

GENERAL NOTES

- HEATING VENTILATING AND AIR CONDITIONING (HVAC)
Heat Pump: Single package wall mounted air to air electric heat pump unit shall be rated in accordance with ARI Standard 240-77.
Reference Brands: BARD WH42A-XXXXX WITHOUT T-STAT
MARVAIR AVP 42 HPA-08S
All units shall be 230/208 volt, 1 phase system, UL tested & approved or comparable and meet current energy standards.

- A.) The system shall maintain an automatically controlled indoor classroom temperature of 78 degrees F. When the outdoor dry bulb temperature varies between 100 degrees F. in the summer
- B.) The system must maintain the above temperature when the damper is adjusted to use approximately one third fresh air.

- Ductwork:
A.) Construct all ductwork of galvanized sheet metal in accordance with C.M.C., Ashrae Guide Equipment volume and Smacna Low Velocity Duct Construction manual, latest editions. All ductwork shall be insulated with 1" thick fiberglass duct wrap with vapor barrier. Provide 1" duct attenuation at all ductwork within 2'-0" of HVAC unit.

- B.) Non-metallic duct option: In accessible concealed portions of duct system rigid 1" fiberglass or insulated flex-duct with vapor barrier may be substituted for sheet metal ductwork. All ductwork within 2' of the HVAC unit and all interface connections shall be metal. Ductwork and reinforcement shall be designed for 2" static pressure.
Reference Brands: Owens-Corning fiberglass ductboard, 1" thick, and Micro-aire, TYPE 475.
Non-metallic ductwork shall conform to NFPA 90-A and SMACNA Class 1 rating.

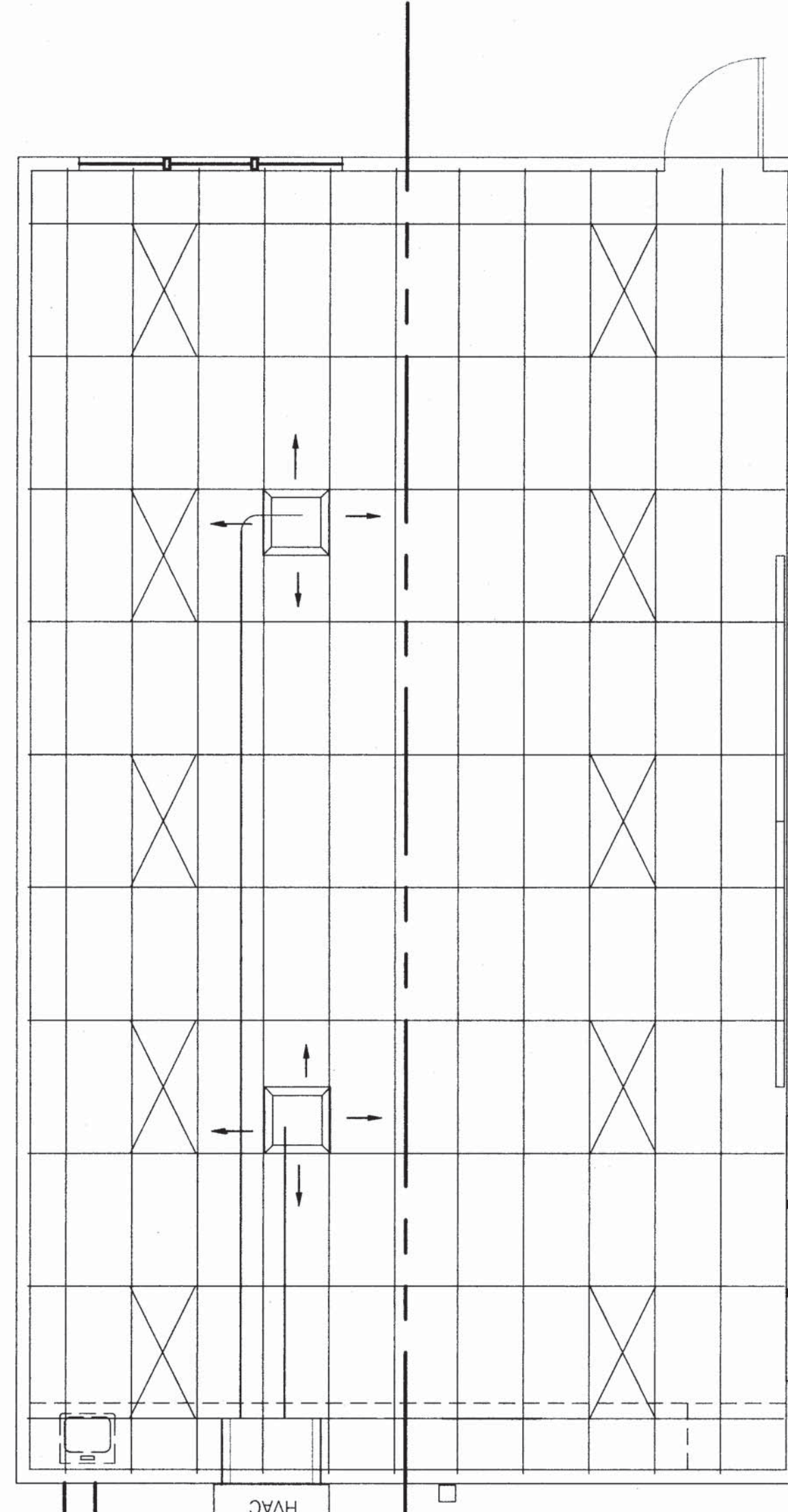
- Air duct insulation and linings shall comply with flame spread less than or equal to 25, smoke generation less than or equal to 50.
Supply air diffusers shall be 675 CFM max. 12" round. 1" fiberglass or flexduct ductwork specifically designed to provide air thermal cooling systems. 24"x8"x1" Micro-Aire type #475 Owens-Corning, Knauf, Certainteed, or equal and 90-B: UL #131 test, class 1 rating with SMACNA.

- Registers and diffusers: Provide three (Min) 4-way throw air diffusers as manufactured Carnes, Titus, Hart and Cooley, Metalaire, Shoemaker, Barber-Coleman or Krueger commercial grade grills and registers
Air conditioning controls.
Thermostat: Provide electronic programmable thermostat. Thermostat shall have the following functions:
A.) 5 and 2 weekday/weekend programming with 4 separate time/temperature setting for 24-hour period.
B.) Key board lockout switch.
C.) Programmable display.
D.) 2-hour override minimum.
E.) Status indicated Led's.
F.) Battery back-up.
Provide locking clear thermostat cover with thermostat cover with access hole for program override. White Rodgers JF92 @ +60" SEALED.

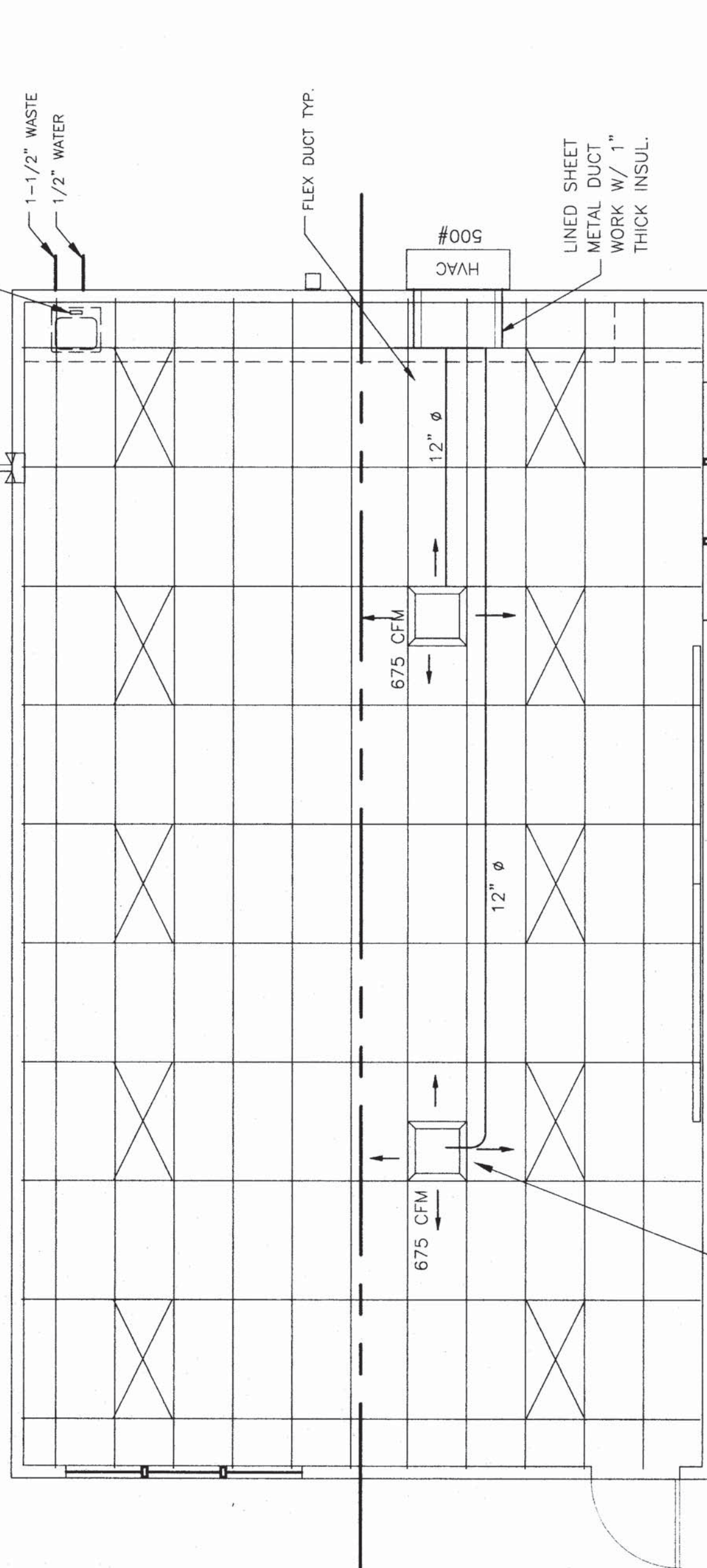
- Thermal insulation:
A.) Roof insulation: R-19 Unfaced.
B.) Walls insulation: R-11 Kraft Faced.
C.) Floors insulation: R-11 Kraft Faced.
Flame spread and smoke development shall conform to California Building Code sec. 707.
Factory-made air ducts. Factory-made air ducts shall be approved for the use intended or shall conform to the requirements of U.M.C. Standard No. 6-1. Each portion of a factory-made air duct system shall be identified by the manufacturer with a label or other suitable identification indicating compliance with U.M.C. Standard No. 6-1 and its class designation. These ducts shall be listed and shall be installed in accordance with the terms of their listing and the requirements of UMC STD. 6-1.

- Duct Support
Flex duct to be supported with 1-1/2" wide x 26 ga. galv. strap @ max 6'-0" o.c. Attach to rafter w/2 #8 SMS @ each end.
Supply air plenum to be supported with 1-1/2" wide x 26 ga. galv. straps min. 2 per plenum.
Supply air box and diffusers to be supported with (2) 12 ga. hanger wires to box @ opposite corners.
Supply air box and diffusers to be braced with (2) 12 ga. slack wires to box @ opposite corners. Attach supply air diffusers to ceiling grid to resist a lateral load equal to the weight of the diffuser and supply air box w/2 #8 SMS.

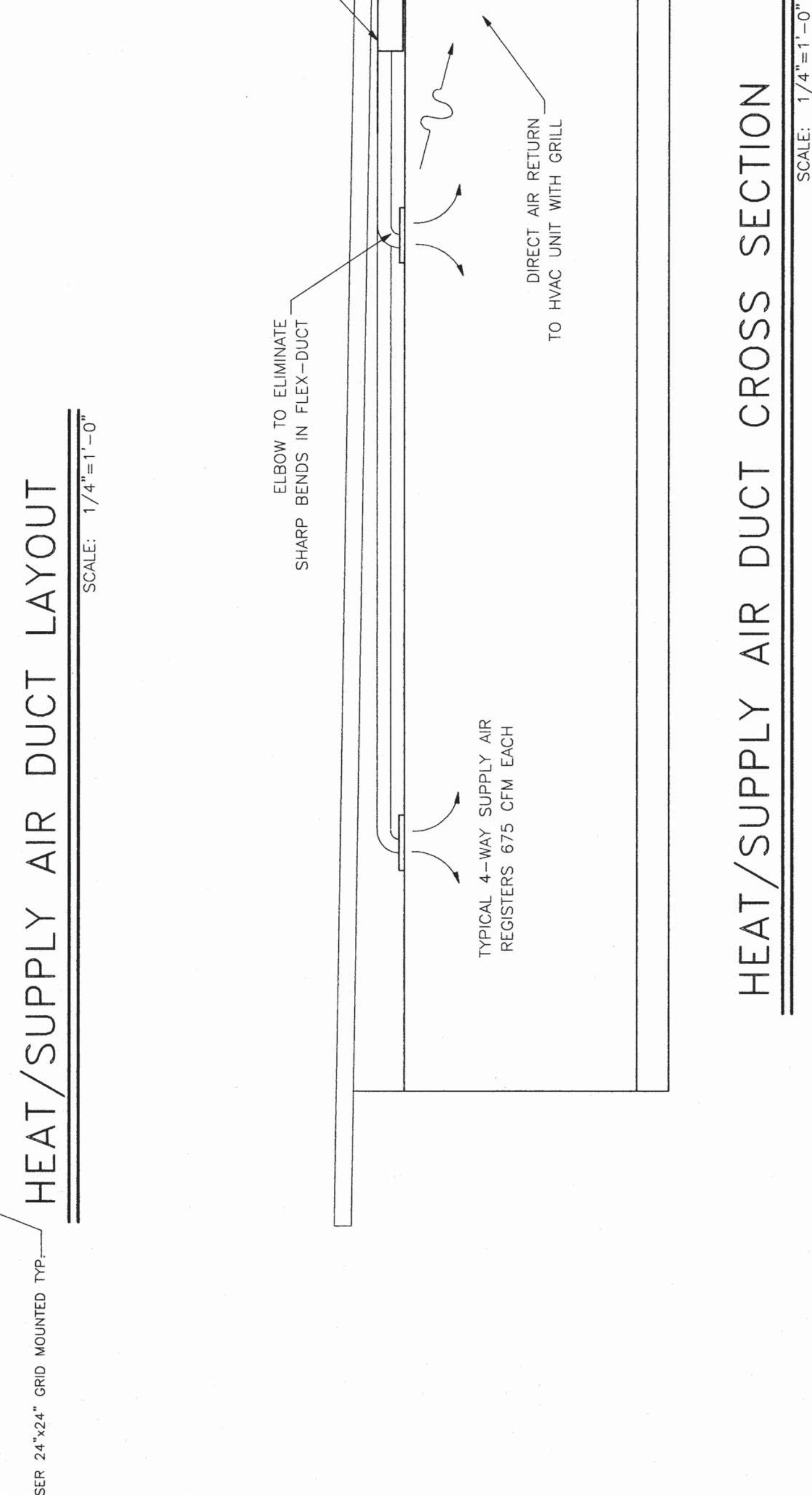
- THESE DRAWINGS COMPLY WITH THE ENERGY CONSERVATION REQUIREMENTS OF TITLE 24 OF THE STATE OF CALIFORNIA



HEAT/SUPPLY AIR DUCT LAYOUT
SCALE: 1/4"=1'-0"



HEAT/SUPPLY AIR DUCT LAYOUT
SCALE: 1/4"=1'-0"



HEAT/SUPPLY AIR DUCT CROSS SECTION
SCALE: 1/4"=1'-0"

FILE NO. 105913
IDENTIFICATION STAMP
BY: [Signature]
DATE: 10/5/13
AC: [Signature]

NOTE
STUB OUT LOCATIONS FOR WATER, WASTE AND GAS ARE DIAGRAMMATIC ONLY. EXACT LOCATIONS MAY VARY +/- SEVERAL FEET. PLEASE CONTACT AMERICAN MODULAR SYSTEMS FOR EXACT LOCATIONS.

BASED ON PC# 02-101837-1

NO.	DATE	DESCRIPTION	NO.	DATE	DESCRIPTION
1			1		
2			2		
3			3		

PROJECT No. _____
SHEET No. **M 1**

DATE: 07-10-01
SCALE: NONE
DRAWN BY: M.H.
CHECKED BY: _____
SERIAL NO. _____

CUSTOMER:
BAKERSFIELD CITY SCHOOL DISTRICT
THORNER ELEMENTARY

MECHANICAL PLAN & NOTES

24 X 40 RELOCATABLE CLASSROOMS

American Modular Systems
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