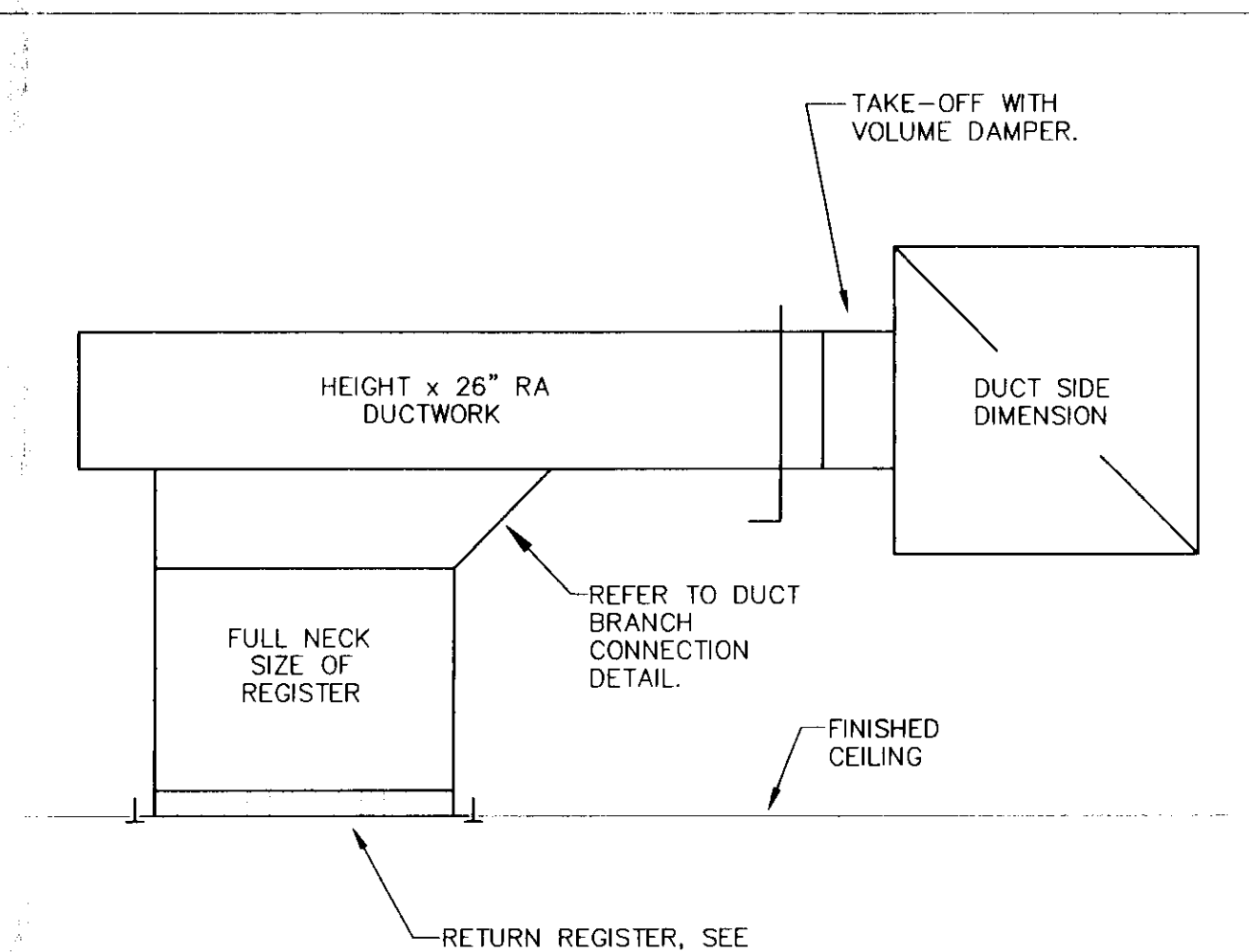
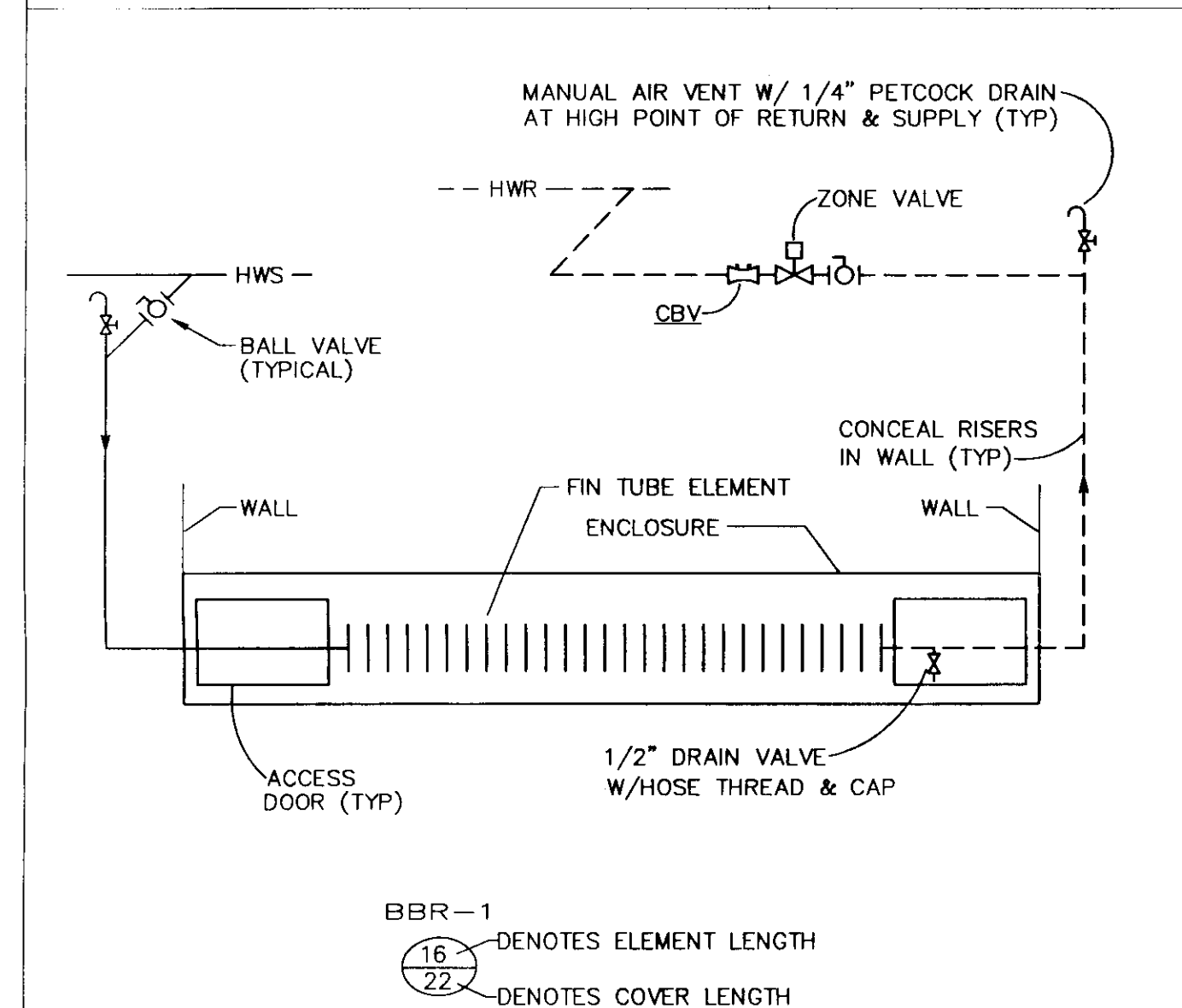


FLEXIBLE DUCT TO BE MAXIMUM OF 12 INCHES LONG.

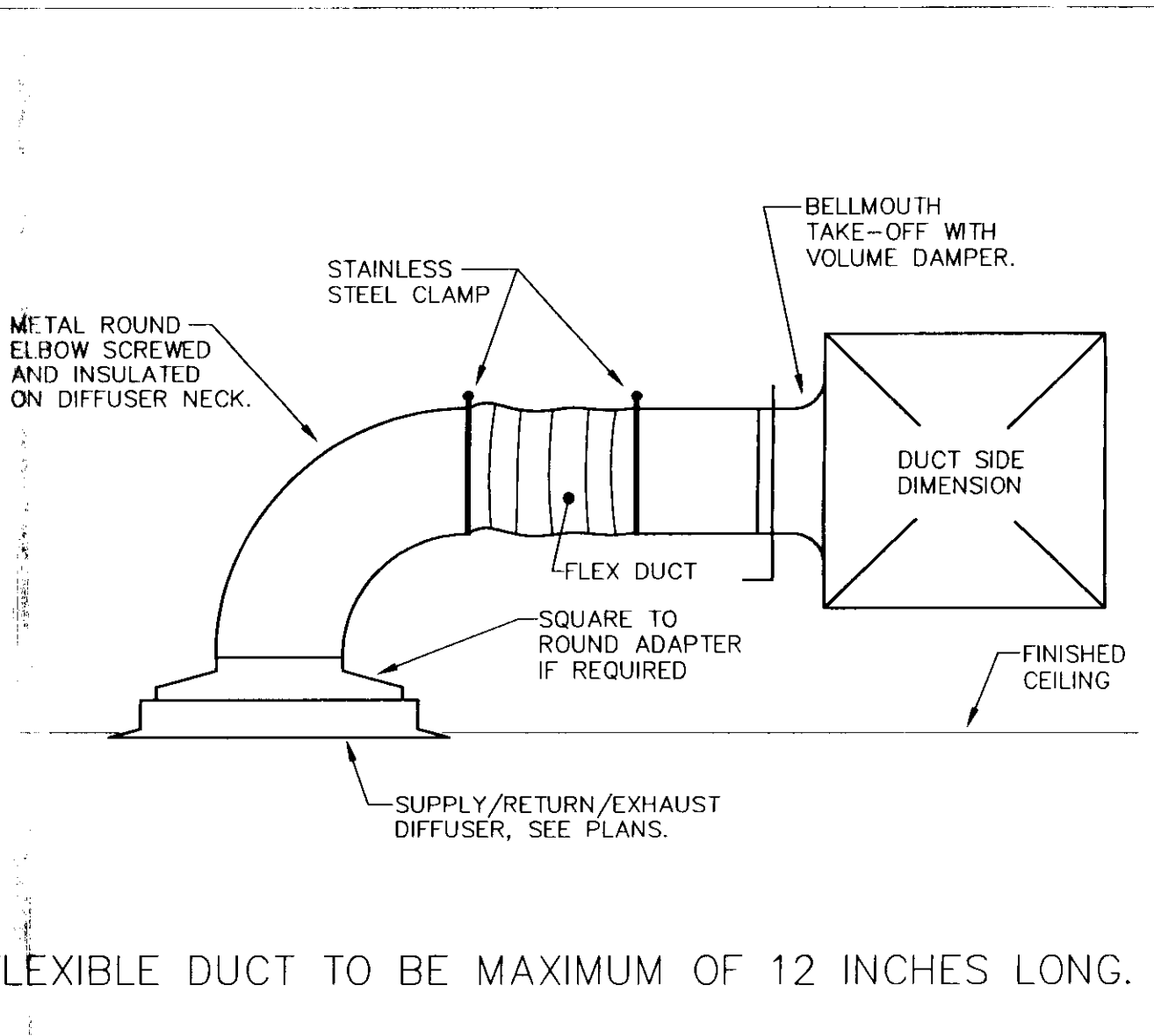
4 TYPICAL RETURN REGISTER DUCT CONNECTION DETAIL
M3 No Scale



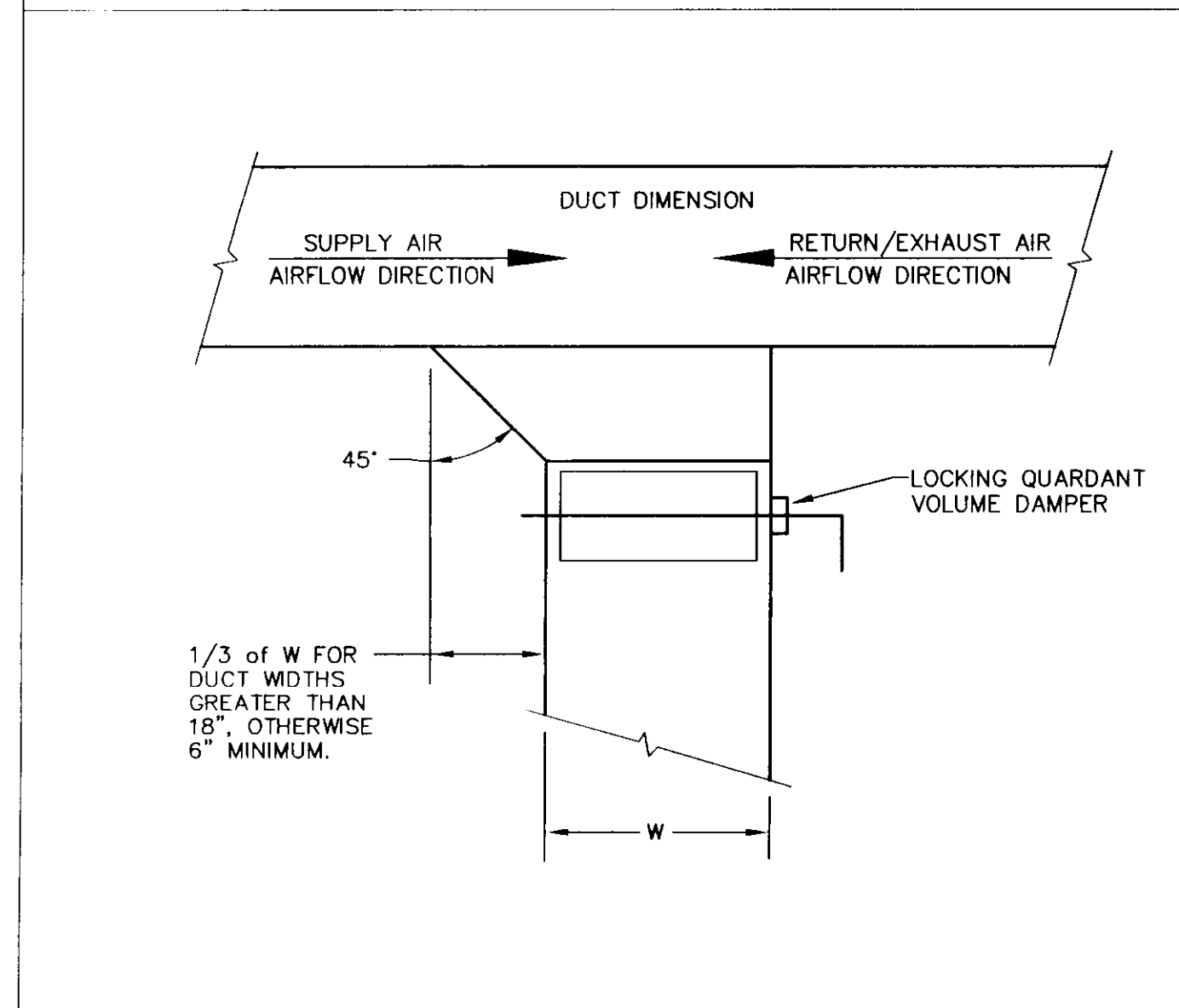
1 TYPICAL RETURN REGISTER DUCT CONNECTION DETAIL
M3 No Scale



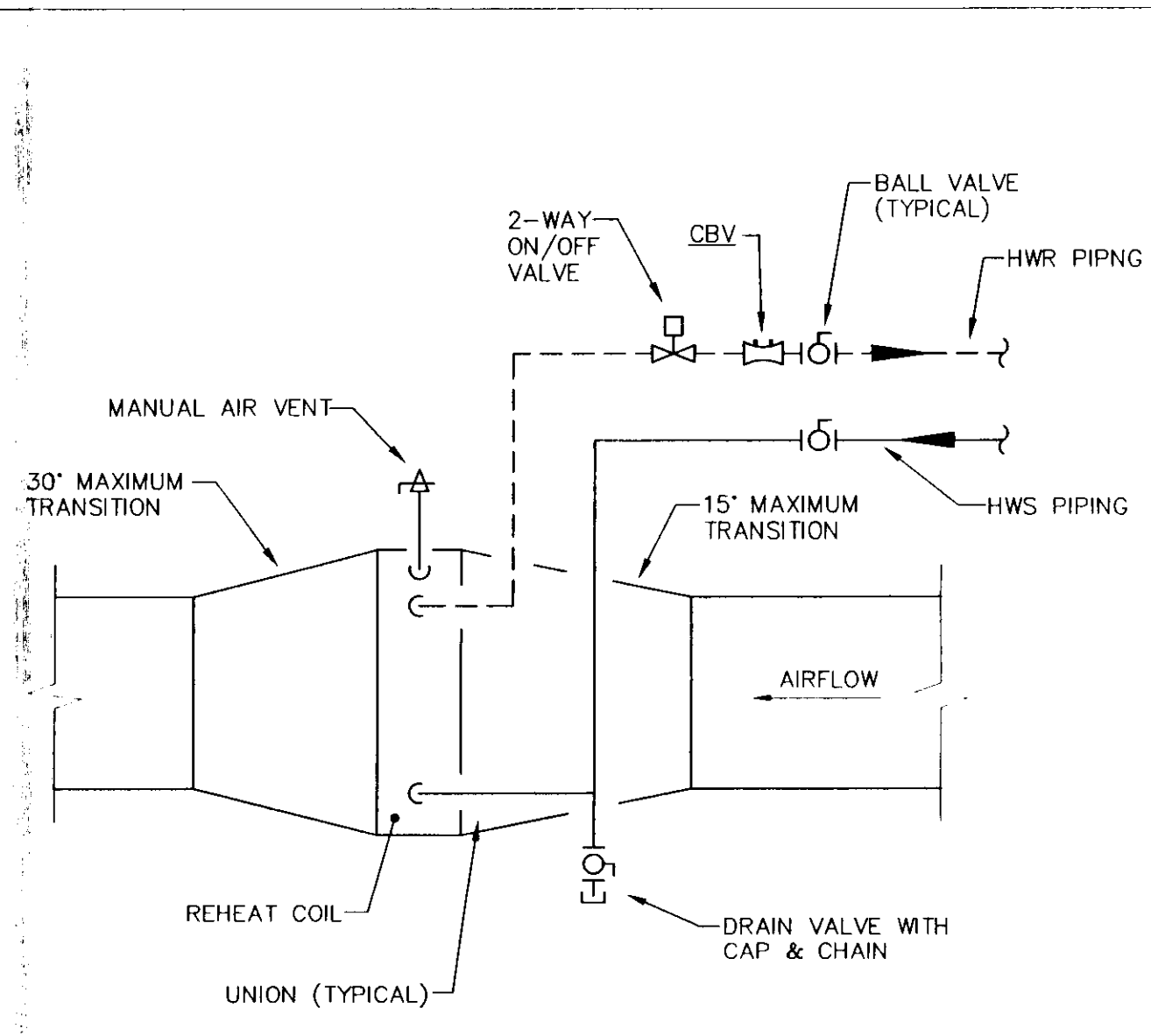
5 TYPICAL BBR-1 BASEBOARD PIPING DETAIL
M3 No Scale



2 TYPICAL DIFFUSER CONNECTION DETAIL
M3 No Scale



6 DUCT BRANCH CONNECTION DETAIL
M3



3 HOT WATER REHEAT COIL (RC-) PIPING DETAIL
M3

| MECHANICAL EQUIPMENT SCHEDULE | |
|-------------------------------|---|
| ITEM | DESCRIPTION |
| BBR-E | EXISTING BASEBOARD RADIATOR TO REMAIN. FINS TO BE CLEANED. |
| BBR-1 | BASEBOARD RADIATOR, 960 BTUH / FT @ 180°F EWT, 4 GPM, 65°F EAT, RITLING MODEL No. FSOD-3/4C-32. 3-1/4"x3-1/4" FINS, 1 ROW, UNIT HEIGHT 20" HIGH, 14 GAUGE ENCLOSURE. |
| MAU-1 | MAKE-UP AIR UNIT. LP GAS DIRECT FIRED, 80°F TEMP RISE, MINIMUM TURNDOWN 25:1, MOTORIZED DAMPER, 2" FILTERS, REMOTE OPERATING PANEL WITH SUMMER/OFF/WINTER, HOOD CENTER 24x12 EXHAUST, BLOWER ON/ALARM, DIRTY FILTER INDICATOR, ROOM SENSOR WEATHERHOOD, 14" HIGH ROOF CURB AND SUPPLEMENTAL CURB, 3500 CFM (0.94 TOTAL SP), 291.1 MBH, DIRECT FIRED, INLET DAMPER, CONTROL CENTER W/DISCONNECTS AND MOTOR STARTERS, WEATHERHOOD WITH BIRDSCREEN, CONVENIENCE OUTLET, 2HP MOTOR, 208/1/60, GREENHECK MODEL No. KSU-110-H20; OR APPROVED EQUAL. |
| SA | SOUND ATTENUATOR: IAC, MODEL No. 3S-24-18; OR APPROVED EQUAL. SIZED AT +1000 FPM AND IN THE 3rd OCTAVE BAND TO HAVE A REDUCTION OF 16. |
| KITCHEN HOOD | KITCHEN HOOD-13'-6" FT x 3'-6" FT x 24 IN DEEP, GREENHECK MODEL No. GHEW, 18 GAUGE, TYPE 304 SS. ACCESSORIES TO BE FILTER HOUSING, 3 VAPOR PROOF UL LISTED LIGHT FIXTURES PREWIRED TO JUNCTION BOX. COMPLY WITH NFPA 96, 1 EXHAUST DUCT COLLAR - 24x12, FIRE SUPPRESSION SYSTEM. ALUMINUM FILTERS AND GREASE CUP. |
| RC-1 | REHEAT COIL: 1300 CFM, 49,340 BTU/HR @ 180°F EWT, 150°F LWT, 3.3 GPM, 1.1 WPD(PSIG), 40°F EAT, 75°F LAT, TRANE MODEL TT, 0.05 APD, 92 FPF, 1 ROWS, 433.3 FT/MIN., 24x18 COIL SIZE. |
| RC-2 | REHEAT COIL: 1200 CFM, 47,060 BTU/HR @ 180°F EWT, 150°F LWT, 3.1 GPM, 1.1 WPD(PSIG), 40°F EAT, 75°F LAT, TRANE MODEL TT, 0.03 APD, 80 FPF, 1 ROWS, 320.0 FT/MIN., 30x18 COIL SIZE. |
| RC-3 | REHEAT COIL: 1000 CFM, 37,960 BTU/HR @ 180°F EWT, 150°F LWT, 2.5 GPM, 1.5 WPD(PSIG), 40°F EAT, 75°F LAT, TRANE MODEL TT, 0.09 APD, 107 FPF, 1 ROWS, 571.4 FT/MIN., 18x14 COIL SIZE. |
| RC-4 | REHEAT COIL: 1500 CFM, 56,940 BTU/HR @ 180°F EWT, 150°F LWT, 3.8 GPM, 1.4 WPD(PSIG), 40°F EAT, 75°F LAT, TRANE MODEL TT, 0.07 APD, 100 FPF, 1 ROWS, 500.0 FT/MIN., 24x18 COIL SIZE. |

| DIFFUSERS & REGISTERS SCHEDULE | |
|--------------------------------|---|
| ITEM | DESCRIPTION |
| SD-1 | SUPPLY DIFFUSER: METAL-AIRE, SERIES 5000-6-IV-SPFN, 4-WAY BLOW, 18x18 NECK SIZE, SQUARE TO ROUND ADAPTER, COLOR: OFF-WHITE, ALUMINUM, T-BAR MOUNT (24x24), INDUCTION VANE CORE. |
| SD-2 | SUPPLY DIFFUSER: METAL-AIRE, SERIES 5000-6-IV-SPFN, 2-WAY BLOW, 18x18 NECK SIZE, SQUARE TO ROUND ADAPTER, COLOR: OFF-WHITE, ALUMINUM, T-BAR MOUNT (24x24), INDUCTION VANE CORE. |
| SD-3 | SUPPLY DIFFUSER: METAL-AIRE, SERIES 5000-6-IV-SPFN, 3-WAY BLOW, 18x18 NECK SIZE, SQUARE TO ROUND ADAPTER, COLOR: OFF-WHITE, ALUMINUM, T-BAR MOUNT (24x24), INDUCTION VANE CORE. |
| SD-4 | SUPPLY DIFFUSER: THERMA-FUSER MODEL No. TF-HC, 4-WAY BLOW, 10" NECK SIZE, 24x24 SQUARE DIFFUSER, COLOR: OFF-WHITE, ALUMINUM, T-BAR MOUNT. |
| RR-1 | RETURN AIR REGISTER: METAL-AIRE, SERIES H4002RD-45', 24x14 NECK SIZE, SET BLADES TOWARDS CEILING, COLOR: OFF-WHITE, ALUMINUM, WITH OPPOSED BLADE DAMPER. |
| RR-2 | RETURN AIR REGISTER: METAL-AIRE MODEL No. CC5, NECK SIZE AS NOTED ON DRAWINGS, COLOR: OFF-WHITE, ALUMINUM, T-BAR MOUNT, WITH OPPOSED BLADE DAMPER. |
| ER-1 | EXHAUST AIR REGISTER: METAL-AIRE MODEL No. CC5, 11x11 NECK SIZE WITH SQUARE TO ROUND ADAPTER, COLOR: OFF-WHITE, ALUMINUM, T-BAR MOUNT, WITH OPPOSED BLADE DAMPER. |
| ER-2 | EXHAUST AIR REGISTER: METAL-AIRE MODEL No. CC5, 22x22 NECK SIZE WITH SQUARE TO ROUND ADAPTER, COLOR: OFF-WHITE, ALUMINUM, T-BAR MOUNT, WITH OPPOSED BLADE DAMPER. |

* INDICATES TO PAINT THE DUCTWORK BEHIND DIFFUSERS/REGISTERS WITH TWO COATS OF FLAT BLACK PAINT.

| EXHAUST FAN SCHEDULE | | | | | | | | | | | |
|----------------------|----------|---------|-----------|----------|---------|----------|---------------|--------------|-------------|---|---------|
| TAG | UNIT CFM | TYPE | FAN MOTOR | | | | MOTOR STARTER | DESIGN BASIS | | | REMARKS |
| | | | ESP | MOTOR HP | MAX RPM | VOLTAGE | CUTLER HAMMER | MANUFACTURER | MODEL No. | | |
| EF-1 | 3500 | UPBLAST | 1.50 | 1.5 | 1725 | 208/1/60 | PART OF MAU-1 | GREENHECK | CUBE-180-15 | 1 | |
| EF-2 | 700 | UPBLAST | 0.25 | 1/4 | 800 | 120/1/60 | ECN022 | GREENHECK | CUBE-130 | 2 | |

- ACCESSORIES TO INCLUDE: 12" HIGH ROOF CURB, INTEGRAL FACTORY MOUNTED DISCONNECT SWITCH, BIRDSCREEN, GREASE TRAP W/ DRAIN CONNECTION, BEARINGS WITH GREASE FITTINGS, HEAT BAFFLE AND VENTED CURB EXTENSION OF HEIGHT AS REQUIRED FOR TOP OF FAN DISCHARGE TO BE 40" ABOVE THE ROOF LEVEL.
- ACCESSORIES TO INCLUDE: BACKDRAFT DAMPER, INTEGRAL FACTORY MOUNTED DISCONNECT SWITCH AND BIRDSCREEN.

| ROOF TOP UNIT SCHEDULE | | | | | | | | | | | | | | |
|------------------------|----------|-------------|------|-----------|---------|--------------|---------------|------------------|------------------|-----------|-----------|--------------|-----------|---------|
| TAG | UNIT CFM | MIN. OA CFM | ESP | FAN MOTOR | | | ELECTRICAL | | DX COOLING COIL | | | DESIGN BASIS | | REMARKS |
| | | | | MOTOR HP | MAX RPM | UNIT VOLTAGE | MOTOR STARTER | EAT (°F) (DB/WB) | LAT (°F) (DB/WB) | MBH TOTAL | MBH SENS. | MANUFACTURER | MODEL No. | |
| RTU-1 | 2500 | 250 | 1.25 | 2.0 | 1134 | 208/3ø/60 | INTERNAL | 95.0/67.0 | 55.0/55.0 | 75.0 | 53.7 | TRANE | TC0075C | 1 |
| RTU-2 | 2500 | 250 | 1.25 | 2.0 | 1134 | 208/3ø/60 | INTERNAL | 95.0/67.0 | 55.0/55.0 | 75.0 | 53.7 | TRANE | TC0075C | 2 |
| RTU-3 | 2500 | 250 | 0.75 | 2.0 | 1134 | 208/3ø/60 | INTERNAL | 95.0/67.0 | 55.0/55.0 | 75.0 | 53.7 | TRANE | TC0075C | 3 |

- ACCESSORIES TO INCLUDE: ECONOMIZER, 14" HIGH ROOF CURB, OVERSIZED MOTOR, LATCH DOORS, BAROMETRIC RELIEF DAMPERS AND DOUBLE WALL CONSTRUCTION.
- ACCESSORIES TO INCLUDE: ECONOMIZER, 14" HIGH ROOF CURB, OVERSIZED MOTOR, LATCH DOORS, BAROMETRIC RELIEF DAMPERS AND DOUBLE WALL CONSTRUCTION.
- ACCESSORIES TO INCLUDE: ECONOMIZER, 14" HIGH ROOF CURB, OVERSIZED MOTOR, LATCH DOORS, BAROMETRIC RELIEF DAMPERS AND DOUBLE WALL CONSTRUCTION.

STATE OF VERMONT
DEPARTMENT OF BUILDINGS and GENERAL SERVICES
AGENCY OF ADMINISTRATION
MONTPELIER, VERMONT

E. F. KNAPP AIRPORT TERMINAL
BERLIN, VERMONT

MECHANICAL RENOVATIONS

| | | | | |
|--------------------|------------------------|------------|---------------------|----------------|
| DATE: 7/21/2000 | SCALE: AS SHOWN | REVISIONS: | CAD FILE: KNAPP3 | DWG NO. M-3 |
| DRAWN BY: TJY | APPROVED BY: E.E.P. | | SHEET: 5 OF 8 | |

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