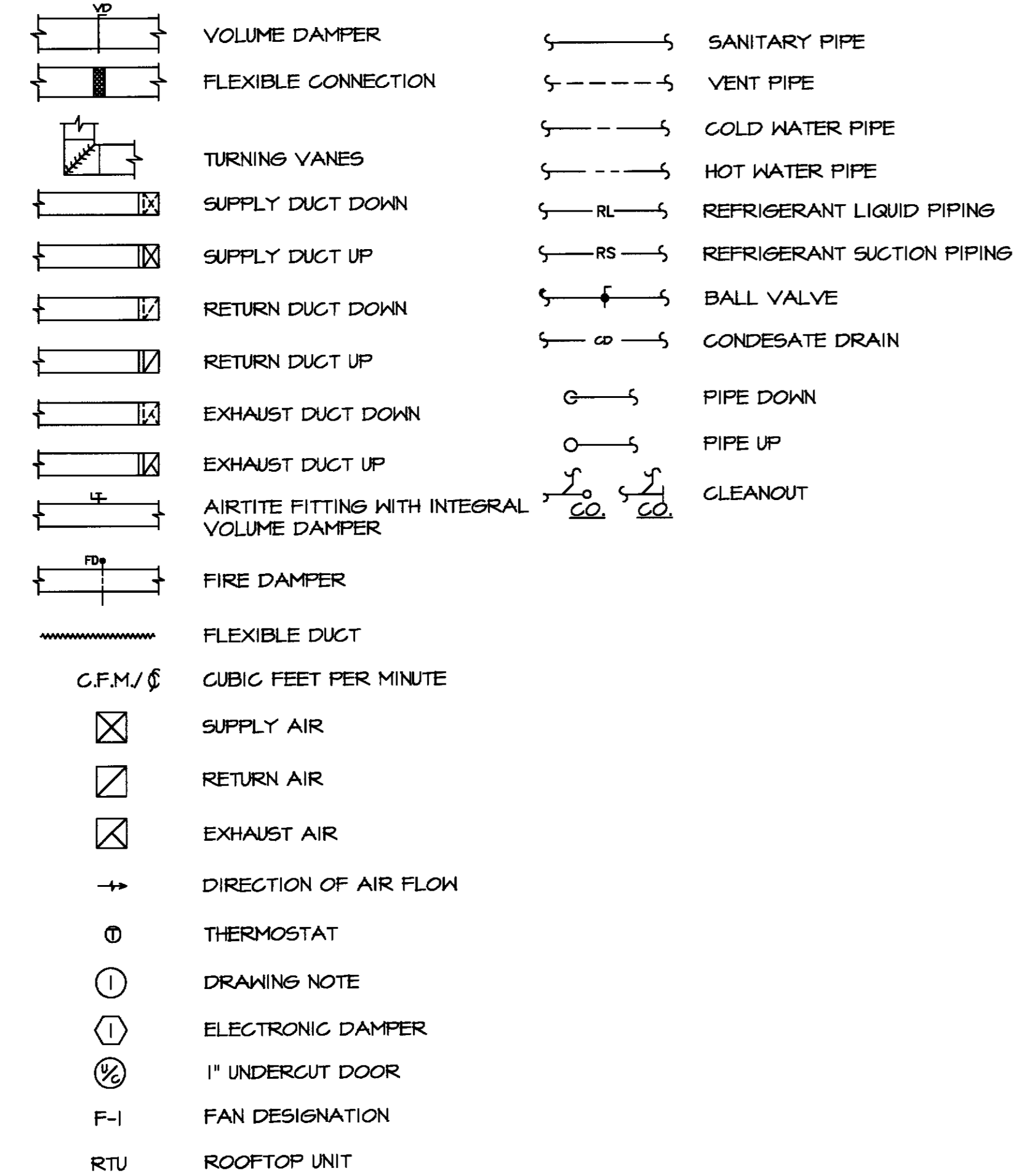
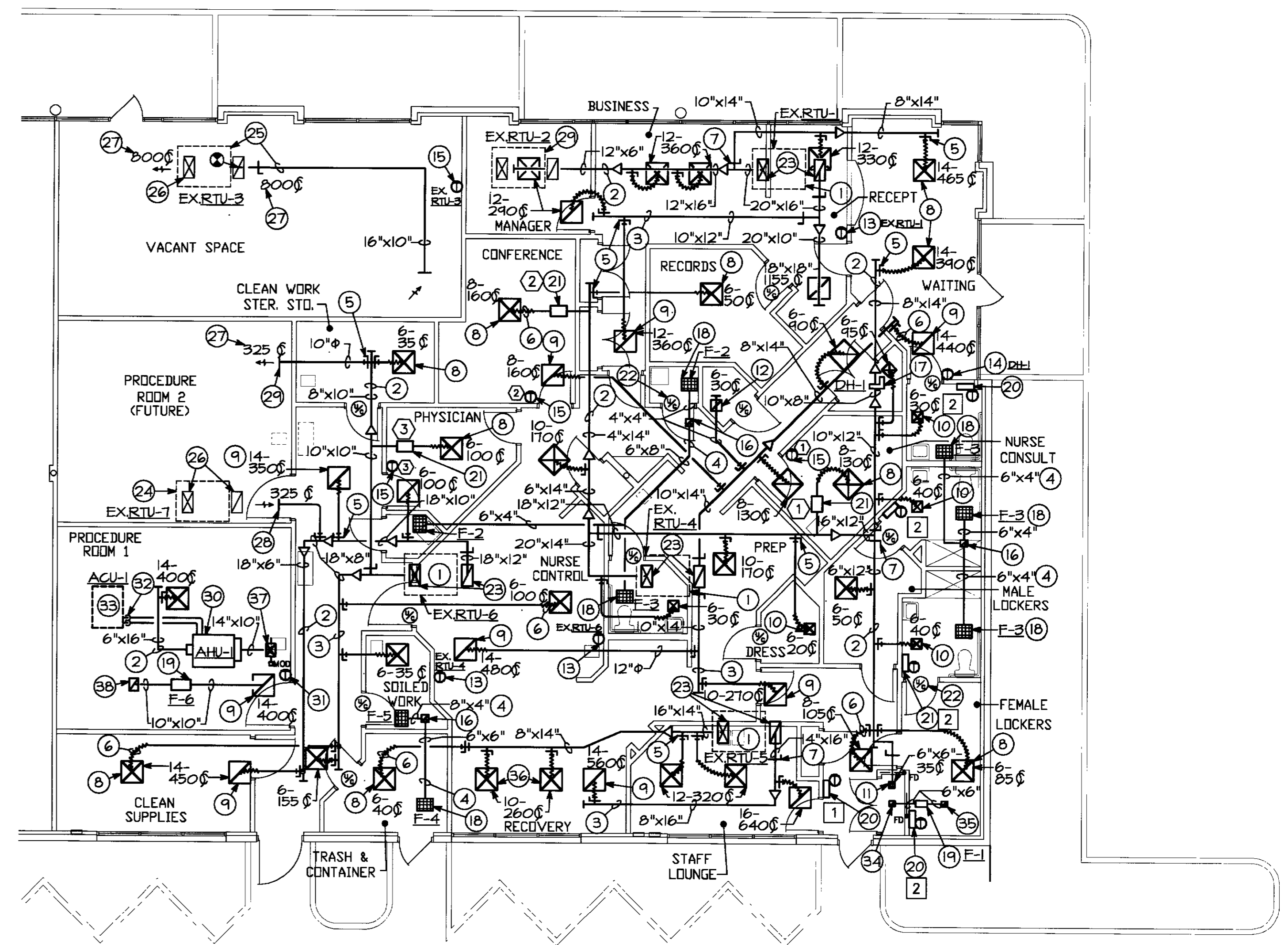


**SYMBOLS LEGEND**



**GENERAL NOTES:**

- 1) ALL ITEMS INDICATED BOLD SHALL BE CONSIDERED NEW UNLESS OTHERWISE NOTED.
- 2) CONTRACTOR SHALL ENSURE ALL DUCTWORK IS PROPERLY SEALED, PATCHED AND MADE AIRTIGHT WHERE ANY DEMOLITION AND NEW WORK IS DONE. (TYPICAL ALL DUCTWORK).
- 3) ALL EXISTING THERMOSTATS, BEING RELOCATED, TO BE RECALIBRATED.
- 4) COORDINATE ALL THERMOSTAT LOCATIONS WITH FINAL PARTITION/FURNITURE LAYOUT.
- 5) ANY ITEM NOT BEING REUSED SHALL BE TURNED OVER TO A BUILDING COORDINATOR FOR BUILDING STOCKPILE.
- 6) CONTRACTOR IS TO INSPECT EXISTING ROOFTOP EQUIPMENT SERVING THE REVISED TENANT LAYOUT AND CLEAN FILTERS, LUBRICATE MOTORS AND RECHARGE REFRIGERANT (AS NEEDED) TO OBTAIN MAXIMUM PERFORMANCE.
- 7) ALL MANUFACTURES SHALL BE EQUAL TO THOSE INDICATED.
- 8) ALL AIR DEVICES AND THERMOSTATS SHALL BE STOCKPILED FOR REUSE EXCEPT FOR PERFORATED RETURN AIR DEVICES. CONTRACTOR TO TURN OVER PERFORATED RETURN AIR DEVICES TO A BUILDING REPRESENTATIVE/OWNER FOR THEIR STOCKPILE.
- 9) CONTRACTOR TO FIELD VERIFY AND REMOVE EXISTING EXHAUST FANS, CONTROLS, DUCTWORK, ETC. WITHIN THE AREA OF WORK. CAP/SEAL ANY EXISTING EXHAUST DUCTWORK, WITHIN THE CEILING, TO THE OUTSIDE TO PREVENT THE MIGRATION OF UNTEMPERED OUTSIDE AIR AND RAIN.
- 10) CONTRACTOR TO FIELD INSPECT EXISTING ROOFTOP EQUIPMENT SERVING THE REVISED TENANT LAYOUT FOR PROPER OPERATION AND REPORT ANY COSTLY DEFICIENCIES TO THE OWNER.
- 11) ANY CUTTINGS OR PATCHING OF THE ROOF TO BE DONE BY THE OWNER'S ROOFING CONTRACTOR.
- 12) CONTRACTOR TO INSTALL/SIZE AND TRAP REFRIGERANT PIPING PER MANUFACTURER'S RECOMMENDATIONS.



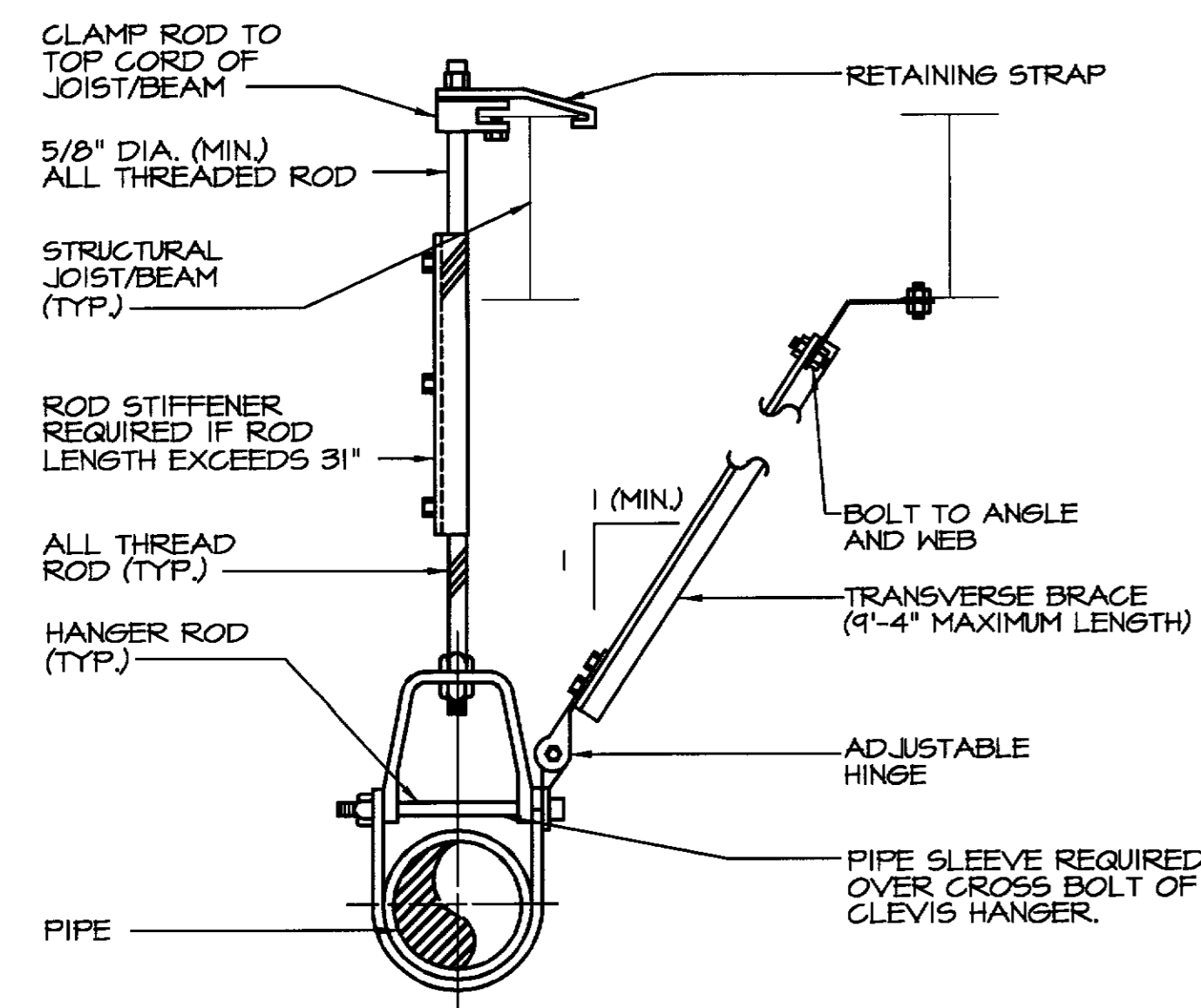
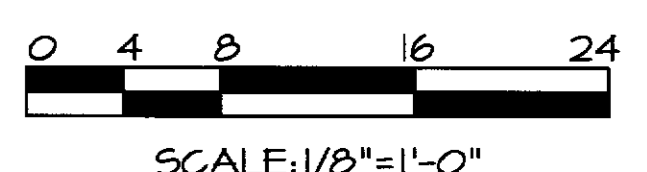
**FLOOR PLAN-EXISTING CONDITIONS/  
NEW WORK (HVAC)**  
SCALE: 1/8"=1'-0"

**NOTICE TO CONTRACTORS:**

ALL CONTRACTORS PRIOR TO BID SUBMISSION PROCESS SHALL VISIT PROPOSED WORK SITE AND FIELD VERIFY ALL EXISTING CONDITIONS. ANY CONDITIONS THAT DIFFERS FROM THAT SHOWN ON THIS PLAN SHALL BE REPORTED TO ARCHITECT/ENGINEER SO THAT NEW AND REVISED BID DRAWINGS OR INFORMATION MAY BE ISSUED. MODIFICATIONS TO SCOPE OF WORK WHICH RESULTS FROM CONTRACTORS NEGLIGENCE TO VISIT THE SITE PRIOR TO SUBMITTING BID, SHALL BE THE CONTRACTORS SOLE RESPONSIBILITY.

**DRAWING NOTES**

- 1) OUTLINE OF EXISTING ROOFTOP UNIT MOUNTED ON THE ROOF TO REMAIN. CONTRACTOR TO FIELD VERIFY, LOCATE AND REMOVE ALL ASSOCIATED AIR DEVICES AND EXISTING DUCTWORK UP TO POINT OF DUCT PENETRATION THROUGH THE ROOF.
- 2) SUPPLY AIR DUCTWORK SUPPORTED ABOVE CEILING (TYPICAL).
- 3) RETURN AIR DUCTWORK SUPPORTED ABOVE CEILING (TYPICAL).
- 4) EXHAUST AIR DUCTWORK SUPPORTED ABOVE CEILING (TYPICAL).
- 5) AIR-TITE FITTING WITH DAMPER AND ADHESIVE GASKET (TYPICAL).
- 6) INSULATED FLEXIBLE DUCTWORK SUPPORTED ABOVE CEILING (TYPICAL).
- 7) VOLUME DAMPER (TYPICAL).
- 8) NEW/RELOCATED 24"x24" PERFORATED SUPPLY AIR DIFFUSER MOUNTED IN ACOUSTICAL TILE CEILING WITH NECK SIZE AND AIR VOLUME INDICATED (TYPICAL).
- 9) NEW 24"x24" RETURN AIR GRILLE (TITUS-25R) MOUNTED IN ACOUSTICAL TILE CEILING WITH NECK SIZE AIR VOLUME INDICATED (TYPICAL).
- 10) NEW 12"x12" PERFORATED SUPPLY AIR DIFFUSER MOUNTED IN ACOUSTICAL TILE/DRYWALL CEILING WITH NECK SIZE AND AIR VOLUME INDICATED. PROVIDE TRIM PANELS FOR DRYWALL INSTALLATION (TYPICAL).
- 11) DOUBLE DEFLECTION SIDE-HALL SUPPLY AIR REGISTER MOUNTED IN DRYWALL CEILING WITH NECK SIZE AND AIR VOLUME INDICATED.
- 12) RETURN AIR REGISTER MOUNTED IN DRYWALL CEILING WITH NECK SIZE AND AIR VOLUME INDICATED.
- 13) RELOCATED THERMOSTAT TO BE MOUNTED 45'-0" ABOVE FINISHED FLOOR ON WALL TO CONTROL ROOFTOP UNIT (TYPICAL).
- 14) THERMOSTAT TO BE MOUNTED 45'-0" ABOVE FINISHED FLOOR ON WALL TO CONTROL ELECTRIC DUCT HEATER.
- 15) THERMOSTAT TO BE MOUNTED 45'-0" ABOVE FINISHED FLOOR ON WALL TO CONTROL ELECTRONIC DAMPER (TYPICAL).
- 16) 8"x8" EXHAUST AIR DUCTWORK UP TO GOOSENECK ON ROOF.
- 17) ELECTRIC SLIP-IN DUCT HEATER. REFER TO SHEET M-5 FOR SIZE AND CAPACITY (TYPICAL).
- 18) CEILING MOUNTED EXHAUST FAN MOUNTED IN ACOUSTICAL TILE CEILING. REFER TO SHEET M-5 FOR SIZE AND CAPACITY (TYPICAL).
- 19) IN-LINE EXHAUST FAN SUPPORTED ABOVE CEILING. REFER TO SHEET M-5 FOR SIZE AND CAPACITY.
- 20) ELECTRIC WALL MOUNTED HEATER WITH INTEGRAL THERMOSTAT. REFER TO SHEET M-5 FOR SIZE AND CAPACITY (TYPICAL).
- 21) ELECTRONIC VOLUME (SLAVE) DAMPER ABOVE CEILING. REFER TO SHEET M-5 FOR SIZE AND CAPACITY.
- 22) 1" DOOR UNDERCUT. COORDINATE WITH ARCHITECT (TYPICAL).
- 23) CONTRACTOR TO ROUTE SUPPLY/RETURN AIR DUCTWORK UP TO EXISTING ROOFTOP UNIT DUCT TAPS JUST BELOW ROOF LINE AND MAKE CONNECTION. TRANSITION DUCTWORK AS REQUIRED TO UNIT CONNECTIONS. PROVIDE FLEXIBLE CONNECTION AT DUCTWORK CONNECTION TO UNIT.
- 24) OUTLINE OF EXISTING ROOFTOP UNIT (EX-RTU-1) MOUNTED ON THE ROOF TO REMAIN. CONTRACTOR TO ABANDONED UNIT IN PLACE AND PUT THERMOSTAT TO LOWEST POSSIBLE SETTINGS FOR BOTH HEATING/COOLING AND MOUNT TO SIDE OF OPEN END RETURN DUCTWORK ABOVE CEILING.
- 25) OUTLINE OF EXISTING ROOFTOP UNIT MOUNTED ON THE ROOF TO REMAIN. CONTRACTOR TO ROUTE/SUPPORT RETURN AIR DUCTWORK FROM OPEN STRUCTURE ABOVE AND PROVIDE A 1/2"x1/2" WIRE MESH SCREEN OVER OPEN END DUCTWORK.
- 26) PROVIDE A 1/2"x1/2" WIRE MESH SCREEN OVER OPEN SUPPLY END DUCTWORK 18'-0" BELOW ROOF LINE.
- 27) BALANCE TO AIRFLOW AS INDICATED (TYPICAL).
- 28) OPEN END DUCTWORK THROUGH DEMISING WALL WITH 1/2"x1/2" WIRE MESH SCREEN OVER DUCT OPENING. DUCTWORK MOUNTED #12'-0" ABOVE FINISHED FLOOR WITHIN OPEN STRUCTURE AREA.
- 29) OUTLINE OF EXISTING ROOFTOP UNIT (EX-RTU-2) MOUNTED ON THE ROOF TO REMAIN. CONTRACTOR TO ABANDONED UNIT IN PLACE AND MOUNT ASSOCIATED THERMOSTAT TO SIDE OF OPEN END RETURN DUCTWORK ABOVE CEILING. THERMOSTAT TO BE TURNED TO THE OFF POSITION.
- 30) AIR HANDLING UNIT SUPPORTED FROM STRUCTURE ABOVE CEILING. REFER TO SHEET M-5 FOR SIZE AND CAPACITY.
- 31) THERMOSTAT MOUNTED ON WALL 45'-0" ABOVE FINISHED FLOOR TO CONTROL AIR HANDLING UNIT. THERMOSTAT BY DESERT AIR.
- 32) ROUTE REFRIGERANT PIPING UP THROUGH PITCH POCKET FROM FAN COIL UNIT TO AIR COOLED CONDENSING UNIT MOUNTED ON ROOF.
- 33) OUTLINE OF REMOTE AIR COOLED CONDENSING UNIT MOUNTED ON ROOF. REFER TO SHEET M-5 FOR SIZE AND CAPACITY.
- 34) EXHAUST AIR REGISTER MOUNTED IN DRYWALL CEILING.
- 35) 8"x8" EXHAUST AIR DUCTWORK UP TO GOOSENECK ON ROOF.
- 36) 24"x24" SUPPLY AIR DIFFUSER MOUNTED IN ACOUSTICAL TILE CEILING WITH NECK SIZE AND AIR VOLUME INDICATED AS MANUFACTURED BY PRICE, MODEL#LFDXC WITH HE 458 (HEPA) FILTER.
- 37) 14"x10" INTAKE AIR DUCTWORK UP TO GOOSENECK ON ROOF WITH MOTOR OPERATED DAMPER.
- 38) 10"x10" RELIEF AIR DUCTWORK UP TO GOOSENECK ON ROOF.



**SEISMIC PIPE SUPPORT DETAIL**  
NO SCALE

**MECHANICAL H.V.A.C DESIGN CRITERIA**

- 1.0 OUTSIDE CONDITIONS
  - A. 101 DEGREES F. DB, SUMMER @ 68 DEGREES WB.
  - B. 34 DEGREES F. DB, WINTER @ 28.5 DEGREES WB.
- 2.0 INSIDE CONDITIONS
  - A. 75 DEGREES F. DB, SUMMER (2 DEGREE F. DB) @ 50% RELATIVE HUMIDITY
  - B. 70 DEGREES F. DB, WINTER (2 DEGREE F. DB)
  - C. 68 DEGREES F. DB, WINTER/SUMMER (2 DEGREE F. DB) FOR PROCEDURE ROOM
- 3.0 OCCUPANCY RATE
  - A. ONE PERSON PER OFFICE/EXAM ROOM
- 4.0 VENTILATION RATE
  - A. .20 C.F.M. PER SQ. FOOT
- 5.0 ELECTRICAL LOADS
  - A. 350 WATTS PER P/C (1 PERSON) PC
  - B. LIGHTING 2 WATTS PER SQ. FOOT
- 6.0 BUILDING U" VALUES
  - A. ROOF - .04
  - B. EXTERIOR WALL - .10
  - C. GLASS - .80 U" VALUE
  - .75 SHADING COEFFICIENT

REV#	DATE	REVISIONS DESCRIPTION

**dp**  
DON PENN  
CONSULTING ENGINEERS  
3850 HIGHWAY 380, SUITE 101  
GRAPEVINE, TEXAS 76051  
917-410-2858 FAX 917-261-8411

**F**  
ENGINEERS  
ARCHITECTS  
SURVEYORS  
**FREDRICK WARD ASSOCIATES, INC.**  
P.O. Box 727, 5 South Main Street Bel Air, Maryland 21014-0727  
Phone: 410-879-2090 or 410-838-7900 Fax: 410-893-1243  
Columbia, Maryland Warrenton, Virginia

TENANT RENOVATIONS FOR:  
**RMS LIFE LINE**  
RIVERSIDE, CALIFORNIA

DATE 9/11/01	DRAWING NO.
SCALE AS NOTED	M
DESIGNED BY DLI	
DRAWN BY DLI	SHEET 1 OF 5
	2011215.00