

### HVAC CONTROLS NOTE

AIR CONDITIONING CONTRACTOR SHALL PROVIDE OR CAUSE TO BE PROVIDED ALL CONTROLS, CONTROL WIRING & CONDUIT, POWER WIRING & CONDUIT, AND ALL OTHER ITEMS NECESSARY FOR INSTALLATION AND CONTROL OF HEAT PUMP AIR CONDITIONING UNITS. IN ADDITION, CONTRACTOR SHALL PROVIDE INTERFACE WITH THE EXISTING EMS SYSTEM COMPUTER GRAPHICALLY DERIVING MECHANICAL LAYOUT WITH OWN SCREEN DISPLAYS THAT ARE CONTROLLED BY THE EXISTING BMS. CONTRACTOR SHALL PROVIDE ALL NECESSARY HARDWARE AND SOFTWARE TO INTERFACE TO EXISTING PROGRAM DESIGNED TO CALCULATE TENANT OVERTIME USAGE OF THE AIR CONDITIONING SYSTEM. CONTACT BUILDING CONTROLS SERVICE CONTRACTOR THERMAL CONCEPTS AT 1-800-953-2503 FOR SPECIFICATIONS AND DETAILS. A COMPLETE AND OPERATIONAL CONTROL SYSTEM IS TO BE PROVIDED. HEAT PUMP STARTER IS TO BE INTERLOCKED WITH THE EXISTING EMS CONTROL PANEL LOCATED IN THE COMMONS. (REPLY CONTACT)

THERMOSTATS ARE TO BE WHITE-ROGERS PROGRAMMABLE TYPE, MODEL F196-344 VENT EXACT MODEL NUMBER WITH LANDLORD.

THE ABOVE NOTES APPLY TO ALL EQUIPMENT IN THE TENANT SPACE, INCLUDING EXISTING HEAT PUMPS

THE CEILING SPACE THROUGHOUT THIS PROJECT IS A RETURN AIR PLENUM. NO COMBUSTIBLE OR TOXIC MATERIALS ARE ALLOWED ABOVE THE CEILING.

### SYMBOL LEGEND

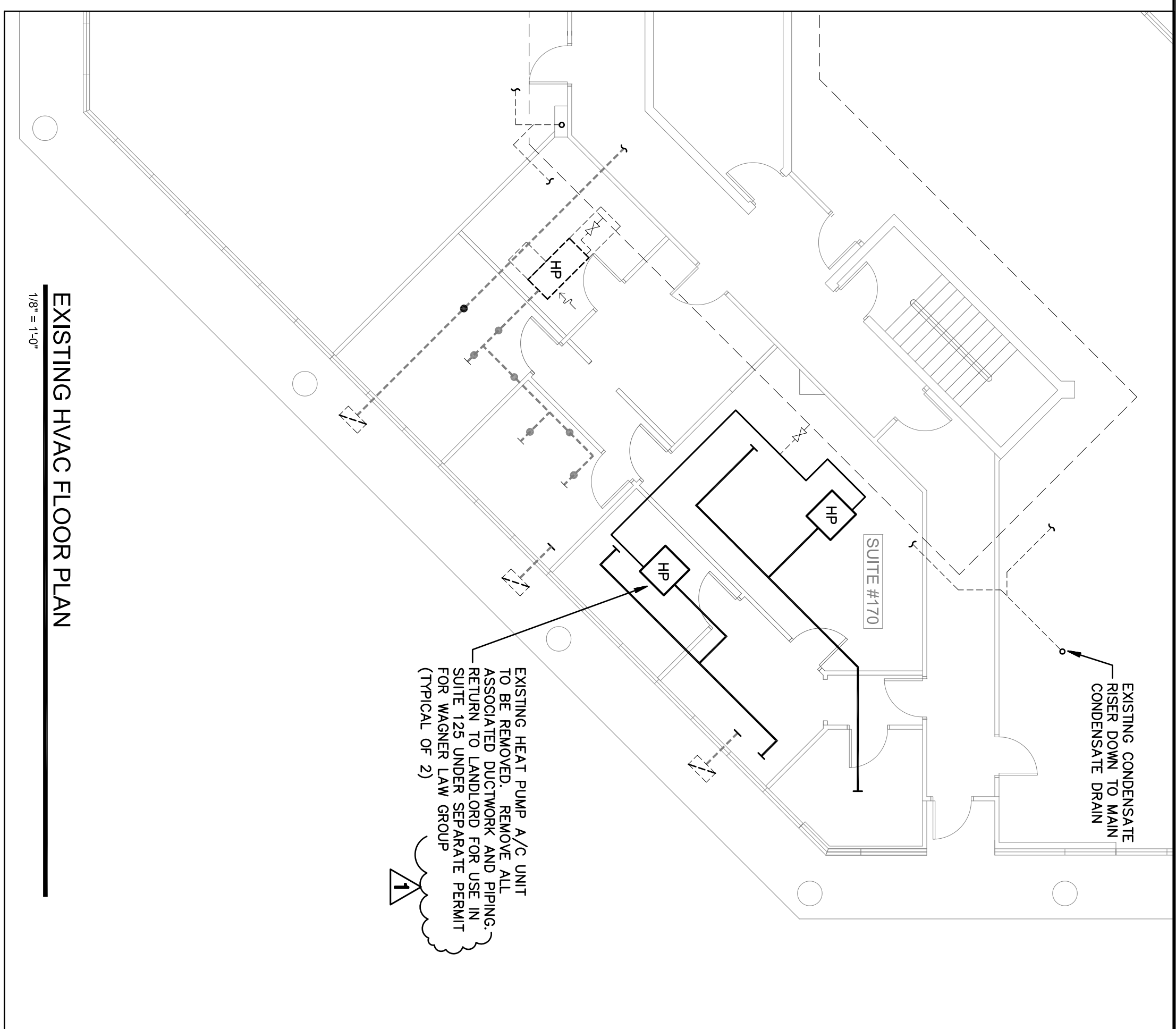
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|--|--|
|  | HEAT PUMP A/C UNIT AS NOTED                        |
|  | EXISTING EQUIPMENT AS NOTED                        |
|  | SUPPLY AIR DIFFUSER AS NOTED                       |
|  | RETURN/TRANSFER GRILLE AS NOTED                    |
|  | EXISTING SUPPLY AIR GRILLE                         |
|  | EXISTING RETURN/TRANSFER GRILLE                    |
|  | DUCTWORK AS NOTED                                  |
|  | EXISTING DUCTWORK TO REMAIN                        |
|  | DUCT TRANSITION                                    |
|  | TYPE B FIRE DAMPER                                 |
|  | W/ACCESS DOOR                                      |
|  | MOTORIZED BACKDRAFT/VOLUME DAMPER, GREENHECK VDR63 |
|  | MANUAL VOLUME DAMPER                               |
|  | THERMOSTAT AS NOTED                                |
|  | FLEXIBLE DUCT, U.L. CLASS 1                        |
|  | CONNECTION TO EXISTING EQUIPMENT                   |
|  | TAKE-OFF WITH VOLUME DAMPER FOR FLEXIBLE DUCT      |
|  | DUCT SMOKE DETECTOR WITH AUDIBLE & VISUAL ALARMS   |

### ABBREVIATIONS

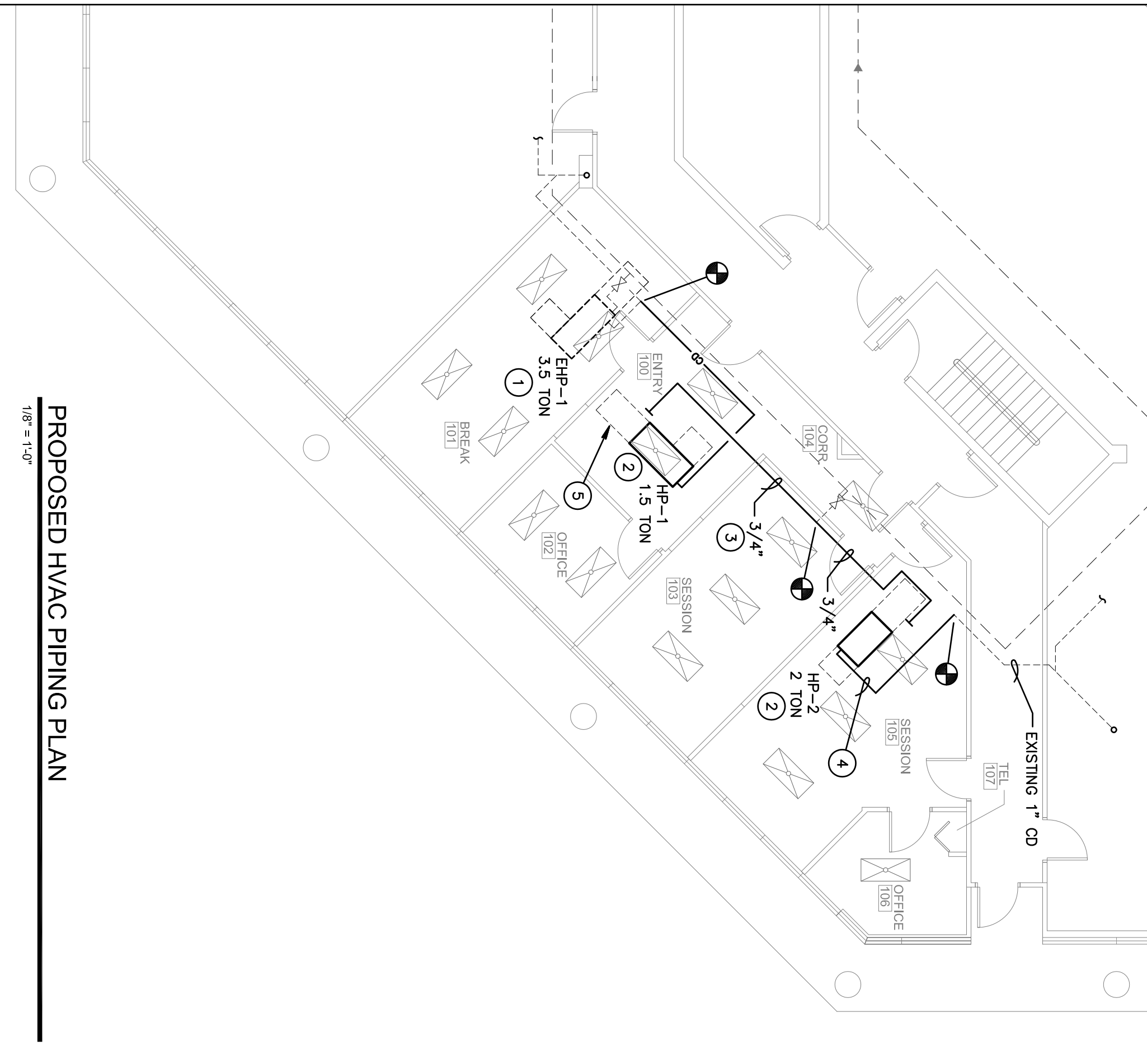
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|-----|---|
| HP  | HEAT PUMP                                 |
| WSP | WATER SOURCE TYPE                         |
| EHP | EXISTING HEAT PUMP                        |
| S/A | SUPPLY AIR                                |
| R/A | RETURN AIR                                |
| O/A | OUTSIDE AIR                               |
| E/A | EXHAUST AIR                               |
| CFM | CUBIC FEET PER MINUTE                     |
| M/D | MANUAL VOLUME DAMPER (OPPOSED BLADE TYPE) |
| FD  | FIRE DAMPER                               |
| AHU | AIR HANDLING UNIT                         |
| CD  | CONDENSATE DRAIN                          |
| CWS | CONDENSER WATER SUPPLY                    |
| CWR | CONDENSER WATER RETURN                    |

### PROPOSED PLAN KEYNOTES:

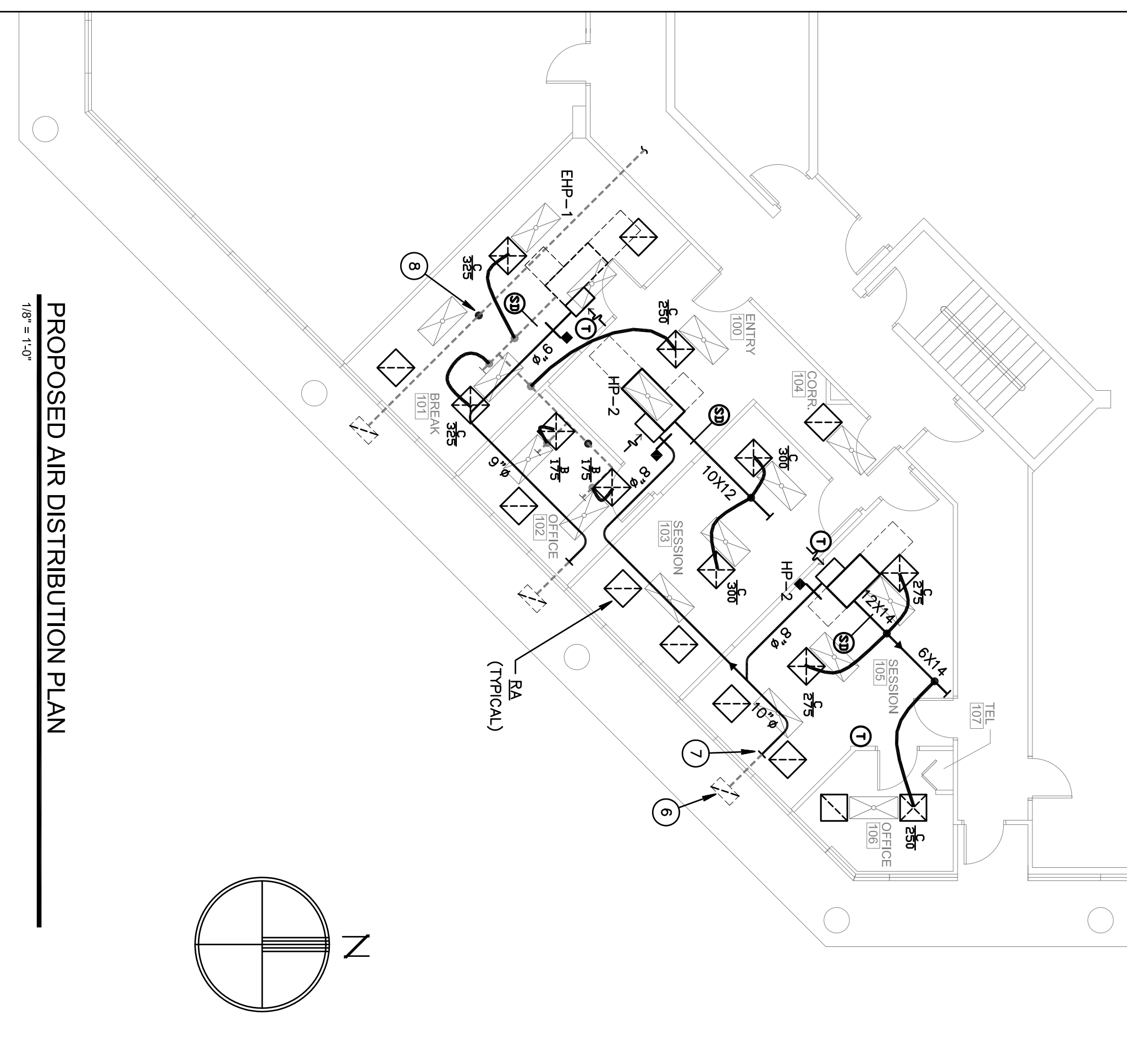
- EXISTING HEAT PUMP TO REMAIN.
- PROPOSED NEW HEAT PUMP A/C UNIT
- CWR PIPING NOT SHOWN FOR CLARITY. MATCH CWS PIPING SHOWN (TYPICAL)
- CONDENSATE DRAIN PIPING IS 3/4" MINIMUM, EXCEPT AS NOTED OTHERWISE
- MAINTAIN 42" CLEAR SPACE ON ELECTRICAL ACCESS SIDE OF A/C UNITS (TYPICAL)
- EXISTING OUTSIDE AIR GRILLE IN SOFFIT, WITH 12X6 DUCT STUBBED TO INTERIOR. (TYPICAL)
- PROVIDE SQUARE TO ROUND TRANSITION AS REQUIRED. (TYPICAL)
- PROVIDE SHEETMETAL CAP TO SEAL OPENING IN EXISTING O/A DUCT.



EXISTING HVAC FLOOR PLAN  
1/8" = 1'-0"



PROPOSED HVAC PIPING PLAN  
1/8" = 1'-0"



PROPOSED AIR DISTRIBUTION PLAN  
1/8" = 1'-0"

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REVISIONS  
4-17-12 GEN. REV.  
2  
3  
4  
5

DRAWN BY GD  
CD  
3/29/12

