Quick	Brass 155°F
Viking VK462	Chairs	2	5.6	Horizontal Pendent	%	Quick	Brass 155°F
Total = 111							

It is the sole responsibility of owner and owners representative to insure that this building/buildings has proper heat and insulation to prevent fire sprinkler pipe, fittings and devices from freezing.

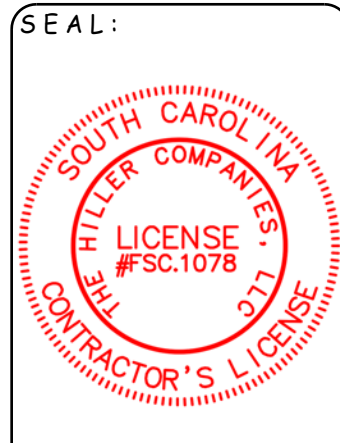


GENERAL NOTES:

- 1) SYSTEMS ARE DESIGNED AND INSTALLED PER NFPA 13 (1919 EDITION)
- 2) STEEL SYSTEM PIPING 2" AND SMALLER TO BE CPVC WITH CPVC FITTINGS, CONVERT TO BLACK STEEL PIPE AND FITTINGS WHERE EXPOSED
- 3) STEEL SYSTEM PIPING 2" AND SMALLER TO BE SCH. 40 BLACK STEEL PIPE AND FITTINGS ARE THREADED / GROOVED / FLANGED / WELDED
- 4) STEEL SYSTEM PIPING 2" AND SMALLER TO BE SCH. 10 BLACK STEEL PIPE AND FITTINGS ARE GROOVED / FLANGED / WELDED
- 5) ALL HANGERS ARE TO MEET THE CRITERIA SET FORTH BY NFPA 13 (1919 EDITION) AND SPAN SUPPLEMENTARY SPECIFICATIONS
- 6) WIRING OF ELECTRICAL EQUIPMENT IS TO BE BY OTHERS
- 7) PAINTING OF PIPE OR COMPONENTS SHALL BE BY OTHERS
- 8) (b) (4) REPRESENTS THE MINIMUM REQUIREMENTS
- 9) THE HILLER COMPANIES TO START 1'-0" ABOVE FINISHED FLOOR
- 10) ALL UNDERGROUND PIPING BY OTHERS
- 11) ALL HANGERS SHALL BE 4" OR LESS FROM FLOOR TO BE PROTECTED WITH APPROVED GUARDS

WATER SUPPLY INFORMATION			
STATIC PRESSURE	53	FIRE PUMP	
RESIDUAL PRESSURE	51	SIZE GPM @ PSI	3
FLOW G.P.M.	1160	TYPE OF DRIVER	
DATE OF TEST	09/30/2025	ELECTRICAL REQ.5	
HYDRANT LOCATION	@ TEST NODE (SEE SITE PLAN)		N
TEST TAKEN BY	GREENWOOD CPW		(803

NOTES:
TESTED BY - MIKE PROCTOR
WITNESSED BY - RUSSELL HOLLEY
CONTACT EMAIL - RHOLLEY@GREENWOODCPW.COM
HYDRANT LOCATION - SEE FP-01

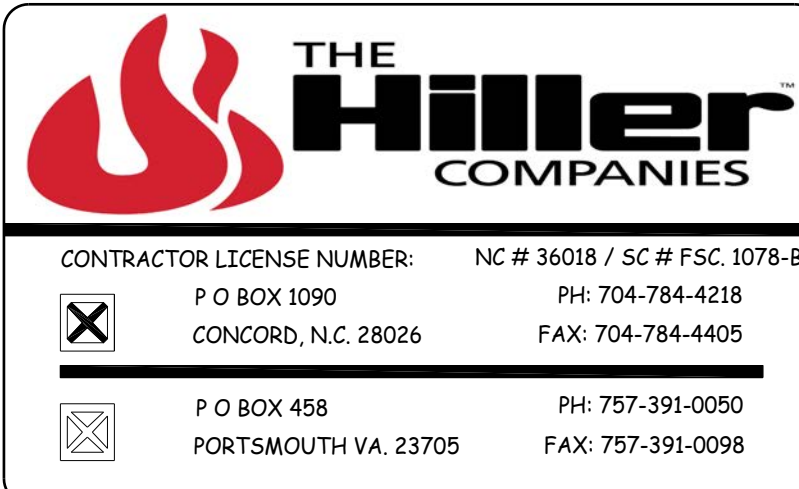


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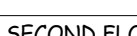
JUAN OCHOA
NICET #139445
LEVEL IV
WATER BASED SYSTEMS LAYOUT

SIGNED: Timothy J. O'Connell

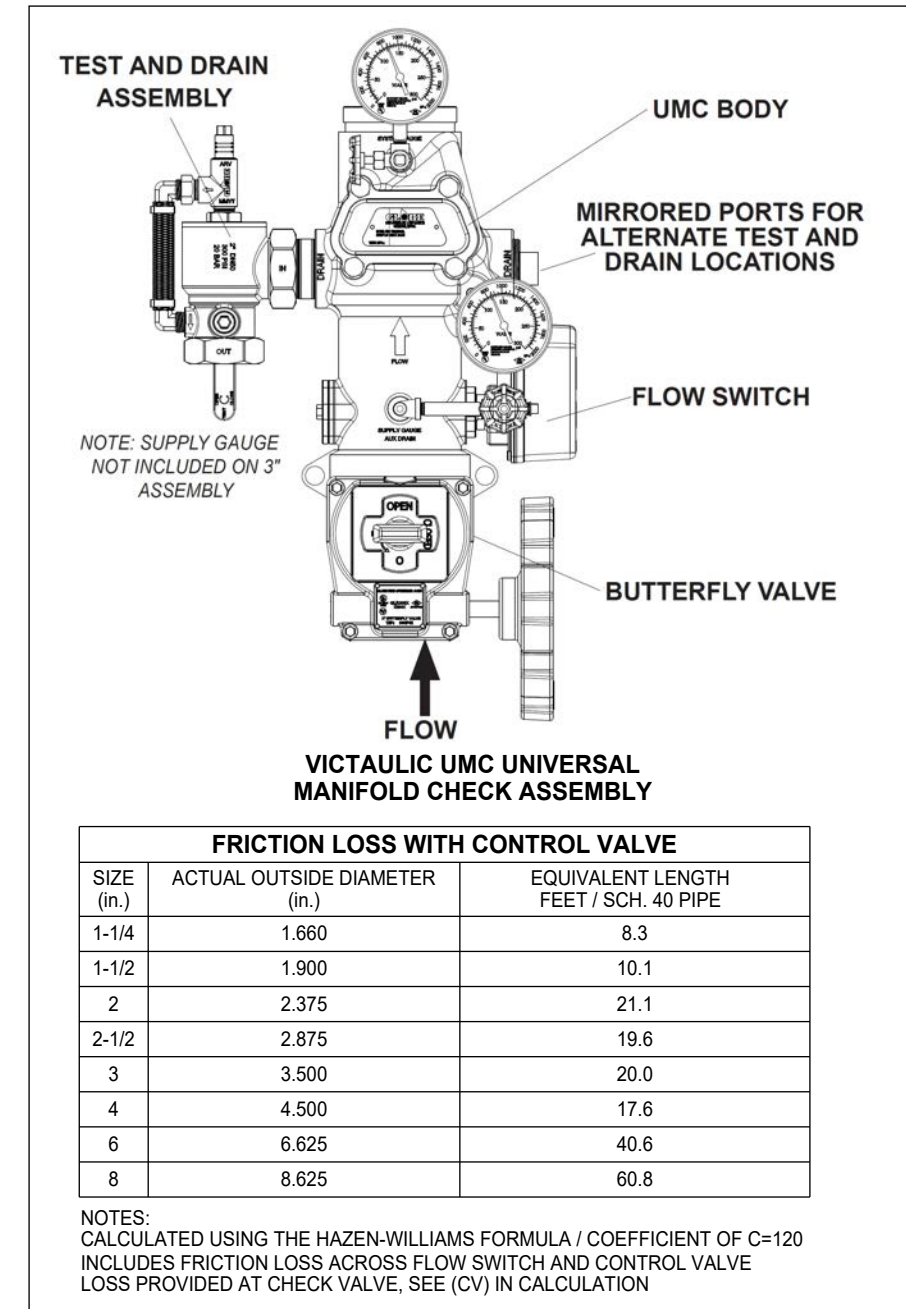
Sprinkler Legend - Total Project								
Symbol	Manufacturer	SIN	Model	Quantity	K-Factor	Type	Size / Response	Finish / Temperature
	Viking	VK300	Microlist	9	5.6	Upright	½ Quick	Brass / 200°F
	Viking	VK621	Concealed	85	5.6	Concealed Pendent	¾ Quick	Brass / 185°F
	Viking	VK502	Pendant	33	5.6	Pendant	¾ Quick	Brass / 200°F
	Viking	VK4621	Concealed	5	5.6	Concealed Pendent	¾ Quick	Brass / 200°F
	Viking	VK484	Freedom	59	4.9	Concealed Pendent	Fast Brass	185°F White Coverplate 18 x 18 / 324H
	Generic	HFG	Chute Head	4	5.6	Horizontal Sideswall	¾ Quick	Brass / 185°F
	Viking	VK305	Microfast	3	5.6	Horizontal Sideswall	Fast Chrome	200°F Chrome Res Eoc 100T Chl / 258H L
	Viking	VK460	Freedom	104	5.8	Horizontal Sideswall	Fast Chrome	185°F Chrome Res Head 16 x 16 / 16T Fash
	Victacolic	V5818	VSI	4	5.6	Pendent	1 Quick	VC250 200°F
	Vikclic	VK465	Freedom	208	4.9	Pendent	Fast Chrome	185°F Chrome Res Esc 18 x 18 / 324H
				Total =	480			

[illegible]

JOB NAME:	Home2 Suites by Hilton 4-Story Hotel Construction 475 Hospitality Blvd. Greenwood, SC 29649
CONTRACT WITH:	John M. Campbell Company 102 Winchester Avenue Monroe, NC 28110

PHONE: (704) 254-3214	
DRAWING NAME: FIRE SUPPRESSION PLAN - SECOND FLOOR	
DRAWN BY: TWH	
AHJ: LLR / Greenwood FM	
DATE: 10/10/25	
SCALE: AS NOTED	
CONTRACT NO.: C60588	

SUBMITTALS

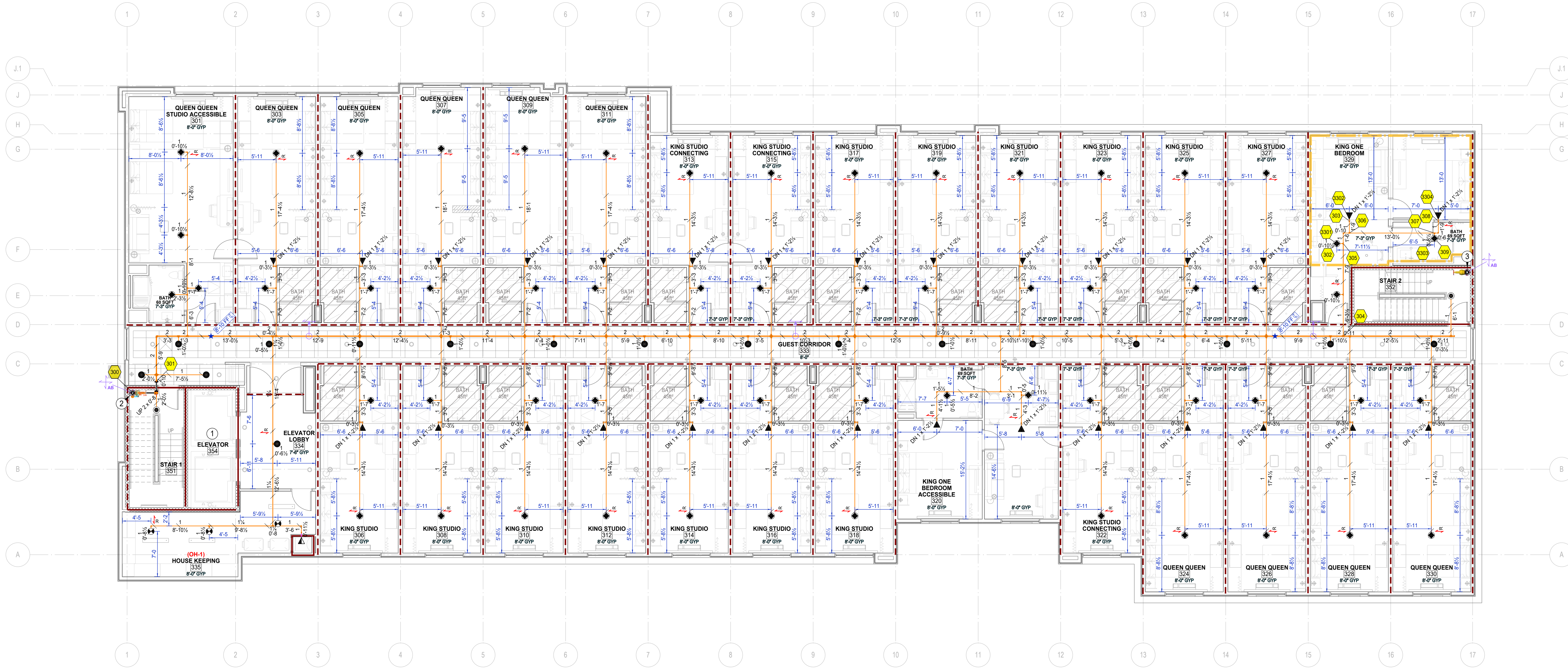


ZONE CONTROL ASSEMBLY DETAIL WITH CONTROL VALVE

2

FP-06

SCALE: N.T.S.
2" ASSEMBLY USED FOR ZONE 3 (THIRD FLOOR)



SEISMIC AND BRANCHLINE RESTRAIN NOTE

1. WHERE SHORT RODS AND STRAPS ARE USED - NO LATERAL BRACING REQUIRED PER NFPA 13, 18.5.5.10.2.

2. WHERE SHORT RODS AND STRAPS ARE USED - NO BRANCHLINE RESTRAINTS REQUIRED PER NFPA 13, 18.5.5.10.1 AND 18.6.5.

1

FP-06

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

0 2 4 6 8

FIRE SUPPRESSION PLAN - THIRD FLOOR

Sprinkler Legend - Total 3rd Floor												
Symbol	Manufacturer	SIN	Model	Quantity	K-Factor	Type	Size	Response	Finish	Temperature	Note	Max Spacing
	Viking	VK484	Freedom	17	4.9	Concealed Pendant	1/2"	Fast	Brass	165°F	White Coverplate	18 x 18 / 324H
	Viking	VK460	Freedom	29	5.6	Horizontal Sidewall	1/2"	Fast	Chrome	155°F	Chrome Res Esc	16 x 16 / 256H
	Viking	VK468	Freedom	59	4.9	Pendant	1/2"	Fast	Chrome	155°F	Chrome Res Esc	18 x 18 / 324H
	Viking	VK4621	Concealed	2	5.6	Concealed Pendant	1/2"	Quick	Brass	165°F	White Coverplate	130R OH / 225H LH
	Viking	VK302	Microfast	3	5.6	Pendant	1/2"	Quick	Chrome	200°F	Chrome Res Esc	130R OH / 225H LH
	Generic	MFG	Chute Head	1	5.6	Horizontal Sidewall	1/2"	Quick	Brass	165°F	Connect Chute Head	100R OH / 196H LH
					Total = 111							

FIREWALL AND BARRIER NOTES	
2-HR FIRE RATED ASSEMBLY	-----
1-HR FIRE RATED ASSEMBLY	-----
GENERAL FIRE RATING NOTES	
1. ALL EXTERIOR BEARING WALLS ARE 1-HOUR RATED UNLESS OTHERWISE NOTED.	
2. ALL INTERIOR WOOD BEARING WALLS TO BE 1-HOUR RATED.	
3. ALL INTERSTITIAL TRUSS CAVITIES SHALL BE COMPLETELY FILLED WITH NON-COMBUSTIBLE BLOWN INSULATION. SPRINKLERS ARE NOT PROVIDED IN THIS AREA.	

Hydraulic Information	
Remote Area Zone 3 - King One Bedroom 329	Residential
OCCUPANCY CLASSIFICATION	DENSITY (gpm/ft²)
100.00	0.10 for 484H² (Actual 484H²)
TOTAL HOSE STREAMS	4
TOTAL HEADS FLOWING	4
K-FACTOR	5.8, 4.9
P-BOR BASE OF RISER (gpm)	86.42
P-BOR BASE OF RISER (psi)	21.783
Zone 2 BASE OF RISER (gpm)	86.42
Zone 2 BASE OF RISER (psi)	81.348
Zone 3 BASE OF RISER (gpm)	86.42
Zone 3 BASE OF RISER (psi)	76.556
SAFETY MARGIN (psi)	+21.486 (40.6%)

HYDRAULIC DESIGN NOTES:

USE OF VK460 RESIDENTIAL PENDENT HEADS

Max Spacing: 18x18

Minimum Flow: 17 GPM

Minimum Pressure: 12.0 PSI

USE OF VK460 RESIDENTIAL SIDEWALL HEADS

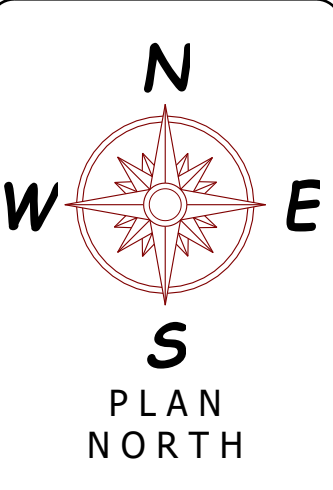
Max Spacing: 16x16

Minimum Flow: 20 GPM

Minimum Pressure: 11.9 PSI

- FIRE PROTECTION KEY NOTES
- ① SPRINKLERS AT TOP AND BOTTOM OF ELEVATOR SHAFT NOT REQUIRED PER ASME A14.1 & NFPA 13, 9.3.6.2
- ② EXPOSED 4" MANUAL CLASS-I COMBINATION STANDPIPE W/ 2" FCA (ZONE 1) AND 2 1/2" HOSE ANGLE VALVE.
- ③ EXPOSED 4" MANUAL CLASS-I STANDPIPE SYSTEM.
- FIRE PROTECTION GENERAL NOTES
1. THE HILLER COMPANIES STARTS 1'-0" ABOVE FINISHED FLOOR. ALL UNDERGROUND PIPING BY OTHERS.
2. SPRIGS 4 FT (1.2M) OR LONGER SHALL BE RESTRAINED AGAINST LATERAL MOVEMENT.
3. SYSTEM DRAINS SHALL BE INSTALLED AS REQUIRED PER NFPA 13 AND EXTENDED OUTSIDE THE BUILDING.
4. ALL CORRIDOR CEILING HEIGHTS AT 8'-6" AND UNIT CEILING HEIGHTS AT 10'-0" UNLESS NOTED OTHERWISE.
5. FIRE SPRINKLERS SHALL NOT BE REQUIRED IN BATHROOMS THAT ARE LESS 55 FT² IN AREA IN ACCORDANCE WITH NFPA 13, 9.2.4.1.3.
6. FIRE SPRINKLERS ARE NOT REQUIRED PER NFPA 13, 9.2.4.2, IN CLOSETS, LINEN CLOSETS AND PANTRIES WITHIN DWELLING UNITS THAT MEET ALL THE FOLLOWING CONDITIONS:
- THE AREA OF THE SPACE DOES NOT EXCEED 54 FT².
 - THE WALLS AND CEILINGS ARE SURFACED WITH NONCOMBUSTIBLE OR LIMITED-COMBUSTIBLE MATERIALS AS DEFINED BY NFPA 220.
7. THE ATTIC AND INTERSTITIAL SPACES ARE TO BE FILLED WITH NONCOMBUSTIBLE INSULATION. FIRE SPRINKLERS ARE NOT REQUIRED FOR THIS CONCEALED SPACE WITH THE REQUIREMENTS OF NFPA 13, 9.2.1.1 BEING MET.
8. CPVC USED ABOVE CEILINGS IN ALL RESIDENTIAL AREAS. CONVERT PIPING TO STEEL IN EXPOSED AREAS AND ROOMS OF ORDINARY HAZARD OCCUPANCIES EXCEEDING 400 FT².
9. SPRINKLERS SHALL BE INSTALLED AT THE TOP OF COMBUSTIBLE STAIR SHAFTS, UNDER THE LANDINGS AT EACH FLOOR LEVEL AND BENEATH THE LOWEST INTERMEDIATE LANDING PER NFPA 13, 9.3.4.1.
10. ALL PIPING VALVES AND APPURTENANCES SHALL BE INSTALLED SUCH AS NOT TO OBSTRUCT ANY PORTION OF WINDOWS, DOORWAYS, STAIRS, PASSAGEWAYS OR ACCESS TO EQUIPMENT.

It is the sole responsibility of owner and owners representative to insure that this building/buildings has proper heat and insulation to prevent fire sprinkler pipe, fittings and devices from freezing.



GENERAL NOTES:

1) SYSTEMS ARE DESIGNED AND INSTALLED PER NFPA 13 (2019 EDITION)

2) RESIDENTIAL SYSTEM PIPING 2" AND SMALLER TO BE CPVC WITH CPVC FITTINGS. CONVERT TO BLACK STEEL PIPE AND FITTINGS WHERE EXPOSED.

3) STEEL SYSTEM PIPING 2" AND SMALLER TO BE SCH. 40 BLACK STEEL PIPE AND FITTINGS ARE THREADED / GROOVED / FLANGED / WELDED.

4) STEEL SYSTEM PIPING 2 1/2" OR LARGER TO BE SCH. 10 BLACK STEEL PIPE AND FITTINGS ARE GROOVED / FLANGED / WELDED.

5) ALL HANGERS ARE TO MEET THE CRITERIA SET FORTH BY NFPA 13 (2019 EDITION) AND SPACED ACCORDING TO MANUFACTURER'S SPECIFICATIONS.

6) WIRING OF ELECTRICAL EQUIPMENT IS TO BE BY OTHERS.

7) PAINTINGS OF PIPE OR COMPONENTS SHALL BE BY OTHERS.

8) ○ REPRESENTS A HYDRAULIC REFERENCE POINT.

9) THE HILLER COMPANIES TO START 1'-0" ABOVE FINISHED FLOOR.

10) ALL UNDERGROUND PIPING BY OTHERS.

11) SPRINKLERS LOCATED 7'-6" OR LESS FROM FLOOR TO BE PROTECTED WITH APPROVED GUARDS.

WATER SUPPLY INFORMATION			
STATIC PRESSURE	53	FIRE PUMP	YES
RESIDUAL PRESSURE	51	SIZE GPM @ PSI	300 @ 60
FLOW G.P.M.	1160	TYPE OF DRIVER	VIP
DATE OF TEST	09/30/2025	ELECTRICAL REQ.	208V
HYDRANT LOCATION	@ TEST NODE (SEE SITE PLAN)		NODE #1
TEST TAKEN BY	GREENWOOD CPW		(803) 545-3881

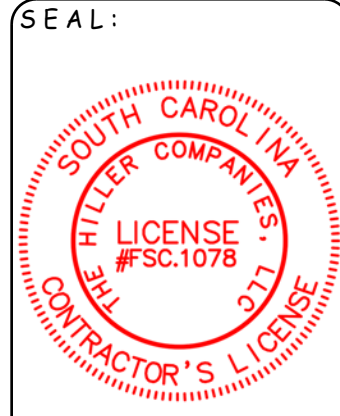
NOTES:

TESTED BY - MIKE PROCTOR

WITNESSED BY - RUSSELL HOLLEY

CONTACT EMAIL - RHOLLEY@GREENWOODCPW.COM

HYDRANT LOCATION - SEE FP-01



NICET REVIEW STAMP

JUAN OCHOA

NICET #0199445

LEVEL IV

WATER BASED SYSTEMS LAYOUT

SIGNED: *[Signature]*

VALID THROUGH 01/01/2027

Sprinkler Legend - Total Project												
Symbol	Manufacturer	SIN	Model	Quantity	K-Factor	Type	Size	Response	Finish	Temperature	Note	Max Spacing
	Viking	VK300	Microfast	9	5.6	Upright	1/2"	Quick	Brass	200°F	Exposed	130R OH / 225H LH
	Viking	VK4621	Concealed	55	5.6	Concealed Pendant	1/2"	Quick	Brass	155°F	White Coverplate	130R OH / 225H LH
	Viking	VK302	Microfast	33	5.6	Pendant	1/2"	Quick	Chrome	200°F	Chrome Res Esc	130R OH / 225H LH
	Viking	VK4621	Concealed	1	5.6	Concealed Pendant	1/2"	Quick	Brass	200°F	White Coverplate	130R OH / 225H LH
	Viking	VK484	Freedom	59	4.9	Concealed Pendant	1/2"	Fast	Brass	165°F	White Coverplate	18 x 18 / 324H
	Generic	MFG	Chute Head	4	5.6	Horizontal Sidewall	1/2"	Quick	Brass	155°F	Connect Chute Head	100R OH / 196H LH
	Viking	VK305	Microfast	3	5.6	Horizontal Sidewall	1/2"	Quick	Chrome	200°F	Chrome Res Esc	100R OH / 196H LH
	Viking	VK460	Freedom	104	5.8	Horizontal Sidewall	1/2"	Fast	Chrome	155°F	Chrome Res Esc	16 x 16 ft / 256H
	Victaulic	V3515	VS1	4	5.6	Pendant	1"	Quick	VC250	200°F	VC250 Coverplate	130R OH / 225H LH
	Viking	VK460	Freedom	308	4.9	Pendant	1/2"	Fast	Chrome	155°F	Chrome Res Esc	18 x 18 / 324H
				Total = 480								

NO.	DATE	REVISION DISCRIPTION	BY

THE Hiller COMPANIES

CONTRACTOR LICENSE NUMBER: NC # 36018 / SC # FSC 1078-B

P O BOX 1090 CONCORD, N.C. 28026

PH 704-784-4218 FAX: 704-784-4405

P O BOX 458 PORTSMOUTH VA. 23705

PH 757-391-0050 FAX: 757-391-0098

TOR NAME: Home2 Suites by Hilton 4-Story Hotel Construction 475 Hospitality Blvd. Greenwood, SC 29649

CONTRACT WITH: John M. Campbell Company 102 Winchester Avenue Monroe, NC 28110

PHONE: (704) 254-3214

DRAWING NAME: FIRE SUPPRESSION PLAN - THIRD FLOOR

DRAWN BY: TWH

DATE: 10/10/25

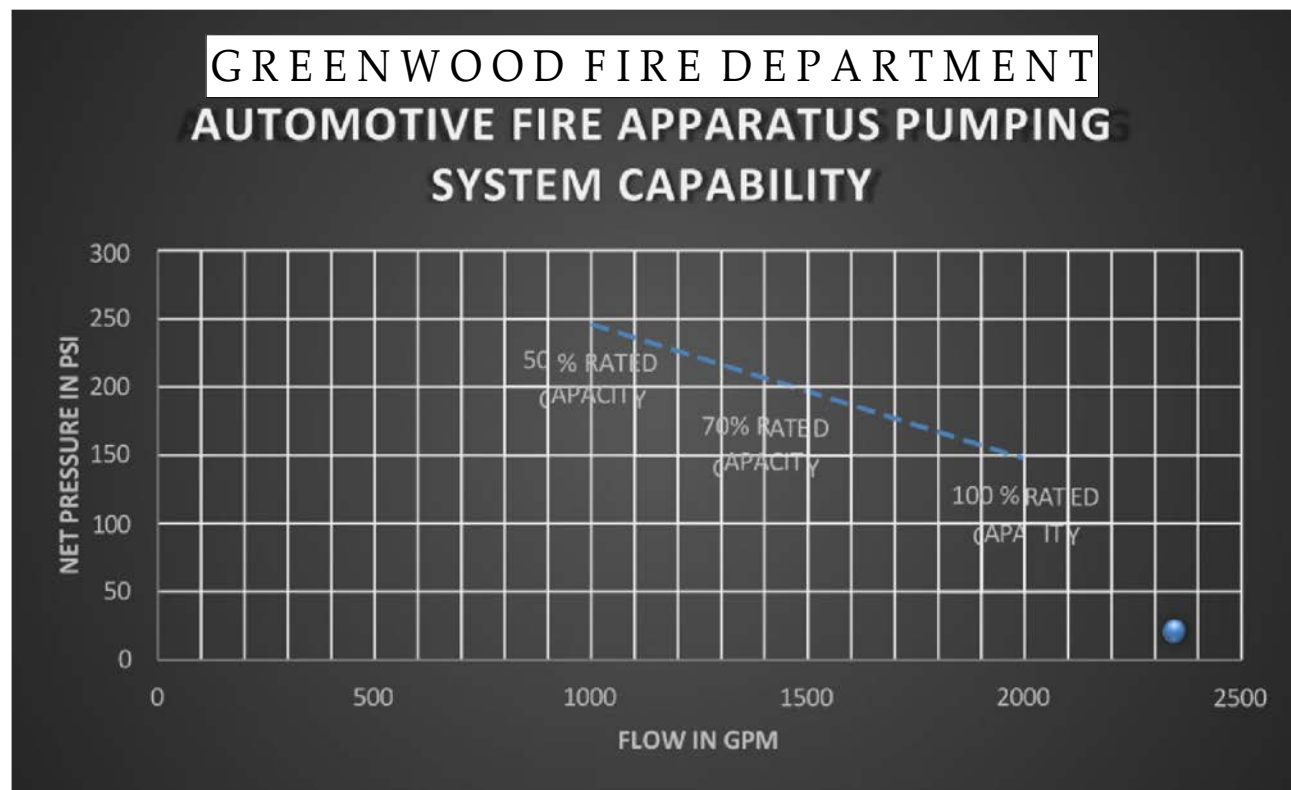
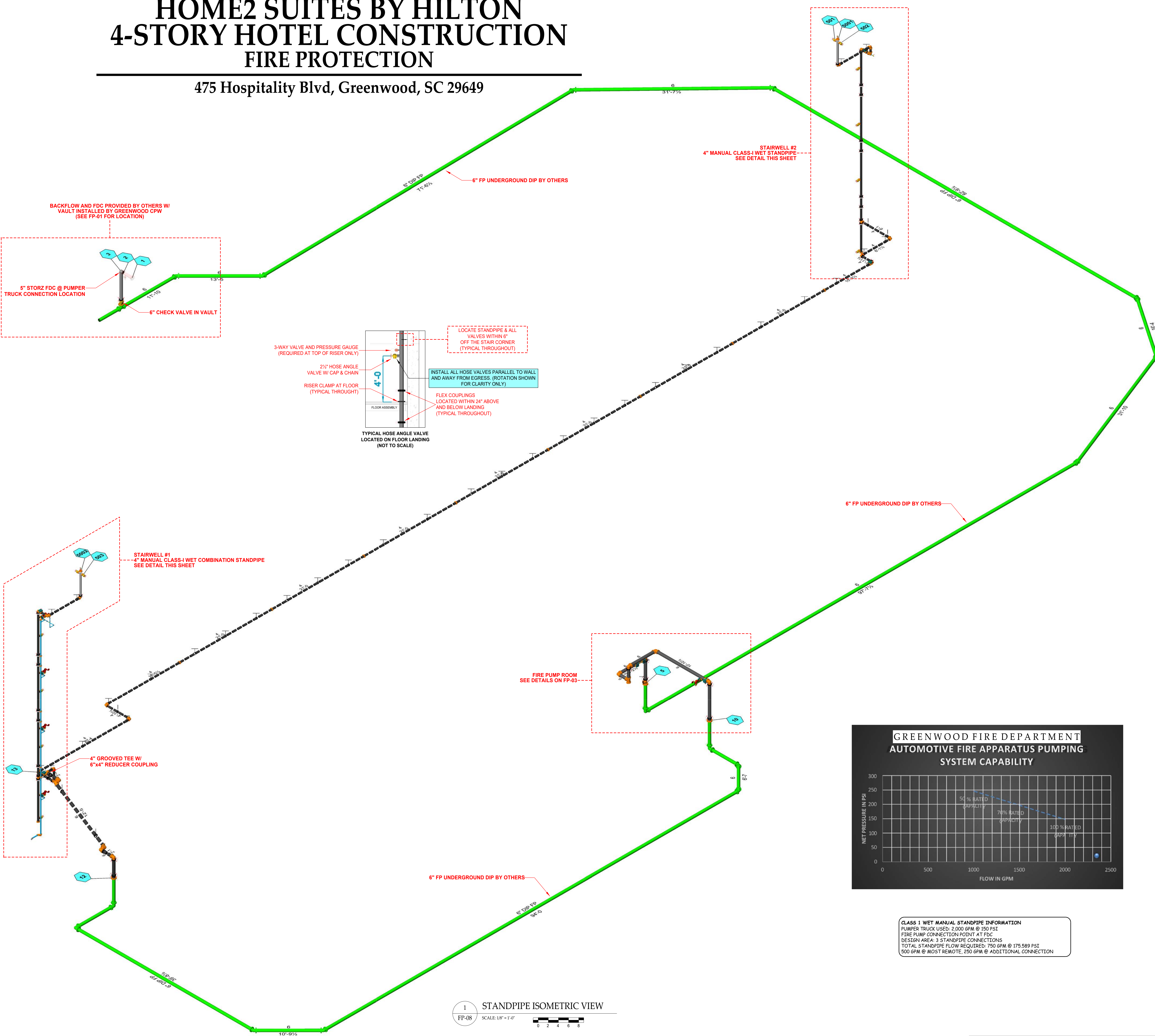
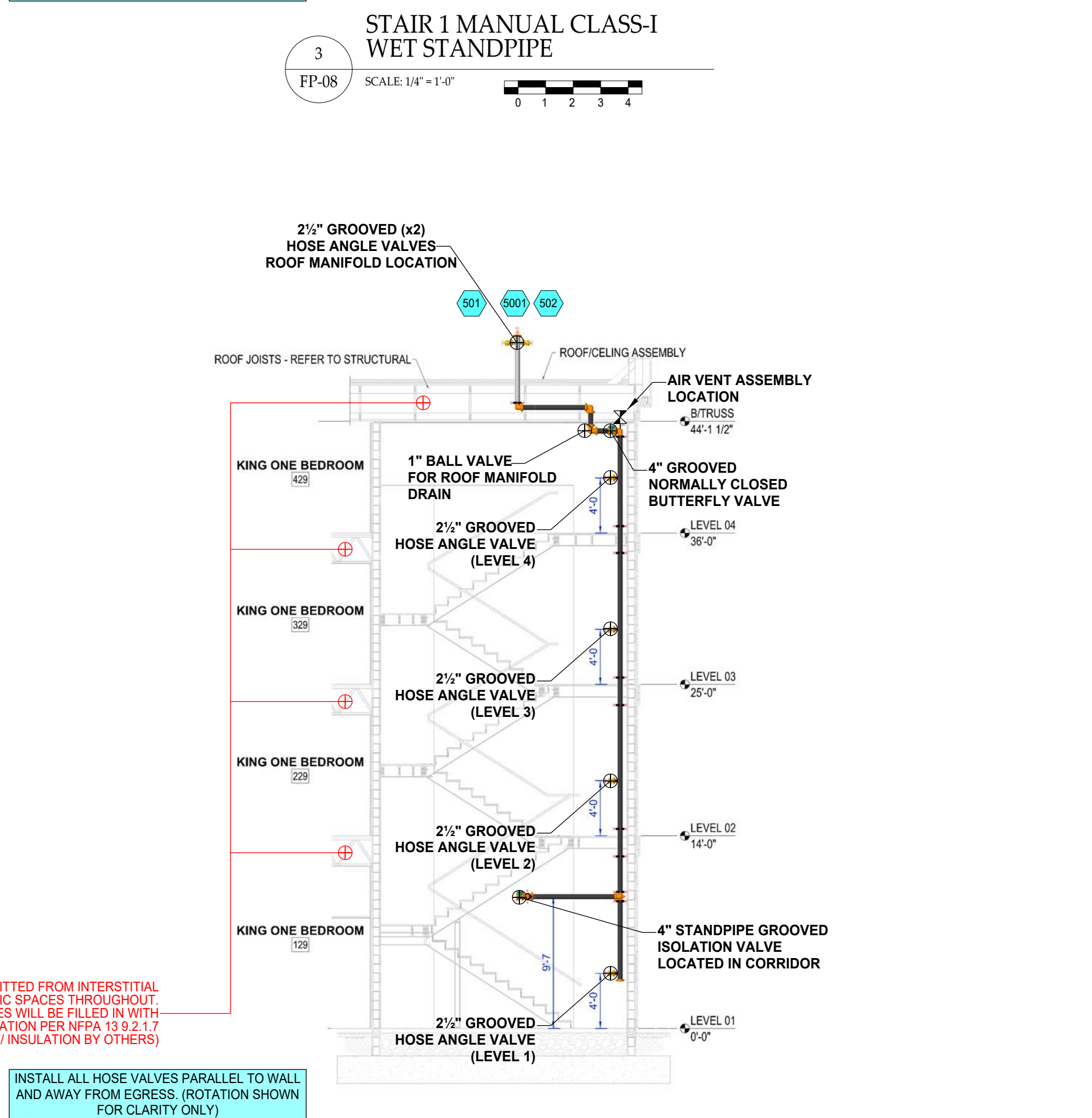
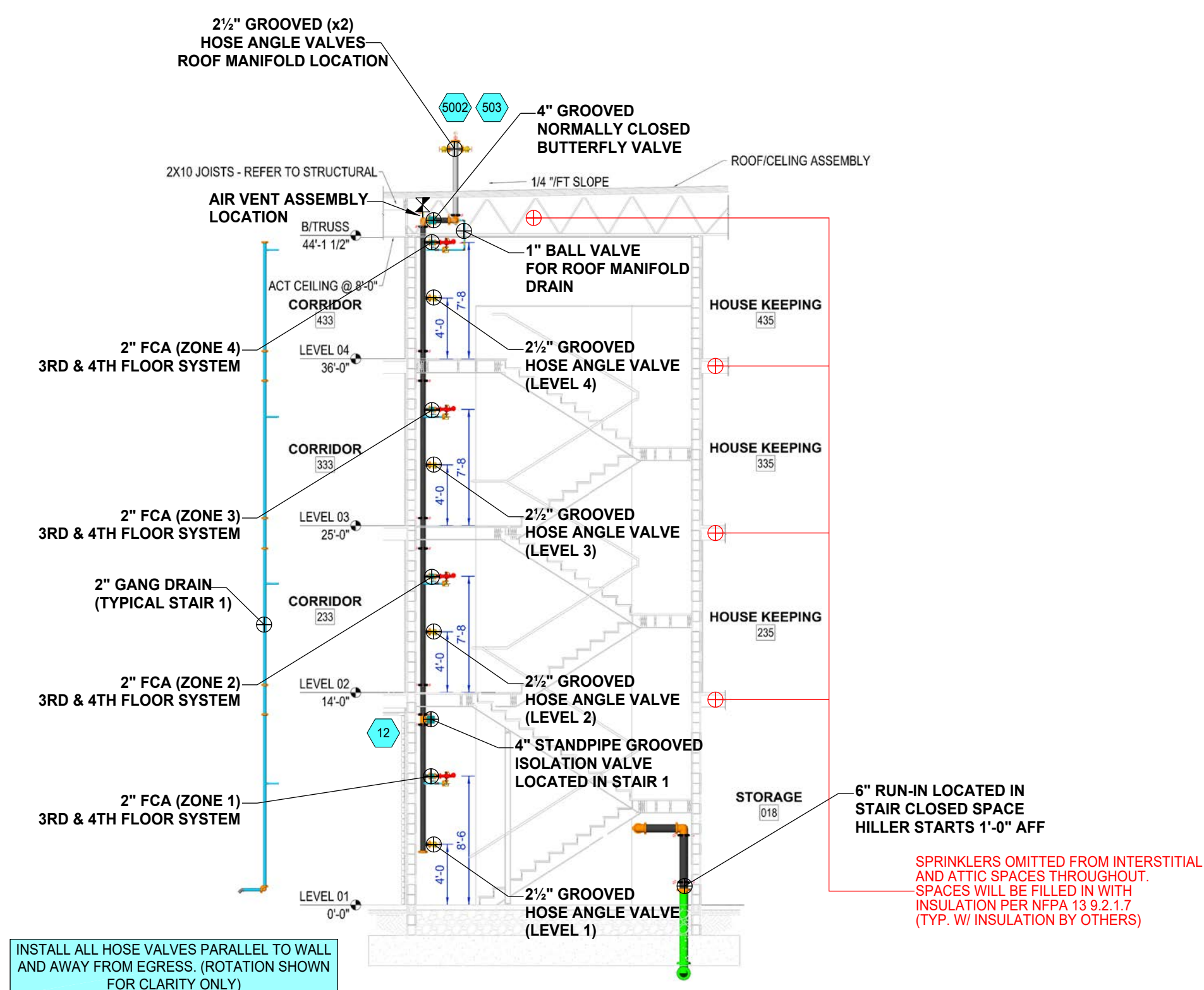
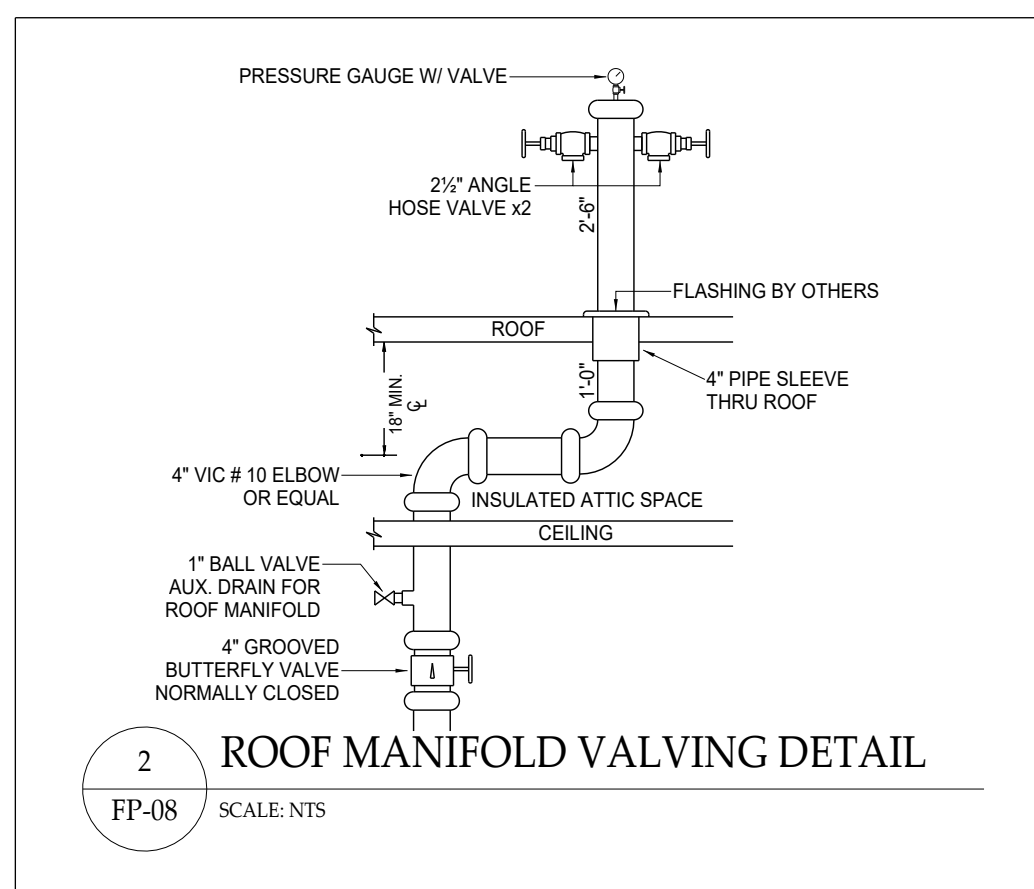
SCALE: AS NOTED

CONTRACT NO.: CP0588

FP-06 of 08

HOME2 SUITES BY HILTON 4-STORY HOTEL CONSTRUCTION FIRE PROTECTION

475 Hospitality Blvd, Greenwood, SC 29649



CLASS 1 WET MANUAL STANDPIPE INFORMATION
PUMPER TRUCK USED: 2,000 GPM @ 150 PSI
FIRE PUMP CONNECTION POINT AT FDC
DESIGN AREA: 3 STANDPIPE CONNECTIONS
TOTAL STANDPIPE FLOW REQUIRED: 750 GPM @ 175.589 PSI
500 GPM @ MOST REMOTE, 250 GPM @ ADDITIONAL CONNECTION

SUBMITTALS

It is the sole responsibility of owner and owners representative to insure that this building/buildings has proper heat and insulation to prevent fire sprinkler pipe, fittings and devices from freezing.

GENERAL NOTES:
1) SYSTEMS ARE DESIGNED AND INSTALLED PER NFPA 13 (2019 EDITION)
2) RESIDENTIAL SYSTEM PIPING 2" AND SMALLER TO BE CPVC WITH CPVC FITTINGS. CONVERT TO BLACK STEEL PIPE AND FITTINGS WHERE EXPOSED.
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8) REPRESENTS A HYDRAULIC REFERENCE POINT.
9) THE HILLER COMPANIES TO START 1'-0" ABOVE FINISHED FLOOR.
10) ALL UNDERGROUND PIPING BY OTHERS.
11) SPRINKLERS LOCATED 7'-6" OR LESS FROM FLOOR TO BE PROTECTED WITH APPROVED GUARDS.

WATER SUPPLY INFORMATION
STATIC PRESSURE 53 FIRE PUMP YES
RESIDUAL PRESSURE 51 SIZE GPM @ PSI 300 @ 60
FLOW 6 P.M. 1160 TYPE OF DRIVER VIP
DATE OF TEST 09/30/2025 ELECTRICAL REQ. 208V
HYDRANT LOCATION @ TEST NODE (SEE SITE PLAN) NODE #1
TEST TAKEN BY GREENWOOD CPW (803) 545-3881

SEAL:
SOUTH CAROLINA
HILLER COMPANIES
LICENSE #SC-1078
CONTRACTOR'S LICENSE

NICET REVIEW STAMP
JUAN OCHOA
NICET #0199445
LEVEL IV
WATER BASED SYSTEMS LAYOUT
SIGNED: [Signature]
VALID THROUGH 01/01/2027

Sprinkler Legend - Total Project											
Symbol	Manufacturer	SIN	Model	Quantity	K-Factor	Type	Size	Response	Finish	Temperature	Note
⊗	Viking	VK300	Microfast	9	5.6	Upright	1/2	Quick	Brass	200°F	Exposed
⊗	Viking	VK421	Concealed	55	5.6	Concealed Pendant	1/2	Quick	Brass	155°F	White Coverplate
⊗	Viking	VK302	Microfast	33	5.6	Pendant	1/2	Quick	Chrome	200°F	Chrome Res Esc
⊗	Viking	VK421	Concealed	1	5.6	Concealed Pendant	1/2	Quick	Brass	200°F	White Coverplate
⊗	Viking	VK494	Freedom	59	4.9	Concealed Pendant	1/2	Fast	Brass	155°F	White Coverplate
⊗	Generic	MFG	Chute Head	4	5.6	Horizontal Sidewall	1/2	Quick	Brass	155°F	Connect Chute Head
⊗	Viking	VK305	Microfast	3	5.6	Horizontal Sidewall	1/2	Quick	Chrome	200°F	Chrome Res Esc
⊗	Viking	VK460	Freedom	104	5.8	Horizontal Sidewall	1/2	Fast	Chrome	155°F	Chrome Res Esc
⊗	Victaulic	V3515	VS1	4	5.6	Pendant	1	Quick	VC250	200°F	VC250 Concealed
⊗	Viking	VK460	Freedom	208	4.9	Pendant	1/2	Fast	Chrome	155°F	Chrome Res Esc
				Total = 480							

NO.	DATE	REVISION DISCRIPTION	BY
1			
2			
3			
4			
5			
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7			
8			
9			
10			

THE Hiller COMPANIES
CONTRACTOR LICENSE NUMBER: NC # 36018 / SC # FSC 1078-B
P O BOX 1090 CONCORD, N.C. 28026 PH: 704-784-4218 FAX: 704-784-4405
P O BOX 458 PORTSMOUTH VA. 23705 PH: 757-391-0050 FAX: 757-391-0098

TOR NAME: Home2 Suites by Hilton
4-Story Hotel Construction
475 Hospitality Blvd.
Greenwood, SC 29649
CONTRACT WITH: John M. Campbell Company
102 Winchester Avenue
Monroe, NC 28110
PHONE: (704) 254-3214
475 Hospitality Blvd.
Greenwood, SC 29649
DRAWN BY: TWH
AHJ: LLR / Greenwood FM
DATE: 10/10/25
SCALE: AS NOTED
CONTRACT NO.: CP0588
FP-08 of 08