

**LEGEND**

**FIRE ALARM**

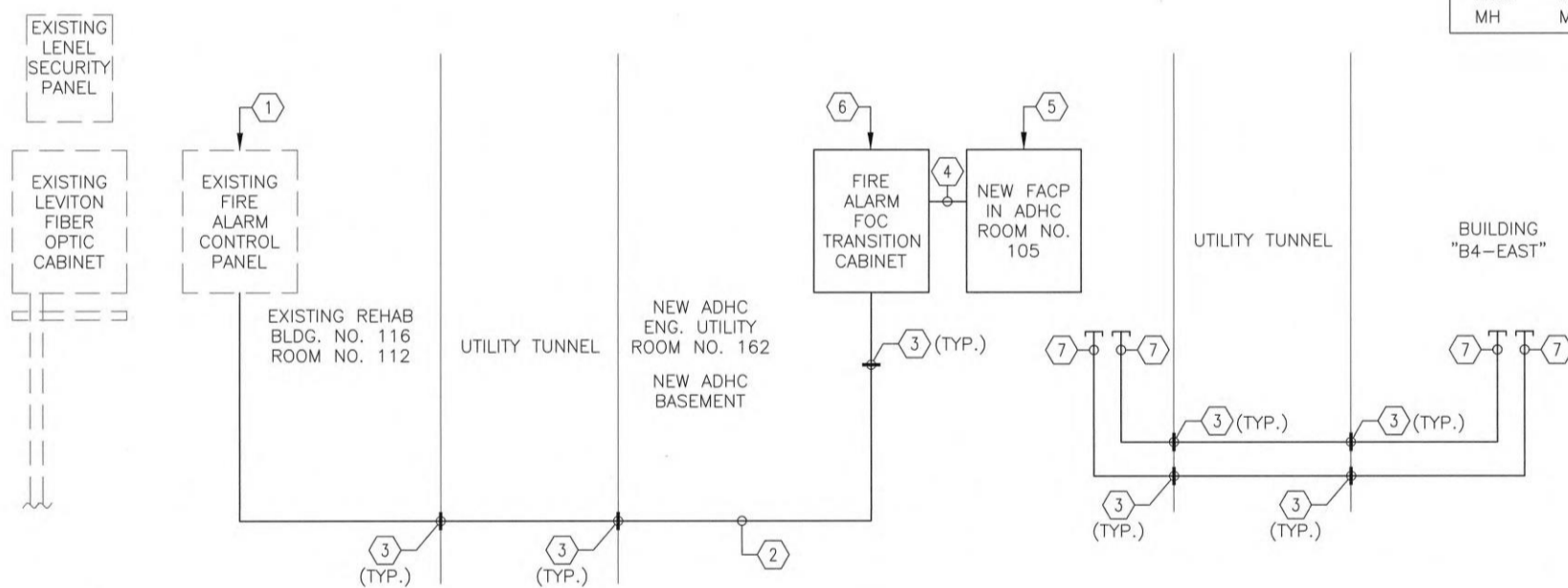
- F** FIRE ALARM PULL STATION. MOUNTED 48" AFF TO CENTERLINE OF STATION.
- 15 F** HORN/SPEAKER ALARM. COMBINATION SPEAKER WITH ADJUSTABLE CANDELA STROBE LIGHT. WALL MOUNTED 90" AFF TO TOP. CEILING MOUNT WHERE INDICATED. NUMBER INDICATES CANDELA RATING OF STROBE. 'WP' INDICATES WEATHERPROOF UNIT. DEVICE SHALL BE DUAL COIL AND SHALL FUNCTION AS A FIRE ALARM DEVICE AND A PUBLIC ADDRESS DEVICE.
- 15 F** VISUAL ALARM. ADJUSTABLE CANDELA STROBE LIGHT. WALL MOUNTED 90" AFF TO TOP. CEILING MOUNT WHERE INDICATED. NUMBER INDICATES CANDELA RATING OF STROBE. REFER TO SPECIAL REQUIREMENTS IN SLEEPING AREAS. NS INDICATES NON-SUPERVISED 120 VOLT REMOTE VISUAL SIGNAL, 177 CANDELA, CONNECTED TO NON-SUPERVISED SMOKE DETECTOR.
- SFS** SPRINKLER FLOW SWITCH
- SIS** SPRINKLER TAMPER SWITCH
- MM** MONITOR MODULE
- S** SMOKE DETECTOR
- DH** DOOR HOLDER
- H<sub>S</sub>** DUCT SMOKE DETECTOR  
'S' INDICATES LOCATED IN SUPPLY PLENUM  
'R' INDICATES LOCATED IN RETURN PLENUM
- T** TEST STATION FOR DUCT SMOKE DETECTOR
- PIV** PIV (POST INDICATOR VALVE)

**ABBREVIATIONS**

- |        |                                      |       |  |
|--------|--------------------------------------|-------|--|
| A      | AMP                                  | MIC   | MICROWAVE OR MICROPHONE  |
| AC     | ALTERNATING CURRENT                  | NC    | NORMALLY CLOSED OR NURSE CALL  |
| ADA    | AMERICANS WITH DISABILITIES ACT      | NEC   | NATIONAL ELECTRICAL CODE   |
| AFF    | ABOVE FINISHED FLOOR                 | NFPA  | NATIONAL FIRE PROTECTION ASSOCIATION                                     |
| AFG    | ABOVE FINISHED GRADE                 | NO    | NORMALLY OPEN  |
| AWG    | AMERICAN WIRE GAUGE                  | NO.   | NUMBER   |
| BLDG   | BUILDING                             | PA    | PUBLIC ADDRESS   |
| C      | CONDUIT                              | PB    | PUSH BUTTON  |
| cd     | CANDELA RATING                       | PNL   | PANEL  |
| CLG    | CEILING                              | PVC   | POLYVINYL CHLORIDE   |
| CH     | CHANNEL                              | REF   | REFRIGERATOR   |
| CKT    | CIRCUIT                              | RSC   | RIGID STEEL CONDUIT  |
| CL     | CENTERLINE                           | RTU   | ROOF TOP UNIT  |
| CMU    | CONCRETE MASONRY UNIT                | SF    | SUPPLY FAN   |
| CONC   | CONCRETE                             | SS    | SOLID STATE  |
| CONT'D | CONTINUED                            | SWBD1 | SWITCHBOARD, NUMBER AS INDICATED   |
| COR    | CONTRACTING OFFICER'S REPRESENTATIVE | TYP   | TYPICAL  |
| CU     | COPPER                               | TV    | TELEVISION   |
| CUH    | CABINET UNIT HEATER                  | UG    | UNDERGROUND  |
| DC     | DIRECT CURRENT                       | UL    | UNDERWRITERS LABORATORIES  |
| DW     | DISH WASHER                          | UPS   | UNINTERRUPTIBLE POWER SUPPLY   |
| EC     | ELECTRICAL CONTRACTOR                | V     | VOLT   |
| EF     | EXHAUST FAN                          | VA    | DEPARTMENT OF VETERAN AFFAIRS  |
| EGC    | EQUIPMENT GROUNDING CONDUCTOR        | VA    | VOLT-AMPERE  |
| EOL    | END OF LINE                          | VAMC  | VA MEDICAL CENTER  |
| EUH    | ELECTRIC UNIT HEATER                 | VOIP  | VOICE OVER INTERNET PROTOCOL   |
| EWC    | ELECTRIC WATER COOLER                | W     | WATT   |
| FACP   | FIRE ALARM CONTROL PANEL             | W/    | WITH   |
| GD     | GARBAGE DISPOSAL                     | WP    | WEATHERPROOF   |
| GEC    | GROUNDING ELECTRODE CONDUCTOR        | WRG   | WIRING   |
| GFI    | GROUND FAULT INTERRUPTER             | XFMR  | TRANSFORMER  |
| GND    | GROUND                               | XP    | EXPLOSION-PROOF  |
| HP     | HORSEPOWER                           | (R)   | LOCATION OF RELOCATED DEVICE OR EQUIPMENT                                |
| HZ     | HERTZ                                | (RR)  | REMOVE AND RELOCATE EXISTING DEVICE OR EQUIPMENT                         |
| JB     | JUNCTION BOX                         | (RX)  | REMOVE EXISTING DEVICE OR EQUIPMENT                                      |
| KCMIL  | THOUSAND CIRCULAR MIL                | (X)   | EXISTING DEVICE OR EQUIPMENT TO REMAIN                                   |
| KV     | THOUSAND VOLTS (KILOVOLT)            | (XR)  | EXISTING DEVICE OR EQUIPMENT TO BE REMOVED AND REPLACED AT SAME LOCATION |
| KVA    | THOUSAND VOLT-AMPS                   |       |  |
| KW     | THOUSAND WATTS (KILOWATT)            |       |  |
| LED    | LIGHT EMITTING DIODE                 |       |  |
| LTG    | LIGHTING                             |       |  |
| MCC    | MOTOR CONTROL CENTER                 |       |  |
| MCCB   | MOLDED CASE CIRCUIT BREAKER          |       |  |
| MCB    | MAIN CIRCUIT BREAKER                 |       |  |
| MH     | MANHOLE                              |       |  |

**GENERAL NOTES**

- A. NOT ALL SYMBOLS INDICATED IN THE LEGEND, OR LISTED ABBREVIATIONS, APPEAR ON THE DRAWINGS. COORDINATE WORK ACCORDINGLY. COMPLY WITH SPECIFICATIONS AND NOTES BELOW AS APPLICABLE.
- B. ALL PENETRATIONS THROUGH FLOORS, RATED WALLS AND PARTITIONS SHALL BE SEALED WITH UL APPROVED FIRE SEALANT MATERIAL TO MAINTAIN FIRE AND/OR SMOKE RATING FOR THE SEPARATION. REFER TO SPECIFICATIONS.
- C. ALL CONDUITS, ENCLOSURES, CONDUIT BODIES AND THEIR COVERS CONTAINING FIRE ALARM SYSTEM CONDUCTORS SHALL BE PAINTED RED.
- D. PROVIDE WIRE MARKERS TO IDENTIFY CABLES FOR ALL SYSTEMS AT THE ORIGIN, PULL BOXES, AND TERMINATION POINTS. LABELS SHALL BE SELF ADHESIVE OR HEAT SHRINK TYPE. REFER TO SPECIFICATIONS.
- E. SOME WORK UNDER THIS CONTRACT WILL REQUIRE WORK DUTIES TO BE PERFORMED AFTER NORMAL WORKING HOURS. DETERMINATION OF SPECIFIC WORK DUTIES TO BE PERFORMED AFTER HOURS MUST BE MADE BY VA STAFF AT THEIR CONVENIENCE. POSSIBLE WORK REQUIRING AFTER HOURS APPROVAL INCLUDES: POWER OUTAGES AND DISRUPTION OF SERVICES, EXTREME NOISE AND/OR VIBRATION, CUTTING AND PATCHING OF CONCRETE, AND DELIVERIES OF EQUIPMENT.
- F. CARE SHOULD BE TAKEN BY ALL CONTRACTORS TO AVOID DAMAGING OR DISTURBING EXISTING CONSTRUCTION AND FINISHES. CONTRACTORS SHALL BE RESPONSIBLE FOR MAKING ANY REPAIRS NECESSARY TO RECTIFY DAMAGE AND RESTORE EXISTING CONSTRUCTION AND FINISHES TO UNDAMAGED STATE UPON COMPLETION OF WORK AT NO EXPENSE TO THE VA. REPAIR OR REPLACE AND REFINISH, TO THE SATISFACTION OF THE VA, ANY CEILING, FLOOR, OR WALL SURFACES OR STRUCTURES THAT MAY BE DAMAGED IN THE PROCESS OF WORK.
- G. REFER TO SHEET FA001 FOR LEGEND, ABBREVIATIONS, AND GENERAL NOTES.
- H. PROVIDE NEW FIRE ALARM SYSTEM AS INDICATED, REFER TO FLOOR PLAN FOR LOCATIONS OF DEVICES, REFER TO FIRE ALARM MATRIX SUMMARY FOR ADDITIONAL INFORMATION.
- I. PROVIDE SUFFICIENT COMMUNICATION LOOP CIRCUITS TO SERVE MAXIMUM NUMBER OF ADDRESSES RECOMMENDED BY FIRE ALARM SYSTEM MANUFACTURER PLAN AN ADDITIONAL 50%.
- J. REFER TO FIRE ALARM PLANS FOR LOCATIONS.
- K. NOT ALL SYMBOLS INDICATED IN THE LEGEND, OR LISTED ABBREVIATIONS, APPEAR ON THE DRAWINGS. COORDINATE WORK ACCORDINGLY. COMPLY WITH SPECIFICATIONS AND NOTES BELOW AS APPLICABLE.
- L. THE FIRE ALARM CIRCUITING SHALL BE ROUTED TO NEW FIRE ALARM CONTROL PANEL(FACP) LOCATED IN ROOM NO. 105.
- M. THE FIRE ALARM CONTRACTOR SHALL MATCH EXISTING STYLE AND CLASS OF FIRE ALARM WIRING SYSTEM.



**KEY NOTES**

- 1. EXISTING EDWARDS EST3X FIRE ALARM CONTROL PANEL, LOCATED IN ROOM 112, REFER TO DRAWING FA001 FOR ADDITIONAL INFORMATION.
- 2. EXTEND CAMPUS FIBER OPTIC CABLE LOOP FROM BLDG NO. 116 ROOM NO. 112, TO NEW ADHC ROOM NO. 105.
- 3. PROVIDE UL RATED FIRE STOP ASSEMBLY AT ALL RATED PENETRATIONS (TYPICAL)
- 4. PROVIDE NEW FIRE ALARM WIRING SYSTEM FROM FIRE ALARM TRANSITION CABINET TO FIRE ALARM CONTROL PANEL.
- 5. THE FIRE ALARM CONTRACTOR SHALL PROVIDE NEW EDWARDS FIRE ALARM TRANSITION AND FIRE ALARM CONTROL PANEL, THE FIRE ALARM CONTROL PANEL SHALL BE EDWARDS EST3X SYSTEM.
- 6. THE FIRE ALARM CONTRACTOR SHALL PROVIDE NEW EDWARDS FIRE ALARM TRANSITION CABINET, THE NEW FIRE ALARM SYSTEM SHALL BE COMPATIBLE WITH EDWARDS EST3X FIRE ALARM SYSTEM.
- 7. PROVIDE (3) 3" EMPTY CONDUITS WITH PULL STRINGS FROM ADHC TO BUILDING "B4-EAST", COORDINATE THE EXACT ROUTING PATH AT SITE, PROVIDE BUSH CONDUIT END.

**LIFE SAFETY LINE TYPES**

- FIRE RESISTIVE RATED LINE, 1 HOUR
- FIRE RESISTIVE RATED LINE, 2 HOUR
- FIRE-RATED, SMOKE BARRIER LINE, 1 HOUR
- ◆-S FIRE-RATED, SMOKE BARRIER LINE, 2 HOUR
- ◆-30 FIRE-RATED, SMOKE BARRIER LINE, 30 MIN
- ◆-SW NON-RATED, SUITE LINE, (SMOKE RESISTIVE)
- ◆-SR NON-RATED SMOKE RESISTIVE

NOTE: ALL SYMBOLS MAY NOT BE USED

**F1 LOW VOLTAGE FIRE ALARM RISER DIAGRAM**  
NOT TO SCALE

FULLY SPRINKLED  
BID DOCUMENTS  
FOR CONSTRUCTION

Office of  
Construction  
and Facilities  
Management

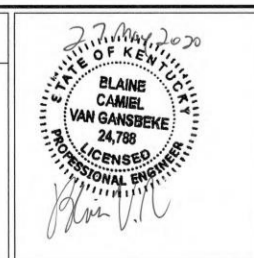


ADDENDUM 1 - BID AND CONSTRUCTION DOCUMENTS	Date
05/29/20	

**CONSULTANTS:**


**ARCHITECT/ENGINEERS:**

Architecture | Engineering | Design-Build  
200 Envoy Circle #201, Louisville KY 40299 - PH: 502.339.8511 - www.paradigmusa.com

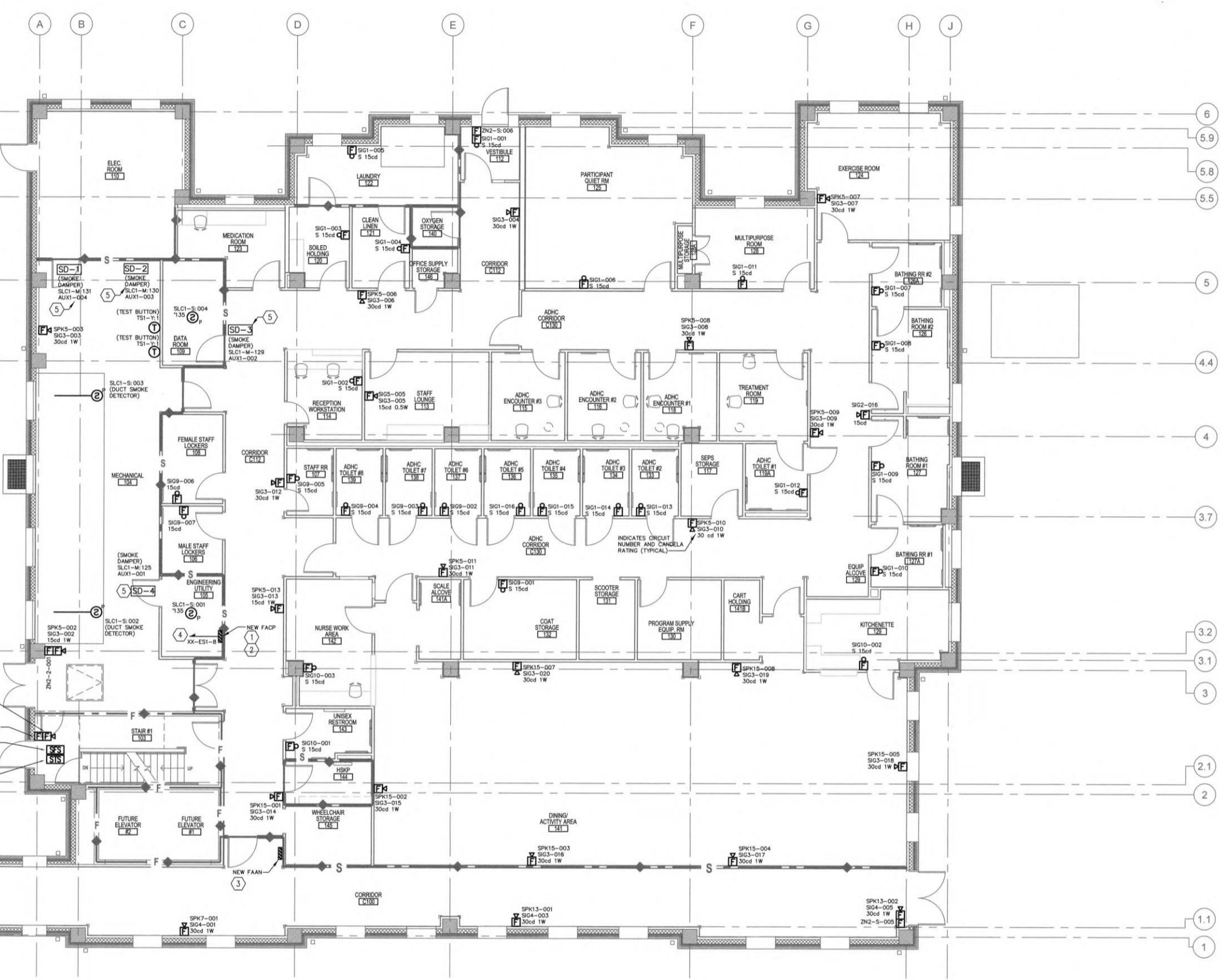


<b>Drawing Title</b> FIRE ALARM LEGEND, GENERAL NOTES, AND ABBREVIATIONS	<b>Project Title</b> ST CLOUD ADH AND EC SUPPORT
<b>Approved Project Director</b>	<b>Project Number</b> 656-343
	<b>Building Number</b> ---
	<b>Location</b> ST CLOUD VA HEALTH CARE SYSTEM 4801 VETERANS DRIVE, ST. CLOUD MN 56303
	<b>Drawing Number</b> FA001
	<b>Date</b> 12-27-2019
	<b>Checked</b> WLM
	<b>Drawn</b> MMF

**FIRE ALARM LEGEND**

- F** FIRE ALARM PULL STATION. MOUNTED 48" AFF TO CENTERLINE OF STATION.
- 15** HORN/SPEAKER ALARM. COMBINATION SPEAKER WITH ADJUSTABLE CANDELA STROBE LIGHT. WALL MOUNTED 90" AFF TO TOP. CEILING MOUNT WHERE INDICATED. NUMBER INDICATES CANDELA RATING OF STROBE. "WP" INDICATES WEATHERPROOF UNIT. DEVICE SHALL BE DUAL COIL AND SHALL FUNCTION AS A FIRE ALARM DEVICE AND A PUBLIC ADDRESS DEVICE.
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- H** DETECTOR: LETTER INDICATES AS FOLLOWS:  
 BLANK = PHOTOELECTRIC SMOKE DETECTOR  
 H = HEAT SMOKE  
 I = IONIZATION SMOKE  
 IH = IONIZATION AND HEAT SMOKE  
 IP = IONIZATION AND PHOTOELECTRIC SMOKE  
 PH = PHOTOELECTRIC AND HEAT SMOKE  
 IPH = IONIZATION, PHOTOELECTRIC, AND HEAT
- S** DUCT MOUNTED SMOKE DETECTOR WITH REMOTE TEST AND RESET STATION. FURNISHED AND WIRED BY ELECTRICAL CONTRACTOR, INSTALLED BY MECHANICAL CONTRACTOR.  
 'S' INDICATES LOCATED IN SUPPLY AIR DUCT  
 'R' INDICATES LOCATED IN RETURN AIR DUCT
- TS** REMOTE TEST STATION WITH RESET FOR DUCT SMOKE DETECTOR
- DH** ELECTROMAGNETIC TYPE DOOR HOLDER RELEASE
- SFS** SPRINKLER FLOW SWITCH
- SIS** SPRINKLER TAMPER SWITCH

**F1 PARTIAL ROOF LEVEL STAIR PLAN**  
1/8" = 1'-0"



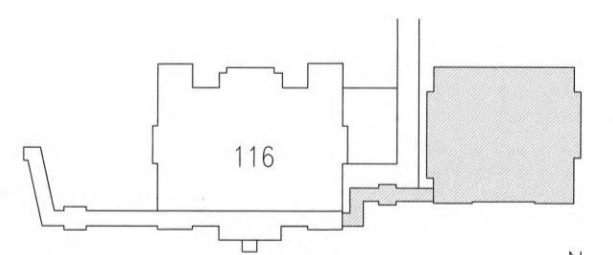
**GENERAL FIRE ALARM PLAN NOTES**

- A. REFER TO SHEET FA001 FOR LEGEND, ABBREVIATIONS, SCHEDULES AND GENERAL NOTES.
- B. THE ELECTRICAL CONTRACTOR SHALL PROVIDE JUNCTION BOX WITH 3/4 INCH EMPTY CONDUIT ROUTED UP INTO THE ACCESSIBLE CEILING SPACE AND OVER TO THE FIRE ALARM CONTROL PANEL, PROVIDE PULL STRINGS WITHIN THE EMPTY CONDUIT SYSTEM.
- C. THE FIRE ALARM CONTRACTOR SHALL PULL FIRE ALARM CABLE FROM JUNCTION BOX (FIRE ALARM DEVICE) TO FACP AND NAC PANEL.
- D. THE FIRE ALARM CONTRACTOR SHALL PROVIDE FINISH COVER PLATE AT EACH FIRE ALARM DEVICE.
- E. THE FIRE ALARM CONTRACTOR SHALL PROVIDE FULLY ENGINEERED SHOP DRAWING SUBMITTALS OF THE PROPOSED WORK PRIOR TO BEGINNING CONSTRUCTION. THE SHOP DRAWINGS SUBMITTALS SHALL INCLUDE BUT NOT LIMITED TO: VOLTAGE DROP CALCULATIONS, BATTERY CALCULATIONS, INSULATION VALUE, LENGTH OF FIRE ALARM WIRE, SLC WIRING, NAC WIRING ETC.
- F. ALL CONDUIT SHALL BE ROUTED IN 3/4 INCH CONDUIT.
- G. FIRE ALARM CONDUIT SHALL BE PAINTED RED IN COLOR.
- H. THE ELECTRICAL CONTRACTOR SHALL INCLUDE IN BID NUMBER ALL ASSOCIATED COST OF PROVIDING A FULLY FUNCTIONAL FIRE ALARM SYSTEM.
- I. THE BASIS OF DESIGN FOR THE FIRE ALARM SYSTEM SHALL BE MANUFACTURED BY: EDWARDS, MODEL NO. EST. ALL NEW FIRE ALARM DEVICES SHALL BE COMPATIBLE WITH EXISTING SYSTEM, REFER TO SPECIFICATION 283100 FOR ADDITIONAL INFORMATION.
- J. REFER TO DRAWING FA502 FOR ADDITIONAL CIRCUITING INFORMATION

**FIRE ALARM PLAN NOTES**

1. THE CONTRACTOR SHALL PROVIDE NEW FIRE ALARM CONTROL PANEL AS INDICATED. NEW FACP SHALL BE COMPATIBLE WITH FACILITY SYSTEM, REFER TO SPECIFICATION 283100 FOR ADDITIONAL INFORMATION.
2. THE NEW FIRE ALARM CONTROL PANEL (FACP) SHALL INTERCONNECT TO THE EXISTING FIRE ALARM SYSTEM. SEE SHEET FA103 FOR FURTHER INFORMATION.
3. THE FIRE ALARM CONTRACTOR SHALL PROVIDE FIRE ALARM ANNUNCIATOR (FAAN) AS INDICATED, THE NEW FAAN SHALL BE COMPATIBLE WITH THE EXISTING FIRE ALARM SYSTEM.
4. CONNECT TO LOCKED HANDLE CIRCUIT BREAKER, REFER TO DRAWING EP603 FOR ADDITIONAL INFORMATION.
5. PROVIDE FIRE ALARM CONNECTION TO SMOKE DAMPER, REFER TO DETAIL C3/FA502 FOR ADDITIONAL INFORMATION.
6. INSTALL DEVICE SIAMENSE CONNECTION AS INDICATED, INSTALL PER VAMC ST. CLOUD MOUNTING HEIGHT REQUIREMENTS.

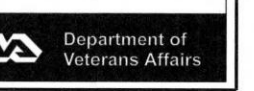
**F1 FIRST FLOOR PLAN**  
1/8" = 1'-0"



**KEY PLAN**  
NTS

FULLY SPRINKLED  
BID DOCUMENTS  
FOR CONSTRUCTION

Office of  
Construction  
and Facilities  
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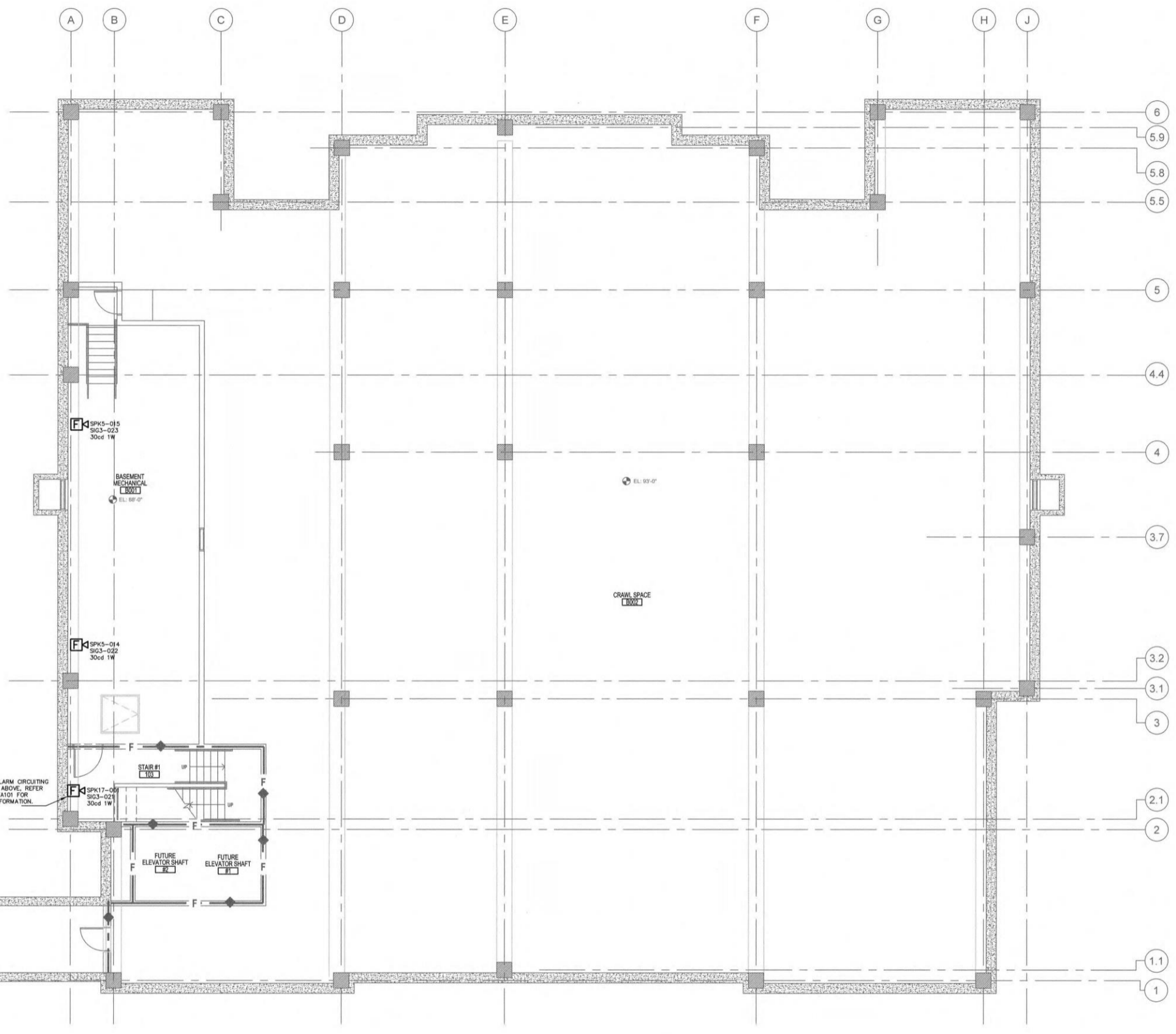


<p>CONSULTANTS:</p>	<p>ARCHITECT/ENGINEERS:</p> <p style="text-align: center;"><b>paradigm</b> Architecture   Engineering   Design-Build 200 Envoy Circle #201, Louisville KY 40299 - PH: 502.339.8511 - www.paradigmusa.com</p>	<p>Drawing Title</p> <p style="text-align: center;"><b>FIRE ALARM PLAN FIRST FLOOR</b></p> <p>Approved Project Director</p>	<p>Project Title</p> <p style="text-align: center;"><b>ST CLOUD ADH AND EC SUPPORT</b></p> <p>Location <b>ST CLOUD VA HEALTH CARE SYSTEM</b> 4801 VETERANS DRIVE, ST. CLOUD MN 56303</p>	<p>Project Number</p> <p style="text-align: center;"><b>656-343</b></p> <p>Building Number</p> <p style="text-align: center;">---</p> <p>Drawing Number</p> <p style="text-align: center;"><b>FA101</b></p>	<p>Date</p> <p style="text-align: center;"><b>12-27-2019</b></p> <p>Checked</p> <p style="text-align: center;"><b>WLM</b></p> <p>Drawn</p> <p style="text-align: center;"><b>MMF</b></p>
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**FIRE ALARM LEGEND**

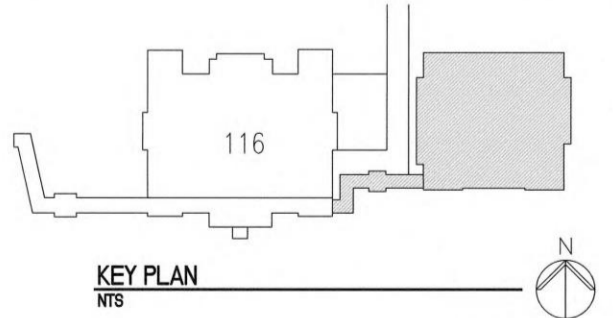
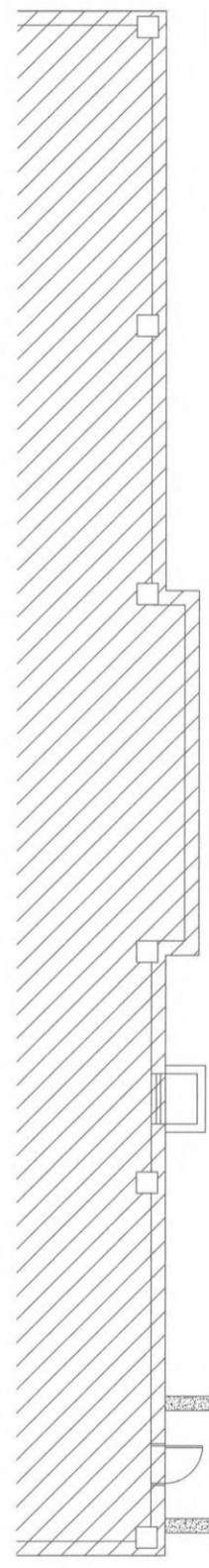
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	DETECTOR; LETTER INDICATES AS FOLLOWS: BLANK = PHOTOELECTRIC SMOKE DETECTOR H = HEAT SMOKE I = IONIZATION SMOKE IH = IONIZATION AND HEAT SMOKE IP = IONIZATION AND PHOTOELECTRIC SMOKE PH = PHOTOELECTRIC AND HEAT SMOKE IPH = IONIZATION, PHOTOELECTRIC, AND HEAT
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	ELECTROMAGNETIC TYPE DOOR HOLDER RELEASE
	SPRINKLER FLOW SWITCH
	SPRINKLER TAMPER SWITCH

three inches = one foot  
one and one half inches = 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



- GENERAL FIRE ALARM PLAN NOTES**
- REFER TO SHEET FA001 FOR LEGEND, ABBREVIATIONS, SCHEDULES AND GENERAL NOTES.
  - THE ELECTRICAL CONTRACTOR SHALL PROVIDE JUNCTION BOX WITH 3/4 INCH EMPTY CONDUIT ROUTED UP INTO THE ACCESSIBLE CEILING SPACE AND OVER TO THE FIRE ALARM CONTROL PANEL, PROVIDE PULL STRINGS WITHIN THE EMPTY CONDUIT SYSTEM.
  - THE FIRE ALARM CONTRACTOR SHALL PULL FIRE ALARM CABLE FROM JUNCTION BOX (FIRE ALARM DEVICE) TO FACP AND NAC PANEL.
  - THE FIRE ALARM CONTRACTOR SHALL PROVIDE FINISH COVER PLATE AT EACH FIRE ALARM DEVICE.
  - THE FIRE ALARM CONTRACTOR SHALL PROVIDE FULLY ENGINEERED SHOP DRAWING SUBMITTALS OF THE PROPOSED WORK PRIOR TO BEGINNING CONSTRUCTION. THE SHOP DRAWINGS SUBMITTALS SHALL INCLUDE BUT NOT LIMITED TO: VOLTAGE DROP CALCULATIONS, BATTERY CALCULATIONS, INSULATION VALUE, LENGTH OF FIRE ALARM WIRE, SLC WIRING, NAC WIRING ETC.
  - ALL CONDUIT SHALL BE ROUTED IN 3/4 INCH CONDUIT.
  - FIRE ALARM CONDUIT SHALL BE PAINTED RED IN COLOR.
  - THE ELECTRICAL CONTRACTOR SHALL INCLUDE IN BID NUMBER ALL ASSOCIATED COST OF PROVIDING A FULLY FUNCTIONAL FIRE ALARM SYSTEM.
  - THE CONTRACTOR SHALL ROUTE FIRE ALARM CIRCUITING UP TO FLOOR ABOVE AND CONTINUE FIRE ALARM CIRCUITING, REFER TO DRAWING FA101 FOR ADDITIONAL INFORMATION.

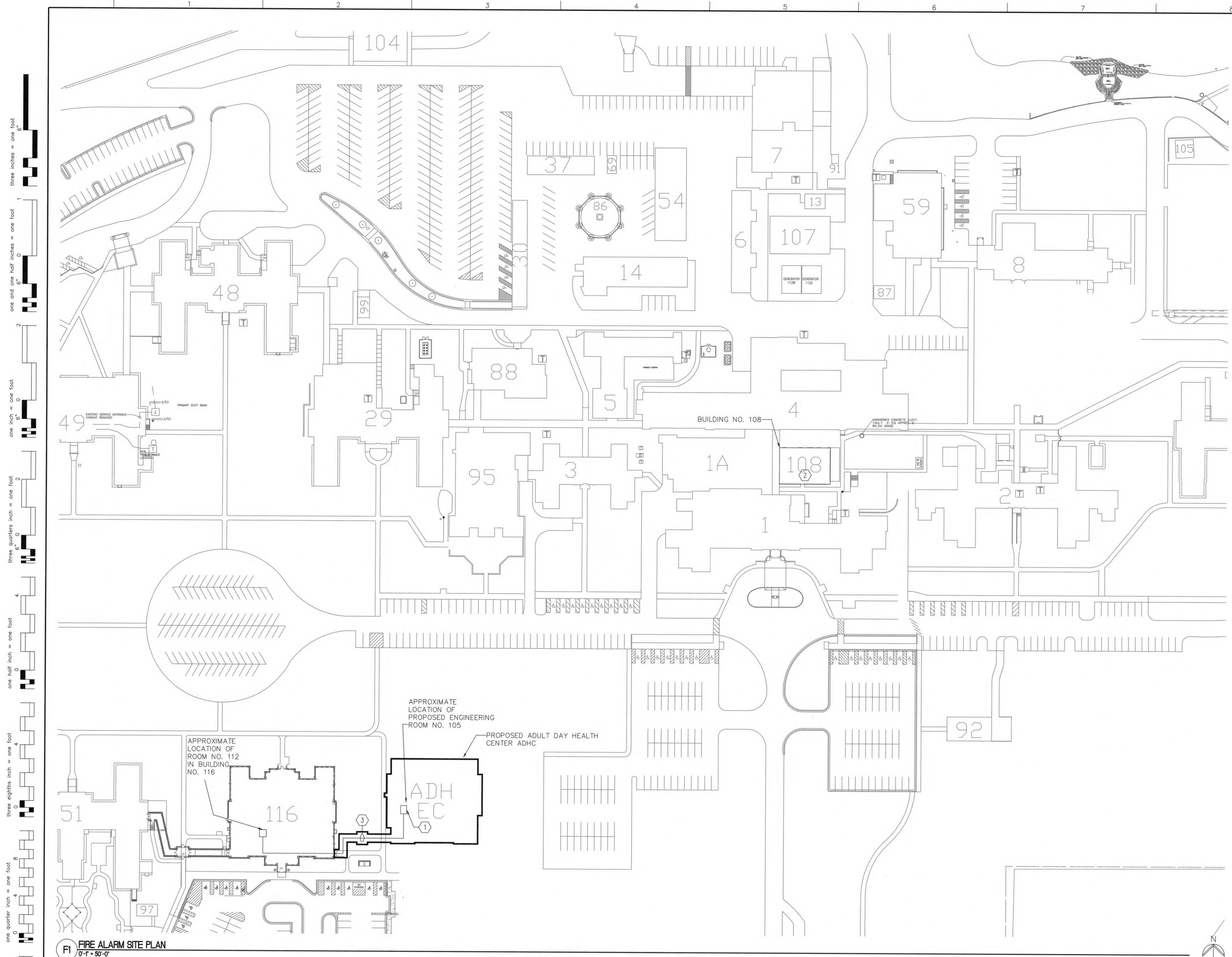
- FIRE ALARM PLAN NOTES**
- PROVIDE NEW FIRE ALARM CONTROL PANEL AS INDICATED. NEW FACP SHALL BE COMPATIBLE WITH FACILITY SYSTEM.
  - THE NEW FIRE ALARM CONTROL PANEL SHALL INTERCONNECT TO THE EXISTING FIRE ALARM SYSTEM. SEE SHEET FA103 FOR FURTHER INFORMATION.
  - THE FIRE ALARM CONTRACTOR SHALL PROVIDE FIRE ALARM ANNUNCIATOR AS INDICATED THE FAAN SHALL BE COMPATIBLE WITH THE EXISTING FIRE ALARM SYSTEM.
  - CONNECT TO LOCKED HANDLE CIRCUIT BREAKER, REFER TO ELECTRICAL PANEL SCHEDULES FOR ADDITIONAL INFORMATION.



**F1 FIRST FLOOR PLAN**  
1/8" = 1'-0"

FULLY SPRINKLED  
BID DOCUMENTS  
FOR CONSTRUCTION

<p>CONSULTANTS:</p>		<p>ARCHITECT/ENGINEERS:</p> <p><b>paradigm</b> Architecture   Engineering   Design-Build 200 Envoy Circle #201, Louisville KY 40299 - PH: 502.339.8511 - www.paradigmusa.com</p>			<p>Drawing Title</p> <p><b>FIRE ALARM PLAN BASEMENT</b></p> <p>Approved Project Director</p>	<p>Project Title</p> <p>ST CLOUD ADH AND EC SUPPORT</p> <p>Location ST CLOUD VA HEALTH CARE SYSTEM 4801 VETERANS DRIVE, ST. CLOUD MN 56303</p> <p>Date 12-27-2019</p> <p>Checked WLM Drawn MMF</p>	<p>Project Number 656-343</p> <p>Building Number ---</p> <p>Drawing Number <b>FA102</b></p>	<p>Office of Construction and Facilities Management</p> <p>Department of Veterans Affairs</p>
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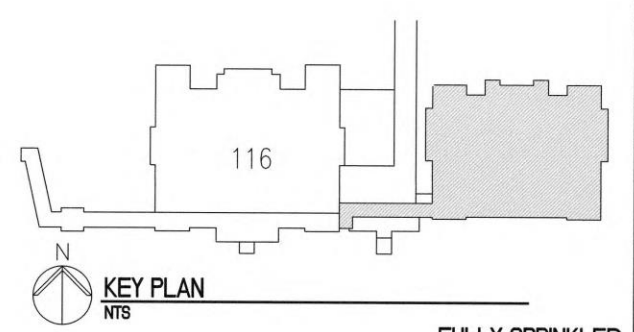


- GENERAL FIRE ALARM PLAN NOTES**
- A. REFER TO SHEET FA001 FOR LEGEND, ABBREVIATIONS, SCHEDULES AND GENERAL NOTES.
  - B. NEW FIRE ALARM CONTROL PANEL (FACP) SHALL BE COMPATIBLE WITH EXISTING SYSTEM.
  - C. WIRING METHODS AND WIRING SYSTEM INSTALLED SHALL BE PER MANUFACTURERS RECOMMENDATIONS.

- FIRE ALARM PLAN NOTES**
1. THE FACP (FIRE ALARM CONTROL PANEL) AND ASSOCIATED EQUIPMENT SHALL BE LOCATED IN ROOM ENGINEERING UTILITY ROOM NO. 105, REFER TO DRAWING FA101 FOR ADDITIONAL INFORMATION.
  2. THE FIRE ALARM CONTRACTOR SHALL PROGRAM THE NEW FIRE ALARM DEVICES ONTO THE "FIREWORKS" MASTER FIRE ALARM CONTROL PANEL LOCATED IN THE BOILER PLANT BUILDING NO. 7.
  3. THE FIRE ALARM CONTRACTOR SHALL EXTEND END FIBER OPTIC CABLE FROM EXISTING FACP LOCATED IN BUILDING NO. 116 TO FACP IN ADHC BUILDING, REFER TO DRAWING FA101 FOR ADDITIONAL INFORMATION.

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 one eighth inch = one foot  
 one sixteenth inch = one foot

**F1 FIRE ALARM SITE PLAN**  
0'-1" = 50'-0"

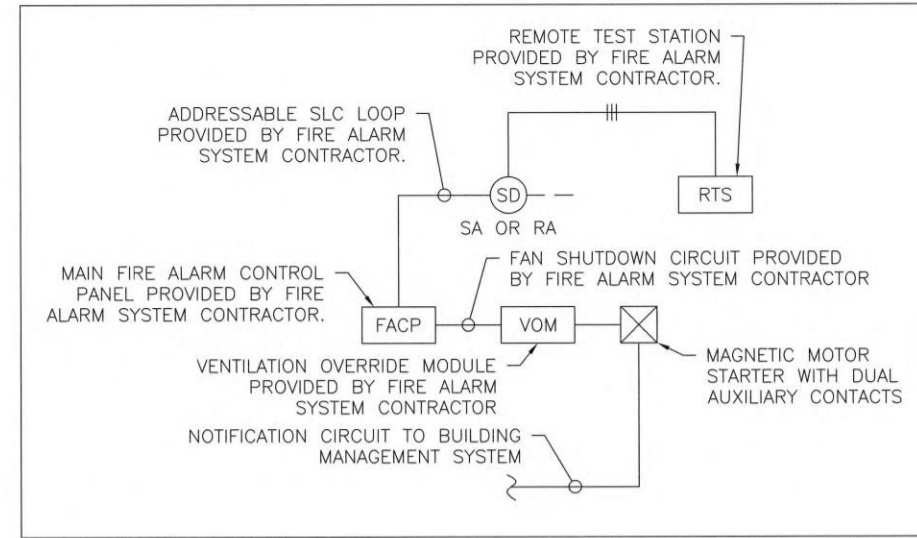


<b>CONSULTANTS:</b> 		<b>ARCHITECT/ENGINEERS:</b>  Architecture   Engineering   Design-Build 200 Envoy Circle #201, Louisville KY 40299 - PH: 502.339.8511 - www.paradigmusa.com				Drawing Title <b>FIRE ALARM SITE PLAN</b>		Project Title <b>ST CLOUD ADH AND EC SUPPORT</b>		Project Number <b>656-343</b>		Office of Construction and Facilities Management Department of Veterans Affairs	
Approved Project Director						Location <b>ST CLOUD VA HEALTH CARE SYSTEM</b> 4801 VETERANS DRIVE, ST. CLOUD MN 56303		Drawing Number <b>FA103</b>					
Date <b>12-27-2019</b>		Checked <b>WLM</b>		Drawn <b>MMF</b>									

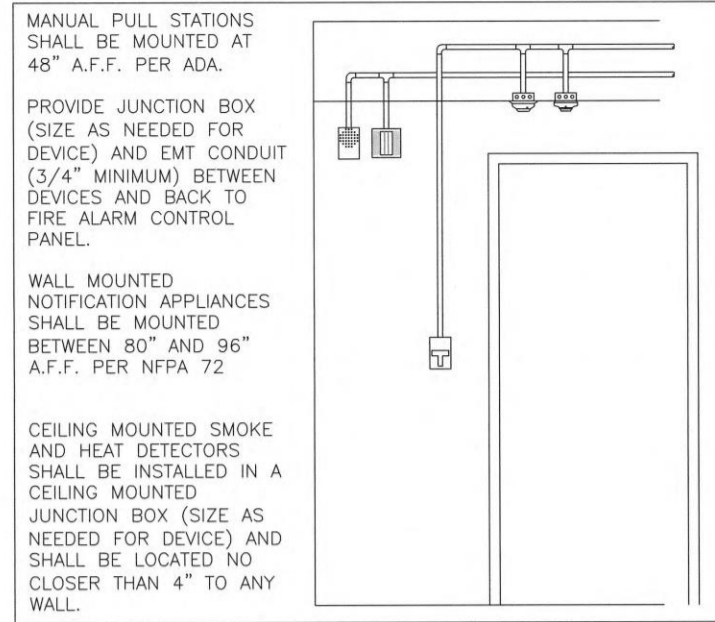
**KEY NOTES**

- EXISTING NURSE CALL SYSTEM TO REMAIN, SHOWN FOR REFERENCE ONLY.
- EXISTING SECURITY PANEL TO REMAIN, SHOWN FOR REFERENCE ONLY.
- EXISTING EDWARDS EST3X FIRE ALARM PANEL TO REMAIN, SHOWN FOR REFERENCE ONLY.
- EXISTING NAC (NOTIFICATION APPLIANCE CIRCUIT) PANEL TO REMAIN, SHOWN FOR REFERENCE ONLY.
- EXISTING FIRE ALARM BATTERY SUPPLY TO REMAIN, SHOWN FOR REFERENCE ONLY.
- THE FIRE ALARM CONTRACTOR SHALL DISCONNECT AND EXTEND THE EXISTING "END OF LOOP" FIRE ALARM FIBER OPTIC CABLE TO THE NEW FIBER OPTIC CABLE TRANSITION CABINET IN THE NEW ADHC BUILDING.
- EXISTING PUBLIC ADDRESS AMPLIFIER TO REMAIN, THE PUBLIC ADDRESS CONTRACTOR SHALL ROUTE NEW PUBLIC ADDRESS CABLING TO NEW PUBLIC ADDRESS PANEL LOCATED IN THE NEW ADHC.
- EXISTING CONDUIT SYSTEM TO REMAIN (TYPICAL).
- THE FIRE ALARM CONTRACTOR SHALL PROVIDE NEW EDWARDS EST3X FIRE ALARM CONTROL PANEL AS INDICATED, THE CONTRACTOR SHALL EXTEND THE "END OF LOOP" FIBER OPTIC CABLE TO NEW FIBER OPTIC CABLE TRANSITION CABINET AS INDICATED.
- THE CONTRACTOR SHALL PROVIDE NEW PUBLIC ADDRESS PANEL AS INDICATED, THE NEW P.A. PANEL SHALL CONNECT TO THE EXISTING AMPLIFIER IN BUILDING NO. 116, ROUTE NEW CABLING VIA THE UTILITY TUNNEL SYSTEM.
- PROVIDE NEW NAC PANEL AS INDICATED, SHALL BE COMPATIBLE WITH NEW FIRE ALARM SYSTEM.
- PROVIDE UL RATED FIRE STOP ASSEMBLY AT ALL RATED PENETRATIONS (TYPICAL).
- PROVIDE NEW FIBER OPTIC CABLE TRANSITION CABINET AS INDICATED, CONNECT "END OF LOOP" FIBER OPTIC CABLE TO NEW F.O.C. PANEL.

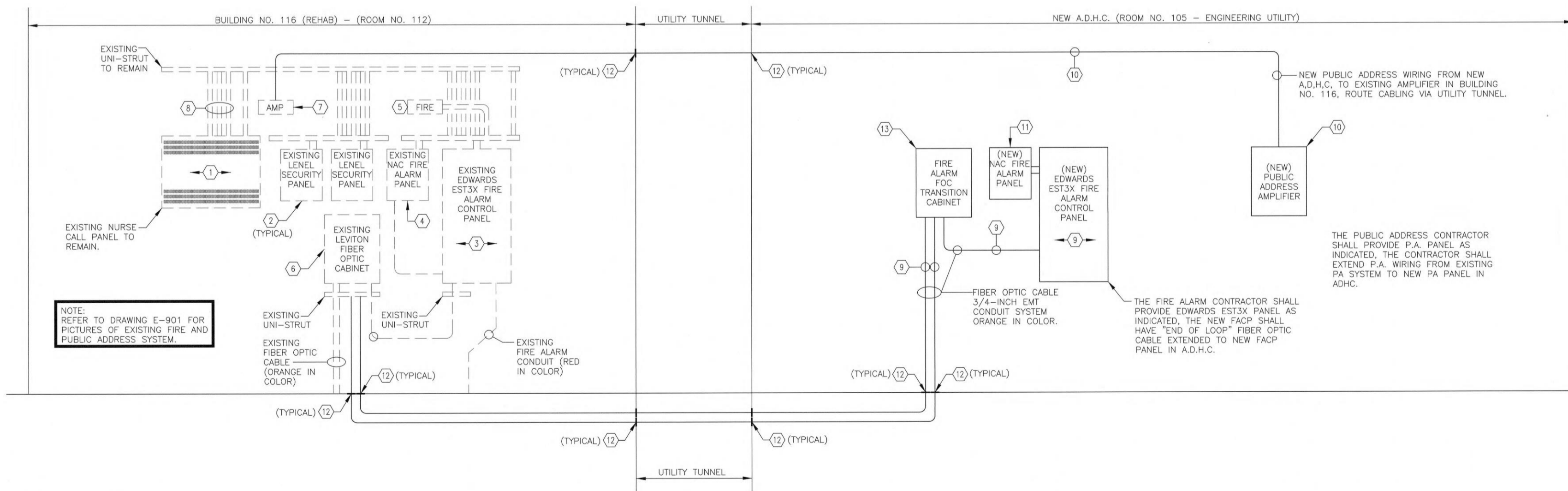
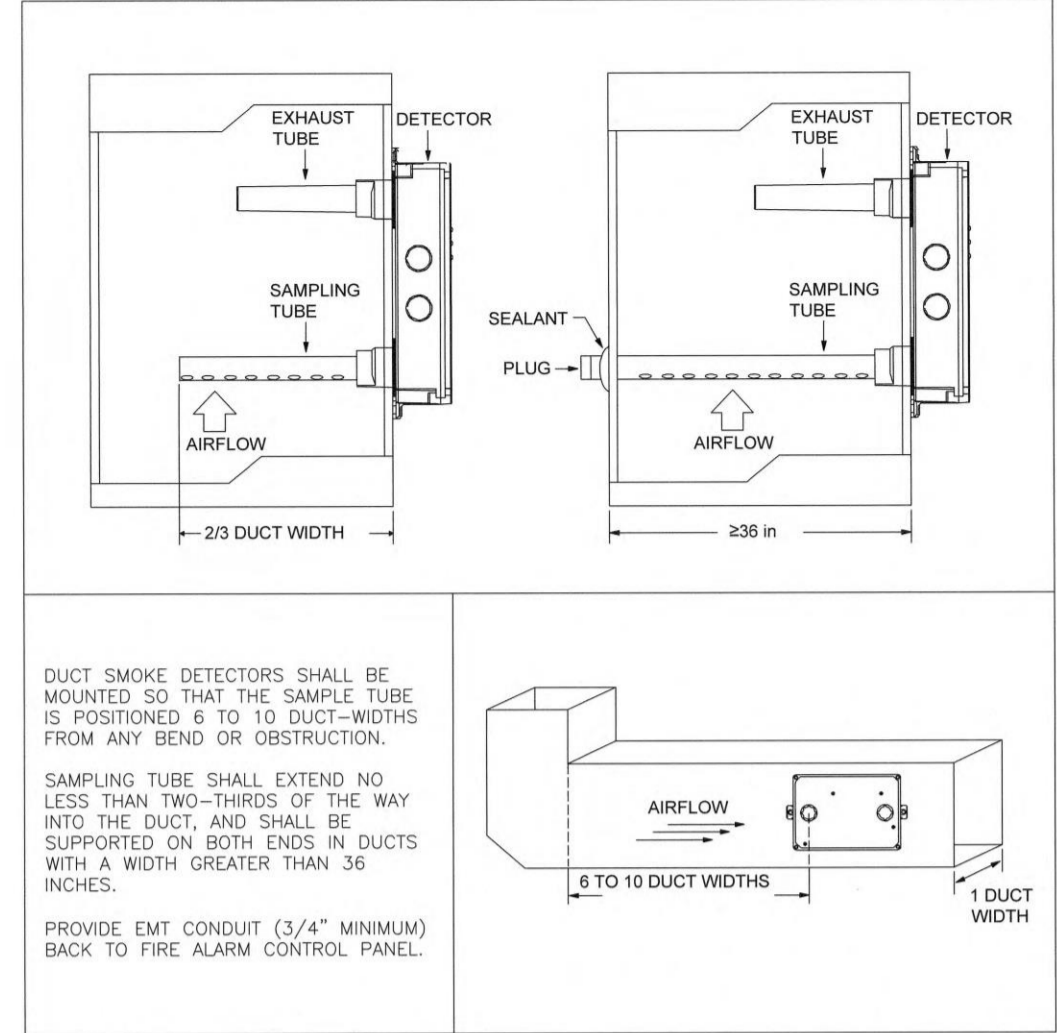
**C5 AIR HANDLING SYSTEM SHUTDOWN WIRING DIAGRAM**  
NO SCALE



**B5 FIRE ALARM DEVICE MOUNTING DETAIL**  
NOT TO SCALE



**F4 DUCT SMOKE DETECTOR INSTALLATION DETAIL**  
NOT TO SCALE



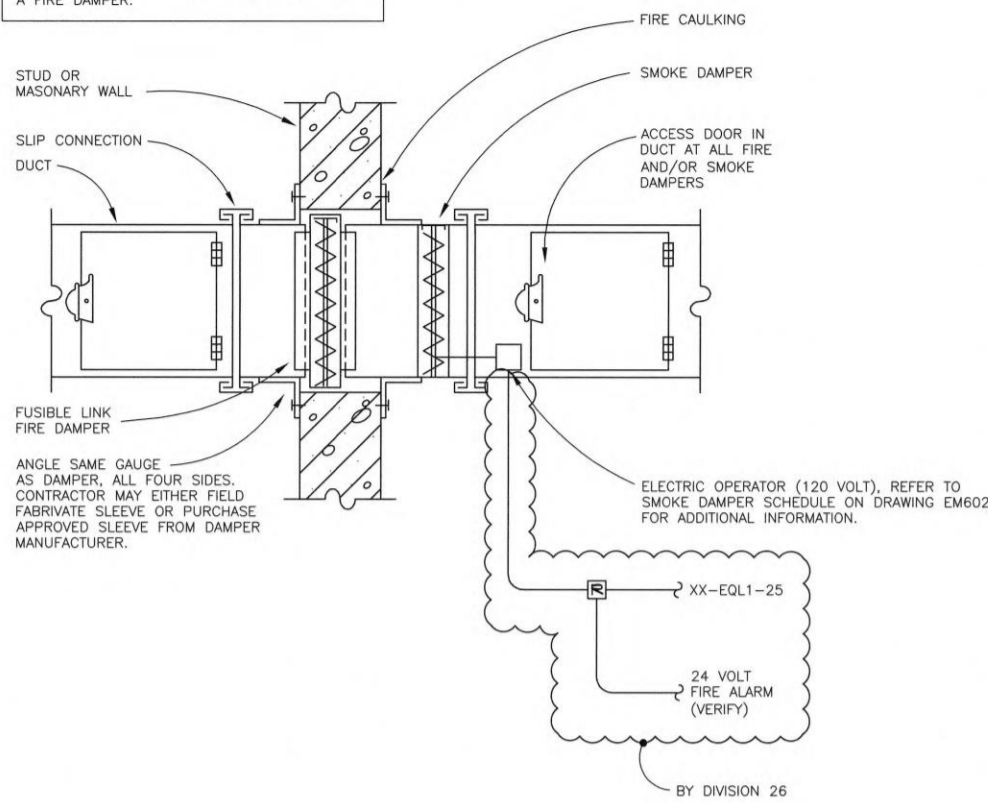
**F1 FIRE ALARM AND PUBLIC ADDRESS RISER DIAGRAM**  
NOT TO SCALE

three inches = one foot  
one and one half inches = 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

FULLY SPRINKLED  
BID DOCUMENTS  
FOR CONSTRUCTION

<b>CONSULTANTS:</b> 		<b>ARCHITECT/ENGINEERS:</b>  Architecture   Engineering   Design-Build 200 Envoy Circle #201, Louisville KY 40299 - PH: 502.339.8511 - www.paradigmusa.com		Drawing Title <b>FIRE ALARM DETAILS</b>		Project Title <b>ST CLOUD ADH AND EC SUPPORT</b>		Project Number <b>656-343</b>		Office of Construction and Facilities Management	
Approved Project Director				Location <b>ST CLOUD VA HEALTH CARE SYSTEM</b> 480 VETERANS DRIVE, ST. CLOUD MN 56303		Building Number ---		Drawing Number <b>FA501</b>		Department of Veterans Affairs	
Date <b>12-27-2019</b>		Checked <b>WLM</b>		Drawn <b>MMF</b>		Date <b>12-27-2019</b>		Checked <b>WLM</b>		Drawn <b>MMF</b>	

NOTE:  
ALL SMOKE DAMPERS ARE EITHER COMBINATION FIRE/SMOKE DAMPERS OR ARE PARALLEL WITH A FIRE DAMPER.



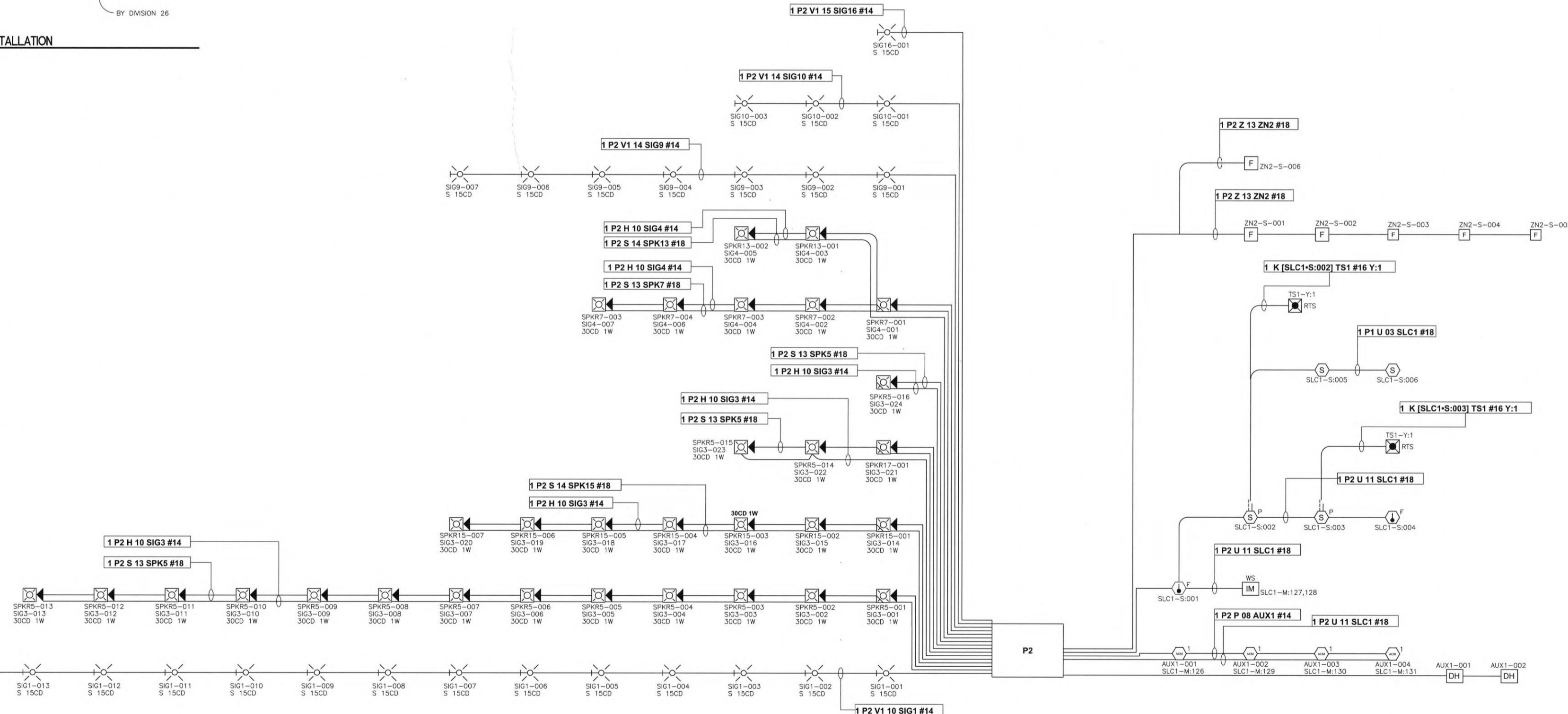
2C SECTION THRU SMOKE DAMPER INSTALLATION  
NOT TO SCALE

Battery Calculations for Panel: P2						
Part No:3X-SFS1R - EST3X LIFE SAFETY CONTROL PANEL, RED						
Part No.	Qty.	Description	Standby	Total Standby	Alarm	Total Alarm
<b>Panel Equipment</b>						
SFS1-CPU	1	MAIN CPU BOARD	115.000mA	115.000mA	115.000mA	115.000mA
SFS1	1	CONTROL/DISPLAY MODULE	2.000mA	2.000mA	2.000mA	2.000mA
PS10-4B	1	POWER SUPPLY CARD	50.000mA	50.000mA	50.000mA	50.000mA
3-SSDC1	1	SIGNATURE SINGLE DRIVER CONTROLLER FOR EST3	144.000mA	144.000mA	204.000mA	204.000mA
CLA-PS10	1	CLASS A ADAPTER CARD	0.000mA	0.000mA	0.000mA	0.000mA
3X-FIB	1	3X FIBER COMMUNICATION CARD, CLASS B/A NET, CLASS B AUDIO	105.000mA	105.000mA	105.000mA	105.000mA
3-IDC 8/4	3	INITIATING / INDICATING DEVICE CIRCUIT MODULE	53.000mA	159.000mA	350.000mA	1050.000mA
1	1	Card: 11 Circuit: SLC1 Signaling line	0.000mA	0.000mA	0.000mA	0.000mA
<b>Total Panel Stby</b>			<b>575.000mA</b>	<b>575.000mA</b>	<b>Total Panel Alarm</b>	<b>1526.000mA</b>
<b>Peripheral Devices</b>						
SIGA-MCR	4	CONTROL RELAY MODULE - UIO MOUNT (Power)	0.000mA	0.000mA	0.000mA	0.000mA
EC1F-VM	27	STROBE, M-C, FIRE, WH, WALL (Notification)	0.000mA	0.000mA	103.000mA	2781.000mA
G4HFW-S2VMC	28	SPEAKER/STROBE, 520Hz, 25V, FIRE, WH, 15, 30, 75, 110 CD (Notification)	0.000mA	0.000mA	130.000mA	3640.000mA
G4HFW-S2VMC	3	SPEAKER/STROBE, 520Hz, 25V, FIRE, WH, 15, 30, 75, 110 CD (Notification)	0.000mA	0.000mA	96.000mA	288.000mA
SIGA-SD	2	SUPERDUCT PHOTOELECTRIC DUCT SMOKE DETECTOR (Signaling line)	0.045mA	0.090mA	0.000mA	0.000mA
SIGA-HFS	2	FIXED HEAT DETECTOR (Signaling line)	0.045mA	0.090mA	0.000mA	0.000mA
SIGA-WFM	1	DUAL INPUT WATERFLOW / SUPERVISORY MODULE (Signaling line)	0.250mA	0.250mA	0.000mA	0.000mA
SIGA-MCR	4	CONTROL RELAY MODULE - UIO MOUNT (Signaling line)	0.100mA	0.400mA	0.000mA	0.000mA
SD-TRK	2	SUPERDUCT, REMOTE TEST/RESET STATION, KEYED (Test Switch)	5.000mA	10.000mA	0.000mA	0.000mA
270-SPQ	6	PULL STATION, TERMINALS (Initiating)	0.000mA	0.000mA	0.000mA	0.000mA
G4HFW-S2VMC	31	SPEAKER/STROBE, 520Hz, 25V, FIRE, WH, 15, 30, 75, 110 CD (Audio)	0.000mA	0.000mA	0.000mA	0.000mA
<b>Total Peripheral Stby</b>			<b>10.830mA</b>	<b>10.830mA</b>	<b>Total Periph Alarm</b>	<b>6709.000mA</b>
<b>Total Standby Amps</b>			<b>585.830mA</b>	<b>585.830mA</b>	<b>Total Alarm Amps</b>	<b>8235.000mA</b>
			Standby time: 24 Hrs	14.06Ah	Alarm time: 5 Min	0.686Ah
					Battery requirement:	14.746Ah
			Compensation Factors - Standby: 1.2	Requirement with compensation:		17.695Ah

GENERAL FIRE ALARM PLAN NOTES

- REFER TO SHEET FA001 FOR LEGEND, ABBREVIATIONS, SCHEDULES AND GENERAL NOTES.
- THE ELECTRICAL CONTRACTOR SHALL PROVIDE JUNCTION BOX WITH 3/4 INCH EMPTY CONDUIT ROUTED UP INTO THE ACCESSIBLE CEILING SPACE AND OVER TO THE FIRE ALARM CONTROL PANEL, PROVIDE PULL STRINGS WITHIN THE EMPTY CONDUIT SYSTEM.
- THE FIRE ALARM CONTRACTOR SHALL PULL FIRE ALARM CABLE FROM JUNCTION BOX (FIRE ALARM DEVICE) TO FACP AND NAC PANEL.
- THE FIRE ALARM CONTRACTOR SHALL PROVIDE FINISH COVER PLATE AT EACH FIRE ALARM DEVICE.
- THE FIRE ALARM CONTRACTOR SHALL PROVIDE FULLY ENGINEERED SHOP DRAWING SUBMITTALS OF THE PROPOSED WORK PRIOR TO BEGINNING CONSTRUCTION. THE SHOP DRAWINGS SUBMITTALS SHALL INCLUDE BUT NOT LIMITED TO: VOLTAGE DROP CALCULATIONS, BATTERY CALCULATIONS, INSULATION VALUE, LENGTH OF FIRE ALARM WIRE, SLC WIRING, NAC WIRING ETC.
- ALL CONDUIT SHALL BE ROUTED IN 3/4 INCH CONDUIT.
- FIRE ALARM CONDUIT SHALL BE PAINTED RED IN COLOR.
- THE ELECTRICAL CONTRACTOR SHALL INCLUDE IN BID NUMBER ALL ASSOCIATED COST OF PROVIDING A FULLY FUNCTIONAL FIRE ALARM SYSTEM.
- THE FIRE ALARM SYSTEM SHALL BE MANUFACTURED BY: EDWARDS, MODEL NO. EST3X.

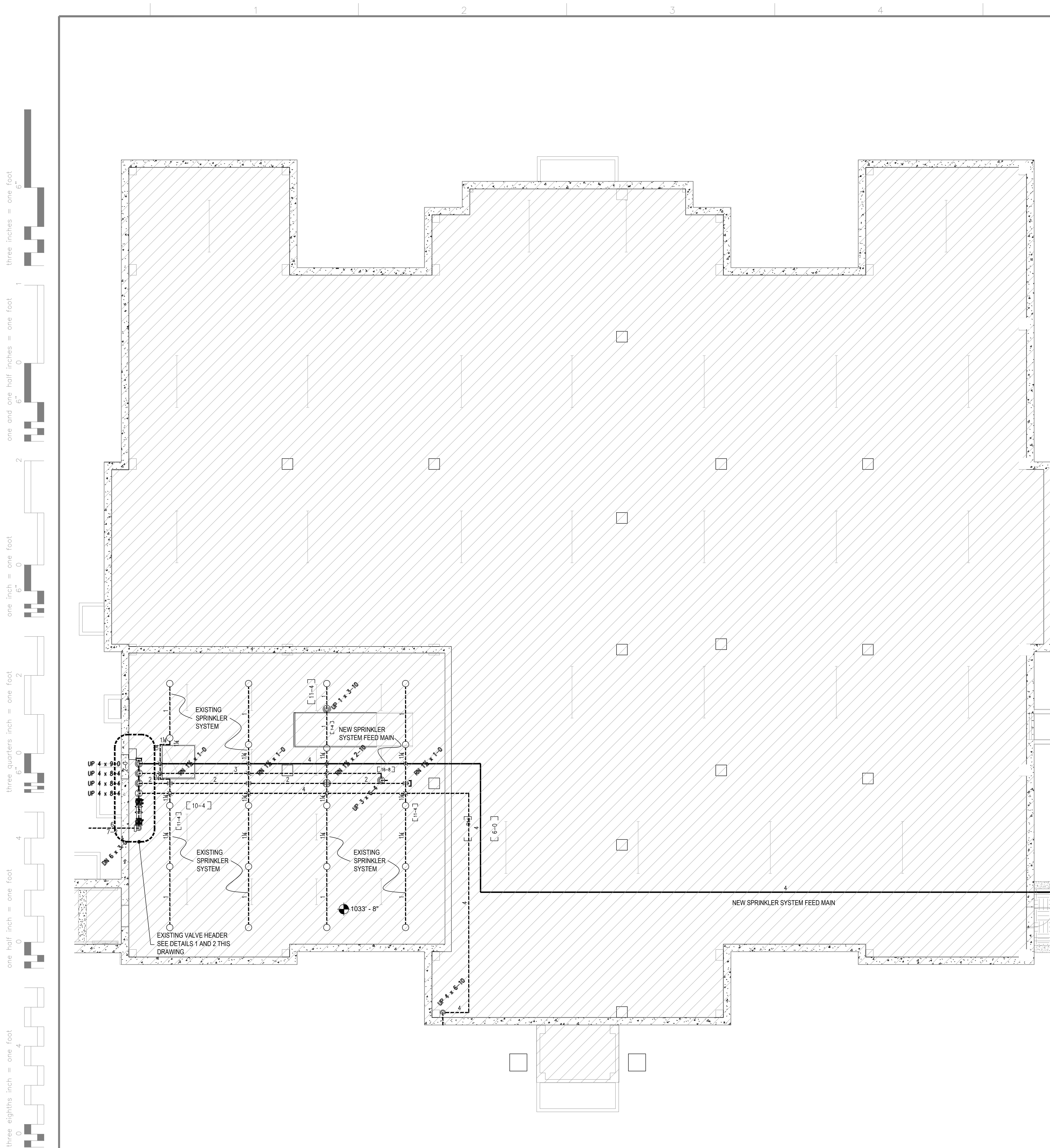
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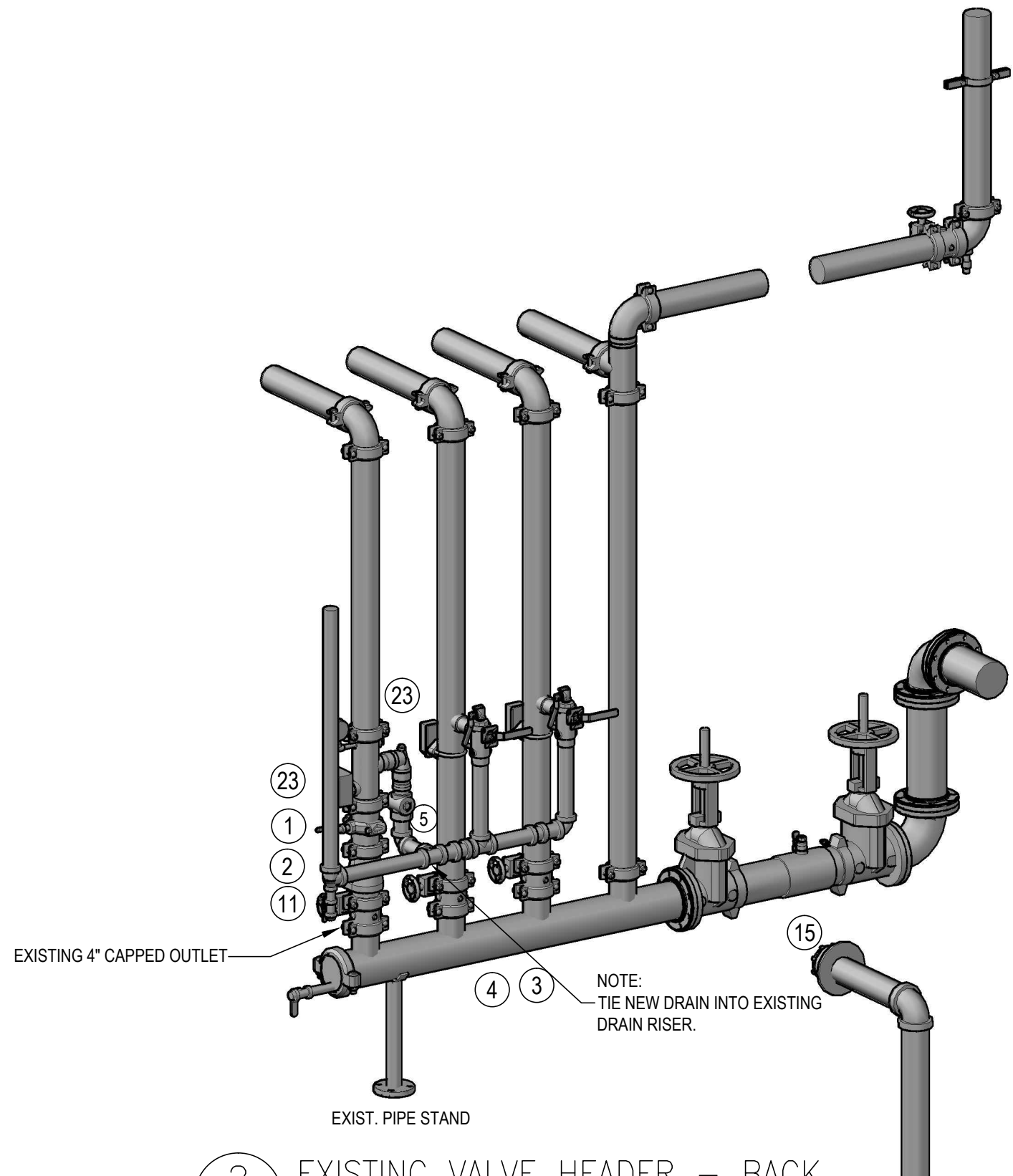
F1 FIRE ALARM RISER DIAGRAM  
NOT TO SCALE

CONSULTANTS:  		ARCHITECT/ENGINEERS:  Architecture   Engineering   Design-Build 200 Envoy Circle #201, Louisville KY 40299 - PH: 502.339.8511 - www.paradigmusa.com		Drawing Title <b>FIRE ALARM RISER AND BATTERY CALCULATIONS</b>		Project Title <b>ST CLOUD ADH AND EC SUPPORT</b>		Project Number <b>656-343</b>		Office of Construction and Facilities Management Department of Veterans Affairs	
ADDENDUM 1 - BID AND CONSTRUCTION DOCUMENTS 05/29/20				Approved Project Director		Location <b>ST CLOUD VA HEALTH CARE SYSTEM</b> 4801 VETERANS DRIVE, ST. CLOUD, MN 56203		Building Number ---		Drawing Number <b>FA502</b>	
Revisions:		Date		Date 12-27-2019		Checked WLM		Drawn MMF		Date 12-27-2019	

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BID DOCUMENTS  
FOR CONSTRUCTION



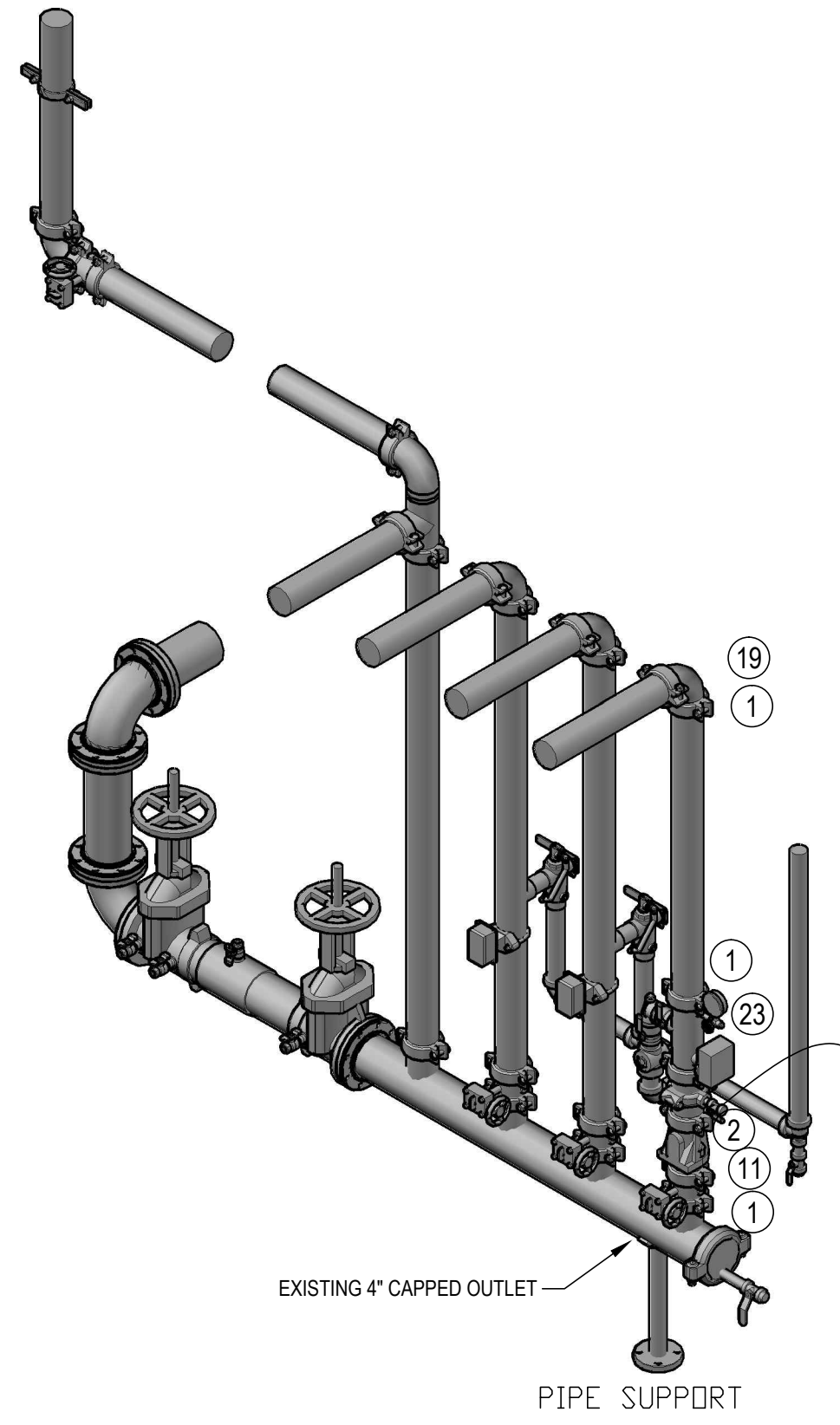
1 BUILDING 116 - SPRINKLER HEADER LOCATION  
 FP100 SCALE : 1/8" = 1FT



2 EXISTING VALVE HEADER - BACK  
 FP100 SCALE : 1/2" = 1FT

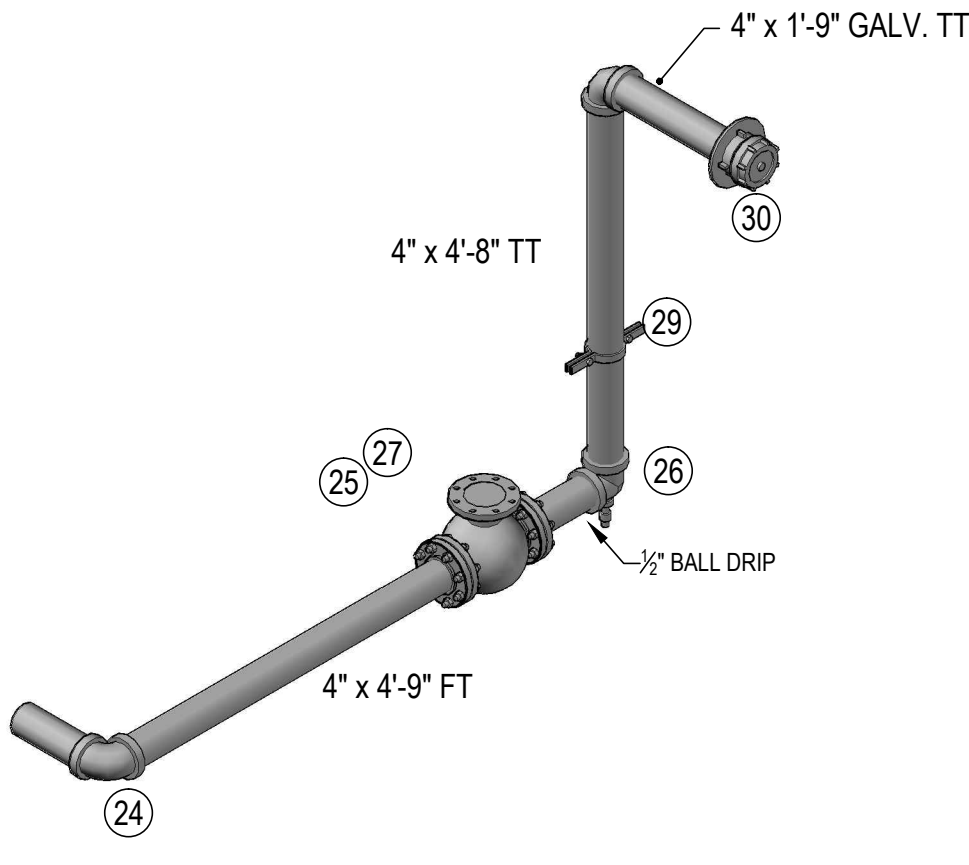
Legend	
ID	Description
1	4 VIC LT-CPLG #75
2	4 VIC FLK CHECK VLV #717
3	2" BLK. M.I. UNION
4	2 TEE
5	2 C I ELL
6	2"TEST&DR 3/4"OR MOD#2511A AGF
7	2 X 7 RED FLANGE CI
8	6" PIPE SUPPORT
9	6 X 1 DRAIN CAP
10	1 X 1/2 CI HEX BUSHING
11	4 VIC BFLY W/TAM&TAP #705
12	4 VIC DRAIN #10-DR
13	4" RISER CLAMP
14	1" PLUG
15	6" BFP DBLCHK OSYRW BOTH COLT (C200)
16	6" FLG ELL
17	4" WATER FLOW SWITCH
18	4 VIC TEE #20
19	4 VIC 90 #10
20	6" VIC CPLG #77
21	1" BALL VALVE
22	2 X 1 X 2 RED TEE
23	4" FLOOR CONTROL ASSY G/G

3 VALVE HEADER LEGEND  
 FP100 SCALE : N.T.S.



4 EXISTING VALVE HEADER - FRONT  
 FP100 SCALE : 1/2" = 1FT

- NOTES:
- USE THE EXISTING VALVE HEADER IN BUILDING 116 TO FEED THE SYSTEM FOR THE ADULT DAYCARE CENTER. USE THE EXISTING 4" CAPPED OUTLET FOR THE NEW SYSTEM.
  - AN ADDITIONAL FIRE DEPARTMENT STORZ CONNECTION IS TO BE PROVIDED AS SHOWN.
  - NITROGEN WET INERTING SYSTEM
    - SUPPLY AND INSTALL:
      - NITROGEN TANK
      - POTTER NITROGEN CYLINDER PRESSURE REGULATOR WITH HOSE
      - POTTER WET PIPE SYSTEM INERTING KIT
      - INSTALL NITROGEN INJECTION MANIFOLD ON HEADER BELOW FLOW SWITCH
      - INSTALL QUICK-X-HAUST VENT IN REMOTE ACCESSIBLE AREA
      - POTTER PAAR-B AUTOMATIC FLOAT TYPE AIR VENT



5 FIRE DEPARTMENT CONNECTION  
 FP100 SCALE : 1/2" = 1FT

Legend		
ID	Qty	Description
24	1	4 C I ELL
25	2	4" GASKET PACK 125# FLANGE
26	1	4 X 1 X 4 RED TEE
27	1	4" CHECK VALVE F/F KENNEDY
28	1	1 X 1/2 CI HEX BUSHING
29	1	4" RISER CLAMP
30	1	4x5" STORZ CONNECTION

three inches = one foot  
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 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

FULLY SPRINKLED  
 BID DOCUMENTS  
 NOT FOR CONSTRUCTION

**CONSULTANTS:**  
 I hereby certify that this plan, specification or report was prepared by me or under my supervision and that I am a NICET IV Senior Engineering Technician.  
 Name: Ed Meijer Date: 05/27/2020  
 VA License No. 051010 NICET # 94151  
 Meijer Design, Inc.  
 2302 Gibraltar Road  
 St. Joseph, MO 64503  
 Phone: (320) 492-3841  
 www.meijer.com

**ARCHITECT/ENGINEERS:**  
  
 Architecture | Engineering | Design-Build  
 200 Envoy Circle #201, Louisville KY 40299 - PH: 502.339.8511 - www.paradigmusa.com

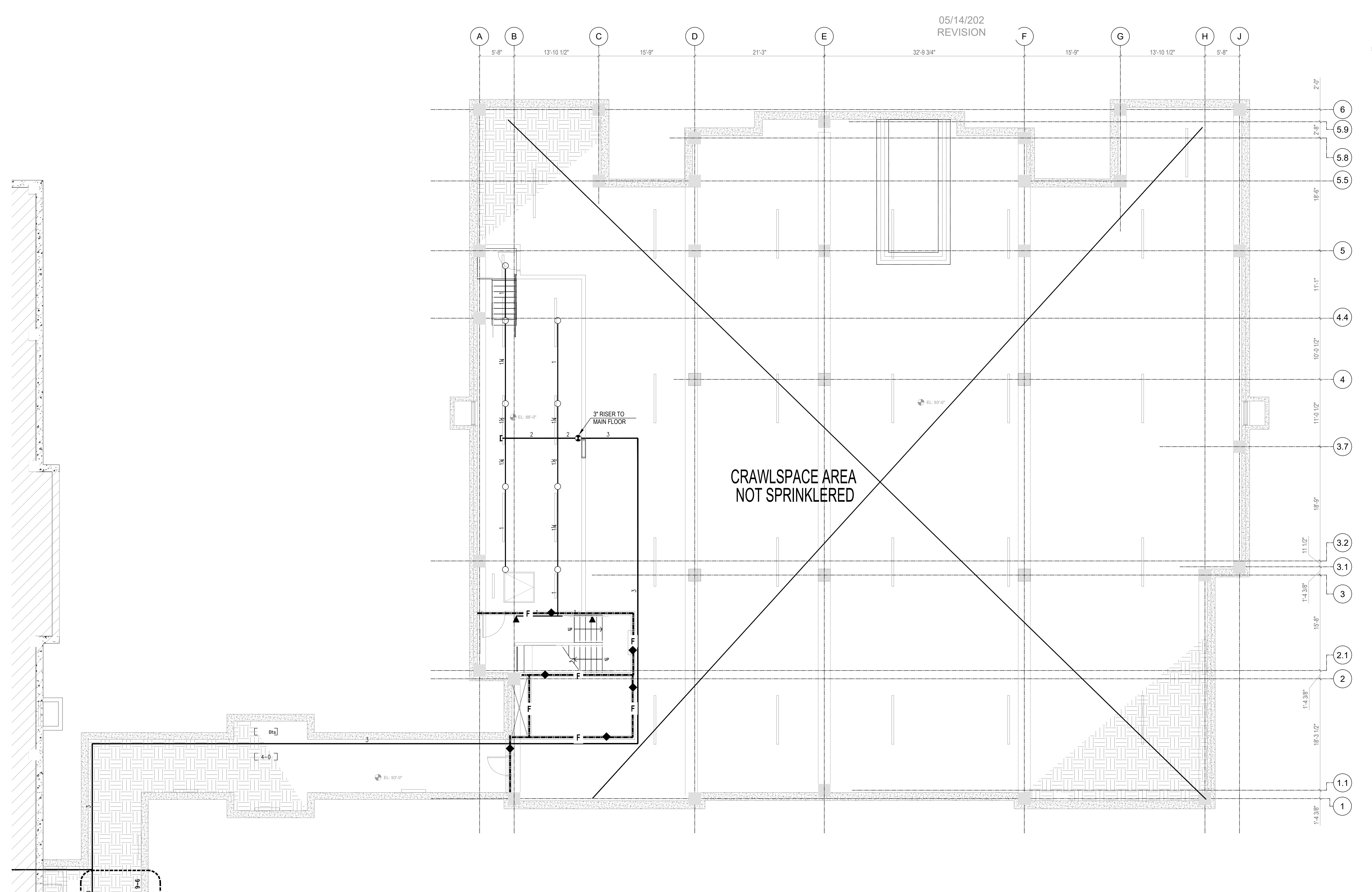
Drawing Title  
 FIRE PROTECTION SYSTEM SUPPLY AND HEADER DETAILS  
 Approved Project Director

Project Title  
 ST CLOUD ADH AND EC SUPPORT  
 Location ST CLOUD VA HEALTH CARE SYSTEM  
 4801 VETERANS DRIVE, ST. CLOUD MN 56303  
 Date 05-27-2020 Checked Drawn EM

Project Number  
 656-343  
 Building Number  
 ---  
 Drawing Number  
 FP100

Office of  
 Construction and Facilities Management

three inches = one foot  
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05/14/202  
 REVISION

CRAWLSPACE AREA  
 NOT SPRINKLERED

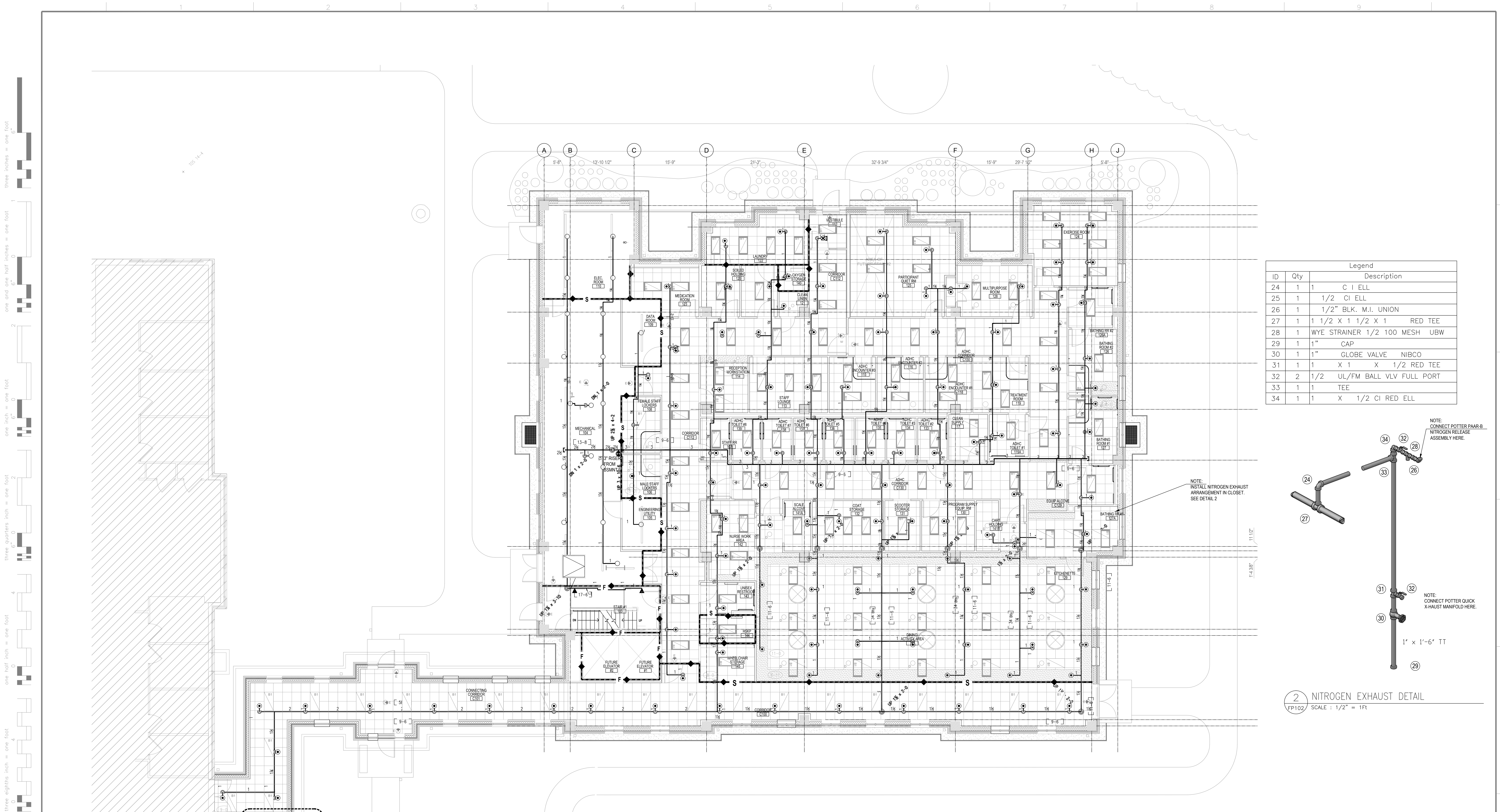
1 LOWER LEVEL SPRINKLER SYSTEM  
 SCALE : 1/8" = 1 FT

Sprinkler Head Schedule					
Symbol	Count	Thread	K-Factor	Description	Note
○	9	1/2"	5.6	TY3131 1/2 QR 155 B UP	
◄	2	1/2"	5.6	TY3331 1/2 QR 155 B HSW	
11 = Total Number of Heads Basement					

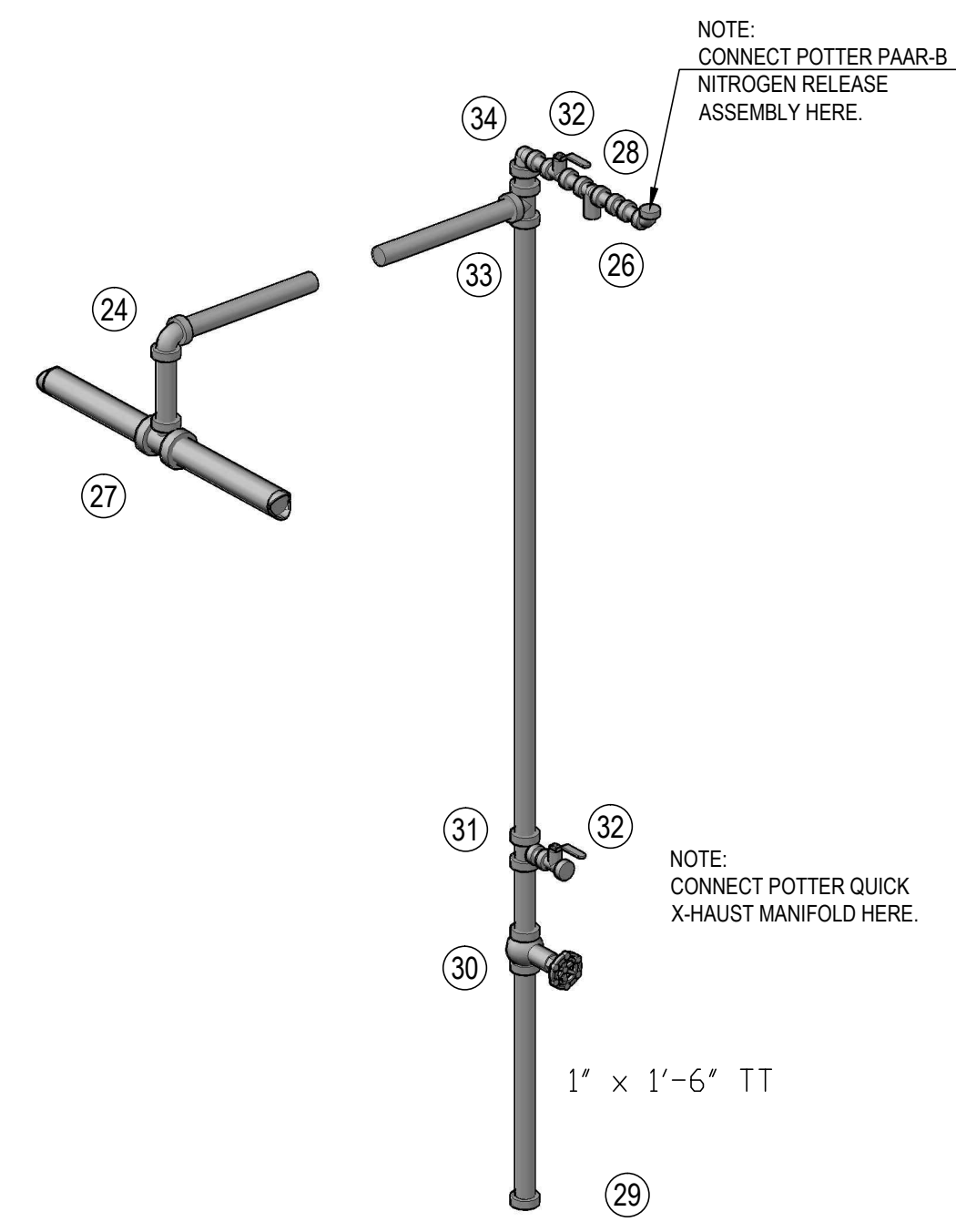
FULLY SPRINKLED  
 BID DOCUMENTS  
 NOT FOR CONSTRUCTION

Revisions Date	<b>CONSULTANTS:</b> I hereby certify that this plan, specification or report was prepared by me or under my supervision and that I am a NICET IV Senior Engineering Technician. Name: Ed Meijer Date: 05/27/2020 WA License No. 061010 NICET # 94131 Paradigm Design, Inc. 2302 Gateway Road St. Joseph, MO 64501 Phone: (320) 492-3841 www.paradigmusa.com	<b>ARCHITECT/ENGINEERS:</b>  <b>paradigm</b> Architecture   Engineering   Design-Build 200 Envoy Circle #201, Louisville KY 40299 - PH: 502.339.8511 - www.paradigmusa.com	Drawing Title <b>LOWER LEVEL FIRE PROTECTION SYSTEM</b> Approved Project Director	Project Title <b>ST CLOUD ADH AND EC SUPPORT</b> Location <b>ST CLOUD VA HEALTH CARE SYSTEM</b> 4801 VETERANS DRIVE, ST. CLOUD MN 56303 Date 05-27-2020 Checked Drawn EM	Project Number <b>656-343</b> Building Number --- Drawing Number <b>FP101</b>	Office of Construction and Facilities Management 
	VA FORM 08-6231					





Legend		
ID	Qty	Description
24	1	1 C I ELL
25	1	1/2 CI ELL
26	1	1/2" BLK. M.I. UNION
27	1	1 1/2 X 1 1/2 X 1 RED TEE
28	1	WYE STRAINER 1/2 100 MESH UBW
29	1	1" CAP
30	1	1" GLOBE VALVE NIBCO
31	1	X 1 X 1/2 RED TEE
32	2	1/2 UL/FM BALL VLV FULL PORT
33	1	TEE
34	1	X 1/2 CI RED ELL



2 NITROGEN EXHAUST DETAIL  
 FP102 SCALE: 1/2" = 1'-0"

1 MAIN FLOOR SPRINKLER SYSTEM  
 FP102 SCALE: 1/8" = 1'-0"

Sprinkler Head Schedule					
Symbol	Count	Thread	K-Factor	Description	Note
○	124	1/2"	5.6	TY323 1/2 OR 155 WH PDR	on Drop
○	20	1/2"	5.6	TY3131 1/2 OR 155 B UP	
⊗	1	1"	5.6	TY3235 1/2 Q-12.00 155 B PR	
◀	2	1/2"	5.6	TY3331 1/2 OR 155 B HSW	
147 = Total Number of Heads Main Floor					

one eighth inch = one foot  
 one quarter inch = one foot  
 one half inch = one foot  
 three eighths inch = one foot  
 three quarters inch = one foot  
 one inch = one foot  
 one and one half inches = one foot  
 two inches = one foot  
 three inches = one foot  
 four inches = one foot  
 five inches = one foot  
 six inches = one foot  
 seven inches = one foot  
 eight inches = one foot  
 nine inches = one foot  
 ten inches = one foot  
 eleven inches = one foot  
 twelve inches = one foot  
 thirteen inches = one foot  
 fourteen inches = one foot  
 fifteen inches = one foot  
 sixteen inches = one foot

Revisions Date	<b>CONSULTANTS:</b> I hereby certify that this plan, specification or report was prepared by me or under my supervision and that I am a NICET IV Senior Engineering Technician. Name: Ed Meijer Date: 05/27/2020 VA License No. 051010 NCEC # 04151 Meijer Design, Inc. 23602 Gateway Road St. Joseph, MO 64503 Phone: (320) 492-3841 www.mefix.com	<b>ARCHITECT/ENGINEERS:</b> <div style="text-align: center;">   <b>paradigm</b>            Architecture   Engineering   Design-Build            200 Envoy Circle #201, Louisville KY 40299 - PH: 502.339.8511 - www.paradigmso.com         </div>	Drawing Title <b>MAIN FLOOR FIRE PROTECTION SYSTEM AND NITROGEN DETAIL</b> Approved Project Director	Project Title <b>ST CLOUD ADH AND EC SUPPORT</b> Location <b>ST CLOUD VA HEALTH CARE SYSTEM</b> 4801 VETERANS DRIVE, ST. CLOUD MN 56303 Date: 05-27-2020 Checked: Drawn: EM	Project Number <b>656-343</b> Building Number --- Drawing Number <b>FP102</b>	FULLY SPRINKLED BID DOCUMENTS NOT FOR CONSTRUCTION  Office of Construction and Facilities Management  
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