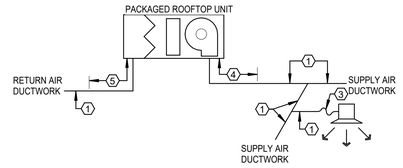
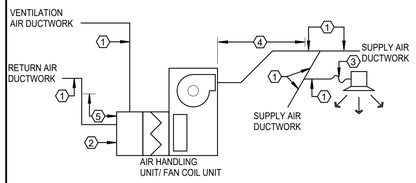
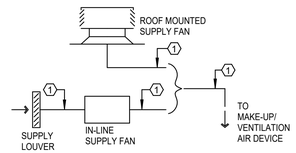
DUCT LINER AND INSULATION



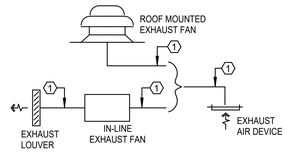
PACKAGED ROOFTOP UNIT



AIR HANDLING UNITS AND FAN COIL UNITS



MAKE-UP/VENTILATION AIR SYSTEMS



EXHAUST AIR SYSTEMS

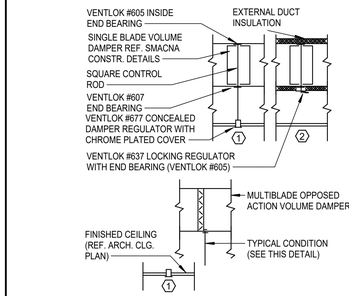
KEYED NOTES:

1. SHEETMETAL DUCTWORK WITH EXTERNAL DUCTWORK INSULATION AS SPECIFIED.
2. SHEETMETAL DUCTWORK RETURN AIR PLENUM WITH EXTERNAL DUCTWORK INSULATION AS SPECIFIED.
3. FLEXIBLE DUCTWORK WITH EXTERNAL DUCTWORK INSULATION AS SPECIFIED.
4. SHEETMETAL DUCTWORK WITH EXTERNAL DUCTWORK INSULATION AS SPECIFIED AND 1" THICK 1-1/2 LB LINER AS SPECIFIED FROM AIR HANDLING UNIT DISCHARGE TO 10'-0" DOWNSTREAM.
5. SHEETMETAL DUCTWORK WITH EXTERNAL DUCTWORK INSULATION AS SPECIFIED AND 1" THICK 1-1/2 LB LINER AS SPECIFIED FROM AIR HANDLING UNIT INLET TO 10'-0" UPSTREAM.
6. EXHAUST DUCTWORK AS SPECIFIED WITH FIREBOARD INSULATION AS SPECIFIED.
7. SHEETMETAL DUCTWORK ONLY. NO INSULATION REQUIRED.

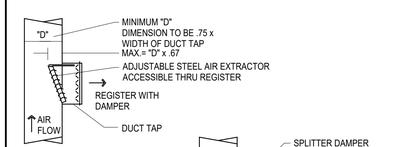
ABBREVIATIONS

A	AMP
ADD	ADDENDUM
ADJ	ADJUSTABLE
AFF	ABOVE FINISH FLOOR
AHU	AIR HANDLER UNIT
AI	ANALOG INPUT
ALT	ALTERNATE
AO	ANALOG OUTPUT
APPRX	APPROXIMATE
ARCH	ARCHITECT, ARCHITECTURAL
BDD	BACK DRAFT DAMPER
BLDG	BUILDING
BTUH	BRITISH THERMAL UNIT PER HOUR
C	CENTER
CD	CEILING DIFFUSER
CFM	CUBIC FEET PER MINUTE
CO	CLEAN OUT
COND	CONDENSATE
CONT	CONTINUOUS
COP	COEFFICIENT OF PERFORMANCE
DB	DRY BULB
DET	DETAIL
DG	DOOR GRILLE
DI	DIGITAL INPUT
DIA/∅	DIAMETER
DIM	DIMENSION
DN	DOWN
DO	DIGITAL OUTPUT
DWG	DRAWING
EA	EXHAUST AIR
EAT	ENTERING AIR TEMPERATURE
EC	ELECTRICAL CONTRACTOR
EER	ENERGY EFFICIENCY RATIO
EF	EXHAUST FAN
EG	EXHAUST GRILLE
ELEC	ELECTRICAL
ERV	ENERGY RECOVERY VENTILATOR
ESP	EXTERNAL STATIC PRESSURE
EWT	ENTERING WATER TEMPERATURE
EXIST	EXISTING
FA	FRESH AIR
FPM	FEET PER MINUTE
FT	FOOT (FEET)
GA	GAUGE/GAGE
GALV	GALVANIZED
GC	GENERAL CONTRACTOR
GPM	GALLONS PER MINUTE
GYP	GYPSUM
HORIZ	HORIZONTAL
HP	HORSEPOWER
HT	HEIGHT
I/O	INPUT/OUTPUT
IN	INCH
LAT	LEAVING AIR TEMPERATURE
LB	POUND
LWT	LEAVING WATER TEMPERATURE
MAX	MAXIMUM
MBH	1000 BTU PER HOUR
MC	MECHANICAL CONTRACTOR
MCA	MINIMUM CIRCUIT AMPS
MECH	MECHANICAL
MIN	MINIMUM
MFR	MANUFACTURER
NTS	NOT TO SCALE
OA	OUTSIDE AIR
OC	ON CENTER
P	PUMP
PC	PLUMBING CONTRACTOR
PLBG	PLUMBING
PSI	POUNDS PER SQUARE INCH
QTY	QUANTITY
RA	RETURN AIR
REQD	REQUIRED
REV	REVERSE OR REVISION
RG	RETURN AIR GRILLE
RPM	REVOLUTIONS PER MINUTE
RTU	ROOF TOP UNIT
SA	SUPPLY AIR
SQFT	SQUARE FEET
SG	SUPPLY GRILLE
SP	STATIC PRESSURE
SPEC	SPECIFICATIONS
SS	STAINLESS STEEL
T&B	TEST AND BALANCE
TEMP	TEMPERATURE OR TEMPORARY
TG	TRANSFER GRILLE
TYP	TYPICAL
V	VOLT
VAR	VARIABLE OR VARIES
VEL	VELOCITY
VFD	VARIABLE FREQUENCY DRIVE
VTR	VENT THRU ROOF
W/	WITH
W/IN	WITHIN
W/O	WITH OUT
WB	WET BULB
WC	WATER COLUMN (INCHES OF)
WT	WEIGHT

DUCTWORK CONSTRUCTION DETAILS

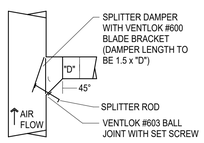


1. DAMPER ABOVE INACCESSIBLE CEILING
2. DAMPER ABOVE LIFT-OUT CEILING

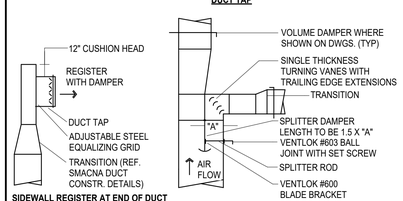


NOTES:
1. MAX. WIDTH OF DUCT TAP SHALL BE 48". PROVIDE BOTTOM BRACKET FOR SUPPORT WHERE EXTRACTOR EXCEEDS 16".
2. MAX. HEIGHT OF DUCT TAP SHALL BE 12" (MIN.= 4")

EXTRACTOR SIDEWALL REGISTER



DUCT TAP



SIDEWALL REGISTER AT END OF DUCT

SPLITTER

MECHANICAL SYMBOL LEGEND

SYMBOL	DESCRIPTION (DISREGARD ITEMS NOT SHOWN ON PLANS)
GENERAL	
(#)	KEY NOTE TAG
(A)	REVISION TAG
	NEW EQUIPMENT
EQUIP-1	EQUIPMENT TAG
DUCTWORK	
	SUPPLY AIR DUCTWORK
	RETURN AIR AND OUTSIDE AIR DUCTWORK
	EXHAUST AIR DUCTWORK
	FLEXIBLE DUCTWORK
	SUPPLY AIR DUCTWORK THROUGH HORIZONTAL PARTITION
	RETURN AIR DUCTWORK THROUGH HORIZONTAL PARTITION
	EXHAUST AIR DUCTWORK THROUGH HORIZONTAL PARTITION
	ROUND DUCTWORK
	FIRE DAMPER (VERTICAL)
	FIRE DAMPER (HORIZONTAL)
(S)	SMOKE DAMPER (VERTICAL)
(S)	SMOKE DAMPER (HORIZONTAL)
(F/S)	COMBINATION FIRE & SMOKE DAMPER (VERTICAL)
(F/S)	COMBINATION FIRE & SMOKE DAMPER (HORIZONTAL)
	MANUAL BALANCING DAMPER (SEE DAMPER SCHEDULE)
M	MOTORIZED DAMPER (SEE DAMPER SCHEDULE)
SENSORS	
(T)	THERMOSTAT AND TEMPERATURE SENSOR
(H)	HUMIDISTAT
(SD)	SMOKE DETECTOR
(HD)	HEAT DETECTOR
AIR DEVICES	
(G)	GRILLE SIZE TAG (REFER TO GRILLE SIZE LEGEND)
	SUPPLY AIR GRILLE WITH FOUR-WAY THROW
	SUPPLY AIR GRILLE WITH THREE-WAY THROW
	SUPPLY AIR GRILLE WITH TWO-WAY THROW
	SUPPLY AIR GRILLE WITH TWO-WAY CORNER THROW
	SUPPLY AIR GRILLE WITH ONE-WAY THROW
	RETURN AIR GRILLE
	RETURN AIR GRILLE WITH SOUND BOOT
	EXHAUST AIR GRILLE
	SUPPLY AIR SIDEWALL GRILLE
	RETURN AIR SIDEWALL GRILLE
20X12	RETURN AIR OPENING ABOVE CEILING
RENOVATIONS	
	POINT OF CONNECTION FROM NEW TO EXISTING
	ITEM TO REMAIN
	ITEM TO BE REMOVED

GENERAL MECHANICAL NOTES

1. ALL WORK SHALL BE IN COMPLIANCE WITH STATE AND LOCAL CODES.
2. THE CONTRACTOR SHALL PAY FOR ALL FEES, PERMITS, LICENSES, ETC., NECESSARY FOR PROPER COMPLETION OF THE WORK.
3. INSTALL ALL EQUIPMENT IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS.
4. VERIFY ALL EXISTING CONDITIONS. NOTIFY ENGINEER OF ANY CONFLICTS BETWEEN CONTRACT DRAWINGS AND ACTUAL CONDITIONS.
5. EXISTING UTILITIES TO BE ABANDONED SHALL BE PROPERLY DISCONNECTED AND CAPPED AS REQUIRED BY CODE OR LOCAL ORDINANCE.
6. THESE DRAWINGS ARE DIAGRAMMATIC AND SHALL NOT BE SCALED. ADDITIONAL DATA SHALL BE FROM THE ENGINEER THROUGH WRITTEN CLARIFICATION ONLY. VERIFY ALL EXISTING CONDITIONS, ELEVATIONS, AND DIMENSIONS BEFORE PROCEEDING WITH ANY PORTION OF ANY WORK. THE CONTRACTOR SHALL PROVIDE ALL OFFSETS AND TRANSITIONS REQUIRED TO MEET EXISTING CONDITIONS.
7. THE CONTRACTOR SHALL PERFORM WORK IN A SKILLED AND PROFESSIONAL MANNER.
8. ALL CONTRACTORS ARE RESPONSIBLE TO FIELD COORDINATE WORK SCHEDULE WITH OWNER REPRESENTATIVE.
9. THE CONTRACTOR SHALL WORK AND COORDINATE WITH THE OTHER TRADES.
10. ALL EQUIPMENT SHALL BE NEW AND IN UNDAMAGED CONDITION. ANY EQUIPMENT FOUND DEFECTIVE SHALL BE IMMEDIATELY REMOVED FROM THE PROJECT.
11. PROVIDE 3 COPIES OF AN OPERATION AND MAINTENANCE MANUAL FOR ALL MAJOR EQUIPMENT REQUIRING SERVICE. MAJOR EQUIPMENT INCLUDES BUT IS NOT LIMITED TO COILS, FANS, AND CONTROL WIRING DIAGRAMS. EACH PIECE OF EQUIPMENT SHALL STATE THE CONTRACT DATE AND THE NAME, ADDRESS AND PHONE NUMBER FOR THE PRIME CONTRACTOR, SUBCONTRACTOR PERFORMING THE INSTALLATION, AND THE LOCAL VENDOR FOR SPARE PARTS. THE MANUALS SHALL CONTAIN MAINTENANCE INSTRUCTIONS REQUIRED FOR THE INSTALLED EQUIPMENT. MANUALS SHALL BE BOUND IN A THREE RING HARD COVER BINDER. O & M MANUALS SHALL BE SUBMITTED TO THE OWNER PRIOR TO FINAL WALK THROUGH OF THE PROJECT.
12. PROVIDE 8 HOURS OF OWNER TRAINING FOR THE INSTALLED EQUIPMENT. TRAINING SHALL BE HELD ONLY AFTER ALL OF THE EQUIPMENT IS INSTALLED AND PROPER OPERATION IS VERIFIED.
13. CONTRACTOR SHALL SUBMIT A CERTIFIED REPORT INDICATING SYSTEM PERFORMANCE INCLUDING, BUT NOT LIMITED TO, VOLTAGE AND AMPERAGE MEASUREMENTS OF ALL EQUIPMENT GREATER THAN 1/3 H.P. WATER BALANCE MEASUREMENTS OF EACH COIL AND PUMP. AIR BALANCE MEASUREMENTS OF OUTSIDE AIR DELIVERY, AIR HANDLING UNIT SUPPLY, SUPPLY DIFFUSERS, EXHAUST AND RETURN GRILLES. AIR BALANCE SHALL BE WITHIN 10% OF DESIGN CONDITIONS. THE REPORT CERTIFICATION SHALL BE AS FOLLOWS:

    I (name) of (company) CERTIFY THAT ALL MEASUREMENTS, FIGURES AND STATEMENTS INDICATED IN THIS REPORT WERE TAKEN BY ME OR UNDER MY SUPERVISION AND ARE ACCURATE AS OF (date). DESIGN FLOWS WERE BASED UPON PLANS DATED (xx/xx/xx).

14. DUCT MATERIAL SHALL BE GALVANIZED OR ALUMINUM CONSTRUCTION IN ACCORDANCE WITH SMACNA DUCT CONSTRUCTION STANDARD 2005 FOR THE PRESSURE AND SEAL CLASS LISTED IN DUCTWORK/INSULATION SCHEDULE.
15. DUCT SIZES LISTED ON PLANS ARE THE REQUIRED CLEAR INTERIOR DIMENSIONS.
16. SUPPLY AND RETURN BRANCH DUCTS MAY BE INSULATED FLEX DUCT IF THE RUN IS LESS THAN 5 FEET IN LENGTH. ANY LENGTHS OVER 5 FEET SHALL BE RIGID DUCTWORK, DUCT SHALL BE THE SAME SIZE AS THE LISTED DIFFUSER THROAT UNLESS NOTED OTHERWISE.
17. PROVIDE VOLUME CONTROL DAMPERS WHERE INDICATED AND AT ALL TAKEOFFS, BOTH SUPPLY AND RETURN SYSTEMS, AND MAJOR DUCT RUNS. DAMPERS SHALL BE FACTORY-FABRICATED WITH ZINC-PLATED, DIE-CAST CONTROL HARDWARE. CONTROL HARDWARE SHALL INCLUDE HEAVY GAUGE DIAL AND HANDLE WITH ELEVATED PLATFORM FOR INSULATED DUCT MOUNTING.
18. PROVIDE TURNING VANES IN ALL RECTANGULAR ELBOWS CONFORMING TO SMACNA DUCT CONSTRUCTION STANDARD 2005 FIG. 4-2 TYPE RE-3 WITH STANDARD RADIUS. WHERE SPACE PERMITS, PROVIDE RADIUSED ELBOWS IN ACCORDANCE WITH FIGURES 4-2, TYPE RE-1.
19. ALL RECTANGULAR MAIN TO RECTANGULAR BRANCH CONNECTIONS, BOTH CONVERGING AND DIVERGING CONFIGURATIONS, SHALL HAVE A 45 DEG. ENTRY TAP CONSTRUCTED IN ACCORDANCE WITH SMACNA DUCT CONSTRUCTION STANDARD 2005 FIG. 4-6.
20. DIFFUSER PATTERN 4-WAY UNLESS OTHERWISE INDICATED. PROVIDE FIBERGLASS DUCT INSULATION WITH VAPOR BARRIER AS SCHEDULED UNLESS NOTED OTHERWISE.
21. MECHANICAL CONTRACTOR TO REPAIR ANY DAMAGE DONE TO THE FIRE PROOFING WHILE INSTALLING THE MECHANICAL TRADES. SEAL ALL PENETRATIONS THROUGH RATED STRUCTURES WITH UL LISTED FIRE SEAL DESIGNED FOR THE SPECIFIED APPLICATION.
22. THE CONTRACTOR SHALL TAKE ALL PRECAUTIONARY MEASURES TO PROTECT THE PUBLIC AND ADJACENT PROPERTIES FROM DAMAGE THROUGHOUT CONSTRUCTION.
23. THE CONTRACTOR SHALL GUARANTEE ALL WORKMANSHIP AND MATERIALS FOR A PERIOD OF ONE (1) YEAR FROM THE DATE OF SUBSTANTIAL COMPLETION OR AS OTHERWISE REQUIRED IN THE SPECIFICATIONS.
24. MECHANICAL CONTRACTOR TO INCLUDE THE TEST AND BALANCE, AND ANY PERMIT FEES IN THEIR BID.
25. MECHANICAL CONTRACTOR SHALL VERIFY ALL ROOFTOP EQUIPMENT WEIGHTS, SIZES, LOCATIONS AND OPENINGS REQUIRED AND SHALL COORDINATE ANY CHANGES WITH THE ARCHITECT.
26. UPON PROJECT COMPLETION, RECORD (AS-BUILT) DRAWINGS SHALL BE PROVIDED BY THE CONTRACTOR TO THE BUILDING OWNER. ALL CHANGES MADE TO EQUIPMENT, DUCTWORK, AND GENERAL DESIGN SHALL BE NOTED ON THE DRAWINGS. PROVIDE IN PDF FORMAT OR PRINTED SET AT THE OWNER'S REQUEST.

MECHANICAL SHEET INDEX

M000	MECHANICAL TITLE SHEET
M101	MECHANICAL PLAN
M201	MECHANICAL ROOF PLAN
M501	MECHANICAL DETAILS
M601	MECHANICAL SCHEDULES

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FLAT LAND
CIVIL

KFC ENGINEERING
STRUCTURAL

SALAS O'BRIEN
MECHANICAL / ELECTRICAL



KF
drawn by

DG
checked by

AUGUST 2026
date

REVISIONS

Δ	DESCRIPTION	DATE

MOORE PUBLIC SCHOOLS

MPS ASC
BOARDROOM
BUILDING

sheet no:

M000

Salas O'Brien

Salas O'Brien Inc. - Oklahoma City
2900 S. Telephone Road, Suite 120
Moore, OK 73160
CA#: 9820 Expiration Date: 06/30/27

Salas O'Brien Project Number: 2650-00986-00

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SAFEROOM GENERAL NOTES

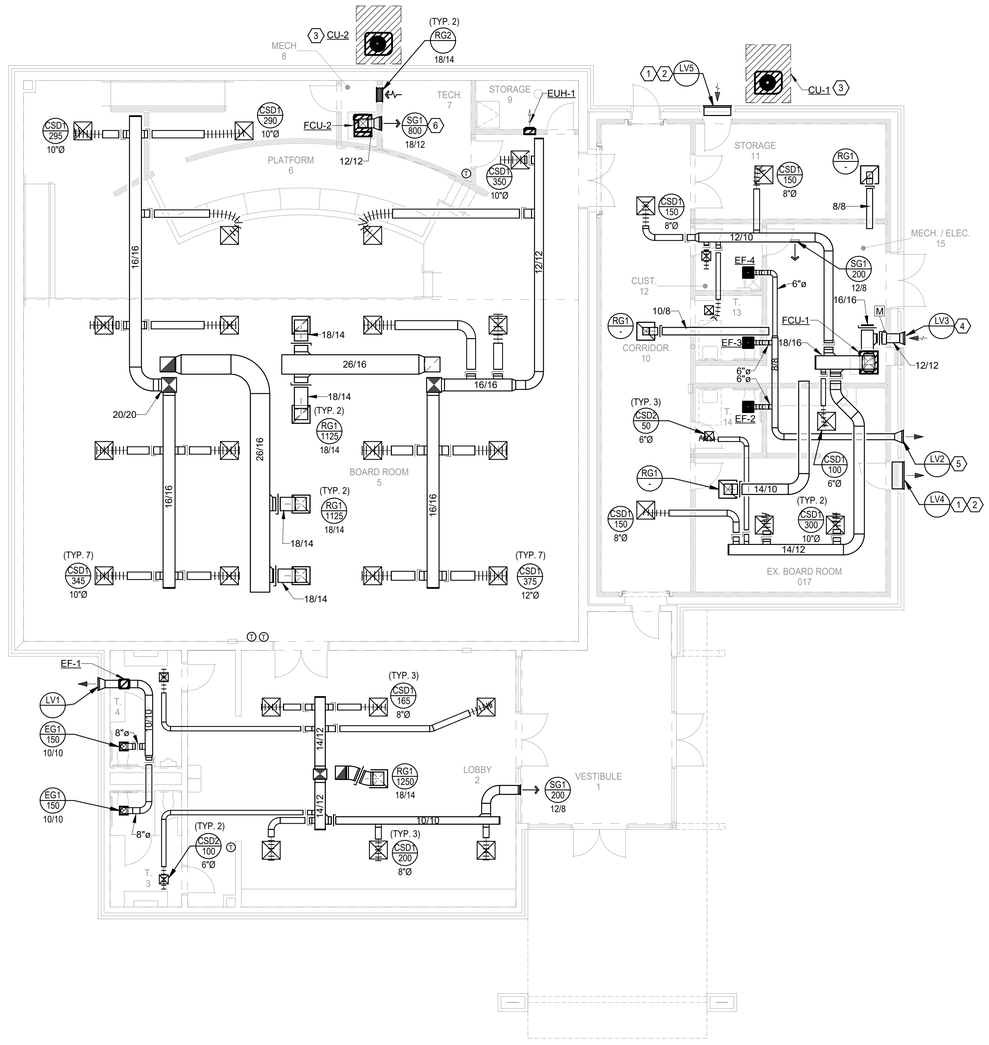
1. ALL PENETRATIONS OVER 3 1/2 SQUARE INCHES OR 2 1/16 INCHES IN DIAMETER IN/OUT OF SHELTER REQUIRE FEMA SHROUD. REFER TO STRUCTURAL FOR ALL SHROUD DETAIL.

GENERAL NOTES

1. COORDINATE INSTALLATION OF EQUIPMENT AND DUCTWORK WITH ALL TRADES.
2. COORDINATE LOCATION OF THERMOSTATS WITH E.C. ROUGH-IN BY E.C
3. ROUTE CONDENSATE TO NEAREST HUB DRAIN OR MOP SINK WITH A TRAP PRIMER. MAINTAIN A MINIMUM OF 1/4 IN. PER FOOT SLOPE IN DIRECTION OF DISCHARGE. COORDINATE WITH PC.
4. PLACE BALANCING DAMPERS ON ALL SUPPLY AND RETURN BRANCH DUCTS AS CLOSE AS POSSIBLE TO THE MAIN TRUNK. SEE DETAIL 2/M501 FOR ADDITIONAL INFORMATION.

MECHANICAL KEYED NOTES

1	LOUVER MOUNTED BEHIND INSULATED DOOR. COORDINATE WITH ARCHITECT AND GC.
2	FINAL HEIGHT OF LOUVER SHALL BE COORDINATED WITH SAFEROOM SHELTER PLAN.
3	PROVIDE 4" REINFORCED CONCRETE PAD. INSTALL UNIT IN ADHERENCE WITH MANUFACTURER'S SUGGESTED CLEARANCES. EXTEND CONCRETE PAD A MINIMUM OF 6" ON EACH SIDE OF UNIT. EXTEND BAD TO BUILDING. COORDINATE WITH GC AND ARCHITECT.
4	MOUNT LOUVER AT MINIMUM 1'-4" ABOVE GRADE.
5	MOUNT LOUVER AT 10'-0" ABOVE GRADE.
6	LOCATE GRILLE ABOVE TECHNOLOGY RACK.



N 1 **MECHANICAL PLAN**
Scale: 1/8" = 1'-0"

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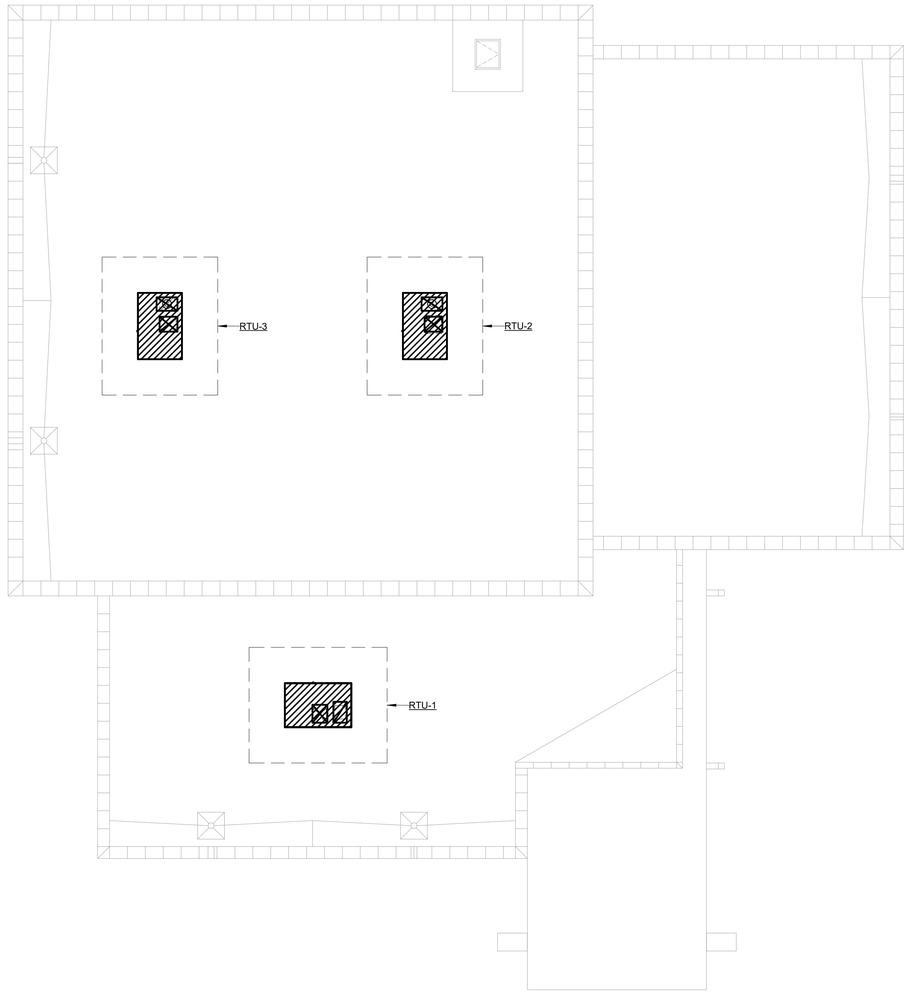
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GENERAL NOTES

1. MAINTAIN A MINIMUM OF 10'-0" BETWEEN ALL OUTSIDE AIR INTAKES AND ANY EXHAUST OPENINGS.
2. MAINTAIN A MINIMUM OF 10'-0" BETWEEN ANY MECHANICAL ROOF EQUIPMENT AND ROOF EDGE WHERE PARAPET DOES NOT EXCEED 42".
3. ROUTE ALL RTU CONDENSATE LINES TO NEAREST ROOF DRAIN WITH 1" COPPER PAINTED BLACK. REFER TO MECHANICAL DETAIL SHEET FOR ADDITIONAL INFORMATION.



N 1 **MECHANICAL ROOF PLAN**
Scale: 1/8" = 1'-0"

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Bridget McDonald
30822
08/14/26

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Δ	DESCRIPTION	DATE

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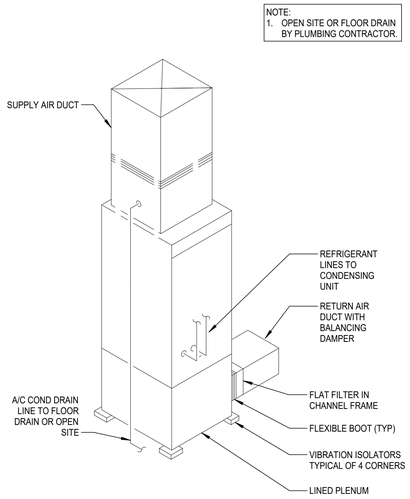
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M201

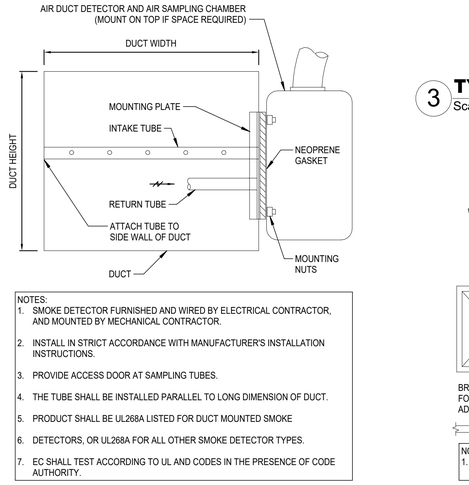
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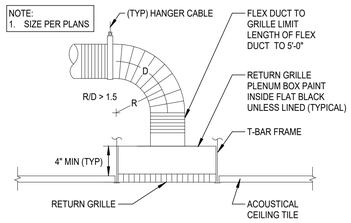


5 VERTICAL FCU DETAIL
Scale: N.T.S.

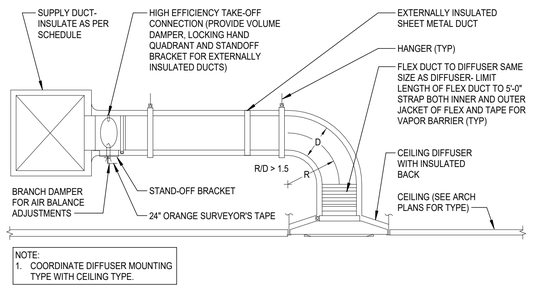


NOTES:
1. SMOKE DETECTOR FURNISHED AND WIRED BY ELECTRICAL CONTRACTOR, AND MOUNTED BY MECHANICAL CONTRACTOR.
2. INSTALL IN STRICT ACCORDANCE WITH MANUFACTURER'S INSTALLATION INSTRUCTIONS.
3. PROVIDE ACCESS DOOR AT SAMPLING TUBES.
4. THE TUBE SHALL BE INSTALLED PARALLEL TO LONG DIMENSION OF DUCT.
5. PRODUCT SHALL BE UL268A LISTED FOR DUCT MOUNTED SMOKE
6. DETECTORS, OR UL268A FOR ALL OTHER SMOKE DETECTOR TYPES.
7. EC SHALL TEST ACCORDING TO UL AND CODES IN THE PRESENCE OF CODE AUTHORITY.

4 SMOKE DETECTOR MOUNTING DETAIL
Scale: N.T.S.

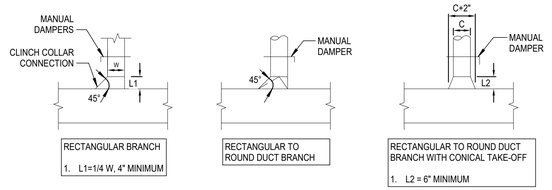


3 TYP. RETURN/EXHAUST AIR GRILLE PLENUM BOX DETAIL
Scale: N.T.S.



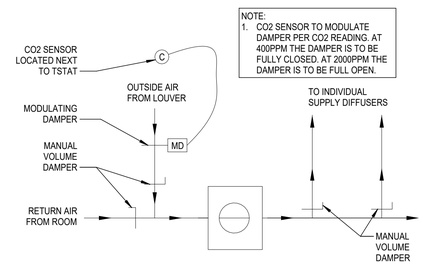
NOTE:
1. COORDINATE DIFFUSER MOUNTING TYPE WITH CEILING TYPE.

2 TYP. CEILING DIFFUSER DETAIL
Scale: N.T.S.

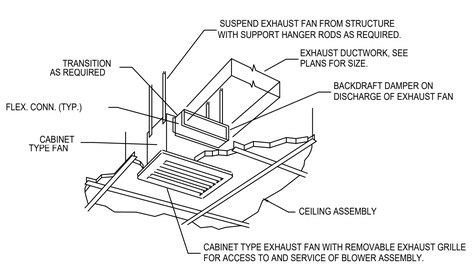


NOTES:
1. ALL DUCTWORK TO BE CONSTRUCTED TO MEET S.M.A.C.N.A. STANDARDS
2. REMOVE EVERY OTHER TURNING VANE IN RETURN/EXHAUST DUCTS.

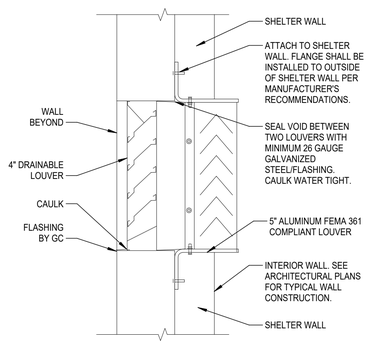
1 TYPICAL DUCTWORK DETAILS
Scale: N.T.S.



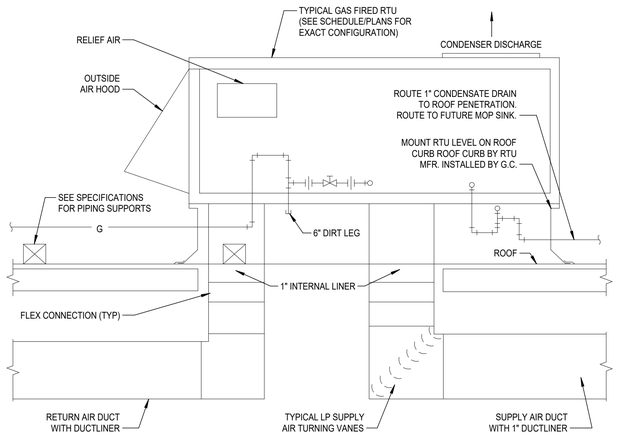
9 FURNACE AIR BALANCE SCHEMATIC
Scale: N.T.S.



8 CEILING MOUNTED EXHAUST FAN
Scale: N.T.S.



7 FEMA LOUVER CONNECTION DETAIL
Scale: N.T.S.



6 MQ - TYP. ROOF TOP UNIT GAS FIRED DETAIL
Scale: N.T.S.

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SALAS O'BRIEN
MECHANICAL / ELECTRICAL

KF
drawn by

DG
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AUGUST 2026
date

REVISIONS

Δ	DESCRIPTION	DATE

MOORE PUBLIC SCHOOLS

MPS ASC
BOARDROOM
BUILDING

sheet no:

M501

Salas O'Brien

Salas O'Brien Inc. - Oklahoma City
2900 S. Telephone Road, Suite 120
Moore, OK 73160
CA#: 9820 Expiration Date: 06/30/27

Salas O'Brien Project Number: 2650-00986-00

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PACKAGED ROOFTOP UNIT - GAS HEAT

MARK	FAN							COOLING				COOLING		HEATING			HEATING		BASIS OF DESIGN					REMARKS
	SUPPLY AIR CFM	OUTSIDE AIR CFM	EXT.STATIC PRESSURE (IN. W.C.)	HORSE POWER	CURRENT CHAR			AIR TEMPERATURE (°F)			TOTAL CAPACITY (BTU)	SENSIBLE CAPACITY (BTU)	MINIMUM EER	NUMBER OF STAGES	ENTERING AIR TEMP.(°F)	INPUT (BTUH)	OUTPUT (BTUH)	SSE %	NUMBER OF STAGES	MANUFACTURER	MODEL	MCA	MOCP	WEIGHT (LBS)	
					V	P	F	ENTERING DRY BULB	ENTERING WET BULB	AMBIENT TEMP														
RTU-1	1,495	250	1.00	1.5	208	3	60	82.0	67.0	104 °F	61400	43400	12.8	2	60	80000	65000	81	2	YORK	KT061N08P2DEAAE1A1	39	50	1215	1-12
RTU-2	2,975	750	1.00	3.0	208	3	60	82.0	67.0	104 °F	113000	82400	12.2	2	60	180000	146000	81	2	YORK	KJ120N18R2DEEAE1A1	60	70	1325	1-13
RTU-3	3,000	750	1.00	3.0	208	3	60	82.0	67.0	104 °F	113000	82400	12.2	2	60	180000	146000	81	2	YORK	KJ120N18R2DEEAE1A1	60	70	1325	1-13

GENERAL NOTES:
1. EXTERNAL STATIC PRESSURE INCLUDES LOSSES DUE TO DUCTWORK, AIR DEVICES, DAMPERS, AND DUCT MOUNTED HOT WATER COILS WHERE APPLICABLE. DIRTY FILTER AND UNIT CASING MUST BE ADDED TO EXTERNAL STATIC PRESSURE TO OBTAIN TOTAL PRESSURE LOSS. INCREASE HORSEPOWER AS REQUIRED TO MEET YOUR TOTAL PRESSURE LOSS. COORDINATE WITH ELECTRICIAN.
2. MAINTAIN MINIMUM CLEARANCE FOR COIL PULL AS RECOMMENDED BY UNIT MANUFACTURER. MAINTAIN MINIMUM CLEARANCE AS REQUIRED TO OPEN ACCESS AND CONTROL DOORS ON UNIT FOR SERVICE, MAINTENANCE, AND INSPECTION. MAINTAIN MINIMUM ELECTRICAL CLEARANCE AS REQUIRED BY NEC.

REMARKS:
1. PROVIDE UNIT WITH DISCONNECT SWITCH, HAIL GAURD, AND MOTORIZED OUTSIDE AIR DAMPER.
2. PROVIDE UNIT WITH FACTORY MOUNTED GFCI RECEPTACLE FOR ELECTRICIAN TO WIRE TO SEPARATE CIRCUIT.
3. PROVIDE UNIT WITH LOW AMBIENT CONTROL.
4. PROVIDE UNIT WITH DIGITAL, WI-FI ACCESSIBLE 7-DAY PROGRAMMABLE THERMOSTAT WITH OCCUPIED/UNOCCUPIED SETTINGS CAPABLE OF CONTROLLING THE H/C STAGES OF SPECIFIED UNIT.
5. PROVIDE A WATER LEVEL SENSING DEVICE (FLOW SWITCH) IN THE PRIMARY DRAIN PAN. THIS DEVICE SHALL SHUT OFF THE APPLIANCE IN THE EVENT THE PRIMARY DRAIN LINE BECOMES RESTRICTED.
6. PROVIDE LOW LEAK ENTHALPY ECONOMIZER WITH BAROMETRIC RELIEF DAMPER AND POWERED EXHAUST.
7. MECHANICAL CONTRACTOR IS RESPONSIBLE FOR ALL ELECTRICAL COSTS IF ALTERNATE UNIT IS PROVIDED WITH GREATER ELECTRICAL CHARACTERISTICS THAN SHOWN.
8. MODULATE OUTSIDE AIR BASED ON DEMAND REPORTED BY CO2 SENSOR.
9. PROVIDE 2" MERV-8 FILTERS.
10. PROVIDE UNIT WITH MODULATING HGRH AND WALL-MOUNTED HUMIDITY SENSOR.
11. PROVIDE WITH HINGED AND TOOL-LESS ACCESS DOORS.
12. PROVIDE WITH FACTORY ROOF CURB SO THAT BOTTOM OF RTU IS A MINIMUM OF 14" ABOVE FINISHED ROOF.
13. PROVIDE FACTORY INSTALLED RETURN DUCT SMOKE DETECTOR WITH REMOTE TEST STATIONS TO BE LOCATED IN OCCUPIED SPACE. INSTALLATION OF REMOTE TEST STATION AND CONNECTION TO FIRE ALARM SYSTEM BY EC.

UNIT HEATER - ELECTRIC

MARK	MINIMUM CAPACITY (BTUH)	KW	NUMBER OF STAGES	CURRENT CHAR.			CFM	MANUFACTURER	MODEL	REMARKS
				V	P	F				
EUH-1	5,000	1.5	1	120	1	60	100	MARLEY	FRC-1512F	1-3

REMARKS:
1. PROVIDE WITH INTERNAL THERMOSTAT.
2. RECESSED MOUNTED UNIT. PROVIDE WITH RECESSED MOUNTING KIT.
3. PROVIDE WITH BUILT-IN DISCONNECT.

FAN

TAG	LOCATION	CFM	EXT. STATIC PRESSURE (IN.W.C.)	MAX RPM	HORSE POWER	CURRENT CHAR			LOCALLY SWITCHED	INTERLOCK WITH	FAN TYPE	DRIVE TYPE	MANUFACTURER	MODEL NUMBER	REMARKS
						V	P	F								
CABINET																
EF-2	T 14	75	0.25	810	0.04	120	1	60	-	LIGHTS	CABINET	DIRECT	COOK	GC-146	1-3
EF-3	T 13	75	0.25	810	0.04	120	1	60	-	LIGHTS	CABINET	DIRECT	COOK	GC-146	1-3
EF-4	-	75	0.25	810	0.04	120	1	60	-	LIGHTS	CABINET	DIRECT	COOK	GC-146	1-3
INLINE															
EF-1	T 4	300	0.25	1100	0.02	120	1	60	-	LIGHTS	INLINE	DIRECT	COOK	090-SQN-D	1-3

GENERAL NOTES:
1. PROVIDE WITH ELECTRONIC SPEED CONTROL MOUNTED ABOVE ACCESSIBLE CEILING.
2. MC SHALL PROVIDE LOW VOLTAGE MOTORIZED DAMPER.
3. PROVIDE UNIT MOUNTED DISCONNECT.

DX FAN/COIL UNIT - HEAT PUMP WITH ELEC HEAT

MARK	FAN							AIR TEMPERATURE (°F)		COOLING				ELEC HEATING					BASIS OF DESIGN				REMARKS
	SUPPLY AIR CFM	OUTSIDE AIR CFM	EXT.STATIC PRESSURE (IN. W.C.)	HORSE POWER	CURRENT CHAR			ENTERING DRY BULB	ENTERING WET BULB	NOM. TOTAL CAPACITY	NOM. SENS. CAPACITY	MINIMUM EER2/ SEER2	NUMBER OF STAGES	ENTERING AIR TEMP.(°F)	MINIMUM CAPACITY (BTUH)	KW	NUMBER OF STAGES	CURRENT CHARAC.			MANUFACTURER	MODEL	MCA	MOCP	
					V	P	F											V	P	F					
FCU-1	1,500	275	0.90	0.75	208	1	60	80.0	67.0	46,000	33,000	14.43/-	2	60.00	45,000	15.00	2	208	1	60	YORK	JHE48D5CG2SS2	80	90	1-4

GENERAL NOTES:
1. EXTERNAL STATIC PRESSURE INCLUDES LOSSES DUE TO DUCTWORK, AIR DEVICES, DAMPERS, AND DUCT MOUNTED HOT WATER COILS WHERE APPLICABLE. DIRTY FILTER AND UNIT CASING MUST BE ADDED TO EXTERNAL STATIC PRESSURE TO OBTAIN TOTAL PRESSURE LOSS. INCREASE HORSEPOWER AS REQUIRED TO MEET YOUR TOTAL PRESSURE LOSS. COORDINATE WITH ELECTRICIAN.
2. MAINTAIN MINIMUM CLEARANCE FOR COIL PULL AS RECOMMENDED BY UNIT MANUFACTURER. MAINTAIN MINIMUM CLEARANCE AS REQUIRED TO OPEN ACCESS AND CONTROL DOORS ON UNIT FOR SERVICE, MAINTENANCE, AND INSPECTION. MAINTAIN MINIMUM ELECTRICAL CLEARANCE AS REQUIRED BY NEC.

REMARKS:
1. UNIT TO BE INSTALLED PER MANUFACTURER'S INSTALLATION INSTRUCTIONS.
2. CONTROLLED BY PROGRAMMABLE WIRED THERMOSTAT.
3. REFRIGERANT LINES TO BE SIZED PER MANUFACTURER'S REQUIREMENTS.
4. PROVIDE VERTICAL UNIT.

GRILLE

MARK	SERVICE	TYPE	DAMPER	CONSTRUCTION MATERIAL	FINISH COLOR	MANUFACTURER	MODEL NUMBER	DESCRIPTION
EXHAUST AIR								
EG1	EXHAUST AIR	GRILLE	-	STEEL	WHITE	TITUS	50F	EGGCRATE GRILLE WITH CEILING FRAME, 12"X12"
RETURN AIR								
RG1	RETURN AIR	GRILLE	-	STEEL	WHITE	TITUS	PAR	EXPOSED T-BAR CEILING FRAME STYLE WITH A 24"X24" FACE. PERFORATED.
RG2	RETURN AIR	GRILLE	-	STEEL	WHITE	TITUS	350RL	SINGLE DEFLECTION SIDEWALL GRILLE WITH HORIZONTAL FRONT BARS. SURFACE MOUNTED (1)
SUPPLY AIR								
CSD1	SUPPLY AIR	DIFFUSER	-	STEEL	WHITE	TITUS	TDC	SQUARE CEILING DIFFUSER, 24"X24"
CSD2	SUPPLY AIR	DIFFUSER	-	STEEL	WHITE	TITUS	TDC	SQUARE CEILING DIFFUSER 12"X12"
SG1	SUPPLY AIR	GRILLE	-	STEEL	BY ARCH	TITUS	300RL	DOUBLE DEFLECTION SIDEWALL GRILLE WITH HORIZONTAL FRONT BARS. SURFACE MOUNTED (1)

GENERAL NOTES:
1. DAMPERS NOTED AS U.L. SHALL BE A 'U.L.' CLASSIFIED CEILING RADIATION DAMPER WITH THERMAL BLANKET.
2. COORDINATE FINAL AIR DEVICE LOCATION AND FINISH COLOR WITH ARCHITECT.

REMARKS:
1. N/A

LOUVER

MARK	SIZE (HxW)	MINIMUM FREE AREA (SQ. FT.)	CFM	MANUFACTURER	MODEL NO.	LOUVER TYPE	COMMENTS	REMARKS
LV1	16/12	0.2	300	GREENHECK	ESD-403	EXHAUST	DRAINABLE	1-2
LV2	16/12	0.2	225	GREENHECK	AFL-501	EXHAUST	FEMA RATED, DRAINABLE (GREENHECK ESD-403)	1-2
LV3	16/16	0.5	275	GREENHECK	AFL-501	INTAKE	FEMA RATED, DRAINABLE (GREENHECK ESD-403)	1-2
LV4	36/24	2.0	0	GREENHECK	AFL-501	EXHAUST	FEMA RATED, DRAINABLE (GREENHECK ESD-403)	1-2
LV5	36/24	2.0	0	GREENHECK	AFL-501	INTAKE	FEMA RATED, DRAINABLE (GREENHECK ESD-403)	1-2

REMARKS:
1. COORDINATE LOUVER FINISH AND COLOR WITH ARCHITECT.
2. PROVIDE WITH BIRD SCREEN.

AIR COOLED CONDENSING UNIT

MARK	MIN. TOTAL CAPACITY (BTUH)	OUTDOOR AIR TEMP (°F)	MINIMUM EER2/ SEER2	NOM. HEAT CAPACITY (BTUH)	MIN COP	CURRENT CHAR.			RELATED UNIT MARK	BASIS OF DESIGN				REMARKS
						V	P	F		MANUFACTURER	MODEL	MCA	MOCP	
CU-1	46,000	104	12 / 16	53000.0	3.9	208	1	60	FCU-1	YORK	YH648E2S11	27	45	1-3
CU-2	22,000	104	12.7 / 15.5	0.0	0	208	1	60	FCU-2	YORK	YC424E2S11	13	20	1-3

GENERAL NOTES:
A. MINIMUM RECOMMENDED CLEARANCE AROUND UNIT IS 12 INCHES ON NON-SERVICE SIDES AND 30 INCHES ON SERVICE SIDES. MAINTAIN MINIMUM CLEARANCE FOR CONDENSER AIR FLOW AS RECOMMENDED BY UNIT MANUFACTURER. MAINTAIN MINIMUM CLEARANCE AS REQUIRED TO OPEN ACCESS AND CONTROL DOORS ON UNIT FOR SERVICE, MAINTENANCE, AND INSPECTION. MAINTAIN MINIMUM ELECTRICAL CLEARANCE AS REQUIRED BY NEC.

REMARKS:
1. PROVIDE WITH LOW AMBIENT CONTROL DOWN TO 20°F.
2. M.C. TO PROVIDE DISCONNECT SWITCH. E.C. TO INSTALL DISCONNECT. COORDINATE WITH E.C.
3. REFRIGERANT LINES TO BE SIZED PER MANUFACTURER'S REQUIREMENTS.

DX FAN/COIL UNIT - COOLING ONLY

MARK	FAN						AIR TEMPERATURE (°F)		COOLING				BASIS OF DESIGN				REMARKS
	SUPPLY AIR CFM	OUTSIDE AIR CFM	EXT.STATIC PRESSURE (IN. W.C.)	HORSE POWER	CURRENT CHAR			ENTERING DRY BULB	ENTERING WET BULB	MIN. TOTAL CAPACITY (BTUH)	MIN. SENS. CAPACITY (BTUH)	MINIMUM EER/ SEER	NUMBER OF STAGES	MANUFACTURER	MODEL	MCA	MOCP	
					V	P	F											
FCU-2	800	0	0.90	0.8	208	1	60	80.0	67.0			12 / 16		YORK	JHE24B5AC2SS2	4	15	1-4

GENERAL NOTES:
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REMARKS:
1. UNIT TO BE INSTALLED PER MANUFACTURER'S INSTALLATION INSTRUCTIONS.
2. CONTROLLED BY PROGRAMMABLE WIRED THERMOSTAT.
3. REFRIGERANT LINES TO BE SIZED PER MANUFACTURER'S REQUIREMENTS.
4. PROVIDE VERTICAL UNIT.

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