ABBREVIATIONS

@	AT
A/C	ABOVE CEILING
A/E	ARCHITECTS AND ENGINEERS
A/G	ABOVE GRADE
ACC	AIR COOLED CHILLER
ACD	AUTOMATIC CONTROL DAMPER
AD	ACCESS DOOR
ADJ	ADJUSTABLE
AFF	ABOVE FINISHED FLOOR
AFMS	AIRFLOW MEASURING STATION
AHRI	AIR-CONDITIONING, HEATING AND REFRIGERATION INSTITUTE
AHU	AIR HANDLING UNIT
ALT	ALTERNATE
ASHRAE	AMERICAN SOCIETY OF HEATING, REFRIGERATING AND AIR CONDITIONING ENGINEERS
AS	AIR SEPARATOR
ATU	AIR TERMINAL UNIT
AI	ANALOG INPUT
AO	ANALOG OUTPUT
B	BOILER
BAS	BUILDING AUTOMATION SYSTEM
BD	BELT DRIVE
BLDG	BUILDING
BMS	BUILDING MANAGEMENT SYSTEM
BP	BOILER PUMP -PRIMARY LOOP
BTUH	BRITISH THERMAL UNIT PER HOUR
CEF	CEILING EXHAUST FAN
CFM	CUBIC FEET PER MINUTE
CF	CHEMICAL FEEDER
CFH	CUBIC FEET PER HOUR
CHWS/R	CHILLED WATER PIPING SUPPLY AND RETURN
CHWS	CHILLED WATER PIPING SUPPLY
CHWR	CHILLED WATER PIPING RETURN
CHWP	CHILLED WATER PUMP
CO	CARBON MONOXIDE / CLEANOUT
CONT	CONTINUOUS
COP	COEFFICIENT OF PERFORMANCE
COMP	COMPRESSOR
CT	COOLING TOWER
CWV	CHILLED WATER VALVE
Cv	FLOW COEFFICIENT
DB	DRY BULB TEMPERATURE
DBA	DECIBEL A RATING
DCW	DOMESTIC COLD POTABLE WATER
DD	DIRECT DRIVE
DDC	DIRECT DIGITAL CONTROL
DEG. F	DEGREES IN FAHRENHEIT
DN	DOWN
DP	DEW POINT TEMPERATURE
DPS	DIFFERENTIAL PRESSURE SENSOR
DWGS	DRAWINGS
DX	DIRECT EXPANSION
DI	DIGITAL INPUT
DO	DIGITAL OUTPUT
(E)	EXISTING
EA	EXHAUST AIR OR EACH
EAG	EXHAUST AIR GRILLE
EAL	EXHAUST AIR LOUVER
EAR	EXHAUST AIR REGISTER
EAT	ENTERING AIR TEMPERATURE
EER	ENERGY EFFICIENCY RATIO
EF	EXHAUST FAN
EMCS	ENERGY MANAGEMENT AND CONTROL SYSTEM
ENT	ENTERING
ERV	ENERGY RECOVERY VENTILATOR
ESP	EXTERNAL STATIC PRESSURE
ET	EXPANSION TANK
EUH	ELECTRIC UNIT HEATER
EWT	ENTERING WATER TEMPERATURE
FD	FLOOR DRAIN
FLA	FULL LOAD AMPS
FLP	FLOOR PLAN
FPM	FEET PER MINUTE
FT	FEET
FT W.C.	FEET OF WATER COLUMN
GI	GRAVITY INTAKE
GR	GRAVITY RELIEF
GPM	GALLONS PER MINUTE
HDPE	HIGH-DENSITY POLYETHYLENE
HDT	HORIZONTAL DRAW THROUGH
HBT	HORIZONTAL BLOW THROUGH
HOA	HAND-OFF-AUTO
HP	HORSEPOWER
HPU	HEAT PUMP UNIT
HVAC	HEATING VENTILATING AND AIR CONDITIONING
HWS/R	HOT WATER PIPING SUPPLY AND RETURN
HWS	HOT WATER SUPPLY
HWR	HOT WATER RETURN
HWP	HOT WATER PUMP
HWV	HOT WATER VALVE
HZ	HERTZ
IL	INLINE
IPLV	INTEGRATED PART LOAD VALUE
IN W.C.	INCH OF WATER COLUMN
LAT	LEAVING AIR TEMPERATURE
LWT	LEAVING WATER TEMPERATURE
MAX	MAXIMUM
MBH	1000 BTUHS
MCA	MINIMUM CIRCUIT AMPS
MERV	MINIMUM EFFICIENCY REPORTING VALUE (FILTER)
MFG	MANUFACTURING
MFR	MANUFACTURER
MIN	MINIMUM
MOCP	MAXIMUM OVERCURRENT PROTECTION DEVICE
MVD	MANUAL VOLUME DAMPER
NEC	NATIONAL ELECTRICAL CODE
NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
NO	NORMALLY OPEN
NC	NORMALLY CLOSED OR NOISE CRITERIA
NPLV	NON-STANDARD PART LOAD VALUE
NTS	NOT TO SCALE
OA	OUTSIDE AIR
OAL	OUTSIDE AIR LOUVER
OAU	OUTSIDE AIR UNIT
O.C.	ON CENTER
PD	PRESSURE DROP
PEX	CROSS-LINKED POLYETHYLENE
PH	PHASE
PPM	PARTS PER MILLION
PRV	PRESSURE REDUCING VALVE
P/T	PRESSURE/TEMPERATURE PORTS
PSI	POUNDS PER SQUARE INCH
PSIG	POUNDS PER SQUARE INCH (GAGE PRESSURE)
QTY	QUANTITY
RA	RETURN AIR
RAG	RETURN AIR GRILLE
RAR	RETURN AIR REGISTER
RH	RELATIVE HUMIDITY
RPBFP	REDUCED PRESSURE BACKFLOW PREVENTER
RPM	REVOLUTION PER MINUTE
RLA	RATED LOAD AMPS
SA	SUPPLY AIR
SAR	SUPPLY AIR REGISTER
SD	SMOKE DETECTOR
SEER	SEASONAL ENERGY EFFICIENCY RATIO
SF	SUPPLY FAN
SMACNA	SHEET METAL AND AIR CONDITIONING CONTRACTORS' NATIONAL ASSOCIATION
SPT	STATIC PRESSURE TRANSMITTER
TA	TRANSFER AIR
TAG	TRANSFER AIR GRILLE
T'STAT	THERMOSTAT
TT	TEMPERATURE TRANSMITTER
TSP	TOTAL STATIC PRESSURE
TYP.	TYPICAL
UNO	UNLESS NOTED OTHERWISE
UV	ULTRAVIOLET
UV-C	ULTRAVIOLET TYPE C
U/G	UNDERGROUND
V	VOLTS
VAV	VARIABLE AIR VOLUME
VFD	VARIABLE FREQUENCY DRIVE
W/	WITH
WB	WET BULB TEMPERATURE
WCC	WATER COOLED CHILLER
WHP	WATER SOURCE HEAT PUMP
WOG	WATER, OIL, GAS
W.G.	WATER GAUGE

NOTE:
NOT ALL ABBREVIATIONS ARE USED ON THIS DRAWINGS

CONTROLS LEGEND

- AI — ANALOG INPUT
- AO — ANALOG OUTPUT
- DI — DIGITAL INPUT
- DO — DIGITAL OUTPUT
- T — SPACE TEMPERATURE SENSOR OR THERMOSTAT
- H — SPACE HUMIDITY SENSOR
- T — DUCT MOUNT TEMPERATURE SENSOR
- H — DUCT MOUNT HUMIDITY SENSOR
- OR: M / M — DUCT MOUNT MOTORIZED DAMPER AND ACTUATOR
- FM — DUCT MOUNTED AIR FLOW MEASURING STATION
- FZ — FREEZESTAT
- T — LINEAR AVERAGING TEMPERATURE SENSOR
- DP — DIFFERENTIAL PRESSURE TRANSMITTER
- MVD — MANUAL VOLUME DAMPER
- VFD — VARIABLE FREQUENCY DRIVE
- DDC — DDC PANEL
- AIRFLOW
- FAN
- FILTER

PROJECT BUILDING CODE REQUIREMENTS

WORK SHALL COMPLY WITH THE FOLLOWING AGENCIES:

- 2023 FLORIDA BUILDING CODE
- 2023 FLORIDA MECHANICAL CODE
- 2023 FLORIDA ENERGY CONSERVATION CODE
- 2023 FLORIDA PLUMBING CODE
- 2023 FLORIDA FUEL GAS CODE
- 2023 FLORIDA FIRE PREVENTION CODE
- AMERICAN SOCIETY OF HEATING AND REFRIGERATION ENGINEERS (ASHRAE)
- AMERICAN SOCIETY OF PLUMBING ENGINEERS (ASPE)
- NATIONAL FIRE PROTECTION ASSOCIATION (NFPA)
- 2020 NFPA 70 NATIONAL ELECTRICAL CODE
- NFPA 101 LIFE SAFETY CODE

LEGEND

DUCTWORK

- 24"x12" — RECTANGULAR DUCT SIZE. FIRST SIZE LISTED IS SIDE SHOWN IN PLANS & ROUND DUCT SIZE
- 12"Ø
- EXTERNALLY INSULATED DUCTWORK
- EXTERNALLY INSULATED ROUND FLEXIBLE DUCTWORK (MIN R-6)
- DUCT 90° ELBOW WITH TURNING VANES
- DUCT 45° TRANSITION WITH TURNING VANES
- RADIUSED DUCT ELBOW. TURNING RADIUS SHALL BE 1.5 TIMES THE TURNING DIMENSION
- FLEXIBLE DUCT CONNECTION
- TRANSITION
- SUPPLY OR OUTSIDE AIR DUCT TURNING UP (POSITIVE PRESSURE)
- RETURN OR EXHAUST AIR DUCT TURNING UP (NEGATIVE PRESSURE)
- SUPPLY OR OUTSIDE AIR DUCT TURNING DOWN (POSITIVE PRESSURE)
- RETURN OR EXHAUST AIR DUCT TURNING DOWN (NEGATIVE PRESSURE)
- MANUAL VOLUME DAMPER
- EQUIPMENT WITH CLEARANCE SHOWN IN DASHED LINE
- AHU 1 — NEW EQUIPMENT TAG
- (E)AHU-1 — EXISTING EQUIPMENT TAG
- CONNECT TO EXISTING
- EQUIPMENT TO BE DEMOLISHED

- 1 — SHEET NOTE
- 1 — DETAIL NOTE
- 1 — REVISION # AND CLOUD
- T1 — THERMOSTAT MOUNT TO MATCH LIGHT SWITCH ('1' INDICATES EQUIPMENT CONTROLLED).
- CO2 — DUCT MOUNT OR WALL MOUNT CARBON DIOXIDE SENSOR
- S — DUCT MOUNT SMOKE DETECTOR (PROVIDED BY DIVISION 26, INSTALLED BY DIVISION 23 AND WIRED BY DIVISION 26).
- UNDER CUT DOOR 3/4"

SINGLE LINE PIPING

- ELBOW TURN UP
- ELBOW TURN DOWN
- CONNECTION, BOTTOM
- CONNECTION, TOP
- D — CONDENSATE DRAIN PIPING
- REFRIGERANT PIPING

1 TITLE — DESCRIPTION
SCALE — DWG SCALE, SCHEMATIC, OR NOT TO SCALE (NTS)

1 / M301 — BUILDING SECTION

1 / M301 — BUILDING ELEVATION

GENERAL DUCTWORK NOTES

1. UNLESS NOTED OTHERWISE, ALL NEW SUPPLY, RETURN, OUTSIDE AND EXHAUST AIR DUCTWORK SHALL BE LOW PRESSURE SINGLE WALL METAL RECTANGULAR, SMACNA STATIC PRESSURE CLASS 2" W.G., SEAL CLASS A. INSULATION PER SPECIFICATIONS.
2. ALL DUCTWORK CONSTRUCTION, DUCT HANGERS, AND SUPPORTS SHALL COMPLY WITH SMACNA'S "HVAC DUCT CONSTRUCTION STANDARDS-METAL AND FLEXIBLE" FOR METAL THICKNESS', REINFORCING TYPES AND INTERVALS, TIE-ROD APPLICATIONS, AND JOINT TYPES AND INTERVALS. SUPPORT HORIZONTAL DUCTS WITHIN 24" OF EACH ELBOW AND WITHIN 48" OF EACH BRANCH. SEE DUCT HANGER DETAILS.
3. VERIFY COLLAR SIZES ON ALL EQUIPMENT INLETS AND OUTLETS. TRANSITION DUCTWORK AS NECESSARY. EXTERNALLY INSULATE ALL TRANSITIONS AT EQUIPMENT CONNECTIONS.
4. PROVIDE FLEXIBLE CONNECTIONS, AND VIBRATION ISOLATORS FOR INTERNALLY ISOLATED UNITS. PROVIDE FLEXIBLE DUCT CONNECTORS AT ALL HVAC EQUIPMENT CONNECTIONS COMPLYING WITH UL-181, NFPA 90A, AND NFPA 90B.

DIFFUSER/GRILLE LEGEND AND SPECIFICATION

CD: ALUMINUM CEILING DIFFUSER SUITABLE FOR INSTALLATION IN LAY-IN CEILING OR GYPSUM BOARD CEILINGS. INLET SIZE AND AIRFLOW AS INDICATED. PROVIDE WITH SQUARE-TO-ROUND NECK TRANSITION AS REQUIRED. PRICE ASPD, TITUS OMNI-AA, OR EQUIVALENT.

SAG: ALUMINUM SUPPLY GRILLE WITH 0° DEFLECTION AND 3/4" SPACING SUITABLE FOR SURFACE MOUNTING TO SIDEWALL GYPSUM BOARD CEILINGS OR LAY-IN INSTALLATION IN TILE CEILING. REGISTER DESIGNATION INDICATES GRILLE TO BE PROVIDED WITH OPPOSED BLADE DAMPER. SIZE AS INDICATED. FOR LAY-IN INSTALLATION, PROVIDE LAY-IN BORDER FRAME AND PROVIDE FILLER PANEL FOR CEILING TILE LOCATION. PRICE 620D, TITUS 300FS, OR EQUIVALENT.

AIRFLOW

OR

EAG OR RAG OR TAG:
ALUMINUM GRILLE WITH 0° DEFLECTION AND 3/4" SPACING SUITABLE FOR SURFACE MOUNTING TO SIDEWALL GYPSUM BOARD CEILINGS OR LAY-IN INSTALLATION IN TILE CEILING. REGISTER DESIGNATION INDICATES GRILLE TO BE PROVIDED WITH OPPOSED BLADE DAMPER. SIZE AS INDICATED. FOR LAY-IN INSTALLATION, PROVIDE LAY-IN BORDER FRAME AND PROVIDE FILLER PANEL FOR CEILING TILE LOCATION. PRICE 610 , TITUS 350 ZF OR EQUIVALENT.

AIRFLOW

NOTES:

- COORDINATE COLORS WITH ARCHITECTURAL RCP. PROVIDE COLOR SELECTION FOR A/E REVIEW.
- COORDINATE ALL LOCATION WITH ARCHITECTURAL RCP AND LIGHTING.
- MAXIMUM NC VALUE FOR ALL AIR DISTRIBUTION SYSTEM SHALL BE 20.

GENERAL MECHANICAL NOTES

1. CONTRACTOR SHALL COORDINATE WITH OTHER TRADES REQUIRED OPENINGS IN WALLS, FOUNDATIONS, FLOORS, AND ROOFS.
2. FIELD VERIFY ALL DIMENSIONS, SIZES, AND CONNECTION LOCATIONS BEFORE ANY DUCTWORK FABRICATION OR PIPE CUTTING IS COMMENCED. PROVIDE ANY OFFSETS, TRANSITIONS, AND OTHER MINOR ADJUSTMENTS AS REQUIRED FOR A COMPLETE AND WORKING SYSTEM INSTALLATION.
3. COORDINATE FLOOR DRAIN LOCATIONS IN MECHANICAL ROOMS WITH ANY EQUIPMENT LOCATED IN THE MECHANICAL ROOM. ROUTE CONDENSATE DRAIN PIPING OUT OF WALKWAY PATHS. CONDENSATE DRAIN PIPING SHALL BE COPPER TYPE L WITH A MIN. OF 1" FLEXIBLE ELASTOMERIC CELLULAR INSULATION AND VAPOR BARRIER.
4. VERIFY MECHANICAL EQUIPMENT LOCATIONS AND PROVIDE ADEQUATE MAINTENANCE CLEARANCE AROUND EACH PIECE OF EQUIPMENT PER THE MANUFACTURER'S RECOMMENDATIONS. PROVIDE CLEARANCE IN FRONT OF ELECTRICAL PANELS AND OTHER ELECTRICAL EQUIPMENT PER THE NATIONAL ELECTRICAL CODE REQUIREMENTS. COORDINATE WITH OTHER TRADES.
5. HVAC EQUIPMENT, PIPING, AND ETC. ARE SHOWN IN APPROXIMATE LOCATIONS. ACTUAL LOCATIONS SHALL BE DETERMINED IN THE FIELD, FULLY COORDINATED AND IN COMPLIANCE WITH CONTRACT DOCUMENTS. IN NO INSTANCE SHALL THE LOCATION VIOLATE STANDARDS, CODES, GOOD HVAC PRINCIPLES, AND THE INTENT OF THE HVAC DESIGN. CONSULT ENGINEER PRIOR TO RELOCATION. MECHANICAL DRAWINGS, IN SOME RESPECTS, ARE DIAGRAMMATIC. COORDINATION, LAYOUT OF SECTIONS, OR FIELD MEASUREMENTS MAY BE REQUIRED PRIOR TO FABRICATION OF DUCTWORK OR PIPING. MODIFY SIZES, AS DIRECTED BY ENGINEER, FOR FIT. ARRANGE ALL DUCTWORK AND PIPING IN A NEAT AND ORDERLY MANNER. COORDINATE WITH OTHER TRADES.
6. CONTRACTOR SHALL NOT CUT ANY STRUCTURAL MEMBERS OF BUILDING.
7. PROVIDE WATER PROOF SEALING OF PIPE AND DUCT PENETRATIONS OF EXTERIOR WALLS, FLOORS, AND/OR ROOF.
8. DO NOT MOUNT DISCONNECT SWITCHES ON HVAC EQUIPMENT EXCEPT AS RECOMMENDED BY MANUFACTURER. EQUIPMENT OF DIFFERING ELECTRICAL CHARACTERISTICS, PHYSICAL DIMENSIONS, CAPACITIES, AND RATINGS MAY BE FURNISHED, PROVIDED SUCH PROPOSED EQUIPMENT IS APPROVED BY THE ENGINEER IN WRITING AND CONNECTING MECHANICAL SERVICES, CIRCUIT BREAKERS, CONDUIT, MOTORS, BASES, AND EQUIPMENT SPACES ARE INCREASED. ADDITIONAL COSTS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR PROVIDING DIFFERING EQUIPMENT.
9. THERMOSTATS SHALL BE GENERALLY LOCATED AS SHOWN. COORDINATE WITH FURNITURE, CASEWORK AND OWNER PROVIDED ITEMS.
10. REFER TO DIVISION 23 SPECIFICATIONS FOR FURTHER REQUIREMENTS.
11. TEST AND BALANCE (TAB) SHALL BE PROVIDED FOR THIS PROJECT. CONTRACTOR SHALL COORDINATE ALL TAB REQUIREMENTS WITH THE TAB CONTRACTOR DURING THE CONSTRUCTION. REFER TO SPECIFICATION 23 05 93 FOR FURTHER INFORMATION.

Anton Lee
Digitally signed by Anton Lee
Date: 2024.05.08 12:21:57 -05'00'

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PROJECT NUMBER 21-147

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PROFESSIONAL ANTON LEE LICENSED No. 82369 STATE OF FLORIDA PROFESSIONAL ENGINEER
05-08-2024

Driftwood Transit Stop & Restroom - Walton County
79 Driftwood Road
Miramar Beach, Florida 32550

DRAWN BY: AL	CHECKED BY: AL
APPROVED BY: AL	
REVISIONS:	
SHEET TITLE:	MECHANICAL LEGEND AND NOTES
DATE: 5/8/2024	FILE: 21014
DRAWING NUMBER:	M-001

DESIGN CONDITIONS

	OUTSIDE		INSIDE - OCCUPIED MODE	
	DB (DEG. F)	WB (DEG. F)	DB (DEG. F)	RH
SUMMER	94	78	72	50%
WINTER	29	-	70	

NOTES:

1. INSIDE SUMMER DESIGN TEMPERATURE IS +0/-2 DEG. F.
2. INSIDE SUMMER DESIGN RELATIVE HUMIDITY IS + 10%.
3. INSIDE WINTER DESIGN TEMPERATURE IS +2/-0 DEG. F.

FAN SCHEDULE

				PERFORMANCE DATA					ELECTRICAL DATA		
MARK	TYPE	DRIVE	CONTROLS INTERLOCK	CFM	E.S.P. (IN. W.C.)	MAX. RPM	MAX. SONES	FAN POWER (HP)	VOLTS	PHASE	Hz
EF-1	IL	DD	LIGHT SWITCH	150	0.40	1,000	1.0	124W	115	1	60
EF-2	IL	DD	LIGHT SWITCH	150	0.40	1,000	1.0	124W	115	1	60
EF-3	CEF	DD	LIGHT SWITCH	80	0.40	1,000	2.0	80W	115	1	60

NOTES:

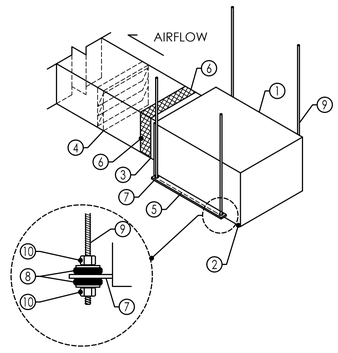
1. IL - INLINE CABINET; CEF - CEILING MOUNT; DD - DIRECT DRIVE
2. PROVIDE WITH GALVANIZED HOUSING AND SOLID STATE SPEED CONTROLLER FOR AIR FLOW BALANCING, NEMA-1 SWITCH, TOGGLE ALONG WITH JUNCTION BOX MOUNTED AND WIRED. PROVIDE WITH BACKDRAFT DAMPER.
3. BASIS OF DESIGN:
   EF-1 AND 2: GREENHECK CSP-A200.
   EF-3: GREENHECK SP-B110.

SPLIT SYSTEM DX HEAT PUMP UNIT EQUIPMENT SCHEDULE - WALTON COUNTY TRANSIT AND RR

INDOOR UNIT																						OUTDOOR UNIT								
	FAN DATA				COOLING COIL DATA								HEATING COIL DATA				ELECTRIC HEAT			ELECTRICAL DATA											
MARK	SA AIRFLOW (CFM)	OA AIRFLOW (CFM)	EXT. S. P. (IN. W.C.)	POWER (HP)	TOTAL CAP. (MBH)	SENSIBLE CAP. (MBH)	LATENT CAP. (MBH)	EAT (DB) (DEG. F)	EAT (WB) (DEG. F)	LAT (DB) (DEG. F)	LAT (WB) (DEG. F)	ARI SEER/ EER	TOTAL CAP. (MBH)	EAT (DB) (DEG. F)	LAT (DB) (DEG. F)	ARI HSPF	REQ. HEAT (KW)	PROVIDED HEAT (KW)	# OF STAGE	MCA	MOP	VOLTS	PHASE	Hz	MARK	COMP QTY	FAN QTY	MCA	MOP	VOLTS	PHASE	Hz
AHU-1	980	100	0.50	1/3 HP	25.3	21.3	4.0	73.5	60.7	54.0	51.5	16 SEER	31.9	65	95	3.9 COP	9.3	9.6	1	54	60	240	1	60	HPU-1	1	1	15	25	240	1	60

NOTES:

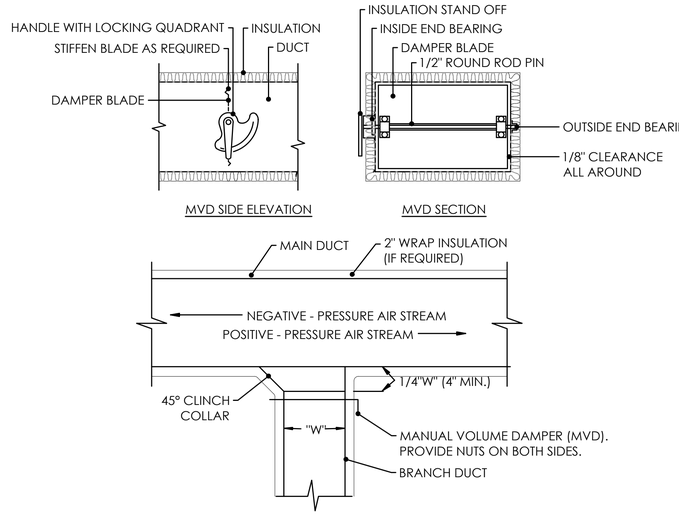
1. UNIT EFFICIENCY IS RATED AT ARI STANDARD CONDITIONS.
2. PROVIDE INDOOR AIR HANDLER UNIT WITH VARIABLE SPEED MOTOR AND 2" MERV 8 FILTER.
3. PROVIDE FIELD FABRICATED INSULATED METAL PLENUM BOX AND NEOPRENE ISOLATOR.
4. PROVIDE OUTDOOR UNIT WITH LOUVERED PANELS OR COIL GUARD AND DIGITAL SCROLL COMPRESSOR
5. REFRIGERANT R-410A PIPING SIZE, ROUTING, AND CONFIGURATION SHALL BE AS RECOMMENDED BY MANUFACTURER.
6. INSULATE ENTIRE LENGTH OF REFRIGERANT SUCTION LINES WITH MINIMUM 3/4" THICK UNICELLULAR INSULATION.
7. MOUNT AND SECURE ALL OUTDOOR UNIT ON 4 INCH THICK CONCRETE PAD.
8. PROVIDE OUTDOOR UNIT WITH CORROSION PROTECTION FOR COILS AND CASINGS. MIN. 10,000 HOURS SALT SPRAY.
9. PROVIDE SINGLE POWER POINT CONNECTION. COORDINATE FINAL POWER REQUIREMENTS WITH ELECTRICAL.
10. BASIS OF DESIGN IS TRANE.



DETAIL 1 KEY NOTES:

1. CORROSION RESISTANT GALVANIZED STEEL SCROLL AND HOUSING WITH SOUND ABSORBING INSULATION
2. ARCHITECTURAL CEILING GRILLE
3. RECTANGULAR OUTLET DUCT COLLAR AND TRANSITION TO ROUND
4. OUTLET WITH INTEGRAL SPRING LOADED BACK DRAFT DAMPER
5. ACCESS PANEL (BOTTOM)
6. FLEXIBLE DUCT CONNECTOR
7. MOUNTING ANGLE BRACKET
8. VIBRATION ISOLATOR - TOP & BOTTOM
9. 1/4" S.S. THREADED HANGER ROD (TOTAL OF FOUR). SUPPORT FROM BUILDING PER FAN MANUFACTURER'S RECOMMENDATIONS.
10. S.S. NUT AND WASHER

1 CEILING EXHAUST FAN DETAIL
NOT TO SCALE



2 DUCT BRANCH CONNECTION AND MVD DETAIL
NOT TO SCALE

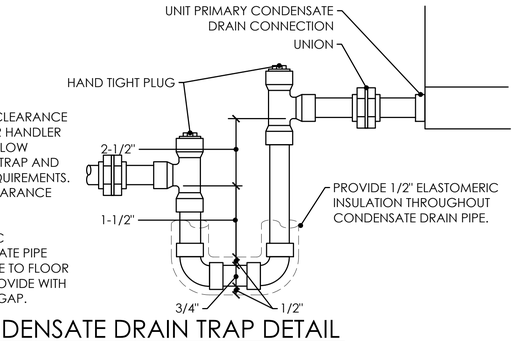
DETAIL 3 NOTES:

- DELETE INSULATION STAND-OFF ON DUCTWORK WITHOUT EXTERIOR INSULATION.
- DETAIL SHOWS SINGLE BLADE DAMPER. DAMPER INSTALLATION SHALL BE SIMILAR FOR MULTI-BLADE DAMPERS & ROUND DAMPERS.

DETAIL 3 NOTE:

PROVIDE PLASTIC PHENOLIC ENGRAVED NAMEPLATE/TAG WITH BLACK BACKGROUND AND WHITE TEXT. MECHANICALLY AFFIXED.

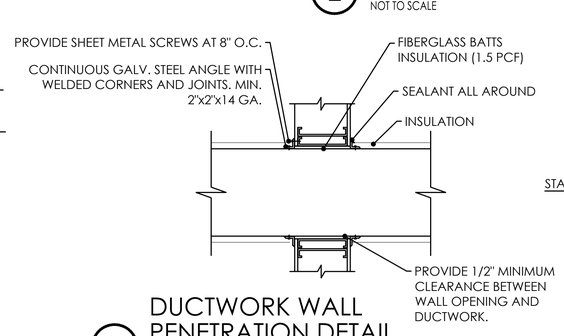
3 EQUIPMENT TAG DETAIL
NOT TO SCALE



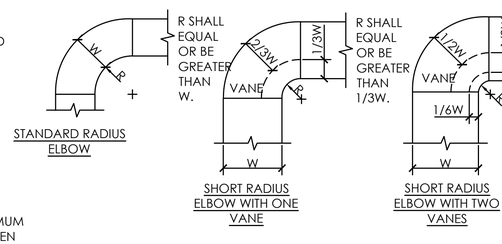
NOTES:

1. PROVIDE CLEARANCE BELOW AIR HANDLER UNIT TO ALLOW PROPER P-TRAP AND SLOPE REQUIREMENTS. TOTAL CLEARANCE MIN. 6".
2. ROUTE PVC CONDENSATE PIPE AND SLOPE TO FLOOR DRAIN. PROVIDE WITH 1-1/2" AIR GAP.

4 CONDENSATE DRAIN TRAP DETAIL
NOT TO SCALE



5 DUCTWORK WALL PENETRATION DETAIL
NOT TO SCALE



DETAIL 6 NOTES:

- THE INTERIOR SURFACE OF ALL RADIUS ELBOWS SHALL BE MADE ROUND.
- ALL STANDARD RADIUS ELBOWS SHOWN ON FLOOR PLANS MAY BE MADE SHORT RADIUS ELBOWS. ALL SHORT RADIUS ELBOWS SHALL HAVE VANES. VANES SHALL BE CONSTRUCTED, SUPPORTED AND FASTENED AS RECOMMENDED BY SMACNA.

6 DUCTWORK RADIUS ELBOW DETAIL
NOT TO SCALE

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05-08-2024

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Miramar Beach, Florida 32550

DRAWN BY: AL	CHECKED BY: AL
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SHEET TITLE: MECHANICAL SCHEDULES AND DETAILS	
DATE: 5/8/2024	FILE: 21014
DRAWING NUMBER: M-002	

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EXPOSED DOUBLE WALL DUCT NOTES

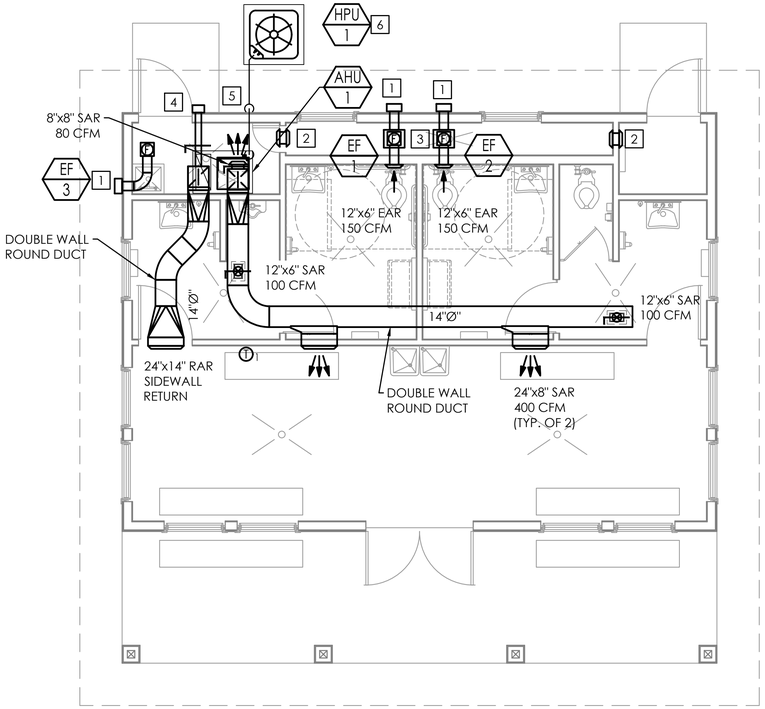
- PROVIDE DOUBLE WALL RECTANGULAR AND ROUND DUCT FOR ALL EXPOSED DUCTWORK LOCATED INSIDE RESTROOM AS NOTED.
- SURFACE PREPARATION - EXPOSED TO BE PAINTED. COLOR PER ARCHITECTURAL.
- DUCTWORK SHALL BE FABRICATED PER SMACNA HVAC DUCT CONSTRUCTION STANDARDS 3RD ED. 2005. PRESSURE RATING SHALL BE 2" W.G.
- COORDINATE WITH A/E FOR FINAL COLOR SELECTION. DUCTWORK SHALL BE FIELD PAINTED. HANDLE WITH CARE. ALL DENTS AND IRREPARABLE DAMAGE AS DETERMINED BY THE A/E SHALL BE REPLACED BY THE CONTRACTOR WITH NO ADDITIONAL COST TO THE OWNER.
- BASIS OF DESIGN IS CROWN PRODUCTS AND EQUAL BY SPIRAL PIPE OF TEXAS.
- PROVIDE CABLE WIRE SUPPORT TO STRUCTURE.

RECTANGULAR DOUBLE WALL DUCTWORK:

- OUTER WALL SHELL MATERIAL: 24 GAUGE G-60 GALVANIZED STEEL.
- INNER WALL: PERFORATED METAL LINER FABRICATED OF G-60 GALVANIZED STEEL, 22 GAUGE GALVANIZED PERFORATED STEEL, 3/32" DIAMETER HOLES ON 3/16" STAGGERED CENTERS 2" W.G. PROVIDE WITH 1" THICK INTERNAL INSULATION CONSISTS OF HIGH DENSITY GLASS FIBER BOARD (4 PCF).
- DUCT CONSTRUCTION: PROVIDE GASKET FOR TRANSVERSE CONNECTORS WITH TDF FITTINGS.

ROUND SPIRAL DOUBLE WALL DUCTWORK

- OUTER WALL SHELL:. MATERIAL: 24 GAUGE GALVANIZED STEEL PER ASTM A653, CS TYPE B. GALVANNEALED STEEL (PAINTABLE) PER ASTM A65. 24 GAUGE
- INNER WALL: 24 GAUGE PERFORATED STEEL 3/32" DIA. HOLE, 3/16" CENTER STAGGER. 1" THICK INTERNAL INSULATION.
- PIPE CONSTRUCTION: SPIRAL LOCK SEAM SMACNA RL-1.
- TRANSVERSE CONNECTIONS: FACTORY INSTALLED 18 GAUGE OUTBOARD FLANGE WITH FIELD INSTALLED FACTORY PROVIDED BUTYL GASKET; SCREWED TOGETHER WITH #10 TEK SCREWS.



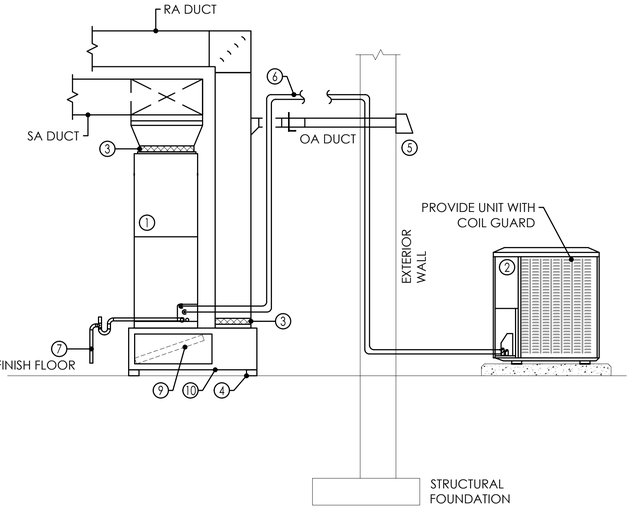
1 MECHANICAL PLAN

4' 0' 4' 8'

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

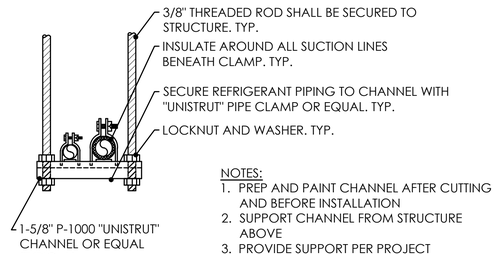
KEY NOTES

1. ROUTE 6" EXH TO ALUMINUM WALL VENT CAP EQUAL TO SEIHO CFXC-6
2. 8"x8" TAG. TYP. OF 2.
3. INLINE CABINET EXHAUST FAN. INTERLOCK WITH LIGHTING OCCUPANCY SENSOR. SEE ELECTRICAL. TYP.
4. ROUTE 8" OA TO ALUMINUM WALL CAP EQUAL TO SEIHO SFXN-8.
5. PROVIDE ALUMINUM JACKET ON ALL WEATHER EXPOSED INSULATED REFRIGERANT PIPE.
6. MOUNT CONDENSING UNIT ON CONCRETE HOUSEKEEPING PAD. PROVIDE WITH NEOPRENE PAD.



2 SPLIT SYSTEM DX AHU AND HPU DETAIL

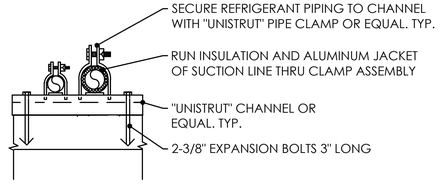
NOT TO SCALE TYPICAL FOR AHU/HPU #1



NOTES:
1. PREP AND PAINT CHANNEL AFTER CUTTING AND BEFORE INSTALLATION
2. SUPPORT CHANNEL FROM STRUCTURE ABOVE
3. PROVIDE SUPPORT PER PROJECT SPECIFICATIONS AND WITHIN 6" OF ANY ELBOW

3 OVERHEAD INTERIOR REFRIGERANT PIPE SUPPORT DETAIL

NOT TO SCALE



4 WEATHER EXPOSED OUTDOOR REFRIGERANT PIPE SUPPORT DETAIL

NOT TO SCALE

DETAIL 4 KEY NOTES:

1. INDOOR AIR HANDLER UNIT. ROUTE CONTROL WIRING IN CONDUIT TO AHU. ABOVEGROUND HVAC CONTROL CONDUIT WITH PULL-WIRE INSTALLED BY MECHANICAL CONTRACTOR. CONTROL WIRING IN FLEX CONDUIT TO OUTDOOR CONDENSING UNIT.
2. OUTDOOR HEAT PUMP UNIT. ANCHOR CONDENSING UNIT TO THE HOUSEKEEPING PAD WITH AT WITH GASKETED WASHERS THROUGH MFR PROVIDED HOLES IN THE BASE OF THE UNIT.
3. FLEXIBLE DUCT CONNECTION. TYP.
4. NEOPRENE ISOLATORS.
5. ROUTE OA TO EXTERIOR WALL CAP OR SOFFIT GRILLE.
6. HARD DRAWN COPPER REFRIGERANT LINES. INSTALL AWAY FROM EQUIPMENT MAINTENANCE CLEARANCE. SECURE TO WALL AND CEILING.
7. CONDENSATE DRAIN. SIZE COPPER CONDENSATE LINE AT FULL SIZE OF UNIT CONNECTION. MIN 3/4" DIA. INSULATE CONDENSATE WITH 1/2" FLEXIBLE UNICELLULAR INSULATION AND SECURE PIPING TO STRUCTURE. ROUTE DRAIN TO EXTERIOR SPLASH BLOCK.
8. PROVIDE SLEEVE ON ALL PIPE PENETRATION. SEAL WEATHER TIGHT.
9. 2" PLEATED FILTER.
10. FIELD FABRICATED SIDE RETURN FILTER BASE. PROVIDE WITH HINGED FILTER ACCESS DOOR.

SEQUENCE OF OPERATION

GENERAL:
- APPLICABLE FOR AHU/HPU-1
- PROVIDE ALL REQUIRED CONTROLS TO OPERATE THE UNITS AS NOTED BELOW.
- PROVIDE CONDUIT FOR ALL CONTROLS WIRING EXPOSED IN THE MECHANICAL ROOM.
- CONDUIT SHALL COMPLY WITH ELECTRICAL REQUIREMENTS.

START/STOP CONTROL:
- PROVIDE MANUFACTURER PROGRAMMABLE T'STAT SYSTEM FOR SCHEDULED START/STOP AND LOCAL OVERRIDE.
- PROVIDE ALL REQUIRED THE FIRE ALARM RELAY AND ALL SAFETIES FEATURES FROM MFR.

OCCUPIED COOLING MODE:
- THE AHU FAN SHALL START AND ONLY MODULATE AS NEEDED.
- THE STAGES OF DX COOLING SHALL BE CYCLED AS REQUIRED TO MAINTAIN SPACE TEMPERATURE WHEN THE SPACE TEMPERATURE RISES ABOVE THE COOLING SETPOINT.

OCCUPIED HEATING MODE:
- THE AHU FAN SHALL START AND ONLY MODULATE AS NEEDED.
- THE STAGES OF DX HEATING SHALL BE CYCLED AS REQUIRED TO MAINTAIN SPACE TEMPERATURE WHEN THE SPACE TEMPERATURE DROPS BELOW THE HEATING SETPOINT.
- WHEN THE DX HEATING CYCLE IS INCAPABLE TO MAINTAIN SPACE TEMPERATURE, THE ELECTRICAL STRIP HEAT SHALL BE MODULATED AS REQUIRED TO MAINTAIN HEATING SETPOINT.

OCCUPIED DEFROST MODE:
- THE AHU FAN SHALL START.
- DURING HEATING MODE, IF THE UNIT DEFROST CYCLE ACTIVATES, THE UNIT SHALL RUN THE INDOOR FAN AND MODULATE THE ELECTRIC STRIP HEATER TO SATISFY THE SPACE HEATING REQUIREMENTS.

UNOCCUPIED MODE:
- THE AHU ONLY RUN AS NEEDED TO SATISFY UNOCCUPIED SPACE TEMPERATURE.

OVERRIDE MODE:
- THE OVERRIDE TIMERS SHALL PLACE THE SYSTEM IN OCCUPIED MODE FOR 2 HOURS (ADJ.)

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05-08-2024

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