1. Heating systems used for primary air handling units only shall not add 10% on top of air handling unit safety factor.

2. To avoid frosting of pre-filters, provide filter housings before and after the preheat coil to allow changing the filter position from upstream of the coil during the summer to downstream of the coil for the winter season.

3. Design mixed air plenums for proper mixing of outdoor and return air with the use of manufactured air blenders. Mixed air temperature gradients should be limited to 5°C. For mixing plenums:
   - Fresh air dampers; to be opposed blade, low leakage dampers, jack-shaft style return dampers: parallel blade, directing air back towards intake.
   - Mixing plenums shall use air blenders in their construction.

4. All air handling units are to be capable of utilizing 100% outdoor air for free cooling.

5. A single outdoor air damper is preferred in lieu of using two dampers where a smaller damper is used for the minimum outdoor air requirements.


7. Central station variable air volume systems are preferred to multiple smaller air systems. Avoid using outdoor rooftop air supply units. Multiple smaller systems have been found to cost more initially, are less efficient and require more maintenance. There may be instances where it is more practical to use more than one central system, especially where the building layout results in very long duct runs and occupancy schedules vary for different parts of the building.

8. Provisions of hoist rails or rigging points shall be made for all central air handling units with motors greater than 10Hp. Access routes shall be identified for replacement of all motors.

9. Size central fans and main cooling coils for the sum of the peaks of the cooling loads with no diversity factor, rather than using block load calculations. This will allow for some reserve capacity to accommodate future changes in the building’s use and occupancy. Noting that sizing central system fans, coils, and components to the sum of all peak cooling loads without diversity is commonly understood to add cost to the project, the design consultant shall undertake a building review to justify (to the satisfaction of the University) that a design approach using diversity factors for the project is warranted where budgetary pressures promote mechanical cost reduction considerations.

10. Consideration shall be given for the use of venturi air control valves for general S/A and R/A applications.
11. Use a return air fan for returning air to the central air systems.

12. Applications to be reviewed on a case by case basis with the University to determine acceptability / approach.