

GENERAL MECHANICAL SPECIFICATIONS

SCOPE

THE WORK TO BE DONE UNDER THIS DIVISION OF THE SPECIFICATIONS INCLUDE THE FURNISHING OF ALL EQUIPMENT, SUPPLIES, LABOR, SUPERVISION AND ALL MATERIALS NOT SPECIALLY MENTIONED, READY FOR USE, PLUMBING, SPRINKLERS, HEATING, VENTILATION, AIR CONDITIONING EQUIPMENT AND ASSOCIATED ITEMS AND ALL TEMPERATURE CONTROL COMPONENTS. IT IS THE INTENTION OF THE SPECIFICATIONS AND DRAWINGS TO CALL FOR FINISHED WORK, TESTED AND READY FOR OPERATION.

IT IS THE INTENT THAT ALL MECHANICAL WORK AND MATERIALS NECESSARY TO COMPLETE THE ENTIRE PROJECT IN ACCORDANCE WITH THE CONTRACT PLANS AND SPECIFICATIONS, WHERE SPECIALLY MENTIONED HERE OR NOT, SHALL BE FURNISHED. ALL WORK AND MATERIALS NECESSARY TO FULFILL THIS INTENT SHALL BE SUPPLIED UNDER THE MECHANICAL SPECIFICATIONS WITHOUT ADDITIONAL COST TO THE OWNER.

CODES, RULES, PERMITS AND FEES

THIS CONTRACTOR SHALL GIVE ALL NECESSARY NOTICES, OBTAIN ALL PERMITS AND PAY ALL STATE AND LOCAL TAXES, FEES AND OTHER COSTS IN CONNECTION WITH HIS WORK; FILE ALL NECESSARY PLANS, PREPARE ALL DOCUMENTS AND OBTAIN ALL NECESSARY APPROVALS OF ALL STATE AND LOCAL DEPARTMENTS HAVING JURISDICTION; OBTAIN ALL REQUIRED CERTIFICATES OF INSPECTION FOR HIS WORK AND DELIVERY OF SAME TO THE OWNER BEFORE REQUEST FOR ACCEPTANCE AND FINAL PAYMENT FOR THE WORK.

THIS CONTRACTOR SHALL INCLUDE IN THE WORK, WITHOUT EXTRA COST TO THE OWNER, ANY LABOR, MATERIALS, SERVICES, APPARATUS, DRAWINGS (IN ADDITION TO CONTRACT DRAWINGS AND DOCUMENTS), IN ORDER TO COMPLY WITH ALL APPLICABLE LAWS, ORDINANCES, RULES AND REGULATIONS WHETHER OR NOT SHOWN ON THE DRAWINGS AND/OR SPECIFIED.

THIS CONTRACTOR SHALL PERFORM AND FILE ALL TESTS IN ACCORDANCE WITH CURRENT REGULATIONS OF THE STATE AND LOCAL AUTHORITIES. HE SHALL FURNISH AND INSTALL SIGNS REQUIRED BY THE STATE AND LOCAL AUTHORITIES.

ALL MATERIALS FURNISHED AND ALL WORK INSTALLED SHALL COMPLY WITH THE RULES AND RECOMMENDATIONS OF THE NATIONAL BOARD OF FIRE UNDERWRITERS, WITH ALL REQUIREMENTS OF LOCAL UTILITIES COMPANIES, WITH THE RECOMMENDATION OF THE FIRE INSURANCE RATING ORGANIZATION HAVING JURISDICTION. REGULATIONS ALL WORK SHALL BE DONE IN STRICT ACCORDANCE WITH THE STATE A OF CONNECTICUT BASIC BUILDING CODE, B.O.C.A., STATE FIRE SAFETY CODE, A.D.A., U.L., NEMA, O.S.H.A., INTERNATIONAL PLUMBING CODE AND NFPA, WITH ALL REQUIREMENTS OF ALL GOVERNMENTAL DEPARTMENTS HAVING JURISDICTION. REQUIREMENTS OF THE ABOVE SHALL TAKE PRECEDENCE OVER PLANS AND SPECIFICATIONS.

GUARANTEE AND SERVICE

THE CONTRACTOR SHALL GUARANTEE ALL MATERIALS AND WORKMANSHIP FOR A PERIOD OF ONE YEAR FROM THE DATE OF ACCEPTANCE OF THE INSTALLATION. IN ADDITION, THE CONTRACTOR SHALL PROVIDE, FREE OF CHARGE, ONE YEAR'S MAINTENANCE GUARANTEE OF MAINTAINED

SERVICE AND ADJUSTMENT OF ALL EQUIPMENT IN THIS CONTRACT.

DRAWINGS AND INTENT

DRAWINGS ARE INTENDED AS WORKING DRAWINGS FOR GENERAL LAYOUT OF THE VARIOUS ITEMS OF EQUIPMENT. HOWEVER, LAYOUT OF EQUIPMENT, ACCESSORIES, SPECIALTIES, AND PIPING SYSTEMS ARE DIAGRAMMATIC UNLESS SPECIALLY DIMENSIONED AND DO NOT NECESSARILY INDICATE EVERY REQUIRED PIPE, VALVE, FITTINGS, TRAP, ELBOW, TRANSITION, OFFSETS, JUNCTION OR PULLBOX, OR SIMILAR ITEMS REQUIRED FOR A COMPLETE INSTALLATION.

TEMPORARY SERVICES

PRIOR TO PERFORMING WORK REQUIRING INTERRUPTION OF EXISTING SERVICES, THE CONTRACTOR SHALL SECURE FROM THE OWNER, APPROVAL OF THE PROPOSED OPERATION.

WORK SHALL BE ARRANGED FOR CONTINUOUS PERFORMANCE WHENEVER POSSIBLE. THE MECHANICAL CONTRACTOR SHALL PROVIDE TEMPORARY SERVICES AND/OR CONNECTIONS WHERE REQUIRED AND/OR SCHEDULE AND PERFORM OVERTIME WORK FOR ANY OPERATION WHICH REQUIRED SHUTDOWN OF THE FACILITIES AT NO ADDITIONAL COST TO THE OWNER.

CONTINUITY OF EXISTING SYSTEM

MAINTAIN CONTINUITY OF THE EXISTING SOIL, WASTE, VENT, HOT AND COLD WATER SYSTEM TO THE AREAS NOT AFFECTED BY THIS ALTERATION.

RELATED WORK IN OTHER DIVISIONS

ALL ELECTRICAL WORK, SETTING OF ACCESS DOORS IN HUNG CEILINGS, WALL AND FURRED SPACES, FINISHED PAINTING OF PIPING AND EQUIPMENT, CUTTING AND PATCHING, CONCRETE WORK.

THIS CONTRACTOR SHALL FURNISH THE GENERAL CONTRACTOR WITH THE SIZES AND LOCATIONS OF CHASES AND OPENINGS WHICH OCCUR IN WALLS, PARTITIONS, FLOORS, ETC., REQUIRED FOR THE INSTALLATION OF THE WORK CALLED FOR UNDER THIS CONTRACT. WILL BE DONE BY THE GENERAL CONTRACTOR, EXCEPT CUTTING REQUIRED FOR THE INSTALLATION OF HANGERS.

MEASUREMENTS

ALL MEASUREMENTS TAKEN AT THE BUILDING SHALL TAKE PRECEDENCE OVER SCALE DIMENSIONS. EVERY PART OF THE PLANS SHALL BE FITTED TO THE ACTUAL CONDITIONS AT THE BUILDING. IF IN CONFLICT WITH SCALE DIMENSION, CONTACT ARCHITECT FOR CLARIFICATION.

PROTECTION OF FIXTURES, MATERIALS AND EQUIPMENT

CLOSE PIPE OPENINGS WITH CAPS OR PLUGS DURING INSTALLATION. TIGHTLY COVER AND PROTECT FIXTURES AND EQUIPMENT AGAINST DIRT, WATER AND CHEMICAL OR MECHANICAL INJURY. AT COMPLETION OF ALL WORK, FIXTURES, EXPOSED MATERIALS AND EQUIPMENT SHALL BE THOROUGHLY CLEANED.

DEMOLITION

CONTRACTOR SHALL FURNISH ALL LABOR, MATERIALS, EQUIPMENT, ETC., REQUIRED TO COMPLETE ALL DEMOLITION WORK NECESSARY FOR THE FULL COMPLETION OF THIS CONTRACT. PROTECT ALL PARTS AND EQUIPMENT THAT ARE TO REMAIN. ASSUME FULL RESPONSIBILITY FOR DAMAGE.

ALL ITEMS BEING REMOVED SHALL REMAIN THE PROPERTY OF THE OWNER UNLESS OTHERWISE INDICATED BY HIM. EQUIPMENT AND DEVICES THE OWNER DOES NOT WISH TO RETAIN SHALL BECOME THE PROPERTY OF THIS CONTRACTOR AND REMOVED FROM THE SITE. ALL MATERIALS CHOSEN TO BE RETAINED BY THE OWNER SHALL BE DELIVERED BY THE CONTRACTOR TO SUCH POINT AS DESIGNATED BY THE OWNER.

EXAMINATION OF PREMISES-SPECIAL NOTE

NO CONSIDERATION OR ALLOWANCE WILL BE GRANTED FOR FAILURE TO VISIT SITE, OR FOR ANY ALLEGED MISUNDERSTANDING OF MATERIALS TO BE FURNISHED, OR WORK TO BE DONE; IT BEING THAT TENDER OF PROPOSAL INDICATED WITH ITS AGREEMENT TO ITEMS AND CONDITIONS REFERRED TO HEREIN OR INDICATED ON AFOREMENTIONED DRAWINGS.

SCAFFOLDING, RIGGING AND HOISTING

UNLESS OTHERWISE SPECIFIED, CONTRACTOR SHALL FURNISH ALL SCAFFOLDING, RIGGING, HOISTING AND SERVICES NECESSARY FOR ERECTION AND DELIVERY INTO THE PREMISES OF ANY EQUIPMENT AND APPARATUS FURNISHED. REMOVE SAME FROM THE PREMISES WHEN NO LONGER REQUIRED.

HOUSEKEEPING

THIS CONTRACTOR SHALL BE RESPONSIBLE FOR KEEPING STOCK OF MATERIALS AND EQUIPMENT STORED ON PREMISES IN A NEAT AND ORDERLY MANNER AND, AT ALL TIMES, KEEP THE PREMISES FREE FROM ACCUMULATION OF WASTE MATERIAL OR RUBBISH CAUSED BY HIS EMPLOYEES AT WORK. HE SHALL REMOVE HIS RUBBISH AND SURPLUS MATERIALS FROM THE JOB SITE AND SHALL LEAVE THE PREMISES AND HIS WORK IN A CLEAN AND PERFECT CONDITION.

QUIET OPERATION

ALL WORK SHALL OPERATE UNDER ALL CONDITIONS OF LOAD WITHOUT ANY SOUND OR VIBRATION WHICH IS OBJECTIONABLE IN THE OPINION OF THE ENGINEER. IN CASE OF MOVING MACHINERY, SOUND OR VIBRATION NOTICEABLE OUTSIDE OF ROOM IN WHICH IT IS INSTALLED, OR ANNOYING INSIDE ITS OWN ROOM, WILL BE CONSIDERED OBJECTIONABLE BY THE ENGINEER AND SHALL BE REMEDIED IN APPROVED MANNER BY CONTRACTOR AT HIS EXPENSE.

SHOP DRAWINGS

PRIOR TO DELIVERY TO JOB SITE, BUT SUFFICIENTLY IN ADVANCE OF REQUIREMENTS NECESSARY TO ALLOW ENGINEER AMPLE TIME FOR REVIEW, CONTRACTOR SHALL SUBMIT FOR APPROVAL, SEVEN (7) COPIES EACH OF SHOP DRAWINGS OF ALL EQUIPMENT. ALSO, SHEET METAL FABRICATION DRAWINGS DRAWN TO A SCALE OF 1/4" TO THE FOOT OR LARGER.

ADJACENT OCCUPIED SPACES

WORK IN ADJACENT OCCUPIED SPACES SHALL NOT BE SCHEDULED DURING NORMAL WORK HOURS.

EQUIPMENT DEVIATION

THE PLANS AND/OR SPECIFICATIONS INDICATE THE NAME, MODEL NUMBER OR TYPE OF EQUIPMENT OR MATERIALS SPECIFIED. SHOULD THE BIDDER DESIRE TO USE EQUIPMENT OR MATERIALS OR A MAKE OTHER THAN THOSE SPECIFIED OR SHOWN, HE SHALL ATTACH A RIDER TO THE BID FORM LISTING THE DEDUCTIONS AND/OR ADDITIONS TO HIS BASE BID, TOGETHER WITH THE MANUFACTURER'S NAME AND MODEL NUMBERS OF THE EQUIPMENT OR MATERIALS HE PROPOSED TO FURNISH AS "SUBSTITUTES". IF NO SUBSTITUTE INFORMATION IS FURNISHED, IN FULL ACCORDANCE WITH THE PLANS AND/OR SPECIFICATIONS.

RECORD DRAWINGS

CONTRACTOR SHALL KEEP ACCURATE RECORD OF ALL DEVIATIONS IN WORK AS ACTUALLY INSTALLED FROM WORK INDICATED PAYING PARTICULAR ATTENTION TO DIMENSIONING OUTSIDE UNDERGROUND UTILITY LINES, THEIR OFFSETS AND VALUES.

OWNER'S INSTRUCTIONS AND SYSTEM OPERATION

AT THE TIME OF THE JOB'S ACCEPTANCE BY OWNER, CONTRACTOR SHALL FURNISH ONE COMPLETE SET OF APPROVED CERTIFIED DRAWINGS TO THE OWNER. IN ADDITION, CONTRACTOR SHALL FURNISH MAINTENANCE AND OPERATING INSTRUCTIONS FOR ALLEQUIPMENT. THESE INSTRUCTIONS SHALL BE WRITTEN IN LAYMAN'S LANGUAGE AND SHALL BE INSERTED IN A VINYL-COVERED THREE-RING LOOSE LEAF BINDER. THIS BINDER SHALL FIRST BE APPROVED BY THE ENGINEER OF RECORD.

HEATING - VENTING - AIR CONDITIONING SPECIFICATIONS

DEFINITION

"FURNISH" OR "PROVIDE"-TO FURNISH, ERECT, INSTALL AND CONNECT UP COMPLETE AND READY FOR OPERATION PARTICULAR WORK REFERRED TO, UNLESS SPECIFICALLY INDICATED OR SPECIFIED OTHER WISE.

"WORK"-LABOR, MATERIALS, EQUIPMENT, APPARATUS, CONTROLS, ACCESSORIES AND ALL OTHER ITEMS CUSTOMARILY FURNISHED AND/OR REQUIRED FOR PROPER AND COMPLETE INSTALLATION OF WORK.

"CONCEALED"-EMBEDDED IN MASONRY OR OTHER CONSTRUCTION, INSTALLED BEHIND WALL, FURRING, WITHIN DOUBLE PARTITION OR HUNG CEILINGS, IN TRENCHES OR IN CRAWL SPACES.

"EXPOSED"-NOT INSTALLED UNDERGROUND OR "CONCEALED" AS DEFINED ABOVE.

"INDICATED" OR "SHOWN"-AS INDICATED OR SHOWN ON DRAWINGS OR SPECIFIED WITH SPECIFICATIONS.

"PIPING"-PIPE, FITTING, FLANGES, VALVES, CONTROLS, HANGERS, TRAPS, DRAINS, INSULATION AND ITEMS CUSTOMARILY OR REQUIRED IN CONNECTION WITH OR RELATED TO SUCH PIPING.

"SUPPLY"-TO PURCHASE, PROCURE, ACQUIRE AND DELIVER COMPLETE WITH ALL RELATED ITEMS.

"INSTALL"-TO ERECT, MOUNT AND CONNECT UP COMPLETE WITH ALL RELATED ACCESSORIES.

"NOTED"-AS INDICATED ON DRAWINGS AND/OR SPECIFIED.

SLEEVES

PROVIDE NO. 22 USSG GALVANIZED IRON SLEEVES EXTENDED THROUGHOUT CONSTRUCTION IN CEILINGS, WALLS AND PARTITIONS. FOR INSULATE PIPING SIZED TO ALLOW INSULATION TO PASS THROUGH SLEEVE. PROVIDE 1/2 INCH SPACE BETWEEN PIPE AND/OR INSULATION AND SLEEVE, SEAL ALL SLEEVES IN ACCORDANCE WITH BUILDING CODE AND FIRE DEPARTMENT REQUIREMENTS.

EXPANSION ANCHORS

SUSPEND HANGERS FROM EXPANSION ANCHORS IN SOLID CONCRETE SLABS SIMILAR TO HILTI HDI OR FROM EXISTING STRUCTURAL STEEL WITH BEAM CLAMPS SIMILAR TO GRINNELL NO. 61, 87, 131 AND 225. PROVIDE HANGER IN PLACE WITH DOUBLE NUTS. PROVIDE PROTECTION SHIELDS ON INSULATED PIPING. INSTALL HANGERS OVER INSULATION AND SHIELDS.

WHERE OVERHEAD CONSTRUCTION DOES NOT PERMIT FASTENING HANGER RODS IN REQUIRED LOCATIONS, PROVIDE ADDITIONAL STEEL FRAMING AS REQUIRED AND REVIEWED.

DISSIMILAR METALS

PROVIDE BRASS OR COPPER WATER PIPING CONNECTED TO GALVANIZED PIPE AND FOR ANY OTHER DISSIMILAR METALS WITH DIELECTRIC FITTINGS.

WORK IN EXISTING BUILDING IN ORDER TO INSURE CONTINUOUS OPERATION OF PRESENT BUILDING, CONTRACTOR SHALL MAKE TEMPORARY PIPE CONNECTIONS BETWEEN NEW AND EXISTING WORK WITH TEMPORARY PIPING AND VALVES AS REQUIRED.

WHERE TEMPORARY SHUTDOWN OF VARIOUS SERVICES ARE UNAVOIDABLE, THEY SHALL BE MADE AT TIMES ACCEPTABLE TO THE INSTITUTION.

REMOVE VARIOUS DRAINS, VENTS, COLD WATER HOT WATER, PIPING, ETC. PIPING, FITTINGS VALVES, TRIM, ETC., THAT HAS BEEN REMOVED SHALL BE TURNED OVER TO THE OWNER FOR INSPECTION, AFTER WHICH SHALL BE REMOVED FROM THE PREMISES.

CONTRACTOR SHALL NOT INTERRUPT THE VARIOUS PLUMBING SYSTEMS WITHOUT PERMISSION OF THE OWNER. SUCH INTERRUPTIONS SHALL BE MADE ONLY AT THE TIME STATED. CONTRACTOR SHALL GIVE AMPLE TIME TO THE OWNER FOR ANY REQUIRED SHUTDOWN.

TEMPORARY PLUMBING WORK INCLUDING DRAINAGE, COLD WATER, ETC., AS REQUIRED.

DOMESTIC WATER PIPING AND GRAY WATER

ALL WATER PIPING WITHIN THE BUILDING SHALL BE TYPE "L" COPPER TUBING WITH SWEAT TYPE WROUGHT FITTINGS, AND ALL JOINTS SHALL BE MADE WITH 95-5 SOLDER OR STAY-SAFE BRIDGET LEAD-FREE SOLDER.

PROVIDE AIR CUSHIONS OR ZURN-SHOKTROL AT EACH GROUP OF FIXTURES AS INDICATED OR REQUIRED BY GOOD PRACTICE.

PROVIDE SECTION CUTOFF VALVES ON ALL MAIN BRANCHES.

PITCH AND VALVE ALL WATER PIPING FOR CONVENIENT DRAINAGE.

ALL PIPES SHALL BE REAMED TO FULL AREA BEFORE INSTALLATION AND BLOWN CLEAN OF CHIPS AND DIRT.

PIPING SHALL BE CONCEALED IN FURRED SPACE OF OCCUPIED AREAS OR CHASES WHEREVER CONSTRUCTION PERMITS. CONTRACTOR SHALL OBTAIN PERMISSION OF THE ARCHITECT TO RUN EXPOSED PIPES NOT SPECIFICALLY SHOWN ON THE DRAWINGS AS EXPOSED.

WHERE HORIZONTAL BRANCH PIPE MAINS, BRANCHES, OR RISERS ARE EXPOSED IN FINISHED AREAS, THEY SHALL BE FITTED WITH A TWO PIECE FLOOR AND CEILING PLATE HAVING A DULL SATIN CHROME PLATE FINISH.

INSULATION

INSULATE ALL HOT, RECIRC, HOT AND COLD WATER PIPING ABOVE GRADE WITH 1/2" THICK HEAVY DENSITY FIBERGLASS 25 ASJ WITH VAPOR BARRIER AND LAP ADHESIVE JACKET. INSULATION ON FITTINGS SHALL BE FIBERGLASS WITH PRE-MOLDED JACKET.

INTERIOR WATER VALVES

VALVES SHALL BE BRONZE BALL TYPE, JAMESBURY CLINCHER OR APOLLO 3 OR EQUAL.

DUCT INSTALLATION

SIZE AND APPROXIMATE LOCATION OF ALL DUCTS ARE SHOWN OF THE DRAWINGS. CHECK CAREFULLY WITH THE ARCHITECTURAL DRAWINGS AND DRAWINGS SHOWING WORK OF OTHER TRADES TO MAKE SURE THAT THERE WILL BE NO CONFLICT BETWEEN THESE TRADES AND THE DUCTS. DUCTS SHALL BE OFFSET AS REQUIRED TO CLEAR STRUCTURAL MEMBERS, AND, IF NECESSARY, TO ALTER DIMENSIONS OF THE DUCT. THIS MAY BE DONE PROVIDED THE CROSS-SECTIONAL AREA IS IN NO CASE REDUCED. MEDIUM PRESSURE DUCTWORK ALL DUCTWORK DOWNSTREAM POINT OF CONNECTION TO EXISTING TRUNK DUCT AND V.A.V. BOX SHALL BE MEDIUM PRESSURE. GAUGES, JOINTS, SEAMS, REINFORCEMENT, FITTINGS, SEALING, SUPPORTS AND OTHER DETAILS FOR RECTANGULAR, ROUND AND FLAT OVAL DUCT SHALL BE IN ACCORDANCE WITH SMACNA, HIGH PRESSURE DUCT CONSTRUCTION STANDARDS (HDPDS).

SHEET METAL DUCTWORK

ALL DUCTWORK DOWNSTREAM OF VAV BOX, UNLESS OTHERWISE NOTED SHALL BE CONSTRUCTED OF #1 QUALITY FIRST SHEETS OF GALVANIZED STEEL FREE OF CRACKS OR BLEMISHES. WHEN PITTSBURGING OR SNAP LOCKING A JOINT, THE GALVANIZED SHALL NOT BE CHIPPED OFF.

ALL PARTS OF THE SHEET METAL DUCT SYSTEM SHALL BE CONSTRUCTED AND INSTALLED IN STRICT ACCORDANCE WITH THE FIRST EDITION 1985 FOR PRESSURES 2 IN W.G. MAXIMUM STATIC PRESSURE AS OUTLINED AND DETAILED BY SMACNA, APRIL, 1986.

FLEXIBLE DUCT MAY BE USED TO CONNECT RIGID DUCTWORK TO SUPPLY DIFFUSERS. DUCT SHALL BE SMACNA FORM "M-1" INSULATED METALLIC. FLEXIBLE DUCT SHALL NOT EXCEED 3'-0" IN LENGTH. SEISMIC RESTRAINT FOR DUCTWORK PROVIDE REQUIRED BRACING MATERIAL. DUCTWORK SHALL BE SUPPORTED AND BRACED TO RESIST AL DIRECTIONAL (TRANSVERSE, LONGITUDINAL, AND VERTICAL) FORCES TO 10 PERCENT OF THE WEIGHT OF THE DUCT SYSTEM.

FLEXIBLE CONNECTIONS

SHALL BE 29 OZ. NEOPRENE COATED FIBERGLASS, 6" WIDE. BURNING PROPERTIES SHALL CONFORM TO NFPA 90A. FASTEN TO DUCTWORK PER MANUFACTURER'S RECOMMENDATIONS. FABRIC SHALL NOT BE STRESSED OTHER THAN BY AIR PRESSURE. ALLOW AT LEAST ONE INCH SLACK TO INSURE THAT NO VIBRATION IS TRANSMITTED.

VOLUME DAMPERS

SINGLE BLADE OR OPPOSED BLADE MULTI-LOUVERED TYPE AS DETAILED IN SMACNA STANDARDS, FIGURES 2-11 AND 2-12. PROVIDE END BEARING FOR ALL DAMPERS. CLADFRAM OR OTHER OPERATOR FOR EXTERNALLY INSULATED DUCT SHALL HAVE STAND-OFF MOUNT SO OPERATION IS CLEAR OF THE INSULATION. PROVIDE VOLUME DAMPER IN DUCTWORK FOR EACH SUPPLY DIFFUSER.

HOT WATER PIPING

HOT WATER SUPPLY AND RETURN PIPING SHALL BE TYPE L COPPER TUBING WITH SWEAT FITTINGS MADE UP WITH 95-5 SOLDER OR STANDARD WEIGHT, SCHEDULE 40, OPEN HEARTH STEEL. THROUGHOUT FOR STEEL PIPE. ALL FITTINGS SHALL BE OF THE BEST GRAY CAST IRON BY CRANE OR WALWORTH WITH TRUE CLEAN TAPERED THREADS FREE OF SAND HOLES OR OTHER DEFECTS. EXCEPT RADIANT SYSTEM.

PIPE SUPPORT

ALL PIPES SHALL BE SUPPORTED IN A GOOD, FIRM AND SUBSTANTIAL MANNER BY MEANS OF ADJUSTABLE, MALLEABLE IRON OR COPPER HANGERS OF APPROVED DESIGN.

HOT WATER VALVES

VALVES SHALL BE BALL TYPE, JAMESBURY CLINCHER OR APOLLO.

INSULATION

INSULATE ALL HOT WATER SUPPLY AND RETURN PIPING WITH 1" THICK HEAVY DENSITY FIBERGLASS 25 ASJ WITH VAPOR BARRIER AND LAP ADHESIVE JACKET. INSULATION ON FITTINGS SHALL BE FIBERGLASS WITH PRE-MOLDED JACKET.

TEST AND BALANCE

COMPLETELY TEST AND BALANCE ALL SUPPLY AND RETURN AIR SYSTEMS AND HOT WATER SYSTEMS AND PROVE THE CAPACITIES OF THE SYSTEM AND THE SYSTEM COMPONENTS. SUBMIT RESULTS TO ENGINEER FOR APPROVAL. ALSO, PROVIDE SINGLE LINE DRAWINGS OF SYSTEM WITH LOCATIONS AND CAPACITIES OF ALL DIFFUSERS AND EQUIPMENT.

TEMPERATURE CONTROLS

FURNISH ALL THE LABOR, MATERIAL, EQUIPMENT AND SUPERVISION REQUIRED TO RELOCATE AND TIE-IN TO THE EXISTING SYSTEM OF TEMPERATURE CONTROL. VERIFY THAT ALL VAV BOXES, ETC., RESPOND TO THE THERMOSTATS.

THE CONTROL SYSTEM SHALL INCLUDE ALL NECESSARY EQUIPMENT WHETHER OR NOT SPECIFICALLY MENTIONED.

THE CONTROL SYSTEM SHALL BE AS SELECTED BY OWNER AND SHALL BE COMPLETE IN ALL RESPECTS.

ALL 120 VAC POWER RUNOUTS FOR TEMPERATURE CONTROL SYSTEM AND FAN POWERED V.A.V. BOXES SHALL BE THE RESPONSIBILITY OF THIS CONTRACTOR. SQUARE SUPPLY DIFFUSERS REFER TO DRAWING SCHEDULES.

RETURN GRILLES

AS REQUIRED FOR A COMPLETE OPERATING SYSTEM.

DRAWING NO:

M - 1

DATE: 01-28-2009

SCALE: AS NOTED

JLG Designs, LLC

INTERIORS & BUILDING DESIGNS

Milford, Connecticut 06460

Phone: 203-876-2095

E-mail: jlg-design@juno.com

CT REGISTERED INTERIOR DESIGNER AND CT LICENSED BUILDING OFFICIAL

REVISIONS:

THIS DRAWING IS THE PROPERTY OF THE DESIGNER. IT IS TO BE USED ONLY FOR THE PROJECT AND SITE SPECIFICALLY IDENTIFIED HEREON. IT IS NOT TO BE REPRODUCED, COPIED, REPRODUCED, OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, WITHOUT THE WRITTEN CONSENT OF THE DESIGNER.

TOBIN RENOVATION

**79 BOTSFORD AVENUE
MILFORD, CONNECTICUT**