FIRE PROTECTION SYSTEM SYMBOLS

SYMBOL	DESCRIPTION
– – – – –	ZONE BOUNDARY
◇#	RISER BANK NUMBER DESIGNATION
(#)	RISER COUNT
⬡A	SPRINKLER SYSTEM AREA DESIGNATION
[#]	KEY NOTE
	FIRE HYDRANT
	HOSE VALVE
	LOOP SECTIONAL CONTROL VALVE
	POST INDICATOR VALVE
	UNDERGROUND GATE VALVE
	SINGLE INLET/STORZ FREE STANDING (FDC)
	2 INLET FREE STANDING (FDC)
	SINGLE INLET/STORZ WALL MOUNTED (FDC)
	2 INLET WALL MOUNTED (FDC)
	3 INLET WALL MOUNTED (FDC)

NOTE: FOR REFERENCE ONLY; ALL SYMBOLS MAY NOT BE USED

ESFR SPRINKLER (PENDENT-TYPE) NOTES

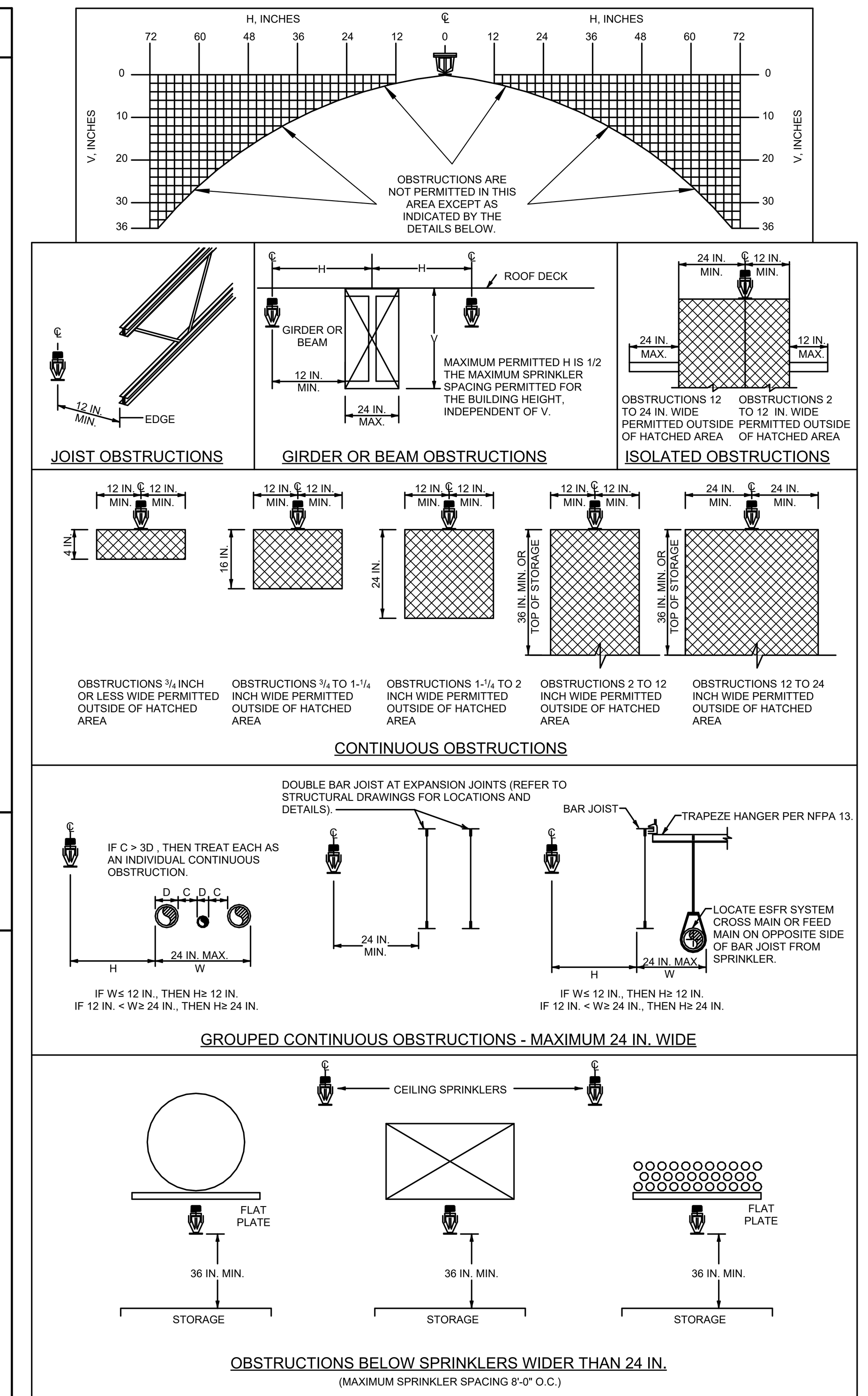
1. THE SPRINKLER CONTRACTOR SHALL BE RESPONSIBLE FOR PROPER CONSIDERATION AND COORDINATION OF ALL OBSTRUCTIONS AND OTHER INSTALLED EQUIPMENT WHICH MAY HAVE AN IMPACT ON THE OPERATION OF ESFR SPRINKLERS.
2. PRIOR TO THE START OF CONSTRUCTION, THE SPRINKLER CONTRACTOR SHALL CLOSELY COORDINATE WITH ALL OTHER TRADES - INCLUDING, BUT NOT LIMITED TO, STRUCTURAL STEEL, MECHANICAL, ELECTRICAL, PLUMBING, DATA PROCESSING, AND MATERIAL HANDLING - TO ENSURE THE WATER DISCHARGE FROM ESFR SPRINKLERS WILL NOT BE OBSTRUCTED FROM REACHING BURNING COMMODITIES AT HIGH VOLUME AND HIGH MOMENTUM.
3. ESFR SPRINKLER PLACEMENT WITH RESPECT TO OBSTRUCTIONS SHALL ADHERE TO THE ESFR SPRINKLER OBSTRUCTION DETAILS (THIS SHEET). WHERE AN OBSTRUCTION IS NOT COVERED BY THE DETAILS, ADHERE TO THE MORE STRINGENT REQUIREMENTS OF NFPA 13 OR FM GLOBAL PROPERTY LOSS PREVENTION DATA SHEET 2-0 ("FMDS 2-0"). ANY OBSTRUCTION ISSUE IDENTIFIED DURING THE COURSE OF CONSTRUCTION OR ACCEPTANCE INSPECTIONS SHALL BE CORRECTED TO MEET THE REQUIREMENTS OF THESE DRAWINGS AT NO ADDITIONAL COST TO THE CONTRACT.
4. THE FOLLOWING ARE THE MOST COMMON RULES FOUND IN THE STANDARD FOR HANDLING OBSTRUCTIONS LOCATED ENTIRELY BELOW THE SPRINKLERS. COMPLIANCE WITH THESE RULES IN NO WAY RELIEVES THE CONTRACTOR FROM FULL COMPLIANCE WITH THE STANDARD.
   a. INDIVIDUAL OBSTRUCTIONS MEASURING 3/4-IN. WIDE OR LESS AND AT LEAST 4 IN. BELOW THE SPRINKLER DEFLECTOR OR LOCATED AT LEAST 12 IN. HORIZONTALLY FROM THE CENTERLINE OF THE SPRINKLER MAY BE IGNORED.
   b. CONTINUOUS OBSTRUCTIONS WIDER THAN 3/4 IN. AND NO WIDER THAN 1-1/4 IN. SHALL BE LOCATED AT LEAST 12 IN. HORIZONTALLY FROM THE CENTERLINE OF THE SPRINKLER OR AT LEAST 16 IN. VERTICALLY BELOW THE SPRINKLER DEFLECTOR.
   c. CONTINUOUS OBSTRUCTIONS WIDER THAN 1-1/4 IN. AND NO WIDER THAN 2 IN. SHALL BE LOCATED AT LEAST 12 IN. HORIZONTALLY FROM THE CENTERLINE OF THE SPRINKLER OR AT LEAST 24 IN. VERTICALLY BELOW THE SPRINKLER DEFLECTOR.
   d. CONTINUOUS OR ISOLATED OBSTRUCTIONS WIDER THAN 2 IN. AND NO WIDER THAN 12 IN. SHALL BE LOCATED AT LEAST 12 IN. HORIZONTALLY FROM THE CENTERLINE OF THE SPRINKLER.
   e. CONTINUOUS OR ISOLATED OBSTRUCTIONS WIDER THAN 12 IN. AND NO WIDER THAN 24 IN. SHALL BE LOCATED AT LEAST 24 IN. HORIZONTALLY FROM THE CENTERLINE OF THE SPRINKLER.
   f. OBSTRUCTIONS GREATER THAN 24 IN. WIDE SHALL BE POSITIONED ABOVE THE SPRINKLER DISCHARGE UMBRELLA, OTHERWISE ADDITIONAL SPRINKLERS SHALL BE INSTALLED UNDERNEATH THE OBSTRUCTION.
5. THE RULES NOTED ABOVE ASSUME OBSTRUCTIONS ARE LOCATED ON ONE SIDE OF THE ESFR SPRINKLER ONLY. ALL OBJECTS ON THE OPPOSITE SIDE OF THE SPRINKLER SHALL BE POSITIONED ABOVE THE SPRINKLER DISCHARGE UMBRELLA.
6. VERTICAL DUCT WORK SUPPLYING UNIT HEATERS SHALL BE CENTERED BETWEEN ESFR SPRINKLERS.
7. THE CONTRACTOR SHALL SPACE ESFR SPRINKLERS WITH CONSIDERATION OF THE LOCATION OF ALL SKYLIGHTS SO THAT AN ESFR SPRINKLER IS NOT LOCATED DIRECTLY UNDERNEATH A SKYLIGHT. REFER TO ARCHITECTURAL DRAWINGS FOR THE LOCATIONS OF SKYLIGHTS. INDICATE COORDINATION ON THE SHOP DRAWINGS.
8. ESFR SPRINKLER LOCATIONS SHALL BE COORDINATED WITH THE LIGHTING FIXTURE LOCATIONS, IN ORDER TO AVOID POTENTIAL OBSTRUCTION ISSUES. INDICATE COORDINATION ON THE SHOP DRAWINGS.
9. COORDINATE THE LOCATION OF ALL HIGH VOLUME LOW SPEED (HVLS) CEILING FANS SUCH THAT THE FAN HUB IS INSTALLED CENTERED BETWEEN FOUR ESFR SPRINKLERS AND THAT THE TOP OF THE FAN BLADES (AIRFOILS) ARE A MINIMUM OF 36 IN. BELOW THE SPRINKLER DEFLECTOR. INDICATE COORDINATION ON THE SHOP DRAWINGS.

CONVEYOR & PLATFORM SPRINKLER PROTECTION GUIDELINES

1. GENERAL GUIDELINES FOR PROVIDING PROTECTION BELOW CONVEYORS, CATWALKS, STAIR CROSS OVERS, AND OTHER SIMILAR OBSTRUCTIONS ARE AS FOLLOWS SUBJECT TO APPROVAL OF THE LOCAL AHJ AND ARKANSAS STATE FIRE MARSHAL:
   a. THE FOLLOWING GUIDELINES ARE PROVIDED TO MEET THE INTENT OF NFPA 13 OBSTRUCTION RULES. THE INTENT OF OBSTRUCTION RULES IS TO ENSURE THE SPRINKLER PATTERN DEVELOPS AND THAT THE SPRINKLER DISCHARGE REACHES THE HAZARD. THE INTENT OF THE STANDARD IS NOT TO ONLY LOOK AT THE WIDTH OF A POSSIBLE OBSTRUCTION AND THEN APPLY THE OBSTRUCTION RULES (I.E., REQUIRE ADDITIONAL SPRINKLERS BENEATH). THE POSSIBLE OBSTRUCTION HAS TO EITHER IMPAIR THE SPRINKLER PATTERN FROM DEVELOPING AND/OR PREVENT THE SPRINKLER DISCHARGE FROM REACHING THE HAZARD. IT IS POSSIBLE THAT WHAT MAY BE VIEWED AS AN OBSTRUCTION (E.G., CONVEYOR) IS THE HAZARD ITSELF AND NOT AN OBSTRUCTION TO THE HAZARD.
   b. ELEVATED PLATFORMS (OTHER THAN THOSE ADDRESSED IN THE SPRINKLER DESIGN SCHEDULE) WIDER THAN 48 IN. SHALL BE PROVIDED WITH SPRINKLER PROTECTION UNDERNEATH. SPRINKLERS SHALL BE UPRIGHT OR PENDENT K11.2 QUICK-RESPONSE SPRINKLERS LISTED FOR STORAGE APPLICATIONS. SYSTEMS SHALL BE DESIGNED TO PROVIDE A 0.40 GPM/SQ FT DENSITY OVER THE MOST HYDRAULICALLY DEMANDING 2,000 SQ FT PLUS 500 GPM HOSE STREAM ALLOWANCE. IF THE PLATFORM IS SUFFICIENTLY NARROW SUCH THAT PROTECTION IS ACCOMPLISHED WITH ONE (1) BRANCH LINE, THE HYDRAULICALLY MOST DEMANDING FIVE (5) SPRINKLERS (AT A MINIMUM) SHALL BE CALCULATED TO PRODUCE A 0.40 GPM/SQ FT DENSITY PLUS 500 GPM HOSE STREAM ALLOWANCE. WHERE PROTECTION IS ACHIEVED WITH TWO (2) OR MORE BRANCH LINES, THE DIMENSION OF THE HYDRAULICALLY CALCULATED AREA PARALLEL TO THE SPRINKLER BRANCH LINE SHALL BE NOT MORE THAN 1.2-TIMES THE SQUARE ROOT OF THE DESIGN BASIS AREA OF 2,000 SQ FT (I.E., NOT MORE THAN 53.7 FT, ROUNDED UP TO THE NEXT WHOLE SPRINKLER COUNT BASED ON SPRINKLER SPACING ALONG THE BRANCH LINE). THE DIMENSION PERPENDICULAR TO THE BRANCH LINES SHALL BE SUCH THAT EVERY BRANCH LINE IS INCLUDED IN THE AREA IN QUESTION OR A 2,000 SQ FT AREA IS ACHIEVED, WHICHEVER IS LESS.
   c. SPRINKLERS SHALL NOT BE REQUIRED BELOW CONVEYORS (SINGLE OR MULTI-STACK THAT ARE VERTICALLY ALIGNED) THAT ARE 48 IN. WIDE OR LESS, ARE OVER PERSONNEL WALKWAYS, AND/OR WOULD NOT ALLOW FOR COMBUSTIBLE STORAGE UNDERNEATH (E.G., ADMINISTRATIVE CONTROLS IN PLACE TO PREVENT STORAGE).
2. SPRINKLER SYSTEMS (INCLUDING SPRINKLERS, PIPE, HANGERS, BRACING, AND OTHER COMPONENTS) SHALL NOT INHIBIT MHE INSTALLATION OR MHE MAINTENANCE FUNCTIONS. MHE EQUIPMENT INCLUDES BUT IS NOT LIMITED TO CONVEYORS, PLATFORMS, CHUTES, AND MOTOR DRIVES. SPRINKLERS SHALL BE INSTALLED IN SUCH A MANNER AS TO REDUCE THE LIKELIHOOD OF SPRINKLER STRIKES. WHILE THIS APPLIES TO ALL SPRINKLERS THAT ARE INSTALLED AT MHE, ADDITIONAL CARE SHALL BE TAKEN WHERE SPRINKLERS ARE EXPOSED TO FOOT AND PIT TRAFFIC. THE CONTRACTOR SHALL ADHERE TO THE SPECIFIC REQUIREMENTS OUTLINED FURTHER IN THE PROJECT SPECIFICATIONS.
3. SPRINKLER GUARDS SHALL BE SUPPLIED AND INSTALLED BY THE CONTRACTOR TO PROTECT SPRINKLERS FROM POTENTIAL IMPACT. UL CLASSIFIED HEAVY DUTY GUARDS (I.E. SPRINKGUARD OR APPROVED EQUAL) ARE PREFERRED WHERE AVAILABLE. GUARDS SHALL BE PROVIDED WHERE:
   a. SPRINKLERS ARE WITHIN 48-INCHES OF MHE EQUIPMENT. MEASURED FROM THE NEAREST EDGE OF MHE EQUIPMENT TO THE SPRINKLER.
   b. SPRINKLERS ARE INSTALLED UNDERNEATH MHE OR ELEVATED PLATFORMS THAT ARE NOT MORE THAN 12-FEET ABOVE RELATIVE FINISHED FLOOR (I.E., THE FLOOR OR WALKING SURFACE IMMEDIATELY BELOW THE SPRINKLER).
   c. THE PRELIMINARY QUANTITY OF SPRINKLER GUARDS PER BUILDING SHALL BE ESTIMATED BASED ON PROVIDING 0.00056 SPRINKLERS PER SQ FT. THE FINAL QUANTITIES AND LOCATION WILL BE PROVIDED ON A SITE-BY-SITE BASIS BASED ON THE FINAL COMPOSITE LAYOUT.
4. SPRINKLER GUARDS SHALL BE REVIEWED AND VALIDATED BY THE FIRE PROTECTION ENGINEER TO ENSURE THE GUARD DOES NOT COMPROMISE THE SPRINKLER PERFORMANCE. SPRINKLER GUARDS THAT HAVE NOT BE UL TESTED AND COULD OBSTRUCT THE SPRINKLER DISCHARGE PATTERN FROM DEVELOPING SHALL NOT BE USED.

SEISMIC BRACING

1. PROTECTION OF PIPING AGAINST DAMAGE WHERE SUBJECTED TO EARTHQUAKES SHALL BE PER NFPA 13 REQUIREMENTS FOR SEISMIC BRACING AND RESTRAINTS OF SPRINKLER SYSTEMS.
2. DROPS THAT EXTEND DOWN TO FREE-STANDING STRUCTURES, SUCH AS ELEVATED LEVELS, WHICH HAVE THE POTENTIAL TO SWAY INDEPENDENTLY OF THE BUILDING STRUCTURE SHALL BE DESIGNED TO ACCOMMODATE A HORIZONTAL RELATIVE DISPLACEMENT BETWEEN THE OVERHEAD SUPPLY PIPING AND THE LOWER STRUCTURE. THE HORIZONTAL RELATIVE DISPLACEMENT SHALL BE TAKEN AS THE HEIGHT OF THE TOP POINT OF ATTACHMENT TO THE LOWER STRUCTURE ABOVE ITS BASE OR THE HIGHEST POINT OF POTENTIAL CONTACT BETWEEN THE LOWER STRUCTURE AND THE PIPING ABOVE ITS BASE, WHICHEVER IS HIGHER, MULTIPLIED BY ±0.05, UNLESS A SMALLER VALUE IS JUSTIFIED BY TEST DATA OR ANALYSIS. THE HORIZONTAL RELATIVE DISPLACEMENT SHALL BE ACCOMMODATED BY TWO OR MORE FLEXIBLE COUPLINGS, SWING JOINTS, OR OTHER MEANS AS APPROVED BY HGI. THE USE OF FLEXIBLE COUPLINGS, SWING JOINTS, AND OTHER MEANS SHALL BE IN ACCORDANCE WITH THE LIMITATIONS OF THEIR LISTING AND THE MANUFACTURER'S RECOMMENDATIONS FOR DESIGN.
3. MANUFACTURERS OF BRACES SHOULD BE CONSULTED TO VERIFY THAT THE BRACE ATTACHMENTS HAVE SUFFICIENT STRENGTH FOR THE MAXIMUM LOAD THAT WILL BE ENCOUNTERED.
4. WHERE SWAY BRACING ASSEMBLIES ARE USED, THE ASSEMBLIES ARE REQUIRED TO BE LISTED FOR A MAXIMUM LOAD RATING.



ESFR/ STORAGE SPRINKLER OBSTRUCTION DETAILS

NOT TO SCALE

SEISMIC LOADS ANALYSIS

IBC (2021) SECTION 1613

SEISMIC IMPORTANCE FACTOR	IE	1	
OCCUPANCY CATEGORY		II	
MAPPED SPECTRAL	SS	0.377	g
RESPONSE ACCELERATION	S1	0.15	g
SITE CLASS	CLASS	D (POST LIQUEFACTION)	
SPECTRAL RESPONSE COEFFICIENTS	SDS	0.418	g
	SD1	0.292	g
SEISMIC DESIGN CATEGORY	CATEGORY	D	
RESPONSE MODIFICATION FACTOR	RP	4.5	
SEISMIC DESIGN FORCE	FP =	0.287	x WP

WP = 1.15 * THE WEIGHT OF WATER-FILLED PIPE (ACCOUNTS FOR FITTINGS)

* SEISMIC BRACING REQUIRED

SCOPE OF WORK

1. THESE DRAWINGS ARE CONTRACT CRITERIA DRAWINGS REFLECTING THE OWNER'S MINIMUM REQUIREMENTS, WITH WHICH THE CONTRACTOR MUST COMPLY. THESE DRAWINGS SHALL NOT BE CONSTRUED AS NFPA 13- OR PROJECT-REQUIRED FIRE SPRINKLER SHOP DRAWINGS. THE FIRE SPRINKLER CONTRACTOR SHALL PROVIDE TO THE FIRE PROTECTION ENGINEER AND THE LOCAL AHJ CODE- AND PROJECT-REQUIRED FIRE SPRINKLER SUBMITTAL DOCUMENTS IN ACCORDANCE WITH THESE DRAWINGS AND ASSOCIATED SPECIFICATIONS. THESE DRAWINGS WILL NOT BE PROVIDED TO THE CONTRACTOR IN ELECTRONIC (CAD OR REVIT) FORMAT FOR THEIR CREATION OF REQUIRED SUBMITTAL DRAWINGS; THESE DRAWINGS SHALL NOT BE SUBMITTED AS CODE- OR PROJECT-REQUIRED SUBMITTAL DRAWINGS.
2. THE FIRE SPRINKLER CONTRACTOR SHALL CONFORM TO THE SPECIFICATIONS OF THE PROJECT (I.E., THESE DRAWINGS AND ASSOCIATED SPECIFICATIONS). IF QUESTIONS OR DISCREPANCIES ARISE DURING THE EXECUTION OF THE PROJECT, THE CONTRACTOR SHALL SUBMIT AN RFI TO THE FIRE PROTECTION ENGINEER'S ATTENTION FOR RESOLUTION.
3. THIS PROJECT IS NOT DESIGN-BUILD. LOCAL AHJ PERMITTING AND APPROVAL IS REQUIRED. HOWEVER, IF/WHEN A DISCREPANCY EXISTS BETWEEN THESE CRITERIA AND WHAT THE LOCAL AHJ MAY BE ACCEPTING OF, IT IS THE CONTRACTOR'S RESPONSIBILITY TO COMPLY WITH THE MORE STRINGENT REQUIREMENT. THESE CONTRACT CRITERIA ARE NOT TO BE CIRCUMVENTED BY THE CONTRACTOR SEEKING APPROVAL OF LOCAL AHJ WITHOUT DUE CONSIDERATION, CONFERENCE, AND CLARIFICATION WITH THE FIRE PROTECTION ENGINEER.
4. THESE DRAWINGS CONVEY THE SCOPE OF WORK FOR WATER-BASED FIRE PROTECTION SYSTEMS FOR THE FACILITY. THE SCOPE GENERALLY CONSISTS OF PRIVATE FIRE SERVICE MAINS, FIRE PUMP, AND INTERIOR FIRE SPRINKLER SYSTEMS FOR THE FACILITY. THE FIRE SPRINKLER CONTRACTOR SHALL PROVIDE ALL COMPONENTS AND SYSTEMS AS DETAILED ON THESE FP-SERIES DRAWINGS. THESE DRAWINGS DO NOT PURPORT TO REGURGITATE ALL REQUIREMENTS FROM APPLICABLE CODES AND STANDARDS. IT IS THE FIRE SPRINKLER CONTRACTOR'S RESPONSIBILITY TO COMPLY WITH THESE SPECIFICATIONS AND LOCAL CODES AND STANDARDS. THE FIRE SPRINKLER CONTRACTOR SHALL COORDINATE WITH ALL OTHER TRADES (E.G., CIVIL, FIRE ALARM, MECHANICAL, ELECTRICAL) SO AS TO PROVIDE A COMPLETE SYSTEM AS SPECIFIED IN THESE DRAWINGS AND ASSOCIATED SPECIFICATIONS.
5. THE BASIS OF DESIGN FOR THESE CONTRACT CRITERIA DRAWINGS CONSISTS OF FOLLOWING CODES AND STANDARDS (NOT ALL MAY BE APPLICABLE):
   a. 2021 ARKANSAS FIRE PREVENTION CODE VOLUME II, INTERNATIONAL BUILDING CODE 2021 EDITION
   b. 2021 ARKANSAS FIRE PREVENTION CODE VOLUME I, INTERNATIONAL FIRE CODE 2021 EDITION
   c. NFPA 13, STANDARD FOR THE INSTALLATION OF SPRINKLER SYSTEMS, 2019 EDITION
   d. NFPA 13, STANDARD FOR THE INSTALLATION OF SPRINKLER SYSTEMS, 2025 EDITION FOR CONVEYANCE OBSTRUCTION GUIDELINES (IN NEGOTIATIONS WITH AR STATE FIRE MARSHAL)
   e. NFPA 20, STANDARD FOR THE INSTALLATION OF STATIONARY PUMPS FOR FIRE PROTECTION, 2019 EDITION
   f. NFPA 24, STANDARD FOR THE INSTALLATION OF PRIVATE FIRE SERVICE MAINS AND THEIR APPURTENANCES, 2019 EDITION
   g. NFPA 72, NATIONAL FIRE ALARM AND SIGNALING CODE, 2019 EDITION

GENERAL NOTES

1. ALL HOLES IN WALLS AND FLOORS SHALL BE CORE DRILLED OR HAVE METALLIC PIPE SLEEVES INSTALLED.
2. ALL PENETRATIONS IN FIRE RESISTIVE RATED ASSEMBLIES SHALL BE FIRE STOPPED BY APPROVED MEANS AND THE ASSEMBLY SHALL BE RESTORED TO ITS REQUIRED FIRE RESISTANCE RATING.
3. MANUFACTURERS OF BRACES SHOULD BE CONSULTED TO VERIFY THAT THE BRACE ATTACHMENTS HAVE SUFFICIENT STRENGTH FOR THE MAXIMUM LOAD THAT WILL BE ENCOUNTERED.
4. WATER DAMAGE CANNOT BE TOLERATED. TAKE ANY NECESSARY MEASURES TO KEEP THE PREMISES DRY AT ALL TIMES. REPAIR WATER DAMAGE RESULTING FROM THE WORK, WHETHER INTENTIONAL OR NOT, AT NO COST TO AND TO THE SATISFACTION OF THE OWNER. IN NO CASE SHALL AIR VENTS BE PERMITTED TO BE LEFT OPEN WHERE THEY MAY DISCHARGE WATER UNCONTROLLED.
5. PRIOR TO THE OPERATION (OPEN OR CLOSE) OF ANY VALVE CONTROLLING WATER TO THE DOMESTIC OR FIRE SYSTEMS, NOTIFICATION SHALL BE GIVEN TO, AND APPROVAL OBTAINED FROM, THE GENERAL CONTRACTOR.
6. NEITHER THE ARCHITECT, OWNER, NOR ENGINEER SHALL BE RESPONSIBLE FOR PROVIDING A SAFE WORKING PLACE FOR THE CONTRACTOR, SUBCONTRACTORS, OR THEIR EMPLOYEES, OR ANY INDIVIDUAL RESPONSIBLE TO THEM FOR THE WORK. THIS RESPONSIBILITY RESTS WITH THE CONTRACTOR.

FIRE SPRINKLERS

1. CONTRACTOR SHALL PROVIDE A COMPLETE AUTOMATIC SPRINKLER SYSTEM IN ACCORDANCE WITH DRAWINGS, SPECIFICATIONS, AND NFPA 13.
2. CONTRACTOR SHALL HYDRAULICALLY PROVE THE REMOTE AREA OF EACH SEPARATE HAZARD GROUP OF EACH SYSTEM WITHOUT EXCEPTION.
3. CONTRACTOR SHALL BE RESPONSIBLE FOR AVOIDING ALL CONFLICTS WITH STRUCTURE, LIGHTING FIXTURES, SKYLIGHTS, UNIT HEATERS, DIFFUSERS, GRILLES, DUCTS, CONDUIT, PIPING, CONVEYORS AND ALL OTHER OBSTRUCTIONS ENCOUNTERED. CONTRACTOR SHALL COORDINATE WITH ARCHITECTURAL, ELECTRICAL, AND MECHANICAL WORK. ANY DEVIATIONS FROM APPROVED SHOP DRAWINGS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL BEFORE PROCEEDING WITH THE WORK.
4. CONTRACTOR SHALL COORDINATE THE POSITION AND HANGING METHOD OF ALL SPRINKLER PIPING 4 IN. AND LARGER WITH THE STRUCTURAL DRAWINGS.
5. CONTRACTOR SHALL ENSURE ALL HORIZONTAL PIPING RUNS ARE LOCATED ABOVE THE BOTTOM CHORD OF ROOF JOIST GIRDERS.
6. CONTRACTOR SHALL PROVIDE ALL NECESSARY MAIN AND/OR AUXILIARY DRAINS AND AIR VENTS FOR THE SPRINKLER SYSTEMS AND ON RISERS AS REQUIRED BY NFPA 13. DRAINS SERVING TRAPPED SECTIONS WITH A CAPACITY GREATER THAN 5 GALLONS SHALL DISCHARGE OUTSIDE OR TO A DRAIN CONNECTION CAPABLE OF HANDLING THE FLOW OF THE DRAIN. ALL DRAINS AND VENTS SHALL TERMINATE ON EXTERIOR WALLS WITHIN 8 IN. OF GRADE. CONCRETE SPLASH BLOCKS SHALL BE PROVIDED UNDER EACH DRAIN OUTLET WHERE NECESSARY TO PREVENT SOIL EROSION. ALL DRAIN VALVES SHALL REMAIN ACCESSIBLE BY STEPLADDER (APPROXIMATELY 7 FT OR LESS).
7. ALL MAIN DRAINS, AUXILIARY DRAINS, MANUAL AIR VENTS, AND/OR INSPECTOR'S TEST CONNECTIONS TERMINATING ON THE SHIPPING DOCK WALLS SHALL BE RUN DOWN THE SHIPPING DOCK WALL ONLY AT THE PERSONNEL DOORS OR RISERS AND NOT BETWEEN SHIPPING DOCK DOORS. COORDINATE PLACEMENT OF PIPING WITH CONTROLS AND OTHER EQUIPMENT, AS REQUIRED.
8. ALL MECHANICAL FITTINGS SHALL BE HELD IN PLACE WITH MECHANICAL COUPLINGS OF THE SAME MANUFACTURER.
9. ALL PIPING HANGERS, BRACING AND SUPPORTS SHALL BE DESIGNED, LOCATED, AND INSTALLED IN ACCORDANCE WITH NFPA 13.
10. FIRE SPRINKLER CONTRACTOR SHALL PROVIDE AND INSTALL WATERFLOW ALARM DEVICES ON ALL SPRINKLER SYSTEMS FOR MONITORING BY THE FACU. THE FIRE SPRINKLER CONTRACTOR SHALL COMMUNICATE AND COORDINATE AS NECESSARY WITH THE FIRE ALARM CONTRACTOR TO ENSURE ALL DEVICES ARE MONITORED.
11. FIRE SPRINKLER CONTRACTOR SHALL PROVIDE AND INSTALL VALVE SUPERVISORY TAMPER DEVICES ON ALL INTERIOR FIRE PROTECTION CONTROL VALVES FOR MONITORING BY THE FACU. THE FIRE SPRINKLER CONTRACTOR SHALL COMMUNICATE AND COORDINATE AS NECESSARY WITH THE FIRE ALARM CONTRACTOR TO ENSURE ALL DEVICES ARE MONITORED.
12. FIRE SPRINKLER CONTRACTOR SHALL PROVIDE NO OTHER FIRE ALARM-ASSOCIATED DEVICES, COMPONENTS, PANELS, ETC.
13. AUXILIARY AREA (I.E., SATELLITE OFFICE AREAS, PLATFORMS, CONVEYORS AND BATHROOMS) SPRINKLER SYSTEMS MAY BE FED FROM THE NEAREST CEILING SYSTEM CROSS MAIN OR BY INDIVIDUAL DROPS. EACH AUXILIARY AREA CONTAINING MORE THAN FIVE (5) SPRINKLERS SHALL HAVE A SEPARATE, LISTED, ACCESSIBLE, SUPERVISED, AND INDICATING CONTROL VALVE WHEN FED FROM A CROSS MAIN. THE FIRE SPRINKLER CONTRACTOR SHALL COORDINATE LOCATION OF THESE VALVES WITH THE FIRE ALARM AND ELECTRICAL CONTRACTOR(S).
14. EACH AND EVERY SPRINKLER SYSTEM RISER INCLUDING AUXILIARY AREAS SHALL ASSIGNED AND CLEARLY MARKED WITH A NUMBERED LABEL. ZONE MAPS INDICATING THE LOCATION AND BOUNDARY FOR EACH SYSTEM SHALL BE PRINTED, LAMINATED, AND POSTED BY THE FIRE PROTECTION SUBCONTRACTOR AT EACH RISER BANK AND WITHIN THE FIRE PUMP ROOM.
15. ALL SPRINKLERS SHALL BE INSTALLED AFTER THE PIPING HAS BEEN INSTALLED AT CEILING LEVEL, AND NOT WHILE THE PIPING IS ON GROUND LEVEL.

WAREHOUSE INTERIOR HOSE CONNECTIONS

1. SMALL HOSE CONNECTIONS SHALL BE PROVIDED THROUGHOUT THE FACILITY IN ACCORDANCE WITH LOCAL REQUIREMENTS, NFPA 13, AND THESE DRAWINGS FOR FIRST-AID FIREFIGHTING AND OVERHAUL OPERATIONS.
2. EACH INTERIOR FIRE HOSE CONNECTION (NFPA 13) SHALL CONSIST OF A 2-1/2 IN. HOSE VALVE WITH INTEGRAL PRESSURE REGULATING DEVICE TO LIMIT RESIDUAL PRESSURE TO 100 PSI AND A CAP WITH CHAIN, WITHOUT HOSE.
3. INTERIOR FIRE HOSE CONNECTIONS SHALL BE PROVIDED AT THE FOLLOWING LOCATIONS:
   a. AT EACH SPRINKLER RISER MANIFOLD UPSTREAM OF ANY SPRINKLER SYSTEM RISER CHECK VALVE.

SPRINKLER DESIGN SCHEDULE (REFERENCE SPECIFICATION 211313)

⬡X

AREA DESIGNATION	AREA DESCRIPTION	AREA CEILING HEIGHT	AREA MIN. CLEAR HEIGHT	TOP OF PRODUCT (SEE NOTES)	HAZARD DESCRIPTION		CEILING SYSTEM								IN-RACK SPRINKLERS							INSIDE/OUTSIDE HOSE (GPM)	DURATION (MINUTES)	NOTES
					MAXIMUM ALLOWED	ACTUAL	SYSTEM NO.	SYSTEM TYPE	DENSITY (GPM/ SQ.FT.)	REMOTE AREA (SQ.FT.)	NO. SPKRS.	PRESSURE OR FLOW	SPKR. TYPE.	SPKR. SPACING (SQ.FT.)	SYSTEM NO.	NO. SPKRS.	PRESSURE OR FLOW	SPKR. TYPE	MMR # LEVELS & TYPE	DRR # LEVELS & TYPE	SRR # LEVELS & TYPE			
A	GENERAL STORAGE WAREHOUSE	45'-0" (PEAK)	36'-0"	5'-0"	36'-0" RACK STORAGE OF ORDINARY CLASS I-IV COMMODITIES & CARTONED UNEXPANDED GROUP A PLASTICS - ESFR	5'-0" ON-FLOOR STORAGE OF CARTONED UNEXPANDED GROUP A PLASTICS-ORDINARY HAZARD (GROUP 2)	1-24	ESFR	--	--	12	40 PSI	ESFR PENDENT, K-22.4 OR K-25.2, ORD. OR INT. TEMP.	100 MAX., 64 MIN.	--	--	--	--	--	--	--	100 / 150	60	REFERENCE: NFPA 13 AND SPRINKLER LISTING. NO OPEN TOP CONTAINERS. NO SOLID SHELVES. ALL TYPES OF GROUP A PLASTIC, WHEN STORED 5 FT. OR LESS IN HEIGHT WITHIN ANY TYPICAL ARRANGEMENT WILL BE PROTECTED WITH ORDINARY HAZARD (GROUP 2) DESIGN PER NFPA 13. ESFR SPRINKLER PROTECTION IS ADEQUATE TO PROTECT LIGHT AND ORDINARY HAZARDS PER NFPA 13. IDLE WOOD PALLETS SHALL NOT BE STORED IN AREAS WHERE THE DECK HEIGHT EXCEEDS 40 FT UNLESS STACK DOES NOT EXCEED 6 FT AND EACH PILE OF NOT MORE THAN FOUR (4) STACKS IS SEPARATED FROM OTHER PALLET PILES BY AT LEAST 8 FT. ALL OTHER STORED COMMODITY SHALL BE KEPT NOT LESS THAN 25 FT AWAY PER NFPA 13.
B	GENERAL OFFICE SPACE	SEE ARCH. PLANS	--	--	LIGHT HAZARD	LIGHT HAZARD	VARIES & 25	CMDA	0.10	1,500	--	--	QR PENDENT, K≥5.6, ORD. TEMP.	225 MAX.	--	--	--	--	--	--	--	000 / 100	30	REFERENCE: NFPA 13 AND SPRINKLER LISTING. ROOMS SUCH AS STORAGE, ELECTRICAL, AND COMPUTER ROOMS LARGER THAN 130 SQ. FT. SHALL BE PROTECTED IN ACCORDANCE WITH ORDINARY HAZARD (GROUP 1) CRITERIA.
C	UNDERNEATH PID PLATFORM	15'-2"	TBD	TBD	IDLE WOOD PALLETS UP TO 6'-0"	EXTRA HAZARD (GROUP 2)	2-3 & 22-23	CMDA	0.40	2,000	--	--	QR UPRIGHT OR PENDENT, K≥11.2, ORD. TEMP.	100 MAX.	--	--	--	--	--	--	--	100 / 400	120	REFERENCE: NFPA 13 AND SPRINKLER LISTING. PLATFORM FRAMING IS OBSTRUCTED CONSTRUCTION; PROVIDE SPRINKLER DEFLECTORS BELOW BOTTOM OF STRUCTURAL MEMBERS AS DESIGN ALLOWS, OTHERWISE SPRINKLERS MAY BE REQUIRED IN EVERY BAY. PLASTIC PALLETS SHALL NOT BE STORED UNLESS DOCUMENTATION (SUCH AS UL LISTING OR FM APPROVAL) IS PROVIDED AND WELL MAINTAINED ON SITE, PROVING PLASTIC PALLETS ARE OF EQUAL OR LESSER HAZARD THAN WOOD PALLETS PER NFPA 13.
D	DIESEL FIRE PUMP ROOM	SEE ARCH. PLANS	--	--	EXTRA HAZARD (GROUP 2)	EXTRA HAZARD (GROUP 2)	12	CMDA	0.40	ENTIRE	--	--	QR UPRIGHT OR PENDENT, K-11.2, ORD. TEMP.	100 MAX.	--	--	--	--	--	--	--	100 / 400	90	REFERENCE: NFPA 13, NFPA 20 AND SPRINKLER LISTING.
E	UNDERNEATH CONVEYORS AND PLATFORMS	SEE MHE VENDOR PLANS	--	--	EXTRA HAZARD (GROUP 2)	EXTRA HAZARD (GROUP 2)	VARIES	CMDA	0.40	2,000	--	--	QR UPRIGHT OR PENDENT, K-11.2, ORD. TEMP.	100 MAX.	--	--	--	--	--	--	--	100 / 400	90	REFERENCE: NFPA 13 AND SPRINKLER LISTING.

APPROVAL STAMP:

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PROJECT DESCRIPTION

AMAZON LIT3
2026 IXD GEN5M
CROSS-DOCK WAREHOUSE FACILITY
(RECEIPT & REDISTRIBUTION)

PROJECT LOCATION

Port of Little Rock
PORT OF LITTLE ROCK
(INDUSTRIAL PARK)
LITTLE ROCK, ARKANSAS 72206
(UNINCORPORATED PARCELS) PULASKI COUNTY

SHEET TITLE

FIRE PROTECTION NOTES

SHEET MANAGEMENT

PROJECT NO.:	LIT3
DATE ISSUED:	03/20/2025
DRAWN BY:	KC
REVIEWED BY:	MC

ISSUANCE / REVISION SCHEDULE

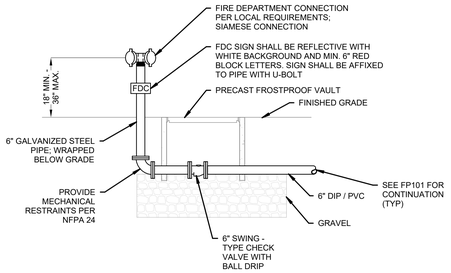
#	DATE	DESCRIPTION
	03/20/2025	100% CD

SHEET NUMBER

FP001

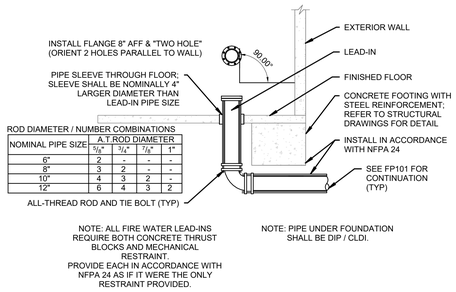
Submittal Type — Working Documents

Autodesk Docs://IXD_NA_US_LIT3/LIT3-HGI-ZZ-ZZ-M3-FIR.rvt



7 FIRE DEPARTMENT CONNECTION

NOT TO SCALE



ROD DIAMETER / NUMBER COMBINATIONS

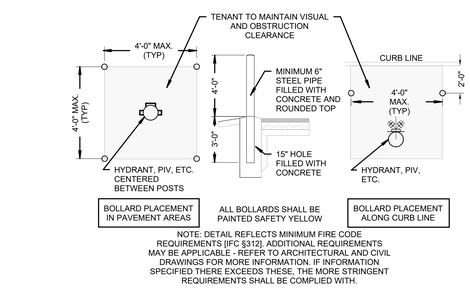
NOMINAL PIPE SIZE	A.T ROD DIAMETER			
	⅝"	¾"	⅞"	1"
6"	2	-	-	-
8"	3	2	-	-
10"	4	3	2	-
12"	6	4	3	2

NOTE: ALL FIRE WATER LEAD-INS REQUIRE BOTH CONCRETE THRUST BLOCKS AND MECHANICAL RESTRAINT.
PROVIDE EACH IN ACCORDANCE WITH NFPA 24 AS IF IT WERE THE ONLY RESTRAINT PROVIDED.

NOTE: PIPE UNDER FOUNDATION SHALL BE DIP / CLDI.

6 RISER LEAD-IN UNDER FOUNDATION

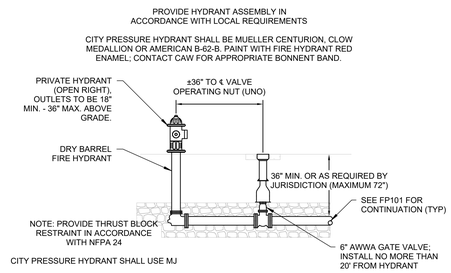
NOT TO SCALE



NOTE: DETAIL REFLECTS MINIMUM FIRE CODE REQUIREMENTS [IFC §312]. ADDITIONAL REQUIREMENTS MAY BE APPLICABLE - REFER TO ARCHITECTURAL AND CIVIL DRAWINGS FOR MORE INFORMATION. IF INFORMATION SPECIFIED THERE EXCEEDS THESE, THE MORE STRINGENT REQUIREMENTS SHALL BE COMPLIED WITH.

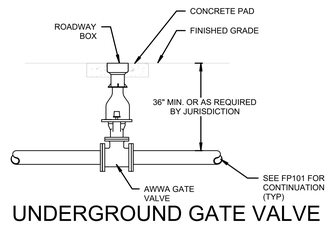
5 BOLLARD PLACEMENTS

NOT TO SCALE



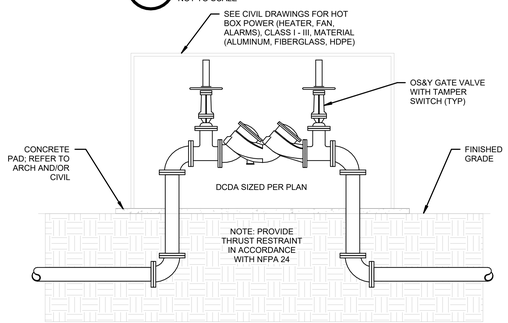
4 HYDRANT WITH CONTROL VALVE

NOT TO SCALE



3 UNDERGROUND GATE VALVE WITH ROADWAY BOX

NOT TO SCALE



2 ABOVE GROUND BACKFLOW PREVENTER IN HOT BOX

NOT TO SCALE

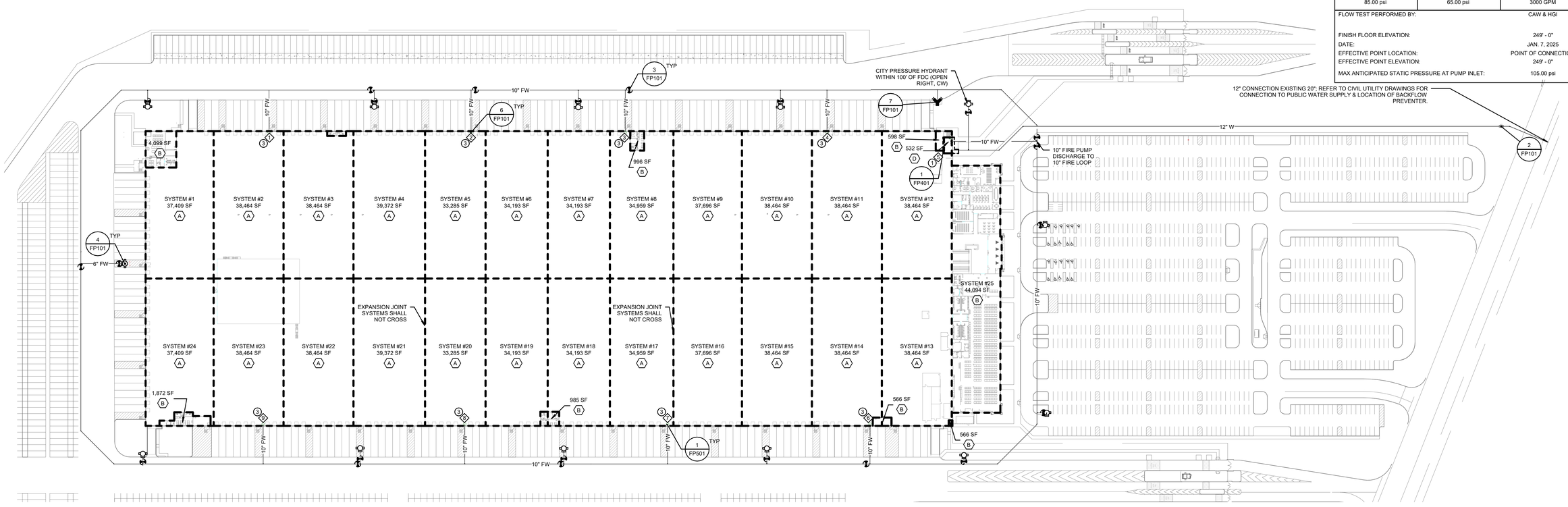
GENERAL NOTES

1. ALL UNDERGROUND PIPING, VALVES, AND APPURTENANCES (DOWNSTREAM OF THE FIRE PUMP) SHALL BE RATED FOR A MINIMUM WORKING PRESSURE OF 175 PSI.
2. THE TOP OF ALL UNDERGROUND MAINS SHALL HAVE A MINIMUM DEPTH OF COVER BELOW EARTH GRADE AS REQUIRED BY LOCAL BUILDING CODES OR NFPA 24, WHICHEVER IS GREATER. LOCAL REQUIREMENT IS MINIMUM 42 IN. BURY.
3. UNDERGROUND MAINS UPSTREAM OF THE FIRE PUMP SHALL BE MECHANICALLY RESTRAINED AGAINST MOVEMENT AT ALL PIPE JOINTS, INCLUDING ALL CHANGES IN DIRECTION, BEHIND TEES, HYDRANTS, DEAD END LINES OR CAPPED TEES, AND PIPE-TO-PIPE JOINTS. ALTERNATIVELY, MINIMUM REQUIRED PIPE LENGTHS SHALL BE MECHANICALLY RESTRAINED AT ALL CHANGES IN DIRECTION (AS NOTED) OR THRUST BLOCKS USED IF, AND ONLY IF, CALCULATIONS ARE PROVIDED PROVING THE MINIMUM RESTRAINED LENGTH OR BEARING AREA OF THRUST BLOCKS. MECHANICAL JOINT RESTRAINTS AND/OR THRUST BLOCKS SHALL BE DESIGNED IN ACCORDANCE WITH NFPA 24 BASED UPON A HYDROSTATIC TEST PRESSURE OF 200 PSI AND THE SOIL RESISTANCE (I.E., HORIZONTAL BEARING STRENGTH) AS DETERMINED BY THE GEOTECHNICAL/SOILS ENGINEER, USING A MINIMUM SAFETY FACTOR OF 1.5.
4. UNDERGROUND MAINS DOWNSTREAM OF THE FIRE PUMP SHALL BE MECHANICALLY RESTRAINED AGAINST MOVEMENT AT ALL PIPE JOINTS, INCLUDING ALL CHANGES IN DIRECTION, BEHIND TEES, HYDRANTS, DEAD END LINES OR CAPPED TEES, AND PIPE-TO-PIPE JOINTS. ALTERNATIVELY, MINIMUM REQUIRED PIPE LENGTHS SHALL BE MECHANICALLY RESTRAINED AT ALL CHANGES IN DIRECTION (AS NOTED) OR THRUST BLOCKS USED IF, AND ONLY IF, CALCULATIONS ARE PROVIDED PROVING THE MINIMUM RESTRAINED LENGTH OR BEARING AREA OF THRUST BLOCKS. MECHANICAL JOINT RESTRAINTS AND/OR THRUST BLOCKS SHALL BE DESIGNED IN ACCORDANCE WITH NFPA 24 BASED UPON A HYDROSTATIC TEST PRESSURE OF 225 PSI AND THE SOIL RESISTANCE (I.E., HORIZONTAL BEARING STRENGTH) AS DETERMINED BY THE GEOTECHNICAL/SOILS ENGINEER, USING A MINIMUM SAFETY FACTOR OF 1.5.
5. ALL FIRE WATER LEAD-INS INTO THE BUILDING SHALL BE PROVIDED WITH BOTH MECHANICAL JOINT RESTRAINTS AND CONCRETE THRUST BLOCKS. EACH THRUST RESTRAINT METHOD SHALL BE INDIVIDUALLY PROVIDED IN ACCORDANCE WITH NFPA 24 AS IF IT WERE THE ONLY RESTRAINT METHOD BEING UTILIZED FOR THE FIRE WATER LEAD-IN.
6. ALL UNDERGROUND RODS, NUTS, BOLTS AND WASHERS SHALL BE COATED WITH AN ACCEPTABLE CORROSION-RETARDING MATERIAL. CORROSION PROTECTION SHALL MEET THE REQUIREMENTS OF NFPA 24.
7. FIRE DEPARTMENT CONNECTION (FDC) SHALL BE PROVIDED WHERE INDICATED ON THE FIRE PROTECTION SITE PLAN. THE FDC CHECK VALVE SHALL BE INSTALLED IN A VAULT TO FACILITATE THE NECESSARY ACCESS FOR REQUIRED INSPECTION, TESTING, AND MAINTENANCE.
8. ALL UNDERGROUND PIPING SHALL BE HYDROSTATICALLY TESTED FOR 2 HOURS IN ACCORDANCE WITH NFPA 24. PIPING UPSTREAM OF THE FIRE PUMP SHALL BE TESTED AT 200 PSI. PIPING DOWNSTREAM OF THE FIRE PUMP (INCLUDING THE FDC PIPING) SHALL BE TESTED AT 225 PSI. BEFORE TESTING, THE TRENCH SHALL BE BACKFILLED BETWEEN JOINTS. ALL JOINTS AND THRUST BLOCKS SHALL BE LEFT EXPOSED DURING THE TEST.
9. GUARD POSTS SHALL BE PROVIDED AROUND ALL ABOVEGROUND FIRE SERVICE MAIN WATER SUPPLY COMPONENTS SUBJECT TO VEHICULAR DAMAGE. COMPONENTS TO BE PROTECTED INCLUDE, BUT ARE NOT LIMITED TO, ON-SITE HYDRANTS, FREE-STANDING FDC(S), AND YARD POST-INDICATING VALVES (PIVs; IF PROVIDED). THE TOP OF EACH GUARD POST SHALL BE 4 FT ABOVE GRADE LEVEL AND SHALL EXTEND A MINIMUM OF 3 FT BELOW GRADE. GUARD POSTS SHALL BE ANCHORED IN CONCRETE. A MINIMUM CLEAR SPACE OF 3 FT SHALL BE PROVIDED BETWEEN EACH GUARD POST AND THE COMPONENT BEING PROTECTED.
10. REFER TO THE ARCHITECTURAL DRAWINGS FOR EXACT FIRE SPRINKLER RISER LEAD-IN LOCATIONS.
11. REFER TO THE CIVIL UTILITY DRAWINGS AND SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS. IN THE EVENT OF CONFLICTS, CONSTRUCT FIRE SERVICE MAINS TO THE MOST STRINGENT REQUIREMENTS, AS DETERMINED BY THE FIRE PROTECTION ENGINEER.
12. ALL UNDERGROUND PRIVATE FIRE SERVICE MAIN PIPING, INCLUDING THE FDC AND FIRE PUMP SUCTION PIPING, SHALL BE COMPLETELY FLUSHED IN ACCORDANCE WITH NFPA 20 AND NFPA 24 PRIOR TO CONNECTION TO ABOVEGROUND FIRE SPRINKLER PIPING. FLUSHING PROCEDURES ARE SUBJECT TO THE APPROVAL OF THE FIRE PROTECTION ENGINEER AND THE AUTHORITIES HAVING JURISDICTION.
13. IT IS THE GENERAL CONTRACTOR'S RESPONSIBILITY TO COORDINATE THEIR CONTRACTORS FOR THE FLUSHING PROCEDURE.
14. THE INSTALLING CONTRACTOR (OF THE UNDERGROUND PRIVATE FIRE SERVICE MAINS) SHALL SUBMIT THEIR FLUSHING PROCEDURES FOR REVIEW. THE PROCEDURE SHALL INCLUDE THE FOLLOWING CRITERIA (FROM NFPA 20 AND NFPA 24):
    a. UNDER NO CIRCUMSTANCES SHALL THE PRESSURE ON THE PUBLIC WATER SUPPLY SYSTEM BE ALLOWED TO DROP BELOW 20 PSI.
    b. IF THE FLUSHING RATES AND/OR DURATIONS INDICATED BELOW NOT ACHIEVABLE WITHOUT THE FIRE PUMP, ADDITIONAL FLUSHING WILL BE REQUIRED AFTER THE FIRE PUMP ACCEPTANCE TEST.
    c. THE 12 IN. PIPE SUPPLYING THE FIRE PUMP SHALL BE FLUSHED AT A MINIMUM FLOW RATE OF 5,290 GPM OR THE MAXIMUM FLOW RATE AVAILABLE FROM THE UTILITY AT 20 PSI. THE MINIMUM FLOW RATE SHALL NOT BE LESS THAN 150% OF THE RATED CAPACITY OF THE FIRE PUMP.
    d. THE FLOW RATE (GPM) DURING EACH FLUSHING OPERATION SHALL BE MEASURED. AN INDIRECT MEASUREMENT OF THE FLOW BASED ON A CURRENT (DAY OF FLUSHING) FLOW TEST IS SUFFICIENT. IF THE FIRE PUMP IS NECESSARY TO OVERCOME PRESSURE LOSSES IN THE SYSTEM IN ORDER TO ACHIEVE THE NECESSARY MINIMUM FLOW RATES, THE FIRE PUMP SHALL FIRST BE ACCEPTANCE TESTED AND THE INDIRECT MEASUREMENT FOR THE FLUSHING OPERATIONS SHALL BE OBTAINED FROM A COMPARISON TO THE DATA FROM THE FIRE PUMP FLOW TEST RESULTS.
    e. THE MINIMUM FLUSHING DURATION SHALL BE BASED ON THE LENGTH OF THE PIPING TO BE FLUSHED DIVIDED BY THE MINIMUM FLUSHING VELOCITY. THE 12 IN. FIRE PUMP SUCTION PIPING SHALL BE FLUSHED AT A MINIMUM VELOCITY OF 15 FPS. IF THE ABOVE REFERENCED FLOW RATE (I.E., 5,290 GPM) IS NOT ACHIEVED, THE DURATION SHALL BE BASED ON THE ACTUAL VELOCITY [FLOW VELOCITY IN 12 IN. PIPE (IN FPS) = 0.00283 x FLOW RATE (IN GPM)]. THE BALANCE OF THE UNDERGROUND FIRE SERVICE MAIN PIPING SHALL BE FLUSHED AT A MINIMUM VELOCITY OF 10 FPS. A SAFETY FACTOR OF AT LEAST 2 SHALL BE APPLIED TO THE MINIMUM FLUSHING DURATION TO ACCOUNT FOR LARGER OBJECTS THAT MAY BE ROLLING ALONG THE BOTTOM OF THE PIPE RATHER THAN TRAVELING WITHIN THE WATER STREAM.
    f. AS A FREE-STANDING (YARD TYPE) FDC IS PROVIDED, THE 6 IN. PIPING SHALL BE FLUSHED AT A MINIMUM FLOW RATE OF 880 GPM BY REVERSING THE CHECK VALVE.
    g. THE 10 IN. UNDERGROUND PRIVATE FIRE SERVICE MAIN LOOP AND FIRE SPRINKLER SYSTEM LEAD-INS SHALL BE FLUSHED AT A MINIMUM FLOW RATE OF 2,440 GPM.
    h. THE UNDERGROUND PRIVATE FIRE SERVICE MAIN LOOP AROUND THE BUILDING SHALL BE FLUSHED IN SUCH A MANNER SO AS TO ACHIEVE FULL FLUSHING WITH AN OVERLAP OF THE FLUSHED SEGMENTS - WITH AN ISOLATION VALVE CLOSED, FLUSH CLOCKWISE, THEN WITH A DIFFERENT ISOLATION VALVE CLOSED, FLUSH COUNTERCLOCKWISE PAST THE PREVIOUS OUTLET.
    i. AFTER THE LOOP HAS BEEN FLUSHED, ALL REMAINING SPRINKLER SYSTEM LEAD-INS SHALL BE FLUSHED.
    j. EACH FIRE HYDRANT SHALL BE FULLY OPENED AND CLOSED UNDER FULL SYSTEM PRESSURE AND CHECKED FOR PROPER DRAINAGE. THE 6 IN. FIRE HYDRANT LATERALS SHALL BE FLUSHED AT A MINIMUM FLOW RATE OF 880 GPM.
15. CONTRACTOR SHALL PROVIDE A COPY OF THE CONTRACTOR'S MATERIAL AND TEST CERTIFICATE FOR UNDERGROUND PIPING (REFER TO NFPA 24) IN ADDITION TO ANY PHOTOS OR OTHER DOCUMENTATION OF THE FLUSHING FOR THE PROJECT RECORD.

DESIGN WATER FLOW DATA

STATIC PRESSURE (PSI)	RESIDUAL PRESSURE (PSI)	WATER FLOW (GPM)
85.00 psi	65.00 psi	3000 GPM

FLOW TEST PERFORMED BY:	CAW & HGI
FINISH FLOOR ELEVATION:	249' - 0"
DATE:	JAN. 7, 2025
EFFECTIVE POINT LOCATION:	POINT OF CONNECTION
EFFECTIVE POINT ELEVATION:	249' - 0"
MAX ANTICIPATED STATIC PRESSURE AT PUMP INLET:	105.00 psi



1 FIRE PROTECTION SITE PLAN & ROOF-LEVEL SYSTEMS

1" = 80'-0"

NOTE: WITHIN THE WAREHOUSE, THIS PLAN VIEW SHOWS THE ROOF-LEVEL SYSTEMS AND THE AREAS ON THE GROUND WITH SUSPENDED CEILINGS THAT ARE TO BE PROTECTED BY THESE SYSTEMS (EXCEPTION IS FIRE PUMP ROOM AND MAIN OFFICE BLOCK).

NOTE: FIRE SPRINKLER ZONES AND RISER COUNTS AT THE VARIOUS FIRE WATER LEAD-INS HAVE BEEN LAID OUT IN CONJUNCTION WITH SECTIONAL VALVES IN UNDERGROUND FIRE SERVICE MAINS. SPRINKLER CONTRACTOR MAY CONSIDER OTHER SYSTEM ZONING BUT MUST CONSIDER POSSIBLE IMPACT TO NUMBER AND LOCATION OF SECTIONAL VALVES IN UNDERGROUND FIRE SERVICE MAINS. CONTRACTOR SHALL SUBMIT AN RFI TO FIRE PROTECTION ENGINEER'S ATTENTION SHOULD ALTERNATE ZONING LAYOUT BE CONSIDERED.

NOTE: PRIVATE UNDERGROUND FIRE SERVICE MAINS HAVE BEEN COORDINATED WITH THE CIVIL ENGINEER. REFER TO CIVIL SITE UTILITY DRAWINGS FOR MORE INFORMATION. CONTRACTOR SHALL INSTALL FROM CIVIL ENGINEER'S DRAWINGS IN ORDER TO ENSURE COORDINATION WITH ALL OTHER UNDERGROUND UTILITIES. BUT IF CONFLICT EXISTS BETWEEN THE TWO SETS OF PLANS, CONTRACTOR SHALL SUBMIT AN RFI TO BOTH CIVIL AND FIRE PROTECTION ENGINEER'S ATTENTION FOR CLARIFICATION AND RESOLUTION. NO FIELD CHANGES SHALL BE MADE WITHOUT EXPRESS WRITTEN CONSENT FROM THE FIRE PROTECTION ENGINEER. CONTRACTOR SHALL COMPLY WITH ALL LOCAL ENFORCED CODES AND STANDARDS.

TRUE NORTH

80 0 80 160
1" = 80'-0" SCALE FEET

APPROVAL STAMP:

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harrington group
Atlanta, GA • Charlotte, NC HGI PG No.: 245MDC004

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PROJECT DESCRIPTION
AMAZON LIT3
2026 IXD GENSM
CROSS-DOCK WAREHOUSE FACILITY
(RECEIPT & REDISTRIBUTION)

PROJECT LOCATION
Port of Little Rock
PORT OF LITTLE ROCK
(INDUSTRIAL PARK)
LITTLE ROCK, ARKANSAS 72206
(UNINCORPORATED PARCELS) PULASKI COUNTY

SHEET TITLE
FIRE PROTECTION SITE PLAN & DETAILS

SHEET MANAGEMENT

PROJECT NO.:	LIT3
DATE ISSUED:	03/20/2025
DRAWN BY:	KC
REVIEWED BY:	MC

ISSUANCE / REVISION SCHEDULE

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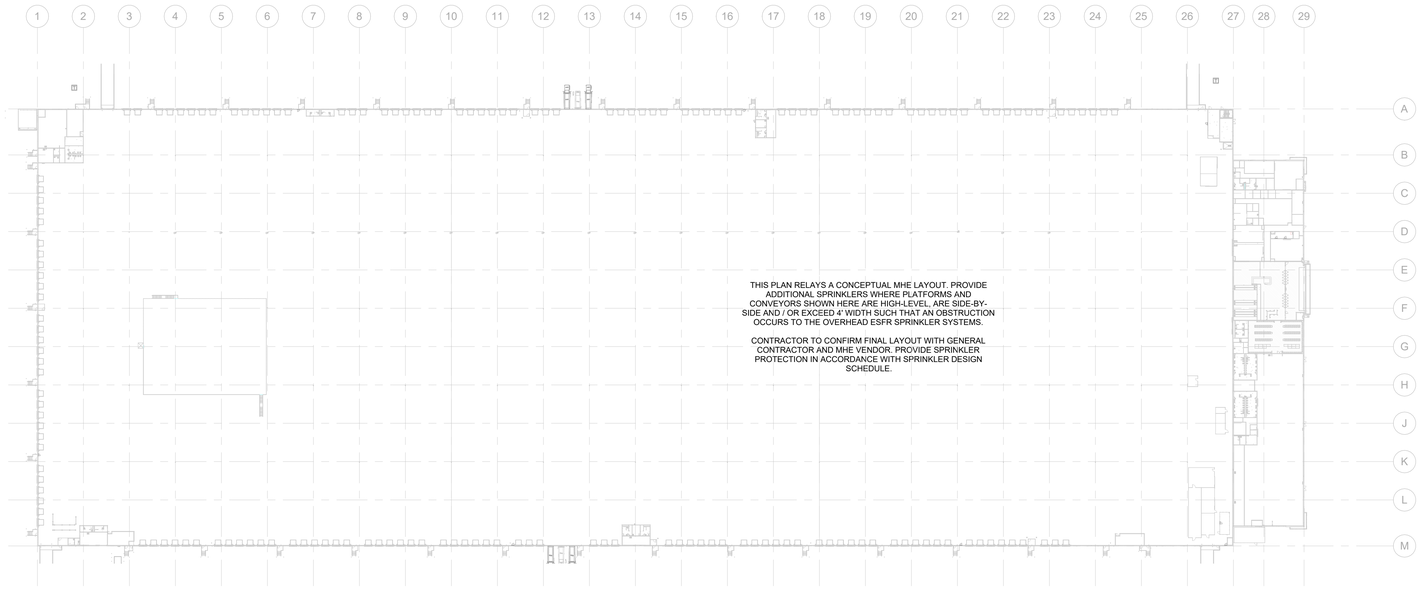
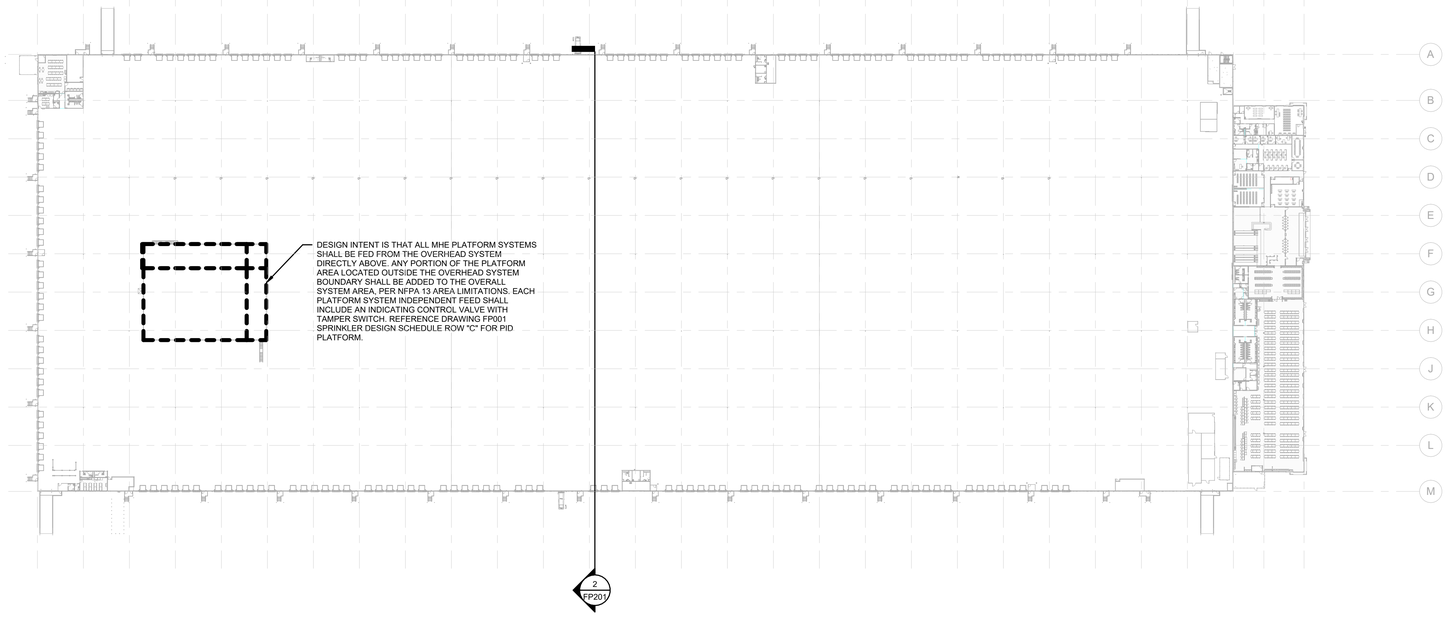


2 FIRE PROTECTION PLAN - MHE

1" = 80'-0"

POPULATION OF PLAN PENDING RECEIPT OF COMPOSITE V1.0 AND OUTCOME OF ARKANSAS STATE FIRE MARSHAL NEGOTIATIONS (IN PROGRESS).

SCOPE WILL REQUIRE ADDITIONAL PRICING EXERCISE.



1 FIRE PROTECTION PLAN - PLATFORMS

1" = 80'-0"

POPULATION OF PLAN PENDING RECEIPT OF COMPOSITE V1.0.

SCOPE WILL REQUIRE ADDITIONAL PRICING EXERCISE.

TRUE NORTH

80 0 80 160

1" = 80'-0" SCALE FEET

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AMAZON LIT3
2026 IXD GENSM
CROSS-DOCK WAREHOUSE FACILITY
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PROJECT LOCATION

PORT OF LITTLE ROCK
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(UNINCORPORATED PARCELS) PULASKI COUNTY

SHEET TITLE

FIRE PROTECTION PLANS

SHEET MANAGEMENT

PROJECT NO.:	LIT3
DATE ISSUED:	03/20/2025
DRAWN BY:	KC
REVIEWED BY:	MC

ISSUANCE / REVISION SCHEDULE

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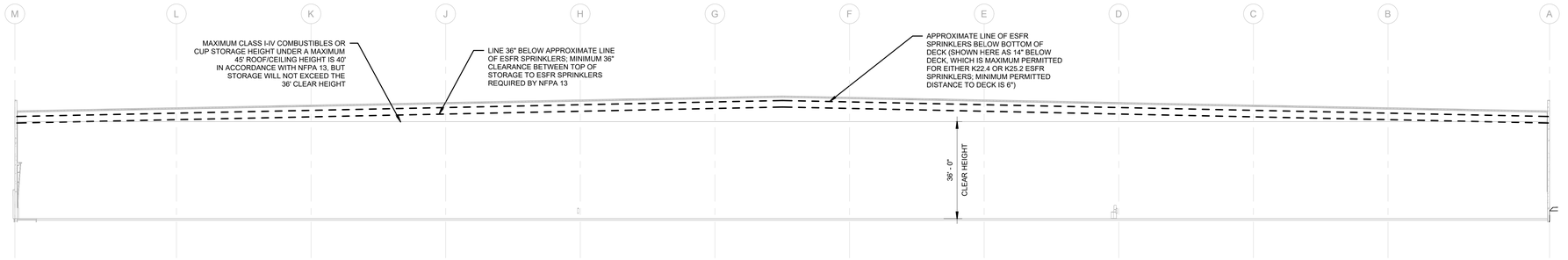
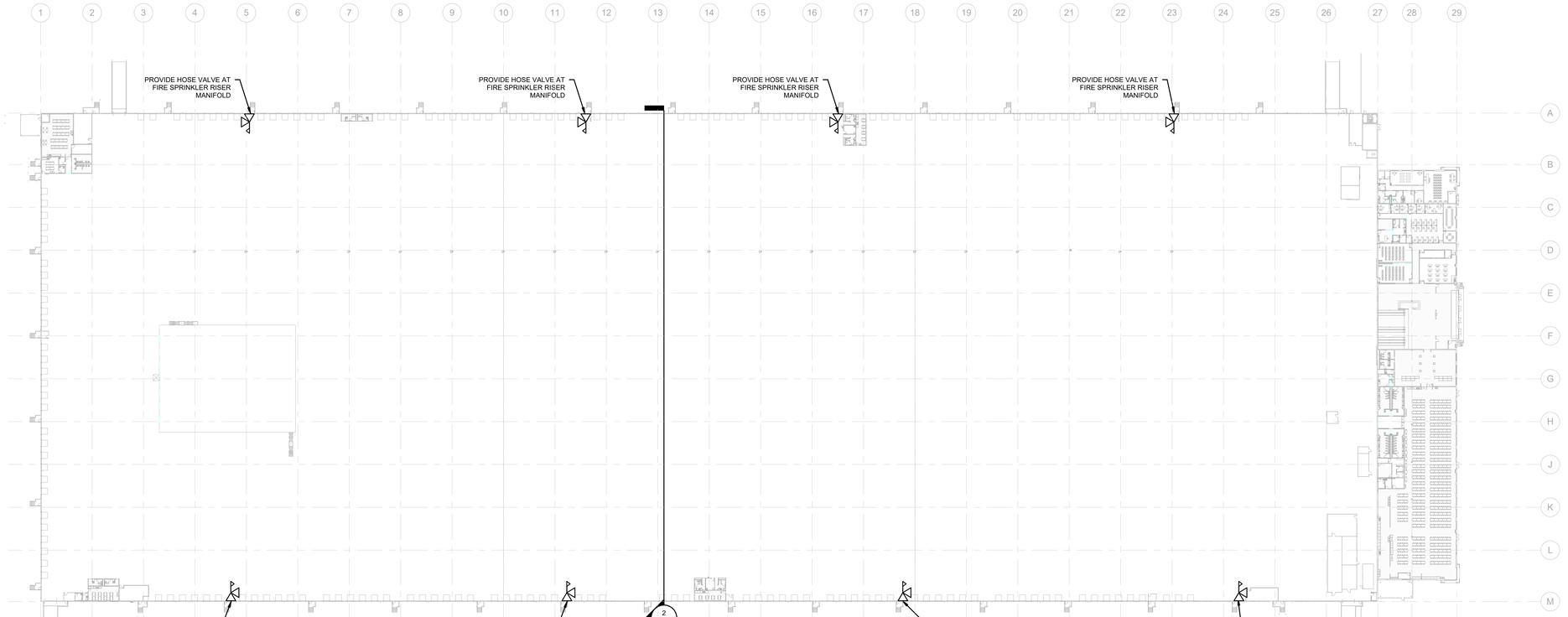


2 FIRE PROTECTION - PARTIAL BUILDING SECTION

1" = 20'-0"



1 FIRE HOSE VALVE PLAN

1" = 60'-0"

20 0 20 40
1" = 20'-0" SCALE FEET

60 0 60 120
1" = 60'-0" SCALE FEET

TRUE NORTH

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FIRE HOSE VALVE PLAN

SHEET MANAGEMENT

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DRAWN BY:	KC
REVIEWED BY:	MC

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SHEET NUMBER

FP201

Submittal Type — Working Documents

Autodesk Docs://ID_PA_US_LITX/LIT3-HDC-ZZ-ZZ-M3-FP.rvt

XX-X FIRE PUMP ROOM SCHEDULE - BASIS OF DESIGN

PUMP ID	SERVICE	RATED FLOW (GPM)	NET CHURN PRESSURE (PSI)	RPM	RATED HP (ENGINE/MOTOR)	VOLTAGE/PHASE/HERTZ
FP-1	FIRE PUMP (VARIABLE SPEED PRESSURE LIMITING CONTROL)	2,000	120	2,100	197	120/1/60 (CONTROLLER & ENGINE BLOCK HEATER)
JP-1	PRESSURE MAINTENANCE (JOCKEY) PUMP	20	110	3,500	3	480/3/60 (COORDINATE WITH ELECTRICAL)

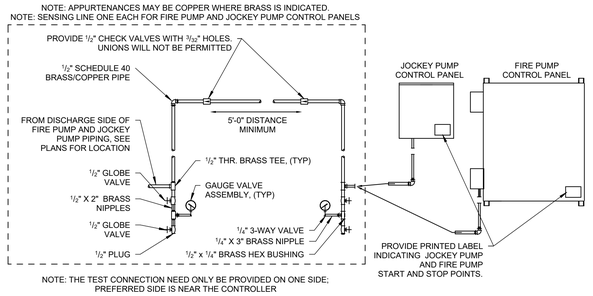
NOTE: DESIGN INTENT FOR THE BASIS OF DESIGN, VARIABLE SPEED CONTROLLED FIRE PUMP SELECTION IS FOR THE VARIABLE SPEED CONTROL (I.E., PLD) OF THE FIRE PUMP TO DISENGAGE BEYOND THE CAPACITY RATING OF THE FIRE PUMP BUT NOT MORE THAN ±135% OF THE RATED CAPACITY OF THE FIRE PUMP (I.E., 2,600-2,800 GPM). THE MAXIMUM PRESSURE POSSIBLY PRODUCED BY THE FIRE PUMP AND THE INCOMING WATER SUPPLY AT ANY TIME SHALL BE NOT MORE THAN 225 PSI WITHIN THE PRIVATE FIRE SERVICE MAIN SYSTEM DOWNSTREAM OF THE FIRE PUMP.

FIRE PUMP ROOM EQUIPMENT LIST

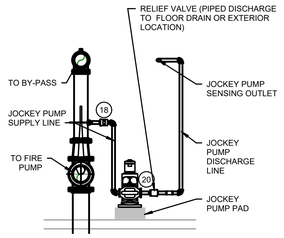
NUMBER	ITEM
1	WATER SUPPLY PIPING
2	OS&Y VALVE WITH TAMPER SWITCH (NORMALLY OPENED)
3	ECCENTRIC REDUCER (IF REQUIRED)
4	DIESEL ENGINE-DRIVEN FIRE PUMP (CW ROTATION)
5	BATTERIES, RACK-MOUNTED NO LESS THAN 12" ABOVE FLOOR
6	STAINLESS STEEL JACKETED, INSULATED EXHAUST PIPE & MUFFLER
7	CONCENTRIC REDUCER (IF REQUIRED)
8	6" PRESSURE RELIEF VALVE WITH 6" X 10" ENCLOSED WASTE CONE
9	45° ELBOW (ANGLED DOWN) & CONCRETE SPLASH BLOCK
10	CHECK VALVE (ANTI-HAMMER TYPE FOR PUMP DISCHARGE)
11	BUTTERFLY VALVE WITH TAMPER SWITCH (NORMALLY CLOSED)
12	FIRE PUMP TEST HEADER WITH 2-1/2" HOSE VALVES
13	TEST HEADER BALL DRIP
14	BUTTERFLY VALVE WITH TAMPER SWITCH (NORMALLY OPENED)
15	CHECK VALVE (ANTI-HAMMER TYPE FOR FDC)
16	SIAMESE FDC (TWO 2 1/2" INLETS)
17	DISCHARGE WATER PIPING
18	1-1/4" INDICATING VALVE WITH TAMPER SWITCH (JOCKEY PUMP SUPPLY)
19	PRESSURE MAINTENANCE (JOCKEY) PUMP
20	1-1/4" INDICATING VALVE WITH TAMPER SWITCH (JOCKEY PUMP DISCHARGE)
21	1-1/4" RUBBER-SEATED CHECK VALVE FOR JOCKEY PUMP DISCHARGE
23	FIRE PUMP BYPASS CHECK VALVE
24	AUTOMATIC AIR RELEASE VALVE
25	DOUBLE-WALL DIESEL FUEL TANK
26	FUEL TANK MONITOR MODULES
27	PRESSURE MAINTENANCE (JOCKEY) PUMP CONTROLLER
28	FIRE PUMP CONTROLLER
29	PUMP ROOM VALVE SUPERVISORY MONITOR MODULES
30	FIRE PUMP CONTROLLER MONITOR MODULES
31	UNDERGROUND VALVE T-WRENCH MOUNTED TO WALL
32	VENTILATION OPENING - INTAKE
33	VENTILATION OPENING - EXHAUST
34	PIPE STAND SUPPORT

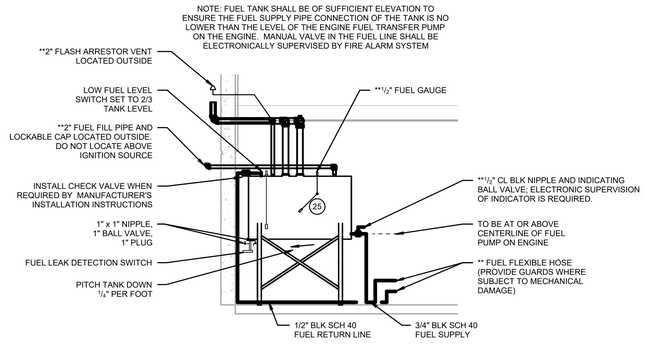
DIESEL FIRE PUMP NOTES

1. A COMPLETE DIESEL ENGINE-DRIVEN FIRE PUMP AND ASSOCIATED PUMP ROOM INSTALLATION SHALL BE PROVIDED IN ACCORDANCE WITH NFPA 20 AND NFPA 24, AND THE DRAWINGS AND SPECIFICATIONS.
2. PUMP CASING RELIEF VALVE (IF PROVIDED) DISCHARGE AND PACKING GLAND DRAIN PORTS SHALL BE SEPARATELY ROUTED TO FLOOR DRAIN OR EXTERIOR. ROUTE PIPE TO AVOID CREATING TRIP HAZARDS. FLOOR DRAIN SHALL DISCHARGE AS REQUIRED PER LOCAL REQUIREMENTS.
3. FIRE PUMP AND PRESSURE MAINTENANCE (JOCKEY) PUMP CONTROLLER PRESSURE SENSING LINES SHALL BE COMPLETELY SEPARATE AND INDEPENDENT. SENSING LINE CONNECTIONS SHALL BE MADE BETWEEN THE DISCHARGE CHECK VALVES AND DISCHARGE CONTROL VALVES.
4. PROVIDE PIPE STANDS AND HANGERS IN ACCORDANCE WITH NFPA 13 AND NFPA 20.
5. THE FIRE ALARM CONTROL UNIT SHALL MONITOR THE FOLLOWING ADDRESSABLE CONDITIONS FROM THE FIRE PUMP CONTROLLER:
   a. ENGINE RUNNING CONDITION (ADDRESSABLE SUPERVISORY);
   b. FIRE PUMP CONTROLLER MAIN SWITCH IN THE OFF OR MANUAL POSITION (I.E., NOT IN AUTO) (ADDRESSABLE SUPERVISORY);
6. THE FIRE ALARM CONTROL UNIT SHALL MONITOR ALL OTHER FIRE PUMP-ASSOCIATED SIGNALS AS GENERAL SUPERVISORY AND TROUBLE SIGNALS. THEY SHALL INCLUDE ALL THOSE SIGNALS REQUIRED BY NFPA 20 AND FIRE PUMP AND ENGINE MANUFACTURERS.
   a. GENERAL ENGINE TROUBLE (ADDRESSABLE SUPERVISORY)
   b. GENERAL CONTROLLER TROUBLE (ADDRESSABLE SUPERVISORY)
   c. GENERAL PUMP ROOM TROUBLE (ADDRESSABLE SUPERVISORY)
7. SEQUENCE OF OPERATION:
   a. MAIN RELIEF VALVE SET POINT SHALL BE 180 PSI;
   b. JOCKEY PUMP STOP POINT SHALL BE 175 PSI;
   c. PRESSURE LIMITING DRIVER (PLD) SET POINT SHALL BE 170 PSI;
   d. JOCKEY PUMP START POINT SHALL BE 165 PSI;
   e. FIRE PUMP START POINT SHALL BE 155 PSI;
   f. THE FIRE PUMP SHALL BE ARRANGED TO RUN UNTIL MANUALLY SHUT OFF. AUTOMATIC SHUTOFF CAPABILITIES SHALL NOT BE INSTALLED OR CONNECTED.
8. FIRE PUMP SHALL BE CERTIFIED PER NFPA 20. FIRE PUMP, FIRE PUMP CONTROLLER, AND DIESEL ENGINE MANUFACTURER'S REPRESENTATIVES MUST BE PRESENT FOR ACCEPTANCE TESTING. CERTIFICATION FOR EACH REPRESENTATIVE MUST BE PROVIDED PRIOR TO THE DAY-OF TESTING TO CONFIRM AND ENSURE PROPER REPRESENTATIVES WILL BE PRESENT.
9. COORDINATE DEVICE AND EQUIPMENT LOCATIONS IN THE PUMP ROOM WITH ACTUAL DOOR PLACEMENT.



6 FIRE PUMP SENSING LINES
NOT TO SCALE





5 JOCKEY PUMP SCHEMATIC
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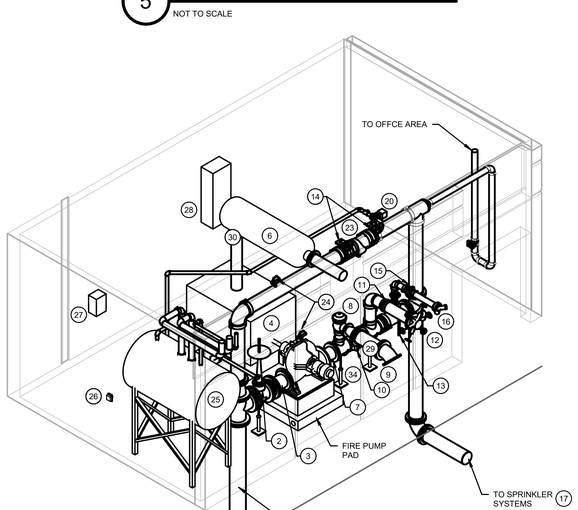

4 DIESEL FUEL TANK - PUMP ROOM
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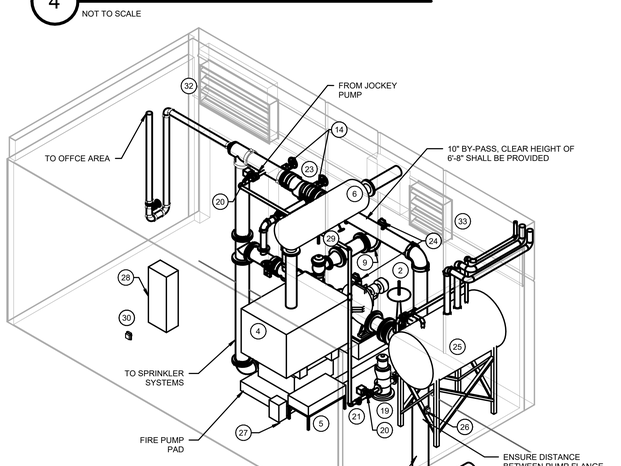
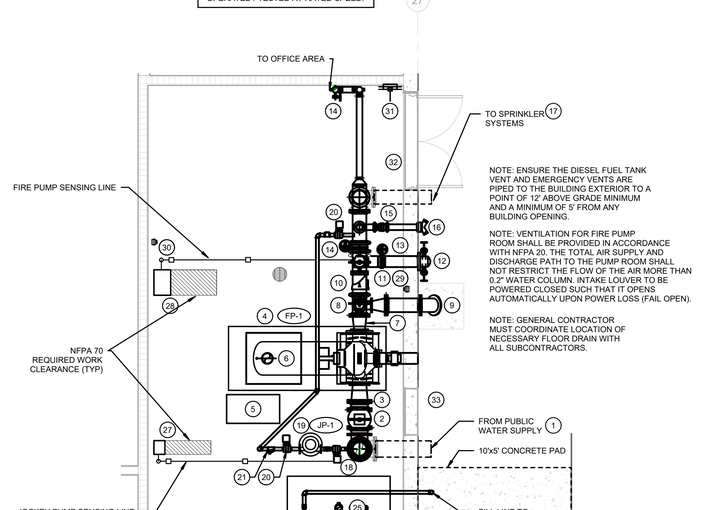


CONTRACTOR SHALL PROVIDE THE FOLLOWING A PROMINENT SIGNAGE ON WALL WITHIN FIELD OF VIEW OR IMMEDIATELY ADJACENT TO THE FIRE PUMP DISCHARGE CONTROL VALVE FOR REFERENCE DURING TEST PROCEDURES.

CAUTION:
FIRE PUMP DISCHARGE PRESSURE WILL EXCEED THE MAXIMUM WORKING PRESSURE OF THE SYSTEM DURING OPERATION AT RATED SPEED (I.E., VARIABLE SPEED DISENGAGED). ENSURE SYSTEM IS PROPERLY ISOLATED AND MAIN RELIEF VALVE IS CLOSED WHEN FIRE PUMP IS OPERATED / TESTED AT RATED SPEED.

ATTENTION:
NOTIFY CENTRAL ARKANSAS WATER AT LEAST 24 HOURS PRIOR TO CONDUCTING FIRE PUMP ANNUAL FLOW TEST. CAW MAY BE REACHED AT: (501) 210-4960



3 FIRE PUMP ROOM ISOMETRIC

2 FIRE PUMP ROOM ISOMETRIC

1 ENLARGED FIRE PUMP ROOM
1/4" = 1'-0"

1/4" = 1'-0" SCALE 2 0 2 4 6 8 10 FEET

TRUE NORTH

APPROVAL STAMP:

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PROJECT DESCRIPTION
AMAZON LIT3
2026 IXD GENSM
CROSS-DOCK WAREHOUSE FACILITY (RECEIPT & REDISTRIBUTION)

PROJECT LOCATION
Port of Little Rock
PORT OF LITTLE ROCK
(INDUSTRIAL PARK)
LITTLE ROCK, ARKANSAS 72206
(UNINCORPORATED PARCELS) PULASKI COUNTY

SHEET TITLE
ENLARGED FIRE PUMP ROOM PLAN & NOTES

SHEET MANAGEMENT

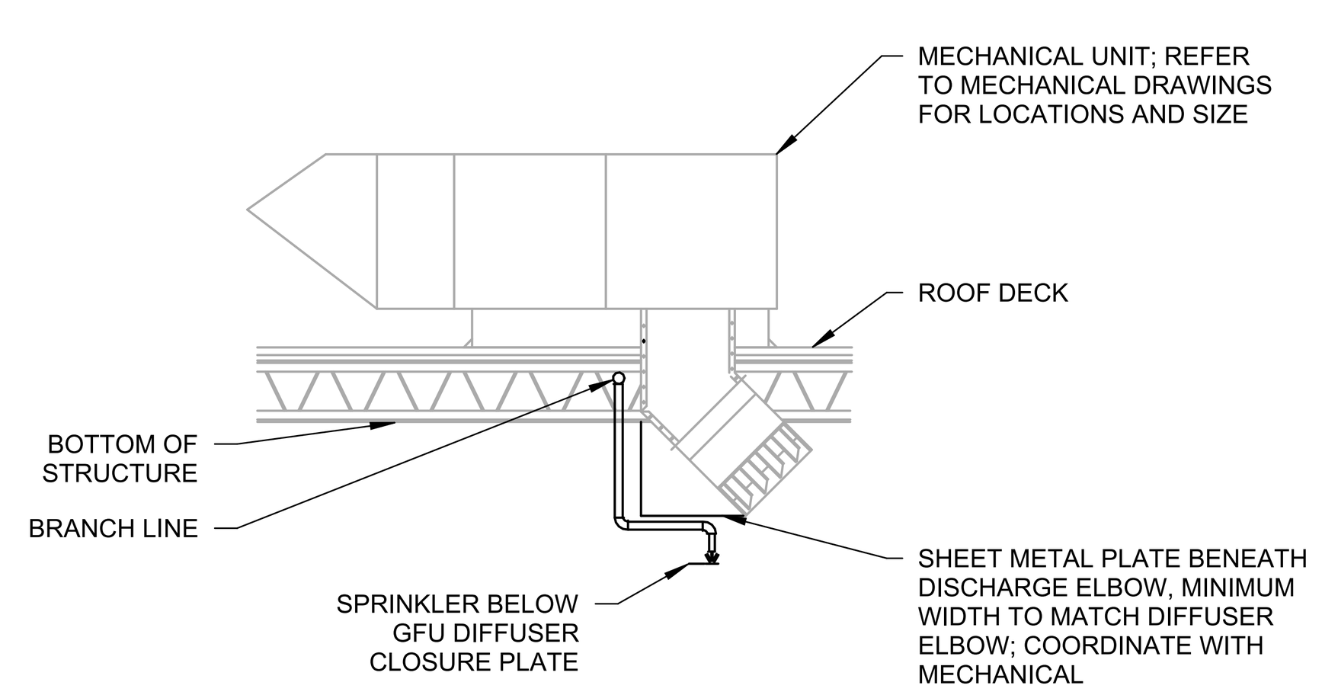
PROJECT NO.:	LIT3
DATE ISSUED:	03/20/2025
DRAWN BY:	KC
REVIEWED BY:	MC

ISSUANCE / REVISION SCHEDULE

#	DATE	DESCRIPTION
	03/20/2025	100% CD

SHEET NUMBER
FP401

Submittal Type — Working Documents



4 GAS UNIT-ESFR UNDER PAN
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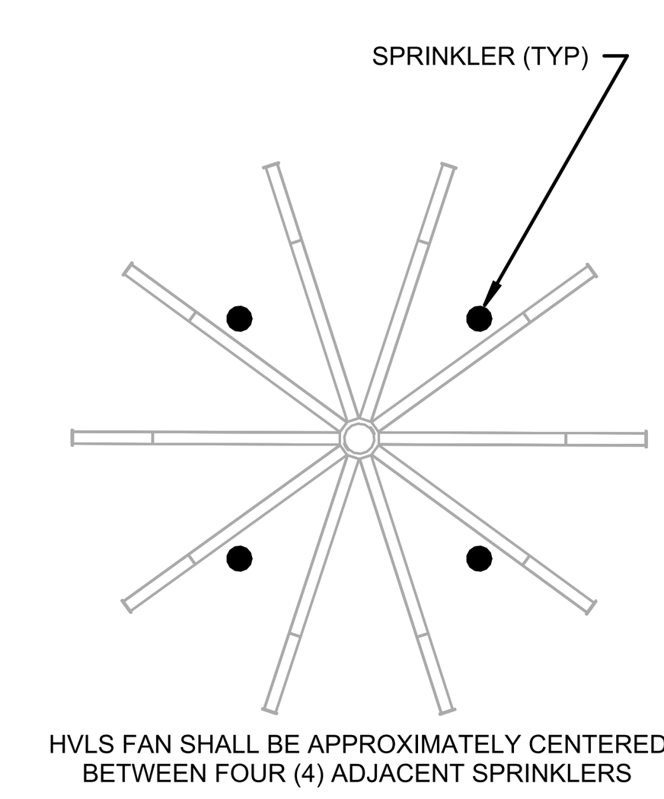

3 HVLS FAN-FIRE SPRINKLER
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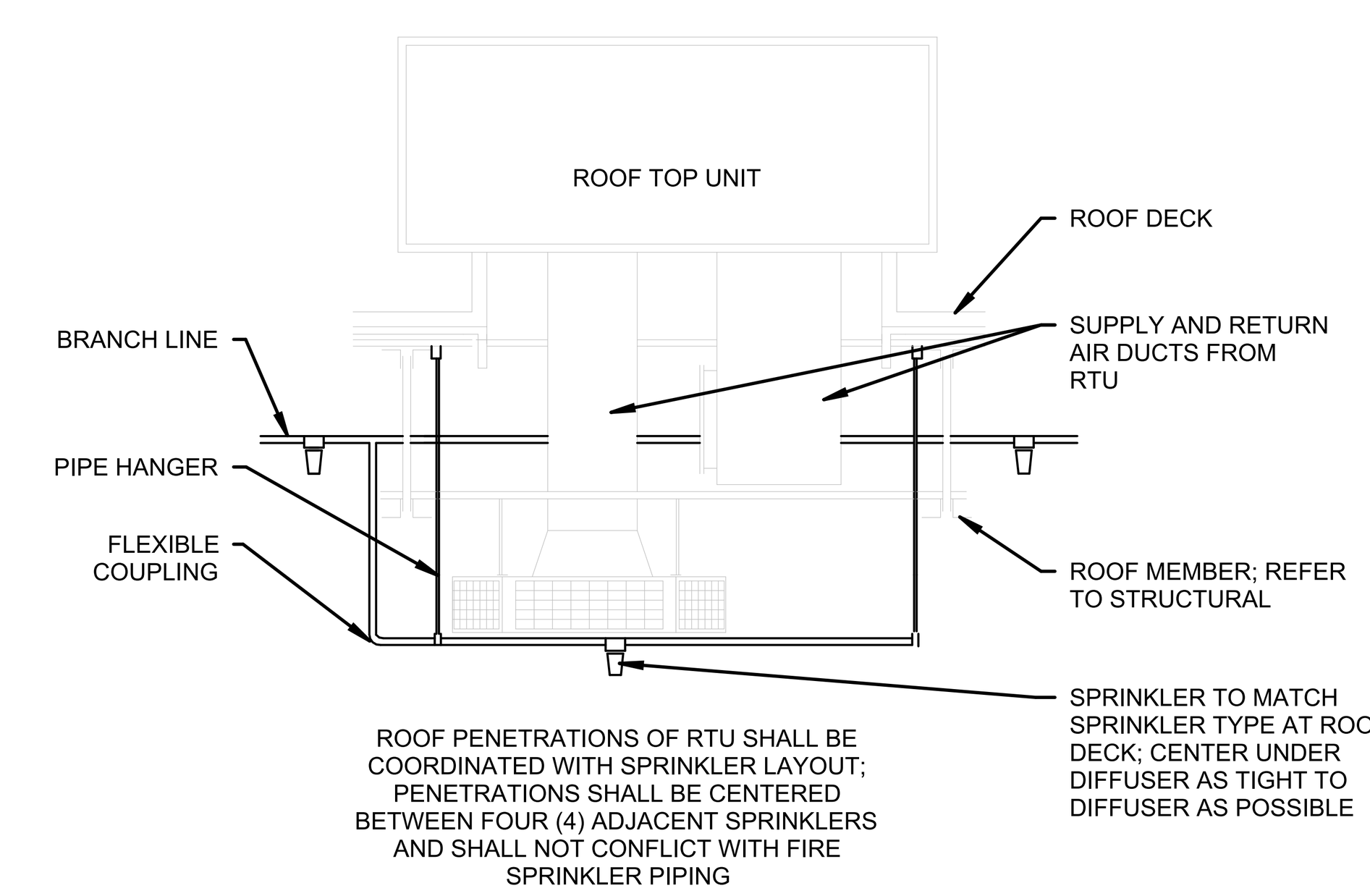

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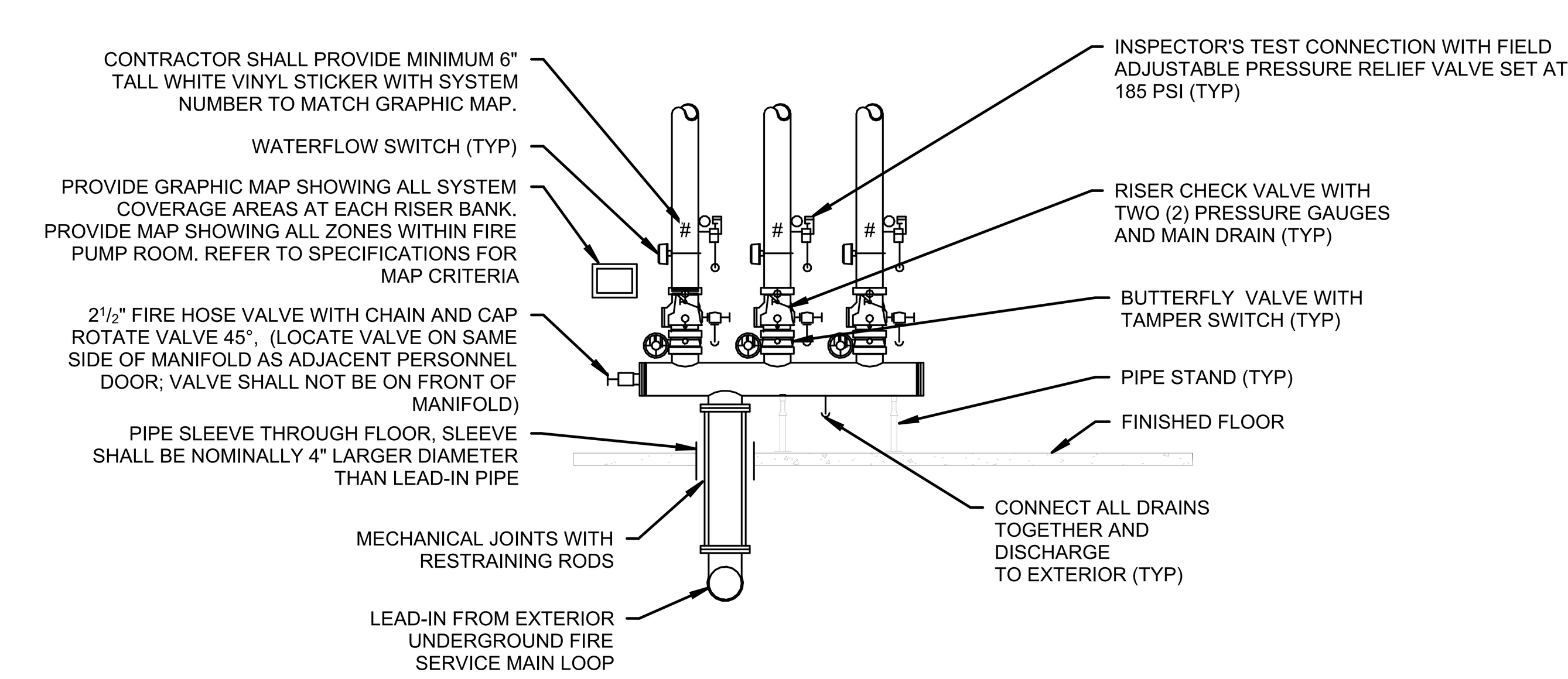

1 TYPICAL SPRINKLER RISER ASSEMBLIES
NOT TO SCALE

APPROVAL STAMP:

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PROJECT DESCRIPTION

AMAZON LIT3
2026 IXD GEN5M
CROSS-DOCK WAREHOUSE FACILITY
(RECEIPT & REDISTRIBUTION)

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Port of Little Rock
PORT OF LITTLE ROCK
(INDUSTRIAL PARK)
LITTLE ROCK, ARKANSAS 72206
(UNINCORPORATED PARCELS) PULASKI COUNTY

SHEET TITLE

FIRE PROTECTION DETAILS

SHEET MANAGEMENT

PROJECT NO.:	LIT3
DATE ISSUED:	03/20/2025
DRAWN BY:	KC
REVIEWED BY:	MC

ISSUANCE / REVISION SCHEDULE

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	03/20/2025	100% CD

Submittal Type — Working Documents

SHEET NUMBER

FP501

FIRE ALARM INSTALLATION NOTES*

* (THE FIRE ALARM CONTRACTOR SHALL REPRODUCE THE FIRE ALARM INSTALLATION REQUIREMENTS BELOW ON THEIR SHOP SUBMITTAL DRAWINGS.)

1. ALL AC POWER OR AC CONTROL WIRING SHALL BE RUN IN EMT CONDUIT IN FULL COMPLIANCE WITH NFPA 70 THE NATIONAL ELECTRIC CODE (NEC). IN NO CASE SHALL AC POWER WIRING BE RUN IN THE SAME CONDUIT AS ANY OTHER FIRE ALARM CIRCUITS. A MINIMUM SEPARATION OF 1/2 IN. BETWEEN AC POWER OR CONTROL WIRING AND ALL CIRCUITS SHALL BE MAINTAINED WITHIN THE FACU, DACT, AND ALL OTHER FIRE ALARM INTERFACES. THE EXCEPTION TO THIS WOULD BE AT TERMINAL BLOCKS WITHIN PANELS OR AT THE INTERFACE WITH DEVICES. AT THESE LOCATIONS, MAXIMUM POSSIBLE SEPARATION SHALL BE ACHIEVED.
2. ALL FIRE ALARM WIRING SHALL BE RUN IN EMT CONDUIT UP TO THE ELEVATION OF THE BOTTOM MEMBER OF THE BAR JOIST OR ROOF STRUCTURAL MEMBER. THE CONDUIT SHALL BE BENT AT 90° AT THE TOP OF ALL CONDUIT RISERS SO AS TO TERMINATE HORIZONTALLY AT THE STRUCTURAL MEMBER. ALL WIRING SHALL BE NEATLY ROUTED AND FASTENED IN FULL CONFORMANCE WITH THE REQUIREMENT OF THE NEC AND CONFIGURED SO THAT THE STRUCTURAL MEMBERS PROTECT THE WIRING FROM MECHANICAL DAMAGE. ALL WIRING/CABLES WHICH ARE NOT IN CONDUIT SHALL BE SUPPORTED BY BUILDING STRUCTURAL MEMBERS FOR THE FULL LENGTH OF THE WIRE OR CABLE IN ORDER TO PROVIDE THE MAXIMUM LEVEL OF PROTECTION AGAINST PHYSICAL DAMAGE BY THE BUILDING CONSTRUCTION AS REQUIRED BY NEC ARTICLE 760.130 (B)(1). "STRINGING" WIRE/CABLE ACROSS THE BOTTOM MEMBERS OF THE STRUCTURE WILL NOT BE PERMITTED.
3. THE SELECTION OF CABLE TYPES AND WIRE WITH RESPECT TO CONDUCTOR SIZE, SHIELDING REQUIREMENTS, AND SEPARATION BETWEEN CIRCUITS SHALL BE IN FULL COMPLIANCE WITH THE REQUIREMENTS OF THE MANUFACTURER OF THE FIRE ALARM PANELS WITHOUT EXCEPTION. VOLTAGE DROP CALCULATIONS SHALL BE SUBMITTED FOR THE NOTIFICATION CIRCUITS OF THE SYSTEM. ALL INITIATING, SIGNALING, AND NOTIFICATION CIRCUIT WIRE/CABLE SHALL BE SPECIFICALLY LISTED FOR USE WITH FIRE ALARM SYSTEMS. IN THE EVENT THAT PERFORMANCE TESTING INDICATES THAT CONDUCTOR PERFORMANCE OR SEPARATION IS INADEQUATE, THE CONTRACTOR SHALL MAKE ALL NECESSARY CORRECTIONS WITHOUT EXPENSE TO THE OWNER.
4. THE SELECTION OF CONDUCTORS SHALL FULLY COMPLY WITH THE NEC, ARTICLES 725 AND 760. THE STRANDING RESTRICTIONS OF INDIVIDUAL CONDUCTORS SHALL BE COMPLIED WITH WITHOUT EXCEPTION. ALL WIRING SHALL BE SPECIFICALLY LISTED FOR FIRE ALARM SYSTEM APPLICATION. PRODUCT DATA FOR ALL CABLES AND WIRE TO BE UTILIZED IN THE INSTALLATION SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PRIOR TO USAGE.
5. PERMANENT MACHINE-LETTERED WIRE MARKERS WITH NUMBER/ LETTERS SHALL BE USED TO IDENTIFY THE TERMINATIONS OF ALL CONDUCTORS WITHIN THE FACU, DACT, AND NAC PANELS. PERMANENT WIRE MARKERS SHALL ALSO BE USED AT ALL DEVICES WHICH HAVE NUMBERED TERMINALS. PROVIDE A SCHEDULE OF NUMBERS ON THE FIRE ALARM SHOP DRAWINGS.
6. IN NO CASE SHALL CONDUCTORS BE JOINED BY SPLICING. APPROPRIATE LUGS AND TERMINAL BLOCKS, OR PRESSURE CONNECTORS SHALL BE USED WHERE CONDUCTORS ARE JOINED. WIRE NUTS SHALL NOT BE USED. ALL TERMINAL BLOCKS SHALL EITHER BE FULLY INSULATED, FLOATING TYPE, OR BE PERMANENTLY MOUNTED TO APPROPRIATE METAL ENCLOSURES USING METAL SCREWS. USE OF ADHESIVE STRIPS OR SIMILAR MEANS TO MOUNT TERMINAL BLOCKS IS PROHIBITED. ALL CONNECTIONS TO THE FIRE ALARM CONTROL UNIT TERMINAL BLOCKS, AS WELL AS ALL CONNECTIONS TO SCREW TERMINALS OF DEVICES, SHALL BE COMPLETE WITH PROPERLY SIZED CRIMP LUGS IF STRANDED WIRE IS UTILIZED IN ALL CASES WHERE END-OF-LINE RESISTORS SHARE A TERMINAL BLOCK CONNECTION WITH ANOTHER CONDUCTOR, THE LEADS OF THE END-OF-LINE RESISTOR SHALL BE WITHIN TWO AWG SIZES OF THE OTHER CONDUCTOR WITHOUT EXCEPTION.
7. IN ALL CASES WHERE SHIELDED CABLE IS USED, THE SHIELDING SHALL BE MAINTAINED CONTINUOUSLY THROUGHOUT THE CIRCUIT AND SHALL TERMINATE TO APPROPRIATE TERMINAL SCREWS WITHIN THE FACU, DACT, AND OTHER APPLICABLE DEVICES IN FULL COMPLIANCE WITH THE MANUFACTURERS' REQUIREMENTS AND SYSTEM LISTINGS.
8. ALL WIRES SHALL BE CHECKED FOR GROUNDS, SHORTS, OPENS, AND CORRECT RESISTANCE, CAPACITANCE, AND OTHER APPLICABLE PARAMETERS PRIOR TO TERMINATION OF THE CIRCUITS AT THE FACU OR OTHER SUBPANELS AND PRIOR TO THE INSTALLATION OF DEVICES. THE MINIMUM RESISTANCE TO GROUND OR BETWEEN ANY TWO CONDUCTORS SHALL BE 10 MEGAOHMS AT 24 VOLTS, VERIFIED WITH A VOLTAGE GENERATING INSULATION TESTER. THE CONTRACTOR SHALL PROVIDE WRITTEN DOCUMENTATION AND CERTIFICATION OF THIS TESTING.
9. WHERE WIRING AND CONDUIT PENETRATE FIRE-RATED BARRIERS, APPROPRIATE FIRE STOPPING SHALL BE PUT IN PLACE. INSTALLATION OF MATERIALS SHALL RESULT IN FIRE RESISTANT RATING EQUAL TO OR GREATER THAN THE RATING OF THE PENETRATED ASSEMBLY, UNLESS OTHERWISE INDICATED.
10. WHENEVER WIRING AND CABLES PASS THROUGH BUILDING WALLS, FLOORS, AND ROOFS OR IS EXTERIOR TO THE BUILDING, IT SHALL BE ENCLOSED IN EMT OR FLEXIBLE CONDUIT. PENETRATIONS THROUGH EXTERIOR WALLS OR ROOFS SHALL BE SEALED WEATHER TIGHT.
11. ELECTRICAL BOXES WHICH HOUSE FIRE ALARM DEVICES SHALL NOT BE USED AS JUNCTION BOX FOR ANY OTHER SYSTEM CIRCUITS.
12. ALL JUNCTION BOXES FOR WHICH THE CIRCUIT USE IS NOT READILY DISCERNIBLE SHALL BE PERMANENTLY LABELED. ALL LABELS SHALL BE P-TOUCH OR EQUAL WITH BLACK LETTERS ON A WHITE BACKGROUND. PROPER SURFACE PREPARATION IS REQUIRED TO ENSURE ADHESION. THE USE OF HANDWRITING TO PERFORM THIS IDENTIFICATION IS NOT ACCEPTABLE.
13. TO PREVENT INSULATION DAMAGE OR DEVICE DAMAGE, THE FOLLOWING REQUIREMENTS APPLY:
    a. ANY THREADED EMT OR FLEXIBLE CONDUIT TERMINATING AT METAL BOXES OR CABINETS SHALL BE PROVIDED WITH INSULATING BUSHINGS AT THE THROAT OF THE CONNECTOR.
    b. ANY EMT CONNECTORS MUST BE THE ALL STEEL COMPRESSION TYPE WITH INSULATING THROATS.
    c. PROVIDE A CLAMP OR OTHER APPROVED RESTRAINING DEVICE WHERE CABLES OR WIRES WHICH ARE NOT IN CONDUIT ENTER JUNCTION BOXES.
14. WHERE PANEL ENCLOSURES ARE INSTALLED RECESSED IN GYPSUM WALLBOARD WALLS, INTERCONNECTING CIRCUITS AND SHALL BE CONCEALED WITHIN THE WALL CAVITY OR IN THE SPACE ABOVE THE SUSPENDED CEILING OR OTHER SPACE TO THE MAXIMUM EXTENT POSSIBLE. ALL CIRCUITS SHALL BE ROUTED AND SECURED IN FULL COMPLIANCE WITH THE NEC.
15. ALL PANEL ENCLOSURES INSTALLED OUTSIDE OR IN THE FIRE PUMP ROOM/ HOUSE SHALL BE NEMA 2 RATED AND ARRANGED SO THAT ALL PENETRATIONS INTO THE ENCLOSURE SHALL BE THROUGH THE BOTTOM OF THE ENCLOSURE. COORDINATE LOCATION WITH CONSTRUCTION DRAWINGS.

FIRE ALARM SYSTEM SYMBOLS

FACU	FIRE ALARM CONTROL UNIT
ANN	REMOTE ANNUNCIATOR
SPP	SMOKE PURGE PANEL
RSFACU XX	RELEASING SERVICE FIRE ALARM CONTROL UNIT
NAC	NOTIFICATION APPLIANCE POWER BOOSTER PANEL
DACT	DIGITAL ALARM COMMUNICATOR TRANSMITTER
DFPC	DIESEL ENGINE-DRIVEN FIRE PUMP CONTROLLER
JPC	MAINTENANCE (JOCKEY) PUMP CONTROLLER
SPD	SURGE PROTECTIVE DEVICE
HDCP	HYDROGEN DISPENSER CONTROL PANEL
	SMOKE DETECTOR / DUCT SMOKE DETECTOR
	HEAT DETECTOR
XX	GAS DETECTOR
XX	FLAME DETECTOR
F	MANUAL FIRE ALARM BOX (SINGLE ACTION) WITH PROTECTIVE COVER
SR	SHUTTER RELEASE STATION
PS	WATERFLOW SWITCH / PRESSURE-TYPE WATERFLOW SWITCH
TS	VALVE SUPERVISORY TAMPER SWITCH
HIGH/LOW	HIGH/ LOW PRESSURE SWITCH
SOV	SOLENOID VALVE 24V
MM DMM	MONITOR MODULE / DUAL MONITOR MODULE
RM	RELAY MODULE
K	KEY-OPERATED SWITCH
	GROUND TO EARTH CONNECTION
	HORN / STROBE - WALL MOUNTED
	HORN / STROBE - CEILING MOUNTED
	STROBE - WALL MOUNTED
	STROBE - CEILING MOUNTED
B	BELL - WALL MOUNTED
S	SPEAKER - CEILING MOUNTED
S	SPEAKER - WALL MOUNTED
#	KEY NOTE

NOTE: "XX" - INDICATES TYPE OF SYSTEM (E.G., DIPA = DOUBLE-INTERLOCK PREACTION)
"WP" INDICATES WEATHER-PROOF DEVICE
"XX CD" INDICATES VISUAL DEVICE CANDELA RATING
NOTE: FOR REFERENCE ONLY; ALL SYMBOLS MAY NOT BE USED

SCOPE OF WORK

1. THESE DRAWINGS ARE CONTRACT CRITERIA DRAWINGS REFLECTING THE OWNER'S MINIMUM REQUIREMENTS, WITH WHICH THE CONTRACTOR MUST COMPLY. THESE DRAWINGS SHALL NOT BE CONSTRUED AS NFPA 72- OR PROJECT-REQUIRED FIRE ALARM SHOP DRAWINGS. THE FIRE ALARM CONTRACTOR SHALL PROVIDE TO THE FIRE PROTECTION ENGINEER AND THE LOCAL AHJ CODE- AND PROJECT-REQUIRED FIRE ALARM SUBMITTAL DOCUMENTS IN ACCORDANCE WITH THESE DRAWINGS AND ASSOCIATED SPECIFICATIONS. THESE DRAWINGS WILL NOT BE PROVIDED TO THE CONTRACTOR IN ELECTRONIC (CAD OR REVIT) FORMAT FOR THEIR CREATION OF REQUIRED SUBMITTAL DRAWINGS; THESE DRAWINGS SHALL NOT BE SUBMITTED AS CODE- OR PROJECT-REQUIRED SUBMITTAL DRAWINGS.
2. THE FIRE ALARM CONTRACTOR SHALL CONFORM TO THE SPECIFICATIONS OF THE PROJECT (I.E., THESE DRAWINGS AND ASSOICATED SPECIFICATIONS). IF QUESTIONS OR DISCREPANCIES ARISE DURING THE EXECUTION OF THE PROJECT, THE CONTRACTOR SHALL SUBMIT AN RFI TO THE FIRE PROTECTION ENGINEER'S ATTENTION FOR RESOLUTION.
3. THIS PROJECT IS NOT DESIGN-BUILD. LOCAL AHJ PERMITTING AND APPROVAL IS REQUIRED. HOWEVER, IF/WHEN A DISCREPANCY EXISTS BETWEEN THESE CRITERIA AND WHAT THE LOCAL AHJ MAY BE ACCEPTING OF, IT IS THE CONTRACTOR'S RESPONSIBILITY TO COMPLY WITH THE MORE STRINGENT REQUIREMENT. THESE CONTRACT CRITERIA ARE NOT TO BE CIRCUMVENTED BY THE CONTRACTOR SEEKING APPROVAL OF LOCAL AHJ WITHOUT DUE CONSIDERATION, CONFERENCE, AND CLARIFICATION WITH THE FIRE PROTECTION ENGINEER.
4. THESE CRITERIA DRAWINGS REPRESENT THE TENANT'S MINIMUM REQUIREMENTS, AND RELAY THE DESIGN INTENT OF THE SYSTEM AS SPECIFIED BY THE FIRE PROTECTION ENGINEER. THESE DRAWINGS ARE NOT TO BE CONSTRUED AS NFPA 72-REQUIRED, NOR PROJECT-SPECIFIED, CONTRACTOR SHOP DRAWINGS. THE FIRE ALARM CONTRACTOR SHALL GENERATE THEIR OWN SHOP DRAWINGS AS REQUIRED BY NFPA 72, AND THESE PROJECT CRITERIA DRAWINGS AND SPECIFICATIONS. THESE DRAWINGS CONVEY THE SCOPE OF WORK FOR THE REQUIRED PROTECTED PREMISES FIRE ALARM SYSTEM FOR THE FACILITY. THE SCOPE GENERALLY CONSISTS OF FIRE ALARM CONTROL UNIT ("FACU"), MONITORING OF FIRE PUMP AND FIRE SPRINKLER SYSTEMS, INCLUDING ALL SUPERVISORY VALVE SWITCHES, WATERFLOW SWITCHES, MANUAL PULL BOXES, SMOKE DETECTION, ETC. FOR THE FACILITY AS CONVEYED IN THESE CRITERIA DRAWINGS. THE FIRE ALARM CONTRACTOR SHALL PROVIDE ALL COMPONENTS AND SYSTEMS AS DETAILED ON THESE FA-SERIES DRAWINGS. THESE DRAWINGS DO NOT PURPORT TO REGURGITATE ALL REQUIREMENTS FROM APPLICABLE CODES AND STANDARDS. IT IS THE FIRE ALARM CONTRACTOR'S RESPONSIBILITY TO COMPLY WITH THESE SPECIFICATIONS AND LOCAL CODES AND STANDARDS. THE FIRE ALARM CONTRACTOR SHALL COORDINATE WITH ALL OTHER TRADES (E.G., CIVIL, FIRE SPRNIKLER, MECHANICAL, ELECTRICAL) SO AS TO PROVIDE A COMPLETE SYSTEM AS SPECIFIED IN THESE DRAWINGS AND ASSOCIATED SPECIFICATIONS.
5. THE BASIS OF DESIGN FOR THESE CONTRACT CRITERIA DRAWINGS CONSISTS OF FOLLOWING CODES AND STANDARDS (NOT ALL MAY BE APPLICABLE):
    a. 2021 ARKANSAS FIRE PREVENTION CODE VOLUME II, INTERNATIONAL BUILDING CODE 2021 EDITION
    b. 2021 ARKANSAS FIRE PREVENTION CODE VOLUME I, INTERNATIONAL FIRE CODE 2021 EDITION
    c. NFPA 13, STANDARD FOR THE INSTALLATION OF SPRINKLER SYSTEMS, 2019 EDITION
    d. NFPA 14, STANDARD FOR THE INSTALLATION OF STANDPIPE AND HOSE SYSTEMS, 2019 EDITION
    e. NFPA 20, STANDARD FOR THE INSTALLATION OF STATIONARY PUMPS FOR FIRE PROTECTION, 2019 EDITION
    f. NFPA 24, STANDARD FOR THE INSTALLATION OF PRIVATE FIRE SERVICE MAINS AND THEIR APPURTENANCES, 2019 EDITION
    g. NFPA 72, NATIONAL FIRE ALARM AND SIGNALING CODE, 2019 EDITION
    h. NFPA 1221, STANDARD FOR THE INSTALLATION, MAINTENANCE, AND USE OF EMERGENCY SERVICES COMMUNICATIONS SYSTEM, 2019 EDITION

GENERAL NOTES

1. AN INTELLIGENT/ADDRESSABLE PROTECTED PREMISE FIRE ALARM SYSTEM SHALL BE PROVIDED TO MONITOR SMOKE DETECTORS, WATERFLOW ALARM SWITCHES, VALVE TAMPER SUPERVISORY SWITCHES, AND FIRE PUMP CONDITIONS, AND TO INITIATE EMERGENCY FORCES/OCCUPANT NOTIFICATION IN ACCORDANCE WITH THESE CRITERIA DRAWINGS, SPECIFICATIONS AND NFPA 72.
2. THE FIRE ALARM SYSTEM SHALL BE UL-LISTED (UL 864) FOR CENTRAL STATION SERVICE AND RELEASING SERVICE, AND BE BACNET CAPABLE. THE ONLY ACCEPTABLE SYSTEM MANUFACTURER'S ARE NOTIFIER AND EST/EDWARDS. THIS IS A TENANT REQUIREMENT. THE FIRE PROTECTION ENGINEER DOES NOT HAVE THE AUTHORITY TO APPROVE OTHERS.
3. PROVIDE SURGE PROTECTIVE DEVICES FOR ALL POWER CIRCUITS AND THOSE CIRCUITS THAT ENTER/LEAVE THE FACILITY (E.G., CIRCUITS TO MONITOR EXTERIOR BACKFLOW PREVENTER CONTROL VALVES). SURGE PROTECTION SHALL BE PROVIDED IN ACCORDANCE WITH NFPA 70 ARTICLE 285.
4. ALL INITIATING DEVICES SHALL BE INTELLIGENT/ADDRESSABLE WHERE INDICATED. SEPARATE ADDRESSABLE MONITOR MODULES SHALL BE PROVIDED FOR EACH CONVENTIONAL INPUT DEVICE SUCH THAT EACH ALARM DEVICE CAN COMMUNICATE WITH THE FIRE ALARM CONTROL UNIT ("FACU") AS A DISTINCT ALARM INPUT WITH UNIQUE DESCRIPTION.
5. PROVIDE MANUAL FIRE ALARM BOX PROTECTIVE COVERS FOR ALL INSTALLED MANUAL PULL STATIONS. THE FIRE ALARM CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THAT THE COVER CHOSEN IS COMPATIBLE WITH THE RESPECTIVE MANUAL PULL STATION. THE STI-1130 COVER SHOULD BE USED, WHERE POSSIBLE.
6. THE COMMUNICATION METHOD BETWEEN THE PROTECTED PREMISES AND THE SUPERVISING STATION(S) SHALL BE PROVIDED IN ACCORDANCE WITH NFPA 72. A DIGITAL ALARM COMMUNICATOR TRANSMITTER ("DACT") SHALL BE PROVIDED WITH THE CAPABILITY TO TRANSMIT DISTINCT ALARM, SUPERVISORY, AND TROUBLE SIGNALS BY DEVICE ADDRESS TO THE CENTRAL STATION USING CONTACT ID FORMAT. OTHER SIGNAL TRANSMISSION METHODS PERMITTED BY NFPA 72 ARE ACCEPTABLE; METHOD AND SPECIFIC COMPONENTS SHALL BE APPROVED BY THE FIRE PROTECTION ENGINEER.
7. FIRE PUMP SUPERVISORY SIGNALS SHALL ALSO INCLUDE THOSE INDICATED IN THE FIRE PUMP NOTES. THE FIRE ALARM CONTRACTOR SHALL COORDINATE WITH THE FIRE SPRINKLER CONTRACTOR TO MONITOR ALL SIGNALS ASSOCIATED WITH THE FIRE PUMP INSTALLATION AS REQUIRED BY THESE PROJECT SPECIFICATIONS AND NFPA 20.
8. ALL WIRES SHALL BE CHECKED FOR GROUNDS, SHORTS, OPENS, AND CORRECT RESISTANCE, CAPACITANCE AND OTHER APPLICABLE PARAMETERS PRIOR TO TERMINATION OF THE CIRCUITS AT THE FIRE ALARM CONTROL PANEL OR SUBPANELS AND PRIOR TO THE INSTALLATION OF DEVICES. THE CONTRACTOR SHALL PROVIDE WRITTEN DOCUMENTATION AND CERTIFICATION OF THIS TESTING ON A PER CIRCUIT BASIS.
9. THE FIRE ALARM SYSTEM SHALL BE INTERLOCKED TO SHUT DOWN ALL HVAC EQUIPMENT, INCLUDING RTUs, GFUs, ETC. IN THE WAREHOUSE AREA PER THE FIRE ALARM SEQUENCE OF OPERATIONS. COORDINATE WITH MECHANICAL AND ELECTRICAL CONTRACTORS FOR NUMBER AND LOCATIONS OF FANS AND CONTROLS.
10. WATERFLOW SWITCHES, VALVE TAMPER SWITCHES, AND OTHER SPRINKLER SYSTEM SUPERVISORY CONTACTS SHALL BE PROVIDED AND INSTALLED BY THE FIRE SPRINKLER CONTRACTOR AND UNDERGROUND FIRE WATER UTILITY CONTRACTOR FOR MONITORING BY THE FACU VIA ADDRESSABLE MONITOR MODULES. THE FIRE ALARM CONTRACTOR IS RESPONSIBLE TO PROVIDE AND CONNECT MONITOR MODULES TO THE SWITCHES AND TO THE FACU. FIRE ALARM CONTRACTOR SHALL COORDINATE WITH FIRE SPRINKLER CONTRACTOR TO DETERMINE FINAL LOCATION AND NUMBER OF SWITCHES REQUIRED. EACH SIGNAL INITIATING FIRE ALARM DEVICE SHALL BE PROVIDED ITS OWN UNIQUE ADDRESS (AND DESCRIPTION) FOR MONITORING BY THE MAIN FACU. THIS INCLUDES, FOR EXAMPLE, THE SPRINKLER SYSTEM WATERFLOW SWITCHES.
11. ALL ADDRESSABLE DUCT SMOKE DETECTORS (GFUs) ARE TO BE FURNISHED AND INSTALLED BY THE FIRE ALARM CONTRACTOR. ALL NON-ADDRESSABLE DUCT SMOKE DETECTORS (RTUs) ARE TO BE FURNISHED AND INSTALLED BY THE MECHANICAL CONTRACTOR. THE FIRE ALARM CONTRACTOR IS RESPONSIBLE FOR THE INSTALLATION OF ALL MONITOR MODULES, RELAY MODULES, SUPPLEMENTAL RELAYS, AND INTERCONNECTING WIRING ASSOCIATED WITH ALL DUCT SMOKE DETECTORS AND RELATED FACU MONITORING, SHUTDOWN AND CONTROL FUNCTIONS. COORDINATE WITH MECHANICAL CONTRACTOR FOR FINAL NUMBER AND LOCATIONS OF AIR HANDLING UNITS TO BE EQUIPPED WITH DUCT SMOKE DETECTORS.
12. THE FACU AND NAC POWER SUPPLY PANELS SHALL BE PROVIDED WITH AN ADDRESSABLE PHOTOELECTRIC SPOT-TYPE SMOKE DETECTOR MOUNTED ON THE CEILING DIRECT ABOVE THE PANEL(S). WHERE THE CEILING HEIGHT EXCEEDS 15' ABOVE FINISHED FLOOR, PROVIDE THE SMOKE DETECTOR ON THE WALL DIRECTLY ABOVE THE PANEL(S) AND WITHIN 5' (60") OF THE TOP OF THE PANEL(S) IN ACCORDANCE WITH NFPA 72.
13. THE NUMBER AND LOCATION OF NAC POWER SUPPLIES SHALL BE DETERMINED BY THE FIRE ALARM CONTRACTOR. NAC POWER SUPPLIES SHALL BE LOCATED ON THE PERIMETER DOCK WALLS OR IN ELECTRICAL ROOMS, IN LOCATIONS APPROVED BY THE ARCHITECT AND FIRE PROTECTION ENGINEER. THE FIRE ALARM CONTRACTOR SHALL COORDINATE THE NUMBER AND LOCATION OF NAC POWER SUPPLIES WITH THE ELECTRICAL CONTRACTOR TO PROVIDE ELECTRICAL POWER TO THE PANELS, AS NEEDED. NAC POWER SUPPLIES SHALL BE NOT LESS THAN 10 AMP POWER SUPPLIES.
14. PROVIDE EMERGENCY VOICE / ALARM COMMUNICATION SYSTEM ("EVAC") SYSTEM FOR THE MAIN BREAK ROOM (SEPARATED MIXED-USE GROUP A OCCUPANCY) AS REQUIRED BY IFC CHAPTER 9. PROVIDE NON-REQUIRED (NFPA 72) OCCUPANT NOTIFICATION APPLIANCES, VISUAL AND AUDIBLE, IN ACCORDANCE WITH THE DESIGN INTENT REFLECTED ON THESE DRAWINGS. IT IS THE FIRE ALARM CONTRACTOR'S RESPONSIBILITY TO COMPLY WITH LOCAL REQUIREMENTS. DESIGN INTENT IS COMPLETE AUDIBLE COVERAGE WITH SELECT VISUAL COVERAGE AS SHOWN ON THESE DRAWINGS (I.E., PRIMARILY THROUGHOUT MAIN AND REMOTE OFFICE/RESTROOM AREAS, AND AROUND THE PERIMETER OF THE PREDOMINANT GROUP S-1 OCCUPANCY).
15. AUDIBLE OCCUPANT NOTIFICATION SHALL BE DESIGNED IN ACCORDANCE WITH NFPA 72 REQUIREMENTS FOR THE ENTIRE FACILITY. THE FIRE ALARM CONTRACTOR IS RESPONSIBLE FOR ADDING HORNS AS NECESSARY (BEYOND WHAT MAY BE SHOWN ON THESE DRAWINGS AND PER THE ACTUAL DEVICES THAT WILL BE PROVIDED) TO ENSURE AUDIBILITY THROUGHOUT THE FACILITY. THE EXPECTED VARIOUS AMBIENT NOISE LEVELS ARE AS FOLLOWS:

OFFICE AREAS	45 dBA
MAIN BREAK ROOM	55 dBA
ABOVE PID PLATFORM (MEZZANINE)	75 dBA
BELOW PID PLATFORM (MEZZANINE)	75 dBA
ADJACENT TO CONVEYORS	90 dBA

16. WHEN AN EMERGENCY RESPONDER COMMUNICATIONS ENHANCEMENT SYSTEM ("ERCES") IS PROVIDED, IT SHALL BE MONITORED FOR SUPERVISORY CONDITIONS. EACH CONDITION SHALL BE INDEPENDENTLY MONITORED BY IT'S OWN MONITOR MODULE. COORDINATE WITH ERCES CONTRACTOR FOR DEVICE LOCATIONS INCLUDING EXACT NUMBER AND DESCRIPTION OF POINTS. THE FOLLOWING SIX CONDITIONS SHALL BE CONSIDERED:

DONOR ANTENNA MALFUNCTION
ACTIVE RF-EMITTING DEVICE MALFUNCTION
ACTIVE SYSTEM COMPONENT MALFUNCTION
LOSS OF NORMAL AC POWER
SYSTEM BATTERY CHARGER FAILURE
LOW BATTERY CAPACITY (70% REDUCTION)

SYSTEM OUTPUTS

CONTROL UNIT ANNUNCIATION (A–E); NOTIFICATION (F–J); MISC. (K–N)

A: ACTUATE AUDIBLE SIGNAL AT MAIN FIRE ALARM CONTROL UNIT (AND REMOTE ANNUNCIATOR[S])
B: ACTUATE COMMON ALARM SIGNAL INDICATOR
C: ACTUATE COMMON SUPERVISORY INDICATOR
D: ACTUATE COMMON TROUBLE INDICATOR
E: ANNUNCIATE ORIGIN AND DESCRIPTION OF SIGNAL ON LCD DISPLAY OF FACU AND ALL REMOTE ANNUNCIATORS
F: ACTUATE OCCUPANT NOTIFICATION DEVICES WITHIN FACILITY
G: ACTUATE ASSOCIATED EXTERIOR NOTIFICATION DEVICE
H: TRANSMIT DISTINCT ALARM SIGNAL TO CENTRAL MONITORING STATION
I: TRANSMIT DISTINCT SUPERVISORY SIGNAL TO CENTRAL MONITORING STATION
J: TRANSMIT DISTINCT TROUBLE SIGNAL TO CENTRAL MONITORING STATION
K: SHUTDOWN ALL WAREHOUSE AIR HANDLING EQUIPMENT (AHU, RTU, GFU, AND HVLS AND EXHAUST FANS)
L: SHUTDOWN RESPECTIVE RTU
M: DISABLE ACCESS CONTROL SYSTEM
N: BYPASS AUTOMATIC DISABLING OF ACCESS CONTROL SYSTEM (I.E., AINTAINED SECURED DOORS)

#	SYSTEM INPUTS	A	B	C	D	E	F	G	H	I	J	K	L	M	N	#
1	SPRINKLER WATERFLOW (MAIN WAREHOUSE AREA SYSTEMS)	◆	◆			◆	◆	◆	◆			◆		◆		1
2	SPRINKLER WATERFLOW (OTHER THAN MAIN WAREHOUSE AREA SYSTEMS)	◆	◆			◆	◆	◆	◆					◆		2
3	SMOKE DETECTOR (FACU, NACs, ETC.)	◆	◆			◆	◆		◆					◆		3
4	MANUAL PULL STATION	◆	◆			◆	◆		◆					◆		4
5	DUCT SMOKE DETECTOR - ROOF TOP UNIT	◆		◆		◆				◆			◆			5
6	VALVE TAMPER SWITCH	◆		◆		◆				◆						6
7	KEYED SWITCH - ACCESS CONTROL - BYPASS POSITION	◆		◆		◆				◆					◆	7
8	FIRE ALARM SYSTEM AC POWER FAILURE	◆			◆	◆					◆					8
9	FIRE ALARM SYSTEM LOW BATTERY	◆			◆	◆					◆					9
10	OPEN CIRCUIT	◆			◆	◆					◆					10
11	SHORT CIRCUIT	◆			◆	◆					◆					11
12	GROUND FAULT	◆			◆	◆					◆					12
13	LOSS OF CARRIER	◆			◆	◆					◆					13
	DIESEL FIRE PUMP MONITORING															
14	FIRE PUMP ENGINE RUNNING	◆		◆		◆				◆						14
15	FIRE PUMP MAIN SWITCH IN "OFF" OR "MANUAL" POSITION (I.E., NOT-IN-AUTO)	◆		◆		◆				◆						15
16	FIRE PUMP ENGINE GENERAL TROUBLE	◆		◆		◆				◆						16
17	FIRE PUMP ROOM GENERAL TROUBLE	◆		◆		◆				◆						17
18	FIRE PUMP CONTROLLER GENERAL TROUBLE	◆		◆		◆				◆						18
		A	B	C	D	E	F	G	H	I	J	K	L	M	N	

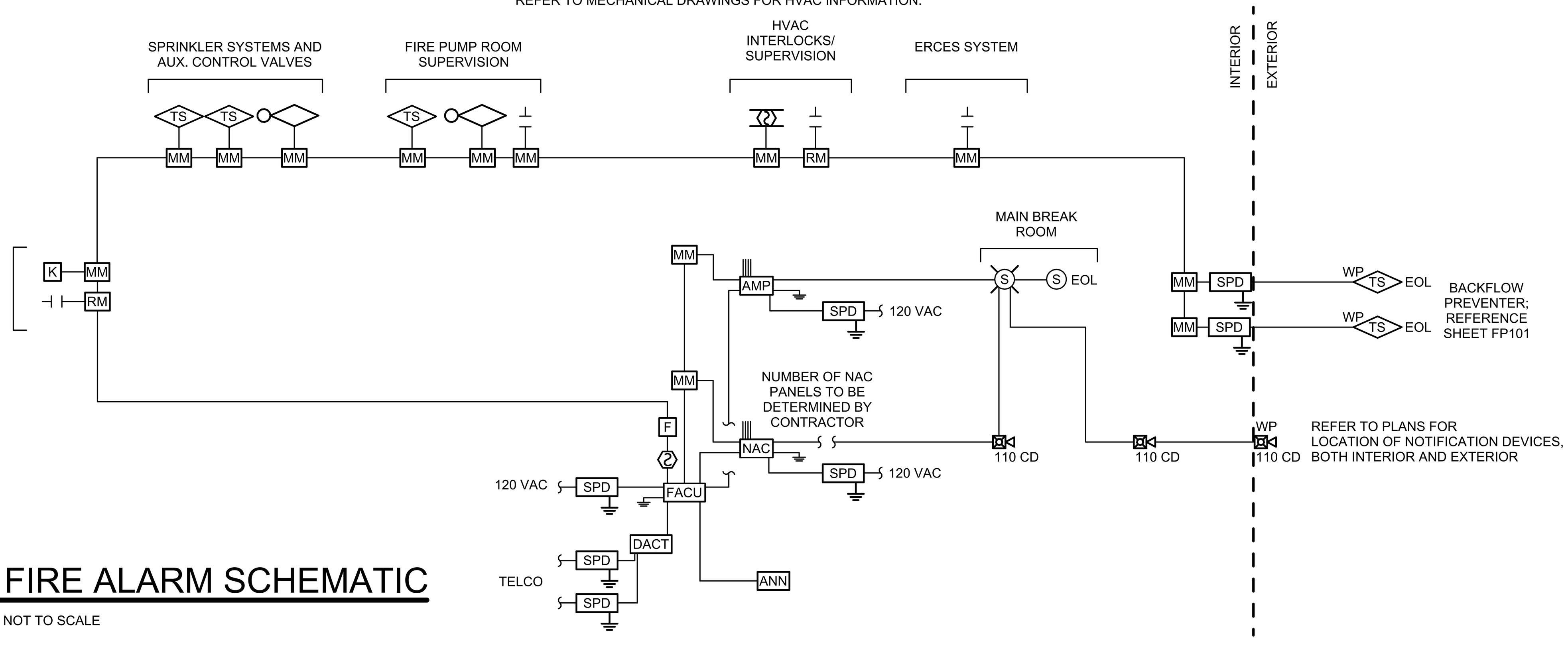
2 FIRE ALARM SYSTEM SEQUENCE OF OPERATIONS

NOT TO SCALE

NOTE: SIGNALS FOR PUBLIC EMERGENCY RADIO SYSTEM HAVE BEEN TESTED WITHIN THE GENERAL VICINITY OF THIS SITE IN ACCORDANCE WITH APPLICABLE CODE. FIRE ALARM CONTRACTOR SHALL MONITOR THE ERCES SYSTEM IN ACCORDANCE WITH APPLICABLE CODES AND STANDARDS. REFER TO DRAWINGS FR001 AND FR101 FOR ERCES INFORMATION.

NOTE: LAYOUT IS SCHEMATIC IN NATURE AND INTENDED TO CONVEY DESIGN INTENT; CONTRACTOR SHALL DETERMINE FINAL DEVICE COUNT. FACU SYSTEM MONITORING SHALL BE IN ACCORDANCE WITH NFPA 72 AND LOCAL AHJ REQUIREMENTS. REFER TO MECHANICAL DRAWINGS FOR HVAC INFORMATION.

KEY-OPERATED SWITCH, MONITOR MODULE,AND RELAY MODULE FOR ACCESS CONTROL SYSTEM; COORDINATE WITH BUILDING MANAGEMENT SYSTEM; LOCATE RELAY MODULE(S) WITHIN 3 FT OF BUILDING MANAGEMENT CONTROL PANEL(S); ALL OTHER DEVICES SHALL BE LOCATED WITH FACU; REFER TO PLANS



1 FIRE ALARM SCHEMATIC

NOT TO SCALE

APPROVAL STAMP:

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PROJECT DESCRIPTION

AMAZON LIT3
2026 IXD GEN5M
CROSS-DOCK WAREHOUSE FACILITY
(RECEIPT & REDISTRIBUTION)

PROJECT LOCATION

Port of Little Rock
PORT OF LITTLE ROCK
(INDUSTRIAL PARK)
LITTLE ROCK, ARKANSAS 72206
(UNINCORPORATED PARCELS) PULASKI COUNTY

SHEET TITLE

FIRE ALARM NOTES

SHEET MANAGEMENT

PROJECT NO.:	LIT3
DATE ISSUED:	03/20/2025
DRAWN BY:	KC
REVIEWED BY:	MC

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#	DATE	DESCRIPTION
	03/20/2025	100% CD

SHEET NUMBER

FA001

Submittal Type — Working Documents

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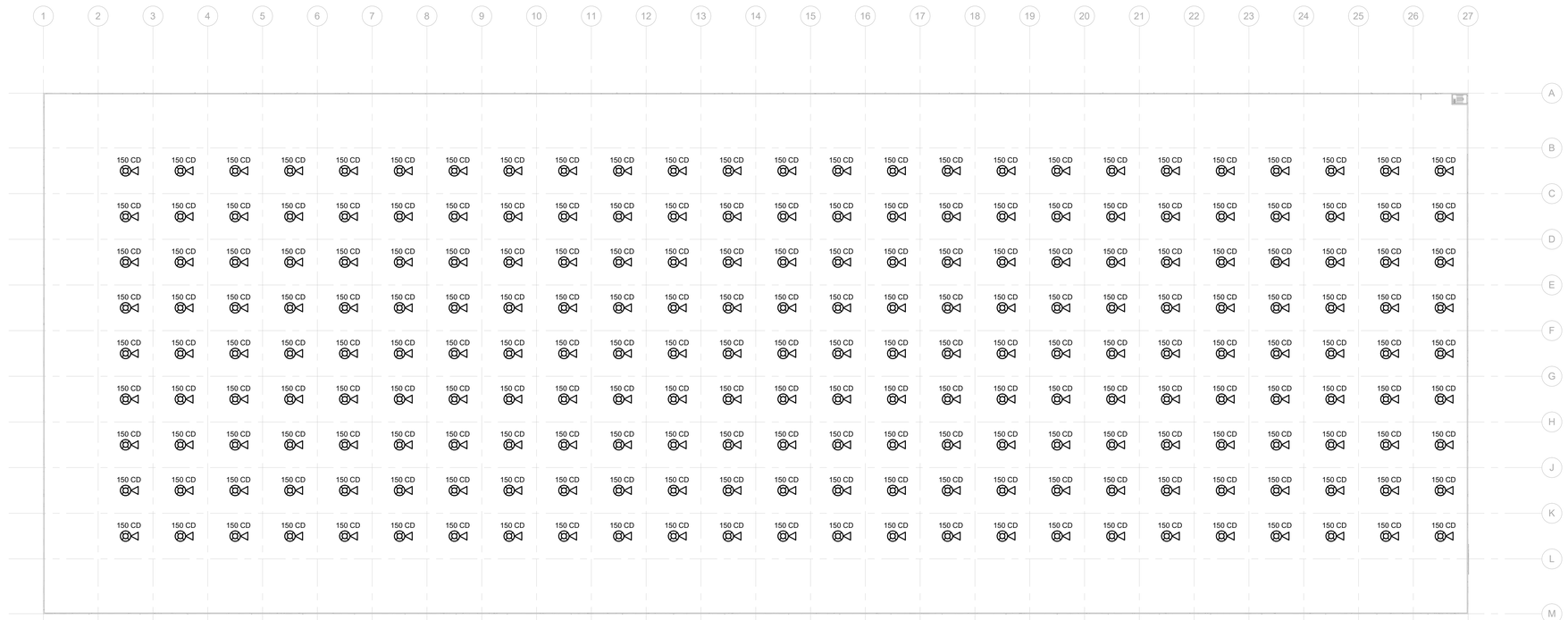
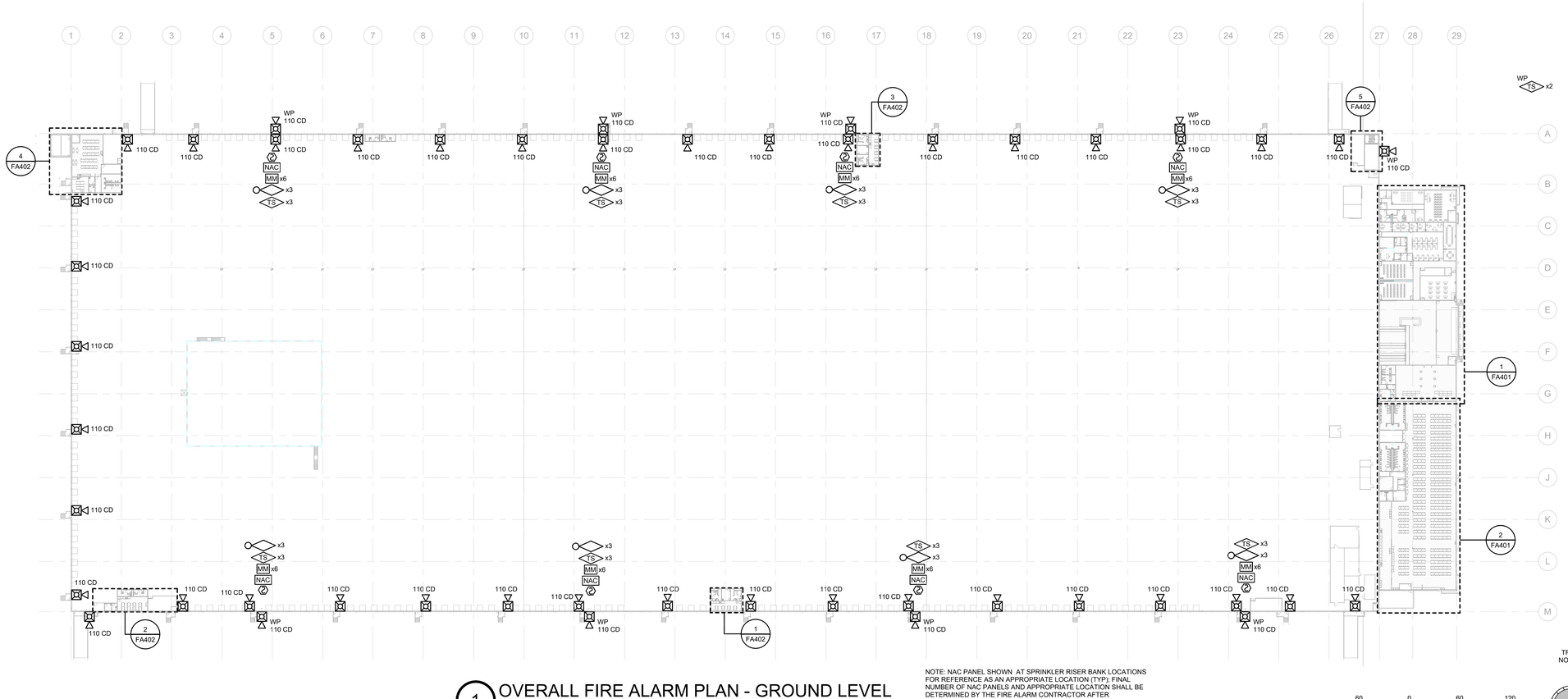


2 OVERALL FIRE ALARM PLAN - ROOF PLAN

1" = 60'-0"

NOTE: DESIGN INTENT IS PRIMARILY 100% AUDIBLE COVERAGE. CODE DOES NOT REQUIRE 100% VISUAL COVERAGE AND IS NOT INTENDED WITH THIS DESIGN CONCEPT.

DEVICES ARE TO BE MOUNTED TO THE UNDERSIDE OF THE STRUCTURAL DECK'S JOISTS; 150 CANDELA DEVICES, SPACED NOMINALLY ON 60 FT. CENTERS, WILL BE USED TO PROVIDE NFPA 72 LUMEN REQUIREMENT AT FLOOR LEVEL.



1 OVERALL FIRE ALARM PLAN - GROUND LEVEL

1" = 60'-0"

NOTE: NAC PANEL SHOWN AT SPRINKLER RISER BANK LOCATIONS FOR REFERENCE AS AN APPROPRIATE LOCATION (TYP); FINAL NUMBER OF NAC PANELS AND APPROPRIATE LOCATION SHALL BE DETERMINED BY THE FIRE ALARM CONTRACTOR AFTER COORDINATION WITH ALL TRADES.

TRUE NORTH

1" = 60'-0" SCALE: 60 0 60 120 FEET

APPROVAL STAMP:

HAMILTON DEVELOPMENT
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LITTLE ROCK, ARKANSAS 72206
(UNINCORPORATED PARCELS) PULASKI COUNTY

SHEET TITLE

FIRE ALARM PLANS

SHEET MANAGEMENT

PROJECT NO.:	LIT3
DATE ISSUED:	03/20/2025
DRAWN BY:	KC
REVIEWED BY:	MC

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#	DATE	DESCRIPTION
	03/20/2025	100% CD

SHEET NUMBER

FA101

Submittal Type — Working Documents

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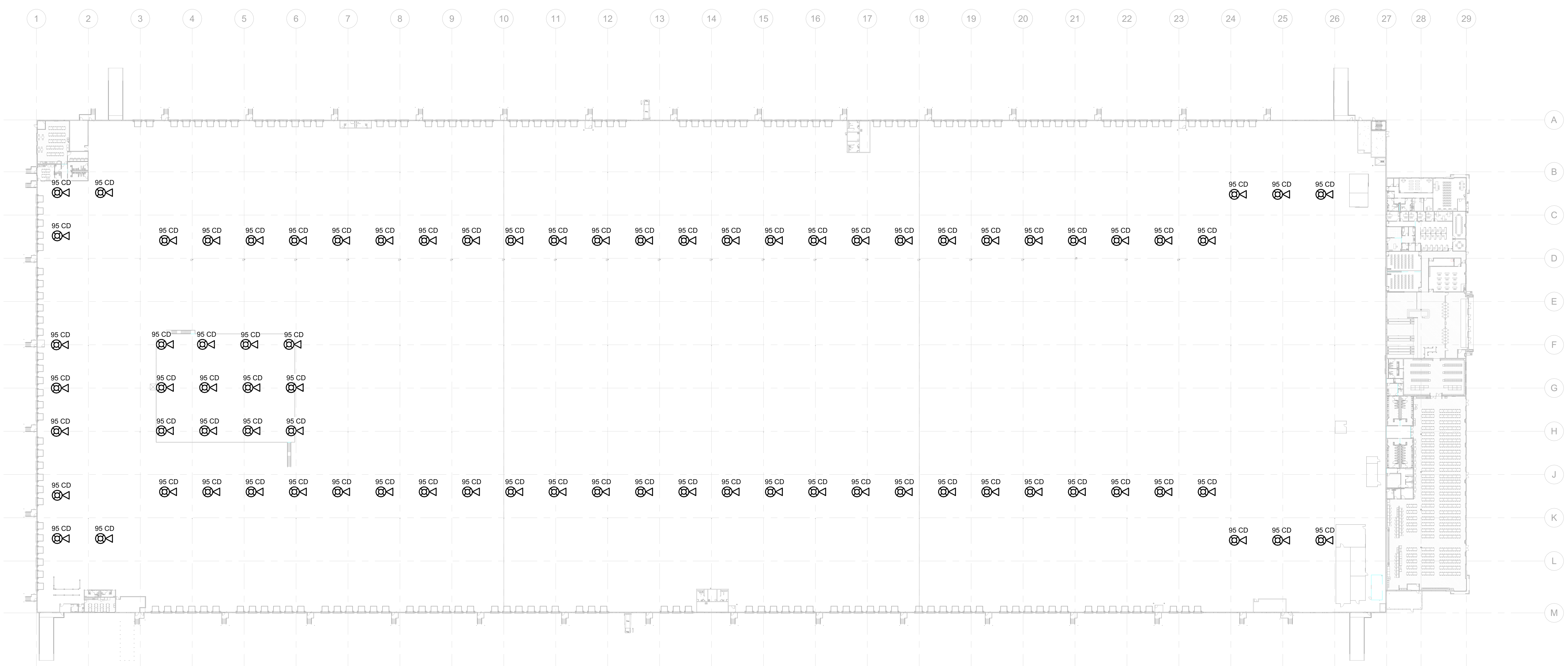

1 FIRE ALARM PLAN - UNDER PLATFORMS

1" = 60'-0"

PLATFORM LOCATIONS SUBJECT TO RELEASE OF COMPOSITE V1.0. LAYOUT SHOWN HERE FOR PRICING PURPOSES ONLY. ASSUME PLATFORMS ARE AT 20'-0" AFF.

1" = 60'-0"
60 0 60 120
SCALE FEET

TRUE NORTH

APPROVAL STAMP:

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LITTLE ROCK, ARKANSAS 72206
(UNINCORPORATED PARCELS) PULASKI COUNTY

SHEET TITLE

FIRE ALARM PLAN - UNDER PLATFORMS

SHEET MANAGEMENT

PROJECT NO.:	LIT3
DATE ISSUED:	03/20/2025
DRAWN BY:	KC
REVIEWED BY:	MC

ISSUANCE / REVISION SCHEDULE

#	DATE	DESCRIPTION
	03/20/2025	100% CD

SHEET NUMBER

FA102

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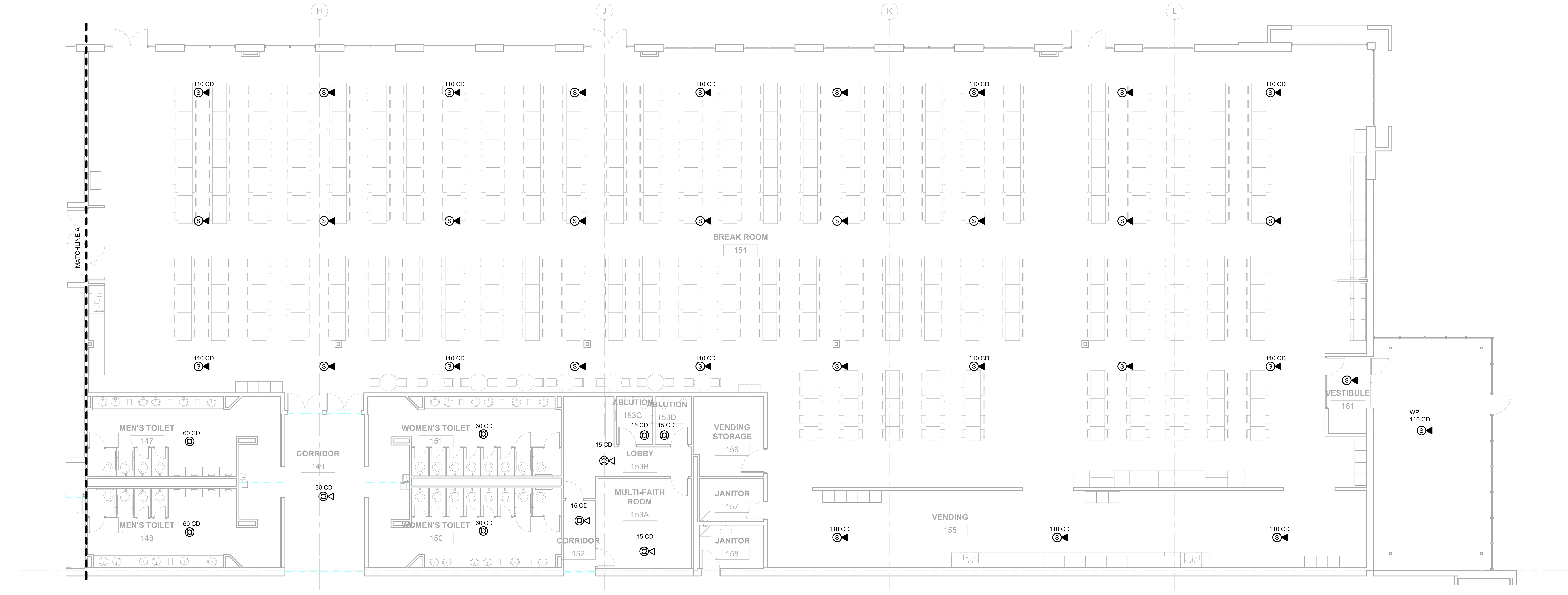
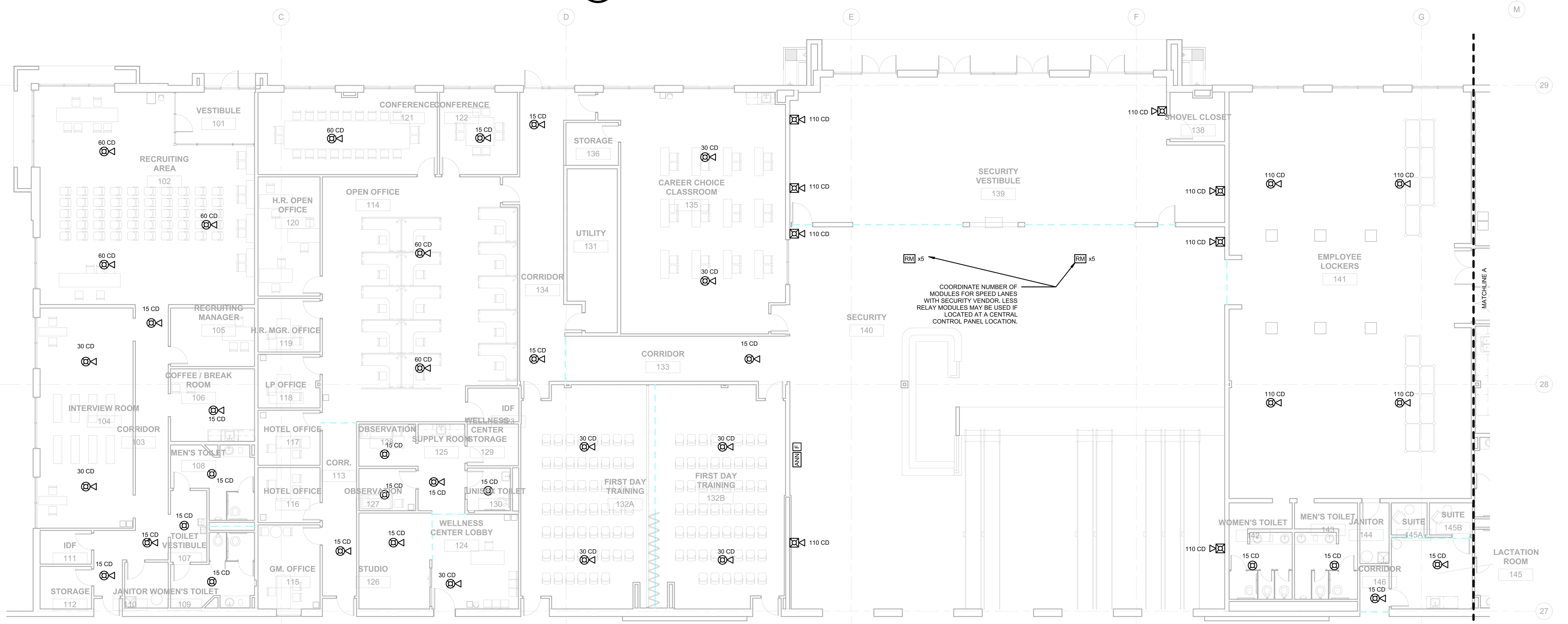


2 ENLARGED FIRE ALARM PLAN - MAIN OFFICE AREA - SOUTH

1/8" = 1'-0"



1 ENLARGED FIRE ALARM PLAN - MAIN OFFICE AREA - NORTH

1/8" = 1'-0"

1/8" = 1'-0" SCALE 5 0 5 10 15 20 FEET

TRUE NORTH

APPROVAL STAMP:

HAMILTON DEVELOPMENT
ONE MUSIC SQUARE SOUTH, SUITE 110
NASHVILLE, TN 37203

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HGI HARRINGTON GROUP INC HGI Prj. No.: 24SMDC004
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PH: 501.246.3578

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PROJECT DESCRIPTION

AMAZON LIT3
2026 IXD GEN5M
CROSS-DOCK WAREHOUSE FACILITY
(RECEIPT & REDISTRIBUTION)

PROJECT LOCATION

Port of Little Rock
PORT OF LITTLE ROCK
(INDUSTRIAL PARK)
LITTLE ROCK, ARKANSAS 72206
(UNINCORPORATED PARCELS) PULASKI COUNTY

SHEET TITLE

ENLARGED FIRE ALARM PLANS

SHEET MANAGEMENT

PROJECT NO.:	LIT3
DATE ISSUED:	03/20/2025
DRAWN BY:	KC
REVIEWED BY:	MC

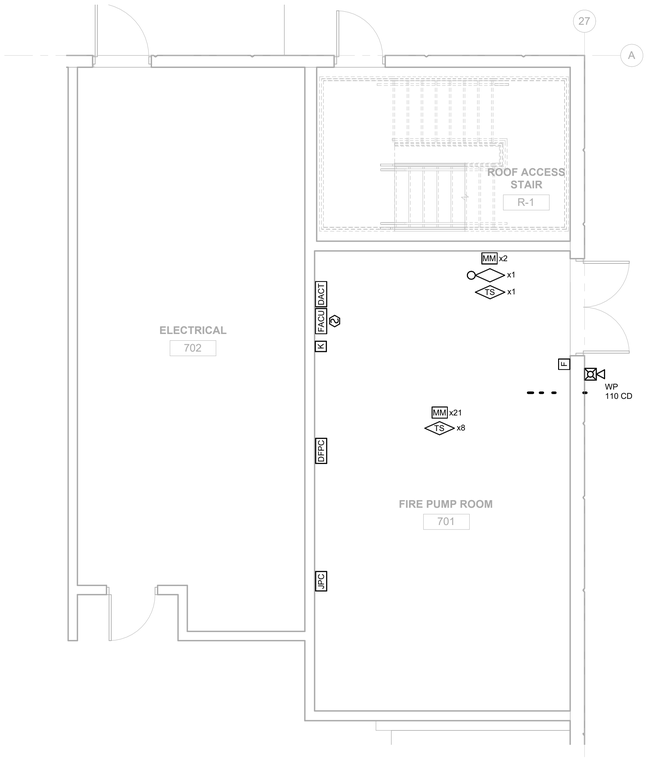
ISSUANCE / REVISION SCHEDULE

#	DATE	DESCRIPTION
	03/20/2025	100% CD

SHEET NUMBER

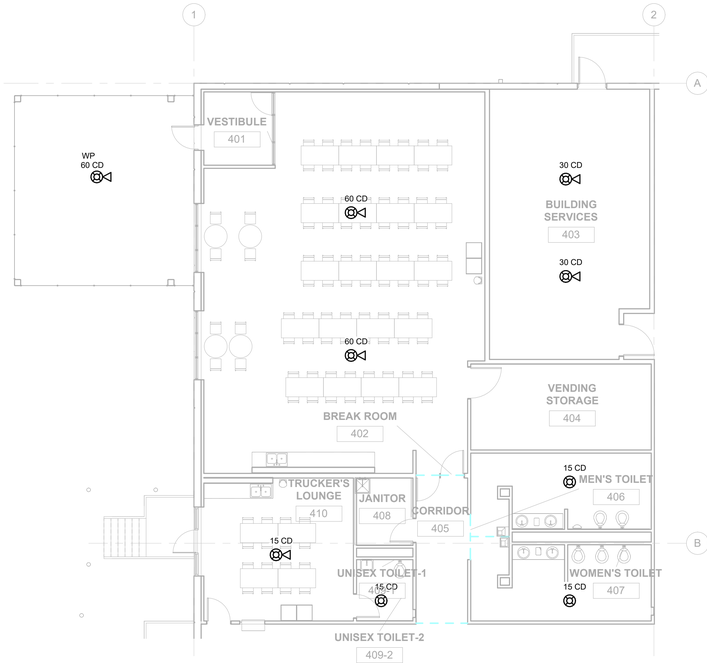
FA401

Submittal Type — Working Documents



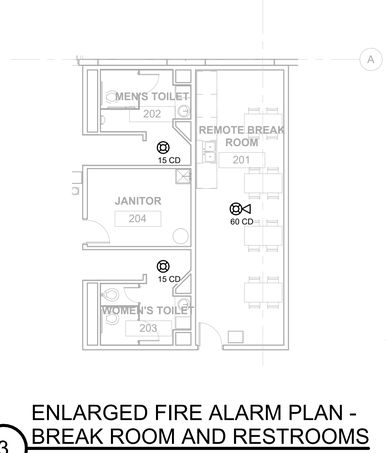
5 ENLARGED FIRE ALARM PLAN - FIRE PUMP ROOM

1/4" = 1'-0"



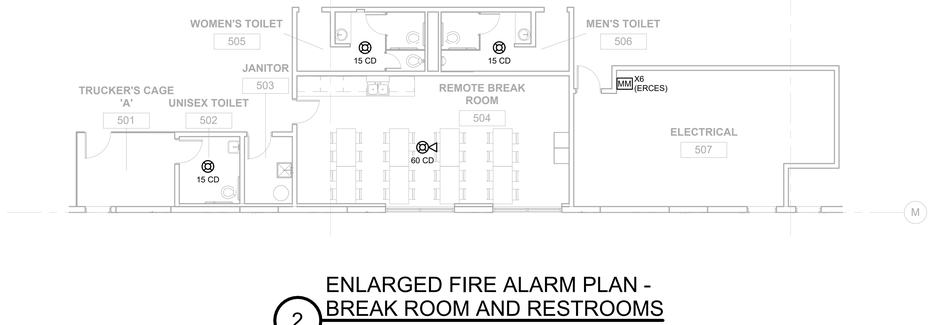
4 ENLARGED FIRE ALARM PLAN - OFFICE AREA

1/8" = 1'-0"



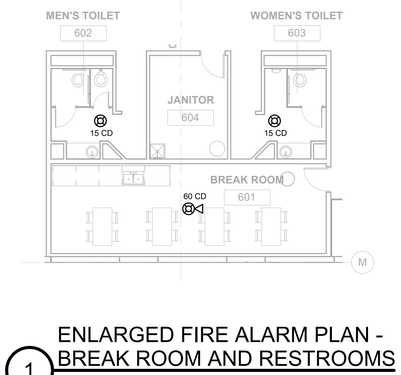
3 ENLARGED FIRE ALARM PLAN - BREAK ROOM AND RESTROOMS

1/8" = 1'-0"



2 ENLARGED FIRE ALARM PLAN - BREAK ROOM AND RESTROOMS

1/8" = 1'-0"



1 ENLARGED FIRE ALARM PLAN - BREAK ROOM AND RESTROOMS

1/8" = 1'-0"

TRUE NORTH

1/4" = 1'-0" SCALE 2 0 2 4 6 8 10 FEET

1/8" = 1'-0" SCALE 5 0 5 10 15 20 FEET

APPROVAL STAMP:

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PH: 501.246.3578

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PROJECT DESCRIPTION

AMAZON LIT3
2026 IXD GENSM
CROSS-DOCK WAREHOUSE FACILITY
(RECEIPT & REDISTRIBUTION)

PROJECT LOCATION

Port of Little Rock
PORT OF LITTLE ROCK
(INDUSTRIAL PARK)
LITTLE ROCK, ARKANSAS 72206
(UNINCORPORATED PARCELS) PULASKI COUNTY

SHEET TITLE

ENLARGED FIRE ALARM PLANS

SHEET MANAGEMENT

PROJECT NO.:	LIT3
DATE ISSUED:	03/20/2025
DRAWN BY:	KC
REVIEWED BY:	MC

ISSUANCE / REVISION SCHEDULE

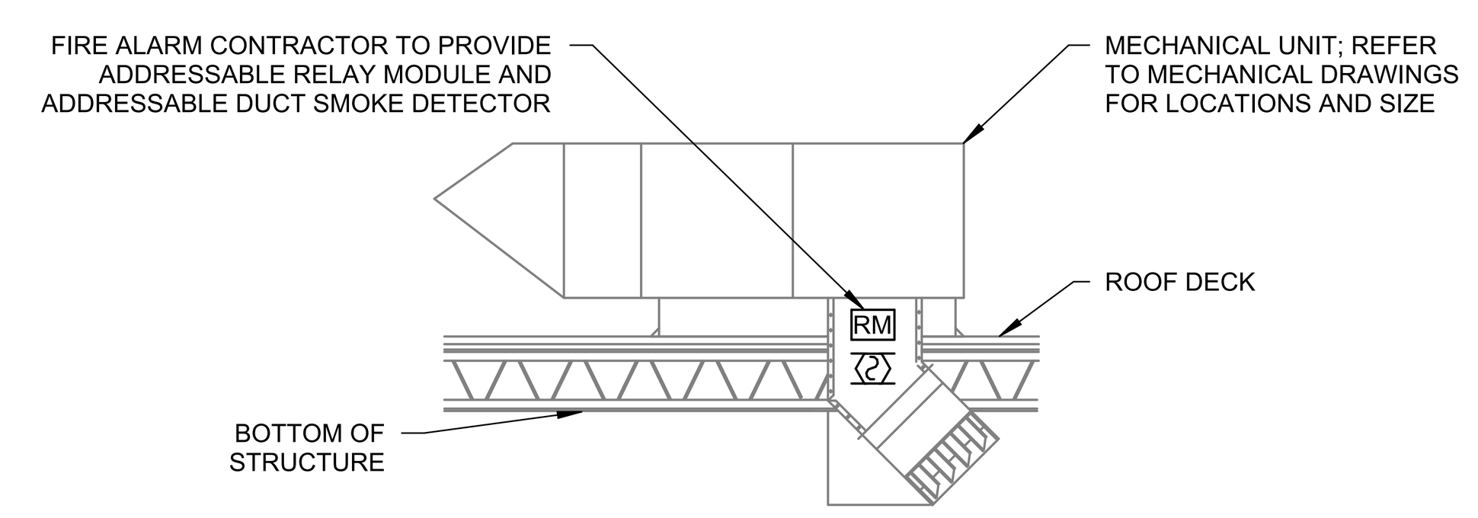
#	DATE	DESCRIPTION
	03/20/2025	100% CD

SHEET NUMBER

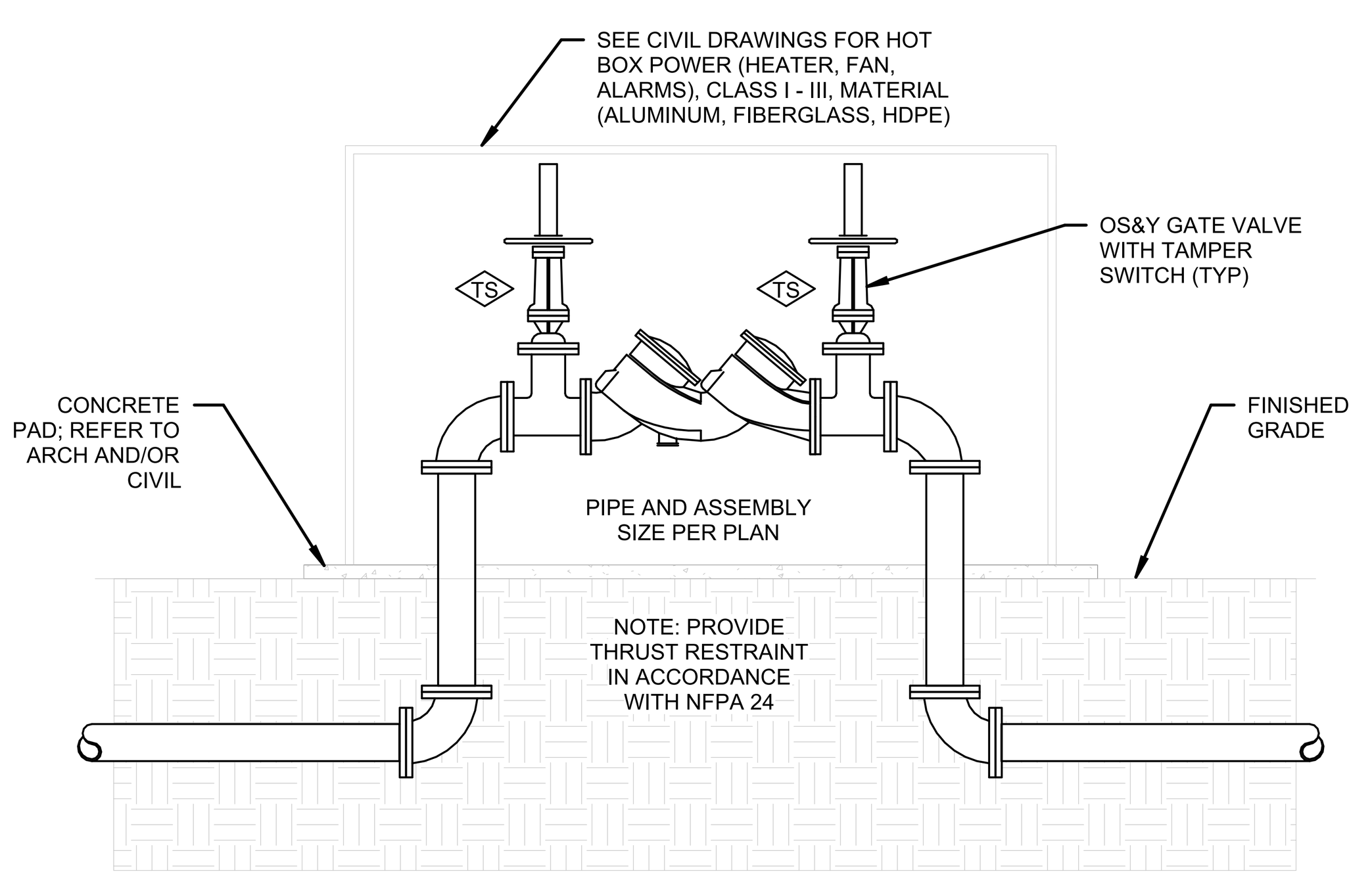
FA402

Submittal Type — Working Documents

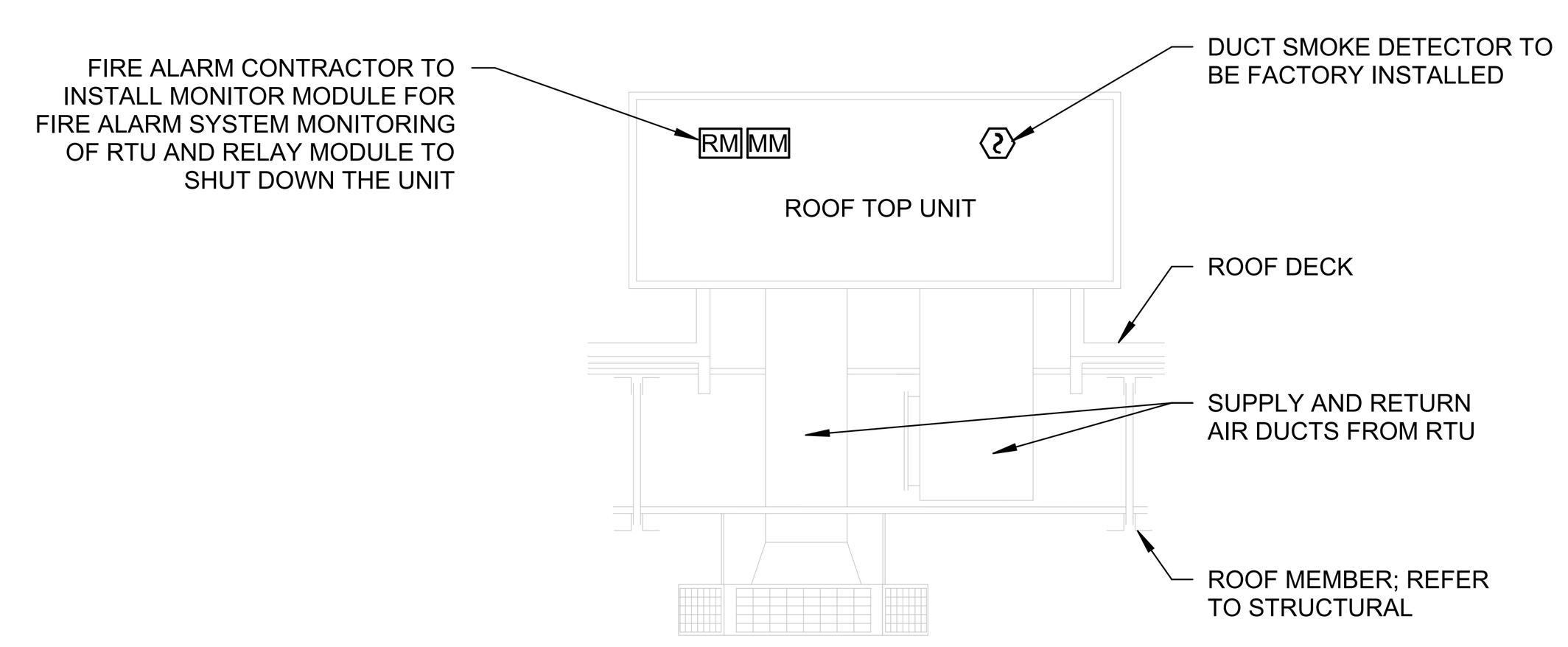
Autodesk Docs://RD_PA_US_LIT3/LIT3+RD-ZZ-ZZ-M3-F-FA.rvt



4 GAS UNIT-FIRE ALARM DEVICES
NOT TO SCALE



3 ABOVE GROUND BACKFLOW PREVENTER IN HOT BOX
NOT TO SCALE



2 RTU-FIRE ALARM DEVICES
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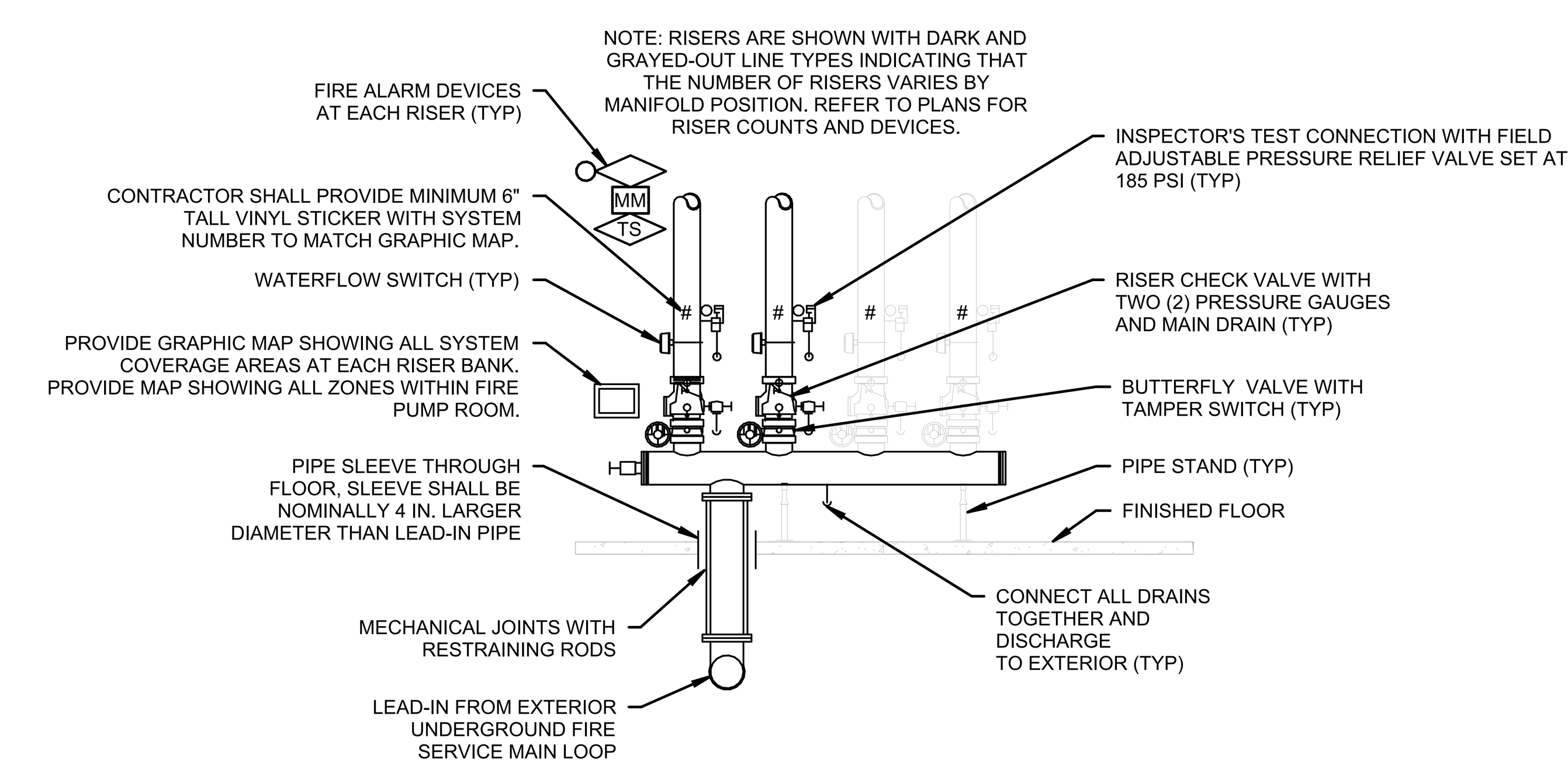

1 SPRINKLER RISER ASSEMBLIES
NOT TO SCALE

APPROVAL STAMP:

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NASHVILLE, TN 37203

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CROSS-DOCK WAREHOUSE FACILITY
(RECEIPT & REDISTRIBUTION)

PROJECT LOCATION
Port of Little Rock
PORT OF LITTLE ROCK
(INDUSTRIAL PARK)
LITTLE ROCK, ARKANSAS 72206
(UNINCORPORATED PARCELS) PULASKI COUNTY

SHEET TITLE
FIRE ALARM DETAILS

SHEET MANAGEMENT

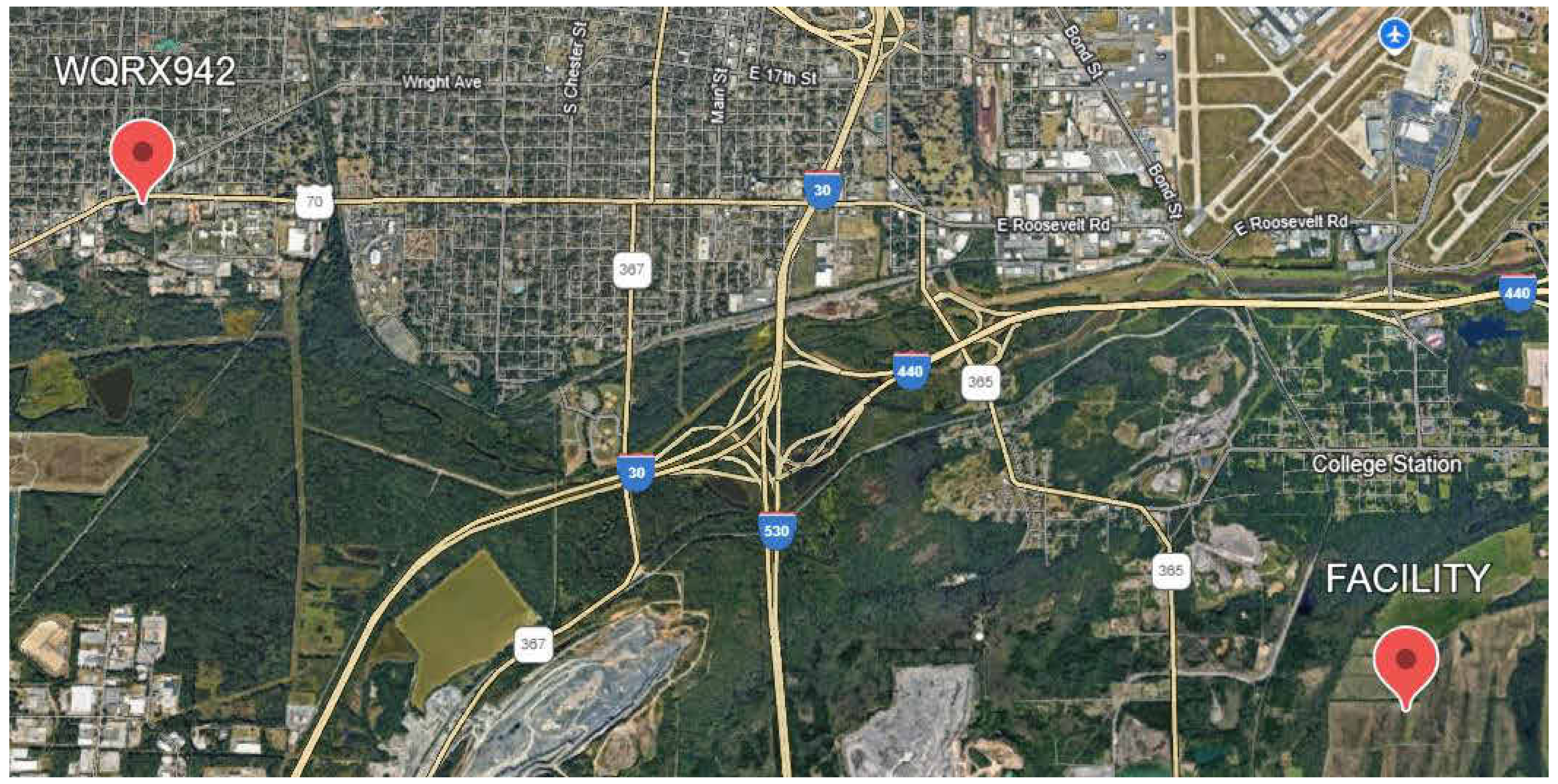
PROJECT NO.:	LIT3
DATE ISSUED:	03/20/2025
DRAWN BY:	KC
REVIEWED BY:	MC

ISSUANCE / REVISION SCHEDULE

#	DATE	DESCRIPTION
	03/20/2025	100% CD

SHEET NUMBER
FA501

Submittal Type — Working Documents



2 DONOR SITE LOCATION
NOT TO SCALE

DONOR SITES

GENERAL ARKANSAS STATE POLICE COMMUNICATIONS AND EMERGENCY RESPONSE.

1. 3701 W. ROOSEVELT.
2. 3717 BATESVILLE PIKE.
3. 21011 TWO TOWERS ROAD, SHINALL MOUNTAIN.

LITTLE ROCK METRO SIMULCAST

Site Number	Dec: 005 Hex: 5	Unique DB ID	21943	Modulation	P25 PHASE 1
'RFSS	1	NAC	185	'FCC Call sign	WQRX942
Description	AWIN - LITTLE ROCK	County	PULASKI	Updated	07/01/2018

SITE FREQUENCIES

851.1375	852.4375	856.1875	859.7625
851.1625	853.700	854.5625	854.6375
855.8375	856.2125	, 856.4375	856.4875
856.7125	856.7625	856.9375	857.2125
857.2625	857.4875	857.6625	857.7125
857.7625	857.9375	858.2125	858.7625
858.9375	859.2125	859.4875	859.9375

ERCES SYSTEM SYMBOLS

	RADIO ANTENNA
	BI-DIRECTIONAL AMPLIFIER (BDA)
	BASE TRANSCEIVER STATION
	RADIO REPEATER
	DONOR ANTENNA
	POWER SPLITTER

NOTE: FOR REFERENCE ONLY; ALL SYMBOLS MAY NOT BE USED

SCOPE OF WORK

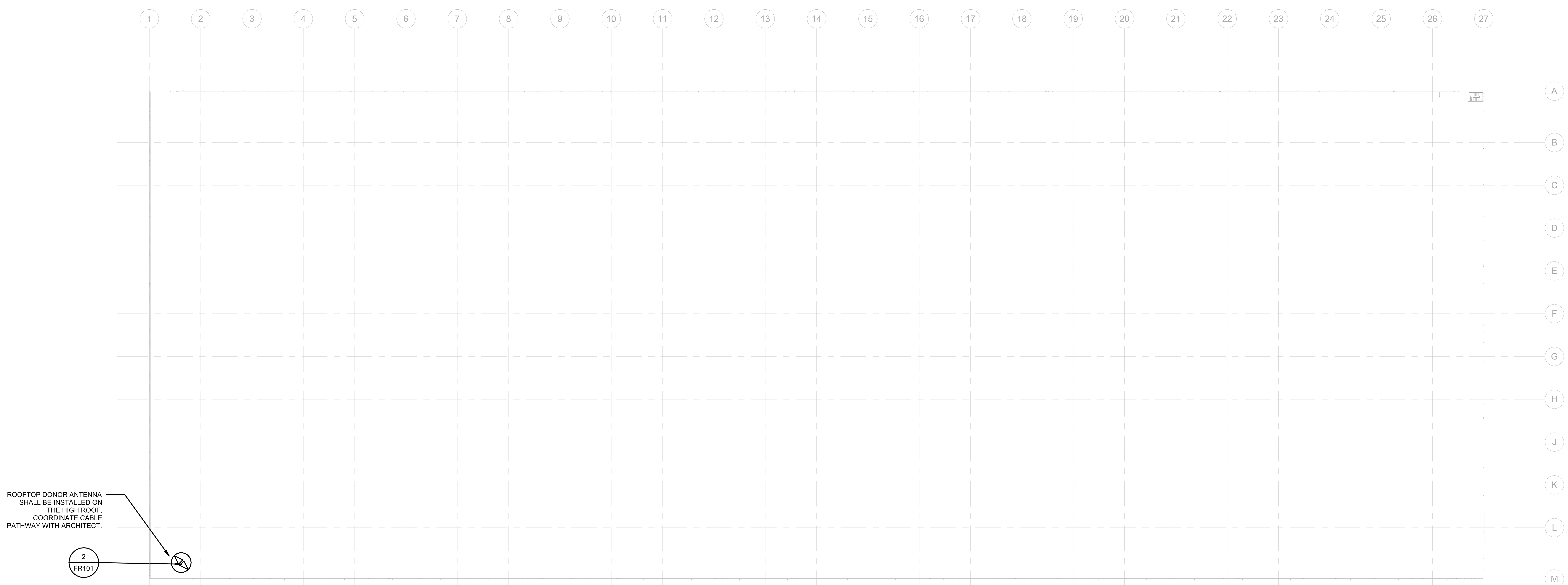
1. THESE DRAWINGS ARE CONTRACT CRITERIA DRAWINGS REFLECTING THE OWNER'S MINIMUM REQUIREMENTS, WITH WHICH THE CONTRACTOR MUST COMPLY. THESE DRAWINGS SHALL NOT BE CONSTRUED AS NFPA 1221- OR PROJECT-REQUIRED EMERGENCY RESPONDER COMMUNICATION ENHANCEMENT SYSTEM ("ERCES") SHOP DRAWINGS. THE ERCES CONTRACTOR SHALL PROVIDE TO THE FIRE PROTECTION ENGINEER AND THE LOCAL AHJ CODE- AND PROJECT-REQUIRED ERCES SUBMITTAL DOCUMENTS IN ACCORDANCE WITH THESE DRAWINGS AND ASSOCIATED SPECIFICATIONS. THESE DRAWINGS WILL NOT BE PROVIDED TO THE CONTRACTOR IN ELECTRONIC (CAD OR REVIT) FORMAT FOR THEIR CREATION OF REQUIRED SUBMITTAL DRAWINGS; THESE DRAWINGS SHALL NOT BE SUBMITTED AS CODE- OR PROJECT-REQUIRED SUBMITTAL DRAWINGS.
2. THE ERCES CONTRACTOR SHALL CONFORM TO THE SPECIFICATIONS OF THE PROJECT (I.E., THESE DRAWINGS AND ASSOICATED SPECIFICATIONS). IF QUESTIONS OR DISCREPANCIES ARISE DURING THE EXECUTION OF THE PROJECT, THE CONTRACTOR SHALL SUBMIT AN RFI TO THE FIRE PROTECTION ENGINEER'S ATTENTION FOR RESOLUTION.
3. THIS PROJECT IS NOT DESIGN-BUILD. LOCAL AHJ PERMITTING AND APPROVAL IS REQUIRED. HOWEVER, IF/WHEN A DISCREPANCY EXISTS BETWEEN THESE CRITERIA AND WHAT THE LOCAL AHJ MAY BE ACCEPTING OF, IT IS THE CONTRACTOR'S RESPONSIBILITY TO COMPLY WITH THE MORE STRINGENT REQUIREMENT. THESE CONTRACT CRITERIA ARE NOT TO BE CIRCUMVENTED BY THE CONTRACTOR
SEEKING APPROVAL OF LOCAL AHJ WITHOUT DUE CONSIDERATION, CONFERENCE, AND CLARIFICATION WITH THE FIRE PROTECTION ENGINEER.
4. THESE CRITERIA DRAWINGS REPRESENT THE OWNER'S MINIMUM REQUIREMENTS, AND RELAY THE DESIGN INTENT OF THE SYSTEM AS SPECIFIED BY THE FIRE PROTECTION ENGINEER. THESE DRAWINGS ARE NOT TO BE CONSTRUED AS NFPA 1221-REQUIRED, NOR PROJECT-SPECIFIED, CONTRACTOR SHOP DRAWINGS. THE ERCES CONTRACTOR SHALL GENERATE THEIR OWN SHOP DRAWINGS AS REQUIRED BY NFPA 1221, AND THESE PROJECT CRITERIA DRAWINGS AND SPECIFICATIONS. THESE DRAWINGS CONVEY THE SCOPE OF WORK FOR THE REQUIRED ERCES FOR THE FACILITY. THE SCOPE GENERALLY CONSISTS OF DONOR ANTENNA, BACKBONE, DISTRIBUTED ANTENNA, LIGHTNING PROTECTION, AND SYSTEM MONITORING BY THE FACILITY'S FIRE ALARM CONTROL UNIT ("FACU") AS CONVEYED IN THESE CRITERIA DRAWINGS. THE ERCES CONTRACTOR SHALL PROVIDE ALL COMPONENTS AND SYSTEMS AS DETAILED ON THESE FR-SERIES DRAWINGS. THESE DRAWINGS DO NOT PURPORT TO REGURGITATE ALL REQUIREMENTS FROM APPLICABLE CODES AND STANDARDS. IT IS THE ERCES CONTRACTOR'S RESPONSIBILITY TO COMPLY WITH THESE SPECIFICATIONS AND LOCAL CODES AND STANDARDS. THE ERCES CONTRACTOR SHALL COORDINATE WITH ALL OTHER TRADES (E.G., FIRE SPRNIKLER, FIRE ALARM, MECHANICAL, ELECTRICAL) SO AS TO PROVIDE A COMPLETE SYSTEM AS SPECIFIED IN THESE DRAWINGS AND ASSOCIATED SPECIFICATIONS.
5. THE BASIS OF DESIGN FOR THESE CONTRACT CRITERIA DRAWINGS CONSISTS OF FOLLOWING CODES AND STANDARDS (NOT ALL MAY BE APPLICABLE):
   a. 2021 ARKANSAS FIRE PREVENTION CODE VOLUME II, INTERNATIONAL BUILDING CODE 2021 EDITION
   b. 2021 ARKANSAS FIRE PREVENTION CODE VOLUME I, INTERNATIONAL FIRE CODE 2021 EDITION
   c. NFPA 72, NATIONAL FIRE ALARM AND SIGNALING CODE, 2019 EDITION
   d. NFPA 1221, STANDARD FOR THE INSTALLATION, MAINTENANCE, AND USE OF EMERGENCY SERVICES COMMUNICATIONS SYSTEM, 2019 EDITION

GENERAL NOTES

1. A UL 2524, IFC-, AND NFPA-COMPLIANT ERCES SHALL BE PROVIDED TO ENHANCE AND DISTRIBUTE PUBLIC SAFETY RADIO FREQUENCIES CURRENTLY IN USE BY THE LOCAL AUTHORITIES. THE ERCES CONTRACTOR SHALL COORDINATE THE FREQUENCIES IN USE BY THE LOCAL AUTHORITIES AS WELL AS ANY INTEROPERATIONAL CHANNELS BY OUTSIDE AGENCIES.
2. THE ERCES DESIGN SHALL MEET -95 dBm OR DAQ 3.0 IN 95 PERCENT GENERAL AREAS AND 99 PERCENT IN CRITICAL AREAS. CRITICAL AREAS SHALL BE COORDINATED WITH THE LOCAL AUTHORITY HAVING JURISDICTION.
3. DEDICATED BRANCH CIRCUITS SHALL BE PROPERLY SIZED, RED MARKED, AND LOCKED.
4. PROVIDE FAST-ACTING SURGE PROTECTIVE DEVICES FOR CIRCUITS THAT ENTER/LEAVE THE FACILITY (E.G., DONOR ANTENNA). SURGE-PROTECTIVE DEVICES SHALL BE PROVIDED IN ACCORDANCE WITH NFPA 70 ARTICLE 285. EACH BRANCH CIRCUIT SHALL HAVE FAST-ACTING SURGE PROTECTIVE DEVICES INSTALLED TO PROTECT ERCES COMPONENTS AS WELL AS A LOCKING RECEPTACLE COVER.
5. THE NUMBER AND LOCATION OF HEAD-END, REMOTE UNITS, AND ANTENNA SHALL BE DETERMINED BY THE ERCES CONTRACTOR. ALL ERCES HEAD-END AND REMOTE UNITS SHALL BE LOCATED IN ELECTRICAL ROOMS OR IN LOCATIONS APPROVED BY THE ARCHITECT AND FIRE PROTECTION ENGINEER. THE ERCES CONTRACTOR SHALL COORDINATE THE NUMBER AND LOCATION OF ERCES UNITS WITH THE ELECTRICAL CONTRACTOR TO PROVIDE ELECTRICAL POWER TO THE PANELS.
6. THE NUMBER AND LOCATION OF ERCES TROUBLE CONDITION OUTPUT(S) SHALL BE DETERMINED BY THE ERCES CONTRACTOR AND COORDINATED WITH THE FIRE ALARM CONTRACTOR.
7. THE ERCES CONTRACTOR SHALL PROVIDE NFPA AND PROJECT-REQUIRED ACCEPTANCE TESTING DOCUMENTATION, INCLUDING INTEGRATED SYSTEM TESTING.
8. THE ANTENNA GROUNDING LOCATION SHALL BE NOTED ON THE ERCES CONTRACTOR'S SHOP SUBMITTAL.
9. THE ERCES CONTRACTOR SHALL INCLUDE HEAT MAPS OF ALL AREAS COVERED BY THE ERCES IN THE SHOP SUBMITTAL PACKAGE.

ERCES INSTALLATION

1. THE ERCES CONTRACTOR SHALL COORDINATE WALL SPACE REQUIREMENTS FOR THE INSTALLATION OF ALL HEAD-END, REMOTE, AND BATTERY BACK-UP ("BBU") EQUIPMENT PRIOR TO SHOP SUBMITTAL.
2. THE ERCES SHALL BE CONNECTED TO THE BUILDING FIRE ALARM SYSTEM FOR CONTINUOUS MONITORING. REFER TO FIRE ALARM DRAWINGS AND COORDINATE WITH THE FIRE ALARM CONTRACTOR.
3. ALL ALARM CONTACTS ARE NORMALLY OPEN, AND SHOULD BE PROGRAMMED AS A SUPERVISORY SIGNAL BY THE FIRE ALARM CONTRACTOR. THE ERCES CONTRACTOR SHALL NOTE THE FIRE ALARM POINT OF CONNECTION ON THEIR SHOP SUBMITTAL AND COORDINATE WITH THE FIRE ALARM CONTRACTOR.
4. ADDITIONAL MONITORED POINTS AND RADIO CHANNELS MAY BE REQUIRED BY THE AHJ.
5. ALL ERCES COMPONENTS SHALL BE ROUTED ABOVE AND LOCATED ABOVE THE AREA CLEAR HEIGHTS. REFER TO ARCHITECTURAL DRAWINGS FOR CLEAR HEIGHTS.
6. SPLICES, JOINTS, AND ANTENNA CONNECTIONS SHALL BE ENCLOSED IN A LISTED ENCLOSURE IN CONFORMANCE WITH NFPA 1221.
7. SERVICE LOOPS AT ANTENNAS SHALL BE SECURELY FASTENED TO STRUCTURAL STEEL AND COMPLY WITH MANUFACTURER'S MINIMUM BEND RADIUS.



1 ERCES PLAN - EXTERIOR ROOF PLAN
1" = 60'-0"

1" = 60'-0" 60 0 60 120
SCALE FEET

TRUE NORTH

APPROVAL STAMP:

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PROJECT DESCRIPTION

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2026 IXD GEN5M
CROSS-DOCK WAREHOUSE FACILITY
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Port of Little Rock
PORT OF LITTLE ROCK
(INDUSTRIAL PARK)
LITTLE ROCK, ARKANSAS 72206
(UNINCORPORATED PARCELS) PULASKI COUNTY

SHEET TITLE

ERCES ROOF PLAN & NOTES

SHEET MANAGEMENT

PROJECT NO.:	LIT3
DATE ISSUED:	03/20/2025
DRAWN BY:	KC
REVIEWED BY:	MC

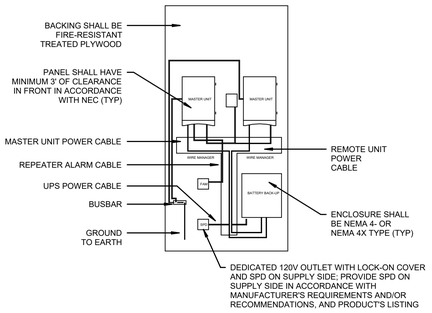
ISSUANCE / REVISION SCHEDULE

#	DATE	DESCRIPTION
	03/20/2025	100% CD

SHEET NUMBER

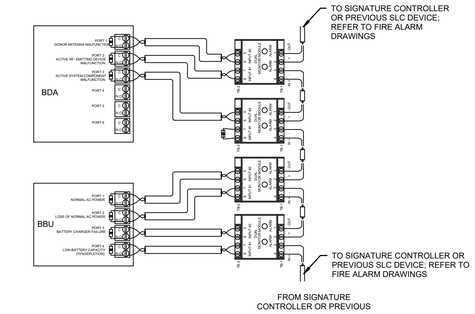
FR001

Submittal Type — Working Documents



4 HEAD-END / REMOTE LOCATION LAYOUT - TYP

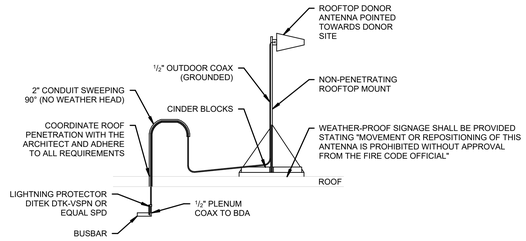
NOT TO SCALE



NOTE: FIRE ALARM MONITOR MODULES TO BE PROVIDED BY FIRE ALARM CONTRACTOR; ERCES CONTRACTOR TO PROVIDE CONDUCTORS BETWEEN THEIR EQUIPMENT/COMPONENTS AND THE MONITOR MODULES; COORDINATE APPROPRIATE TERMINATION OF CONDUCTORS AT MONITOR MODULES. ERCES SHALL BE MONITORED IN ACCORDANCE WITH NFPA REQUIREMENTS.

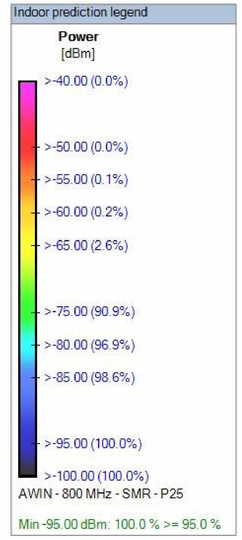
3 FIRE ALARM INTERFACE - TYP

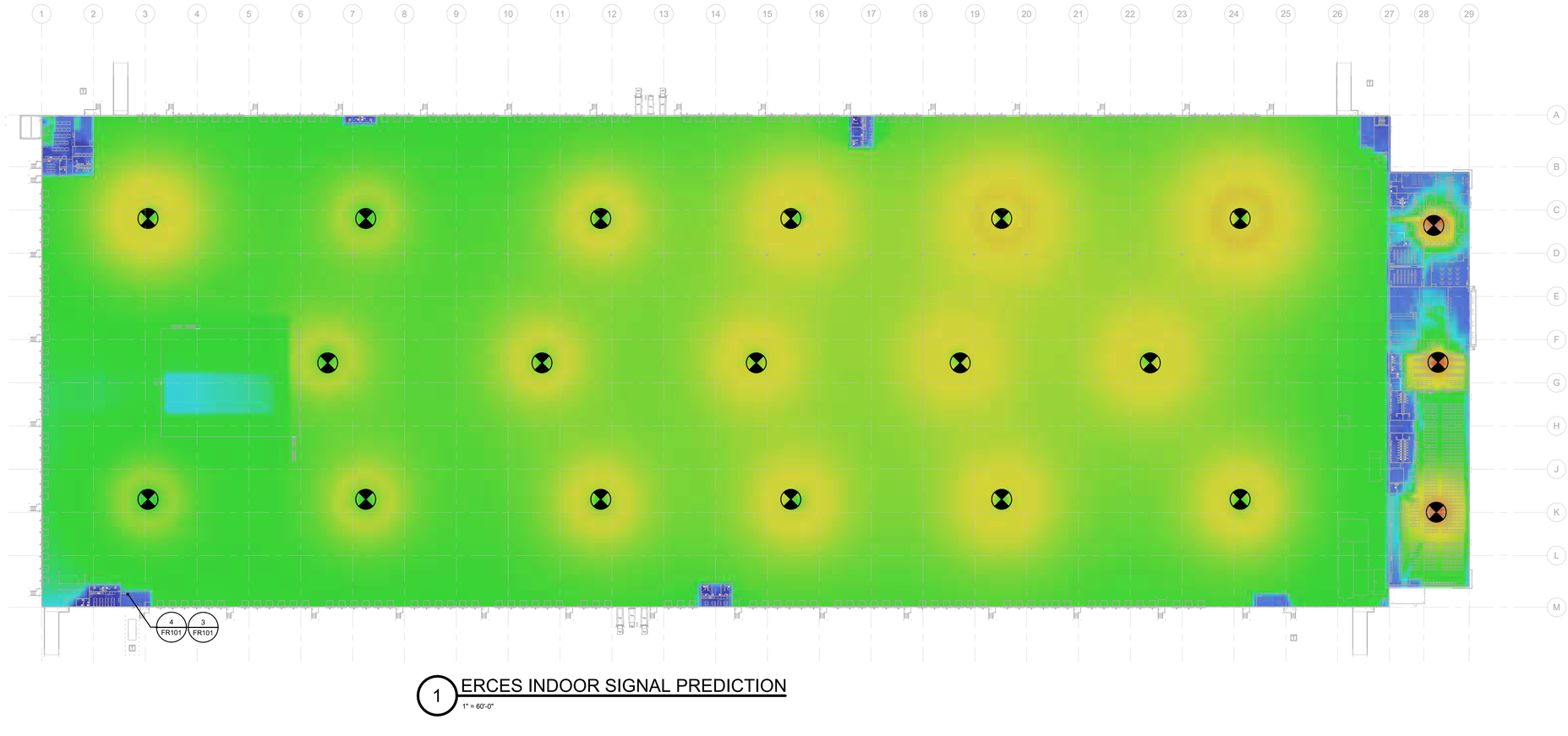
NOT TO SCALE



2 ROOFTOP ANTENNA - TYP

NOT TO SCALE





1 ERCES INDOOR SIGNAL PREDICTION

1" = 60'-0"

TRUE NORTH

1" = 60'-0"

60 0 60 120

SCALE FEET

APPROVAL STAMP:

HAMILTON DEVELOPMENT
ONE MUSIC SQUARE SOUTH, SUITE 110
NASHVILLE, TN 37203

SM DESIGN & CONSULTING, PC
855 Bloomfield Avenue, Suite 220
Glen Ridge, NJ 07028
Telephone 973-259-9500
www.smdcpc.com

CONSULTANT

STRUCTURAL CONSULTANTS
SHIRK & O'DONOVAN CONSULTING ENGINEERS, INC
370 EAST WILSON BRIDGE ROAD
WORTHINGTON, OH 43085
PH: 614.436.6465

MEP CONSULTANTS
KRAEMER CONSULTING ENG PLLC
2050 W. WHISPERING WIND DR, STE 158
PHOENIX, AZ 85085
PH: 602.285.1669

FIRE PROTECTION CONSULTANTS
HARRINGTON GROUP, INC
3237 SATELLITE BOULEVARD, SUITE 525
DULUTH, GA 30096
PH: 770.564.3505

TELECOMMUNICATIONS CONSULTANTS
HARGIS ENGINEERS, INC
1201 THIRD AVENUE, SUITE 600
SEATTLE, WA 98101
PH: 206.448.3376

IN COORDINATION WITH DEVELOPERS CONSULTANT WORKING IN PARALLEL:

SITE CIVIL
PICKERING FIRM, INC.
1700 KIRK RD, SUITE 120
LITTLE ROCK, AR 72223
PH: 501.246.3578

SEAL

Preliminary
03/20/2025 3:34:45 PM

END USER

amazon

PROJECT DESCRIPTION

AMAZON LIT3
2026 IXD GENSM
CROSS-DOCK WAREHOUSE FACILITY
(RECEIPT & REDISTRIBUTION)

PROJECT LOCATION

Port of Little Rock
PORT OF LITTLE ROCK
(INDUSTRIAL PARK)
LITTLE ROCK, ARKANSAS 72206
(UNINCORPORATED PARCELS) PULASKI COUNTY

SHEET TITLE

ERCES INDOOR SIGNAL PREDICTION & DETAILS

SHEET MANAGEMENT

PROJECT NO.:	LIT3
DATE ISSUED:	03/20/2025
DRAWN BY:	KC
REVIEWED BY:	MC

ISSUANCE / REVISION SCHEDULE

#	DATE	DESCRIPTION
	03/20/2025	100% CD

SHEET NUMBER

FR101