

ABBREVIATIONS

Table of abbreviations for construction elements, including symbols for ID, AT, A, AFF, AHJ, ALUM, ANOD, AFES, B, BLDG, BLDG, C, CL, CAB, CB, CER, CJI, CLG, CLO, CLR, COL, CONC, CONSTR, CONT, CONTR, D, DR, DET, DN, DS, DW, E, EA, EDF, EL, ELEC, ELEV, EQ, EXT, F, FA, FE, FHC, FIN, FLR, FOC, FOM, FT, G, GA, GALV, GL, GYP, HD, H, HC, HM, HNR, HT, HW.

GRAPHICS AND SYMBOLS

Construction Type Symbols, Material Symbols - Plan, Material Symbols - Detail, and Plan Reference Symbols. Includes symbols for existing and new construction, materials like brick, concrete, steel, and various plan reference symbols like room symbols, section symbols, and elevation symbols.

SHEET INDEX

Sheet Index table with columns: SHEET #, SHEET NAME, INITIAL ISSUE DATE, CURRENT REV, CURRENT REVISION DATE. Lists sheets for GENERAL, CIVIL, LANDSCAPE, STRUCTURAL, ARCHITECTURE, FOOD SERVICE, FIRE PROTECTION, PLUMBING, ELECTRICAL, AQUATICS.

SEAL

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CLIENT



City of West Memphis, 205 Redding St. West Memphis, AR 72301

DRAWING ISSUE

Table with columns for issue number, description, and date. Shows a sequence of drawing issues from 1 to 10.

ARCHITECT

PROJECT LUONG logo and contact information for Houston, San Antonio, and Santa Monica offices.

CONSULTANT

JOB INFO

CITY OF WEST MEMPHIS RECREATION CENTER, ST HWY 191/I-40 SERV, West Memphis, AR 72301

JOB No.: WESCIT00561

SHEET TITLE

SHEET INDEX AND GENERAL INFO

SHEET NUMBER

G-002

PROJECT INFORMATION

SCOPE OF WORK:
NEW CONSTRUCTION OF A RECREATION CENTER WITH NATATORIUM, COURTS, CONCESSIONS, OFFICES AND RESTROOMS.

AUTHORITIES HAVING JURISDICTION:
CITY OF WEST MEMPHIS BUILDING DEPARTMENT AND FIRE DEPARTMENT

APPLICABLE CODES:
BUILDING CODE: 2021 ARKANSAS FIRE PREVENTION CODE VOL. II (BUILDING)
ENERGY CODE: 2014 ARKANSAS ENERGY CODE
MECHANICAL CODE: 2021 ARKANSAS MECHANICAL CODE
ELECTRICAL CODE: 2020 NATIONAL ELECTRICAL CODE
PLUMBING CODE: 2018 ARKANSAS PLUMBING CODE AND ARKANSAS GAS CODE
FIRE CODE: 2021 ARKANSAS FIRE PREVENTION CODE VOL. I (FIRE)
ACCESSIBILITY: 2010 ADA STANDARDS

BUILDING ADDRESS:
ST HWY 191/40 SERV, West Memphis, AR 72301

BUILDING NUMBER:
1 OF 1

BUILDING HEIGHT:
37'-8 1/4"

NUMBER OF STORES:
1 STORY

BUILDING AREA	TYPE	AREA
CONDITIONED		83,108 SF
UNCONDITIONED		4,495 SF
TOTAL GROSS		87,603 SF

VICINITY MAP



BUILDING OCCUPANCY AND CONSTRUCTION

OCCUPANCY CLASSIFICATION (IBC SECTION 302):
NON-SEPARATED MIXED USE

A-4 ASSEMBLY (PRIMARY USE)
A-2 ASSEMBLY
A-3 ASSEMBLY
B BUSINESS
S STORAGE

H2 HAZARD

CONSTRUCTION TYPE (IBC TABLE 601):
TYPE I-B

ALLOWABLE HEIGHT/STORIES ABOVE GRADE PLANE (IBC TABLE 501.3 & 504.4)
HEIGHT: 7 FT
STORIES: 1 (PER 507.4 RESTRICTIONS)

ALLOWABLE BUILDING AREA (IBC TABLE 506.2)
BASED ON THE MOST RESTRICTIVE USE FOR NON-SEPARATED MIX USE
AREA (SPRINKLERED): 36,000 SF
FRONTAGE INCREASE: N/A
TOTAL ALLOWABLE: UNLIMITED PER SEC 507.4

REQUIRED SEPARATION OF OCCUPANCIES (IBC TABLE 508.6)

OCCUPANCY TYPE	ADJACENT OCCUPANCY	REQUIRED SEPARATION (HOURS)
H2	A-2,2	3
H2	B	2

FIRE RESISTANCE REQUIREMENTS

FIRE RESISTANCE REQUIREMENTS FOR ALL BUILDING ELEMENTS (IBC TABLE 601)

BUILDING ELEMENT	FIRE RATING (HOURS)	UL ASSEMBLY
PRIMARY STRUCTURAL FRAME	0	N/A
BEARING WALLS		
EXTERIOR	0	N/A
INTERIOR	0	N/A
NON-BEARING WALLS & PARTITIONS		
EXTERIOR	0	N/A
INTERIOR	0	N/A
FLOOR CONSTRUCTION & ASSOCIATED SECONDARY STRUCTURAL MEMBERS:		
FLOOR CONSTRUCTION & ASSOCIATED SECONDARY STRUCTURAL MEMBERS	0	N/A
ROOF CONSTRUCTION & ASSOCIATED SECONDARY STRUCTURAL MEMBERS	0	N/A

FIRE PROTECTION (IBC SECTION 901, 906.1 & 907.2.1)
AUTOMATIC FIRE SPRINKLER SYSTEM REQUIRED & PROVIDED. RE: SHEET XXXXXXX
PORTABLE FIRE EXTINGUISHERS REQUIRED & PROVIDED. RE: SHEET 0410
FIRE ALARM DETECTION SYSTEM
MANUAL FIRE ALARM BOXES: NOT REQUIRED

FIRE RESISTANCE RATING REQUIREMENTS FOR EXTERIOR WALLS (IBC TABLE 705.5)

FIRE SEPARATION (FEET)	FIRE RESISTANCE (HOURS)
X ≥ 30'	H OCC = 0 HR A,B,S-E OCC = 0 HR

MAXIMUM AREA OF EXTERIOR WALL OPENINGS (IBC TABLE 705.6)

FIRE SEPARATION (FEET)	DEGREE OF OPENING PROTECTION	ALLOWABLE PERCENT:
X ≥ 30'	UNPROTECTED, SPRINKLERED	NO LIMIT

CONCEALED SPACES (SECTION 710)
DRAFTSTOPPING NOT REQUIRED IN NON-COMBUSTIBLE CONSTRUCTION AND BUILDINGS EQUIPPED WITH AUTOMATIC SPRINKLER SYSTEM.
FIRE RESISTING (718.1)
CONCEALED WALL SPACES (718.2.2)
DRAFTSTOPPING IN FLOORS NOT REQUIRED (718.3)
DRAFTSTOPPING IN ATTICS NOT REQUIRED (718.4)

CORRIDOR FIRE RESISTANCE RATING (TABLE 1002.2)

OCCUPANCY	OCCUPANCY LOAD SERVED BY CORRIDOR	REQUIRED FIRE RATING
A	> 30	WITH SPRINKLER = 0 HR

PLUMBING FIXTURE COUNTS - BUILDING

MINIMUM FIXTURES REQUIRED ARE CALCULATED BASED ON 50% MALE AND 50% FEMALE OCCUPANTS

ASSEMBLY
1,195 OCCUPANTS = 598 MALE, 598 FEMALE

STORAGE
5 OCCUPANTS = 3 MALE, 3 FEMALE

CLASSIFICATION	DESCRIPTION	WATER CLOSET		LAVATORIES		SHOWERS	DRINKING FOUNTAINS	SERVICE SINKS
		MALE	FEMALE	MALE	FEMALE			
ASSEMBLY CODE REQ'S	INDOOR SPORTING EVENTS	FIRST 1,500 = 1/175	FIRST 1,500 = 1/140	1,020	1/150	--	1/1,000	1
FIXTURES REQUIRED		7.97	14.95	2.99	3.99	--	1.20	1
STORAGE CODE	CHEMICAL STORAGE ROOMS	1/100	1/100	1/100	1/100	--	1/1,000	1
FIXTURES REQUIRED		.03	.03	.03	.03	--	.01	1
TOTAL FIXTURES REQUIRED		8	15	4	5	--	2	2
TOTAL FIXTURES PROVIDED		15+2*	15	11+2*	11	--	4	2

NOTES:
* UNSEX RESTROOMS

PLUMBING FIXTURE COUNTS - POOL

IBC SECTION 609
MINIMUM FIXTURES REQUIRED ARE CALCULATED BASED ON 50% MALE AND 50% FEMALE OCCUPANTS

2,000 OCCUPANTS = 1,000 MALE, 1,000 FEMALE

FIXTURES REQUIRED	WATER CLOSET		LAVATORIES		CLEANSING SHOWERS		RINSE SHOWERS	
	MALE	FEMALE	MALE	FEMALE	MALE	FEMALE	MALE	FEMALE
TOTAL FIXTURES PROVIDED *	--	--	--	--	3	3	1	1

NOTES:
* SEE SECTION ABOVE FOR TOTAL WATER CLOSETS AND LAVATORIES PROVIDED
** 7/18/2017/2007: 76 +1
*** 2/26/2017/2007: 92 +1

ENERGY CODE

CLIMATE ZONE:
3

INTERNATIONAL ENERGY CONSERVATION CODE REQUIREMENTS:

	CODE DESIGN REQUIREMENTS	PROPOSED DESIGN VALUES
WINDOWS	U-FACTOR: ≤ 0.50	U-FACTOR: SHGC: 0.13
	VISIBLE LIGHT TRANSMISSION: U-FACTOR: ≤ 0.65	VISIBLE LIGHT TRANSMISSION: U-FACTOR:
DOORS	U-FACTOR: U-FACTOR:	U-FACTOR:
OVERHEAD DOOR	METAL BUILDING	METAL BUILDING
WALL INSULATION	R-VALUE: R-13 + R-3 CONTIGUOUS INSULATION OR EQUIVALENT	R-VALUE: X
	METAL BUILDING	METAL BUILDING
ROOF INSULATION	R-VALUE: R-10 W/ R-5 THERMAL BLOCKS	R-VALUE: X

NOTE: R-VALUES LISTED ARE MINIMUMS. U-FACTORS LISTED ARE MAXIMUMS

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City of West Memphis
205 Redding St. West Memphis, AR 72301

DRAWING ISSUE

NO.	DATE	DESCRIPTION
1	2024-07-15	ISSUE FOR DESIGN DEVELOPMENT
2	2024-07-15	2024-07-15 THE DATE CONTRACT DOCUMENTS WERE PREPARED

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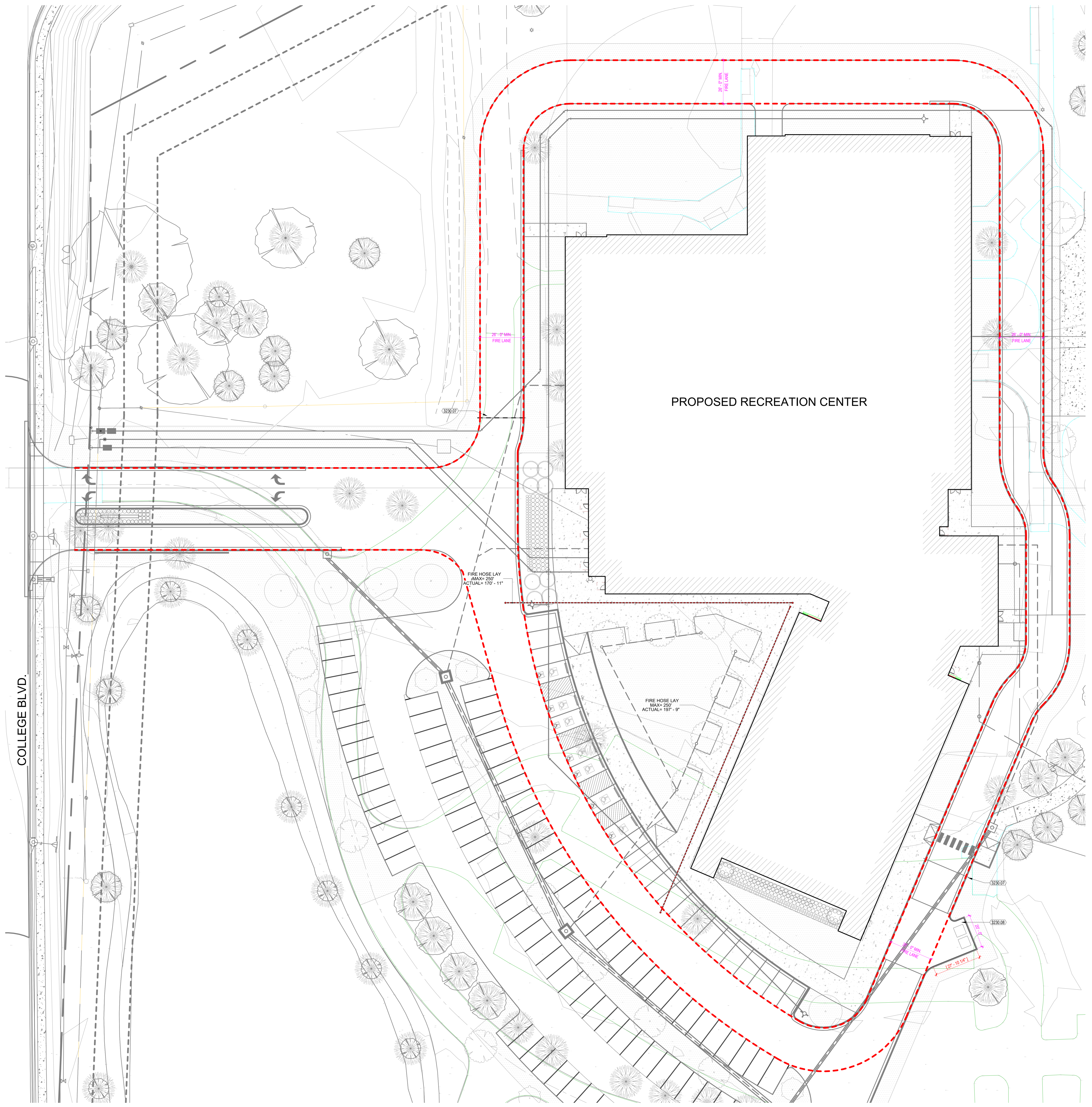
JOB No.: WESCIT00561

SHEET TITLE

CODE ANALYSIS

SHEET NUMBER

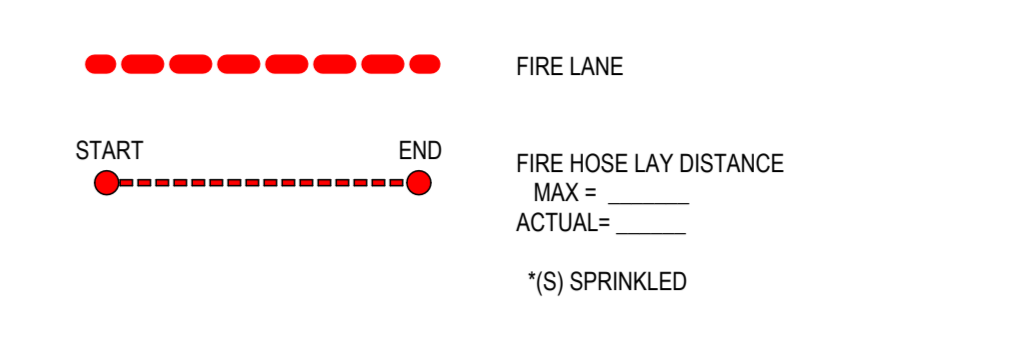
G-010



GENERAL NOTES - FIRE HOSE LAY

1. ANY DIMENSIONS INDICATED ON THIS PLAN ARE FOR LIFE SAFETY REVIEW ONLY AND SHOULD NOT BE USED FOR CONSTRUCTION PURPOSES OR SIZES.
2. FIRE ACCESS ROADS TO MEET ALL APPLICABLE REQUIREMENTS OF APPENDIX D OF THE INTERNATIONAL FIRE CODE.
3. REFER TO CIVIL DRAWINGS FOR LOCATIONS OF EXISTING AND PROPOSED FIRE HYDRANTS.

LEGEND - FIRE HOSE LAY



KEYNOTES

NOTE: KEYNOTE NUMBERING IS FOR ORGANIZATIONAL PURPOSES ONLY AND NOT INTENDED TO REFER TO A SPECIFIC CSI DIVISION

NUMBER	DESCRIPTION
3230.07	EMERGENCY BREAKAWAY GATE RE. LANDSCAPE
3230.08	ASPHALT DUMPSTER PAD

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DRAWING ISSUE

NO.	DATE	DESCRIPTION
1	2024.07.15	ISSUE FOR DESIGN DEVELOPMENT
2	2024.08.15	FOR THE CITY OF WEST MEMPHIS
3	2024.09.15	FOR THE CITY OF WEST MEMPHIS

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JOB No.: WESCIT00561

SHEET TITLE

FIRE ACCESS PLAN

SHEET NUMBER

G-011

MEANS OF EGRESS REQUIREMENTS

MEANS OF EGRESS SIZING (IBC SECTION 1005)
 EXIT WIDTH REQUIRED FOR OTHER EGRESS COMPONENTS: 1.200 X .15 + 18"
 TOTAL EGRESS DOOR WIDTH PROVIDED: (3) 3' DOORS AND (8) 8' DOUBLE DOORS = 64'

NOTES:
 1. EGRESS REQUIREMENTS SHALL NOT BE LESS THAN REQUIRED BY 2021 ARKANSAS FIRE PREVENTION CODE VOL. I AND ELSEWHERE AS REQUIRED BY APPLICABLE CODE INCLUDING THE AMERICANS WITH DISABILITIES ACT (ADA). IN THE EVENT OF DISCREPANCIES BETWEEN CODES, COMPLY WITH THE MORE RESTRICTIVE REQUIREMENT IN ALL CASES.
 2. MEANS OF EGRESS DOORS SHALL MEET THE REQUIREMENTS OF THE 2021 ARKANSAS FIRE PREVENTION CODE VOL. I SECTION 1005 AND ADA SECTION 404. DOORS PROVIDED FOR EGRESS PURPOSES IN NUMBERS GREATER THAN REQUIRED BY CODE SHALL ALSO MEET THE REQUIREMENTS OF THESE SECTIONS.
 3. PROJECTIONS INTO THE REQUIRED EGRESS CLEAR OPENING WIDTH, INCLUDING HANDRAILS, SHALL COMPLY WITH THE 2021 ARKANSAS FIRE PREVENTION CODE VOL. I SECTION 1005.7 AND ADA SECTION 307 NOT TO EXCEED 4" BETWEEN 27" AND 80" ABOVE THE FLOOR OR GROUND.

COMMON PATH OF EGRESS TRAVEL DISTANCE (IBC TABLE 1006.2.1)

OCCUPANCY TYPE	MAX OCC LOAD OF SPACE	MAX COMMON PATH OF EGRESS TRAVEL DISTANCE
A	49	WITH SPRINKLER SYSTEM = 75'
H-2	3	WITH SPRINKLER SYSTEM = 25'

MINIMUM NUMBER OF EXITS OR ACCESS TO EXITS PER STORY (IBC TABLE 1006.3.1)
 NUMBER OF EXITS REQUIRED = 4
 NUMBER OF EXITS PROVIDED = 4

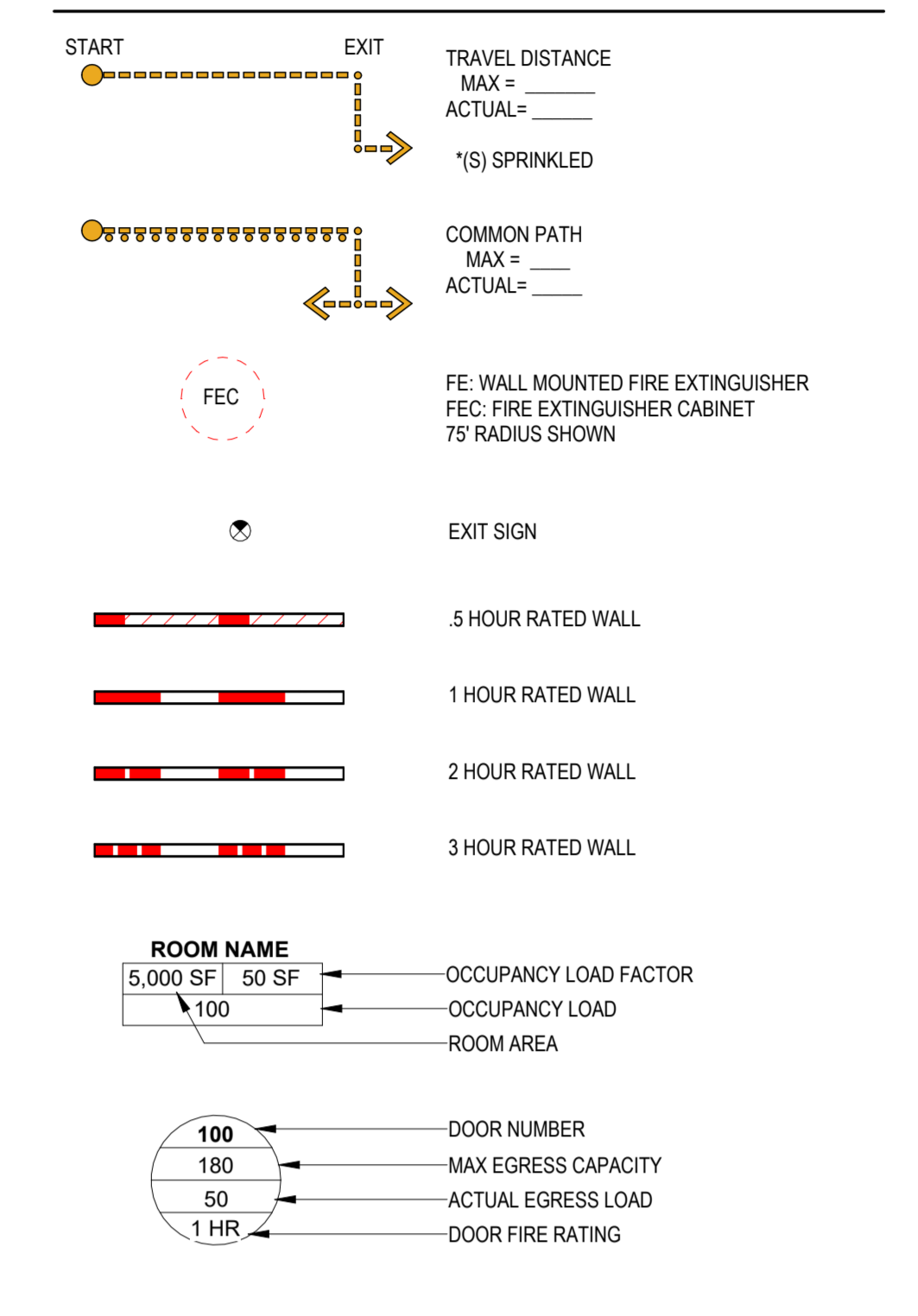
EXIT ACCESS TRAVEL DISTANCE (IBC TABLE 1017.2)
 OCCUPANCY TYPE A WITH SPRINKLER SYSTEM = 200' MAX

DEAD END CORRIDOR (SECTION 1020.9)
 20FT

GENERAL NOTES - LIFE SAFETY

- ANY DOORS SHOWN IN DATED ASSEMBLIES SHALL ALSO BE RATED AS REQUIRED BY CODE. REFERENCE DOOR SCHEDULE.
- ANY SIZES INDICATED ON THIS PLAN ARE FOR LIFE SAFETY REVIEW ONLY AND SHOULD NOT BE USED FOR CONSTRUCTION PURPOSES OR SIZES.
- ALL LIFE SAFETY DEVICES SHOWN ARE REQUIRED, BUT PRODUCT TYPES, DETAILS, MEANS AND METHODS MUST BE FULLY COORDINATED BY THE CONTRACTOR.
- MINIMUM SETBACKS SHOWN FOR REFERENCE ONLY IN THESE DRAWINGS.
- DO NOT SCALE DIMENSIONS FROM DRAWINGS. ANY UNKNOWN DIMENSIONS SHALL BE OBTAINED FROM DESIGN PROFESSIONALS.
- ROOM AND DOOR NUMBERS ARE FOR CONSTRUCTION & DESIGN COORDINATION. FINAL ROOM NAMES AND NUMBERS SHALL BE CONFIRMED PRIOR TO FABRICATION OF SIGNAGE.
- FURNITURE SHOWN IS BY OTHERS AND IS FOR PLANNING PURPOSES ONLY.
- FIRE EXTINGUISHERS SHALL BE INSTALLED PER NFPA 10.
- REFER TO MECHANICAL DRAWINGS FOR SMOKE INfiltration FIRE DAMPER LOCATIONS. REFER TO ELECTRICAL DRAWINGS FOR SMOKE DETECTOR LOCATIONS.
- EXIT SIGN LOCATIONS/QUANTITIES ARE APPROXIMATE AND ADDITIONAL SIGNS MAY BE REQUIRED BY THE AUTHORITY HAVING JURISDICTION. CONFIRM FINAL LOCATIONS WITH THE A.H.J. PRIOR TO INSTALLATION AND PROVIDE AN ADDITIONAL EXIT SIGNS AS REQUIRED BY THE A.H.J.

LEGEND - LIFE SAFETY



KEYNOTES

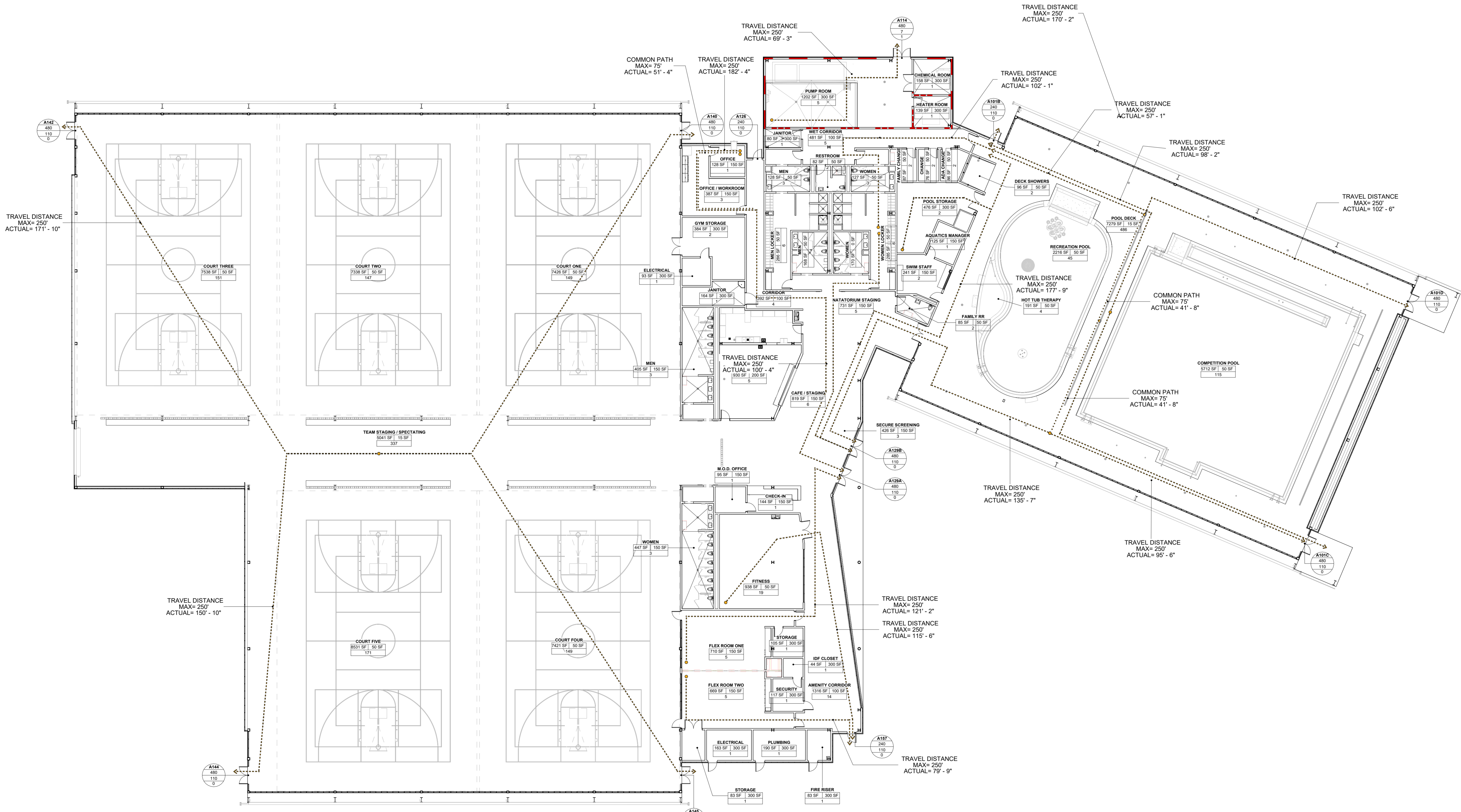
NOTE: KEYNOTE NUMBERING IS FOR ORGANIZATIONAL PURPOSES ONLY AND NOT INTENDED TO REFER TO A SPECIFIC CSI DIVISION

NUMBER	DESCRIPTION

OCCUPANCY LOADS (IBC TABLE 1004.5)

RM #	ROOM DATA	AREA	OCC. TYPE	O.L.F.	O.L.
A137	CONCESSION	930 SF	A-2	200 SF	5
A2		930 SF			5
A134	FITNESS	938 SF	A-3	90 SF	19
A3		938 SF			19
A100	COMPETITION POOL	5,712 SF	A-4	90 SF	115
A101	POOL DECK	2,278 SF	A-4	15 SF	488
A102	RECREATION POOL	2,216 SF	A-4	90 SF	45
A103	HOT TUB THERAPY	191 SF	A-4	90 SF	4
A125	WOMEN	170 SF	A-4	0 SF	1
A140	COURT ONE	7,426 SF	A-4	90 SF	169
A141	COURT TWO	7,338 SF	A-4	90 SF	147
A142	COURT THREE	7,538 SF	A-4	90 SF	151
A144	COURT FIVE	6,531 SF	A-4	90 SF	171
A145	COURT FOUR	7,421 SF	A-4	90 SF	169
A146	TEAM STAGING / SPECTATING	5,941 SF	A-4	15 SF	337
A4		59,862 SF			1,754
A104	SWIM STAFF	241 SF	B	150 SF	2
A105	AQUATICS MANAGER	125 SF	B	150 SF	2
A107	DECK SHOWERS	96 SF	B	50 SF	2
A108	ADA CHANGE	96 SF	B	50 SF	2
A109	CHANGE	79 SF	B	50 SF	2
A110	FAMILY CHANGE	87 SF	B	50 SF	2
A111	WOMEN SHOWER	142 SF	B	50 SF	3
A112	WOMEN LOCKER	296 SF	B	50 SF	6
A113	FAMILY RR	85 SF	B	50 SF	2
A115	WET CORRIDOR	481 SF	B	100 SF	5
A117	VESTIBULE	97 SF	B	100 SF	1
A118	VESTIBULE	62 SF	B	100 SF	1
A119	WOMEN	127 SF	B	50 SF	3
A120	RESTROOM	82 SF	B	50 SF	2
A121	MEN	128 SF	B	50 SF	3
A122	MEN SHOWER	140 SF	B	50 SF	3
A123	MEN LOCKER	296 SF	B	50 SF	6
A124	MEN	168 SF	B	50 SF	4
A126	CORRIDOR	392 SF	B	100 SF	4
A127	NATATORIUM STAGING	731 SF	B	150 SF	5
A129	SECURE SCREENING	426 SF	B	150 SF	3
A132	FLEX ROOM TWO	669 SF	B	150 SF	5
A133	FLEX ROOM ONE	719 SF	B	150 SF	5
A135	ENTRY / STAGING	906 SF	B	150 SF	7
A136	CHECK-IN	144 SF	B	150 SF	1
A138	OFFICE WORKROOM	397 SF	B	150 SF	3
A139	OFFICE	128 SF	B	150 SF	1
A153	WOMEN	447 SF	B	150 SF	3
A154	MEN	406 SF	B	150 SF	3
A156	M.O.D. OFFICE	96 SF	B	150 SF	1
A157	AMENITY CORRIDOR	1,316 SF	B	100 SF	14
A158	CAFE / STAGING	819 SF	B	150 SF	6
B		83,309 SF			111
A114	PUMP ROOM	1,252 SF	H2	300 SF	5
A151	CHEMICAL ROOM	158 SF	H2	300 SF	6
H2		1,360 SF			6
A106	POOL STORAGE	476 SF	S-2	300 SF	2
A116	HEATER ROOM	139 SF	S-2	300 SF	1
A128	JANITOR	164 SF	S-2	300 SF	1
A130	PLUMBING	190 SF	S-2	300 SF	1
A131	STORAGE	83 SF	S-2	300 SF	1
A148	ELECTRICAL	93 SF	S-2	300 SF	1
A149	GYM STORAGE	384 SF	S-2	300 SF	2
A150	SECURITY	117 SF	S-2	300 SF	1
A152	STORAGE	109 SF	S-2	300 SF	1
A155	FIRE RISER	83 SF	S-2	300 SF	1
A159	JANITOR	80 SF	S-2	300 SF	1
A160	ELECTRICAL	163 SF	S-2	300 SF	1
A161	IDF CLOSET	44 SF	S-2	300 SF	1
S-2		2,122 SF			15
		74,540 SF			1310

CALCULATION NOTES:
 1. BUILDING OCCUPANT LOAD SHALL BE LIMITED TO 1,200 OCCUPANTS.
 2. OCCUPANCY TYPES B, S-2, A-2, A-3 DO NOT EXCEED 10% OF FLOOR AREA AND SERVICE THE PRIMARY A-4 OCCUPANCY, THEREFORE CLASSIFYING THEM AS ACCESSORY OCCUPANCIES PER IBC SECTION 1004.2.
 3. 'N': OCCUPANCY CATEGORY - NOT REGULARLY OCCUPIED SPACES.



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DRAWING ISSUE

NO.	DATE	DESCRIPTION

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JOB No.: WESCIT00561

SHEET TITLE

LIFE SAFETY PLAN

SHEET NUMBER

G-012

GENERAL NOTES:

CODE COMPLIANCE: BUILDING: 2021 ARKANSAS FIRE PREVENTION CODE VOL. II (BUILDING) MECHANICAL: 2021 ARKANSAS MECHANICAL CODE ENERGY: 2014 ARKANSAS ENERGY CODE

GENERAL: 1. PRIOR TO SUBMITTING BID, VISIT THE JOB SITE AND BECOME FULLY ACCQUAINTED WITH THE PROJECT. REVIEW THE GENERAL NOTES, SPECIFICATIONS AND OTHER DRAWINGS FOR ADDITIONAL REQUIREMENTS WHICH MAY NOT BE SPECIFICALLY CALLED OUT IN THIS PORTION OF THE CONSTRUCTION DOCUMENTS. NOTIFY ARCHITECT, ENGINEER AND/OR OWNER OF ANY CONFLICTS OR DISCREPANCIES PRIOR TO SUBMISSION OF BID.

2. COORDINATE THE INSTALLATION OF THE MECHANICAL SYSTEMS WITH THE OTHER TRADES TO ENSURE A NEAT AND ORDERLY INSTALLATION. INSTALL DUCTWORK AND PIPING AS TIGHT TO STRUCTURE AS POSSIBLE. COORDINATE WITH OTHER TRADES TO LOCATE AND PROVIDE PENETRATIONS THROUGH FIRE RATED WALLS AND CEILING. COORDINATE WITH ARCHITECT AND GENERAL CONTRACTOR FOR THE WEIGHT OF THE DUCT PLUS THE ADDITIONAL LOAD AT A POINT IN THE DUCT SYSTEM (IMC 506.5.8.1).

3. WHERE SHUTDOWN OF EXISTING SYSTEMS IS REQUIRED DURING NEW WORK, COORDINATE SHUTDOWN TIME AND DURATION WITH THE OWNER TO MINIMIZE DOWNTIME. NOTIFY OWNER SEVEN (7) DAYS PRIOR TO INTERRUPTION OF SERVICE.

4. DURING INSTALLATION OF NEW WORK, AVOID DAMAGING EXISTING SURFACES AND EQUIPMENT TO REMAIN. REPAIR DAMAGE CAUSED DURING CONSTRUCTION AT NO EXTRA COST TO THE OWNER.

5. PROVIDE TEMPORARY BARRIERS TO CONTAIN DUST AND DEBRIS RESULTING FROM THE PERFORMANCE OF THE WORK TO THE AREA WHERE WORK IS BEING PERFORMED.

6. ALL MECHANICAL EQUIPMENT, DUCTWORK AND PIPING ARE SHOWN AT APPROXIMATE LOCATIONS. FIELD MEASURE FINAL DUCTWORK AND PIPING WITHIN THE AVAILABLE SPACE. VERIFY FINAL EQUIPMENT LOCATIONS MEET MANUFACTURER'S RECOMMENDATIONS REGARDING SERVICE CLEARANCE AND PROPER MANUFACTURING CLEARANCES.

7. REFER TO ARCHITECTURAL DRAWINGS FOR RELATED CONSTRUCTION DETAILS AS APPLICABLE TO THE HVAC SYSTEM. VERIFY CHASERS AND PENETRATIONS SHOWN ON ARCHITECTURAL DRAWINGS THAT ARE INTENDED FOR DUCTWORK AND PIPING MEET REQUIREMENTS.

8. COORDINATE LOCATION OF ROOF MOUNTED HVAC EQUIPMENT AND ROOF PENETRATIONS WITH THE ARCHITECTURAL AND STRUCTURAL DRAWINGS.

9. INDOOR AIR QUALITY MEASURES: PROTECT INSIDE OF INSTALLED AND DELIVERED DUCTWORK AND HVAC EQUIPMENT EXPOSED TO DUST, PAINT AND MOISTURE. REPLACE INSULATION THAT HAS BECOME WET AT ANY TIME DURING CONSTRUCTION. DRYING THE INSULATION WITH INSULATION LINER IN PLACE.

10. COORDINATE WITH DRAWINGS, GENERAL NOTES, AND SPECIFICATIONS OF ALL OTHER DISCIPLINES FOR ADDITIONAL REQUIREMENTS WHICH MAY NOT BE SPECIFICALLY CALLED OUT IN THIS PORTION OF THE CONSTRUCTION DOCUMENTS. NOTIFY ARCHITECT, ENGINEER AND/OR OWNER OF CONFLICTS OR DISCREPANCIES PRIOR TO SUBMISSION OF BID.

11. ALL MATERIALS LOCATED IN AIR PLENUMS (CEILING PLenums, CHASE WALLS, ETC.) SHALL MEET CODE REQUIREMENTS (IMC 602) FOR FLAME SPREAD INDEX AND SMOKE DEVELOPMENT INDEX OF 50. COORDINATE WITH GC AND OTHER TRADES.

12. DETAILS PROVIDED ON THE DETAIL SHEETS APPLY TO THE PROJECT GLOBALLY. SPECIFIC INSTANCES ARE CALLED OUT OTHERWISE. PROVIDE ADDITIONAL CLARIFICATION OF APPLICATION IS REQUIRED.

13. COORDINATE FINISH AND COLOR SELECTION OF ALL MECHANICAL ELEMENTS EXPOSED TO PUBLIC VIEW, INCLUDING EQUIPMENT, DIFFUSERS, DUCTS, PIPES, ETC., WITH ARCHITECT PRIOR TO PROCUREMENT. COMMENTS TO BE FIELD PAINTED AS DIRECTED BY ARCHITECT SHALL BE PREPARED FOR PAINTING PRIOR TO INSTALLATION.

14. DO NOT ROUTE DUCTWORK OR PIPING OVER ELECTRICAL EQUIPMENT OR PANELS.

15. ROUTING OF MECHANICAL SYSTEMS THROUGH OR ABOVE TELECOM, DATA, AV, ETC. ROOMS NOT SERVING THAT SPACE IS PROHIBITED UNLESS OTHERWISE NOTED. REFER TO TECHNOLOGY DRAWINGS FOR EQUIPMENT ROOM LOCATIONS.

16. INSTALL DUCTWORK AND PIPING PARALLEL TO BUILDING COLUMN LINES UNLESS OTHERWISE SHOWN OR NOTED.

17. PROVIDE RISERS, DROPS, AND TRANSITIONS NECESSARY TO ROUTE DUCTWORK AND PIPING AS SHOWN. COORDINATE ROUTING WITH ARCHITECTURAL AND STRUCTURAL DRAWINGS, AND ALL OTHER TRADES WORK.

18. PROVIDE EQUIPMENT VENTS AND FLUES PER EQUIPMENT MANUFACTURERS RECOMMENDATIONS AND EQUIPMENT SPECIFICATIONS. KEEP PENETRATIONS THROUGH ROOF AT A MINIMUM OF 12" FROM HVAC EQUIPMENT FRESH AIR INLETS AND 2'-0" FROM ROOF PARAPETS.

19. PROVIDE AUXILIARY DRAIN PANS UNDER ALL SUSPENDED HVAC EQUIPMENT WITH COOLING CAPABILITIES. WHERE LOCATED ABOVE CEILING, PROVIDE AUXILIARY DRAIN PAN WITH WATER SENSOR ALARM.

20. FOOD SERVICE HOOD INFORMATION PROVIDED ON PLANS IS FOR REFERENCE ONLY. FOOD SERVICE DOCUMENTS WILL GOVERN IN CASE OF DISCREPANCIES BETWEEN DOCUMENTS.

21. PROVIDE ALUMINUM DUCTWORK FOR ALL SYSTEMS SERVING DISHWASHERS.

22. PROVIDE ALUMINUM DUCTWORK FOR ALL SYSTEMS SERVING HYDROTHERMOPANATORUM SPACES.

23. PROVIDE ALUMINUM DUCTWORK FOR ALL SYSTEMS SERVING DISHWASHERS.

24. FOR GREASE DUCTWORK WITH VERTICAL OFFSETS, RESERVOIRS AND DRAINS SHALL BE PROVIDED AT THE LOW POINT PER DETAILS. COORDINATE WITH GENERAL CONTRACTOR TO KEEP AREA BELOW CLEAR FOR ACCESS.

25. PROVIDE TYPE I GREASE HOOD EXHAUST DUCTWORK OF MINIMUM 16 GAUGE BLACK IRON WITH LIQUID TIGHT WELDS. INSTALL ACCESS PORTS FOR CLEANING AS REQUIRED BY NFPA 96 AND LOCAL CODES. AT MINIMUM PROVIDE ACCESS PANELS EVERY 20 FEET HORIZONTALLY AND AT EACH FLOOR LEVEL IN THE VERTICAL (IMC 506.3.9). COORDINATE ACCESS FROM FLOOR BELOW TO GREASE DUCT ACCESS PORT LOCATIONS WITH GC TO ENSURE THERE IS A DEFINED AND CLEAR PATH TO EACH ACCESS PORT LOCATION. ROUTE GREASE DUCT WITH RADIUS ELBOWS WITHOUT TURNING VANES AND PROVIDE HIGH-EFFICIENCY BRANCH DUCT CONNECTIONS. SLOPE GREASE DUCT BACK TOWARDS HOOD OR APPROVED LOW POINT RECEPTOR AT A MINIMUM OF 1/4" PER FOOT FOR HORIZONTAL RUNS 75 FEET OR LESS, OR A MINIMUM OF 1" PER FOOT ON HORIZONTAL RUNS EXCEEDING 75 FEET. MAINTAIN 18" CLEARANCE TO COMBUSTIBLE MATERIALS. FOR GREASE DUCTS WITH A CROSS-SECTIONAL DIMENSION OF 24" OR GREATER, PERSONNEL ACCESS ENTRY MAY BE PROVIDED FOR CLEANING OF HORIZONTAL GREASE DUCT IN LIEU OF ACCESS PANELS AT EVERY 20 FEET. IF PERSONNEL ACCESS IS UTILIZED, THE GREASE DUCT SUPPORT SYSTEM SHALL BE DESIGNED FOR THE WEIGHT OF THE DUCT PLUS THE ADDITIONAL LOAD AT A POINT IN THE DUCT SYSTEM (IMC 506.3.8.1). INSTALL GREASE DUCTS IN AN APPROVED FIRE-RATED ENCLOSURE SEPARATED FROM THE EXHAUST DUCT BY A MINIMUM OF 6" AND MAXIMUM OF 12" VENTILATE ENCLOSURE TO THE OUTSIDE AIR IF REQUIRED BY CODE. AS AN OPTION, IF APPROVED BY LOCAL CODE, PROVIDE AN APPROVED WRAP SYSTEM IN LIEU OF THE RATED DUCT WRAP SYSTEM. DUCT WRAP SYSTEM SHALL MEET UL REQUIREMENTS FOR GREASE DUCT ENCLOSURES. REFERENCE DETAILS FOR ADDITIONAL INFORMATION.

26. FOR RISERS GREATER THAN 6" OR FOR MULTIPLE PIPES GROUPED CLOSELY TOGETHER WITH A WEIGHT EQUIVALENT TO OR GREATER THAN A 6" PIPE, PIPE SUPPORTS SHALL BE ATTACHED TO THE STEEL FRAMING STRUCTURE, NOT SLAB ON DECK. NO ATTACHMENTS ARE ALLOWED TO BARE STEEL. DECK FOR ATTACHMENTS TO SLAB ON DECK, MAXIMUM POINT LOAD PER ATTACHMENT IS 250 LBS.

PENETRATIONS:

27. REFER TO ARCHITECTURAL DRAWINGS FOR RELATED CONSTRUCTION DETAILS AS APPLICABLE TO THE HVAC SYSTEM. VERIFY CHASERS AND PENETRATIONS SHOWN ON ARCHITECTURAL DRAWINGS THAT ARE INTENDED FOR DUCTWORK AND PIPING MEET REQUIREMENTS.

28. SEAL PENETRATIONS THROUGH THE BUILDING COMPONENTS IN ACCORDANCE WITH THE CONTRACT SPECIFICATIONS. FIREPROOF PENETRATIONS THROUGH FIRE RATED COMPONENTS IN ACCORDANCE WITH U.L. REQUIREMENTS.

29. PROVIDE FIRE OR FIRE-SMOKE DAMPERS, AS APPLICABLE, IN DUCTWORK AT CEILING AND WALL SLAT LOCATIONS SHOWN ON THE PLANS. FIRE AND FIRE-SMOKE DAMPERS SHALL CONFORM TO NFPA AS APPLICABLE. COORDINATE WITH GC FOR LENGTH WITH REQUIREMENTS OF INSTALLED LOCATION.

30. DUCTWORK CROSSING FIRE RATED WALLS OR OTHER FIRE RATED ASSEMBLIES SHALL BE MINIMUM 26 GAUGE SHEET METAL.

31. ALL PENETRATIONS THROUGH CONGRESSION, KITCHEN AND COMMISARY WALLS SHALL BE SEALED AIR-TIGHT. TYPICAL COORDINATION WILL BE THE RESPONSIBILITY OF THE CONTRACTOR AT NO EXTRA COST TO THE OWNER.

32. DURING SHUTDOWN OF EXISTING SYSTEMS IS REQUIRED DURING NEW WORK, COORDINATE SHUTDOWN TIME AND DURATION WITH THE OWNER TO MINIMIZE DOWNTIME. NOTIFY OWNER SEVEN (7) DAYS PRIOR TO INTERRUPTION OF SERVICE.

33. DURING INSTALLATION OF NEW WORK, AVOID DAMAGING EXISTING SURFACES AND EQUIPMENT TO REMAIN. REPAIR DAMAGE CAUSED DURING CONSTRUCTION AT NO EXTRA COST TO THE OWNER.

34. PROVIDE TEMPORARY BARRIERS TO CONTAIN DUST AND DEBRIS RESULTING FROM THE PERFORMANCE OF THE WORK TO THE AREA WHERE WORK IS BEING PERFORMED.

35. ALL MECHANICAL EQUIPMENT, DUCTWORK AND PIPING ARE SHOWN AT APPROXIMATE LOCATIONS. FIELD MEASURE FINAL DUCTWORK AND PIPING WITHIN THE AVAILABLE SPACE. VERIFY FINAL EQUIPMENT LOCATIONS MEET MANUFACTURER'S RECOMMENDATIONS REGARDING SERVICE CLEARANCE AND PROPER MANUFACTURING CLEARANCES.

36. REFER TO ARCHITECTURAL DRAWINGS FOR RELATED CONSTRUCTION DETAILS AS APPLICABLE TO THE HVAC SYSTEM. VERIFY CHASERS AND PENETRATIONS SHOWN ON ARCHITECTURAL DRAWINGS THAT ARE INTENDED FOR DUCTWORK AND PIPING MEET REQUIREMENTS.

37. COORDINATE LOCATION OF ROOF MOUNTED HVAC EQUIPMENT AND ROOF PENETRATIONS WITH THE ARCHITECTURAL AND STRUCTURAL DRAWINGS.

38. INDOOR AIR QUALITY MEASURES: PROTECT INSIDE OF INSTALLED AND DELIVERED DUCTWORK AND HVAC EQUIPMENT EXPOSED TO DUST, PAINT AND MOISTURE. REPLACE INSULATION THAT HAS BECOME WET AT ANY TIME DURING CONSTRUCTION. DRYING THE INSULATION WITH INSULATION LINER IN PLACE.

39. COORDINATE WITH DRAWINGS, GENERAL NOTES, AND SPECIFICATIONS OF ALL OTHER DISCIPLINES FOR ADDITIONAL REQUIREMENTS WHICH MAY NOT BE SPECIFICALLY CALLED OUT IN THIS PORTION OF THE CONSTRUCTION DOCUMENTS. NOTIFY ARCHITECT, ENGINEER AND/OR OWNER OF CONFLICTS OR DISCREPANCIES PRIOR TO SUBMISSION OF BID.

40. ALL MATERIALS LOCATED IN AIR PLENUMS (CEILING PLenums, CHASE WALLS, ETC.) SHALL MEET CODE REQUIREMENTS (IMC 602) FOR FLAME SPREAD INDEX AND SMOKE DEVELOPMENT INDEX OF 50. COORDINATE WITH GC AND OTHER TRADES.

41. DETAILS PROVIDED ON THE DETAIL SHEETS APPLY TO THE PROJECT GLOBALLY. SPECIFIC INSTANCES ARE CALLED OUT OTHERWISE. PROVIDE ADDITIONAL CLARIFICATION OF APPLICATION IS REQUIRED.

42. COORDINATE FINISH AND COLOR SELECTION OF ALL MECHANICAL ELEMENTS EXPOSED TO PUBLIC VIEW, INCLUDING EQUIPMENT, DIFFUSERS, DUCTS, PIPES, ETC., WITH ARCHITECT PRIOR TO PROCUREMENT. COMMENTS TO BE FIELD PAINTED AS DIRECTED BY ARCHITECT SHALL BE PREPARED FOR PAINTING PRIOR TO INSTALLATION.

43. DO NOT ROUTE DUCTWORK OR PIPING OVER ELECTRICAL EQUIPMENT OR PANELS.

44. ROUTING OF MECHANICAL SYSTEMS THROUGH OR ABOVE TELECOM, DATA, AV, ETC. ROOMS NOT SERVING THAT SPACE IS PROHIBITED UNLESS OTHERWISE NOTED. REFER TO TECHNOLOGY DRAWINGS FOR EQUIPMENT ROOM LOCATIONS.

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56. AS AN ALTERNATE TO FIELD FABRICATED DUCT DESCRIBED ABOVE, TYPE I GREASE HOOD EXHAUST DUCTWORK SHALL BE METAL-FAB 36 OR 48 SERIES, OR APPROVED EQUAL, PRE-FABRICATED CONCRETE DUCT GREASE EXHAUST DUCTWORK. INSTALL ACCESS PORTS FOR CLEANING AS REQUIRED BY NFPA 96 AND LOCAL CODES. AT MINIMUM PROVIDE ACCESS PANELS EVERY 20 FEET HORIZONTALLY AND AT EACH FLOOR LEVEL IN THE VERTICAL (IMC 506.3.9). COORDINATE ACCESS FROM FLOOR BELOW TO GREASE DUCT ACCESS PORT LOCATIONS WITH GC TO ENSURE THERE IS A DEFINED AND CLEAR PATH TO EACH ACCESS PORT LOCATION. ROUTE GREASE DUCT WITH RADIUS ELBOWS WITHOUT TURNING VANES AND PROVIDE HIGH-EFFICIENCY BRANCH DUCT CONNECTIONS. SLOPE GREASE DUCT BACK TOWARDS HOOD OR APPROVED LOW POINT RECEPTOR AT A MINIMUM OF 1/4" PER FOOT FOR HORIZONTAL RUNS 75 FEET OR LESS, OR A MINIMUM OF 1" PER FOOT ON HORIZONTAL RUNS EXCEEDING 75 FEET PER MANUFACTURER'S RECOMMENDATIONS. FOR GREASE DUCTS WITH A CROSS-SECTIONAL DIMENSION OF 24" OR GREATER, PERSONNEL ACCESS ENTRY MAY BE PROVIDED FOR CLEANING OF HORIZONTAL GREASE DUCT IN LIEU OF ACCESS PANELS AT EVERY 20 FEET. IF PERSONNEL ACCESS IS UTILIZED, THE GREASE DUCT SUPPORT SYSTEM SHALL BE DESIGNED FOR THE WEIGHT OF THE DUCT PLUS THE ADDITIONAL LOAD AT A POINT IN THE DUCT SYSTEM (IMC 506.5.8.1).

57. COORDINATE THE EXACT MOUNTING SIZE AND FRAME TYPE OF DIFFUSERS, REGISTERS AND GRILLES WITH THE SUPPLIER TO MEET THE CEILING, WALL AND DUCT INSTALLATION REQUIREMENTS.

58. ADJUST LOCATION OF CEILING DIFFUSERS, REGISTERS AND GRILLES AS REQUIRED TO ACCOMMODATE FINAL CEILING GRID AND LIGHTING LOCATIONS.

59. COORDINATE DIFFUSER PAINTING WITH ARCHITECT. UNLESS NOTED OTHERWISE, ALL DIFFUSERS TO BE PAINTED PER ARCHITECTURAL DIRECTION OR TO MATCH ADJACENT MOUNTING ELEMENT - CEILING/WALL/DOCT.

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MECHANICAL SYMBOLS

THIS IS A MASTER LEGEND AND NOT ALL SYMBOLS OR ABBREVIATIONS ARE USED.

STANDARD MOUNTING HEIGHT

THERMOSTATS (USER ADJUSTABLE) (TOP OF DEVICE) 48" 48"

EXISTING DUCTWORK/EQUIPMENT TO BE REMOVED OR RELOCATED

EXISTING DUCTWORK/EQUIPMENT TO REMAIN

INSULATED FLEXIBLE DUCT (MAX. 5'-0" LONG)

BRANCH DUCT WITH 45° RECTANGLE-ROUND BRANCH FITTING AND MANUAL VOLUME DAMPER

ELBOW WITH TURNING VANES

DUCT UP

DUCT DOWN

COMBUSTION AIR

EXHAUST AIR - GENERAL

EXHAUST AIR - DRYER

EXHAUST AIR - GREASE

EXHAUST AIR - DISHWASHER

EXHAUST AIR - SMOKE

EXHAUST AIR - FLUE

OUTSIDE AIR

RELIEF AIR

RETURN AIR

SPECIAL EXHAUST

SUPPLY AIR

PRESSURIZATION SUPPLY AIR

10" (NECK SIZE) CSO-1 (TYPE) 300 CFM (CFM OF SUPPLY DIFFUSER OR REGISTER) FIELD REGION INDICATES DEFLECTOR

24x24 (NECK SIZE) CRG-1 (TYPE) 800 CFM (CFM OF RETURN GRILLE) (RETURN/EXHAUST GRILLE SHOWN BELOW)

ACCESS PANEL (IN GYPSUM)

MANUAL VOLUME DAMPER

SQUARE TO ROUND TRANSITION

DUCT MOUNTED SMOKE DETECTOR (SD-SUPPLY/RD-RETURN)

ROUND DUCT TAG INDICATING DIAMETER

RECTANGULAR DUCT TAG INDICATING INTERNAL DUCT DIMENSIONS.

FLAT OVAL DUCT TAG INDICATING INTERNAL DUCT DIMENSIONS

HVAC DAMPERS

FIRE DAMPER

FIRE SMOKE DAMPER

SMOKE DAMPER

VOLUME DAMPER

MOTORIZED DAMPER

BACKDRAFT DAMPER

HVAC DUCTWORK AND ACCESSORIES

DUCTWORK/EQUIPMENT TO BE REMOVED OR RELOCATED

EXISTING DUCTWORK/EQUIPMENT TO REMAIN

INSULATED FLEXIBLE DUCT (MAX. 5'-0" LONG)

BRANCH DUCT WITH 45° RECTANGLE-ROUND BRANCH FITTING AND MANUAL VOLUME DAMPER

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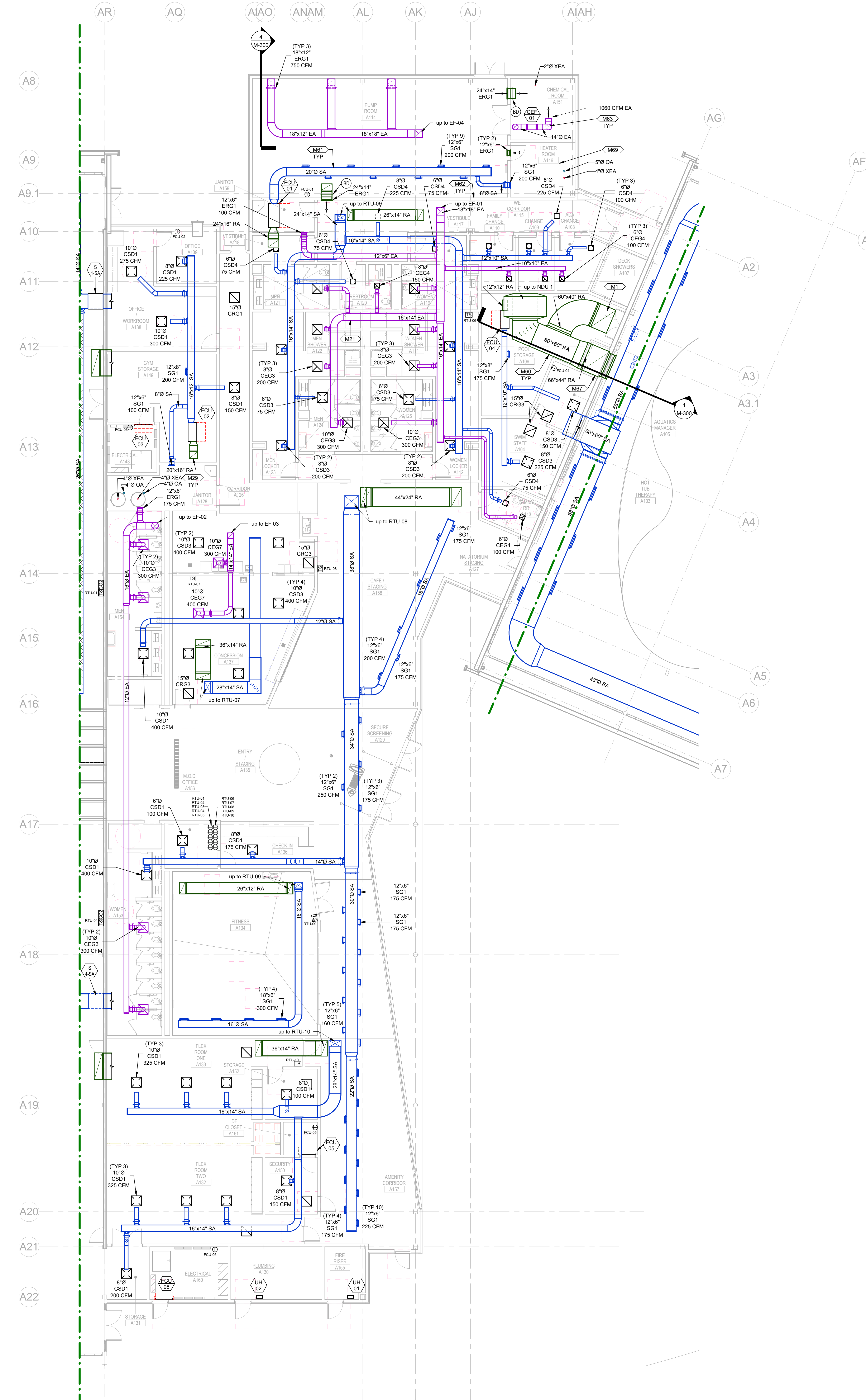
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ROUND DUCT TAG INDICATING DIAMETER

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FLAT OVAL DUCT TAG



- MECHANICAL PLAN NOTES**
- M1 DUCT UP TO LEVEL ABOVE.
 - M21 ALL EXHAUST AIR DUCTWORK, GRILLES, AND ACCESSORIES SERVING SHOWER AREAS SHALL BE ALUMINUM CONSTRUCTION.
 - M29 PROVIDE FLUE VENT AND COMBUSTION AIR DUCTS AT CONNECTION TO EACH WATER HEATER. SIZE AND INSTALL VENT TERMINALS PER MANUFACTURER'S RECOMMENDATIONS. REFER TO SPECIFICATIONS, DETAILS, AND PLUMBING PLANS FOR FLUE CONSTRUCTION, CONNECTION, AND ROUTING REQUIREMENTS.
 - M60 ALL DUCTWORK, GRILLES, DAMPERS, SUPPORTS, AND ACCESSORIES ASSOCIATED WITH THE POOL NATATORIUM SYSTEMS, SHALL BE CORROSION RESISTANT ALUMINUM CONSTRUCTION. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION.
 - M61 ALL EXPOSED DUCTWORK ROUTED WITHIN THE POOL ROOM / POOL EQUIPMENT ROOM / POOL STORAGE ROOM SHALL BE DOUBLE WALL ALUMINUM, EXCEPT WHERE OTHERWISE NOTED FOR SPECIAL EXHAUST.
 - M62 SEAL PENETRATIONS OF ALL DUCTS, PIPES, ETC. PASSING THROUGH THE VAPOR BARRIER ENCLOSURES OF THE POOL, POOL MECHANICAL, AND POOL STORAGE ROOMS. REFER TO ARCHITECTURAL SPECIFICATIONS AND DETAILS FOR ADDITIONAL INFORMATION.
 - M63 PROVIDE PVC COATED EXHAUST DUCT FOR CORROSIVE CHEMICAL EXHAUST AIR.
 - M67 ROUTE NATATORIUM RETURN DUCT DOWN TO LOUVER LOW TO THE FINISH FLOOR. INSTALL LOUVER AS LOW TO GROUND AS POSSIBLE.
 - M69 POOL HEATERS SHALL BE PROVIDED WITH MANUFACTURER'S VERTICAL DIRECT VENT KITS. PROVIDE FLUE VENTS AND COMBUSTION AIR DUCTS AT CONNECTION TO POOL AND SPA WATER HEATERS. REFER TO POOL VENDOR DRAWINGS FOR ADDITIONAL INFORMATION. INSTALL VENT TERMINALS PER MANUFACTURER'S RECOMMENDATIONS. REFER TO SPECIFICATIONS FOR FLUE AND DUCT CONSTRUCTION REQUIREMENTS.

SEAL

THIS DOCUMENT IS RELEASED FOR THE PURPOSE OF PRELIMINARY SUBMITTAL ONLY. IT IS NOT TO BE USED FOR CONSTRUCTION PURPOSES.

CLIENT



City of West Memphis

DRAWING ISSUE

NO.	DATE	DESCRIPTION
1	08/15/2024	ISSUED FOR PERMIT
2	08/15/2024	ISSUED FOR CONSTRUCTION DOCUMENT PREPARATION

ARCHITECT

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255004284
 AR CORPORATE NO. 4M
 EXPIRES 12/31/2026

JOB INFO

CITY OF WEST MEMPHIS
 RECREATION CENTER
 ST HWY 191/40 SERV.
 West Memphis, AR 72301

JOB No.: WESCIT00561

SHEET TITLE

HVAC LEVEL 01 PLAN - SECTOR B

SHEET NUMBER

M-101.B

1 HVAC LEVEL 01 PLAN - SECTOR B
 1/8" = 1'-0"

DAVID S. WOLFORD
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 DATE PLOTTED: 11/20/24 11:28 AM

FAN SCHEDULE															
MARK	AREA SERVED	MANUFACTURER	MODEL	MOUNTING	CFM	ESP (IN)	BHP	NOM HP	FAN RPM	DRIVE (BELT/DIRECT)	VFD (Y/N)	ELECTRICAL	CONTROL METHOD	WEIGHT (LBS)	NOTES
CEF 01	POOL CHEMICAL ROOM	CONTINENTAL	AXP300	INLINE	750	0.2	0.00	0.36	2741	DIRECT	No	120 V / 1PH	CONTINUOUS	20	ALL
EF 01	LOCKER ROOM / RESTROOMS	GREENHECK	G-180-VG	ROOF - DOWNBLAST	2450	0.4	0.39	0.75	1800	DIRECT	No	120 V / 1PH	TIME CLOCK	110	ALL
EF 02	RESTROOMS	GREENHECK	G-180-VG	ROOF - DOWNBLAST	1375	0.4	0.22	0.59	1800	DIRECT	No	120 V / 1PH	TIME CLOCK	75	ALL
EF 03	CONCESSION	GREENHECK	GUE-120-VG	ROOF - UPBLAST	700	0.4	0.10	0.25	1800	DIRECT	No	120 V / 1PH	LIGHTING INTERLOCK	65	ALL
PEF 01	POOL MECHANICAL ROOM	GREENHECK	G-180-VG	ROOF - DOWNBLAST	2250	0.3	0.29	0.75	1800	DIRECT	No	120 V / 1PH	CONTINUOUS	110	ALL

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LEGEND:
 EF - GENERAL EXHAUST FAN SF - GENERAL SUPPLY FAN TF - TRANSFER FAN
 PEF - POOL EXHAUST FAN CE - CHEMICAL EXHAUST FAN

GENERAL NOTES:

- MOUNT ALL FANS AS FOLLOWS: REFER TO VIBRATION ISOLATION SPECIFICATIONS AS NEEDED.
 ROOF MOUNTED - CURB: PROVIDE INSULATED ROOF CURB WITH MINIMUM HEIGHT REQUIRED TO MAINTAIN BOTTOM OF EQUIPMENT A MINIMUM OF 8 INCHES ABOVE FINISHED ROOF SURFACE. PROVIDE SLOPED CURB IF NEEDED TO MATCH ROOF SLOPE. COORDINATE WITH ROOF INSULATION THICKNESS AND ROOF TAPER AT INSTALLED LOCATION. COORDINATE CURB TYPE WITH DRAWINGS.
 BUILDING: PROVIDE ALL-THREAD HANGING RODS.
 ROOF MOUNTED - UTILITY SET: PROVIDE PRE-ENGINEERED ROOF EQUIPMENT SUPPORTS WITH MINIMUM HEIGHT REQUIRED TO MAINTAIN BOTTOM OF EQUIPMENT A MINIMUM OF 8 INCHES ABOVE FINISHED ROOF SURFACE. COORDINATE WITH ROOF INSULATION THICKNESS AND ROOF TAPER AT INSTALLED LOCATION.
- COORDINATE WITH THE FOLLOWING ACCESSORIES MATCHING FANS DESIGNATION FOR VFD:
 SIDEWALL: PROVIDE MOUNTING BRACKETS AND ACCESSORIES REQUIRED FOR WALL MOUNTING.
 ROOF INSULATION THICKNESS AND ROOF TAPER AT INSTALLED LOCATION. COORDINATE CURB TYPE WITH DRAWINGS.
- NOMINAL MOTOR HP SHALL BE NO LARGER THAN THE FIRST AVAILABLE NOMINAL MOTOR SIZE GREATER THAN THE BHP.
- PROVIDE THE FOLLOWING ACCESSORIES MATCHING FANS DESIGNATION FOR VFD:
 FOR FANS WITH VFD: FURNISH VFD WITH INTEGRAL DISCONNECTING MEANS. DIVISION 26 TO INSTALL AND FIELD WIRE. PROVIDE SHAFT GROUNDING SYSTEM ON MOTOR. REFER TO MOTOR SPECIFICATION FOR MORE INFORMATION.
 FOR FANS WITH NO VFD: WITH MANUFACTURER'S ELECTRONICALLY COMMUTATED (EC) MOTOR WITH FACTORY INTEGRAL DISCONNECT. DISCONNECTS FOR FANS MOUNTED OUTDOORS SHALL BE NEMA 3R. PROVIDE EITHER SPEED CONTROLLER OR MANUFACTURER'S ADVANCED EC MOTOR CONTROLLER WITH BMS INTERFACE TO ACHIEVE CONTROL INTENT. IN ALL OTHER INSTANCES COORDINATE WITH DIVISION 26.
- PROVIDE BRODSREEN AND MOTORIZED DAMPER INTERLOCKED WITH FAN OPERATION UNLESS OTHERWISE NOTED. MOTORIZED DAMPER PRESSURE DROP SHALL NOT EXCEED 0.15 IN W.G. COORDINATE DAMPER POWER WITH DIVISION 26 CONTRACTOR. MOTORIZED DAMPER TO BE MOUNTED WITHIN CURBS FOR CURB MOUNTED FANS. FOR ALL OTHER FANS, MOTORIZED DAMPER TO BE LOCATED AT EXTERIOR PENETRATION (ROOF/WALL) IN ACCESSIBLE LOCATION UNLESS OTHERWISE INDICATED ON DRAWINGS.
- FANS WITH SCHEDULED MINIMUM TO BE SELECTED AT BOTH MINIMUM AND MAXIMUM AIRFLOWS AT SCHEDULED ESP.

NOTES SPECIFIC TO POOL VENTILATION EXHAUST (NON-CHEMICAL EXHAUST):
 A. FAN AND ALL ASSOCIATED DUCTWORK SHALL BE ALUMINUM WITH MOTOR OUT OF AIRSTREAM.

NOTES SPECIFIC TO POOL CHEMICAL EXHAUST:
 A. FAN SHALL BE OF CORROSION RESISTANT PLASTIC CONSTRUCTION WITH MOTOR LOCATED OUT OF AIRSTREAM.
 B. DO NOT PROVIDE DAMPER FOR HYDROTHERAPY CHEMICAL EXHAUST.

GRILLE, REGISTER AND DIFFUSER SCHEDULE										
MARK	MANUFACTURER	SERVICE	MODEL	CONSTRUCTION TYPE	FACE TYPE	MOUNTING LOCATION	FACE SIZE (IN)	MAX. PRESS. DROP (IN W.C.)	NOTES	
CEG3	TTTUS	EXHAUST	OMNI-AA	ALUMINUM	PLAQUE	CEILING	24"x24"	25	0.10	ALL
CEG4	TTTUS	EXHAUST	OMNI-AA	ALUMINUM	PLAQUE	CEILING	12"x12"	25	0.10	ALL
CEG7	TTTUS	EXHAUST	PAR-AA	ALUMINUM	PERFORATED	CEILING	24"x24"	25	0.10	ALL
CRG1	TTTUS	RETURN	OMNI	STEEL	PLAQUE	CEILING	24"x24"	25	0.10	ALL
CRG3	TTTUS	<varies>	OMNI-AA	ALUMINUM	PLAQUE	CEILING	24"x24"	25	0.10	ALL
CSD1	TTTUS	SUPPLY	OMNI	STEEL	PLAQUE	CEILING	24"x24"	25	0.10	ALL
CSD3	TTTUS	SUPPLY	OMNI-AA	ALUMINUM	PLAQUE	CEILING	24"x24"	25	0.10	ALL
CSD4	TTTUS	SUPPLY	OMNI-AA	ALUMINUM	PLAQUE	CEILING	12"x12"	25	0.10	ALL
ERG1	TTTUS	EXHAUST/RETURN	300FL	ALUMINUM	LOUVERED	DUCT/WALL	REFER TO PLANS	25	0.10	ALL
SG1	TTTUS	<varies>	300FL	ALUMINUM	LOUVERED	DUCT/WALL	REFER TO PLANS	25	0.10	ALL
SS3	TTTUS	SUPPLY	DL	ALUMINUM	LOUVERED	DUCT	REFER TO PLANS	25	0.10	ALL

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LEGEND:
 CEG - CEILING EXHAUST GRILLE ERG - DUCT/WALL EXHAUST/RETURN/TRANSFER GRILLE
 CRG - CEILING RETURN/TRANSFER GRILLE SG - DUCT/WALL SUPPLY GRILLE
 CSD - CEILING SUPPLY DIFFUSER

GENERAL NOTES:

- NECK SIZE SHOWN ON DRAWINGS. PROVIDE BRANCH DUCT TO MATCH NECK SIZE UNLESS OTHERWISE SHOWN ON DRAWINGS.
- FRAME TYPE TO MATCH CEILING/WALL CONSTRUCTION.
- PROVIDE DIFFUSERS, LINEAR SLOTS, AND GRILLES WITH NO EXPOSED MOUNTING SCREWS.
- PAINT ALL INTERIOR SURFACES OF SLOTS, GRILLES AND PLENUMS FLAT BLACK.
- COORDINATE INSTALLATION AND DIFFUSER TYPE WITH ARCHITECTURAL REFLECTED CEILING PLAN. PROVIDE REMOTE CABLE OPERATED DAMPER FOR DIFFUSERS INSTALLED IN INACCESSIBLE CEILING. REFER TO SPECIFICATIONS.

NOTES SPECIFIC TO CEILING MOUNT DEVICES:

- SUPPLY DIFFUSERS SHALL HAVE 4-WAY THROW PATTERN UNLESS OTHERWISE INDICATED BY FLOW ARROWS ON DRAWINGS.
- PAINT ENAMEL FINISH TO MATCH CEILING COLOR. DIFFUSER COLOR SHALL BE A STANDARD CATALOG COLOR UNLESS OTHERWISE NOTED ON PLAN. COORDINATE AIR DEVICE COLOR WITH ARCHITECTURAL PLANS AND SUBMIT PROPOSED COLORS FOR REVIEW BY ENGINEER AND ARCHITECT.
- PROVIDE WITH RAPID MOUNT FRAMING OPTION FOR LAY-IN TYPE DIFFUSERS INSTALLED IN A SHEETROCK OR OTHERWISE INACCESSIBLE CEILING.

NOTES SPECIFIC TO WALL/DUCT MOUNT DEVICES:

- FRONT BLADES PARALLEL TO LONG DIMENSION.
- SUPPLY GRILLES SHALL HAVE ADJUSTABLE DOUBLE DEFLECTION BARS.
- PROVIDE OPPOSED BLADE DAMPER ADJUSTABLE FROM FACE OF DEVICE WHERE INDICATED ON PLAN. DAMPERS SHOWN OUTSIDE OF DEVICES ARE INTENDED TO BE INSTALLED NOT INTEGRAL TO DEVICE.

UNIT HEATER SCHEDULE (ELECTRIC)											
MARK	AREA SERVED	MANUFACTURER	MODEL	MIN OUT (MBH)	NOM (KW)	MIN NO OF STAGES	CFM	MOTOR HP	ELECTRICAL	WEIGHT (LBS)	NOTES
UH 01	A155 FIRE RISER	QMARK	MUH03-81	10.2	3.0	1	350	0.01	208 V / 1PH	27	ALL
UH 02	A130 PLUMBING	QMARK	MUH03-81	10.2	3.0	1	350	0.01	208 V / 1PH	27	ALL

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NOTES:

- MOUNT 8 FEET ABOVE FINISHED FLOOR WITHOUT OBSTRUCTING AIRFLOW.
- PROVIDE WITH UNIT MOUNTED THERMOSTAT.
- CU CARRIER PROVIDE NECESSARY MOUNTING BRACKET AND ACCESSORIES FOR HORIZONTAL MOUNTING.
- DISCONNECT SWITCH PROVIDED BY DIVISION 26 CONTRACTOR.

MINI SPLIT INDOOR UNIT SCHEDULE (COOLING ONLY)														
MARK	AREA SERVED	MANUFACTURER	MODEL	UNIT TYPE	ASSOCIATED OUTDOOR UNIT	TH (MBH)	SH (MBH)	COOLING CAP			ELECTRICAL	WEIGHT (LBS)	NOTES	
								(T DB)	(T WB)	(T DB)				
FCU 03	A148 ELEC	CARRIER	45MHAC24	DUCTLESS - WALL MOUNTED	CU 03	19.0	19.0	80	68	208 V / 1PH	3	15	40	ALL
FCU 05	A150 DF	CARRIER	45MHAC24	DUCTLESS - WALL MOUNTED	CU 05	20.0	20.0	80	68	208 V / 1PH	3	15	40	ALL
FCU 06	A160 ELEC	CARRIER	45MHAC33	DUCTLESS - WALL MOUNTED	CU 06	24.5	24.5	80	68	208 V / 1PH	3	15	56	ALL

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NOTES:

- REFER TO MINI SPLIT OUTDOOR UNIT SCHEDULE FOR ADDITIONAL INFORMATION.
- INDOOR UNIT POWERED THROUGH OUTDOOR UNIT. WIRING BETWEEN INDOOR AND OUTDOOR UNITS PROVIDED BY DIVISION 26 CONTRACTOR. COORDINATE CONDUCTOR QUANTITY WITH MANUFACTURER'S REQUIREMENTS.
- DISCONNECT SWITCH FOR INDOOR UNIT PROVIDED BY DIVISION 26 CONTRACTOR.
- COORDINATE SIZE OF CONDUCTOR TERMINATION LUGS WITH CONDUCTOR SIZES SHOWN ON ELECTRICAL DRAWINGS.
- STARTERS FOR ALL MOTORS SHALL BE PROVIDED INTEGRAL WITH UNIT.
- CONTRACTOR SHALL VERIFY WITH EQUIPMENT SUPPLIER EXACT ROUTING AND SIZE OF INSULATED REFRIGERANT PIPING. INSTALL PER MANUFACTURER'S RECOMMENDATIONS.
- PROVIDE WITH FLOAT SWITCH IN PRIMARY DRAIN PAN TO SHUT OFF UNIT WHEN WATER DOES NOT DRAIN PROPERLY.
- PROVIDE WITH HARDWIRED WALL-MOUNTED CONTROLLER BY UNIT MANUFACTURER.
- CONDENSATE PUMP PROVIDED BY DIVISION 22 CONTRACTOR.
- SELECT EQUIPMENT FOR ELEVATION OF 214 FEET ABOVE SEA LEVEL.

MINI SPLIT OUTDOOR UNIT SCHEDULE													
MARK	MANUFACTURER	MODEL	ASSOCIATED INDOOR UNIT	REFR TYPE	TH (MBH)	COOLING			ELECTRICAL	WEIGHT (LBS)	NOTES		
						EER2	SEER2	VPH					
CU 03	CARRIER	37MHAC24	FCU 03	R-454B	22.0	10.2	21.1	208 V / 1PH	19	20	74	ALL	
CU 05	CARRIER	37MHAC24	FCU 05	R-454B	22.0	10.2	21.1	208 V / 1PH	19	20	74	ALL	
CU 06	CARRIER	37MHAC33	FCU 06	R-454B	33.0	12	19.6	208 V / 1PH	34	35	168	ALL	

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NOTES:

- REFER TO MINI SPLIT INDOOR UNIT SCHEDULE FOR ADDITIONAL INFORMATION.
- INDOOR UNIT POWERED THROUGH OUTDOOR UNIT. WIRING BETWEEN INDOOR AND OUTDOOR UNITS PROVIDED BY DIVISION 26 CONTRACTOR. COORDINATE CONDUCTOR QUANTITY WITH MANUFACTURER'S REQUIREMENTS.
- EQUIPMENT CAPACITY SCHEDULED IS MINIMUM CAPACITY THAT MUST BE PROVIDED AT AMBIENT TEMPERATURE INDICATED.
- CONTRACTOR SHALL VERIFY WITH EQUIPMENT SUPPLIER EXACT ROUTING AND SIZE OF INSULATED REFRIGERANT PIPING. INSTALL PER MANUFACTURER'S RECOMMENDATIONS.
- DISCONNECT SWITCH PROVIDED BY DIVISION 26 CONTRACTOR.
- COORDINATE SIZE OF CONDUCTOR TERMINATION LUGS WITH CONDUCTOR SIZES SHOWN ON ELECTRICAL DRAWINGS.
- STARTERS FOR ALL MOTORS SHALL BE PROVIDED INTEGRAL WITH UNIT.
- PROVIDE CONDENSER COIL HAIL GUARDS.
- PROVIDE PRE-ENGINEERED ROOF EQUIPMENT SUPPORTS WITH MINIMUM HEIGHT REQUIRED TO MAINTAIN BOTTOM OF EQUIPMENT A MINIMUM OF 8 INCHES[16 INCHES] ABOVE FINISHED ROOF SURFACE. COORDINATE WITH ROOF INSULATION THICKNESS AND ROOF TAPER AT INSTALLED LOCATION.
- PROVIDE LOW AMBIENT KIT FOR COOLING OPERATION DOWN TO 25°F.
- SELECT EQUIPMENT FOR ELEVATION OF 214 FEET ABOVE SEA LEVEL.

FAN COIL UNIT SCHEDULE (HEAT PUMP)																							
MARK	AREA SERVED	MANUFACTURER	MODEL	SUPPLY FAN	CFM	ESP (IN)	NOM HP	COOLING COIL				HEAT PUMP HEATING COIL				MIN OA (CFM)	ELECTRICAL	WEIGHT (LBS)	NOTES				
								TH (MBH)	SH (MBH)	EAT (T DB)	LAT (T WB)	REFR TYPE	MIN OUT (MBH)	AMBIENT (T DB)	EAT (T DB)					LAT (T DB)			
FCU 01	PUMP ROOM	CARRIER	FJ5ANX060	2500	0.5	0.75	50.0	37.9	74.2	58.2	55.0	53.5	R-454B	30.0	20	60	90	0	208V1	7.6	15	210	ALL
FCU 02	OFFICE WORKROOM / GYM STORAGE	CARRIER	FJ5ANXB36	1500	0.5	0.50	26.0	23.7	74.2	58.4	55.0	53.5	R-454B	14.1	20	70	75	208V1	5.3	15	148	ALL	
FCU 04	POOL STAFF OFFICES / STORAGE	CARRIER	FJ5ANXA18	550	0.5	0.33	11.9	10.9	74.2	58.4	55.0	53.5	R-454B	6.3	20	70	90	30	208V1	3.6	15	120	ALL

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NOTES:

- ASSOCIATED CONDENSING UNIT SHALL BE BY THE SAME MANUFACTURER.
- FOR COOLING, EQUIPMENT SIZED FOR 10°F AMBIENT TEMPERATURE. HEAT PUMP HEATING CAPACITY BASED ON AMBIENT TEMPERATURE LISTED.
- PROVIDE PRE-MANUFACTURED OR FIELD FABRICATED FILTER RACK ON UNIT RETURN AIR INLET WITH 2" MERV 13, PLEATED THROWAWAY FILTERS. FILTERS SHALL BE ACCESSIBLE FROM SERVICE SIDE OF UNIT. BOTTOM ACCESS FILTER RACK IS NOT PERMITTED.
- PROVIDE WITH BACK INLET CONNECTION.
- PROVIDE WITH FRONT OUTLET CONNECTION.
- PROVIDE WITH 7-DAY PROGRAMMABLE THERMOSTAT WITH STAGED HEATING AND COOLING CAPABILITY AS REQUIRED FOR OPERATION OF AUXILIARY HEATING AND COOLING CONTROLS.
- PROVIDE ACRYLIC WINDPROOF INLET COVER.
- PROVIDE FACTORY MOUNTED STARTER AND DISCONNECT SWITCH INSTALLED ON SERVICE SIDE OF UNIT.
- STARTER PROVIDED BY DIVISION 26 CONTRACTOR.
- PROVIDE SINGLE POINT POWER CONNECTION.
- SPECIFIED FAN ESP ACCOUNTS FOR DUCT LOSSES EXTERNAL TO UNIT. FILTER LOSS IS AT A MINIMUM OF 400 FPM FACE VELOCITY.
- PROVIDE MOTOR HORSPOWER TO OVERCOME INTERNAL UNIT STATIC PRESSURE DROP PLUS SPECIFIED EXTERNAL STATIC PRESSURE DROP.
- NOMINAL MOTOR HP SHALL BE NO LARGER THAN THE FIRST AVAILABLE NOMINAL MOTOR SIZE GREATER THAN THE REQUIRED BHP.
- DIVISION 26 CONTRACTOR SHALL PROVIDE SMOKE DETECTORS IN RETURN AIR DUCT(S).
- PROVIDE WITH SPRING VIBRATION ISOLATION AND ALL-THREAD HANGING RODS.
- PROVIDE HEATER TO MEET OR EXCEED SCHEDULED MINIMUM MBH OUTPUT. NOMINAL KW IS BASED ON LISTED MANUFACTURER'S STANDARD PRODUCT.
- COORDINATE EQUIPMENT POWER SUPPLY WITH ELECTRICAL CONTRACTOR IF DIFFERENT FROM THAT SCHEDULED.
- TOTAL HEATING CAPACITY INCLUDES THE HEAT PUMP HEATING COIL CAPACITY AT THE AMBIENT DRY BULB TEMPERATURE LISTED.
- SELECT EQUIPMENT FOR ELEVATION OF 214 FEET ABOVE SEA LEVEL.
- PROVIDE AUXILIARY DRAIN PAN WITH FLOOD DETECTOR SWITCH TO SHUT OFF UNIT WHEN WATER IS PRESENT IN DRAIN PAN.

CONDENSING UNIT SCHEDULE (HEAT PUMP)																	
MARK	SERVICE	MANUFACTURER	MODEL	NOMINAL TONS	REFR TYPE	COOLING CAPACITY			HEATING CAPACITY			ELECTRICAL	WEIGHT (LBS)	NOTES			
						TH (MBH)	MIN EFF (EER2)	SEER2	CAP (MBH)	AMBIENT (DB F)	MIN EFF (HSPF2)						
CU 01	FCU 01	CARRIER	27SCA590	5	R-454B	60.0	12.0	14.5	30.0	19.7	3.7	7.5	208V1	31.1	50	255	ALL
CU 02	FCU 02	CARRIER	27SCA536	3	R-454B	36.0	12.0	14.5	20.0	19.7	3.8	7.5	208V1	19.2	30	193	ALL
CU 04	FCU 04	CARRIER	27SCA518	1.5	R-454B	18.0	12.0	14.5	10.0	19.7	3.7	7.5	208V1	10.9	15	109	ALL

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NOTES:

- REFER TO HEAT PUMP CONTROL MATRIX FOR CONTROL FEATURES, MODULES, AND ACCESSORIES THAT SHALL BE PROVIDED WITH THE EQUIPMENT.
- EQUIPMENT CAPACITY SCHEDULED IS MINIMUM CAPACITY THAT MUST BE PROVIDED AT AMBIENT TEMPERATURE INDICATED.
- CONTRACTOR SHALL VERIFY WITH EQUIPMENT SUPPLIER EXACT QUANTITY AND SIZE OF REFRIGERANT PIPING.
- PROVIDE LIQUID LINE FILTER DRYER AND SIGHT GLASS.
- PROVIDE PRE-ENGINEERED ROOF EQUIPMENT SUPPORTS WITH MINIMUM HEIGHT REQUIRED TO MAINTAIN BOTTOM OF EQUIPMENT A MINIMUM OF 8 INCHES ABOVE FINISHED ROOF SURFACE. COORDINATE WITH ROOF INSULATION THICKNESS AND ROOF TAPER AT INSTALLED LOCATION.
- DISCONNECT SWITCH PROVIDED BY DIVISION 26 CONTRACTOR.
- STARTERS FOR ALL MOTORS SHALL BE PROVIDED INTEGRAL WITH UNIT.
- COORDINATE SIZE OF CONDUCTOR TERMINATION LUGS WITH CONDUCTOR SIZES SHOWN ON ELECTRICAL DRAWINGS.
- PROVIDE CONDENSER COIL HAIL GUARDS.
- PROVIDE HARD START KIT.
- PROVIDE A FACTORY APPLIED COIL CORROSION COATING TO CONDENSER COIL WHICH IS CAPABLE OF WITHSTANDING GREATER THAN 6,000 HOURS OF THE ASTM B117 SALT SPRAY TEST.
- EQUIPMENT SIZED FOR 105°F AMBIENT TEMPERATURE.

SEAL

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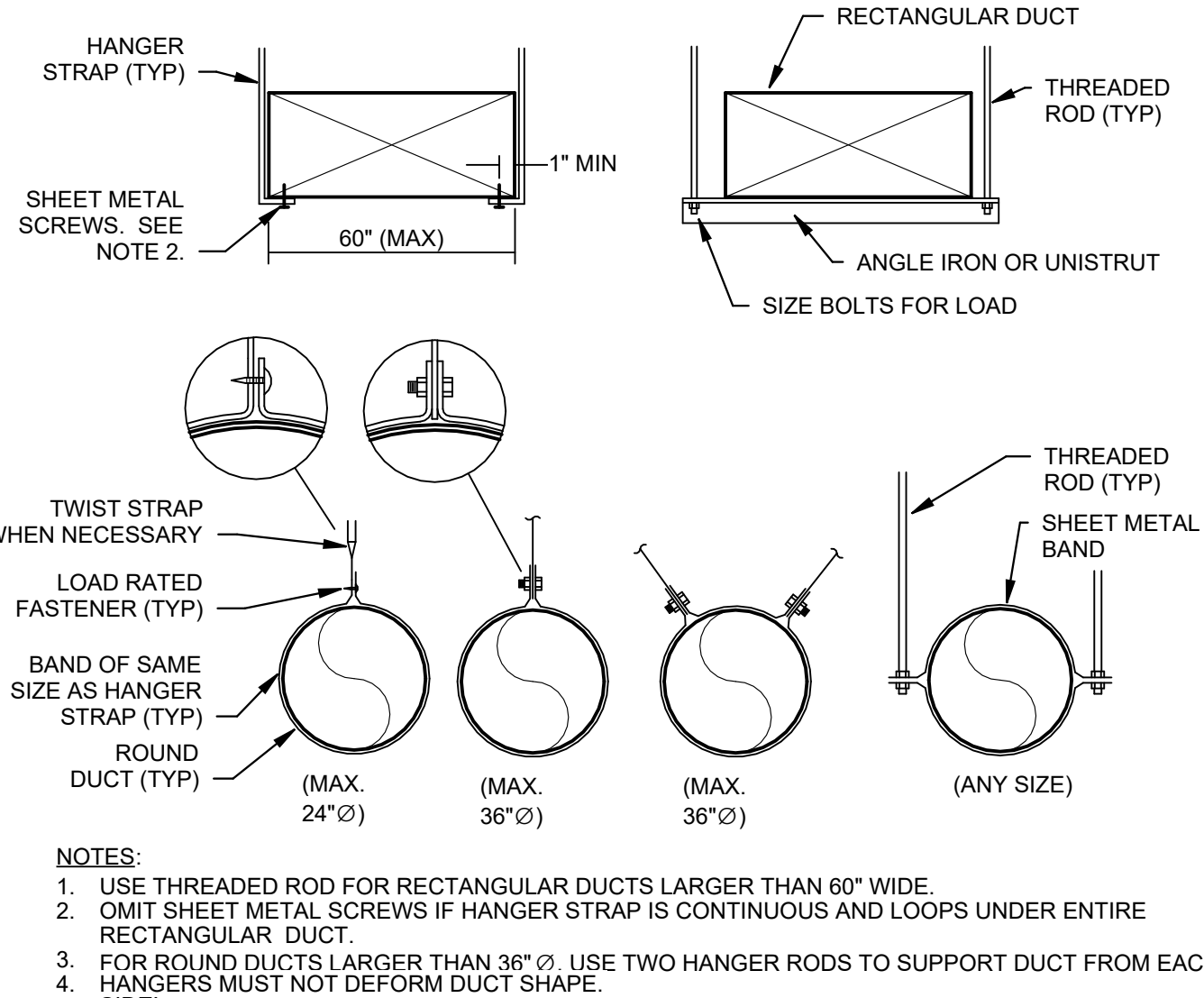
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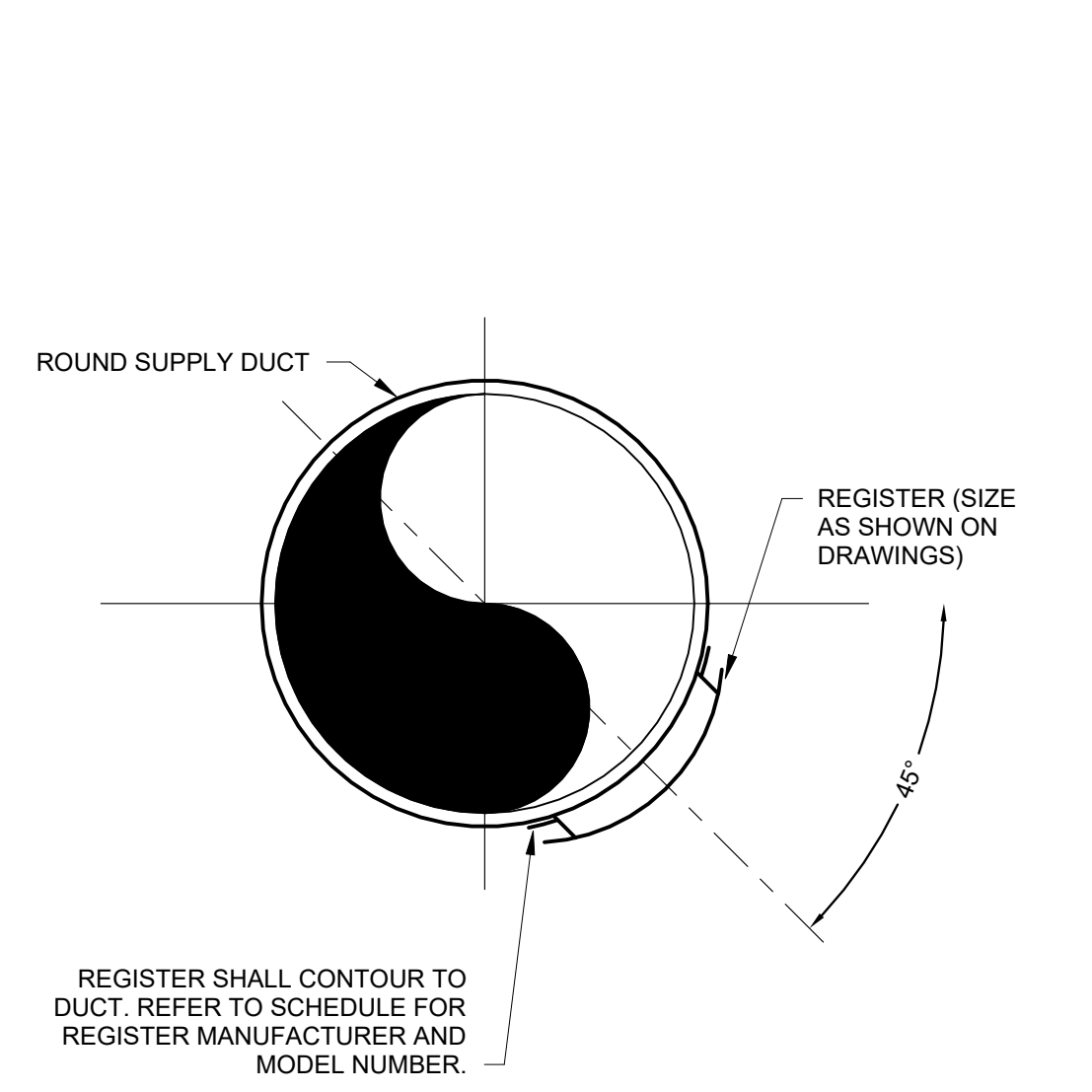
City of West Memphis

DRAWING ISSUE

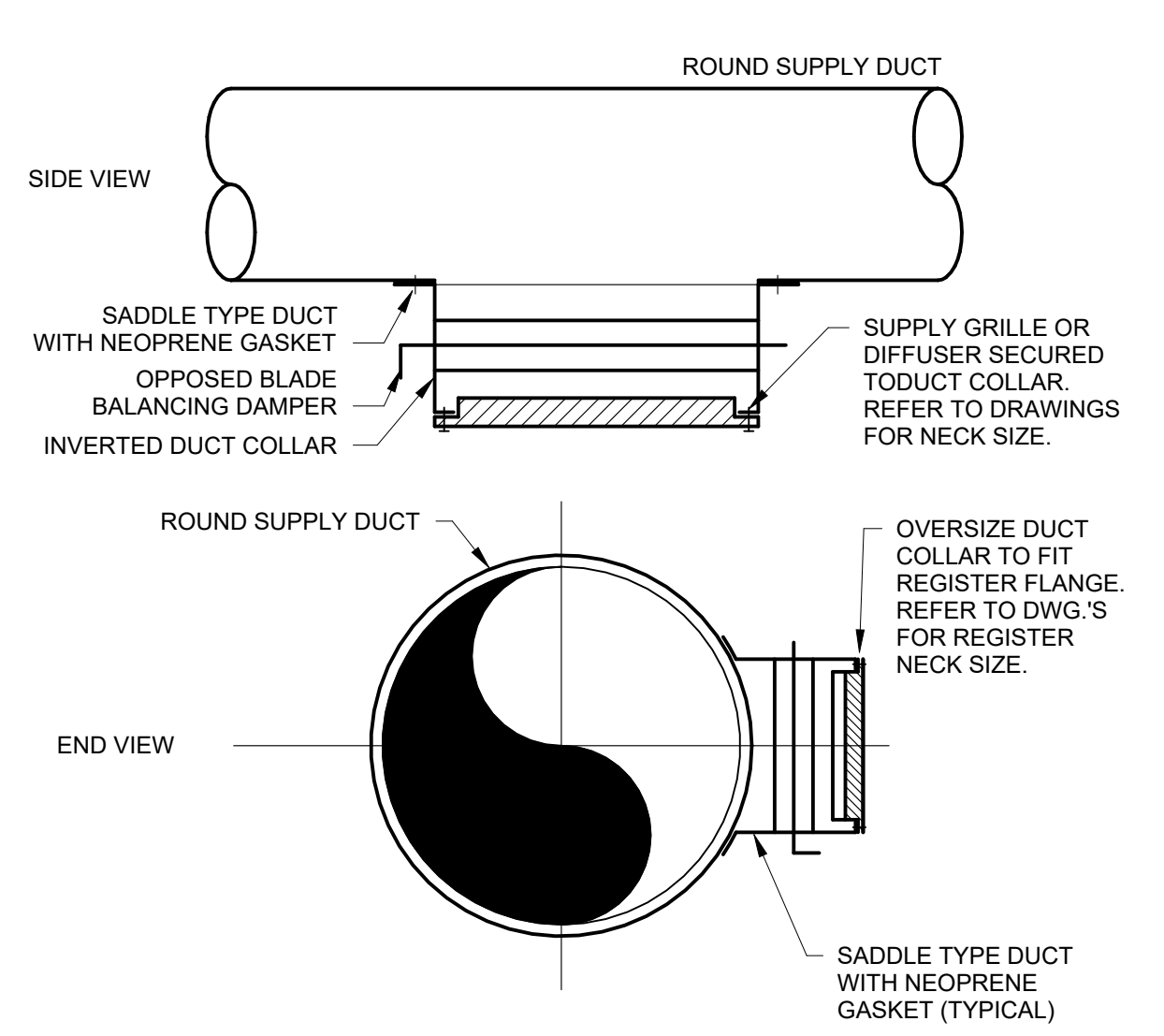
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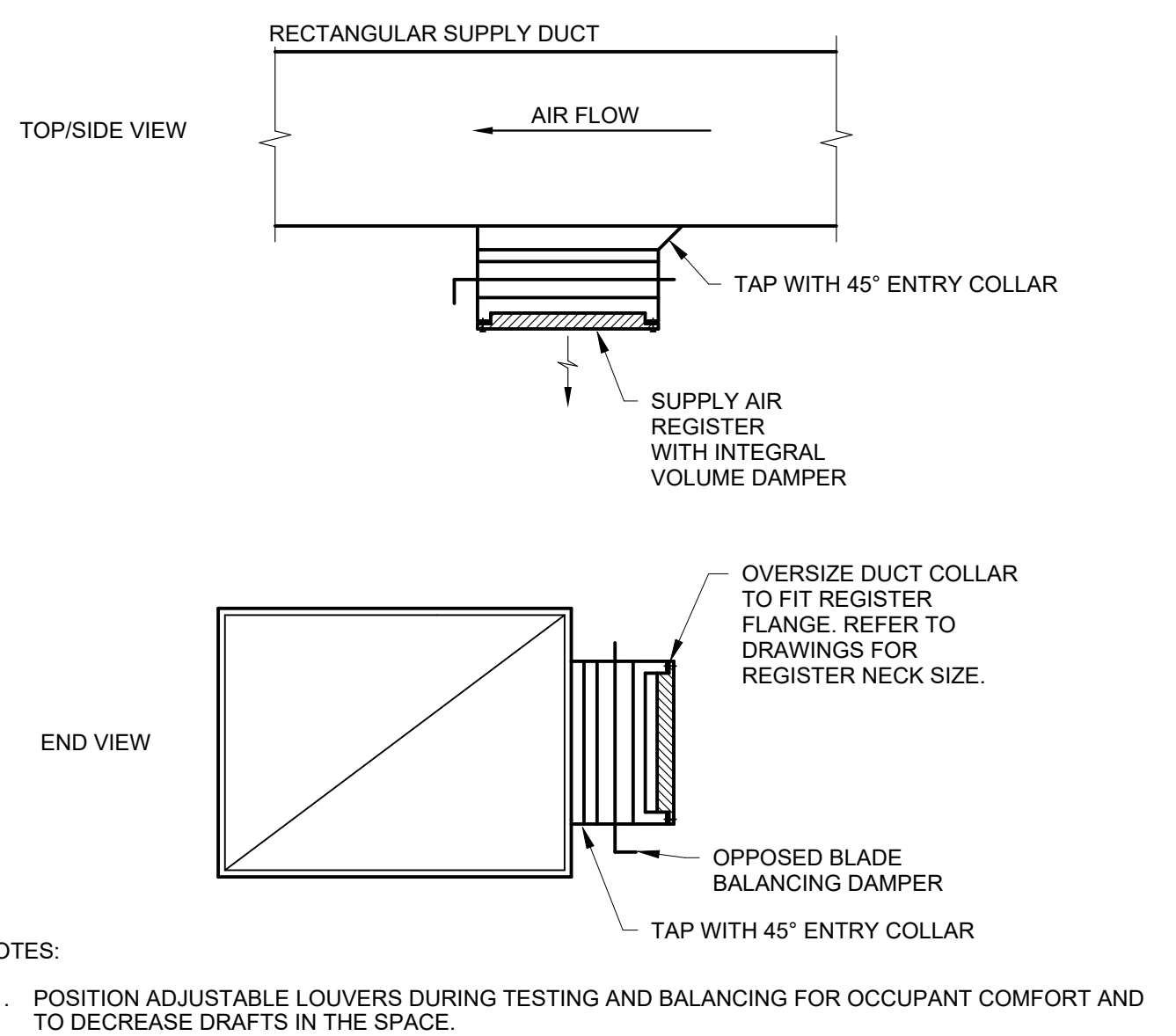
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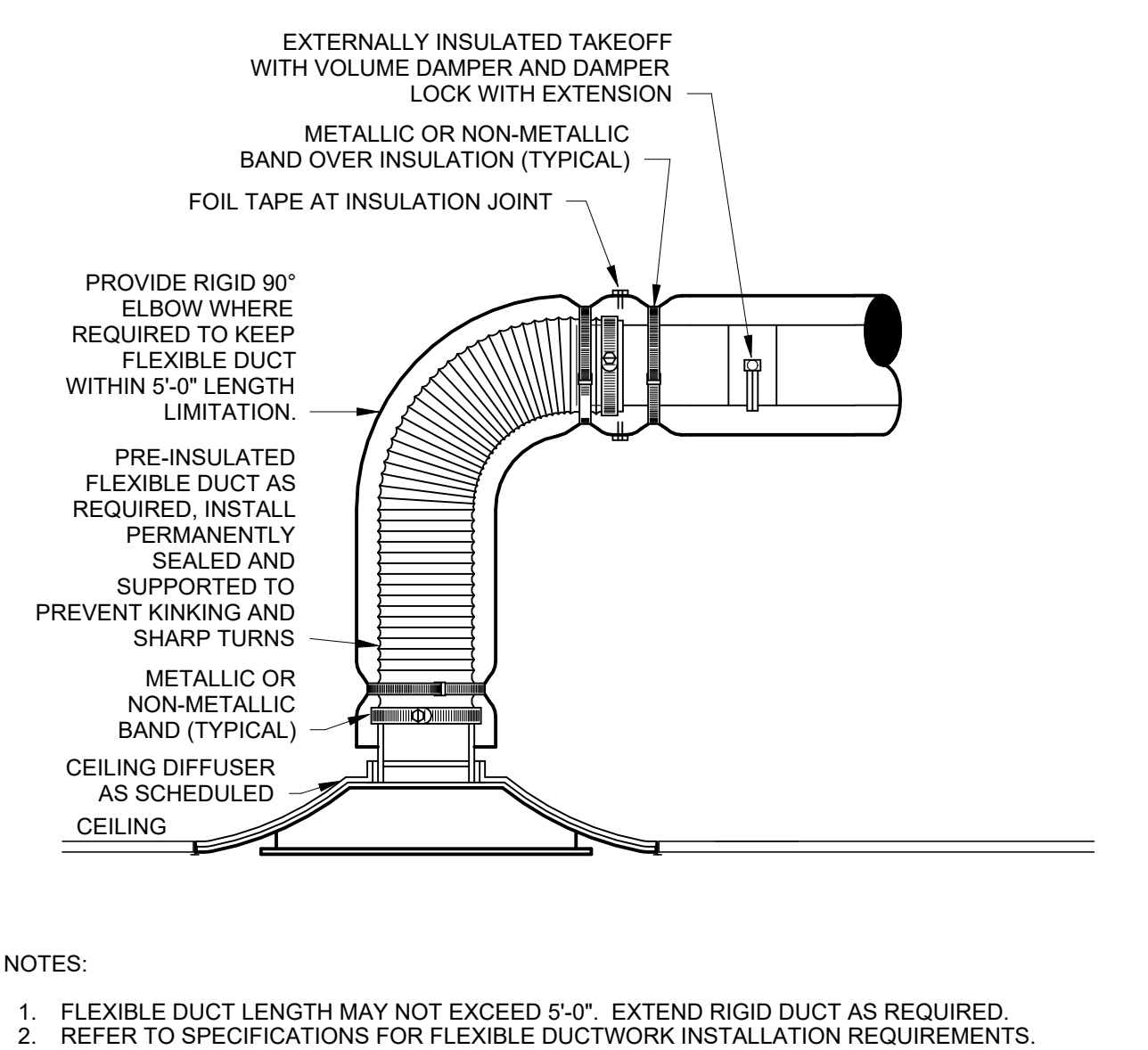
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NTS



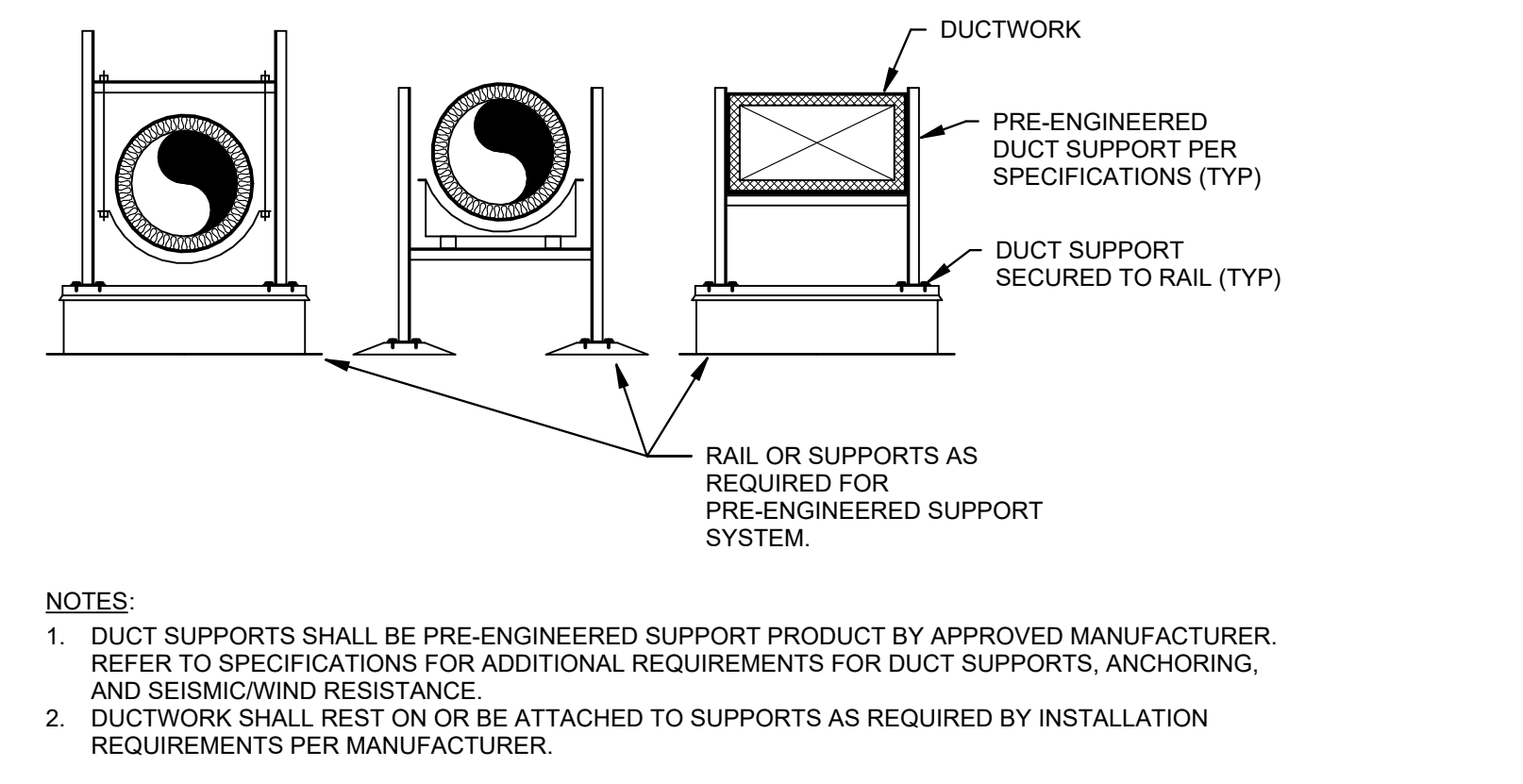
3 REGISTER MOUNTING TO ROUND DUCT DETAIL
NTS



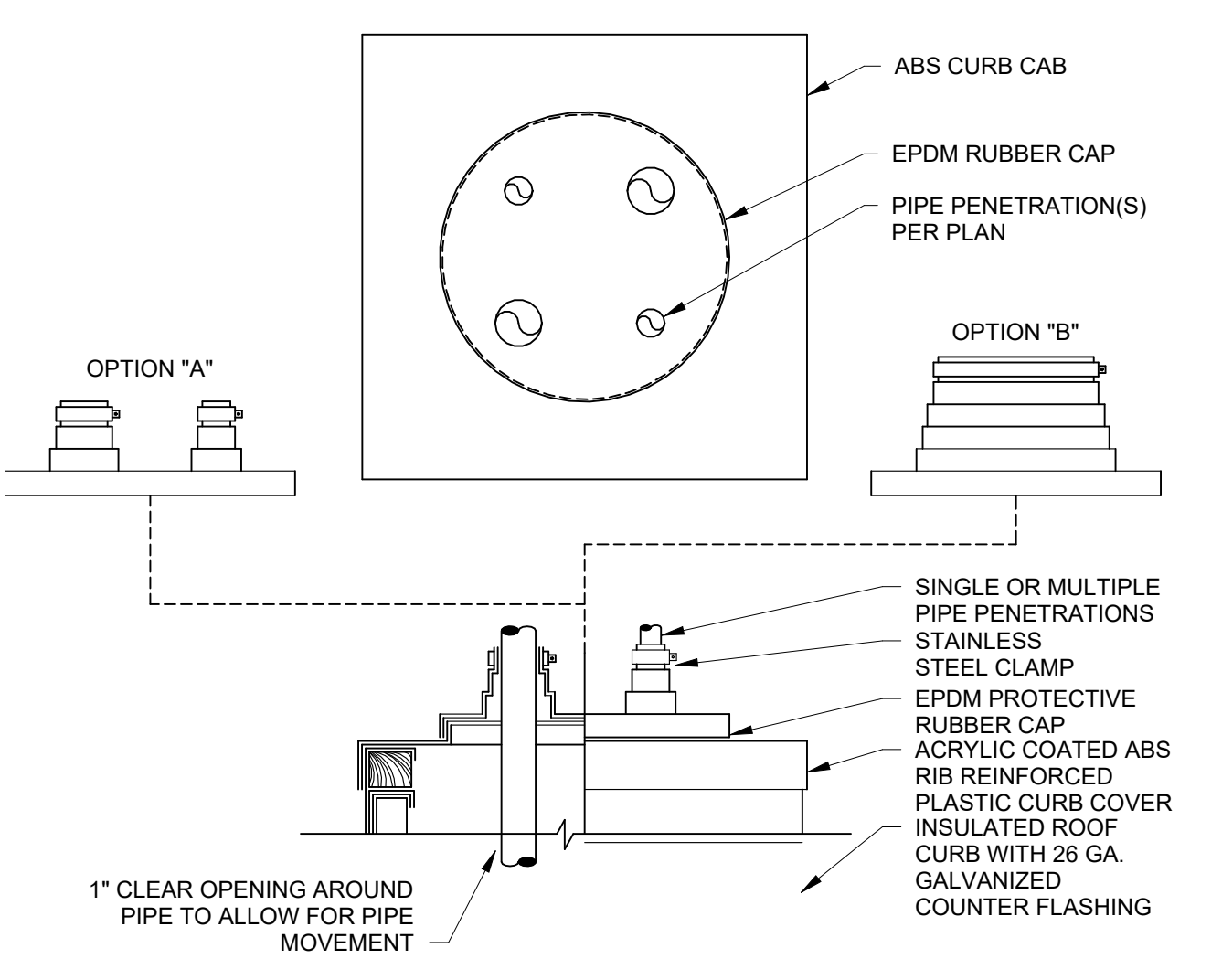
2 REGISTER MOUNTING TO RECTANGULAR DUCT DETAIL
NTS



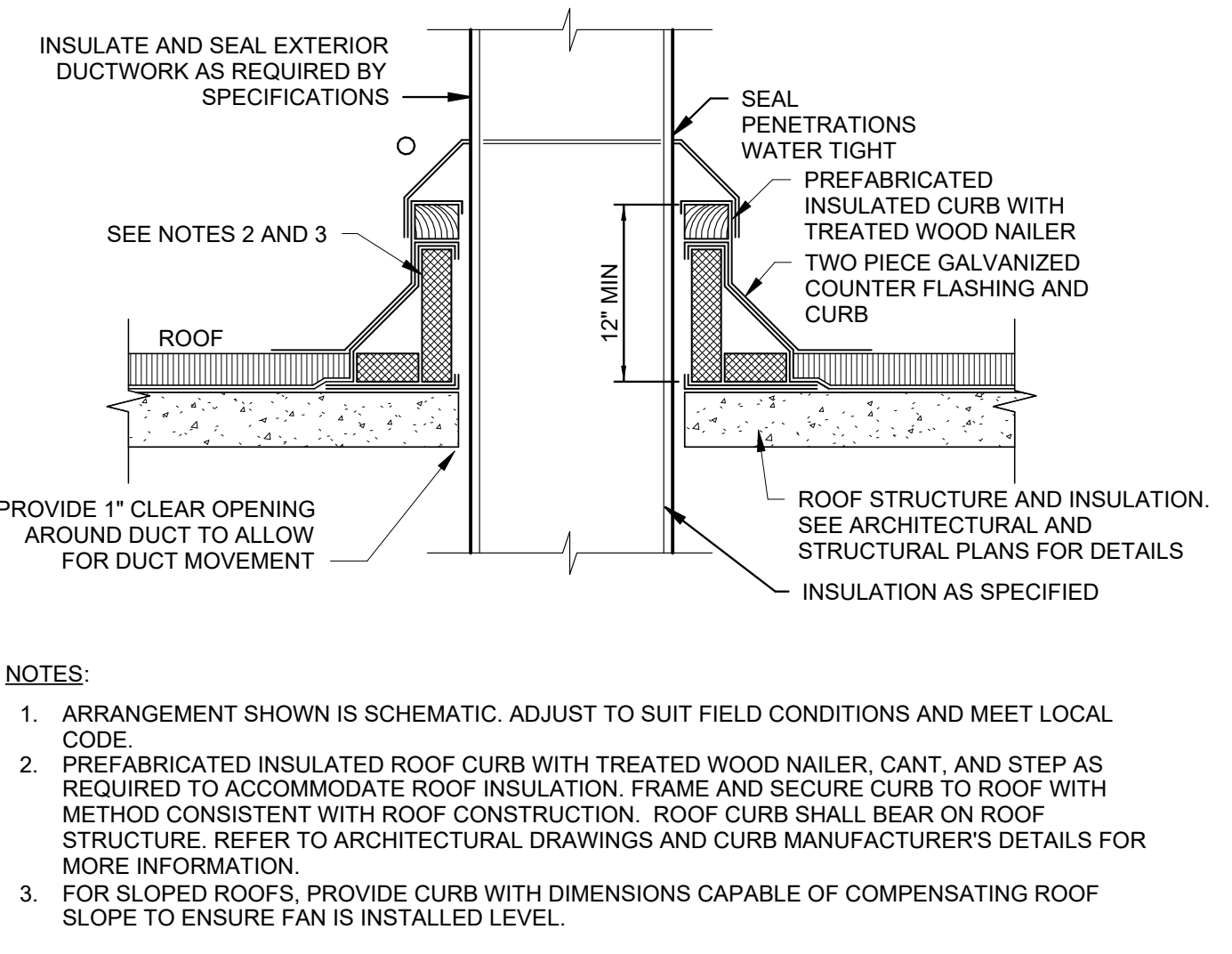
1 CEILING DIFFUSER DETAIL
NTS



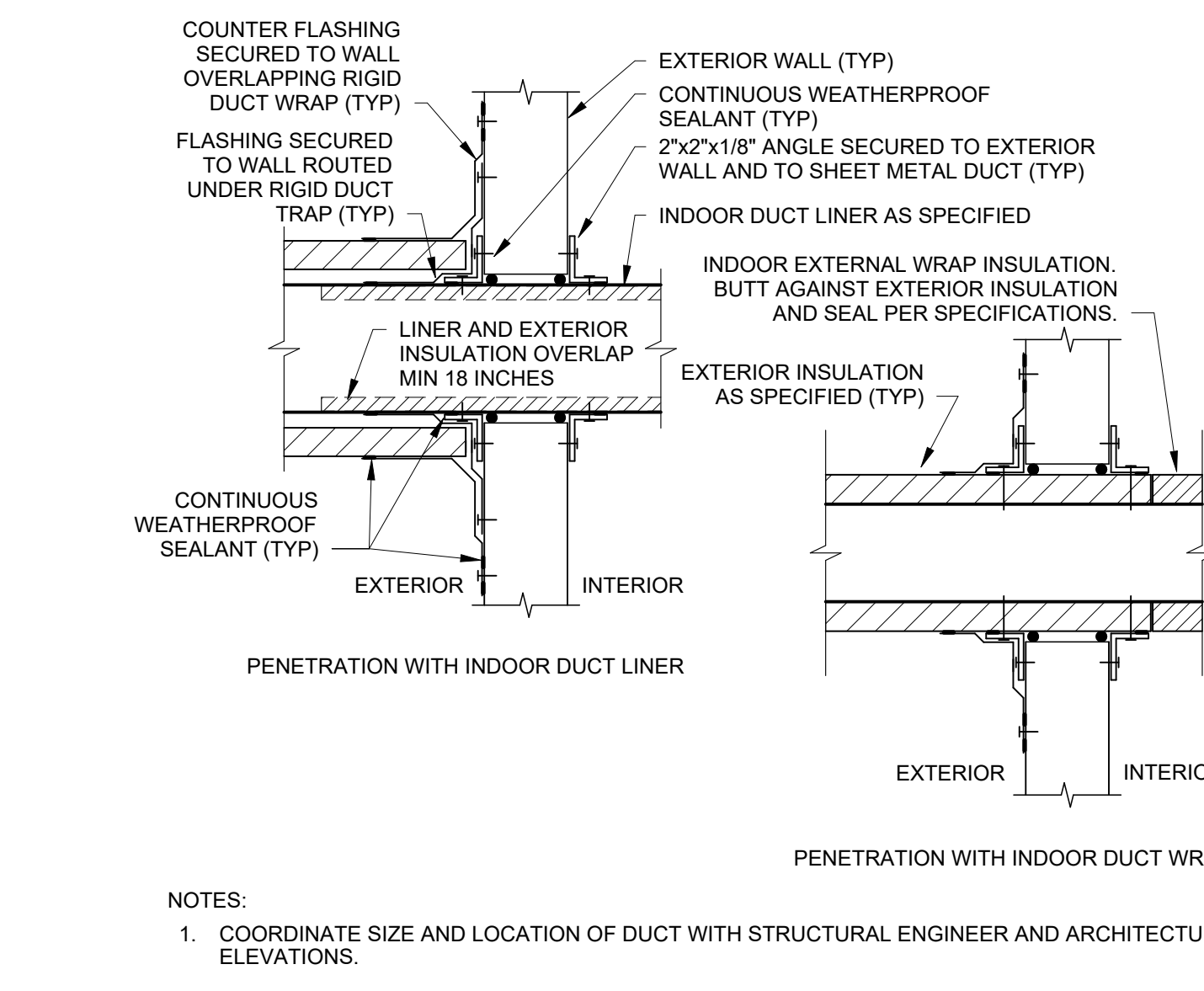
10 ROOF MOUNTED DUCT SUPPORT DETAIL
NTS



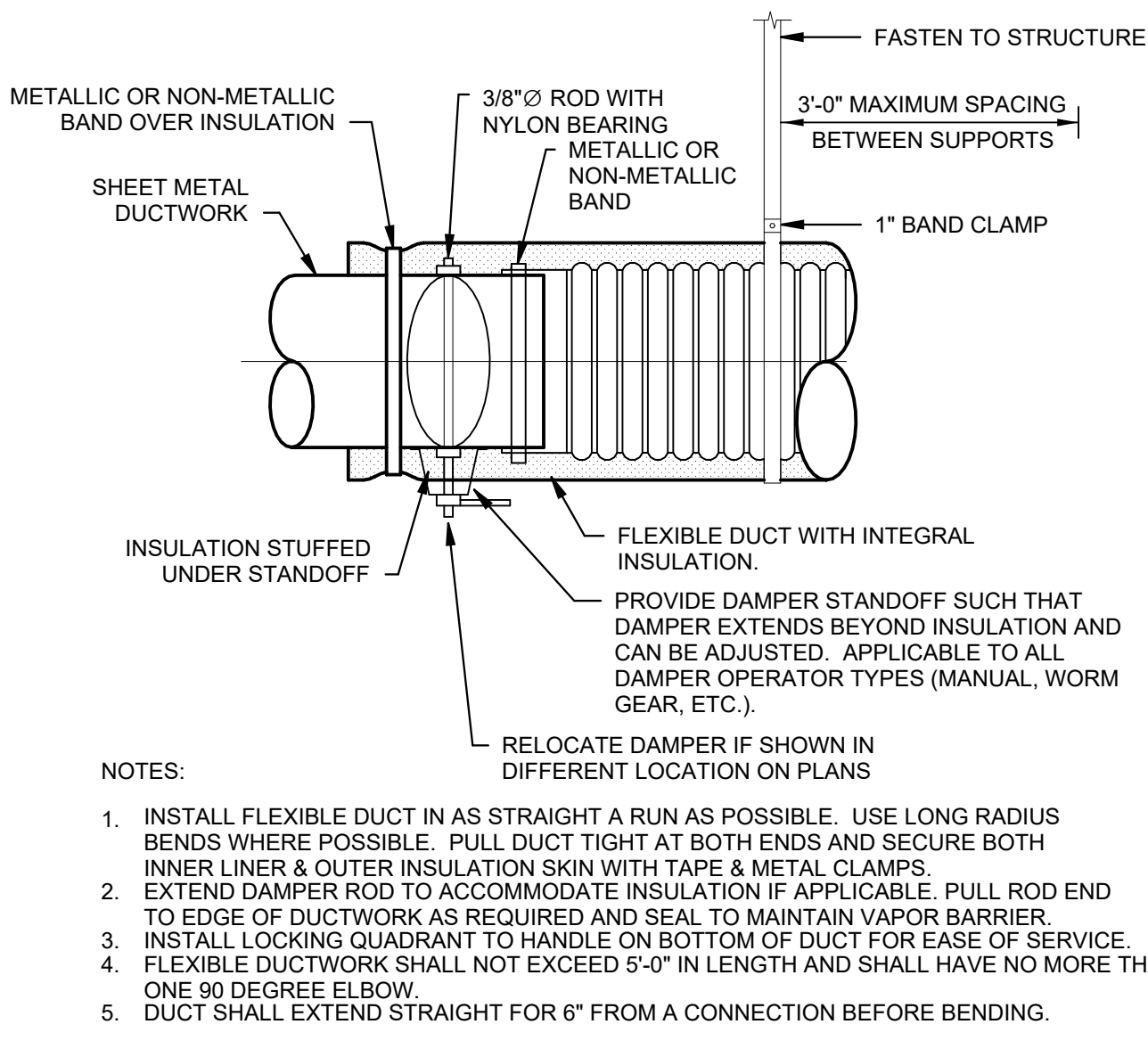
9 PIPE PORTAL ROOF PENETRATION DETAIL
NTS



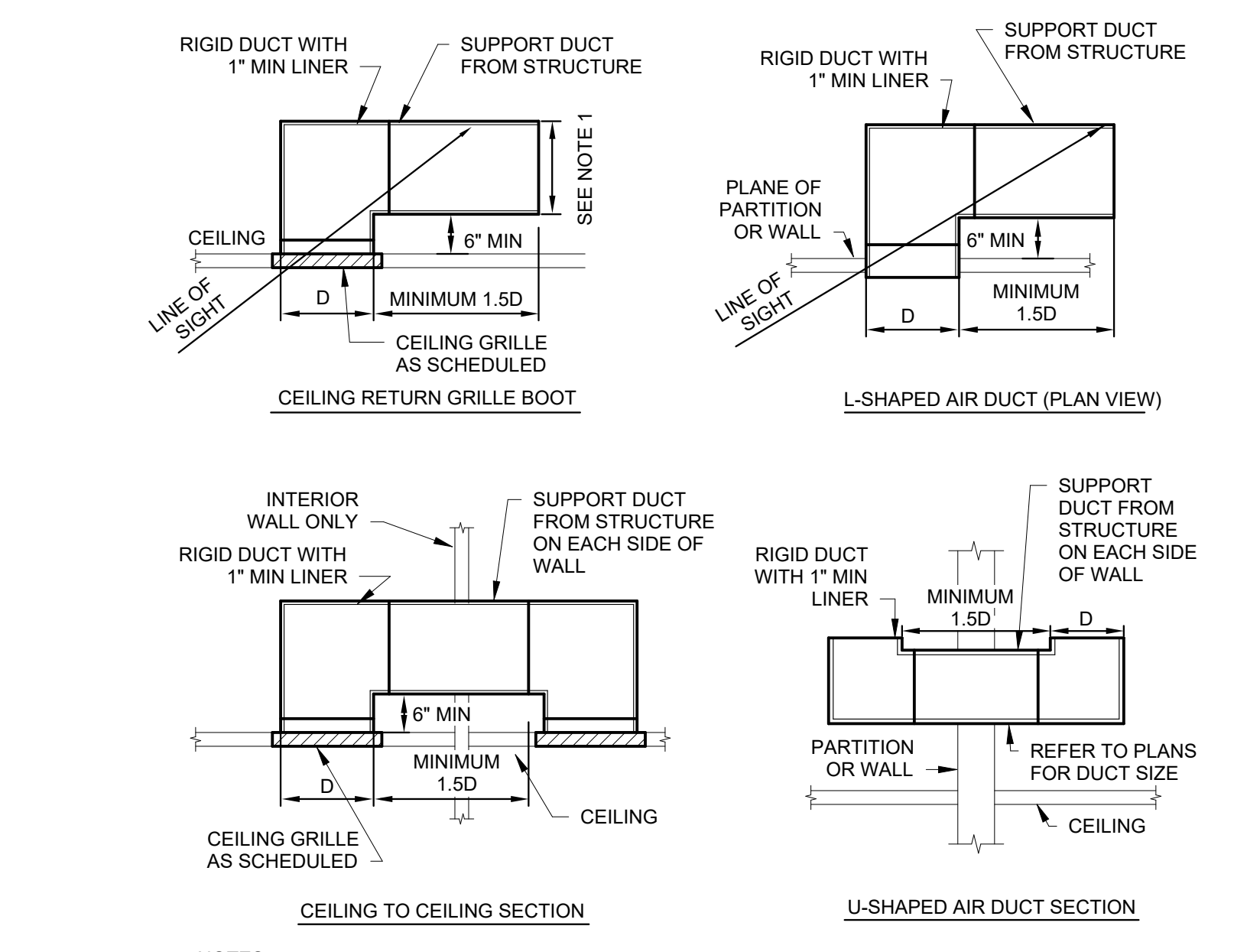
8 RECTANGULAR AIR DUCT PENETRATION THROUGH ROOF DETAIL
NTS



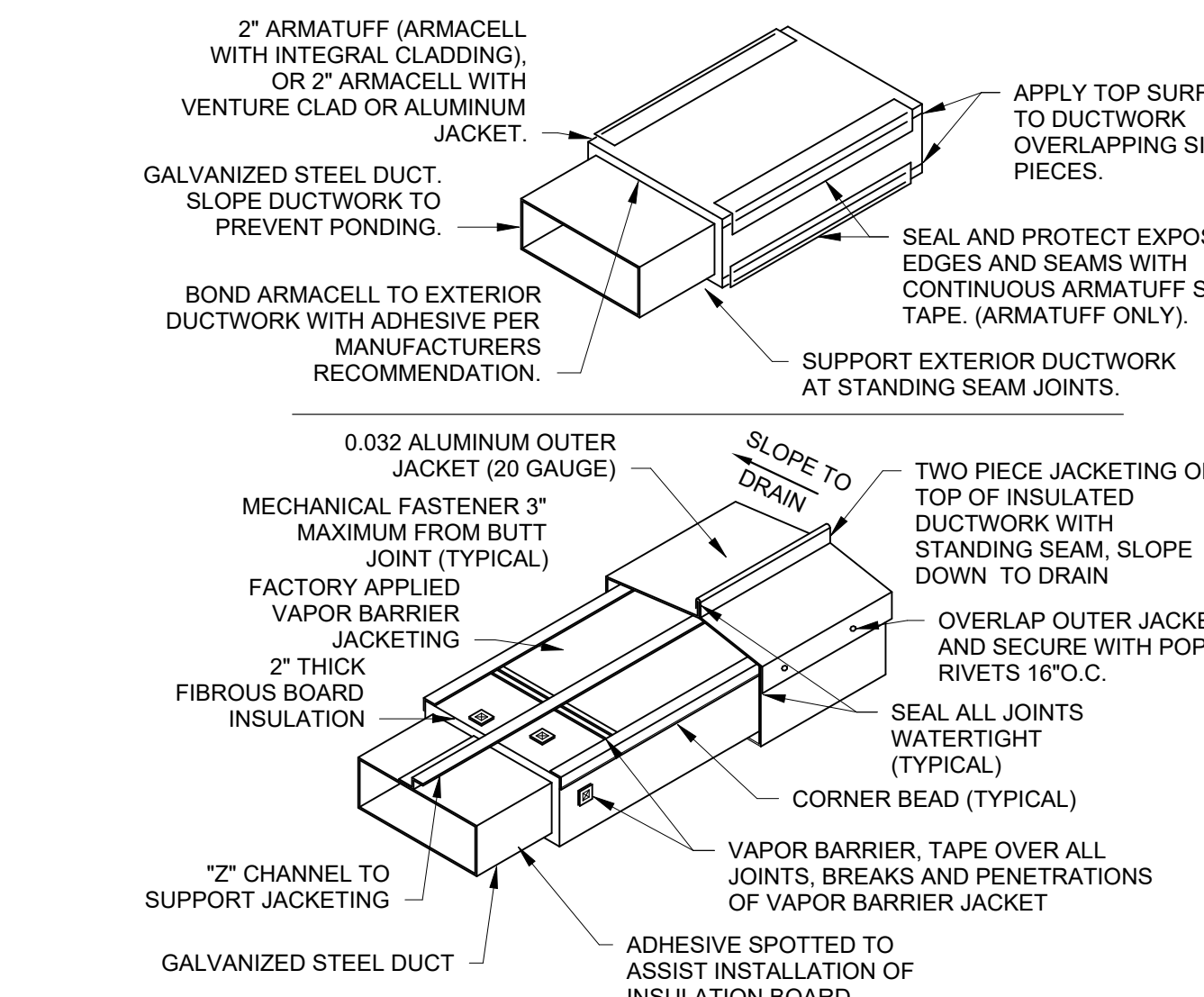
7 DUCT EXTERIOR WALL PENETRATION DETAIL
NTS



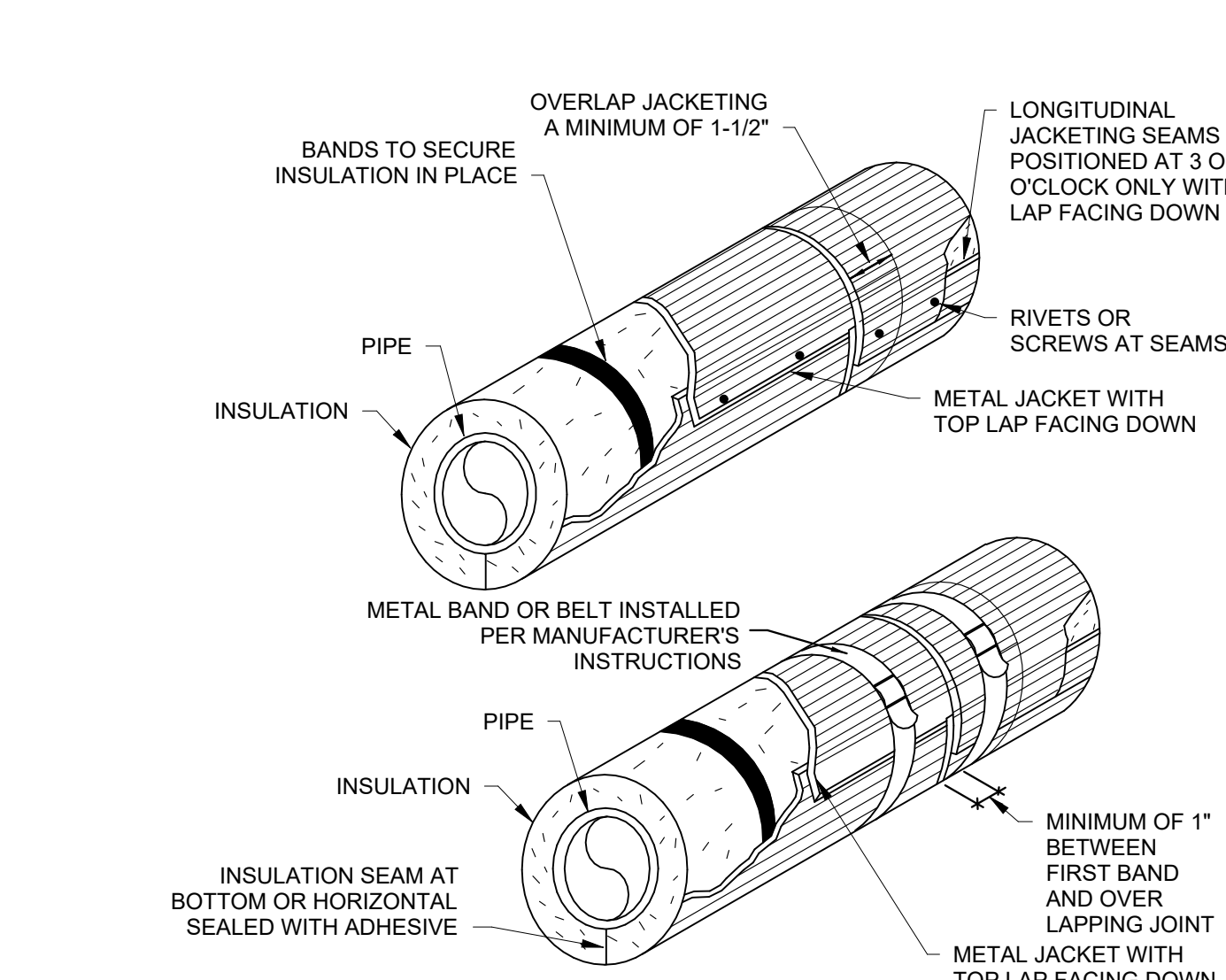
6 DAMPER AND FLEX DUCT CONNECTION DETAIL
NTS



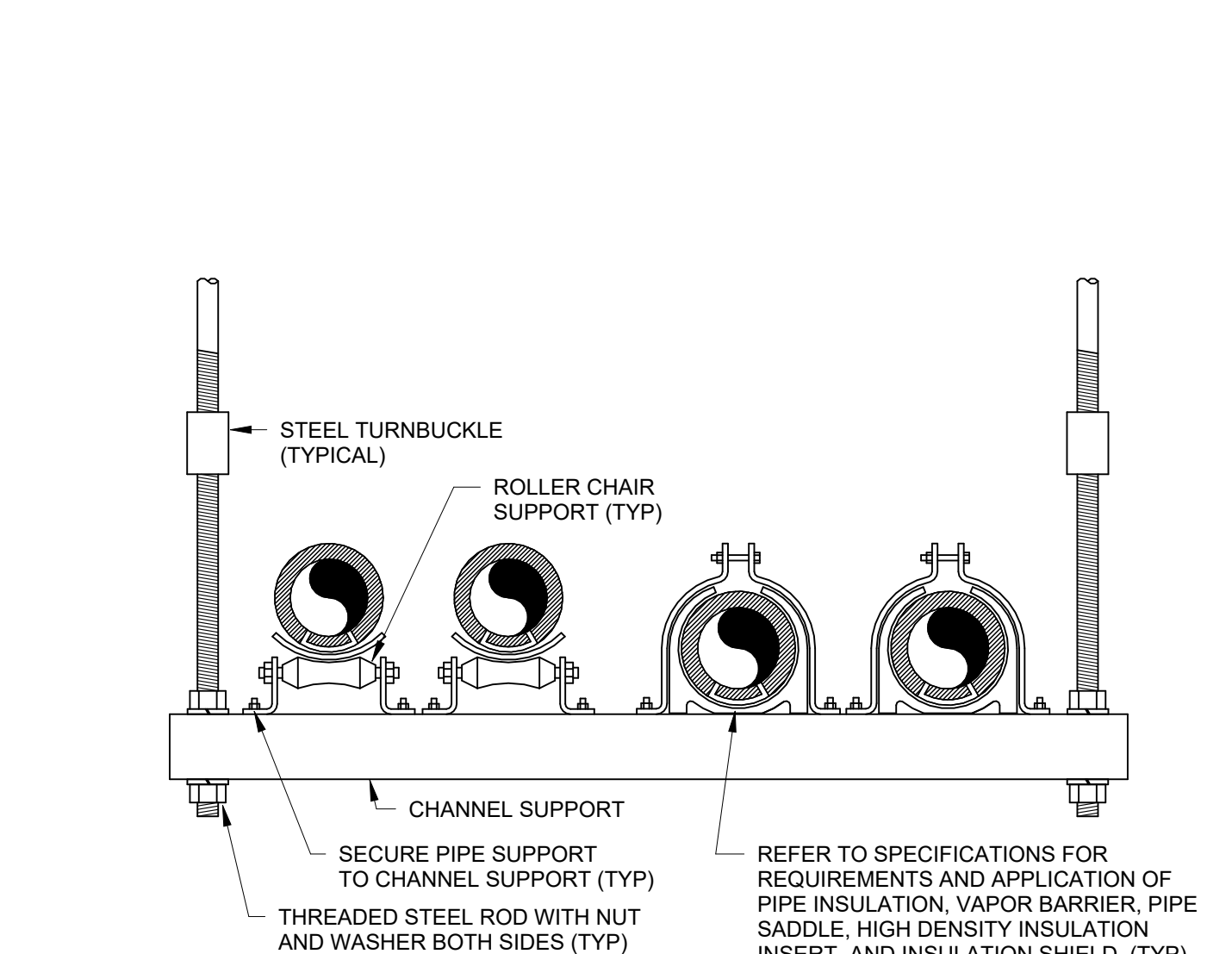
15 RETURN TRANSFER AIR DUCT DETAILS
NTS



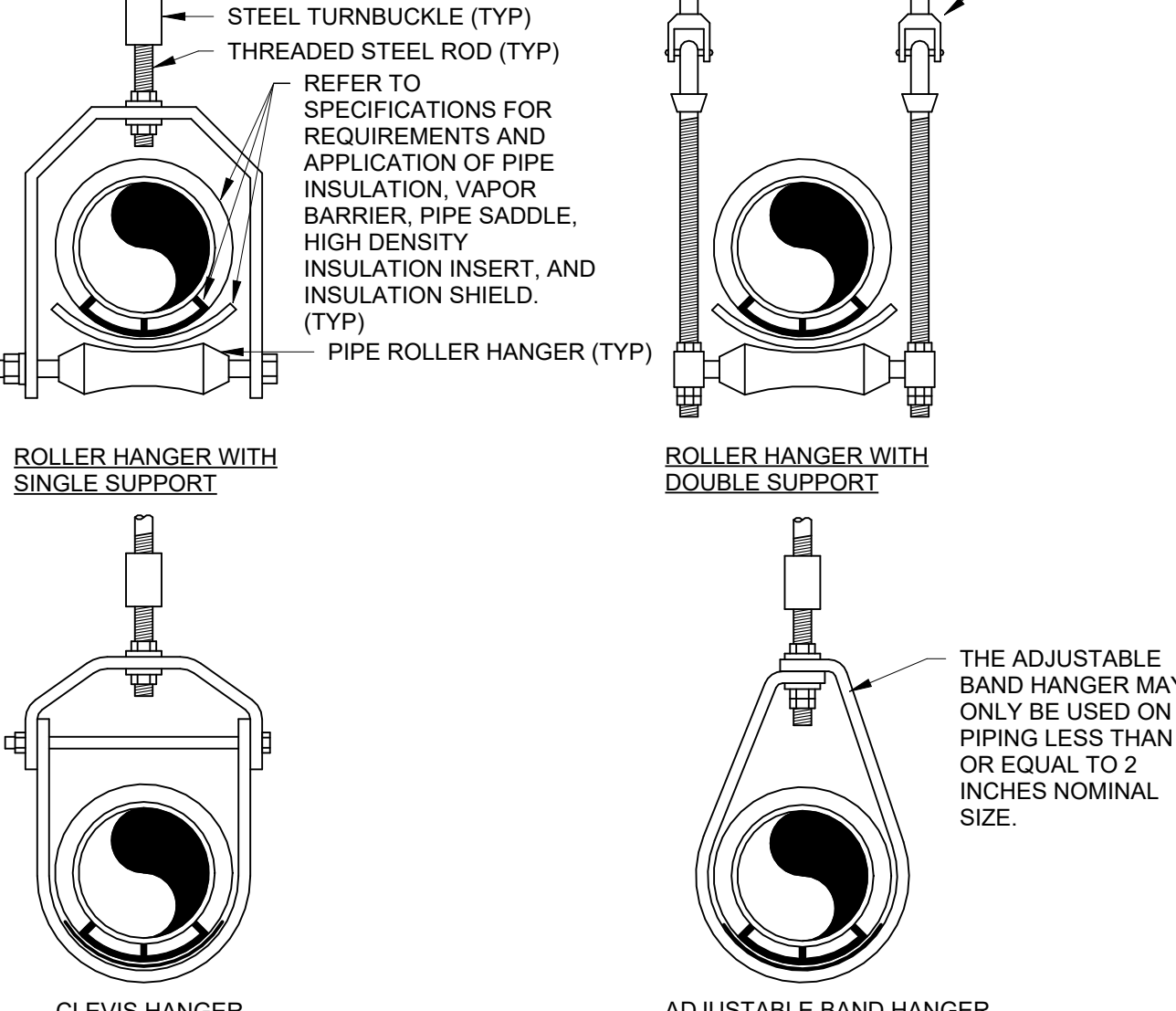
14 EXTERIOR DUCTWORK INSULATION DETAIL
NTS



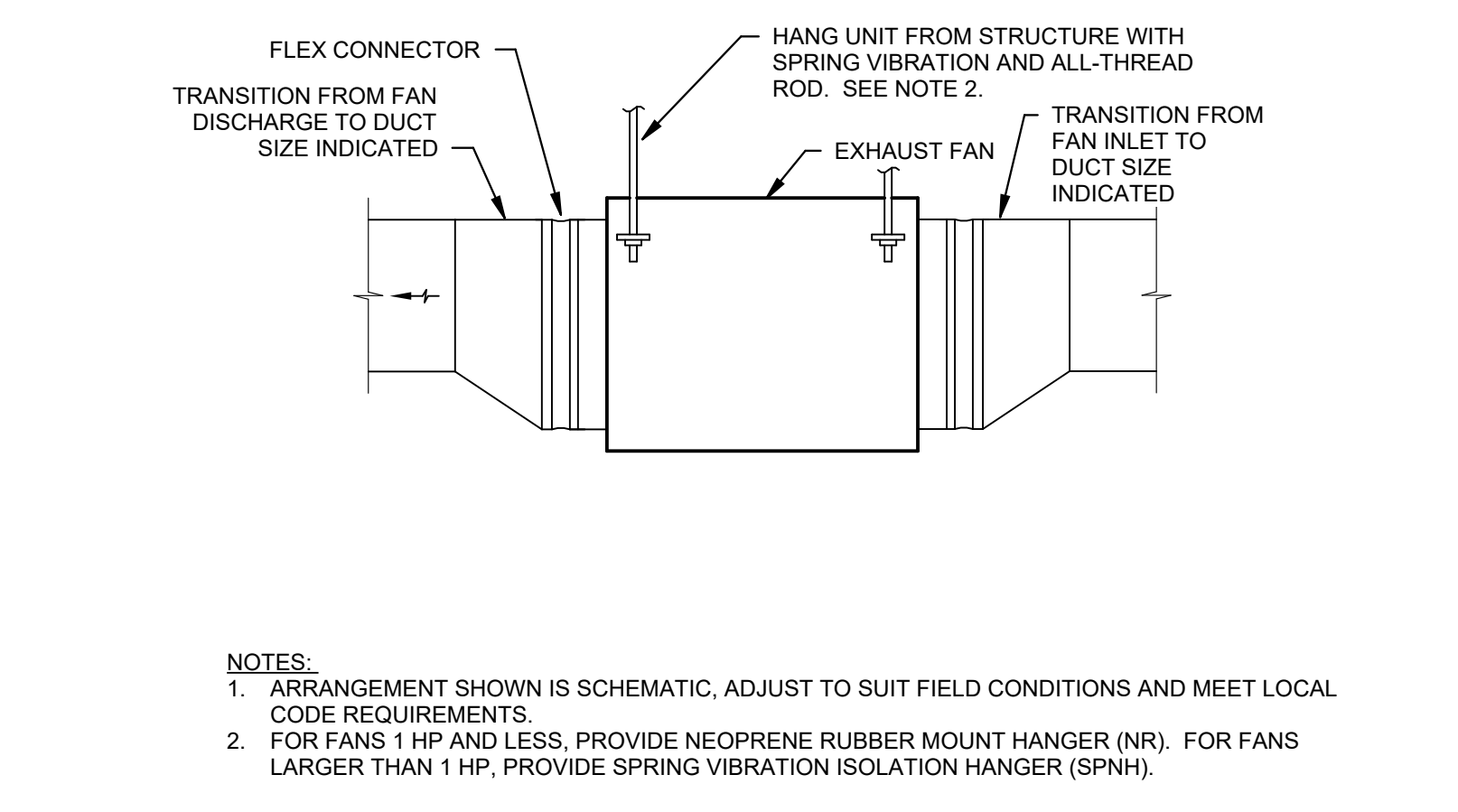
13 EXTERIOR PIPING WITH FIELD APPLIED METAL JACKET OVER INSULATION DETAIL
NTS



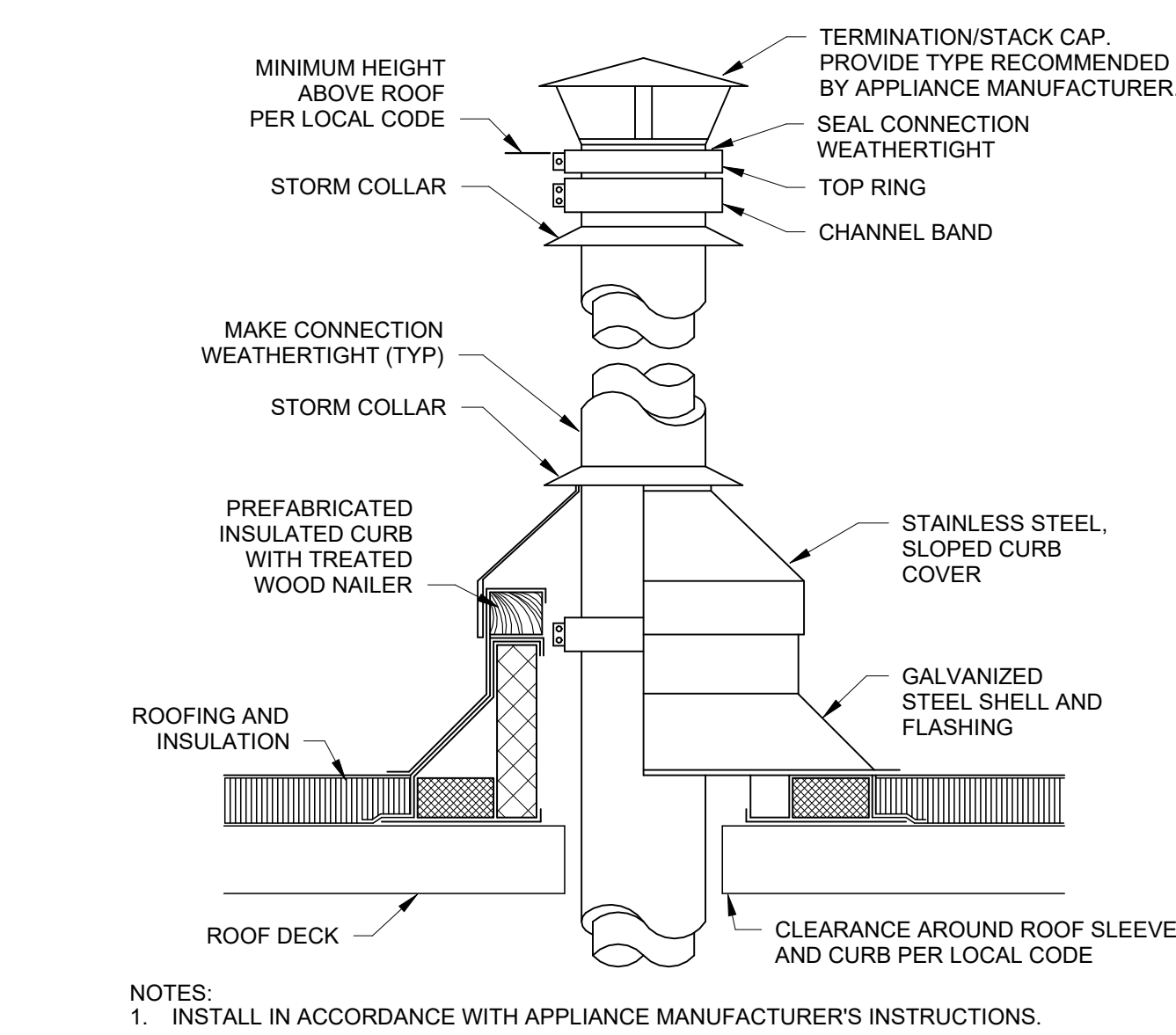
12 MULTIPLE PIPE TRAPEZE HANGER DETAIL
NTS



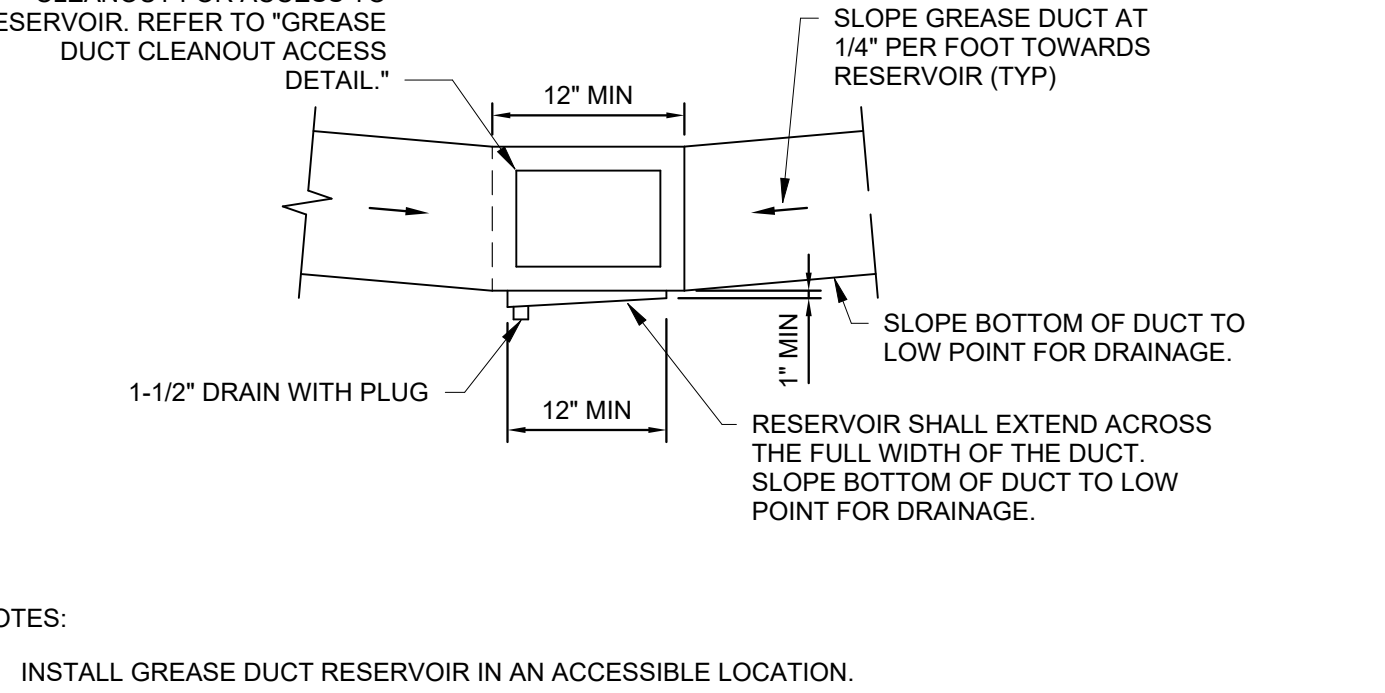
11 PIPE HANGER DETAILS
NTS



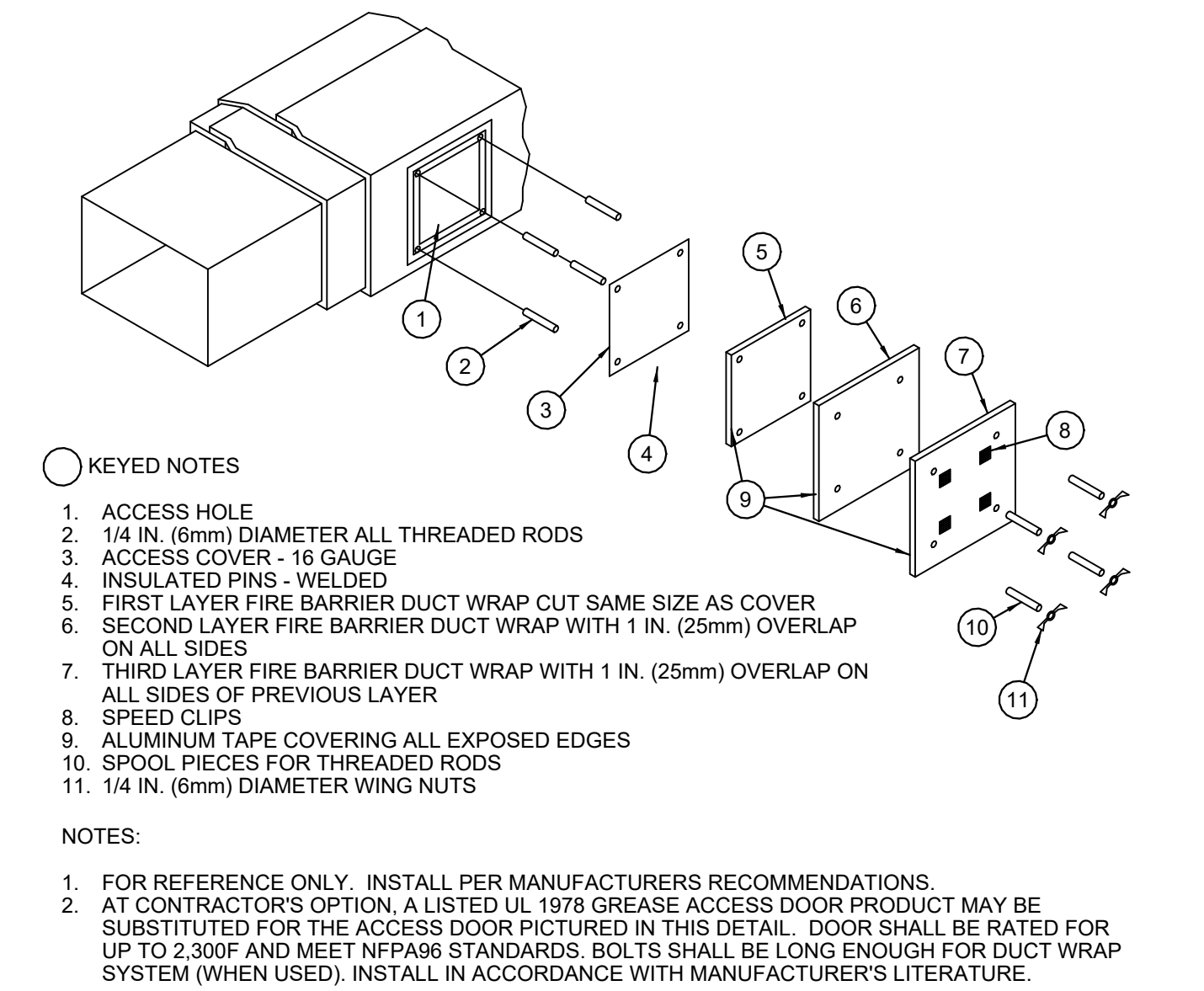
20 IN-LINE FAN DETAIL
NTS



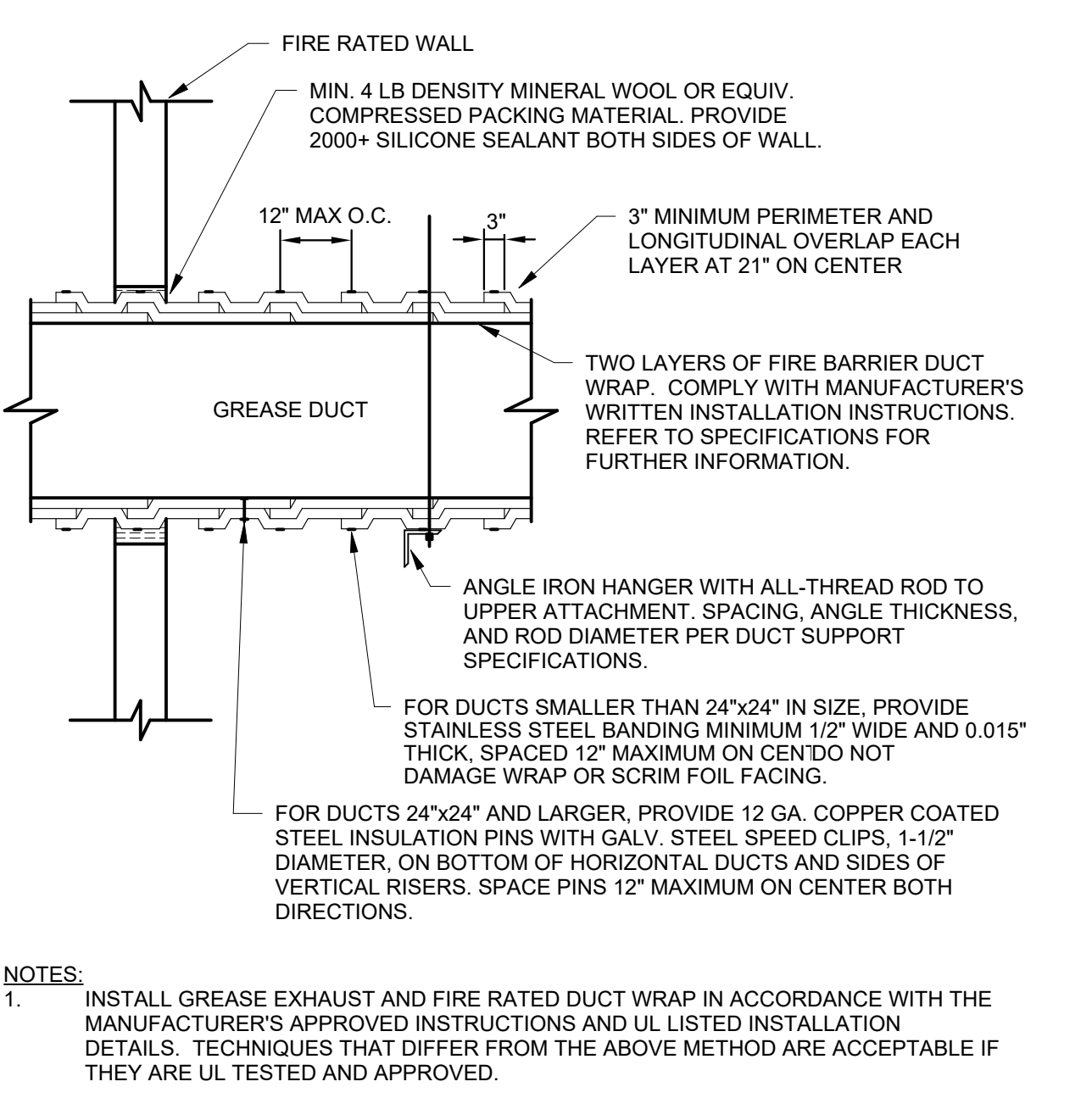
19 FLUE STACK DETAIL
NTS



18 GREASE DUCT RESERVOIR DETAIL
NTS



17 GREASE DUCT CLEANOUT ACCESS DOOR DETAIL
NTS



16 GREASE DUCT FIRE WRAP INSULATION INSTALLATION DETAIL
NTS

SEAL

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CLIENT

City of West Memphis

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250004284
AR CORPATE NO. 4M
EXPIRES 12/31/2028

JOB INFO

CITY OF WEST MEMPHIS RECREATION CENTER
ST HWY 191/40 SERV.
West Memphis, AR 72301

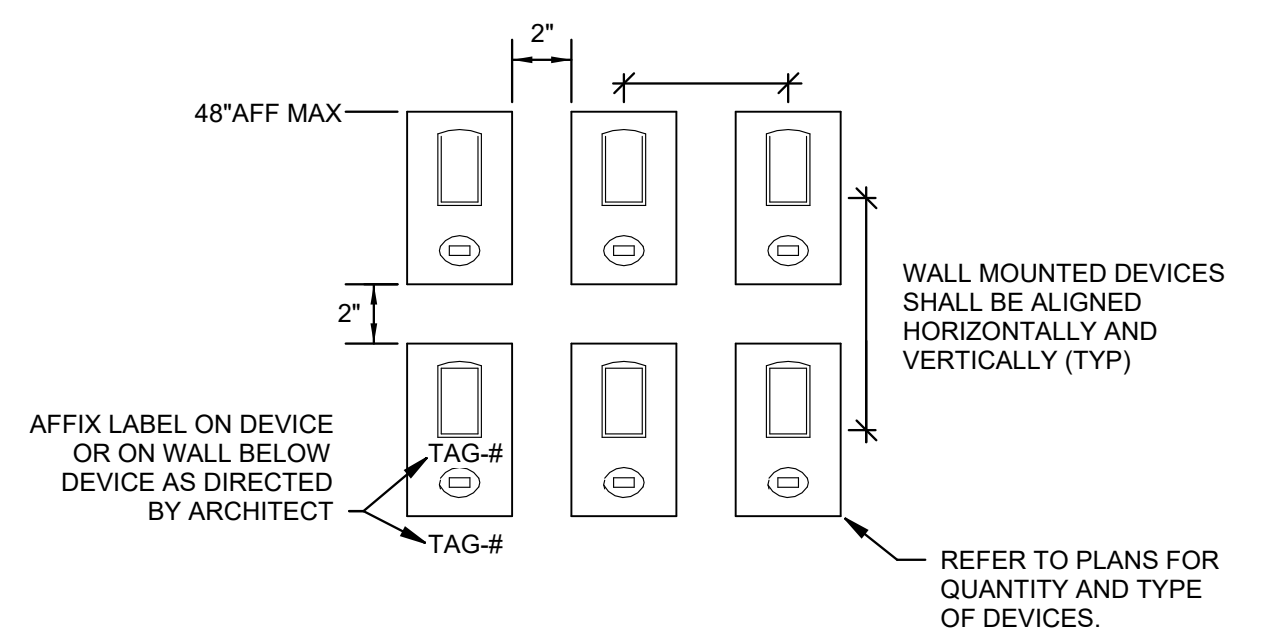
JOB No.: WESCIT00561

SHEET TITLE

MECHANICAL DETAILS

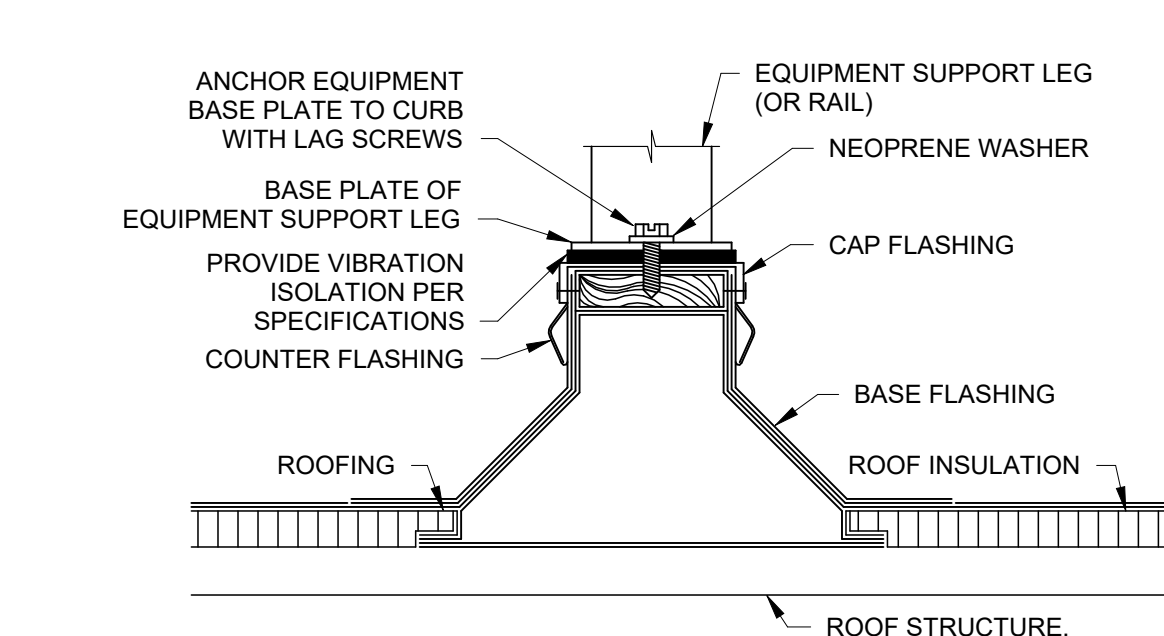
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M-500



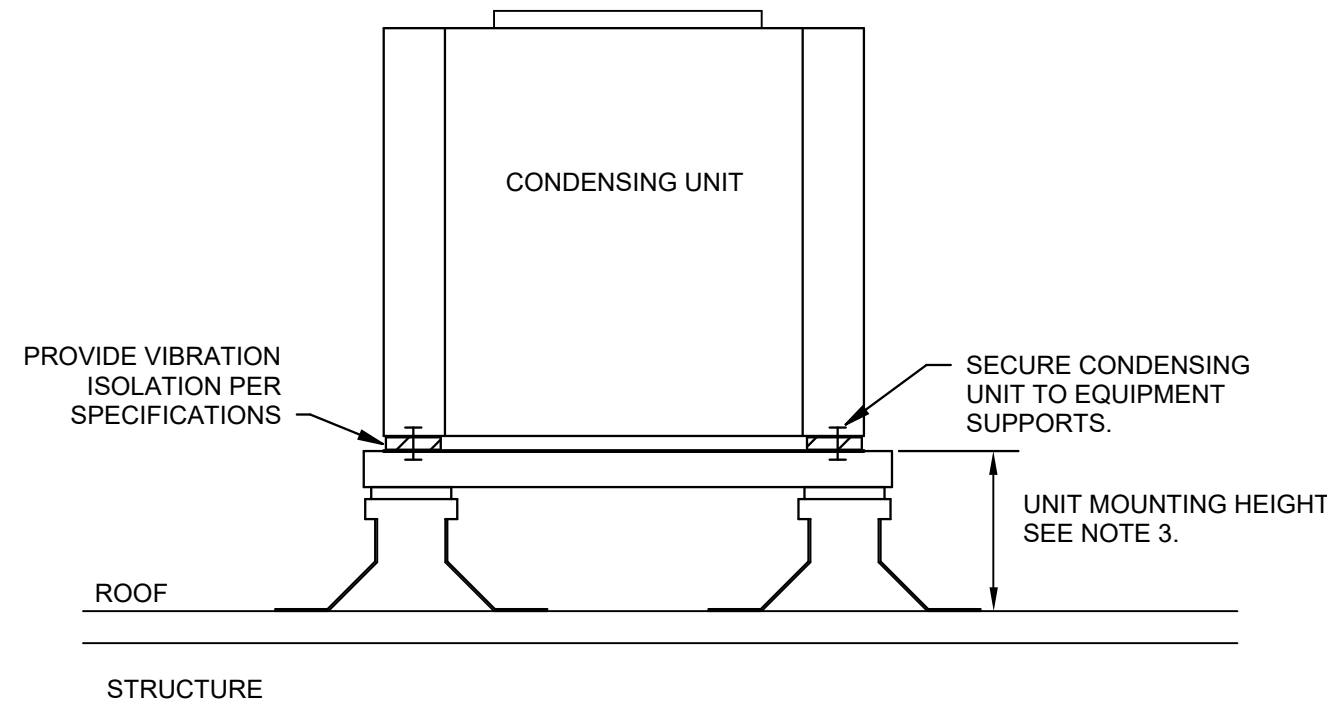
- NOTES:
- CONTROL DEVICES SHALL BE INSTALLED SUBJECT TO ADA REQUIREMENTS.
 - WHEN CONTROL DEVICE IS MOUNTED ABOVE COUNTER, COUNTER DEPTH SHALL NOT EXCEED 24\"/>

5 WALL-MOUNTED CONTROL DEVICE ARRAY DETAIL
NTS



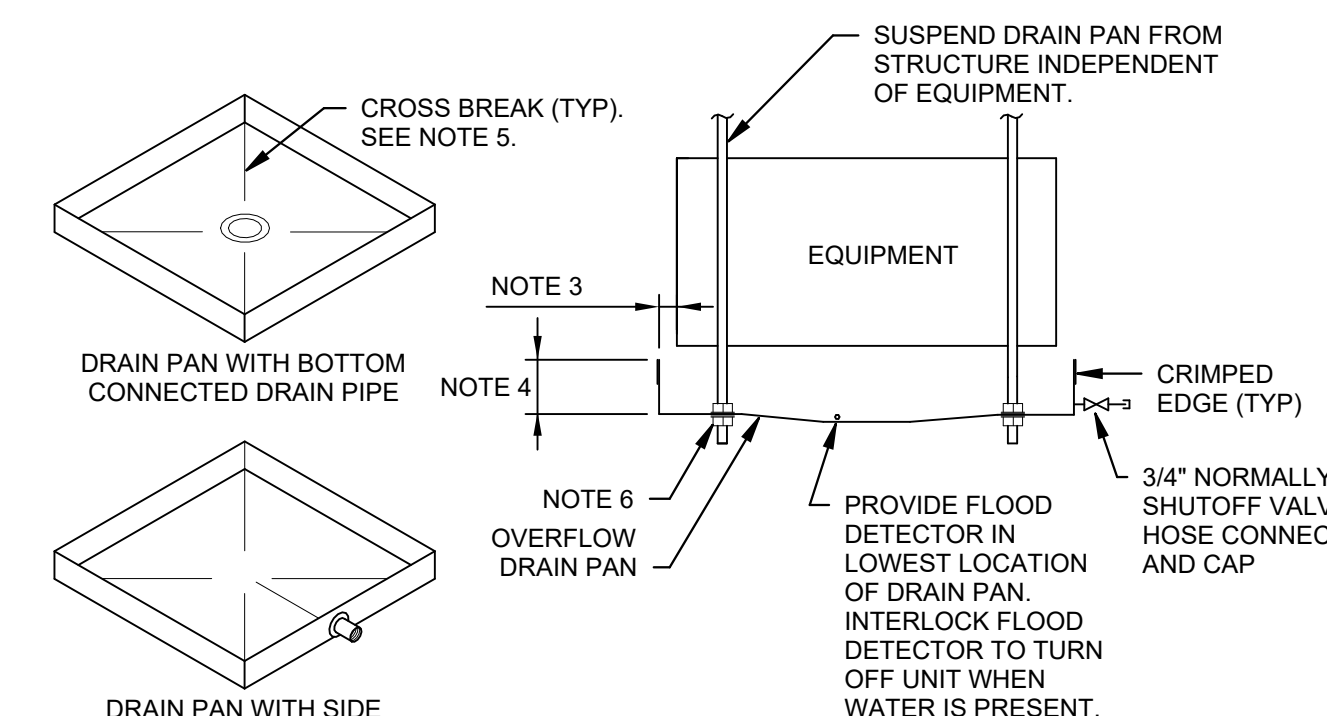
- NOTES:
- REFER TO SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS FOR EQUIPMENT SUPPORTS, ANCHORING AND SEISMIC/WIND RESISTANCE.

4 EQUIPMENT SUPPORT RAIL DETAIL
NTS



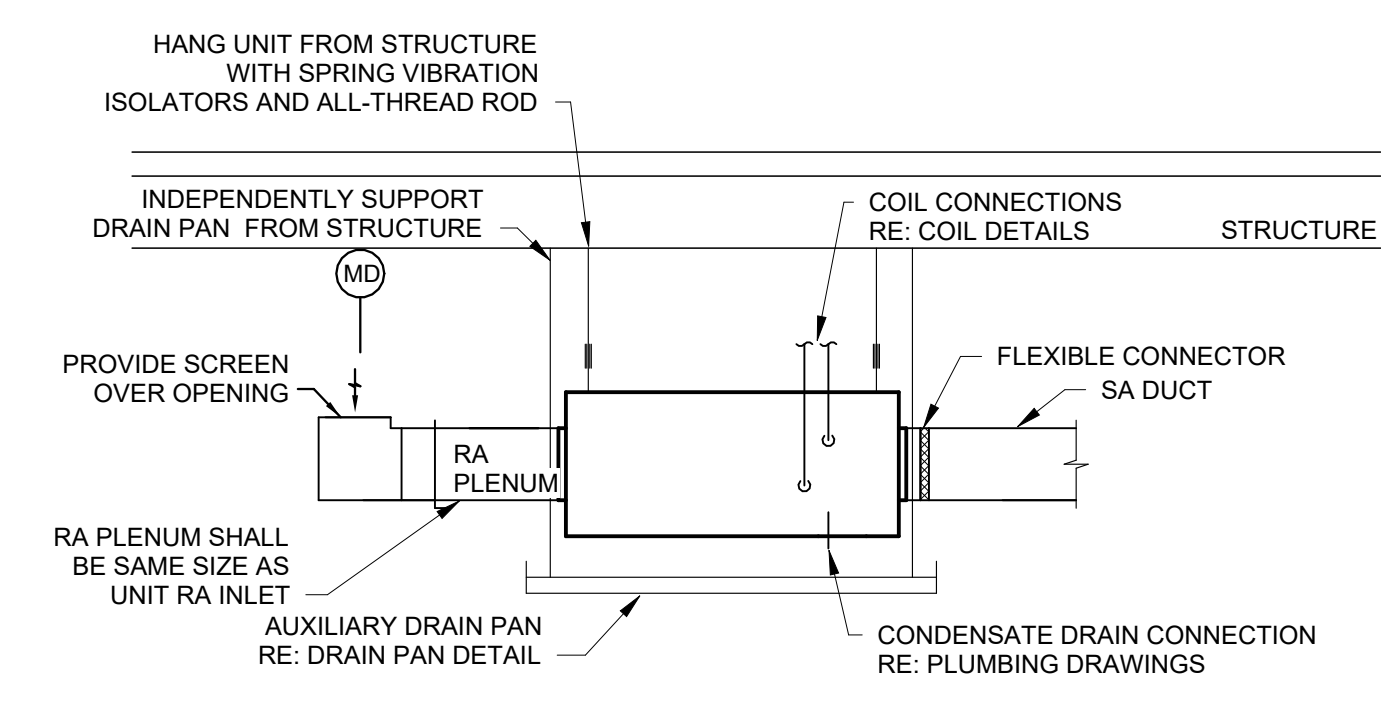
- NOTES:
- SUPPORT AND ANCHOR OUTDOOR UNITS IN COMPLIANCE WITH LOCAL SEISMIC AND WIND RESISTANT REQUIREMENTS.
 - SEE MECHANICAL EQUIPMENT ANCHORS AND SUPPORT SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
 - REFER TO THE EQUIPMENT SCHEDULE AND MANUFACTURER'S REQUIREMENTS FOR UNIT MOUNTING HEIGHT.

3 CONDENSING UNIT SUPPORT DETAIL
NTS



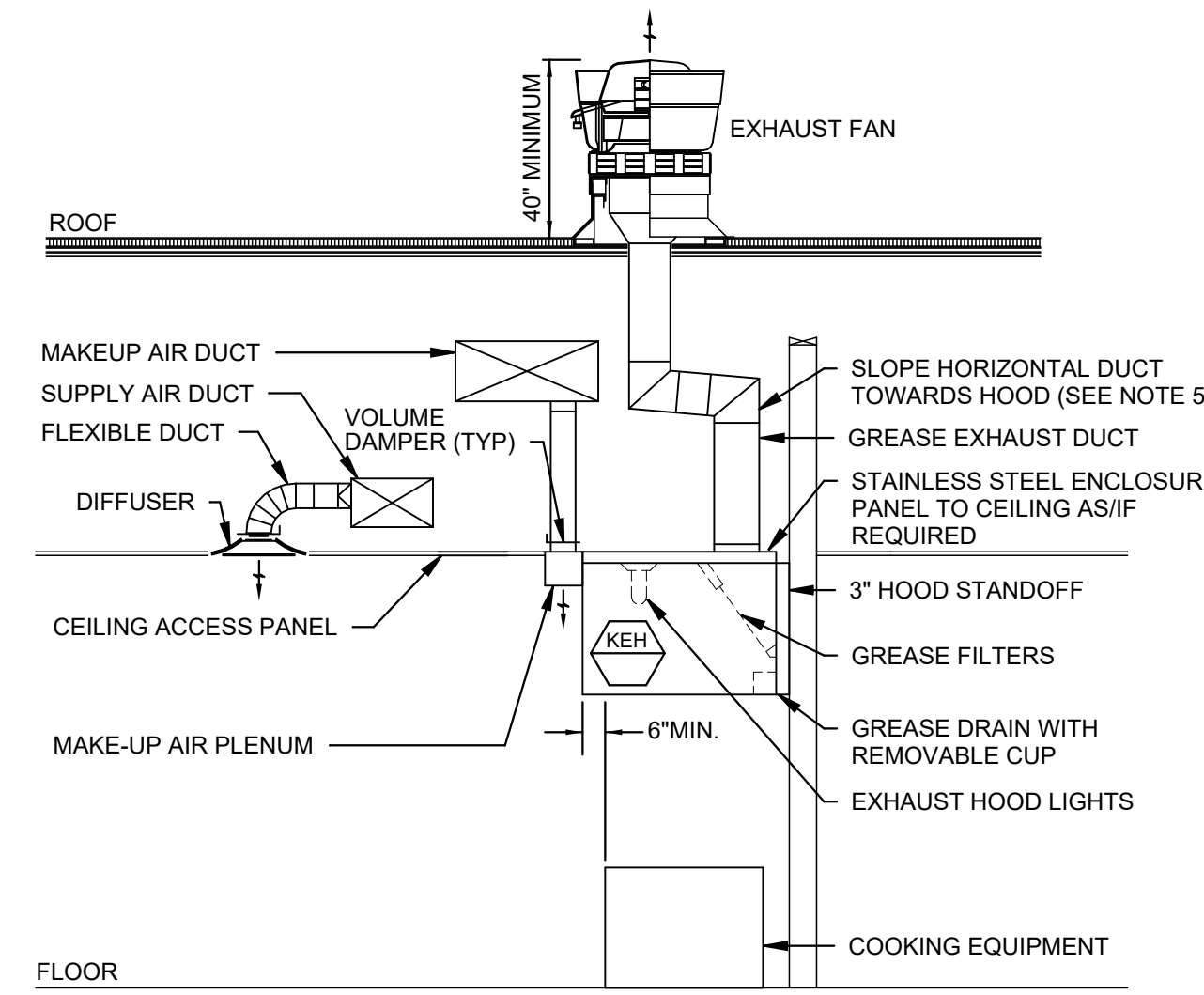
- NOTES:
- SOLDER ALL JOINTS TO MAKE DRAIN PAN LEAK TIGHT.
 - FABRICATE DRAIN PAN FROM 20 GAUGE GALVANIZED SHEET METAL.
 - DRAIN PAN SHALL EXTEND MINIMUM 3\"/>

2 CONDENSATE OVERFLOW DRAIN PAN DETAIL
NTS



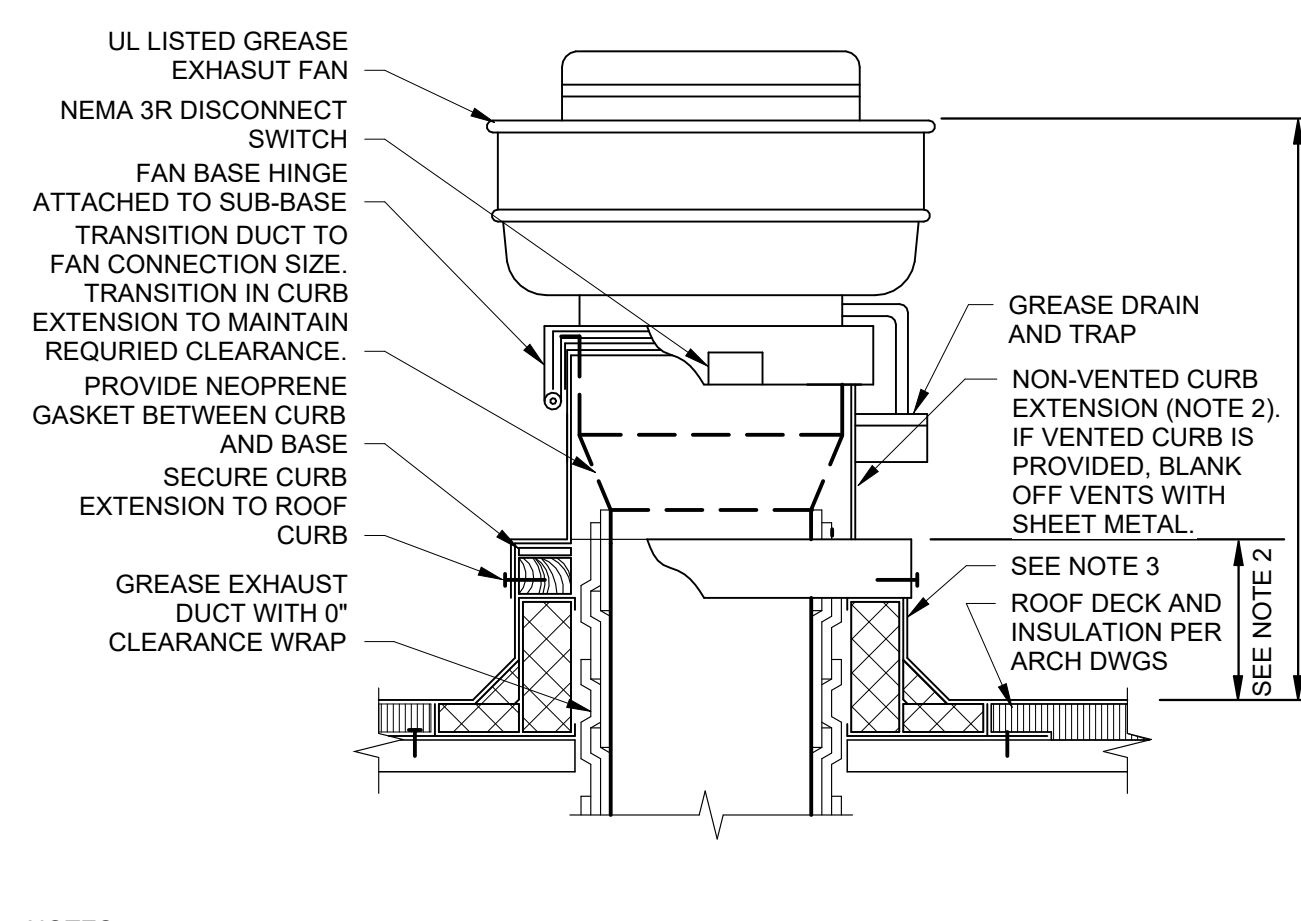
- NOTES:
- ARRANGEMENT SHOWN IS SCHEMATIC. ADJUST TO SUIT FIELD CONDITIONS AND MEET LOCAL CODE REQUIREMENTS.

1 HORIZONTAL HVAC UNIT DETAIL
NTS



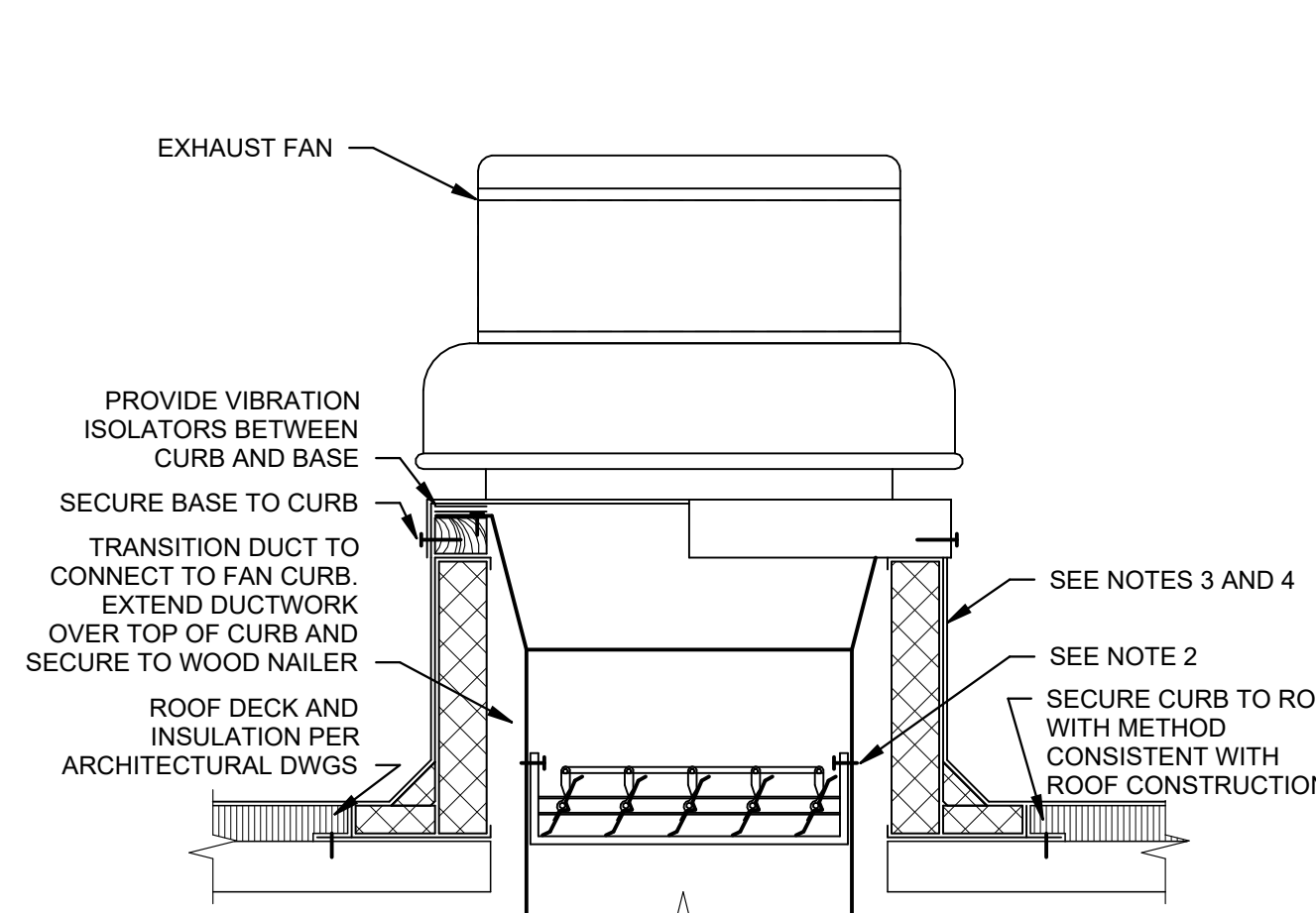
- NOTES:
- SUBMIT SHOP DRAWINGS OF ALL HOOD SYSTEMS TO CITY FOR APPROVAL PRIOR TO INSTALLATION.
 - TOTAL HOOD SYSTEM TO BE IN COMPLETE CONFORMANCE WITH NFPA, AND ALL LOCAL CODES AND REGULATIONS.
 - COORDINATE ALL FIRE PROTECTION SYSTEMS WITH FIRE PROTECTION CONTRACTOR WHO SHALL ALSO BE RESPONSIBLE FOR ALL PERMITS AND TESTING REQUIREMENTS.
 - PROVIDE WRAP SYSTEM WHERE APPROVED BY LOCAL CODES IN LIEU OF RATED ENCLOSURE.
 - PROVIDE ACCESS PANELS AS REQUIRED BY LOCAL CODE AND PER PLAN.
 - HOODS SHALL EXTEND MINIMUM 6\"/>

10 KITCHEN EXHAUST HOOD ELEVATION DETAIL
NTS



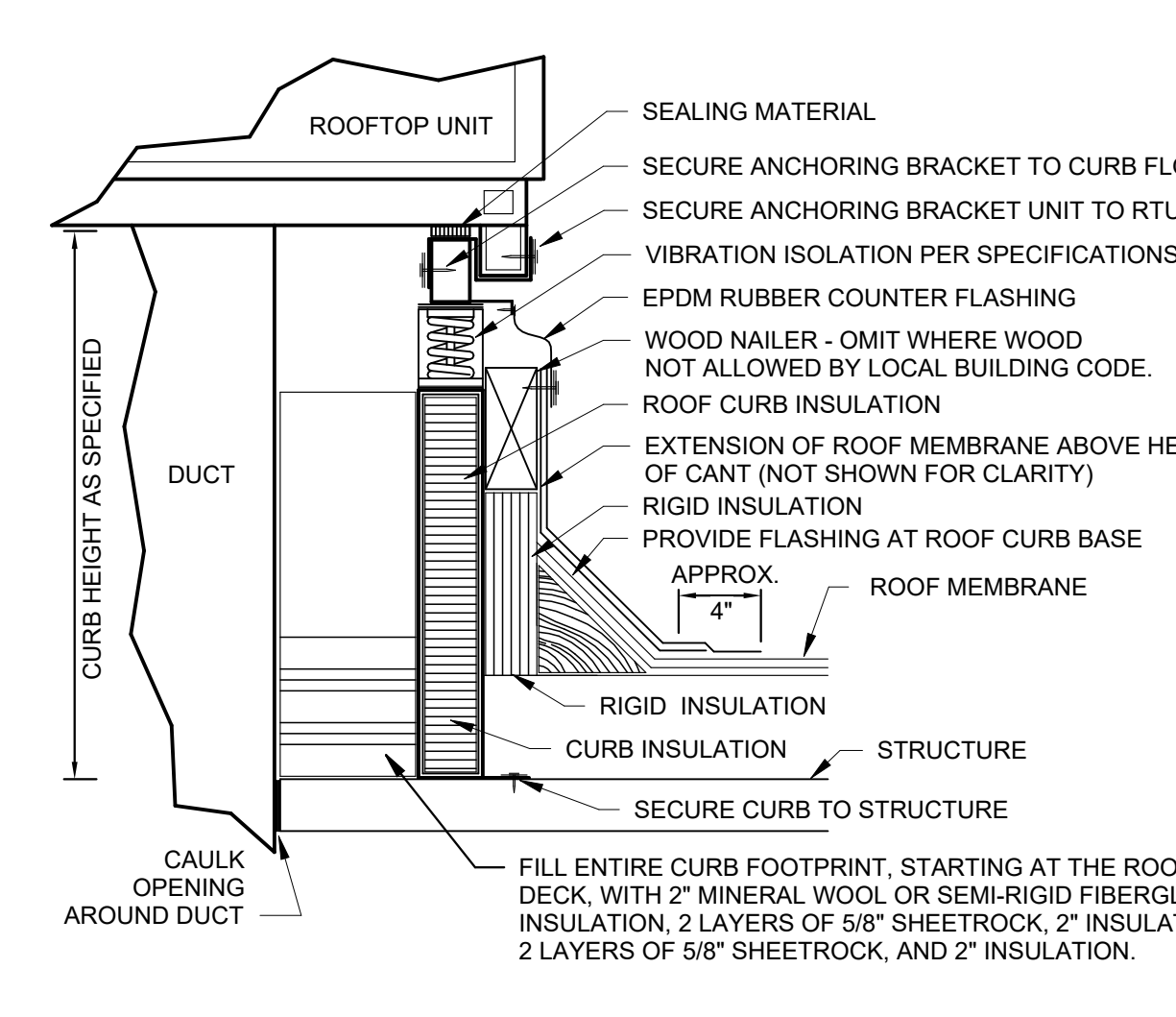
- NOTES:
- ARRANGEMENT SHOWN IS SCHEMATIC. ADJUST TO SUIT FIELD CONDITIONS AND MEET LOCAL CODE.
 - PROVIDE CURB EXTENSION MADE FROM NON-COMBUSTIBLE MATERIAL OF HEIGHT REQUIRED TO MOUNT FAN BASE A MINIMUM 18 INCHES ABOVE COMBUSTIBLE CURB MATERIAL AND DISCHARGE GREASE OUTLET A MINIMUM OF 40 INCHES ABOVE ROOF SURFACE OR ANY ADJACENT BUILDING STRUCTURE WITHIN 10 FEET OF OUTLET, WHICHEVER IS HIGHER.
 - PREFABRICATE INSULATED ROOF CURBS WITH TREATED WOOD NAILER, CANT, AND STEP AS REQUIRED TO ACCOMMODATE ROOF INSULATION, FRAME AND SECURE CURB TO ROOF WITH METHOD CONSISTENT WITH ROOF CONSTRUCTION. ROOF CURB SHALL BEAR ON ROOF STRUCTURE. FOR SLOPED ROOFS, PROVIDE CURB WITH DIMENSIONS CAPABLE OF COMPENSATING ROOF SLOPE TO ENSURE FAN IS INSTALLED LEVEL.
 - FOR SLOPED ROOFS, PROVIDE CURB WITH DIMENSIONS CAPABLE OF COMPENSATING ROOF SLOPE TO ENSURE FAN IS INSTALLED LEVEL.

9 UPBLAST GREASE EXHAUST FAN DETAIL
NTS



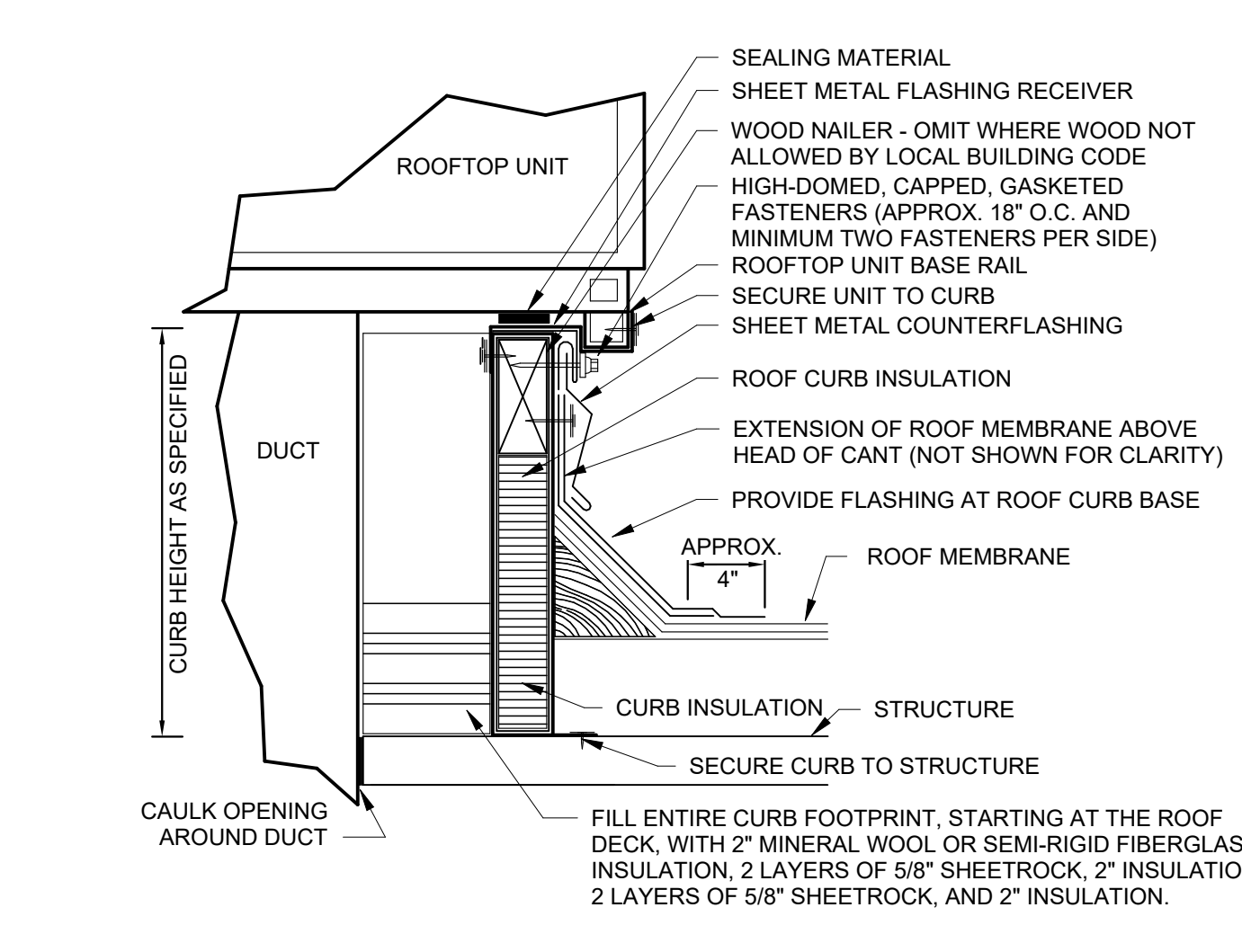
- NOTES:
- ARRANGEMENT SHOWN IS SCHEMATIC. ADJUST TO SUIT FIELD CONDITIONS AND MEET LOCAL CODE.
 - IF DAMPER IS SPECIFIED IN EQUIPMENT SCHEDULE, INSTALL DAMPER AT BASE OF CURB AND SECURE FROM ABOVE TO ALLOW SERVICE THROUGH TOP OF CURB.
 - PREFABRICATE INSULATED ROOF CURB WITH TREATED WOOD NAILER, CANT, AND STEP AS REQUIRED TO ACCOMMODATE ROOF INSULATION, FRAME AND SECURE CURB TO ROOF WITH METHOD CONSISTENT WITH ROOF CONSTRUCTION. ROOF CURB SHALL BEAR ON ROOF STRUCTURE. REFER TO ARCHITECTURAL DRAWINGS AND CURB MANUFACTURER'S DETAILS FOR MORE INFORMATION.
 - FOR SLOPED ROOFS, PROVIDE CURB WITH DIMENSIONS CAPABLE OF COMPENSATING ROOF SLOPE TO ENSURE FAN IS INSTALLED LEVEL.

8 ROOF MOUNTED DOWNBLAST FAN DETAIL
NTS



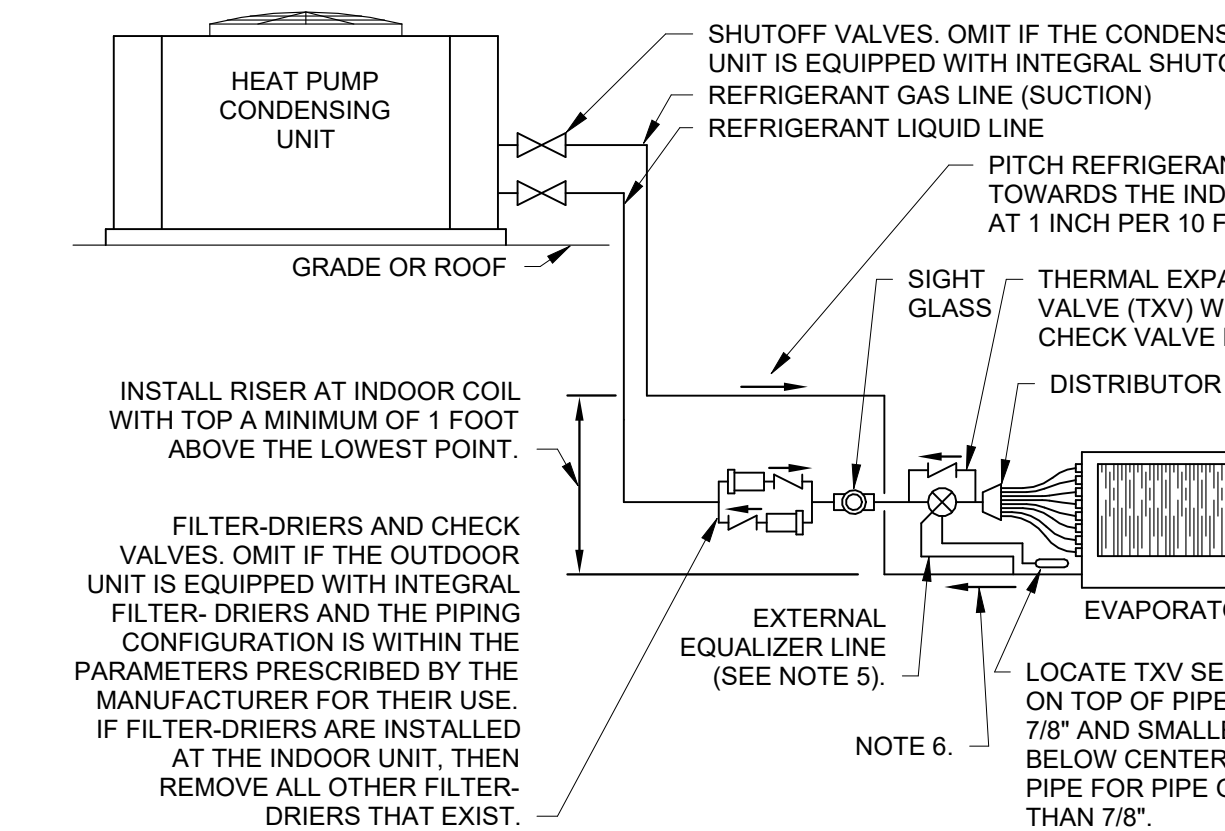
- NOTES:
- CUT METAL DECKING TO ALLOW CURB INSTALLATION ON STEEL FRAMING. AFTER CURB IS SET IN PLACE, TRIM REMAINING METAL DECKING AND INSTALL WITHIN CURB. TACK WELD DECKING TO SUPPORT STEEL. DO NOT WELD INTERIOR DECKING TO ROOF CURB. PROVIDE ADDITIONAL CROSS FRAMING TO SUPPORT INTERIOR DECKING AND FILL MATERIAL AS REQUIRED.
 - REFER TO SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS FOR ROOF CURBS, ANCHORING AND SEISMIC/WIND RESISTANCE.

7 VIBRATION ISOLATION ROOF CURB DETAIL
NTS



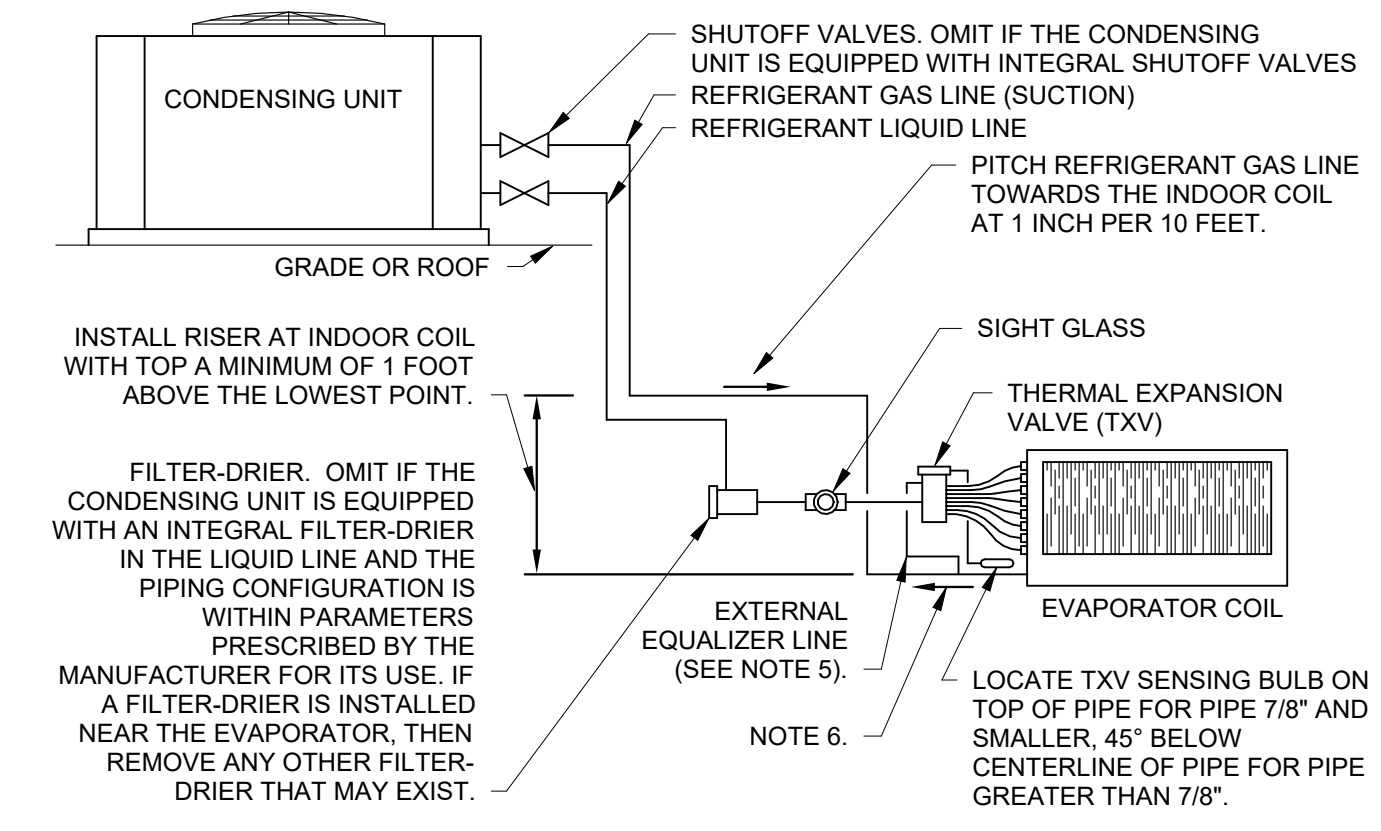
- NOTES:
- CUT METAL DECKING TO ALLOW CURB INSTALLATION ON STEEL FRAMING. AFTER CURB IS SET IN PLACE, TRIM REMAINING METAL DECKING AND INSTALL WITHIN CURB. TACK WELD DECKING TO SUPPORT STEEL. DO NOT WELD INTERIOR DECKING TO ROOF CURB. PROVIDE ADDITIONAL CROSS FRAMING TO SUPPORT INTERIOR DECKING AND FILL MATERIAL AS REQUIRED.
 - REFER TO SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS FOR ROOF CURBS, ANCHORING AND SEISMIC/WIND RESISTANCE.

6 ROOF CURB DETAIL
NTS



- NOTES:
- INSTALL REFRIGERANT PIPING AND COMPONENTS IN STRICT CONFORMANCE WITH ALL MANUFACTURER'S RECOMMENDATIONS AND REQUIREMENTS, WHICH SHALL TAKE PRECEDENCE OVER INFORMATION PRESENTED IN THIS DETAIL.
 - ALL COMPONENTS INSTALLED SHALL BE THE EXACT MODEL RECOMMENDED BY THE MANUFACTURER.
 - CONSULT THE MANUFACTURER REGARDING THE NEED TO INSTALL A SOLENOID VALVE IN THE LIQUID LINE BETWEEN THE FILTER-DRIER AND SIGHT GLASS.
 - INSTALL REFRIGERANT PIPE SIZES RECOMMENDED BY THE MANUFACTURER AND CONSULT THE MANUFACTURER REGARDING THE NEED FOR INTERMEDIATE TRAPS BASED ON THE RECOMMENDED PIPE SIZES AND PIPING CONFIGURATION.
 - INSTALL THERMAL EXPANSION VALVE WITH BALANCED PORT CONSTRUCTION AND EXTERNAL EQUALIZER LINES FOR ALL EVAPORATOR COILS EQUIPPED WITH A REFRIGERANT DISTRIBUTOR.
 - PITCH REFRIGERANT GAS LINE AWAY FROM INDOOR COIL AT 1/8\"/>

10 SPLIT SYSTEM-HEAT PUMP PIPING DETAIL
NTS



- NOTES:
- INSTALL REFRIGERANT PIPING AND COMPONENTS IN STRICT CONFORMANCE WITH ALL MANUFACTURER'S RECOMMENDATIONS AND REQUIREMENTS, WHICH SHALL TAKE PRECEDENCE OVER INFORMATION PRESENTED IN THIS DETAIL.
 - ALL COMPONENTS INSTALLED SHALL BE THE EXACT MODEL RECOMMENDED BY THE MANUFACTURER.
 - CONSULT THE MANUFACTURER REGARDING THE NEED TO INSTALL A SOLENOID VALVE IN THE LIQUID LINE BETWEEN THE FILTER-DRIER AND SIGHT GLASS.
 - INSTALL REFRIGERANT PIPE SIZES RECOMMENDED BY THE MANUFACTURER AND CONSULT THE MANUFACTURER REGARDING THE NEED FOR INTERMEDIATE TRAPS BASED ON THE RECOMMENDED PIPE SIZES AND PIPING CONFIGURATION.
 - INSTALL THERMAL EXPANSION VALVE WITH BALANCED PORT CONSTRUCTION AND EXTERNAL EQUALIZER LINES FOR ALL EVAPORATOR COILS EQUIPPED WITH A REFRIGERANT DISTRIBUTOR.
 - PITCH REFRIGERANT GAS LINE AWAY FROM INDOOR COIL AT 1/8\"/>

11 SPLIT SYSTEM-COOLING ONLY PIPING DETAIL
NTS



NO.	DATE	DESCRIPTION
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3	08/11/2025	ISSUED FOR PERMITS
4	08/11/2025	ISSUED FOR PERMITS
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100	08/11/2025	ISSUED FOR PERMITS

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250004284
 AR CORP 08/16/10 4M
 EXPIRES 12/31/2028

CITY OF WEST MEMPHIS
RECREATION CENTER
ST HWY 191/40 SERV.
West Memphis, AR 72301

ROOFTOP UNIT CONTROL MATRIX												
CONTROL FEATURE	UNITS	RTU-1	RTU-2	RTU-3	RTU-4	RTU-5	RTU-6	RTU-7	RTU-8	RTU-9	RTU-10	NOTES
		SETPOINT OR Y/N	SETPOINT OR Y/N	SETPOINT OR Y/N	SETPOINT OR Y/N	SETPOINT OR Y/N	SETPOINT OR Y/N	SETPOINT OR Y/N	SETPOINT OR Y/N	SETPOINT OR Y/N	SETPOINT OR Y/N	
SETPPOINTS												
COOLING - OCCUPIED SETPOINT	"F											
COOLING - UNOCCUPIED SETPOINT	"F											
COOLING - SUPPLY AIR TEMPERATURE SETPOINT	"F											
DEAD BAND - MINIMUM HEATING AND COOLING TEMPERATURE SETPOINT DIFFERENCE	"F	5	5	5	5	5	5	5	5	5	5	
HEATING - OCCUPIED SETPOINT	"F											
HEATING - UNOCCUPIED SETPOINT	"F											
HEATING - SUPPLY AIR TEMPERATURE SETPOINT	"F											
PROGRAMMED CONTROL FEATURES												
HVAC SYSTEM OCCUPIED/UNOCCUPIED MODE - PROGRAMMABLE THERMOSTAT		Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	B
REMOTE TEMPERATURE SENSOR		Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	B
DEMAND CONTROL VENTILATION - CO2 SENSOR FEEDBACK	PPM	1,000	1,000	1,000	1,000	1,000	N	N	N	N	N	B
EQUIPMENT ACCESSORIES AND CONTROL MODULES												
OUTSIDE AIR DAMPER - MOTOR OPERATED (2-POSITION)		N	N	N	N	N	N	N	N	N	N	K
OUTSIDE AIR DAMPER - MOTOR OPERATED (MODULATING)		Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	L
INTEGRATED ECONOMIZER - DIFFERENTIAL ENTHALPY ENABLE (OA ENTHALPY - RA ENTHALPY)	BTULB	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	E
ECONOMIZER FAULT DETECTION AND DIAGNOSTICS (FDD) SYSTEM		Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	F, G
RELIEF - BAROMETRIC DAMPER		Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	M
COOLING COIL (DX - STAGED)		Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	M
HEATING COIL (NATURAL GAS)		Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	M
SUPPLY FAN CONTROL METHODS												
ON DURING OCCUPIED HOURS		Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
CYCLE WITH LOADS DURING UNOCCUPIED HOURS		Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
CONSTANT VOLUME FAN CONTROL		N	N	N	N	N	N	N	N	N	N	M, Q
VARIABLE VOLUME - STAGED FAN CONTROL IN RESPONSE TO ACTIVE COOLING COIL STAGES		Y	Y	Y	Y	Y	N	Y	Y	N	Y	M, Q
SAFETIES, INTERLOCKS, AND ALARMS												
GAS VALVE SAFETY		Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	F
RETURN AIR SMOKE DETECTOR - SAFETY SHUTDOWN		Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	U
LOW LIMIT FREEZESTAT - FREEZE PROTECTION SAFETY SHUTDOWN		Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	F
FIRE ALARM CONTROL PANEL - SAFETY SHUTDOWN INTERLOCK		Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	F
KITCHEN EXHAUST SYSTEM INTERLOCK		N	N	N	N	N	N	Y	N	N	N	S
REFRIGERANT LEAK DETECTION ALARM		Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	F

DIV. 23 CONTRACTOR SHALL PROVIDE CONTROL PANEL(S), WIRING, THERMOSTAT(S), TEMPERATURE SENSOR(S), HUMIDISTAT(S), AND/OR CO2 SENSOR(S) WHERE SHOWN ON THE DRAWINGS AND AS REQUIRED TO FACILITATE THE SCHEDULED CONTROL, MODULES AND SEQUENCES OF OPERATION. EACH UNIT SHALL CONTROL BASED ON ITS OWN INTERNAL SAFETIES, TIME DELAYS, AND SEQUENCES UNLESS NOTED OTHERWISE. COORDINATE WITH OWNER FINAL BUILDING AND EQUIPMENT SCHEDULES DURING STARTUP. REFERENCE DIVISION SPECIFICATIONS FOR INDIVIDUAL DEVICE REQUIREMENTS.

NOTES:
 B. DIVISION 23 CONTRACTOR SHALL PROVIDE DEVICE.
 E. IF SETPOINT VALUE IS LISTED, IT INDICATES ECONOMIZER HIGH-LIMIT SHUTOFF. UNIT SHALL BE IN ECONOMIZER IF CONDITIONS ARE LESS THAN SETPOINT. THE FOLLOWING SENSORS SHALL DETERMINE ECONOMIZER ON POINT: OUTSIDE AIR TEMPERATURE, DIVISION 23 PROVIDED AS PART OF ECONOMIZER CONTROL MODULE. RETURN AIR TEMPERATURE, DIVISION 23 PROVIDED AS PART OF ECONOMIZER CONTROL MODULE. OUTSIDE AIR HUMIDITY, DIVISION 23 PROVIDED AS PART OF ECONOMIZER CONTROL MODULE. RETURN AIR HUMIDITY, DIVISION 23 PROVIDED AS PART OF ECONOMIZER CONTROL MODULE.
 F. DEVICE SHALL BE FACTORY MOUNTED AND PRE-WIRED FOR OPERATION SUBJECT TO THE ONBOARD CONTROLLER.
 G. PROVIDE UNIT WITH AN FDD SYSTEM CONSISTING OF PERMANENTLY INSTALLED OUTSIDE AIR, SUPPLY AIR, AND RETURN AIR TEMPERATURE SENSORS. THE UNIT CONTROLLER SHALL AT A MINIMUM BE CAPABLE OF PROVIDING SYSTEM STATUS OF ECONOMIZER, COMPRESSOR, HEATING, MIXED AIR LOW LIMIT ALARM, AND SENSOR VALUES. EACH OPERATING MODE SHALL BE CAPABLE OF INDEPENDENTLY OPERATING FOR TESTING. THE SYSTEM SHALL REPORT FAULTS TO AN APPLICATION ACCESSIBLE BY SERVICE PERSONNEL. THE FOLLOWING FAULTS SHALL BE DETECTED: AIR TEMPERATURE SENSOR FAILURE, ECONOMIZER ENABLE/DISABLED WHEN ECONOMIZER SHOULD BE OFF/ON, RESPECTIVELY. DAMPER NOT MODULATING, AND EXCESS OUTSIDE AIR.
 K. DETERMINE MINIMUM DAMPER POSITION IN FIELD DURING BALANCING TO PROVIDE SCHEDULED OUTDOOR AIRFLOW DURING OCCUPIED HOURS. DAMPER SHALL BE CLOSED DURING UNOCCUPIED HOURS.
 L. EQUIPMENT MANUFACTURERS SHALL PROVIDE MODULATING DAMPER AND CONTROLS CAPABLE OF ADJUSTING THE DAMPER POSITION TO MAINTAIN THE SCHEDULED OUTSIDE AIR ON THE DRAWINGS ACROSS ALL FAN SPEEDS. DIV. 23 CONTRACTOR SHALL PROGRAM MULTIPLE DAMPER POSITION SETPOINTS IN THE FIELD DURING TESTING AND BALANCING TO MAINTAIN MINIMUM VENTILATION WHEN NOT IN ECONOMIZER. DAMPER SHALL BE CLOSED DURING UNOCCUPIED HOURS.
 M. UNITARY CONTROLLER SHALL MODULATE AND/OR CYCLE SUPPLY FAN SPEED SETPOINT AND COIL CAPACITY STAGES SUBJECT TO THE INTERNAL SAFETIES AND SEQUENCES TO MAINTAIN SCHEDULED SETPOINTS.
 Q. PROVIDE STAGED FAN CONTROL WITH MINIMUM 2 FAN SPEEDS. LOW SPEED SHALL NOT EXCEED 66% OF FULL SPEED AND SHALL DRAW NO MORE THAN 40% OF FAN POWER AT FULL SPEED. COMPRESSORS SHALL BE CONTROLLED TO MATCH CAPACITY OF 2-STAGE SUPPLY FAN SUCH THAT LEAVING AIR TEMPERATURE REMAINS CONSTANT.
 S. INTERLOCK RTU WITH KITCHEN EXHAUST HOOD SYSTEM(S) TO SHUT DOWN UPON SIGNAL FROM HOOD FIRE EXTINGUISHING SYSTEM. INTERLOCK RTU WITH KITCHEN EXHAUST FAN TO ENERGIZE WHEN HOOD SYSTEM IS ENERGIZED FOR PRESSURIZATION.
 U. DIVISION 28 CONTRACTOR SHALL PROVIDE DEVICE.

NATATORIUM DEHUMIDIFICATION UNIT CONTROL MATRIX			
CONTROL FEATURE	UNITS	NDU-1	NOTES
		SETPOINT OR Y/N	
SETPPOINTS			
NATATORIUM AIR TEMPERATURE SETPOINT	"F	85	B
DEHUMIDIFICATION SETPOINT - HUMIDITY SENSOR FEEDBACK	% RH	50%	B
PROGRAMMED CONTROL FEATURES			
HVAC SYSTEM OCCUPIED/MAINTENANCE MODE - THROUGH UNIT CONTROLLER		Y	B, R
REMOTE TEMPERATURE SENSOR		Y	B
REMOTE HUMIDITY SENSOR		Y	B
EQUIPMENT ACCESSORIES AND CONTROL MODULES			
MINIMUM OUTSIDE AIR DAMPER - MOTOR OPERATED (2-POSITION)		Y	C
MINIMUM EXHAUST FAN - CONSTANT VOLUME POWERED EXHAUST FAN		Y	H
EXHAUST - MOTORIZED DAMPER	IN. W.C.	Y	L
LOW AMBIENT CONTROL KIT	"F	20 F	M
COOLING COIL (DX - VARIABLE SPEED) (GLYCOL FLUID COOLED)		Y	M
EVAPORATOR COIL BYPASS DAMPER		Y	F
FLUID COOLER PUMP		Y	F
DEHUMIDIFICATION - HOT GAS REHEAT		Y	N
HEATING COIL (NATURAL GAS)		Y	M
ENERGY RECOVERY			
HEAT RECOVERY DEVICE (SENSIBLE ONLY) - GLYCOL LOOP		Y	
HEAT RECOVERY PUMP		Y	
SUPPLY FAN CONTROL METHODS			
ON CONTINUOUSLY		Y	
CONSTANT VOLUME FAN CONTROL		Y	
SAFETIES, INTERLOCKS, AND ALARMS			
GAS VALVE SAFETY		Y	F
SUPPLY AIR SMOKE DETECTOR - SAFETY SHUTDOWN		Y	Q
RETURN AIR SMOKE DETECTOR - SAFETY SHUTDOWN		Y	Q
LOW LIMIT FREEZESTAT - FREEZE PROTECTION SAFETY SHUTDOWN		Y	F
DIFFERENTIAL PRESSURE SWITCH - FILTER CHANGE ALARM		Y	F
FIRE ALARM CONTROL PANEL - SAFETY SHUTDOWN INTERLOCK		Y	

DIV. 23 CONTRACTOR SHALL PROVIDE CONTROL PANEL(S), WIRING, THERMOSTAT(S), TEMPERATURE SENSOR(S), HUMIDISTAT(S), AND/OR HUMIDITY SENSOR(S) WHERE SHOWN ON THE DRAWINGS AND AS REQUIRED TO FACILITATE THE SCHEDULED CONTROL, MODULES AND SEQUENCES OF OPERATION. EACH UNIT SHALL CONTROL BASED ON ITS OWN INTERNAL SAFETIES, TIME DELAYS, AND SEQUENCES UNLESS NOTED OTHERWISE. COORDINATE WITH OWNER FINAL BUILDING AND EQUIPMENT SCHEDULES DURING STARTUP. REFERENCE DIVISION SPECIFICATIONS FOR INDIVIDUAL DEVICE REQUIREMENTS.

NOTES:
 B. DIVISION 23 CONTRACTOR SHALL PROVIDE DEVICE.
 C. DETERMINE MINIMUM DAMPER POSITION IN FIELD DURING BALANCING TO PROVIDE SCHEDULED OUTDOOR AIRFLOW WHEN UNIT IS OPERATIONAL. CLOSE DAMPER WHEN UNIT IS NOT OPERATIONAL.
 F. FACTORY MOUNT AND PRE-WIRE DEVICE FOR OPERATION SUBJECT TO THE ONBOARD CONTROLLER.
 H. INITIATE POWERED EXHAUST FAN ON AND OPERATE CONTINUOUSLY WHEN UNIT IS OPERATING.
 L. PROVIDE TWO POSITION EXHAUST DAMPER. OPEN DAMPER WHEN ASSOCIATED EXHAUST FAN IS OPERATIONAL.
 M. MODULATE AND/OR CYCLE COIL CAPACITY STAGES SUBJECT TO THE INTERNAL SAFETIES AND SEQUENCES TO MAINTAIN SCHEDULED SETPOINTS.
 N. DEHUMIDIFICATION SEQUENCE SHALL BE BASED ON ZONE AIR HUMIDITY.
 Q. DIVISION 28 CONTRACTOR SHALL PROVIDE DEVICE.
 R. EQUIPMENT SHALL BE IN OCCUPIED MODE WHEN WATER IS PRESENT IN THE POOLS. WHEN IN POOL MAINTENANCE MODE SYSTEM SHALL OPERATE ON CALL FOR HEATING/COOLING WITH NO VENTILATION OR EXHAUST.

PROJECT DESIGN CONDITIONS																
CLIMATE CONDITIONS			WEATHER STATION			REFERENCE			MONDAY - FRIDAY							
WEATHER STATION: MEMPHIS INTL. TN, USA			2025 ASHRAE			TBD BY OWNER			SATURDAY							
CLIMATE ZONE: 3A						TBD BY OWNER			SUNDAY							
ASHRAE HEATING: 99.6%			19.7 °F DB			TBD BY OWNER			HOLIDAY							
DESIGN HEATING CONDITIONS:			19.7 °F DB													
HUMIDIFICATION:			5.8 °F DP			7.5 g/ft³			25.8 °F DB							
ASHRAE COOLING:			96.6 °F DB			77.0 °F WB										
DESIGN COOLING CONDITIONS:			96.6 °F DB			77.0 °F WB										
DEHUMIDIFICATION:			77 °F DP			141.8 g/ft³			86.2 °F DB							
BUILDING OPERATING HOURS:																
BAS CONTRACTOR SHALL PROVIDE CAPABILITY FOR 20 DISTINCT BUILDING SCHEDULES/EVENT TYPES TO BE DETERMINED BY THE OWNER. SCHEDULES SHALL BE CONVEYED BY THE BAS TO OTHER CONTROL SYSTEMS IN THE BUILDING (INCLUDING BUT NOT LIMITED TO THE LIGHTING CONTROL AND POWER MONITORING SYSTEMS) VIA SYSTEM INTEGRATION.																
SPACE / UNIT DESCRIPTION		SETPOINTS						SPACE OPERATING HOURS				NOTES				
		COOLING / DE-HUMIDIFICATION			HEATING			HUMIDIFICATION		ZONE VENTILATION RESET			OCCUPIED / UNOCCUPIED			
		OCC °F	UNOCC °F	MAX RH %	MIN RH %	OCC °F	UNOCC °F	MIN RH %	MAX RH %	CONTROL METHOD	BASE PPM	MAXIMUM PPM	M-F	SAT	SUN	
CONCESSION		72	80	60%	NA	70	60	NA	NA	NA	NA	NA	TBD	TBD	TBD	B
FLEX ROOM		72	80	60%	50%	68	60	NA	NA	CO2	400	600	TBD	TBD	TBD	A-D
FITNESS (WORKOUT)		72	80	60%	50%	68	60	NA	NA	NA	NA	NA	TBD	TBD	TBD	B-D
GYM (COURTS)		72	80	60%	50%	68	60	NA	NA	NA	NA	NA	TBD	TBD	TBD	B-D
LOBBY/TAGGING		72	80	60%	50%	68	60	NA	NA	NA	NA	NA	TBD	TBD	TBD	B-D
LOCKER		72	80	60%	50%	68	60	NA	NA	NA	NA	NA	TBD	TBD	TBD	B
NATATORIUM / POOL STORAGE		62	62	60%	50%	62	62	NA	NA	NA	NA	NA	TBD	TBD	TBD	B-D
OFFICE / ADMIN		72	80	60%	50%	70	60	NA	NA	NA	NA	NA	TBD	TBD	TBD	B-D
STORAGE / MEP		78	80	60%	50%	65	60	NA	NA	NA	NA	NA	TBD	TBD	TBD	B-D

NOTES:
 A. ZONE LEVEL VENTILATION RESET / DEMAND CONTROL VENTILATION (DCV) CONTROL METHOD: CARBON DIOXIDE SENSOR (CO2).
 B. ZONE LEVEL SET POINT CONDITIONS SHALL BE AS SCHEDULED UNLESS OTHERWISE SCHEDULED OR NOTED ON THE DRAWINGS FOR ROOM SPECIFIC SPACE CONDITIONS.
 C. ZONE LEVEL OCCUPANCY HOUR SCHEDULE SHALL BE PER BUILDING OPERATING HOURS UNLESS OTHERWISE SCHEDULED.
 D. ZONE LEVEL CONTROLS SHALL BE CAPABLE OF OPERATING WITH INDEPENDENT OCCUPANCY SCHEDULES.

SEQUENCE OF OPERATION

A. ROOFTOP UNIT CONTROL

Reference the Rooftop Unit Control Matrix for sequence of operations.

B. NATATORIUM DEHUMIDIFICATION UNIT CONTROL

Reference the Dehumidification Unit Control Matrix for sequence of operations.

C. FAN COIL UNIT CONTROL SEQUENCE (HEAT PUMP) (FCU-01)

All temperature and airflow setpoints shall be adjustable.

During all hours:

Operate fan coil unit supply fan continuously to maintain makeup air to the Pool Pump Room. When the space temperature sensor calls for cooling or heating, cycle stage(s) of DX cooling and Heat Pump heating to maintain the zone temperature setpoint.

D. FAN COIL UNIT CONTROL SEQUENCE (HEAT PUMP) (FCU-02, FCU-04)

All temperature and airflow setpoints shall be adjustable.

During occupied hours:

Operate fan coil unit supply fan continuously and open outdoor air damper to maintain minimum ventilation. When the space temperature sensor calls for cooling or heating, cycle stage(s) of DX cooling and Heat Pump heating to maintain the zone temperature setpoint. Duct mounted smoke detectors shall shutdown unit upon alarm.

During unoccupied hours:

Cycle the fan coil unit supply fan and cooling or heating system to maintain unoccupied setback temperature setpoints. Outdoor air damper shall be closed.

E. DUCTLESS FAN COIL UNIT CONTROL SEQUENCE (DX COOLING ONLY) (FCU-03, FCU-05, FCU-06)

All temperature and airflow setpoints shall be adjustable.

During all hours:

Cycle the fan coil unit supply fan and cooling system to maintain temperature setpoint.

F. FAN LIGHT SWITCH INTERLOCK CONTROL (EF-03)

Interlock fan operation with the room light switch. Fan shall run continuously when the lights are on.

G. FAN TIME OF DAY CONTROL (EF-01, EF-02)

Interlock fan operation with 7-day, 24-hour time clock. Fan shall operate during occupied hours.

H. FAN CONTINUOUS OPERATION CONTROL (EF-04, EF-05)

Pool Equipment Room and Pool Chemical Storage exhaust fans shall operate continuously 24/7. Turn 'on' and 'off' by equipment circuit breaker.

I. ELECTRIC UNIT HEATER CONTROL

Heater unit mounted thermostat shall energize fan and stage heating to maintain zone temperature setpoint. Temperature setpoints shall be adjustable.

SEAL

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CLIENT



City of West Memphis

DRAWING ISSUE

NO.	DATE	DESCRIPTION
1	08/15/2024	ISSUED FOR PERMITTING
2	08/15/2024	ISSUED FOR CONSTRUCTION DOCUMENT PREPARE

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JOB INFO

JOB No.: WESCIT00561

SHEET TITLE

MECHANICAL CONTROLS

SHEET NUMBER

M-600

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