

HVAC ABBREVIATIONS

ACC	AIR COOLED CONDENSING UNIT (HVAC)
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AHU	AIR HANDLING UNIT
CD	CEILING DIFFUSER
CU	CONDENSING UNIT (COOLER)
EF	EXHAUST FAN
ER	EXHAUST REGISTER
(E)/EXTG	EXISTING
HD	HOOD
MAU	MAKEUP AIR UNIT
ODB	BLADE DAMPER
RG	RETURN GRILL
RTU	ROOFTOP UNIT
SR	SUPPLY REGISTER
VSC	VARIABLE SPEED CONTROL

SUPPLIER/VENDOR ABBREVIATIONS

CO2AS	TENANT'S CO2 ALARM SUPPLIER
GC	GENERAL CONTRACTOR
HES	TENANT'S HVAC EQUIPMENT SUPPLIER
HS	TENANT'S HOOD SUPPLIER
KES	TENANT'S KITCHEN EQUIPMENT SUPPLIER
TAB	TENANT'S TEST & BALANCE VENDOR
TCC	TENANT'S CABLING CONTRACTOR
TDC	TENANT'S DUCT CLEANER
TEMS	TENANT'S ENERGY MANAGEMENT SYSTEM SUPPLIER
TLS	TENANT'S LIGHT/LAMP SUPPLIER
TMB	TENANT'S MENU BOARD SUPPLIER
TMS	TENANT'S MILLWORK SUPPLIER
TP	TENANT'S PHONE SUPPLIER
TRS	TENANT'S RAILING SUPPLIER
TSV	TENANT'S SIGN VENDOR
TUV	TENANT'S UV SANITIZER SUPPLIER
WCS	TENANT'S WALK-IN COOLER SUPPLIER
WHS	TENANT'S WATER HEATER SUPPLIER

HVAC GENERAL NOTES

- A. GENERAL NOTES APPLY TO HVAC SHEETS.
- B. WORK SHALL COMPLY WITH STATE AND LOCAL CODE REQUIREMENTS AS APPROVED AND AMENDED BY THE AUTHORITY HAVING JURISDICTION, INCLUDING APPLICABLE SECTIONS OF NFPA, THE MECHANICAL CODE, AND ANY INTERIM AMENDMENTS AT THE TIME OF THE PROPOSAL. PURCHASE PERMITS ASSOCIATED WITH THE WORK. OBTAIN INSPECTIONS REQUIRED BY CODE. SEE SHEET G-001 FOR THE PREVAILING CODES.
- C. CONTRACTOR AND SUBCONTRACTORS SHALL REVIEW A COMPLETE SET OF THE CONSTRUCTION DOCUMENTS.
- D. COORDINATE WORK WITH THE WORK OF OTHER TRADES, EQUIPMENT FURNISHED BY OTHERS, REQUIREMENTS OF THE OWNER, AND OF THE EXISTING CONDITIONS AT THE PROJECT SITE.
- E. DRAWINGS FOR THE MECHANICAL WORK ARE DIAGRAMMATIC, SHOWING THE GENERAL LOCATION, TYPE, LAYOUT, AND EQUIPMENT REQUIRED. THE DRAWING SHALL NOT BE SCALED FOR EXACT MEASUREMENTS, REFER TO ARCHITECTURAL DRAWINGS FOR DIMENSIONS. REFER TO MANUFACTURER'S STANDARD INSTALLATION DRAWINGS FOR EQUIPMENT CONNECTIONS AND INSTALLATION REQUIREMENTS. PROVIDE DUCTWORK, CONNECTIONS, OFFSETS, ACCESSORIES, AND MATERIALS NECESSARY FOR A COMPLETE SYSTEM.
- F. DUCT DIMENSIONS ON PLANS INDICATE DIMENSIONS OF INTERNAL FREE AREA.
- G. PERFORATED CEILING DIFFUSERS SHALL BE 4-WAY UNLESS NOTED OTHERWISE.
- H. COORDINATE ROOF WORK WITH THE OWNER'S CONSTRUCTION MANAGER PRIOR TO CONSTRUCTION.
- I. UNLESS NOTED OTHERWISE, RECTANGULAR DUCT ELBOWS GREATER THAN 45° SHALL BE MITERED ELBOWS WITH DOUBLE-THICKNESS TURNING VANES AND RECTANGULAR DUCT ELBOWS 45° OR LESS SHALL BE RADIUSSED ELBOWS WITH AN INSIDE RADIUS OF AT LEAST 1/2 THE WIDTH OF THE DUCT.
- J. REPLACE AIR FILTERS WITH NEW, CLEAN, MERV 7 AIR FILTERS AT TURNOVER.
- K. THE TERM "FURNISH" MEANS SUPPLY AND DELIVER TO THE PROJECT SITE, READY FOR UNLOADING, UNPACKING, ASSEMBLY, INSTALLATION, AND SIMILAR OPERATIONS. THE TERM "INSTALL" DESCRIBES THE OPERATIONS AT THE PROJECT SITE INCLUDING THE ACTUAL UNLOADING, UNPACKING, ASSEMBLY, ERECTING, PLACING, ANCHORING, APPLYING, WORKING TO DIMENSION, FINISHING, CURING, PROTECTING, CLEANING, AND SIMILAR OPERATIONS. THE TERM "PROVIDE" MEANS TO FURNISH AND INSTALL, COMPLETE AND READY FOR THE INTENDED USE.
- L. PROVIDE LABELING CALLED FOR IN THE HVAC PLANS USING ENGRAVED PHENOLIC PLATES.
- M. PROVIDE P3000 12 GA. UNISTRUT WITH PG FINISH FOR DUCT SUPPORTS AND OTHER UNISTRUT IN AREAS EXPOSED TO VIEW. SLOTTED UNISTRUT AND OTHER UNISTRUT WITH HOLES IS NOT ACCTEABLE.

CATEGORY	APPLICATION	ALLOWABLE MATERIAL
DUCT	EXPOSED SUPPLY	RECT. LINED OR ROUND AS SHOWN, NO EXPOSED DUCT SEALING MASTIC
	EXPOSED RETURN	RECTANGULAR, NO EXPOSED DUCT SEALING MASTIC
	EXPOSED GEN. EXHAUST	RECTANGULAR, NO EXPOSED DUCT SEALING MASTIC
	CONCEALED, SUPPLY	RECT. OR ROUND AS SHOWN, LINED OR INSULATED
	CONCEALED, RETURN	RECT. OR ROUND AS SHOWN, LINED OR INSULATED
	CONCEALED, GEN. EXHAUST	RECT. OR ROUND AS SHOWN
	CONCEALED, TYPE I HOOD EXHAUST	RECTANGULAR 12 GA. BLACK IRON W/ WRAP OR UL 1978 FACTORY-MANUFACTURED DUCT W/ WRAP (SUBMIT SHOP DRAWINGS FOR FACTORY-MANUFACTURED DUCT PRIOR TO ORDERING FOR APPROVAL)

HVAC SYMBOLS

	CEILING DIFFUSER
	CEILING-MOUNTED RETURN REGISTER
	CEILING-MOUNTED EXHAUST REGISTER
	SUPPLY REGISTER
	RETURN REGISTER
	FLEXIBLE DUCT
	MITERED CORNER WITH TURNING VANES
	DUCTWORK INTERNAL FREE DIMENSIONS (WIDTH x HEIGHT)
	RECTANGULAR TO ROUND DUCT TRANSITION
	DUCT-MOUNTED SMOKE DETECTOR
	MOTOR-OPERATED DAMPER
	MANUAL VOLUME DAMPER
	GREASE DUCT CLEANOUT
	MITERED CORNER WITHOUT TURNING VANES
	GRIDPOINT THERMOSTAT
	GRIDPOINT ZONE SENSOR MODULE
	GRIDPOINT SUPPLY PROBE
	PLAN NOTE: SEE PLAN NOTES LISTED ON THE SAME SHEET FOR NOTE MEANING
	CONNECT TO EXISTING
	EQUIPMENT TAG: SEE EQUIPMENT SCHEDULE ON SHEET M-600 FOR EQUIPMENT INFORMATION
	AUDIO/VISUAL REMOTE SMOKE DETECTOR ANNUNCIATOR WITH REMOTE KEY OPERATED RESET
	MOTORIZED DAMPER
	FIRE DAMPER W/ ACCESS DOOR
	GRILL, REGISTER, OR DIFFUSER TAG 12" ROUND 550 CFM

HVAC SPECIFICATIONS

- SECTION 15738 - SPLIT SYSTEM AIR CONDITIONING UNITS
- PART 1 - GENERAL
- 1.1 SECTION REQUIREMENTS
- A. Submittals: Product data, including rated capacities accounting for outside air and including weights.
 - B. EER: Greater than or equal to values prescribed in 2020 NYC Energy Conservation Code.
 - C. Comply with ASHRAE 15.
- PART 2 - PRODUCTS
- 2.1 EVAPORATOR CASING
- A. Heavy gauge galvanized steel
 - B. Removable access panels for servicing
 - C. Completely insulated with foil faced, cleanable, fire retardant odorless glass fiber material.
- 2.2 EVAPORATOR COIL
- A. Copper tubing mechanical bonded to aluminum fins
 - B. Draw through airflow
 - C. Double-sloped, removable, cleanable composite drain pan
- 2.3 INDOOR FAN
- A. Adjustable belt drive
 - B. Forward curved, centrifugal fan
 - C. Permanently lubricated bearings
- 2.4 DUCT FURNACES
- A. Certified by ETL for use with natural gas
 - B. 20 gauge cold rolled steel with baked enamel finish
 - C. Aluminum steel heat exchanger and burners, with stainless steel burner port protectors
- 2.5 CONDENSING UNIT
- A. Hermetic scroll compressor(s)
 - B. Crankcase heater
 - C. Evaporator defrost control
- PART 3 - EXECUTION
- 3.1 INSTALLATION
- A. Install air handling units and condensing units, and duct furnaces level and plumb.
 - B. Install air handling unit and duct furnace components using manufacturer's standard mounting devices securely fastened to the building structure.
 - C. Connect gas piping to duct furnace. Provide pipe unions and shut off valves and sufficient clearance for burner service and removal.
 - D. Connect refrigerant piping to and between air handling units and condensing units to allow service and maintenance.
 - E. Ground all equipment.
- END OF SECTION 15738

- SECTION 15810 - DUCTS AND ACCESSORIES
- PART 1 - GENERAL
- 1.1 SECTION REQUIREMENTS
- A. Submittals: Product Data for fire and smoke dampers.
 - B. Comply with NFPA 90A for systems serving spaces more than 25,000 cu. ft. in volume or building Types II, IV, and V construction more than 3 stories in height.
 - C. Comply with NFPA 90B for systems serving spaces in 1 or 2 family dwellings or serving spaces less than 25,000 cu. ft..
 - D. Comply with NFPA 96, "Ventilation Control and Fire Protection of Commercial Cooking Operations," Chapter 3, "Duct System," for range hood ducts, except single family residential usage, unless otherwise indicated.
 - E. Comply with UL 181 and UL 181A for ducts and closures.
 - F. Testing, Adjusting, and Balancing Agency Qualifications: AABC certified.
- PART 2 - PRODUCTS
- 2.1 DUCTS
- A. Spiral Duct: Spiral Lock Seam, without insulation, G90 galvanized finish, ASTM A-653/924
 - 1. Basis of Design Manufacturers: Lindab SPIROsafe, alternates to the basis of design must be submitted for review.
 - 2. Fittings: Factory produced standing seam construction with internal sealing. Fittings with a major axis of 36" or smaller shall be 20 gauge. Fittings with a major axis of 37"-48" shall be 18 gauge.
 - B. Galvanized Steel Sheet: Forming steel, ASTM A 653/653M, G90 coating designation.
 - C. Duct Liner: ASTM C 1071, Type II, with an airstream surface coated with a temperature resistant coating. Thickness: 1-1/2 inch, R-value : 6.3.
 - 1. Adhesive: ASTM C 916, Type I.
 - 2. Mechanical Fasteners: Galvanized steel pin, length as required to penetrate liner plus a 1/8 inch projection maximum into the airstream.
 - D. Joint and Seam Tape: Comply with UL 181A.
 - E. Joint and Seam Sealant: Comply with UL 181A.
 - F. Rectangular Metal Duct Fabrication: Comply with SMACNA's "HVAC Duct Construction Standard" for metal thickness, reinforcing types and intervals, tie rod applications, and joint types and intervals.
- 2.2 ACCESSORIES
- A. Volume-Control Dampers: Factory fabricated volume control dampers, complete with required hardware and accessories. Single blade and multiple opposed blade, standard leakage rating, and suitable for horizontal or vertical applications.
 - B. Fire Dampers: Factory-fabricated fire dampers, complete with required hardware and accessories. UL labeled according to UL 555, "Fire Dampers".
 - C. Flexible Connectors: Flame retardant or noncombustible fabrics, coatings, and adhesives complying with UL 181, Class 1.
 - D. Flexible Ducts: Factory fabricated, insulated, round duct, with an outer jacket enclosing 2 inch thick, glass fiber insulation, R-value: 6.0, around a continuous inner liner.
- PART 3 - EXECUTION
- 3.1 INSTALLATION
- A. Duct System Pressure Class: Construct and install each duct system with 2 inch positive and negative duct pressure classifications.
 - B. Conceal ducts from view in finished and occupied spaces. Except where noted as exposed.
 - C. Avoid passing through electrical equipment spaces and enclosures.
 - D. Support and connect metal ducts according to SMACNA's "HVAC Duct Construction Standard".
 - E. Install duct accessories according to applicable portions of details of construction as shown in SMACNA standards.
 - F. Install liner on all supply and return duct.
 - G. Install volume control dampers in lined duct with methods to avoid damage to liner and to avoid erosion of duct liner.
 - H. Install fire and smoke dampers according to manufacturer's UL approved written instructions.
 - I. Install fusible links in fire dampers.
 - J. Provide saddle taps at tees for exposed ductwork.
- 3.2 TESTING, ADJUSTING, AND BALANCING
- A. The owner will supply an independent balance agent to to balance and adjust the HVAC installation. The balance agent will be responsible for any pulley or belt changes required.
 - B. The general contractor is to have trained staffed available during the balancing to correct issues noted by the balance agent.
 - C. The balance agent is to balance airflow within distribution systems, including submains, branches, and terminals to indicated quantities +/- 10%. The hood exhaust system shall be balanced to a tolerance of -0+10% and the make-up air system to a tolerance of -10+0%.
 - D. The balance agent is to supply a copy of the balance report to the owner, engineer and general contractor for review.
- END OF SECTION 15810

- SECTION 15855 - DIFFUSERS, REGISTERS, AND GRILLES
- PART 1 - GENERAL
- 1.1 SECTION REQUIREMENTS
- A. Submittals: None.
- PART 2 - PRODUCTS
- 2.1 OUTLETS AND INLETS
- A. Diffusers:
 - 1. Refer to Grills, Registers, and Diffusers Schedule for equipment schedule
 - 2. Manufacturer: As scheduled (NO SUBSTITUTIONS)
 - 3. Material: As scheduled.
 - 4. Finish: As scheduled.
 - 5. Mounting: As scheduled.
 - B. Wall and Ceiling Registers:
 - 1. Refer to Grills, Registers, and Diffusers Schedule for equipment schedule
 - 2. Manufacturer: As scheduled (NO SUBSTITUTIONS)
 - 3. Material: As scheduled.
 - 4. Finish: As Scheduled.
 - 5. Mounting: Countersunk screw.
 - C. Wall and Ceiling Grilles:
 - 6. Refer to Grills, Registers, and Diffusers Schedule for equipment schedule
 - 7. Manufacturer: As scheduled (NO SUBSTITUTIONS)
 - 8. Material: As scheduled.
 - 9. Finish: As Scheduled.
 - 10. Mounting: Countersunk screw or lay in depending location.
- PART 3 - EXECUTION
- 3.1 INSTALLATION
- A. Coordinate location and installation with duct installation and installation of other ceiling and wall mounted items.
 - B. Locate ceiling diffusers, registers, and grilles, as indicated on general construction "reflected ceiling plans." Unless otherwise indicated, locate units in center of acoustical ceiling panels.
- END OF SECTION 15855
- SECTION 15900 - HVAC INSTRUMENTATION AND CONTROLS
- PART 1 - GENERAL
- 1.1 SECTION REQUIREMENTS
- A. Summary: Electric/electronic control sequences for HVAC systems and equipment.
 - B. Submittals: Shop Drawings detailing operating control sequences of each item of HVAC equipment and system and Product Data for controllers, sensors, operators, control panels, thermostats, humidistats, actuators, control valves and dampers.
 - C. System Description: Control systems consists of sensors, indicators, actuators, final control elements, interface equipment, and other apparatus, accessories, required to operate mechanical systems according to sequences of operation indicated and specified.
 - D. Operation Sequence:
 - 1. Unoccupied Cycle: During unoccupied hours, as set by the Energy Management System, the outside air and return dampers for the HVAC unit close, and the thermostat set point resets to 65° F (user adjustable). Upon a call for heating, the HVAC unit energizes.
 - 2. Occupied Cycle: During occupied hours, as set by the Energy Management System, the outside air and return dampers open to a minimum set point. The furnace and exhaust fans run continuously. Upon a call for heating, the furnace heating energizes. Upon a call for cooling, the condensing unit energizes.
- PART 2 - PRODUCTS (Not Applicable)
- PART 3 - EXECUTION
- 3.1 INSTALLATION
- A. Install control wiring concealed, except in mechanical rooms, and according to requirements specified in Division 16 Sections.
- END OF SECTION 15900

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PERMIT SET
03/10/2023

REV. DATE	DESCRIPTION
10/07/2022	LLD REVIEW SET
02/28/2023	PERMIT SET
10/31/2022	BID SET
2 02/28/2023	CONSTRUCTION SET

PROFESSIONAL SEAL

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DRAWN BY: PCE
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PROJECT NUMBER:
22074

SHEET TITLE:

MECHANICAL
SPECIFICATIONS,
SYMBOLS, & GENERAL
INFORMATION

SHEET NUMBER:

M-010.00
1 OF 15

DOB NOW Filing #: X08027475-11

KEYNOTES FOR THIS SHEET 1, 2 ETC.

- 1 SEE ARCHITECTURAL REFLECTED CEILING PLAN FOR CEILING MOUNTED EQUIPMENT LOCATION. TYPICAL.
- 2 PAINT DUCTWORK VISIBLE THROUGH DINING ROOM SUPPLY REGISTERS BLACK. TYPICAL.
- 3 PROVIDE FD/AD AT ALL PENETRATIONS AT DRAFT CURTAIN. COORDINATE WITH ARCHITECTURAL DRAWINGS.
- 4 DUCT TO TRANSITION TO AHU-1 RETURN CONNECTION ON PRE-FABRICATED ECONOMIZER (PROVIDED WITH UNIT). AHU-1 SHALL HAVE A FACTORY SUPPLIED, FIELD INSTALLED SMOKE DETECTOR MOUNTED IN THE RETURN AIR STREAM, PRIOR TO AN MIXING OF AIR. INTERLOCK SMOKE DETECTOR TO AHU-1 OPERATION.
- 5 DUCT TO TRANSITION TO AHU-2 RETURN CONNECTION ON PRE-FABRICATED ECONOMIZER (PROVIDED WITH UNIT). AHU-2 SHALL HAVE A FACTORY SUPPLIED, FIELD INSTALLED SMOKE DETECTOR MOUNTED IN THE RETURN AIR STREAM, PRIOR TO ANY MIXING OF AIR. INTERLOCK SMOKE DETECTOR TO AHU-2 OPERATION.
- 6 DUCT TO TRANSITION TO AHU-1 SUPPLY CONNECTION. AHU-1 SHALL HAVE A FACTORY SUPPLIED, FIELD INSTALLED SMOKE DETECTOR MOUNTED IN THE SUPPLY AIR STREAM. INTERLOCK SMOKE DETECTOR TO AHU-1 OPERATION.
- 7 DUCT TO TRANSITION TO AHU-2 SUPPLY CONNECTION. AHU-2 SHALL HAVE A FACTORY SUPPLIED, FIELD INSTALLED SMOKE DETECTOR MOUNTED IN THE SUPPLY AIR STREAM. INTERLOCK SMOKE DETECTOR TO AHU-2 OPERATION.
- 8 (E) 24" DIA. DUCT UP TO MAU ON ROOF. TRANSITION TO MAU-1 SUPPLY CONNECTION IN ROOF CURB.
- 9 10" DIA. DUCT UP FROM HOOD TO 15" DIA. DUCT, CONNECT TO (E) DUCT STUB. VERIFY CONNECTION POINT IN FIELD. (E) DUCT CONTINUES UP TO EF-1 ON ROOF. SEE M-101 FOR CONTINUATION. NEW DUCT TO BE COMPLIANT WITH NFPA 96. PROVIDE RADIUS ELBOWS WITH AN INSIDE RADIUS OF 0.5W AT ELBOWS IN GREASE DUCT. PROVIDE DUCT CLEANOUT ACCESS DOOR AT ALL CHANGES IN DIRECTION AND AT LINEAR INTERVALS PER LOCAL CODE.
- 10 CONNECT TO (E) DUCT STUB. VERIFY CONNECTION POINT IN FIELD. (E) DUCT CONTINUES UP TO EF-2 ON ROOF. SEE M-101 FOR CONTINUATION. SEE DETAIL 6/M-701 FOR FAN INSTALLATION DETAILS.
- 11 28" DIA. DUCT DOWN TO MAKEUP AIR PSP DUCT CONNECTION. TRANSITION TO SUPPLY PLENUM OPENING SIZE. TYPICAL FOR 3.
- 12 8" DIA. DUCT DOWN TO AC PSP DUCT CONNECTION. TRANSITION TO SUPPLY PLENUM OPENING SIZE. TYPICAL. CAP UNUSED DUCT CONNECTIONS.

KEYNOTES FOR THIS SHEET 1, 2 ETC.

- 13 INSTALL GRIDPOINT ZONE SENSOR MODULE FURNISHED BY TEMS FOR AHU-1 AT THIS LOCATION AT 60" AFF DIRECTLY TO WALL (NO JUNCTION BOX). COORDINATE LOCATION WITH EQUIPMENT. PROVIDE WIRING AS SHOWN IN DETAIL 8/E710. LABEL SENSOR WITH CORRESPONDING UNIT.
- 14 INSTALL GRIDPOINT ZONE SENSOR MODULE FURNISHED BY TEMS FOR AHU-2 AT THIS LOCATION AT 66" AFF DIRECTLY TO WALL (NO JUNCTION BOX). COORDINATE LOCATION WITH EQUIPMENT. PROVIDE WIRING AS SHOWN IN DETAIL 8/E710. LABEL SENSOR WITH CORRESPONDING UNIT.
- 15 INSTALL GRIDPOINT SUPPLY PROBE FURNISHED BY TEMS FOR AHU-1 IN THE SUPPLY DUCTWORK UPSTREAM FROM THE FIRST BRANCH CONNECTION. PROVIDE WIRING AS SHOWN IN DETAIL 8/E710.
- 16 INSTALL GRIDPOINT SUPPLY PROBE FURNISHED BY TEMS FOR RTU-2 IN THE SUPPLY DUCTWORK UPSTREAM FROM THE FIRST BRANCH CONNECTION. PROVIDE WIRING AS SHOWN IN DETAIL 8/E710.
- 17 INSTALL REMOTE TEMPERATURE SENSOR FOR HOOD HD-1 AT THIS LOCATION AT 66" AFF. COORDINATE LOCATION WITH EQUIPMENT. PROVIDE (2) #18 G. THERMISTOR CABLE FROM TEMPERATURE SENSOR TO HOOD CONTROL PANEL. LABEL SENSOR "HD-1".
- 18 INSTALL KITCHEN HOOD, HD-1. SUPPORT HOOD PER MANUFACTURER'S INSTALLATION INSTRUCTIONS AND AS DETAILED IN THE ARCHITECTURAL AND STRUCTURAL DRAWINGS. INSTALL HOOD ACCORDING TO THE REQUIREMENTS OF ITS LISTING, IN COMPLIANCE WITH NFPA 96, THE BUILDING CODE, AND AUTHORITIES HAVING JURISDICTION. HOOD SHALL HAVE AN INTEGRAL DUCT COLLAR TEMPERATURE SENSOR TO AUTOMATICALLY ENERGIZE THE EXHAUST AND MAKEUP AIR FANS IF COOKING TEMPERATURES ARE DETECTED. EXHAUST DUCT SYSTEM TO BE WELDED OR FACTORY-MANUFACTURED WATER AND AIR TIGHT. INSTALL CLEANOUTS PER CODE AND AS SHOWN. INSTALL HOOD PER DETAILS 4/M-700, 2/M-701, AND 3/M-701. CHIPOTLE WILL PROVIDE AN INDEPENDENT TESTING AGENCY FOR TESTING THE INTEGRITY OF THE GREASE DUCT SYSTEM.
- 19 INSTALL REMOTE CONDENSING UNIT FOR WALK-IN COOLER LOCATED ABOVE WALK-IN COOLER AS DETAILED IN THE ARCHITECTURAL AND STRUCTURAL DRAWINGS. INSTALL REFRIGERANT LINE SET, THERMOSTATIC EXPANSION VALVE, SOLENOID VALVE, TEMPERATURE CONTROL, SIGHT GLASS, FILTER DRIER, PRESSURE CONTROL, LOW AMBIENT CONTROLS, AND WEATHERPROOF HOUSING. TRAP AND SLOPE REFRIGERANT LINES PER MANUFACTURER'S RECOMMENDATIONS. INSTALLATION SHALL COMPLY WITH ASHRAE/ANSI STANDARD 15. INSTALL THE REFRIGERANT LINE SET TO WITHIN 3'-0" OF THE CONDENSING UNIT. CUT 2-1/2" HOLE IN WALK-IN COOLER ROOF FOR REFRIGERANT LINE SET AND SEAL PER THE COOLER MANUFACTURER'S INSTALLATION INSTRUCTIONS AFTER LINE SET IS INSTALLED.

KEYNOTES FOR THIS SHEET 1, 2 ETC.

- 20 INSTALL REMOTE CONDENSER FOR ICE MACHINE IN CEILING SPACE OF STORAGE ROOM, HUNG FROM THE FLOOR ABOVE. INSTALL REFRIGERANT LINE SET, THERMOSTATIC EXPANSION VALVE, SOLENOID VALVE, TEMPERATURE CONTROL, SIGHT GLASS, FILTER DRIER, PRESSURE CONTROL, LOW AMBIENT CONTROLS AND WEATHERPROOF HOUSING. TRAP AND SLOPE REFRIGERANT LINES PER MANUFACTURER'S RECOMMENDATIONS. INSTALLATION SHALL COMPLY WITH ASHRAE/ANSI STANDARD 15. INSTALL THE REFRIGERANT LINE SET TO WITHIN 3'-0" OF THE REMOTE CONDENSER. IF REFRIGERANT PIPING TO ICE MACHINE IS EXPOSED TO PUBLIC VIEW, CONCEAL WITHIN A STAINLESS STEEL SHROUD AS SHOWN IN THE ARCHITECTURAL DRAWINGS.
- 21 INSTALL EQUIPMENT PER MANUFACTURER'S INSTALLATION INSTRUCTIONS AND AS DETAILED IN THE ARCHITECTURAL AND STRUCTURAL DRAWINGS.
- 22 PROVIDE SUPPLY DIFFUSER CONNECTION TO SUPPLY SYSTEM PER DETAIL 6/M-700. TYPICAL, FOR ALL DIFFUSERS LOCATED IN A CEILING.
- 23 BOTTOM OF 10" DIA. DUCTS SHALL BE FLUSH WITH BOTTOM OF 15" DIA. DUCT MAIN. BOTTOM OF MAIN SHALL BE FLUSH WITH BOTTOM OF (E) STUB.
- 24 RELIEF LOUVER IN STOREFRONT ABOVE STOREFRONT WINDOWS. DUCT TO FIXED BLADE RETURN GRILLE IN SOFFIT FACE AND PROVIDE BACKDRAFT DAMPER. COORDINATE LOUVER SIZE WITH (E) STOREFRONT AND COORDINATE LOCATION WITH BEAMS. VERIFY EXISTING CONDITIONS IN FIELD.
- 25 INSTALL EQUIPMENT PER MANUFACTURER'S INSTALLATION INSTRUCTIONS. INSTALL FLUE PIPING & TERMINATION AT ROOF LEVEL PER MANUFACTURER'S INSTALLATION INSTRUCTIONS. ROUTE FLUE PIPING TO SHAFT UP TO ROOF, MINIMIZING ELBOWS AND USING 45 DEG. ELBOWS IN LIEU OF 90 DEG. WHERE POSSIBLE.

UP TO MAU-1 ON 2ND FLOOR ROOF. VERIFY EXISTING CONDITIONS IN FIELD. SEE SHEET M-101 FOR CONTINUATION.

24"x20"

24"x20"

24"x20"

24"x20"

24"x20"

24"x20"

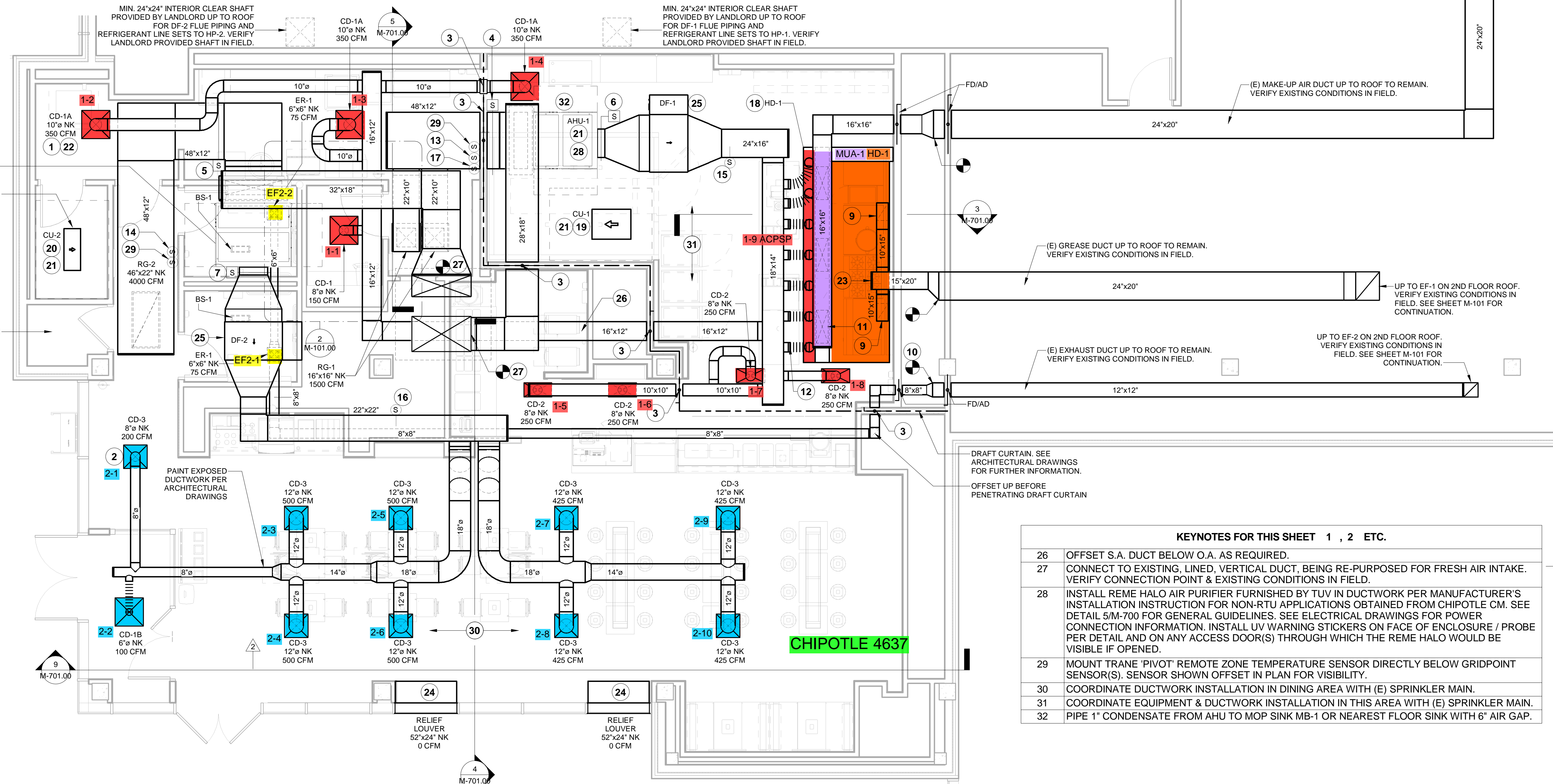
UP TO EF-1 ON 2ND FLOOR ROOF. VERIFY EXISTING CONDITIONS IN FIELD. SEE SHEET M-101 FOR CONTINUATION.

UP TO EF-2 ON 2ND FLOOR ROOF. VERIFY EXISTING CONDITIONS IN FIELD. SEE SHEET M-101 FOR CONTINUATION.

DRAFT CURTAIN. SEE ARCHITECTURAL DRAWINGS FOR FURTHER INFORMATION.
OFFSET UP BEFORE PENETRATING DRAFT CURTAIN

KEYNOTES FOR THIS SHEET 1, 2 ETC.

- 26 OFFSET S.A. DUCT BELOW O.A. AS REQUIRED.
- 27 CONNECT TO EXISTING LINED. VERTICAL DUCT, BEING RE-PURPOSED FOR FRESH AIR INTAKE. VERIFY CONNECTION POINT & EXISTING CONDITIONS IN FIELD.
- 28 INSTALL REME HALO AIR PURIFIER FURNISHED BY TUV IN DUCTWORK PER MANUFACTURER'S INSTALLATION INSTRUCTION FOR NON-RTU APPLICATIONS OBTAINED FROM CHIPOTLE CM. SEE DETAIL 5/M-700 FOR GENERAL GUIDELINES. SEE ELECTRICAL DRAWINGS FOR POWER CONNECTION INFORMATION. INSTALL UV WARNING STICKERS ON FACE OF ENCLOSURE / PROBE PER DETAIL AND ON ANY ACCESS DOOR(S) THROUGH WHICH THE REME HALO WOULD BE VISIBLE IF OPENED.
- 29 MOUNT TRANE 'PIVOT' REMOTE ZONE TEMPERATURE SENSOR DIRECTLY BELOW GRIDPOINT SENSOR(S). SENSOR SHOWN OFFSET IN PLAN FOR VISIBILITY.
- 30 COORDINATE DUCTWORK INSTALLATION IN DINING AREA WITH (E) SPRINKLER MAIN.
- 31 COORDINATE EQUIPMENT & DUCTWORK INSTALLATION IN THIS AREA WITH (E) SPRINKLER MAIN.
- 32 PIPE 1" CONDENSATE FROM AHU TO MOP SINK MB-1 OR NEAREST FLOOR SINK WITH 6" AIR GAP.



1 HVAC PLAN
1/4" = 1'-0"

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STORE NO.: 31-4637
 HUTCH METRO CENTER
 1776 EASTCHESTER ROAD
 BRONX, NY 10461

PERMIT SET
 03/10/2023

REV. DATE	DESCRIPTION
10/07/2022	LLD REVIEW SET
02/28/2023	PERMIT SET
10/31/2022	BID SET
2 02/28/2023	CONSTRUCTION SET

PROFESSIONAL SEAL

 Michael L. Wilson, P.E.
 NY License #073765-1
 03/03/23

PROFESSIONAL IN CHARGE: Michael L. Wilson, P.E.
 DRAWN BY: PCE
 CHECKED BY: AIS
 PROJECT NUMBER:
 22074
 SHEET TITLE:
 HVAC PLAN

SHEET NUMBER:
 M-100.00
 2 OF 15

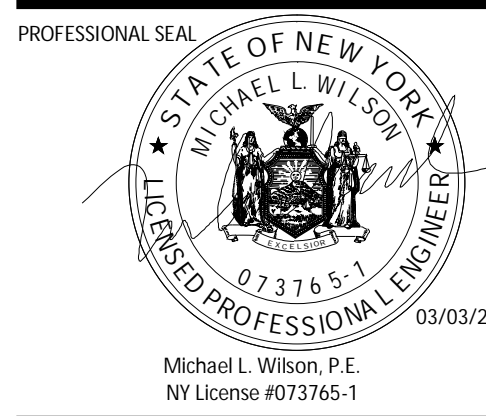
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2022-DB#4/P#1-2



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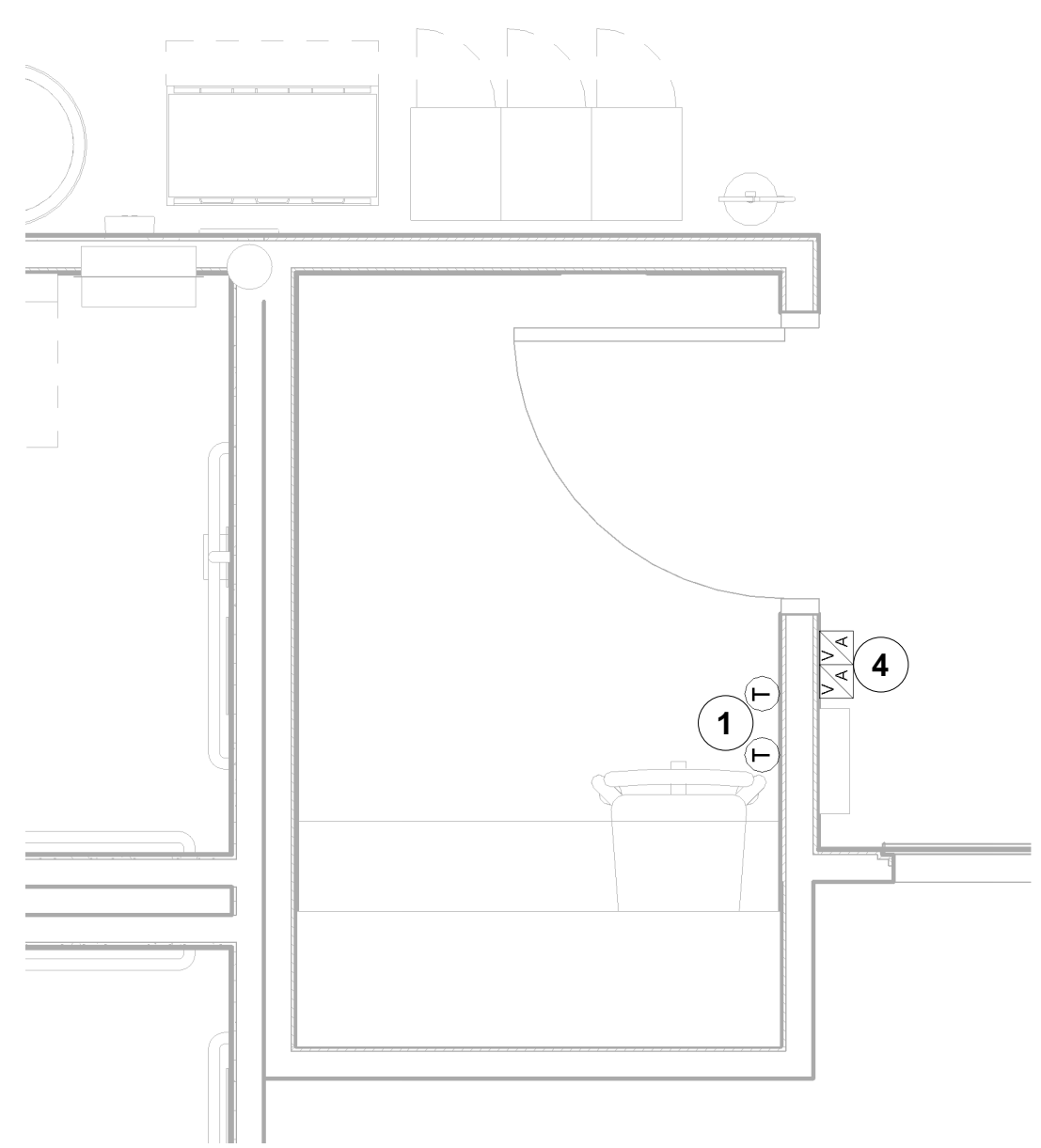


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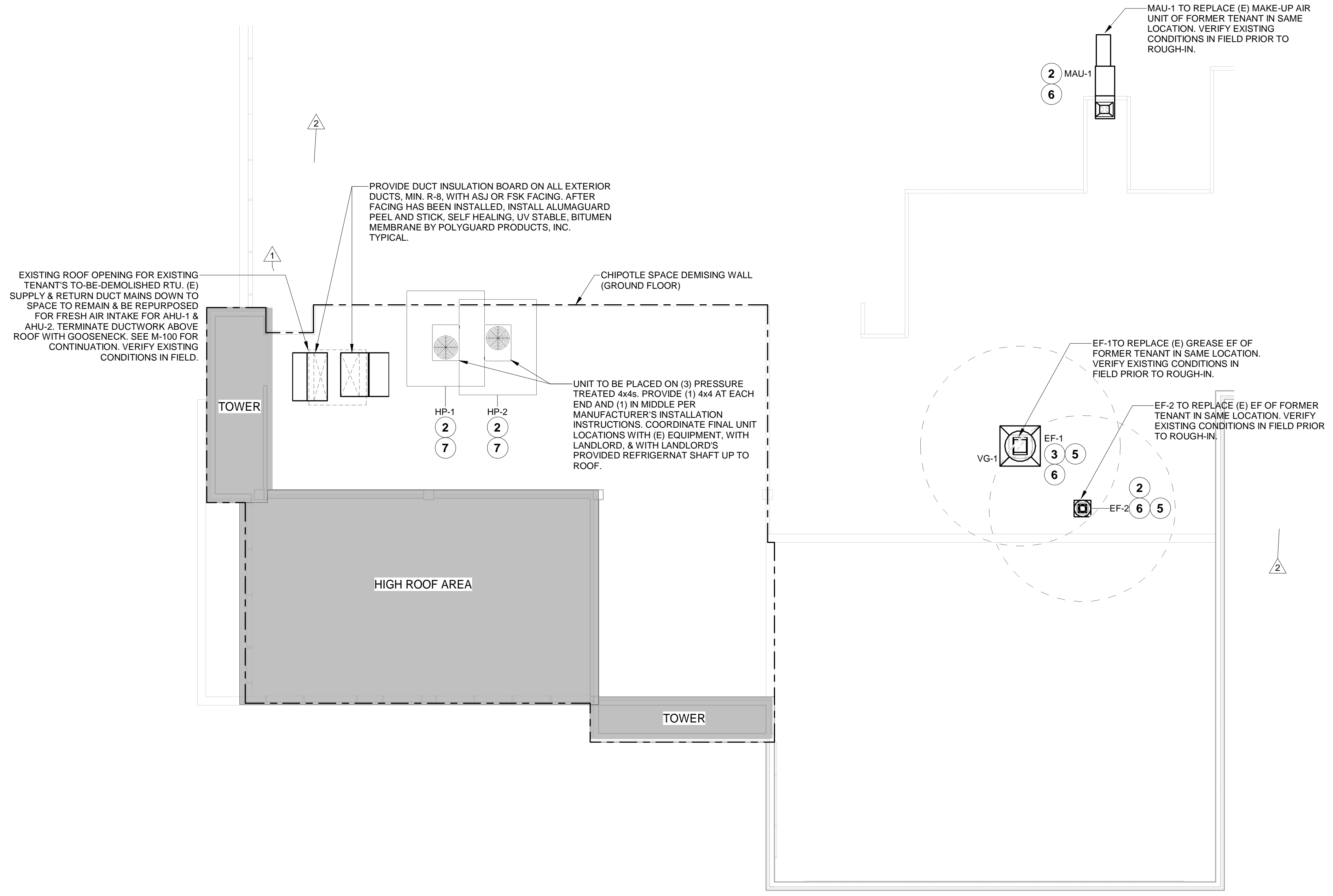
HVAC ROOF PLAN &
 OFFICE PLAN

SHEET NUMBER:
M-101.00
 3 OF 15

KEYNOTES FOR THIS SHEET 1, 2 ETC.	
1	INSTALL NEW TRANE THERMOSTATS FOR AHU-1 AND AHU-2 AT THIS LOCATION AT 48" AFF. COORDINATE WITH ELECTRICAL SWITCHING IN THIS AREA. PROVIDE WIRING AS SHOWN IN DETAIL 8/E710. LABEL THERMOSTAT WITH CORRESPONDING UNIT.
2	INSTALL EQUIPMENT PER MANUFACTURER'S INSTALLATION INSTRUCTIONS AND AS DETAILED IN THE ARCHITECTURAL AND STRUCTURAL DRAWINGS.
3	INSTALL EXHAUST FAN EF-1 PER DETAIL 8/M-700 AND AS DETAILED IN THE ARCHITECTURAL AND STRUCTURAL DRAWINGS. INSTALL GREASE VIROGUARD SYSTEM FURNISHED BY CHIPOTLE ON EXHAUST FAN EF-1.
4	PROVIDE AUDIO/VISUAL REMOTE SMOKE DETECTOR ANNUNCIATOR WITH REMOTE KEY OPERATED RESET. WIRE A UNIT BACK TO EACH SMOKE DETECTOR. MOUNT UNIT 60" AFF. LABEL ANNUNCIATOR WITH CORRESPONDING UNIT. TYPICAL. NOTE: THERE ARE (4) TOTAL DEVICES ON WALL, MOUNT (2) OVERTOP OF (2). (1) A/V DEVICE WILL BE SUPPLIED WITH EACH UNIT, CONTRACTOR TO PROVIDE (1) ADDITIONAL A/V DEVICE PER UNIT.
5	10'-0" MIN. CLEARANCE FROM OUTER EDGE OF EXHAUST FAN TO FRESH AIR INTAKES. TYPICAL.
6	VERIFY SIZE OF (E) CURB AND ROOF OPENING IN FIELD, COMPARE TO CURBS NOTED IN THE M-400 SERIES OF DRAWINGS IN THIS SET AND NOTIFY CAPTIVE AIRE AND THE ENGINEER OF RECORD OF POTENTIAL ISSUES.
7	INSTALL REMOTE OUTDOOR HEAT PUMP UNIT FOR PAIRED INDOOR AHU ON ROOF AS DETAILED IN THE ARCHITECTURAL AND STRUCTURAL DRAWINGS. INSTALL REFRIGERANT LINE SET, THERMOSTATIC EXPANSION VALVE, SOLENOID VALVE, TEMPERATURE CONTROL, SIGHT GLASS, FILTER DRIER, PRESSURE CONTROL, LOW AMBIENT CONTROLS, AND WEATHERPROOF HOUSING. TRAP AND SLOPE REFRIGERANT LINES PER MANUFACTURER'S RECOMMENDATIONS. SEAL PIPING PENETRATIONS THROUGH ROOF. INSTALLATION SHALL COMPLY WITH ASHRAE/ANSI STANDARD 15. INSTALL THE REFRIGERANT LINE SET WITHIN LANDLORD PROVIDED SHAFT TO/FROM PAIRED INDOOR EQUIPMENT IN GROUND FLOOR CEILING SPACE AND THE CORRESPONDING OUTDOOR HEAT PUMP UNIT. VERIFY LANDLORD PROVIDED REFRIGERANT SHAFT IN FIELD.



2 HVAC OFFICE PLAN
 1/2" = 1'-0"



1 HVAC ROOF PLAN
 1/8" = 1'-0"

**HOOD SHOP DRAWING PRODUCED BY
MANUFACTURER - FOR REFERENCE ONLY**

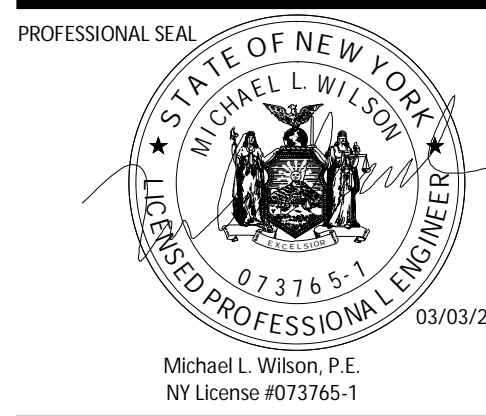
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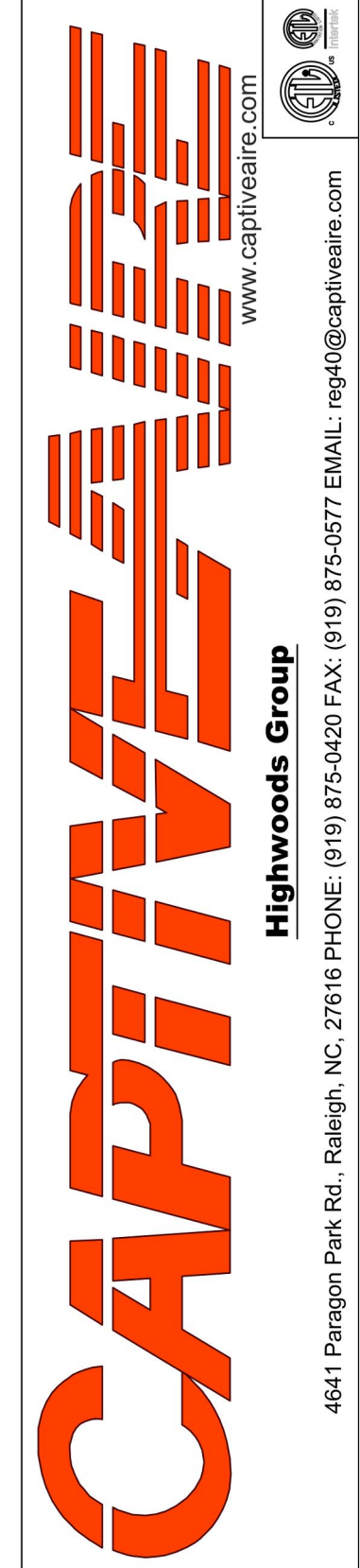
PROFESSIONAL IN CHARGE: Michael L. Wilson, P.E.
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CAPTIVEAIRE
DRAWINGS

M-401.00

4 OF 15
DOB NOW Filing #: X08027475-11

REVISIONS	
DESCRIPTION	DATE



CHIPOTLE HUTCH METRO CENTER #4637
BRONX, NY, 10461

DATE: 2/28/2023
DWG.#: 5667266
DRAWN BY: JMB-40
SCALE: 3/4" = 1'-0"
MASTER DRAWING
SHEET NO. 1

SPECIFICATION: CAPTRATE® GREASE-STOP® SOLID FILTER

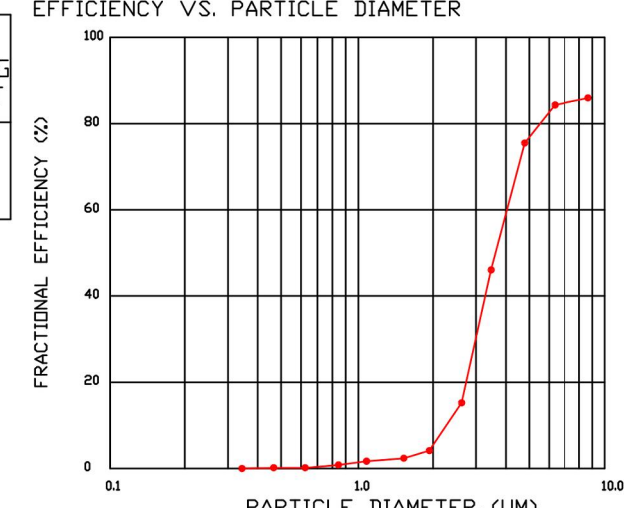
THE CAPTRATE GREASE-STOP SOLID FILTER IS A SINGLE-STAGE FILTER FEATURING A UNIQUE S-Baffle DESIGN IN CONJUNCTION WITH A SLOTTED REAR Baffle DESIGN, TO DELIVER EXCEPTIONAL FILTRATION EFFICIENCY.

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

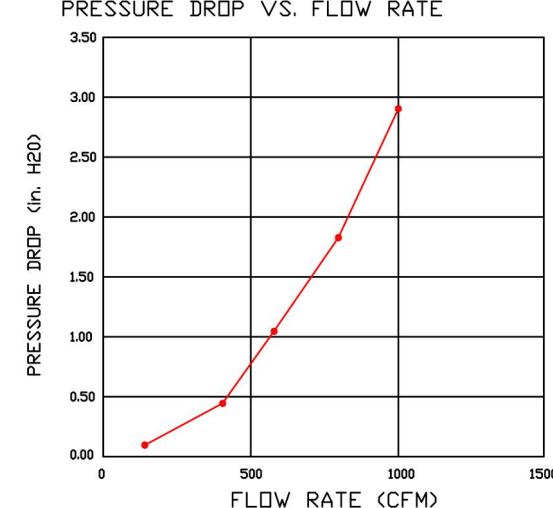
UNITS SHALL INCLUDE STAINLESS STEEL HANDLES AND A FASTENING DEVICE TO SECURE THE TWO COMPONENTS WHEN ASSEMBLED.

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

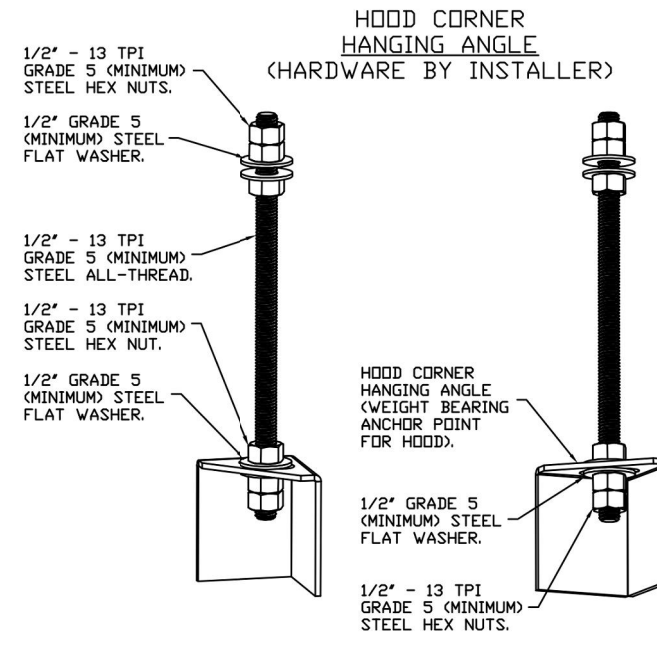
EFFICIENCY VS. PARTICLE DIAMETER



PRESSURE DROP VS. FLOW RATE

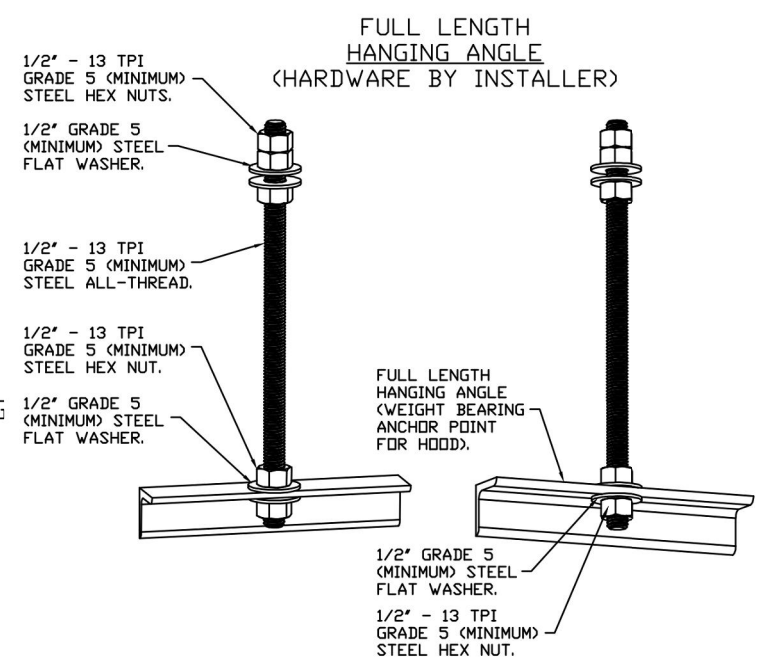


CAPTRATE FILTERS ARE BUILT IN COMPLIANCE WITH:
NFPA #96.
NSF STANDARD #2.
UL STANDARD #1046.
INT. MECH. CODE (IMC).
ULC-S649.



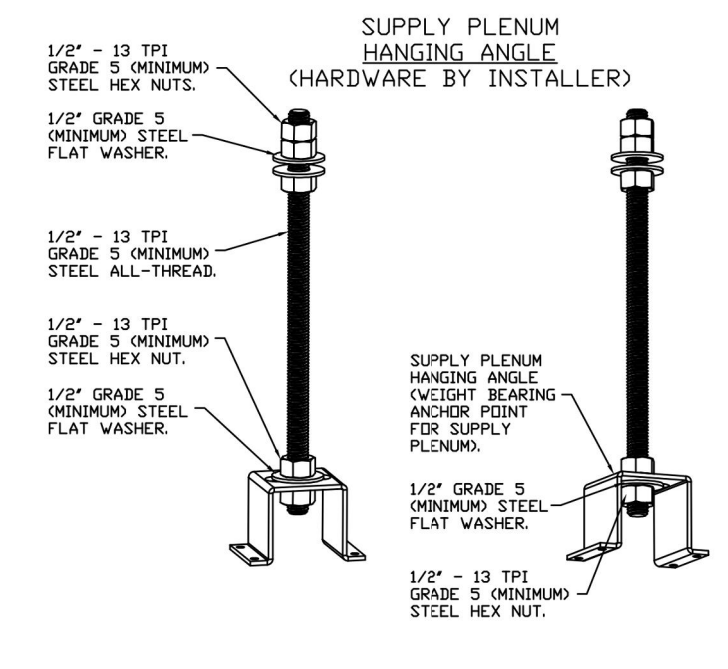
ASSEMBLY INSTRUCTIONS

HANGING ANGLE MUST BE SUPPORTED WITH 1/2" - 13 TPI GRADE 5 (MINIMUM) ALL-THREAD. SANDWICH HANGING ANGLES AND CEILING ANCHOR POINTS WITH 1/2" GRADE 5 (MINIMUM) STEEL FLAT WASHERS AND 1/2" - 13 TPI GRADE 5 (MINIMUM) HEX NUTS AS SHOWN. MUST USE DOUBLED HEX NUT CONFIGURATION BENEATH HOOD HANGING ANGLES AND ABOVE CEILING ANCHORS. MAINTAIN 1/4" OF EXPOSED THREADS BENEATH BOTTOM HEX NUT. TORQUE ALL HEX NUTS TO 57 FT-LBS.



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ASSEMBLY INSTRUCTIONS

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FOR QUESTIONS, CALL THE
Highwoods Group
REGION 40
PHONE: (919) 875-0420
EMAIL: rep40@captiveaire.com

PATENT NUMBERS
AC-PSP (UNITED STATES) - US PATENT 7963830 B2.
AC-PSP WALL (CANADA) - CA PATENT 2820509.
AC-PSP ISLAND (CANADA) - CA PATENT 2820330.

HOOD INFORMATION - JOB#5667266

HOOD NO	TAG	MODEL	MANUFACTURER	LENGTH	MAX COOKING TEMP	TYPE	APPLIANCE DUTY	DESIGN CFM/FT	TOTAL EXH CFM	EXHAUST PLENUM RISER(S)				MUA CFM	AC CFM	HOOD CONSTRUCTION	HOOD CONFIG			
										WIDTH	LENG	HEIGHT	DIA				CFM	VEL	SP	END TO END
1		5424 ND-2-ACPSP-F	CAPTIVEAIRE	14' 3"	600 DEG	I	HEAVY	225	3200	10'	15'	4'	1600	1536	-0.641'	1950	798	430 SS WHERE EXPOSED	ALONE	ALONE

HOOD INFORMATION

HOOD NO	TAG	TYPE	FILTER(S)				LIGHT(S)				UTILITY CABINET(S)				FIRE SYSTEM PIPING	HOOD HANGING WEIGHT	
			QTY	HEIGHT	LENGTH	EFFICIENCY @ 7 MICRONS	QTY	TYPE	WIRE GUARD	LOCATION	SIZE	FIRE SYSTEM	SIZE	ELECTRICAL			MODEL #
1		CAPTRATE SOLID FILTER	10	20"	16"	85% SEE FILTER SPEC	10	L55 SERIES E26	NO	LEFT	12"x54"x24"	ANSUL R-102	3.0/3.0	SC-31110MA	1 LIGHT 1 FAN	YES	1234 LBS

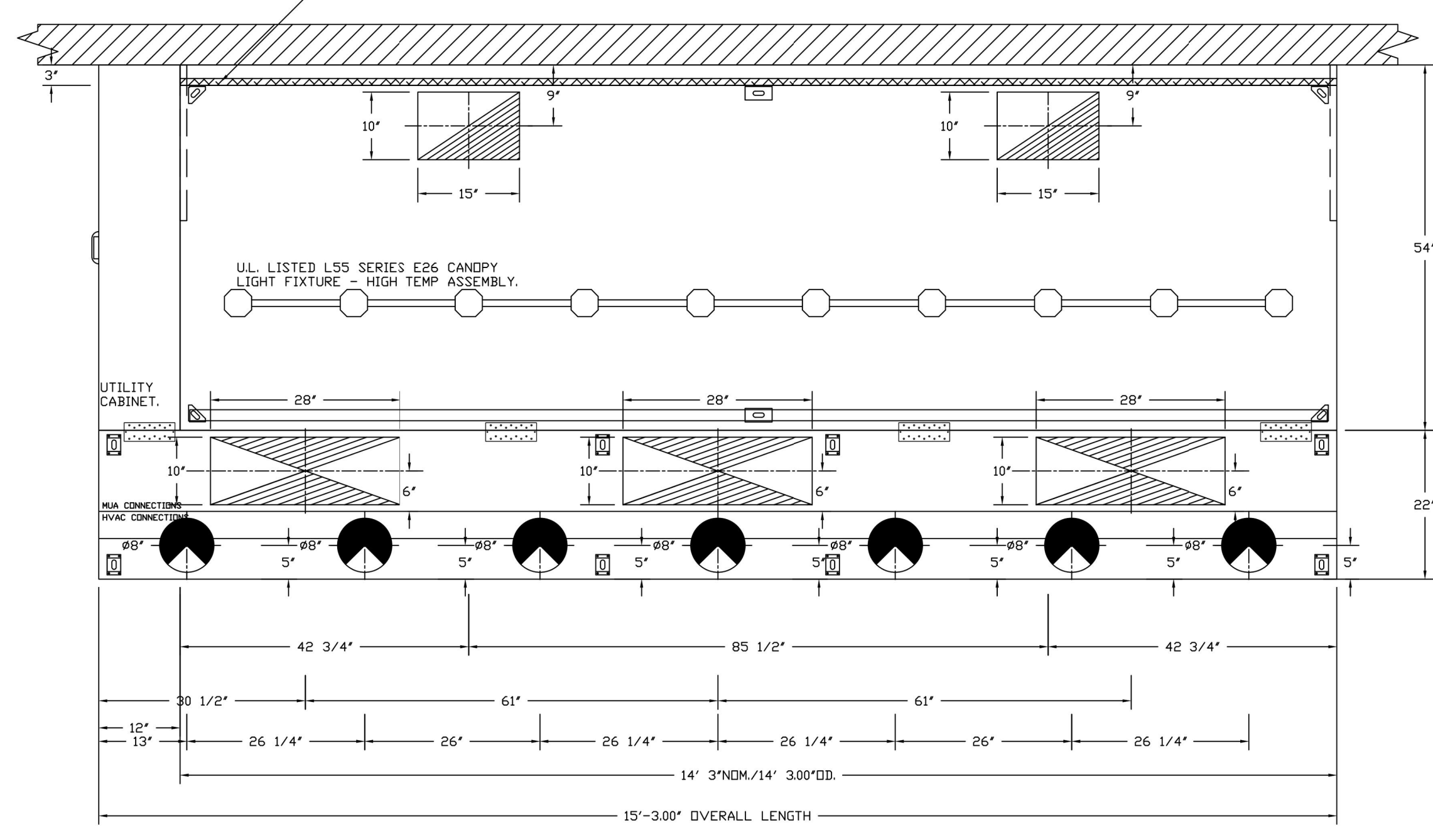
HOOD OPTIONS

HOOD NO	TAG	FIELD WRAPPER	10.00" HIGH	FRONT, LEFT, RIGHT.
1		RIGHT QUARTER END PANEL	23" TOP WIDTH, 0" BOTTOM WIDTH,	23" HIGH 430 SS.
		LEFT QUARTER END PANEL	23" TOP WIDTH, 0" BOTTOM WIDTH,	23" HIGH 430 SS.
		INSULATION FOR TOP OF HOOD.		
		INSULATION FOR BACK OF HOOD.		
		NYC CONSTRUCTION.		
		FULL DIMENSION HANGING BRACKET - FRONT.		

PERFORATED SUPPLY PLENUM(S)

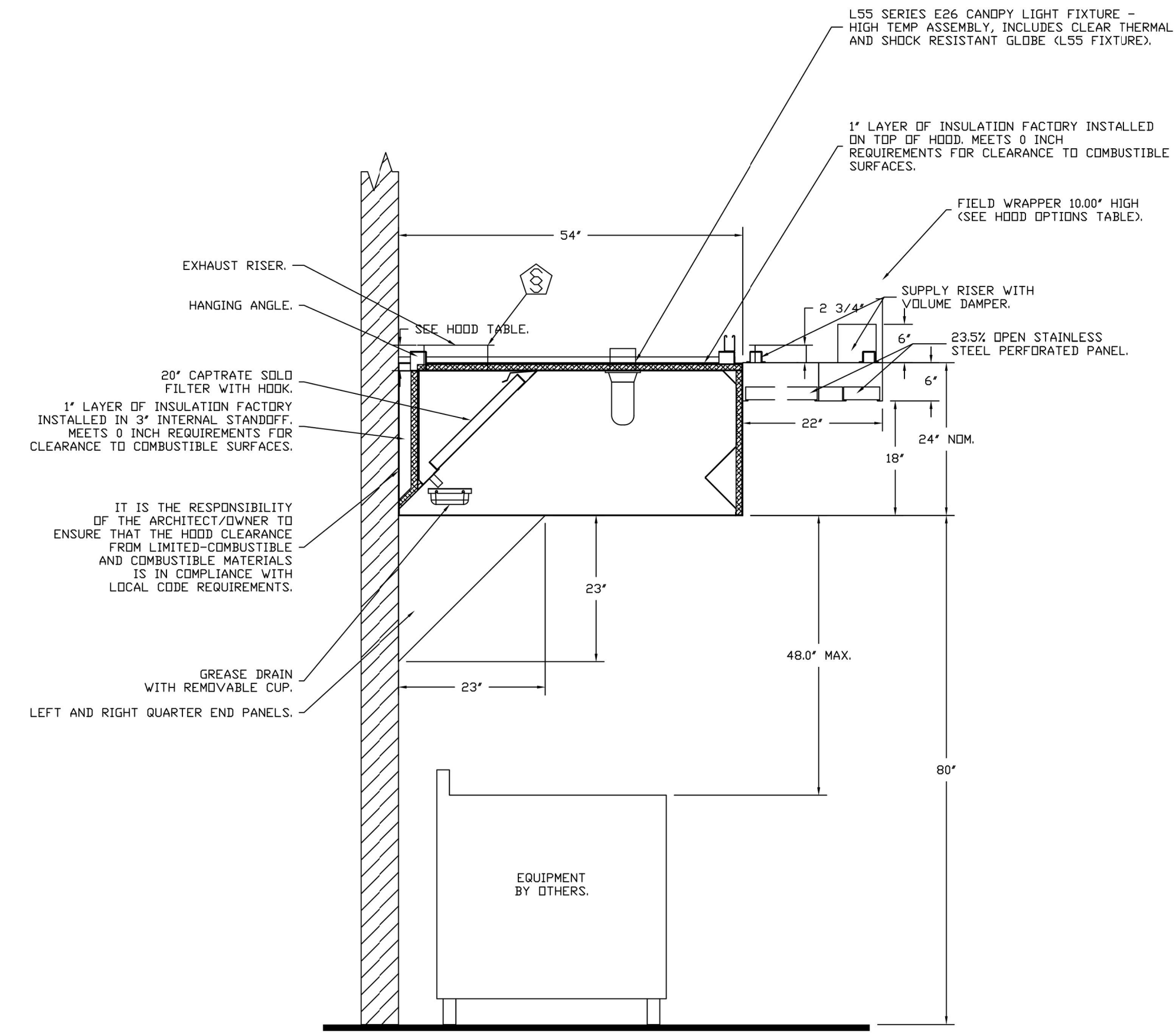
HOOD NO	TAG	POS	LENGTH	WIDTH	HEIGHT	TYPE	RISER(S)			
							WIDTH	LENG	DIA	CFM
1		Front	183"	22"	6"	MUA	10'	28"	650	0.166'
						MUA	10'	28"	650	0.166'
						MUA	10'	28"	650	0.166'
						AC	8"	114	0.041'	
						AC	8"	114	0.041'	
						AC	8"	114	0.041'	
						AC	8"	114	0.041'	
						AC	8"	114	0.041'	
						AC	8"	114	0.041'	

1" LAYER OF INSULATION FACTORY INSTALLED IN INTERNAL BACK STANDOFF. MEETS 10 INCH REQUIREMENTS FOR CLEARANCE TO COMBUSTIBLE SURFACES.



2022-DB#4/P#1-2

HOOD SHOP DRAWING PRODUCED BY
MANUFACTURER - FOR REFERENCE ONLY



SECTION VIEW - MODEL 5424ND-2-ACPSP-F
HOOD - #1

FIRE SYSTEM INFORMATION - JOB#5667266

FIRE SYSTEM NO	TAG	TYPE	SIZE	FLDW POINTS	INSTALLATION	
					SYSTEM	LOCATION ON HOOD
1		ANSUL R102	3.0/3.0	13	FIRE CABINET LEFT	LEFT, HOOD 1

GAS VALVE(S)

FIRE SYSTEM NO	TAG	TYPE	SIZE	SUPPLIED BY
1		MECHANICAL	2.000	CAPTIVEAIRE SYSTEMS

REVISIONS

NO.	DESCRIPTION	DATE

Highwoods Group
4641 Paragon Park Rd., Raleigh, NC, 27616 PHONE: (919) 975-0420 FAX: (919) 875-0877 EMAIL: rag4@captivaire.com

CHIPOTLE HUTCH METRO CENTER #4637
BRONX, NY, 10461

DATE: 2/28/2023
DWG.#: 5667266
DRAWN BY: JMB-40
SCALE: 3/4" = 1'-0"
MASTER DRAWING
SHEET NO. 2

Consultant:
Polaris
Consulting Engineers, PC
214 W. Main Street, Suite 208
Moorestown, NJ 08057
(856) 778-5400

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CAPTIVEAIRE
DRAWINGS

SHEET NUMBER:
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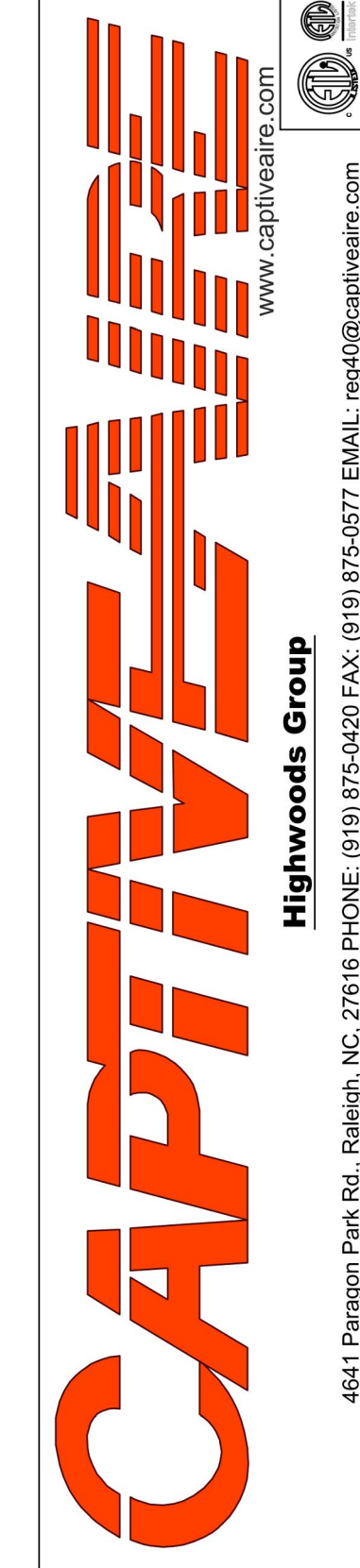
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**CAPTIVEAIRE
DRAWINGS**

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SHEET NO. 3

EXHAUST FAN INFORMATION - JOB#5667266

FAN UNIT NO	TAG	QTY	FAN UNIT MODEL #	MANUFACTURER	CFM	ESP	RPM	MOTOR ENCL	HP	BHP	PHASE	VOLT	FLA	DISCHARGE VELOCITY	WEIGHT (LBS)	SONES
1	EF-1	1	DUE240HFA	CAPTIVEAIRE	3200	1.000	719	DDP,PREMIUM	3.000	1.0620	3	208	10.2	727 FPM	305	11.1
3	EF-2	1	DUI0HFA	CAPTIVEAIRE	150	0.100	824	TEAD-ECM	0.166	0.0060	1	115	1.9	312 FPM	49	1.7

MUA FAN INFORMATION - JOB#5667266

FAN UNIT NO	TAG	QTY	FAN UNIT MODEL #	BLOWER	HOUSING	MIN CFM	DESIGN CFM	ESP	RPM	MOTOR ENCL	HP	BHP	PHASE	VOLT	FLA	MCA	MDCP	WEIGHT (LBS)	SONES
2	MAU-1	1	A1-D.250-15D	ISMF-1-MDD	A1-D.250	1000	1950	0.300	1942	DDP,PREMIUM	2.000	1.1950	3	208	6.1	7.7A	15A	509	18.5

GAS FIRED MAKE-UP AIR UNIT(S)

FAN UNIT NO	TAG	INPUT BTUs	OUTPUT BTUs	TEMP RISE	REQUIRED INPUT GAS PRESSURE	GAS TYPE	BURNER EFFICIENCY(%)
2	MAU-1	131327	120821	58°F	7 IN. W.C. - 14 IN. W.C.	NATURAL	92

FAN OPTIONS

FAN UNIT NO	TAG	QTY	DESCRIPTION
1	EF-1	1	GREASE BOX
		1	REMOVE HINGE KIT LABEL FROM THE FAN BASE
2	MAU-1	1	2 YEAR PARTS WARRANTY
		1	SIZE 1 TEMPERED COMMERCIAL DOWN DISCHARGE FOR DIRECT DRIVE AHUS
		1	INLET PRESSURE GAUGE, 0-35"
		1	MANIFOLD PRESSURE GAUGE, -5 TO 15" WC
		1	LDV FIRE START
		1	SHIP LOOSE GAS STRAINER 3/4"
		1	AC INTERLOCK RELAY - 24VAC COIL
		1	MOTORIZED BACKDRAFT DAMPER FOR A1-D HOUSING - MEETS AMCA CLASS 1A RATING
		1	LDV PRESSURE GAS SWITCH
		1	SEPARATE 120V WIRING PACKAGE (REQUIRED AND USED ONLY FOR DCV OR PREWIRE WITH VFD) - THREE PHASE ONLY
		1	2 YEAR PARTS WARRANTY
		1	ECM WIRING PACKAGE - EXHAUST - MANUAL OR 0-10VDC REFERENCE SPEED CONTROL -MSC-(TELCDD), CCW ROTATION
3	EF-2	1	1 12-BDD DAMPER
		1	2 YEAR PARTS WARRANTY

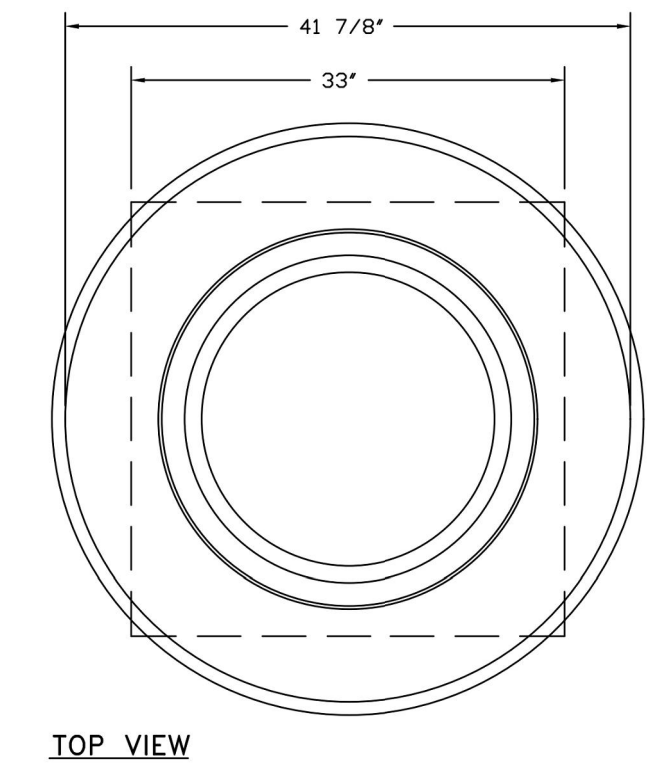
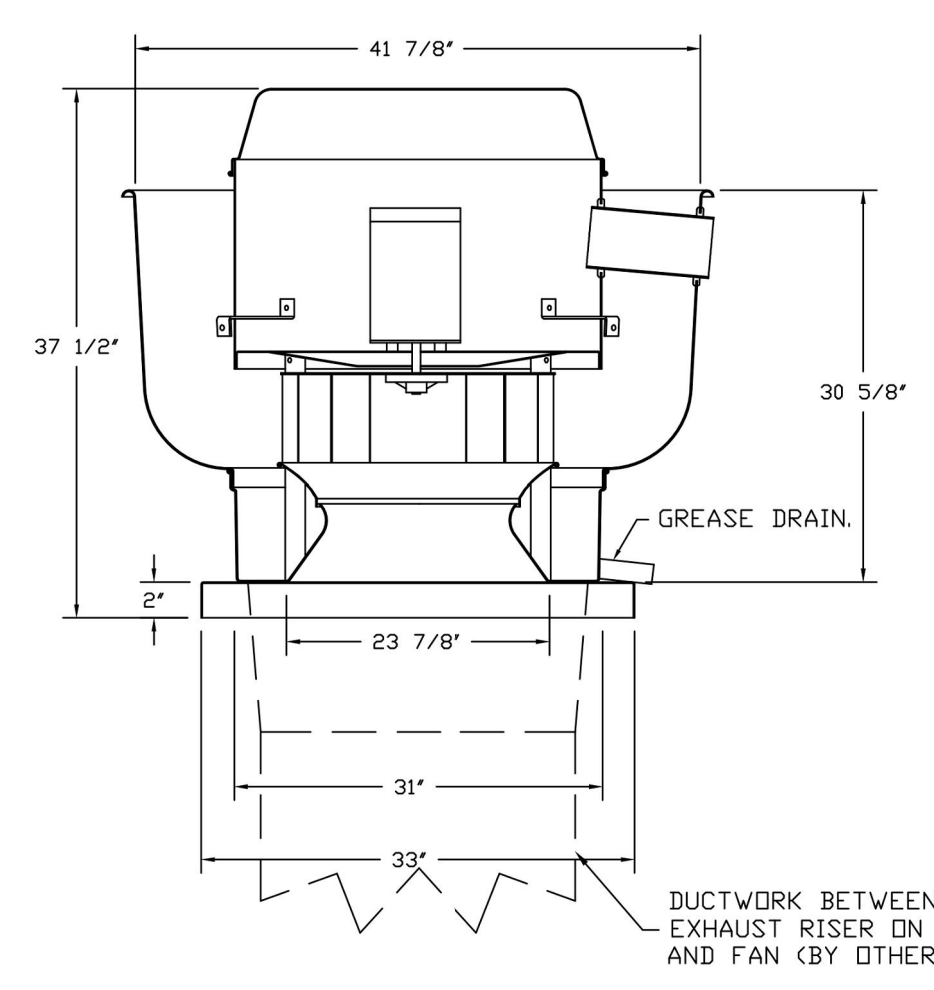
FAN ACCESSORIES

FAN UNIT NO	TAG	EXHAUST				SUPPLY		
		GREASE CUP	GRAVITY DAMPER	WALL MOUNT	SIDE DISCHARGE	GRAVITY DAMPER	MOTORIZED DAMPER	WALL MOUNT
1	EF-1	YES						
2	MAU-1						YES	
3	EF-2	YES						

CURB ASSEMBLIES

NO	ON FAN	TAG	WEIGHT	ITEM	SIZE
1		MAU-1	101 LBS	SUPPLY ADAPTER	FROM 36.500" X 84.500" TO 21.000" X 71.000" X 6.000"H.
2		EF-1	33 LBS	EXHAUST ADAPTER	FROM 40.000"SQ TO 31.500"SQ X 9.000"H.
3		EF-2	30 LBS	EXHAUST ADAPTER	FROM 24.500"SQ TO 17.250"SQ X 9.000"H.

FAN #1 DUE240HFA - EXHAUST FAN (EF-1)



FEATURES:

- DIRECT DRIVE CONSTRUCTION (NO BELTS/PULLEYS).
- ROOF MOUNTED FANS.
- RESTAURANT MODEL.
- UL705 AND UL762 AND ULC-S645
- VARIABLE SPEED CONTROL.
- INTERNAL WIRING.
- THERMAL OVERLOAD PROTECTION (SINGLE PHASE).
- HIGH HEAT OPERATION 300°F (149°C).
- GREASE CLASSIFICATION TESTING.
- NEMA 3R SAFETY DISCONNECT SWITCH.

NORMAL TEMPERATURE TEST

EXHAUST FAN MUST OPERATE CONTINUOUSLY WHILE EXHAUSTING AIR AT 300°F (149°C) UNTIL ALL FAN PARTS HAVE REACHED THERMAL EQUILIBRIUM, AND WITHOUT ANY DETERIORATING EFFECTS TO THE FAN WHICH WOULD CAUSE UNSAFE OPERATION.

ABNORMAL FLARE-UP TEST

EXHAUST FAN MUST OPERATE CONTINUOUSLY WHILE EXHAUSTING BURNING GREASE VAPORS AT 600°F (316°C) FOR A PERIOD OF 15 MINUTES WITHOUT THE FAN BECOMING DAMAGED TO ANY EXTENT THAT COULD CAUSE AN UNSAFE CONDITION.

OPTIONS

- GREASE BOX.
- REMOVE HINGE KIT LABEL FROM THE FAN BASE.
- 2 YEAR PARTS WARRANTY.

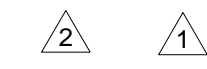
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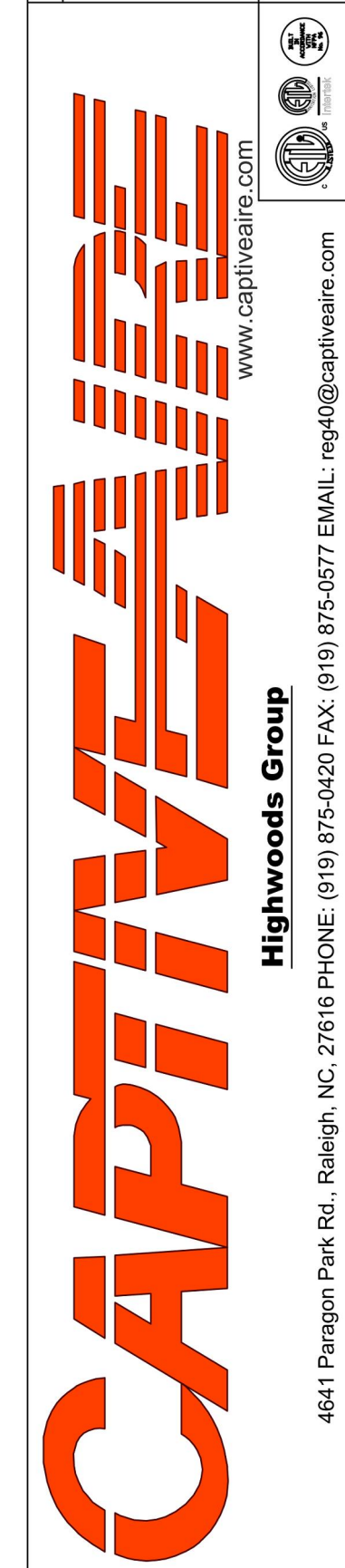
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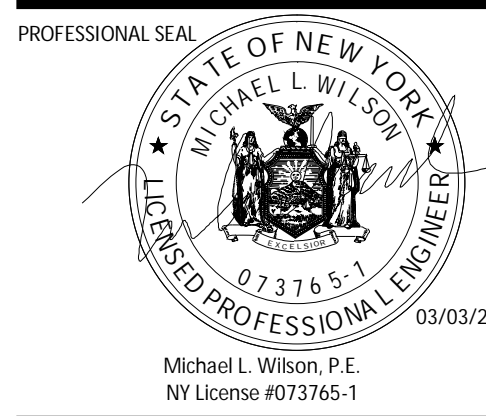


CHIPOTLE MEXICAN GRILL, INC.
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COLUMBUS, OH 43218-2566
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STORE NO.: 31-4637
HUTCH METRO CENTER
1776 EASTCHESTER ROAD
BRONX, NY 10461

PERMIT SET
03/10/2023

REV. DATE	DESCRIPTION
10/07/2022	LLD REVIEW SET
02/28/2023	PERMIT SET
10/31/2022	BID SET
11/03/2022	PER DB04
02/28/2023	CONSTRUCTION SET



Michael L. Wilson, P.E.
NY License #023765-1

PROFESSIONAL IN CHARGE: Michael L. Wilson, P.E.
DRAWN BY: PCE
CHECKED BY: AUS

PROJECT NUMBER:
22074

SHEET TITLE:
CAPTIVEAIRE DRAWINGS

SHEET NUMBER:

M-404.00

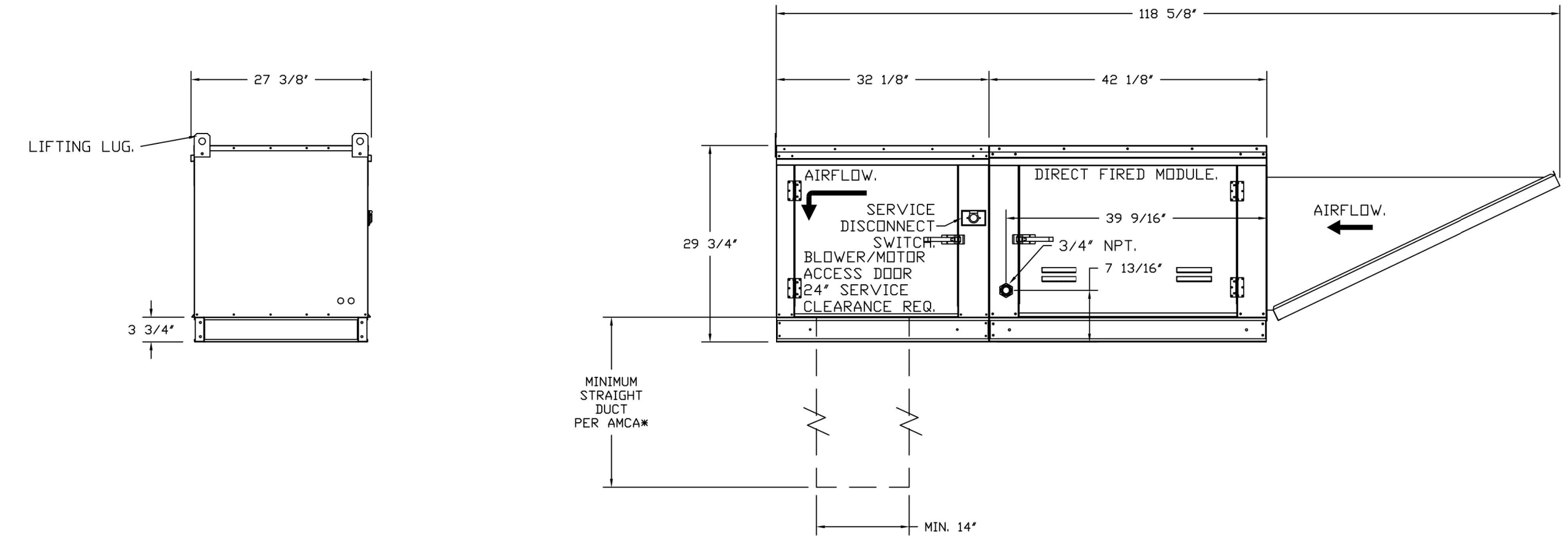
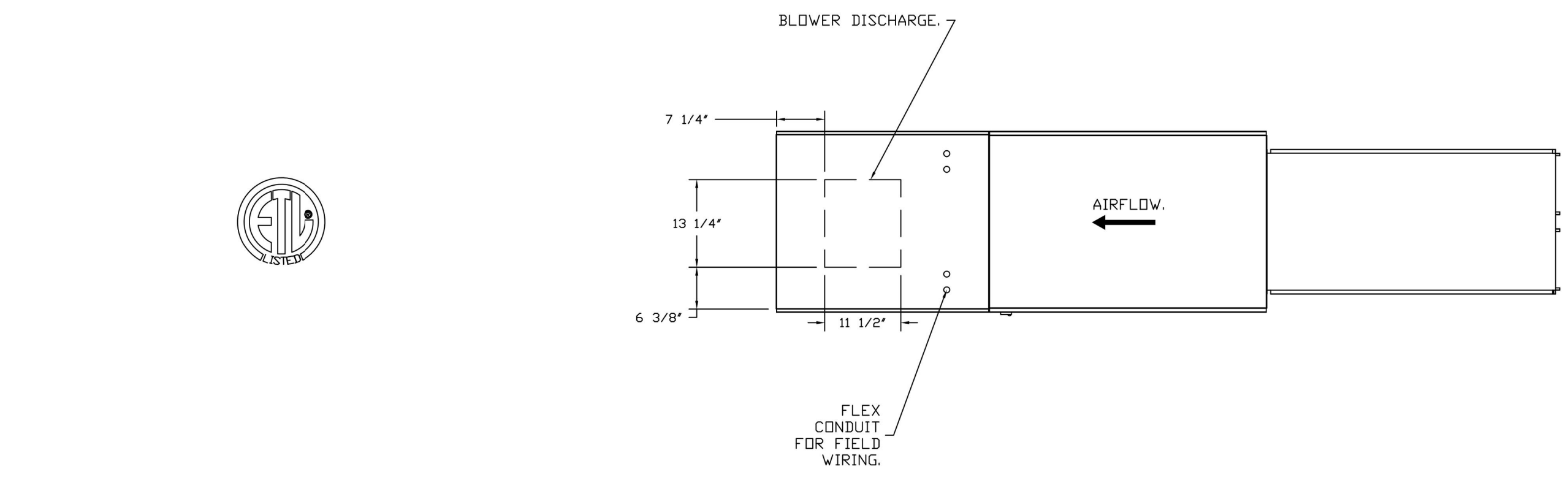
7 OF 15

DOB NOW Filing #: X08027475-11

- FAN #2 AI-D250-15D - HEATER (MAU-1)
- DIRECT GAS FIRED HEATED MAKE-UP AIR UNIT WITH 15" MIXED FLOW DIRECT DRIVE FAN.
 - INTAKE HOOD WITH EZ FILTERS.
 - DOWN DISCHARGE - AIR FLOW RIGHT -> LEFT
 - DOWN DISCHARGE CONSTRUCTION FOR SIZE 1 DIRECT DRIVE AHUS.
 - GAS PRESSURE GAUGE, 0-35", 2.5" DIAMETER, 1/4" THREAD SIZE.
 - GAS PRESSURE GAUGE, 0-35" TO #15 INCHES WC, 2.5" DIAMETER, 1/4" THREAD SIZE.
 - LOW FIRE START - ALLOWS THE BURNER CIRCUIT TO ENERGIZE WHEN THE MODULATION CONTROL IS IN A LOW FIRE POSITION.
 - SHIP LODGE GAS STRAINER, TO BE INSTALLED UPSTREAM OF UNIT CONNECTION, 3/4" CONNECTION.
 - COOLING INTERLOCK RELAY, 24VAC COIL, 120V CONTACTS, LOCKS OUT BURNER CIRCUIT WHEN AC IS ENERGIZED.
 - MOTORIZED BACK DRAFT DAMPER 16" X 18" FOR SIZE 1 STANDARD & MODULAR HEATER UNITS W/EXTENDED SHAFT, STANDARD GALVANIZED CONSTRUCTION, 3/4" REAR FLANGE, LOW LEAKAGE, TFB180S ACTUATOR INCLUDED.
 - LOW PRESSURE GAS SWITCH (1" - 6" WC) FACTORY SET AT 2" WC.
 - SEPARATE 120VAC WIRING PACKAGE FOR MAKE-UP AIR UNITS. OPTION MUST BE SELECTED WHEN MOUNTING VFD IN PREWIRE PANEL OR WITH DCV PACKAGE, PROVIDES SEPARATE 120VAC INPUT TO SUPPLY FAN. THIS 120V SIGNAL MUST BE RUN BY ELECTRICIAN FROM DCV TO MUA SWITCH.
 - HINGED DOUBLE WALL INSULATED DDDR ASSEMBLY (BURNER/BLOWER SECTION).
 - 2 YEAR PARTS WARRANTY.

NOTE: SUPPLY DUCT MUST BE INSTALLED TO MEET SMACNA STANDARDS. A MINIMUM STRAIGHT DUCT LENGTH MUST BE MAINTAINED DOWNSTREAM OF UNIT DISCHARGE AS OUTLINED IN AMCA PUBLICATION 200. WHEN USING RECTANGULAR DUCTWORK, ELBOWS MUST BE RADIUS THROAT, RADIUS BACK WITH TURNING VANES. FLEXIBLE DUCTWORK AND SQUARE THROAT/SQUARE BACK ELBOWS SHOULD NOT BE USED. ANY TRANSITION AND/OR TURNS IN THE DUCTWORK WILL CAUSE SYSTEM EFFECT. SYSTEM EFFECT WILL DRASTICALLY INCREASE STATIC PRESSURE AND REDUCE AIRFLOW. DO NOT RELY ON UNIT TO SUPPORT DUCT IN ANY WAY. FAILURE TO PROPERLY SIZE DUCTWORK MAY CAUSE SYSTEM EFFECTS AND REDUCE PERFORMANCE OF THE EQUIPMENT. SUGGESTED STRAIGHT DUCT SIZE IS 14" x 14".

SUPPLY SIDE HEATER INFORMATION:
WINTER TEMPERATURE = 17°F. TEMP. RISE = 58°F.
BTUs CALCULATED OFF ACTUAL AIR DENSITY.
OUTPUT BTUs AT ALTITUDE OF 0.0 FT. = 120829.
INPUT BTUs AT ALTITUDE OF 0.0 FT. = 131356.
OUTPUT BTUs AT ALTITUDE OF 2 FT. = 120821.
INPUT BTUs AT ALTITUDE OF 2 FT. = 131327.



DIRECT FIRED (DF) PROFILE PLATE ASSEMBLY

DIRECT FIRED PROFILE PLATE SPECIFICATIONS:

DESCRIPTION:
DIRECT FIRED BURNERS SHALL HAVE PATENTED (US PATENT NO. US6629532B2), SELF-ADJUSTING PROFILE PLATES DESIGNED TO ENSURE PROPER AIR VELOCITY AND PRESSURE DROP ACROSS THE BURNER. PROFILE PLATES SHALL ALLOW BURNERS TO ACHIEVE CLEAN COMBUSTION BY LIMITING BY-PRODUCT LEVELS TO A MAXIMUM OF 50PPM OF CARBON MONOXIDE (CO) AND 50PPM OF NITROGEN DIOXIDE (NO2). DIRECT FIRED UNITS SHALL BE CONFIGURED WITH THE BLUICE-ROBUSTE DOWNSTREAM OF THE BURNER. THIS ARRANGEMENT WILL ENSURE A CONSISTENT AIRFLOW, REGARDLESS OF INLET AIR TEMPERATURE.

APPLICATION:
SPRING-LOADED BURNER PROFILE PLATES ARE ENGINEERED TO AUTOMATICALLY REACT TO THE MOMENTUM OF A FRESH AIR STREAM, WITHOUT THE NEED FOR ANY MOTORS OR ACTUATORS TO MECHANICALLY ADJUST THEM WITH THIS FEATURE. ALL OF UNITS ARE DESIGNED FOR DEMAND CONTROL VENTILATION (DCV) REQUIREMENTS.

CERTIFICATIONS:
ALL PROFILE PLATE ASSEMBLIES SHALL BE INCLUDED IN THE DF UNIT'S ETL LISTING AND COMPLY WITH COMBINED SAFETY STANDARDS ANSI Z83.4 AND CSA 3.7 (NON-RECIRCULATING DF HEATERS) AND ANSI Z83.18 (RECIRCULATING DF HEATERS).

GENERAL CONSTRUCTION:
-PROFILE PLATES SHALL BE FORMED FROM 600 GALVANIZED STEEL.
-PROFILE PLATES SHALL VARY IN SIZE PER UNIT.
-PROFILE PLATES SHALL BE MOUNTED ALONG THE SAME PLANE AS THE DISCHARGE OF THE BURNER.
-DESIGN SHALL INCORPORATE PROPERLY TORQUED, PERMANENTLY MOUNTED SPRING HINGES.
-SPRING HINGES SHALL BE MADE FROM PLATED STEEL.

2022-DB#4/P#1-2

HOOD SHOP DRAWING PRODUCED BY
MANUFACTURER - FOR REFERENCE ONLY

Consultant:
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Consulting Engineers, PC
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(856) 778-5400

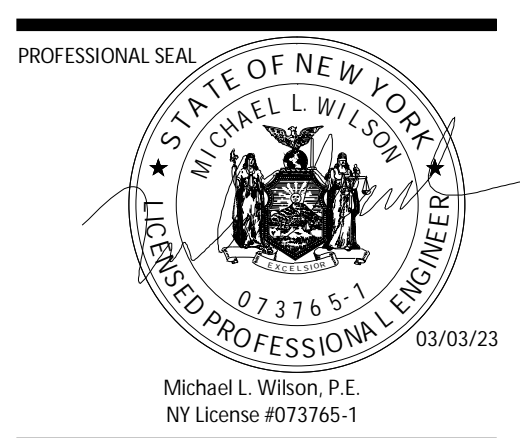
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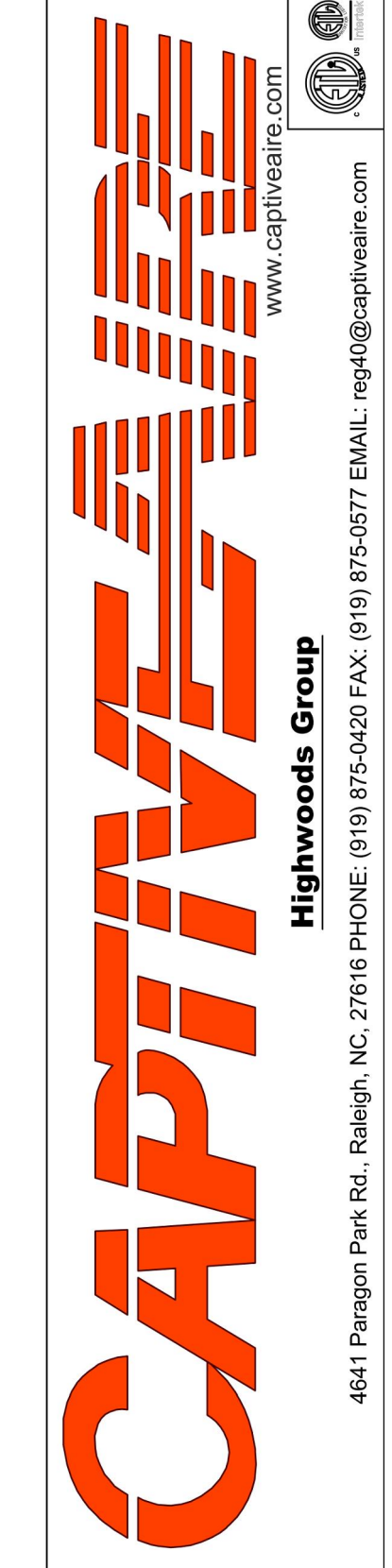
SHEET TITLE:
CAPTIVEAIRE
DRAWINGS

SHEET NUMBER:
M-405.00

8 OF 15

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DESCRIPTION	DATE



CHIPOTLE HUTCH METRO CENTER #4637
BRONX, NY, 10461

DATE: 2/28/2023

DWG.#:
5667266

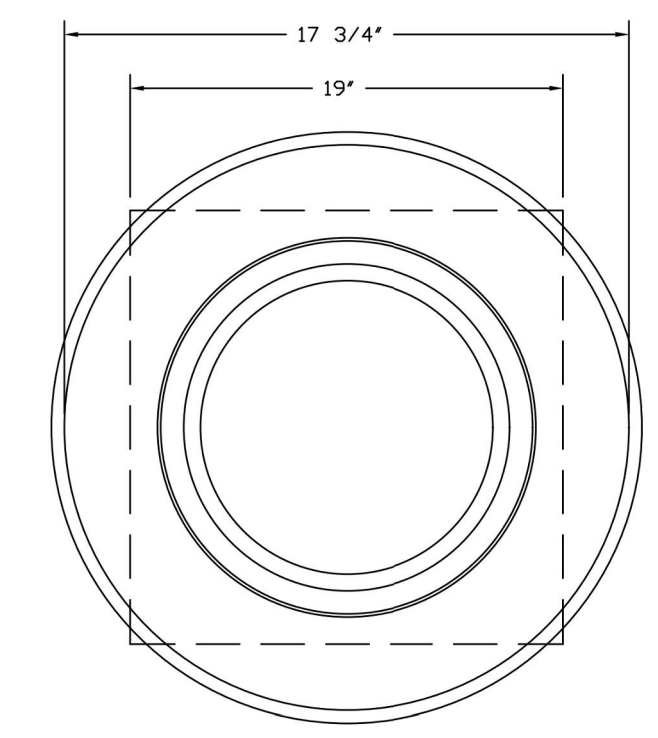
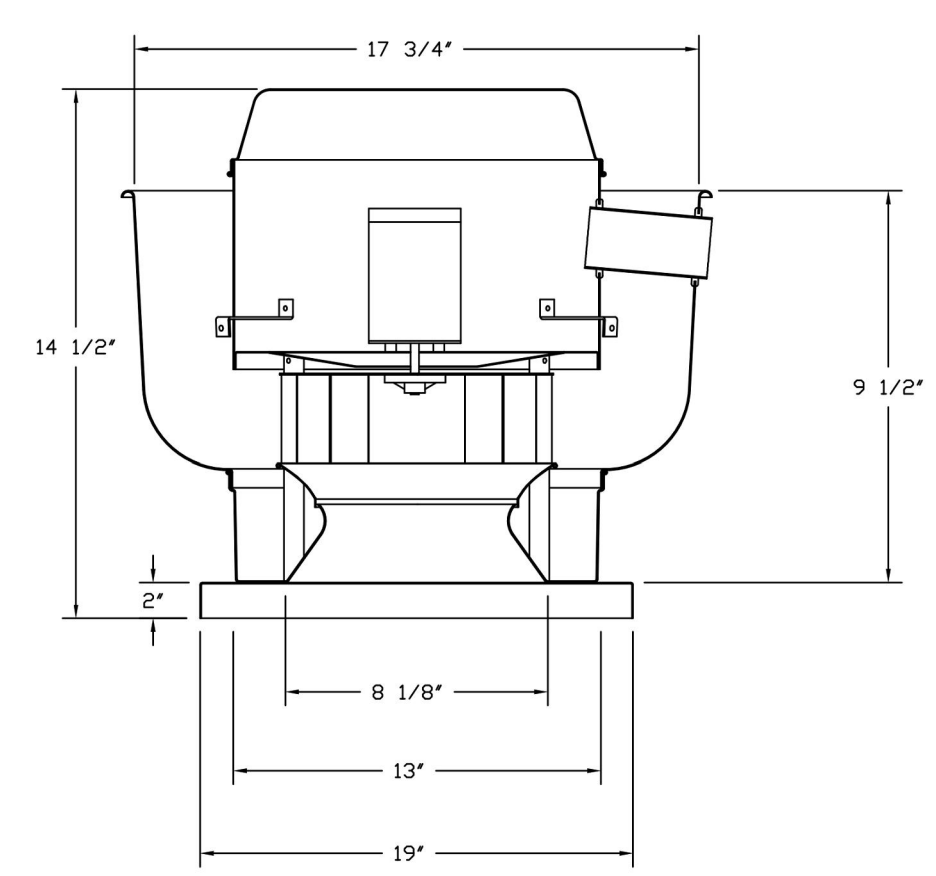
DRAWN BY:
JMB-40

SCALE:
3/4" = 1'-0"

MASTER DRAWING

SHEET NO.
5

FAN #3 DIIHQEA - EXHAUST FAN (EF-2)

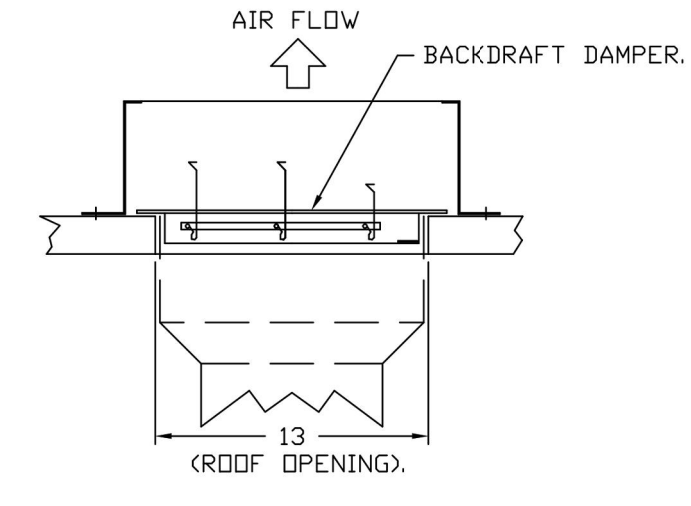


TOP VIEW

- FEATURES:**
- DIRECT DRIVE CONSTRUCTION (NO BELTS/PULLEYS).
 - ROOF MOUNTED FANS.
 - UL705.
 - VARIABLE SPEED CONTROL.
 - INTERNAL WIRING.
 - THERMAL OVERLOAD PROTECTION (SINGLE PHASE).

- OPTIONS:**
- ECM WIRING PACKAGE - EXHAUST - MANUAL DR. 0-10VDC REFERENCE SPEED CONTROL - MSC - (TEL.CD), CW ROTATION.
 - 1 1/2" BDD DAMPER.
 - 2 YEAR PARTS WARRANTY.

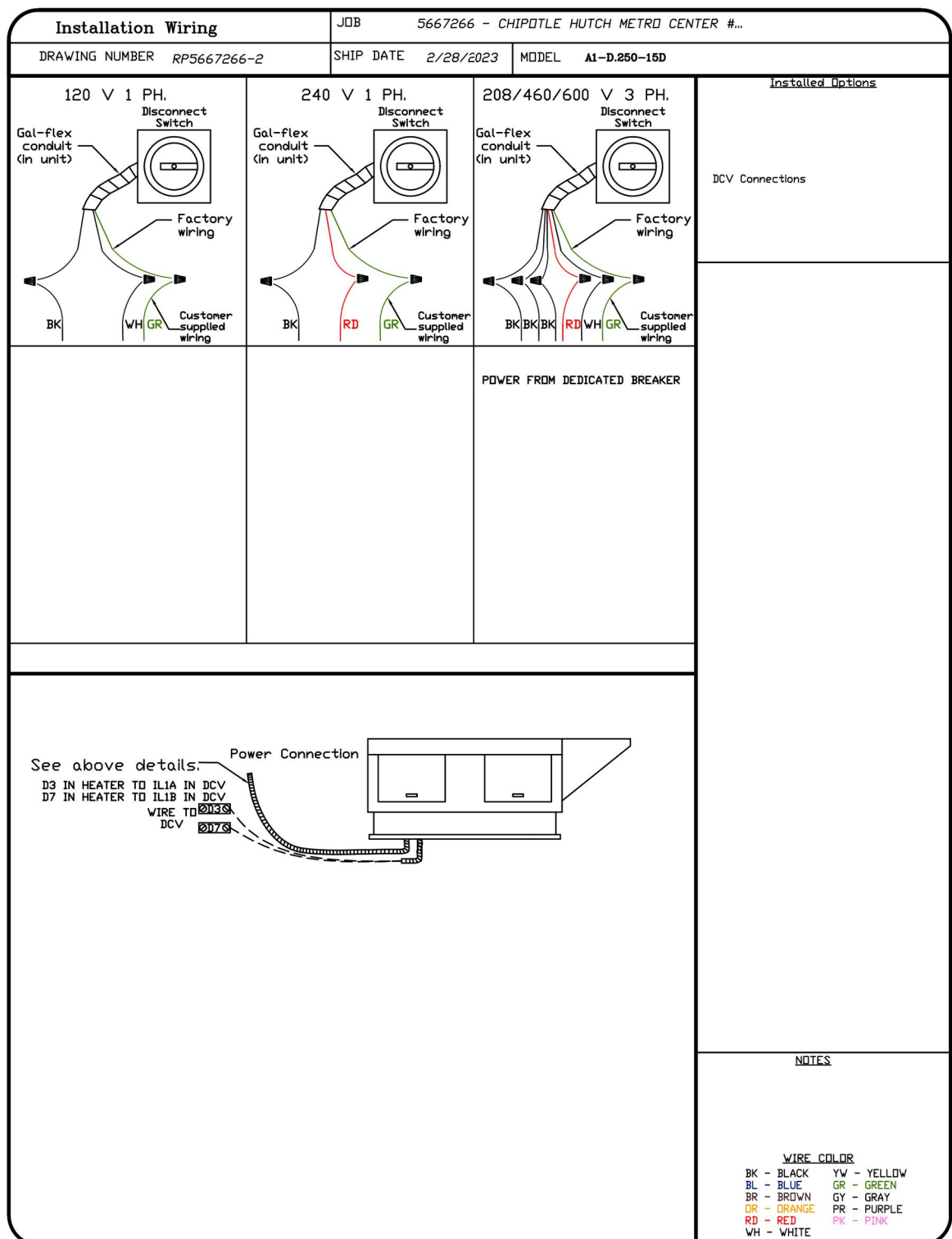
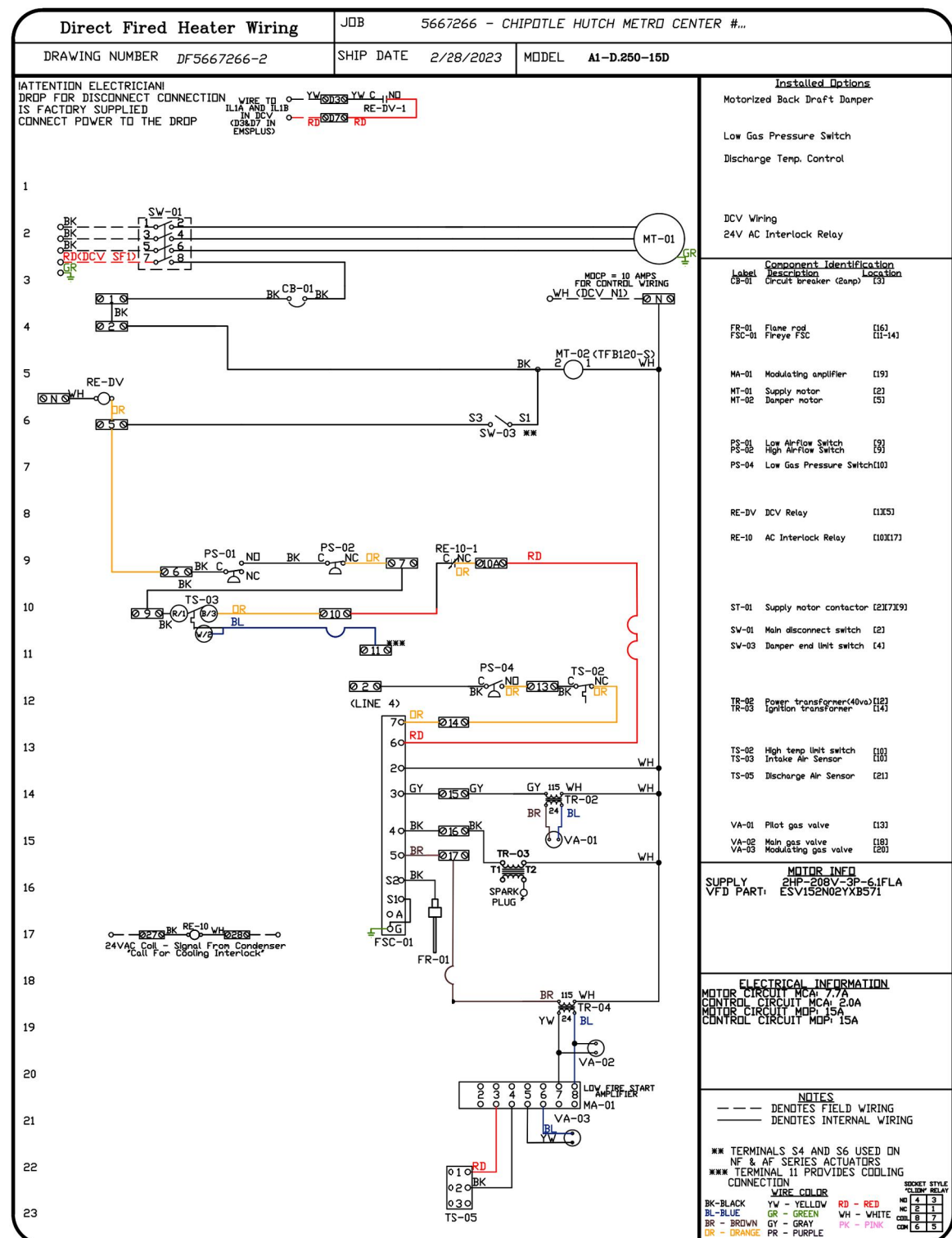
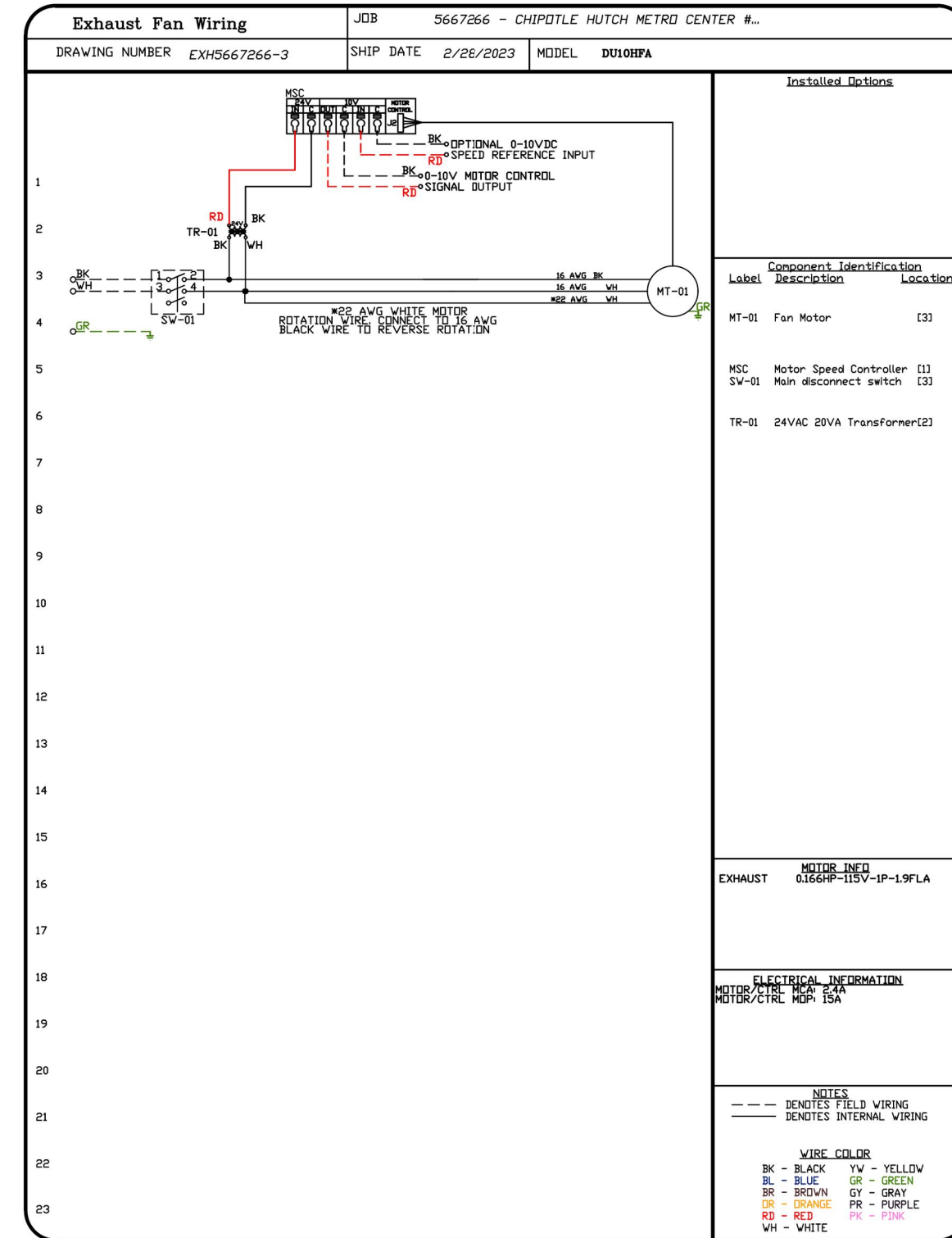
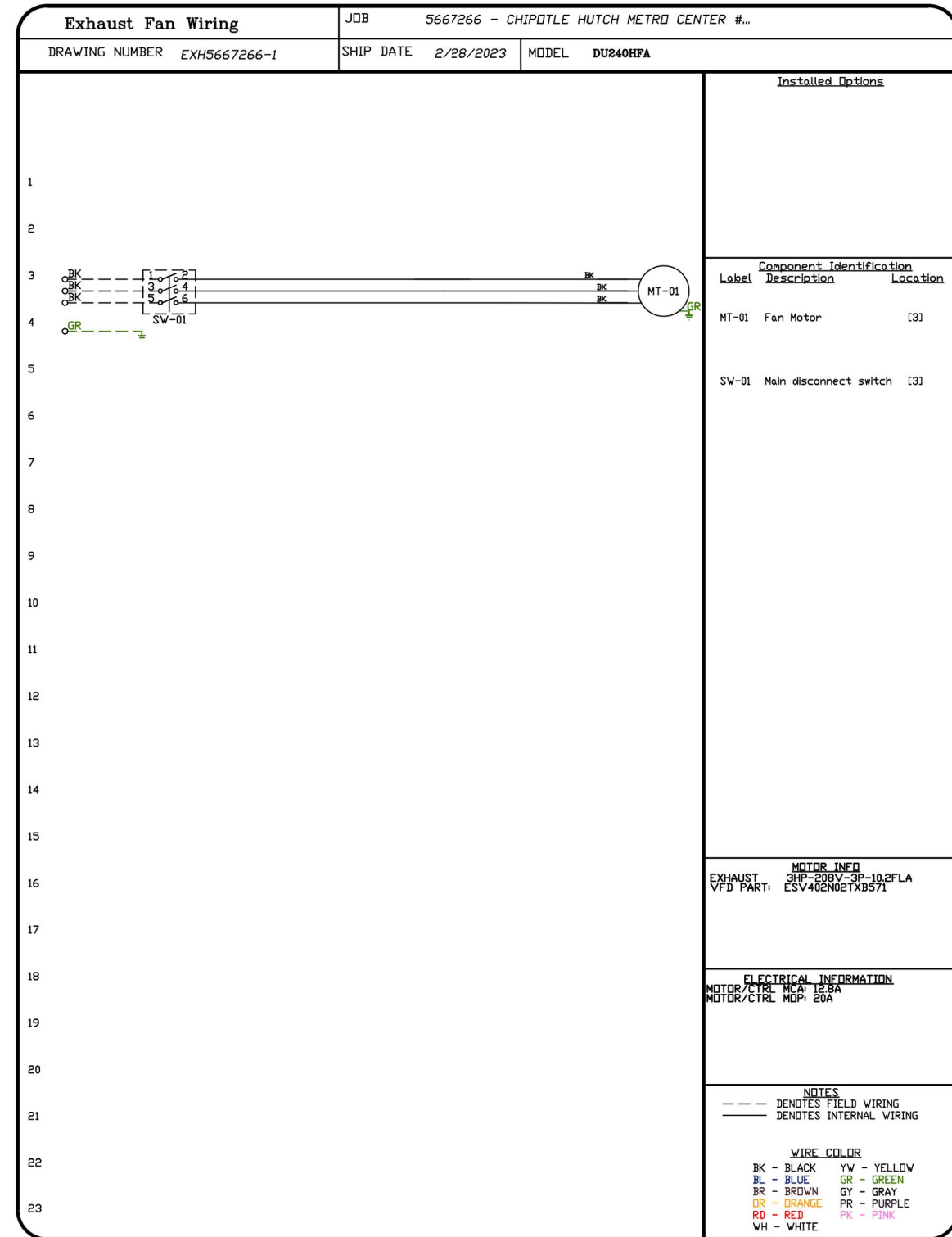
BACKDRAFT DAMPER INSTALLATION



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2 1



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CAPTIVEAIRE
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Highwoods Group
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CHIPOTLE HUTCH METRO CENTER #4637
BRONX, NY, 10461

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SCALE: 3/4" = 1'-0"
MASTER DRAWING
SHEET NO. 6

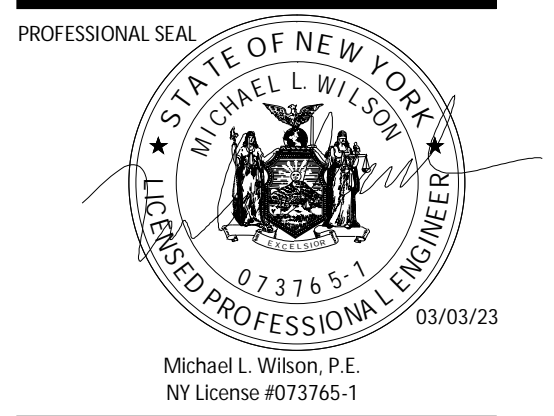
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NYCECC 2020 - TABLE C403.2.10: MINIMUM PIPE INSULATION THICKNESS							
FLUID OPERATING TEMPERATURE RANGE AND USAGE (°F)	INSULATION CONDUCTIVITY		NOMINAL PIPE OR TUBE SIZE (in.)				
	CONDUCTIVITY Btu-in / (hr-ft ² -°F)	MEAN RATING TEMPERATURE (°F)	< 1.0	1.0 < 1.5	1.5 < 4.0	4.0 to < 8.0	8.0 and up
> 350	0.32 - 0.34	250	4.5	5.0	5.0	5.0	5.0
251 - 350	0.29 - 0.32	200	3.0	4.0	4.5	4.5	4.5
201 - 250	0.27 - 0.30	150	2.5	2.5	2.5	3.0	3.0
141 - 200	0.25 - 0.29	125	1.5	1.5	2.0	2.0	2.0
105 - 140	0.21 - 0.28	100	1.0	1.0	1.5	1.5	1.5
40 - 60	0.21 - 0.27	75	0.5	0.5	1.0	1.0	1.0
< 40	0.20 - 0.26	50	0.5	1.0	1.0	1.0	1.5

DUCT INSULATION

PER SECTION C403.11.1 OF THE 2020 NYC ENERGY CONSERVATION CODE, ALL SUPPLY & RETURN DUCTS & PLENUMS SHALL BE INSULATED IN THE FOLLOWING MANNER:

- LOCATED IN UNCONDITIONED SPACES: MINIMUM OF R-6 INSULATION
- LOCATED OUTSIDE THE BUILDING: MINIMUM OF R-8 INSULATION (CLIMATE ZONES 1-4) AND R-12 INSULATION (CLIMATE ZONES 5-8)
- LOCATED WITHIN A BUILDING ENVELOPE ASSEMBLY: SEPARATED FROM THE BUILDING EXTERIOR, UNCONDITIONED, OR EXEMPT SPACE BY A MINIMUM OF R-8 INSULATION (CLIMATE ZONES 1-4) AND R-12 INSULATION (CLIMATE ZONES 5-8)

DUCTWORK INSULATION SPEC

6. DUCTWORK INSULATION

- ALL NEW AND EXISTING CONCEALED SHEET METAL SUPPLY DUCTWORK (AND RETURN DUCTWORK IN UNCONDITIONED SPACES) SHALL BE INSULATED WITH 2" THICK FLEXIBLE DUCT INSULATION, WITH A MINIMUM R VALUE OF 6, WITH REINFORCED FOIL FACED, FLAME RESISTANT, ALUMINUM FOIL VAPOR BARRIER SIMILAR TO KNAUF FRIENDLY FEEL DUCT WRAP WITH ECOSE. THE DUCT SIZES SHOWN ON THE FLOOR PLANS ARE CLEAR INSIDE DIMENSIONS. THE SHEET METAL SIZE SHALL BE INCREASED TO ACCOMMODATE THE LINER. INSULATION AND FACING WILL HAVE A COMBINED FLAME SPREAD RATING NO GREATER THAN 25 AND SMOKE DEVELOPED RATING NOT EXCEEDING 50. ALL INSULATION SHALL BE SECURED WITH DUCT ADHESIVE AND SEAMS SEALED BY TWO-INCH SEALING LIP WITH ADHESIVE AND FASTENED WITH 16 GAUGE RUST RESISTANT WIRE OR FIBERGLASS CORD ON 12" CENTERS. ON DUCTS OVER 24" WIDE, WELDED PINS AND CLIPS SHALL BE USED ON THE UNDERSIDE FOR FASTENING INSULATION.
- FRESH AIR INTAKE, MIXED AIR DUCTWORK AND LOUVER BLANK-OFF PANELS SHALL BE INSULATED WITH RIGID DUCT INSULATION 2" THICK WITH A MINIMUM R VALUE OF 8, WITH WHITE VINYL FOIL BARRIER FACING SIMILAR TO KNAUF ECLIPSE DUCTBOARD WITH ECOSE. INSULATION AND FACING WILL HAVE A COMBINED FLAME SPREAD RATING NO GREATER THAN 25 AND SMOKE DEVELOPED RATING NOT EXCEEDING 50. INSULATION SHALL BE IMPALED OVER WELDED PINS WITH CLIPS FIRMLY EMBEDDED INTO INSULATION. ALL JOINTS AND CLIPS SHALL BE SEALED WITH MATCHING STRIPS OF VINYL COATED VAPOR BARRIER LAMINATE SIMILAR TO OWENS CORNING 24 ASJ FOR DUCTS.
- ALL SEALING TAPE SHALL CONFORM TO UL181A OR UL181B WHEN USED AS PRIMARY SEALANT.

ENERGY ANALYSIS (DUCTWORK INSULATION) CLIMATE ZONE 4A

ITEM DESCRIPTION	PROPOSED DESIGN VALUE	CODE PRESCRIBED VALUE
ALL SUPPLY & RETURN DUCTWORK INSIDE BUILDING	R-VALUE ≥ 6	R-VALUE ≥ 6
FRESH AIR INTAKE DUCTWORK	R-VALUE > 8	R-VALUE > 8

NOTES: ALL SEALING TAPE SHALL CONFORM TO UL-181A OR UL-181B WHEN USED AS A PRIMARY SEALANT.

TO THE BEST OF MY KNOWLEDGE, BELIEF AND PROFESSIONAL JUDGEMENT, THESE PLANS AND SPECIFICATIONS ARE IN COMPLIANCE WITH THE 2020 NEW YORK CITY ENERGY CONSERVATION CODE.

REQUIRED INSPECTIONS

SPECIAL INSPECTIONS SHALL BE MADE BY A "SPECIAL INSPECTOR", AN ENGINEER, OR ARCHITECT LICENSED IN NEW YORK STATE WORKING FOR AN APPROVED SPECIAL INSPECTION AGENCY. THE SPECIAL INSPECTOR SHALL MEET THE QUALIFICATIONS REQUIREMENTS AS DEFINED BY THE NYC BUILDING CODE AND ALL RELEVANT MEMORANDA AND DIRECTIVES THAT APPLY TO THIS WORK. ALL INSPECTIONS SHALL BE MADE IN ACCORDANCE WITH CHAPTER 17 OF THE 2022 NYC BUILDING CODE AND THE DEPARTMENT'S SPECIAL INSPECTIONS RULE.

THE SELECTED CONTRACTOR IS RESPONSIBLE FOR ARRANGING FOR AND PERFORMING THE REQUIRED NEW YORK CITY DEPARTMENT OF BUILDINGS SPECIAL INSPECTIONS WITH THE SELECTED EXPEDITOR OF RECORD.

- SPECIAL INSPECTIONS ARE REQUIRED FOR:
- MECHANICAL SYSTEMS (BC 1704.16)
 - FINAL INSPECTION UNDER DIRECTIVE 14
 - ENERGY CODE INSPECTIONS (NYC AND 1RCNY5000)
 - HVAC-R AND SERVICE HEATING EQUIPMENT
 - HVAC-R AND SERVICE WATER HEATING SYSTEM CONTROLS
 - HVAC-R AND SERVICE WATER PIPING DESIGN & INSULATION

BUILDING DEPARTMENT NOTES

- ALL WORK SHALL COMPLY WITH THE APPLICABLE SECTIONS OF THE BUILDING CODE, CITY OF NEW YORK, EFFECTIVE DECEMBER 31, 2022 AND ALL AMENDMENTS TO DATE, MATERIALS AND EQUIPMENT SUBJECT TO CONTROLLED INSPECTION.
- MECHANICAL VENTILATION AIR CONDITIONING AND REFRIGERATION: INSPECTION AND TESTS OF THE REQUIRED VENTILATION SYSTEMS AND NOISE CONTROL AS CHAPTER 17 OF THE NEW YORK CITY BUILDING CODE AND CHAPTER 1 OF THE NEW YORK CITY MECHANICAL CODE.
- THE FOLLOWING WORK ITEMS, COMPONENTS, MATERIALS, CAPACITIES, ETC., SHALL COMPLY WITH THE FOLLOWING CODE REFERENCE:
 - DUCT CONSTRUCTION AND SUPPLY INTAKES, EXHAUST AND RELIEF FILTERS AS PER CHAPTER 6 OF THE 2022 NEW YORK CITY MECHANICAL CODE.
 - NOISE CRITERIA LEVELS AND TEST PROCEDURE FOR SOUND POWER LEVELS AS PER CHAPTER 9, SECTION 928 OF THE 2022 NEW YORK CITY MECHANICAL CODE.
 - ELECTRIC WIRING EQUIPMENT, FIRE CONTROL AND CONTROLS MINIMUM TEMPERATURE TO BE MAINTAINED IN OCCUPIED SPACES DURING HEATING SEASON AS PER NEC.
 - 70 DEGREE F WHEN 5 DEGREE OUTSIDE (WITH 15 MPH WIND) AS PER ASHRAE.
- REFER TO ARCHITECTURAL DRAWING FOR FIRE RATED WALL LOCATIONS AND RATED CONSTRUCTION.
- THE VENTILATION REQUIREMENTS FOR ALL AREAS COMPLIES WITH THE MINIMUM CODE REQUIREMENTS OF CHAPTER 4 (VENTILATION) OF THE NEW YORK CITY MECHANICAL CODE. THE VENTILATION REQUIREMENTS ARE MADE WITHOUT TAKING ANY CREDIT FOR EXTERIOR WINDOWS AND/OR OPENING IN AIR CONDITIONED AREAS.
- UPON COMPLETION OF THIS VENTILATION SYSTEM, A TEST SHALL BE CONDUCTED IN THE PRESENCE OF AND DIRECTION OF A LICENSED PROFESSIONAL ENGINEER OR HAVING NOT LESS THAN FIVE (5) YEARS OF EXPERIENCE SUPERVISING INSTALLATION OF VENTILATING SYSTEMS. THE TEST SHALL SHOW COMPLIANCE WITH THE CODE REQUIREMENTS FOR VENTILATION AND THE PROPER FUNCTIONING OF ALL OPERATING DEVICES BEFORE THE SYSTEM IS APPROVED. THE LICENSED PROFESSIONAL ENGINEER OR REGISTERED ARCHITECT WHO CONDUCTS THE TESTS SHALL FILE A CERTIFICATE AS TO WHETHER THE SYSTEM COMPLIES WITH THE APPLICABLE LAWS. HE SHALL ALSO FILE WITH THE CERTIFICATION, A REPORT OF THE TEST, THE TEST AND REPORT SHALL BE MADE IN A MANNER SATISFACTORY TO THE SUPERINTENDENT. A STATEMENT SHALL BE FILED BY THE OWNER OR TENANT IN POSSESSION THAT THE SYSTEM WILL BE KEPT IN CONTINUOUS OPERATION AT ALL TIMES DURING NORMAL OCCUPANCY OF THE STRUCTURE AS PROVIDED IN THE APPLICABLE SECTIONS OF THE CODE. BASE BUILDING PLANS ARE FILED FOR SINGLE TENANT OCCUPANCY. ALL TENANT PLANS WILL BE FILED UNDER SEPARATE APPLICATIONS.
- DETAIL OF DUCT SUPPORTS SHALL BE IN ACCORDANCE WITH THE 2022 NEW YORK CITY MECHANICAL CODE. UNLESS OTHERWISE NOTED, ALL DUCTS SHALL BE CONSTRUCTED OF GALVANIZED IRON. SEE DETAIL FOR METHOD USED FOR HANGING DUCT.
- ALL VENTILATING AND HANGING DUCTWORK, BOTH HIGH AND LOW VELOCITY, TO BE CONSTRUCTED IN ACCORDANCE WITH THE DUCT MANUALS OF SMACNA, LATEST EDITION.
- ALL FIRE DAMPERS SHALL BE APPROVED BY THE NEW YORK CITY BOARD OF STANDARDS AND APPEALS AND SHALL BE MANUFACTURED AND INSTALLED IN ACCORDANCE WITH THE STANDARDS OF THE NATIONAL BOARD OF FIRE UNDERWRITERS (NBFU PAMPHLETS 90A AND 90B). FIRE DAMPERS SHALL BE AIR BALANCE AND TESTING CO., B.S.A. CATALOG NO. 100-6-SM OR IF DIFFERENT MANUFACTURED, NUMBER SHALL BE FILED AT THE COMPLETION OF THE INSTALLATION.
- THIS PLAN IS APPROVED ONLY FOR WORK INDICATED ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON, OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.
- TO THE BEST OF MY KNOWLEDGE, BELIEF AND PERSONAL JUDGEMENT, THESE PLANS AND SPECIFICATIONS ARE IN COMPLIANCE WITH THE 2020 NEW YORK CITY ENERGY CONSERVATION CONSTRUCTION CODE.

Consultant:



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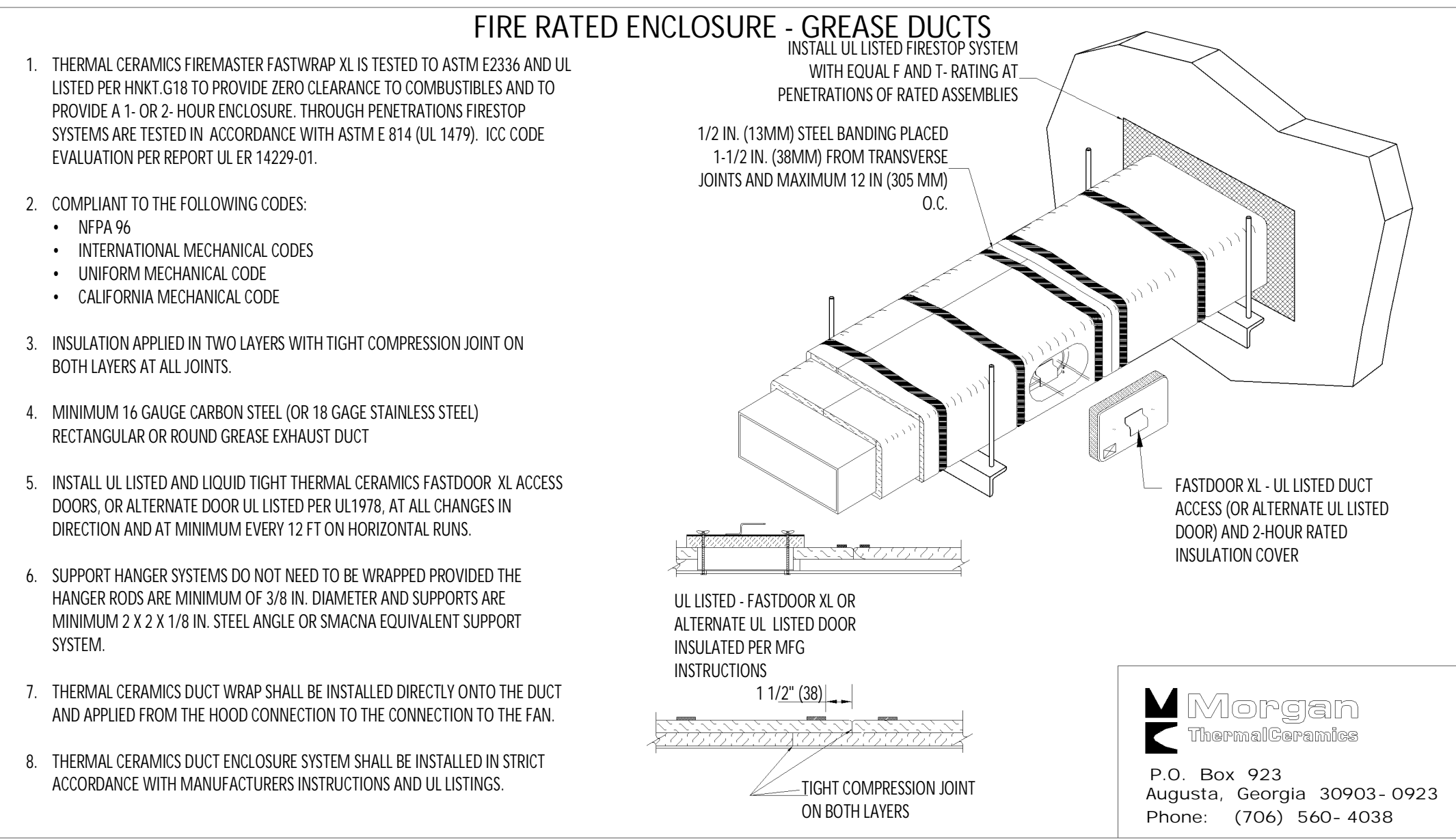
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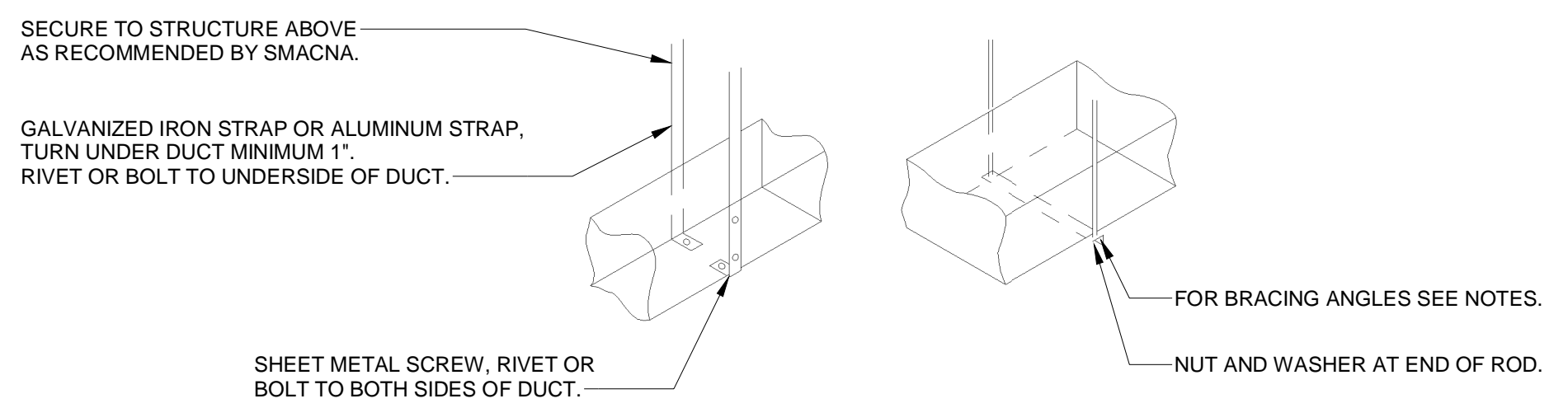
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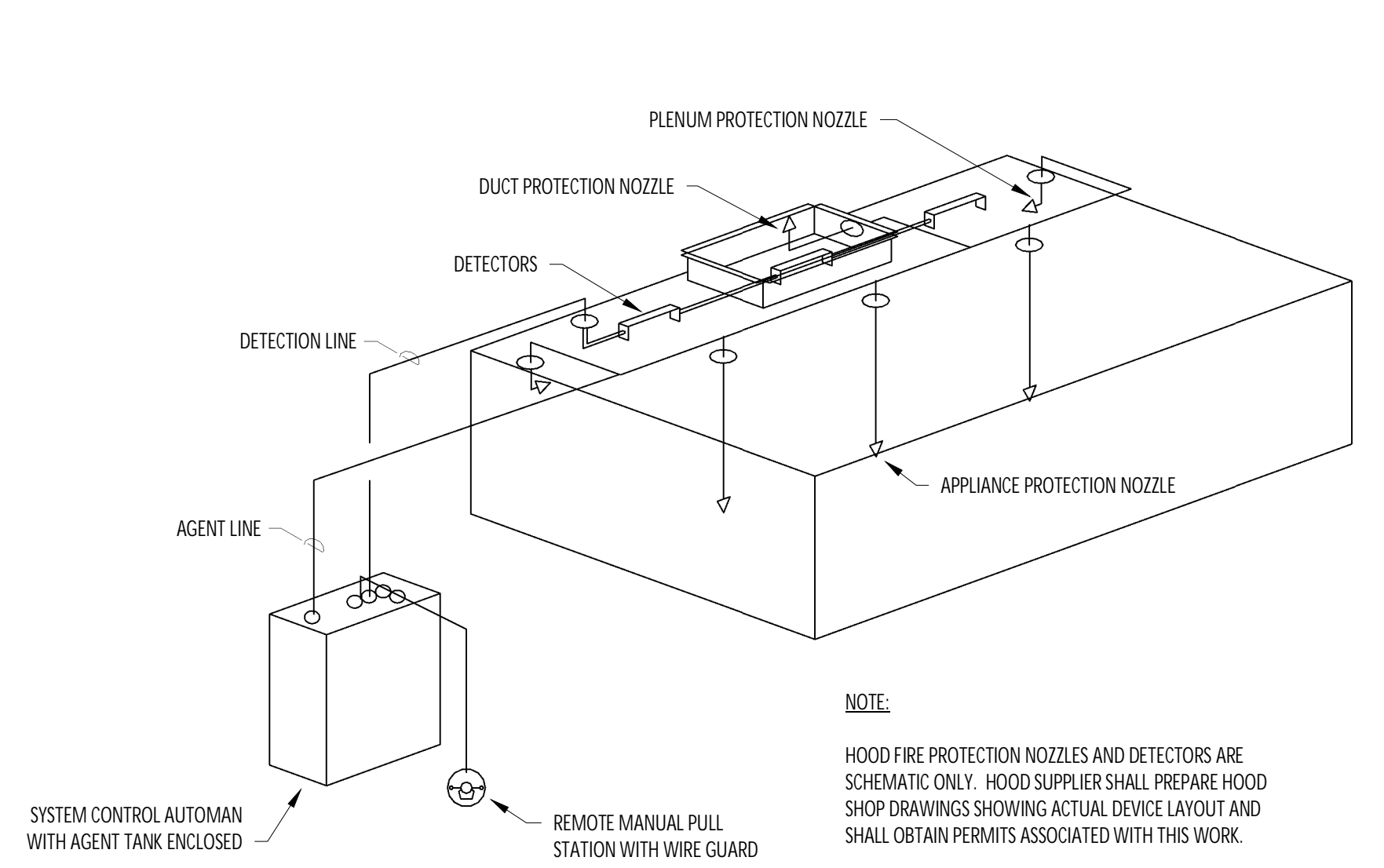
1 FIREMASTER DUCT WRAP - UL HNK1-G18
NOT TO SCALE

RECTANGULAR DUCT HANGER SCHEDULE (MINIMUM SIZES)

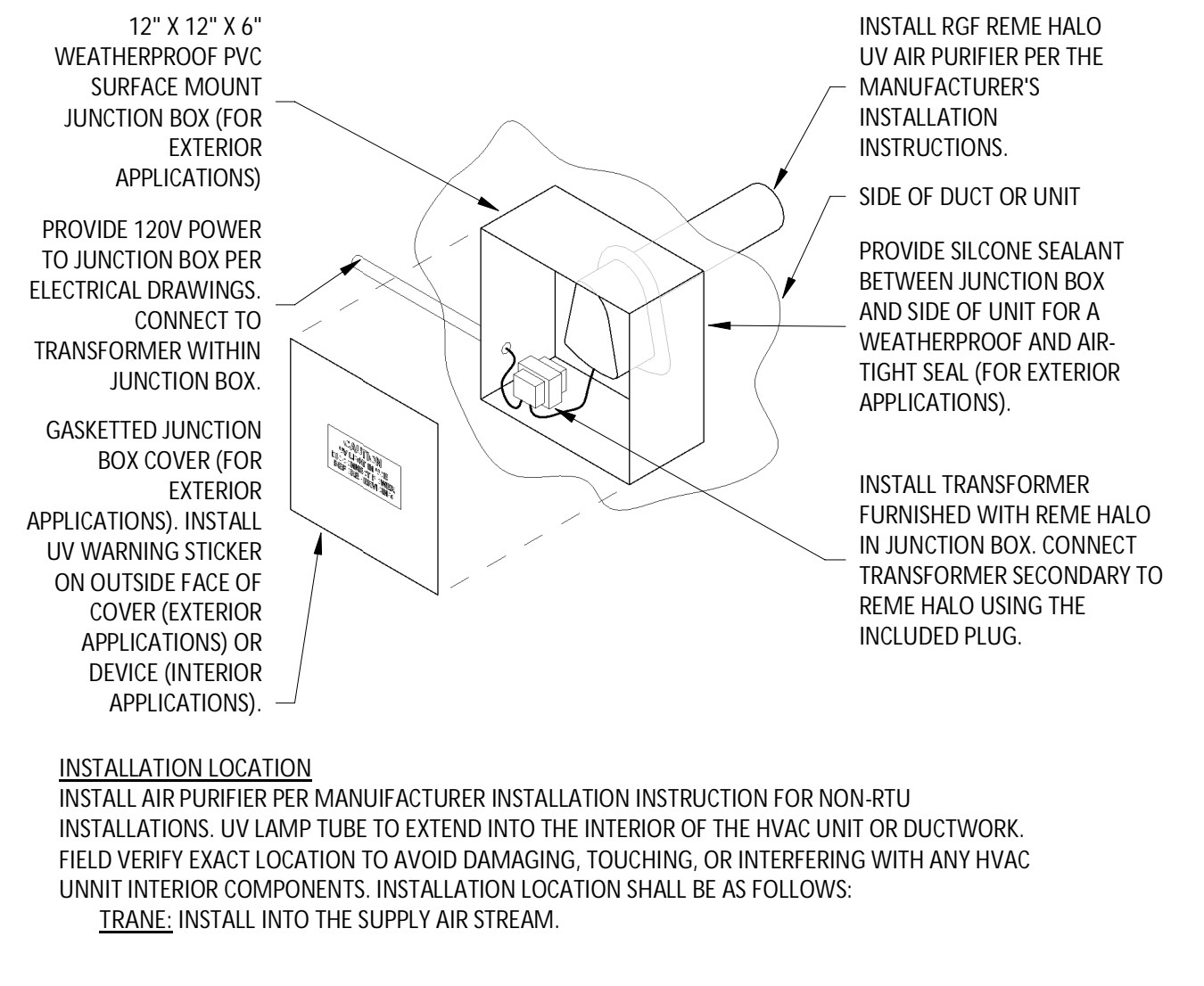
HALF DUCT PERIMETER RANGE	PAIR AT 10' SPACING		PAIR AT 8' SPACING		PAIR AT 5' SPACING		PAIR AT 4' SPACING	
	STRAP	WIRE/ROD	STRAP	WIRE/ROD	STRAP	WIRE/ROD	STRAP	WIRE/ROD
P/2-30"	1"x22 GA.	10 GA. (0.135")	1"x22 GA.	10 GA. (0.135")	1"x22 GA.	12 GA. (0.106")	1"x22 GA.	12 GA. (0.106")
P/2-72"	1"x18 GA.	3/8"	1"x20 GA.	1/4"	1"x22 GA.	1/4"	1"x22 GA.	1/4"
P/2-96"	1"x16 GA.	3/8"	1"x18 GA.	3/8"	1"x20 GA.	3/8"	1"x22 GA.	1/4"
P/2-120"	1-1/2"x16 GA.	1/2"	1"x16 GA.	3/8"	1"x18 GA.	3/8"	1"x18 GA.	1/4"
P/2-168"	1-1/2"x16 GA.	1/2"	1"x16 GA.	1/2"	1"x16 GA.	3/8"	1"x18 GA.	3/8"
P/2-192"	-	1/2"	1-1/2"x16 GA.	1/2"	1"x16 GA.	3/8"	1"x16 GA.	3/8"



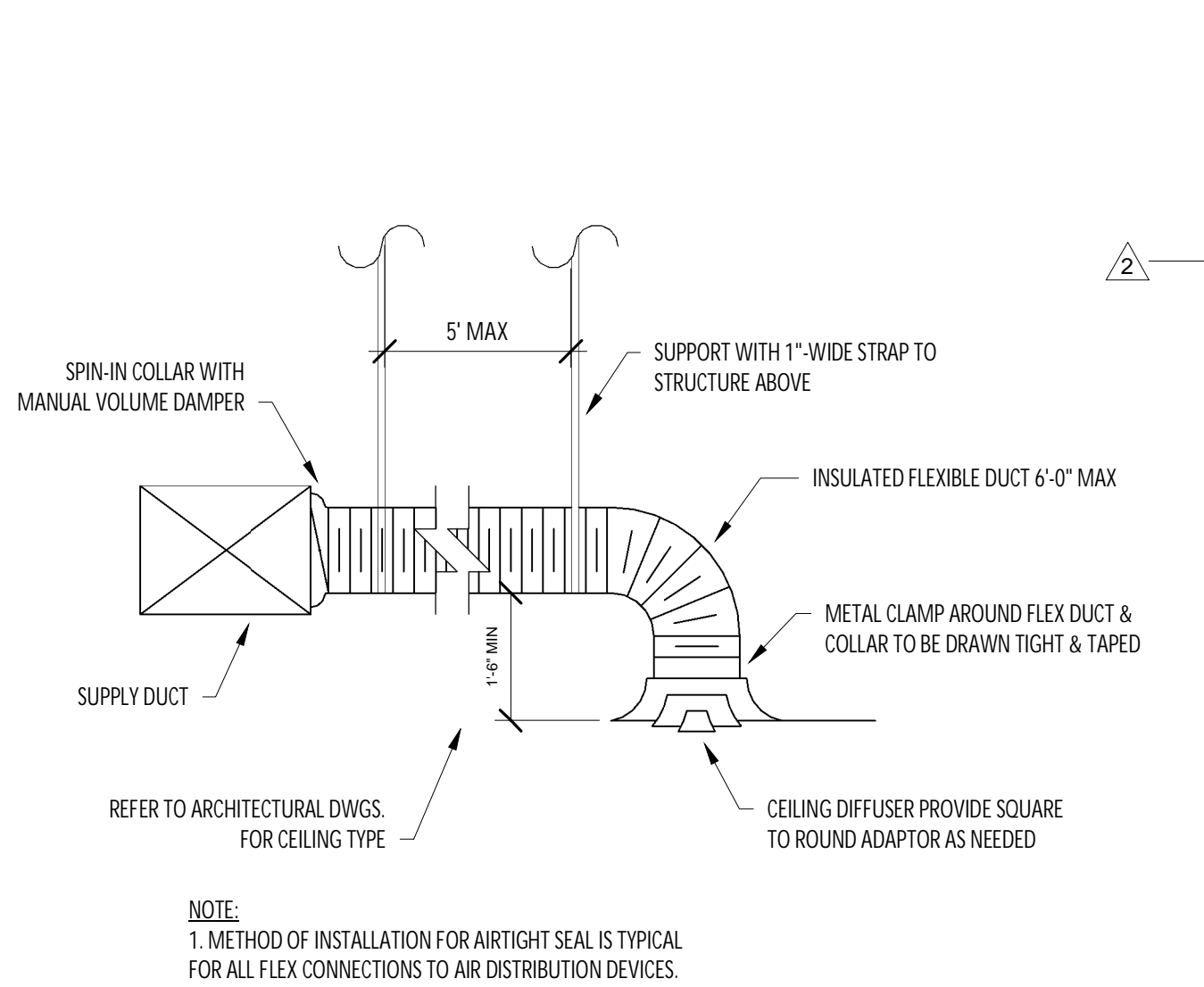
3 HVAC - DUCT HANGER DETAILS
NOT TO SCALE



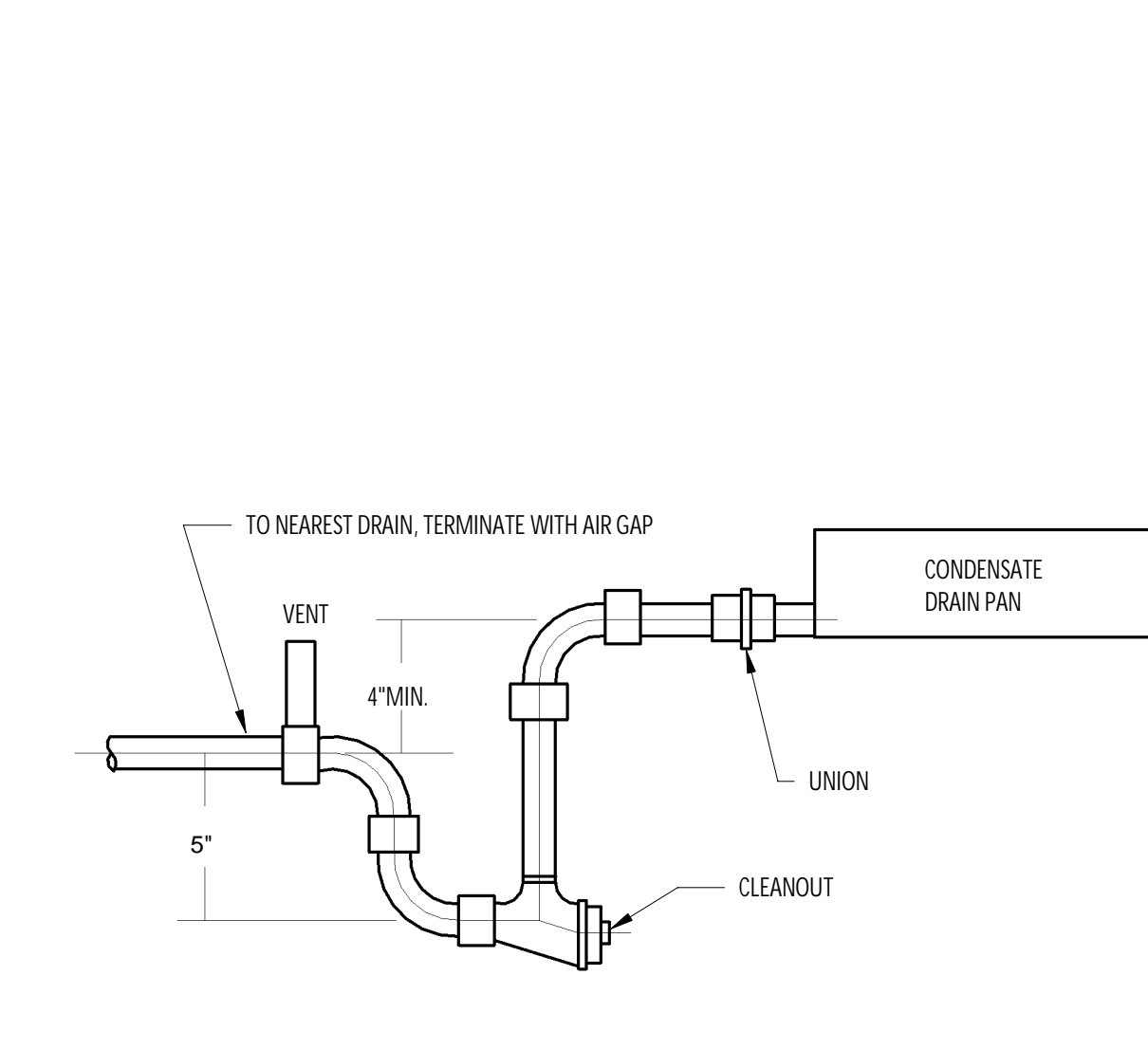
4 HVAC - FIRE SUPPRESSION SYSTEM SCHEMATIC
NOT TO SCALE



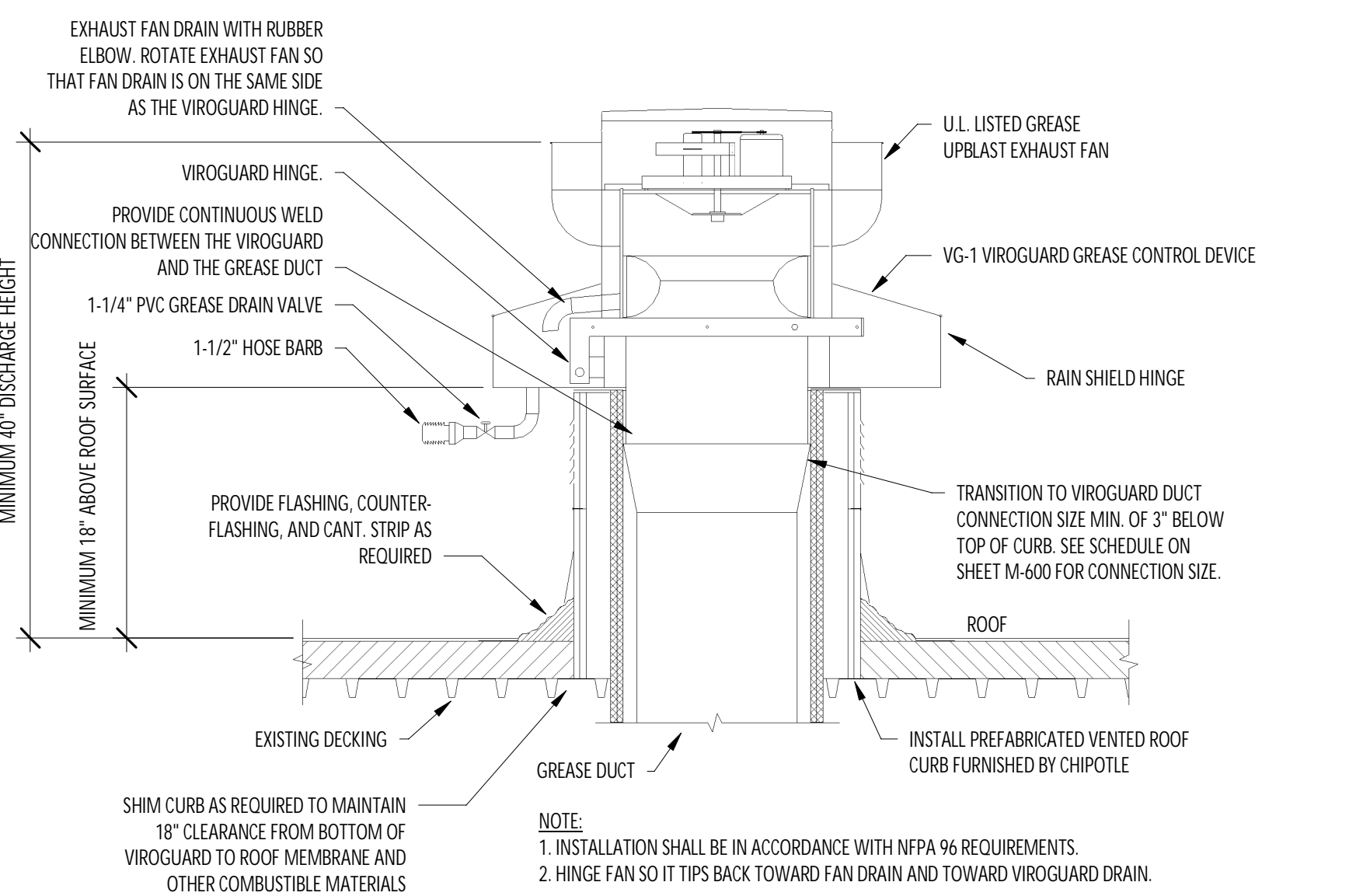
5 UV AIR PURIFIER INSTALLATION
NOT TO SCALE



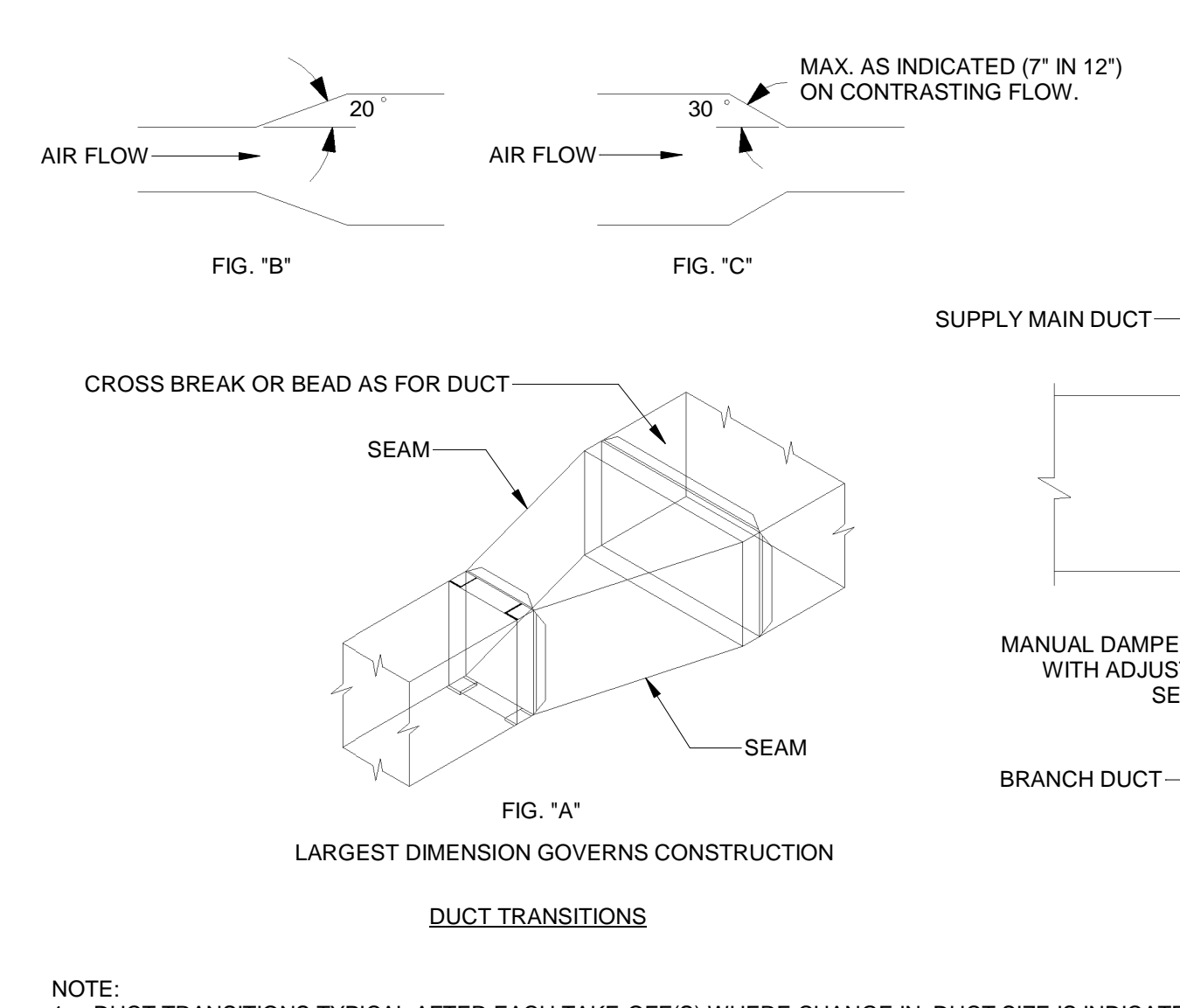
6 HVAC - DIFFUSER CONNECTION
NOT TO SCALE



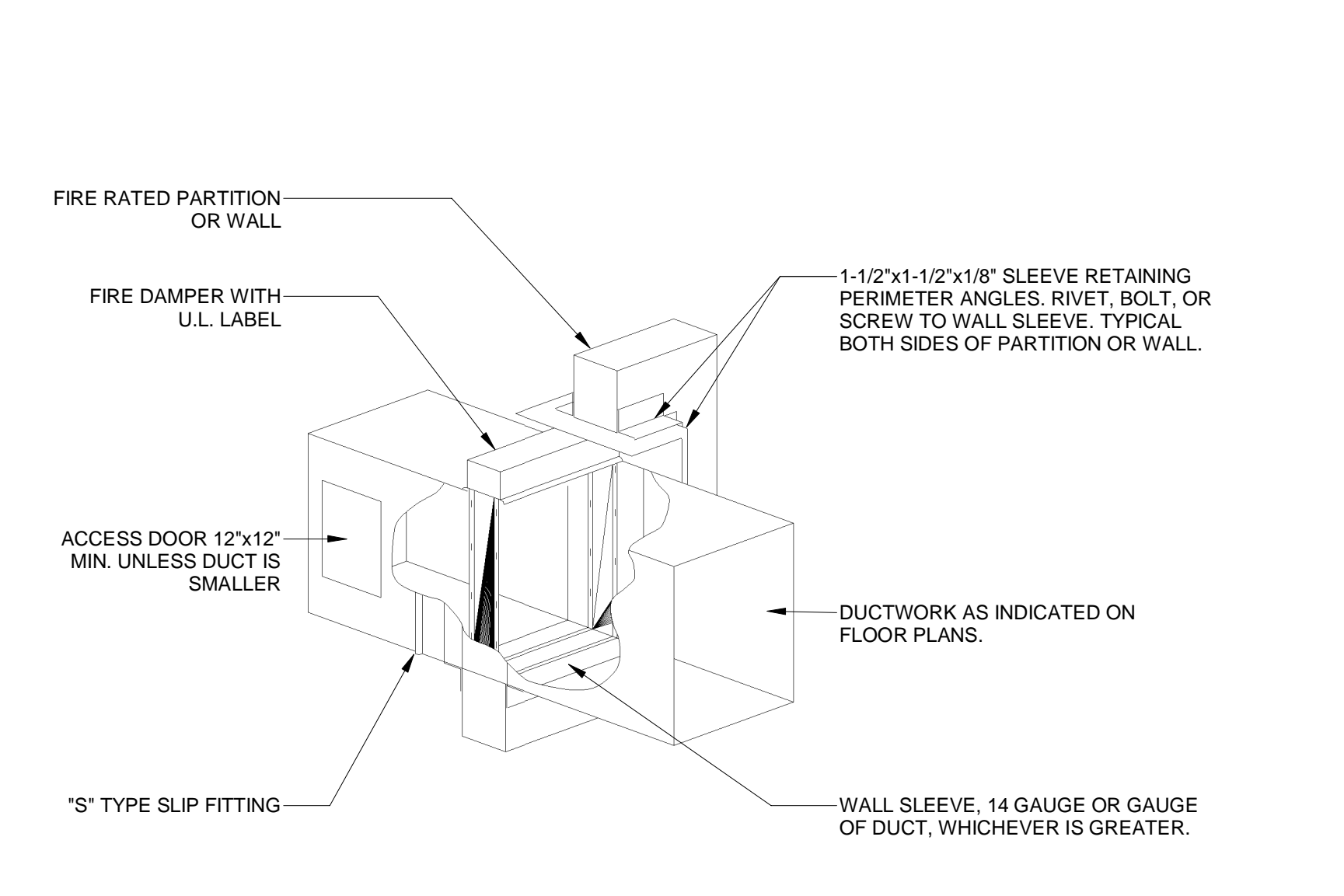
7 HVAC - CONDENSATE COOLING COIL DRAIN PAN
1/8" = 1'-0"



8 GREASE EXHAUST FAN
NOT TO SCALE



9 HVAC - DUCT TRANSITION DETAILS
NOT TO SCALE



10 HVAC - FIRE DAMPER DETAIL
NOT TO SCALE

Consultant:

Polaris
Consulting Engineers, PC

214 W. Main Street, Suite 208
Moorestown, NJ 08057
(856) 778-5400

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STORE NO.: 31-4637

HUTCH METRO CENTER
1776 EASTCHESTER ROAD
BRONX, NY 10461

PERMIT SET
03/10/2023

REV. DATE DESCRIPTION
10/07/2022 LLD REVIEW SET
02/28/2023 PERMIT SET
10/31/2022 BID SET
2 02/28/2023 CONSTRUCTION SET

PROFESSIONAL SEAL

STATE OF NEW YORK
MICHAEL L. WILSON
LICENSED PROFESSIONAL ENGINEER
023765-1
03/03/23

Michael L. Wilson, P.E.
NY License #073765-1

PROFESSIONAL IN CHARGE: Michael L. Wilson, P.E.
DRAWN BY: PCE
CHECKED BY: AIS

PROJECT NUMBER:
22074

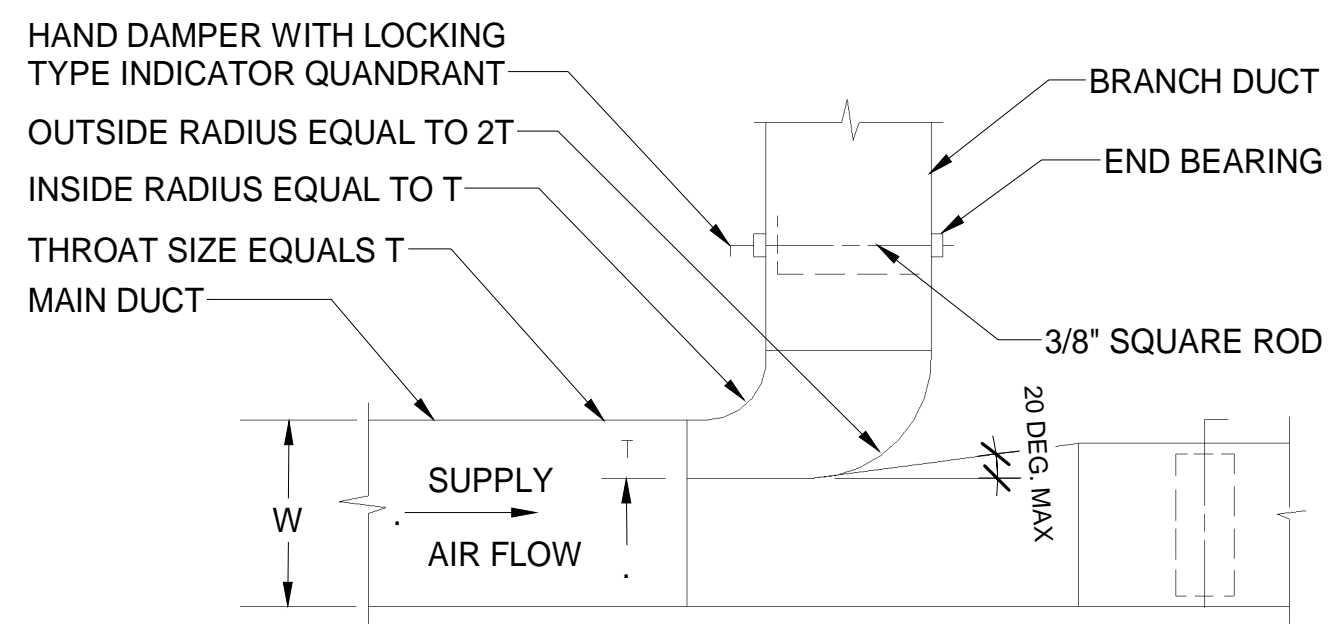
SHEET TITLE:

HVAC DETAILS

SHEET NUMBER:
M-700.00
13 OF 15

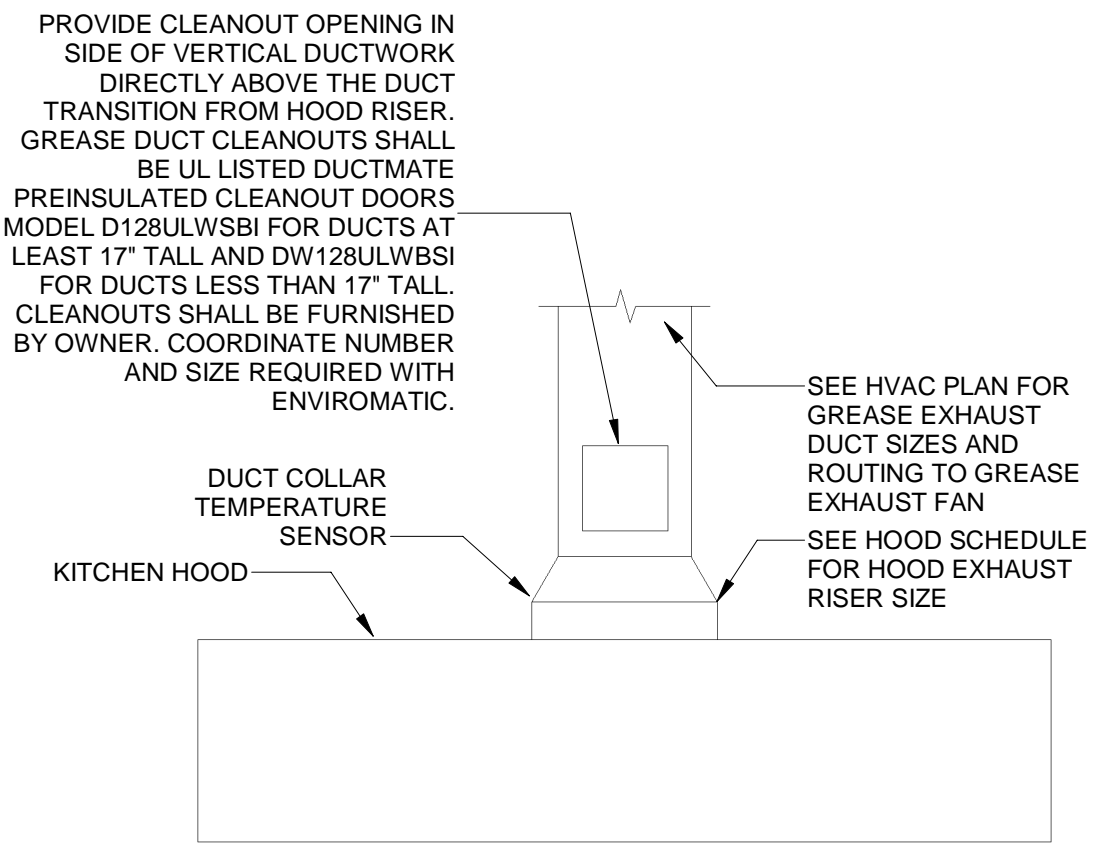
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2022-DB#4/P#1-2

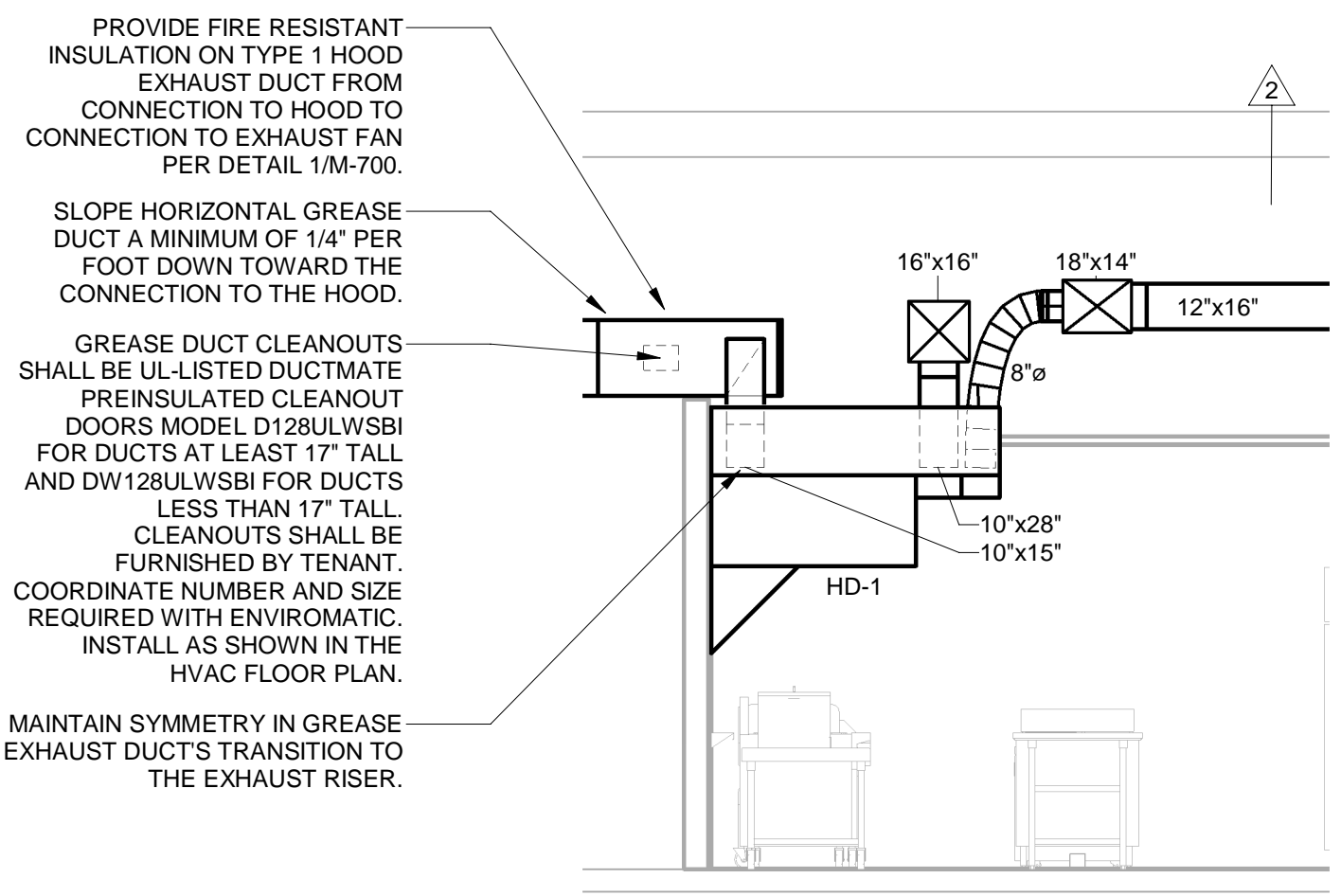


- NOTES:
- FURNISH THIS TYPE CONNECTION FOR BRANCHES WITH MORE THAN 200 CFM. MUST BE USED WHEN W IS GREATER THAN, OR EQUAL TO 36".
 - MINIMUM T = 4".

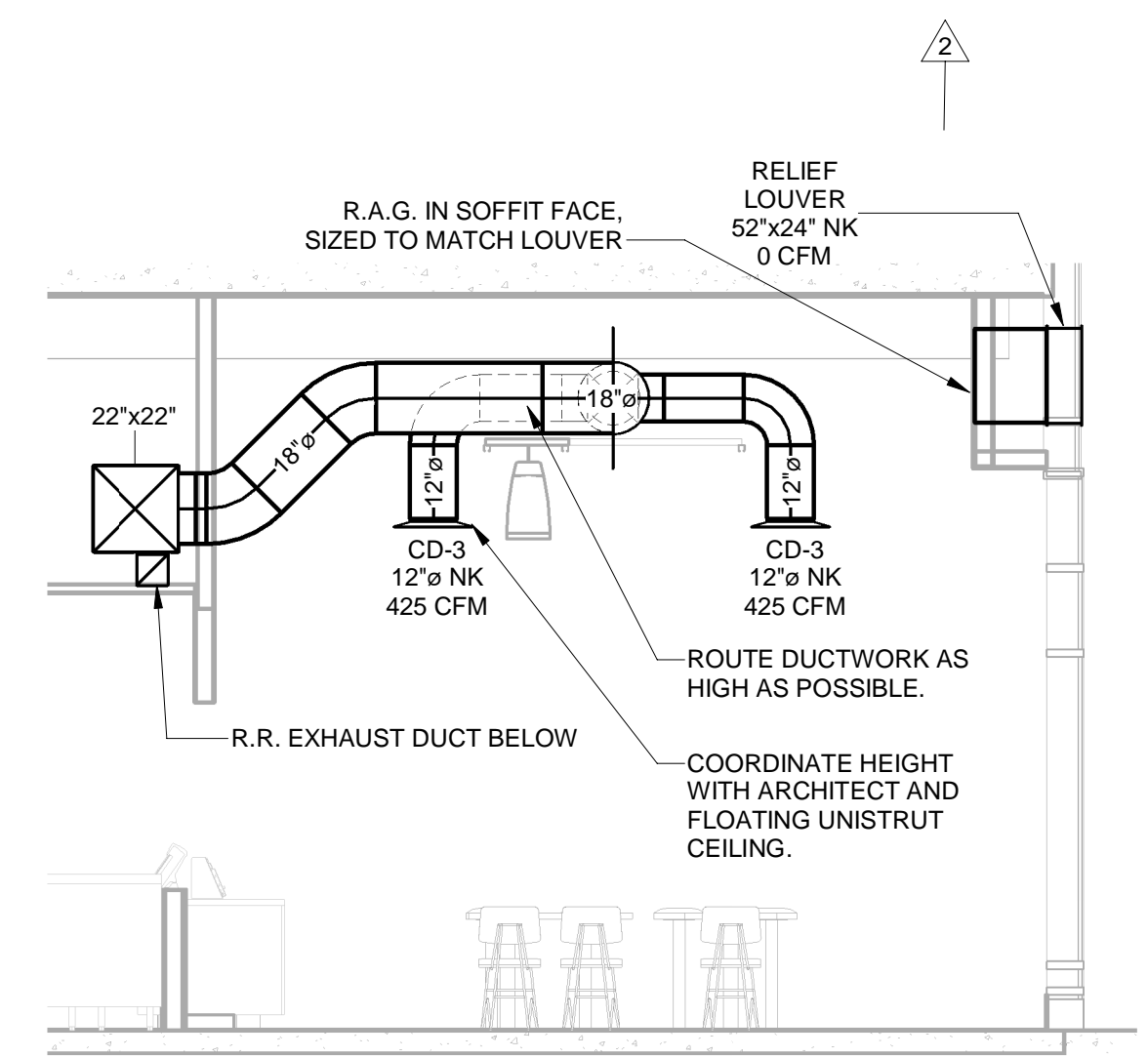
1 HVAC - RECTANGULAR DUCT BRANCH NOT TO SCALE



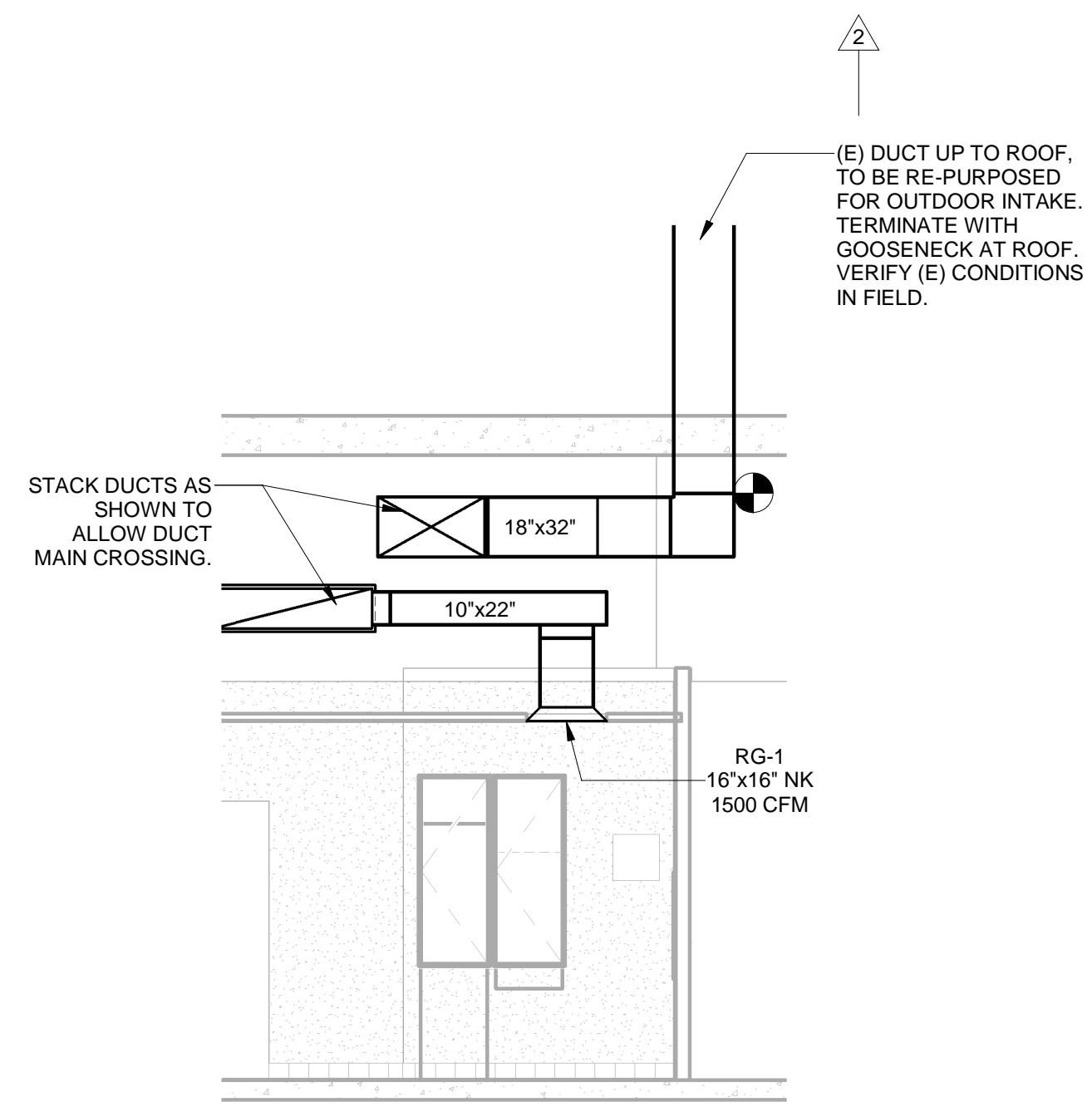
2 HVAC - GREASE EXHAUST DUCT AT HOOD NOT TO SCALE



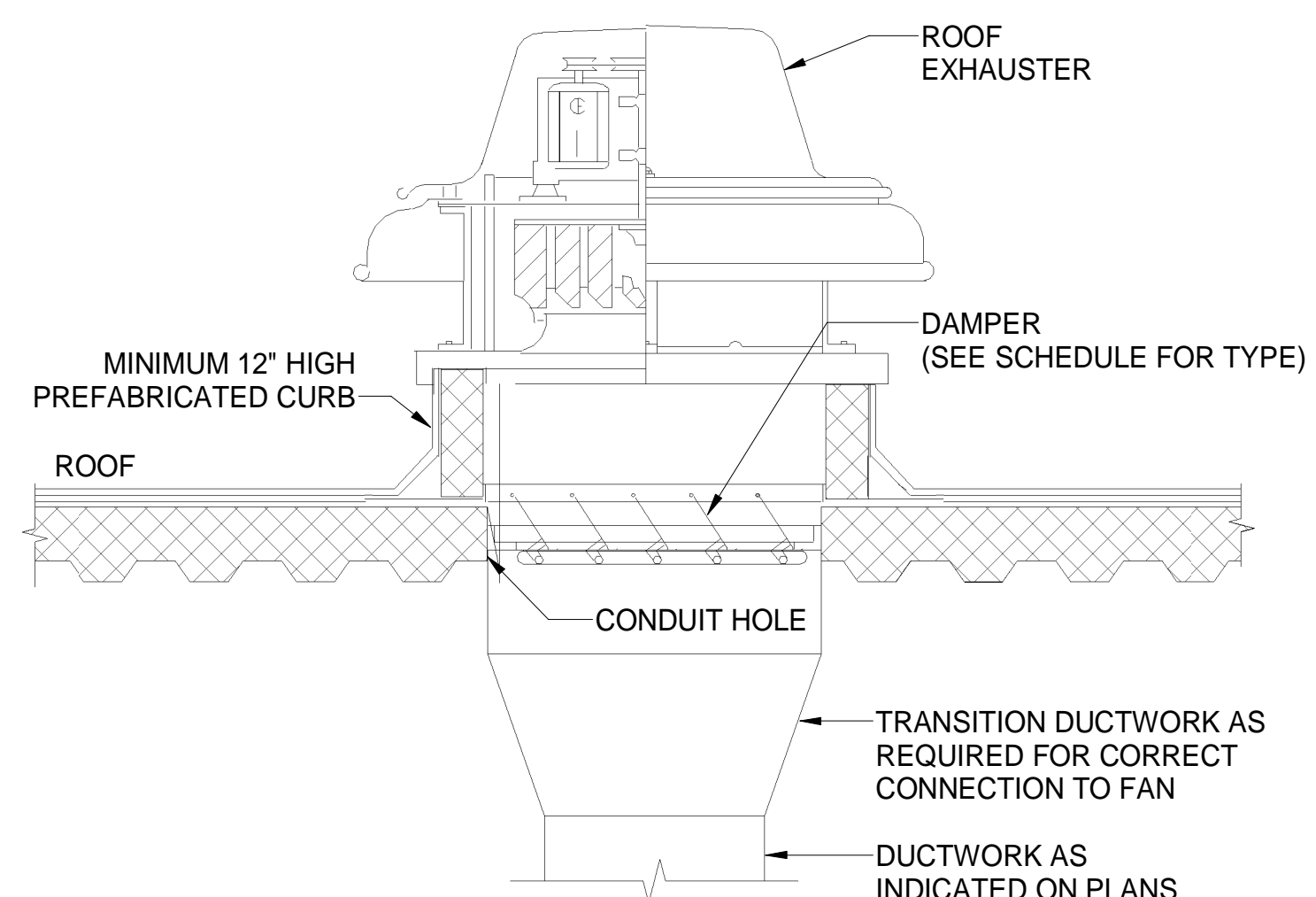
3 HVAC - HOOD DUCTWORK SECTION 'A' 1/4" = 1'-0"



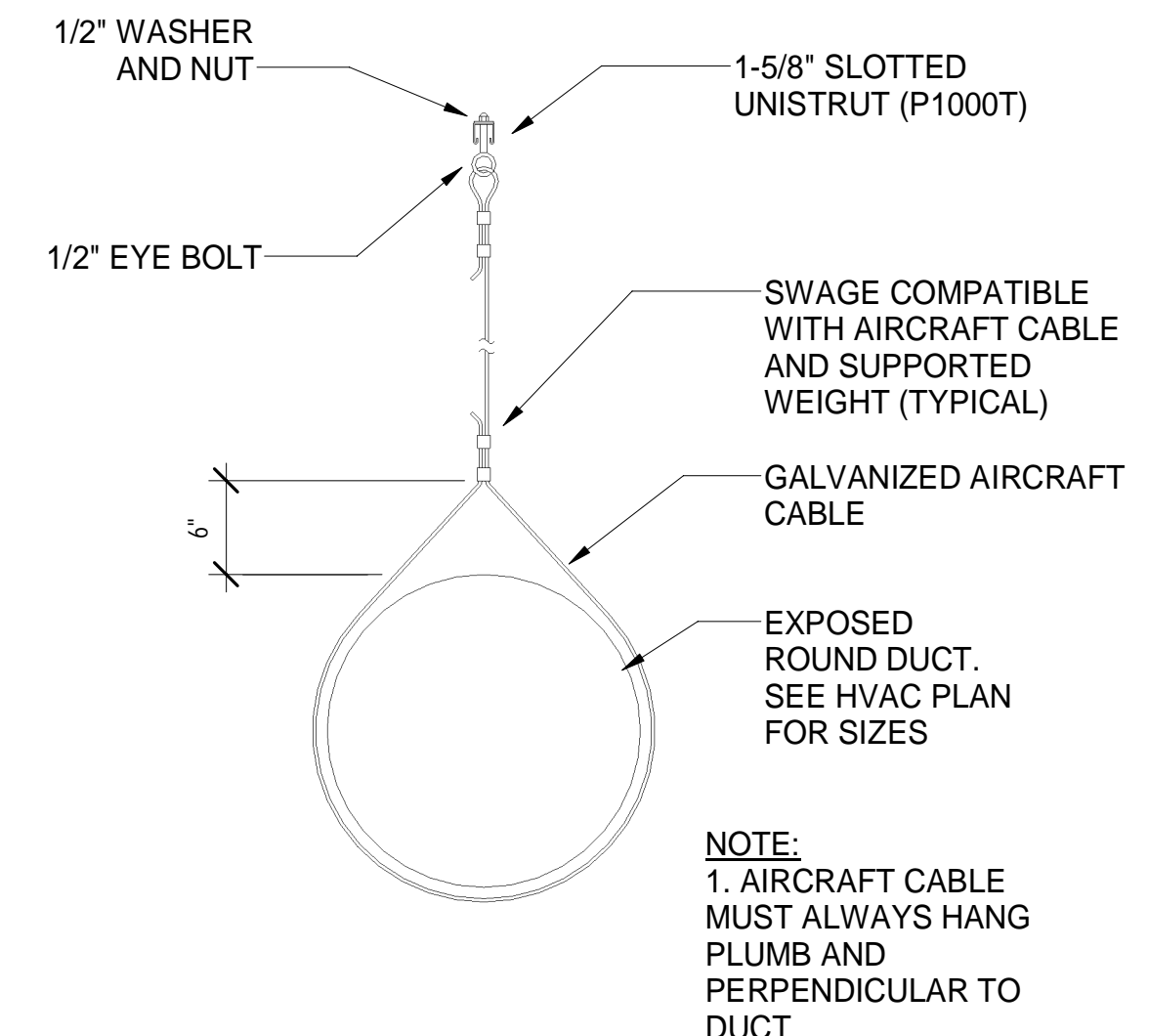
4 HVAC - AHU-2 SUPPLY DUCT SECTION 1/4" = 1'-0"



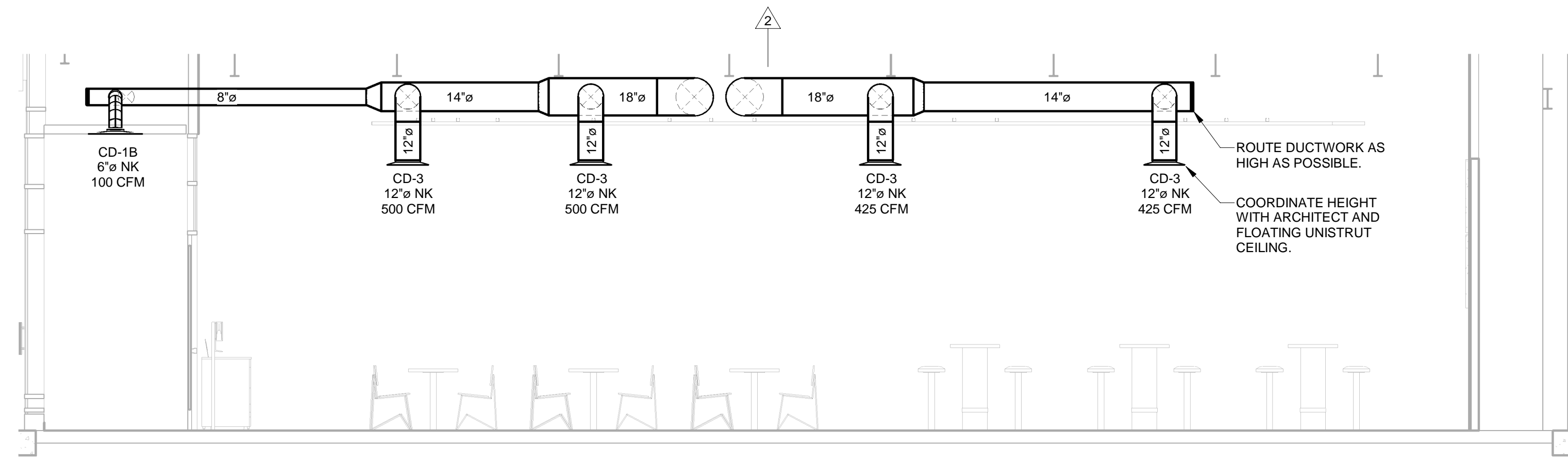
5 HVAC - RTU-1 DUCTWORK SECTION 1/4" = 1'-0"



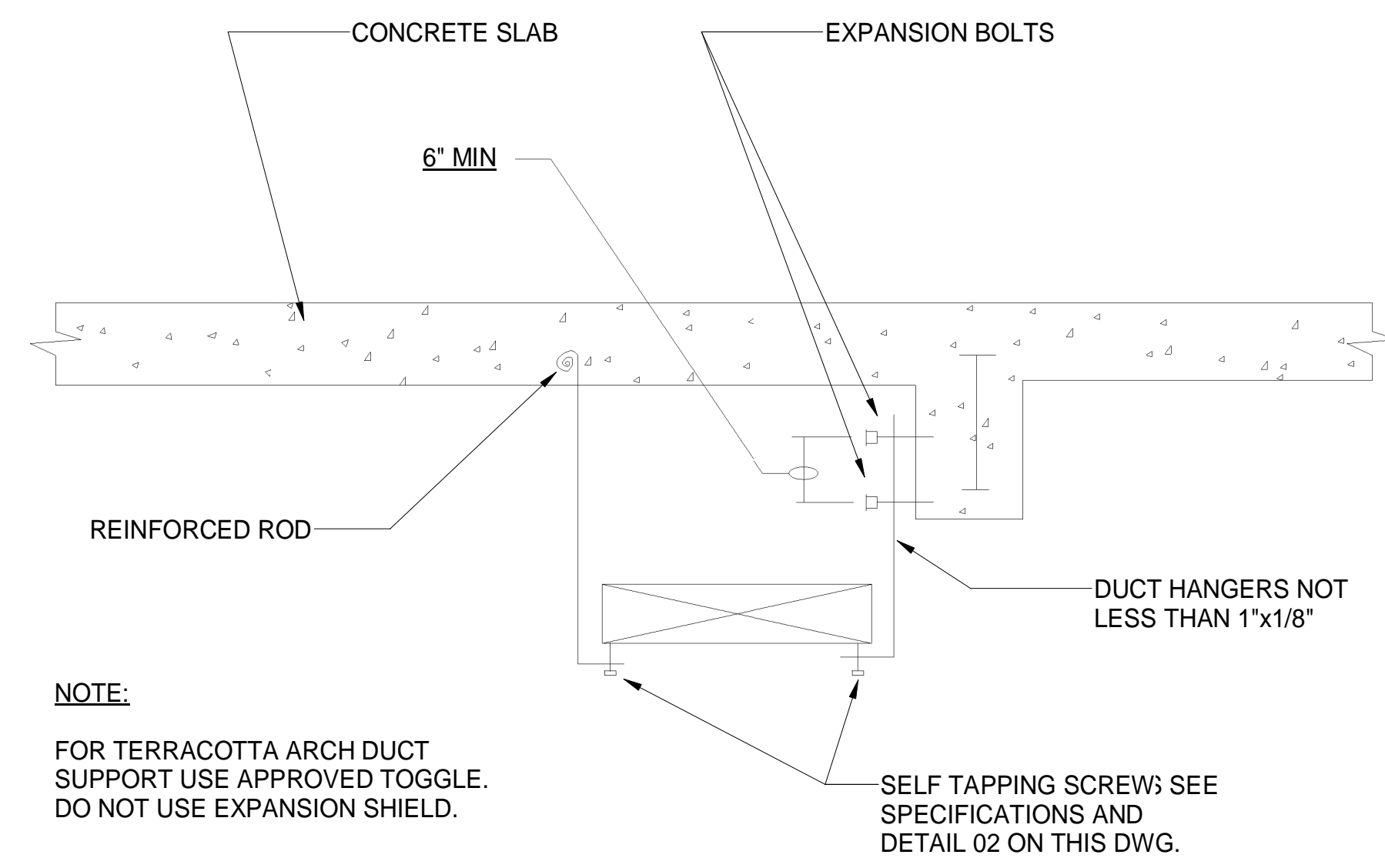
6 HVAC - ROOF MOUNTED EXHAUST FAN NOT TO SCALE



8 HVAC - EXPOSED DUCTWORK SUPPORT 1" = 1'-0"



9 HVAC - DINING ROOM DUCTWORK SECTION 'A' 1/4" = 1'-0"



10 HVAC - DUCT SUPPORT DETAIL FOR CONCRETE ARCH DETAIL NOT TO SCALE

BUILDING DEPARTMENT NOTES:

- AIR CONDITIONING SHALL COMPLY WITH "STANDARDS OF MECHANICAL VENTILATION" ARTICLE 12, PAR. 1206.0 NEW YORK BUILDING CODE, LATEST REVISION.
- THE VENTILATION INDEX FOR ALL AREAS COMPLIES WITH THE MINIMUM CODE REQUIREMENTS. ALL CALCULATIONS OF VENTILATION INDEX WERE MADE WITHOUT TAKING ANY CREDIT FOR EXTERIOR WINDOW AND/OR OPENING.

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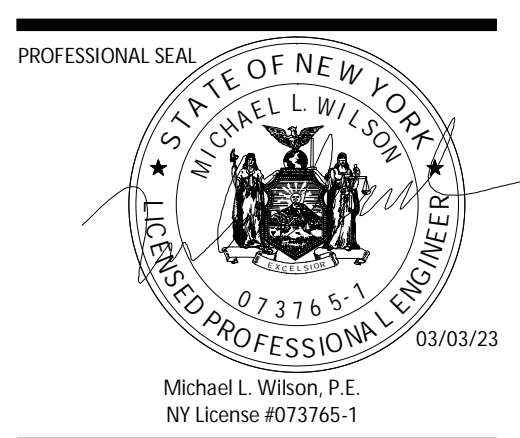


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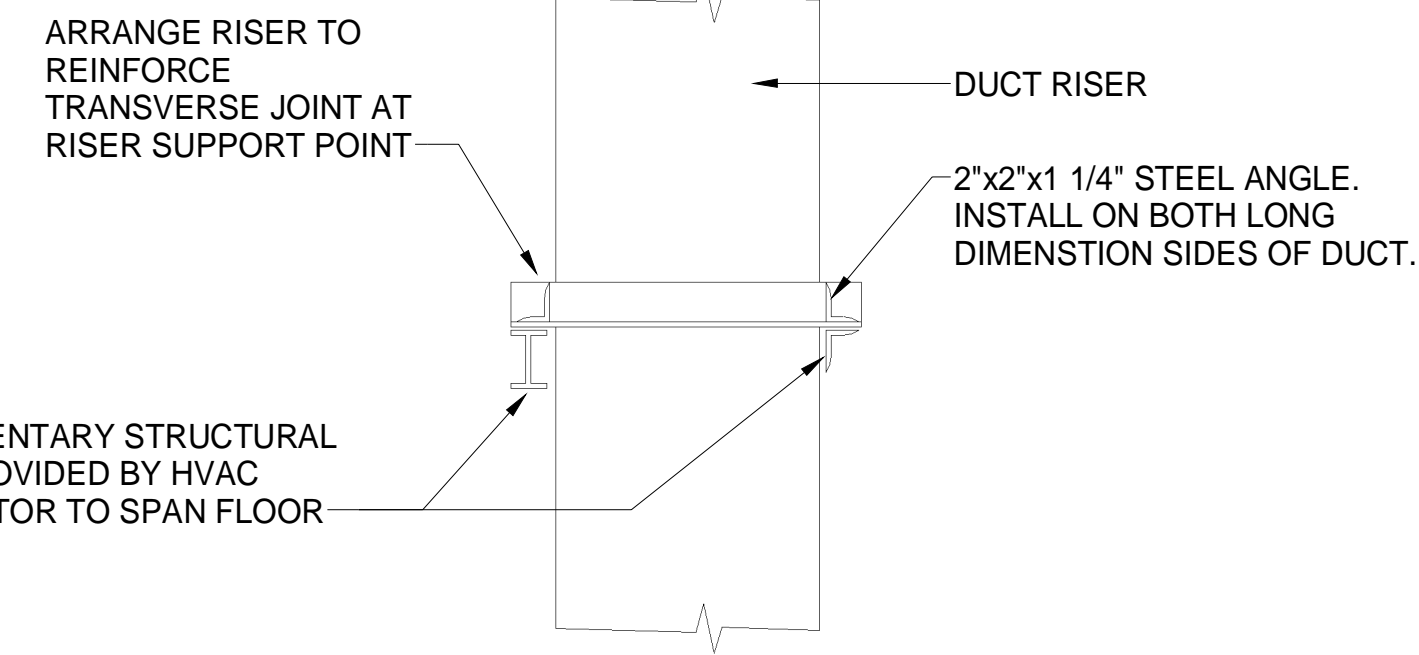
PROFESSIONAL IN CHARGE: Michael L. Wilson, P.E.
 DRAWN BY: PCE
 CHECKED BY: AIS
 PROJECT NUMBER:
 22074
 SHEET TITLE:

HVAC DETAILS

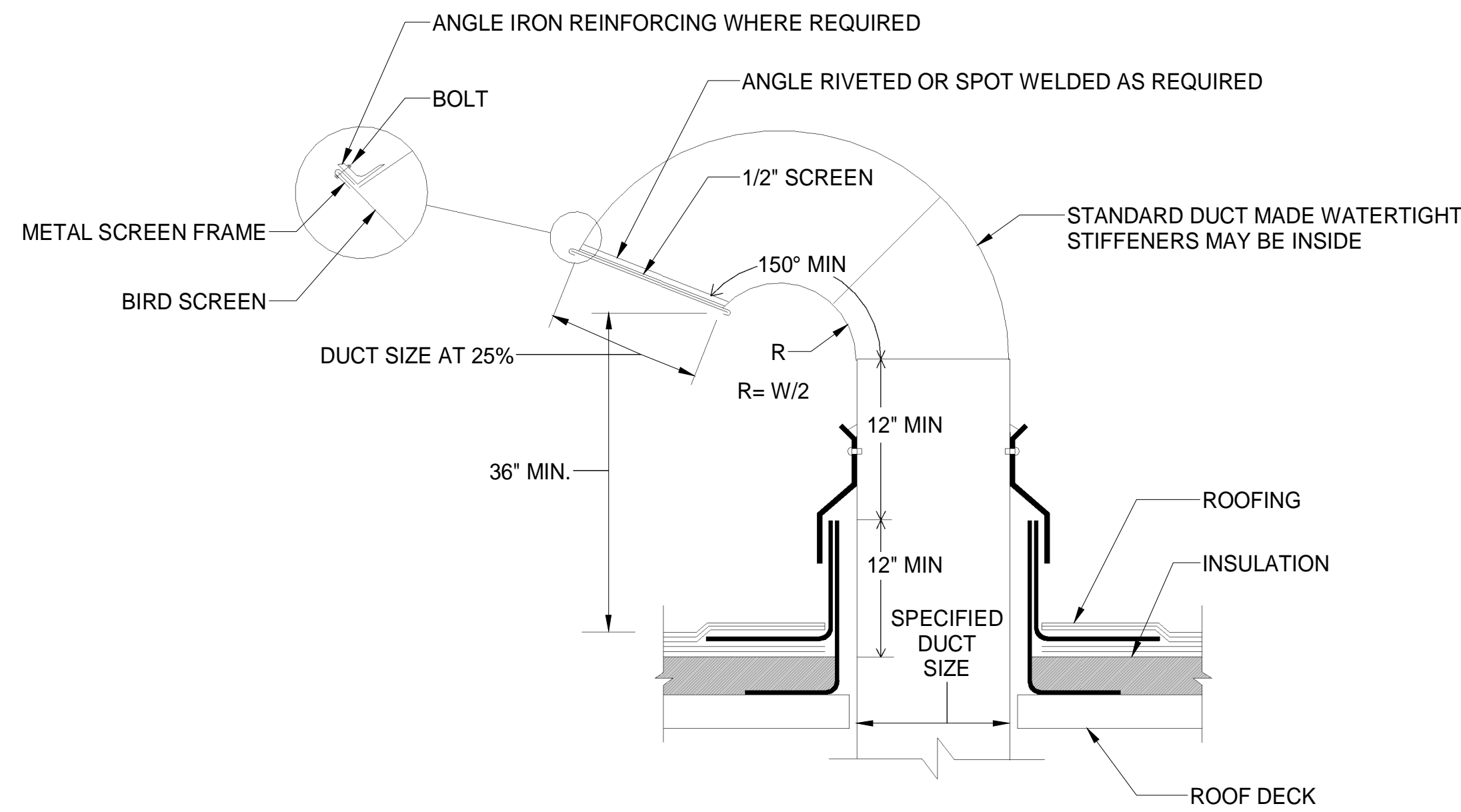
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DOB NOW Filing #: X08027475-11

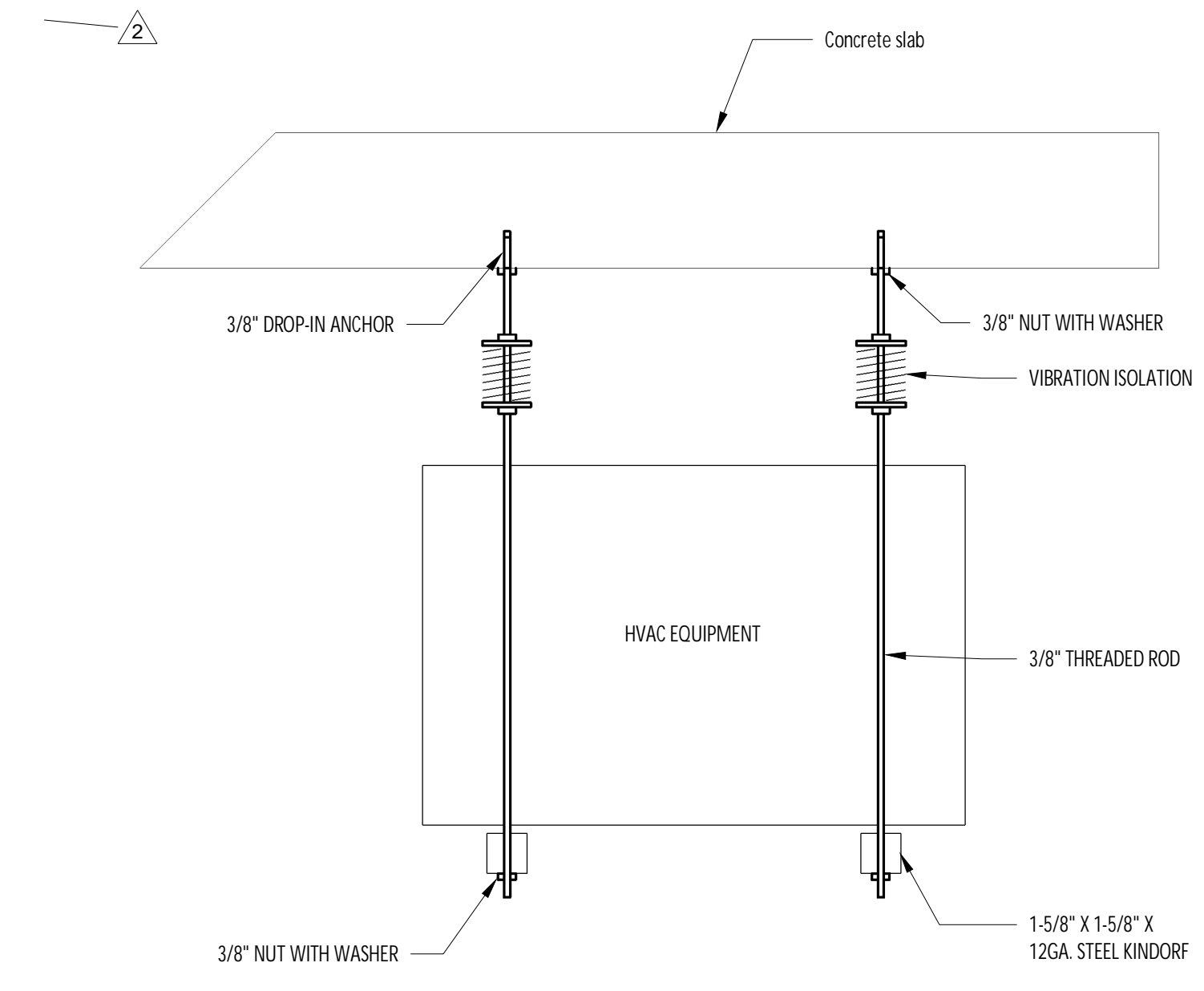
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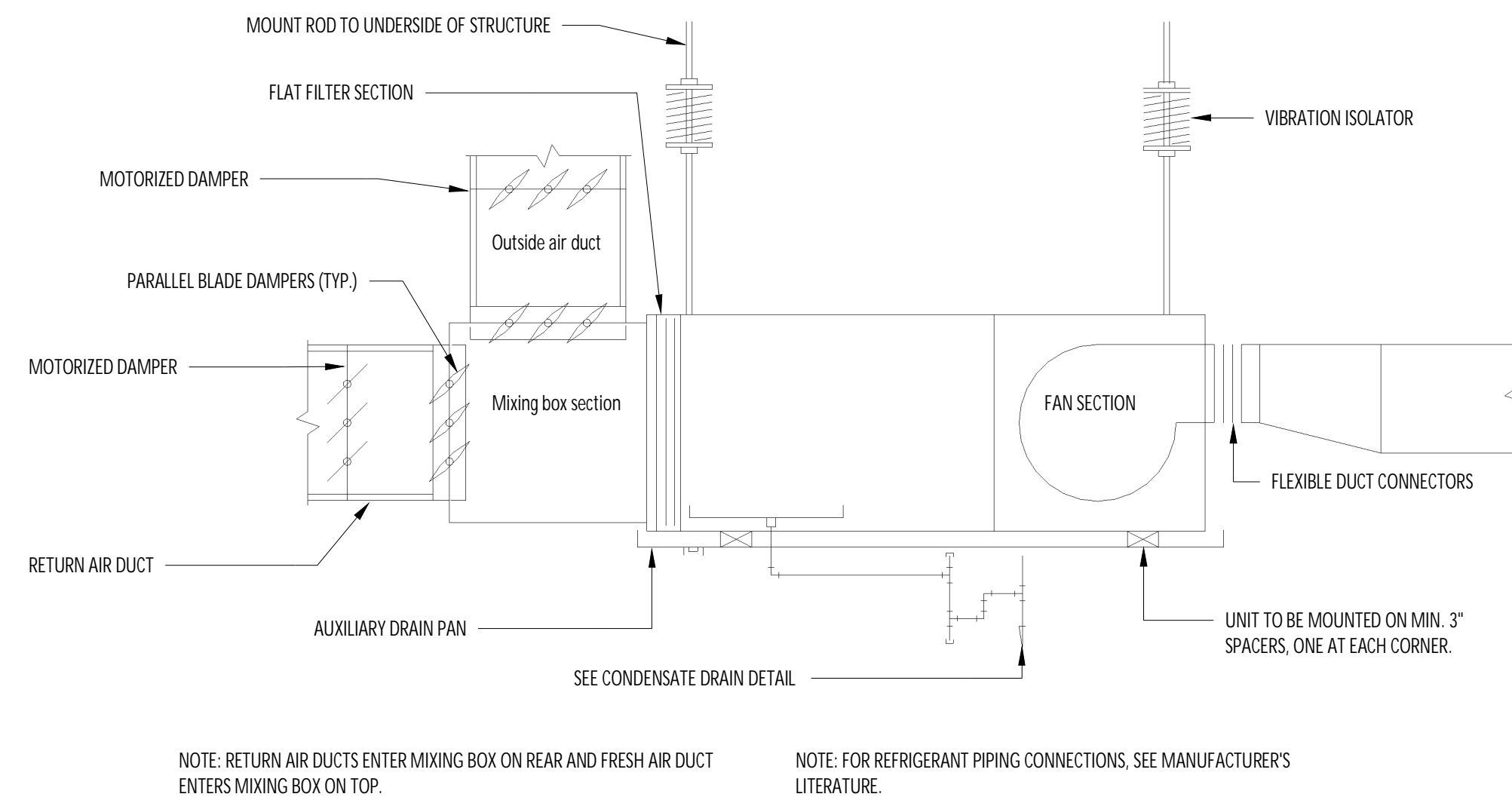
1 HVAC - DUCT RISER SUPPORT
NOT TO SCALE



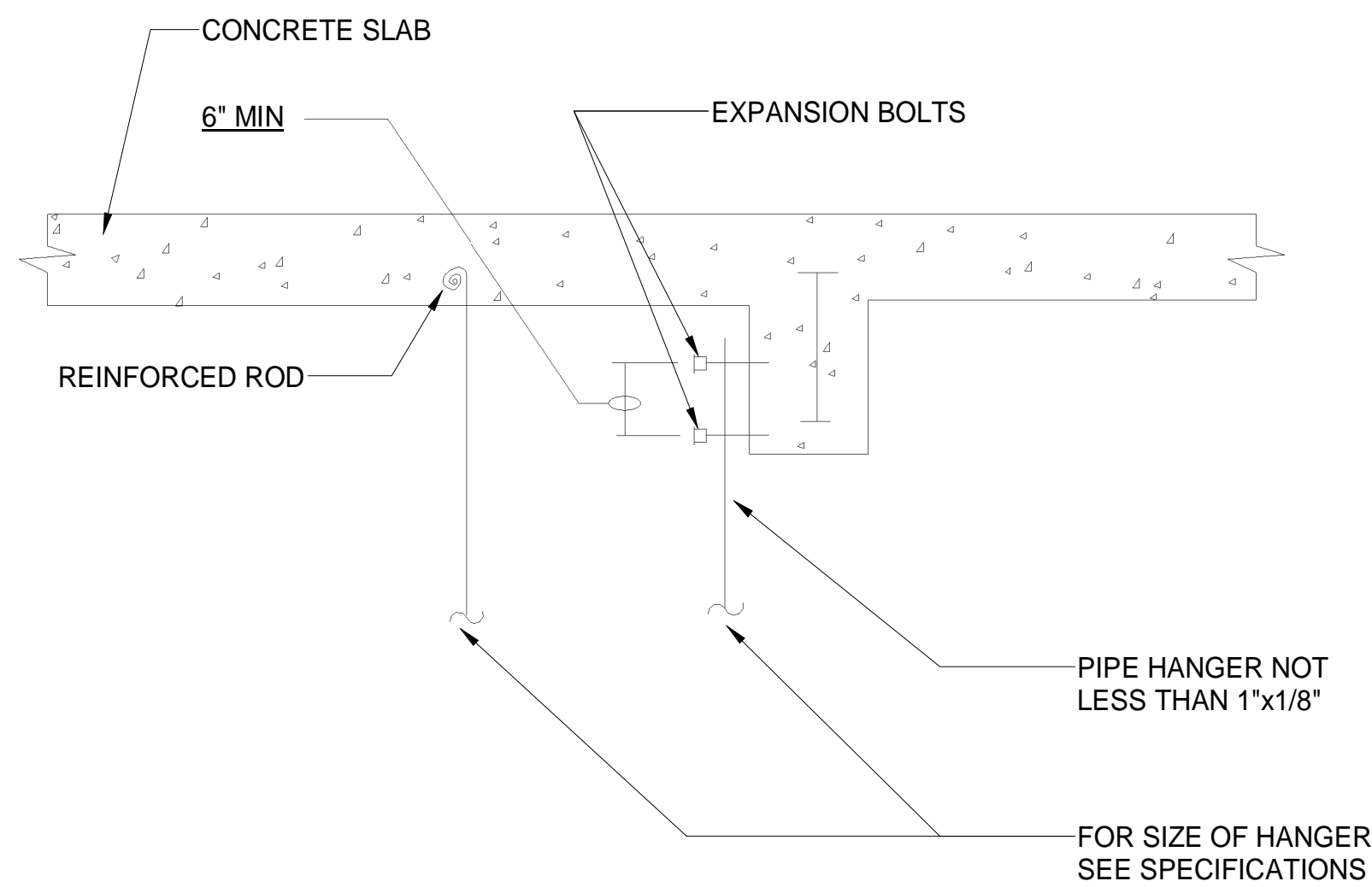
2 HVAC - GOOSENECK DETAIL
NOT TO SCALE



3 HVAC - EQUIPMENT HANGING DETAIL
NOT TO SCALE



4 HVAC - AHU ABOVE CEILING
1/8" = 1'-0"



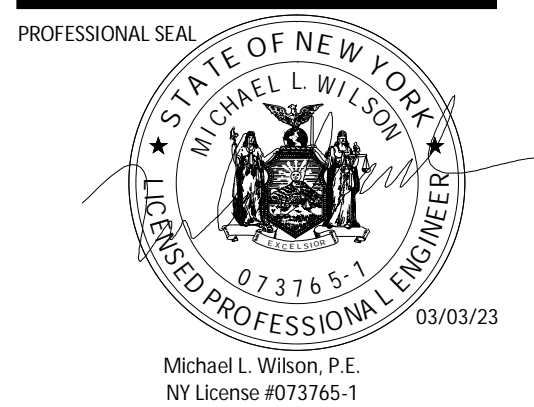
5 HVAC - PIPE SUPPORT DETAIL FOR CONCRETE
1/4" = 1'-0"



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HVAC DETAILS

SHEET NUMBER:

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 15 OF 15

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