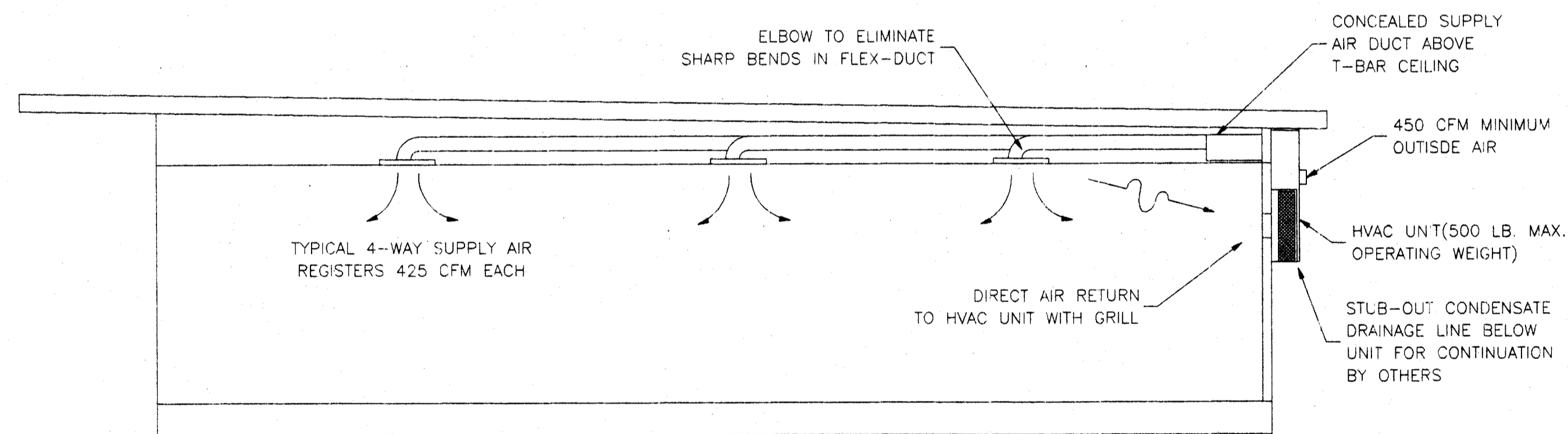


B
M1 HEAT/SUPPLY AIR DUCT LAYOUT
SCALE: 1/4"=1'-0"



A
M1 HEAT/SUPPLY AIR DUCT CROSS SECTION
SCALE: 1/4"=1'-0"

TITLE 24 ENERGY COMPLIANCE SUMMARY

PC # 02-104915 BUILDING DESCRIPTION: 24x40 Relocatable Building
 Note: See Title 24 Energy Compliance Report Booklet for More Details. Manufacturer: American Modular Systems
 Zones: (1-16) 14, 15 & 16

Envelope Measures

| INSULATION | GLAZING |
|--------------------|-----------------------------|
| Roof: R-19 (Batt) | Panels: Dual U-Factor: 0.85 |
| Wall: R-11 (Batt) | Frames: Metal SHGC: 0.34 |
| Floor: R-11 (Batt) | Tinting: Solarban 60 |

Lighting Measures

| Code | Quantity | Description | Lamp/Ballast | Total Watts |
|------|----------|------------------------------------|--------------------|-------------|
| A | 8 | (3) 4ft fluorescent 18 Elec Tandem | T32TB / Electronic | 704 |
| b | 2 | (3) 4ft fluorescent 18 Elec | T32TB / Electronic | 228 |

Controls for Credit: Occ Sensor > 250 sq ft

Mechanical Measures

| Modular | Type | Qty | OSA | Cooling Eff. | Heating Eff. |
|---------|--------------|-----|-----|--------------|--------------|
| 24x40 | BARD WH602-A | 1 | 710 | 10.20 SEER | 7.00 HSPF |

HP T-Stat: Electric Heat (KW): 0.0 kw Duct Location: Conditioned Space
 Economizer: Duct Insulation: R-4.2

GENERAL NOTES
 HEATING VENTILATING AND AIR CONDITIONING (HVAC)
 1. 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 WH431A-XXXXXX

MAXIMUM AC SIZE FOR THIS BUILDING WILL BE A 5-TON UNIT

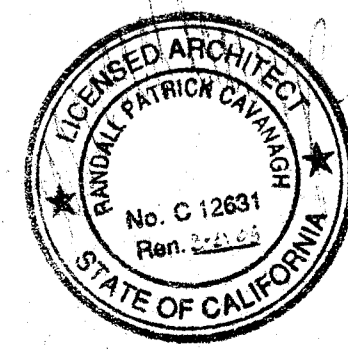
- All units shall be 230/208 volt, 1 phase system, UL tested & approved or comparable and meet current energy standards.
- A.) The system shall maintain an automatically controlled indoor classroom temperature of 78 degrees F. When the outdoor dry bulb temperature varies between 100 degrees F. in the summer
 B.) The system must maintain the above temperature when the damper is adjusted to use approximately one third fresh air.
2. 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 ductwork 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.
3. Air duct insulation and linings shall comply with flame spread less than or equal to 25, smoke generation less than or equal to 50.
4. 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, Knaufl, Certainteed, or equal and 90- B: UL #131 test, class 1 rating with "SMACNA".
5. Registers and diffusers: Provide three (Min) 4-way throw air diffusers as manufactured Carnes, Titus, Hart and Cooley, Metolaire, Shoemaker, Barber-Coleman or Krueger commercial grade grills and registers
6. 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 IF92-371 @ +60" SEALED.
7. 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.
8. 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.

NOTE
 STUB OUT LOCATIONS FOR WATER, WASTE AND GAS ARE DIAGRAMMATICAL ONLY. EXACT LOCATIONS MAY VARY +/- SEVERAL FEET. PLEASE CONTACT AMERICAN MODULAR SYSTEMS FOR EXACT LOCATIONS. POINT OF CONNECTION WILL BE AT THE FACE OF THE BUILDING.

IDENTIFICATION STAMP
 DIV. OF THE STATE ARCHITECT
 APPROX: 108670
 DATE: JUL 28 2005
 FILE NO.
 IDENTIFICATION STAMP
 DIV. OF THE STATE ARCHITECT
 OFFICE OF REGULATION SERVICES
 AC: _____ FLS: _____ SS: _____
 DATE: _____

BASED ON PC# 02-104915

24 X 40
 RELOCATABLE
 CLASSROOMS



CUSTOMER:
 BAKERSFIELD CITY SCHOOL DISTRICT

MECHANICAL PLAN & NOTES

DATE: 11/29/04
 SCALE: NONE
 DRAWN BY: RS
 CHECKED BY:
 CHECKED BY:
 SERIAL NO.

| REVISIONS | | | | | |
|-----------|------|-------------|----|------|-------------|
| NO | DATE | DESCRIPTION | NO | DATE | DESCRIPTION |
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PROJECT No.
 SHEET No.
 M1