

BALDWIN HALL (0050)

Baldwin Hall was originally constructed in 1937 with additions constructed in 1942 and 2018. The 2018 addition also included modifications to the existing air conditioning systems serving the balance of the building to convert them from constant air volume to variable air volume systems. The building is predominantly served by variable volume Air Handling Units (AHUs) serving duct mounted variable air volume terminal units with hot water reheat coils. There are Fan Coil Units that provide heating and cooling within data rooms on each floor and the new annex stairwell.

VARIABLE VOLUME AIR HANDLING UNITS

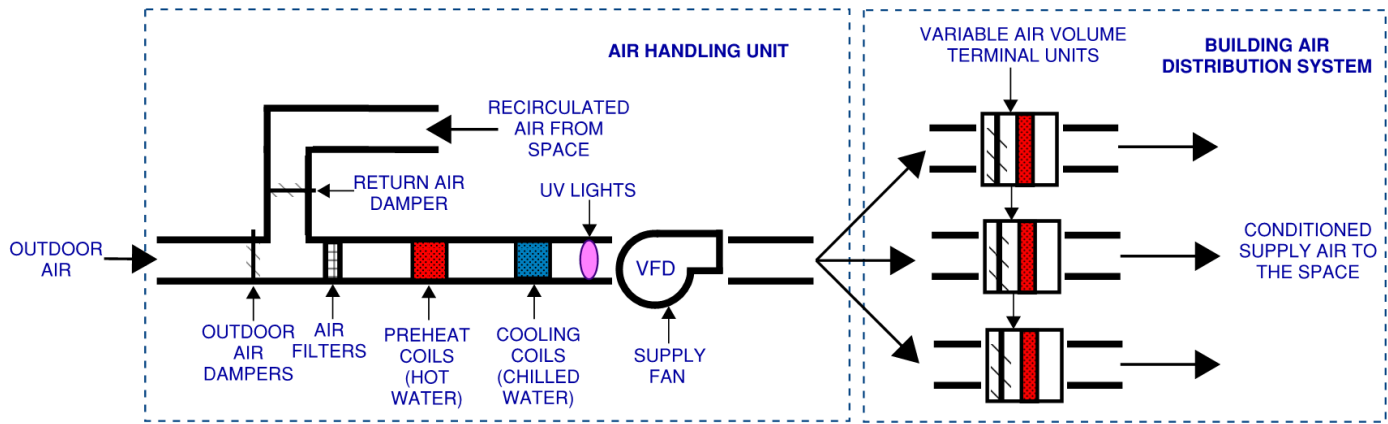
The Air Handling Units deliver a variable volume of conditioned air consisting of a mixture of recirculated building air and fresh air from outside of the building. The building return air is mixed with outdoor air, passed through a bank of filters and cooled with chilled water coils in the building's air handling unit before being supplied to rooms throughout the building through above ceiling ductwork. The Variable Air Volume terminal units (VAVs) are equipped with an air damper to regulate the volume of air delivered from the central AHU to the space based on the current space temperatures. Most of the VAVs also include a fan, a hot water coil and a filter combination that will mix in air from the above ceiling plenum with the conditioned air from the central AHU when the space requires heating.

Air is recirculated from the spaces back to the air handling unit through ceiling mounted air return registers located in each space. Return air is pulled from a plenum space above the ceiling, in lieu of ductwork. Exhaust is provided in restrooms on each floor to remove odors and to maintain building pressurization.

AHU-1 and AHU-2, which serve the 2018 building addition, were designed with MERV-13 filters and a bank of ultraviolet lights to help inhibit biological activity within the AHUs. In addition, these units are both equipped with air side economizer functionality that allows the units to increase the ventilation rate when ambient conditions are appropriate.

AHU-2, which serves the 2018 Annex's fourth floor large classroom, operates with a demand controlled ventilation sequence that reduces the ventilation rate dynamically when the classroom is determined to be unoccupied. The demand controlled ventilation operating mode is being disabled as part of FMD's COVID 19 response program to maintain higher ventilation rates, regardless of occupancy. The building AHUs operate according to a building occupancy schedule. The AHUs within the building are being operated continuously, even during unoccupied periods at night and on weekends, to increase ventilation within the building as part of FMD's COVID 19 response program.

Chilled water is supplied throughout the building from a chiller located in the mechanical room or from the campus chilled water system. Heating hot water, distributed throughout the building for heating, is provided by a steam to water heat exchanger using steam from the central campus steam system.

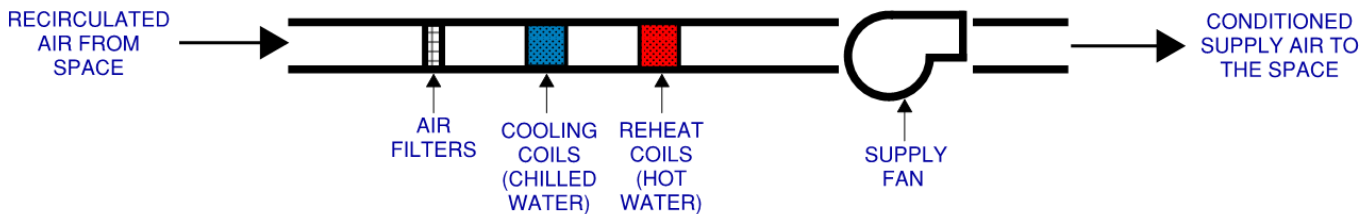


VARIABLE VOLUME AIR HANDLING UNIT SCHEMATIC

FAN COIL UNITS

A fan coil unit is fairly simple: it's a fan with a coil or coils (like a car radiator) that can add heating and cooling to the air stream flowing through it. The FCUs have air filters to remove particulate matter from the air, a hot water coil and chilled water coil for heating and cooling the air, and a supply fan for forced air circulation through the unit and into the space. There is no ventilation air provided for these FCUs because they are located in spaces with transient occupancy.

The hot water is produced in the mechanical room by way of a heat exchanger that takes heat from the campus steam system and adds it to the building's hot water loop. The chilled water is provided from UGA's campus chilled water system.



4-PIPE FAN COIL UNIT SCHEMATIC