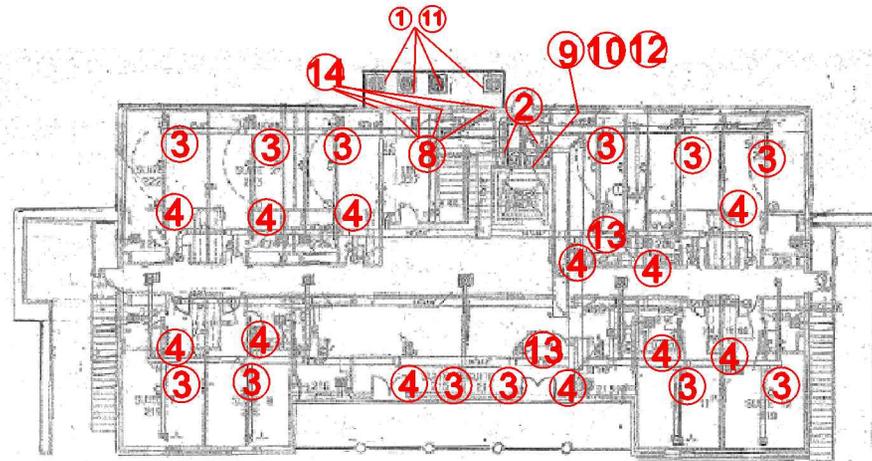


**GENERAL NOTES: Sheet H3**

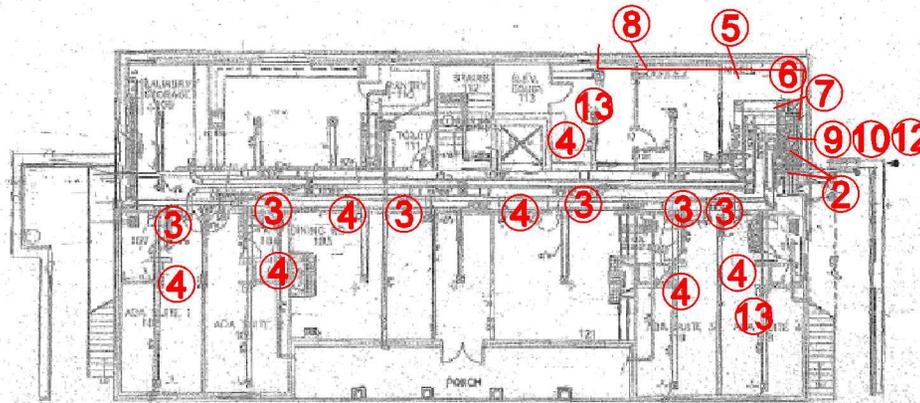
1. Work shall be coordinated with the director of the Fisher House and COR to ensure that work does not interfere with personnel residing in the spaces. Work shall be limited to one to two units at a time depending on occupancy levels in the building. Units shall only non-operational when daily lows are above 30 F and daily highs are below 75 F.
2. In the winter, the system shall be able to maintain a relative humidity level of 30% in all spaces but shall have safeguards to prevent over-humidification of space and formation of frost on windows.
3. Provide control system for heat pump/furnace combination that works with the current zone damper system in the building.
4. The heat pump system shall have a SEER rating of at least 18 and HSPF of 12. The furnace shall have an AFUE of at least 98%.
5. Temperature/humidity sensors shall be configured so that personnel in room cannot make adjustments to room temperature set-points.
6. The temperature set-points in each room shall only be adjusted via the main control panel in the mechanical space.
7. Vent pipe and air pipe for furnace shall be re-connected according to manufacturer's instructions. Re-run condensate drains for units.
8. Ensure current breakers for each piece of equipment are proper capacity or install new ones.
9. Install all necessary parts, accessories, wiring, and cabling on the Heat Pump/Furnace system to provide a fully functional system that meets the drawings and specifications. Install serial communication bus to pass information between major system components where required by the manufacturer. Other components shall require a 3 wire, 24 volt connection.
10. The COR will allow the re-use of existing wiring as long as contractor can show it meets the requirements of the manufacturer and is still functional, otherwise new wiring shall be required. Contractor shall install new transformers for equipment that requires a transformer.

**PLAN NOTES: Sheet H3**

1. Position the new condenser units so that they shall meet the clearances given by the manufacturer. The contractor shall pour an additional concrete pad if the current pad does not accommodate the new condenser units. If the concrete pad is to be added use #4 rebar. Also drill 6" into existing pad at 12" centers and insert 12" #4 rebar. Insert dowels with epoxy designed for this application.
2. Locate controller for Unitary HVAC system in this area. Bring all required control wiring and cabling back to this area.
3. The contractor shall ensure all current zone dampers are in operational order and install new damper actuators and damper control modules. Place Damper Control Modules and transformers in a NEMA enclosure.
4. Install new temperature/humidity sensors in each room in same location as previous temperature sensors. Utilize a decorative back plate if the new sensor does not cover holes, discolored area, or any other unattractively feature left by old sensor. Connect temperature sensors to control system.
5. Run necessary data cables to tie HVAC Controllers and meters into LAN. The contractor will interface with the VA Information Management Team on how to terminate cables and which ports on the VA system the contractor shall plug into. (Deduct alternate 1 eliminates connecting HVAC controllers to LAN) and (Deduct alternate 3 eliminates connecting meters to LAN.)
6. The contractor shall install an electric meter into the main electrical feed for the building to measure electrical consumption and connect this meter to the facility's Building Automation System and the existing Energy Essentials Meter software along with associated graphics. The service to the Building 208 V, 3 phase, 400 amps, and 4 wire system. Size the CTs and PTs for the meter accordingly. (Deduct 2-do not connect meter into LAN or BAS.)
7. Contractor shall upgrade the current Neptune water meter or install a new water meter that will also be on the BAS and Energy Essentials Software and measure water usage on a 15 minute interval. The contractor shall provide appropriate graphics and trends on the Energy Essentials software. (Deduct 2-do not connect meter into LAN or BAS.)
8. Contractor shall run all new refrigeration lines for the units. Factory-supplied filter drier must be installed. Refrigeration lines shall be sized according to manufacturer instructions in order to keep cooling capacity at 100%.
9. Contractor shall verify dimensions of new units and shall make modifications as necessary to fit the new units in the current locations. The contractor shall ensure that there is sufficient room to perform maintenance on these units.
10. Install manufacturer recommended high efficiency filter, low airflow resistant filters in Media Filter Cabinet. Provide a box each of MERV 10 and MERV 13 filters to the VA that fit the Media Filter Cabinet.
11. Run Control Wiring and conduit to Condenser Units.
12. Provide necessary control power wiring and water lines to fan powered humidifier.
13. Install humidistat in this area.
14. Reuse existing electrical disconnects if properly sized.



H.V.A.C.  
**UPPER LEVEL FLOOR PLAN**  
 1/8" = 1'-0"



H.V.A.C.  
**MAIN LEVEL FLOOR PLAN**  
 1/8" = 1'-0"

Drawing Title	Project Title	Date	
Fisher House HVAC	SPACE UTILIZATION	5/27/16	
NEW WORK	Building Number 016	064-R H-3	