

**SPECIFICATIONS & NOTES:**

CONTRACTOR SHALL VISIT THE SITE TO DETERMINE PRE-EXISTING CONDITIONS AND ALL WORK NECESSARY. PRIOR TO BIDDING, VERIFY ALL MEASUREMENTS AND EXISTING CONDITIONS IN THE FIELD. GENERAL SCHEMATIC LAYOUT IS INDICATED; ALL OFFSETS, OBSTRUCTIONS, AND EXISTING CONFIGURATIONS AND CONSTRAINTS MUST BE FIELD-VERIFIED.

OBTAIN NECESSARY PERMITS AND PAY ASSOCIATED FEES.

COORDINATE ANY SERVICE DISRUPTIONS WITH THE OWNER.

INSTALL ALL COMPONENTS IN ACCORDANCE WITH MANUFACTURER RECOMMENDATIONS, ALL LOCAL CODES AND STANDARDS, AND UNUM PROVIDENT REQUIREMENTS.

DRAWINGS ARE DIAGRAMMATIC ONLY; FIELD-VERIFY ALL EXISTING CONDITIONS. COORDINATE INSTALLATIONS WITH OTHER TRADES.

THE INTENTION OF THESE CONTRACT DOCUMENTS IS TO CALL FOR FINISHED WORK, FULLY TESTED AND READY FOR OPERATION. ANY COMPONENTS OR LABOR NOT MENTIONED IN THE CONTRACT DOCUMENTS BUT REQUIRED FOR FUNCTIONING SYSTEMS SHALL BE PROVIDED. SHOULD THERE APPEAR TO BE ANY DISCREPANCIES OR QUESTIONS OF INTENT, THE CONTRACTOR SHALL REFER THE MATTER TO THE ARCHITECT FOR DECISION BEFORE START OF ANY RELATED WORK.

PERFORM WORK IN ACCORDANCE WITH LOCAL CODES.

SEAL ALL DUCT AND PIPE PENETRATIONS WITH FIRE SEALANT.

OBSERVE THE OWNER'S CLEANLINESS PROTOCOLS.

**METAL DUCTWORK**

GALVANIZED STEEL DUCTWORK: ASTM A653 GALVANIZED STEEL SHEET, LOCK-FORMING QUALITY AND 0.90 ZINC COATING. ALL DUCTWORK SHALL BE FURNISHED AND INSTALLED IN ACCORDANCE WITH SMACNA STANDARDS. CONSTRUCT DUCT SYSTEMS SO THAT LEAKAGE DOES NOT EXCEED ONE PERCENT OF THE TOTAL AIR QUANTITIES. SEAL ALL DUCT JOINTS WITH GASKETED CONNECTIONS, DUCTMATE, OR EQUAL.

DUCTWORK PRESSURE/SEAL CLASS:  
SUPPLY DUCTWORK UPSTREAM OF DUAL DUCT VAV TERMINAL UNITS:  
6 INCH/CLASS A,  
SUPPLY DUCTWORK DOWNSTREAM OF DUAL DUCT VAV TERMINAL UNITS:  
2 INCH/CLASS C.

INSULATE DUCTWORK WITH 1-1/2" F.G. BLANKET WITH VAPOR BARRIER JACKET EQUAL TO SCHULLER MIDDLE TYPE 75, ASTM C533, WITH FSK FACING.

PROVIDE VOLUME DAMPERS AT ALL BRANCH DUCTS.

**SPECIFICATIONS & NOTES: (CONT)**

**INSULATED FLEXIBLE DUCTS**  
ALUMINUM LAMINATE AND POLYESTER FILM WITH LATEX ADHESIVE SUPPORTED BY HELICALLY WOUND SPRING STEEL WIRE, FIBERGLASS INSULATION, POLYETHYLENE VAPOR BARRIER FILM, R-VALUE = 4.2, UL 181, CLASS 1, MAXIMUM LENGTH: 5 FEET.

**ACOUSTICAL DUCT/PLENUM LINER**

1-INCH THICK, BONDED GLASS FIBER FLEXIBLE BLANKET, 1.5 LBS./CUBIC FOOT DENSITY, 8000 FPM MAX. AIR VELOCITY, 250 DEG F MAX. OPERATING TEMPERATURE. LINER SHALL COMPLY WITH NFPA 90A/90B AND ASTM C 1071.

APPLY LINER AS PER MANUFACTURERS RECOMMENDATIONS UTILIZING ADHESIVE BONDING BETWEEN LINER AND SHEET METAL, AND METAL FASTENERS.

**DUAL DUCT VAV TERMINAL UNITS**

DESIGN IS BASED ON TTFS, PRESSURE INDEPENDENT, COMPLETE WITH SEPARATE INLET MULTI-POINT AIRFLOW SENSORS AND DAMPER ASSEMBLIES. THE TERMINAL CASING SHALL BE MINIMUM 20 GAUGE GALVANIZED STEEL, INTERNALLY LINED WITH NON-POROUS, FIBER-FREE SEALED LINER WHICH COMPLEES WITH UL 181 AND NFPA 255. DAMPERS OF HEAVY GAUGE STEEL.

HEATING AND COOLING INLETS SHALL HAVE SEPARATE DAMPER ASSEMBLIES FOR COMPLETE PRESSURE INDEPENDANT CONTROL OF EACH AIRSTREAM FOR VARIABLE OR CONSTANT VOLUME TOTAL DISCHARGE APPLICATION. TERMINALS WITH INLET DAMPERS MECHANICALLY INTERCONNECTED ARE NOT ACCEPTABLE. THE DAMPER SHALL BE HEAVY GAUGE STEEL WITH SOLID SHAFT ROTATING IN SELF-LUBRICATING BEARINGS.

UNIT SHALL INCLUDE A MIXER-ATTENUATOR SECTION AS AN INTEGRAL PART OF THE TERMINAL MINIMIZE DOWNSTREAM STRATIFICATION.

PROVIDE 24 VOLT CONTROL TRANSFORMER

**AUTOMATIC TEMPERATURE CONTROLS**

EXTEND THE EXISTING ANDOVER CONTROL SYSTEM TO SERVE THE RENOVATED AREA. ALL NEW CONTROLS SHALL BE ELECTRONIC/DDC.

PROVIDE COMPLETE CONTROLS FOR VAV TERMINAL UNITS

**SEQUENCE OF OPERATION**

ON A CALL FOR COOLING, COLD AIR DAMPER SHALL MODULATE OPEN TO SATISFY SPACE TEMPERATURE SET POINT OF 75 DEG F. (ADJ.).

ON A CALL FOR HEATING, HOLD AIR DAMPER SHALL MODULATE OPEN TO SATISFY SPACE TEMPERATURE SET POINT OF 72 DEG F. (ADJ.).

COOLING AND HEATING AIR DAMPERS SHALL MAINTAIN A MIXED MINIMUM AIR FLOW AS SCHEDULED ON DRAWINGS.

**TESTING, ADJUSTING, AND BALANCING (T-A-B)**

TEST, ADJUST, AND BALANCE EQUIPMENT AND DISTRIBUTION SYSTEMS IN ACCORDANCE WITH NEBB OR AABC PROCEDURAL STANDARDS. TESTS SHALL BE PERFORMED BY AND INDEPENDENT T-A-B AGENCY.

T-A-B ALL NEW AIR INLETS AND OUTLETS, INCLUDING DESIGN AND ACTUAL CFM.

T-A-B NEW DUAL DUCT VAV TERMINAL UNITS.

0	ISSUED FOR CONSTRUCTION	3-10-05
REV.	DESCRIPTION	DATE

**ISSUED FOR CONSTRUCTION**  
**3-10-05**

CURRENT ISSUE STATUS:		

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UnumProvident HO-1  
3rd FLOOR OFFICE RENOVATIONS  
PORTLAND, ME.  
PROJECT:

<b>SPECIFICATIONS AND NOTES</b>		
SHEET TITLE:		
SCALE: NOT TO SCALE	DATE: 3-10-05	
PROJECT MANAGER: JLH	GRAPHIC SCALE: 0" = 1"	
JOB CAP/DRAWN: CEB/CAH		
A/E OF RECORD: FWJ	SHEET No. M-002	
SMRT CAD FILE: M-002-05004		
PROJECT No. 05004		