	MECHANICAL A	BBREVI	<u>ATIONS</u>
AD ADJ AFF AHU APPROX ARCH BLDG BOD BOP BTU BTUH CD CF CFM CLG CONN CTE CU DB DIFF DIA Ø DIM DN DWG EA. EA EA EA EA EA EA EA EA EA EA EA EA EA	MECHANICAL A ACCESS DOOR ADJUSTABLE ABOVE FINISHED FLOOR AIR HANDLING UNIT APPROXIMATE ARCHITECTURAL BUILDING BOTTOM OF DUCT BOTTOM OF PIPE BRITISH THERMAL UNIT BTU PER HOUR CEILING DIFFUSER CUBIC FEET CUBIC FEET PER MINUTE CEILING CONNECTION CONNECT TO EXISTING CONNECT TO EXISTING CONDENSING UNIT DRY BULB TEMPERATURE DIFFUSER DIAMETER DIAMETER DIMENSION DOWN DRAWING EACH EXHAUST GRILLE ELECTRICAL ELEVATOR EQUIPMENT EXTERNAL STATIC PRESSURE EXISTING FAHRENHEIT FAN FIRE DAMPER FULL LOAD AMPS FLEXIBLE FEET FIRE/SMOKE DAMPER GALVANIZED GYPSUM BOARD HORSEPOWER HERTZ	LB LD MAU MAX MBH MCA MFR MECH MIN MOD MOCP MVD NC NTS OA OED PACU PD PH PRV PSI RA REQD PC PB PH PRV PSI RA REQD RG RH RLA RPM RTU SA SD SF SG SP SQ SF SG SF SG SP SQ SF SG SF SC SF SC SC SF SC SC SF SC SC SF SC SC SF SC SC SF SC SC SF SC SC SF SC SC SF SC SC SF SC SC SF SC SC SC SC SC SC SC SC SC SC	POUND LINEAR DIFFUSER MAKE UP AIR UNIT MAXIMUM 1000 BTU PER HOUR MINIMUM CURRENT AMPAC MANUFACTURER MECHANICAL MINIMUM MOTORIZED DAMPER MAX. OVERCURRENT PRO MANUAL VOLUME DAMPER NOISE CRITERIA NOT TO SCALE OUTSIDE AIR OPEN END DUCT PACKAGED AIR CONDITION PRESSURE DROP PHASE PRESSURE REDUCING VAL POUNDS PER SQ. INCH RETURN AIR REQUIRED RETURN GRILLE RELATIVE HUMIDITY RUNNING LOAD AMPS REVOLUTIONS PER MINUT ROOF TOP UNIT SUPPLY AIR SMOKE DAMPER SQUARE FOOT SUPPLY GRILLE STATIC PRESSURE SQUARE FOOT SUPPLY REGISTER STRUCTURAL TEMPERATURE TRANSFER GRILLE THERMOSTAT TYPICAL UNIT HEATER UNLESS NOTED OTHERWIS VOLT VOLTS ALTERNATING CUR WATTS WET BULB WATER COLUMN
HP HZ IN KEF KH KW LAT	HORSEPOWER HERTZ INCH KITCHEN EXHAUST FAN KITCHEN EXHAUST HOOD KILOWAT LEAVING AIR TEMPERATURE	WB WC W/ W/O (A) (D) (E)	WET BULB WATER COLUMN WITH WITHOUT ABANDONED DEMO EXISTING

MECHANICAL SHEET INDEX

NUMBER	SHEET NAME
M001	GENERAL NOTES AND LEGEND
M101	FIRST FLOOR PLAN - MECHANICAL
M101.1	FIRST FLOOR PLAN - AREA A NORTH - MECHANICAL
M101.2	FIRST FLOOR PLAN - AREA A SOUTH - MECHANICAL
M101.3	FIRST FLOOR PLAN - AREA B - MECHANICAL
M101.4	FIRST FLOOR PLAN - AREA C - MECHANICAL
M102	SECOND FLOOR PLAN - MECHANICAL
M102.1	SECOND FLOOR PLAN - AREA A NORTH - MECHANICAL
M102.2	SECOND FLOOR PLAN - AREA A SOUTH - MECHANICAL
M102.3	SECOND FLOOR PLAN - AREA B - MECHANICAL
M102.4	SECOND FLOOR PLAN - AREA C - MECHANICAL
M103	THIRD FLOOR PLAN - MECHANICAL
M103.1	THIRD FLOOR PLAN - AREA A SOUTH - MECHANICAL
M103.2	THIRD FLOOR PLAN - AREA B - MECHANICAL
M104	OVERALL ROOF PLAN - MECHANICAL
M104.1	ROOF PLAN - AREA A NORTH - MECHANICAL
M104.2	ROOF PLAN - AREA A SOUTH - MECHANICAL
M104.3	ROOF PLAN - AREA B - MECHANICAL
M104.4	ROOF PLAN - AREA C - MECHANICAL
M201	SECTIONS - MECHANICAL
M301	ENLARGED PLANS - MECHANICAL
M302	ENLARGED PLANS - MECHANICAL
M401	DETAILS - MECHANICAL
M402	DETAILS - MECHANICAL
M403	KITCHEN EQUIPMENT DETAILS - CAFETERIA
M404	KITCHEN EQUIPMENT DETAILS - CAFETERIA
M405	KITCHEN EQUIPMENT DETAILS - CAFETERIA
M406	KITCHEN EQUIPMENT DETAILS - FACS LAB
M407	KITCHEN EQUIPMENT DETAILS - FACS LAB
M408	KITCHEN EQUIPMENT DETAILS - FACS LAB
M409	KITCHEN EQUIPMENT DETAILS - FACS LAB
M410	KITCHEN EQUIPMENT DETAILS - FACS LAB
M501	CONTROLS - MECHANICAL
M502	CONTROLS - MECHANICAL
M603	SCHEDULES - MECHANICAL

	MECHANICAL GENERA	<u>NOTES</u>	MECHA	NICAL LEGEND
	1. CONTRACTOR SHALL VISIT THE SITE AND BECOME PROJECT SCOPE, UTILITY CONNECTIONS, AND ALL	FAMILIAR WITH THE BUILDING SERVICES.	<u>SYMBOL</u>	DESCRIPTION
JR T AMPACITY	FAILURE TO DO SO SHALL NOT RELIEVE THE CONT RESPONSIBILITY IN THE PERFORMANCE OF HIS WO	RACTOR OF ANY RK.		RECTANGULAR SUPPLY DI
	TO COMPLETE IN EVERY DETAIL AND LEAVE IN WO CALLED FOR HEREIN OR SHOWN AN THE ACCOMP	RKING ORDER ALL ITEMS		RECTANGULAR RETURN D
PER INT PROTECTION DAMPER	3. CONTRACTOR SHALL FILE ALL DRAWINGS, PAY ALL PERMITS AND CERTIFICATES OF INSPECTION RELA	FEES AND OBTAIN ALL TIVE TO THIS WORK.		RECTANGULAR EXHAUST
	4. UPON COMPLETION OF THE PROJECT. ALL SYSTEM MATERIALS SHALL BE IN NEW, CLEAN CONDITION V RESTORED TO ACCEPTABLE CONDITION. ALL EQUI	EQUIPMENT AND /ITH ALL DAMAGE PMENT, COMPONENTS AND		ROUND SUPPLY DUCT - UF
ONDITIONING UNIT	FOR AT COMPLETION OF THE JOB, ALL MISCELLANI SURPLUS MATERIALS, RUBBISH AND DEBRIS SHALL	JGHLY CLEANED, READY EOUS TOOLS, SCAFFOLDING, BE REMOVED BY THIS		ROUND RETURN DUCT - UI
CING VALVE INCH	 STANDARD DETAILS ILLUSTRATED ON THE DRAWIN ALL CASES WHERE THE FEATURE OCCURS IN THE 	GS SHALL BE APPLIED IN SYSTEM DESIGN.		ROUND EXHAUST DUCT - L
TY ADC	6. ALL DUCTWORK SIZES SHOWN ARE CLEAR INSIDE REFER TO SPECIFICATIONS FOR DUCT INSULATION	DIMENSIONS IN INCHES. REQUIREMENTS.		FLEXIBLE DUCTWORK
R MINUTE	7. MAJOR EQUIPMENT SHOWN ON THE PLANS AND EL GENERAL ARRANGEMENT AND SPACE ALLOCATION SHALL VERIFY THE SPACE REQUIREMENTS FOR EA USING MANUFACTURER CERTIFIED SHOP DRAWING NECESSARY ADJUSTMENTS IN FOUIPMENT PLACED	EVATIONS ILLUSTRATE THE IS. THE CONTRACTOR CH SYSTEM COMPONENT ISS AND MAKE THE MENT AND CONNECTION IN		TRANSITION SQUARE THROAT
≣ R	 ORDER TO ACCOMMODATE THE EXACT EQUIPMEN 8. DRAWINGS ARE SCHEMATIC IN NATURE AND SHALL CONTRACTOR IS RESPONSIBLE FOR COORDINATIN SERVICES WITH EXISTING CONDITIONS AND WITH A 	TO BE INSTALLED. NOT BE SCALED. THE G EXACT ROUTING OF ALL		ELBOW WITH TURNING VANES RISE/DROP IN ELEVATION
	9. SUPPORTS, ANCHOR BOLTS, AND HANGERS FOR A	LL EQUIPMENT SPECIFIED IN	R/D R/D	
THERWISE	DIVISION 23 SHALL CONFORM TO THE SPECIFICATIO STEEL BRACING SUPPORTS AND REINFORCING STI EQUIPMENT SPECIFIED IN DIVISION 23 SHALL BE PA OF DIVISION 23.	ONS. MISCELLANEOUS EEL NEEDED TO SUPPORT RT OF THE SCOPE OF WORK		RADIUS ELBOW
NG CURRENT	10. WHERE PIPES OR DUCTS ARE TO PASS THROUGH SHALL BE PROVIDED PRIOR TO WALL CONSTRUCTI EQUAL OR GREATER GAUGE METAL THAN PIPES PA	VALLS, DUCT SLEEVES ON. SLEEVE SHALL BE OF ASSING THROUGH.		RECTANGULAR OR ROUNE BRANCH. RECTANGULAR MVD REQUIRED TO AIR DE
	11. DIFFUSERS, REGISTERS, AND GRILLES SHOWN ON DRAWINGS SHALL BE IN ACCORDANCE WITH THE A SCHEDULE AND SPECIFICATIONS. BRANCH DUCTS IN ACCORDANCE WITH THE SCHEDULE UNLESS NO	THE MECHANICAL IR DISTRIBUTION DEVICE TO AIR DEVICES SHALL BE TED OTHERWISE.		BRANCH DUCT CONNECTIO CONICAL TEE AND TAP ROUND TRUNK.
	12. FIRE DAMPERS SHALL BE INSTALLED IN DUCTWOR RATED PARTITIONS, WALLS, BARRIERS, FLOORS, A WITH THE PROJECT APPLICABLE BUILDING CODES. REQUIREMENTS OF THE FIRE RATING AND BE "U.L."	C PENETRATIONS THROUGH ND SHAFTS IN ACCORDANCE DAMPERS SHALL MEET THE LABELED. REFER TO		MANUAL VOLUME DAMPER
	 ARCHITECTURAL DRAWINGS FOR THE LOCATIONS AND FLOORS. 13. PENETRATIONS THROUGH RATED WALLS AND FLO SEALED AND EIRESAEED TO MAINTAIN THE INTEGR 	AND RATINGS OF ALL WALLS DRS SHALL BE SLEEVED,		MOTORIZED DAMPER
	 SEALED AND FIRESAFED TO MAINTAIN THE INTEGR FLOOR UL FIRE RESISTANCE RATING. 14. DUCTWORK STORED ON-SITE AWAITING INSTALLAT PROPERLY SEALED AND PROTECTED. OPEN ENDS 	ION SHALL REMAIN OF DUCTWORK SHALL BE		DUCT SMOKE DETECTOR
	CAPPED AND SEALED AFTER INSTALLATION. 15. CEILING DIFFUSER LOCATIONS SHALL BE AS SHOW	N ON THE ARCHITECTURAL		
	16. CEILING DIFFUSERS, REGISTERS AND GRILLES SHA		SD >	FIRE DAMPER (HORIZON IA SMOKE DAMPER (HORIZON
	 PROVIDE MANUAL BALANCING/VOLUME DAMPERS A BRANCH TAKE-OFES TO DIFFUSERS AND GRILLES F 	AT ALL LOW PRESSURE	FSD	FIRE/SMOKE DAMPER (HO
	EXHAUST MAINS AND SUB-MAINS, AND AT ALL LOW SUB-MAIN TAKE-OFFS. DAMPERS SHALL BE INSTAL CEILING OR ACCESS PANEL.	PRESSURE DUCT SPLITS OR LED ABOVE AN ACCESSIBLE	FD SD FSD	FIRE DAMPER (VERTICAL D SMOKE DAMPER (VERTICA
	 VALVES, AND OTHER DEVICES. PROVIDE ACCESS I COORDINATE PLACEMENT WITH THE ARCHITECT P 19. CONTRACTOR SHALL COORDINATE WITH THE ARCHI 	ANELS AS REQUIRED. RIOR TO INSTALLATION.	sx Sx	SUPPLY DIFFUSER AND AII BLANK OUTS INDICATE NO THIS DIRECTION (SX DEN(
	20. SEISMIC RESTRAINT IS REQUIRED ON ALL MECHAN	CAL EQUIPMENT,		RETURN GRILLE AND AIR (
	THE DESIGNING ENGINEER VERIFYING THE INSTALL MEET WITH THEIR DESIGN INTENT AND HAS THEIR SUBMITTED PRIOR TO CONCEALMENT OF ANY POR SYSTEM OR THE FINAL INSPECTION	AND SEALED LETTER FROM ED SEISMIC RESTRAINTS APPROVAL MUST BE TION OF A MECHANICAL	EX	(X DENOTES TYPE) EXHAUST GRILLE AND AIR (X DENOTES TYPE)
	21. ANY CONTRACTOR WHO DESIRES TO INSTALL, ENL MOVE OR REPLACE ANY MECHANICAL SYSTEM, TH	ARGE, ALTER, REPAIR, E INSTALLATION OF WHICH	CFM	AIR FLOW RATE AT DOOR UNDERCUT
	IS REGULATED BY THIS CODE, SHALL FIRST MAKE A THE REQUIRED PERMIT FOR THE WORK PER LOCAL SUBJECT TO THE FIELD INSPECTOR'S APPROVAL.	PPLICATION AND OBTAIN . CODE. ALL MECHANICAL IS		
	22. ALL MECHANICAL EQUIPMENT AND APPLIANCES SH REQUIRED BY IMC 306 AND IFGC 306.	ALL BE ACCESSIBLE AS		POINT OF DEMOLITION
	23. PROVIDE WATER LEVEL DETECTION DEVICES COM	PLIANT WITH IMC 307.2.3.1.	WALL MOU	JNTED CONTROL DEVICES
	ASHRAE CLIMATE Z	ONE	$\mathbf{\hat{T}}$	THERMOSTAT OR TEMP SE
	PROJECT CLIMATE ZONE:ASHRAE ZONE 3A0.4% SUMMER DESIGN COOLING:Tdb = 96.2°F, Twb = 7599.6% WINTER DESIGN HEATING:Tdb = 16.8°F	′.6°F	(P)	PRESSURE MONITOR
	1% DEHUMIDIFICATION: Tdb = 85.2°F, Twb = 78	3.6°F	CO MPM-X	CARBON MONOXIDE SENS MULTI-POINT MONITOR
	BID DRAWINGS	<u> </u>	HYDRON	NIC PIPING SYMBOLS
	1. THESE DRAWINGS ARE FOR BIDDING PURPOSES O CONSTRUCTION DRAWINGS.	NLY. THESE ARE NOT	⊖ ⊢	PRESSURE GAUGE
	2. REVISIONS DUE TO COMMENTS RECIEVED FROM S OWNER PROVIDED EQUIPMENT, AND COORDINATIO WILL BE INCORPORATED INTO THE FINAL CONSTRU	TATE REVIEW AGENCIES, ON BETWEEN ALL TRADES ICTION DRAWINGS SET.	$\mathbb{A}_{\mathbb{A}}$	THERMOSTAT BALL VALVE OR GATE VAL
	3. PROVIDE CEILING MOUNTED AIR DISTRIBUTION GR AREAS WHERE CEILINGS ARE PROVIDED. EXTEND GRILLES FROM SUPPLY AND RETURN MAIN.	LLES IN ALL CONDITIONED ELEXIBLE DUCTWORK TO	Z†Z	CHECK VALVE BACKFLOW PREVENTER
	4. DUCTWORK IN EXPOSED AREAS SHALL BE PAINTED SPECIFICATIONS. ROUND EXPOSED DUCT SHALL B DUCT WITH RADIUS FRAME SUPPLY GRILLES. RECT INTERNALLY LINED WITH MIN. 1" THICK ACOUSTICA	PER ARCHITECTURAL E DUAL WALL SPIRAL TYPE ANGULAR DUCT SHALL BE LINER.	函 函 函	GLOBE VALVE THREE WAY VALVE
	5. PROVIDE ALL NECESSARY UTILITIES, ACCESSORIES REQUIRED FOR A COMPLETE OPERATIONAL SYSTE FURNISHED EQUIPMENT. COORDINATE REQUIREM EQUIPMENT TO BE INSTALLED.	S AND APPURTENANCES M AT ALL OWNER ENTS WITH ACTUAL	の	3-WAY CONTROL VALVE HYDRONIC PUMP
			NOT ALL	SYMBOLS MAY BE USED







1 FIRST FLOOR PLAN - MECHANICAL





GENERAL LIFE SAFETY NOTES

WALL RATINGS

• • • I HR FIRE BARRIER (FIRE STAIRS, ELEVATOR SHAFTS, MECH. SHAFTS, SHAFTS) UL DESIGN NUMBERS - U469, U905

2 HR FIRE WALL (BUILDING SEPARATION WALL)

UL DESIGN NUMBERS - U497, U905, U916 - - - - SMOKE PARTITION

MECHANICAL DEMOLITION NOTES

- THE CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS OF THE MECHANICAL, PLUMBING, AND ELECTRICAL SYSTEMS PRIOR TO SUBMITTING A BID AND BEFORE BEGINNING WORK. BRING ANY DISCREPANCIES FROM THE DRAWINGS AND NOTES TO THE ARCHITECT IMMEDIATELY. MINOR CHANGES IN THE SCOPE OF DEMOLITION WORK SHALL NOT JUSTIFY AN ADDITIONAL COST.
- ALL EXISTING MECHANICAL EQUIPMENT, PIPING, DUCTWORK, ETC. IS TO BE DEMOLISHED THROUGHOUT THE EXISTING BUILDING.
- REMOVAL OF EXISTING FIXTURES, PIPING, AND EQUIPMENT WILL REQUIRE ISOLATING THE PIPING RISERS OR MAINS VIA SHUT-OFF VALVES. PROVIDE NEW ISOLATION VALVES AS REQUIRED FOR COMPLETION OF WORK.
- REMOVAL OF EXISTING PLUMBING FIXTURES, PIPING, AND EQUIPMENT WILL REQUIRE CAPPING AND CEILING EXISTING MAINS OR BRANCHES AS NECESSARY AND REQUIRED TO ALLOW THE REMAINING SYSTEMS TO FULLY OPERATE WITHOUT DEGRADATION.
- THE CONTRACTOR SHALL PROVIDE THE REMOVAL OF ALL EXISTING CEILINGS, WALLS, AND SLABS AS REQUIRED FOR THE DEMOLITION WORK. PROVIDE TEMPORARY BRACING AND SHORING AS REQUIRED TO CREATE A SAFE ENVIRONMENT FOR CONSTRUCTION.
- EXISTING PIPING, DUCTWORK, WIRING, CONDUIT, ETC. THAT IS NOT UTILIZED IN THE COMPLETED BUILDING SHALL BE DISCONTINUED OR REMOVED. ALL ENDS OF DISCONTINUED PIPING, CONDUIT, AND DUCTWORK SHALL BE CAPPED AT THE NEAR WALL—CEILING, OR FLOOR SO THAT THEY ARE COMPLETELY CONCEALED. OPENINGS LEFT IN WALLS, CEILINGS, FLOORS, ETC., WHERE EQUIPMENT, CONDUIT, PIPING, ETC. ARE REMOVED AND NOT REPLACED SHALL BE PATCHED TO MATCH THE MATERIAL TO ADJACENT CONSTRUCTION.
- EXISTING PIPING, WIRING, CONDUIT, DUCTWORK, AND EQUIPMENT THAT IS NOT TO BE REUSED SHALL BE REMOVED IN ITS ENTIRETY AND SHALL BE REMOVED FROM THE SITE AND DISPOSED OF IN ACCORDANCE WITH APPLICABLE LAWS AND REGULATIONS.
- ALL CUTTING OF EXISTING BUILDING COMPONENTS SHALL BE ACCOMPLISHED 8. IN A NEAT AND WORKMANLIKE MANNER WITHOUT THE REMOVAL OF EXCESS MATERIALS IN A SAFE MANNER. THE CONTRACTOR SHALL PATCH AND REPLACE REMOVED MATERIAL WITH MATERIAL SIMILAR TO ADJACENT CONSTRUCTION.
- WHERE EXISTING PIPING, DUCTWORK, CONDUIT, AND EQUIPMENT ARE TO BE 9 UTILIZED IN THE COMPLETED WORK AND IN CONFLICT WITH THE NEW CONSTRUCTION, THE COMPONENTS SHALL BE RELOCATED AND RECONNECTED TO MAINTAIN THE DESIRED SERVICES.
- PORTIONS OF THE EXISTING SYSTEMS MAY OR MAY NOT BE SHOWN EVEN THOUGH IT MAY BE NECESSARY TO MODIFY THEM. THE CONTRACTOR IS TO VERIFY ALL EXISTING CONDITIONS.
- 11. ALL ACCESSIBLE ABANDONED PIPING, CONDUIT, DUCTWORK, AND EQUIPMENT SHALL BE REMOVED AND PROPERLY DISPOSED OF.

ICC 500 SHELTER - DESIGN NOTES

- 1. STORM SHELTER SHALL BE IN ACCORDANCE WITH SECTION 702 OF THE 2020 ICC 500 STANDARD FOR THE DESIGN AND CONSTRUCTION OF STORM SHELTERS.
- DESIGN OCCUPANCY OF THE TORNADO SHELTER IS BASED ON 2,009 OCCUPANTS.
- MECHANICAL VENTILATION FOR THE STORM SHELTER SHALL BE PROVIDED IN ACCORDANCE WITH 2020 ICC 500 SECTION 702.4.2.
- PROVIDE A MINIMUM VENTILATION RATE OF 5 CFM PER OCCUPANY FOR THE 4 DESIGN OCCUPANT LOAD.
- OUTSIDE AIR INTAKE OPENINGS SHALL BE SEPARATED A MINIMUM OF 10-FEET HORIZONTALLY FROM ANY HAZARDOUS OR NOXIOUS CONTAMINANT.
- AIR EXHAUST OR INTAKE OPENINGS THAT TERMINATE OUTSIDE OF OCCUPIED STORM SHELTER AREAS AND OCCUPANT SUPPORT AREAS SHALL BE CONSIDERED OPENINGS AND SHALL BE PROTECTED IN ACCORDANCE WITH 2020 ICC 500 SECTION 306.4. VENTILATION OPENINGS THAT PENETRATE THE STORM SHELTER ENVELOPE BETWEEN THE HOST BUILDING AND STORM SHELTER SHALL ALSO COMPLY WITH THE PROVISIONS OF SECTION 603.
- THE MECHANICAL VENTILATION SYSTEM SHALL BE CONNECTED TO A STANDBY POWER SYSTEM. THE STANDBY POWER SYSTEM SHALL HAVE ADEQUATE CAPACITY AND RATING TO SUPPLY ALL REQUIRED SYSTEMS AND CIRCUITS FOR STANDBY LIGHTING AND ALL MECHANICAL VENTILATION SYSTEMS INTENDED TO BE OPERATED AT ONE TIME. THE STANDBY POWER SYSTEM SHALL BE DESIGNED TO PROVIDE CONTINUOUSLY THE REQUIRED OUTPUT FOR A MINIMUM OF TWO (2) HOURS.
- PENETRATIONS THROUGH THE STORM SHELTER ENVELOPE OF MECHANICAL, 8. ELECTRICAL, AND PLUMBING SYSTEMS INCLUDING PIPING AND UTILITY LINES, LARGER THAN 3-1/2 SQUARE INCHES (RECTANGULAR) OR 2-1/2 INCHES (CIRCULAR) SHALL BE CONSIDERED OPENINGS AND SHALL BE PROTECTED IN ACCORDANCE WITH SECTION 306.4. PENETRATIONS OF THE STORM SHELTER ENVELOPE SHALL NOT DEGRADE THE STRUCTURAL INTEGRITY OR IMPACT RESISTANCE OF THE STORM SHELTER ENVELOPE.
- PENETRATIONS OF THE STORM SHELTER ENVELOPE BY HAZARDOUS GAS OR LIQUID LINES SHALL HAVE AUTOMATIC SHUTOFFS TO PROTECT AGAINST LEAKAGE DUE TO MOVEMENT OF THE UTILITY LINE.

MECHANICAL KEYNOTES

PROVIDE NATURAL GAS SERVICE TO BUILDING. SIZED FOR 10,250 CFH. M1 BLUE DASHED LINE INDICATES BOUNDARY OF ICC 500 STORM SHELTER AREA. M2 PROVIDE VENTILATION SYSTEM IN ACCORDANCE WITH 2020 ICC 500.





PROJECT NAME WSD - NEW SENIOR HIGH SCHOOL LOCATION 800 E JACKSON AVE WYNNE AR 72396 PROJECT

NUMBER

DEVELOPER/OWNER WYNNE SCHOOL DISTRICT

INFORMATION





SHEET TITLE FIRST FLOOR PLAN -MECHANICAL

DATE 17.10.24 SHEET NUMBER

Chad Stewart & Associates, Inc. 9720 Village Circle Lakeland, TN 38002 Phone 901-260-7850 CSAengineeringinc.com M101



SCALE: 1/8" = 1'-0" 0' 4' 8'





² Chad Stewart & Associates, Inc.
 9720 Village Circle Lakeland, TN 38002
 Phone 901-260-7850 CSAengineeringinc.com





GENERAL LIFE SAFETY NOTES

KEYPLAN

WALL RATINGS • • • A HR FIRE BARRIER (FIRE STAIRS, ELEVATOR SHAFTS, MECH. SHAFTS, SHAFTS) UL DESIGN NUMBERS - U469, U905 2 HR FIRE WALL (BUILDING SEPARATION WALL) UL DESIGN NUMBERS - U497, U905, U916 - - - - - SMOKE PARTITION











1 FIRST FLOOR PLAN - AREA B - MECHANICAL 1/8" = 1'-0"

GENERAL LIFE SAFETY NOTES

WALL RATINGS

• • • SHAFTS, UL DESIGN NUMBERS - U469, U905 2 HR FIRE WALL (BUILDING SEPARATION WALL) UL DESIGN NUMBERS - U497, U905, U916

- - - - - SMOKE PARTITION











M101.3



1 FIRST FLOOR PLAN - AREA C - MECHANICAL

SCALE: 1/8" = 1'-0" 0' 4' 8' 16'

GENERAL LIFE SAFETY NOTES

WALL RATINGS

----- • ----- • I HR FIRE BARRIER (FIRE STAIRS, ELEVATOR SHAFTS, MECH. SHAFTS, SHAFTS) UL DESIGN NUMBERS - U469, U905 2 HR FIRE WALL (BUILDING SEPARATION WALL) UL DESIGN NUMBERS - U497, U905, U916

- - - - - SMOKE PARTITION





ICC 500 SHELTER - DESIGN NOTES

- 1. STORM SHELTER SHALL BE IN ACCORDANCE WITH SECTION 702 OF THE 2020 ICC 500 STANDARD FOR THE DESIGN AND CONSTRUCTION OF STORM SHELTERS.
- DESIGN OCCUPANCY OF THE TORNADO SHELTER IS BASED ON 2,009 2. OCCUPANTS.
- MECHANICAL VENTILATION FOR THE STORM SHELTER SHALL BE PROVIDED IN 3. ACCORDANCE WITH 2020 ICC 500 SECTION 702.4.2.
- PROVIDE A MINIMUM VENTILATION RATE OF 5 CFM PER OCCUPANY FOR THE 4 DESIGN OCCUPANT LOAD.
- OUTSIDE AIR INTAKE OPENINGS SHALL BE SEPARATED A MINIMUM OF 10-FEET 5. HORIZONTALLY FROM ANY HAZARDOUS OR NOXIOUS CONTAMINANT.
- AIR EXHAUST OR INTAKE OPENINGS THAT TERMINATE OUTSIDE OF OCCUPIED 6. STORM SHELTER AREAS AND OCCUPANT SUPPORT AREAS SHALL BE CONSIDERED OPENINGS AND SHALL BE PROTECTED IN ACCORDANCE WITH 2020 ICC 500 SECTION 306.4. VENTILATION OPENINGS THAT PENETRATE THE STORM SHELTER ENVELOPE BETWEEN THE HOST BUILDING AND STORM
- THE MECHANICAL VENTILATION SYSTEM SHALL BE CONNECTED TO A STANDBY 7. POWER SYSTEM. THE STANDBY POWER SYSTEM SHALL HAVE ADEQUATE CAPACITY AND RATING TO SUPPLY ALL REQUIRED SYSTEMS AND CIRCUITS FOR STANDBY LIGHTING AND ALL MECHANICAL VENTILATION SYSTEMS INTENDED TO BE OPERATED AT ONE TIME. THE STANDBY POWER SYSTEM SHALL BE DESIGNED TO PROVIDE CONTINUOUSLY THE REQUIRED OUTPUT FOR A MINIMUM OF TWO (2) HOURS.
- PENETRATIONS THROUGH THE STORM SHELTER ENVELOPE OF MECHANICAL ELECTRICAL, AND PLUMBING SYSTEMS INCLUDING PIPING AND UTILITY LINES, LARGER THAN 3-1/2 SQUARE INCHES (RECTANGULAR) OR 2-1/2 INCHES (CIRCULAR) SHALL BE CONSIDERED OPENINGS AND SHALL BE PROTECTED IN ACCORDANCE WITH SECTION 306.4. PENETRATIONS OF THE STORM SHELTER ENVELOPE SHALL NOT DEGRADE THE STRUCTURAL INTEGRITY OR IMPACT RESISTANCE OF THE STORM SHELTER ENVELOPE.
- PENETRATIONS OF THE STORM SHELTER ENVELOPE BY HAZARDOUS GAS OR 9. LIQUID LINES SHALL HAVE AUTOMATIC SHUTOFFS TO PROTECT AGAINST LEAKAGE DUE TO MOVEMENT OF THE UTILITY LINE.

ICC 500 SHELTER - VENTILATION

OCCUPANTS	VENTILATION RATE (CFM / OCCUPANT)	VENTILATION REQD (CFM)	F
2,009	5	10,045	

MECHANICAL KEYNOTES

- 24 VAC FEMA VENTILATION MANUAL ACTIVATION DEVICE EQUAL TO M5 AMERICAN GAS SAFETY MODEL #AGS-EPO-KL WITH CLEAR FLIP COVER, RED BUTTON, KEY RESET SWITCH, BLUE HOUSING, AND CUSTOM LABEL. ALL KEY RESET SWITCHES SHALL BE KEYED ALIKE. CUSTOM LABEL SHALL READ "SHELTER VENTILATION". MOUNT PER ADA GUIDELINES AND ARCHITECTURAL DRAWINGS.
- WHEN FEMA VENTILATION MANUAL ACTIVATION DEVICE IS DEPRESSED, M6 ALL FEMA OUTSIDE AIR DAMPER ACTUATORS SHALL MOTOR OPEN AND EXHAUST FANS SHALL ACTIVATE. WHEN FEMA VENTILATION MANUAL ACTIVATION DEVICE IS IN THE RESET POSITION, ALL FEMA OUTSIDE AIR DAMPERS SHALL MOTOR CLOSED AND EXHAUST FAN SHALL BE OFF. PROVIDE 120VAC MOTORIZED DAMPER AND END SWITCH INTERLOCKED M7
- WITH SHELTER EXHAUST FANS. DAMPER SHALL BE FULLY OPEN WHEN EF IS IN OPERATION. M8 DAMPERS USED TO OPERATE VENTILATION OPENINGS SHALL BE
- CONNECTED TO STANDBY POWER SYSTEM. (2020 ICC 500 702.4.2)





SHELTER SHALL ALSO COMPLY WITH THE PROVISIONS OF SECTION 603.

VENTILATION PROVIDED (CFM) 10,500

ARCH 1010 676 Marshall Ave. Suite 101 Memphis, TN 38103 901.497.6563 www.arch1010.com ©2024 ARCH 1010 ALL RIGHTS RESERVED POLK STANLEY WILCOX 801 South Spring Street Little Rock, AR 72201 501.378.0878 office www.polkstanleywilcox.com CONSULTANT/SEAL ARKANSAS $\star \star \star$ REGISTERED PROMESSIONAL EXGINEER 10/17/2024 No.15519

PROJECT NAME WSD - NEW SENIOR HIGH SCHOOL LOCATION 800 E JACKSON AVE WYNNE AR 72396 PROJECT

NUMBER

DEVELOPER/OWNER WYNNE SCHOOL DISTRICT

INFORMATION





SHEET TITLE FIRST FLOOR PLAN -AREA C - MECHANICAL

M101.4

DATE 17.10.24

SHEET NUMBER

² Chad Stewart & Associates, Inc.
 9720 Village Circle Lakeland, TN 38002
 Phone 901-260-7850 CSAengineeringinc.com









MATCHLINE AREA MATCHLINE AREA B

GENERAL LIFE SAFETY NOTES

WALL RATINGS

• • • • SHAFTS, SHAFTAFTAFTAFT, SHAFTS, SHAFTS, SHAFTS, SHAFTS, SHAFTS, SHAFTS, SHAFTS UL DESIGN NUMBERS - U469, U905 2 HR FIRE WALL (BUILDING SEPARATION WALL) UL DESIGN NUMBERS - U497, U905, U916

- - - - - SMOKE PARTITION









SHEET TITLE SECOND FLOOR PLAN -MECHANICAL

DATE 17.10.24 SHEET NUMBER







SCALE: 1/8" = 1'-0"



KEYPLAN

WALL RATINGS 🗕 🗕 🖕 🖕 💶 1 HR FIRE BARRIER (FIRE STAIRS, ELEVATOR SHAFTS, MECH. SHAFTS, SHAFTS) UL DESIGN NUMBERS - U469, U905 2 HR FIRE WALL (BUILDING SEPARATION WALL)

UL DESIGN NUMBERS - U497, U905, U916 - - - - - SMOKE PARTITION





PROJECT NO: 24122



SECOND FLOOR PLAN - AREA A SOUTH - MECHANICAL

SCALE: 1/8" = 1'-0" 0' 4' 8' 16'

GENERAL LIFE SAFETY NOTES

KEYPLAN

WALL RATINGS • • • • SHAFTS, SHAFTS) UL DESIGN NUMBERS - U469, U905 2 HR FIRE WALL (BUILDING SEPARATION WALL) _____ UL DESIGN NUMBERS - U497, U905, U916

- - - - - SMOKE PARTITION

AM AM

SCALE: 1/8" = 1'-0" 0' 4' 8'

GENERAL LIFE SAFETY NOTES

WALL RATINGS

• • • SHAFTS, UL DESIGN NUMBERS - U469, U905 2 HR FIRE WALL (BUILDING SEPARATION WALL) UL DESIGN NUMBERS - U497, U905, U916

- - - - - SMOKE PARTITION

M102.3

1 SECOND FLOOR PLAN - AREA C - MECHANICAL

SCALE: 1/8" = 1'-0" 0' 4' 8' 16'

GENERAL LIFE SAFETY NOTES

WALL RATINGS 🗕 🗕 🔹 🗕 🗕 🗕 🛶 1 HR FIRE BARRIER (FIRE STAIRS, ELEVATOR SHAFTS, MECH. SHAFTS, SHAFTS) UL DESIGN NUMBERS - U469, U905 2 HR FIRE WALL (BUILDING SEPARATION WALL)

UL DESIGN NUMBERS - U497, U905, U916 - - - - - SMOKE PARTITION

M102.4

THIRD FLOOR PLAN - MECHANICAL

B/C REA E E

GENERAL LIFE SAFETY NOTES

WALL RATINGS

• • • SHAFTS, UL DESIGN NUMBERS - U469, U905 2 HR FIRE WALL (BUILDING SEPARATION WALL) UL DESIGN NUMBERS - U497, U905, U916

- - - - SMOKE PARTITION

SHEET TITLE THIRD FLOOR PLAN -MECHANICAL

M103

DATE 17.10.24 SHEET NUMBER

THIRD FLOOR PLAN - AREA A SOUTH - MECHANICAL

SCALE: 1/8" = 1'-0" 0' 4' 8' 16'

GENERAL LIFE SAFETY NOTES

KEYPLAN

WALL RATINGS 🗕 🗕 🖕 🖕 💶 1 HR FIRE BARRIER (FIRE STAIRS, ELEVATOR SHAFTS, MECH. SHAFTS, SHAFTS) UL DESIGN NUMBERS - U469, U905 2 HR FIRE WALL (BUILDING SEPARATION WALL) UL DESIGN NUMBERS - U497, U905, U916 - - - - - SMOKE PARTITION

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GENERAL LIFE SAFETY NOTES

WALL RATINGS

• • • A HR FIRE BARRIER (FIRE STAIRS, ELEVATOR SHAFTS, MECH. SHAFTS, SHAFTS) UL DESIGN NUMBERS - U469, U905 2 HR FIRE WALL (BUILDING SEPARATION WALL) UL DESIGN NUMBERS - U497, U905, U916

- - - - - SMOKE PARTITION

1 ROOF PLAN - MECHANICAL

0' 8' 16' 32'

N	IATU	IRAL	GAS	PIPE	SIZIN	IG - 5	PSI
EQUIVALENT LENGTH (FT)	MAXIMUM CFH PER PIPE SIZE						
	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"	2-1/2"
700	320	669	1,260	2,590	3,880	7,460	11,900

<u>NOTES:</u> THE STEEL PIPE MATERIAL PORTION OF THE LOW PRESSURE (7" W.C.) GAS SYSTEM IS SIZED IN ACCORDANCE WITH INTERNATIONAL FUEL GAS CODE (IFGC) TABLE 402.4(2), INLET PRESSURE < 2 PSI., PRESSURE DROP = 0.5" W.C., SPECIFIC GRAVITY = 0.60, BASED ON TOTAL DEVELOPED LENGTH OF 250 FT AND FLOW RATE OF 296 CFH.

GA	S LOAD SIZING
MARK	GAS DEMAND (CFH)
DKMAU-1	400
DOAS-B-1	600
DOAS-B-2	600
DOAS-C-1	300
DOAS-C-2	300
DOAS-C-3	300
DOAS-C-4	300
DOAS-C-5	200
GENERATOR	4098
K-16	260
K-17	120
K-18	200
K-19	88
K-20	88
K-21	198
KITCHEN	1500
KMAU-1	400
KMAU-3	400
KMAU-4	400
RTU-AN-1	200
RTU-AN-2	200
RTU-AN-4	200
RTU-AN-5	200
RTU-AN-6	200
RTU-AN-9	200
RTU-AN-10	200
RTU-AN-11	200
RTU-AN-13	200
RTU-AN-14	200
RTU-AS-4	400
RTU-B-1	0
RTU-B-2	0
RTU-B-3	600
RTU-C-1	200
RTU-C-2	200
RTU-C-3	400
SCIENCE LABS	750
	15302

- LONGEST EQUIVALENT RUN ESTIMATED AT 900 FT. PROVIDE REGULATOR SIZED FOR CFH LISTED AT EACH APPLIANCE AS REQUIRED. PROVIDE VENTING FOR REGULATORS INSTALLED INDOORS PER CODE. PROVIDE GAS PIPING WITH A MINUMUM OF 5 PSI ON 3.
- GAS LOW PRESSURE SIDE. PROVIDE NEW GAS METER AND PRESSURE 4. REGULATING VALVE. COORDINATE FINAL LOCATION
- AND PAY ALL COSTS OF UPGRADE OF METER WITH 5.
- LOCAL UTILITY AS REQUIRED. GAS PIPING AT BUILDING EXTERIOR TO BE PAINTED TO MATCH ARCHITECT SPECIFIED FINISHES.

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1 ROOF PLAN - AREA A NORTH - MECHANICAL

SCALE: 1/8" = 1'-0" 0' 4' 8' 16

 $\left[\right]$

KEYPLAN

7 / 7 - 7 <u> 17 - C. 145</u>

PROJECT NO: 24122Chad Stewart & Associates, Inc.9720 Village CircleLakeland, TN 38002ENGINEERINGPhone 901-260-7850CSAengineeringinc.com

M104.2

KEYPLAN

PROJECT NO: 24122Chad Stewart & Associates, Inc.9720 Village CircleLakeland, TN 38002ENGINEERINGPhone 901-260-7850CSAengineeringinc.com

M104.3

KEYPLAN

H

(K) (K.1)

2 MECHANICAL SECTION @ CAFETERIA 1/8" = 1'-0"

MECHANICAL KEYNOTES PROVIDE ANSUL SHUT-OFF VALVE NEAR HOOD WITH MANUAL SHUT-OFF VALVE M4

DIRECTLY UPSTREAM STUB-UP 1" G WITH SHUT-OFF VALVE APPROX. 24" AFF AT EACH GAS FIRED APPLIANCE. PROVIDE FLEXIBLE GAS HOSE FOR FINAL CONNECTION TO EQUIPMENT. M5

GAS LOAD SIZING			
MARK	GAS DEMAND (CFH)		
DKMAU-1	400		
DOAS-B-1	600		
DOAS-B-2	600		
DOAS-C-1	300		
DOAS-C-2	300		
DOAS-C-3	300		
DOAS-C-4	300		
DOAS-C-5	200		
GENERATOR	4098		
K-16	260		
K-17	120		
K-18	200		
K-19	88		
K-20	88		
K-21	198		
KITCHEN	1500		
KMAU-1	400		
KMAU-3	400		
KMAU-4	400		
RTU-AN-1	200		
RTU-AN-2	200		
RTU-AN-4	200		
RTU-AN-5	200		
RTU-AN-6	200		
RTU-AN-9	200		
RTU-AN-10	200		
RTU-AN-11	200		
RTU-AN-13	200		
RTU-AN-14	200		
RTU-AS-4	400		
RTU-B-1	0		
RTU-B-2	0		
RTU-B-3	600		
RTU-C-1	200		
RTU-C-2	200		
RTU-C-3	400		
1. <u>LING</u> LONGEST	EQUIVALENT RUN ESTIMATED AT 700 F REGULATOR SIZED FOR CFH LISTED AT		

PROVIDE VENTING FOR REGULATORS INSTALLED INDOORS PER CODE. PROVIDE GAS PIPING WITH A MINUMUM OF 7" W.C. ON GAS LOW PRESSURE SIDE. EXISTING GAS METER AND REGULATOR TO REMAIN. COORDINATE FINAL LOCATION AND PAY ALL COSTS OF UPGRADE OF METER WITH LOCAL UTILITY AS REQUIRED. GAS PIPING AT BUILDING EXTERIOR TO BE PAINTED TO MATCH ARCHITECT 5.

SPECIFIED FINISHES.

CH APPLIANCE AS REQUIRED.

ARCH 1010 676 Marshall Ave. Suite 101 Memphis, TN 38103 901.497.6563 www.arch1010.com ©2024 ARCH 1010 ALL RIGHTS RESERVED POLK STANLEY | WILCOX 801 South Spring Street Little Rock, AR 72201 501.378.0878 office www.polkstanleywilcox.com CONSULTANT/SEAL ARKANĪSAS * * * REGISTERED PROPOSSIONALL CUMENCINEER No.15519 PROJECT NAME WSD - NEW SENIOR HIGH SCHOOL LOCATION 800 E JACKSON AVE WYNNE AR 72396 PROJECT NUMBER DEVELOPER/OWNER WYNNE SCHOOL DISTRICT INFORMATION CHAD STEWART & ASSOCIATES, INC #1206 SHEET TITLE ENLARGED PLANS -MECHANICAL

DATE 17.10.24 SHEET NUMBER

KITCHEN AIR BALANCE TABLE						
FACS LAB						
UNIT	MAKE-UP AIR (CFM)	EXHAUST AIR (CFM)				
KEF-3		2,900				
KEF-4A		1,900				
KEF-4B		1,900				
DKEF-1		400				
DKEF-2		400				
DKEF-3		400				
DKEF-4		400				
KMAU-3	2,600					
KMAU-4	3,400					
DKMAU-1	1,600					
RTU-AN-14	400					
TRANSFER AIR	300					
TOTAL	8,300	8,300				
KITCHEN NEGATIVE PRESSURIZATION 3.8%						

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9 SPLIT SYSTEM DETAIL N.T.S.

A CONDENSATE PUMP, PIPE DISCHARGE TO NEAREST INDIRECT WASTE PIPE.

3 PIPE SUPPORT DETAIL

THREADED ROD **CLEVIS HANGER** REDUCER AS REQUIRED TO CONNECT TO UNIT OPENING PROVIDE 12" LONG, S.S. PIPE INSULATION BRAIDED HOSE, FLEX. CONN. EQUAL TO MASON MODEL CSAMN (CSA APPROVED) FOR CONNECTION TO UNIT. HIGH DENSITY PT PLUG -INSULATION OR HVAC STEEL SADDLE FILED UNION (TYP.) -RTU-1 WITH INSULATION LUBRICATED ENGRAVED INSULATION SHIELD PLUG VALVE I.D. TAG ┣╋ (\mathcal{A}) GAS SERVICE GAS PRESSURE REGULATOR WITH INTERNAL RELIEF. 7" W.G. \square \square OUTLET, FISHER MODEL S102 — CURB ANCHOR DETAIL OR EQUAL (WHERE REQUIRED) CONDENSATE CONNECTION. SLOPE 1-1/4" CONDENSATE DRAIN - SEE DUCT-MOUNTED SMOKE DETECTOR INTERLOCKED TO SHUT DOWN UNIT UPON DETECTION OF SMOKE PLUMBING. ALL ROOF DECKING AND INSULATION SHALL BE CONTINUOUS UNDER THE UNIT CURB EXCEPT AT THE DUCT OPENINGS. PACK ALL VOIDS IN THE UNIT CURB WITH SOUND ATTENUATING BATT INSULATION PRIOR TO INSTALLING UNIT ON THE CURB. **4 ROOFTOP UNIT DETAIL** N.T.S.

CAP FOR CONNECTION BY HVAC CONTRACTOR

GALVANIZED SCREWS ALL 4 SIDES. - FINAL CONNECTION BY HVAC CONTRACTOR 2" RIGID BOARD INSULATION -CANT & FLASHING 45° SLOPE PIPES AWAY FROM HOOD ROOF DECK 8" HIGH (MINIMUM) PREFABRICATED INSULATED ROOF CURB CAULK AND MAKE DRAIN LINE SHALL BE MIN. WATERTIGHT AT PIPE STEEL ANGLE FRAME 1-1/4" OR THE SAME SIZE PENETRATION AROUND OPENING AS THE NIPPLE ON THE HVAC EQUIP., IF THE NIPPLE IS LARGER THAN PIPES THROUGH ROOF \bigcirc

8 PIPE PENETRATION OF ROOF DETAIL N.T.S.

- GALVANIZED SHEET METAL HOOD. FASTEN TO CURB WITH

- WALL ASSEMBLY MIN 4-3/4 IN. AND 6 IN. THICK REINFORCED LIGHTWEIGHT OR NORMAL WEIGHT (100-150 PCF) 1. CONCRETE FOR 1 AND 2 HR RATINGS, RESPECTIVELY. WALL MAY ALSO BE CONTRUCTED OF ANY UL CLASSIFIÉD CONCRETE BLOCKS*. MAX AREA OF OPENING IS 1300 IN WITH A MAX DIMENSION OF 50 IN. SEE CONCRETE BLOCKS (CAZT) CATEGORY IN THE FIRE RESISTANCE DIRECTORY FOR NAMES OF MANUFACTURERS.
- STEEL DUCT NOM. 24 IN. BY 48 IN. (OR SMALLER) NO. 24 GAUGE (OR HEAVIER) GALV STEEL DUCT TO BE INSTALLED WITHIN THE FIRESTOP SYSTEM. THE ANNULAR SPACE SHALL BE MIN 0 (POINT CONTACT) IN. TO A MAX 2 IN. DUCT TO BE RIGIDLY SUPPORTED ON BOTH SIDES OF THE WALL ASSEMBLY. FIRESTOP SYSTEM - THE FIRESTOP SYSTEM SHALL CONSIST OF THE FOLLOWING: FILL, VOID OR CAVITY MATERIAL* - SEALANT - MIN 5/8 IN. THICKNESS OF FILL MATERIAL APPLIED WITHIN ANNULUS FLUSH WITH BOTH SURFACES OF WALL. AT POINT CONTACT LOCATION, A MIN 1/2 IN. DIAM BEAD OF FILL MATERIAL SHALL BE APPLIED TO THE WALL/DUCT INTERFACE ON BOTH SURFACES OF WALL. HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC - FS-ONE SEALANT, FS-ONE MAX INTUMESCENT SEALANT, CP601S ELASTOMERIC FIRESTOP SEALANT, CFS-S-SIL GG SEALANT OR CP606 FLEXIBLE SEALANT STEEL RETAINING ANGLE - MIN NO. 18 MSG (0.048 IN.) GALV STEEL ANGLES CUT TO FIT CONTOUR OF
- DUCT WITH A 2 IN. OVERLAP ON THE DUCT AND A MIN 1 IN. OVERLAP ON THE GYPSUM BOARD ASSEMBLY ON BOTH SURFACES OF WALL. 2 IN. LEG OF ANGLE SECURED TO DUCT WITH MIN NO. 8 BY 3/4 IN. LONG SHEET METAL SCREWS, SPACED A MAX OR 6 IN. OC. * INDICATES SUCH PRODUCTS SHALL BEAR THE UL OR CUL CERTIFICATION MARK FOR JURSIDICTIONS EMPLOYING THE

UL OR CUL CERTIFICATION (SUCH AS CANADA), RESPECTIVELY.

CONNECT FIRE

DAMPER TO DUCT

WITH APPROVED

OR BLANKET MEETING THE ABOVE SPECIFICATIONS AND BEARING THE UL CLASSIFICATION MARKING WITH A FLAME SPREAD INDEX OF 25 OR LESS AND A SMOKE DEVELOPED INDEX 50 OR LESS MAY BE USED. FILL, VOID, OR CAVITY MATERIAL* - SEALANT - MIN. 5/8 IN. THICKNESS OF FILL MATERIAL APPLIED WITHIN ANNULUS, FLUSH WITH BOTH SURFACES OF WALL. HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC. - FS-ONE SEALANT OR FS-ONE MAX INTUMESCENT SEALANT. * INDICATES SUCH PRODUCTS SHALL BEAR THE UL OR CUL CERTIFICATION MARK FOR JURISDICTIONS EMPLOYING THE UL OR CUL CERTIFICATION (SUCH AS CANADA), RESPECTIVELY.

WOUND DUCT.

1.

3.

1 DUCT PENETRATION THROUGH FIRE RATED WALL **2** RATED WALL **N.T.S.**

8 OUTDOOR UNIT ROOF MOUNTING DETAIL N.T.S.

ROUND DUCT PENETRATION THROUGH FIRE

SYSTEM NO. W-J-7124

ANSI/UL1479 (ASTM E814)

F RATINGS - 1 AND 2 HR (SEE

ITEM 4) T RATING - 1/2 HR

WALL ASSEMBLY - MIN. 6 IN. THICK REINFORCED LIGHTWEIGHT OR NORMAL WEIGHT (100-150 PCF) CONCRETE. WALL

MAY ALSO BE CONSTRUCTED OF ANY UL CLASSIFIED CONCRETE BLOCKS*. MAX. DIAM. OF OPENING IS 24 IN. SEE

STEEL DUCT - GALV. STEEL DUCT TO BE INSTALLED CONCENTRICALLY OR ECCENTRICALLY WITHIN THE FIRESTOP

DUCT INSULATION* - NOM. 1-1/2 OR 2 IN. THICK GLASS FIBER BATT OR BLANKET (MIN. 3/4 PCF) JACKETED ON THE

A. SPIRAL WOUND HVAC DUCT - NOM. 20 IN. DIAM. (OR SMALLER) NO. 24 MSG (OR HEAVIER) GALV. STEEL SPIRAL

OUTSIDE WITH A FOIL-SCRIM-KRAFT FACING. LONGITUDINAL AND TRANSVERSE JOINTS SEALED WITH ALUMINUM FOIL

THAT THE ANNULAR SPACE WITHIN THE FIRESTOP SYSTEM SHALL BE MIN. 1/4 IN. TO MAX. 1-1/2 IN. SEE BATTS AND

TAPE. DURING THE INSTALLATION OF THE FILL MATERIAL, THE BATT OR BLANKET SHALL BE COMPRESSED 50% SUCH

BLANKETS - (BKNV) CATEGORY IN THE BUILDING MATERIALS DIRECTORY FOR NAMES OF MANUFACTURERS. ANY BATT

SHEET METAL DUCT - NOM. 12 IN. DIAM. (OR SMALLER) NO. 28 MSG (OR HEAVIER) GALV. SHEET STEEL DUCT.

CONCRETE BLOCKS (CAZT) IN THE FIRE RESISTANCE DIRECTORY FOR NAMES OF MANUFACTURERS.

SYSTEM. DUCT TO BE RIGIDLY SUPPORTED ON BOTH SIDES OF WALL ASSEMBLY.

INTERRUPT INTERNAL DUCT

EDGES WITH SEALANT.

CLOSURE SPRING

BLADE LOCK

FASTENERS.

COVER INSULATION EDGE

FACING THE AIRSTREAM

LINER AT FIRE DAMPER. SEAL

WITH 22 GA. METAL NOSING.

WRAP FIRE DAMPER FRAME

WITH EXTERNAL INSULATION

HINGED DUCT ACCESS PANEL

PROVIDE CEILING ACCESS PANEL

WHERE REQUIRED TO OBTAIN

ACCESS ABOVE GYP. BOARD OR

OTHER INACCESSIBLE CEILINGS.

VERIFY LOCATION WITH ARCHITECT

WITH MINIMUM TWO (2) CAM

FLOOR

PULL

3 PIPE PENETRATION THROUGH RATED WALL

THE UL LISTING MARK

∀ 3B

CONNECT FIRE DAMPER

BREAK-AWAY DUCT

TO DUCT WITH APPROVED

SYSTEM NO. W-J -1088 DECEMBER 04, 2002 F RATINGS - 1 AND 2 HR (SEE ITEM 3) T RATING - 0 HR

(3A)-

10 GAS CONNECTION TO KITCHEN EQUIPMENT N.T.S.

WALL

HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC - FS-ONE SEALANT *BEARING THE UL CLASSIFICATION MARK +BEARING

PACKING MATERIAL - MIN 2-1/8 IN. OR 2-3/4 IN. THICKNESS OF MIN 4 PCF MINERAL WOOL BATT INSULATION FIRMLY PACKED INTO OPENING ON ONE SIDE OF THE WALL AS PERMANENT FORM FOR 1 AND 2 HR WALLS

FLEXIBLE STEEL CONDUIT+ - NOM 2 IN. DIAM (OR SMALLER) FLEXIBLE STEEL CONDUIT. SEE FLEXIBLE METAL CONDUIT (DXUZ) CATEGORY IN THE ELECTRICAL CONSTRUCTION EQUIPMENT DIRECTORY FOR NAMES OF

CONDUIT - NOM 4 IN. DIAM (OR SMALLER) STEEL ELECTRICAL METALLIC TUBING (EMT) OR 6 IN. DIAM STEEL

SECTION A-A

MIGRATION THROUGH NON-FIRE RATED ASSEMBLIES.

NOT FOR FIRE-RATED ASSEMBLIES.

NOT FOR USE WITH CPVC PIPING.

4 SMOKE PARTITION APPROVAL PRIOR A N.T.S.

LIMITATIONS:

•

HILTI CP 506 SMOKE AND ACOUSTIC SEALANT MAY BE INSTALLED WHERE IT IS NECESSARY TO RESTRICT SMOKE

TO INSTALLATION.

ONE-SIDED APPLICATIONS

TWO-SIDED APPLICATIONS

OPTIONAL

SLEEVE

REFER TO PRODUCT LITERATURE FOR COMPLETE DETAILS ON INSTALLATION, SUITABLE APPLICATIONS, AND LIMITATIONS. THESE DETAILS REPRESENT GENERAL INSTALLATION GUIDELINES TO SATISFY SMOKE PARTITION SEALING REQUIREMENTS OF THE INTERNATIONAL BUILDING CODE (2003, 2006, 2009, 2012, 2015, OR 2018). OBTAIN

DATE 17.10.24 SHEET NUMBER

JECT NO: 24122

KITCHEN EQUIPMENT DETAILS - CAFETERIA 1

-0.621"	2150	WHERE EXPOSED	ALONE	ALONE			
		UTILITY CABIN	NET(S)	FLECTRICAL	SWITCHES	FIRE	ноот
IZE	TYPE	SIZE		MODEL #	QUANTITY	PIPING	PIPING WEIGH
60"x24"				SC-321110MA	1 LIGHT 1 FAN	YES	1036 LBS
0"×24"	TANK FS	\$ 4.0/4.0/	4.0			YES	1237 LBS

SPECIFICATION: CAPTRATE GREASE-STOP SOLD FILTER

THE CAPTRATE GREASE-STDP SOLD FILTER IS A SINGLE-STAGE FILTER FEATURING A UNIQUE S-BAFFLE DESIGN IN CONJUNCTION WITH A SLOTTED REAR BAFFLE DESIGN, TO DELIVER EXCEPTIONAL FILTRATION EFFICIENCY.

UNITS SHALL INCLUDE STAINLESS STEEL HANDLES AND A FASTENING DEVICE TO SECURE THE TWO COMPONENTS WHEN ASSEMBLED.

GREASE EXTRACTION EFFICIENCY PERFORMANCE SHALL REMOVE AT LEAST 75% OF GREASE PARTICLES FIVE MICRONS IN SIZE, AND 85% GREASE PARTICLES SEVEN MICRONS IN SIZE AND LARGER, WITH A CORRESPONDING PRESSURE DROP NOT TO EXCEED 1.0 INCHES OF WATER GAUGE.

IF ORDERED, CAS SERVICE WILL PERFORM A SYSTEM DESIGN VERIFICATION (SDV) ONCE ALL EQUIPMENT HAS HAD A COMPLETE START UP PER THE OPERATION AND INSTALLATION MANUAL. TYPICALLY, THE SDV WILL BE PERFORMED AFTER ALL INSPECTIONS ARE COMPLETE.

ANY FIELD RELATED DISCREPANCIES THAT ARE DISCOVERED DURING THE SDV WILL BE BROUGHT TO

THE ATTENTION OF THE GENERAL CONTRACTOR AND CORRESPONDING TRADES ON SITE. THESE ISSUES WILL BE DOCUMENTED AND FORWARDED TO THE APPROPRIATE SALES OFFICE. IF CAS SERVICE HAS

RESOLVE A DISCREPANCY THAT IS A FIELD ISSUE, THE GENERAL CONTRACTOR WILL BE NOTIFIED AND BILLED FOR THE WORK. SHOULD A RETURN TRIP BE REQUIRED DUE TO ANY FIELD RELATED DISCREPANCY THAT CANNOT BE RESOLVED DURING THE SDV, THERE WILL BE ADDITIONAL TRIP

DURING THE SDV, CAS SERVICE WILL ADDRESS ANY DISCREPANCY THAT IS THE FAULT OF THE MANUFACTURER. SHOULD A RETURN TRIP BE REQUIRED, THE GENERAL CONTRACTOR AND APPROPRIATE SALES DEFFICE WILL BE NOTIFIED. THERE WILL BE NO ADDITIONAL CHARGES FOR MANUFACTURER DISCREPANCIES.

FOR QUESTIONS, CALL THE

Western TN and MS Mechanical

REGION 74

PHONE: (901) 480-4443

EMAIL: reg74@captiveaire.com

PRESSURE DROP VS. FLOW RATE

10

0

FLOW RATE (CFM)

INSE ISTORY

THE CAPTRATE GREASE-STOP SOLD WAS TESTED TO ASTM STANDARD ASTM F2519-05. MANUFACTURER APPROVED FOR USE IN SOLID FUEL APPLICATIONS AS A SPARK ARRESTER.

FILTER IS STAINLESS STEEL CONSTRUCTION, AND SIZED TO FIT INTO STANDARD 2-INCH DEEP HOOD CHANNEL(S).

- SUPPLY 430 SS ALONE ALONE 4" 14" 1850 1731 -0.657" 2150 WHERE EXPOSED ALUNE ALUNE 430 SS

EFFICIENCY VS. PARTICLE DIAMETER

PARTICLE DIAMETER, (UM)

CAPTRATE FILTERS ARE BUILT IN COMPLIANCE WITH.

SYSTEM DESIGN VERIFICATION (SDV)

40

NFPA #96. NSF STANDARD #2. UL STANDARD #1046. INT, MECH. CDDE (IMC). ULC-S649.

nenos enos	DESIGN	INSTALLATION		
MAX FP	FP	SYSTEM	LOCATION ON HOOD	
60	44	FIRE CABINET LEFT	LEFT, HOOD 2	

EXHA FAN	UST F	TAN	INFO	RMATION	- <i>JOB#6</i>	<u>5823051</u>					мат								DISCHARGE	WEIGHT		7								
	TAG	QIY		FAN UNIT MU	DEL #	MANUF	CTURER	CEM	ESP	RPM	ENC	L	нР	внь	PHAS			+L	A VELOCITY	(LBS)	SUNE	5								
1	KEF-1	1		DU180HF	A	CAPTI	VEAIRE	1850	1.200	1057			1.500	0.7850	0 3	46	50	3.0	0 427 FPM	178	11.1	-								
4	DEF-1	1		DUISUHF (а 4	CAPTI	VEAIRE	750	0.500	1369	TEAD-	ECM	0.333	0.9700) 1	46	.5	3.0	3 371 FPM	64	12.7	-								
DOAS	/RTU F	FAN	SCHE	DULE - JO.	B#68230	51					1							_												
FAN	TAG Q	TY	DD	AS/RTU MODEL	# MAN	UFACTURER	BLOWER	RETUR		TOTAL	WEIGHT	ESP	HP	PHASE	VOLT	MCA		CP -	DUTSIDE AIR MIXEI		ING INF A∨ING A	ORMATI AIR	N C	APACITY		IEER	ISMRE	DISCH	RIARGE	EHEA
ND			AC 111	AC2 1 200 10 10			1045 2 5	AIR UF	AIR CFM	4200	(CB2)	0.500	5.00	2	460	22.04	254		DB WB DB	WB DB	WB	DP		L SE	NS.	10.6	4.2	DB	WB	DES
ND7 1. IN 2. D 3. II 4. R 5. E 6. E 7. S 8. F 9. A 10. 2 11. IN 12. I 13. I 14. H 15. H	L ES: IRECT DR IRECT DR IRECT DR IRECT DR IECTRONI UCTION L CTION L CTION L CTION C VERAGING * EXTERI 1% EFFIC SUPPLY C MDISTURE IAIL GUAR ACTORY	SCROL IVE P D MON TION I CONDEC CEXP INE AI COMMIS G INTA OR DU IENT I ELIMI RD FOI INSTA	L CEMP LENUM ITERING PRESSU INSING ANSIDN CCUMUL SIDNING KE, EV IAL-WAI FURNAC FURNAC NATER R CEND LLED C	RESSOR WITH I BLOWER. BELT 5 VIA CELLULAI RE MONITORING FANS VALVE. TXV ATOR 5 WITH 5 YEAR AP AND DISCHA LL CONSTRUCTII E, WITH MODUL/ G INTEGRAL TI FOR SIZE 2, 10 ENSING COIL DMPRESSOR SOU	NTEGRATED DRIVEN BL R CONNECTII ON HIGH AN NOT ACCEP PARTS WAR RGE TEMPER JN W/ R-13 ATING INDUC J UNIT WITH TON RTU. I ND BLANKET	DIL SENSD DWERS ARI DN BY MANI ID LOW PRE TABLE RANTY, 25 RATURE SEN INSULATID SER TO MAI ER TO MAI F CFM MEAS	L R. DIGITA FACTURER SSURE SI YEAR WAI SDRS (DIS N-MINIMUM UREMENT	L DR STA EPTABLE DE DF SY: CHARGE S 20GA EX STANT CD INCLUDED	GED SCROL STEM INCLU I STAINLES ENSOR TO FERIOR W/ BUSTION I THROUGH I	L NOT A JDED TH S STEE BE FACT 14GA B FFICIEN JIGITAL	AN APPRO ROUGH DI L HEAT E FORY MOU ASE INTERFAC	I GITAL XCHANG NTED W SS FIR: E	UAL INTERI JER JITHIN	UNIT)	1 TURN	DOWN	VITH	NG	AND 54 TURNDOWN Y	VITH LP						<u> </u>				
FAN	OPTIO	NS																												
	TAG	Q	TY				DES	CRIPTION																						
			1 GR	EASE BOX																										
1	KEF-1		1 EX	HAUST FAN HE	AT BAFFL	E FAN																								
-		- 8	1 2 1 GR	YEAR PARTS \ EASE BOX	VARRANTY																									
г	KEF-2	-	1 LO 1 EX	AD REACTOR M HAUST FAN HE	DUNTED IN	FAN																								
		-	1 2 1 IN	YEAR PARTS	ARRANTY	-35'																								
			1 MA	NIFOLD PRESS	URE GAUGE	с, о то 10	' WC, 1 F	URNACE																						
			1 IN	TAL CEM MUNI TAKE FIRESTA	T SET TO	135*F																								
			1 FR 1 DI:	EEZESTAT SCHARGE FIRE	STAT SET	TD 240°F																								
			1 SH 1 CA	IP LODSE GAS	STRAINER	3/4" RING SYST	EM - INT	ERNET DR	CELLUL	R CON	NECTION	REQUI	RED																	
			1 RT	US DOWN DISC			460/48	N/ P4104	PEEPIGE			SPEE	'n																	
				MPRESSOR, EC	M CONDENS	SIZE 2 1	0 TIN P		HEAT	XHINT,	VARIABLI	_ SFEE																		
3	KMALI-	, 🗖	1 RT	U2 CURB DUCT	HANGER	3120 0, 1		IO, NU KE																						
0		· _	1 RT 1 RT	U SIZE 2 INT U2 HAIL GUAR	D	SHIPPED	TUUSE																							
		-	1 RT 1 RT	UVZH065 COMP	PRESSOR S	OUND BLAN A - MPU	IKET 230	/460/575	V - FAC	ORY IN	ISTALLEI)																		
			1 RT	U FIXED 100% MERV 8 FILT	DA INTAKE	CONTROL	4)																							
			1 UN	IT MOUNTED	FD CONFIC	SURED FOR	DCV																							
				NGLE POINT E	LECTRICAL		ON FOR F	RTU. 750	A TRANS		USED. I	F A NE	JN-DC	V																
			BE	SELECTED, D	DES NOT P	ROVIDE S	JPPLY ST	ARTER IN		ADTO		MUST																		
		3	1 M0 PA	NITORING AND RTS WARRANT	CAPTIVEA Y (SEE A	IRE SERV	CE CONT DETAILS	RACT, 25	YEAR ST	AINLES	S STEEL	FURNA	ACE																	
4	DEE-1			M WIRING PAC ELCO), CCW RI	KAGE - EX	(HAUST -	MANUAL [R 0-10∨	DC REFER	ENCE S	PEED CO	NTROL	-MSC																	
			1 2	YEAR PARTS V	VARRANTY																									
FAN	ACCES	5501	EX	HAUST		SUF	PLY																							
	TAG	GRE	ASE G	RAVITY WALL	SIDE	GRAVITY	MOTORI	ZED WAL																						
1	KEE-1	C	UP I	AMPER MOUNT	DISCHARG	E DAMPER	DAMPE	R MOUN	т																					
5	KEF-2	Y	ES						_																					
4 CUR	B ASSI	EMB	LIES																											
ND			TAG	WE	IGHT	ITE	м						SIZ	ZE																
1	# 1	к	EF-1	43	LBS	CUR	в	26.500"W	X 26.500	'L X 20).000 * H	1.000:1	2.000	PITCH	ALD	IG LEI	NGTH,	, R]	IGHT VENTED											
2	# 2	к	EF-2	43	LBS	CUR	в	26.500"W	X 26.500	'L X 20	0.000 * H	1.000:1	2.000	PITCH	ALD	IG LEI	NGTH,	, R]	IGHT VENTED											
3	# 3	KM	1AU-1	111	LBS	CUR	В	49.500"W	X 75.000	L X 20	.000″H	1.000:1	2.000	PITCH	ALON	IG WII	DTH, F	RIG	HT INSULATED.											
4	# 4	D	EF-1	27	LBS	CUR	В	19.500*W	X 19.500*	_ X 20.	000°H	1.000:12	2.000	PITCH	ALON	G LEN	GTH,	RI	GHT.											
UNIT	NUMBER	2		HMI #	HMI SCI		I TEM	P AVERA	GING	MODBU	5																			
F	AN #3	н	MI #1	- UNIT HMI #	1 MOUN	TED IN UN		T AVERA	GED	AUURES 55	5																			

KITCHEN EQUIPMENT DETAILS - CAFETERIA 5

TY MDISTURE GA REMOVAL TYP RATE NATU	S INPUT PE BTUS RAL 294967	DUTPUT BTUs 238923	TEMP RISE	REQUIRED INPUT GAS PRESSURE	NDTES
NATU	RAL 294967	238923	47*F		
				7 IN. W.C 14 IN. W.C.	1,2,3,4,5,6,7,8,9,10,11,12,13,14,1

KITCHEN EQUIPMENT DETAILS - CAFETERIA 6

ROOF OPENING DIMENSIONS.

PITCHED CURBS ARE AVAILABLE FOR PITCHED RODFS.

EXAMPLE: 7/12 PITCH = 30° SLOPE.

SPECIFY PITCH

OPTIONS ECM WIRING PACKAGE - EXHAUST -IANUAL DR 0-10VDC REFERENCE SPEED DINTROL -MSC- (TELCD), CCW RDIATID 2 YEAR PARTS WARRANTY.

ARCH 1010 676 Marshall Ave. Suite 101 Memphis, TN 38103 901.497.6563 www.arch1010.com ©2024 ARCH 1010 ALL RIGHTS RESERVED POLK STANLEY WILCOX 801 South Spring Street Little Rock, AR 72201 501.378.0878 office www.polkstanleywilcox.com CONSULTANT / SEAL ARKANSAS $\star \star \star$ REGI\$TERED PROMASSIONAL ÉXGINEER ' No.15519 PROJECT NAME WSD - NEW SENIOR HIGH SCHOOL LOCATION 800 E JACKSON AVE WYNNE AR 72396 PROJECT NUMBER DEVELOPER/OWNER WYNNE SCHOOL DISTRICT INFORMATION Revision CHAD STEWART & ASSOCIATES, INC #1206 SHEET TITLE KITCHEN EQUIPMENT DETAILS - CAFETERIA DATE 17.10.24 SHEET NUMBER

KITCHEN EQUIPMENT DETAILS - CAFETERIA 9

KITCHEN EQUIPMENT DETAILS - CAFETERIA 10

KITCHEN EQUIPMENT DETAILS - FACS 3

1/2" DIA. HEAVY DUTY NUT ONE ABOVE AND TWO BELOW HANGING ANGLE

1/2" DIA. ALL THREAD ROD CONNECTED TO ROOF JOIST THROUGH ANOTHER HANGING

KITCHEN EQUIPMENT DETAILS - FACS 4

	UT	FILITY CABINET(S)			ETPE	наар
	FIRE	SYSTEM	ELECTRICAL	SWITCHES		HANGING
IZE	TYPE	SIZE	MODEL #	QUANTITY	PIPING	WEIGHT
					YES	870 LBS
					YES	548 LBS
50"×24"	TANK FS	4.0/4.0/4.0			YES	937 LBS

	ΤΠΤΑΙ		HODD C	ONFIG
SP	SUPPLY	HOOD CONSTRUCTION	END TO END	ROW
.873″	2600	430 SS WHERE EXPOSED	ALONE	ALONE
.587″	1700	430 SS WHERE EXPOSED	LEFT	ALONE
.587*	1700	430 SS WHERE EXPOSED	RIGHT	ALONE

KITCHEN EQUIPMENT DETAILS - FACS 2

DS #	SURFACE	*CLEARANCE
	TOP	18*
	FRONT	0"
,2	BACK	18*
	LEFT	18*
	RIGHT	18*
	TOP	18*
	FRONT	0*
3	BACK	18*
	LEFT	18"
	RIGHT	0"

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EXH. FAN	AUST I			٦.																				
	TAG			2																				
1	KEF-3	1	EADU180H	ECON-AIR	2900	1.400	1264	DDP,PR	EMIUM	2.000 1.	4340	3	460	3.3	670	FPM	214	18.5						
2	KEF-4A	1	EADU180H	ECUN-AIR	1900	1.100	1025			1.000 0.	7290	3	460	1.7	439	FPM	151	10.4						
DOAS	S/RTU	FAN	SCHEDULE – JOB#689	5301									1				0.		_]					
FAN	Í		F	AN INFORMATION	-	ETURN	MAX		VETGHI	-		ELECT	RICAL I	NFORMAT	rion	DUTSID	E AIR MIXE	D AIR		G INFOR	RMATIO	N CAP	ACITY	
	TAG	QTY	DDAS/RTU MDDEL #	MANUFACTURER	BLOWER	IR CFM AI	R CFM	CFM	(LBS)	ESP	HP	PHASE		MCA	MOCP	DB	WB DB	WB	DB	WB	DP	TOTAL	SENS.	IEER ISMRE
4	KMAU-3	1	EARTU2-I.250-15-8T-MPU	ECON-AIR	15P-2	0	2600	2600	1964	0.500	2.00	0 3	460	17.5A	20A	94.0°F	76.0°F 94.0°F	76.0*F	66.2°F 6	5.7°F 65	5.5°F 1	101.3 MBH	79.1 MBH	20.2 9.8
5	KMAU-4	1	EARTU2-I.300-18-10T-MPU	ECON-AIR	18P-2	0	3400	3400	2025	0.500	5.00	0 3	460	32.8A	35A	94.0*F	76.0°F 94.0°F	76.0*F	65.0°F 6	4.8*F 6	4.7*F 1	43.3 MBH	107.8 MBH	18.6 4.3
1. 2. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12. 13. 14. 15.	INVERTER DIRECT I INTEGRA REFRIGER EC MOTO ELECTRO SUCTION FACTORY AVERAGI 2" EXTE 81% EFF SUPPLY HAIL GU FACTORY DOWN D	R SCRI DRIVE TED MI R CDN R CDN NIC E: LINE COMM NG IN' RIDR ICIENT CFM I VARD F Y INST ISCHAI	DLL COMPRESSOR WITH INTEGRAT PLENUM BLOWER. BELT DRIVED INITORING VIA CELLULAR CONNE I PRESSURE MONITORING ON HIGH DENSING FANS (PANSION VALVE, TXV NOT ACI ACCUMULATOR ISSIONING WITH 5 YEAR PARTS TAKE, EVAP AND DISCHARGE TEM DUAL-WALL CONSTRUCTION W/ R FURNACE, WITH MODULATING IN MONITORING INTEGRAL TO UNIT V OR CONDENSING COLL ALLED COMPRESSOR SOUND BLAM RGE/ND RETURN	TED DIL SENSOR. N BLOWERS ARE ICTION BY MANUF 4 AND LOW PRES CEPTABLE WARRANTY, 25 Y MPERATURE SENSI -13 INSULATION- NDUCER TO MAINT WITH CFM MEASU	DIGITAL NDT ACCE ACTURER SURE SIDE (EAR WARE DRS (DISC) -MINIMUM AIN CONS REMENT IN	DR STAG PTABLE DF SYST ANTY DN HARGE SEN 20GA EXTE ANT CDMI CLUDED T	ED SCR EM INC STAINL SOR T RIDR \ BUSTIDI HRDUGH	CLUDED T ESS STE D BE FAC V/ 14GA N EFFICIE H DIGITAL	AN AP HROUGH EL HEA CTORY I BASE INCY AI INTER	PRU√ED I DIGITA T EXCH MOUNTEI CROSS F FACE	EQU L IN ANGE WI TRIN	ITERFAC R THIN UN G RANG	E 117) E. 61 T	URNDOW	'N WITH	I NG AND	5:1 TURNDO	WN WITH	H LP					
FAN		IS									F	AN A	CCESS	ORIES	5									
FAN	TAG			ST		SL	JPPLY																	
1	VEE-2	1	NEORMATION JOB#6895501 FAN UNIT NODEL # MANFACTURER CFM ESP RPM R EADUB0H ECDM-AIR 1900 1100 105 DP/ EADUB0H ECDM-AIR 1900 1100 105 DP/ SCHEDUILE - JOB#685301 F F F DBS/RTU DDS/RTU DDS/RTU						Ĺ		TAG	GREASE		ITY WAL	SIDE	GRAVI	TY MOTORI	ZED W	ALL					
_		1	2 YEAR PARTS WARRANTY								-	1	KEF-3	CUP YES	DAMP	ER MOUN	T DISCHARGE	DAMPE	R DAMP	ER MD	JUNT			
2	KEF-4A	1	LOAD REACTOR MOUNTED IN FAN								-	2 K	EF-4A	YES	_					_				
3	KEF-4B	1	GREASE BOX								C	URB .	ASSEN	MBLIE.	S ,			1						
L		1	2 YEAR PARTS WARRANTY INLET PRESSURE GAUGE, 0-35"								N		N	TAG		WEI	GHT	ITE	м					SI
		1	MANIFOLD PRESSURE GAUGE, 0 TO	10' WC, 1 FURNAC	E				_			1 #	1	KEF-3		43	LBS	CUR	RB	26.500"V	V X 26	6.500″L X	20.000"H	1.000:12.000
		1	INTAKE FIRESTAT SET TO 135°F									2 # 3	2	KEF-44	4	43	LBS	CUR	RB å	26.500"	V X 26	5.500″L X	20.000"H	1.000:12.000
		1	DISCHARGE FIRESTAT SET TO 240'	*F								3 # 3	3	KEF-4I	в	43	LBS	CUR	RB i	26.500"	V X 26	5.500″L X	20.000"H	1.000:12.000
		1	CASLINK BUILDING MONITORING SY	STEM - INTERNET	OR CELLUL	AR CONNEC	TION R	EQUIRED	_			4 #	4	KMAU-3	3	111	LBS	CUR	RB 4	49.500*	√ X 75	5.000°L X	20.000 * H	1.000:12.000
		1	2" MERV 8 FILTERS FOR RTU2 (Q	TY, 4)								5 # 5	5	KMAU-4	4	111	LBS	CUR	SB ,	49.500*\	√ X 75	5.000°L X	20.000*H	1.000:12.000
		1	COMPRESSOR, ECM CONDENSING FAI	UN, 460/480V. R41 NS 201	UA REFRIGE	RANI, VAR	IABLE 3	SPEED																
		1	RTU2 ND RETURN - 100% DA - MP																					
4	KMAU-3	1	RTU2 HAIL GUARD		INCLODED																			
		1	RTUVZH044 COMPRESSOR SOUND BI	LANKET 230/460/5	575V - FAC	TORY INST	ALLED																	
		1	CLOGGED FILTER SWITCH - NOTIF	ICATION ON HMI	KENEN				_															
		1	SINGLE POINT ELECTRICAL CONNECT	CTION FOR RTU. 75	50VA TRANS	FORMER US	ED. IF	A NON-DC	v															
		1	BE SELECTED, DOES NOT PROVIDE	SUPPLY STARTER	IN PREWIR	E							EA	ANS #1 (K	EF-3), #	2 (KEF-4A), #3 (KEF-4B)	- EADU1	80H EXHAUS	T FAN				
		1	LOAD REACTOR MOUNTED IN FAN 5 YEAR ENTIRE UNIT PARTS WARR	ANTY, 10 YEAR EN	TIRE UNIT	PARTS WAR	RANTY	WITH REM	ΟΤΕ														<u>ا</u> – D	RECT DRIVE
		1	MONITORING AND CAPTIVEAIRE SEP PARTS WARRANTY (SEE ADDITION	RVICE CONTRACT, AL DETAILS)	25 YEAR S	AINLESS S	STEEL F	URNACE							-	-	37	3/8* —		-			- R - R	ODF MOUNTED
		1	EXTERIOR GAS CONNECTION PROVI BRACKET	DED BY FACTORY	WITH QUICK	SEAL AND	ANTI-I	RUTATION									<u> </u>						- u - v	_705 AND UL7 ARIABLE SPEE
		1	MANIFOLD PRESSURE GAUGE, 0 TO	10" WC, 1 FURNAC	E											1	1 _F	_	Ę	<u> </u>		t	- II - T	HERMAL DVER
		1	INTAKE FIRESTAT SET TO 135*F						-										, L				- Gi - N	REASE CLASSI
		1	DISCHARGE FIRESTAT SET TO 240'	*F											33 3/4	4-								RMAL TEMPER
		1	SINGLE POINT ELECTRICAL CONNEC PREWIRE CONTROLS THIS UNIT. TH	CTION FOR RTU, 75	50VA TRANS	FORMER US	ED. IF	A NON-DC	v													22 5/8*	VI	HAUST FAN M HILE EXHAUST TIL ALL FAN
		1	BE SELECTED. DOES NOT PROVIDE CASLINK BUILDING MONITORING SY	SUPPLY STARTER STEM - INTERNET	IN PREWIR	AR CONNEC	TION R	EQUIRED								\sim	┱╬╧			/		14-13-14	TH	ERMAL EQUILI TERIDRATING
		1	RTU2 DOWN DISCHARGE 2" MERV 8 FILTERS FOR RTU2 (Q	TY. 4)																GREA:	SE DRA	AIN.	AR	NURMAL FLAR
	2202557	1	10 TON MODULATING COOLING OPTI COMPRESSOR, ECM CONDENSING FAI	⊡N, 460/480∨. R4 NS	10A REFRIG	RANT, VAR	RIABLE	SPEED							4	2*		5 1/21		ľ			EX	HAUST FAN MU ILE EXHAUSTI
5	KMAU-4	1	RTU FIXED 100% DA INTAKE CONTR RTU2 ND RETURN - 100% DA - MP	U																			AT 15 DA	600°F (316°C MINUTES WIT MAGED TO AN
		1	RTU2 CURB DUCT HANGER CLOGGED FILTER SWITCH - NOTIF	ICATION ON HMI																			AN	UNSAFE CON
		1	RTU2 HAIL GUARD RTU SIZE 2 INTAKE HODD, SHIPPE	D LOOSE														26' —					1	<u>PTIONS</u> GREASE BOX
		1	RTUVZH065 COMPRESSOR SOUND BI	LANKET 230/460/5 DNTROL (571 VFD	75V - FAC INCLUDED>	TORY INST	ALLED									-	17	28.	717	ן דסטת	TWORK	BETWEE	N	- LOAD REACT - 2 YEAR PAR
		1	LOAD REACTOR MOUNTED IN FAN MOISTURE ELIMINATOR FOR SIZE 2	2, 10 TON RTU. NO	REHEAT												V	\vee		∽ EXH4 AND	AUST R FAN C	RISER ON BY OTHER	HOOD RS).	
		1	UNIT MOUNTED VFD CONFIGURED F 5 YEAR ENTIRE UNIT PARTS WARR	DR DCV RANTY, 10 YEAR EN	TIRE UNIT	PARTS WAR	RANTY	WITH REM	ΟΤΕ															
		1	PARTS WARRANTY (SEE ADDITION	AL DETAILS)	25 YEAR S	AINLESS S	TEEL F	URNACE																
		1	BRACKET	MATION - JOB#6895301 FAN UNIT MODEL # MANUFACTURER CFM ESP RPM MOTO EADUB0H ECON-AIR 1900 1100 1265 DIP.PRE EADUB0H ECON-AIR 1900 1000 1265 DIP.PRE DASARTU MODEL # MANUFACTURER BLUVER RETURN DIMAN DIAGO 2660 2600 UR-12300-18-10T-MPU ECON-AIR 189-2 0 3400 3400 PRESSUM VITH INTEGRATED IN SEASON DIGITAL DR STARED SCRUL NOT TANUER 2000 3400 3400 PRESSUM VITH INTEGRATED WITH AN ACCENTRAL NORACTURER MANUFACTURER NORACTURER NORACTURER NORACTURER NORACTURER NORACTURER NORACTURER NORACTURE NORACTUR																				

KITCHEN EQUIPMENT DETAILS - FACS 5

KITCHEN EQUIPMENT DETAILS - FACS 8

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KITCHEN EQUIPMENT DETAILS - FACS 9

ELECTRICIAN NOTES :

NON-COMBUSTIBLE WALL-

DURING THE SDV, CAS SERVICE WILL ADDRESS ANY DISCREPANCY THAT IS THE FAULT OF THE MANUFACTURER. SHOULD A RETURN TRIP BE REQUIRED, THE GENERAL CONTRACTOR AND APPROPRIATE SALES DFFICE WILL BE NOTIFIED. THERE WILL BE NO ADDITIONAL CHARGES FOR MANUFACTURER

ILIT	Y CABINET(S)			FIRE	наар
SYS	TEM	ELECTRICAL	SWITCHES	SYSTEM	HANGING
	SIZE	MODEL #	QUANTITY	PIPING	HDDD HANGING WEIGHT 167 LBS 166 LBS 166 LBS 166 LBS
				YES	167 LBS
				YES	166 LBS
				YES	166 LBS
				YES	166 LBS

INE	ALONE							
INE	ALONE							
INE	ALONE							
INE	ALONE							
ILIT	Y CABIN	ET(S)					5105	
SYS	STEM		ELECTRICAL	L	SWITCHE	.s	SYSTEM	
	SIZE		MODEL #		QUANTIT	Y	PIPING	HODD HANGING WEIGHT 167 LBS 166 LBS 166 LBS
							YES	167 LBS
							YES	166 LBS
							YES	166 LBS
							YES	166 L BS

ם מסכ						
D TO IND	ROW					
.ONE	ALONE					
.ONE	ALONE					
.ONE	ALONE					
.ONE	ALONE					
SYS	TEM	ELECTRICAL	SW	ITCHES	FIRE	HOOD
	SIZE	MODEL #	QU	ANTITY	PIPING	WEIGHT
					YES	167

KITCHEN EQUIPMENT DETAILS - FACS 10

*CLEARANCE

CLEARANCE TO COMBUSTIBLES

FRON

RIGHT

BACK

- *0" CLEARANCE TO COMBUSTIBLES CONFORMS TO UL710

SURFACE

HOODS #

1,2,3,4

BACKSPLASH

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KITCHEN EQUIPMENT DETAILS - FACS DOMESTIC KITCHEN 3

NDTES - FIELD PIPE DRDPS AS SHOWN PIPING, ELBOWS, TEES, AND NDZZLES SUPF - FIELD INSTALLED DRDP: FACTORY WILL PR PLATED PIPING SHIPPED LODSE TO BE FIEL - SHIP LODSE DRDP: FACTORY WILL PROVIDE SHIPPED LODSE TO BE FIELD-INSTALLED. - RELOCATE NOZZLES IF FLOW PATTERN IS SALAMANDERS, ETC. - DIVERLAPPING COVERAGE SHALL NOT BE US - IF APPLICABLE, EXTENDED PRE-PIPED DRDI - FACTORY PIPING EXTENDES A MAXIMUM OF G	CLIED BY CAS. DVIDE QTY 2 60IN LDI D-INSTALLED. THE EXACT CHRDME F BLDCKED BY SHELVING SED DN ANY APPLIANC S ARE SHIPPED LDDSI 'ABDVE THE TDP DF	NG PIECES OF CHROME PIPE LENGTH NEEDED 5, E WITH AN OBSTRUCTION. E. THE HOOD.	
- APPLIANCE DIMENSIONS LISTED REPRESENT SIZE, NOT THE OVERALL APPLIANCE SIZE.	THE COOKING SURFAC	E	
- THIS FIRE SYSTEM COMPLIES WITH U.L. 30	REQUIREMENTS.		
- DL-F NDZZLE PART NUMBER REPLACES 307	22-01-H8/E-0		
JDB #: 6898813. JDB NAME: WYNNE HIGHSCHOOL FACS LAB (DD	MESTIC & CORRIDOR).		
SYSTEM SIZE: TANK-SP-2-WC WITH REMDIE 1 HDDD # 1 3' 0.00' LDNG × 30' WIDE × 44' H HISER # 1 SIZE: 8' DIA. HDDD # 1 METAL BLDW-DFF CAPS INCLUDED. HDDD # 2 3' 0.00' LDNG × 30' WIDE × 44' H RISER # 1 SIZE: 8' DIA. HDDD # 3 3' 0.00' LDNG × 30' WIDE × 44' H RISER # 1 SIZE: 8' DIA. HDDD # 3 METAL BLDW-DFF CAPS INCLUDED. HDDD # 3 METAL BLDW-DFF CAPS INCLUDED. HDDD # 3 METAL BLDW-DFF CAPS INCLUDED. HDDD # 1 SIZE: 8' DIA. HDDD # 4 3' 0.00' LDNG × 30' WIDE × 44' H RISER # 1 SIZE: 8' DIA.	IGH. IGH. IIGH. IIGH.	I FP: 72. MAXIMUM FP: 80.	
- HEAVY-DUTY APPLIANCES (RATED 600'F) W DUWNSTREAM FIRESTAT IN THE EVENT THAT HORIZONTAL RUNS OVER 25 FT IN LENGTH, - MEDIUM TO LIGHT-DUTY APPLIANCES (RATE ANY ADDITIONAL DOWNSTREAM DETECTION.	ILL REQUIRE AN ADDI THE DUCTWORK CONTA D 450°F) WILL NOT RE	TIDNAL JINS ANY EQUIRE	
AGENT DISTRIBUTION PIPING LIMITA	ATIONS		
PIPE SECTION	MAX PIPE LENGTH (FT)		
MAX SUPPLY LINE TO FIRST OVERLAPPING NOZZLE	42		
OVERLAPPING NOZZLE APPLIANCE BRANCH	10		
DEDICATED NDZZLE APPLIANCE BRANCH	10		

FAN	TAC	07V		DEAS			FAN	INFORMA	TION		RETUR	N MA		TAL VED	GHT ,	50 14		RICAL I		MOCO	DU
ND	DKMAIL	1	F.	ARTUP-T	50-13-10	- " T-DDAS		ECON-A1	R	39-2	AIR C	AIR	CFM C	600 10	IS) E	500 1	50 3	460	26.94	304	D
N	ITES:	1	0	AR 102-1.1:	50-13-10	I-DUAS		ECUN-A	R 1	39-2	0	160	10 1	600 19	15 0.	500 1.:	50 3	460	26.8A	304	85.
1234567890111234	INVERTER INTEGRAT REFRIGER EC MOTOF ELECTRON SUCTION FACTORY 81% EFFI SUPPLY FULLY M HAIL GU FACTORY DOWN DI	RIVE ED M ATIDA CON IC E LINE COM RIDR CIENT CFM DDUL ARD F INST SCHA	PLEN PLEN DNITDF N PRES IDENSI XPANS ACCUM ISSID TAKE, JUAL- T FURM MONITO ATING FDR CO TALLEI RGE/N	UN BLOW RING VIA SSURE MO NG FANS IDN VALV MULATOR WING WITH EVAP AN WALL CO VACE, WI DRING INT HOT GAS DNDENSIN D COMPRE D RETURM	ER. BEL CELLUL NITORINO /E. TXV H 5 YEA D DISCH NSTRUCT IH MODUI CEGRAL REHEAT S COIL SSOR SO	INTEGR T DRIV AR CON 5 ON H 7 NOT R PART ARGE T ION W/ ATING TO UNIT UND BL	ACCEP S WAI EMPER R-13 INDUC WITH ANKE	LOVERS DN BY M ND LOW TABLE RRANTY, RRANTY, RATURE S INSULA CER TO M H CFM ME	25 YEA ENSURS 25 YEA ENSURS TIDN-MI MAINTAIN CASUREN	R VAR COISC NIMUM CONS MENT I	RANTY CHARGE 20GA STANT NCLUDE	DN STA SYSTEM DN STA SENSD EXTERIC COMBUS D THRE	INCLUI AINLESS R TO B R V/ 1 TION EF	ED THRDU STEEL H E FACTOR 14GA BASE FICIENCY GITAL INT	GH DIGI EAT EX MOUNT ACRESS ERFACE	CHANGE ED VI	nterfac R Thin Un Ig Rangi	E (17) E. 64 TI	URNDOW	N WITH	NG
FAN FAN UNIT	OPTIO. TAG	NS	QTY						DES	CRIPT	ION						1				
ND		-	1	INLET PR	ESSURE	GAUGE	, 0-35	5*			oren 971) 2011 -										
		ŀ	1	TOTAL C	PRESSU	URE GA	UGE, (0 TO 10'	WC, 1	FURNA	CE						-				
		F	1	INTAKE F	IRESTAT	SET	135	5*F	_								-				
		þ	1	DISCHARO	E FIRES	TAT SE	т та	240*F									1				
		ŀ	1	SHIP LOD SINGLE F	ISE GAS	STRAIN	AL CL	A*	N FOR	RTU, 7	50VA	RANSFE	IRMER L	JSED. IF A	NON-I	CV	-				
			1	PREWIRE BE SELEC	CONTRO	LS THI	S UNI	T, THE N VIDE SUP	28, #47	ARTER	IN PF	EVIRE	WIRE D	IPTION MUS	ST						
		F	1	CASLINK	BUILDIN	G MONI	TORIN	G SYSTEM	4 - INT	ERNET	DR CE	LLULAR	CONNE	CTION RE	UIRED		-				
		È	1	2' MERV	13 FILT	ERS FI	R RT	UZ (QTY.	4)								1				
		ł	1	DVERHEA	T STAT	.KS FD	n KTU	E WIY.	42								1				
			1	10 TON M	DDULATI	NG COD	ENSIN	OPTION, 5 FANS	460/48	0V. R4	10A RE	FRIGER	ANT, V	ARIABLE S	PEED						
1	DKMAU	-1	1	10 TON M	DULATI	NG REF	AKE C	ONTROL	SPACE	DEWP	DINT C	ONTROL	- R41	DA							
		Ē	1	RTU2 CU	RB DUCT	HANGE	R			104 -		SUDDI	ED BY	THERE			1				
		Ŀ	1	CLOGGED	FILTER	SWITC	H - N	DTIFICAT	IDN DN	HMI	ALARA	SUFFLI	ED BI	UTHERS			1				
			1	RTU2 CDI INCLUDES	RECEPT	CE DUT	COVE	GFCD, 15 R AND J	5 AMP - BDX	REQU	IRES S	EPARAT	E 120V	CONNECT	ON.						
		F	1	RTUVZHO	65 CDMP	RESSOR	I SOU	ND BLANK	ET 230	/460/	575V ·	FACTO	IRY INS	TALLED			-				
		ļ	1	RTU2 ND	RETURN	- 1007	AD 3	LITETTY /		-							1				
		Ŀ	1	DCCUPIEI	E TEMPERATURE AND HUMIDITY SPACE SENSUR IED SCHEDULING MUNITED VFD CONFIGURED FOR DCV REACTUR MOUNTED IN FAN												1				
		ŀ	1	UNIT MOL	MELNIED VFD CONFIGURED FOR DCV REACTOR MOUNTED IN FAN C FIRE INPUT											-					
		F	1	24VAC F	IRE INPL	IT	0.7.0				17105	-	DTD 14			WOTE	1				
			1	MONITORI PARTS V	NG AND	CAPTIN	ADDI	SERVIC	E CONT	RACT,	25 YE	AR STA	INLESS	STEEL FU	RNACE	MUTE					
		ŀ	1	EXTERIOR	GAS CO	INNECT	ION P	ROVIDED	BY FAC	TORY	WITH	DUICK S	EAL AN	D ANTI-R	TATION		1				
	+		1	GREASE 1	BOX												1				
2	DKH-1	EF	1	FAN BASE	ING PACH	AGE -	PWM	U/DR30/3 SIGNAL	FROM E	- INST CPMD3	PREVI	AT PLA	CD MD	TOR GREAS	RUTAT	S IDN	-				
	-	-	1	2 YEAR	PARTS W	ARRAN	ſΥ										1				
3	DKH-2	EF	1	FAN BASE	E CERAM	IC SEA	L - D	U/DR30/	33HFA ·	- INST	ALLED	AT PLA	NT - F	OR GREAS	E DUCT	S	1				
		~ -	1	2 YEAR	NG PACH	AGE -	PWM	SIGNAL	FROM E	CPMD3	PREVI	RE (TEI	.CO MD	TER), COW	ROTAT	IDN	-				
		-	1	GREASE		IC SEA	- 1	11/0230/	33454	- INST			NT - 1	TR GREAS		2	-				
4	DKH-3	EF	1	ECM WIR	ING PACH	AGE -	PWM	SIGNAL	FROM E	CPMD3	PREVI	RE (TEI	CD MD	TOR), CCW	RUTAT	IDN	1				
	1	+	1	GREASE	PARTS W	ARRAN	Y														
5	DKH-4	EF	1	FAN BASE	CERAM	AGE -	PWM	U/DR30/	33HFA -	- INST	PREVI	AT PLA	NT - F	TOR GREAS	E DUCT	S IDN	-				
0.000		t	1	2 YEAR	PARTS W	ARRAN	ſΥ										1				
FAN	ACCES	SOR	IES			<u> </u>					- 1										
FAN	TAG			LXHAUS	-			SUPI	-LT	1											
NO			CUP	DAMPER	MOUNT	DISCH	ARGE	DAMPER	DAMP	ER	MOUNT										
3	DKH-1 DKH-2	EF	YES		-					-											
4	DKH-3	EF	YES	-	-					=	_										
UR	B ASSE	MBI	LIES	1	1	-															
	DN FAN	Ţ	AG		WEIGHT	6		ITEM							SIZE						
1	# 1	DKM	IAU-1		111 LBS	1		CURB	49	.500'V	X 75.	000°L X	20.000*	H 1.000	2.000 P	ITCH	ALONG	WIDTH,	RIGHT	INSULA	TED.
5	# 2	DKH	-1 EF		31 LBS	9		CURB	19. H	500'W	X 19.5	00'L X	20.000*	H 1.000-1	2.000 P	TCH /	ALONG L	ENGTH,	RIGHT	VENTE	D
3	# 3	DKH	-2 EF		31 LBS	8.		CURB	19. H	500'V INGED	X 19.5	00"L X	20.0001	H 1.000-1	2.000 P	TCH (ALONG L	ENGTH,	RIGHT	VENTE	D
4	# 4	DKH	-3 EF		31 LBS	8		CURB	19. H	500"W	X 19.5	00°L X	20.000*	H 1.000-1	2.000 P	TCH	ALONG L	ENGTH,	RIGHT	VENTE	D
5	# 5	DKH	-4 EF		31 LBS	8		CURB	19	500"W	X 19.5	00"L X	20.000*	H 1.000+1	2.000 P	TCH (ALONG L	ENGTH,	RIGHT	VENTE	D
		_		_		HMI SC	HEDUL	E						1							
UNI	T NUMBER			HMI #		HM	LDC	ATION	TEMP	AVERA	GING	ADD	BUS	1							
F	AN #1	HM	HMI # HMI LDC/ MI #1 - UNIT HMI # 1 MDUNTED 7					N UNIT	NDT	AVERA	GED	5	5	1							
F	AN #1	HI HI HI HI HI MDUNTED I #1 HMI #2 SPACE HMI #1 MDUNTED							AV	ERAGE	D	5	6								
exu	AUST	MAN	INF	RMATT	ON -	JOP#	6894	8813													
FAN	<u>XHAUST FAN INFORMATION - JOB#6898</u> Fan INIT TAG QTY FAN UNIT MUTEL #						5836	MANUFA	CTURER	CF	м	ESP	RPM	MOTOR	HP	BHP	PHASE	VOLT	FLA	DISCH	IARGE
ND	IT TAG QTY FAN UNIT MODEL # M						FOR	-AIP	40		0.500	1109	TEAD-ECH	0.333	0.0840	1	202	25	VELC	FPH	
3	DKH-2 E	F 1			EADU33	1		ECON	I-AIR	40	0	0.500	1108	TEAD-ECH	0.333	0.0840	1	208	2.5	198	FPM
4	DKH-3 E	F 1			EADU33	e.		ECON	-AIR	40	0	0.500	1108	TEAD-ECH	0.333	0.0840	1	208	2.5	198	FPM
5	DKH-4 E	F 1			EADU33	1		ECON	-AIR	40	0	0.500	1108	TEAD-ECH	0.333	0.0840	1	208	2.5	198	FPM

KITCHEN EQUIPMENT DETAILS - FACS DOMESTIC KITCHEN 4

KITCHEN EQUIPMENT DETAILS - FACS DOMESTIC KITCHEN 6

NIT	TAG	PACKAGE #		SWITCH	IES	DETIDN	FA	NS CONTROLL	ED			
	THU .	THORAGE #	EBOHTIBIT	LOCATION	QUANTITY		FAN TAG	TYPE	\$	HP	VOL	FL
							DKMAU-1	SUPPLY	3	1.500	460	2.0
					1 LIGHT		DKH-1 EF	EXHAUST	1	0.333	208	2.5
1	DKH-1 ECP	SC-341110MA	WALL UTILITY CABINET LEFT	SHIP LODSE W/		SMART CONTROLS THERMOSTATIC CONTROL	DKH-2 EF	EXHAUST	1	0.333	208	2.5
					1 FAN		DKH-3 EF	EXHAUST	1	0.333	208	2.5
							DKH-4 EF	EXHAUST	1	0.333	208	2.5

Chad Stewart & Associates, Inc. 9720 Village Circle Lakeland, TN 38002 Phone 901-260-7850 CSAengineeringinc.com

KITCHEN EQUIPMENT DETAILS - FACS DOMESTIC KITCHEN 7

KITCHEN EQUIPMENT DETAILS - FACS DOMESTIC KITCHEN 8

ARCH 1010 676 Marshall Ave. Suite 101 Memphis, TN 38103 901.497.6563 www.arch1010.com ©2024 ARCH 1010 ALL RIGHTS RESERVED POLK **STANLEY** WILCOX 801 South Spring Street Little Rock, AR 72201 501.378.0878 office www.polkstanleywilcox.com CONSULTANT/SEAL ARKANSAS * * * REGISTERED PRODUSSTOWALL EXGINEER No.15519 $P_F = 10/17/2024$ E. WHI PROJECT NAME WSD - NEW SENIOR HIGH SCHOOL LOCATION 800 E JACKSON AVE WYNNE AR 72396 PROJECT NUMBER DEVELOPER/OWNER WYNNE SCHOOL DISTRICT INFORMATION CHAD STEWART & ASSOCIATES, INC #1206 SHEET TITLE KITCHEN EQUIPMENT DETAILS - FACS LAB DATE 17.10.24 SHEET NUMBER M410

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									AI											AO									В	I												BC	C					
EQUIPMENT	BUILDING STATIC PRESSURE	MIXED AIR TEMP	RETURN AIR HUMIDITY	RETURN AIR TEMP	SUPPLY AIR STATIC PRESSURE	SUPPLY AIR TEMP	AIRFLOW	DISCHARGE AIR TEMP	ZONE HUMIDITY	ZONE SETPOINT ADJUST	ZONE TEMP	ENTHALPY WHEEL DISCHARGE AIR HUMIDITY	ENTHALPY WHEEL DISCHARGE AIR TEMP	EXHAUST AIR TEMP	FILTER DIFFERENTIAL PRESSURE	OUTSIDE AIR HUMIDITY	OUTSIDE AIR TEMP	MIXED AIR DAMPERS	RETURN FAN VFD	SUPPLY FAN VFD	ZONE DAMPER	SUPPLY AIR STATIC PRESSURE BYPASS DAMPER	FREEZESTAT	HIGH STATIC SHUTDOWN	RETURN AIR SMOKE DETECTOR	RETURN FAN STATUS	RETURN FAN VFD FAULT	SUPPLY AIR SMOKE DETECTOR	SUPPLY FAN STATUS	SUPPLY FAN VFD FAULT	ZONE OVERIDE	FAN STATUS	ENTRACET WREEL STATUS EXHALIST FAN STATUS		OUTSIDE AIR DAMPER STATUS	SMOKE DETECTOR	COOLING STAGE 1	COOLING STAGE 2	HEATING STAGE 1	HEATING STAGE 2	RETURN FAN START/STOP	SUPPLY FAN START/STOP	FAN START/STOP	ENTHALPY WHEEL BYPASS DAMPERS	ENTHALPY WHEEL PREHEATER	ENTHALPY WHEEL START/STOP	EXHAUST FAN START/STOP	OUTSIDE AIR DAMPER
VAV-RTU	lacksquare																																															
VAV-TERMINAL UNIT								lacksquare	\bullet																						\bullet																	
ROOF MOUNTED EF																															(
DOAS W/ ERV				\bullet												lacksquare															\bullet					\bullet											•	
RTU																						\bullet				\bullet			\bullet		\bullet								\bullet									

1 DDC CONTROLS POINTS LIST N.T.S.

3 CONTROL SCHEMATIC - DOAS w/ ERV

AI - Zone Humidity

|| ⟨H⟩ ||-

1 SEQUENCE OF OPERATION - VAV RTU

Alarms shall be provided as follows: High Supply Air Temp: If the supply air temperature is greater than 120°F (adj.). Low Supply Air Temp: If the supply air temperature is less than 45°F (adj.).

Supply Air Temperature: The controller shall monitor the supply air temperature

Low Return Air Temp: If the return air temperature is less than 45°F (adj.).

Alarms shall be provided as follows: High Return Air Temp: If the return air temperature is greater than 90°F (adj.).

The controller shall monitor the return air temperature and use as required for setpoint control or economizer control (if present).

Return Air Temperature:

High Return Air Humidity: If the return air humidity is greater than 70% (adj.). Low Return Air Humidity: If the return air humidity is less than 35% (adj.).

Alarms shall be provided as follows:

Return Air Humidity: The controller shall monitor the return air humidity and use as required for economizer control (if present) or humidity control (if present).

High Mixed Air Temp: If the mixed air temperature is greater than 90°F (adj.). Low Mixed Air Temp: If the mixed air temperature is less than 45°F (adj.).

Alarms shall be provided as follows:

Mixed Air Temperature: The controller shall monitor the mixed air temperature and use as required for economizer control (if present) or preheating control (if present).

The controller shall measure the return air humidity and override the cooling sequence to maintain return air humidity at or below 60% rh (adj.). Dehumidification shall be enabled whenever the supply fan status is on.

The outside air dampers shall maintain a minimum adjustable position during building occupied hours and be closed during unoccupied hours. Dehumidification:

Minimum Outside Air Ventilation - Fixed Percentage:

The outside and exhaust air dampers shall close and the return air damper shall open when the unit is off. If Optimal Start Up is available the mixed air damper shall operate as described in the occupied mode except that the outside air damper shall modulate to fully closed.

OR the freezestat (if present) is on. OR on loss of supply fan status.

Mixed air temperature drops from 40°F to 35°F (adj.).

The economizer shall close whenever:

Outside air temperature is less than 65°F (adj.). • AND the outside air temperature is less than the return air temperature. AND the supply fan status is on.

The economizer shall be enabled whenever:

The controller shall measure the mixed air temperature and modulate the economizer dampers in sequence to maintain a setpoint 2°F (adj.) less than the supply air temperature setpoint. The outside air dampers shall maintain a minimum adjustable position of 20% (adj.) open whenever occupied.

Low Supply Air Temp: If the supply air temperature is 5°F (adj.) less than setpoint. Economizer

AND the supply fan status is on. Alarms shall be provided as follows:

The heating stages shall run for freeze protection whenever: Supply air temperature drops from 40°F to 35°F (adj.).

AND the cooling (if present) is not active.

Outside air temperature is less than 65°F (adj.). AND the supply fan status is on.

The heating shall be enabled whenever:

Gas Heating Stages: The controller shall measure the supply air temperature and stage the heating to maintain its heating setpoint. To prevent short cycling, there shall be a user definable (adj.) delay between stages, and each stage shall have a user definable (adj.) minimum runtime.

High Supply Air Temp: If the supply air temperature is 5°F (adj.) greater than setpoint.

AND the heating (if present) is not active. Alarms shall be provided as follows:

AND the economizer (if present) is disabled or fully open. AND the supply fan status is on.

Outside air temperature is greater than 60°F (adj.).

The cooling shall be enabled whenever:

Cooling Stages: The controller shall measure the supply air temperature and stage the cooling to maintain its cooling setpoint. To prevent short cycling, there shall be a user definable (adj.) delay between stages, and each stage shall have a user definable (adj.) minimum runtime.

If the return air temperature drops below 68°F (adj.), then the supply air temperature setpoint shall be reset for heating as follows: As outside air temperature drops from 50°F (adj.) to 20°F (adj.). the supply air temperature setpoint shall reset upwards from 75°F (adj.) to95°F (adj.)

As outside air temperature rises from 50°F (adj.) to 85°F (adj.) the supply air temperature setpoint shall reset downwards from 65°F (adj.) to 55°F (adj.).

The supply air temperature setpoint shall reset for cooling as follows:

temperature.

The controller shall monitor the supply air temperature and shall maintain a supply air temperature setpoint reset based on outside air

Supply Air Temperature Setpoint - Outside Air Reset:

High Building Static Pressure: If the building air static pressure is 25% (adj.) greater than setpoint. Low Building Static Pressure: If the building air static pressure is 25% (adj.) less than setpoint.

Alarms shall be provided as follows:

The controller shall measure building static pressure and modulate the return fan VFD speed to maintain a building static pressure setpoint of 0.05in H2O (adj.). The return fan VFD speed shall not drop below 20% (adj.).

Building Static Pressure Control:

Return Fan Runtime Exceeded: Status runtime exceeds a user definable limit (adj.). Return Fan VFD Fault.

Supply Fan Runtime Exceeded: Status runtime exceeds a user definable limit (adj.).

The supply fan shall run anytime the unit is commanded to run, unless shutdown on safeties. To prevent short cycling, the supply fan

The controller shall measure duct static pressure and shall modulate the supply fan VFD speed to maintain a duct static pressure setpoint of

High Supply Air Static Pressure: If the supply air static pressure is 25% (adj.) greater than setpoint.

Alarms shall be provided as follows: Return Fan Failure: Commanded on, but the status is off. Return Fan in Hand: Commanded off, but the status is on.

The return fan shall run whenever the supply fan runs.

1.5in H2O (adj.). The supply fan VFD speed shall not drop below 30% (adj.).

Supply Fan VFD Fault.

Return Fan:

Run Conditions - Scheduled:

Return Air Smoke Detection:

Supply Air Smoke Detection:

Alarms shall be provided as follows:

Supply Air Duct Static Pressure Control:

Alarms shall be provided as follows:

Freeze Protection:

High Static Shutdown:

The unit shall run based upon an operator adjustable schedule.

The unit shall shut down and generate an alarm upon receiving a freezestat status.

The unit shall shut down and generate an alarm upon receiving an high static shutdown signal.

The unit shall shut down and generate an alarm upon receiving a return air smoke detector status.

The unit shall shut down and generate an alarm upon receiving a supply air smoke detector status.

Supply Fan Failure: Commanded on, but the status is off.

Supply Fan in Hand: Commanded off, but the status is on.

Low Supply Air Static Pressure: If the supply air static pressure is 25% (adj.) less than setpoint.

shall have a user definable (adj.) minimum runtime.

3 SEQUENCE OF OPERATION - ROOF MOUNTED EF

The controller shall monitor the fan status. Alarms shall be provided as follows: Fan Failure: Commanded on, but the status is off. Fan in Hand: Commanded off, but the status is on. Fan Runtime Exceeded: Fan status runtime exceeds a user definable limit (adj.)

The fan shall have a user definable (adj.) minimum runtime.

Run Conditions - Continuous: The fan shall run continuously.

Fan Status:

2 SEQUENCE OF OPERATION - VAV TERMINAL UNIT

Alarms shall be provided as follows: • High Zone Humidity: If the zone humidity is greater than 70% (adj.). Low Zone Humidity: If the zone humidity is less than 35% (adj.).

Alarms shall be provided as follows: High Discharge Air Temp: If the discharge air temperature is greater than 120°F (adj.). Low Discharge Air Temp: If the discharge air temperature is less than 40°F (adj.).

Discharge Air Temperature: The controller shall monitor the discharge air temperature.

The zone damper shall modulate to a constant unoccupied airflow (adj.) distributed into the zone. When zone temperature is less than its heating setpoint, the controller shall enable heating to maintain the zone temperature at its unoccupied heating setpoint.

The zone damper shall modulate to maintain a constant occupied airflow (adj.) distributed into the zone. When zone temperature is less than its heating setpoint, the controller shall enable heating to maintain the zone temperature at its heating

Constant Volume Terminal Unit - Flow Control: The unit shall maintain constant airflow through one of the following:

Zone Unoccupied Override: A timed local override control shall allow an occupant to override the schedule and place the unit into an occupied mode for an adjustable period of time. At the expiration of this time, control of the unit shall automatically return to the schedule.

The unit shall use an optimal start algorithm for morning start-up. This algorithm shall minimize the unoccupied warm-up or cool-down period while still achieving comfort conditions by the start of scheduled occupied period.

The occupant shall be able to adjust the zone temperature heating and cooling setpoints

be individually configurable for each zone. The zone setpoints shall automatically return to their previous settings when the facility power consumption drops below the

thresholds.

Occupied:

Unoccupied:

Zone Humidity:

setpoint.

The controller shall monitor the zone humidity.

Zone Setpoint Adjust:

at the zone sensor.

Zone Optimal Start:

Low Zone Temp: If the zone temperature is less than the heating setpoint by a user definable amount (adj.). Demand Limiting - Zone Setpoint Optimization: To lower power consumption, the zone setpoints shall automatically relax when the facility power consumption exceeds definable thresholds. The amount of relaxation shall

Alarms shall be provided as follows: High Zone Temp: If the zone temperature is greater than the cooling setpoint by a user definable amount (adj.).

• A 70°F (adj.) heating setpoint. Unoccupied Mode (night setback): The unit shall maintain A 85°F (adj.) cooling setpoint. • A 55°F (adj.) heating setpoint.

Occupied Mode: The unit shall maintain A 75°F (adj.) cooling setpoint

Run Conditions - Scheduled: The unit shall run according to a user definable time schedule in the following modes:

Run Conditions - Scheduled: The unit shall run according to a user definable time schedule in the following modes: Occupied Mode: The unit shall maintain

A 75°F (adj.) cooling setpoint

• A 70°F (adj.) heating setpoint.

• A 85°F (adj.) cooling setpoint. A 55°F (adj.) heating setpoint.

Alarms shall be provided as follows:

High Zone Temp: If the zone temperature is greater than the cooling setpoint by a user definable amount (adj.). Low Zone Temp: If the zone temperature is less than the heating setpoint by a user definable amount (adj.).

A timed local override control shall allow an occupant to override the schedule and place the unit into an occupied mode for an adjustable

Demand Limiting - Zone Setpoint Optimization:

settings when the facility power consumption drops below the thresholds.

The amount of relaxation shall be individually configurable for each zone. The zone setpoints shall automatically return to their previous

To lower power consumption, the zone setpoints shall automatically relax when the facility power consumption exceeds definable thresholds.

Supply Fan Failure: Commanded on, but the status is off.

Supply Fan in Hand: Commanded off, but the status is on.

Return Fan Failure: Commanded on, but the status is off.

Return Fan in Hand: Commanded off, but the status is on.

Outside air temperature is greater than 60°F (adj.).

Outside air temperature is less than 65°F (adj.).

Outside air temperature is less than 65°F (adj.).

Mixed air temperature drops from 45°F to 40°F (adj.).

AND the outside air temperature is less than the return air temperature

AND the zone temperature is below heating setpoint.

AND the supply fan status is on.

AND the heating is not active.

AND the supply fan status is on.

AND the supply fan status is on.

OR on loss of supply fan status.

Minimum Outside Air Ventilation - Fixed Percentage:

Dehumidification shall be enabled whenever:

Alarms shall be provided as follows:

Alarms shall be provided as follows:

Alarms shall be provided as follows:

the supply fan status is on.

AND zone temperature is greater than the cooling setpoint.

Low Return Air Humidity: If the return air humidity is less than 35% (adj.).

OR the freezestat (if present) is on.

AND the cooling is not active.

AND the economizer (if present) is disabled or fully open.

AND the zone temperature is above cooling setpoint.

Unoccupied Mode (night setback): The unit shall maintain

Zone Setpoint Adjust:

Zone Optimal Start:

Freeze Protection:

Supply Fan:

position of 30% (adj.).

Return Fan:

Cooling Stages:

Gas Heating Stages:

Economizer

•

•

Dehumidification

Mixed Air Temperature

Return Air Humidity:

Return Air Temperature:

Zone Unoccupied Override:

Return Air Smoke Detection:

Supply Air Smoke Detection:

Alarms shall be provided as follows:

Alarms shall be provided as follows:

Alarms shall be provided as follows:

The cooling shall be enabled whenever:

The heating shall be enabled whenever:

The economizer shall be enabled whenever:

The economizer shall close whenever:

shall have a user definable (adj.) minimum runtime.

Static Pressure Relief - Bypass Damper Control:

The return fan shall run whenever the supply fan runs.

4 SEQUENCE OF OPERATION - RTU

High Return Air Temp: If the return air temperature is greater than 90°F (adj.). Low Return Air Temp: If the return air temperature is less than 45°F (adj.).

The controller shall monitor the return air temperature and use as required for economizer control (if present).

High Return Air Humidity: If the return air humidity is greater than 70% (adj.).

The controller shall monitor the return air humidity and use as required for economizer control (if present) or humidity control (if present)

High Mixed Air Temp: If the mixed air temperature is greater than 90°F (adj.). Low Mixed Air Temp: If the mixed air temperature is less than 45°F (adj.).

The controller shall monitor the mixed air temperature and use as required for economizer control (if present) or preheating control (if present).

During dehumidification, the heating shall modulate to maintain a setpoint 1°F (adj.) less than the zone cooling setpoint.

The controller shall measure the return air humidity and override the cooling sequence to maintain return air humidity at or below 60% rh

The outside air dampers shall maintain a minimum position (adj.) during building occupied hours and be closed during unoccupied hours.

The outside and exhaust air dampers shall close and the return air damper shall open when the unit is off. If Optimal Start Up is available, the mixed air damper shall operate as described in the occupied mode except that the outside air damper shall modulate to fully closed.

the zone cooling setpoint. The outside air dampers shall maintain a minimum adjustable position of 20% (adj.) open whenever occupied.

The controller shall measure the zone temperature and modulate the economizer dampers in sequence to maintain a setpoint 2°F less than

The controller shall measure the zone temperature and stage the heating to maintain its heating setpoint. To prevent short cycling, there shall be a user definable (adj.) delay between stages, and each stage shall have a user definable (adj.) minimum runtime.

The controller shall measure the zone temperature and stage the cooling to maintain its cooling setpoint. To prevent short cycling, there shall be a user definable (adj.) delay between stages, and each stage shall have a user definable (adj.) minimum runtime.

Return Fan Runtime Exceeded: Status runtime exceeds a user definable limit (adj.)

High Supply Air Static Pressure: If the supply air static pressure is 25% (adj.) greater than setpoint. Low Supply Air Static Pressure: If the supply air static pressure is 25% (adj.) less than setpoint.

The bypass damper control shall be enabled whenever the unit is operating. The controller shall measure duct static pressure and shall modulate the bypass damper to maintain a duct static pressure setpoint of 1.5in H2O (adj.). When enabled, the damper shall have a minimum

Supply Fan Runtime Exceeded: Status runtime exceeds a user definable limit (adj.).

The supply fan shall run anytime the unit is commanded to run, unless shutdown on safeties. To prevent short cycling, the supply fan

The unit shall shut down and generate an alarm upon receiving a supply air smoke detector status.

The unit shall shut down and generate an alarm upon receiving a return air smoke detector status.

period of time. At the expiration of this time, control of the unit shall automatically return to the schedule. The unit shall shut down and generate an alarm upon receiving a freezestat status.

The unit shall use an optimal start algorithm for morning start-up. This algorithm shall minimize the unoccupied warm-up or cool-down period while still achieving comfort conditions by the start of scheduled occupied period.

The occupant shall be able to adjust the zone temperature heating and cooling setpoints at the zone sensor.

5 SEQUENCE OF OPERATION - DOAS

High Zone Humidity: If the zone humidity is greater than 70% (adj.). Low Zone Humidity: If the zone humidity is less than 35% (adj.).

Alarms shall be provided as follows:

Zone Humidity: The controller shall monitor the zone humidity.

High Discharge Air Temp: If the discharge air temperature is greater than 120°F (adj.) Low Discharge Air Temp: If the discharge air temperature is less than 40°F (adj.).

Alarms shall be provided as follows:

Discharge Air Temperature: The controller shall monitor the discharge air temperature.

Alarms shall be provided as follows: Filter Change Required: Filter differential pressure exceeds a user definable limit (adj.).

The controller shall monitor the differential pressure across the filter.

AND the fan status is on. Filter Differential Pressure Monitor:

Outside air temperature is less than 65°F (adj.). AND the zone temperature is below heating setpoint.

The heating shall be enabled whenever:

Gas Heating Stages: The controller shall measure the zone temperature and stage the heating to maintain its heating setpoint. To prevent short cycling, there shall be a user definable (adj.) delay between stages, and each stage shall have a user definable (adj.) minimum runtime.

AND the zone temperature is above cooling setpoint. AND the fan status is on.

The cooling shall be enabled whenever: Outside air temperature is greater than 60°F (adj.).

Cooling Stages The controller shall measure the zone temperature and stage the cooling to maintain its cooling setpoint. To prevent short cycling, there shall be a user definable (adj.) delay between stages, and each stage shall have a user definable (adj.) minimum runtime.

Exhaust Fan in Hand: Commanded off, but the status is on. Exhaust Fan Runtime Exceeded: Status runtime exceeds a user definable limit (adj.).

Alarms shall be provided as follows: Exhaust Fan Failure: Commanded on, but the status is off.

Exhaust Fan: The exhaust fan shall run whenever the supply fan runs, unless shutdown on safeties.

Alarms shall be provided as follows: Supply Fan Failure: Commanded on, but the status is off. Supply Fan in Hand: Commanded off, but the status is on. Supply Fan Runtime Exceeded: Status runtime exceeds a user definable limit (adj.).

unless shutdown on safeties.

Supply Fan: The supply fan shall run anytime the unit is commanded to run. To prevent short cycling, the supply fan shall have a user definable (adj.) minimum runtime,

Enthalpy Wheel Runtime Exceeded: Status runtime exceeds a user definable limit (adj.).

Alarms shall be provided as follows: Enthalpy Wheel Rotation Failure: Commanded on, but the status is off. Enthalpy Wheel in Hand: Commanded off, but the status is on.

The bypass dampers shall open whenever the enthalpy wheel is disabled

Outside air temperature drops to within 2°F (adj.) of the enthalpy wheel discharge air dewpoint when outside air temperature is below 35° OR the exhaust air temperature drops below 25°F (adj.).

The enthalpy wheel shall run for 10sec (adj.) every 4hr (adj.) the unit runs. Frost Protection: The enthalpy wheel shall run for 10sec (adj.) every 600sec (adj.) whenever:

AND the supply fan is on. Periodic Self-Cleaning:

AND the outside air temperature is less than the return air temperature AND the zone temperature is below heating setpoint.

Heating Mode: The enthalpy wheel shall run for full heat recovery whenever: Outside air enthalpy is less than return air enthalpy

AND the supply fan is on.

- AND the unit discharge air drybulb does not drop below the enthalpy wheel supply air dewpoint AND the zone temperature is above cooling setpoint
- The enthalpy wheel shall run for partial cool recovery (hot dry days) whenever: The outside air humidity ratio is less than the return air humidity ratio AND the outside air temperature is greater than the return air temperature
- AND the supply fan is on.

The outside air enthalpy is greater than the return air enthalpy. AND the zone temperature is above cooling setpoint.

Cooling Mode: The enthalpy wheel shall run for full cool recovery (hot humid days) whenever:

Enthalpy Wheel - Constant Speed: The controller shall run the enthalpy wheel for energy recovery as follows

Outside Air Damper Failure: Commanded open, but the status is closed. Outside Air Damper in Hand: Commanded closed, but the status is open.

Alarms shall be provided as follows:

Outside Air Damper: The outside air damper shall open anytime the unit runs and shall close anytime the unit stops. The supply fan shall start only after the damper status has proven the damper is open. The outside air damper shall close 4sec (adj.) after the supply fan stops.

Smoke Detection: The unit shall shut down and generate an alarm upon receiving a smoke detector status.

The unit shall shut down and generate an alarm upon receiving a freezestat status.

Freeze Protection

expiration of this time, control of the unit shall automatically return to the schedule.

Zone Unoccupied Override: A timed local override control shall allow an occupant to override the schedule and place the unit into an occupied mode for an adjustable period of time. At the

achieving comfort conditions by the start of scheduled occupied period.

The occupant shall be able to adjust the zone temperature heating and cooling setpoints at the zone sensor. Zone Optimal Start: The unit shall use an optimal start algorithm for morning start-up. This algorithm shall minimize the unoccupied warm-up or cool-down period while still

Zone Setpoint Adjust:

relaxation shall be individually configurable for each zone. The zone setpoints shall automatically return to their previous settings when the facility power consumption drops below the thresholds.

Low Zone Temp: If the zone temperature is less than the heating setpoint by a user definable amount (adj.). Demand Limiting - Zone Setpoint Optimization: To lower power consumption, the zone setpoints shall automatically relax when the facility power consumption exceeds definable thresholds. The amount of

Alarms shall be provided as follows: High Zone Temp: If the zone temperature is greater than the cooling setpoint by a user definable amount (adj.).

A 85°F (adj.) cooling setpoint. A 55°F (adj.) heating setpoint.

Unoccupied Mode (night setback): The unit shall maintain

• A 70°F (adj.) heating setpoint.

Occupied Mode: The unit shall maintain • A 75°F (adj.) cooling setpoint

Run Conditions - Scheduled: The unit shall run according to a user definable time schedule in the following modes:

PROJECT NAME WSD - NEW SENIOR HIGH SCHOOL

LOCATION 800 E JACKSON AVE WYNNE AR 72396 PROJECT NUMBER

DEVELOPER/OWNER WYNNE SCHOOL DISTRICT

INFORMATION

CHAD STEWART & ASSOCIATES, INC #1206

SHEET TITLE CONTROLS -MECHANICAL

DATE 17.10.24

SHEET NUMBER

M502

															OUIS	SIDE A	IR ROO		JNIIS	WIIH	IENER	KGY RE	COAF	=RY														
		EFFICIENCY							ENE	RGY RECOV	ERY WHEEL DA	TA							FAN DATA			DX COO	LING DATA		HOT G REHE	AS AT	GAS H	EATING DATA		COMPRESSOR D	ATA	ELECTRICAL D	DATA	UNIT DA	٩ΤΑ	BA	SIS OF DESIGN	
			OUTSIE	DE AIR E	XHAUST AIR		:	SUMMER	DESIGN CO	NDITIONS				WINTER DES	GN CONDI	TIONS		SUPPLY FAN	(S) RETUR	RN / EXHAU FAN(S)	JST CO CAF	OLING PACITY	EAT (°F)	LAT (°F)			CITY (MBH)							DIMENSIONS (IN	1)			
				PD	PD	OUTSIDE	AIR (°F) I	RETURN	AIR (°F) WH	HEEL LAT (°F) RECOVERE CAPACITY	OUTSIDE	AIR (°F)	RETURN AIR	°F) WHEE	L LAT (°F)	RECOVERED CAPACITY				TOTAL	SENSIBLE			CAPACIT	/ DB		TEMP GAS RISE PRESS	TURN 5. DOWN						WEIGH			
MARK	DESCRIPTION	IEER ISMRE2	CFM ((IN-WC) C	FM (IN-WC) DB	WB	DB	WB D	DB WB	(MBH)	DB	WB	DB W	B DB	WB	(MBH)	CFM ESP	HP CFM	ESP HF	P (MBH)	(MBH)	DB WB	DB WE	6 (MBH)	(°F) INPU	T OUTPUT	(°F) (IN-WC) RATIO QTY	TYPE	REFR.	V/PH/HZ MCA MO	CP FLA	L W H	(LBS)	MFR	MODEL	REMARKS
DOAS-B-1	HIGH OUTSIDE AIR ROOFTOP UNIT WITH ERV	14.3	3000	1.0 25	500 1.0	96.0	80.2	75	62.3 79	9.6 67.5	160.7	16.8	13.8	70.0 54	3 58.8	47.5	135.4	12500 1.0 2	2x5 2500	1.0 2x	x5 355.4	290.1	76.1 63.7	53.9 53.	256.1	73.0 600	486	36 6	16:1 2	INVERTER SCROL	LL R-454B	460/3/60 93.5 110	0.0 86.5	247.9 96.0 101	.3 8229	GREENHECK	RVE-150-74C-30I-O-G	2 SEE NOTES.
DOAS-B-2	HIGH OUTSIDE AIR ROOFTOP UNIT WITH ERV	14.3	3000	1.0 25	500 1.0	96.0	80.2	75	62.3 79	9.6 67.5	160.7	16.8	13.8	70.0 54	3 58.8	47.5	135.4	12500 1.0 2	2x5 2500	1.0 2x	x5 355.4	290.1	76.1 63.7	53.9 53.	256.1	73.0 600	486	36 6	16:1 2	INVERTER SCROL	LL R-454B	460/3/60 93.5 110	0.0 86.5	247.9 96.0 101	.3 8229	GREENHECK	RVE-150-74C-30I-O-G	2 SEE NOTES.
DOAS-C-1	HIGH OUTSIDE AIR UNIT	17	1500	1.0 7	50 1.0	96.0	80.2	75	62.3 N	/A N/A	N/A	16.8	13.8	70.0 54	3 N/A	N/A	N/A	4500 1.0	5 3750	1.0 1	1 253.4	148.4	80.0 67.8	48.2 48.	1 187.9	87.7 300	243	50 6	12:1 2	INVERTER SCROL	LL R-454B	460/3/60 52.6 60.	0.0 47.9	190.3 98.3 73.	.1 4395	GREENHECK	RV-45-20I-J-G2	SEE NOTES.
DOAS-C-2	HIGH OUTSIDE AIR UNIT	17	1500	1.0 7	50 1.0	96.0	80.2	75	62.3 N	/A N/A	N/A	16.8	13.8	70.0 54	3 N/A	N/A	N/A	4500 1.0	5 3750	1.0 1	1 253.4	148.4	80.0 67.8	48.2 48.	1 187.9	87.7 300	243	50 6	12:1 2	INVERTER SCROL	LL R-454B	460/3/60 52.6 60.	0.0 47.9	190.3 98.3 73.	.1 4395	GREENHECK	RV-45-20I-J-G2	SEE NOTES.
DOAS-C-3	HIGH OUTSIDE AIR UNIT	17	1500	1.0 7	50 1.0	96.0	80.2	75	62.3 N	I/A N/A	N/A	16.8	13.8	70.0 54	3 N/A	N/A	N/A	4500 1.0	5 3750	1.0 1	1 253.4	148.4	80.0 67.8	48.2 48.	1 187.9	87.7 300	243	50 6	12:1 2	INVERTER SCROL	LL R-454B	460/3/60 52.6 60.	0.0 47.9	190.3 98.3 73.	.1 4395	GREENHECK	RV-45-20I-J-G2	SEE NOTES.
DOAS-C-4	HIGH OUTSIDE AIR UNIT	17	1500	1.0 7	50 1.0	96.0	80.2	75	62.3 N	I/A N/A	N/A	16.8	13.8	70.0 54	3 N/A	N/A	N/A	4500 1.0	5 3750	1.0 1	1 253.4	148.4	80.0 67.8	48.2 48.	1 187.9	87.7 300	243	50 6	12:1 2	INVERTER SCROL	LL R-454B	460/3/60 52.6 60.	0.0 47.9	190.3 98.3 73.	.1 4395	GREENHECK	RV-45-20I-J-G2	SEE NOTES.
DOAS-C-5	100% OUTSIDE AIR ROOFTOP UNIT WITH ERV	5	3200	1.0 27	790 1.0	96.0	80.2	75	62.5 89	9.5 74.7	129.6	17.0	13.9	72.0 55	8 34.2	31.0	108.5	3200 1.0	3 2790	1.0 2	2 189.4	103.5	83.2 71.0	51.8 51.	6 104.1	82.7 200	162	47 6	4:1 1	INVERTER SCROL	LL R-454B	460/3/60 49.2 60.	0.0 42.2	149.5 52.5 60.	2 3324	GREENHECK	RVE-40-41D-15I-G-A2	SEE NOTES.

NOTES: 1. EQUIVALENT EQUIPMENT FROM OTHER MANUFACTURERS INCLUDING AAON, CARRIER, DAIKIN, TRANE, AND VALENT SHALL BE ACCEPTABLE.

						V	/ARI/	ABLE	AIR V	OLU	ME R	00	FTO	P UN	IT SC	HEDL	JLE							
			EFFIC	IENCY	SU	PPLY FAN	N	DX COC	LING DATA	@ 95°F A	MBIENT		HEAT		۹ (ELECTR	ICAL DA	TA		BASIS OF	DESIGN		
		NOMINAL				MIN.	ESP	EAT °F	SENSIBLE	TOTAL			INPUT	OUTPUT		SUPPL	Y FAN(S)					MODEL	WEIGHT	
MARK	AREA SERVED	TONS	IEER	EER	AIRFLOW	OSA	(IN-WC)	Db Wb	MBH	MBH	STAGES	TYPE	MBH	MBH	STAGES	QTY	HP	MCA	MOCP	V/PH/HZ	MFR.	NO.	(LBS)	REMARKS
AREA A SO	UTH											•	·											
RTU-AS-1	1ST FLOOR	40	15.3	11.2	16,000	2,500	2.5	75.6 64.5	377.7	503.0	4	N/A				2	10	110.5	125	460/3/60	TRANE	RA040	7,558	SEE NOTES.
RTU-AS-2	2ND FLOOR	60	16.2	11.3	21,500	4,000	2.5	76.3 65.0	530.8	731.0	4	N/A				2	15	156.0	175	460/3/60	TRANE	RA060	9,383	SEE NOTES.
RTU-AS-3	3RD FLOOR	60	16.2	11.3	21,500	4,000	2.5	76.3 65.0	530.8	731.0	4	N/A				2	15	156.0	175	460/3/60	TRANE	RA060	9,383	SEE NOTES.
			•											•										
			4.5		0.500	1 = 0 0	0.5		100.0	075.0					T T	2	-			400/0/00		B 4 6 6 6	= 0.40	
RIU-B-1	1ST FLOOR	20	15	11.4	9500	1500	2.5	15.6 64.5	192.2	275.9	3	N/A				2	3	63.1	80	460/3/60	IRANE	RA020	5,840	SEE NOTES.
RTU-B-2	2ND FLOOR	30	15.8	11.1	11000	1750	2.5	75.6 64.5	244.0	357.6	3	N/A				2	5	82.0	100	460/3/60	TRANE	RA030	5,840	SEE NOTES.

CONSTANT VOLUME ROOFTOP UNIT SCHEDULE

				EFFICIEN	CY	SUF	PPLY FAN		DX COOL	ING DATA	@ 95°F AI	MBIENT		HEAT	ING DATA	N I	ELE	CTRIC	AL DATA		BASIS O	DESIGN		
		NOMINAL					MIN.	ESP	EAT °F	SENSIBLE	TOTAL			INPUT	OUTPUT		SUPPLY					MODEL	WEIGHT	
MARK	AREA SERVED	TONS	SEER	IEER	EER	AIRFLOW	OSA	(IN-WC)	Db Wb	MBH	MBH	STAGES	TYPE	MBH	MBH	STAGES	FAN BHP	MCA	MOCP	V/PH/HZ	MFR.	NO.	(LBS)	REMARKS
AREA A NC	RTH																							
RTU-AN-1	AGRI	25	14		10.8	6000		0.5	74.88 64	133.86	180.19		GAS	250	202.5			41	50	460/3/60	TRANE	YSJ180	2298	SEE NOTES.
RTU-AN-2	EAST LAB	5	14.6		11	4000		0.5	74.59 63.8	87.98	118.42		GAS	150	121.5			29	40	460/3/60	TRANE	YSJ120	1147	SEE NOTES.
RTU-AN-3	LOBBY	35		14.7	10.3	14000		0.5	72.92 63.23	263.6	367.5		GAS	600	486			84	100	460/3/60	TRANE	YCD420	5392	SEE NOTES.
RTU-AN-4	CAFETERIA	25	13		9.8	10000		0.5	75.91 64.72	210.26	272.55		GAS	400	324			60	80	460/3/60	TRANE	YSJ300	2481	SEE NOTES.
RTU-AN-5	CAFETERIA	25	13		9.8	10000		0.5	75.91 64.72	210.26	272.55		GAS	400	324			60	80	460/3/60	TRANE	YSJ300	2481	SEE NOTES.
RTU-AN-6	KITCHEN	20	13		9.8	8000		0.5	74.59 63.8	172.64	236.2		GAS	250	202.5			54	70	460/3/60	TRANE	YSJ240	2398	SEE NOTES.
RTU-AN-7	LIBRARY	20	14		10.8	6000		0.5	73.53 63.07	131.41	177.24		GAS	250	202.5			41	50	460/3/60	TRANE	YSJ180	2298	SEE NOTES.
RTU-AN-8	LOBBY	12.5	14		10.8	5000		0.5	74.99 64.08	109.77	147.57		GAS	200	162			31	40	460/3/60	TRANE	YSJ150	1437	SEE NOTES.
RTU-AN-9	EAST LAB	7.5	14.6		11	3000		0.5	74.9 64.03	66.7	86.47		GAS	120	97.2			21	25	460/3/60	TRANE	YSJ090	1106	SEE NOTES.
RTU-AN-10	EAST LAB	7.5	14.6		11	3000		0.5	74.9 64.03	66.7	86.47		GAS	120	97.2			21	25	460/3/60	TRANE	YSJ090	1106	SEE NOTES.
RTU-AN-11	ED/TRAIN LAB	4	14.6		11	3000		0.5	74.91 64.03	66.7	89.35		GAS	120	97.2			21	25	460/3/60	TRANE	YSJ090	1106	SEE NOTES.
RTU-AN-13	ART ROOM	5	14		10.8	5000		0.5	75.45 64.4	110.43	148.37		GAS	200	162			31	40	460/3/60	TRANE	YSJ180A	1457	SEE NOTES.
RTU-AN-14	FACS LAB	12.5	14.7		11.7	2000		0.5	76.03 64.8	43.38	61.02		GAS	80	64			12	15	460/3/60	TRANE	YSJ060	999	SEE NOTES.
RTU-B-3	LOBBY	35		14.7	10.3	14000		0.5	72.92 63.23	263.6	367.5		GAS	600	486			84	100	460/3/60	TRANE	YCD420	5392	SEE NOTES.
AREA A SO	UTH																							
RTU-AS-4	LOBBY	12.5	14		10.8	6000		0.5	73.53 63.07	131.41	177.24		GAS	250	202.5			41	50	460/3/60	TRANE	YSJ090	2298	SEE NOTES.
					*						•	•												
AREA C																								
RTU-C-1	PHY HEALTH CLRM	3	14.7		11.7	1600		0.5	76.1 64.85	33.72	47.9		GAS	60	49			11	15	460/3/60	TRANE	YHC048	976	SEE NOTES.
RTU-C-2	CONCESSIONS	4	13.4		10.6	1600		0.5	74.3 63.6	34.7	45.59		GAS	80	64.8			11	15	460/3/60	TRANE	YSC048	767	SEE NOTES.
RTU-C-3	PRESS BOX	12.5	14.6		11	4000		0.5	74.59 63.8	87.98	118.42		GAS	150	121.5			29	40	460/3/60	TRANE	YSJ120	1147	SEE NOTES.

PROVIDE UNIT WITH FACTORY INSTALLED DISCONNECT SWITCH, PHASE MONITOR, AND 120V UNPOWERED SERVICE OUTLET. PROVIDE FACTORY-MOUNTED DDC UNIT CONTROLLER WITH 7-DAY PROGRAMMABLE ROOM SENSOR.

PROVIDE UNITS 5-TONS AND LARGER WITH ENTHALPY ECONOMIZER WITH BAROMETRIC RELIEF DAMPER. PROVIDE MERV 8 FILTER(S).

PROVIDE UNIT WITH HINGED ACCESS PANELS. PROVIDE WATER LEVEL MONITORING DEVICE IN ACCORDANCE WITH IMC 307.2.3.1.

PROVIDE WITH 18" HIGH ROOF CURB. ROOF CURBS SHALL BE ONE PIECE, WELDED, 14 GA. MIN, GALVANIZED. CURBS SHALL BE SLOPED AS REQUIRED FOR THE ROOF WITH RESTRAINT BRACKETS AS REQUIRED FOR SEISMIC REQUIREMENTS. CURBS SHALL BE ANCHORED TO THE ROOF STRUCTURE AS RECOMMENDED BY THE MANUFACTURER. CONTRACTOR TO VERIFY CURB HEIGHT WITH ROOF PITCH AND INSULATION THICKNESSES PRIOR TO ORDERING EQUIPMENT AND CURB. PROVIDE VIBRATION ISOLATION CURBS FOR UNITS ON AREA B ROOF.

SMOKE DETECTORS SHALL BE INSTALLED IN THE SUPPLY & RETURN OF AIR SYSTEMS WITH A DESIGN AIRFLOW CAPACITY GREATER THAN 2000 CFM PER IMC 606.2.1 PROVIDE UNITS WITH MANUFACTURER'S STANDARD PARTS, COMPRESSOR, AND HEAT EXCHANGER WARRANTY(S). UNITS SHALL COMPLY WITH THE LATEST ENFORCED EDITION OF ASHRAE 90.1 AND U.S. DEPARTMENT OF ENERGY 2023 ENERGY STANDARD FOR MINIMUM SEER REQUIREMENTS.

11. EQUIVALENT EQUIPMENT OF OTHER MANUFACTURERS SHALL BE ACCEPTABLE INCLUDING CARRIER, DAIKIN, JCI, LENNOX, TEMPMASTER, TRANE, YORK. 12

						FA	N SCHE	DULE							
									ELE	CTRICAL DA	TA		BASIS O	F DESIGN	
MARK	DESCRIPTION	CFM	ESP (IN-WC)	FAN RPM	DRIVE TYPE	MAX SONES	INTERLOCK	OPENING	MOTOR INPUT	V/PH/HZ	FLA	WEIGHT (LBS)	MFR.	MODEL	REMARKS
EF-AN-1	ROOFTOP EXHAUST FAN	450	.71	1725	DIRECT	10.2	CONTINUOUS	14" Ø	1/4	460/3/60	1.1	49	GREENHECK	G-100HP-A	SEE NOTES
EF-AN-2	ROOFTOP EXHAUST FAN	225	.51	1550	DIRECT	7.6	CONTINUOUS	10" Ø	1/20	115/1/60	-	28	GREENHECK	G-080-D	SEE NOTES
EF-AS-1	ROOFTOP EXHAUST FAN	1859	.519	1725	DIRECT	16.7	CONTINUOUS	12" SQ	1/2	115/1/60	-	57	GREENHECK	G-120-A	SEE NOTES
EF-AS-2	ROOFTOP EXHAUST FAN	225	.51	1550	DIRECT	7.6	CONTINUOUS	12"X6"	1/20	115/1/60	-	28	GREENHECK	G-080-D	SEE NOTES
EF-B-1	ROOFTOP EXHAUST FAN	1200	.53	1725	DIRECT	10.9	CONTINUOUS	16"X16"	1/3	460/3/60	1.1	51	GREENHECK	G-100-A	SEE NOTES
EF-B-2	ROOFTOP EXHAUST FAN	1000	.55	1725	DIRECT	12.7	CONTINUOUS	16"X16"	1/4	460/3/60	1.1	49	GREENHECK	G-099-A	SEE NOTES
EF-B-3	ROOFTOP EXHAUST FAN	75	.53	1140	DIRECT	4.6	CONTINUOUS	6" Ø	1/6	115/1/60	4.4	49	GREENHECK	G-097-B	SEE NOTES
EF-B-4	ROOFTOP EXHAUST FAN	75	.53	1140	DIRECT	4.6	CONTINUOUS	6" Ø	1/6	115/1/60	4.4	49	GREENHECK	G-097-B	SEE NOTES
EF-C-1	INLINE FAN - ICC 500 STORM SHELTER	3750	1.21	1725	DIRECT	25	VAD	24"X24"	2	460/3/60	3.4	122	GREENHECK	SQ-160	SEE NOTES
EF-C-2	INLINE FAN - ICC 500 STORM SHELTER	3750	1.21	1725	DIRECT	25	VAD	24"X24"	2	460/3/60	3.4	122	GREENHECK	SQ-160	SEE NOTES
EF-C-3	INLINE FAN - ICC 500 STORM SHELTER	1500	1.18	1725	DIRECT	15.7	VAD	18"X16"	3/4	460/3/60	1.6	69	GREENHECK	SQ-130	SEE NOTES
EF-C-4	INLINE FAN - ICC 500 STORM SHELTER	1500	1.18	1725	DIRECT	15.7	VAD	18"X16"	3/4	460/3/60	1.6	69	GREENHECK	SQ-130	SEE NOTES

PROVIDE FAN WITH ELECTRICAL DISCONNECT SWITCH.

EXHAUST FAN TO RUN CONTINUOUSLY DURING HOURS OF NORMAL OPERATION. PROVIDE SWITCH FOR CONTROL OF FAN AT FLOOR LEVEL. EXHAUST FAN TO RUN INTERMITTENTLY. PROVIDE RELAY FOR INTERLOCKING EXHAUST FAN TO LIGHT SWITCH.

PROVIDE ROOF MOUNTED EXHAUST FANS WITH BACKDRAFT DAMPER, SPEED CONTROLLER, MFR. PREFABRICATED INSULATED 18" HIGH ROOF CURB, AND TRANSFORMER AS REQUIRED FOR INTERLOCKING. PROVIDE INLINE EXHAUST FANS WITH BACKDRAFT DAMPER, HANGING VIBRATION AND ISOLATION KIT, FLEXIBLE DUCT CONNECTION, GALV. STEEL SCROLL AND HOUSING WITH ALUMINUM WHEEL, SPEED CONTROLLER, MOUNTING BRACKETS, AND TRANSFORMER AS REQUIRED FOR INTERLOCKING.

PROVIDE 120VAC MOTORIZED DAMPER TO OPERATE WITH VENTILATION FAN IN ACCORDANCE WITH ICC 500. SEE FLOOR PLAN M101.4 FOR MORE INFORMATION. MECHANICAL VENTILATION AND MOTORIZED DAMPER SHALL BE CONNECTED TO STANDBY POWER SYSTEM.

FOR KITCHEN EXHAUST FANS, HOODS, AND MAKEUP AIR UNITS SEE KITCHEN EQUIPMENT DETAILS SHEETS FOR SCHEDULES AND DETAILS. SHEETS M403 THRU M410.

SINGLE DUCT VAV TERMINAL UNIT SCHEDULE

Mark NILET OUTLET SIZE CONFIG. CFM CFM CFM (CFM (CFM	BASIS
Mark SIZE SIZE CONFIG. CFM (IN-WC) (CFM) (°F) (°F) (W) V/PH STEPS MCA MOOP NAREA ASOUTH VAV-AS-1.1 10" 14"X12" LEFT 1500 400 .04 1200 55 98.28 5.5 480/3 M 8.27 15 TF VAV-AS-1.4 6" 6"X14" LEFT 1000 225 .07 750 55 98.97 3 480/3 M 4.51 15 TF VAV-AS-1.4 6" 8"X14" LEFT 1000 225 .07 750 55 98.28 5.5 480/3 M 8.27 15 TF VAV-AS-1.6 8" 12"X12" LEFT 1000 225 .07 750 55 98.28 5.5 480/3 M 8.27 15 TF VAV-AS-1.8 10" 10"X14" LEFT 1000 225 .07 750 55	
AREA A SOUTH VAV-AS-1.1 10" 14"X12" LEFT 1500 400 .04 1200 55 98.28 5.5 480/3 M 8.27 15 TF VAV-AS-1.2 6" 6"X16" LEFT 500 125 .14 400 55 92.77 1.5 480/3 M 4.51 15 TF VAV-AS-1.4 6" 8"X14" LEFT 1000 225 .07 750 55 96.97 3 480/3 M 4.51 15 TF VAV-AS-1.6 8" 12"X12" LEFT 1000 125 .07 750 55 96.97 3 480/3 M 8.27 15 TF VAV-AS-1.6 8" 12"X12" LEFT 1500 400 .04 1200 55 98.28 5.5 480/3 M 8.27 15 TF VAV-AS-1.6 8" 12"X14" LEFT 1500 400 .04 1200 55 98.28 5.5 480/3 M 8.27 15 <t< td=""><td>MFR</td></t<>	MFR
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VAV-AS-2.28"12"X12"LEFT1000225.077505596.973480/3M4.5115TFVAV-AS-2.310"14"X14"LEFT1500400.0412005598.285.5480/3M8.2715TFVAV-AS-2.410"14"X14"LEFT1500400.0412005598.285.5480/3M8.2715TFVAV-AS-2.510"14"X14"LEFT1500400.0412005598.285.5480/3M8.2715TF	FRANE
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VAV-AS-2.5 10" 14"X14" LEFT 1500 400 .04 1200 55 98.28 5.5 480/3 M 8.27 15 TF	FRANE
	FRANE
VAV-AS-2.6 10" 14"X14" LEFT 1500 400 .04 1200 55 98.28 5.5 480/3 M 8.27 15 TF	FRANE
VAV-AS-2.7 12" 16"X16" LEFT 2000 475 .05 1600 55 96.97 7 480/3 M 10.52 15 TF	FRANE
VAV-AS-2.8 12" 18"X18" LEFT 2400 600 .08 2000 55 96.97 8 480/3 M 12.03 15 TF	FRANE
VAV-AS-2.9 10" 14"X14" LEFT 1500 400 .04 1200 55 98.28 5.5 480/3 M 8.27 15 TF	FRANE
VAV-AS-2.10 12" 16"X16" LEFT 2000 475 .05 1600 55 96.97 7 480/3 M 10.52 15 TF	FRANE
VAV-AS-2.11 10" 14"X14" LEFT 1500 400 .04 1200 55 98.28 5.5 480/3 M 8.27 15 TF	FRANE
VAV-AS-2.12 10" 14"X14" LEFT 1500 400 .04 1200 55 98.28 5.5 480/3 M 8.27 15 TF	FRANE
VAV-AS-2.13 10" 14"X14" LEFT 1500 400 .04 1200 55 98.28 5.5 480/3 M 8.27 15 TF	FRANE
VAV-AS-2.14 10" 16"X16" LEFT 2000 400 .04 1200 55 98.28 5.5 480/3 M 8.27 15 TF	FRANE

NOTES: ELECTRIC HEAT SHALL HAVE SCR CONTROLS. PROVIDE 1" CLOSED CELL INSULATION.

PROVIDE PRIMARY AND SECONDARY FUSING WITH INTERLOCKING FUSED DISCONNECT. PROVIDE HANGER BRACKETS.

OUTOIDE AID DOOFTOD UNITO WITH ENEDOX DEOOX/EDX

F DESIGN	
MODEL	REMARKS
VCEF10	SEE NOTES.
VCEF06	SEE NOTES.
VCEF08	SEE NOTES.
VCEF06	SEE NOTES.
VCEF10	SEE NOTES.
VCEF08	SEE NOTES.
VCEF10	SEE NOTES.
VCEF10	SEE NOTES.
VCEF10	SEE NOTES.
VCEF06	SEE NOTES.
VCEF12	SEE NOTES.
VCEF08	SEE NOTES.
VCEF08	SEE NOTES.
VCEF12	SEE NOTES.
VCEF10	SEE NOTES.
VCEF08	SEE NOTES.
VCEF10	SEE NOTES.
VCEF12	SEE NOTES.
VCEF08	SEE NOTES.
VCEF10	SEE NOTES.
VCEF12	SEE NOTES.
VCEF12	SEE NOTES.
VCEF10	SEE NOTES.
VCEF12	SEE NOTES.
VCEF10	SEE NOTES.

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		ſ	EFFICIE	NCY	COOLIN	G DATA	HEATIN	G DATA	CO	MPRESSO	JR	ELECT	RICAL [DATA	MIN.	BASI	3 OF DESIGN	
		NOMINAL			AMBIENT	TOTAL	AMBIENT	TOTAL							WEIGHT	· · · · ·		
MARK	DESCRIPTION	TONS	SEER	HSPF	(°F)	(MBH)	(°F)	(MBH)	TYPE	QTY	REFR	V/PH/HZ	MCA	MOCP	(LBS)	MFR	MODEL	REMARKS
ODU-AN-1	SINGLE-ZONE OUTDOOR HEAT PUMP	1.50	20.5	12	95	18.3	43	21.3		1		208/1/60	12	15		MITSUBISHI	NTXSST18B112AA	SEE NOTES
ODU-AN-2	SINGLE-ZONE OUTDOOR HEAT PUMP	1.00	23.1	13.2	95	12.2	43	14.2		1		208/1/60	10	15		MITSUBISHI	NTXSST12B112AA	SEE NOTES
ODU-AN-3	SINGLE-ZONE OUTDOOR HEAT PUMP	0.75	23.1	13.2	95	12.2	43	14.2		1	,	208/1/60	10	15		MITSUBISHI	NTXSST12B112AA	SEE NOTES
ODU-AN-4	SINGLE-ZONE OUTDOOR HEAT PUMP	1.00	23.1	13.2	95	12.2	43	14.2		1		208/1/60	10	15		MITSUBISHI	NTXSST12B112AA	SEE NOTES
ODU-AS-1	SINGLE-ZONE OUTDOOR HEAT PUMP	1.00	23.1	10.2	95	12.2	43	14.2		1		208/1/60	10	15		MITSUBISHI	NTXSST12B112AA	SEE NOTES
ODU-AS-2	SINGLE-ZONE OUTDOOR HEAT PUMP	1.00	23.1	13.2	95	12.2	43	14.2		1		208/1/60	10	15		MITSUBISHI	NTXSST12B112AA	SEE NOTES
ODU-C	SINGLE-ZONE OUTDOOR HEAT PUMP	4	0		95	48.1	43	49.9		1	,	208/1/60	12	15		MITSUBISHI	NTXMSM48A182BA	SEE NOTES

NOTES PROVIDE AND INSTALL REFRIGERANT SUPPLY AND RETURN LINES PER MANUFACTURER'S RECOMMENDATIONS AND REQUIREMENTS. ALL CAPACITIES ARE NET VALUES. PROVIDE EQUIPMENT RAILS FOR MOUNTING ON ROOF. EQUIVALENT EQUIPMENT OF OTHER MANUFACTURERS SHALL BE ACCEPTABLE INCLUDING CARRIER, DAIKIN, JCI, LENNOX, YORK.

				DUC	TLESS SP	LIT INDO	OR UN	NIT SCHE	DULE				
		AIRFLOW		COOLING	DATA	HEATING CAP.	CD SIZE		ELECTRICA	AL DATA	BASIS	OF DESIGN	
MARK	DESCRIPTION	(CFM)	EAT DB (°F)	EAT WB (°F)	TOTAL CAP. (MBH)	(MBH)	(IN)	FILTER	V/PH/HZ	FLA	MANUF.	MODEL	REMARKS
DSS-AN-1	WALL-MOUNTED	629	80	67	18.3	21.3	1-1/4"	WASHABLE	208/1/60		MITSUBISHI	NTXWST18B112AA	SEE NOTES
DSS-AN-2	WALL-MOUNTED	390	80	67	12.2	14.2	1-1/4"	WASHABLE	208/1/60		MITSUBISHI	NTXWST12B112AA	SEE NOTES
DSS-AN-3	WALL-MOUNTED	390	80	67	12.2	14.2	1-1/4"	WASHABLE	208/1/60		MITSUBISHI	NTXWST12B112AA	SEE NOTES
DSS-AS-1	WALL-MOUNTED	390	80	67	12.2	14.2	1-1/4"	WASHABLE	208/1/60		MITSUBISHI	NTXWST12B112AA	SEE NOTES
DSS-AS-2	WALL-MOUNTED	390	80	67	12.2	14.2	1-1/4"	WASHABLE	208/1/60		MITSUBISHI	NTXWST12B112AA	SEE NOTES
DSS-C-1	CEILING CASSETTE	810	80	67	24	24.9	1-1/4"	WASHABLE	208/1/60	1/15	MITSUBISHI	TPLA0A0241EA80A	SEE NOTES
DSS-C-2	CEILING CASSETTE	335	80	67	12	12.5	1-1/4"	WASHABLE	208/1/60	1/15	MITSUBISHI	NTXCKS12A112BA	SEE NOTES
DSS-C-3	CEILING CASSETTE	335	80	67	12	12.5	1-1/4"	WASHABLE	208/1/60	1/15	MITSUBISHI	NTXCKS12A112BA	SEE NOTES
DSS-TB-1	WALL-MOUNTED	390	80	67	12.2	14.2	1-1/4"	WASHABLE	208/1/60		MITSUBISHI	NTXWST12B112AA	SEE NOTES
DSS-TB-2	WALL-MOUNTED	390	80	67	12.2	14.2	1-1/4"	WASHABLE	208/1/60		MITSUBISHI	NTXWST12B112AA	SEE NOTES

NOTES PROVIDE AND INSTALL REFRIGERANT SUPPLY AND RETURN LINES PER MANUFACTURER'S RECOMMENDATIONS AND REQUIREMENTS. ALL CAPACITIES ARE NET VALUES. PROVIDE CONDENSATE PUMP. PROVIDE WATER LEVEL MONITORING DEVICE IN ACCORDANCE WITH IMC 307.2.3.1.

PROVIDE CONDENSATE OVERFLOW SWITCH, INTERLOCK WITH UNIT SHUTDOWN. EQUIVALENT EQUIPMENT OF OTHER MANUFACTURERS SHALL BE ACCEPTABLE INCLUDING CARRIER, DAIKIN, JCI, LENNOX, YORK.

	GRILLE, RE	GISTER,	& DIFF	USER S	CHEDUL	.E			
MARK	DESCRIPTION	APPLICATION	MFR.	MODEL	MATERIAL	FINISH	DAMPER	N.C. MAX	REMARKS
<u>ES:</u> COORDINATE AIR DI	STRIBUTION DEVICE LOCATION WITH LIGHTS AND REFLEC		ANS.						

CEILING DEVICES SHALL BE COMPATIBLE WITH CEILINGS SPECIFIED BY ARCHITEC UNLESS NOTED OTHERWISE, DIFFUSER NECK SIZE INDICATES DUCT RUNOUT SIZE. COORDINATE FINISH OF AIR TERMINALS IN EXPOSED AREAS WITH ARCHITECT.

				L	JUVE	-R 30	HED	ULE					
						WIDTH	HEIGHT	FREE AREA		PRESSURE DROP	FREE AREA VELOCITY	BPWP	
MARK	DESCRIPTION	APPLICATION	MFR.	MODEL	QTY	(IN)	(IN)	(SF)	CFM	(IN-WG)	(FPM)	(FPM)	REMARKS
IL-C-1	INTAKE LOUVER	INTAKE	GREENHECK	AFL-501	1	50	50	8.32	3750	.051	451	553	SEE NOTES
IL-C-1	INTAKE LOUVER	INTAKE	GREENHECK	AFL-501	1	50	50	8.32	3750	.051	451	553	SEE NOTES
IL-C-2	INTAKE LOUVER	INTAKE	GREENHECK	AFL-501	1	50	50	8.32	3000	.033	361	553	SEE NOTES
EL-C-1	EXHAUST LOUVER	EXHAUST	GREENHECK	AFL-501	1	50	50	8.32	3750	.052	451	553	SEE NOTES
EL-C-2	EXHAUST LOUVER	EXHAUST	GREENHECK	AFL-501	1	50	50	8.32	3750	.052	451	553	SEE NOTES
EL-C-3	EXHAUST LOUVER	EXHAUST	GREENHECK	AFL-501	1	36	32	3.49	1500	.047	430	553	SEE NOTES
EL-C-4	EXHAUST LOUVER	EXHAUST	GREENHECK	AFL-501	1	36	32	3.49	1500	.047	430	553	SEE NOTES

PROVIDE LOUVER WITH INTEGRAL GALVANIZED BIRD SCREEN. CUSTOM PAINT COLOR TO BE SELECTED BY ARCHITECT TO MATCH OTHER BUILDING FINISHES. PROVIDE LOUVER WITH EXTENDED SILL. GREENHECK SHOWN IN THE SCHEDULE IS SHOWN TO ESTABLISH A STANDARD OF QUALITY, NOT TO LIMIT COMPETITION. EQUIVALENT EQUIPMENT OF OTHER MANUFACTURERS SHALL BE ACCEPTABLE.

	ELECTRIC UNIT HEATER SCHEDULE							
			AIRFLOW	TOTAL HEATING	ELECT	RICAL		
MARK	MFR.	MODEL	(CFM)	CAPACITY (kW)	V/PH/HZ	MCA	REMARKS	
UH-1	MARKEL	P3P5115CA1N*	1100	15	480/3/60	18.1	SEE NOTES	
EWH-1	MARKEL	G1G5105N	400	5	277/1/60	18.1	SEE NOTES	
WH-2	MARKEL	G1G5105N	400	5	277/1/60	18.1	SEE NOTES	
EWH-3	MARKEL	G1G5105N	400	5	277/1/60	18.1	SEE NOTES	

ALL CAPACITIES ARE NET VALUES. PROVIDE SURFACE MOUNT KIT AND 16 GA. STEEL HEAVY DUTY GRILLE. PROVIDE WITH INTEGRAL THERMOSTAT. ELECTRICAL CONTRACTOR TO PROVIDE DISCONNECT. SEE ELECTRICAL DRAWINGS.

SINGLE DUCT VAV TERMINAL UNIT SCHEDULE

	UNIT DATA			DESIGN AIRFLOW DATA		SCR ELECTRIC HEATING COIL DATA							BA		
	INLET	OUTLET		MAX	MIN	APD	AIRFLOW	EAT	LAT	CAPACITY					
Mark	SIZE	SIZE	CONFIG.	CFM	CFM	(IN-WC)	(CFM)	(°F)	(°F)	(kW)	V/PH	STEPS	MCA	MOCP	MF
VAV-AS-2.15	12"	16"X16"	LEFT	2000	475	.05	1600	55	96.97	7	480/3	М	10.52	15	TRA
VAV-AS-2.16	10"	14"X14"	LEFT	1500	400	.04	1200	55	98.28	5.5	480/3	М	8.27	15	TRA
VAV-AS-3.1	12"	18"X18"	LEFT	2400	600	.08	2000	55	96.97	8	480/3	М	12.03	15	TRA
VAV-AS-3.2	8"	12"X12"	LEFT	1000	225	.07	750	55	96.97	3	480/3	М	4.51	15	TRA
VAV-AS-3.3	10"	18"X12"	LEFT	1500	400	.04	1200	55	98.28	5.5	480/3	М	8.27	15	TRA
VAV-AS-3.4	10"	18"X12"	LEFT	1500	400	.04	1200	55	98.28	5.5	480/3	М	8.27	15	TRA
VAV-AS-3.5	10"	18"X12"	LEFT	1500	400	.04	1200	55	98.28	5.5	480/3	М	8.27	15	TRA
VAV-AS-3.6	10"	18"X12"	LEFT	1500	400	.04	1200	55	98.28	5.5	480/3	М	8.27	15	TRA
VAV-AS-3.7	12"	16"X16"	LEFT	2000	475	.05	1600	55	96.97	7	480/3	М	10.52	15	TRA
VAV-AS-3.8	14"	20"X18"	LEFT	2800	750	.01	2400	55	96.97	10	480/3	М	15.04	20	TRA
VAV-AS-3.9	12"	18"X18"	LEFT	2400	600	.08	2000	55	96.97	8	480/3	М	12.03	15	TRA
VAV-AS-3.10	12"	18"X18"	LEFT	2400	600	.08	2000	55	96.97	8	480/3	М	12.03	15	TRA
VAV-AS-3.11	10"	18"X12"	LEFT	1500	400	.04	1200	55	98.28	5.5	480/3	М	8.27	15	TRA
VAV-AS-3.12	8"	12"X12"	LEFT	1000	225	.07	750	55	96.97	3	480/3	М	4.51	15	TRA
VAV-AS-3.13	10"	14"X14"	LEFT	1500	400	.04	1200	55	98.28	5.5	480/3	М	8.27	15	TRA
VAV-AS-3.14	10"	14"X14"	LEFT	1200	400	.04	1200	55	98.28	5.5	480/3	М	8.27	15	TRA
AREA B			_										-		
VAV-B-1.1	8"	12"X12"	LEFT	1000	225	.07	750	55	96.97	3	480/3	М	4.51	15	TRA
VAV-B-1.2	10"	14"X12"	LEFT	1200	300	.03	1000	55	96.97	4	480/3	М	6.01	15	TRA
VAV-B-1.3	12"	16"X16"	LEFT	2000	475	.05	1600	55	96.97	7	480/3	М	10.52	15	TRA
VAV-B-1.4	8"	12"X12"	LEFT	1000	225	.07	750	55	96.97	3	480/3	М	4.51	15	TRA
VAV-B-1.5	8"	12"X12"	LEFT	1000	225	.07	750	55	96.97	3	480/3	М	4.51	15	TRA
VAV-B-1.6	14"	20"X18"	LEFT	2800	750	.01	2400	55	96.97	10	480/3	М	15.04	20	TRA
VAV-B-1.7	10"	12"X14"	LEFT	1200	300	.03	1000	55	96.97	4	480/3	М	6.01	15	TRA
VAV-B-1.8	10"	14"X14"	LEFT	1500	400	.04	1200	55	98.28	5.5	480/3	М	8.27	15	TRA
VAV-B-2.1	10"	14"X14"	LEFT	1500	400	.04	1200	55	98.28	5.5	480/3	М	8.27	15	TRA
VAV-B-2.2	14"	20"X18"	LEFT	2800	750	.01	2400	55	96.97	10	480/3	М	15.04	20	TRA
VAV-B-2.3	10"	14"X12"	LEFT	1200	300	.03	1000	55	96.97	4	480/3	М	6.01	15	TRA
VAV-B-2.4	10"	14"X14"	LEFT	1500	400	.04	1200	55	98.28	5.5	480/3	М	8.27	15	TRA
VAV-B-2.5	12"	16"X16"	LEFT	2000	475	.05	1600	55	96.97	7	480/3	М	10.52	15	TRA
VAV-B-2.6	12"	18"X14"	LEFT	2000	475	.05	1600	55	96.97	7	480/3	М	10.52	15	TRA
VAV-B-2.7	12"	18"X16"	LEFT	2400	600	.08	2000	55	96.97	8	480/3	М	12.03	15	TRA

SMOKE VENT SCHEDULE							
MARK	DESCRIPTION	MANUFACTURER	MODEL	MATERIAL	LENGTH (IN.)	WIDTH (IN.)	REMAR
SV-1	DOUBLE LEAF SMOKE VENT	BILCO	ACDSV6096	STEEL	60	96	SEE NO
SV-2	DOUBLE LEAF SMOKE VENT	BILCO	ACDSV6096	STEEL	60	96	SEE NO
SV-3	DOUBLE LEAF SMOKE VENT	BILCO	ACDSV6096	STEEL	60	96	SEE NO
SV-4	DOUBLE LEAF SMOKE VENT	BILCO	ACDSV6096	STEEL	60	96	SEE NO
SV-5	DOUBLE LEAF SMOKE VENT	BILCO	ACDSV6096	STEEL	60	96	SEE NO

NOTES: VENT SHALL BE UL LISTED AND COMPLY WITH UL 793 AND UL 790 CLASS A. VENT COVERS SHALL OPEN SIMULTANEOUSLY IN A CONTROLLED MANNER AGAINST A 10 PSF SNOW/WIND LOAD WHEN LATCH IS MANUALLY RELEASED OR WHEN HEAT BREAKS THE UL LISTED FUSIBLE LINK. COVER SHALL BE REINFORCED TO SUPPORT A MINIMUM LIVE LOAD OF 40 PSF WITH A MAX. DEFLECTION OF 1/150TH OF THE 3.

SPAN OR 20 PSF WIND UPLIFT. ENTIRE ROOF AUTOMATIC SMOKE VENT SHALL BE WEATHER TIGHT WITH FULLY WELDED CORNER JOINTS ON COVER AND CURB. SMOKE VENT SHALL BE INSTALLED IN STRICT ACCORDANCE OF 2021 IBC 410.2.7 STAGE VENTILATION FOR STAGES GREATER

THAN 1,000 SF. STAGE = 3,471 SF. 5% OF TOTAL AREA OF STAGE REQUIRED FOR AUTOMATIC SMOKE VENTS = 5% x 3,471 SF = 173.6 SF REQUIRED AREA. 173.6 SF/ 40 SF PER VENT (5'x8') = 5 VENTS MIN.

IS	OF DESIGN					
	MODEL	REMARKS				
	VCEF12	SEE NOTES.				
	VCEF10	SEE NOTES.				
	VCEF12	SEE NOTES.				
	VCEF08	SEE NOTES.				
	VCEF10	SEE NOTES.				
	VCEF10	SEE NOTES.				
	VCEF10	SEE NOTES.				
	VCEF10	SEE NOTES.				
	VCEF12	SEE NOTES.				
	VCEF14	SEE NOTES.				
	VCEF12	SEE NOTES.				
	VCEF12	SEE NOTES.				
	VCEF10	SEE NOTES.				
	VCEF08	SEE NOTES.				
	VCEF10	SEE NOTES.				
	VCEF10	SEE NOTES.				
	VCEF08	SEE NOTES.				
	VCEF10	SEE NOTES.				
	VCEF12	SEE NOTES.				
	VCEF08	SEE NOTES.				
	VCEF08	SEE NOTES.				
	VCEF14	SEE NOTES.				
	VCEF10	SEE NOTES.				
	VCEF10	SEE NOTES.				
	VCEF10	SEE NOTES.				
	VCEF14	SEE NOTES.				
	VCEF10	SEE NOTES.				
	VCEF10	SEE NOTES.				
	VCEF12	SEE NOTES.				
	VCEF12	SEE NOTES.				
	VCEF12	SEE NOTES.				

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