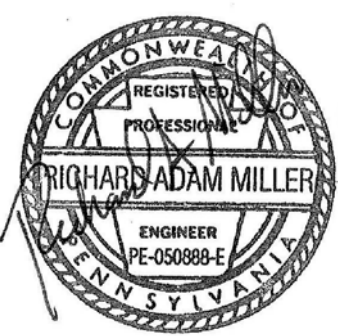


- GENERAL NOTES:**

1. BASIS OF DESIGN IS SENSORSWITCH BRAND nLIGHT SYSTEM. PART NUMBERS ARE TYPICAL EXAMPLES TO CONVEY FUNCTION. PROVIDE LATEST DEVICE VERSIONS AVAILABLE TO MATCH CONTROL FUNCTIONALITY OF THOSE SPECIFIED.
2. WIRING DIAGRAMS ON THIS SHEET ARE TYPICAL. PROVIDE QUANTITY OF POWER PACKS, POWER SUPPLIES, AND OTHER DEVICES AS REQUIRED FOR OPERATION OF SYSTEM AS SPECIFIED.
3. PROVIDE MULTI-BUTTON DIMMERS/SWITCHES WHERE PRACTICAL TO REDUCE TOTAL DEVICE QUANTITY.

[illegible]

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JAMES E. VAN ZANDT  
VETERANS ADMINISTRATION  
MEDICAL CENTER

Drawing Title	CONTROL WIRING DIAGRAM
---------------	------------------------

Approved: Associate Director for Operations:

Approved: Director, Medical Center:

Project Title	EXPAND OUT PATIENT WITH SECOND FLOOR ADDITION
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Building No:

Checked:	
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**Drawn:**

Date  
10/30/15

Project No.  
503-308

Drawing No.

E701

Dwg. 94 Of 112



three inches = one foot  
one and one half inch = one foot  
one inch = one foot  
three-quarters inch = one foot  
one-half inch = one foot  
one-quarter inch = one foot  
one-eighth inch = one foot

1 2 3 4 5 6 7 8

### Panel: EQP3

LOCATION: ELECTRICAL ROOM 204  
MOUNTING: Surface

MAINS... 225 A  
MAINS TYPE: MCB

VOLTAGE: 120/208 3Ø 4W  
AIC RATING: 22,000

CKT	Circuit Description	Trip	Poles	A	B	C	A	B	C	Poles	Trip	Circuit Description	CKT
1	LIGHTING - CORRIDORS	20 A	1	0.5			1.0			1	20 A	LIG - HIMS 239, 244, 245, 246	2
3	LIGHTING - FISCAL DEPT RM...	20 A	1		1.2			1.1		1	20 A	LIGHTING - HIMS RM 248, 242...	4
5	LIGHTING - HIMS RM 239	20 A	1			1.0			0.7	3	20 A	SYSTEM FURNITURE 203	6
7	SYSTEM FURNITURE 203	20 A	3	0.7			0.7			--	--	--	8
9	--	--	--		0.7			0.7		1	20 A	RECEPTACLES	10
11	--	--	--			0.7			0.9	1	20 A	RECEPTACLES	12
13	RECEPTACLE	20 A	1	0.2			1.4			1	20 A	RECEPTACLES	14
15	RECEPTACLES	20 A	1		1.4			1.1		1	20 A	RECEPTACLES	16
17	RECEPTACLES	20 A	1						1.8	1	20 A	RECEPTACLE - ...	18
19	RECEPTACLE - COPIER 232	20 A	1	1.4				1.1		1	20 A	RECEPTACLES	20
21	POWER POLE - COPIER 232	20 A	1		1.4				0.4	1	20 A	RECEPTACLES	22
23	SYSTEM FURNITURE 232	20 A	3			0.4			1.1	1	20 A	RECEPTACLES	24
25	--	--	--		0.4			0.9		1	20 A	RECEPTACLES	26
27	--	--	--							1	20 A	RECEPTACLES	28
29	SYSTEM FURNITURE 232	20 A	3			0.4			1.4	1	20 A	RECEPTACLE - COPIER	30
31	--	--	--		0.4			0.7		3	20 A	SYSTEM FURNITURE 232	32
33	--	--	--			0.4			0.7	--	--	--	34
35	SYSTEM FURNITURE 232	20 A	3			0.7			0.7	--	--	--	36
37	--	--	--			0.7			0.5	3	20 A	SYSTEM FURNITURE 232	38
39	--	--	--			0.7			0.5	--	--	--	40
41	SYSTEM FURNITURE 232	20 A	3			0.7			0.9	3	20 A	SYSTEM FURNITURE 232	42
43	--	--	--		0.7			0.9		3	20 A	SYSTEM FURNITURE 232	44
45	--	--	--			0.7		0.9		--	--	--	46
47	EF-21	20 A	1			0.7			0.9	--	--	--	48
49	EF-23	20 A	1	0.7			1.2			1	20 A	RECEPTACLE	50
51	CUH-1	20 A	1		1.2			1.2		1	20 A	HEAT TRACE (ROOF)	52
53	CU-1 ROOF & AC-1 ELECT. RM	15 A	2			1.2			0.2	1	20 A	RECEPTACLE - ROOF	54
55	--	--	--		1.2			0.7		3	20 A	SYSTEM FURNITURE 203	56
57	SYSTEM FURNITURE 232	20 A	3			0.5			0.7	--	--	--	58
59	--	--	--						0.7	--	--	--	60
61	--	--	--		0.5			1.2		2	25 A	CU-4 ROOF & AC-4 ELEV. MACH.	62
63	COIL CIRC. PUMP (FT-FPP-3)	20 A	1				1.2			--	--	--	64
65	POWER POLE - COPIER 232	20 A	1				1.4			1	20 A	POWER POLE - COPIER 203	66
67	RECEPTACLE - COPIER 232	20 A	1	1.4				1.2		1	20 A	AHU-13 LIGHTING CIRCUIT	68
69	SYSTEM FURNITURE 232	20 A	3			0.7			1.2	1	20 A	AHU-13 RECEPTACLE CIRCUIT	70
71	--	--	--			0.7			1.5	1	20 A	DOOR POWER SUPPLY	72
73	--	--	--		0.7					--	--	--	74
75	SPARE	20 A	1		0.0			0.0		1	20 A	SPARE	76
77	SPARE	--	--			0.0			0.0	--	--	--	78
79	SPACE	--	--		0.0			0.0		--	--	--	80
81	SPACE	--	--			0.0			0.0	--	--	--	82
83	SPACE	--	--				0.0			--	--	--	84

Connected Load  
A0: 21.3 KVA = 178.6 A  
B0: 20.7 KVA = 172.8 A  
C0: 21.9 KVA = 183.4 A

Notes:

### Panel: EQP4

LOCATION: ELECTRICAL 213  
MOUNTING: Surface

MAINS... 225 A  
MAINS TYPE: MCB

VOLTAGE: 120/208 3Ø 4W  
AIC RATING: 22,000

CKT	Circuit Description	Trip	Poles	A	B	C	A	B	C	Poles	Trip	Circuit Description	CKT	
1	LIGHTING - HBPC RM 213	20 A	1	1.20			0.98			1	20 A	LIGHTING - RMS 253,254,258	2	
3	LIGHTING - HAS RM 233	20 A	1		1.30			0.98		1	20 A	LIGHTING - VISN RM 220	4	
5	LIGHTING - CONF. RM A,B,C,D	20 A	1			0.99		0.34	1	20 A	LIGHTING - CORRIDOR	6		
7	SYSTEM FURNITURE 212	20 A	3	0.36			0.36			3	20 A	SYSTEM FURNITURE 212	8	
9	--	--	--	--	0.36			0.36	--	--	--	--	10	
11	--	--	--	--		0.36			0.36	--	--	--	12	
13	SYSTEM FURNITURE 212	20 A	3	0.54			0.72			3	20 A	SYSTEM FURNITURE 212	14	
15	--	--	--	--	0.54			0.72	--	--	--	--	16	
17	--	--	--	--		0.54			0.72	--	--	--	18	
19	SYSTEM FURNITURE 212	20 A	3	0.54			1.08			1	20 A	RECEPTACLES	20	
21	--	--	--	--	0.54			0.18	1	20 A	RECEPTACLE	22		
23	--	--	--	--		0.54			1.44	1	20 A	RECEPTACLES	24	
25	RECEPTACLES	20 A	1	0.72				0.90		1	20 A	RECEPTACLES	26	
27	RECEPTACLES - COPIER 216A	20 A	1		1.44			0.36		3	20 A	SYSTEM FURNITURE 216A	28	
29	RECEPTACLES - COPIER 212	20 A	1			1.44			0.36	--	--	--	30	
31	SYSTEM FURNITURE 216A	20 A	3	0.54			0.36			--	--	--	32	
33	--	--	--	--	0.54			0.54	3	20 A	SYSTEM FURNITURE 216A	34		
35	--	--	--	--		0.54			0.54	--	--	--	36	
37	SYSTEM FURNITURE 216A	20 A	3	0.54			0.54			--	--	--	38	
39	--	--	--	--	0.54				1.08	1	20 A	RECEPTACLES	40	
41	--	--	--	--		0.54			1.44	1	20 A	RECEPTACLES	42	
43	RECEPTACLES	20 A	1	1.08			1.44			1	20 A	RECEPTACLES	44	
45	RECEPTACLES	20 A	1		0.72			2.40		1	30 A	RECEPTACLES	46	
47	RECEPTACLES	20 A	1		0.72			0.54	1	20 A	RECEPTACLES	48		
49	RECEPTACLES	20 A	1	0.36			0.90			1	20 A	RECEPTACLES	50	
51	RECEPTACLES	20 A	1		0.36			0.72	3	20 A	SYSTEM FURNITURE 226	52		
53	RECEPTACLES	20 A	1			1.44			0.72	--	--	--	54	
55	RECEPTACLES	20 A	1	1.44			0.72			--	--	--	56	
57	RECEPTACLES	20 A	1		1.44			0.72	1	20 A	RECEPTACLES	58		
59	RECEPTACLES	20 A	1			0.72		0.72	3	20 A	SYSTEM FURNITURE 226	60		
61	SYSTEM FURNITURE 226	20 A	3	0.72			0.72			--	--	--	62	
63	--	--	--	--		0.72			0.72	--	--	--	64	
65	--	--	--	--			0.72		1.20	1	20 A	CUH-2	66	
67	SYSTEM FURNITURE 226	20 A	3	0.36			1.44			1	20 A	RECEPTACLE - COPIER 228	68	
69	--	--	--	--	0.36			1.44		1	20 A	RECEPTACLE - COPIER 228	70	
71	--	--	--	--		0.36			0.70	1	20 A	COIL CIRC. PUMP (FT-FPP-4)	72	
73	RECEPTACLES	20 A	1	0.18			0.70				20 A	EF-22	74	
75	RECEPTACLES - FLOOR 243-245	20 A	1		0.54			1.20		1	20 A	AHU-14 LIGHTING CIRCUIT	76	
77	RECEPTACLES - TV 243-245	20 A	1			0.54			1.20	1	20 A	AHU-14 RECEPTACLE CIRCUIT	78	
79	PANEL EQP4A	100 A	3	3.68			0.35			1	20 A	RECEPTACLE CONF. A 210	80	
81	--	--	--	--		3.36			0.00	1	0 A	SPARE	82	
83	--	--	--	--			3.91			0.00	1	0 A	SPARE	84

Connected Load  
A0: 23.46 KVA = 195.52 A  
B0: 24.2 KVA = 201.72 A  
C0: 23.6 KVA = 197.27 A

Notes:

### Panel: EQP4A

LOCATION: ELECTRICAL 213  
MOUNTING: Surface

MAINS RATING: 225 A  
MAINS TYPE: MCB

VOLTAGE: 120/208 3Ø 4W  
AIC RATING: 22,000

CKT	Circuit Description	Trip	Poles	A	B	C	A	B	C	Poles	Trip	Circuit Description	CKT
1	RECEPTACLE - REFRIGERATOR	20 A	1	0.80			0.18			1	20 A	RECEPTACLE - BREAK ROOM	2
3	RECEPTACLE - REFRIGERATOR	20 A	1		0.80			0.80		1	20 A	RECEPTACLE - MICROWAVE	4
5	RECEPTACLE - BREAK ROOM	20 A	1			0.18			0.90	1	20 A	RECEPTACLES - BREAK ROOM	6
7	SINK DISPOSAL	20 A	1	1.18			0.18			1	20 A	RECEPTACLE - ROOF	8
9	RECEPTACLE - MICROWAVE	20 A	1		0.18			1.66		2	25 A	CU-3 ROOF & AC-3 DATA RM	10
11	CU-2 ROOF & AC-2 ELECT. RM	15 A	2			1.25			1.66	--	--	--	12
13	--	--	--		1.25			0.18		1	20 A	RECEPTACLE - BREAK ROOM TV	14
15	SPARE	20 A	1		0.00			0.00		1	20 A	SPARE	16
17	SPARE	20 A	1			0.00			0.00	1	20 A	SPARE	18
19	SPARE	20 A	1	0.00					0.00	1	20 A	SPARE	20
21	SPARE	20 A	1		0.00				0.00	1	20 A	SPARE	22
23	SPACE	--	--			0.00			0.00	--	--	SPACE	24
25	SPACE	--	--		0.00				0.00	--	--	SPACE	26
27	SPACE	--	--			0.00			0.00	--	--	SPACE	28
29	SPACE	--	--				0.00			--	--	SPACE	30
31	SPACE	--	--			0.00			0.00	--	--	SPACE	32
33	SPACE	--	--				0.00			--	--	SPACE	34
35	SPACE	--	--					0.00		--	--	SPACE	36
37	SPACE	--	--			0.00			0.00	--	--	SPACE	38
39	SPACE	--	--				0.00			--	--	SPACE	40
41	SPACE	--	--					0.00		--	--	SPACE	42

Connected Load  
A0: 3.76 KVA = 31.78 A  
B0: 3.4 KVA = 28.70 A  
C0: 4.0 KVA = 33.68 A

Notes:

### Panel: EHP

LOCATION: MECHANICAL ROOM B002-1  
MOUNTING: Surface

MAINS RATING: 800 A  
MAINS TYPE: MCB

VOLTAGE: 480/277 3Ø 4W  
AIC RATING: 35,000

CKT	Circuit Description	Trip	Poles	A	B	C	A	B	C	Poles	Trip	Circuit Description	CKT
3	ACC-1	250 A	3	42.7			15.7			3	200 A	PANEL MEPA	2
5	--	--	--		42.7			16.2		--	--	--	4
7	PANEL MEPA	200 A	3	17.2			18.0			3	150 A	ELEVATOR #1	8
9	--	--	--		17.2			18.0		--	--	--	10
11	--	--	--			15.7			18.0	--	--	--	12
13	ELEVATOR #2	150 A	3	18.0			0.0			--	--	SPACE	14
15	--	--	--			18.0		0.0		--	--	SPACE	16
17	--	--	--				18.0		0.0	--	--	SPACE	18
19	SPACE	--	--	0.0				0.0		--	--	SPACE	20
21	SPACE	--	--		0.0				0.0	--	--	SPACE	22
23	SPACE	--	--			0.0			0.0	--	--	SPACE	24
25	SPACE	--	--	0.0			0.0			--	--	SPACE	26
27	SPACE	--	--		0.0			0.0		--	--	SPACE	28
29	SPACE	--	--			0.0			0.0	--	--	SPACE	30
31	SPACE	--	--	0.0			0.0			--	--	SPACE	32
33	SPACE	--	--		0.0			0.0		--	--	SPACE	34
35	SPACE	--	--			0.0			0.0	--	--	SPACE	36
37	SPACE	--	--	0.0			0.0			--	--	SPACE	38
39	SPACE	--	--		0.0			0.0		--	--	SPACE	40
41	SPACE	--	--			0.0			0.0	--	--	SPACE	42



**FIRE ALARM RISER GENERAL NOTES:**

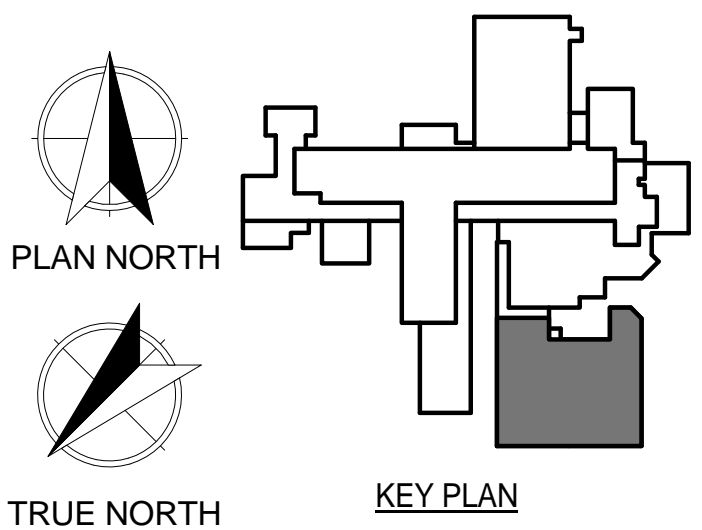
1. RISER IS INTENDED TO SHOW GENERAL SYSTEM ARCHITECTURE AS IT RELATES TO NEW SECOND FLOOR ADDITION. SOME DEVICE SYMBOLS SHOWN ON THIS DIAGRAM REPRESENT MULTIPLE TYPICAL DEVICES, APPLIANCES, AND CIRCUITS. CONTRACTOR IS RESPONSIBLE FOR VERIFYING QUANTITY AND LOCATION OF ALL NEW FIRE ALARM DEVICES.
2. T-TAP INTO SLC LOOP 1 TO MAINTAIN 2ND FLOOR ADDITION DEVICES.
3. PROVIDE NEW AUDIO AND NAC PANELS. COORDINATE 120 V CONNECTION WITH ELECTRICAL.



FIRE ALARM OPERATIONAL MATRIX	INITIATE GENERAL ALARM CONDITION AND DISPLAY CUSTOM DEVICE ADDRESS ON NOTIFIER 300T FACP	INITIATE ALL-AND/IDR AND VISUAL FIRE ALARM NOTIFICATION DEVICES TO ALL ZONES (RESPECTIVE BUILDING ZONES)	TRANSMIT GENERAL ALARM STATUS WITH DEVICE ADDRESS TO THE CAMPUS FIRE DEPARTMENT	RELEASE CROSS-CORRIDOR SMOKE BARRIER DOORS ON HOLD-OPEN DEVICE	INITIATE SUPERVISORY SIGNAL STATUS TO THE CAMPUS FIRE ADDRESS ON NOTIFIER 300T FACP	TRANSMIT SUPERVISORY SIGNAL STATUS TO THE CAMPUS FIRE DEPARTMENT	SHUTDOWN AIR HANDLER SERVED BY THE DETECTOR	INITIATE TROUBLE SIGNAL AND DISPLAY CUSTOM DEVICE ADDRESS ON ENERTRONIC NOTIFIER TAP AND ANNUNCIATORS	TRANSMIT TROUBLE SIGNAL STATUS TO CAMPUS FIRE DEPARTMENT	INITIATE ELEVATOR BECALL TO FIRST FLOOR (PRIMARY)	INITIATE ELEVATOR BECALL TO SECOND FLOOR (ALTERNATE)	INITIATE ELEVATOR POWER SHUNT TRIP BREAKER	CAUSE FIRE CHUTTERS SERVICE VISUAL SIGNAL TO ILLUMINATE INTERMITTENTLY (FLASH IN ELEVATOR CAB)	CONSTANTLY ILLUMINATE FIREFIGHTER'S SERVICE SIGNALS IN ELEVATOR CAB
MANUAL PULL STATION	X	X	X											
SPRINKLER SYSTEM WATER FLOW	X	X	X											
SYSTEM SMOKE DETECTOR	X	X	X											
SMOKE BARRIER CROSS-CORRIDOR SMOKE DETECTOR	X	X	X	X										
ELEVATOR LOBBY SMOKE DETECTOR - FIRST FLOOR	X	X	X							X				X
ELEVATOR LOBBY SMOKE DETECTOR - SECOND FLOOR	X	X	X						X					X
ELEVATOR MACHINE ROOM SMOKE DETECTOR	X	X	X						X			X		
ELEVATOR MACHINE ROOM HEAT DETECTOR	X	X	X								X			
LOSS OF OPERATING VOLTAGE TO CONTROL CIRCUITS TO SHUTDOWN ELEVATOR POWER					X	X								
DUCT SMOKE DETECTION FOR AIR HANDLING UNIT					X	X	X							
VALVE SUPERVISORY SWITCH					X	X								
OPEN CIRCUIT GROUND FAULT, OR SHORT IN FIRE ALARM SYSTEM SLC OR NAC								X	X					
NOTE: OPERATIONAL MATRIX INCLUDES EVENTS FOR NEW FIRE ALARM DEVICES ASSOCIATED WITH 2ND FLOOR ADDITION PROJECT ONLY.														

**NOTE: OPERATIONAL MATRIX INCLUDES EVENTS FOR NEW FIRE ALARM DEVICES ASSOCIATED WITH 2ND FLOOR ADDITION PROJECT ONLY**

1 FIRE ALARM RISER  
FA001 NTS



DELLC  
JOB No. D012-01

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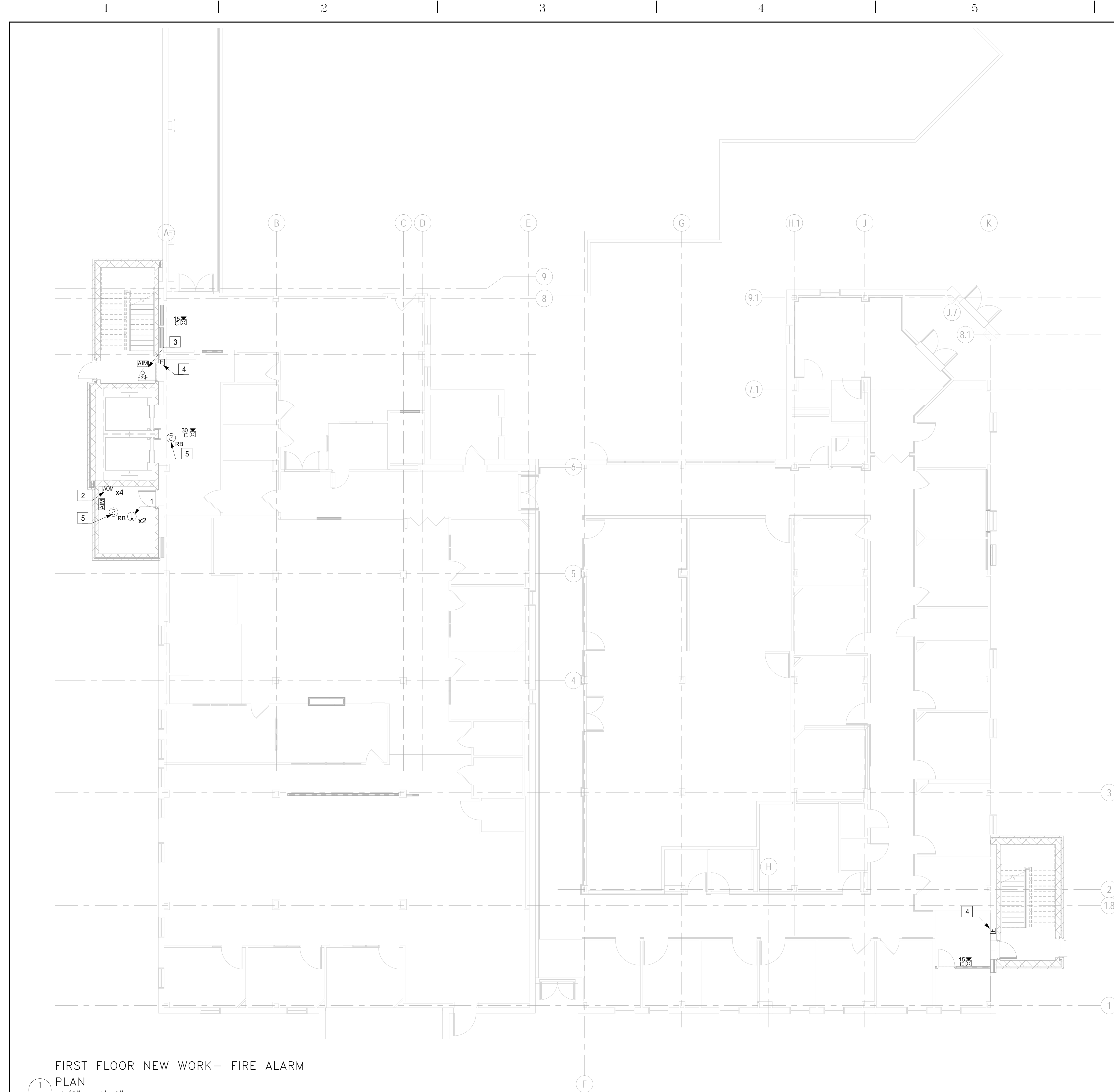
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DEPARTMENT OF  
VETERANS AFFAIRS

three inches = one foot  
one and one half inch = one foot  
one inch = one foot  
three quarters inch = one foot  
one half inch = one foot  
three eighths inch = one foot  
one quarter inch = one foot  
one eighth inch = one foot



**FIRE ALARM GENERAL NOTES:**

1. EXTEND FIRE ALARM SYSTEM AS INDICATED.
2. MODIFY EXISTING FIRST FLOOR SLC AND NAC TO ADD NEW DEVICES SHOWN ON THIS DRAWING.
3. COORDINATE PHASING WORK WITH ARCHITECT.

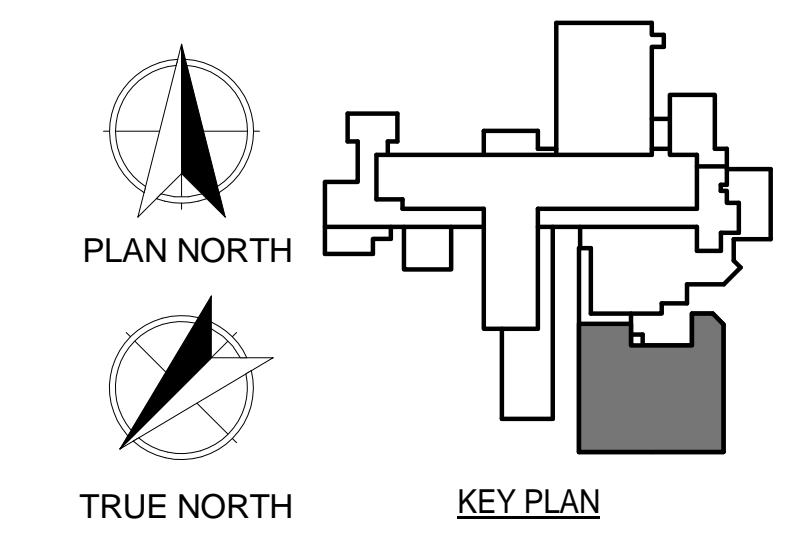
**FIRE ALARM SHEET NOTES:**

1. PROVIDE 135°F RATE COMPENSATION HEAT DETECTORS WITHIN TWO FEET OF EACH SPRINKLER IN THE ELEVATOR MACHINE ROOM.
2. ADDRESSABLE MODULES FOR ELEVATOR INTERFACES.
3. PROVIDE ADDRESSABLE MODULES AT SUPERVISORY SWITCH FOR NEW SPRINKLER RISER CONTROL VALVE IN STAIR 1.
4. PROVIDE MANUAL PULL STATION WITHIN 5 FEET OF NEW FIRST FLOOR STAIR EXIT DOORS.
5. SMOKE DETECTOR FOR ELEVATOR RECALL.

FIRST FLOOR NEW WORK- FIRE ALARM  
PLAN  
1/8" = 1'-0"



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DOCUMENTS



DELLC  
JOB No. D012-01

Revisions:	Date

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**JAMES E. VAN ZANDT**  
VETERANS ADMINISTRATION  
MEDICAL CENTER

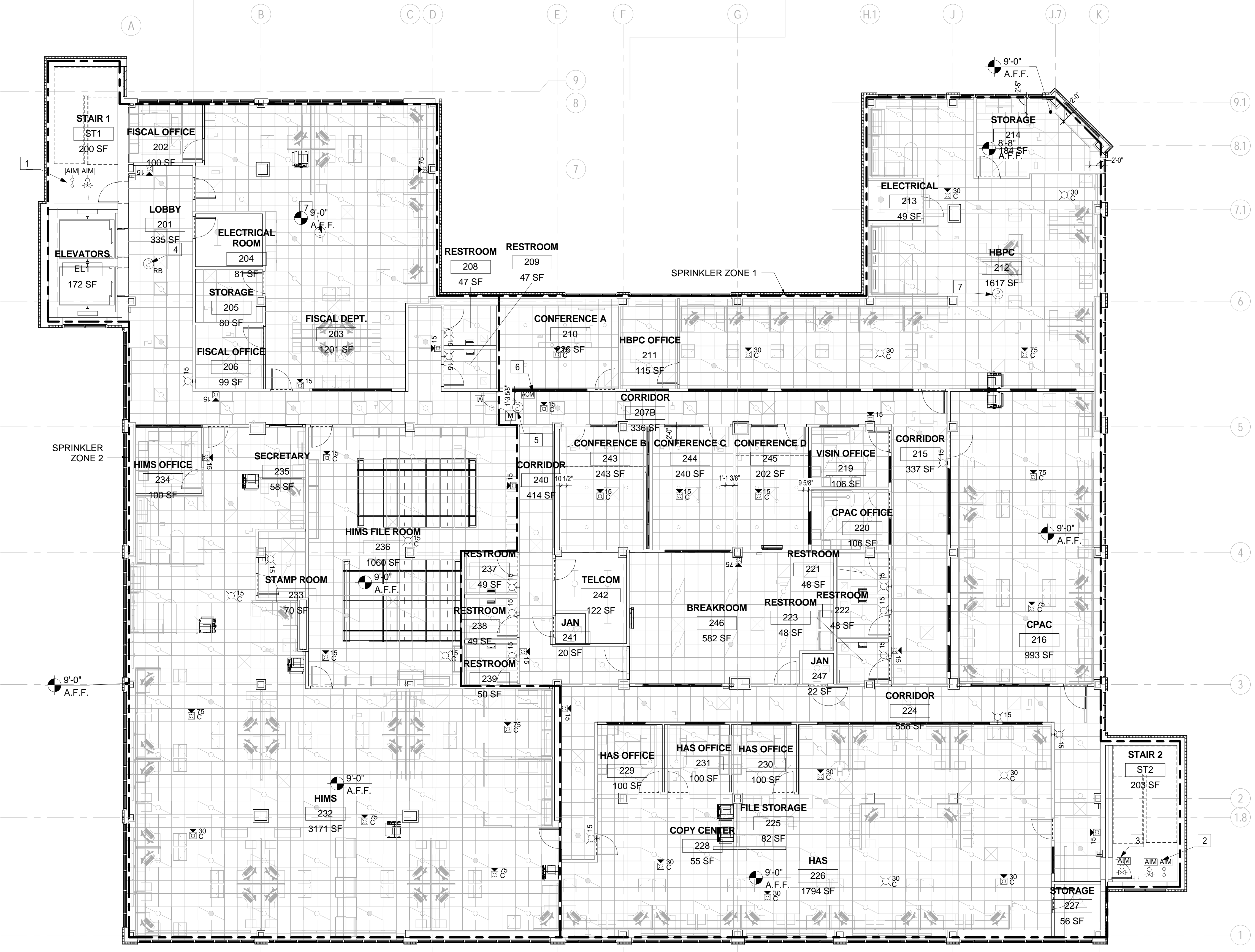
Drawing Title  
**FIRST FLOOR - FIRE ALARM PLAN**  
Approved: Associate Director for Operations:  
Approved: Director, Medical Center:

Project Title  
**EXPAND OUT PATIENT WITH SECOND FLOOR ADDITION**  
Building No.:  
Checked: MJA  
Drawn: PHZ  
Location:

Date  
**10/30/15**  
Project No.  
**503-306**  
Drawing No.  
**FA101**  
Dwg. Of



three inches = one foot  
one and one half inch = one foot  
one inch = one foot  
three-quarters inch = one foot  
one-half inch = one foot  
one-quarter inch = one foot  
three-eighths inch = one foot  
one-eighth inch = one foot



**FIRE ALARM GENERAL NOTES:**

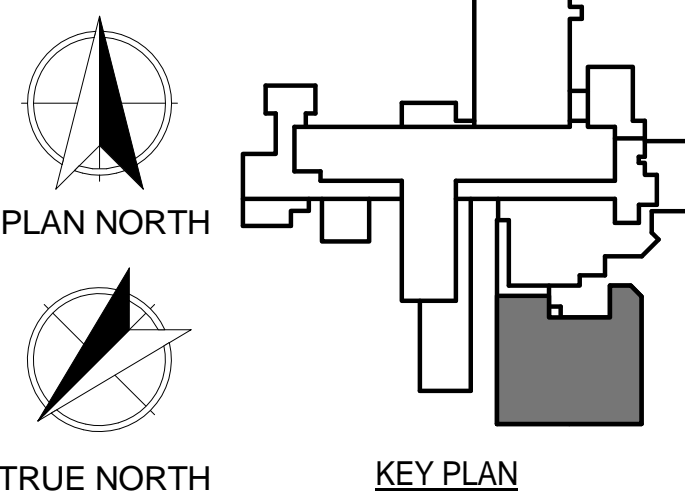
1. EXTEND FIRE ALARM SYSTEM TO THE NEW SECOND FLOOR.
2. EXTEND NEW SLC AND NAC AS NECESSARY TO ACCOMMODATE NEW WORK. SEE SHEET FA001 FOR MORE DETAILS.
3. A NEW AUDIO PANEL AND NEW NAC PANEL WILL BE ADDED TO ACCOMMODATE THE NEW DEVICES IN EXISTING AREAS OF THE HOSPITAL. SEE SHEET FA001 FOR MORE DETAILS.

**FIRE ALARM SHEET NOTES:**

1. PROVIDE ADDRESSABLE MODULES AT WATERFLOW SWITCH AND TAMPER SWITCH FOR NEW SPRINKLER ZONE 2-2.
2. PROVIDE ADDRESSABLE MODULES AT WATERFLOW INDICATOR AND TAMPER SWITCH FOR NEW SPRINKLER ZONE 2-1.
3. PROVIDE ADDRESSABLE MODULES AT SUPERVISORY SWITCH FOR NEW STANDPIPE RISER CONTROL VALVE IN STAIR 2.
4. PROVIDE SMOKE DETECTOR FOR ELEVATOR RECALL.
5. PROVIDE SMOKE DETECTOR WITHIN 5' OF SMOKE BARRIER CROSS CORRIDOR DOOR.
6. RELEASE FOR SMOKE BARRIER DOORS ON HOLD-OPEN DEVICES. POWER FROM FIRE ALARM SYSTEM.
7. DUCT DETECTORS FOR 2 AHU ON ROOF. INSTALL ON SUPPLY SIDE ONLY.

**SECOND FLOOR NEW WORK - FIRE ALARM**

1  
FA102  
1/8" = 1'-0"

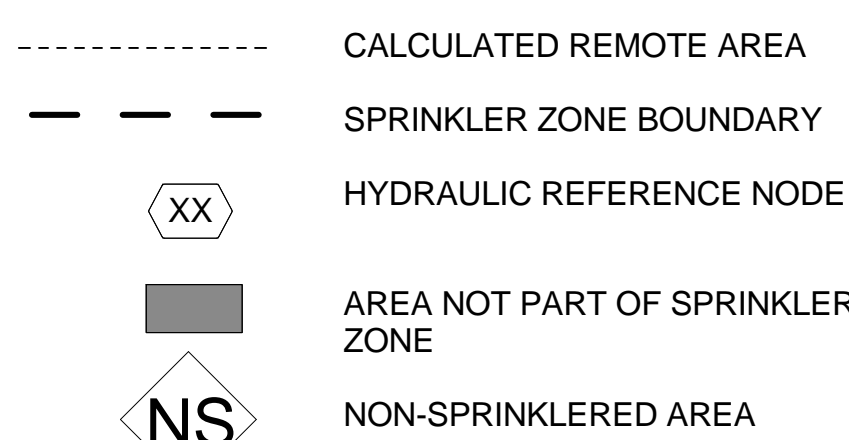


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DOCUMENTS

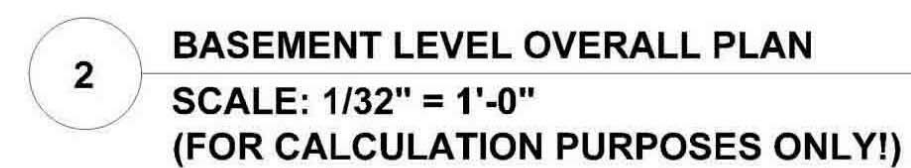
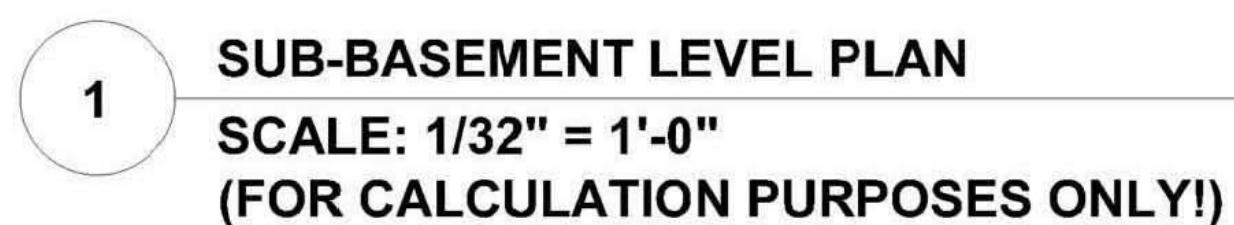
DELLC  
JOB No. D012-01

<b>Consultants:</b> <b>BURDETTE KOEHLER MURPHY &amp; ASSOCIATES, INC.</b> MECHANICAL / ELECTRICAL CONSULTING ENGINEERING 1416 CLARKVIEW ROAD BALTIMORE, MARYLAND 21209 410.323.0600 - FAX 410.317.2543 <b>RICKERT ENGINEERING, INC.</b> STRUCTURAL ENGINEERING 8813 WALTHAM WOODS ROAD, SUITE 500 BALTIMORE, MARYLAND 21234 410.663.5110 - FAX 410.663.5114		<b>BUILDING COST CONSULTANTS</b> COST ESTIMATING 12917 - 30TH AVENUE PLATTSMOUTH, NEBRASKA 68048 402.298.8260 - FAX 402.298.8290 <b>KOFFEL ASSOCIATES, INC.</b> FIRE PROTECTION ENGINEERING 8815 CENTRE PARK DR., SUITE 200 COLUMBIA, MARYLAND 21045 410.750.2246 - FAX 410.750.2588		<b>WHITMAN, REQUADT &amp; ASSOCIATES, LLP</b> CIVIL ENGINEERING 1000 LANCASTER STREET BALTIMORE, MD 21231 410.235.3450 - FAX: 410.243.5716 <b>ROBERT L. SEYMOUR ASSOCIATES</b> AUTOMATIC TRANSPORT ENGINEERING 182 THOMAS JOHNSON DR. SUITE 200 FREDERICK, MARYLAND 21702 301.662.8112 - FAX 301.662.8117		<b>DERBY de enterprises</b> ARCHITECTURE PLANNING ENGINEERING 2215 Conowingo Rd, Suite 100 Bel Air, Maryland 21015-1436 410.803.0009 fax 410.836.6611		<b>JAMES E. VAN ZANDT</b> VETERANS ADMINISTRATION MEDICAL CENTER		<b>Drawing Title</b> <b>SECOND FLOOR - FIRE ALARM PLAN</b> <b>Approved:</b> Associate Director for Operations: <b>Approved:</b> Director, Medical Center:		<b>Project Title</b> <b>EXPAND OUT PATIENT WITH SECOND FLOOR ADDITION</b> <b>Building No.:</b> <b>Checked:</b> MJA <b>Drawn:</b> PHZ <b>Location:</b>		<b>Date</b> 10/30/15 <b>Project No.</b> 503-306 <b>Drawing No.</b> <b>FA102</b> <b>Dwg.</b> Of		<b>DEPARTMENT OF VETERANS AFFAIRS</b>	
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ABC	AUTOMATIC BELL DRIP
ADT	ACOUSTICAL CEILING TILE
AF	ABOVE FINISHED FLOOR
AS	AUTOMATIC SPRINKLER
ATR	ALL THREAD ROD
BFP	BACKFLOW PREVENTER
BTB	BOTTOM OF BEAM
CB	CONCRETE BEAM
COL	COLUMN
CONC	CONCRETE
DI	DUCTILE IRON
DN	DOWN
DP	DRY PENDENT (SPRINKLER)
DS	DRY SIDEWALL (SPRINKLER)
EXT	EXTENDED COVERAGE (SPRINKLER)
EXP	EXPOSED (NO CEILING)
FD	FLOOR DRAIN
FDC	FIRE DEPARTMENT CONNECTION
FHV	FIRE HOSE VALVE
FS	FLOW SWITCH
GALV	GALVANIZED
GYP	Gypsum WALL BOARD (SHEETROCK)
H	HIGH TEMPERATURE (SPRINKLER)
ITC	INSPECTORS TEST CONNECTION
MAX	MAXIMUM
MIN	MINIMUM
MT	METAL TILE
NC	NOT IN CONTRACT
NIS	NON-SPRINKLERED
NOT	NOT TO SCALE
OSJ	OPEN STEEL JOIST
PL	PLASTER (CEILING)
POC	POINT OF CONNECTION
PRV	PRESSURE RELIEF VALVE
QR	QUICK RESPONSE (SPRINKLER)
SCH	SCHEDULE
SPL	HIDDEN SPLINE (CEILING)
STL	STEEL
Typ	TYPICAL
TS	TAMPER SWITCH
UNO	UNLESS NOTED OTHERWISE

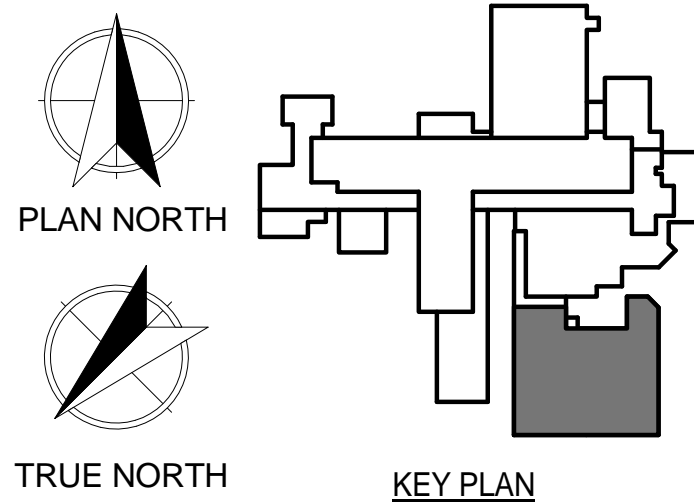


1. PROVIDE WET-PIPE SPRINKLER PROTECTION THROUGHOUT THE NEW SECOND FLOOR ADDITION ABOVE THE OUTPATIENT WING OF BUILDING 1. PROVIDE ALL NECESSARY MATERIALS AND LABOR TO FURNISH AND INSTALL THE SYSTEM AS DESCRIBED IN THE CONTRACT DOCUMENTS.
2. ALL REFERENCE TO THE AUTHORITY HAVING JURISDICTION (AHJ) SHALL MEAN THE DEPARTMENT OF VETERAN AFFAIRS (VA) REGIONAL FIRE PROTECTION ENGINEER. ALL REFERENCE TO THE ENGINEER SHALL MEAN KOFFEL ASSOCIATES, INC. ALL REFERENCE TO THE OWNER SHALL MEAN THE VA.
3. SPRINKLER SYSTEM AND ASSOCIATED COMPONENTS SHALL BE IN ACCORDANCE WITH:
  - o NFPA 13, STANDARD FOR THE INSTALLATION OF SPRINKLER SYSTEMS, 2013 EDITION
  - o NFPA 101® *LIFE SAFETY CODE®*, 2012 EDITION
  - o VA FIRE PROTECTION DESIGN MANUAL (VAFPM) 6TH EDITION, SEPTEMBER 2011
  - o THE MANUFACTURER'S REQUIREMENTS
  - o APPLICABLE LOCAL CODES AND REGULATIONS
4. THE FOLLOWING DESIGN CRITERIA APPLIES:
  - o UNLESS NOTED OTHERWISE, ALL AREAS SHALL BE LIGHT HAZARD: 0.10 GPM/SQ.FT OVER 1,500 SQ.FT
  - o MECHANICAL AND ELECTRICAL ROOMS – ORDINARY HAZARD GROUP I: 0.15 GPM/SQ.FT OVER 1,500 SQ.FT
  - o STORAGE ROOMS AND HIMS FILE ROOM – ORDINARY HAZARD GROUP II: 0.2 GPM/SQ.FT OVER 1,500 SQ.FT

PER SECTION 11.2.3.2.3.1 OF NFPA 13, A REDUCTION IN THE DESIGN AREA UP TO 40% IS PERMITTED WHERE LISTED QUICK-RESPONSE SPRINKLERS ARE UTILIZED.
5. MUNICIPAL WATER SUPPLY TO THE BUILDING 1 SPRINKLER SYSTEM IS SUPPLEMENTED BY AN ELECTRIC DRIVE HORIZONTAL SPLIT CASE FIRE PUMP LOCATED IN BUILDING 3. RESULTS FROM THE MOST RECENT FIRE PUMP TEST ARE:

CONTRACTOR SHALL PROVIDE PUMP TEST DATA NO MORE THAN ONE YEAR OLD FOR ALL HYDRAULIC CALCULATIONS. IF TEST RESULTS SHOW DEGRADATION IN EXCESS OF 5 PERCENT OF MANUFACTURER'S PUMP CURVE, NOTIFY THE OWNER IMMEDIATELY.

3. ALL HYDRAULIC CALCULATIONS SHALL YIELD AT LEAST A 10 PERCENT SAFETY FACTOR FOR EACH SPRINKLER DESIGN AREA, INCLUDING REQUIRED HOSE STREAMS, PER VAFDPM §6.1D.
7. SPRINKLER TYPES SHALL BE AS DESCRIBED IN THE PROJECT SPECIFICATIONS. ALL SPRINKLERS SHALL BE U.L. LISTED AND FM-APPROVED. SPRINKLERS SHALL ALSO BE QUICK RESPONSE, UNLESS PROHIBITED BY THEIR LISTING. SPRINKLERS SHALL BE MANUFACTURED BY VIKING.
8. SPRINKLERS SHALL BE LOCATED IN SUSPENDED CEILING TILES AS INDICATED ON DETAIL 1/FX501. ARMOVERS AND DROPS TO INDIVIDUAL SPRINKLERS SHALL BE FIELD CUT TO ENSURE PROPER SPRINKLER PLACEMENT.
9. SPRINKLER PIPE AND FITTINGS SHALL MEET THE FOLLOWING CRITERIA:
  - PIPE SIZES 2" AND SMALLER: SCHEDULE 40, BLACK STEEL, MEETING ASTM A53 (TYPE E GRADE B) OR A795 (TYPE E GRADE A) SPECIFICATIONS, CONNECTED WITH THREADED FITTINGS.
  - PIPE SIZES 2-1/2" AND LARGER: SCHEDULE 10, BLACK STEEL, MEETING ASTM A135 OR A795 TYPE E GRADE A SPECIFICATIONS, CONNECTED WITH LISTED GROOVED COUPLINGS.
10. PIPE FITTINGS SHALL INCLUDE:
  - o THREADED FITTINGS FOR SCHEDULE 40 PIPE SHALL CONFORM TO SECTION 6.4 OF NFPA 13.
  - o ROLL GROOVED FITTINGS FOR SCHEDULE 10 PIPE SHALL BE UL LISTED. COUPLINGS SHALL COMPLY WITH ASTM A536, AND A183 SPECIFICATIONS WITH GRADE E, TYPE A GASKETS. ALL COMPONENTS SHALL BE FROM A SINGLE MANUFACTURER.
11. ALL MATERIALS SHALL BE LISTED BY UNDERWRITERS LABORATORIES, INC. (U.L.) FOR USE ON COMMERCIAL FIRE PROTECTION SYSTEMS. SPRINKLERS SHALL ALSO BE FACTORY MUTUAL (FM) APPROVED, PER VAF6P.1K.
12. ALL NECESSARY CONNECTIONS TO THE FIRE ALARM SYSTEM SHALL BE MADE BY AND COORDINATED WITH THE FIRE ALARM CONTRACTOR. SYSTEM ACCEPTANCE TESTS SHALL BE CONDUCTED BY THE FIRE ALARM CONTRACTOR AND WITNESSED BY THE VA.
13. ALL HANGERS SHALL BE U.L. LISTED FOR USE WITH SPRINKLER SYSTEMS. HANGER INSTALLATION AND SPACING SHALL BE IN ACCORDANCE WITH NFPA 13.
14. ALL SPRINKLER SYSTEM PIPING AND HANGERS SHALL BE CONCEALED WHEREVER POSSIBLE. PROVIDE ACCESS PANELS FOR ALL VALVES, WHERE REQUIRED.
15. PENETRATION OF FIRE-RATED ASSEMBLIES SHALL BE SEALED WITH A U.L. CERTIFIED THROUGH-PENETRATION SYSTEM APPROPRIATE FOR THE RATING OF THE WALL PENETRATED.
16. COORDINATE THE LOCATION OF SPRINKLER PIPING SHOWN WITH EXISTING MECHANICAL, STRUCTURAL, AND CEILING SYSTEMS. COORDINATE FINAL LOCATIONS OF ALL SPRINKLERS, PIPING, PIPE SIZES, HANGER LOCATIONS, ETC.
17. CONTRACTOR SHALL BE RESPONSIBLE FOR DEVELOPMENT OF SHOP DRAWINGS, HYDRAULIC CALCULATIONS, PERMIT FEES, APPROVAL OF SHOP DRAWINGS, AND ACCEPTANCE OF THE SYSTEM BY THE AHJ.
18. PRIOR TO SUBMITTING AN APPLICATION FOR SPRINKLER PERMIT TO THE AHJ, PROVIDE TWO COPIES OF ALL SHOP DRAWINGS, HYDRAULIC CALCULATIONS, AND PRODUCT DATA SHEETS TO THE OWNER OR ENGINEER FOR REVIEW AND COMMENT. PERMIT APPLICATION SHALL NOT BE MADE UNTIL SUCH TIME THAT THE OWNER OR HAS ENGINEER COMPLETED A REVIEW OF THE SHOP DRAWING PACKAGE.



DELLC  
JOB No. D012-01

**Consultants:**

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& ASSOCIATES, INC.**

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301.662.8112 - FAX 301.662.8117

Project Title		
EXPAND OUT PATIENT WITH SECOND FLOOR ADDITION		
Building No: 1	Checked: MJA	Drawn: PHZ
Location:		

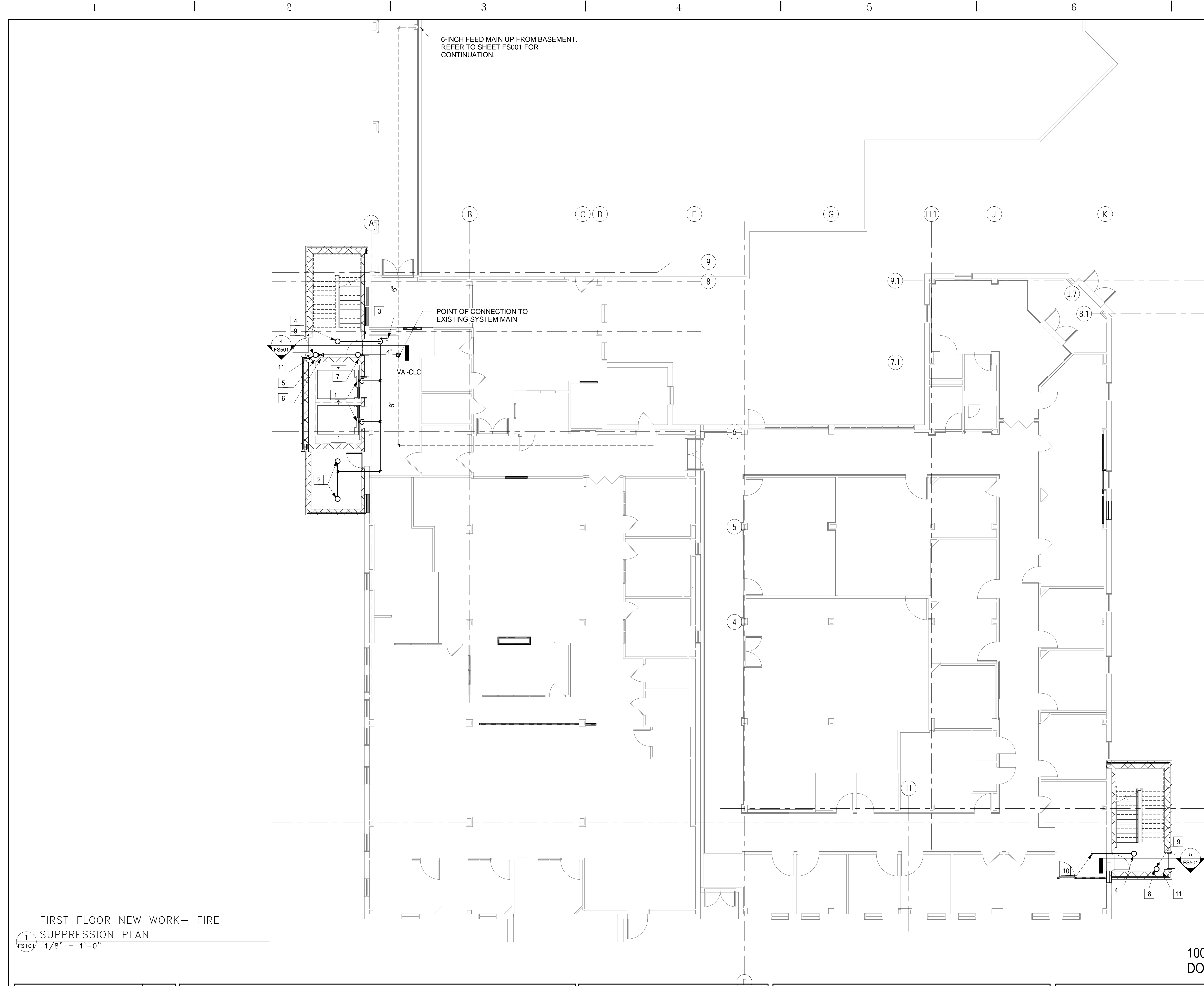
Date  
10/30/15

Project No.  
503-306

Drawing No.  
FS001

Dwg. Of

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one and one half inch = one foot  
one inch = one foot  
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one half inch = one foot  
three eighths inch = one foot  
one quarter inch = one foot  
one eighth inch = one foot



- FIRE SUPPRESSION GENERAL NOTES:**
1. MODIFY SPRINKLER SYSTEM AS INDICATED.
  2. KEEP EXISTING FIRST FLOOR SPRINKLERS ACTIVE DURING CONSTRUCTION.
- FIRE SUPPRESSION SHEET NOTES:**
- 1 LOCATE SIDEWALL SPRINKLERS NO MORE THAN 2 FT ABOVE PIT. NOTE THAT SUPERVISED SHUT-OFF VALVE IS NOT REQUIRED OUTSIDE AND ADJACENT TO PIT SERVED.
  - 2 PROVIDE STANDARD RESPONSE, INTERMEDIATE TEMPERATURE CLASSIFICATION, SPRINKLERS IN ELEVATOR MACHINE ROOM.
  - 3 EXTEND EXISTING FIRST FLOOR SPRINKLER SYSTEM TO NEW SPRINKLERS AS INDICATED. PROVIDE NEW 2-1/2" MAIN TO CONNECT TO EXISTING 2-1/2" CROSS MAIN.
  - 4 PROVIDE SPRINKLER PROTECTION AT BOTTOM OF STAIR.
  - 5 NEW STANDPIPE RISER UP TO SECOND FLOOR.
  - 6 STANDPIPE RISER CONTROL VALVE.
  - 7 NEW STANDPIPE FEED UP TO SECOND FLOOR.
  - 8 NEW STANDPIPE RISER DOWN FROM SECOND FLOOR.
  - 9 2-1/2" FIRE DEPARTMENT HOSE CONNECTION. MATCH EXISTING HOSPITAL CONNECTIONS.
  - 10 EXTEND EXISTING FIRST FLOOR SPRINKLER SYSTEM TO NEW SPRINKLER AS INDICATED. CONNECT TO EXISTING 2-1/2" MAIN.
  - 11 PIPE STANDPIPE RISER DRAIN LINES TO BUILDING EXTERIOR.

FIRST FLOOR NEW WORK- FIRE SUPPRESSION PLAN  
1/8" = 1'-0"

PLAN NORTH

TRUE NORTH

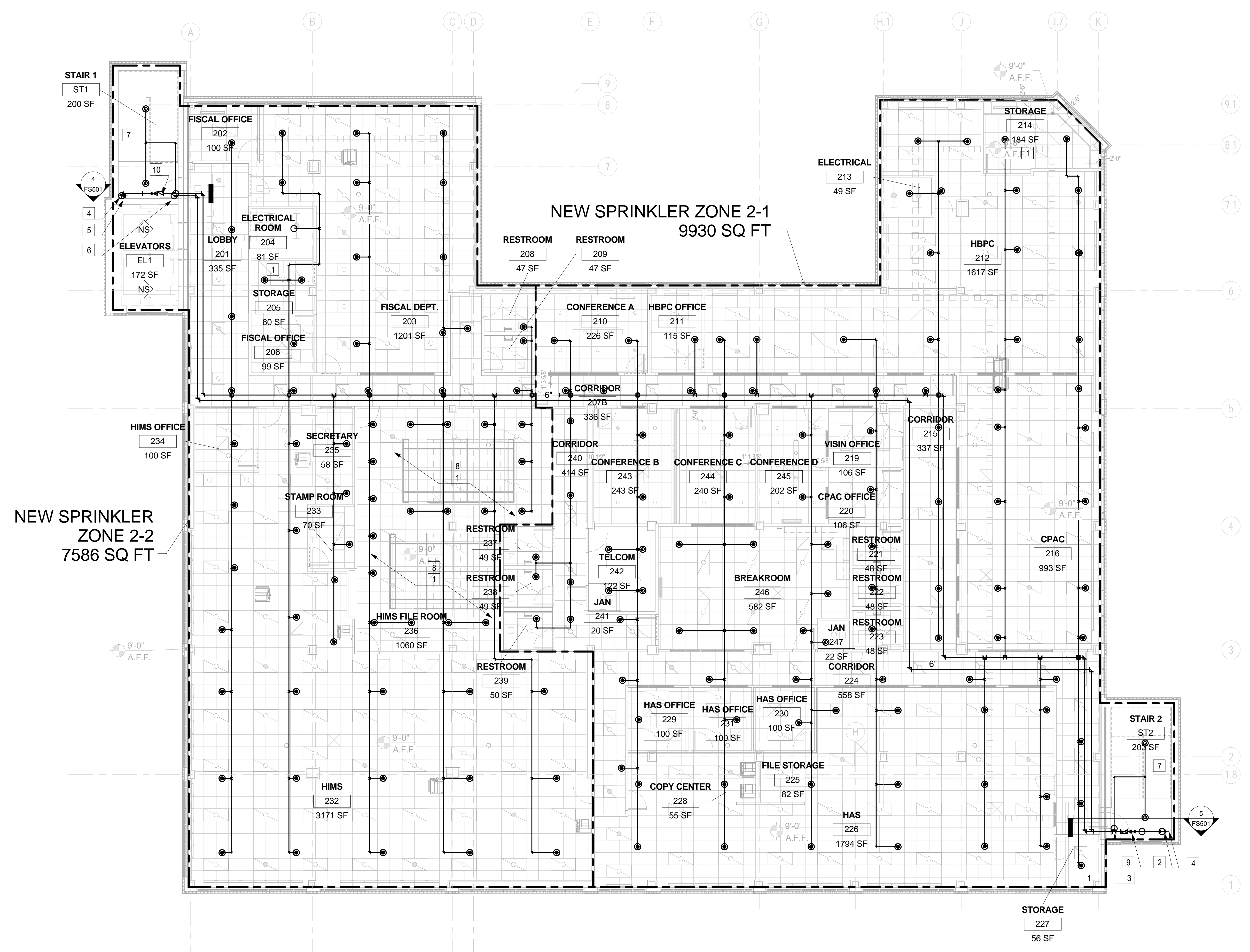
KEY PLAN

100% CONSTRUCTION BID DOCUMENTS  
DELLC JOB No. D012-01

<b>Additional:</b>		<b>Consultants:</b>		<b>BUILDING COST CONSULTANTS</b>		<b>WHITMAN, REQUADT &amp; ASSOCIATES, LLP</b>		<b>DERBY de enterprises</b>		<b>JAMES E. VAN ZANDT ARCHITECTURE PLANNING ENGINEERING</b>		<b>FIRST FLOOR - FIRE SUPPRESSION PLAN</b>		<b>EXPAND OUT PATIENT WITH SECOND FLOOR ADDITION</b>		<b>Date 10/30/15</b>		<b>DEPARTMENT OF VETERANS AFFAIRS</b>
		<b>BURDETTE KOEHLER MURPHY &amp; ASSOCIATES, INC.</b>		COST ESTIMATING 12917 - 30TH AVENUE PLATTSMOUTH, NEBRASKA 68048 402.298.8260 - FAX 402.298.8290		CIVIL ENGINEERING 1000 LANCASTER STREET BALTIMORE, MD 21231 410.235.3450 - FAX: 410.243.5716				2215 Conowingo Rd, Suite 100 Bel Air, Maryland 21015-1436 410.803.0009 fax 410.836.6811		Approved: Associate Director for Operations:		Building No:		Project No. 503-306		
<b>Revisions:</b>		MECHANICAL / ELECTRICAL CONSULTING ENGINEERING 1416 CLARKVIEW ROAD BALTIMORE, MARYLAND 21209 410.323.0600 - FAX 410.377.2543		KOFFEL ASSOCIATES, INC.		ROBERT L. SEYMOUR ASSOCIATES						Approved: Director, Medical Center:		Checked: MJA		Drawing No. FS101		
		RICKERT ENGINEERING, INC.		FIRE PROTECTION ENGINEERING 8815 CENTRE PARK DR., SUITE 200 COLUMBIA, MARYLAND 21045 410.750.2246 - FAX 410.750.2588		AUTOMATIC TRANSPORT ENGINEERING 182 THOMAS JOHNSON DR. SUITE 200 FREDERICK, MARYLAND 21702 301.662.8112 - FAX 301.662.8117								Drawn: PHZ		Dwg. Of		



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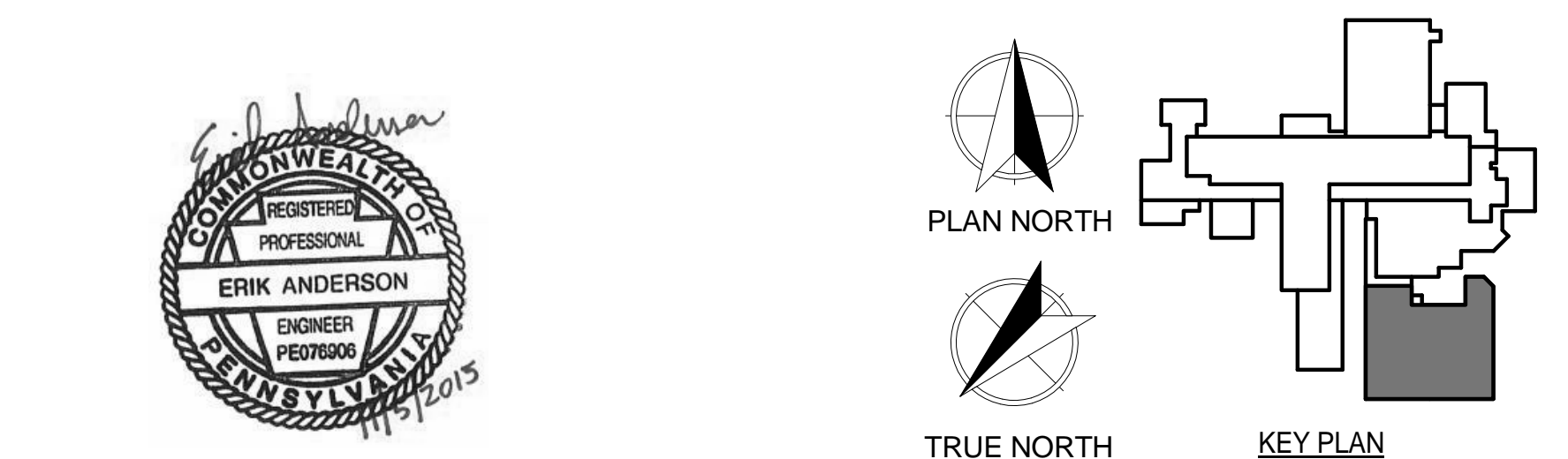
**FIRE SUPPRESSION GENERAL NOTES:**

1. PROVIDE NEW SPRINKLER SYSTEM AS INDICATED.
2. THE SPRINKLER LOCATIONS ARE PRELIMINARY TO INDICATE GENERAL DESIGN INTENT, SCOPE OF WORK, AND AREA OF COVERAGE. SPRINKLER CONTRACTOR IS RESPONSIBLE FOR FINAL LOCATIONS.

**FIRE SUPPRESSION SHEET NOTES:**

- 1 THIS ROOM IS ORDINARY HAZARD GROUP II.
- 2 NEW STANDPIPE RISER DOWN TO FIRST FLOOR.
- 3 STANDPIPE RISER CONTROL VALVE. SEE DETAIL 5 ON FS-501.
- 4 2-1/2" STANDPIPE HOSE CONNECTION.
- 5 NEW STANDPIPE RISER UP FROM FIRST FLOOR.
- 6 NEW STANDPIPE FEED UP FROM FIRST FLOOR.
- 7 PROVIDE SPRINKLER PROTECTION AT TOP OF STAIR.
- 8 SPACE SPRINKLERS 6 FOOT ON CENTER AROUND MOVABLE SHELVING UNITS. LESS THAN 18 INCHES CLEARANCES FROM TOP OF SHELVING UNITS TO SUSPENDED CEILING.
- 9 ZONE CONTROL ASSEMBLY FOR ZONE 2-1. SEE DETAIL 5 ON FS-501.
- 10 ZONE CONTROL ASSEMBLY FOR ZONE 2-2. SEE DETAIL 5 ON FS-501.

SECOND FLOOR NEW WORK - FIRE SUPPRESSION PLAN  
1/8" = 1'-0"



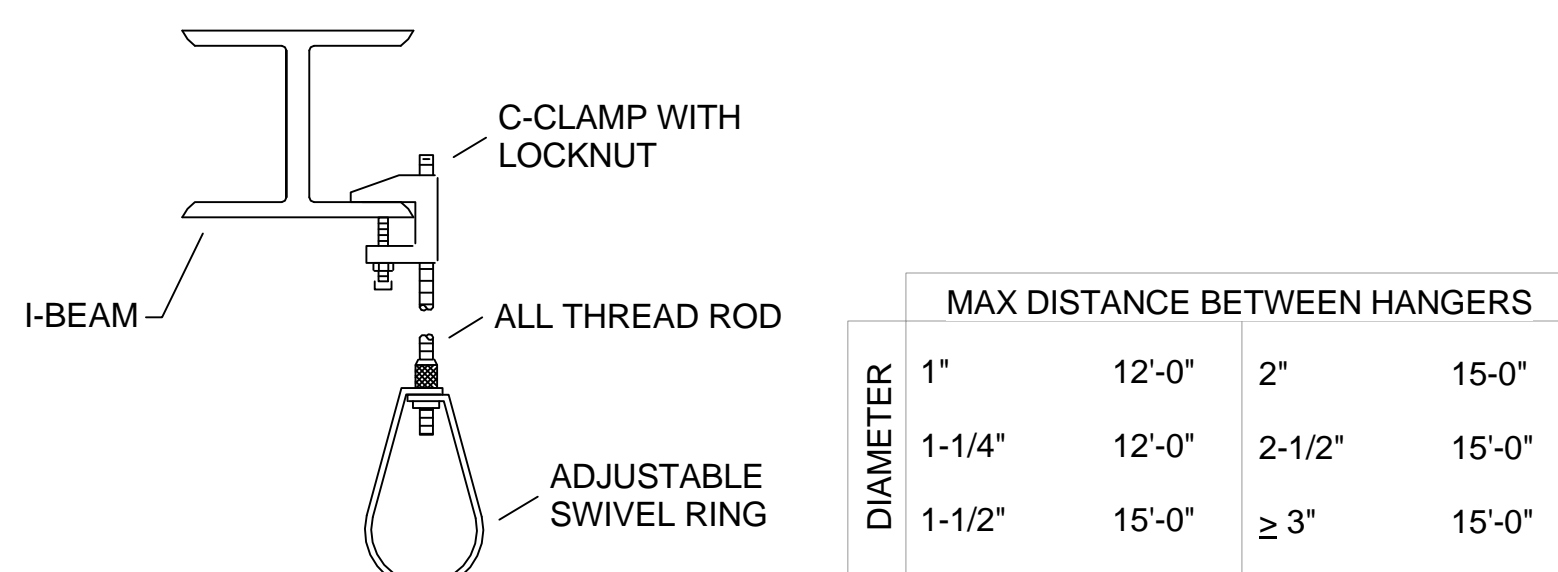
100% CONSTRUCTION BID DOCUMENTS

DELLC JOB No. D012-01

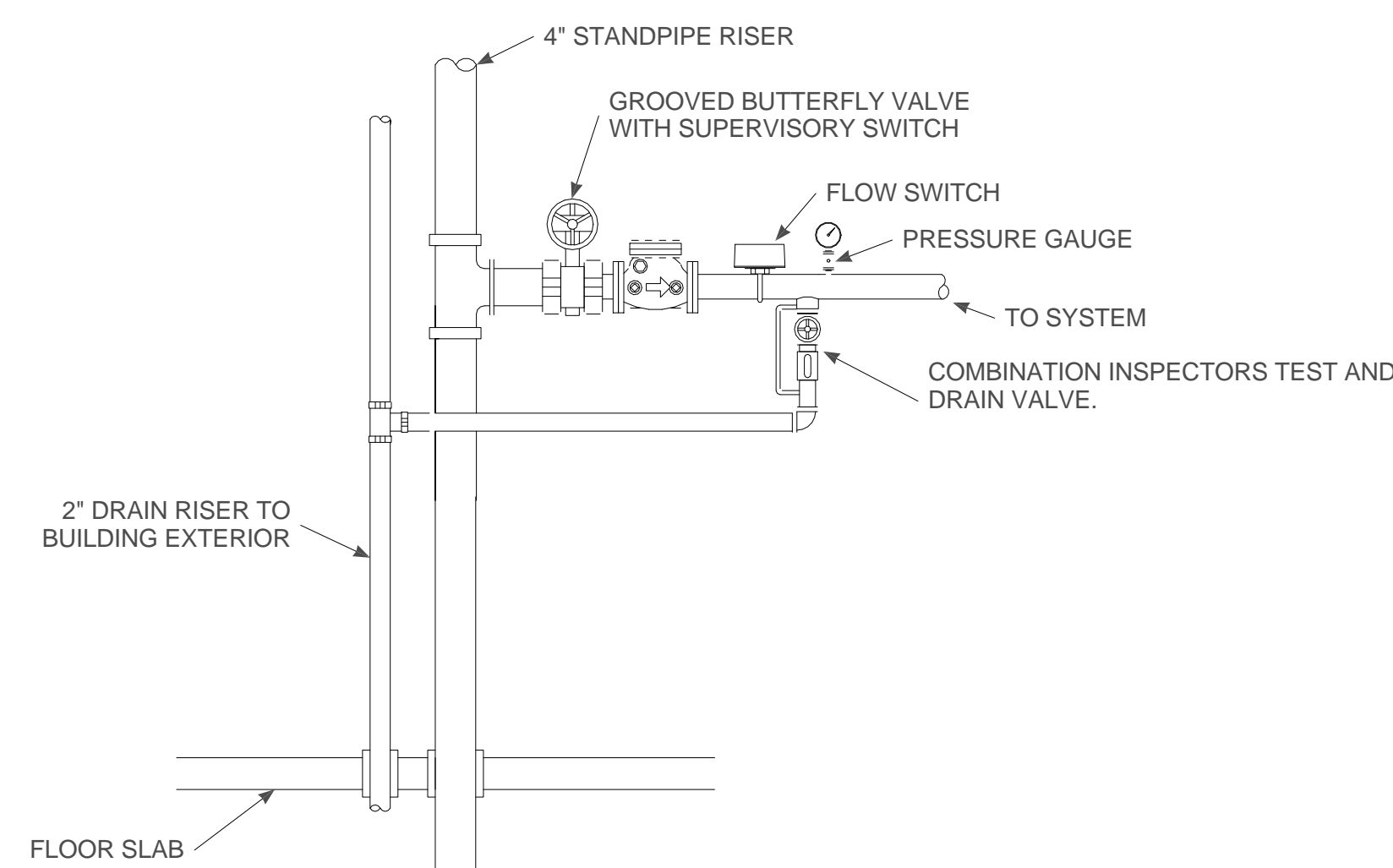
<b>Consultants:</b> <b>BURDETTE KOEHLER MURPHY &amp; ASSOCIATES, INC.</b> MECHANICAL / ELECTRICAL CONSULTING ENGINEERING 1416 CLARKVIEW ROAD BALTIMORE, MARYLAND 21209 410.323.0600 - FAX 410.317.2543 <b>RICKERT ENGINEERING, INC.</b> STRUCTURAL ENGINEERING 8813 WALTHAM WOODS ROAD, SUITE 500 BALTIMORE, MARYLAND 21234 410.663.5110 - FAX 410.663.5114		<b>BUILDING COST CONSULTANTS</b> COST ESTIMATING 12917 - 30TH AVENUE PLATTSMOUTH, NEBRASKA 68048 402.298.8260 - FAX 402.298.8290 <b>KOFFEL ASSOCIATES, INC.</b> FIRE PROTECTION ENGINEERING 8815 CENTRE PARK DR., SUITE 200 COLUMBIA, MARYLAND 21045 410.750.2246 - FAX 410.750.2588		<b>WHITMAN, REQUADT &amp; ASSOCIATES, LLP</b> CIVIL ENGINEERING 1000 LANCASTER STREET BALTIMORE, MD 21231 410.235.3450 - FAX: 410.243.5716 <b>ROBERT L. SEYMOUR ASSOCIATES</b> AUTOMATIC TRANSPORT ENGINEERING 182 THOMAS JOHNSON DR. SUITE 200 FREDERICK, MARYLAND 21702 301.662.8112 - FAX 301.662.8117		<b>DERBY de enterprises</b> ARCHITECTURE PLANNING ENGINEERING 2215 Conowingo Rd, Suite 100 Bel Air, Maryland 21015-1436 410.803.0009 fax 410.836.6811		<b>JAMES E. VAN ZANDT</b> VETERANS ADMINISTRATION MEDICAL CENTER	
<b>ADDITONS:</b> Date: _____ Revisions: _____		<b>Project Title:</b> EXPAND OUT PATIENT WITH SECOND FLOOR ADDITION Building No: _____ Location: _____		<b>Drawing Title:</b> SECOND FLOOR - FIRE SUPPRESSION PLAN Approved: Associate Director for Operations: _____ Approved: Director, Medical Center: _____		<b>Date:</b> 10/30/15 <b>Project No.:</b> 503-306 <b>Drawing No.:</b> FS102 Dwg. Of _____			

DEPARTMENT OF VETERANS AFFAIRS

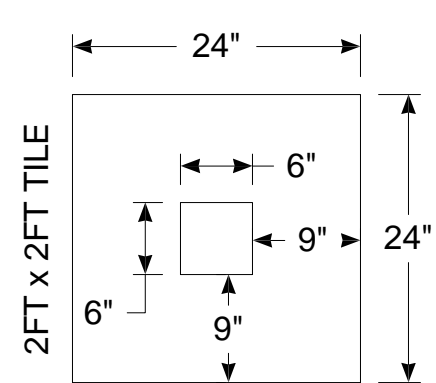
4. WHERE TRAPEZE HANGERS ARE USED, THEY SHALL BE INSTALLED IN ACCORDANCE WITH NFPA 13, SECTION 9.1.1.6.



1 TYPICAL HANGER PLACEMENT  
FS-501 NTS

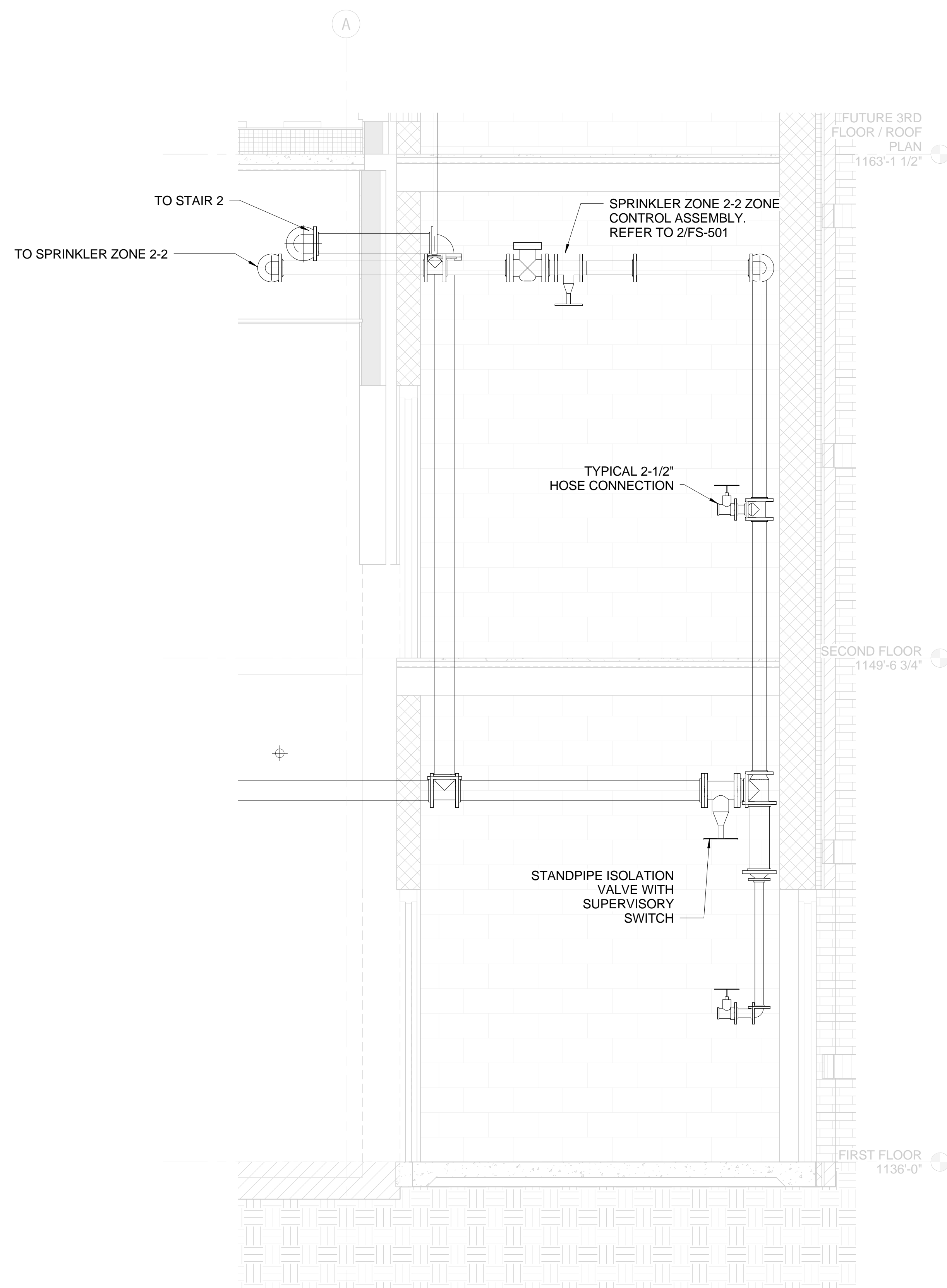


TYPICAL COMBINATION  
SPRINKLER/STANDPIPE RISER

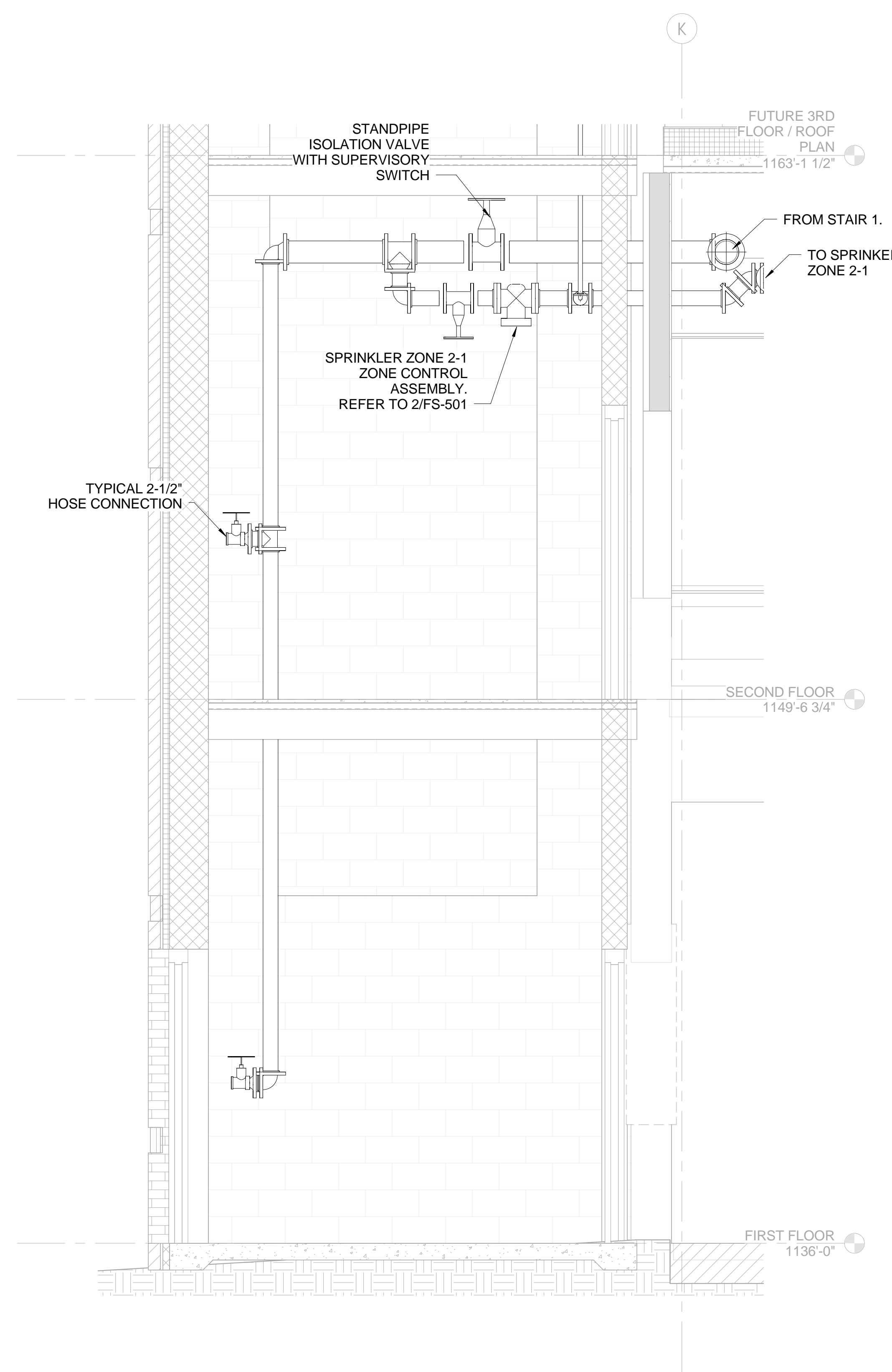


**NOTE:**  
TYPICAL ACOUSTIC CEILING PANEL.  
LOCATE SPRINKLER WITHIN AREA  
INDICATED.

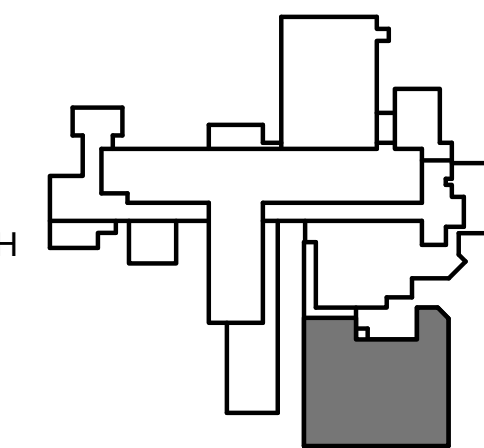
3 SPRINKLER PLACEMENT  
FS-501 NTS



4 STAIR 1 SECTION VIEW  
FS501 1/2" = 1'-0"



5 STAIR 2 SECTION VIEW  
FS501 1/2" = 1'-0"



100% CONSTRUCTION BID  
DOCUMENTS

DELLC  
JOB No. D012-01

[illegible]

**Consultants:**

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& ASSOCIATES, INC.**

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**DERBY**

**ARCHITECTURE  
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**enterprises**

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Drawing Title	FIRE SUPPRESSION DETAILS
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Approved: Associate Director for Operations:

Approved: Director, Medical Center:

Project Title	EXPAND OUT PATIENT WITH SECOND FLOOR ADDITION
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	Building No:
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Checked:
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Drawn:

Location:

Date  
10/30/15

Project No.  
503-306

	Drawing No.

FS501

Dwg.	Of
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DEPARTMENT OF  
VETERANS AFFAIRS