HVAC Symbols

—D—	Condensate Drain	EF	Exhaust Fan
20/6	Rectangular or square ductwork: first number indicates dimension of side shown, second number indicates side not shown.	EF	Exhaust Fan with Light
	Duct Exhaust Elbow—Turned up 90°—Rectangular	FD	Fire Damper
	Duct Exhaust Elbow—Turned down 90°—Rectangular	SD	Smoke Damper
	Duct Return Elbow—Turned up 90°—Rectangular	F/SD	Fire/Smoke Damper
	Duct Return Elbow—Turned down 90°—Rectangular	CRD	Ceiling Radiation Damper
	Duct Supply Elbow—Turned up 90°—Rectangular	CR/SD	Ceiling Radiation/Smoke Damper
	Duct Supply Elbow—Turned down 90°—Rectangular	VD	Volume Damper
	Direction of Flow		Pipe Turned Down
R	Change of Elevation Rise (R), Drop (D)		Pipe Turned Up
S	Smoke Detector		Pipe Capped
H	Heat Detector	H	Humidistat
T	Mount top of thermostat at 47" AFF	C	CO2 Sensor
	Ball Valve		Connect to Existing
	Diaphragm Valve	MOD	Motor Operated Damper
	Gate, Angle Valve		Butterfly Valve
	Globe Angle Valve		Gate Valve
	Three Way Valve		Globe Valve
	Check, Spring Valve		Plug Valve
	Quick—Opening Valve		Check, Swing Gate Valve
	Safety or Relief Valve		Pressure—Reducing Regulator Valve
	Square—Head Cock Valve		Quick—Closing Valve
	Air Vent, Manual		Solenoid Valve
	Pipe Guide		Air Vent, Automatic
	Anchor, Main	S	Air Separator
	Expansion Joint		Anchor, Intermediate
	Flexible Connector		Ball Joint
VFM—1	Flowmeter, Venturi		Expansion Loop
	Heat Exchanger, Liquid		Flowmeter, Orifice Plate with Flanges
	Pressure Gage and Cock	FS	Flow Switch
CW—1	Pump (Indicate Use)	R	Pitch of Pipe, Rise (R) drop (D)
	Strainer	PS	Pressure Switch
	Strainer, Duplex	PSD	Pump Suction Diffuser
	Thermometer Well, Only		Strainer, Blow Off
T	Time Clock		Thermometer

Abbreviations

ACC	Air cooled condenser
ACCU	Air cooled condensing unit
AD	Access door
AFF	Above finished floor
AFR	Above finished roof
AHU	Air handling unit
ARCH	Architectural
AS	Air separator
AVG	Average
BD	Balancing
BDD	Backdraft Damper
BFC	Below finished ceiling
BFP	Backflow preventer
B.I.	Built in
BHP	Brake horse power
BLDG	Building
BOD	Bottom of duct
C	Chilled water coil
CD	Ceiling diffuser
CFM	Cubic feet per minute
CHWS	Chilled water supply
CHWR	Chilled water return
CLG	Ceiling
CO2	Carbon Dioxide Detector
COND	Condensing unit
CONTR	Contractor
CONST	Constant
CONV	Convector
CX	Connect to existing
DCW	Domestic cold water
DH	Dehumidifier
DHW	Domestic hot water
DHWR	Domestic hot water return
DIA or ø	Diameter
DN	Down
DWG	Drawing
DX	Direct expansion
DXC	Refrigerant coil
EAG	Exhaust air grille
EAR	Exhaust air register
EAT	Entering air temperature
EBB	Electric baseboard heater
EC	Electrical contractor
EDC	Electric duct coil
EF	Exhaust fan
ELECT	Electrical
ERV	Energy recovery ventilator
EUH	Electric unit heater
EWH	Electric wall heater
EWC	Electric water cooler
(E)	Existing
FC	Forward curved
F	Furnace
FT	Feet
FTHD	Feet of head
FLEX	Flexible
FSC	Fan speed control
GA	Gauge
GALV	Galvanized
GC	General contractor
GPM	Gallons per minute
GEN	General
HC	Hot water coil
HCWR	Heat/chilled water return
HCWS	Heat/chilled water supply
HG	Hot gas
HP	Heat pump
HTG	Heating
HTR	Heater
HVAC	Heating, ventilating and air conditioning
HV	Heating and ventilating
HORIZ	Horizontal
HP	Horse power
HPWR	Heat pump water return
HPWS	Heat pump water supply
HW	Hot water
HWR	Hot water return
HWS	Hot water supply
IE	Invert elevation
IN	Inches
IRTH	Infrared tube
LAT	Leaving air temperature
LBD	Linear bar diffuser
LBS/LB	Pounds or pound
MA	Mixed air
MAX	Maximum
MBH	1000 British thermal units per hour
MECH	Mechanical
MC	Mechanical contractor
MFGR	Manufacturer
MH	Manhole
MIN	Minimum
MOD	Motor Operated Damper
MTG	Mounting
MUA	Make—up air
MUW	Make—up water
NA	Not applicable
NTS	Not to scale
OA	Outside air
OAI	Outside air intake
OED	Open end duct
PC	Plumbing contractor
PD	Pressure drop
PLUM	Plumbing
PRESS	Pressure
PROP	Propeller
PTAC	Packaged terminal air—conditioner
RA	Return air
RAG	Return air grille
RAR	Return air register
RCH	Radiant Ceiling Heater
REG	Register
REQ'D	Required
RL	Refrigerant liquid
RLX	Relocate existing
RM	Room
RPM	Revolutions per minute
RS	Refrigerant suction
RTU	Rooftop unit
RX	Remove existing
SA	Supply air
SAN	Sanitary
SAR	Supply air register
SF	Supply fan
SFR	Supply floor register
SG	Soffit grille
SHTMTL	Sheet metal
TSTAT	Thermostat
STD	Standard
STM	Storm
STRUCT	Structural
SP	Static pressure
SPD	Sump pump discharge
SPLD	Splitter damper
SQFT	Square feet
SS	Stainless steel
SUCT	Suction
SYS	System
TCP	Temperature control panel
TEMP	Temperature
ΔT	Temperature difference
TG	Transfer grille
THERM	Thermometer
THRD	Threaded
TSP	Total static pressure
TYP	Typical
UH	Unit heater
UL	Underwriters laboratory
UNO	Unless Noted Otherwise
V	Vent
VEST	Vestibule
W/	With
WP	Working point
WSHP	Water source heat pump

Schedules of through penetration firestop systems.

Concrete Floors			Concrete or Block Walls		
Type of penetrant	**(HR)**	**UL—Classified system**	**Type of penetrant**	**(HR)**	**UL—Classified system**
Circular blank openings	3	C—AJ—0055	Circular blank openings	3	C—AJ—0055
Single metal pipes or conduit	3	C—AJ—1226	Single metal pipes or conduit	3	C—AJ—1226
Single non—metallic pipe or conduit (I.E. PVC, CPVC, ABS, FRP, ENT)	3	C—AJ—2342	Single non—metallic pipe or conduit (I.E. PVC, CPVC, ABS, FRP, ENT)	3	C—AJ—2342
Single or bundled cables	3	C—AJ—3095	Single or bundled cables	3	C—AJ—3095
Single insulated pipes	2	C—AJ—5090	Single insulated pipes	2	C—AJ—5090
Electrical busway	3	C—AJ—6006	Electrical busway	3	C—AJ—6006
Non—insulated mechanical ductwork without dampers	3	C—AJ—7046, C—AJ—7084	Non—insulated mechanical ductwork without dampers	2	W—J—7021, W—J—7022
Insulated mechanical ductwork without dampers	N/A	N/A	Insulated mechanical ductwork without dampers	2	W—J—7029
Mixed penetrants	2	C—AJ—8255	Mixed penetrants	2	C—AJ—8255
Wood Floor—Ceiling			**Gypsum Wallboard Assemblies**		
Type of penetrant	**(HR)**	**UL—Classified system**	**Type of penetrant**	**(HR)**	**UL—Classified system**
Metal pipes or conduit	2	F—C—1009	Metal pipes or conduit	2	W—L—1058, W—L—1164
Non—metallic pipe or conduit	2	F—C—2232, F—C—2030	Non—metallic pipe or conduit	2	W—L—2078
Single or bundled cables	2	F—C—3012	Single or bundled cables	2	W—L—3065
			Panel boards	2	W—L—7190
Insulated pipes	2	F—C—5004	Insulated pipes	2	W—L—5028, W—L—5047
Non—insulated mechanical ductwork without dampers	1	F—C—7013	Non—insulated mechanical ductwork without dampers	2	W—L—7017, W—L—7042, W—L—7155
Insulated mechanical ductwork without dampers	N/A	N/A	Insulated mechanical ductwork without dampers	2	W—L—7153, W—L—7156
Mixed penetrants	1	F—C—8026	Mixed penetrants	4	W—L—8069

See Division 7 specifications for other approved manufacturers.
UL's Online Certifications Directory: www.ul.com/database

Notes:

1. Jobsite conditions of each through—penetration firestop system must meet all details of the UL—Classified System selected.
2. If jobsite conditions do not match any UL—classified systems in the schedules above, contact one of the approved manufacturers for alternative systems or engineer judgment drawings.
3. Where more than one applicable UL—Classified System is listed in the schedules, choose the UL System which is most economical for each through—penetration firestop system.
4. Coordinate work with other trades to assure that penetration opening sizes are appropriate for penetrant locations, and vice versa.
5. For 3—hour rated gypsum walls, contact one of the approved manufacturers for a UL—classified system or engineer judgment drawing.

HVAC General Notes

A. Permits: Provide work in accordance with current version of applicable national, state, and local codes as determined by the Authorities Having Jurisdiction (AHJs). Applicable codes shall include ANSI A117.1 (latest edition), UFAS (Uniform Federal Accessibility Standards), FHAG (Fair Housing Accessibility Guidelines), and codes listed on cover and interpretations. Contractor shall be responsible for obtaining and paying for permits and inspections. Contractor shall be familiar with applicable codes and local AHJ interpretations before bid and construction.

B. Definitions: Furnish means to purchase, arrange for delivery to site, and to take delivery at the site. Install means to place in position for use. Provide means to furnish and install. "HC" means handicap accessible per current ADA, UFAS and ANSI Type A requirements. "SI" means sensory impaired per ADA, UFAS and ANSI requirements.

C. Contract Documents: All work shall be performed according to the Contract Documents. The Contract Documents include Architectural, Civil, Structural, Fire Protection, Plumbing, Mechanical, and Electrical design drawings, Specifications, and Addenda, Architect's Supplemental Instructions, Bulletins, Change Orders, and other instruction transmitted to modify the original documents. All of these documents are integral to the project. Refer to the specifications for general requirements, product quality, construction, finish, and for additional installation instructions. Refer to the architectural drawings for accessibility compliance requirements. Before bidding, review and understand the requirements with the Engineer and General Contractor, and again during the pre—construction conference prior to performing the work. Conflicts within or between the Contract Documents and references or codes shall use the most stringent interpretation until clarified. Clarifications shall be requested in writing and shall be resolved prior to proceeding with installation. Scope changes shall be approved by the Owner, Architect, Engineer, and the General Contractor, prior to proceeding with installation. All costs due to performing work prior to conflict resolution shall be borne by the contractor.

D. Coordination: The drawings are diagrammatic, schematic and shown for bidding and general reference. Drawings are not intended to define exact installation details and shall not be scaled. Prior to bid, confirm scope of work with Engineer. Before ordering equipment or supplies, coordinate scope requirements with suppliers and submit product data to Engineer for review. Prior to construction, attend truss coordination/pre—installation conference to coordinate structure requirements, and before installing work verify existing conditions match previous coordination. Coordinate exact dimensions and sequencing with all other trades including but not limited to site, utilities, and framing subcontractor. All additional costs resulting from lack of coordination shall be borne by the contractor.

E. Penetrations: Penetrations through structure shall be coordinated with structural elements, including studs, joists and trusses, before ordering materials or structure construction. Membrane and through penetrations of fire/smoke rated construction shall be protected with a product listed and labeled to maintain the rating of system penetrated. Penetrations through walls, slabs, masonry, etc. shall do so through sleeves. All gaps outside and inside of sleeves shall be caulked or be tightly packed in order to maintain proper protection against fire, smoke, heat loss, moisture, air infiltration, sound transmission, etc.

F. Contractor Deviations: Deviations from the design shall be approved by the Architect and Engineer before ordering supplies or starting work. Alternate products and/or system layouts must be approved in writing prior to bid in order to be accepted. If submitted products are not specified, they are substitutions and shall be submitted for consideration under substitution procedures. Contractor shall be responsible for design and performance of proposed substitutions, even if accepted by owner and added to construction documents. All costs associated with dimensional, performance, or other deviations from basis of design, including but not limited to, engineering, permitting, and other affected trades, shall be borne by the contractor.

G. Incidentals: Provide materials, labor, and incidental work (including protection of existing, surface preparation, hangars, and other appurtenances) to provide complete working HVAC systems for the project. Offsets, fittings, accessories, and miscellaneous hardware are not shown, but shall be included at no additional cost in order to complete the system.

H. Warranty: To obtain final project certificates of occupancy upon completion of the work scope, contractor shall warrant that the work has been completed in compliance with established codes and regulations. Certificate shall be given to owner at project completion.

I. Coordinate radiation/fire dampers with structural assembly/structural shop drawings before ordering. Verify damper outside dimensions fit inside the dimensional clearances of the structural assembly and advise if changes are needed. Verify damper is listed for the application — horizontal or vertical, and concrete, wood, or truss. Verify the UL listing of the damper includes UL listing for the rated assembly and verify the UL listing of rated assembly includes the damper manufacturer and model number. Install all dampers according to manufacturer's instructions.

J. Condensate Drains: Trap for condensate drain shall be 1" deeper than the total possible static pressure that the air handling unit can develop. Trap outlet shall be lower than inlet by 1" more than total unit static pressure.

K. Piping in exterior walls shall be run inside of building insulation. Provide metal jacket up 8'—0" A.F.F. on all exposed insulated piping. Trapeze hangers may be used when grouping pipes.

L. Air Ducts: Duct leakage shall be less than 4.0 CFM at 25 pascals/100 SF of conditioned floor area. Ducts shall run within thermal envelope. Air distribution within walls shall be fully ducted—no exposed studs, drywall, or sheathing. Ducts run outside thermal envelope shall have R—8 insulation minimum.

M. Refrigerant: Provide Non—HCFC HVAC refrigerant, charge per manufacturer requirements. Forward test and refrigerant data to builder and green rater when complete.

N. Ceiling Access Panels: Provide one 36" x 36" ceiling access panel for each item of equipment located above a drywall ceiling. Provide one 24" x 24" ceiling access panel for each valve (including but not limited to balance and control valves, or damper (including but not limited to balance, fire, smoke and/or combination fire/smoke dampers). Coordinate access panel locations and show recommended locations on coordination drawings along with equipment, valves, dampers, structure, lights, and ceiling air devices.

O. Flexible ducts and flexible connectors shall not exceed 5'—0" in length. 10 inches WG positive and 1.0 WG negative. R—value 4.2 within thermal envelope, R—value 8.0 outside thermal envelope. See specifications for additional requirements.

P. Elevator Note: Elevator Calculation Statement: ASME 17.1 — 2.7.6.3.2, 2.7.9.2, 2.7.5.2 requires machine rooms and hoistways to be provided with natural or mechanical means to keep the ambient air temperature and humidity in the range specified by the elevator equipment manufacturer to ensure safe and normal operation of the elevator.
- Machine rooms shall be conditioned as shown on plan and details.
- Hoistway exterior surfaces shall be insulated by the GC to code minimum (R—20 walls and R—38 roof) and provide door seals and vestibule at unconditioned levels. When building is fully conditioned to remain between 70 and 75 degrees F, calculations show that stack effect will provide adequate ventilation to keep the hoistway equipment within design parameters.
- Machine Room Less (MRL) elevators shall be selected by the GC to safely operate between 41 and 104 degrees F (5—40 degrees C). A 15HP or smaller motor generates 73 BTU requiring 160 CuFt of airflow per minute of operation. Each closed elevator door allows 650 cfm of infiltration (3.5' x 7' door with .2" crack at .3" WC pressure) according to ASHRAE Fundamentals Handbook. A draft pressure of .1" WC/floor is created naturally through stack effect. Piston effect produces an additional .03" WC of pressures above and below the car creating additional infiltration during operation. For MRL elevators with motors larger than 15HP, provide an inline exhaust fan ducted from hoistway with minimum 150 cfm, power wiring, motor operated damper, and thermostat with remote sensing probe set for 90 degrees F. When not in use, elevator doors shall open to allow unrestricted airflow into the hoistway when not in operation. At substantial completion, the GC shall place a permanent placard showing acceptable temperature and humidity range.

Q. Materials exposed within plenums shall be noncombustible or have a flame spread index of 25 or less and a smoke—developed index of 50 or less.

STATE OF OHIO
LARRY T. BREHM
53245
REGISTERED PROFESSIONAL ENGINEER

BENNETT POINT

BLDG 1 - 600 E 12TH STREET
BLDG 2 - 528 E 12TH STREET
CINCINNATI, OHIO

NOTE:
1. ALL BIDDERS SHALL VISIT THE SITE AND BECOME FAMILIAR W/ THE EXISTING CONDITIONS AND REQUIREMENTS OF THE PROJECT AND SHALL NOTIFY THE ARCHITECT OF ANY ERRORS AND OMISSIONS SUBSEQUENTLY DISCOVERED IN THE CONTRACT DOCUMENTS.
2. THE CONTRACT DOCUMENTS ARE COMPRISED OF THE DRAWINGS AND THE PROJECT MANUAL IN THEIR ENTIRETY. THE INFORMATION IN THESE DOCUMENTS IS DEPENDENT UPON AND COMPLEMENTARY OF EACH OTHER. SEPARATION OF THE CONTRACT DOCUMENTS SHALL NOT BE PERMITTED IF THE CONTRACTOR CHOOSES TO SEPARATE THE DOCUMENTS, THEY DO SO AT THEIR OWN RISK AND EXPENSE.
3. ADDITIONALLY, SEE GENERAL INFORMATION ON "AG" SHEETS.
4. THE CLIENT ACKNOWLEDGES THE CONSULTANTS (ARCHITECT) PLANS AND SPECIFICATION INCLUDING ALL DOCUMENTS ON ELECTRONIC MEDIA AS INSTRUMENTS OF THE CONSULTANTS (ARCHITECT) PROFESSIONAL SERVICE. THE CLIENT SHALL NOT REUSE OR MAKE OR PERMIT TO BE MADE ANY MODIFICATION TO THE DRAWINGS AND SPECIFICATIONS WITHOUT THE PRIOR WRITTEN AUTHORIZATION OF THE CONSULTANT (ARCHITECT). THE CLIENT AGREES TO WAIVE ANY CLAIM AGAINST THE CONSULTANT (ARCHITECT) ARISING FROM ANY UNAUTHORIZED TRANSFER, REUSE OR MODIFICATION OF THE DRAWINGS AND SPECIFICATIONS.
5. ARCHITECT CANNOT WARRANT THE ACCURACY OF DATA CONTAINED HEREIN. ANY USE OR REUSE OF ORIGINAL OR ALTERED CADD DESIGN MATERIALS BY THE USER OR OTHER PARTIES WITHOUT THE REVIEW AND WRITTEN APPROVAL OF THE ARCHITECT SHALL BE AT THE SOLE RISK OF THE USER. FURTHERMORE, USER AGREES TO DEFEND, INDEMNIFY, AND HOLD ARCHITECT HARMLESS FROM ALL CLAIMS, INJURIES, DAMAGES, LOSSES, EXPENSES, AND ATTORNEY'S FEES ARISING OUT OF THE MODIFICATION OR REUSE OF THESE MATERIALS.
6. THESE DRAWINGS AS PART OF THE CONTRACT DOCUMENTS ARE DIAGRAMMATIC AND ARE NOT INTENDED TO DEFINE EXACT QUANTITIES, LOCATIONS OR CODIFIED REQUIREMENTS. THE DRAWINGS SHALL NOT BE SCALED. EXACT STATE AND LOCAL CODE REQUIREMENTS AND OTHER APPLICABLE CODE REQUIREMENTS SHALL BE VERIFIED BY AND ARE THE SOLE RESPONSIBILITY OF THIS CONTRACTOR. ANY INFORMATION WHICH DIRECTLY CONFLICTS WITH ANY OF THESE CODES OR ANY DISCREPANCIES FOUND IN THE CONTRACT DOCUMENTS SHALL BE BROUGHT TO THE ATTENTION OF THE PROJECT ARCHITECT.

PERMIT SET

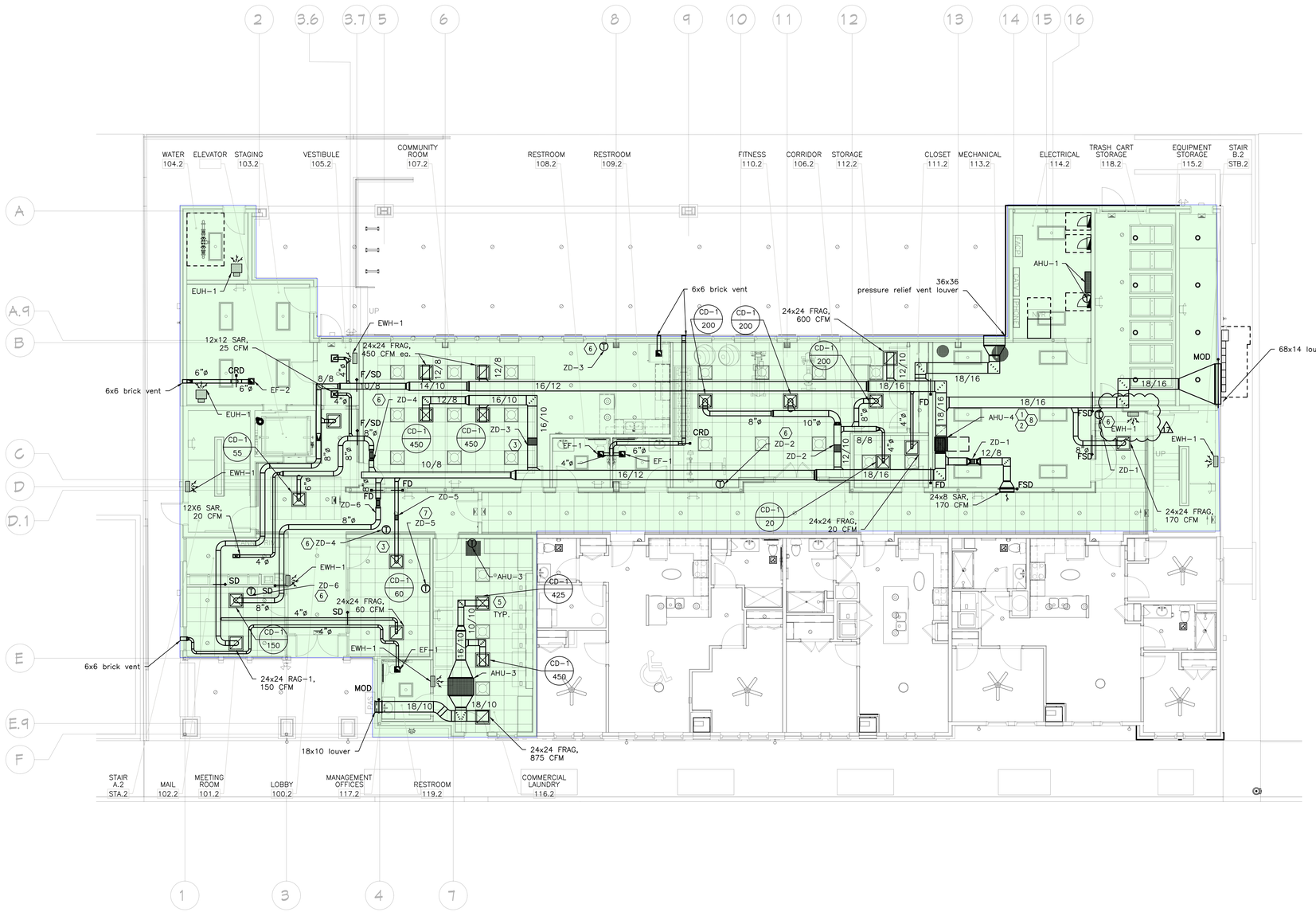
PROJECT DATE: 11.17.2020
PROJECT #: 19187

#	Description	Date

MECHANICAL NOTES, SYMBOLS AND ABBREVIATIONS

M.001

BERARDI+
ARCHITECTURE | INTERIOR DESIGN | ENGINEERING
1398 GOODALE BOULEVARD, COLUMBUS, OHIO 43212
P 614.221.1110 berardipartners.com



Coded Notes

1. Dashed line represents required clearance/access to equipment.
2. Route condensate drain indirectly to nearest floor/hub drain with 2" air gap.
3. Ductwork routed within dropped ceiling/soffit.
4. Flush mounted louvered shutter.
5. See dryer detail – M.402.
6. Thermostat mounted 47" AFF at top. Provide clear locking Lexan cover. All covers keyed alike.
7. Thermostat mounted 47" AFF at top.
8. Provide DCV and economizer controller to operate MOD(s).

north

BUILDING 2 – FIRST FLOOR PLAN

1/8"=1'-0"

STATE OF OHIO
JOHN J. CYBULSKI
E-78419
REGISTERED PROFESSIONAL ENGINEER

11/29/2022

BENNETT POINT

BLDG 1 - 600 E 12TH STREET
BLDG 2 - 528 E 12TH STREET
CINCINNATI, OHIO

NOTE:
1. ALL BIDDERS SHALL VISIT THE SITE AND BECOME FAMILIAR W/ THE EXISTING CONDITIONS AND REQUIRMENTS OF THE PROJECT AND SHALL NOTIFY THE ARCHITECT OF ANY ERRORS AND OMISSIONS SUBSEQUENTLY DISCOVERED IN THE CONTRACT DOCUMENTS.
2. THE CONTRACT DOCUMENTS ARE COMPRISED OF THE DRAWINGS AND THE PROJECT MANUAL IN THEIR ENTIRETY. THE INFORMATION IN THESE DOCUMENTS IS DEPENDENT UPON AND COMPLEMENTARY OF EACH OTHER. SEPARATION OF THE CONTRACT DOCUMENTS SHALL NOT BE PERMITTED IF THE CONTRACTOR CHOOSES TO SEPARATE THE DOCUMENTS, THEY DO SO AT THEIR OWN RISK AND EXPENSE.
3. ADDITIONALLY, SEE GENERAL INFORMATION ON "A0" SHEETS.
4. THE CLIENT ACKNOWLEDGES THE CONSULTANTS (ARCHITECT) DRAWINGS AND SPECIFICATION, INCLUDING ALL DOCUMENTS ON ELECTRONIC MEDIA AS INSTRUMENTS OF THE CONSULTANTS (ARCHITECT) PROFESSIONAL SERVICE. THE CLIENT SHALL NOT REUSE OR MAKE OR PERMIT TO BE MADE ANY MODIFICATION TO THE DRAWINGS AND SPECIFICATIONS WITHOUT THE PRIOR WRITTEN AUTHORIZATION OF THE CONSULTANT (ARCHITECT). THE CLIENT AGREES TO WAIVE ANY CLAIM AGAINST THE CONSULTANT (ARCHITECT) ARISING FROM ANY UNAUTHORIZED TRANSFER, REUSE OR MODIFICATION OF THE DRAWINGS AND SPECIFICATIONS.
5. ARCHITECT CANNOT WARRANT THE ACCURACY OF DATA CONTAINED HEREIN. ANY USE OR REUSE OF ORIGINAL OR ALTERED CADD DESIGN MATERIALS BY THE USER OR OTHER PARTIES WITHOUT THE REVIEW AND WRITTEN APPROVAL OF THE ARCHITECT SHALL BE AT THE SOLE RISK OF THE USER. FURTHERMORE, USER AGREES TO DEFEND, INDEMNIFY, AND HOLD ARCHITECT HARMLESS FROM ALL CLAIMS, INJURIES, DAMAGES, LOSSES, EXPENSES, AND ATTORNEY 'S FEES ARISING OUT OF THE MODIFICATION OR REUSE OF THESE MATERIALS.
6. THESE DRAWINGS AS PART OF THE CONTRACT DOCUMENTS ARE DIAGRAMMATIC AND ARE NOT INTENDED TO DEFINE EXACT QUANTITIES, LOCATIONS OR CODIFIED REQUIREMENTS. THE DRAWINGS SHALL NOT BE SCALED. EXACT STATE AND LOCAL CODE REQUIREMENTS AND OTHER APPLICABLE CODE REQUIREMENTS SHALL BE VERIFIED BY AND ARE THE SOLE RESPONSIBILITY OF THIS CONTRACTOR. ANY INFORMATION WHICH DIRECTLY CONFLICTS WITH ANY OF THESE CODES OR ANY DISCREPANCIES FOUND IN THE CONTRACT DOCUMENTS SHALL BE BROUGHT TO THE ATTENTION OF THE PROJECT ARCHITECT.

PERMIT SET

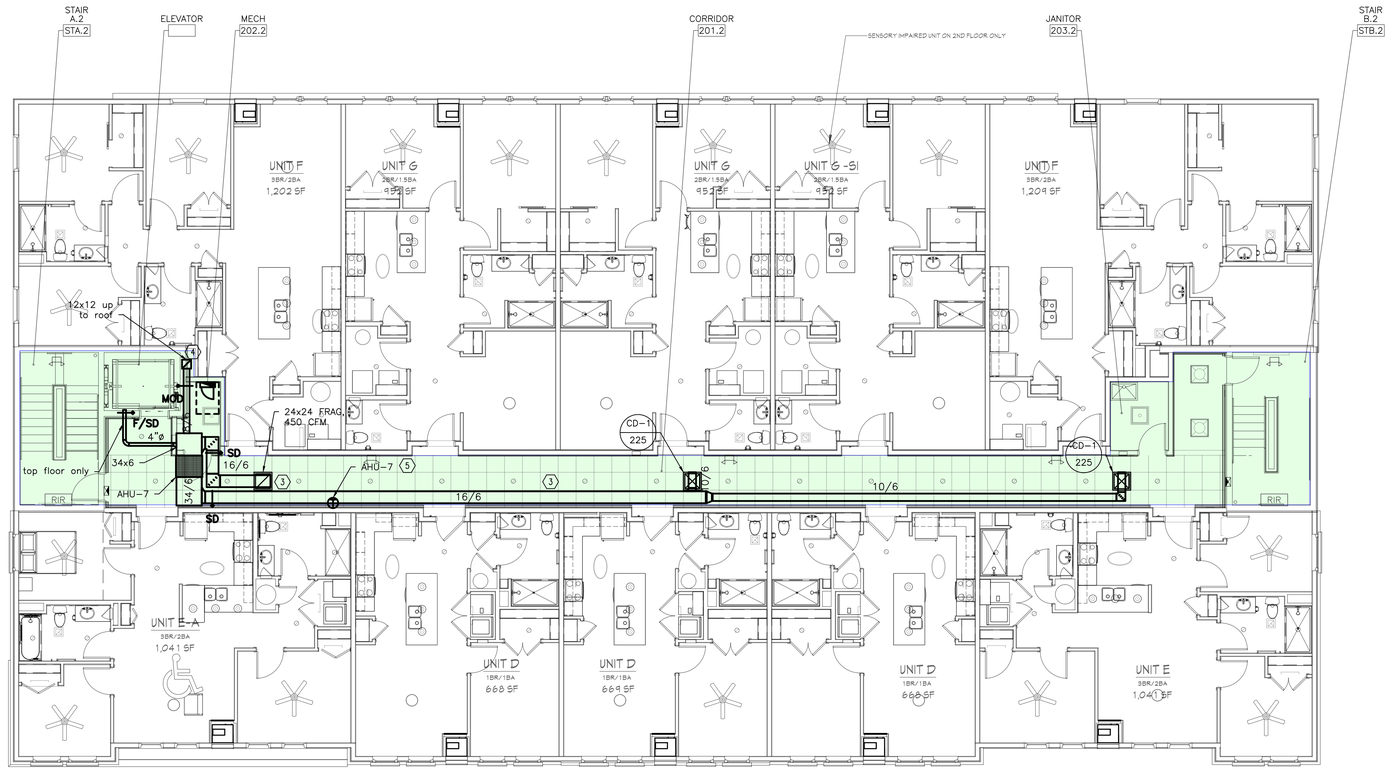
PROJECT DATE: 11.17.2020
PROJECT #: 19187

#	Description	Date
1	90% Drawing Set	11.17.2020
9	ASI #3	09.20.2021
17	ASI #009	11.29.2022

MECHANICAL
BUILDING 2 FIRST FLOOR PLAN

M.101.2

BERARDI+
ARCHITECTURE | INTERIOR DESIGN | ENGINEERING
1398 GOODALE BOULEVARD, COLUMBUS, OHIO 43212
P 614.221.1110 berardipartners.com



Coded Notes

1. Dashed line represents required clearance/access to equipment.
2. Route condensate drain indirectly to nearest floor/hub drain with 2" air gap.
3. Ductwork routed within dropped ceiling/soffit.
4. Outside air intake routed from roof to lower floors.
5. Thermostat mounted 47" AFF at top. Provide clear locking Lexan cover. All covers keyed alike.

north

BUILDING 2 - SECOND - FOURTH FLOOR PLAN

1/8"=1'-0"

BENNETT POINT

BLDG 1 - 600 E 12TH STREET
BLDG 2 - 528 E 12TH STREET
CINCINNATI, OHIO

NOTE:
1. ALL BIDDERS SHALL VISIT THE SITE AND BECOME FAMILIAR W/ THE EXISTING CONDITIONS AND REQUIREMENTS OF THE PROJECT AND SHALL NOTIFY THE ARCHITECT OF ANY ERRORS AND OMISSIONS SUBSEQUENTLY DISCOVERED IN THE CONTRACT DOCUMENTS.
2. THE CONTRACT DOCUMENTS ARE COMPRISED OF THE DRAWINGS AND THE PROJECT MANUAL IN THEIR ENTIRETY. THE INFORMATION IN THESE DOCUMENTS IS DEPENDENT UPON AND COMPLEMENTARY OF EACH OTHER. SEPARATION OF THE CONTRACT DOCUMENTS SHALL NOT BE PERMITTED. IF THE CONTRACTOR CHOOSES TO SEPARATE THE DOCUMENTS, THEY DO SO AT THEIR OWN RISK AND EXPENSE.
3. ADDITIONALLY, SEE GENERAL INFORMATION ON "A0" SHEETS.
4. THE CLIENT ACKNOWLEDGES THE CONSULTANTS (ARCHITECT) DRAWINGS AND SPECIFICATION, INCLUDING ALL DOCUMENTS ON ELECTRONIC MEDIA AS INSTRUMENTS OF THE CONSULTANTS (ARCHITECT) PROFESSIONAL SERVICE. THE CLIENT SHALL NOT REUSE OR MAKE OR PERMIT TO BE MADE ANY MODIFICATION TO THE DRAWINGS AND SPECIFICATIONS WITHOUT THE PRIOR WRITTEN AUTHORIZATION OF THE CONSULTANT (ARCHITECT). THE CLIENT AGREES TO WAIVE ANY CLAIM AGAINST THE CONSULTANT (ARCHITECT) ARISING FROM ANY UNAUTHORIZED TRANSFER, REUSE OR MODIFICATION OF THE DRAWINGS AND SPECIFICATIONS.
5. ARCHITECT CANNOT WARRANT THE ACCURACY OF DATA CONTAINED HEREIN. ANY USE OR REUSE OF ORIGINAL OR ALTERED CADD DESIGN MATERIALS BY THE USER OR OTHER PARTIES WITHOUT THE REVIEW AND WRITTEN APPROVAL OF THE ARCHITECT SHALL BE AT THE SOLE RISK OF THE USER. FURTHERMORE, USER AGREES TO DEFEND, INDEMNIFY, AND HOLD ARCHITECT HARMLESS FROM ALL CLAIMS, INJURIES, DAMAGES, LOSSES, EXPENSES, AND ATTORNEY 'S FEES ARISING OUT OF THE MODIFICATION OR REUSE OF THESE MATERIALS.
6. THESE DRAWINGS AS PART OF THE CONTRACT DOCUMENTS ARE DIAGRAMMATIC AND ARE NOT INTENDED TO DEFINE EXACT QUANTITIES, LOCATIONS OR CODIFIED REQUIREMENTS. THE DRAWINGS SHALL NOT BE SCALED. EXACT STATE AND LOCAL CODE REQUIREMENTS AND OTHER APPLICABLE CODE REQUIREMENTS SHALL BE VERIFIED BY AND ARE THE SOLE RESPONSIBILITY OF THIS CONTRACTOR. ANY INFORMATION WHICH DIRECTLY CONFLICTS WITH ANY OF THESE CODES OR ANY DISCREPANCIES FOUND IN THE CONTRACT DOCUMENTS SHALL BE BROUGHT TO THE ATTENTION OF THE PROJECT ARCHITECT.

PERMIT SET

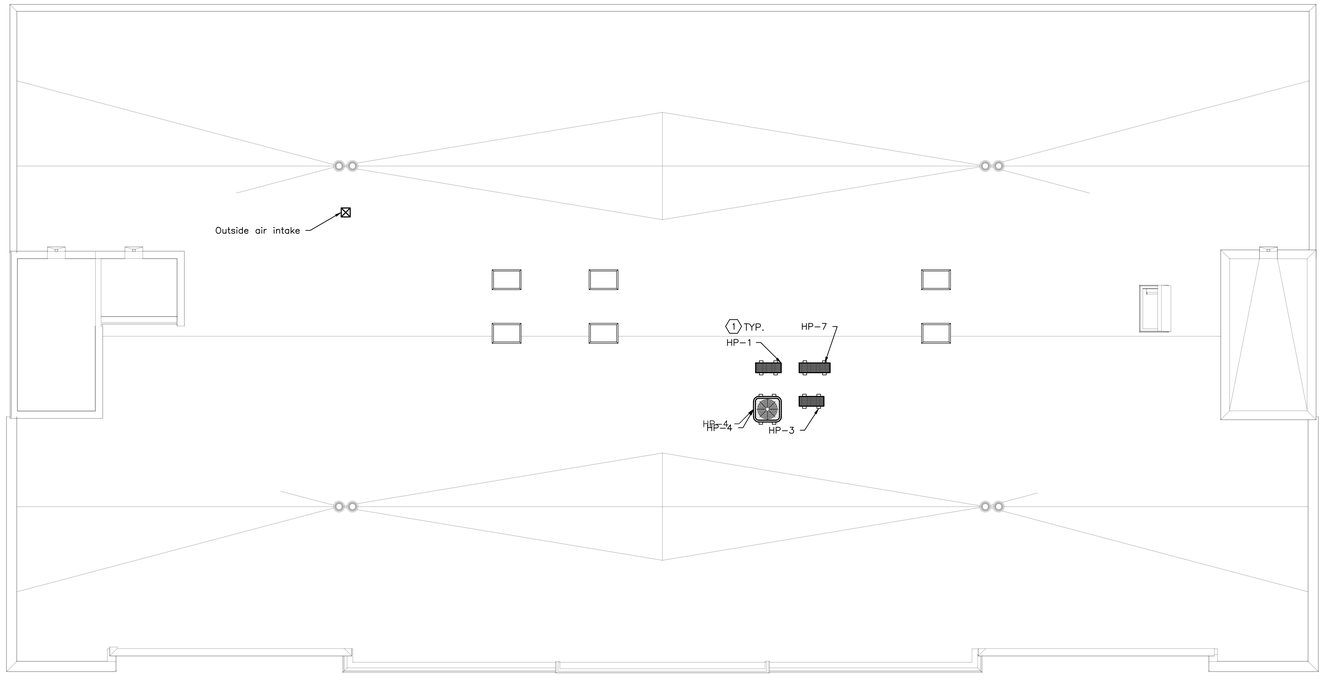
PROJECT DATE: 11.17.2020
PROJECT #: 19187

#	Description	Date
1	90% Drawing Set	11.17.2020

MECHANICAL
BUILDING 2 SECOND-FOURTH FLOOR PLAN

M.102.2

BERARDI+
ARCHITECTURE | INTERIOR DESIGN | ENGINEERING
1398 GOODALE BOULEVARD, COLUMBUS, OHIO 43212
P 614.221.1110 berardipartners.com



Coded Notes

1. Condensing unit mounted on roof. Provide spring vibration isolation, minimum $\frac{3}{4}$" deflection.

north

BUILDING 2 - ROOF PLAN

1/8"=1'-0"

12/5/2022

BENNETT POINT

BLDG 1 - 600 E 12TH STREET
BLDG 2 - 528 E 12TH STREET
CINCINNATI, OHIO

NOTE:
1. ALL BIDDERS SHALL VISIT THE SITE AND BECOME FAMILIAR W/ THE EXISTING CONDITIONS AND REQUIREMENTS OF THE PROJECT AND SHALL NOTIFY THE ARCHITECT OF ANY ERRORS AND OMISSIONS SUBSEQUENTLY DISCOVERED IN THE CONTRACT DOCUMENTS.
2. THE CONTRACT DOCUMENTS ARE COMPRISED OF THE DRAWINGS AND THE PROJECT MANUAL IN THEIR ENTIRETY. THE INFORMATION IN THESE DOCUMENTS IS DEPENDENT UPON AND COMPLEMENTARY OF EACH OTHER. SEPARATION OF THE CONTRACT DOCUMENTS SHALL NOT BE PERMITTED. IF THE CONTRACTOR CHOOSES TO SEPARATE THE DOCUMENTS, THEY DO SO AT THEIR OWN RISK AND EXPENSE.
3. ADDITIONALLY, SEE GENERAL INFORMATION ON "A0" SHEETS.
4. THE CLIENT ACKNOWLEDGES THE CONSULTANTS (ARCHITECT) DRAWINGS AND SPECIFICATION, INCLUDING ALL DOCUMENTS ON ELECTRONIC MEDIA AS INSTRUMENTS OF THE CONSULTANTS (ARCHITECT) PROFESSIONAL SERVICE. THE CLIENT SHALL NOT REUSE OR MAKE OR PERMIT TO BE MADE ANY MODIFICATION TO THE DRAWINGS AND SPECIFICATIONS WITHOUT THE PRIOR WRITTEN AUTHORIZATION OF THE CONSULTANT (ARCHITECT). THE CLIENT AGREES TO WAIVE ANY CLAIM AGAINST THE CONSULTANT (ARCHITECT) ARISING FROM ANY UNAUTHORIZED TRANSFER, REUSE OR MODIFICATION OF THE DRAWINGS AND SPECIFICATIONS.
5. ARCHITECT CANNOT WARRANT THE ACCURACY OF DATA CONTAINED HEREIN. ANY USE OR REUSE OF ORIGINAL OR ALTERED CADD DESIGN MATERIALS BY THE USER OR OTHER PARTIES WITHOUT THE REVIEW AND WRITTEN APPROVAL OF THE ARCHITECT SHALL BE AT THE SOLE RISK OF THE USER. FURTHERMORE, USER AGREES TO DEFEND, INDEMNIFY, AND HOLD ARCHITECT HARMLESS FROM ALL CLAIMS, INJURIES, DAMAGES, LOSSES, EXPENSES, AND ATTORNEY 'S FEES ARISING OUT OF THE MODIFICATION OR REUSE OF THESE MATERIALS.
6. THESE DRAWINGS AS PART OF THE CONTRACT DOCUMENTS ARE DIAGRAMMATIC AND ARE NOT INTENDED TO DEFINE EXACT QUANTITIES, LOCATIONS OR CODIFIED REQUIREMENTS. THE DRAWINGS SHALL NOT BE SCALED. EXACT STATE AND LOCAL CODE REQUIREMENTS AND OTHER APPLICABLE CODE REQUIREMENTS SHALL BE VERIFIED BY AND ARE THE SOLE RESPONSIBILITY OF THIS CONTRACTOR. ANY INFORMATION WHICH DIRECTLY CONFLICTS WITH ANY OF THESE CODES OR ANY DISCREPANCIES FOUND IN THE CONTRACT DOCUMENTS SHALL BE BROUGHT TO THE ATTENTION OF THE PROJECT ARCHITECT.

PERMIT SET

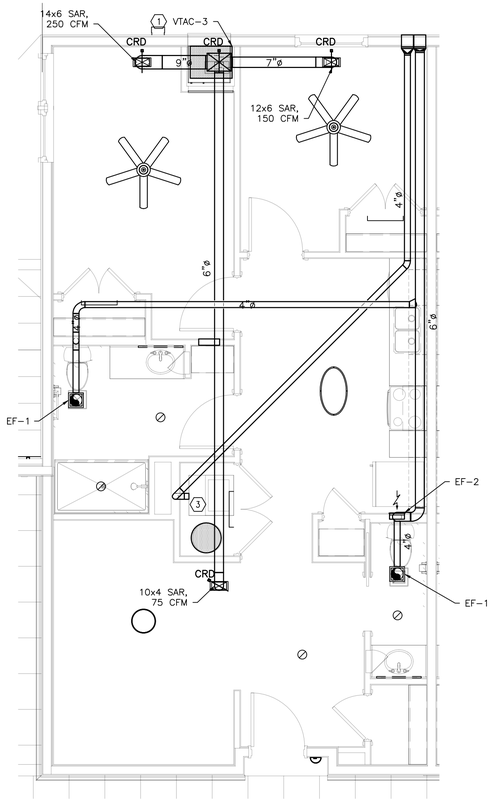
PROJECT DATE: 11.17.2020
PROJECT #: 19187

#	Description	Date
1	90% Drawing Set	11.17.2020
2	Permit Set	03.16.2021

MECHANICAL
BUILDING 2
ROOF PLAN

M.103.2

BERARDI+
ARCHITECTURE | INTERIOR DESIGN | ENGINEERING
1398 GOODALE BOULEVARD, COLUMBUS, OHIO 43212
P 614.221.1110 berardipartners.com

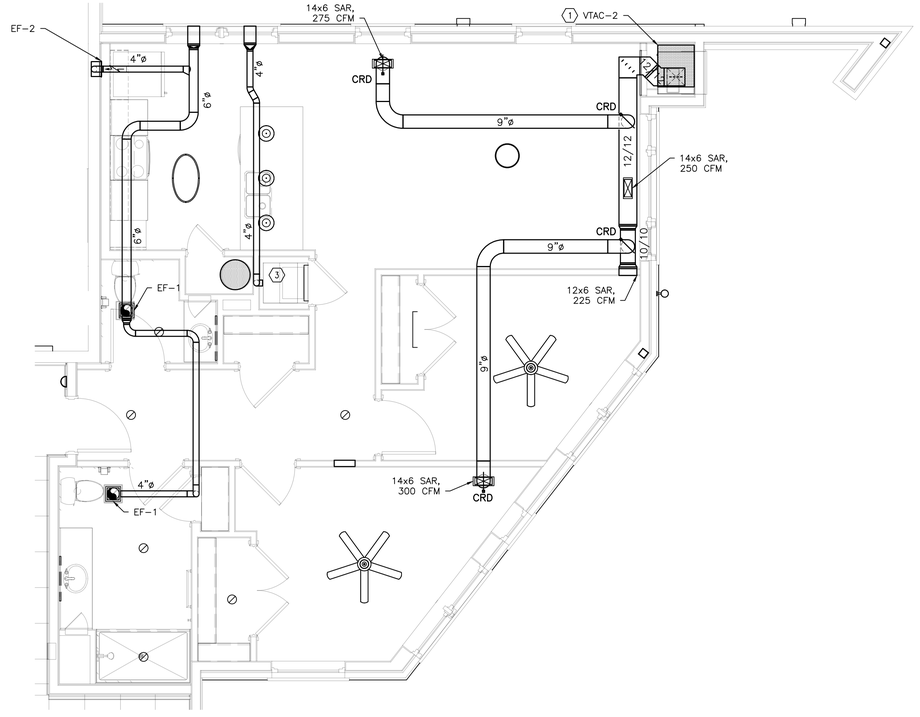


UNIT C - 1BR/1BA

1/4"=1'-0"

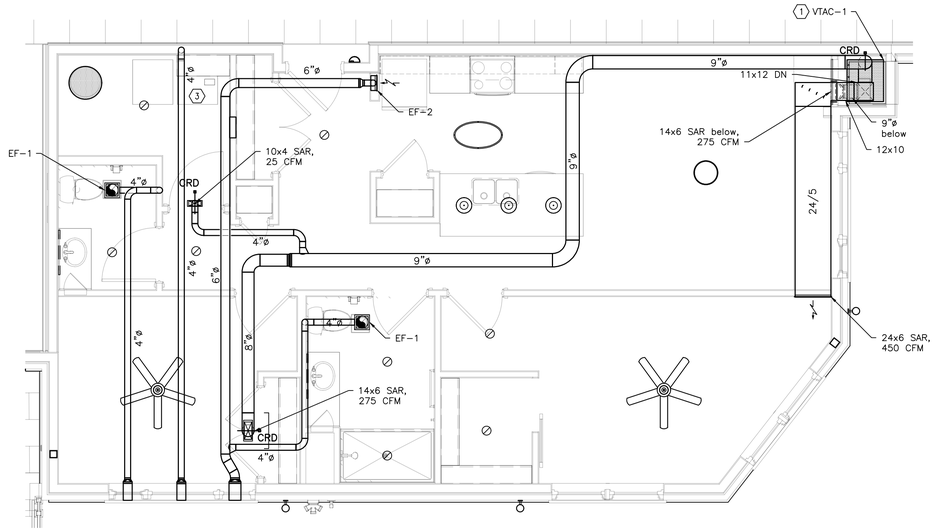
Coded Notes

1. Route condensate drain with trap to condensate drain system. System shall be located against exterior wall. Spill to grade.
2. Ductwork routed within dropped ceiling/soffit.
3. Provide dryer inlet box and duct of minimum 4" diameter, 0.016" thick metal, smooth interior finish, supported on 4' intervals, run without fire dampers, screens or penetrating fasteners. Install with shield plate(s) if within 1.25" of stud face (as specified) and fire caulk where penetrating wall or ceiling membrane. Do not install within a wall required to be rated. Vertical riser shall include a cleanout, elbow(s) shall be smooth with 10" inside radius, run ductwork in ceiling/joist space above laundry room, and outlet to a louvered shutter on lower floors, 10"x6" SG for top floor. Provide permanent sign showing equivalent duct length and mount within 6' of inlet as directed by AHJ.
4. Flush mounted louvered shutter.
5. Thermostat mounted 47" A.F.F. at top.
6. Dashed line represents required clearance/access to equipment.
7. 6" flush mounted louvered shutter.



UNIT B - 2BR/1.5BA

1/4"=1'-0"



UNIT A - 2BR/1.5BA

1/4"=1'-0"

STATE OF OHIO
JOHN CYBULSKI
E-78419
REGISTERED PROFESSIONAL ENGINEER

12/1/2022

BENNETT POINT

BLDG 1 - 600 E 12TH STREET
BLDG 2 - 528 E 12TH STREET
CINCINNATI, OHIO

NOTE:
1. ALL BIDDERS SHALL VISIT THE SITE AND BECOME FAMILIAR W/ THE EXISTING CONDITIONS AND REQUIREMENTS OF THE PROJECT AND SHALL NOTIFY THE ARCHITECT OF ANY ERRORS AND OMISSIONS SUBSEQUENTLY DISCOVERED IN THE CONTRACT DOCUMENTS.
2. THE CONTRACT DOCUMENTS ARE COMPRISED OF THE DRAWINGS AND THE PROJECT MANUAL IN THEIR ENTIRETY. THE INFORMATION IN THESE DOCUMENTS IS DEPENDENT UPON AND COMPLEMENTARY OF EACH OTHER. SEPARATION OF THE CONTRACT DOCUMENTS SHALL NOT BE PERMITTED. IF THE CONTRACTOR CHOOSES TO SEPARATE THE DOCUMENTS, THEY DO SO AT THEIR OWN RISK AND EXPENSE.
3. ADDITIONALLY, SEE GENERAL INFORMATION ON "A0" SHEETS.
4. THE CLIENT ACKNOWLEDGES THE CONSULTANTS (ARCHITECT) DRAWINGS AND SPECIFICATION, INCLUDING ALL DOCUMENTS ON ELECTRONIC MEDIA AS INSTRUMENTS OF THE CONSULTANTS (ARCHITECT) PROFESSIONAL SERVICE. THE CLIENT SHALL NOT REUSE OR MAKE OR PERMIT TO BE MADE ANY MODIFICATION TO THE DRAWINGS AND SPECIFICATIONS WITHOUT THE PRIOR WRITTEN AUTHORIZATION OF THE CONSULTANT (ARCHITECT). THE CLIENT AGREES TO WAIVE ANY CLAIM AGAINST THE CONSULTANT (ARCHITECT) ARISING FROM ANY UNAUTHORIZED TRANSFER, REUSE OR MODIFICATION OF THE DRAWINGS AND SPECIFICATIONS.
5. ARCHITECT CANNOT WARRANT THE ACCURACY OF DATA CONTAINED HEREIN. ANY USE OR REUSE OF ORIGINAL OR ALTERED CADD DESIGN MATERIALS BY THE USER, OR OTHER PARTIES WITHOUT THE REVIEW AND WRITTEN APPROVAL OF THE ARCHITECT SHALL BE AT THE SOLE RISK OF THE USER. FURTHERMORE, USER AGREES TO DEFEND, INDEMNIFY, AND HOLD ARCHITECT HARMLESS FROM ALL CLAIMS, INJURIES, DAMAGES, LOSSES, EXPENSES, AND ATTORNEY 'S FEES ARISING OUT OF THE MODIFICATION OR REUSE OF THESE MATERIALS.
6. THESE DRAWINGS AS PART OF THE CONTRACT DOCUMENTS ARE DIAGRAMMATIC AND ARE NOT INTENDED TO DEFINE EXACT QUANTITIES, LOCATIONS OR CODIFIED REQUIREMENTS. THE DRAWINGS SHALL NOT BE SCALED. EXACT STATE AND LOCAL CODE REQUIREMENTS AND OTHER APPLICABLE CODE REQUIREMENTS SHALL BE VERIFIED BY AND ARE THE SOLE RESPONSIBILITY OF THIS CONTRACTOR. ANY INFORMATION WHICH DIRECTLY CONFLICTS WITH ANY OF THESE CODES OR ANY DISCREPANCIES FOUND IN THE CONTRACT DOCUMENTS SHALL BE BROUGHT TO THE ATTENTION OF THE PROJECT ARCHITECT.

PERMIT SET

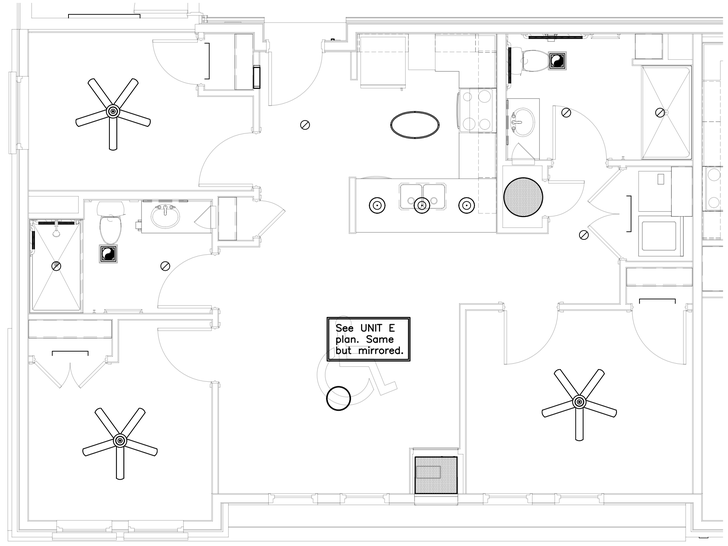
PROJECT DATE: 11.17.2020
PROJECT #: 19187

#	Description	Date

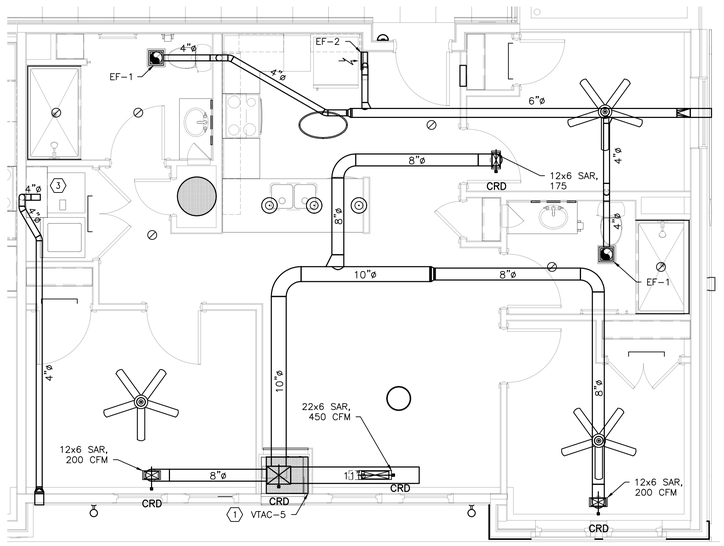
MECHANICAL
DWELLING
UNITS

M.301

BERARDI+
ARCHITECTURE | INTERIOR DESIGN | ENGINEERING
1398 GOODALE BOULEVARD, COLUMBUS, OHIO 43212
P 614.221.1110 berardipartners.com



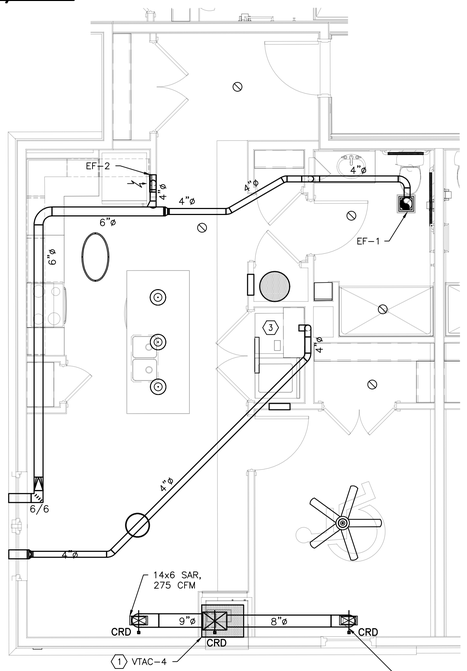
UNIT E-A - 3BR/2BA
1/4"=1'-0"



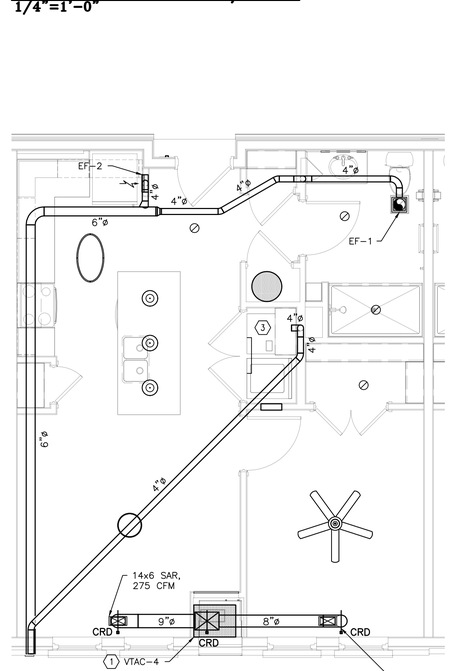
UNIT E - 3BR/2BA
1/4"=1'-0"

Coded Notes

1. Route condensate drain with trap to condensate drain system. System shall be located against exterior wall. Spill to grade.
2. Ductwork routed within dropped ceiling/soffit.
3. Provide dryer inlet box and duct of minimum 4" diameter, 0.016" thick metal, smooth interior finish, supported on 4' intervals, run without fire dampers, screens or penetrating fasteners. Install with shield plate(s) if within 1.25" of stud face (as specified) and fire caulk where penetrating wall or ceiling membrane. Do not install within a wall required to be rated. Vertical riser shall include a cleanout, elbow(s) shall be smooth with 10" inside radius, run ductwork in ceiling/joist space above laundry room, and outlet to a louvered shutter on lower floors, 10"x6" SG for top floor. Provide permanent sign showing equivalent duct length and mount within 6' of inlet as directed by AHJ.
4. Flush mounted louvered shutter.
5. Thermostat mounted 47" A.F.F. at top.
6. Dashed line represents required clearance/access to equipment.
7. 6" flush mounted louvered shutter.



UNIT D-A - 1BR/1BA
1/4"=1'-0"



UNIT D - 1BR/1BA
1/4"=1'-0"

STATE OF OHIO
LARRY T. BREHM
53245
REGISTERED PROFESSIONAL ENGINEER

BENNETT POINT

BLDG 1 - 600 E 12TH STREET
BLDG 2 - 528 E 12TH STREET
CINCINNATI, OHIO

NOTE:
1. ALL BIDDERS SHALL VISIT THE SITE AND BECOME FAMILIAR W/ THE EXISTING CONDITIONS AND REQUIREMENTS OF THE PROJECT AND SHALL NOTIFY THE ARCHITECT OF ANY ERRORS AND OMISSIONS SUBSEQUENTLY DISCOVERED IN THE CONTRACT DOCUMENTS.
2. THE CONTRACT DOCUMENTS ARE COMPRISED OF THE DRAWINGS AND THE PROJECT MANUAL IN THEIR ENTIRETY. THE INFORMATION IN THESE DOCUMENTS IS DEPENDENT UPON AND COMPLEMENTARY OF EACH OTHER. SEPARATION OF THE CONTRACT DOCUMENTS SHALL NOT BE PERMITTED. IF THE CONTRACTOR CHOOSES TO SEPARATE THE DOCUMENTS, THEY DO SO AT THEIR OWN RISK AND EXPENSE.
3. ADDITIONALLY, SEE GENERAL INFORMATION ON "A0" SHEETS.
4. THE CLIENT ACKNOWLEDGES THE CONSULTANTS (ARCHITECT) DRAWINGS AND SPECIFICATION, INCLUDING ALL DOCUMENTS ON ELECTRONIC MEDIA AS INSTRUMENTS OF THE CONSULTANTS (ARCHITECT) PROFESSIONAL SERVICE. THE CLIENT SHALL NOT REUSE OR MAKE OR PERMIT TO BE MADE ANY MODIFICATION TO THE DRAWINGS AND SPECIFICATIONS WITHOUT THE PRIOR WRITTEN AUTHORIZATION OF THE CONSULTANT (ARCHITECT). THE CLIENT AGREES TO WAIVE ANY CLAIM AGAINST THE CONSULTANT (ARCHITECT) ARISING FROM ANY UNAUTHORIZED TRANSFER, REUSE OR MODIFICATION OF THE DRAWINGS AND SPECIFICATIONS.
5. ARCHITECT CANNOT WARRANT THE ACCURACY OF DATA CONTAINED HEREIN. ANY USE OR REUSE OF ORIGINAL OR ALTERED CADD DESIGN MATERIALS BY THE USER, OR OTHER PARTIES WITHOUT THE REVIEW AND WRITTEN APPROVAL OF THE ARCHITECT SHALL BE AT THE SOLE RISK OF THE USER. FURTHERMORE, USER AGREES TO DEFEND, INDEMNIFY, AND HOLD ARCHITECT HARMLESS FROM ALL CLAIMS, INJURIES, DAMAGES, LOSSES, EXPENSES, AND ATTORNEY 'S FEES ARISING OUT OF THE MODIFICATION OR REUSE OF THESE MATERIALS.
6. THESE DRAWINGS AS PART OF THE CONTRACT DOCUMENTS ARE DIAGRAMATIC AND ARE NOT INTENDED TO DEFINE EXACT QUANTITIES, LOCATIONS OR CODIFIED REQUIREMENTS. THE DRAWINGS SHALL NOT BE SCALED. EXACT STATE AND LOCAL CODE REQUIREMENTS AND OTHER APPLICABLE CODE REQUIREMENTS SHALL BE VERIFIED BY AND ARE THE SOLE RESPONSIBILITY OF THIS CONTRACTOR. ANY INFORMATION WHICH DIRECTLY CONFLICTS WITH ANY OF THESE CODES OR ANY DISCREPANCIES FOUND IN THE CONTRACT DOCUMENTS SHALL BE BROUGHT TO THE ATTENTION OF THE PROJECT ARCHITECT.

PERMIT SET

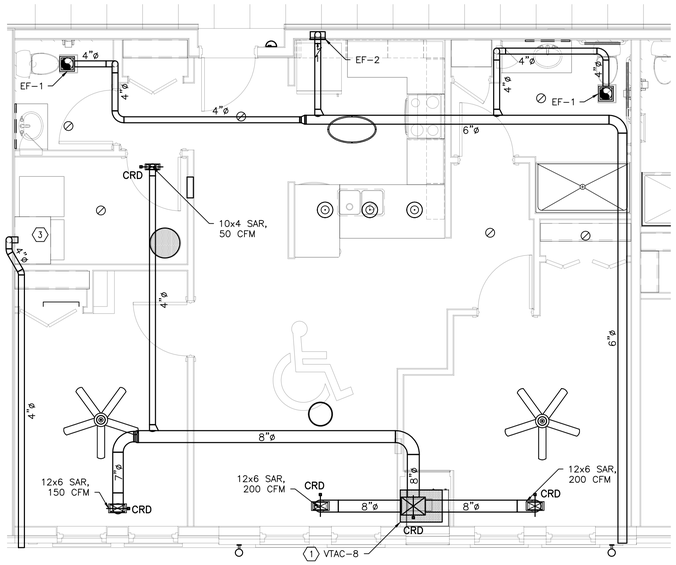
PROJECT DATE: 11.17.2020
PROJECT #: 19187

#	Description	Date

MECHANICAL
DWELLING
UNITS

M.302

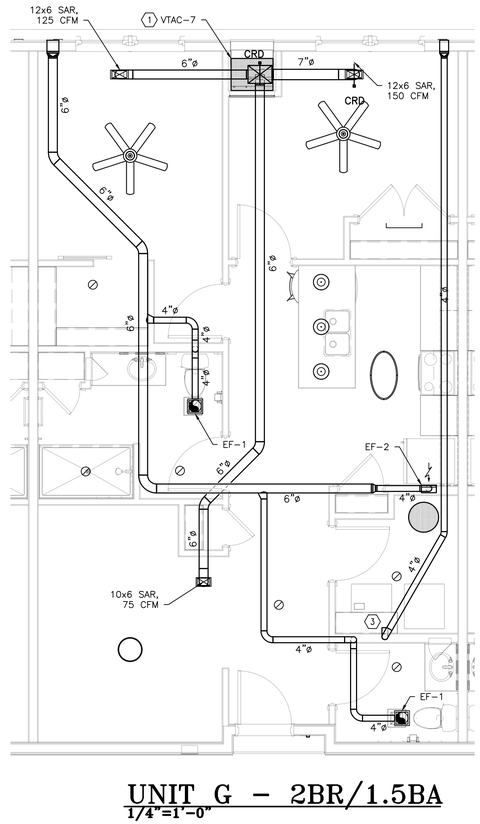
BERARDI+
ARCHITECTURE | INTERIOR DESIGN | ENGINEERING
1398 GOODALE BOULEVARD, COLUMBUS, OHIO 43212
P 614.221.1110 berardipartners.com



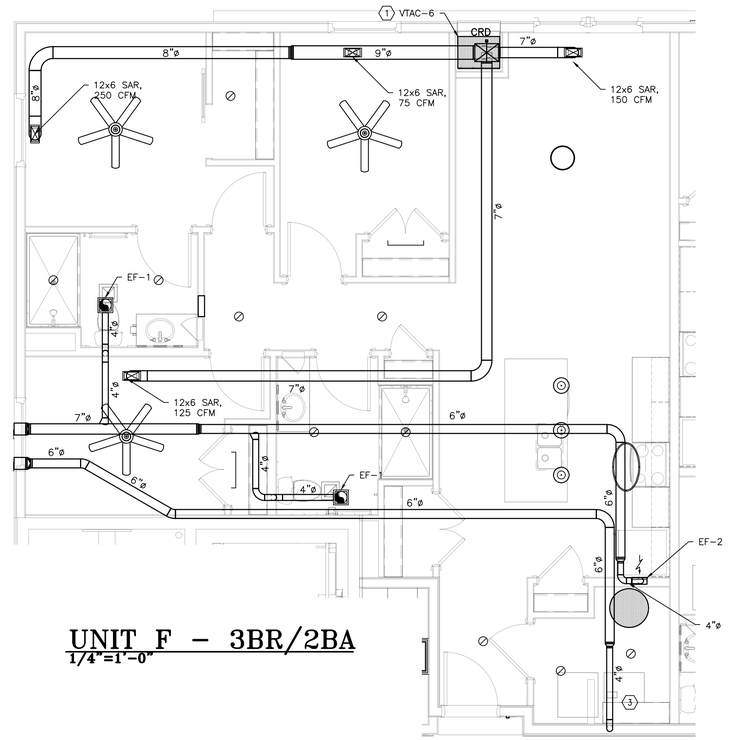
UNIT H-A - 2BR/1.5BA
1/4"=1'-0"

Coded Notes

1. Route condensate drain with trap to condensate drain system. System shall be located against exterior wall. Spill to grade.
2. Ductwork routed within dropped ceiling/soffit.
3. Provide dryer inlet box and duct of minimum 4" diameter, 0.016" thick metal, smooth interior finish, supported on 4' intervals, run without fire dampers, screens or penetrating fasteners. Install with shield plate(s) if within 1.25" of stud face (as specified) and fire caulk where penetrating wall or ceiling membrane. Do not install within a wall required to be rated. Vertical riser shall include a cleanout, elbow(s) shall be smooth with 10" inside radius, run ductwork in ceiling/joist space above laundry room, and outlet to a louvered shutter on lower floors, 10"x6" SG for top floor. Provide permanent sign showing equivalent duct length and mount within 6' of inlet as directed by AHJ.
4. Flush mounted louvered shutter.
5. Thermostat mounted 47" A.F.F. at top.
6. Dashed line represents required clearance/access to equipment.
7. 6" flush mounted louvered shutter.



UNIT G - 2BR/1.5BA
1/4"=1'-0"



UNIT F - 3BR/2BA
1/4"=1'-0"

STATE OF OHIO
JOHN CYBULSKI
E-78419
REGISTERED PROFESSIONAL ENGINEER

12/1/2022

BENNETT POINT

BLDG 1 - 600 E 12TH STREET
BLDG 2 - 528 E 12TH STREET
CINCINNATI, OHIO

NOTE:
1. ALL BIDDERS SHALL VISIT THE SITE AND BECOME FAMILIAR W/ THE EXISTING CONDITIONS AND REQUIREMENTS OF THE PROJECT AND SHALL NOTIFY THE ARCHITECT OF ANY ERRORS AND OMISSIONS SUBSEQUENTLY DISCOVERED IN THE CONTRACT DOCUMENTS.
2. THE CONTRACT DOCUMENTS ARE COMPRISED OF THE DRAWINGS AND THE PROJECT MANUAL IN THEIR ENTIRETY. THE INFORMATION IN THESE DOCUMENTS IS DEPENDENT UPON AND COMPLEMENTARY OF EACH OTHER. SEPARATION OF THE CONTRACT DOCUMENTS SHALL NOT BE PERMITTED. IF THE CONTRACTOR CHOOSES TO SEPARATE THE DOCUMENTS, THEY DO SO AT THEIR OWN RISK AND EXPENSE.
3. ADDITIONALLY, SEE GENERAL INFORMATION ON "A0" SHEETS.
4. THE CLIENT ACKNOWLEDGES THE CONSULTANTS (ARCHITECT) DRAWINGS AND SPECIFICATION, INCLUDING ALL DOCUMENTS ON ELECTRONIC MEDIA AS INSTRUMENTS OF THE CONSULTANTS (ARCHITECT) PROFESSIONAL SERVICE. THE CLIENT SHALL NOT REUSE OR MAKE OR PERMIT TO BE MADE ANY MODIFICATION TO THE DRAWINGS AND SPECIFICATIONS WITHOUT THE PRIOR WRITTEN AUTHORIZATION OF THE CONSULTANT (ARCHITECT). THE CLIENT AGREES TO WAIVE ANY CLAIM AGAINST THE CONSULTANT (ARCHITECT) ARISING FROM ANY UNAUTHORIZED TRANSFER, REUSE OR MODIFICATION OF THE DRAWINGS AND SPECIFICATIONS.
5. ARCHITECT CANNOT WARRANT THE ACCURACY OF DATA CONTAINED HEREIN. ANY USE OR REUSE OF ORIGINAL OR ALTERED CADD DESIGN MATERIALS BY THE USER, OR OTHER PARTIES WITHOUT THE REVIEW AND WRITTEN APPROVAL OF THE ARCHITECT SHALL BE AT THE SOLE RISK OF THE USER. FURTHERMORE USER AGREES TO DEFEND, INDEMNIFY, AND HOLD ARCHITECT HARMLESS FROM ALL CLAIMS, INJURIES, DAMAGES, LOSSES, EXPENSES, AND ATTORNEY 'S FEES ARISING OUT OF THE MODIFICATION OR REUSE OF THESE MATERIALS.
6. THESE DRAWINGS AS PART OF THE CONTRACT DOCUMENTS ARE DIAGRAMMATIC AND ARE NOT INTENDED TO DEFINE EXACT QUANTITIES, LOCATIONS OR CODIFIED REQUIREMENTS. THE DRAWINGS SHALL NOT BE SCALED. EXACT STATE AND LOCAL CODE REQUIREMENTS AND OTHER APPLICABLE CODE REQUIREMENTS SHALL BE VERIFIED BY AND ARE THE SOLE RESPONSIBILITY OF THE CONTRACTOR. ANY INFORMATION WHICH DIRECTLY CONFLICTS WITH ANY OF THESE CODES OR ANY DISCREPANCIES FOUND IN THE CONTRACT DOCUMENTS SHALL BE BROUGHT TO THE ATTENTION OF THE PROJECT ARCHITECT.

PERMIT SET

PROJECT DATE: 11.17.2020
PROJECT #: 19187

#	Description	Date

MECHANICAL
DWELLING
UNITS

M.303

BERARDI+
ARCHITECTURE | INTERIOR DESIGN | ENGINEERING
1398 GOODALE BOULEVARD, COLUMBUS, OHIO 43212
P 614.221.1110 berardipartners.com

Air Device Schedule

Mark	Type	Material	Manufacturer	Model	Remarks
CD-1 CFM	Ceiling Diffuser	Steel	Titus	Omni	4-Way, White, Neck to match duct size, 24"x24" Face, Surface Mount, Border Type 6, Damper
RAR-1	Return Air Register	Steel	Titus	350R	White, Damper
RAR-2	Return Air Register	Steel	Titus	33R	White, Damper, Heavy Duty
RAG-1	Return Air Grille	Steel	Titus	350R	White
RAG-2	Return Air Grille	Steel	Titus	33R	White, Heavy Duty
FRAG	Filter Return Air Grille	Steel	Hart & Cooley	659	White
EAR	Exhaust Air Register	Aluminum	Titus	350F	White, Damper
SG	Soffit Grille	Aluminum	Titus	350F	Mill Finish-prep for Field Paint, Insect Screen
SAR-1	Supply Air Register	Steel	Titus	300RS	White, Double Deflection, Damper
TG	Transfer Grille	Steel	Titus	33R	White, Heavy Duty

Electric Heater Schedule

Mark	kW	Voltage	Manufacturer	Model	Remarks
EWH-1	1.5	120V/1ø	Q-MARK	AWH-3150F	U.L., B.I. T'STAT, B.I. Disconnect, Tamper Resistant, *
EWH-2	1.5	120V/1ø	Q-MARK	CWH-3150F	U.L., B.I. T'STAT, B.I. Disconnect, *
EUH-1	3.0	208V/1ø	Q-MARK	MUH03-81	U.L., Remote T'STAT, **

* EWH: Mount 8" A.F.F. to bottom, recessed U.N.O. (above wall base, but below signage and railings).
** EUH: Mount top 3" below clg., 7'-6" A.F.F. min.

Ductless Heat Pump Air Handling Unit Schedule

Mark	CFM	Type	Voltage	Cooling MBH		Heating MBH	Manuf.	Model	Remarks
				Total	Sensible				
AHU-1	380	Wall	208V/1ø	12.0	9.7	14.0	Trane	NTXWPH06	W/HP-1, T'STAT #MHK1, *

* Factory condensate pump #Blue Diamond, condensate drain with in-line check valve.

Ductless Heat Pump Condensing Unit Schedule

Mark	Cooling BTUH	SEER/EER	HSPF	Voltage	Heat @47°F		Heat @17°F		Heat @5°F MBH	Manuf.	Model	Remarks
					MBH	COP	MBH	COP				
HP-1	12,000	20.8/12.0	10.2	208V/1ø	14.0	10.20	9.2	4.31	14.0	Trane	NTXSPH(B)06	W/AHU-1, Low Ambient to 0°F

Vertical Packaged Terminal Heat Pump Schedule

Mark	CFM	ESP	O.A. CFM	Cooling	EER	Heating @ 47°F		Resist. Heat kW	Voltage	Manuf.	Model	Remarks
				Total MBH		MBH	COP					
VTAC-1	1070	0.3"	66	28.2	11.0	12.3	3.3	5	208V/1ø	Magic-Pak	5MHP4-11-301FP-1	Remote T'STAT, Insulated Sleeve, 24"x16" FRAG, *
VTAC-2	1070	0.3"	66	28.2	11.0	12.3	3.3	5	208V/1ø	Magic-Pak	5MHP4-11-301FP-1	Remote T'STAT, Insulated Sleeve, 24"x16" FRAG, *
VTAC-3	525	0.3"	56	12.0	11.0	9.2	3.3	3	208V/1ø	Magic-Pak	3MHP4-11-121FP-1	Remote T'STAT, Insulated Sleeve, 24"x16" FRAG, *
VTAC-4	525	0.3"	56	12.0	11.0	9.2	3.3	3	208V/1ø	Magic-Pak	3MHP4-11-121FP-1	Remote T'STAT, Insulated Sleeve, 24"x16" FRAG, *
VTAC-5	1070	0.3"	66	28.2	11.0	12.3	3.3	5	208V/1ø	Magic-Pak	5MHP4-11-301FP-1	Remote T'STAT, Insulated Sleeve, 24"x16" FRAG, *
VTAC-6	640	0.3"	56	17.0	11.0	9.2	3.3	5	208V/1ø	Magic-Pak	3MHP4-11-181FP-1	Remote T'STAT, Insulated Sleeve, 24"x16" FRAG, *
VTAC-7	395	0.3"	35	8.6	11.0	9.2	3.3	3	208V/1ø	Magic-Pak	3MHP4-11-091FP-1	Remote T'STAT, Insulated Sleeve, 24"x16" FRAG, *
VTAC-8	640	0.3"	56	17.0	11.0	9.2	3.3	3	208V/1ø	Magic-Pak	3MHP4-11-181FP-1	Remote T'STAT, Insulated Sleeve, 24"x16" FRAG, *

* Architectural exterior Louver-Reliable products model #AEL-42 with 194 frame.

Exhaust Fan Schedule

Mark	CFM	ESP	RPM	HP	Voltage	Manuf.	Model	Remarks
EF-1	30/80 *	0.30"	---	Frac.	115V/1ø	Broan	ZB80M	BDD, Energy Star, Two Speed
EF-2	160	0.30"	1,725	Frac.	115V/1ø	Broan	503	BDD, Wall Mount, 5.0 Sones

* 30 CFM continuous - 80 CFM upon activation of built-in motion sensor, adjust timer to 5 minutes.

Heat Pump Air Handling Unit Schedule

Mark	CFM	O.A. CFM	ESP	HP	Voltage	Heat kW	MCA	Cooling MBH Total	Manuf.	Model	Remarks
AHU-2	400	80	0.3"	Frac.	208V/1ø	5.0	3.0	13.1	Trane	NTXAMT12A112A	W/HP-2, Filters, T'STAT, Louvered access panel, *
AHU-3	875	100	0.3"	Frac.	208V/1ø	0.0	2.73	27.0	Trane	PEAD-A30AA7	W/HP-3, T'STAT
AHU-4	2170	625	0.5"	1.0	208V/1ø	7.5	10.0	55.8	Trane	GAM5B0A60	W/HP-4, Zone Damper System
AHU-7A	450	100	0.14"	Frac.	208V/1ø	-	1.0	11.5	Trane	NTXDKS12A112A	W/HP-7, T'STAT
AHU-7B	450	100	0.14"	Frac.	208V/1ø	-	1.0	11.5	Trane	NTXDKS12A112A	W/HP-7, T'STAT
AHU-7C	450	100	0.14"	Frac.	208V/1ø	-	1.0	11.5	Trane	NTXDKS12A112A	W/HP-7, T'STAT

* Condensate drain auxiliary float shutoff switch.

Heat Pump Condensing Unit Schedule

Mark	Cooling BTUH	SEER/EER	HSPF	Heat @47°F	Heat @17°F	Voltage	MCA	Manuf.	Model	Remarks
				MBH	MBH					
HP-2	13,100	18.0/12.7	8.5	15.0	9.9	208V/1ø	9.0	Trane	NTXSKS12A112A	W/AHU-2
HP-3	27,000	18.0/12.7	12.6	30.0	22.4	208V/1ø	17.0	Trane	NTXSKS30A112A	W/AHU-3
HP-4	55,858	14.5/12.0	8.5	53.5	36.0	208V/1ø	32.5	Trane	4TWR5060	W/AHU-4
HP-7	36,000	17.5/12.7	10.7	45.0	36.0	208V/1ø	42.0	Trane	NTXMPH36A142	W/AHU-7A/B/C

Zone Damper Schedule

Mark	CFM	Size	Manufacturer	Model	Remarks
ZD-1	170	8"ø	Trane	VADB08	Thermostat, With AHU-4, *
ZD-2	620	8"x12"	Trane	VARA5R	Thermostat, With AHU-4, *
ZD-3	900	8"x16"	Trane	VARA7R	Thermostat, With AHU-4, *
ZD-4	100	6"ø	Trane	VADB06	Thermostat, With AHU-4, *
ZD-5	60	6"ø	Trane	VADB06	Thermostat, With AHU-4, *
ZD-6	150	6"ø	Trane	VADB06	Thermostat, With AHU-4, *

* 24 Volt transformer.

STATE OF OHIO
LARRY T. BREHM
53245
REGISTERED
PROFESSIONAL ENGINEER

BENNETT POINT

BLDG 1 - 600 E 12TH STREET
BLDG 2 - 528 E 12TH STREET
CINCINNATI, OHIO

NOTE:
1. ALL BIDDERS SHALL VISIT THE SITE AND BECOME FAMILIAR W/ THE EXISTING CONDITIONS AND REQUIREMENTS OF THE PROJECT AND SHALL NOTIFY THE ARCHITECT OF ANY ERRORS AND OMISSIONS SUBSEQUENTLY DISCOVERED IN THE CONTRACT DOCUMENTS.
2. THE CONTRACT DOCUMENTS ARE COMPRISED OF THE DRAWINGS AND THE PROJECT MANUAL IN THEIR ENTIRETY. THE INFORMATION IN THESE DOCUMENTS IS DEPENDENT UPON AND COMPLEMENTARY OF EACH OTHER. SEPARATION OF THE CONTRACT DOCUMENTS SHALL NOT BE PERMITTED. IF THE CONTRACTOR CHOOSES TO SEPARATE THE DOCUMENTS, THEY DO SO AT THEIR OWN RISK AND EXPENSE.
3. ADDITIONALLY, SEE GENERAL INFORMATION ON "A0" SHEETS.
4. THE CLIENT ACKNOWLEDGES THE CONSULTANTS (ARCHITECT) DRAWINGS AND SPECIFICATION, INCLUDING ALL DOCUMENTS ON ELECTRONIC MEDIA AS INSTRUMENTS OF THE CONSULTANTS (ARCHITECT) PROFESSIONAL SERVICE. THE CLIENT SHALL NOT REUSE OR MAKE OR PERMIT TO BE MADE ANY MODIFICATION TO THE DRAWINGS AND SPECIFICATIONS WITHOUT THE PRIOR WRITTEN AUTHORIZATION OF THE CONSULTANT (ARCHITECT). THE CLIENT AGREES TO WAIVE ANY CLAIM AGAINST THE CONSULTANT (ARCHITECT) ARISING FROM ANY UNAUTHORIZED TRANSFER, REUSE OR MODIFICATION OF THE DRAWINGS AND SPECIFICATIONS.
5. ARCHITECT CANNOT WARRANT THE ACCURACY OF DATA CONTAINED HEREIN. ANY USE OR REUSE OF ORIGINAL OR ALTERED CADD DESIGN MATERIALS BY THE USER OR OTHER PARTIES WITHOUT THE REVIEW AND WRITTEN APPROVAL OF THE ARCHITECT SHALL BE AT THE SOLE RISK OF THE USER. FURTHERMORE USER AGREES TO DEFEND, INDEMNIFY, AND HOLD ARCHITECT HARMLESS FROM ALL CLAIMS, INJURIES, DAMAGES, LOSSES, EXPENSES, AND ATTORNEY 'S FEES ARISING OUT OF THE MODIFICATION OR REUSE OF THESE MATERIALS.
6. THESE DRAWINGS AS PART OF THE CONTRACT DOCUMENTS ARE DIAGRAMMATIC AND ARE NOT INTENDED TO DEFINE EXACT QUANTITIES, LOCATIONS OR CODIFIED REQUIREMENTS. THE DRAWINGS SHALL NOT BE SCALED. EXACT, STATE AND LOCAL CODE REQUIREMENTS AND OTHER APPLICABLE CODE REQUIREMENTS SHALL BE VERIFIED BY AND ARE THE SOLE RESPONSIBILITY OF THE CONTRACTOR. ANY INFORMATION WHICH DIRECTLY CONFLICTS WITH ANY OF THESE CODES OR ANY DISCREPANCIES FOUND IN THE CONTRACT DOCUMENTS SHALL BE BROUGHT TO THE ATTENTION OF THE PROJECT ARCHITECT.

PERMIT SET

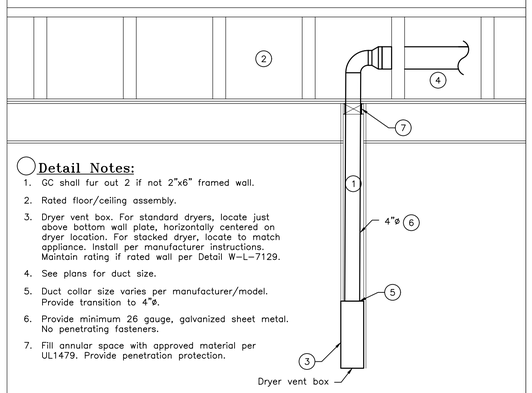
PROJECT DATE: 11.17.2020
PROJECT #: 19187

#	Description	Date
2	Permit Set	03.16.2021

MECHANICAL SCHEDULES

M.401

BERARDI+
ARCHITECTURE | INTERIOR DESIGN | ENGINEERING
1398 GOODALE BOULEVARD, COLUMBUS, OHIO 43212
P 614.221.1110 berardipartners.com

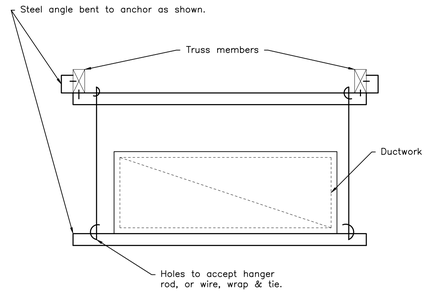


Detail Notes:

1. GC shall fur out 2 if not 2"x6" framed wall.
2. Rated floor/ceiling assembly.
3. Dryer vent box. For standard dryers, locate just above bottom wall plate, horizontally centered on dryer location. For stacked dryer, locate to match appliance. Install per manufacturer instructions. Maintain rating if rated wall per Detail W-L-7129.
4. See plans for duct size.
5. Duct collar size varies per manufacturer/model. Provide transition to 4"ø.
6. Provide minimum 26 gauge, galvanized sheet metal. No penetrating fasteners.
7. Fill annular space with approved material per UL1479. Provide penetration protection.

Dryer Exhaust Detail Vertical Duct

NTS

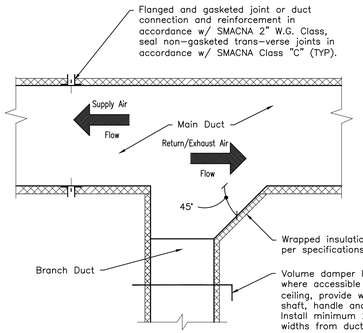


Note:
1. Hanger material must comply with current SMACNA requirements for load use. Strap hangers may be used.

Duct Hanger Detail

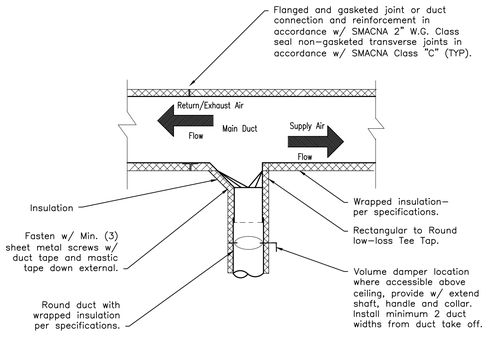
NTS

All rectangular takeoffs from rectangular ducts must be 45° entries, fabricated and installed per current SMACNA manual. Straight tap and clinch lock are not permitted.



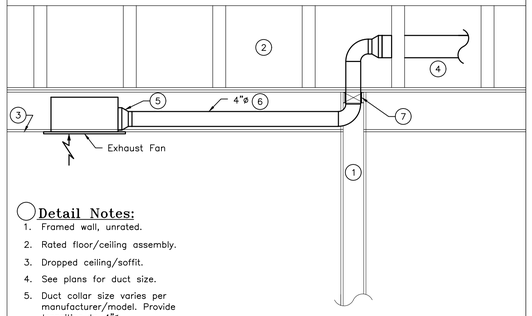
Typical Square Duct Take-off Detail

NTS



Typical Round Take-off Detail

NTS

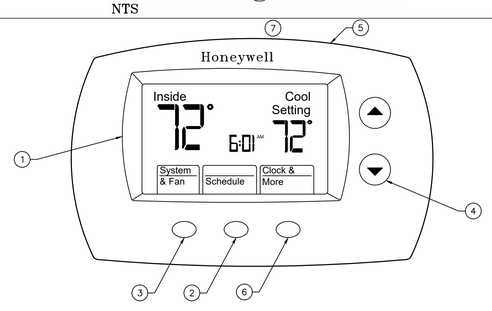


Detail Notes:

1. Framed wall, unrated.
2. Rated floor/ceiling assembly.
3. Dropped ceiling/soffit.
4. See plans for duct size.
5. Duct collar size varies per manufacturer/model. Provide transition to 4"ø.
6. Provide minimum 26 gauge, galvanized sheet metal.
7. Fill annular space with approved material per UL1479.

Typical Ceiling Exhaust Fan Detail

NTS



Honeywell #RTH7400
7-day Programmable
Auto-change over
Low battery warning
Compressor protection
Program for 5°F deadband/economy mode

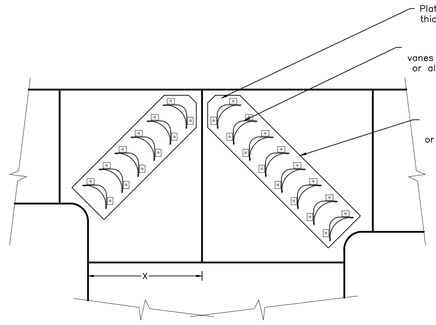
Detail Notes

1. Large display.
2. Schedule.
3. Push button Fan (Auto/On).
4. Push Button to change temperature.
5. Battery Backup.
6. Clock & More.
7. Mount top of thermostat 47" A.F.F.

Thermostat Detail

NTS

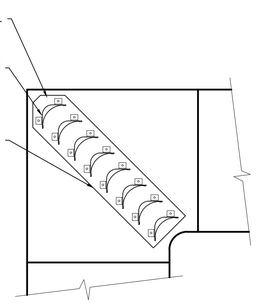
Turning vanes must be installed in all 90 degree square supply and return ducts. Turing vanes must be fabricated and installed per current SMACNA standards. For lined duct, provide insulated and hat section to prevent insulation crushing.



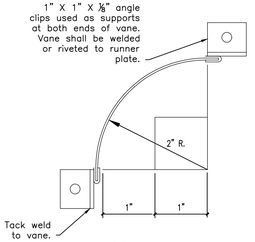
X dimension is proportional to branch duct dimension.

Rectangular Bullhead Tee

NTS



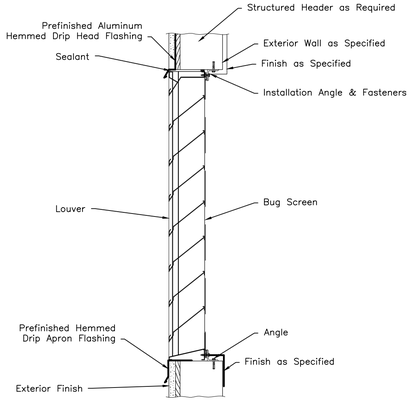
Square elbow with typ "A" double thickness vanes.



Type "A" vane shall be same gauge thickness as duct.

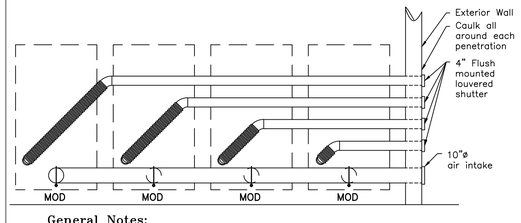
Rectangular Duct Elbows

NTS



Drainable Stationary Louver Detail

NTS



General Notes:

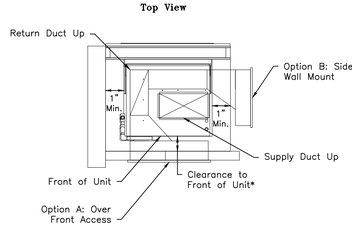
1. Back draft damper per IMC 504.4.
2. Maximum of 6'-0" of metal flexible duct. Connections must not be concealed.
3. Each vertical rise must have a cleanout per IMC 504.3.
4. 4"ø 26 gauge galvanized metal ducts.
5. See architectural plans for quantity.

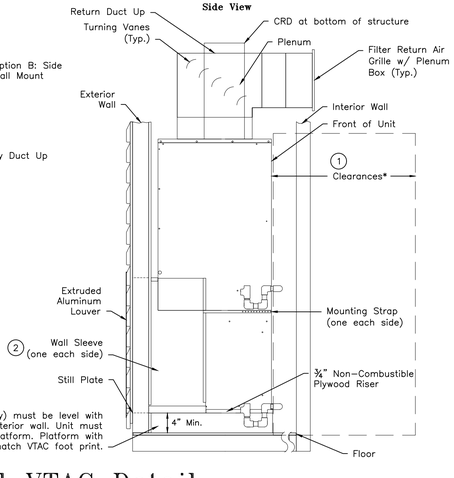
Clothes Dryer Exhaust Detail

NTS

Note:
1. The front of the unit must be accessible for service. If the unit is enclosed, providing a door or access panel opposite the front of the unit is the preferred method of providing access. The door or access panel must be at least 30" wide (centered on the unit) and as tall as the unit. Unit must be supported by platform.
2. The unit must be installed with approved wall sleeve and grille accessories for safe operation. Improper installations could result in property damage, personal injury, or death.

* Minimum clearance to combustibles for the front of the unit is 1". Additional clearance must be provided for the drain trap installation.





Platform (field supply) must be level with sill plate of hole in exterior wall. Unit must be supported by platform. Platform with light gauge framing, match VTAC foot print.

Heat Pump Vertical VTAC Detail

NTS

STATE OF OHIO
LARRY T. BREHM
53245
REGISTERED PROFESSIONAL ENGINEER

BENNETT POINT

BLDG 1 - 600 E 12TH STREET
BLDG 2 - 528 E 12TH STREET
CINCINNATI, OHIO

NOTE:
1. ALL BIDDERS SHALL VISIT THE SITE AND BECOME FAMILIAR W/ THE EXISTING CONDITIONS AND REQUIREMENTS OF THE PROJECT AND SHALL NOTIFY THE ARCHITECT OF ANY ERRORS AND OMISSIONS SUBSEQUENTLY DISCOVERED IN THE CONTRACT DOCUMENTS.
2. THE CONTRACT DOCUMENTS ARE COMPRISED OF THE DRAWINGS AND THE PROJECT MANUAL IN THEIR ENTIRETY. THE INFORMATION IN THESE DOCUMENTS IS DEPENDENT UPON AND COMPLEMENTARY OF EACH OTHER. SEPARATION OF THE CONTRACT DOCUMENTS SHALL NOT BE PERMITTED. IF THE CONTRACTOR CHOOSES TO SEPARATE THE DOCUMENTS, THEY DO SO AT THEIR OWN RISK AND EXPENSE.
3. ADDITIONALLY, SEE GENERAL INFORMATION ON "A0" SHEETS.
4. THE CLIENT ACKNOWLEDGES THE CONSULTANTS (ARCHITECT) DRAWINGS AND SPECIFICATION, INCLUDING ALL DOCUMENTS ON ELECTRONIC MEDIA AS INSTRUMENTS OF THE CONSULTANTS (ARCHITECT) PROFESSIONAL SERVICE. THE CLIENT SHALL NOT REUSE OR MAKE OR PERMIT TO BE MADE ANY MODIFICATION TO THE DRAWINGS AND SPECIFICATIONS WITHOUT THE PRIOR WRITTEN AUTHORIZATION OF THE CONSULTANT (ARCHITECT). THE CLIENT AGREES TO WAIVE ANY CLAIM AGAINST THE CONSULTANT (ARCHITECT) ARISING FROM ANY UNAUTHORIZED TRANSFER, REUSE OR MODIFICATION OF THE DRAWINGS AND SPECIFICATIONS.
5. ARCHITECT CANNOT WARRANT THE ACCURACY OF DATA CONTAINED HEREIN. ANY USE OR REUSE OF ORIGINAL OR ALTERED CADD DESIGN MATERIALS BY THE USER OR OTHER PARTIES WITHOUT THE REVIEW AND WRITTEN APPROVAL OF THE ARCHITECT SHALL BE AT THE SOLE RISK OF THE USER. FURTHERMORE USER AGREES TO DEFEND, INDEMNIFY, AND HOLD ARCHITECT HARMLESS FROM ALL CLAIMS, INJURIES, DAMAGES, LOSSES, EXPENSES, AND ATTORNEY 'S FEES ARISING OUT OF THE MODIFICATION OR REUSE OF THESE MATERIALS.
6. THESE DRAWINGS AS PART OF THE CONTRACT DOCUMENTS ARE DIAGRAMMATIC AND ARE NOT INTENDED TO DEFINE EXACT QUANTITIES, LOCATIONS OR CODIFIED REQUIREMENTS. THE DRAWINGS SHALL NOT BE SCALED. EXACT STATE AND LOCAL CODE REQUIREMENTS AND OTHER APPLICABLE CODE REQUIREMENTS SHALL BE VERIFIED BY AND ARE THE SOLE RESPONSIBILITY OF THE CONTRACTOR. ANY INFORMATION WHICH DIRECTLY CONFLICTS WITH ANY OF THESE CODES OR ANY DISCREPANCIES FOUND IN THE CONTRACT DOCUMENTS SHALL BE BROUGHT TO THE ATTENTION OF THE PROJECT ARCHITECT.

PERMIT SET

PROJECT DATE: 11.17.2020
PROJECT #: 19187

#	Description	Date
2	Permit Set	03.16.2021

MECHANICAL DETAILS

M.402

BERARDI+
ARCHITECTURE | INTERIOR DESIGN | ENGINEERING
1398 GOODALE BOULEVARD, COLUMBUS, OHIO 43212
P 614.221.1110 berardipartners.com