

# REPLACE COTTAGE 2 FIRE SPRINKLER SYSTEM MISSOURI HILLS YOUTH CENTER ST. LOUIS, MO

**SSC Engineering, Inc.**  
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 Chesterfield, MO 63005 MO Cert. of Auth.: 001244

OWNER: STATE OF MISSOURI  
 MICHAEL L. PARSON,  
 GOVERNOR  
 DIVISION OF YOUTH SERVICES

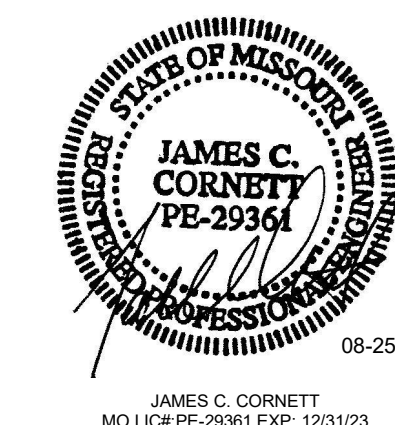
PROJECT MANAGEMENT: OFFICE OF ADMINISTRATION  
 DIVISION OF FACILITIES MANAGEMENT,  
 DESIGN AND CONSTRUCTION



DESIGNER: SSC ENGINEERING INC.

STATE OF MISSOURI PROJECT NUMBER: H2306-01  
 SSC PROJECT NUMBER: 2023-204

SITE NUMBER: 7706  
 FACILITY NUMBER: 8877706012



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FIRE PROTECTION DESIGN CRITERIA (NFPA 13 - 2016 EDITION)					
HAZARD	AREA	DESIGN CRITERIA	HOSE (GPM)	MAX SPACING (SQFT)	DESIGN BASIS
LIGHT HAZARD	OFFICE AREAS / PUBLIC AREAS / CORRIDORS / RESTROOMS / LOBBY / SLEEPING ROOMS	0.10 / 1500 SQFT	100	225	NFPA 13 SECTIONS 5.2, 11.2.3.2, & TABLE 11.2.3.1.2
ORDINARY HAZARD GROUP 1	ELECTRICAL / MECHANICAL / STORAGE / IT / COMMERCIAL KITCHEN	0.15 / 1500 SQFT	250	130	NFPA 13 SECTIONS 5.2, 11.2.3.2, & TABLE 11.2.3.1.2
MINIMUM REQUIRED SAFETY FACTOR: 5 PSI					
NOTES:					
1. THE HYDRAULIC AREA OF OPERATION MAY NOT BE REDUCED AS ALLOWED BY NFPA 13 FOR AREAS UTILIZING QUICK RESPONSE SPRINKLERS FOR NEW SYSTEM INSTALLATIONS OR UNFINISHED SHELL SPACES.					
2. HYDRAULIC AREA OF OPERATION SHALL BE INCREASED (CUMULATIVELY) WITHOUT REVISING THE DENSITY FOR THE FOLLOWING APPLICATIONS:					
A. INCREASED BY 30% FOR AREAS WITH SLOPED CEILINGS WITH A PITCH EXCEEDING 1 IN 6 (16.7%) SLOPE IN ACCORDANCE WITH NFPA 13 11.2.3.2.4.					
B. INCREASED BY 30% FOR DRY-PIPE AND DOUBLE INTERLOCK PRE-ACTION SYSTEMS, IN ACCORDANCE WITH NFPA 13 11.2.3.2.5.					
C. INCREASED TO 3,000 SQFT IF THE BUILDING HAS ADJACENT, NON-SPRINKLERED COMBUSTIBLE SPACES.					
3. THE ABOVE CRITERIA NOTED DOES NOT PRECLUDE THE USE OF EXTENDED COVERAGE OR LISTED SPECIAL APPLICATION SPRINKLERS THAT ARE DESIGNED AND INSTALLED IN ACCORDANCE WITH THEIR LISTING AND MANUFACTURER REQUIREMENTS.					
4. THE HOSE STREAM ALLOWANCE SHALL BE PROVIDED AT THE BASE OF RISER.					

ANCHORAGE & SWAY BRACING - FIRE PROTECTION SYSTEM COMPONENTS							
Occupancy Category (I I)				Seismic Design Category (D I)			
LISTING OF EQUIPMENT AND SYSTEM COMPONENTS	ANCHORAGE TO FLOORS, ROOFS, ETC.		SWAY BRACING		LOCATION OF PROFESSIONALLY SEALED ANCHORAGE AND SWAY BRACING DETAILS		COMMENTS
	Not Provided	Provided	Not Provided	Provided	Drawing No. or Spec. Section	Shop Drawings	
PIPING AND EQUIPMENT	-	X	-	X	-	BY FPC	-
BRACE PIPING AND/OR EQUIPMENT WHERE REQUIRED BY IBC / IFC AND PER METHODS IN NFPA 13							

VIBRATION ISOLATION AND SEISMIC RESTRAINT SCHEDULE						
EQUIPMENT TAG	ISOLATION SPEC.	SEISMIC RESTRAINT	ISOLATOR DEFLECTION	COMPONENT		
				IMPORTANCE FACTOR	RESPONSE MODIFICATION FACTOR	AMPLIFICATION FACTOR
SPR-PIPING	SC	YES	-	1.5	2.5	1.0
SPR-EQUIP	SB	YES	-	1.5	2.5	1.0

AIR COMPRESSOR				
TYPE	MANUFACTURER	MODEL	DB RANGE	REMARKS
AC-1	GENERAL AIR	QLTV	55-65	ALL
1. CONTRACTOR IS RESPONSIBLE FOR SIZING AIR COMPRESSOR BASED ON THE FIRE PROTECTION CONTRACTOR'S ENGINEERED DESIGN. COORDINATE ELECTRICAL REQUIREMENTS WITH THE ELECTRICAL CONTRACTOR.				
2. REFER TO SPECIFICATION 210500 FOR MORE INFORMATION ON THE AIR COMPRESSOR REQUIREMENTS.				

**FLOW TEST**

FIRE PROTECTION CONTRACTOR SHALL PERFORM A TWO-HYDRANT FLOW TEST WITHIN 12 MONTHS OF WORKING PLAN SUBMITTAL PER NFPA 13 23.2.1.1 (2016 EDITION). FLOW TEST RESULTS INCLUDING DATE OF TEST, LOCATION OF TEST HYDRANT, LOCATION OF FLOW HYDRANT, STATIC PRESSURE, RESIDUAL PRESSURE, AND FLOW SHALL BE SUBMITTED WITH HYDRAULIC CALCULATIONS.

IT IS NOT EXPECTED THAT A FIRE PUMP WILL BE REQUIRED AS PART OF THIS PROJECT. CONTRACTOR SHALL ESTIMATE THE SYSTEM DEMAND AND VERIFY THAT THE WATER SUPPLY IS SUFFICIENT PRIOR TO SUBMITTING BIDS. IF THE CONTRACTOR DETERMINES A FIRE PUMP WILL BE REQUIRED, THE ARCHITECT AND ENGINEER SHALL BE NOTIFIED PRIOR TO BIDDING.

FIRE PROTECTION SPRINKLER SCHEDULE						
SYMBOL	TYPE	RE.	K-F	FINISH	NOTE	
NEW						
●	FULLY-CONCEALED PENDENT	QR	5.6	WHITE COVERPLATE	-	
⊙	RECESSED PENDENT	QR	5.6	WHITE	2	
○	UPRIGHT / PENDENT	QR	5.6	BRASS	2	
▼	CONCEALED SIDEWALL	QR	5.6	WHITE	2	
DEMO						
⊙	DEMO PENDENT/UPRIGHT	-	-	-	-	
▼	DEMO SIDEWALL	-	-	-	-	
GENERAL NOTES:						
1. SPRINKLER SHALL BE THE APPROPRIATE TEMPERATURE RATING FOR LOCATION AND OCCUPANCY IN ACCORDANCE WITH NFPA 13.						
2. SPRINKLERS SHALL ALIGN WITH LIGHT FIXTURES AND OTHER CEILING MOUNTED DEVICES. PROVIDE ADDITIONAL SPRINKLERS WHERE REQUIRED TO KEEP SPRINKLERS ALIGNED WITH EXISTING CEILING FIXTURES.						
NOTES:						
1. PROVIDE HIGH TEMPERATURE RATED SPRINKLERS IN VESTIBULES.						
2. PROVIDE WITH LISTED SPRINKLER GUARD FOR ALL UPRIGHT / PENDENT INSTALLATIONS.						

FIRE PROTECTION SYMBOL LEGEND	
	SCOPE OF WORK BOUNDARY
	TEE
	ELBOW
	PIPE CONTINUATION
	SUPERVISED BUTTERFLY INDICATING VALVE
	COUPLING
	SUPERVISED WATERFLOW SWITCH
	PRESSURE GAUGE WITH BALL VALVE
	INSPECTOR'S TEST & DRAIN W/ SIGHT GLASS
	CHECK VALVE (3" AND SMALLER)
	CHECK VALVE (4" AND LARGER)
	FIRE PUMP (SECTION VIEW)
	REDUCER
	SUPERVISED OS&Y VALVE
	HOSE CONNECTION
	FIRE PUMP TEST HEADER
	FIRE PUMP TEST HEADER
	SUPERVISED WATERFLOW SWITCH
	SUPERVISED PRESSURE SWITCH
	SUPERVISED TAMPER SWITCH
	CONNECTION OF NEW TO EXISTING
	NEW FIRE SUPPRESSION PIPE
	DEMO FIRE SUPPRESSION PIPE (ON DEMO PLANS ONLY)
	EXISTING FIRE SUPPRESSION PIPE

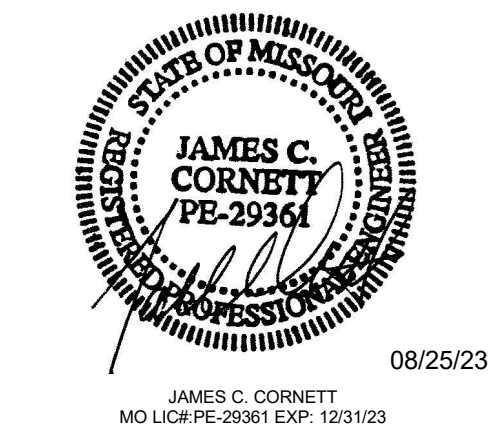
FIRE PROTECTION ABBREVIATION LEGEND	
AFF	ABOVE FINISHED FLOOR
AHJ	AUTHORITY HAVING JURISDICTION
BOP	BOTTOM OF PIPE
BRZ	BRONZE
DN	DOWN
EC	EXTENDED COVERAGE
EX	EXISTING
FHV	FIRE HOSE VALVE
FP	FIRE PROTECTION
FPC	FIRE PROTECTION CONTRACTOR
FT	FEET
GC	GENERAL CONTRACTOR
GRVD	GROOVED
HSW	HORIZONTAL SIDEWALL
IN	INCH
PC	PLUMBING CONTRACTOR
PND	PENDENT
QR	QUICK RESPONSE
SPR	SPRINKLER SYSTEM
SS	STANDPIPE SYSTEM
STND	STANDARD
THR	THREADED
UPR	UPRIGHT
UNO	UNLESS NOTED OTHERWISE

- FIRE PROTECTION GENERAL DEMOLITION NOTES:**
- NOTATION: DEMOLISH PIPING AND EQUIPMENT SHOWN DASHED.
  - EXISTING CONDITIONS: THESE DRAWINGS MAY NOT FULLY DEPICT ALL AS-BUILT CONDITIONS; CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS PRIOR TO SUBMITTING BID(S). NOTIFY ENGINEER AT ONCE SHOULD A DISCREPANCY OR OMISSION BE FOUND.
  - DEMOLITION WORK: VERIFY EXISTING SERVICES TO REMAIN. ALL NECESSARY CARE SHALL BE TAKEN DURING DEMOLITION TO PREVENT DAMAGE TO FIRE PROTECTION, PLUMBING, ELECTRICAL, AND MECHANICAL SYSTEMS TO REMAIN. NOTIFY GENERAL CONTRACTOR AND ELECTRICAL CONTRACTOR IF WIRING IS FOUND ATTACHED TO PIPING. FIRE PROTECTION SYSTEMS SERVING OTHER AREAS SHALL PROVIDE FOR UNINTERRUPTED SERVICE TO THOSE AREAS UNLESS PRIOR WRITTEN APPROVAL IS RECEIVED FROM THE OWNER. COORDINATE ALL SUCH WORK WITH THE GENERAL CONTRACTOR AND OWNERS' ON SITE REPRESENTATIVE.
  - REMOVAL: WHEREVER EXISTING FIRE PROTECTION EQUIPMENT, PIPING AND EQUIPMENT, ETC., ARE TO BE REMOVED, SUCH REMOVAL SHALL INCLUDE ALL ANCHORS, HANGERS, FOUNDATIONS, ETC. ASSOCIATED WITH THE FIRE PROTECTION EQUIPMENT. UNLESS NOTED OTHERWISE, AFTER REMOVAL, FLOORS, WALLS AND CEILINGS SHALL BE PATCHED AND FINISHED TO MATCH ADJOINING SURFACES.
  - WHERE ITEMS ARE REMOVED, UTILITIES AND THE AREA FROM WHICH THE ITEMS HAVE BEEN REMOVED SHALL BE LEFT IN SUCH A MANNER THAT IS SAFE FOR BOTH PEOPLE AND PROPERTY ON A DAILY BASIS.
  - PLAN REVIEW: REFER TO ARCHITECTURAL DRAWINGS FOR ARCHITECTURAL DEMOLITION. REFER TO MEP AND SPRINKLER DEMOLITION PLANS FOR MEP DEMOLITION.

- FIRE PROTECTION GENERAL NOTES:**
- SCOPE: PROVIDE A COMPLETE, FUNCTIONING FIRE SPRINKLER SYSTEM DESIGNED AND INSTALLED IN ACCORDANCE WITH NFPA 13, (2016) EDITION. SYSTEM SHALL MEET ALL APPLICABLE REQUIREMENTS OF THE BUILDING CODE, FIRE CODE, AUTHORITY HAVING JURISDICTION, AND INSURANCE CARRIER. VERIFY REQUIREMENTS PRIOR TO BID SUBMITTAL. NO CHANGE TO THE CONTRACT PRICE WILL BE ACCEPTED FOR PROVIDING AND INSTALLING EQUIPMENT REQUIRED BY THE AFOREMENTIONED CODES, STANDARDS, OR THE LOCAL AUTHORITY HAVING JURISDICTION.
  - DELEGATED DESIGN: THE LOCATIONS OF MAJOR FIRE PROTECTION EQUIPMENT AND PIPE ROUTING ARE SHOWN FOR REFERENCE ONLY TO ASSIST IN BIDDING AND SPACE COORDINATION. FIRE PROTECTION CONTRACTOR SHALL BE RESPONSIBLE FOR DESIGNING AND PROVIDING A COMPLETE, FUNCTIONAL, AND CODE COMPLIANT AUTOMATIC SPRINKLER SYSTEM. FIRE PROTECTION CONTRACTOR SHALL DESIGN, LOCATE AND PROVIDE ALL EQUIPMENT, VALVES, PIPE ARRANGEMENTS AND COORDINATE WITH OTHER TRADES TO MEET THE APPLICABLE CODES AND STANDARDS FOR A COMPLETE AND FUNCTIONAL SYSTEM.
  - APPROVAL: PRIOR TO COMMENCING WORK, APPROVAL SHALL BE RECEIVED FROM THE OWNERS INSURANCE COMPANY, ENGINEER, FIRE MARSHAL AND OWNER. WORK COMMENCED PRIOR TO SHOP DRAWING REVIEW SHALL BE AT CONTRACTOR'S RISK.
  - PIPING AND COORDINATION:
    - FIRE PROTECTION CONTRACTOR SHALL COORDINATE WITH OTHER DISCIPLINES FOR THE LOCATION OF ALL PIPING AND EQUIPMENT TO PREVENT INTERFERENCE. PROVIDE ALL NECESSARY OFFSETS IN PIPING TO AVOID CONFLICT. NO CHANGE TO THE CONTRACT PRICE WILL BE ACCEPTED WHERE ALTERNATE PIPING ROUTES ARE REQUIRED.
    - PIPE SHALL BE INSTALLED AS HIGH AS POSSIBLE IN OPEN STRUCTURE AREAS.
    - CENTERLINE OF PIPING SHALL BE ROUTED A MINIMUM OF 12" ABOVE CEILING.
    - RENDER ANY PASSAGE OF PIPING THROUGH OUTSIDE WALLS PERMANENTLY WATER TIGHT.
    - PROVIDE SEISMIC BRACING AS REQUIRED FOR NEW PIPING. REFER TO BRACING DETAILS.
    - WHERE PIPING ELEVATION CONFLICTS WITH DUCTWORK, OFFSETS TO FIRE PROTECTION PIPING SHALL BE UP AND OVER DUCTWORK. WHERE CONFLICTS OCCUR, PIPING SHALL NOT BE ROUTED DOWN BELOW DUCTWORK WHERE THIS PIPING WOULD BE WITHIN 12" OF CEILING ELEVATION.
    - PROVIDE AUXILIARY DRAINS AS REQUIRED FOR DRAINING TRAPPED SECTIONS OF PIPING. FOR TRAPPED SECTIONS OF PIPING EXCEEDING 5 GALLONS IN CAPACITY, PROVIDE A HARD-PIPED DRAIN CONNECTION AND ROUTE BACK TO DRAIN IN SPRINKLER RISER ROOM OR ALTERNATE LOCATION APPROVED BY ENGINEER.
    - COORDINATE ALL POWER AND FIRE ALARM CONNECTIONS WITH THE ELECTRICAL CONTRACTOR.
  - SPRINKLER TYPE AND DESIGN DENSITIES: REFER TO FIRE PROTECTION SPRINKLER SCHEDULE AND PROTECTION CRITERIA.
  - SUBMITTAL: FIRE PROTECTION CONTRACTOR SHALL BE RESPONSIBLE FOR SUBMITTING THE FOLLOWING DOCUMENTATION SIGNED AND SEALED BY A FIRE PROTECTION ENGINEER REGISTERED IN THE STATE WHERE THE PROJECT IS LOCATED:
    - SHOP DRAWINGS CREATED IN ACCORDANCE WITH NFPA 13 SECTION 23.1.3 (2016 EDITION) AND CONTRACT DOCUMENTS
    - HYDRAULIC CALCULATIONS
    - FLOW TEST INFORMATION
    - PRODUCT DATA FOR ALL EQUIPMENT AND COMPONENTS USED ON THIS PROJECT
    - ANY OTHER DOCUMENTATION AS REQUIRED BY THE AUTHORITY HAVING JURISDICTION.
  - SCOPE VERIFICATION: GENERAL CONTRACTOR SHALL VERIFY:
    - ELECTRICAL CONTRACTOR HAS INCLUDED IN HIS CONTRACT ALL POWER AND EMERGENCY POWER REQUIREMENTS REQUIRED FOR FIRE PROTECTION EQUIPMENT, AND ALL SUPERVISORY FIRE ALARM CONNECTIONS.
  - FIRE WATCH AND SERVICE:
    - CONTRACTOR SHALL PROVIDE A FIRE WATCH DURING CONSTRUCTION HOURS AS REQUIRED. COORDINATE WITH LOCAL FIRE DEPARTMENT FIRE WATCH REQUIREMENTS AND OBTAIN A FIRE WATCH INSPECTION FORM AND LOG INSPECTION TIME WHERE REQUIRED.
    - SYSTEM SHALL BE IN OPERATION AT THE END OF EACH CONSTRUCTION DAY.
  - SPECIFICATIONS: REFER TO SPECIFICATIONS FOR FURTHER DETAIL.
  - THE SCOPE OF WORK INCLUDES ANY ASSOCIATED WORK FOR DEMOLITION / REPLACEMENT / PATCHING / PAINTING / ETC. AS REQUIRED TO INSTALL THE PIPING AND SPRINKLERS. SPRINKLER CONTRACTOR SHALL COORDINATE ALL REPAIRS TO MATCH EXISTING.

FIRE PROTECTION SHEET LIST	
SHEET NUMBER	SHEET NAME
F0.1	FIRE PROTECTION SYMBOLS, NOTES, LEGENDS, AND SCHEDULES
FD1.1	FIRE PROTECTION FLOOR PLANS - DEMOLITION
F1.1	FIRE PROTECTION BASEMENT FLOOR PLAN - RENOVATION
F1.2	FIRE PROTECTION FIRST FLOOR PLAN - RENOVATION
F1.3	FIRE PROTECTION SECOND FLOOR PLAN - RENOVATION
F1.4	FIRE PROTECTION ATTIC FLOOR PLAN - RENOVATION
F5.1	FIRE PROTECTION DETAILS

STATE OF MISSOURI  
MICHAEL L. PARSON  
GOVERNOR



THE SEAL AND SIGNATURE APPLY ONLY TO THE DOCUMENT TO WHICH THEY ARE AFFIXED, AND EXPRESSLY DISCLAIM ANY RESPONSIBILITY FOR ALL OTHER PLANS, SPECIFICATIONS, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE ARCHITECTURAL OR ENGINEERING PROJECT.

**OFFICE OF ADMINISTRATION  
DIVISION OF FACILITIES  
MANAGEMENT,  
DESIGN AND  
CONSTRUCTION  
DIVISION OF YOUTH SERVICES**

MISSOURI HILLS YOUTH CENTER - REPLACE COTTAGE 2 FIRE SPRINKLER SYSTEM

13002 BELLFONTAINE RD,  
ST. LOUIS, MO 63138

PROJECT # H2306-01  
SITE # 7706  
FACILITY # 8877706012

REVISION: \_\_\_\_\_  
DATE: \_\_\_\_\_  
REVISION: \_\_\_\_\_  
DATE: \_\_\_\_\_  
REVISION: \_\_\_\_\_  
DATE: \_\_\_\_\_  
ISSUE DATE: 08-25-23

CAD DWG FILE: -  
DRAWN BY: LMM  
CHECKED BY: JCC  
DESIGNED BY: LMM

SHEET TITLE:  
FIRE PROTECTION SYMBOLS, NOTES, LEGENDS, AND SCHEDULES

SHEET NUMBER:

**F0.1**

SHEET 2 OUT OF 10  
08-25-23

SSC JOB# 2023204 - BID AND PERMIT DOCUMENTS 08-25-23

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CAD DWG FILE: -  
DRAWN BY: SSC  
CHECKED BY: JCC  
DESIGNED BY: SSC

SHEET TITLE:  
FIRE PROTECTION  
FLOOR PLANS -  
DEMOLITION

SHEET NUMBER:

**FD1.1**

SHEET 3 OUT OF 10  
08-25-23

SSC JOB# 2023204 - BID AND PERMIT DOCUMENTS 08-25-23

**FINISH SCHEDULE GENERAL NOTES:**

- CONTRACTOR IS RESPONSIBLE FOR DEMOLITION AND REPLACEMENT / PATCHING / PAINTING / ETC. AS REQUIRED TO INSTALL THE SPRINKLER SYSTEM AND ALL ASSOCIATED COMPONENTS. ALL REPAIRS SHALL MATCH EXISTING FINISHES. COORDINATE WITH THE OWNER FOR ALL MODEL / MATERIAL INFORMATION FOR MATCHING.
- FINISH SCHEDULE KEYED NOTES ARE INTENDED TO CALL OUT THE FINISH AND ACCESSIBILITY INFORMATION WITHIN EACH SPACE AS NECESSARY. CONTRACTOR SHALL VERIFY ALL FINAL FINISHES AND ACCESSIBILITY REQUIREMENTS FOR EACH SPACE PRIOR TO BIDDING.

**FINISH SCHEDULE KEYED NOTES:**

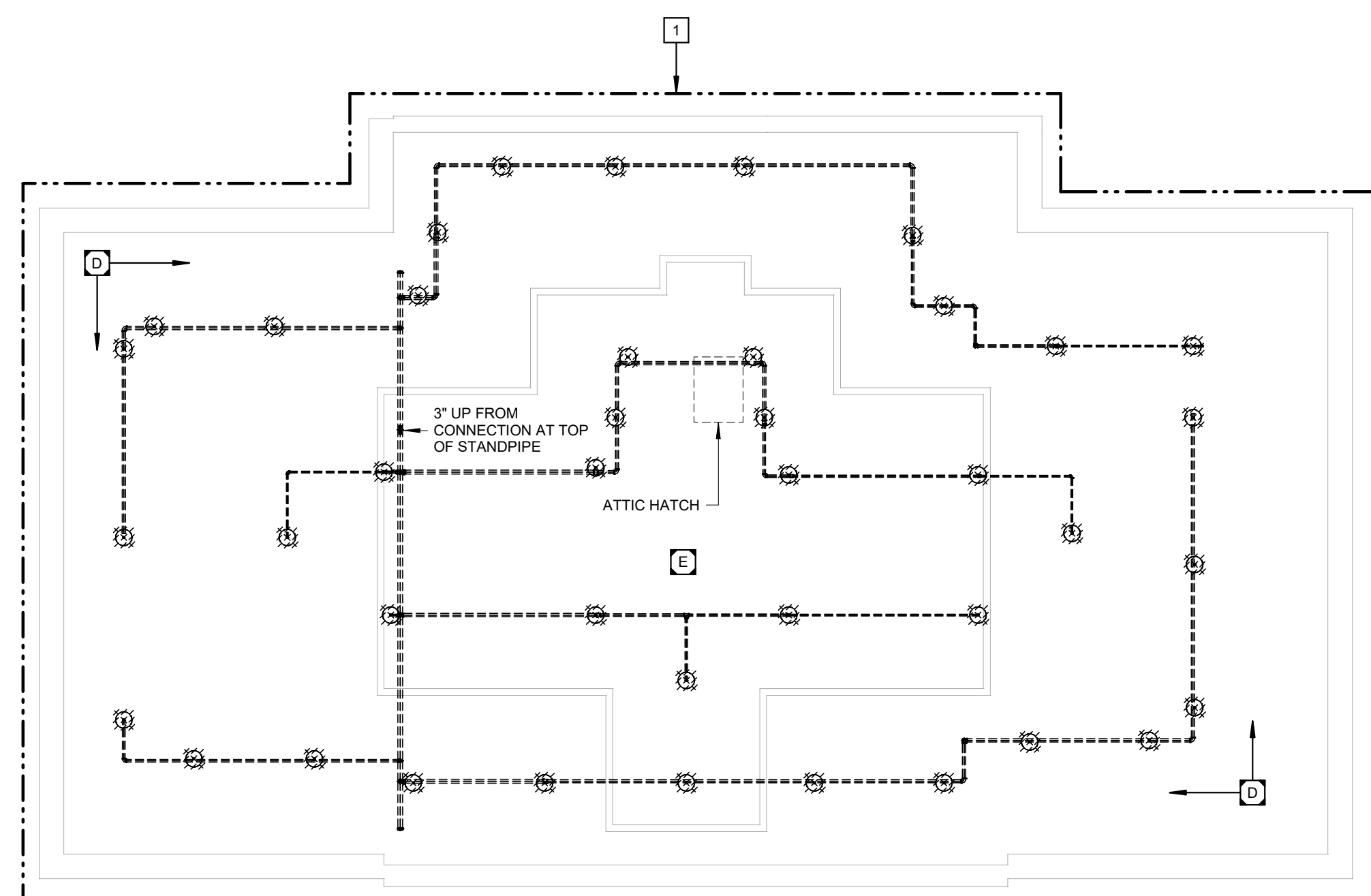
- A EXPOSED CONSTRUCTION. ALL PIPING AND SPRINKLERS EXPOSED WITHIN SPACE.
- B GYPSUM FINISHED CEILING. ALL PIPING AND SPRINKLERS EXPOSED WITHIN SPACE.
- C LAY-IN FINISHED CEILING. ALL OVERHEAD PIPING ROUTED ABOVE CEILING.
- D EXPOSED ATTIC JOIST CONSTRUCTION. NO FLOOR AROUND ATTIC PERIMETER. ACCESSIBLE BY ATTIC JOISTS ONLY.
- E FLOOR ACCESS WITHIN CENTER OF ATTIC.
- F GYPSUM FINISHED CEILING. ALL OVERHEAD PIPING ROUTED ABOVE CEILING.

**FIRE PROTECTION GENERAL NOTES:**

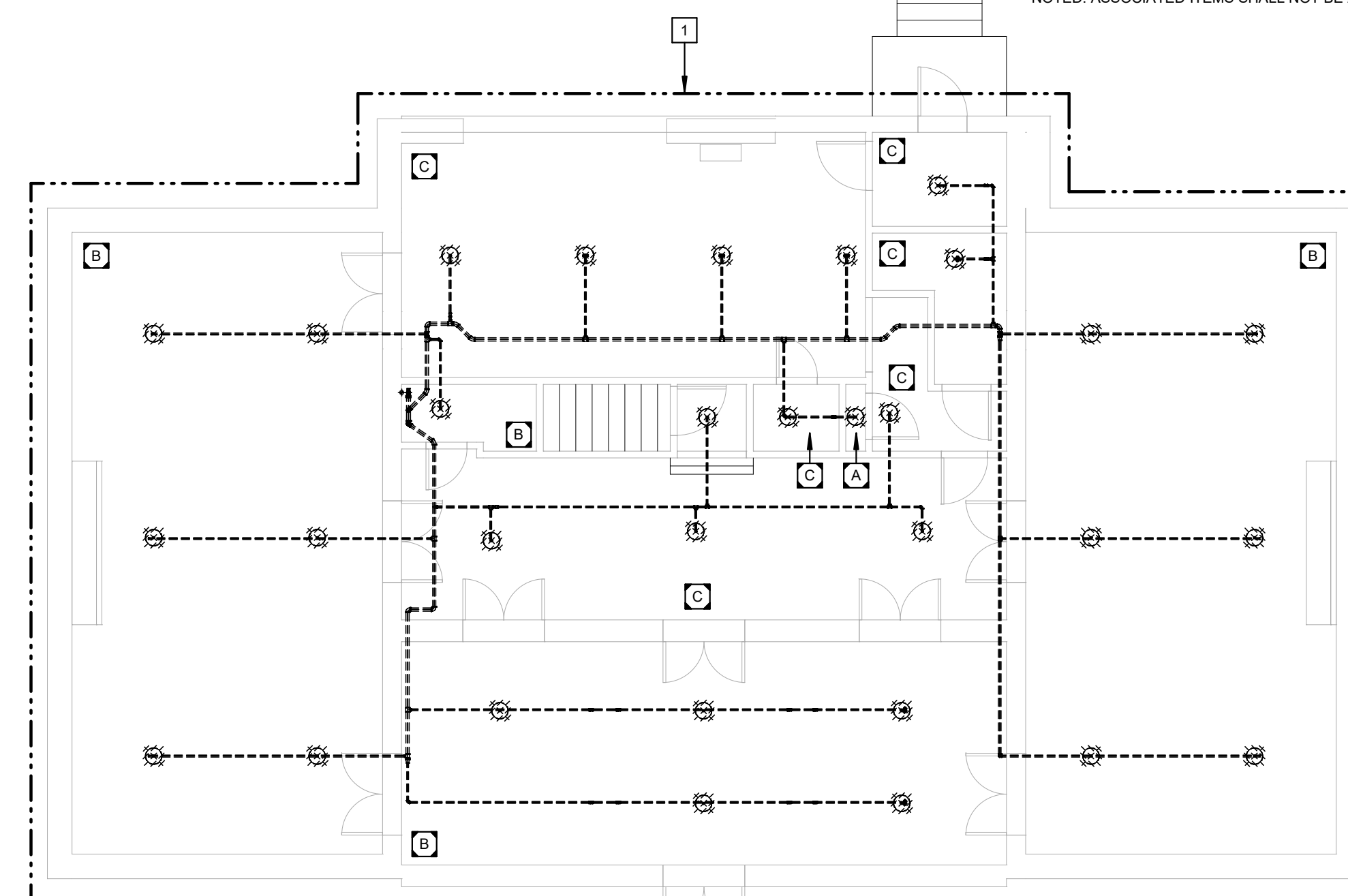
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**FIRE PROTECTION KEYED NOTES:**

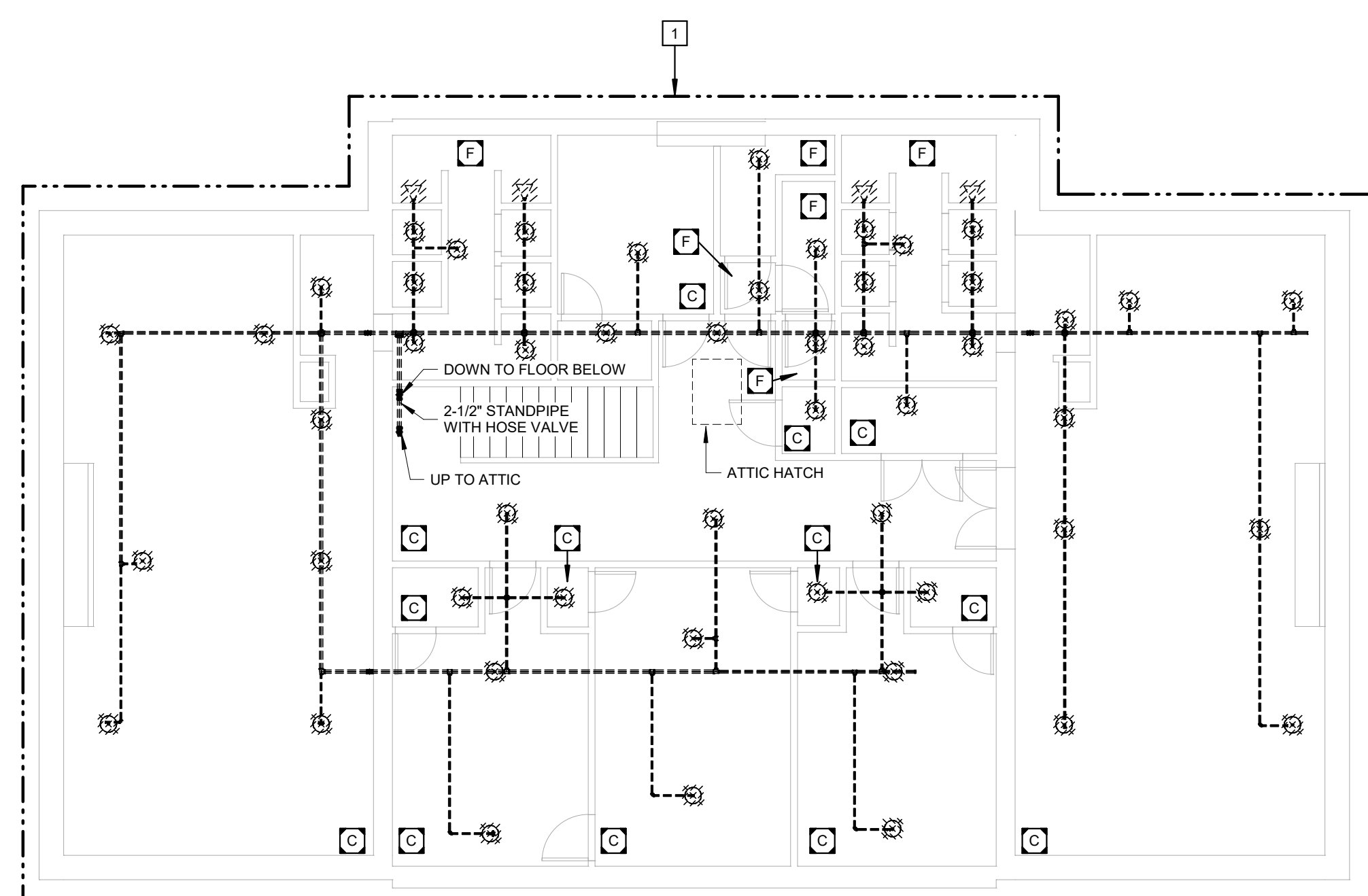
- 1 REMOVE EXISTING PIPING SPRINKLERS IN THIS AREA SHOWN DASHED. ALL PIPING, SPRINKLERS, ASSOCIATED COMPONENTS, ETC. SHALL BE REMOVED FROM THE ITEMS NOTED. ASSOCIATED ITEMS SHALL NOT BE ABANDONED IN PLACE.



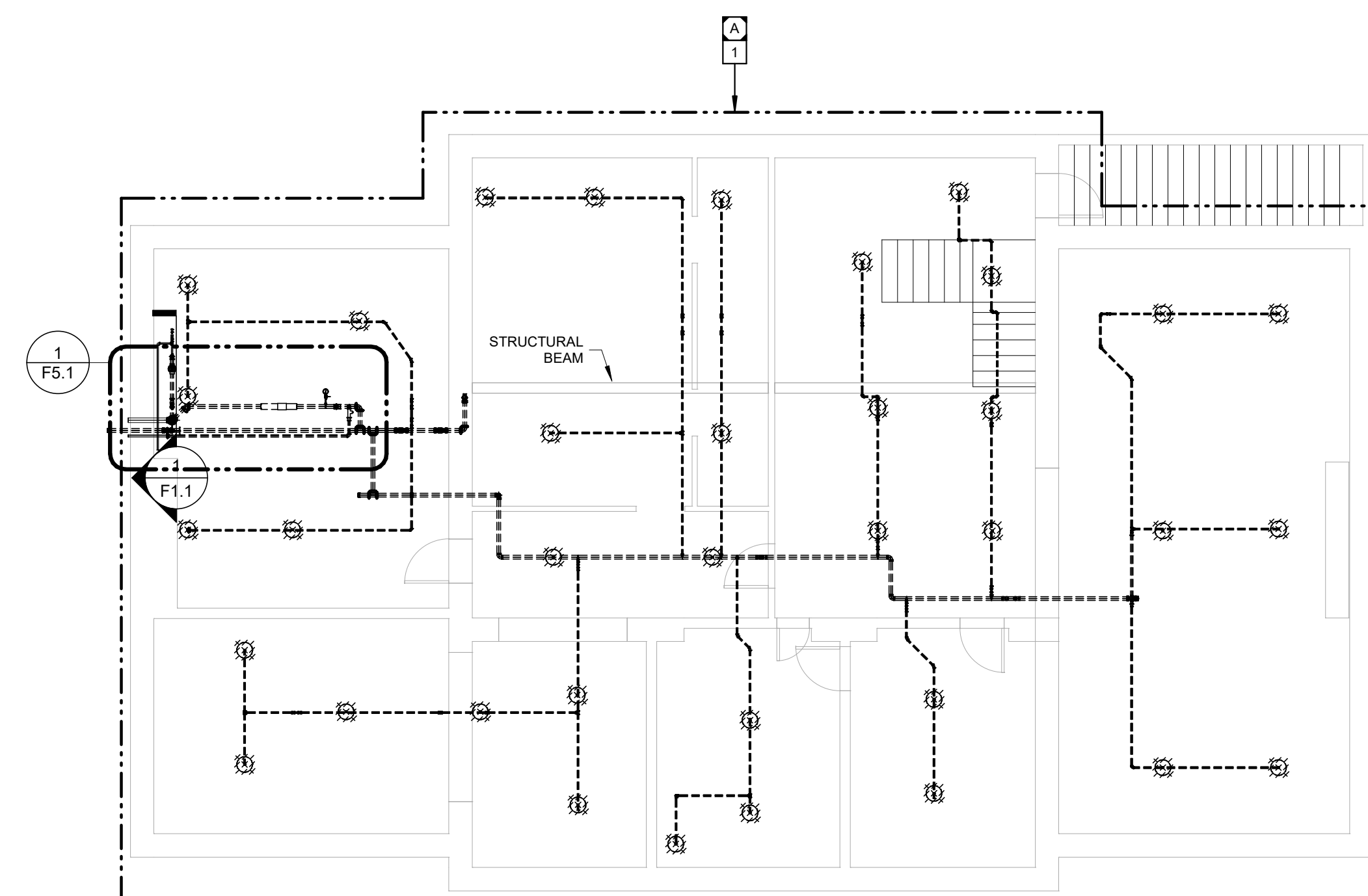
**FIRE PROTECTION ATTIC FLOOR PLAN - DEMOLITION**  
SCALE: 1/8" = 1'-0"  
NORTH



**FIRE PROTECTION FIRST FLOOR PLAN - DEMOLITION**  
SCALE: 1/8" = 1'-0"  
NORTH

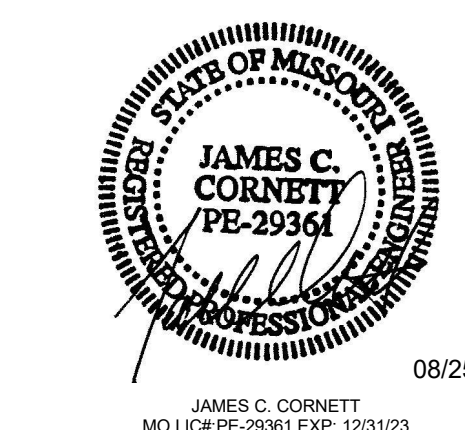


**FIRE PROTECTION SECOND FLOOR PLAN - DEMOLITION**  
SCALE: 1/8" = 1'-0"  
NORTH



**FIRE PROTECTION BASEMENT FLOOR PLAN - DEMOLITION**  
SCALE: 1/8" = 1'-0"  
NORTH

EXISTING SYSTEMS AS SURVEYED BY SSC ENGINEERING ARE PROVIDED FOR REFERENCE ONLY TO ASSIST IN BIDDING PURPOSES. CONTRACTOR SHALL SURVEY THE SITE TO VERIFY EXISTING CONDITIONS.



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CAD DWG FILE: -  
DRAWN BY: LMM  
CHECKED BY: JCC  
DESIGNED BY: LMM

SHEET TITLE:  
FIRE PROTECTION  
BASEMENT FLOOR PLAN  
- RENOVATION

SHEET NUMBER:

F1.1

SHEET 4 OUT OF 10  
08-25-23

SSC JOB# 2023204 - BID AND PERMIT DOCUMENTS 08-25-23

**FINISH SCHEDULE GENERAL NOTES:**

1. CONTRACTOR IS RESPONSIBLE FOR DEMOLITION AND REPLACEMENT / PATCHING / PAINTING / ETC. AS REQUIRED TO INSTALL THE SPRINKLER SYSTEM AND ALL ASSOCIATED COMPONENTS. ALL REPAIRS SHALL MATCH EXISTING FINISHES. COORDINATE WITH THE OWNER FOR ALL MODEL / MATERIAL INFORMATION FOR MATCHING.
2. FINISH SCHEDULE KEYED NOTES ARE INTENDED TO CALL OUT THE FINISH AND ACCESSIBILITY INFORMATION WITHIN EACH SPACE AS NECESSARY. CONTRACTOR SHALL VERIFY ALL FINAL FINISHES AND ACCESSIBILITY REQUIREMENTS FOR EACH SPACE PRIOR TO BIDDING.

**FINISH SCHEDULE KEYED NOTES:**

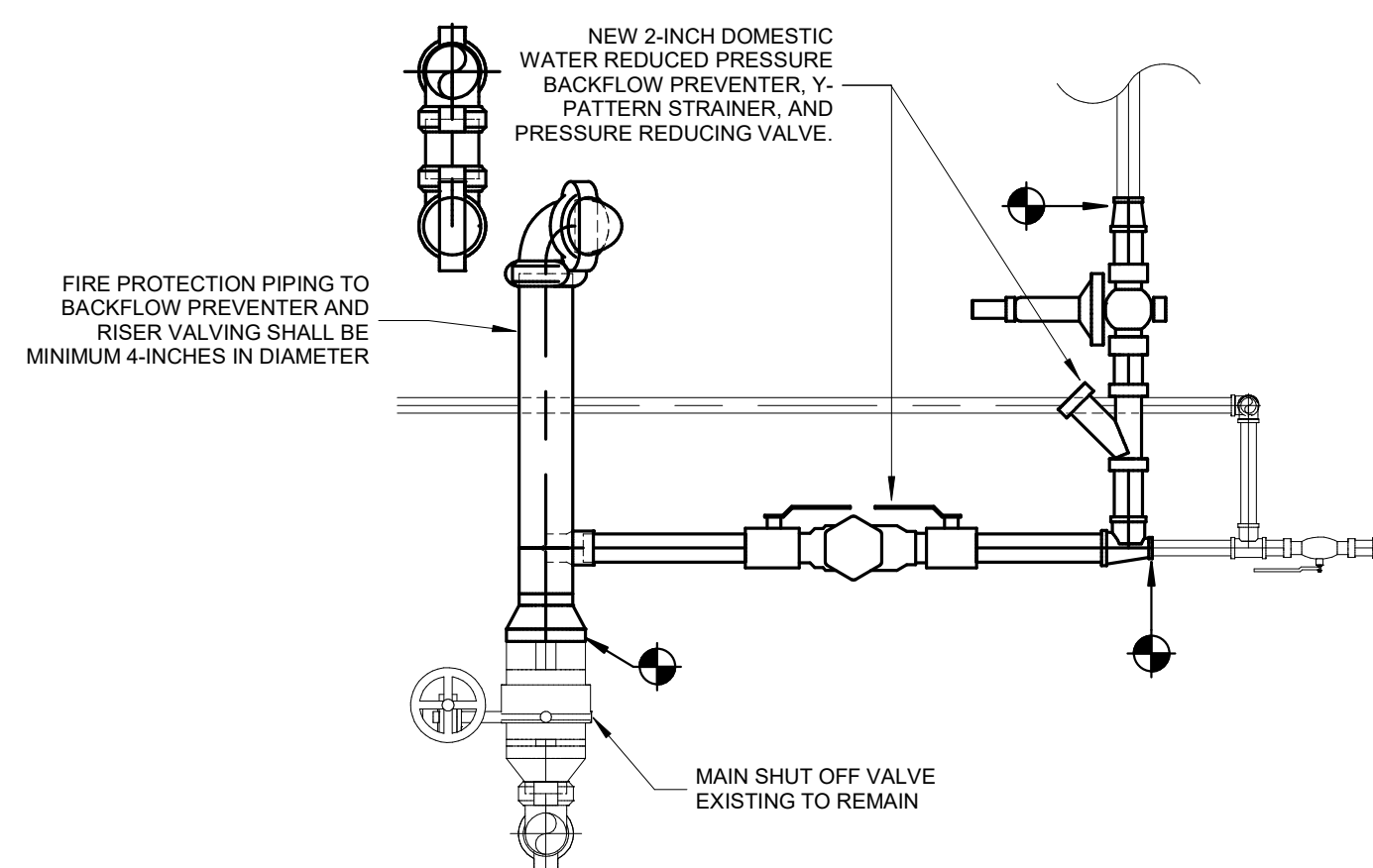
- A EXPOSED CONSTRUCTION. ALL PIPING AND SPRINKLERS EXPOSED WITHIN SPACE.

**FIRE PROTECTION GENERAL NOTES:**

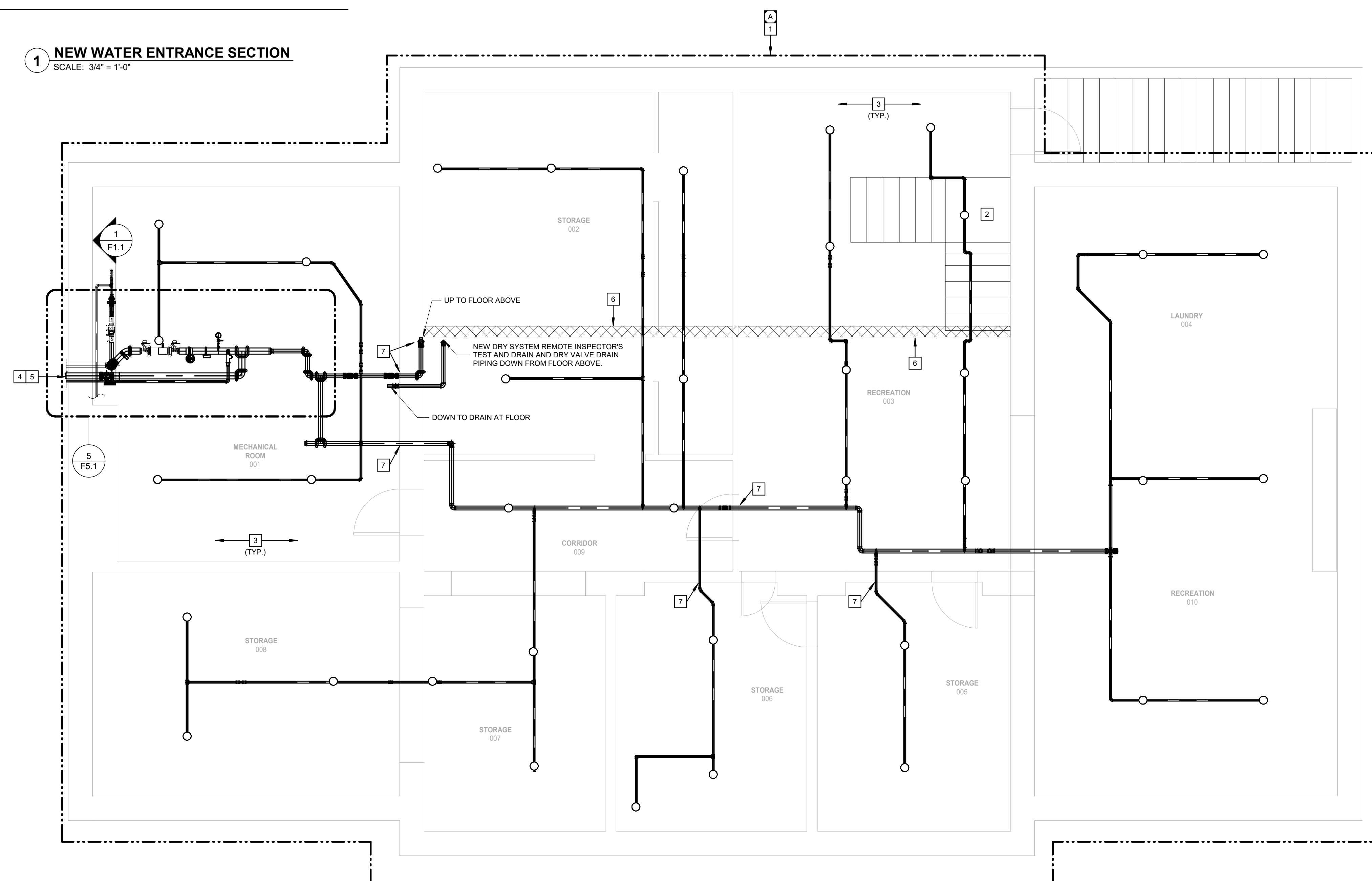
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3. CONTRACTOR SHALL REUSE EXISTING WALL / FLOOR PENETRATIONS WHERE POSSIBLE TO REDUCE THE REQUIREMENT FOR NEW PENETRATIONS.
4. ALL ITEMS STORED IN THE BUILDING ARE TO BE RELOCATED BY THE OWNER.
5. A LARGE QUANTITY OF SPRINKLERS WERE REPLACED IN THE RECENT RENOVATION PROJECT. CONTRACTOR MAY REUSE AND RELOCATE NEWLY INSTALLED SPRINKLERS (SPRINKLER AND SPRIG) WHERE POSSIBLE. ANY NEWLY INSTALLED SPRINKLER NOT USED SHALL BE RETURNED TO THE OWNER IN REUSABLE CONDITION (SPRINKLER AND SPRIG). EXISTING SPRINKLERS THAT WERE NOT RECENTLY REPLACED SHALL NOT BE REUSED.

**FIRE PROTECTION KEYED NOTES:**

1. PROVIDE THE DESIGN AND INSTALLATION OF A COMPLETE AND FUNCTIONAL AUTOMATIC FIRE PROTECTION SYSTEM IN THE AREA INDICATED. FIRE PROTECTION SYSTEM(S) SHALL BE DESIGNED PER NFPA 13 AND IBC REQUIREMENTS FOR A FULLY SPRINKLER BUILDING. PROVIDE ALL SPRINKLERS, PIPING, HANGERS, ETC. AND COORDINATE LOCATIONS, PIPE ROUTING, SCHEDULING, AND ALL OTHER INSTALLATION REQUIREMENTS WITH OTHER TRADES.
2. PROVIDE SPRINKLER PROTECTION BENEATH STAIR LANDING.
3. DO NOT ROUTE FIRE SPRINKLER PIPING ABOVE ELECTRICAL PANELS IN ACCORDANCE WITH NFPA 70 SECTION 110.25(E)(1)(A) (2017 EDITION). NO CHANGE IN COST WILL BE ACCEPTED FOR REROUTING FIRE SPRINKLER PIPING THAT WAS INSTALLED ABOVE ELECTRICAL PANELS. COORDINATE WITH ELECTRICAL CONTRACTOR FOR PANEL LOCATIONS.
4. CONNECT SYSTEM TO NEW FIRE DEPARTMENT CONNECTION ON EXTERIOR OF BUILDING. CONTRACTOR SHALL REPLACE ANY DAMAGED SPRINKLER SYSTEM PENETRATION SEALS, NOTIFY OWNER AND ENGINEER.
5. PROVIDE AN AUDIOVISUAL HORN AND STROBE ALARM ON EXTERIOR WALL ABOVE WALL MOUNTED FIRE DEPARTMENT CONNECTION. SEE SHEET E1.0 FOR MORE INFORMATION AND COORDINATE WITH FIRE ALARM CONTRACTOR FINAL LOCATION OF EXTERIOR ALARM.
6. EXISTING STRUCTURAL BEAM. DO NOT ROUTE PIPING THROUGH BEAM.
7. NEW PIPING SHALL BE ROUTED THROUGH EXISTING WALL AND FLOOR PENETRATIONS. TYP. ALL PENETRATIONS.



**1 NEW WATER ENTRANCE SECTION**  
SCALE: 3/4" = 1'-0"



**FIRE PROTECTION BASEMENT FLOOR PLAN - RENOVATION**  
SCALE: 1/4" = 1'-0"  
NORTH



JAMES C. CORNETT  
MO LIC# PE-29361 EXP: 12/31/23

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MISSOURI HILLS YOUTH  
CENTER - REPLACE  
COTTAGE 2 FIRE  
SPRINKLER SYSTEM

13002 BELLFONTAINE RD,  
ST. LOUIS, MO 63138

PROJECT # H2306-01  
SITE # 7706  
FACILITY # 8877706012

REVISION: \_\_\_\_\_  
DATE: \_\_\_\_\_  
REVISION: \_\_\_\_\_  
DATE: \_\_\_\_\_  
REVISION: \_\_\_\_\_  
DATE: \_\_\_\_\_  
ISSUE DATE: 08-25-23

CAD DWG FILE: -  
DRAWN BY: LMM  
CHECKED BY: JCC  
DESIGNED BY: LMM

SHEET TITLE:  
FIRE PROTECTION FIRST  
FLOOR PLAN -  
RENOVATION

SHEET NUMBER:

**F1.2**

SHEET 5 OUT OF 10  
08-25-23

SSC JOB# 2023204 - BID AND PERMIT DOCUMENTS 08-25-23

**FINISH SCHEDULE GENERAL NOTES:**

- CONTRACTOR IS RESPONSIBLE FOR DEMOLITION AND REPLACEMENT / PATCHING / PAINTING / ETC. AS REQUIRED TO INSTALL THE SPRINKLER SYSTEM AND ALL ASSOCIATED COMPONENTS. ALL REPAIRS SHALL MATCH EXISTING FINISHES. COORDINATE WITH THE OWNER FOR ALL MODEL / MATERIAL INFORMATION FOR MATCHING.
- FINISH SCHEDULE KEYED NOTES ARE INTENDED TO CALL OUT THE FINISH AND ACCESSIBILITY INFORMATION WITHIN EACH SPACE AS NECESSARY. CONTRACTOR SHALL VERIFY ALL FINAL FINISHES AND ACCESSIBILITY REQUIREMENTS FOR EACH SPACE PRIOR TO BIDDING.

**FINISH SCHEDULE KEYED NOTES:**

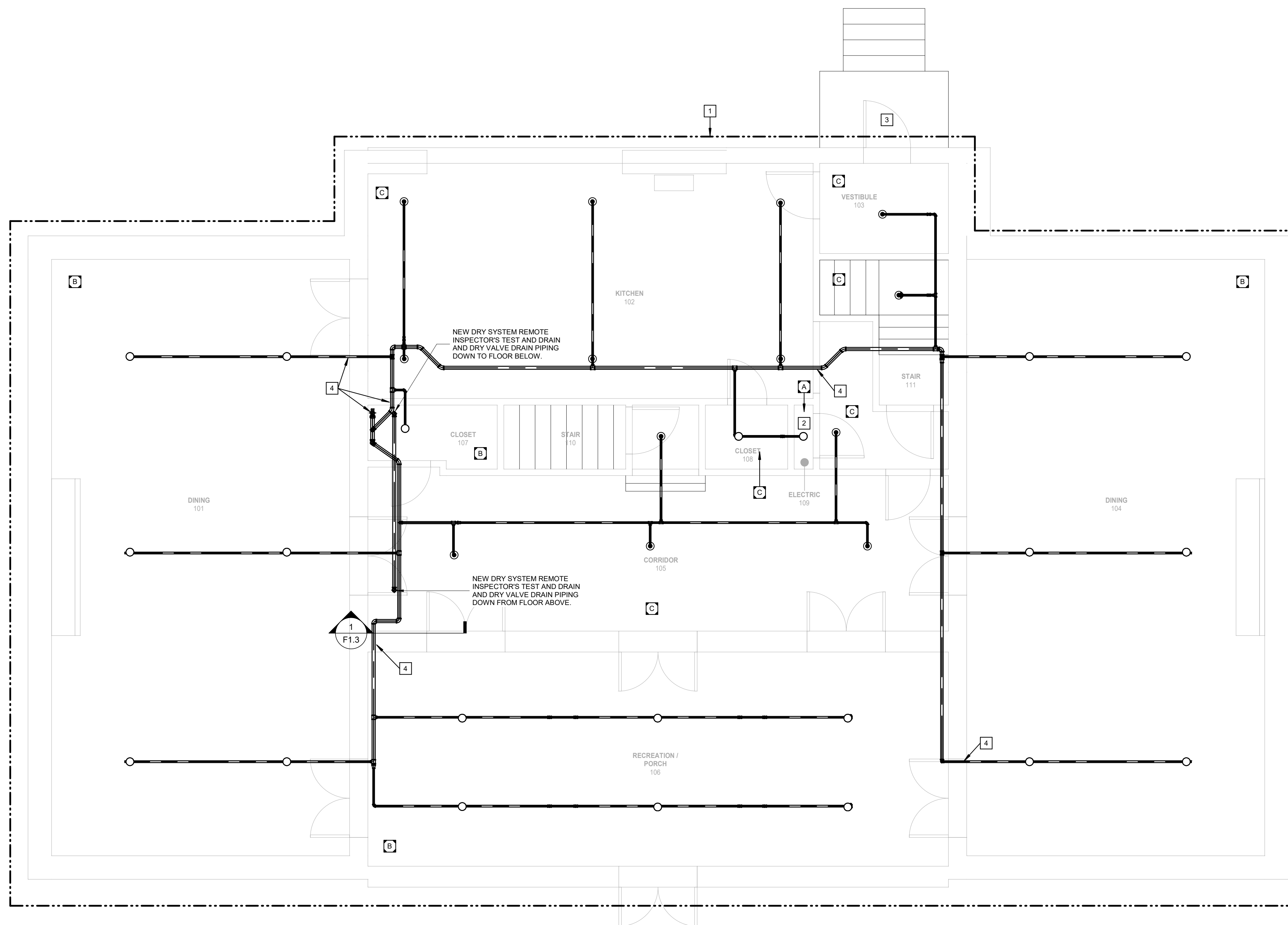
- A** EXPOSED CONSTRUCTION. ALL PIPING AND SPRINKLERS EXPOSED WITHIN SPACE.
- B** GYPSUM FINISHED CEILING. ALL PIPING AND SPRINKLERS EXPOSED WITHIN SPACE.
- C** LAY-IN FINISHED CEILING. ALL OVERHEAD PIPING ROUTED ABOVE CEILING.

**FIRE PROTECTION GENERAL NOTES:**

- REFER TO SHEET FPD.1 FOR SYMBOLS, ABBREVIATIONS AND GENERAL CONSTRUCTION NOTES.
- THE LOCATIONS OF MAJOR FIRE PROTECTION EQUIPMENT AND PIPING ARE SHOWN FOR REFERENCE ONLY TO ASSIST IN BIDDING AND SPACE COORDINATION. FIRE PROTECTION CONTRACTOR SHALL DESIGN, LOCATE, AND PROVIDE ALL EQUIPMENT, SPRINKLERS, VALVES, PIPE ARRANGEMENTS, AND COORDINATE WITH OTHER TRADES TO MEET THE APPLICABLE CODES AND STANDARDS FOR A COMPLETE AND FUNCTIONAL SYSTEM.
- CEILING TILES SHALL BE OWNER FURNISHED, CONTRACTOR INSTALLED. CONTRACTOR SHALL NOTE ANY CURRENTLY INSTALLED CEILING TILE WITH DAMAGE TO OWNER PRIOR TO THE START OF CONSTRUCTION. ANY EXISTING DAMAGED CEILING TILE TO BE FURNISHED BY THE OWNER. ANY TILE DAMAGED DURING CONSTRUCTION ACTIVITIES SHALL BE FURNISHED BY THE CONTRACTOR.
- BUILDING HAS BEEN RECENTLY RENOVATED. ANY MISSING LIGHT FIXTURE SHALL BE OWNER FURNISHED AND INSTALLED. IN AREAS WITH GYPSUM CEILINGS, COORDINATE WITH THE OWNER FOR THE TYPE OF FIXTURE TO BE INSTALLED AND PROVIDE AN OPENING IN THE FINISHED GYPSUM CEILING FOR INSTALLATION OF LIGHT FIXTURE.
- ALL ITEMS STORED IN THE BUILDING ARE TO BE RELOCATED BY THE OWNER.
- A LARGE QUANTITY OF SPRINKLERS WERE REPLACED IN THE RECENT RENOVATION PROJECT. CONTRACTOR MAY REUSE AND RELOCATE NEWLY INSTALLED SPRINKLERS (SPRINKLER AND SPRIG) WHERE POSSIBLE. ANY NEWLY INSTALLED SPRINKLER NOT USED SHALL BE RETURNED TO THE OWNER IN REUSABLE CONDITION (SPRINKLER AND SPRIG). EXISTING SPRINKLERS THAT WERE NOT RECENTLY REPLACED SHALL NOT BE REUSED.

**FIRE PROTECTION KEYED NOTES:**

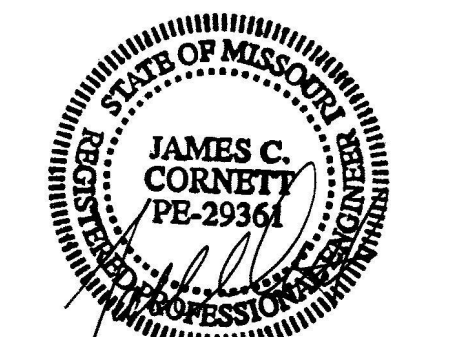
- PROVIDE THE DESIGN AND INSTALLATION OF A COMPLETE AND FUNCTIONAL AUTOMATIC FIRE PROTECTION SYSTEM IN THE AREA INDICATED. FIRE PROTECTION SYSTEM(S) SHALL BE DESIGNED PER NFPA 13 AND IBC REQUIREMENTS FOR A FULLY SPRINKLER BUILDING. PROVIDE ALL SPRINKLERS, PIPING, HANGERS, ETC. AND COORDINATE LOCATIONS, PIPE ROUTING, SCHEDULING, AND ALL OTHER INSTALLATION REQUIREMENTS WITH OTHER TRADES.
- DO NOT ROUTE FIRE SPRINKLER PIPING ABOVE ELECTRICAL PANELS IN ACCORDANCE WITH NFPA 70 SECTION 110.26(E)(1)(A) (2017 EDITION). NO CHANGE IN COST WILL BE ACCEPTED FOR REROUTING FIRE SPRINKLER PIPING THAT WAS INSTALLED ABOVE ELECTRICAL PANELS. COORDINATE WITH ELECTRICAL CONTRACTOR FOR PANEL LOCATIONS.
- SPRINKLER PROTECTION IS PERMITTED TO BE OMITTED FROM WITHIN COMBUSTIBLE SOFFITS, EAVES, OVERHANGS, AND DECORATIVE FRAME ELEMENTS THAT DO NOT EXCEED 4FT IN WIDTH AND COMPLY WITH NFPA 13 SECTIONS 8.15.1.2, 18.2 THROUGH 8.15.1.2, 18.5, 2016 EDITION.
- NEW PIPING SHALL BE ROUTED THROUGH EXISTING WALL AND FLOOR PENETRATIONS. TYP. ALL PENETRATIONS.



**FIRE PROTECTION FIRST FLOOR PLAN - RENOVATION**  
SCALE: 1/4" = 1'-0"  
NORTH



1807 Easton Avenue  
Chesterfield, Missouri 63005  
Phone: 636.530.7770 Fax: 636.530.7977  
Missouri Certificate of Authority #NC 001244



08/25/23

JAMES C. CORNETT  
MO LIC# PE-29361 EXP: 12/31/23

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13002 BELLFONTAINE RD,  
ST. LOUIS, MO 63138

PROJECT # H2306-01  
SITE # 7706  
FACILITY # 8877706012

REVISION: \_\_\_\_\_  
DATE: \_\_\_\_\_  
REVISION: \_\_\_\_\_  
DATE: \_\_\_\_\_  
REVISION: \_\_\_\_\_  
DATE: \_\_\_\_\_  
ISSUE DATE: 08-25-23

CAD DWG FILE: -  
DRAWN BY: LMM  
CHECKED BY: JCC  
DESIGNED BY: LMM

SHEET TITLE:  
FIRE PROTECTION  
SECOND FLOOR PLAN -  
RENOVATION

SHEET NUMBER:

F1.3

SHEET 6 OUT OF 10  
08-25-23

SSC JOB# 2023204 - BID AND PERMIT DOCUMENTS 08-25-23

**FINISH SCHEDULE GENERAL NOTES:**

- CONTRACTOR IS RESPONSIBLE FOR DEMOLITION AND REPLACEMENT / PATCHING / PAINTING / ETC. AS REQUIRED TO INSTALL THE SPRINKLER SYSTEM AND ALL ASSOCIATED COMPONENTS. ALL REPAIRS SHALL MATCH EXISTING FINISHES. COORDINATE WITH THE OWNER FOR ALL MODEL / MATERIAL INFORMATION FOR MATCHING.
- FINISH SCHEDULE KEYED NOTES ARE INTENDED TO CALL OUT THE FINISH AND ACCESSIBILITY INFORMATION WITHIN EACH SPACE AS NECESSARY. CONTRACTOR SHALL VERIFY ALL FINAL FINISHES AND ACCESSIBILITY REQUIREMENTS FOR EACH SPACE PRIOR TO BIDDING.

**FINISH SCHEDULE KEYED NOTES:**

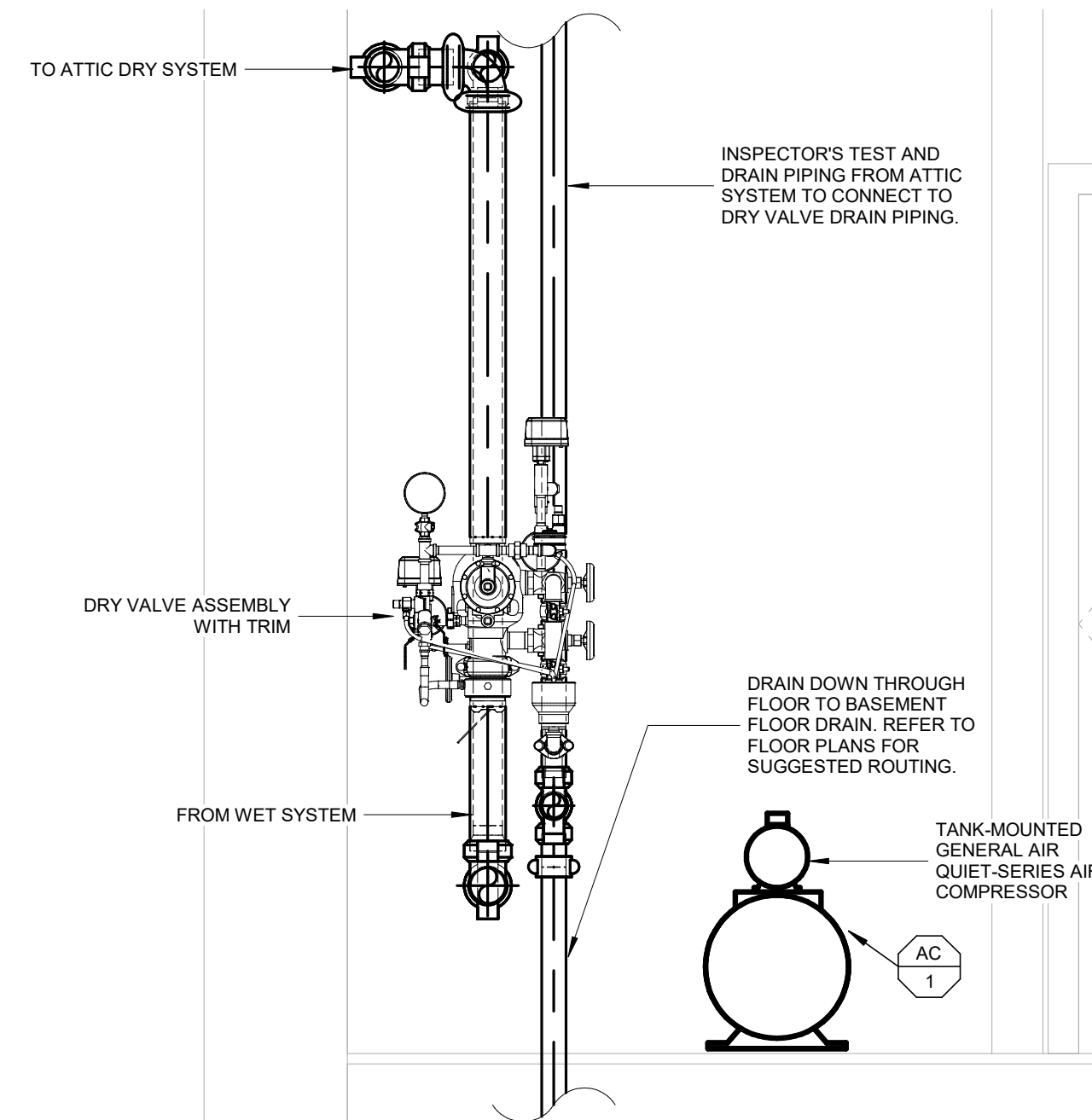
- A EXPOSED CONSTRUCTION. ALL PIPING AND SPRINKLERS EXPOSED WITHIN SPACE.
- B GYPSUM FINISHED CEILING. ALL PIPING AND SPRINKLERS EXPOSED WITHIN SPACE.
- C LAY-IN FINISHED CEILING. ALL OVERHEAD PIPING ROUTED ABOVE CEILING.
- D GYPSUM FINISHED CEILING. ALL OVERHEAD PIPING ROUTED ABOVE CEILING.

**FIRE PROTECTION GENERAL NOTES:**

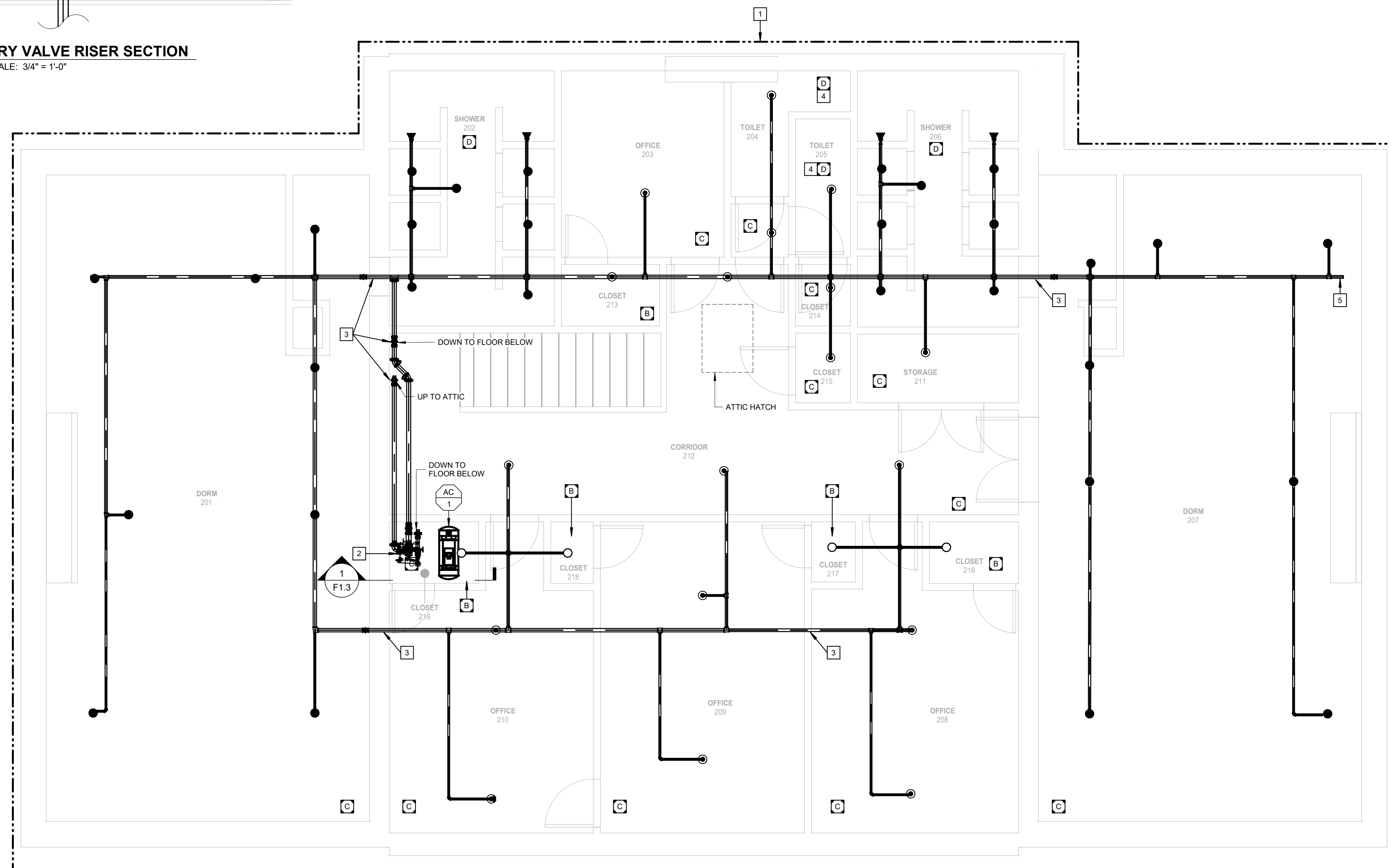
- REFER TO SHEET FP0.1 FOR SYMBOLS, ABBREVIATIONS AND GENERAL CONSTRUCTION NOTES.
- THE LOCATIONS OF MAJOR FIRE PROTECTION EQUIPMENT AND PIPING ARE SHOWN FOR REFERENCE ONLY TO ASSIST IN BIDDING AND SPACE COORDINATION. FIRE PROTECTION CONTRACTOR SHALL DESIGN, LOCATE, AND PROVIDE ALL EQUIPMENT, SPRINKLERS, VALVES, PIPE ARRANGEMENTS, AND COORDINATE WITH OTHER TRADES TO MEET THE APPLICABLE CODES AND STANDARDS FOR A COMPLETE AND FUNCTIONAL SYSTEM.
- CEILING TILES SHALL BE OWNER FURNISHED. CONTRACTOR INSTALLED. CONTRACTOR SHALL NOTE ANY CURRENTLY INSTALLED CEILING TILE WITH DAMAGE TO OWNER PRIOR TO THE START OF CONSTRUCTION. ANY EXISTING DAMAGED CEILING TILE TO BE FURNISHED BY THE OWNER. ANY TILE DAMAGED DURING CONSTRUCTION ACTIVITIES SHALL BE FURNISHED BY THE CONTRACTOR.
- BUILDING HAS BEEN RECENTLY RENOVATED. ANY MISSING LIGHT FIXTURE SHALL BE OWNER FURNISHED AND INSTALLED. IN AREAS WITH GYPSUM CEILINGS, COORDINATE WITH THE OWNER FOR THE TYPE OF FIXTURE TO BE INSTALLED AND PROVIDE AN OPENING IN THE FINISHED GYPSUM CEILING FOR INSTALLATION OF LIGHT FIXTURE.
- ALL ITEMS STORED IN THE BUILDING ARE TO BE RELOCATED BY THE OWNER.
- A LARGE QUANTITY OF SPRINKLERS WERE REPLACED IN THE RECENT RENOVATION PROJECT. CONTRACTOR MAY REUSE AND RELOCATE NEWLY INSTALLED SPRINKLERS (SPRINKLER AND SPRIG) WHERE POSSIBLE. ANY NEWLY INSTALLED SPRINKLER NOT USED SHALL BE RETURNED TO THE OWNER IN REUSABLE CONDITION (SPRINKLER AND SPRIG). EXISTING SPRINKLERS THAT WERE NOT RECENTLY REPLACED SHALL NOT BE REUSED.

**FIRE PROTECTION KEYED NOTES:**

- PROVIDE THE DESIGN AND INSTALLATION OF A COMPLETE AND FUNCTIONAL AUTOMATIC FIRE PROTECTION SYSTEM IN THE AREA INDICATED. FIRE PROTECTION SYSTEM(S) SHALL BE DESIGNED PER NFPA 13 AND IBC REQUIREMENTS FOR A FULLY SPRINKLER BUILDING. PROVIDE ALL SPRINKLERS, PIPING, HANGERS, ETC. AND COORDINATE LOCATIONS, PIPE ROUTING, SCHEDULING, AND ALL OTHER INSTALLATION REQUIREMENTS WITH OTHER TRADES.
- NEW DRY SPRINKLER SYSTEM RISER
- NEW PIPING SHALL BE ROUTED THROUGH EXISTING WALL AND FLOOR PENETRATIONS. TYP. ALL PENETRATIONS.
- CEILING NOT COMPLETED DURING PREVIOUS RENOVATION SCOPE. INSTALL A FINISHED GYPSUM CEILING IN SPACE DURING THIS PROJECT TO MATCH OTHER RESTROOMS RECENTLY RENOVATED ON THIS FLOOR. OWNER SHALL FURNISH AND INSTALL LIGHT FIXTURE IN RESTROOM. COORDINATE WITH OWNER LOCATION OF LIGHT FIXTURE AND PROVIDE OPENING IN GYPSUM CEILING FOR LATER INSTALLATION OF THE LIGHT FIXTURE.
- PROVIDE AUTOMATIC AIR VENT AT SYSTEM HIGH POINT. REFER TO SHEET FP0.1 AND SPECIFICATION 210500 FOR MORE INFORMATION. COORDINATE WITH FIRE ALARM CONTRACTOR WIRING REQUIREMENTS AND FINAL INSTALLED LOCATION.



**1 DRY VALVE RISER SECTION**  
SCALE: 3/4" = 1'-0"



**FIRE PROTECTION SECOND FLOOR PLAN - RENOVATION**  
SCALE: 1/4" = 1'-0"  
NORTH



1807 East Avenue  
Chesterfield, Missouri 63005  
Phone: 636.530.7770 Fax: 636.530.7977  
Missouri Certificate of Authority #NC 001244



08/25/23

JAMES C. CORNETT  
MO LIC# PE-29364 EXP. 12/31/23

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COTTAGE 2 FIRE  
SPRINKLER SYSTEM

13002 BELLFONTAINE RD,  
ST. LOUIS, MO 63138

PROJECT # H2306-01  
SITE # 7706  
FACILITY # 8877706012

REVISION: \_\_\_\_\_  
DATE: \_\_\_\_\_  
REVISION: \_\_\_\_\_  
DATE: \_\_\_\_\_  
REVISION: \_\_\_\_\_  
DATE: \_\_\_\_\_  
ISSUE DATE: 08-25-23

CAD DWG FILE: - \_\_\_\_\_  
DRAWN BY: LMM \_\_\_\_\_  
CHECKED BY: JCC \_\_\_\_\_  
DESIGNED BY: LMM \_\_\_\_\_

SHEET TITLE:  
FIRE PROTECTION  
ATTIC FLOOR PLAN -  
RENOVATION

SHEET NUMBER:

**F1.4**

SHEET 7 OUT OF 10  
08-25-23

**FINISH SCHEDULE GENERAL NOTES:**

1. CONTRACTOR IS RESPONSIBLE FOR DEMOLITION AND REPLACEMENT / PATCHING / PAINTING / ETC. AS REQUIRED TO INSTALL THE SPRINKLER SYSTEM AND ALL ASSOCIATED COMPONENTS. ALL REPAIRS SHALL MATCH EXISTING FINISHES. COORDINATE WITH THE OWNER FOR ALL MODEL / MATERIAL INFORMATION FOR MATCHING.
2. FINISH SCHEDULE KEYED NOTES ARE INTENDED TO CALL OUT THE FINISH AND ACCESSIBILITY INFORMATION WITHIN EACH SPACE AS NECESSARY. CONTRACTOR SHALL VERIFY ALL FINAL FINISHES AND ACCESSIBILITY REQUIREMENTS FOR EACH SPACE PRIOR TO BIDDING.

**FINISH SCHEDULE KEYED NOTES:**

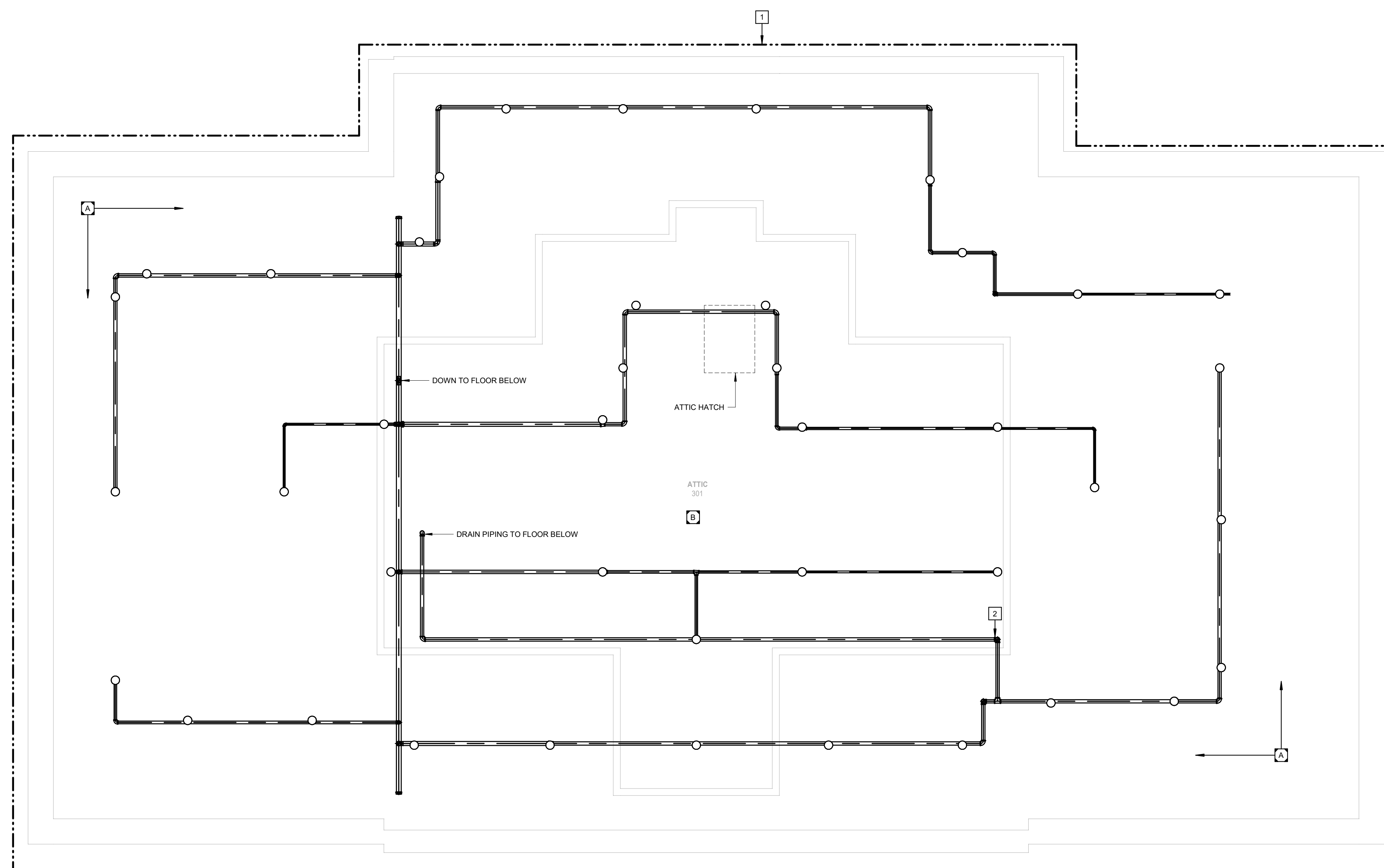
- A EXPOSED ATTIC JOIST CONSTRUCTION. NO FLOOR AROUND ATTIC PERIMETER. ACCESSIBLE BY ATTIC JOISTS ONLY.
- B FLOOR ACCESS WITHIN CENTER OF ATTIC.

**FIRE PROTECTION GENERAL NOTES:**

1. REFER TO SHEET FP0.1 FOR SYMBOLS, ABBREVIATIONS AND GENERAL CONSTRUCTION NOTES.
2. THE LOCATIONS OF MAJOR FIRE PROTECTION EQUIPMENT AND PIPING ARE SHOWN FOR REFERENCE ONLY TO ASSIST IN BIDDING AND SPACE COORDINATION. FIRE PROTECTION CONTRACTOR SHALL DESIGN, LOCATE, AND PROVIDE ALL EQUIPMENT, SPRINKLERS, VALVES, PIPE ARRANGEMENTS, AND COORDINATE WITH OTHER TRADES TO MEET THE APPLICABLE CODES AND STANDARDS FOR A COMPLETE AND FUNCTIONAL SYSTEM.

**FIRE PROTECTION KEYED NOTES:**

- 1 PROVIDE THE DESIGN AND INSTALLATION OF A COMPLETE AND FUNCTIONAL AUTOMATIC FIRE PROTECTION SYSTEM IN THE ATTIC AS INDICATED. FIRE PROTECTION SYSTEM(S) SHALL BE DESIGNED PER NFPA 13 AND IBC REQUIREMENTS FOR A FULLY SPRINKLER BUILDING. PROVIDE ALL SPRINKLERS, PIPING, HANGERS, ETC. AND COORDINATE LOCATIONS, PIPE ROUTING, SCHEDULING, AND ALL OTHER INSTALLATION REQUIREMENTS WITH OTHER TRADES.
- 2 REMOVE INSPECTOR'S TEST AND DRAIN.



**FIRE PROTECTION ATTIC FLOOR PLAN - RENOVATION**  
SCALE: 1/4" = 1'-0"  
NORTH

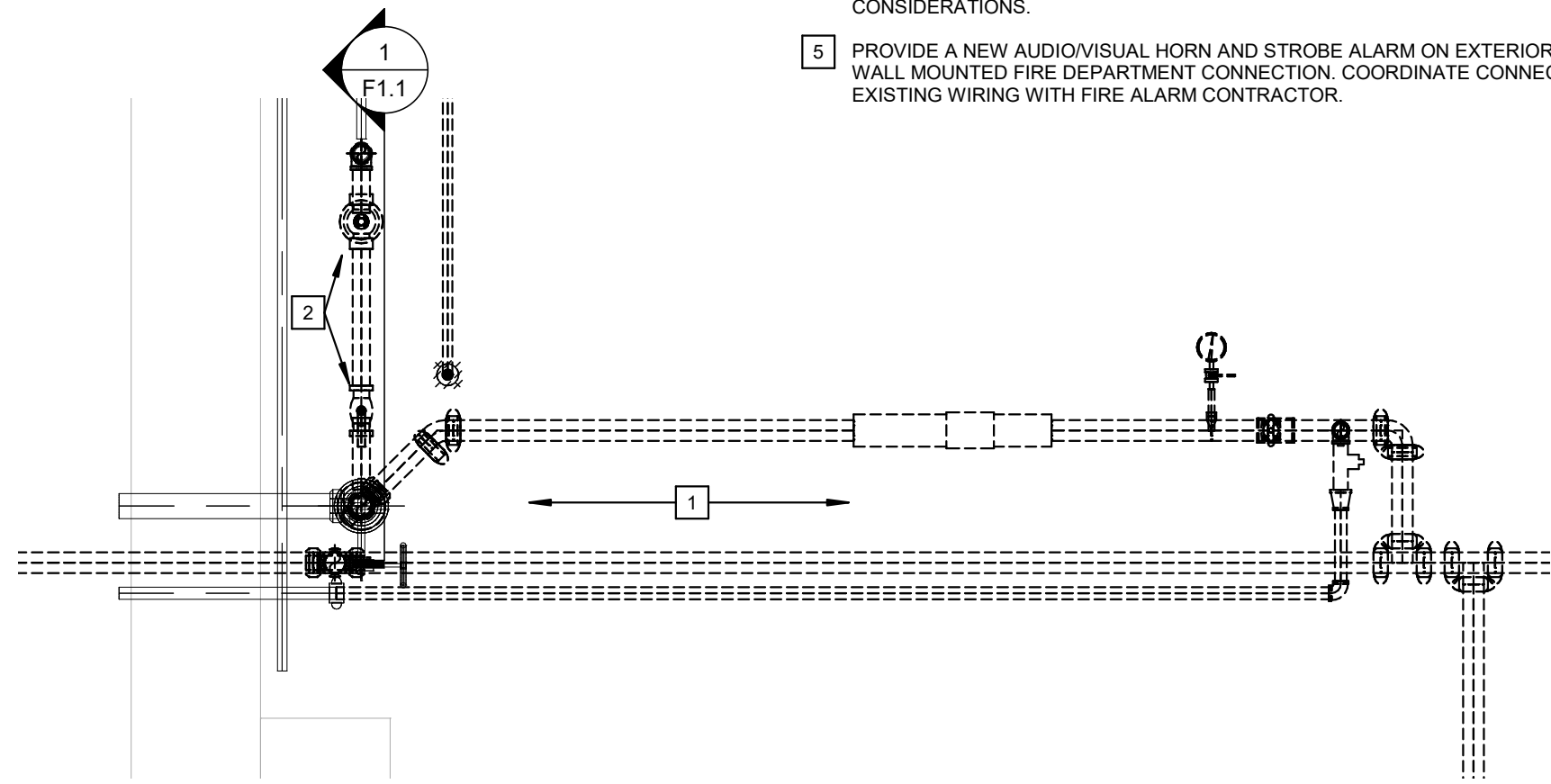
SSC JOB# 2023204 - BID AND PERMIT DOCUMENTS 08-25-23

**GENERAL NOTES:**

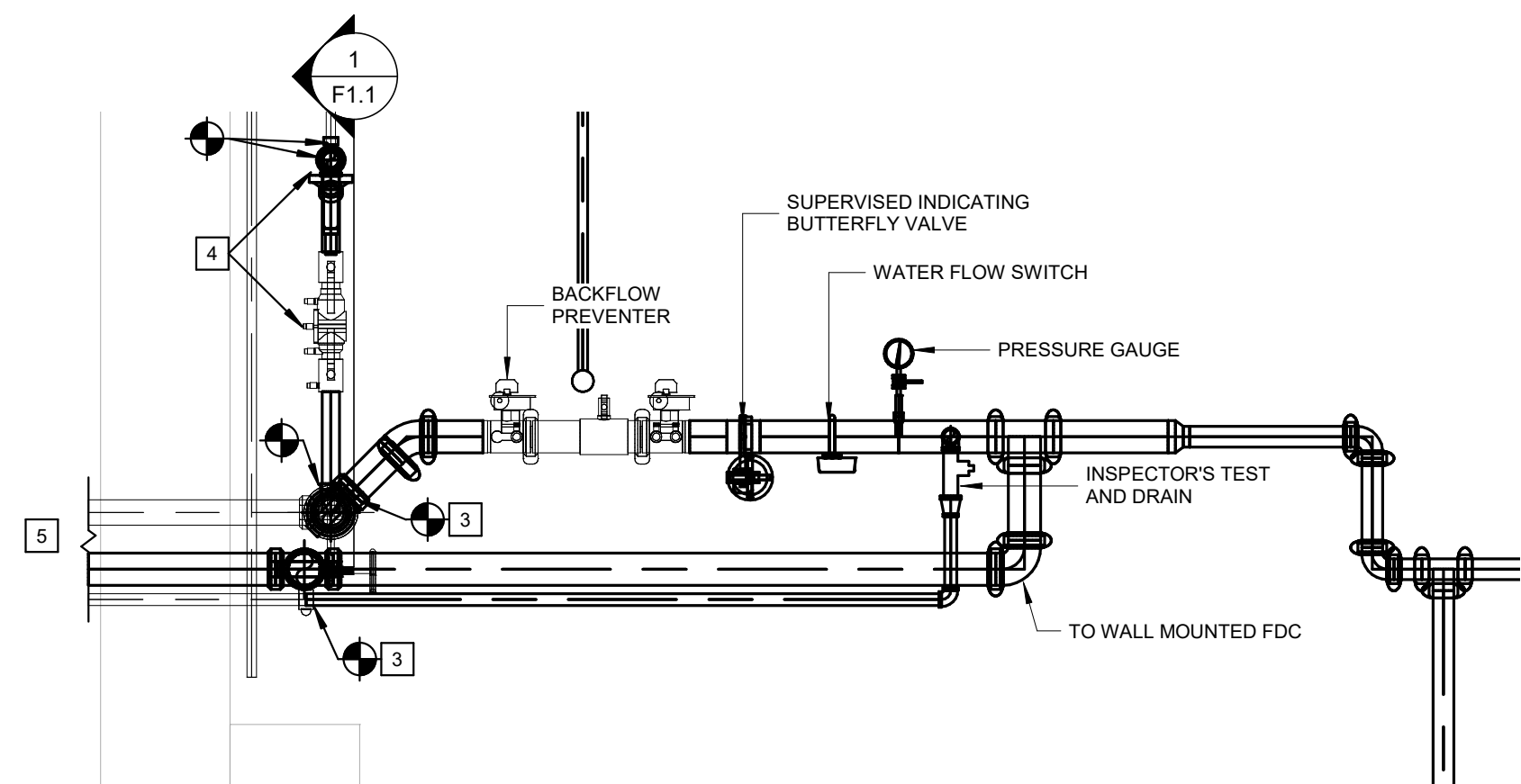
- REFER TO SHEET FP.0.1 FOR SYMBOLS, ABBREVIATIONS AND GENERAL CONSTRUCTION NOTES.
- THE LOCATIONS OF MAJOR FIRE PROTECTION EQUIPMENT AND PIPING ARE SHOWN FOR REFERENCE ONLY TO ASSIST IN BIDDING AND SPACE COORDINATION. FIRE PROTECTION CONTRACTOR SHALL DESIGN, LOCATE, AND PROVIDE ALL EQUIPMENT, SPRINKLERS, VALVES, PIPE ARRANGEMENTS, AND COORDINATE WITH OTHER TRADES TO MEET THE APPLICABLE CODES AND STANDARDS FOR A COMPLETE AND FUNCTIONAL SYSTEM.

**ENLARGED PLAN KEYED NOTES:**

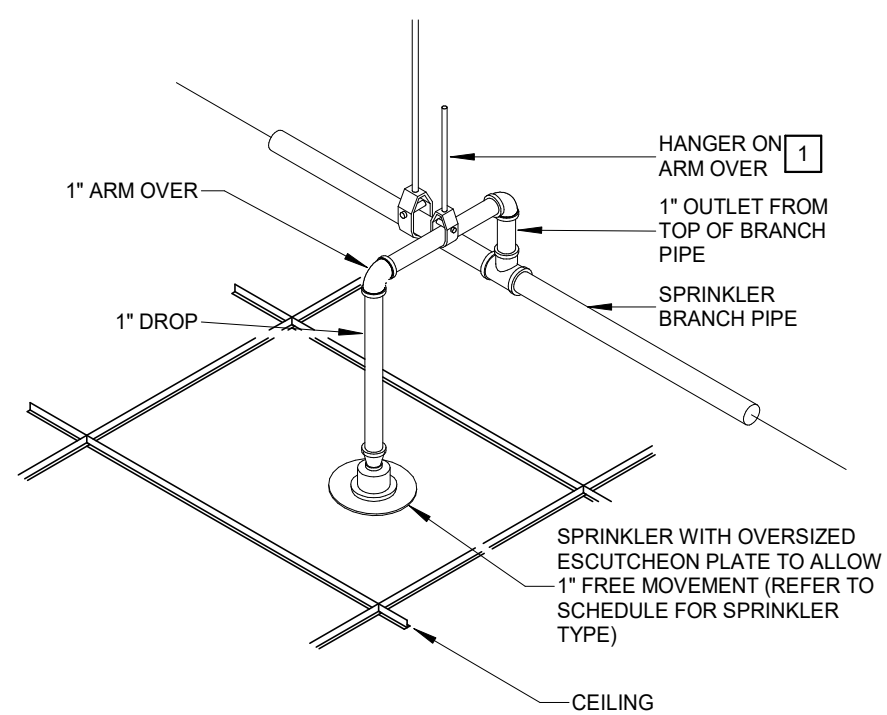
- EXISTING FIRE PROTECTION ENTRANCE EQUIPMENT TO BE DEMOLISHED BACK TO COMBINED ENTRANCE. MAIN DRAIN PIPING SHALL BE DEMOLISHED BACK TO PENETRATION THROUGH EXTERIOR WALL. TO BE RECONNECTED TO DURING RENOVATION. EXISTING 6 INCH MAIN SHUT OFF VALVE SHALL BE EXISTING TO REMAIN. EXISTING 2-1/2" FIRE DEPARTMENT CONNECTION (FDC), ASSOCIATED PIPING, AND WATER MONITOR GONG SHALL BE DEMOLISHED THROUGH WALL TO BE REPLACED DURING RENOVATION.
- EXISTING DOMESTIC WATER BALL VALVE, Y-PATTERN STRAINER, AND PRESSURE REDUCING VALVE TO BE DEMOLISHED.
- CONNECT NEW FIRE PROTECTION ENTRANCE PIPING AND MAIN DRAIN PIPING TO EXISTING CONNECTIONS. FIRE PROTECTION PIPING UP TO AND INCLUDING THE BACKFLOW PREVENTER SHALL BE A MINIMUM OF 4-INCH IN DIAMETER. PROVIDE NEW 4-IN FDC PIPING AND NEW WALL MOUNTED FDC ON EXTERIOR OF BUILDING. NEW FDC SHALL MATCH EXISTING. WALL PENETRATION(S) SHALL BE MADE WATER TIGHT BY USE OF LINK SEAL OR EQUIVALENT.
- NEW BACKFLOW PREVENTER, Y-PATTERN STRAINER, AND PRESSURE REDUCING VALVE SHALL BE INSTALLED ON DOMESTIC WATER ENTRANCE PIPING. STRAINER AND PRESSURE REDUCING VALVE SHALL BE INSTALLED IN THE VERTICAL FOR SPACE CONSIDERATIONS.
- PROVIDE A NEW AUDIOVISUAL HORN AND STROBE ALARM ON EXTERIOR WALL ABOVE WALL MOUNTED FIRE DEPARTMENT CONNECTION. COORDINATE CONNECTION TO EXISTING WIRING WITH FIRE ALARM CONTRACTOR.



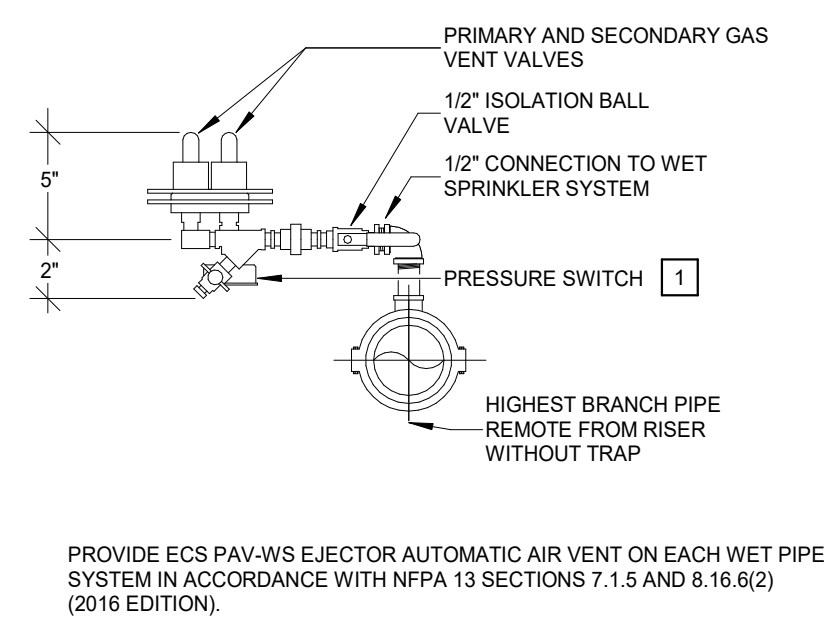
**1 BASEMENT WATER ENTRANCE DEMOLITION ENLARGED PLAN**  
SCALE: 1/2" = 1'-0"  
NORTH



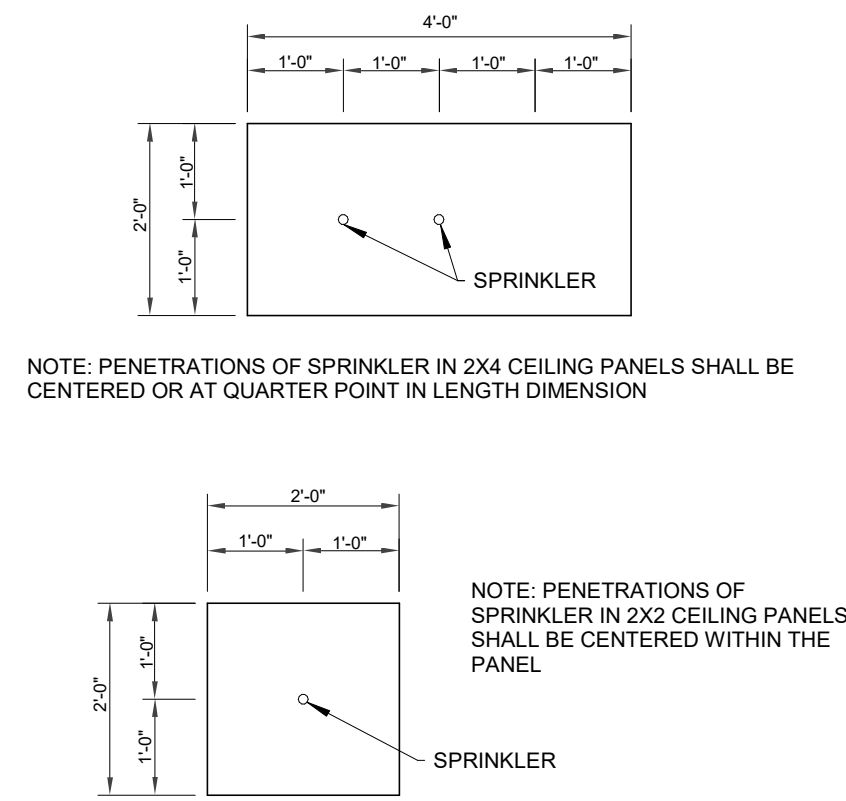
**5 BASEMENT WATER ENTRANCE RENOVATION ENLARGED PLAN**  
SCALE: 1/2" = 1'-0"  
NORTH



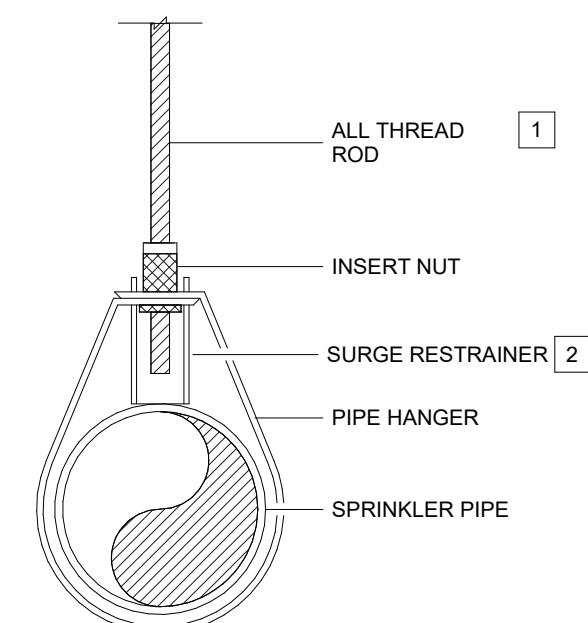
**8 TYPICAL RETURN BEND**  
NOT TO SCALE



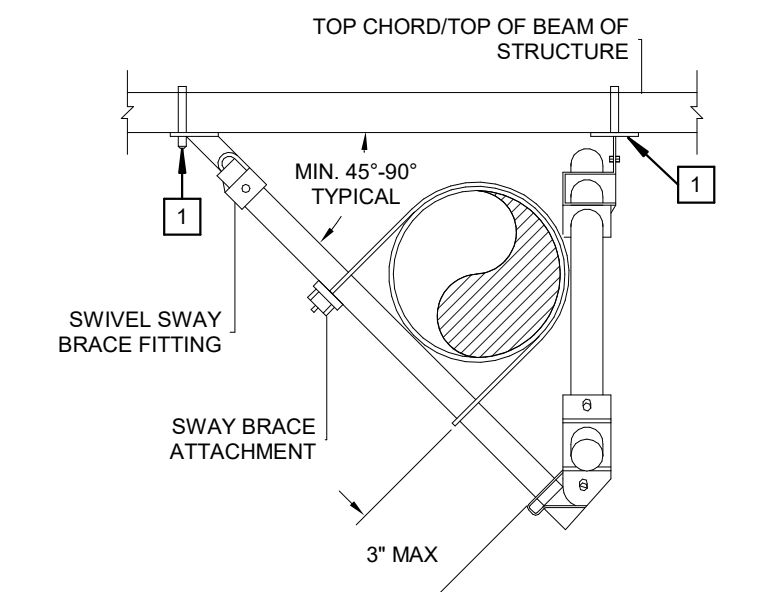
**9 AUTOMATIC AIR VENT**  
NOT TO SCALE



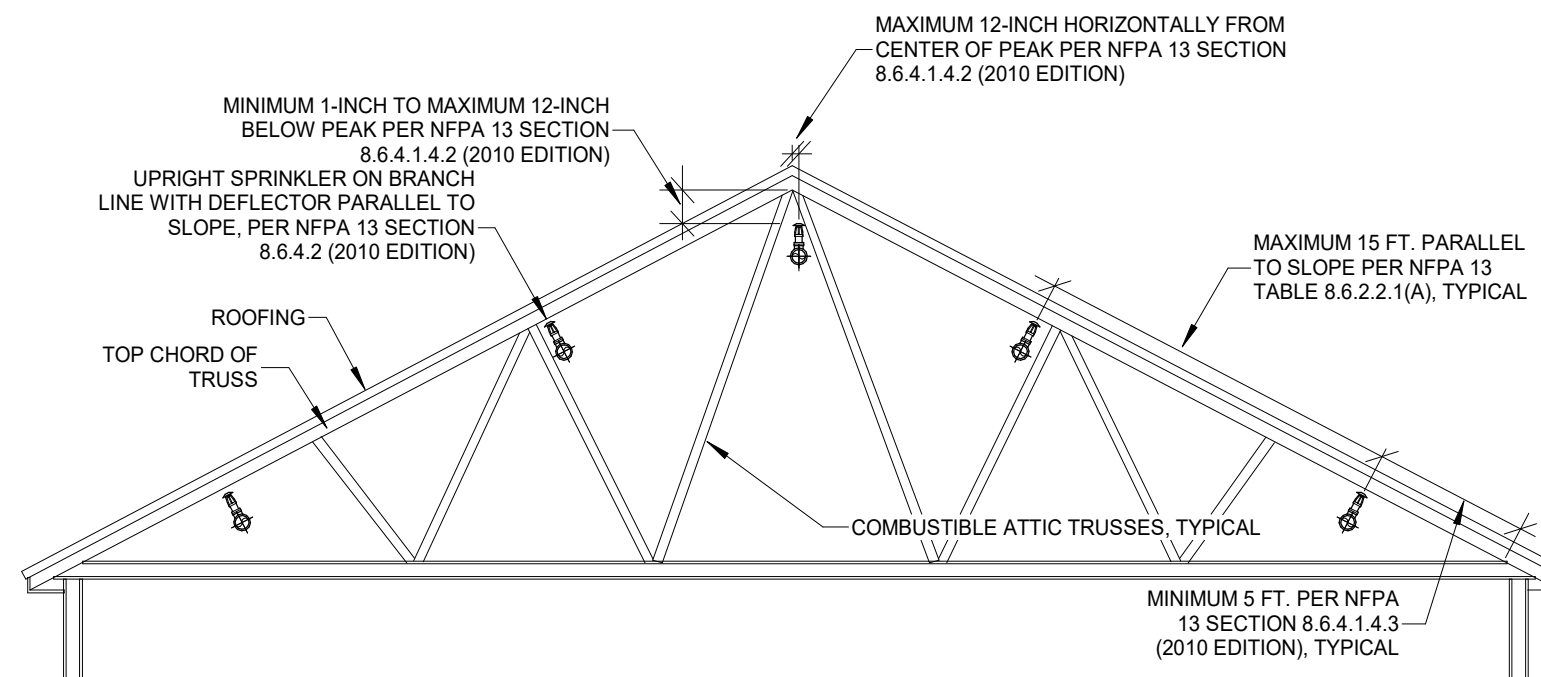
**2 CEILING TILE SPRINKLER SPACING**  
NOT TO SCALE



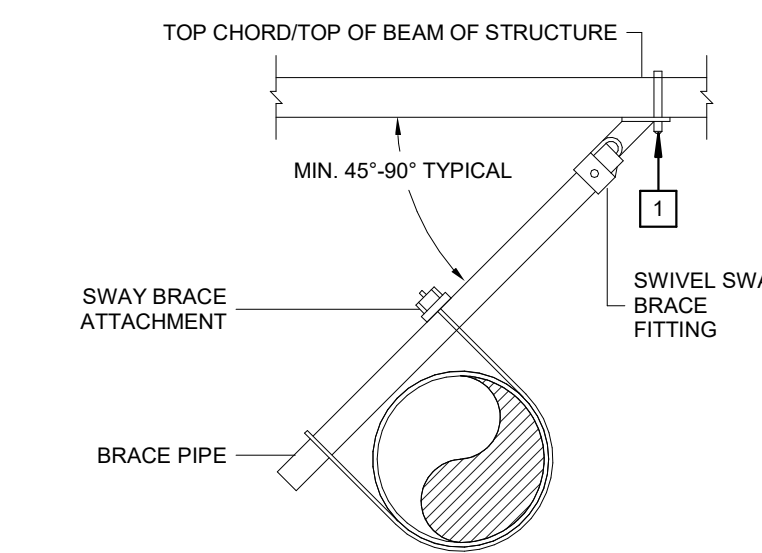
**3 PIPE HANGER**  
NOT TO SCALE



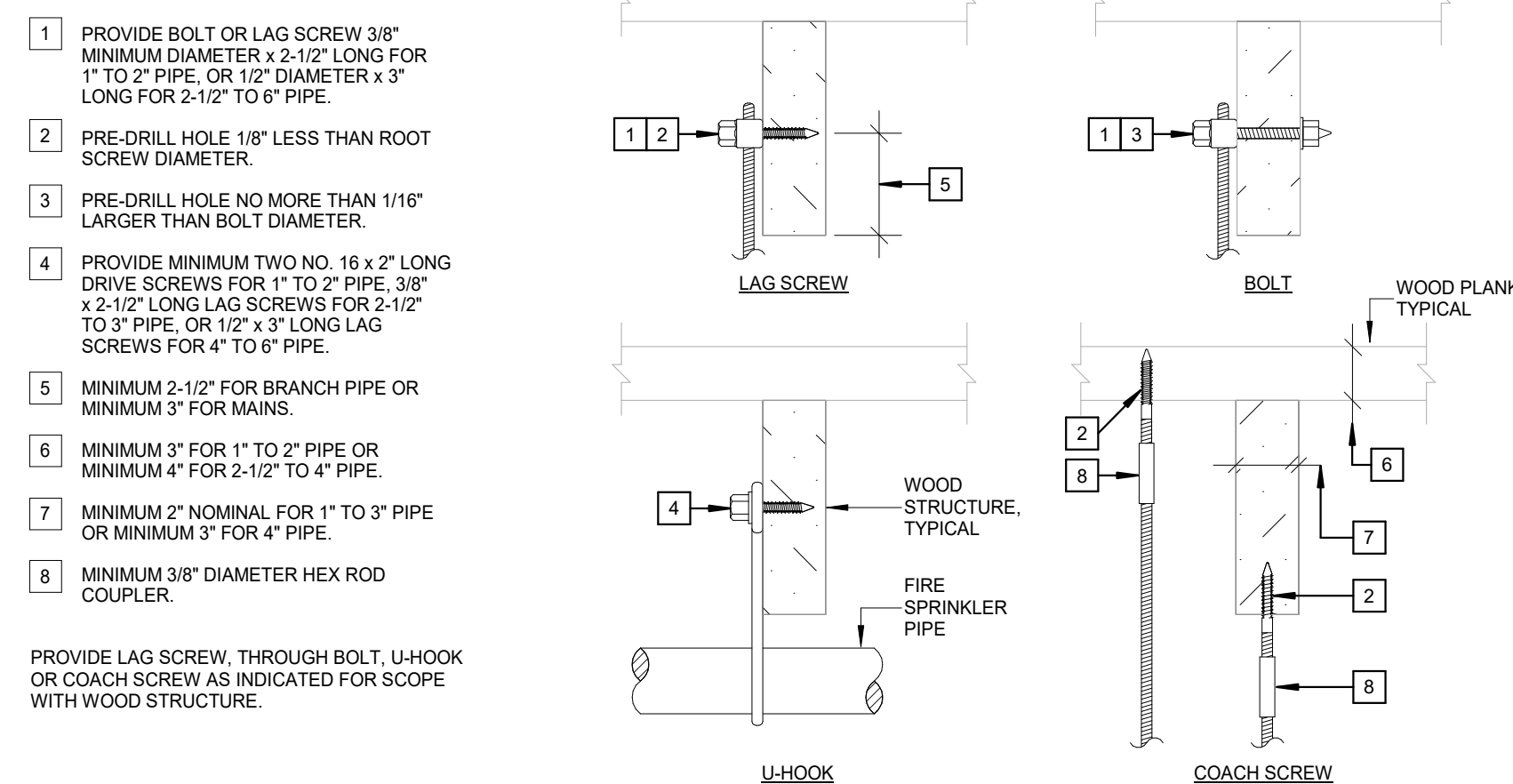
**4 FOUR-WAY SEISMIC BRACE**  
NOT TO SCALE



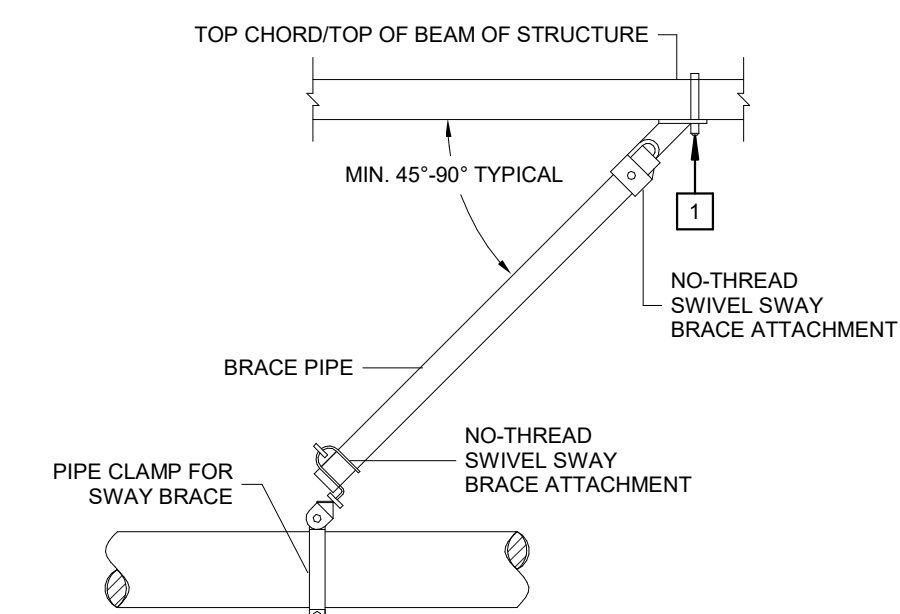
**6 ATTIC SPRINKLER PROTECTION**  
NOT TO SCALE



**7 LATERAL SEISMIC BRACE**  
NOT TO SCALE



**10 WOOD ATTACHMENT DETAIL**  
NOT TO SCALE



**11 LONGITUDINAL SEISMIC BRACE**  
NOT TO SCALE

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ST. LOUIS, MO 63138

PROJECT # H2306-01  
SITE # 7706  
FACILITY # 8877706012

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DATE:  
ISSUE DATE: 08-25-23

CAD DWG FILE: -  
DRAWN BY: LMM  
CHECKED BY: JCC  
DESIGNED BY: LMM

SHEET TITLE:  
**FIRE PROTECTION  
DETAILS**

SHEET NUMBER:

**F5.1**

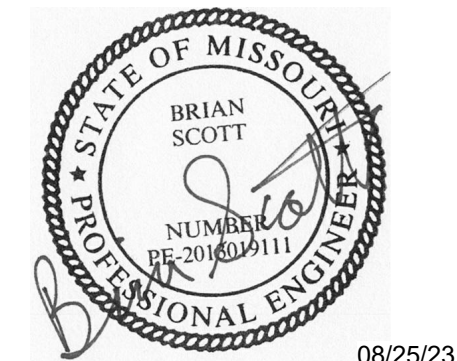
SHEET 8 OUT OF 10  
08-25-23

SSC JOB# 2023204 - BID AND PERMIT DOCUMENTS 08-25-23





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OFFICE OF  
ADMINISTRATION  
DIVISION OF FACILITIES  
MANAGEMENT,  
DESIGN AND  
CONSTRUCTION  
DIVISION OF YOUTH  
SERVICES

MISSOURI HILLS YOUTH  
CENTER - REPLACE  
COTTAGE 2 FIRE  
SPRINKLER SYSTEM

13002 BELLFONTAINE RD,  
ST. LOUIS, MO 63138

PROJECT # H2306-01  
SITE # 7706  
FACILITY # 8877706012

REVISION:  
DATE: \_\_\_\_\_  
REVISION:  
DATE: \_\_\_\_\_  
REVISION:  
DATE: \_\_\_\_\_  
ISSUE DATE: 08-25-23

CAD DWG FILE: -  
DRAWN BY: HAP  
CHECKED BY: BBS  
DESIGNED BY: HAP

SHEET TITLE:  
ELECTRICAL SYMBOLS,  
ABBREVIATIONS &  
GENERAL NOTES

SHEET NUMBER:

E0.1

SHEET 9 OUT OF 10  
08-25-23

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ELECTRICAL SYMBOLS LEGEND

WIRING DEVICES		ABBREVIATIONS	
	JUNCTION BOX OR POINT OF CONNECTION - MOUNT 18" AFF OR AT HEIGHT REQUIRED BY RESPECTIVE EQUIPMENT ITEM MANUFACTURER.	AC	ABOVE COUNTER
		AIC	AMP INTERRUPTING CURRENT
		AFC	AVAILABLE FAULT CURRENT
		AFF	ABOVE FINISHED FLOOR.
	BRANCH CIRCUIT PANELBOARD - MOUNT TOP 78" AFF.	AFI/AFCI	ARC FAULT CIRCUIT INTERRUPTER TYPE DEVICE. (U.N.O.)
<b>MOTORS AND EQUIPMENT</b>		ATS	AUTOMATIC TRANSFER SWITCH
	FIRE ALARM CONTROL PANEL - MOUNT TOP 72" AFF. PROVIDE TWO (2) DATA DROPS.	CATV	CABLE TELEVISION
	FIRE ALARM ANNUCIATOR PANEL - MOUNT TOP 72" AFF.	EC	ELECTRICAL CONTRACTOR
	DIGITAL ALARM COMMUNICATOR TRANSMITTER	ELEV	ELEVATOR CONTRACTOR
	FIRE ALARM POWER SUPPLY - MOUNTED 72" A.F.F.	EM	EMERGENCY
	MANUAL PULL STATION - MOUNT 46" AFF.	EWC	ELECTRIC WATER COOLER; ROUGH-IN RECEPTACLE INCONSPICUOUSLY; COORDINATE WITH PC
	SMOKE DETECTOR - CEILING MOUNTED.	EWL	ELECTRIC WATER HEATER
	SINGLE STATION SMOKE ALARM - CEILING MOUNTED - "CO" INDICATES COMBINATION CARBON MONOXIDE ALARM	EX	EXISTING
	DUCT MOUNTED SMOKE DETECTOR WITH SAMPLING TUBES.	FLA	FULL LOAD AMPS
	DUCT MOUNTED SMOKE DETECTOR'S REMOTE ANNUCIATOR LAMP AND TEST SWITCH-MOUNT ON CEILING. (U.N.O.)	FPC	FIRE PROTECTION CONTRACTOR
	HEAT DETECTOR - CEILING MOUNTED (U.N.O.)	FSS	FUSIBLE SAFETY SWITCH
	CARBON MONOXIDE DETECTOR - CEILING MOUNTED.	GC	GENERAL CONTRACTOR
	VISUAL FLASHER - MOUNT 80" AFF TO BOTTOM OF FLASHER; (NUMERALS INDICATE CANDELA).	GF/IGFCI	GROUND FAULT CIRCUIT INTERRUPTER TYPE DEVICE. (U.N.O.)
	HORN OR SPEAKER - MOUNT 80" AFF; V DENOTES COMBINATION AUDIBLE/VISUAL APPLIANCE. (NUMERALS INDICATE CANDELA).	H.I.D.	HIGH INTENSITY DISCHARGE
	VISUAL FLASHER - CEILING MOUNTED; (NUMERALS INDICATE CANDELA). FINISH TO MATCH CEILING.	IG	ISOLATED GROUND TYPE DEVICE
	HORN OR SPEAKER - CEILING MOUNTED; V DENOTES COMBINATION AUDIBLE/VISUAL APPLIANCE. (NUMERALS INDICATE CANDELA). FINISH TO MATCH CEILING.	KEC	KITCHEN EQUIPMENT CONTRACTOR
	EXTERIOR FA BELL - MOUNT 90" AFF.	MAX	MAXIMUM
	FIRE ALARM MAGNETIC DOOR HOLDER.	MC	MECHANICAL CONTRACTOR
	INTERFACE RELAY FOR CODE REQUIRED ACTION, OR AS NOTED ON PLANS; SEE SPECIFICATION.	MFR	MANUFACTURER
	CONTROL MODULE FOR CODE REQUIRED ACTION; SEE SPECIFICATION.	MH	MOUNTING HEIGHT
	MONITOR MODULE FOR CODE REQUIRED ACTION, OR AS NOTED ON PLANS; SEE SPECIFICATION.	MIN	MINIMUM
	SPRINKLER TAMPER SWITCH (FURNISHED BY FPC).	NF	NON-FUSED SWITCH
	SPRINKLER FLOW SWITCH (FURNISHED BY FPC).	NTS	NOT TO SCALE
	SPRINKLER PRESSURE SWITCH (FURNISHED BY FPC).	PC	PLUMBING CONTRACTOR
		RT	RAINTIGHT
		TP	TAMPER PROOF TYPE DEVICE
		TCC	TEMPERATURE CONTROL CONTRACTOR
		TYP	TYPICAL
		U.N.O.	UNLESS NOTED OTHERWISE
		UPS	UNINTERRUPTIBLE POWER SUPPLY
		WP	WEATHERPROOF
<b>MISCELLANEOUS</b>			
	MECHANICAL EQUIPMENT ITEM IDENTIFICATION PER EQUIPMENT SCHEDULE ON MECHANICAL DRAWINGS.		
	MISCELLANEOUS EQUIPMENT NUMBER. SEE MISCELLANEOUS EQUIPMENT SCHEDULE.		

GENERAL DEMOLITION NOTES:

- THE OWNER INTENDS TO OCCUPY THE BUILDING THROUGHOUT CONSTRUCTION. UTILITIES AND SERVICES SHALL NOT BE INTERRUPTED WITHOUT THE OWNER'S APPROVAL AS TO THE TIME AND DURATION. THE CONTRACTOR SHALL SO ORGANIZE THEIR WORK AS TO CAUSE A MINIMUM OF UTILITY INTERRUPTIONS, WHICH SHALL BE SCHEDULED AT THE CONVENIENCE OF THE OWNER.
- ALL ELECTRICAL EQUIPMENT, LIGHTING FIXTURES, SWITCHES, RECEPTACLES, SPECIAL OUTLETS, ETC., WHICH ARE NOTED TO BE DEMOLISHED, OR ARE SHOWN WITH DASHED LINE SYMBOLS ON THE DEMOLITION PLANS, SHALL BE REMOVED. ASSOCIATED WIRING AND CONDUIT SHALL BE REMOVED BACK TO THE SOURCE OR EXISTING UPSTREAM DEVICE TO REMAIN AND MADE SAFE.
- REMOVE EQUIPMENT, FIXTURES, DEVICES AND OUTLETS AS SPECIFIED AND SHOWN ON DRAWINGS, AND AS MAY BECOME NECESSARY BECAUSE OF EXISTING FIELD CONDITIONS. EXAMINE ALL EXISTING WALLS AND CEILING DESIGNATED FOR REMOVAL TO DETERMINE THE CONDUIT AND WIRING THAT WILL REQUIRE REMOVAL.
- FOR EXISTING ELECTRICAL DEVICES IN WALLS TO BE REMOVED, DISCONNECT POWER, REMOVE CONDUCTORS AND CAP CONDUIT BELOW FLOOR OR ABOVE CEILING AS REQUIRED. DEVICES ARE TO BE REMOVED ALONG WITH WALL BY GENERAL CONTRACTOR.
- FOR EXISTING ELECTRICAL EQUIPMENT, FIXTURES AND DEVICES TO BE REMOVED FROM WALLS WHICH REMAIN, DISCONNECT POWER, REMOVE CONDUCTORS, REMOVE THE ELECTRICAL ITEM, AND PATCH AND FINISH THE SURFACE AS REQUIRED TO MATCH THE EXISTING, OR MAKE READY FOR NEW WALL FINISH, PROVIDE BLANK PLATES WHERE NOTED OR REQUIRED.
- EXISTING RECEPTACLES, DEVICES, ETC. TO REMAIN ARE DENOTED BY THIN SOLID LINE OR MAY NOT BE INDICATED AT ALL. THESE DEVICES SHALL BE EXTENDED TO BE FLUSH WITH NEW FINISH ON EXISTING WALL WHERE REQUIRED.
- MAINTAIN CIRCUIT CONTINUITY TO ALL EQUIPMENT, FIXTURES, DEVICES, ETC., TO REMAIN IN USE. WHERE NOTED ON THE PLANS OR NOT, FIELD VERIFY EXISTING ITEMS TO REMAIN IN USE. WIRING FOR EXISTING CIRCUITS WHICH ARE PARTIALLY ABANDONED SHALL BE RECONNECTED BY THE ELECTRICAL CONTRACTOR TO SERVICE THE REMAINING OUTLETS ON THE CIRCUIT.
- ALL WIRING FOR A CIRCUIT WHICH IS TO BE REMOVED SHALL BE REMOVED BACK TO THE PANEL WHICH SUPPLIED THE CIRCUIT.
- EXISTING CONDUIT & CONDUCTORS MAY BE REUSED WHERE FEASIBLE. ALL UNUSED CONDUIT MADE EMPTY BY THIS DEMOLITION SHALL BE REMOVED BY THE ELECTRICAL CONTRACTOR. WHERE CONDUITS EXTENDING OUT OF THE FLOOR ARE TO BE REMOVED, CUT THE CONDUIT OFF 1/2" BELOW THE FLOOR LINE AND PATCH.
- ALL ACTIVE CIRCUITING THAT RUNS THROUGH THIS SPACE, ORIGINATING AND/OR TERMINATING IN OTHER SPACES, SHALL REMAIN IN PLACE. COORDINATE WITH NEW CEILING WORK FOR RAISED CEILING WHICH MAY REQUIRE CIRCUITING RELOCATION.
- ALL UNUSED TELEPHONE AND DATA CABLES SHALL BE REMOVED. ANY OTHER UNUSED LOW VOLTAGE SYSTEMS CABLES SHALL ALSO BE REMOVED.
- ALL EXISTING EQUIPMENT, LIGHTING FIXTURES, WIRING DEVICES, AND MATERIALS TO BE REMOVED SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE REMOVED FROM THE PREMISES AND PROPERLY DISPOSED OF IN ACCORDANCE WITH AUTHORITIES HAVING JURISDICTION, UNLESS OTHERWISE NOTED. ALL ITEMS NOTED THAT THE OWNER CHOOSES TO KEEP SHALL BE TRANSFERRED TO THEIR STORAGE AREA BY THE ELECTRICAL CONTRACTOR.
- FOR ALL EXISTING ELECTRICAL WIRING DEVICES, TELEPHONE, DATA ETC., CONTRACTOR SHALL REMOVE/REINSTALL COVERPLATES AS REQUIRED TO ALLOW FOR NEW FINISHES.
- INFORMATION ON THE EXISTING CONDITIONS PLANS ARE COMPILED FROM EXISTING DRAWINGS AND CASUAL FIELD OBSERVATIONS AND SHALL BE CONSIDERED APPROXIMATE ONLY. VERIFICATION OF ALL EQUIPMENT, WIRING DEVICES AND FIXTURES, EITHER SHOWN OR NOT SHOWN ON THESE PLANS, SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. NOTIFY ENGINEER IMMEDIATELY IF DISCREPANCIES EXIST.

GENERAL CONSTRUCTION NOTES:

- ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR NECESSARY PERMITS, LICENSES, INSPECTIONS AND FEES FROM THE LOCAL AUTHORITIES. CONTRACTOR SHALL BE LICENSED BY LOCAL AND/OR STATE AUTHORITIES HAVING JURISDICTION.
- ALL MATERIAL AND WORKMANSHIP SHALL CONFORM TO THE NATIONAL FIRE PROTECTION ASSOCIATION (NFPA), NATIONAL ELECTRICAL CODE (NEC), INTERNATIONAL BUILDING CODE (IBC) AND OTHER APPLICABLE LOCAL, STATE AND NATIONAL CODES.
- ALL ELECTRICAL MATERIAL USED ON THIS PROJECT SHALL BE "UL" LISTED AND LABELED.
- THE ENTIRE ELECTRICAL SYSTEM AND ALL ELECTRICAL EQUIPMENT SHALL BE GROUNDED IN STRICT ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE AND AS SHOWN ON THE DRAWINGS. PROVIDE A GROUND WIRE IN EACH POWER CONDUIT, SIZED PER THE NEC.
- CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING A COMPLETE SYSTEM PER CONTRACT DRAWINGS AND ENSURING THAT THE SYSTEM IS OPERATIONAL UPON JOB COMPLETION.
- CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING WITH ALL OTHER TRADES AND DISCIPLINES TO AVOID CONFLICTS AND TO VERIFY ALL EQUIPMENT CONNECTIONS. COORDINATE ALL WIRING DEVICE LOCATIONS AND ELEVATIONS INDICATED ON THE PLANS WITH THE OWNER, ARCHITECT AND FINAL FURNITURE/EQUIPMENT LAYOUTS.
- CONTRACTOR SHALL GUARANTEE ALL LABOR AND MATERIAL INSTALLED OR FURNISHED UNDER THIS CONTRACT FOR A PERIOD OF NOT LESS THAN ONE YEAR AFTER FINAL ACCEPTANCE OF THE BUILDING.
- MAINTAIN AND VERIFY ELECTRICAL EQUIPMENT CLEARANCES AND WORKING SPACE PER NEC.
- PROVIDE ELECTRICAL SYSTEMS IDENTIFICATION AS INDICATED IN THE SPECIFICATIONS AND REQUIRED BY THE NEC OR NFPA 70E.
- IF ANYTHING ON THE PLANS IS NOT IN COMPLIANCE WITH NATIONAL, STATE OR LOCAL CODES, THE ENGINEER SHALL BE ADVISED BY THE ELECTRICAL CONTRACTOR DURING THE BIDDING PROCESS. THERE ARE TO BE NO CHANGES TO THE CONTRACT DOCUMENTS WITHOUT WRITTEN PERMISSION FROM THE ENGINEER.
- CONTRACTOR SHALL BE RESPONSIBLE FOR ALL MEANS AND METHODS FOR NEW WORK, SAFETY, ETC., IN ACCORDANCE WITH ALL AUTHORITIES HAVING JURISDICTION. (I.E. OSHA, NEC, ETC.)
- THE CONTRACTOR SHALL REFER TO ARCHITECTURAL DRAWINGS FOR PHASING AND SCHEDULING OF THIS PROJECT. COORDINATE WITH OWNER'S FIELD REPRESENTATIVE.
- VERIFY ALL INDICATED DIMENSIONS BY FIELD MEASUREMENTS. NOTIFY ENGINEER OF ANY DISCREPANCIES.
- PROVIDE ACCESS PANELS OR DOORS WHERE EQUIPMENT OR DEVICES REQUIRED TO BE ACCESSIBLE ARE CONCEALED BEHIND INACCESSIBLE SURFACES.
- PRIOR TO TURNOVER, THIS CONTRACTOR SHALL REMOVE ALL RUBBISH, DIRT, DEBRIS AND STAINS ON THEIR WORK OR CAUSED BY THEIR WORK AND SHALL THOROUGHLY CLEAN ALL EQUIPMENT, FIXTURES, DEVICES, ETC. CONTRACTOR SHALL REPLACE, TOUCH-UP OR REFINISH THE FACTORY FINISH ON EQUIPMENT, FIXTURES, DEVICES, ETC. MARKED DURING SHIPMENT, INSTALLATION OR CONSTRUCTION.
- PANELBOARD CIRCUIT BREAKERS SHALL BE EQUIPPED WITH BOLT-ON TYPE BREAKERS, PHENOLIC NAME TAGS AND KEYS LOCK AND LATCH. EACH PANEL SHALL BE PROVIDED WITH TWO KEYS WITH ALL PANELS KEYS ALIKE. ALL CIRCUIT BREAKERS USED TO SWITCH LIGHT FIXTURES SHALL BE TYPE SWD SHALL BE APPROVED FOR THE PURPOSE. ALL CIRCUIT BREAKERS SERVING HVAC EQUIPMENT SHALL BE HACR TYPE.
- ALL CIRCUITS INDICATED ON THESE DRAWINGS ARE 20A, 1P CIRCUIT BREAKERS IN PANELS UNLESS NOTED OTHERWISE.
- THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROPER IDENTIFICATION AND LABELING OF ALL CIRCUIT BREAKERS. EACH PANELBOARD SHALL BE EQUIPPED WITH A TYPE WRITTEN CIRCUIT DIRECTORY. ALL EXISTING PANELBOARDS THAT HAVE CIRCUITS ALTERED SHALL HAVE A NEW TYPE WRITTEN CIRCUIT DIRECTORY SHOWING CIRCUIT REVISIONS AND EXISTING CIRCUIT CONDITIONS ON THE NEW DIRECTORY.
- MINIMUM WIRE SIZE SHALL BE #12 AWG UNLESS OTHERWISE NOTED. MINIMUM CONDUIT SIZE SHALL BE 1/2" UNLESS OTHERWISE NOTED. ALL CONDUIT IN SLABS OR EXTERIOR TO BUILDING SHALL BE MINIMUM 1". PROVIDE A NYLON/POLY PULL CORD IN ALL EMPTY CONDUITS.
- ELECTRICAL CONTRACTOR SHALL PROVIDE ALL COPPER CONDUCTORS TYPE THHN OR THWN FOR ALL INTERIOR BUILDING WIRE. FOR EXTERIOR FEEDERS AND BRANCH CIRCUITS PROVIDE ALL COPPER CONDUCTORS TYPE XHHW-2.
- VOLTAGE DROP MINIMUM WIRE SIZING (20A CIRCUIT) USE: 120V CIRCUIT OVER 100' SHALL BE #10 MINIMUM; 120V CIRCUIT OVER 175' SHALL BE #8 MINIMUM; 208V CIRCUIT OVER 200' SHALL BE #10 MINIMUM; 277V CIRCUIT OVER 200' SHALL BE #10 MINIMUM. MINIMUM WIRE SIZE FOR ANY 20A BRANCH CIRCUIT SHALL BE #12. FURTHERMORE, CONSIDER ALL DERATING OF CONDUCTORS AS REQUIRED IN ACCORDANCE WITH THE APPLICABLE NEC.
- ELECTRICAL CONTRACTOR SHALL HAVE THE OPTION OF GROUPING HOME RUNS IN ONE CONDUIT. PER THE REQUIREMENTS OF SECTION 310 OF THE NATIONAL ELECTRICAL CODE, NO MORE THAN FOUR (4) CIRCUITS SHALL BE ALLOWED TO BE GROUPED AND INSTALLED IN A SINGLE JUNCTION BOX. EC SHALL BE RESPONSIBLE FOR INCREASING CONDUCTOR SIZE AND DERATING. HOME RUNS WITH MORE THAN THREE CIRCUITS SHALL BE #10 AWG CONDUCTOR MINIMUM. PROVIDE DEDICATED NEUTRALS FOR EACH PHASE CONDUCTOR AND CONSIDER THEM AS A CURRENT CARRYING CONDUCTOR FOR DERATING.
- ALL HOME RUNS SHALL BE IN EMT CONDUIT. MC CABLE IS PERMITTED ABOVE CEILINGS FROM HOMERUNS TO FIXTURES AND WIRING DEVICES WITHIN WALLS AND FURRED COLUMNS. REFER TO ELECTRICAL SPECIFICATIONS FOR MORE DETAILED INFORMATION.
- HEATING, VENTILATING, AIR CONDITIONING EQUIPMENT AND PLUMBING EQUIPMENT ALONG WITH ALL OTHER MISCELLANEOUS EQUIPMENT, MOTORS, AND KITCHEN EQUIPMENT SHALL BE POWERED AS CALLED OUT ON EQUIPMENT PROVIDER'S SCHEDULES UNLESS OTHERWISE NOTED. EC SHALL PROVIDE DISCONNECTING MEANS UNLESS SPECIFICALLY NOTED ON EQUIPMENT PROVIDER'S SCHEDULE.
- ALL WIRING DEVICES SHALL BE FLUSH MOUNTED, UNLESS NOTED OTHERWISE. ALL CONDUIT SHALL BE RUN WITHIN WALL CAVITIES, BELOW FLOOR AND ABOVE CEILINGS. SURFACE MOUNTED ELECTRICAL WORK SHALL NOT BE USED UNLESS SPECIFICALLY NOTED ON THE PLANS.
- ALL OPENINGS IN FIRE AND/OR SMOKE RATED WALLS, FLOORS, AND PARTITIONS FOR CONDUITS SHALL BE SEALED WITH RED FIRE RESISTANT FOAM OR PUTTY TO MAINTAIN THE FIRE AND/OR SMOKE RATINGS. ALL OPENINGS IN FIRE RATED AND/OR SMOKE WALLS, FLOORS, AND PARTITIONS FOR CABLING SHALL BE SEALED WITH WIREMOLD FLAMESTOPPER, STI EZ-PATH, HILTI SPEED SLEEVE OR EQUIVALENT.
- NO CONDUIT OR CABLES SHALL BE INSTALLED EXPOSED IN FINISHED AREA. NON-CEILING AREA CONDUITS SHALL BE INSTALLED EXPOSED IN A NEAT WORKMAN LIKE MANNER AND BE PAINTED TO MATCH ADJACENT FINISHES.
- ALL MATERIALS, DEVICES, FIXTURES, ETC. THAT ARE REQUIRED FOR THIS PROJECT ARE TO BE FURNISHED AND OR INSTALLED BY THE EC, UNLESS SPECIFICALLY INDICATED TO BE FURNISHED AND OR INSTALLED BY OTHERS.
- SCOPE OF WORK ALSO INCLUDES ANY ASSOCIATED WORK FOR DEMOLITION AND REPLACEMENT / PATCHING / PAINTING / ETC. AS REQUIRED FOR INSTALLATION AND MODIFICATION TO THE EXISTING FIRE ALARM SYSTEM AND EQUIPMENT CONNECTIONS AS NOTED WITHIN THE BID DOCUMENTS. CONTRACTOR SHALL COORDINATE ALL REPAIRS TO MATCH EXISTING.

SEISMIC RESTRAINTS FOR ELECTRICAL SYSTEM COMPONENTS (EARTHQUAKE LOAD RESISTANCE)							
LISTING OF EQUIPMENT & SYSTEM COMPONENTS	OCCUPANCY CATEGORY ( II )		SEISMIC DESIGN CATEGORY ( D )				
	ANCHORAGE TO FLOORS, ROOFS, ETC.		SWAY BRACING		LOCATION OF PROFESSIONALLY SEALED ANCHORAGE AND SWAY BRACING DETAILS		
	NOT PROVIDED	PROVIDED	NOT PROVIDED	PROVIDED	ON CONSTRUCTION DOCUMENTS	SUBSEQUENT SUBMITTAL	
					DRAWING NO. OR SPEC. SECTION	SEPARATE PERMIT & PLANS	COMMENTS
FIRE PROTECTION, DETECTION & ALARM EQUIPMENT & SYSTEM COMPONENTS:							
FIRE ALARM PANEL							N/A, existing
FIRE ALARM BRANCH CIRCUIT							N/A, existing
FIRE ALARM CABLING	X			X			X
OTHER GENERAL EQUIPMENT & SYSTEM COMPONENTS:							
CONDUIT AND WIRING	X			X			1, 2, 3
IT IS THE BASIC INTENT OF THIS CODE BLOCK TO DECLARE WHETHER OR NOT ANCHORAGE AND SWAY BRACING IS REQUIRED ON THE PROJECT. IF SO, TO DECLARE WHETHER OR NOT THE DETAILS ARE SHOWN ON THE PLANS OR WILL BE SHOWN ON A SUBSEQUENT SUBMISSION. IF SEISMIC RESTRAINT OF A COMPONENT IS NOT REQUIRED BY CODE THIS SHOULD BE STATED IN COMMENTS. IF SEISMIC RESTRAINT, WHICH IS NOT REQUIRED BY CODE, IS BEING PROVIDED DUE TO OWNER/DESIGNER REQUIREMENTS THIS SHOULD ALSO BE STATED IN THE COMMENTS.							
PLANS SIGNED AND SEALED BY A MISSOURI PROFESSIONAL ENGINEER ALONG WITH A SEPARATE PERMIT APPLICATION NEED TO BE SUBMITTED TO THE AHJ A MINIMUM OF TWO WEEKS PRIOR TO THE PLANNED INSTALLATION TO ALLOW FOR PLAN REVIEW AND DISTRIBUTION TO THE INSPECTOR. ADDITIONAL TIME MAY BE NEEDED IF SUCH SUBMISSIONS ARE DEFICIENT.							
<ol style="list-style-type: none"> <li>EXCEPTION FOR IP=1.0, WEIGHT 5LBS/FT OR LESS.</li> <li>FLEXIBLE CONNECTION REQUIRED BETWEEN EQUIPMENT AND COMPONENTS IF INSTALLATION OTHER THAN MOUNTED TO WALLS AND FLOORS.</li> <li>EXCEPTION FOR RIGID STEEL IMC CONDUIT ≤ 1-1/2 INCHES IN DIAMETER, AND EMT OR ALUMINUM CONDUIT ≤ 2 INCHES IN DIAMETER.</li> <li>PLANS SIGNED AND SEALED BY A MISSOURI PROFESSIONAL ENGINEER TO BE SUBMITTED SEPARATELY WITH PERMIT APPLICATION FOR REVIEW. TYPICAL SEISMIC ANCHORAGE (OR SWAY BRACING) PROVIDED ON DRAWINGS IS FOR REFERENCE ONLY.</li> </ol>							

ELECTRICAL SHEET LIST	
SHEET NUMBER	SHEET NAME
E0.1	ELECTRICAL SYMBOLS, ABBREVIATIONS & GENERAL NOTES
E1.0	ELECTRICAL SYSTEMS PLAN - RENOVATION



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MISSOURI HILLS YOUTH  
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13002 BELLFONTAINE RD,  
ST. LOUIS, MO 63138

PROJECT # H2306-01  
SITE # 7706  
FACILITY # 8877706012

REVISION: \_\_\_\_\_  
DATE: \_\_\_\_\_  
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DATE: \_\_\_\_\_  
REVISION: \_\_\_\_\_  
DATE: \_\_\_\_\_  
ISSUE DATE: 08-25-23

CAD DWG FILE: - \_\_\_\_\_  
DRAWN BY: HAP \_\_\_\_\_  
CHECKED BY: BDS \_\_\_\_\_  
DESIGNED BY: HAP \_\_\_\_\_

SHEET TITLE:  
ELECTRICAL SYSTEMS  
PLAN - RENOVATION

SHEET NUMBER:

E1.0

SHEET 10 OUT OF 10  
08-25-23

SSC JOB# 2023204 - BID AND PERMIT DOCUMENTS 08-25-23

**FINISH SCHEDULE GENERAL NOTES:**

- CONTRACTOR IS RESPONSIBLE FOR DEMOLITION AND REPLACEMENT / PATCHING / PAINTING / ETC. AS REQUIRED TO INSTALL THE SPRINKLER SYSTEM AND ALL ASSOCIATED COMPONENTS. ALL REPAIRS SHALL MATCH EXISTING FINISHES. COORDINATE WITH THE OWNER FOR ALL MODEL / MATERIAL INFORMATION FOR MATCHING.
- FINISH SCHEDULE KEYED NOTES ARE INTENDED TO CALL OUT THE FINISH AND ACCESSIBILITY INFORMATION WITHIN EACH SPACE AS NECESSARY. CONTRACTOR SHALL VERIFY ALL FINAL FINISHES AND ACCESSIBILITY REQUIREMENTS FOR EACH SPACE PRIOR TO BIDDING.

**FINISH SCHEDULE KEYED NOTES:**

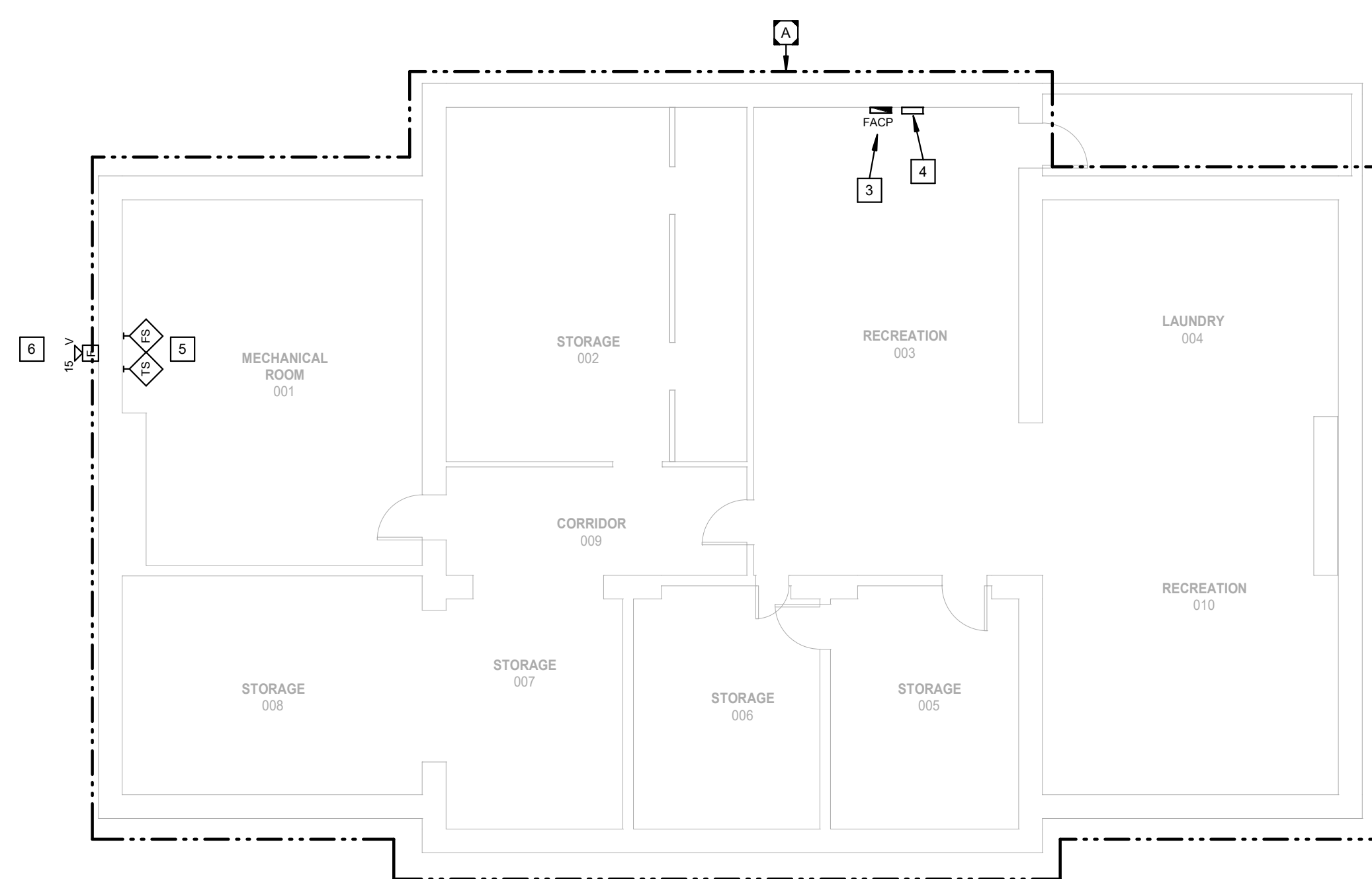
- A** EXPOSED CONSTRUCTION. ALL PIPING AND SPRINKLERS EXPOSED WITHIN SPACE.
- B** GYPSUM FINISHED CEILING. ALL OVERHEAD PIPING ROUTED ABOVE CEILING.
- C** LAY-IN FINISHED CEILING. ALL OVERHEAD PIPING ROUTED ABOVE CEILING.

**ELECTRICAL GENERAL NOTES:**

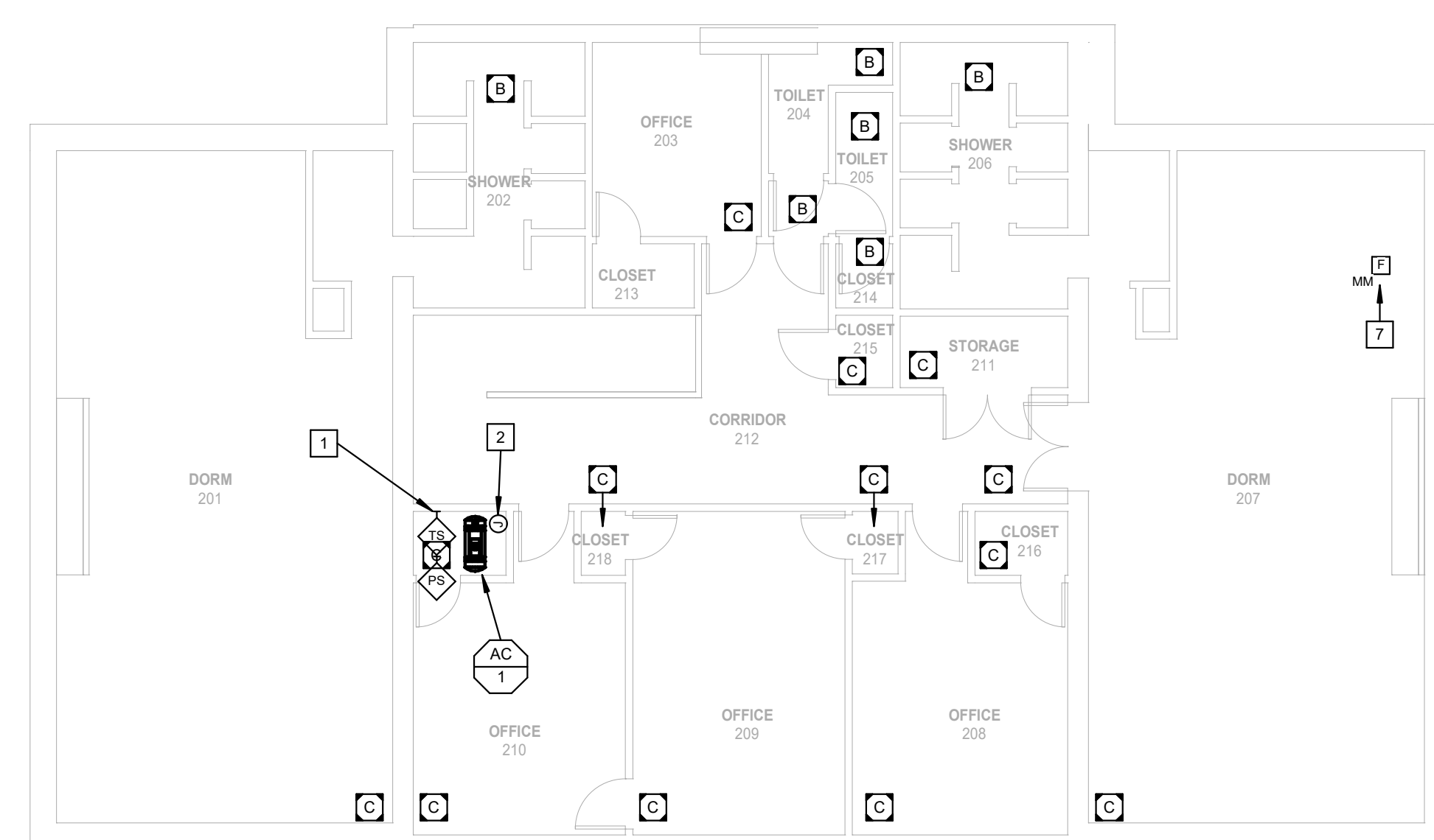
- REFER TO SHEET E0.1 FOR SYMBOLS, ABBREVIATIONS AND GENERAL CONSTRUCTION NOTES.
- ALL MECHANICAL, ELECTRICAL, PLUMBING, FIRE PROTECTION, AND HVAC WORK SHALL BE COORDINATED BY THE CONTRACTOR DOING THE WORK. ANY CORRECTIONS TO ANY OF THE ABOVE SHALL BE AT THAT CONTRACTOR'S EXPENSE.
- ALL DISCONNECTS REQUIRED SHALL BE PROVIDED BY THE EC, U.N.O. SEE MECHANICAL & PLUMBING EQUIPMENT SCHEDULE(S) FOR EQUIPMENT DETAILS AND FOR DISCONNECTS FURNISHED BY OTHERS. REFER TO MANUFACTURER'S SPECIFICATIONS FOR MECHANICAL & PLUMBING EQUIPMENT CONNECTION DETAILS. COORDINATE WITH APPLICABLE TRADES.
- PROVIDE EQUIPMENT GROUNDING CONDUCTOR IN ALL FEEDERS, SIZED IN ACCORDANCE WITH NEC ARTICLE 250.122. SEE SPECIFICATIONS.
- ALL EXTERIOR ELECTRICAL EQUIPMENT AND DISCONNECT SWITCHES SHALL BE IN RATED NEMA 3R OR 4X ENCLOSURES. FINAL CONDUIT CONNECTIONS TO MECHANICAL EQUIPMENT SHALL BE MADE WITH LFMC.
- INFORMATION ON THIS SHEET IS COMPILED FROM EXISTING DRAWINGS AND CASUAL FIELD OBSERVATIONS AND SHALL BE CONSIDERED APPROXIMATE ONLY. VERIFICATION OF ALL EQUIPMENT AND DEVICES, EITHER SHOWN OR NOT SHOWN ON THESE PLANS, SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
- CONTRACTOR SHALL FIELD VERIFY EXISTING EQUIPMENT AND DEVICES PRIOR TO STARTING WORK. NOTIFY ENGINEER IMMEDIATELY IF DISCREPANCIES EXIST.

**ELECTRICAL KEYED NOTES:**

- PROVIDE PRESSURE SWITCH AND TAMPER SWITCH NEAR AIR COMPRESSOR FOR DRY SYSTEM. COORDINATE WITH FPC TO VERIFY EXACT REQUIREMENTS. TIE INTO EXISTING FACP.
- PROVIDE POWER CONNECTION TO AIR COMPRESSOR FOR DRY SYSTEM. COMPRESSOR IS ASSUMED TO BE 208V/1-PHASE. PROVIDE A DEDICATED 20A CIRCUIT FROM WITHIN A PANEL LOCATED IN THE BASEMENT.
- EXISTING FACP LOCATED IN THIS GENERAL AREA. PANEL IS A NOTIFIER SFP-1024.
- ELECTRICAL PANELBOARD LOCATED IN THIS GENERAL AREA.
- PROVIDE FLOW SWITCH AND TAMPER SWITCH NEAR FP RISER. COORDINATE WITH FPC TO VERIFY EXACT PLACEMENT. TIE INTO EXISTING FACP.
- PROVIDE AN AUDIO/VISUAL HORN AND STROBE ALARM ON EXTERIOR WALL ABOVE FIRE DEPARTMENT CONNECTION. TIE INTO EXISTING FACP. COORDINATE EXACT LOCATION WITH FPC.
- PROVIDE FIRE ALARM MONITOR MODULE TO SUPERVISE AUTOMATIC AIR VENT ON FIRE SUPPRESSION SYSTEM. DEVICE IS INTENDED TO BE LOCATED AT HIGHEST POINT IN WET SPRINKLER SYSTEM. TIE INTO EXISTING SUPERVISION LOOP OF FIRE ALARM SYSTEM. EXTEND WIRING AND PROVIDE ADDITIONAL MODULES AND ACCESSORIES AS REQUIRED. PROVIDE RE-PROGRAMMING AND TESTING AS NECESSARY. ACTIVATION SHALL INITIATE SUPERVISORY SIGNAL. COORDINATE WITH FPC.



**ELECTRICAL BASEMENT RENOVATION PLAN**  
SCALE: 1/8" = 1'-0"  
NORTH



**ELECTRICAL SECOND FLOOR RENOVATION PLAN**  
SCALE: 1/8" = 1'-0"  
NORTH