Installation Notes:

A/1 to determine equipment layout.

SYSTEM O/F
1. The supply and return fan shall be off. The outside air dampers shall be closed, the exhaust damper shall be open, the return air dampers shall be open, and the cooling coil control valve shall be closed. The humidity isolation damper shall be closed, and the control valve shall be under the control of the heating coil. Discharge coil temperature at all times shall be maintained at 55 deg F.

SYSTEM ON
2. The unit shall operate based on a programmed occupancy schedule. Schedule shall be capable of being overridden by the user.
3. When the unit is indexed to start the outside air damper shall slow to close to a minimum over a fixed period of time to prevent the low temperature detector from tripping during cold weather. The supply and return fans shall be at variable frequency to drive a minimum airflow rate and slowly ramp up to set point over a fixed period of time.

ENTHALPY ECONOMIZER CYCLE:
4. The outside air enthalpy (total heat content of air) shall be calculated in the software based on psychometric properties of the outside air and humidity. The return air enthalpy shall be calculated the same way based on the return air temperature and a fixed constant (water valve setting for the return air humidity).
5. If the outside air enthalpy is greater than the return air enthalpy and chilled water is available as determined by chilled water supply temperature being below 80 deg F, the outside return, and exhaust air dampers shall modulate to maintain minimum air outdoor air setpoint (to be set by the user) as measured by the unit’s outdoor air sensor. If the outside air enthalpy is less than the return air enthalpy, the outside return, and exhaust air dampers shall modulate to maintain the outside air setpoint (55 deg F), an adjustable deadband offset shall be required between switch over to outdoor sensor operation.

AIR VOLUME AHU WITH FLOWTRACKING AND VIF STEAM HEAT CONTROL DIAGRAM

1. When the outdoor air temperature is below 55 deg F, the heating coil control valve shall modulate to maintain a discharge air temperature of 55 deg F. If the heating coil control valve is not open, the heating coil air temperature shall be closed, and the bypass damper shall be modulated to maintain the discharge air temperature of 55 deg F.
2. The return air humidity shall be enabled and the isolation valve shall be opened through the DDC. The return air fan speed shall be matched to the supply fans speed. The discharge air temperature setpoint during this mode shall be fixed at 55 deg F, and the AHU shall continue to run until the lowest space temperature rises to 55 deg F.

SAFETY
1. The smoke detector shall stop the supply and return fans through the fire alarm system when smoke is detected.
2. The freeze protection alarm shall be enabled at the BAS. Manual reset of the freeze protection alarm shall be required before the unit restarts. A panel mounted pilot light shall be used for local indication that the freeze protection alarm has been tripped.

DATE: 9/10/10
DRAWN: 7/1/10
REVIEW: 7/7/10
DETAIL NO: XXXXXX-XX
OF ONE