

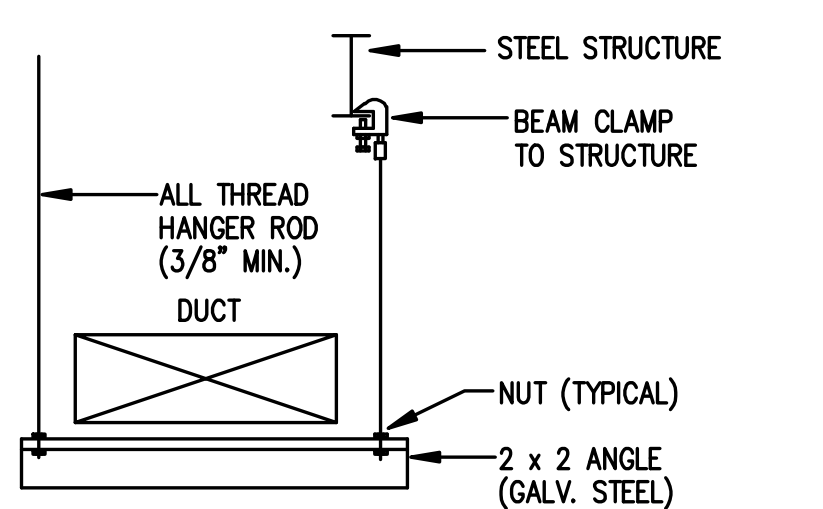
**HVAC GENERAL NOTES:**

- THESE DRAWINGS ARE DIAGRAMMATIC AND ARE PROVIDED TO CONVEY THE INTENT OF THE DESIGN. CONTRACTOR IS REQUIRED TO FIELD VERIFY THE EXISTING CONDITIONS AND SHALL CONSULT WITH THE ARCHITECT/ENGINEER OR HIS REPRESENTATIVE CONCERNING FIELD CONDITIONS THAT PRECLUDE THE CONSTRUCTION OF THESE PLANS. MODIFICATIONS DUE TO FIELD CONDITIONS SHALL BE MADE ONLY AFTER THE ARCHITECT/ENGINEER OR HIS REPRESENTATIVE HAS GIVEN HIS APPROVAL.
- ALL WORK SHALL COMPLY WITH THE 2007 FLORIDA MECHANICAL CODE WITH 2009 SUPPLEMENT.
- A. DUCT WORK IN BASEMENT FROM MAIN AHU:
  - SUPPLY AND RETURN AIR DUCTWORK SHALL BE FABRICATED OF GALVANIZED SHEET METAL. DUCTWORK SHALL BE LINED WITH JOHNS MANVILLE (OR EQUAL) PERMACOTE LINACOUSTIC HP 2" THICK 3LB. PER CU. FT. R=8.0 ANTI-MICROBIAL COATED FIBERGLASS DUCT LINER.
  - DUCTWORK SHALL BE INSTALLED AIR TIGHT AND NOISELESS. ALL DUCT SUPPORTS SHALL BE SO CONSTRUCTED TO TRANSMIT NO VIBRATIONS TO THE BUILDING STRUCTURE. SIZES INDICATED ARE INSIDE CLEAR DIMENSIONS. DUCTWORK ROUTING SHOWN IS DIAGRAMMATIC. ROUTE DUCTWORK AT RIGHT ANGLE TO BUILDING WALLS WITH SMOOTH TRANSITIONS.
- B. DUCT WORK AFTER FCU IN LUCERNE ROOM PRIVATE DINNING-B, 113A:
  - ALL NEW RECTANGULAR SUPPLY, RETURN AND RELIEF AIR DUCTWORK SHALL BE FOIL FACED FIBERGLASS DUCTBOARD. ALL DUCTWORK FABRICATION, INSTALLATION, AND SUPPORTS SHALL CONFORM TO SMACNA STANDARDS. ALL DUCTWORK SHALL BE 1" PRESSURE CLASS UNLESS NOTED OTHERWISE. DUCTWORK SHALL BE INSTALLED AIR TIGHT AND NOISELESS. ALL DUCT SUPPORTS SHALL BE SO CONSTRUCTED TO TRANSMIT NO VIBRATIONS TO THE BUILDING STRUCTURE. SIZES INDICATED ARE INSIDE CLEAR DIMENSIONS. DUCTWORK ROUTING SHOWN IS DIAGRAMMATIC. ROUTE DUCTWORK AT RIGHT ANGLE TO BUILDING WALLS WITH SMOOTH TRANSITIONS.
- C. DUCT WORK INSULATION:
  - ALL OUTSIDE AIR DUCTWORK SHALL BE GALVANIZED SHEET METAL, FABRICATED AND INSTALLED IN ACCORDANCE WITH SMACNA STANDARDS. INSULATE WITH 1-1/2" THICK FIBERGLASS DUCT BOARD.
  - ALL DUCTWORK JOINTS AND DUCT WRAP JOINTS SHALL BE SEALED USING FIBERGLASS MESH AND DUCT MASTIC. (DUCT TAPE NOT ALLOWED).
  - ALL FIBERGLASS DUCT SHALL BE MINIMUM 1-1/2" THICK WITH R=6.0 MINIMUM. FIBERGLASS DUCT MATERIALS AND INSTALLATION SHALL COMPLY WITH THE FLORIDA ENERGY CODE REQUIREMENTS.
- FLEXIBLE DUCTWORK SHALL BE METAL HELIX WITH SMOOTH POLYMER LINER MECHANICALLY LOCKED WITHOUT ADHESIVES. INSULATION SHALL BE FIBERGLASS (MINIMUM R=6.0) AND SHALL HAVE A FIRE RETARDANT REINFORCED ALUMINUM OUTER JACKET. ALL MATERIALS SHALL HAVE A DEVELOPED SMOKE RATING OF LESS THAN 50 AND A FLAME SPREAD RATING OF LESS THAN 25. THE SYSTEM SHALL MEET OR EXCEED U.L. 181 FOR CLASS 1 AIR DUCT. ALL DUCT SYSTEMS SHALL BE FABRICATED AND INSTALLED IN ACCORDANCE WITH THE APPLICABLE S.M.A.C.N.A. DUCT CONSTRUCTION STANDARDS. CHANGES OF DIRECTION SHALL MAINTAIN A RADIUS OF ONE DUCT DIAMETER (MINIMUM) ALONG THE CENTER LINE OF THE DUCT.
- PROVIDE ALL ELECTRICAL WORK REQUIRED TO PLACE THE NEW MECHANICAL SYSTEM IN OPERATION. ALL WORK SHALL BE IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE AND LOCAL CODE REQUIREMENTS. ELECTRICAL REQUIREMENTS INCLUDE MECHANICALLY RELATED CONTROL WIRING.
- PROVIDE TURNING VANES IN ALL CHANGES OF DIRECTION 77 DEGREES AND LARGER. PROVIDE DUCT SPLITTERS IN ALL BRANCH DUCT CONNECTIONS. SIZE THROAT AREA OF THE SPLITTERS IN PROPORTION TO THE DESIGN AIR FLOW RATES TO ACHIEVE EQUAL VELOCITY IN EACH LEG OF THE SPLITTER.
- DO NOT ROUTE DUCTWORK THRU ELECTRICAL EQUIPMENT SPACES. WHERE DUCTS PASS OVER ELECTRICAL EQUIPMENT, PROVIDE A DRIP PAN AND DRAIN LINE TO FLOOR OR GUIDE IN A CONSPICUOUS LOCATION.
- AIR DISTRIBUTION TO BE PROVIDED AND INSTALLED BY THE CONTRACTOR. AIR INLETS AND OUTLETS: PROVIDE DIFFUSERS, GRILLES AND REGISTERS AS INDICATED SIZED TO PROVIDE NOISELESS OPERATION AND PAINTED WITH THE MANUFACTURER'S STANDARD ENAMEL PAINT. COLOR AS INDICATED OR AS SELECTED BY ARCHITECT. BORDERS, FLANGES AND HARDWARE SHALL BE PROVIDED TO SUIT THE TYPE OF CEILING FOR THE SPECIFIC INSTALLATION. PROVIDE FLANGED BORDERS FOR SURFACE MOUNTING ON HARD CEILINGS SUCH AS PLASTER, DRYWALL AND THE LIKE.

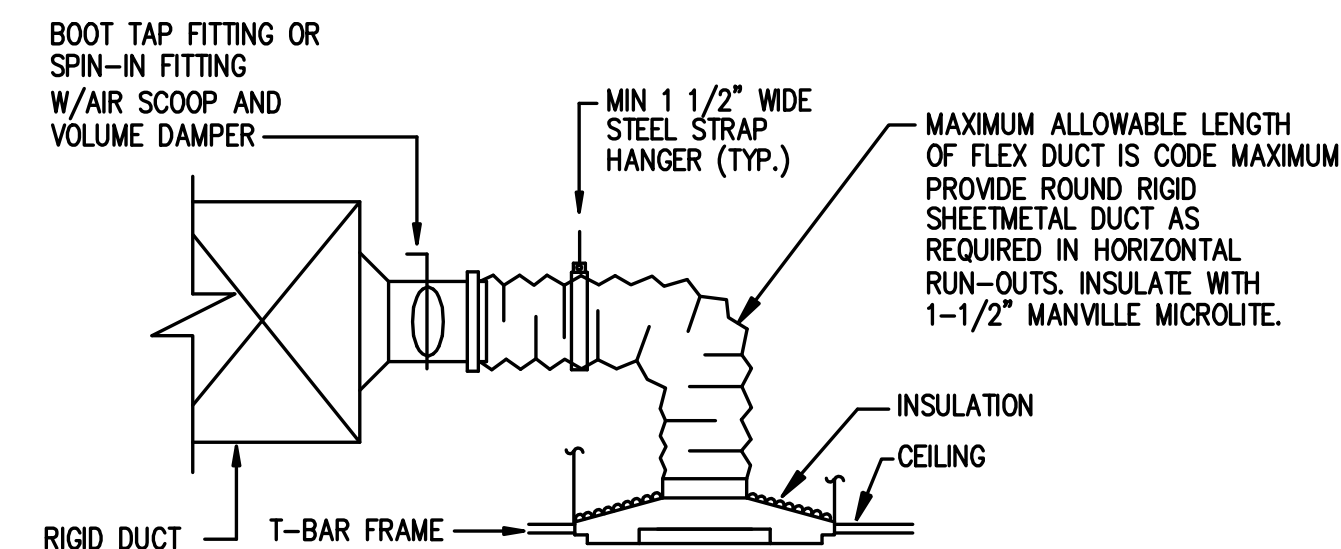
- INSULATE ALL OUTSIDE AIR DUCTWORK WITH MINIMUM 2" THICK, 1.5 LB DENSITY, FIBERGLASS DUCT WRAP INSULATION HAVING AN INSTALLED "R" VALUE OF 6.0 AND PROVIDED WITH FACTORY LAMINATED REINFORCED FOIL/KRAFT VAPOR RETARDER FACING. INSULATE BACKS OF ALL GRILLES AND REGISTERS.
- ALL HVAC SYSTEMS SHALL BE BALANCED TO THE AIR QUANTITIES SHOWN AGAINST THE ACTUAL STATIC PRESSURE REQUIREMENTS OF THE INSTALLED SYSTEMS. CONTRACTOR SHALL PROVIDE POSITIVE MEANS FOR BALANCING EACH INDIVIDUAL AIR OUTLET AND INLET. A CERTIFIED TEST AND BALANCE OF ALL SYSTEMS (AS REQUIRED BY THE FLORIDA ENERGY CODE) SHALL BE PERFORMED BY AN INDEPENDENT CERTIFIED TEST AND BALANCE CONTRACTOR AND SHALL BE SUBMITTED FOR REVIEW BY THE OWNERS REPRESENTATIVE.
- INSTALLATION OF HVAC EQUIPMENT SHALL COMPLY WITH THE MANUFACTURER'S SPECIFICATION AND CLEARANCE REQUIREMENTS.
- CHILLED WATER PIPING AT EXISTING FAN COIL UNIT SHALL BE EITHER BLACK STEEL PIPE OR TYPE L COPPER, (MATCH EXISTING PIPE). PIPING INSULATION SHALL BE NO LESS THAN 1/2" THICK ARMAFLEX PIPE INSULATION, INSULATION THICKNESS SHALL BE IN COMPLIANCE WITH THE FLORIDA ENERGY CODE.
- SEAL ALL PIPE PENETRATIONS THRU FIRE RATED WALLS USING "3M" FIRECAULK.

**AIR DISTRIBUTION SCHEDULE**

PLAN MARK	DESCRIPTION	MATERIAL	FINISH	MANUFACTURER & MODEL No.	NOTES
CD1	HIGH CAPACITY ADJUSTABLE LOUVERED FACE SUPPLY AIR DIFFUSER, FRAME TYPE 3, FULL FACE. ROUND NECK SIZE ON PLANS	ALUMINUM	WHITE	TITUS TMSA-AA	3
RG1 TG1	RETURN AIR GRILLE AND TRANSFER AIR GRILLE, BORDER TYPE 1, 1/2" CORE.	ALUMINUM	WHITE	TITUS 50 F	1,2,3
NOTES: 1. PROVIDE DUCT PLENUMS FOR RG AND TG ATTACHMENT AND PAINT INTERIOR OF DUCT PLENUM FLAT BLACK WHERE DUCT MATERIAL IS VISIBLE THRU GRILLE. 2. PROVIDE MOUNTING TO MATCH CEILING TYPE. PROVIDE 24"x24" MODULE FOR T-BAR LAYIN CEILING AND FLANGED SURFACE MOUNT FOR HARD CEILING. 3. UNLESS INDICATED OTHERWISE ON DRAWING SIZE OF GRILLE SHALL BE 22"x22"					



**TYPICAL RECTANGULAR DUCT SUPPORT**  
NO SCALE



**CEILING DIFFUSER AND FLEX INSTALLATION DETAIL**  
NO SCALE

Owner:  
WESTMINSTER  
COMMUNITIES  
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90 WEST LUCERNE CIRCLE  
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Project:  
WESTMINSTER  
TOWERS  
ORLANDO  
DINING ROOM AND  
SERVING AREA  
RENOVATION  
70 WEST LUCERNE  
ORLANDO, FL  
32801

**Scope Drawings:**  
These drawings indicate the general scope of the project in terms of architectural design concept, the dimensions of the building, the major architectural elements and the type of structural, mechanical and electrical systems.  
The drawings do not necessarily indicate or describe all work required for full performance and completion of the requirements of the contract.  
On the basis of the general scope indicated or described, the trade contractors shall furnish all items required for the proper execution and completion of the work.

**Drawing Title:**  
MECHANICAL  
NOTES,  
DETAILS &  
SCHEDULES

**Revisions:**


Issue Date	Drawn By	Checked By
05/14/10	J EIERMANN	K EIERMANN

**Certified By:**  
  
KENNETH L. EIERMANN P.E.  
FLA. REG. #30761

**Drawing Number:**  
M-2

**Project Number:**  
10023

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