

## ADDENDUM # 03

Hartsville Middle School  
Auditorium HVAC - Upgrades  
DARLINGTON COUNTY SCHOOL DISTRICT  
JCS PROJECT NO: 22011-A  
September 27, 2022



*This addendum modifies the Contract Documents only in the manner and to the extent stated herein and shown on any accompanying drawings and will become a part of the Contract Documents. Except as specified or otherwise indicated by this addendum, all work shall be in accordance with the basic requirements of the Contract Documents.*

### **GENERAL:**

#### **1. BID DATE CHANGE:**

The bid date has been changed to Monday, October 3, 2022. The time and location for this bid opening will remain the same.

#### **2. MECHANICAL:**

##### **A. CO2 Sensor Location:**

*Question: In reference to CO2 sensor location – does the engineer want it in the Return Air stream of AHU1, or in the space?*

**Answer:** The CO2 sensor can be located in the return of AHU-1

##### **B. Room Sensor Location:**

*Question: Where are all of the room sensors to be located? I had the installation guys estimate it at the furthest point from the controlled device so that we would be covered. The locations are not on the drawings.*

**Answer:** The thermostats will be replaced in the existing locations. The location will be shown on the revised drawing. (See attached)

##### **C. Refrigerant Piping Routing:**

*Question: Discussions occurred in reference to how the refrigerant piping is routed. Current routing would require scaffolding to be built over the seating area in order to run the piping above the ceiling. Could this be offset so it runs over the aisle? (There may be issues getting a scissors lift in the aisles due to the floor slope and access.) Could it be run along outside wall?*

**Answer:** At the contractor's option, alternate refrigerant tubing routing locations, above the ceiling, will be acceptable. Additional cost associated with alternate routings, if any, shall be included in the Contractor's bid.

##### **D. Drawings:**

See the attached revised drawings: M-001; M-102; and M-103. Changes are bubbled.

**END OF ADDENDUM # 03**

AIR HANDLING UNIT SCHEDULE									
TAG	DAIKIN MODEL NO.	AIRFLOW - CFM	OUTDOOR AIR - CFM	E.S.P. - IN. WG	MOTOR H.P. (QTY)	ELECTRIC HEAT KW	DX COOLING COIL		REMARKS
							EA DB/WB	LA DB/WB	
AHU-1	CAH019GDCM	8000	2700	2.0	4.0 (2)	30	84.4/70.5	55.6/54.2	1, 2, 3, 4, 5

- UNIT SELECTION SHALL INCLUDE 0.50" FILTER LOAD.
- PROVIDE MIXING BOX AND FILTER SECTION WITH TWO INCH MERV 13 FILTERS AND WITH DAMPERS FOR RETURN AND OUTSIDE AIR.
- PROVIDE DIRECT DRIVE FAN ARRAY WITH FACTORY WIRED SINGLE POINT POWER CONNECTION.
- FURNISH HAND/OFF/AUTO VARIABLE FREQUENCY DRIVE AND UNIT MOUNTED DISCONNECTS.
- AIR HANDLER TO BE HORIZONTAL DRAW THRU. CONFIGURATION SHALL BE MIXING AND FILTER/ELECTRIC HEAT/DX COIL/FAN ARRAY.

VRV SPLIT HEAT PUMP SCHEDULE							
TAG	DAIKIN MODEL	COOLING CAP. - MBH @ 80/67/95 TOTAL	HTG. CAP. - MBH @ 47°F	CFM		EER/COP	REMARKS
				O.A.	TOTAL		
SHP-24/26	REYQ120XAYDA	126.0	110.0	--	--	12.3/3.48	1
AHU-24	FXMQ72MVJU	74.4/49.1	84.0	400	1800	---	1, 2
AHU-26	FXMQ54PBVJU	55.6/40.7	62.2	400	1500	---	1, 2

- PROVIDE WITH HARD WIRED WALL MOUNTED THERMOSTAT. INTERNAL CONDENSATE PUMP WITH FLOAT SWITCH WIRED TO SHUT DOWN UNIT IN ORDER TO PREVENT CONDENSATE OVERFLOW, AND REFRIGERANT ACCESSORIES INCLUDING SCHRADER VALVES AND BALL VALVES AT EACH AIR HANDLING UNIT.
- PROVIDE WITH FILTER RACK ON UNIT INLET AND THROWAWAY FILTER.

SINGLE DUCT TERMINAL UNIT SCHEDULE									
TAG	TRANE MODEL	AIR INLET INCHES	COOLING		HEATING			MAX. A.P.D. - IN. W.C.	REMARKS
			MAX CFM	MIN CFM	CFM	KW	STAGES		
1-25	VCEF	14"ø	2000	1000	1000	8.0	2	0.25	1, 2, 3
1-27	VCEF	16"ø	3000	1500	1500	12.0	3	0.25	1, 2, 3
1-28	VCEF	16"ø	3000	1500	1500	12.0	3	0.25	1, 2, 3

- PROVIDE ELECTRIC HEATING COIL ON BOX DISCHARGE WITH 4'-0" OF STRAIGHT PLENUM BEFORE FITTINGS OR TAKEOFFS.
- PROVIDE 1" MATTED FACED INSULATION.
- CONTROLS SHALL BE FURNISHED BY THE CONTROLS CONTRACTOR AND FACTORY MOUNTED.

AIR COOLED CONDENSING UNIT				
TAG	DAIKIN MODEL	NET COOLING CAPACITY - MBH @ 95°F	EER	REMARKS
SHP-1A	RXYQ216XAYDA	215	10.9	1, 2
SHP-1B	RXYQ216XAYDA	215	10.9	1, 2

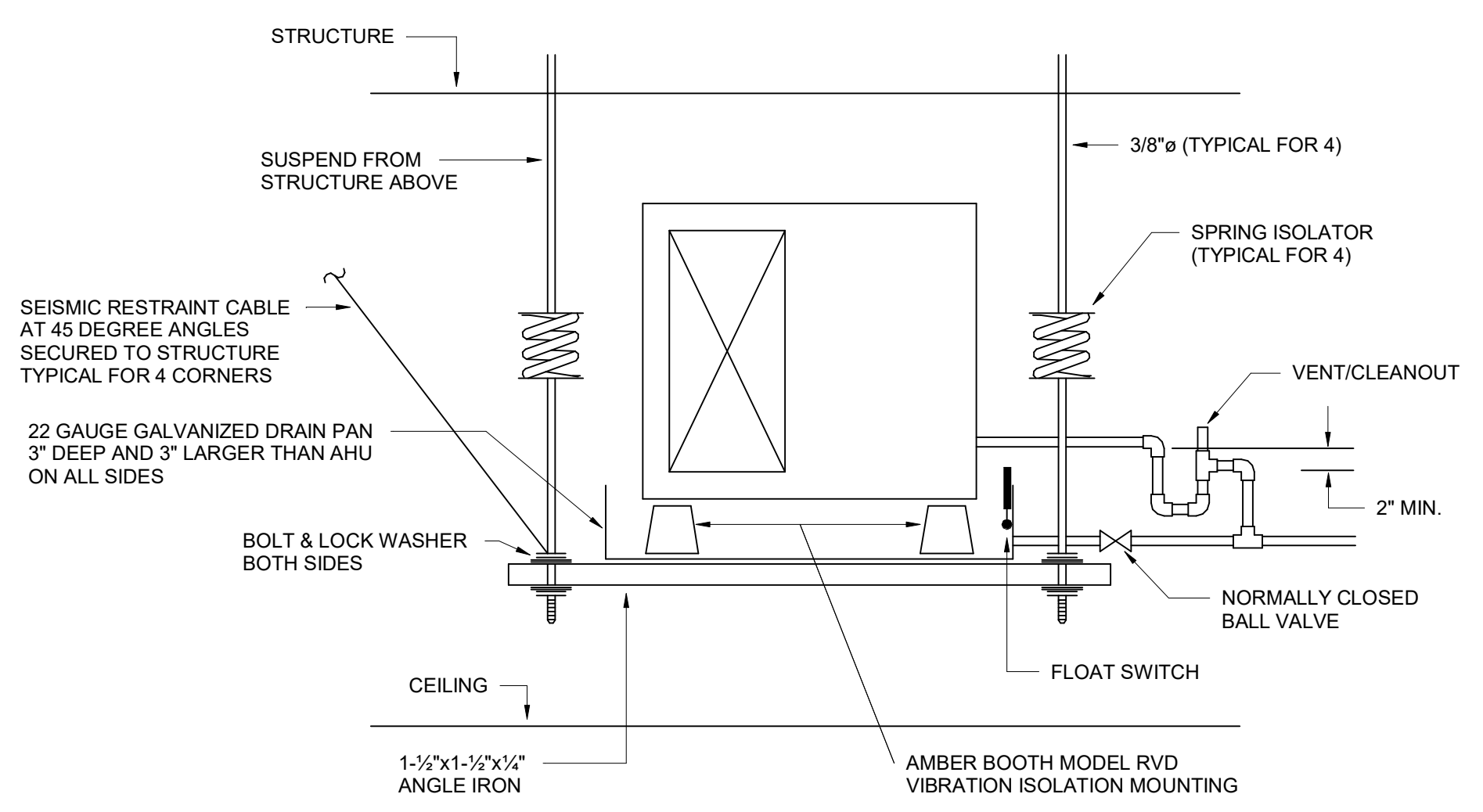
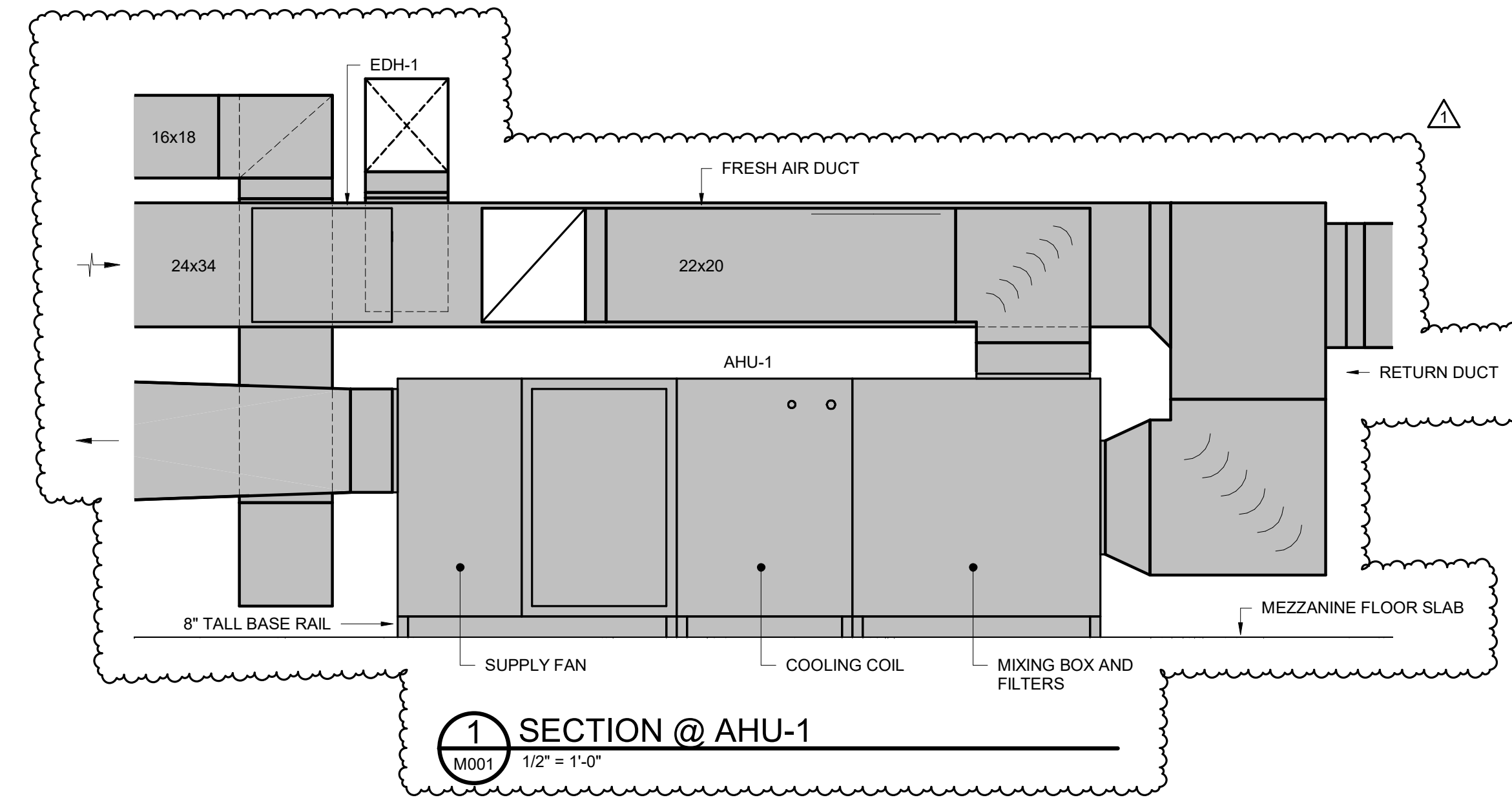
- PROVIDE DUAL CONDENSING UNITS AND BRANCH SELECTOR BOXES.
- PROVIDE LOUVERED COIL GUARDS. LOW AMBIENT COOLING TO 0°F, AND LIQUID AND SUCTION LINE SERVICE VALVES.

ELECTRIC DUCT HEATER SCHEDULE					
TAG	MARKEL MODEL	KW	STAGES	DUCT SIZE (WxH)	REMARKS
EDH-1	HF SERIES	30.0	SCR	34"x24"	1, 2

- PROVIDE WITH DOOR INTERLOCKING DISCONNECT SWITCH.
- PROVIDE WITH SCR CONTROLS, CONTROL TRANSFORMER, AIR FLOW SWITCH AND HIGH LIMIT SWITCH.

DESIGN CONDITIONS		
SEASON	OUTSIDE	INSIDE
SUMMER	96° FDB / 80° FWB	75° FDB / 50% - 60% RH
WINTER	23° FDB	70° FDB

- ### GENERAL NOTES
- ALL WORK SHALL BE IN ACCORDANCE WITH THE 2018 INTERNATIONAL MECHANICAL CODE, 2018 INTERNATIONAL FUEL GAS CODE, 2009 INTERNATIONAL ENERGY CONSERVATION CODE, ND 2006 SMACNA HVAC DUCT CONSTRUCTION STANDARD. ALL LOCAL CODES OR REQUIREMENTS STILL APPLY.
  - VISIT SITE PRIOR TO BIDDING. THIS CONTRACTOR SHALL DETERMINE FEASIBILITY OF INSTALLATION AND REFLECT THIS IN HIS BIDDING.
  - DO NOT SCALE DRAWINGS. SEE ARCHITECTURAL DRAWINGS AND REFLECTED CEILING PLANS FOR EXACT LOCATIONS OF DOORS, WINDOWS, AIR DISTRIBUTION, ETC.
  - DO NOT SCALE DRAWINGS. THIS CONTRACTOR SHALL VERIFY ALL EXISTING ITEMS AND LOCATIONS IN THE FIELD.
  - ALL PIPING AND DUCTWORK LOCATIONS SHALL BE COORDINATED WITH WORK UNDER OTHER DIVISIONS OF THE SPECIFICATIONS TO AVOID INTERFERENCE.
  - EXISTING PIPE, DUCTWORK, CONDUIT, ETC. THAT INTERFERES WITH THE ROUTING OF NEW SYSTEMS SHALL BE RELOCATED. THIS CONTRACTOR SHALL INCLUDE THE COST OF SUCH IN HIS BID UNLESS NOTED OTHERWISE.
  - ALL PIPING AND DUCTWORK INSULATION SHALL BE RUN CONTINUOUSLY THROUGH FLOORS, ROOFS AND PARTITIONS.
  - ALL MECHANICAL ITEMS EXTENDING THROUGH WALLS SHALL BE FLASHED.
  - ALL PIPING IS SHOWN DIAGRAMMATIC. HOWEVER, THIS CONTRACTOR SHALL PROVIDE ALL REQUIRED FITTINGS, PIPING AND INSULATION FOR ALL OFFSETS AND/OR CHANGES IN ELEVATION.
  - EXTEND ALL DRAIN LINES TO NEAREST FLOOR DRAIN OR AS INDICATED - SO ROUTED AS TO AVOID INTERFERENCE WITH PASSAGEWAYS AND MAINTENANCE. DRAINS FROM AIR HANDLING UNITS SHALL BE TRAPPED PER STATIC PRESSURE REQUIREMENTS.
  - MINIMUM PIPE SIZE SHALL BE 3/4-INCH UNLESS INDICATED OTHERWISE.
  - ALL PIPING SHALL BE SUPPORTED IN ACCORDANCE WITH THE SPECIFICATIONS AND FURTHER SUPPORTS OR HANGERS SHALL BE PROVIDED TO PREVENT WEIGHT OF PIPING BEING PLACED ON EQUIPMENT.
  - TURNING VANES SHALL BE PROVIDED AT ALL DUCTWORK ELBOWS AND CHANGES OF DIRECTION TO PROVIDE EVEN FLOW THROUGH DUCT SYSTEM.
  - MOTORIZED OUTSIDE AIR DAMPERS SHALL BE ABLE TO MODULATE AND ADJUST THE OPEN POSITION TO BALANCE THE OUTDOOR AIR TO THE SPECIFIED CFM.
  - ALL ITEMS OF EQUIPMENT IN MECHANICAL ROOM AND ON GRADE SHALL BE LOCATED ON REINFORCED CONCRETE FOUNDATIONS. MINIMUM 6-INCH THICK OR AS DETAILED ON THESE PLANS AND SPECIFICATIONS AND 6 INCHES LARGER THAN EQUIPMENT IN EACH DIRECTION. PADS SHALL BE REINFORCED PER THE HOUSEKEEPING PAD SECTION OF THE ASHRAE PRACTICAL GUIDE FOR SEISMIC RESTRAINT. ALL UNITS SHALL BE SECURED TO THE HOUSEKEEPING PAD WITH SEISMIC RESTRAINTS. PROVIDE 1-INCH CHAMFERS ON ALL SIDES.
  - PROVIDE FOR ACCESS TO ALL EQUIPMENT REQUIRING CLEANING OR ADJUSTMENT PER MANUFACTURER'S INSTRUCTIONS. PROVIDE FULL SPACE FOR COIL REMOVAL AND REPLACEMENT FOR ALL HOT WATER AND CHILLED WATER AIR HANDLING UNITS.
  - THIS CONTRACTOR SHALL PROVIDE ALL ITEMS OF MISCELLANEOUS STEEL AS REQUIRED FOR INSTALLATION OF ALL MECHANICAL ITEMS.
  - REMOVAL AND REPLACEMENT OF CEILING, AS REQUIRED FOR INSTALLATION OF NEW WORK, SHALL BE DONE BY THIS CONTRACTOR.
  - THIS CONTRACTOR SHALL PROVIDE AND INSTALL ALL CONTROL WIRING. DIVISION 26 WILL PROVIDE AND INSTALL ALL POWER WIRING. ALL WIRING SHALL BE IN ACCORDANCE WITH NATIONAL ELECTRICAL CODE. CONTROL WIRING SHALL BE CONCEALED WITHIN WALL AND ALL CONTROL WIRING SHALL BE RIGIDLY SUPPORTED IN EMT CONDUIT INDOORS AND RIGID CONDUIT OUTDOORS. DUCT DETECTORS PROVIDED BY DIVISION 26 SHALL BE INSTALLED BY DIVISION 23. POWER WIRING AND FIRE ALARM CONNECTIONS SHALL BE BY DIVISION 26. CONTROL WIRING FOR UNIT SHUTDOWN AND SMOKE DAMPER CONTROL SHALL BE BY DIVISION 23.
  - LOCATE ALL SPACE CONTROL INSTRUMENTS 4'-0" ABOVE FINISHED FLOOR. COORDINATE LOCATIONS WITH ARCHITECTURAL ELEVATIONS TO AVOID ITEMS INCLUDING BUT NOT LIMITED TO CUSTOM FINISHES, FIXED CASEWORK, FURNITURE, AND DOOR SWINGS. IN THE EVENT OF CONFLICTS IN THE FIELD, THE CONTRACTOR SHALL BRING THIS TO THE ATTENTION OF THE A/E FOR FINAL APPROVAL OF LOCATION.
  - THIS CONTRACTOR SHALL BE RESPONSIBLE FOR ANY NECESSARY DISMANTLING OF EQUIPMENT TO BE REMOVED. FREON SHALL BE RECLAIMED AND DISPOSED OF PER EPA REGULATIONS.
  - ITEMS REMOVED UNDER THIS CONTRACT SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE DISPOSED OF PROPERLY.
  - THIS CONTRACTOR SHALL PATCH ALL WALLS AND FINISHES TO MATCH EXISTING WHERE ALL ITEMS OR EQUIPMENT ARE REMOVED.
  - THE HVAC SYSTEMS SHALL NOT BE OPERATED DURING HEAVY CONSTRUCTION OPERATIONS INCLUDING MASONRY, GYPSUM BOARD SANDING, HEAVY CLEANUP ACTIVITIES, OR OTHER ACTIVITIES THAT CREATE AIRBORNE PARTICLES OR DEBRIS. ALL SYSTEMS SHALL BE CLEAN OF CONSTRUCTION DEBRIS, DUST AND DIRT AT FINAL COMPLETION. DUCT CLEANING AND UNIT/COIL CLEANING SHALL BE PERFORMED IF REQUIRED. IF EQUIPMENT OPERATES DURING CONSTRUCTION PROVIDE FILTER MEDIA OVER ALL RETURN GRILLES AND RETURN DUCT OPENINGS TO PROTECT DUCTS AND EQUIPMENT.

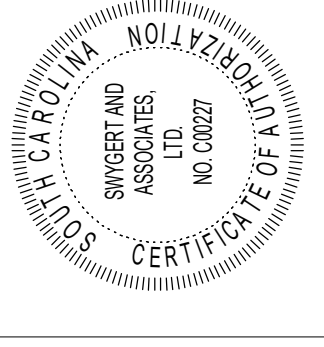


**AIR HANDLING UNIT SUPPORT DETAIL**  
NO SCALE

LEGEND	
SYMBOL	DESCRIPTION
↔ R ↔	REFRIGERANT LINES
↔ D ↔	DRAIN LINE
⊠	RECTANGULAR SUPPLY DUCTWORK
⊠	RETURN AND FRESH AIR DUCTWORK
48x24	48"x24" RECTANGULAR DUCT
AFF	ABOVE FINISHED FLOOR
⊕	CONNECTION POINT OF NEW TO EXISTING

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**HARTSVILLE MIDDLE - AUDITORIUM HVAC UPGRADES**  
**DARLINGTON COUNTY SCHOOL DISTRICT**  
1427 14TH ST., HARTSVILLE, SC 29550

No	Description	Date
1	ADDENDUM 3	09.27.2022

DRAWN BY: **JKB**  
CHECKED BY: **WCL**  
COMM NO: **22011A**  
DATE: **12 AUG. 2022**  
SHEET TITLE: **DETAILS, NOTES, SCHEDULES, AND LEGEND**

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SHEET NO: **M001**

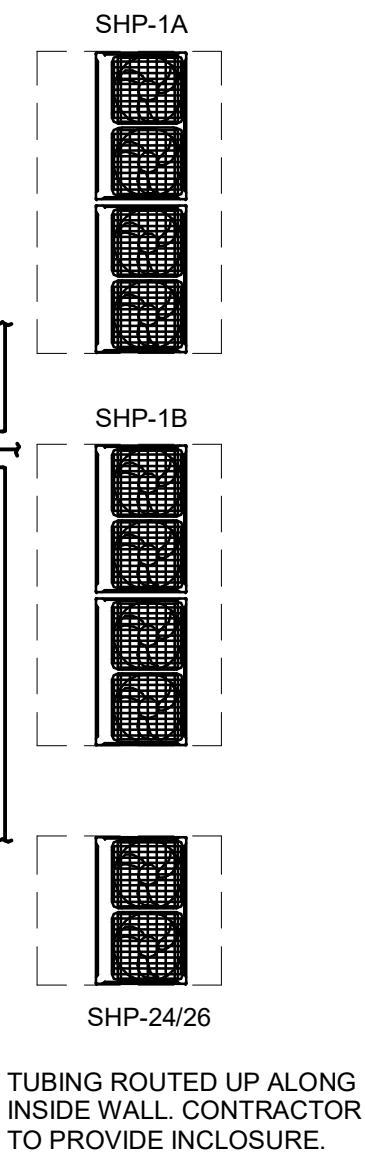
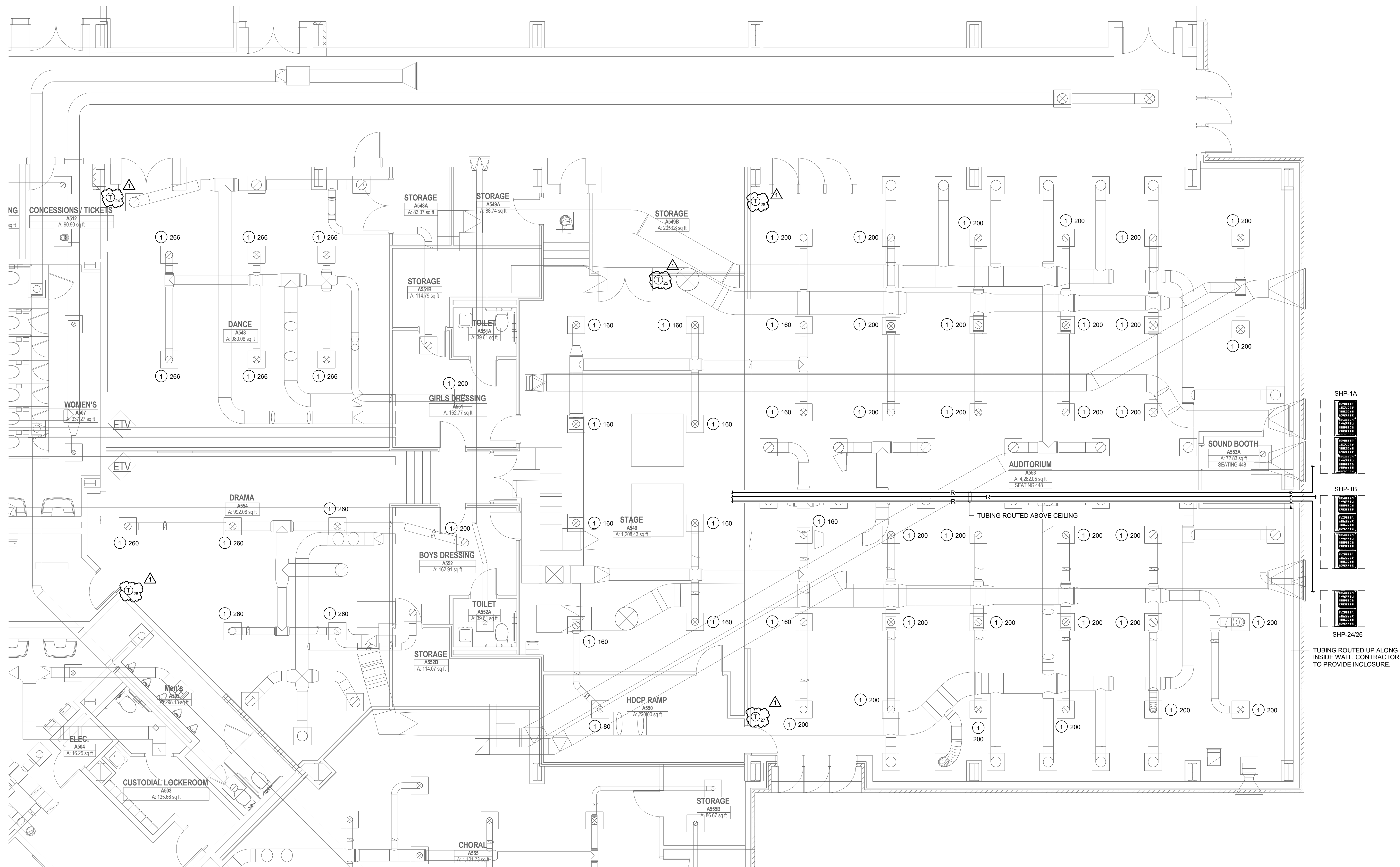
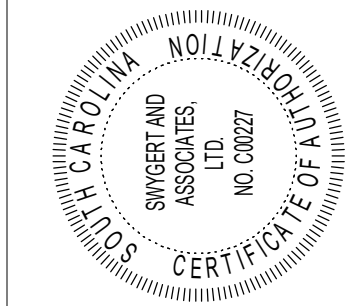
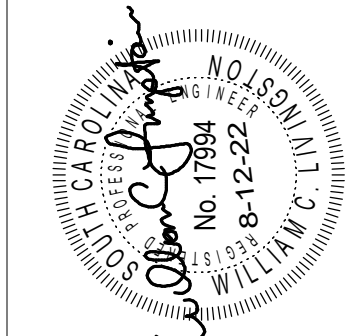
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NOTES TO SHEET  
 ① BALANCE AIRFLOW AS SHOWN.

**Jumper  
 Carter  
 Sease**

**ARCHITECTS**

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1 FLOOR PLAN - BUILDING 500  
 M102 3/16" = 1'-0"

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DRAWN BY: **JKB**  
 CHECKED BY: **WCL**  
 COMM NO: **22011A**  
 DATE: **12 AUG. 2022**  
 SHEET TITLE: **BUILDING 500 RENOVATION PLAN**

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SHEET NO: **M102**

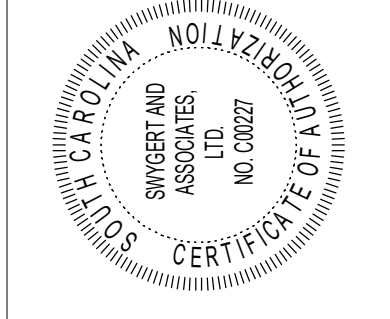
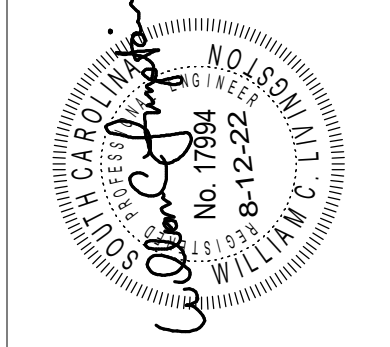
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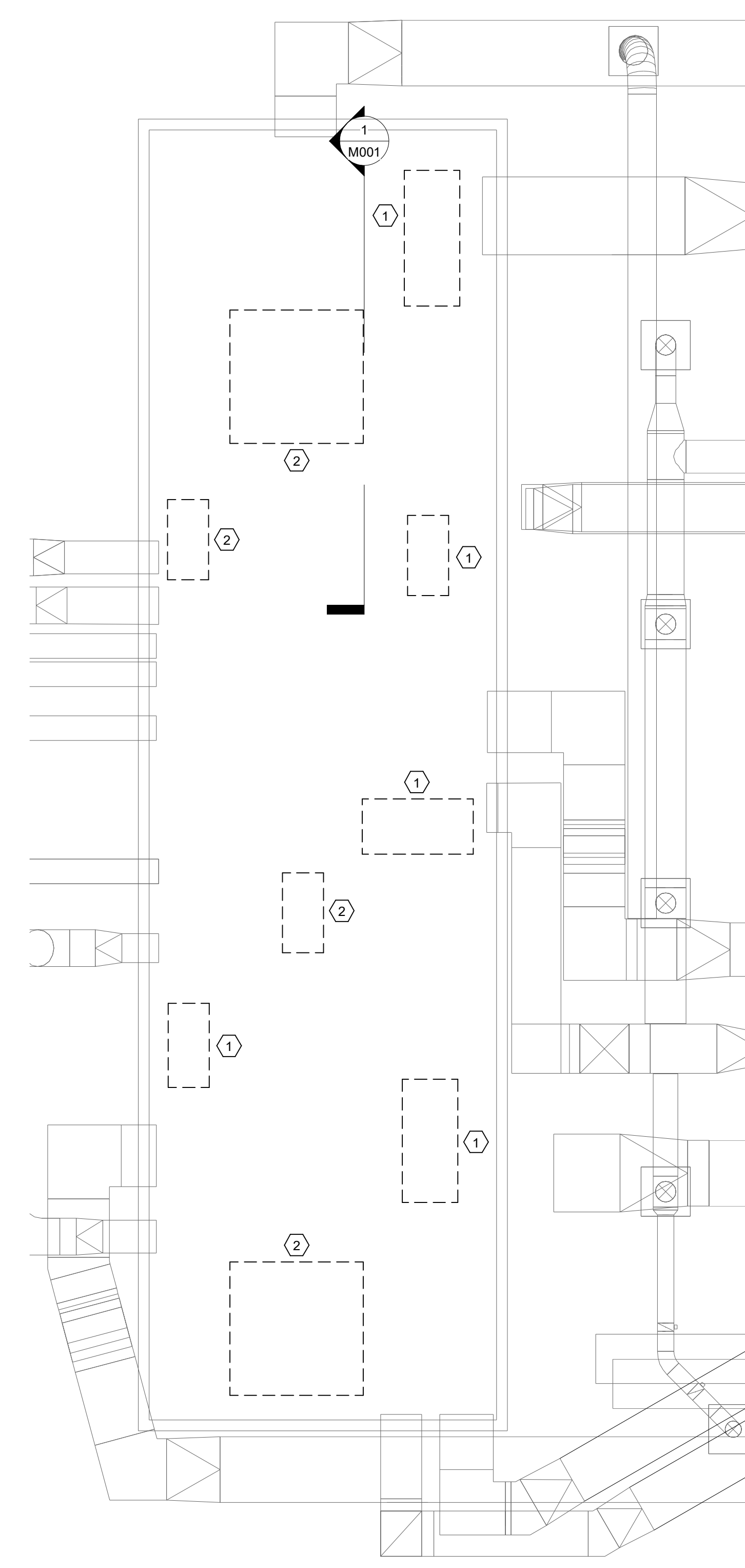
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**DEMOLITION NOTES**

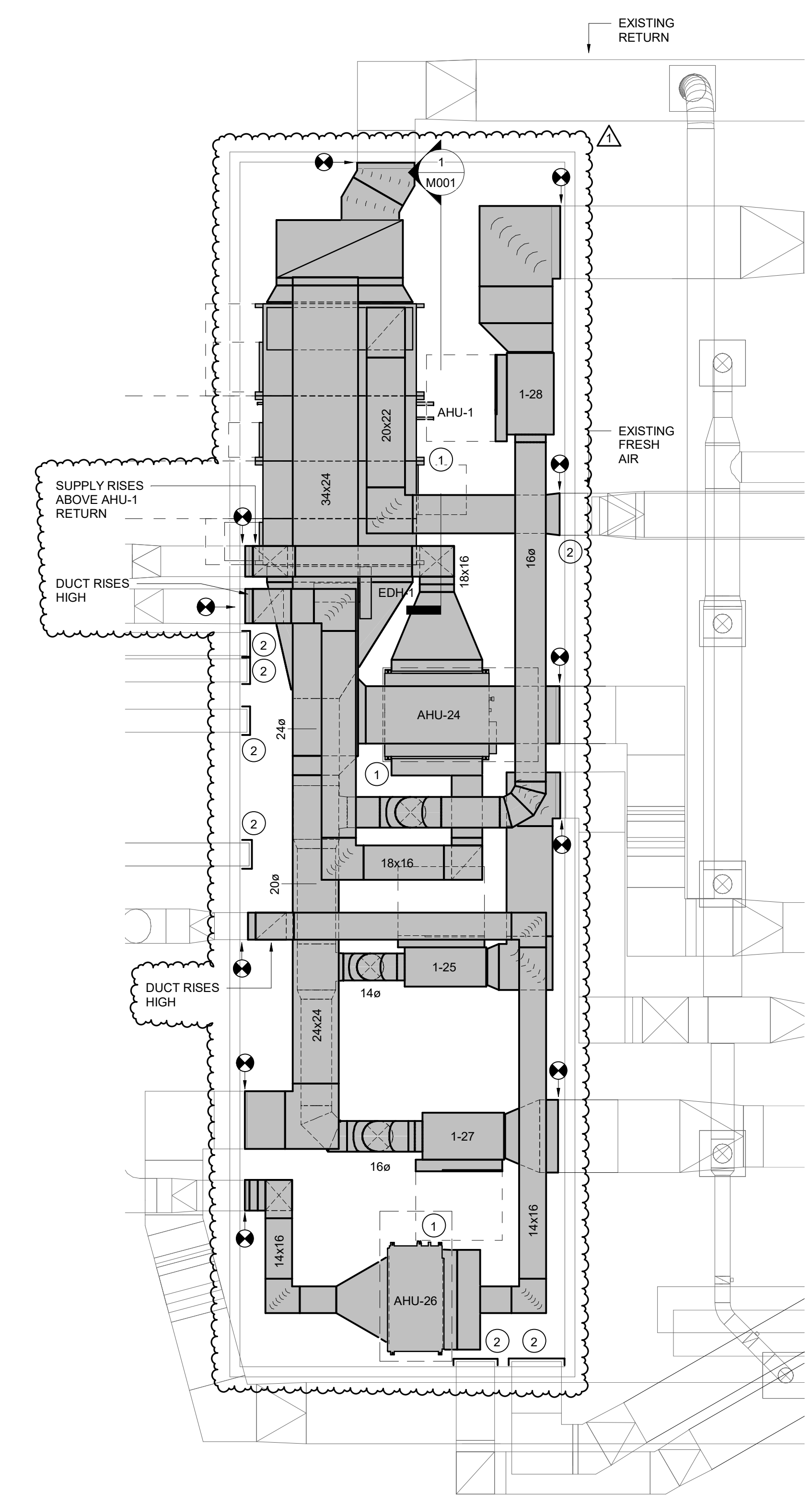
- ① REMOVE EXISTING AIR HANDLER COMPLETE, INCLUDING BUT NOT LIMITED TO DUCTWORK IN MEZZANINE, ALL TUBING, WIRING AND SUPPORTS.
- ② REMOVE EXISTING ENERGY RECOVERY UNIT COMPLETE, INCLUDING BUT NOT LIMITED TO DUCTWORK IN MEZZANINE, WIRING AND SUPPORTS.

**NOTES TO SHEET**

- ① ROUTE CONDENSATE TO FLOOR DRAIN.
- ② CAP EXISTING ERV DUCT TO REMAIN.



① MEZZANINE PLAN - DEMOLITION  
M103 1/4" = 1'-0"



② MEZZANINE PLAN - RENOVATION  
M103 1/4" = 1'-0"

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COMM NO: 22011A  
DATE: 12 AUG. 2022  
SHEET TITLE: MEZZANINE FLOOR PLANS

SHEET NO: M103