



**1 GENERAL HVAC PLAN**  
SCALE: 1/4"=1'-0"

UPON COMPLETION OF HVAC WORK, AND PRIOR TO TENANT OCCUPANCY, ALL AIR AND WATER SYSTEMS SHALL BE ADJUSTED AND BALANCED TO WITHIN 10% OF INDICATED DESIGN AIR QUANTITIES AND IN ACCORDANCE WITH ALL NEBB OR AABC RECOMMENDATIONS AND PROCEDURES. THE HVAC TEST-ADJUST-BALANCE CONTRACTOR SHALL HAVE CURRENT NEBB OR AABC CERTIFICATION. ALL INSTRUMENTS USED SHALL BE PROPERLY CALIBRATED. TABULATE ALL TEST DATA ON NEBB OR AABC FORMS. IF PROBLEMS ARE ENCOUNTERED DURING BALANCE, THE HVAC TEST-ADJUST-BALANCE CONTRACTOR SHALL NOTIFY THE GENERAL CONTRACTOR AND IF NECESSARY TO UPDATE/PROGRAM ALL REQUIRED SYSTEM STATIC PRESSURE SETPOINTS AS DETERMINED THROUGH THE TEST-ADJUST-BALANCE. THE CONTRACTOR SHALL ADJUST ALL VAV TERMINAL UNIT MINIMUM AND MAXIMUM SETPOINTS.

- 1** NEW LOCATION OF EXISTING AHU AS SHOWN ABOVE RESTROOM CEILING.
- 2** NEW/REUSED DUCTWORK TO MATCH EXISTING.
- 3** G.C IS RESPONSIBLE FOR HIRING OF STRUCTURAL ENGINEER AND SUBMITTAL TO LOCAL OFFICIAL FOR STRUCTURAL HANGING OF RELOCATED AHU AND ASSOCIATED DUCTWORK.  
G.C IS RESPONSIBLE FOR HIRING OF MECHANICAL ENGINEER AND SUBMITTAL TO LOCAL OFFICIAL FOR REWORKED HVAC DESIGN AND BALANCE.
- 4** G.C TO HANG AHU AS HIGH AS POSSIBLE TO CLEAR RESTROOM CEILING HEIGHT. IF CONFLICT EXISTS, G.C. IS TO CONTACT ARCHITECT IMMEDIATELY FOR RESOLUTION.
- 5** G.C. TO EXTEND EXISTING PORTION OF DUCTWORK AS SHOWN TO NEW BACK OF HOUSE WALL AS SHOWN.
- 7** G.C. TO INSTALL DUCT MOUNTED BLOWER TO DISTRIBUTE AIR FLOW TO THIS AREA ONLY.
- 8** G.C. TO SUPPLY AND INSTALL NEW SUPPLY DIFFUSERS AS SHOWN ON PLAN. REUSE DEMOLISHED EQUIPMENT IF POSSIBLE.

**HVCAC TESTING AND BALANCING**

THE HVAC CONTRACTOR SHALL PERFORM THE FOLLOWING TASKS UPON COMPLETION, AND ALL REQUIRED REPORTS AND AS-BUILTS SHALL BE SUBMITTED WITHIN (2) WEEKS OF DATE OF SUBSTANTIAL COMPLETION OR OWNER OCCUPANCY.  
A. PROVIDE AND INSTALL CLEAN FILTERS FOR ALL EQUIPMENT SERVING THIS SPACE, INCLUDING THE BASE BUILDING AIR HANDLING UNIT.  
B. SUBMIT TWO (2) COPIES OF HVAC TEST-ADJUST-BALANCE REPORTS TO THE ARCHITECT/ENGINEER FOR REVIEW.  
C. SUBMIT "AS-BUILT" RECORD DRAWINGS INDICATING ACTUAL AS BUILT CONDITIONS TO THE ARCHITECT FOR REVIEW. RECORD DRAWINGS SHALL BE STAMPED "AS-BUILT" AND SHALL HAVE THE NAME, ADDRESS, AND TELEPHONE NUMBER OF THE CONTRACTOR, ALL ENGINEERS SEALS, SHALL BE REMOVED FROM THE DRAWINGS.  
D. SUBMIT TWO (2) COPIES OF OWNERS' MAINTENANCE MANUALS. THE MANUALS SHALL INCLUDE RATINGS, CAPACITIES, PARTS LISTS, WIRING DIAGRAMS, SERVICE/MAINTENANCE RECOMMENDATIONS, AND WARRANTIES.  
E. SUBMIT WRITTEN RESPONSE TO ALL FIELD REPORTS INDICATING CORRECTIVE ACTIONS TAKEN AND DATE CORRECTIVE ACTION WAS TAKEN TO THE ARCHITECT FOR REVIEW.

**PROJECT CLOSEOUT**

**GENERAL HVAC PLAN CODED NOTES**

1. FURNISH AND INSTALL ALL ITEMS, INCLUDING EVERY ARTICLE, DEVICE, OR ACCESSORY REASONABLY NECESSARY TO FACILITATE EACH SYSTEM'S FUNCTIONING AS INDICATED BY THE DESIGN AND THE EQUIPMENT SPECIFIED. ELEMENTS OF THE WORK SHALL INCLUDE, BUT ARE NOT LIMITED TO MATERIALS, LABOR, SUPERVISION, SUPPLIES, EQUIPMENT, TRANSPORTATION, HOISTING/RIGGING, STORAGE, UTILITIES, AND ALL REQUIRED PERMITS AND LICENSES.

2. ALL WORK SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE PORTIONS OF ALL NATIONAL STATE, AND LOCAL CODES AND STANDARDS. WHERE THE CONTRACT DOCUMENTS ARE IN EXCESS OF CODE REQUIREMENTS, THE CONTRACT DOCUMENTS SHALL GOVERN. IN THE EVENT OF A CONFLICT BETWEEN THE CONTRACT DOCUMENT AND APPLICABLE CODES, THE LATTER SHALL GOVERN.

3. FIELD VERIFICATION OF EXISTING CONDITIONS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR SHALL NOTIFY THE ARCHITECT OF ANY DISCREPANCIES FOUND PRIOR TO SUBMISSION OF BID. THE CONTRACTOR SHALL TAKE NOTE THAT THE DRAWINGS ARE SCHEMATIC IN NATURE AND INDICATE THE APPROXIMATE LOCATIONS OF THE HVAC AND PLUMBING SYSTEMS. LOCATE ALL ITEMS BY ON-THE-JOB MEASUREMENTS. COOPERATE WITH OTHER TRADES TO ENSURE PROPER FIT AND ACCESS TO ALL ITEMS.

4. CONSIDERATION SHALL NOT BE GRANTED FOR MISUNDERSTANDING OF THE SCOPE OR AMOUNT OF WORK TO BE PERFORMED. TENDER OF A PROPOSAL CONVEYS FULL CONTRACTOR AGREEMENT OF THE ITEMS AND CONDITIONS SPECIFIED AND/OR INDICATED, SCHEDULED, OR IMPLIED ON THE CONTRACT DOCUMENTS. AND/OR REQUIRED BY THE NATURE OF THIS WORK.

5. ALL WORK SHALL BE ARRANGED IN A NEAT, WELL ORGANIZED MANNER, ALL SERVICES SHALL BE ROUTED PARALLEL AND PERPENDICULAR TO THE PRIMARY LINES OF THE BUILDING. LOCATE ALL OPERATING AND CONTROL EQUIPMENT PROPERLY TO PROVIDE CODE AND/OR MANUFACTURER CLEARANCES.

6. AFTER COMPLETION OF INSTALLATION, BUT PRIOR TO SUBSTANTIAL COMPLETION, CONTRACTOR SHALL CERTIFY IN WRITING THAT PRODUCTS AND MATERIALS INSTALLED AND PROCESSES USED DO NOT CONTAIN ASBESTOS OR POLYCHLORINATED BIPHENYL (PCB).

7. IN THE EVENT THAT MATERIALS, PRODUCTS, AND/OR PROCESS BEING PROPOSED FOR THIS PROJECT CONTAIN, OR MAY EMIT, ANY VOLATILE ORGANIC COMPOUNDS (VOC), FORMALDEHYDE FORMULATIONS, OR HAZARDOUS OUT-GASSING, AS DETERMINED BY THE MANUFACTURER, A MATERIALS SAFETY DATA SHEET SHALL BE SUBMITTED AS PART OF THE SHOP DRAWINGS PROCESS FOR REVIEW BY THE ARCHITECT/OWNER.

8. ALL EQUIPMENT AND MATERIAL TO BE FURNISHED AND INSTALLED ON THIS PROJECT SHALL BE UL OR ETL LISTED, IN ACCORDANCE WITH THE AUTHORITY HAVING JURISDICTION, AND SUITABLE FOR ITS INTENDED USE ON THIS PROJECT.

9. THE FOLLOWING SUBMITTAL DATA SHALL BE FURNISHED AND SHALL INCLUDE BUT NOT LIMITED TO:

- A.) EQUIPMENT AND MATERIALS SHOP DRAWINGS
- B.) COORDINATION DRAWINGS
- C.) RECORD DRAWINGS
- D.) OPERATING AND MAINTENANCE MANUALS

10. ELECTRONIC MEDIA FOR THE PROJECT IS AVAILABLE IN AUTOCAD FORMAT. COPIES OF THE ELECTRONIC MEDIA WILL BE AVAILABLE VIA EMAIL. THE ELECTRONIC MEDIA IS FOR THE INTENDED USE OF THIS PROJECT ONLY AND SHALL NOT BE USED BY ANY PARTY, IN WHOLE OR IN PART, FOR ANY OTHER PROJECT. CONTRACTOR SHALL HAVE AN ACCEPTABLE PERIOD OF 10 WORKING DAYS TO REVIEW AND ACCEPT ELECTRONIC MEDIA FILES DELIVERED. THE ELECTRONIC MEDIA IS INTENDED TO ASSIST THE CONTRACTOR IN THE PREPARATION OF SHOP DRAWINGS FOR THIS PROJECT AND IS TO BE CONSIDERED AS A GUIDE ONLY. THE ELECTRONIC MEDIA AS PROVIDED DOES NOT RELIEVE THE CONTRACTOR OF ANY CONTRACT RESPONSIBILITIES. THE CONTRACTOR AGREES TO PROVIDE THE OWNER AND ARCHITECT AN ELECTRONIC MEDIA COPY OF THE "RECORD DRAWINGS" IN THE SAME FORMAT AS AS INDICATED ABOVE. THE CONTRACTOR SHALL SUBMIT ALL REQUESTS IN WRITING TO THE ENGINEER FOR ELECTRONIC MEDIA.

11. THE GENERAL CONTRACTOR AND ALL SUBCONTRACTORS SHALL COORDINATE THE INSTALLATION OF DUCTWORK, CONDUIT, CABLE, ETC. INSTALLATION WITH LIGHTING FIXTURES, SPECIAL CEILING CONSTRUCTION, AIR DISTRIBUTION EQUIPMENT, AND THE STRUCTURE. PROVIDE ADDITIONAL RISES AND OFFSETS AS REQUIRED. IF, AFTER INSTALLED, NEW DUCTWORK, CONDUIT, OR CABLE IS FOUND TO BE IN CONFLICT WITH THE ARCHITECTURE, STRUCTURE, OR OTHER TRADEWORK, WHICH IS EITHER EXISTING OR SHOWN ON THE CONTRACT DOCUMENTS, THE DUCTWORK, CONDUIT, OR CABLE SHALL BE RELOCATED WITHOUT ADDITIONAL COST TO THE OWNER.

12. MATERIALS AND EQUIPMENT SHALL BE NEW AND IN GOOD CONDITION. THE COMMERCIAL STANDARD ITEMS OF EQUIPMENT AND THE SPECIFIC NAMES INDICATED ARE INTENDED TO IDENTIFY STANDARDS OF QUALITY AND PERFORMANCE NECESSARY FOR THE PROPER FUNCTIONING OF THE DUCTWORK. MATERIALS AND EQUIPMENT, WHICH ARE FOUND TO HAVE FACTORY DEFECTS SHALL BE REPLACED OR REPAIRED IN A MANNER ACCEPTABLE TO THE OWNER AND ENGINEER AT NO ADDITIONAL COST TO THE OWNER.

13. THE CONTRACTOR SHALL PROTECT THE WORK, EQUIPMENT, AND MATERIALS FROM DAMAGE BY HIS WORK OR HIS PERSONNEL, AND SHALL CORRECT ALL DAMAGE THUS CAUSED WITHOUT ADDITIONAL COST TO THE OWNER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL WORK, MATERIALS, AND EQUIPMENT UNTIL FINAL ACCEPTANCE BY THE OWNER. PROTECT ALL WORK AGAINST THEFT, INJURY, OR DAMAGE AND CAREFULLY STORE MATERIALS AND EQUIPMENT RECEIVED ON SITE WHICH IS NOT IMMEDIATELY INSTALLED. THE CONTRACTOR SHALL CLOSE OPEN ENDS OF WORK WITH TEMPORARY COVER OF PLUGS DURING CONSTRUCTION TO PREVENT THE ENTRY OF DUST, DIRT, AND OBSTRUCTING MATERIAL. THE CONTRACTOR SHALL PROTECT ALL EQUIPMENT AND MATERIALS FROM DAMAGE DUE TO WATER, SPRAY-ON FIRE PROOFING, CONSTRUCTION DEBRIS, ETC. IN A MANNER ACCEPTABLE TO THE ARCHITECT AND/OR OWNER.

14. EQUIPMENT SHALL BE IDENTIFIED BY MEANS OF NAMEPLATES PERMANENTLY ATTACHED TO THE EQUIPMENT. NAMEPLATES SHALL BE BLACK SURFACE, WHITE CORE LAMINATED BAKELITE WITH ENGRAVED LETTERS. PLATES SHALL BE A MINIMUM OF 3 IN LONG BY 1 IN WIDE WITH WHITE LETTERED 1/4 IN HIGH.

15. THE WARRANTY PERIOD SHALL BE NO LESS THAN ONE (1) FULL YEAR, UNLESS SPECIFIED OTHERWISE, AND SHALL INCLUDE AT LEAST ONE (1) HEATING SEASON AND ONE (1) FULL COOLING SEASON. DURING THE WARRANTY PERIOD THE CONTRACTOR SHALL GUARANTEE THE FOLLOWING IN A FORM SATISFACTORY TO THE OWNER:  
A.) ALL WORK INSTALLED SHALL BE FREE FROM ANY AND ALL DEFECTS IN WORKMANSHIP AND/OR MATERIALS  
B.) EACH APPARATUS WILL DEVELOP CAPACITIES AND PERFORMANCE CHARACTERISTICS SPECIFIED.  
C.) THE SYSTEMS SHALL OPERATE WITHOUT MALFUNCTION. THE START OF THE CONTRACTORS WARRANTY PERIOD SHALL COMMENCE ON THE DATE OF THE SUBSTANTIAL COMPLETION AS AGREED BY THE OWNER.

16. AREAS OF THE EXISTING BUILDING MIGHT BE OCCUPIED DURING CONSTRUCTION OF THIS PROJECT. NOISY, DUSTY, AND/OR OTHER CONSTRUCTION OPERATIONS REQUIRED FOR WORK WHICH DISTURBS OR CAUSE COMPLAINTS BY THE EXISTING BUILDING OCCUPANTS SHALL NOT BE ACCEPTABLE. ALL AFTER-HOUR OR OVERTIME WORK REQUIRED BY THE CONTRACTOR TO AVOID DISRUPTION OF EXISTING OCCUPANTS WILL BE PROVIDED AT NO COST TO THE OWNER. THE CONTRACTOR SHALL USE CONSTRUCTION METHODS AND MATERIALS WHICH SHALL NOT ADVERSELY AFFECT THE INDOOR AIR QUALITY OF THE EXISTING OCCUPIED AREAS.

17. ALL OR ANY BUILDING SERVICES, UTILITIES, POWER, FIRE PROTECTION, AND DOMESTIC COLD AND HOT WATER MAY NOT BE DISRUPTED FOR ANY REASON WITHOUT PRIOR COORDINATION WITH A REPRESENTATIVE OF BUILDING OPERATIONS.

18. ALL WORK TO BE PERFORMED AS PART OF THIS PROJECT SHALL BE COORDINATED COMPLETELY WITH ALL OTHER TRADES.

19. IN ADDITION AND IF APPLICABLE, COMPLY WITH BASE BUILDING STANDARDS, REQUIREMENTS AND SPECIFICATIONS.

20. PORTIONS OF THE BUILDING MAY BE IN USE AND OCCUPIED DURING THE CONSTRUCTION PERIOD OF THIS PROJECT. ALL BUILDING SERVICES, UTILITIES, POWER, CHILLED WATER, FIRE PROTECTION, AND DOMESTIC COLD AND HOT WATER WHICH WILL BE REQUIRED FOR THIS PROJECT MAY NOT BE DISRUPTED FOR ANY REASON WITHOUT PRIOR COORDINATION WITH A BUILDING REPRESENTATIVE. THE OWNER AND A WRITTEN AUTHORIZATION FROM THE BUILDING MANAGER DESIGNATING A DATE, TIME, AND DURATION THAT ARE APPROVED BY THE BUILDING MANAGER AND OWNER FOR SUCH DISRUPTION. AN ADDITIONAL ADVANCE NOTIFICATION OF SEVEN (7) DAYS SHALL BE GIVEN TO THE BUILDING MANAGER AND OWNER PRIOR TO EACH DISRUPTION.

21. PREMIUM TIME MAY BE REQUIRED TO PERMIT CERTAIN PORTIONS OF THE WORK TO BE PERFORMED AT TIMES ACCEPTABLE TO THE BUILDING MANAGER AND OWNER. THE COST OF SUCH PREMIUM TIME SHALL BE INCLUDED AS PART OF THE BASIC CONTRACT COST.

Table with 3 columns: REV, DATE, COMMENTS. Multiple empty rows for revision tracking.

ISSUE DATE: 01.20.2014

SCALE: AS NOTED

SEAL:

PROJECT NUMBER: 1113158

DRAWN BY: LAH

CHECKED BY: MSG

Copyright (c) by Phase Zero Design Corp. All Rights Reserved.

SHEET TITLE:

**GENERAL HVAC PLAN**

SHEET NUMBER:

**A106**