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A
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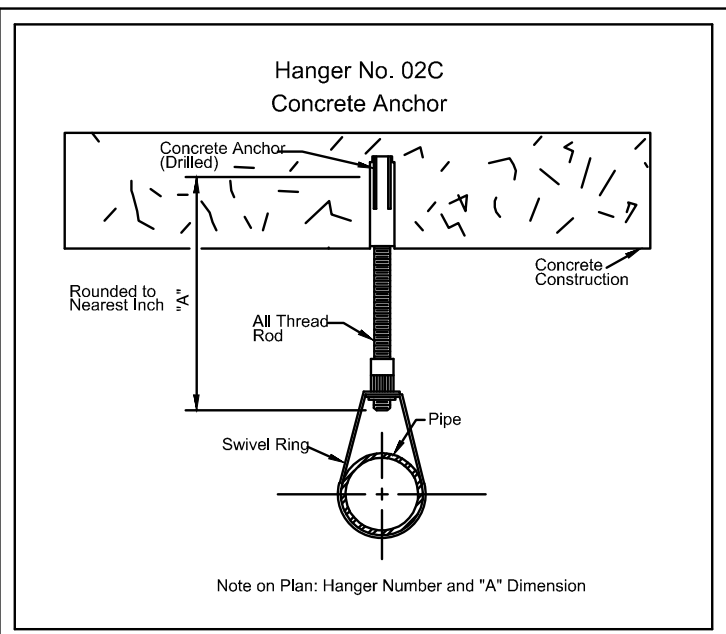
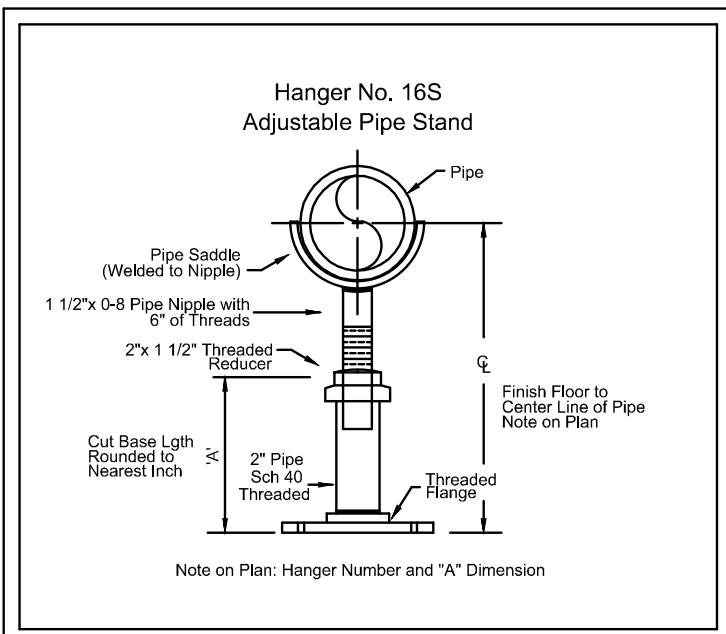
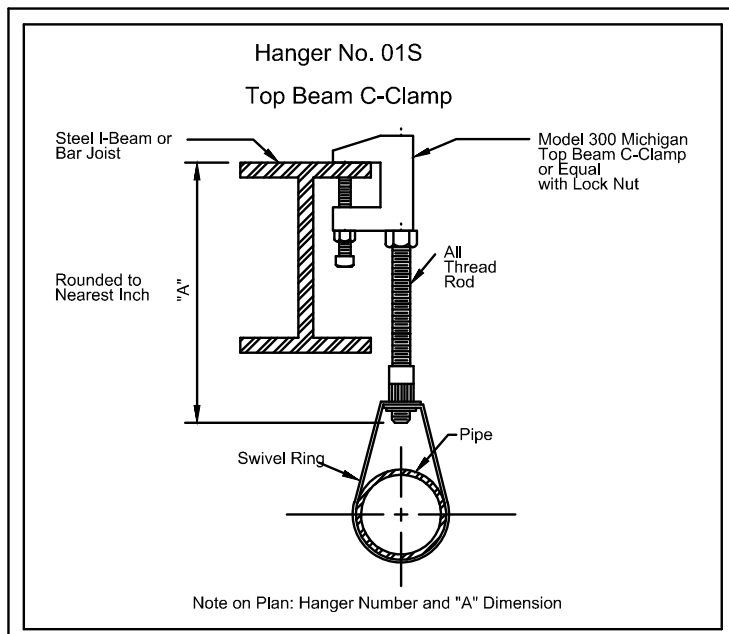


TABLE 6-2.2 MAXIMUM DISTANCE BETWEEN HANGERS (FT-IN.)									
NOMINAL PIPE SIZE (IN)	3/4	1	1-1/4	1-1/2	2	2-1/2	3	4	6
STEEL PIPE	N/A	12-0	12-0	12-0	15-0	15-0	15-0	15-0	15-0
THREADED	N/A	12-0	12-0	12-0	12-0	12-0	N/A	N/A	N/A
LIGHTWALL	N/A	12-0	12-0	12-0	12-0	12-0	N/A	N/A	N/A
COPPER TUBE	8-0	8-0	10-0	10-0	12-0	12-0	12-0	15-0	15-0
CPVC	5-6	6-0	6-6	7-0	8-0	9-0	10-0	N/A	N/A

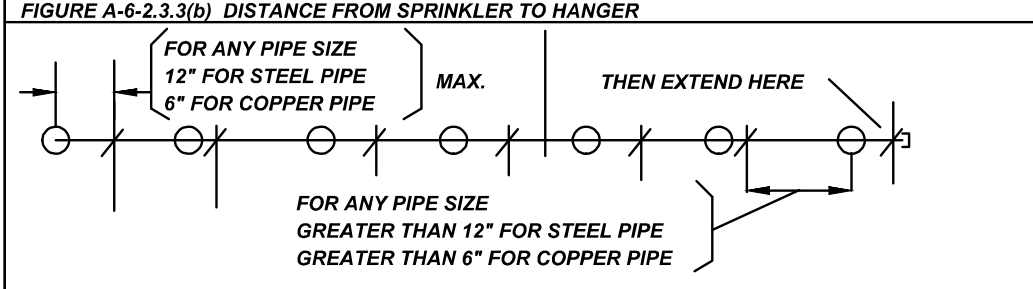
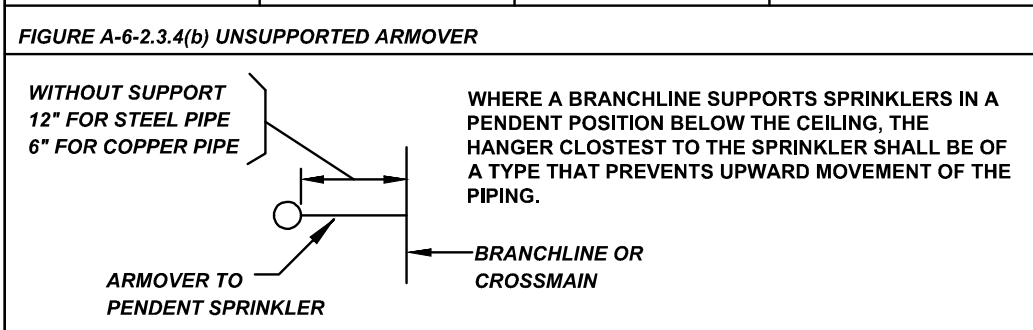
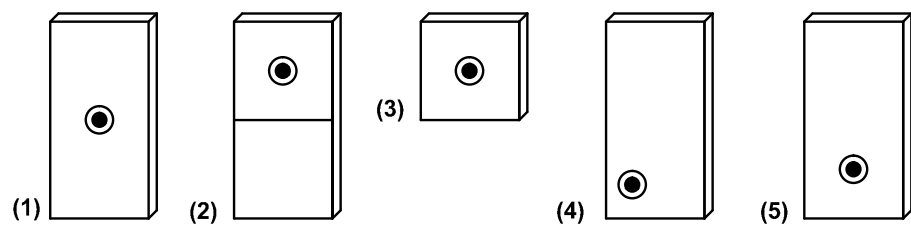


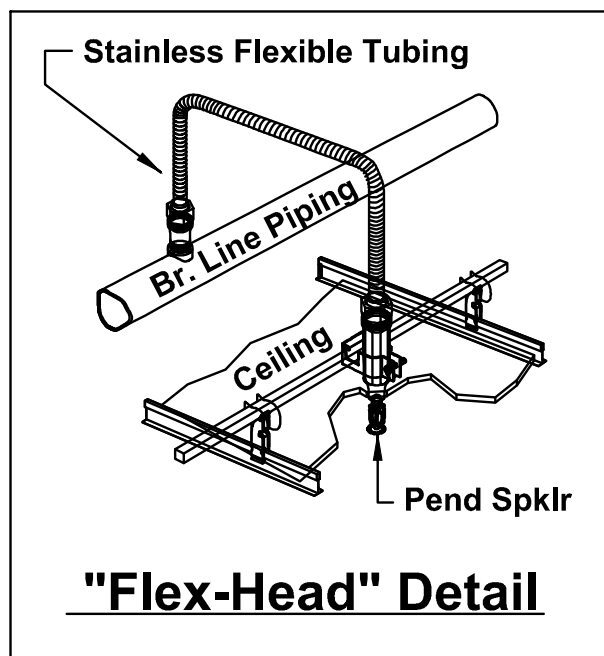
TABLE 6-1.4.1 HANGER ROD SIZE			
PIPE SIZE	DIAM. OF ROD	PIPE SIZE	DIAM. OF ROD
UP TO AND INCLUDING 4"	3/8"	6" AND 8"	1/2"



Sprinkler Head Location in Ceiling Tile(s):
Sprinkler heads will be located in the ceiling tiles as shown in the detail below. (1, 2, & 3)



- (1) 2'x4' Tile with sprinkler head located in center of tile.
- (2) 2'x4' Tile with decorative cut in tile. Sprinkler head to be located centered in either upper or lower area. At the discretion of the sprinkler contractor.
- (3) 2'x2' Tile with sprinkler head located in center of tile.
- (4) 2'x4' Tile with sprinkler head located in tile to best suit the requirements of NFPA 13 (this may be different in each tile)
- (5) 2'x4' Tile Sprinkler head to be located centered in either upper or lower area. At the Discretion of the sprinkler contractor.



GENERAL NOTES

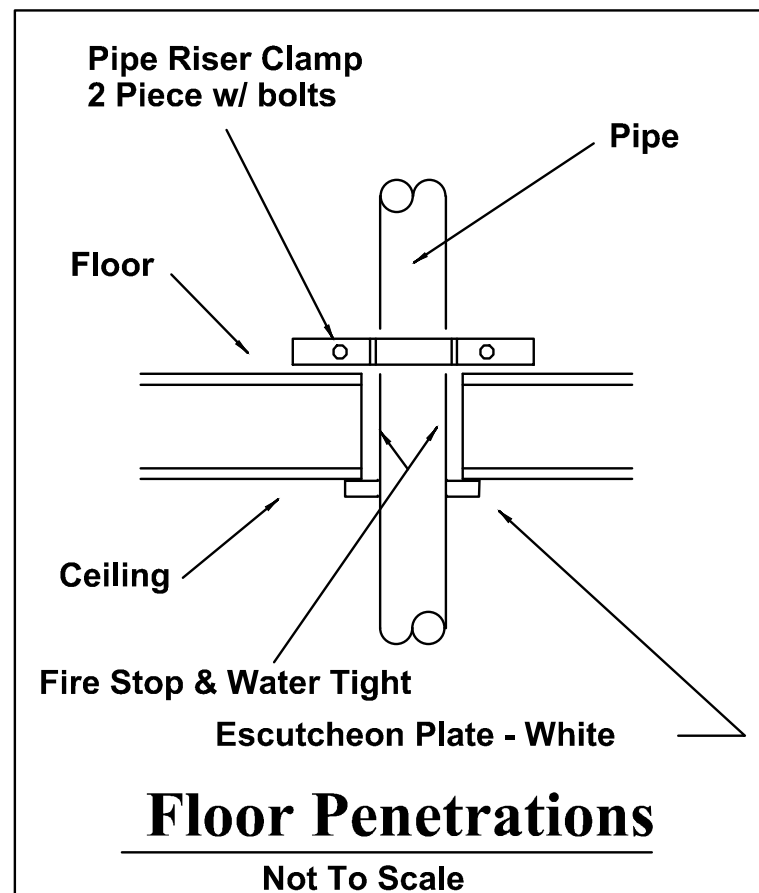
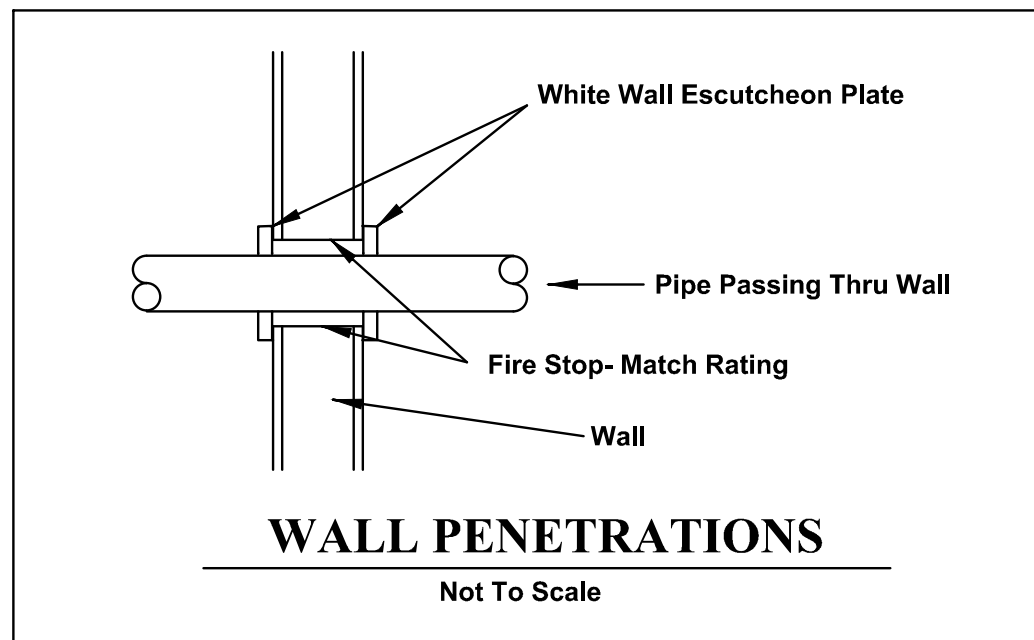
IBC Use Classification: New - Business
Designed In Accordance With: NC IBC - FM Global - ISO - UFC 3-600-01
Work Description: New Buildings
Installation based on NFPA-13: 2013 Edition
National Fire Code Compliance: NFPA #13
Type of System: Wet
All Pipe To Be Schedule 10 & 40 Black

General Notes:

The Sprinkler System is designed in accordance with UFC 3-600-01 and NFPA 13.
All components shall comply with the buy American Act.
All Fire Protection (Sprinkler) Electrical Supervisory Wiring by "Others".
All testing to be witnessed and signed by a Representative of the Owner.
All work is to be coordinated with other trades prior to fabrication or installation.
Whenever possible, attempts have been made with this layout to coordinate with other trades, based on Architect and Engineers drawings.
Hydraulic Calculations are based on the componets and piping as shown on FP drawings, any alterations will change Calculations and should be verified prior to change.
Refer to All Architectual, Mechanical, Electrical, Structual and Site Plans for additional information.
Sprinkler Contractor to submit Manufacture's Technical Data and specifications on all equipment used.
The Owner is responsible for providing adequate heat to protect all types of Fire Protection Systems from freezing and from mechanical damage.
The Owner is responsible for maintaining the proper operating condition of his/her system(s) and devices.
Sprinkler Contractor to include Inspection and Service for a period of one year from completion and acceptance of System.
Spare sprinkler heads shall be provided and stored in a cabinet on the premises as follows:
(1) 1 to 300 sprinklers ----- 6 heads
(2) 301 to 1000 sprinklers ----- 12 heads
(3) Over 1000 sprinklers ----- 24 heads
Head wrenches for each type of sprinkler used is to be stored in cabinet.

Specifications:

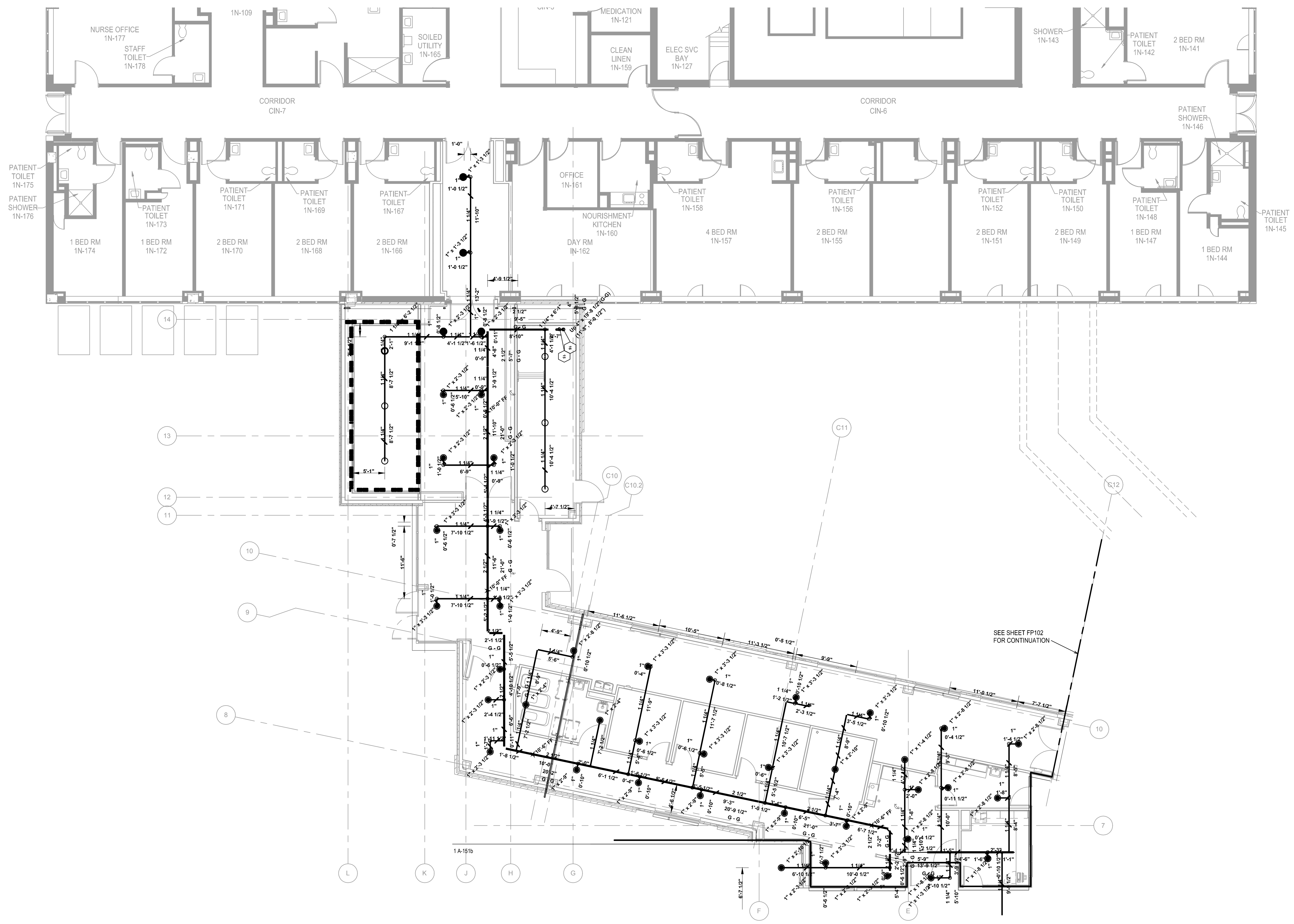
- 1.) Scope of work - Sprinkler contractor is to install in accordance with applicable Codes, Standards and Specifications a complete Wet Type Automatic Sprinkler System.
- 2.) To be performed in a workmanship like manner by persons trained in similar type installations and licensed, where required, by the AHJ.
- 3.) Hydraulic information is to be provided at the main Sprinkler Riser on a Hydraulic Data Plate.
- 4.) Earthquake bracing to be provided as per code and/or AHJ.
- 5.) All Inspector's Test Connections and Low Point Drains to be installed per Codes and Standards.
- 6.) All Hangers to be installed per NFPA and other applicable Codes, refer to details for additional information.
- 7.) Piping to be pitched:
Wet Pipe Systems - Level or slight pitch to drain.
Dry Pipe systems - Mains & X-mains = 1/4" in 10'
- 8.) Main piping - Sch. 40 black steel pipe - Cut, Grooved and Deburred.
- 9.) X-mains & Branchlines - Sch. 40 black steel pipe - Cut, Reamed and threaded.
- 10.) Pipe Joint Compound applied to male threads only.
- 11.) Others to provide: Painting, Electrical Wiring, Control Wiring, Fire Extinguishers, Underground and any other work not shown or specified.
- 12.) All system componets and materials to be U.L Listed and installed per NFPA and Manufacture's Listing.
- 13.) Provide spare head cabinet with a minimum of 2 of each type of sprinkler head used.
- 14.) This building to be properly protected against exposure.
- 15.) System to be hydrostatically tested @ 200psi for 2 hours - per N.F.P.A. #13.
- 16.) Low points of system shall have provisions for proper drainage.
- 17.) 24-hour supervision to be provided by others.
- 18.) Pipe sizing per: HYDRAULIC CALCULATIONS.
- 19.) Quick-response sprinklers shall not be permitted for use in extra hazard occupancies.
- 20.) Sprinklers in unconditioned spaces shall be intermediate temperature rated, 200 degree fahrenheit.



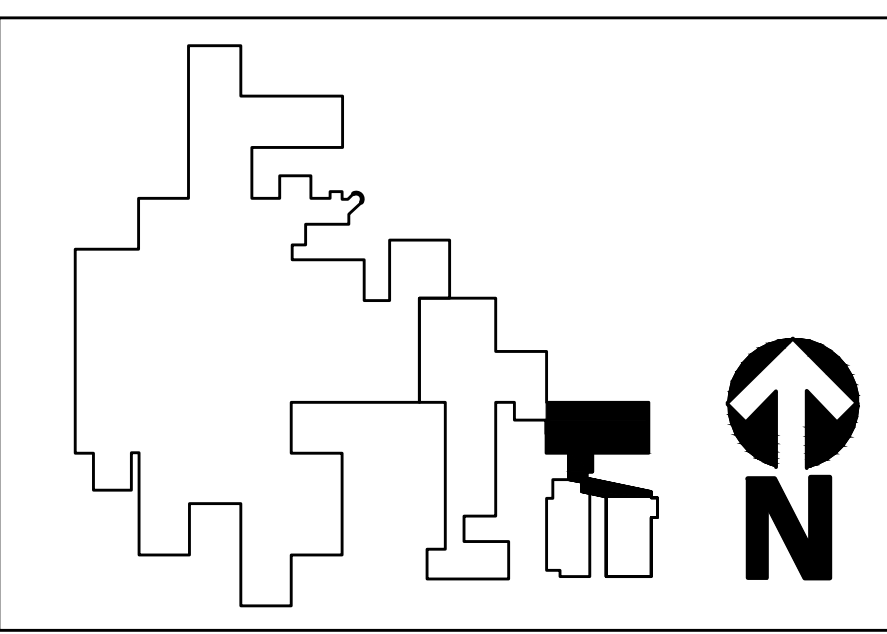
PLUMBING Sheet List		
Sheet Number	Sheet Name	Sheet Order
FP001	FIRE PROTECTION DETAILS	97
FP101	LEVEL 1 FIRE PROTECTION PLAN - KNUCKLE	98
FP102	LEVEL 1 FIRE PROTECTION PLAN - EAST HOUSE	99
FP201	INTERSTITIAL FIRE PROTECTION PLAN - KNUCKLE	100
FP202	INTERSTITIAL FIRE PROTECTION PLAN - EAST HOUSE	101

CONSULTANTS: 1451 Dolley Madison Blvd. Suite 220 McLean VA 22101-3812 703-827-9552 www.ehlert-bryan.com		STAMP VKA ENGINEERS ■ PLANNERS ■ AND SCAPE ARCHITECTS ■ SURVEYORS ■ D ■ LASER SCANNING VKA MARYLAND LLC 20251 CENTURY BOULEVARD, SUITE 400 ■ BERTHLEMAN, MARYLAND 20874 (301) 916-4104 ■ FAX (301) 916-2262 W W W . V I K A . C O M		ARCHITECTS/ENGINEERS: HUELAT DAVIS HEALING DESIGN DESIGN-AIRE ENGINEERING, INC. Virginia 635 S. Fairfax Street Alexandria, VA 22314 703.838.8414 www.healingdesign.com 220 North College Avenue Indianapolis, Indiana 46202 464.9080 www.daengineering.com		Drawing Title: FIRE PROTECTION DETAILS Approved: Project Director	Project Title: COMMUNITY LIVING CENTER EXPANSION AND RENOVATION Location: 1201 Broad Rock Blvd. Richmond, VA 23249 Date: APRIL 14, 2017	Project Number: VA 246 14R 0013 Building Number: Drawing Number: FP001 dwg.97 of 158	Office of Construction and Facilities Management Department of Veterans Affairs
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1 LEVEL 1 FIRE PROTECTION PLAN - KNUCKLE
1/8" = 1'-0"



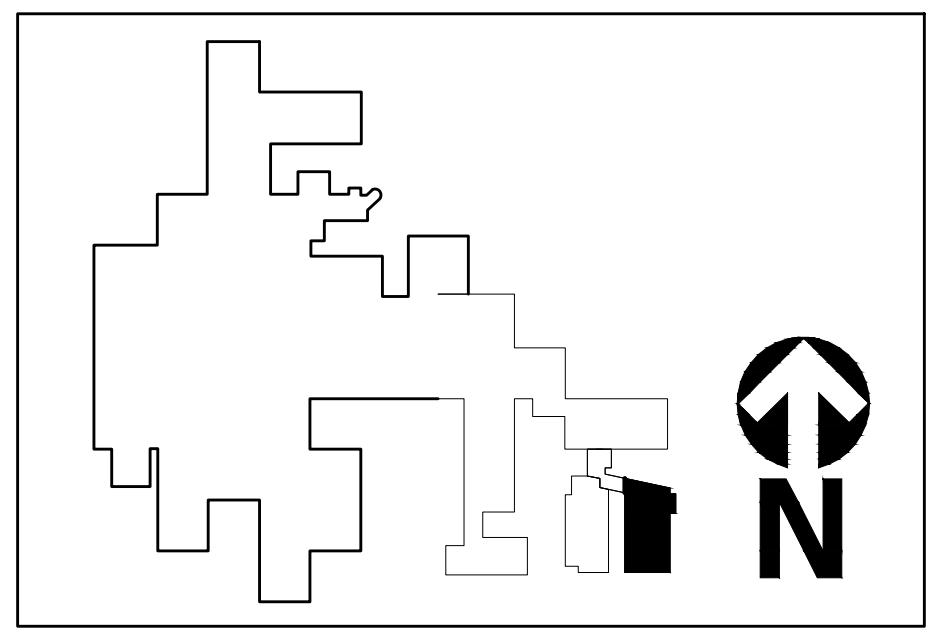
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1451 Dolley Madison Blvd. Suite 220 McLean VA 22101-3812 703-827-9552 www.ehlert-bryan.com		VKA ENGINEER ■ PLANNER ■ LANDSCAPE ARCHITECT ■ SURVEYOR ■ 3D LASER SCANNING VKA MARYLAND LLC 20251 CENTURY BOULEVARD, SUITE 400 ■ BERTMAN TOWN, MARYLAND 20874 (301) 916-4100 ■ FAX (301) 916-2262 W W W . V I K A . C O M		HUELAT DAVIS HEALING DESIGN Virginia 635 S. Fairfax Street Alexandria, VA 22314 703.838.8414 www.healingdesign.com DAE DESIGN-AIRE ENGINEERING, INC. 220 North College Avenue Indianapolis, Indiana 46202 464.9090 www.daengineering.com		LEVEL 1 FIRE PROTECTION PLAN - KNUCKLE		COMMUNITY LIVING CENTER EXPANSION AND RENOVATION		VA 246 14R 0013			
						Approved: Project Director		Location: 1201 Broad Rock Blvd. Richmond, VA 23249		Building Number:		FP101 DWG 98 OF 158	
								Date: APRIL 14, 2017		Checked: EWB			

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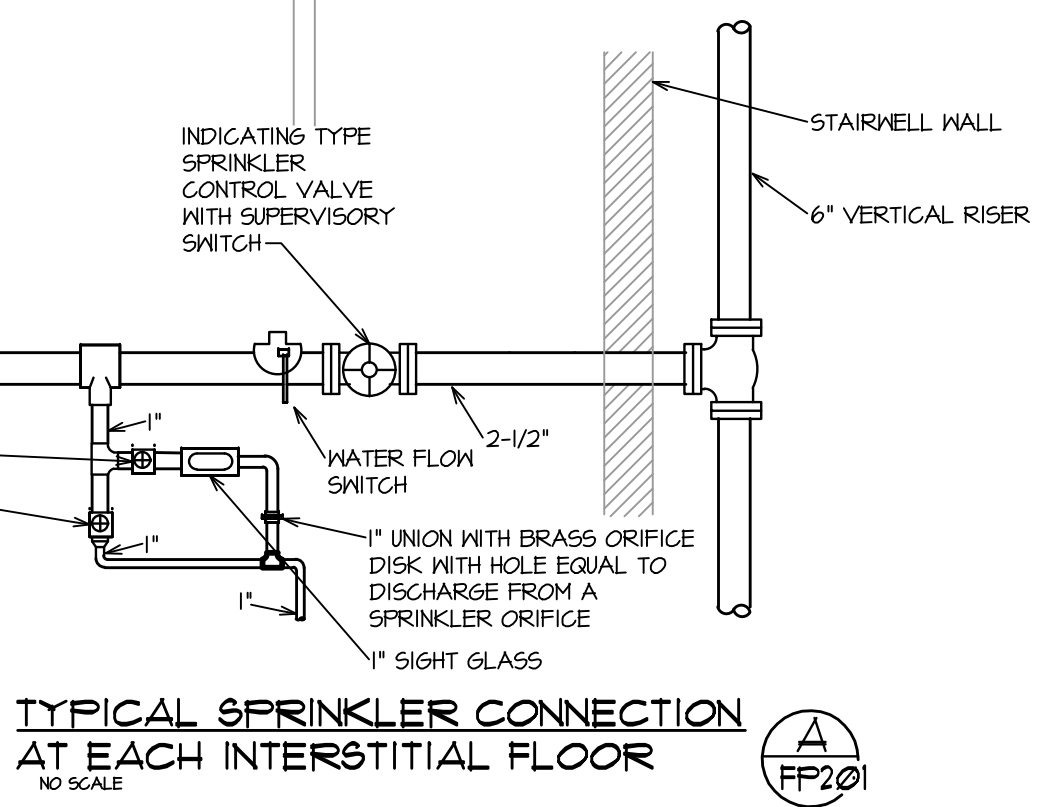
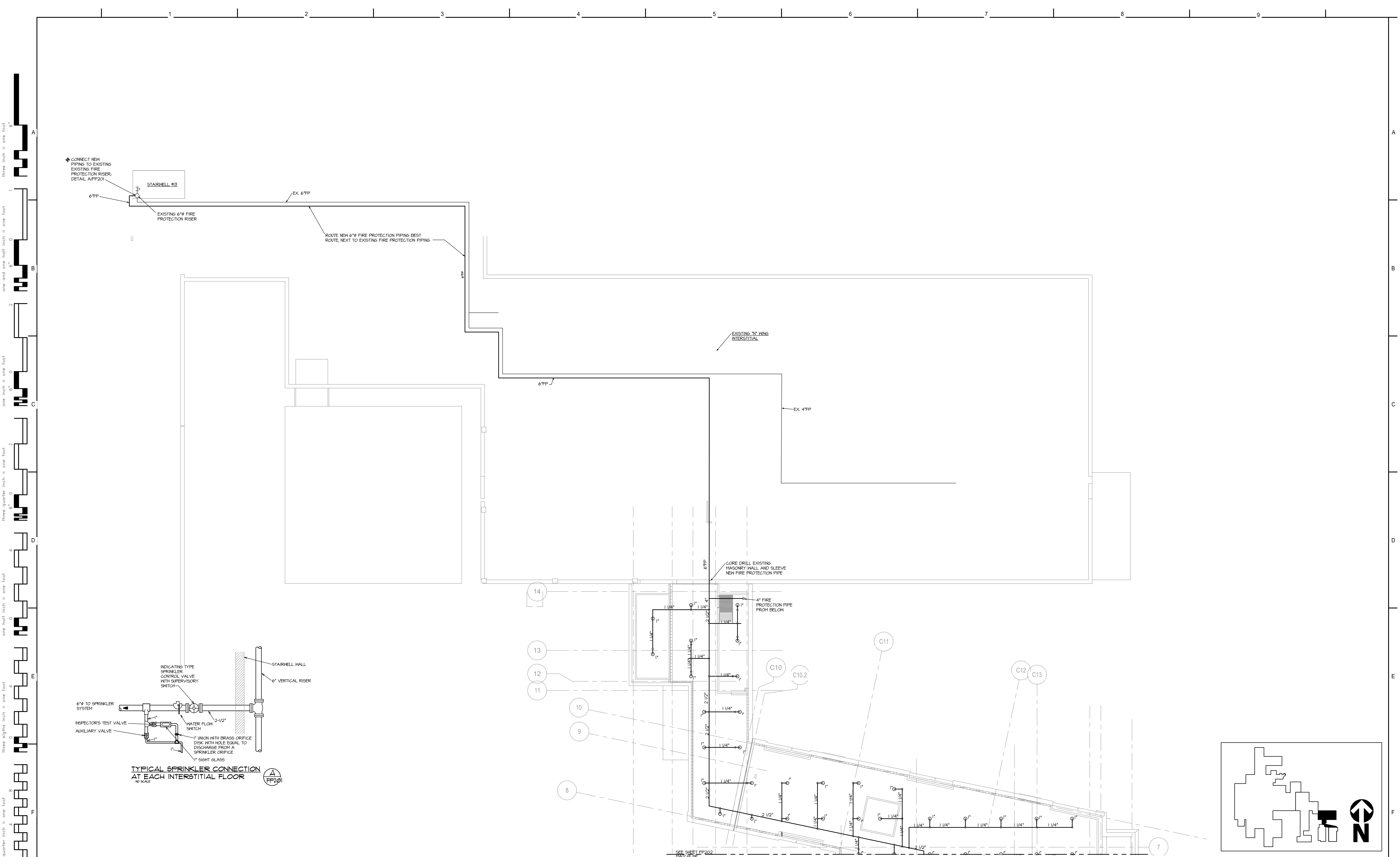
SEE SHEET FP101
FOR CONTINUATION

Hydraulic Information RICH-1	
OCCUPANCY CLASSIFICATION	Light Hazard
DENSITY	0.100gpm/sf for 1500.00sf (Actual 1532.78sf)
TOTAL HOSE STREAMS	100.00
TOTAL HEADS FLOWING	17
K-FACTOR	5.6
TOTAL WATER REQUIRED	374.91
TOTAL PRESSURE REQUIRED	35.882
BASE of RISER (gpm)	274.91
BASE of RISER (psi)	32.045
SAFETY MARGIN (psi)	+93.488 (236.0%)

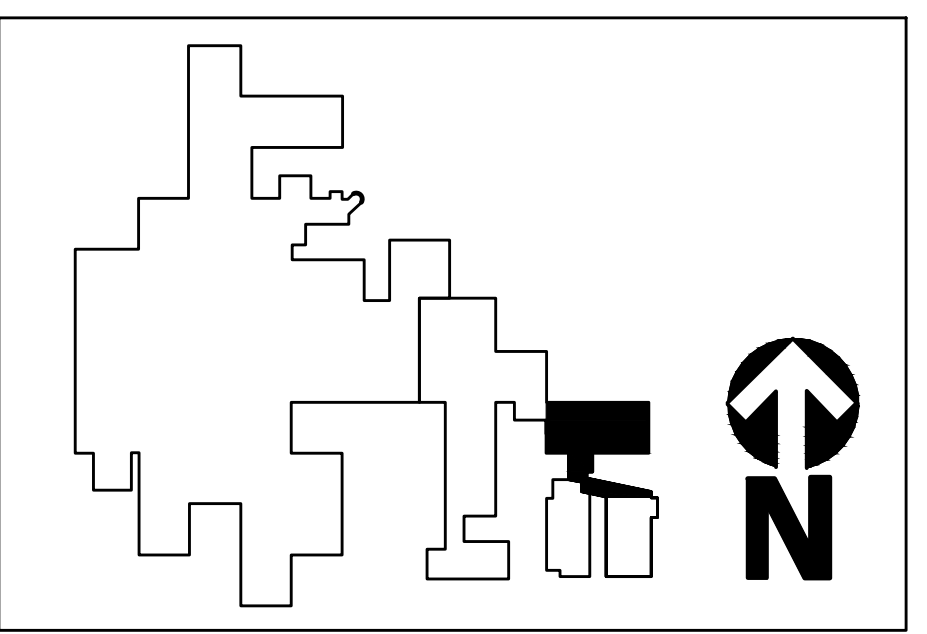
1 LEVEL 1 FIRE PROTECTION PLAN - EAST HOUSE
1/8" = 1'-0"



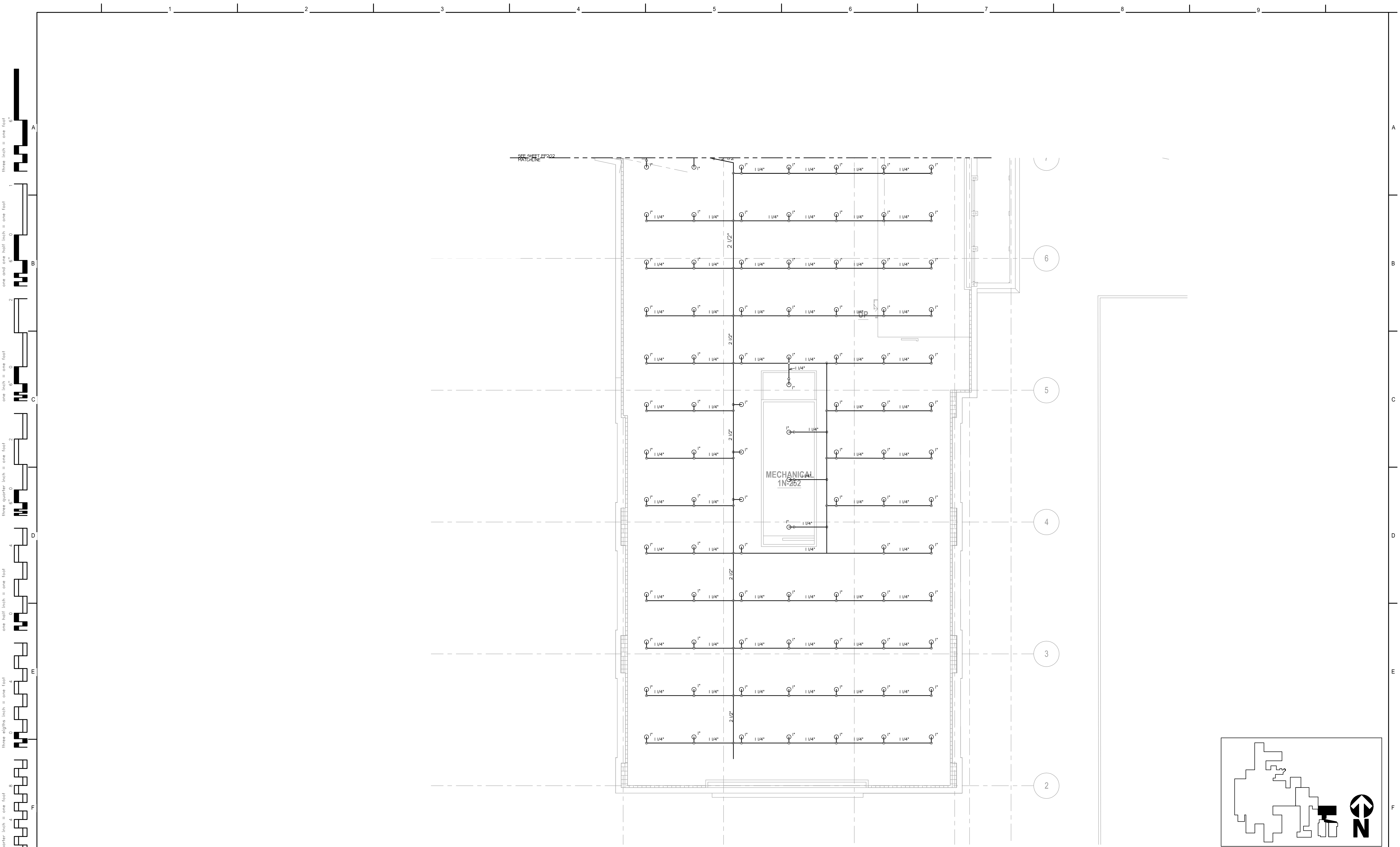
CONSULTANTS: 1451 Dolley Madison Blvd. Suite 220 McLean VA 22101-3812 703-827-9552 www.ehlert-bryan.com		STAMP 		ARCHITECTS/ENGINEERS: Virginia 635 S. Fairfax Street Alexandria, VA 22314 703.838.8414 www.healingdesign.com 220 North College Avenue Indianapolis, Indiana 46202 464.9090 www.daengineering.com		Drawing Title: LEVEL 1 FIRE PROTECTION PLAN - EAST HOUSE Approved: Project Director		Project Title: COMMUNITY LIVING CENTER EXPANSION AND RENOVATION Location: 1201 Broad Rock Blvd. Richmond, VA 23249 Date: APRIL 14, 2017		Project Number: VA 246 14R 0013 Building Number: Drawing Number: FP102 dwg:99 of 158		Office of Construction and Facilities Management Department of Veterans Affairs									
VA FORM 08-6231, Oct 1978		1		2		3		4		5		6		7		8		9		EB1450072	



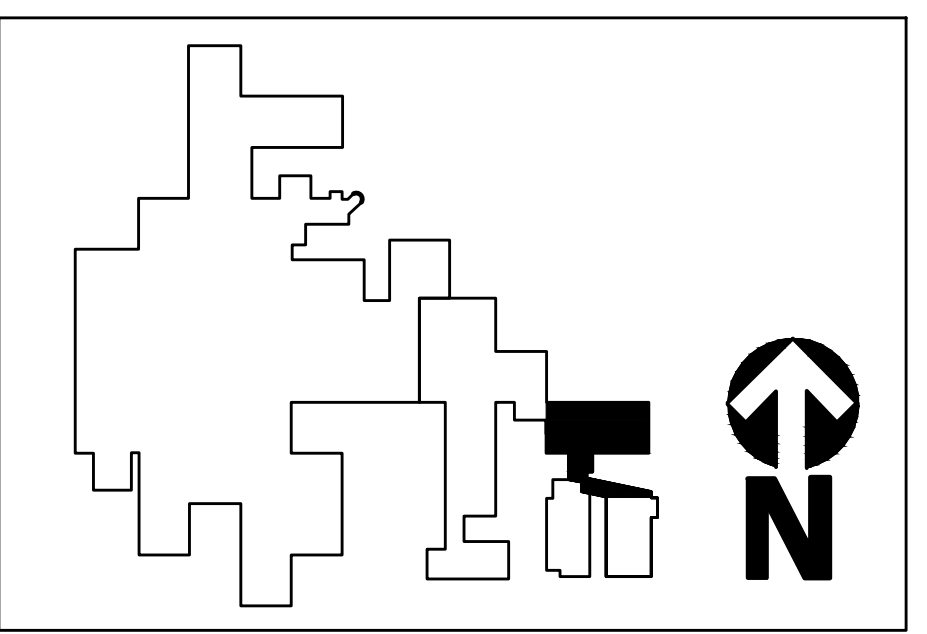
1 INTERSTITIAL FIRE PROTECTION - KNUCKLE
3/32" = 1'-0"



CONSULTANTS: 1451 Dolley Madison Blvd. Suite 220 McLean VA 22101-3812 703-827-9552 www.ehlert-bryan.com		 ENGINEERS ■ PLANNERS ■ LANDSCAPE ARCHITECTS ■ SURVEYORS ■ 3D LASER SCANNING VIFA MARYLAND, LLC 20251 CENTURY BOULEVARD, SUITE 400 ■ BERTHLETTOWN, MARYLAND 20874 (301) 916-4100 ■ FAX (301) 916-2262 WWW.VIFA.COM	STAMP Earl Wade Bouquiere	ARCHITECTS/ENGINEERS: HUELAT DAVIS HEALING DESIGN 220 North College Avenue Indianapolis, Indiana 46202 464.9090 ■ www.daengineering.com	Drawing Title: INTERSTITIAL FIRE PROTECTION - KNUCKLE Approved: Project Director	Project Title: COMMUNITY LIVING CENTER EXPANSION AND RENOVATION		Project Number: VA 246 14R 0013	Office of Construction and Facilities Management Department of Veterans Affairs
						Location: 1201 Broad Rock Blvd. Richmond, VA 23249	Building Number:	Drawn: DAE	
Date: APRIL 14, 2017		Drawn: DAE		Checked: EWB		Project Number: VA 246 14R 0013		Building Number:	Office of Construction and Facilities Management Department of Veterans Affairs
Drawn: DAE		Checked: EWB		Project Number: VA 246 14R 0013		Building Number:			



1 INTERSTITIAL FIRE PROTECTION - EAST HOUSE
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		EARL WADE BOWMAN Lic. No. 13191				Approved: Project Director		Location: 1201 Broad Rock Blvd. Richmond, VA 23249		Building Number:		FP202 DWG 101 OF 158	
								Date: APRIL 14, 2017		Checked: EWB			