1. Consideration shall be given to the selection of steam components to be acceptable for superheated steam applications.

2. High pressure steam is provided from the Central Utilities Plant at the following conditions: 150 PSIG (1035 kPa) and 401°F to 419°F (205°C to 215°C).

3. Steam condensate returns to the Central Utilities Plant at the following conditions: 29 PSIG (200kPa) and 153°F (67°C).

4. Steam pressure reducing stations shall be PLC controlled industrial grade PRV stations. (Fisher) Steam station shall include a mechanical PRV for summerload conditions, and be interconnected to PCL controlled PRV stations. Considerations shall be given to multiple valves to allow optimum control and reduce wire draw on valves.

5. All expandable systems shall be designed for pipe expansion compensation and registered with ABSA. Anchor points and guides shall be designed and coordinated by the Mechanical & Structural consultant.
   Use separate steam and condensate piping systems.
   **PROHIBITED** – single (common) pipe steam and condensate systems are not to be used.

6. Use a duplex pump receiver to return condensate.

7. Use multiple pressure relief valves throughout the system rather than a single valve.

8. All condensate pumps shall be supplied from emergency power. Pumps and control system shall be fully functional under both normal and emergency power conditions.

9. Condensate pumps are not to be attached to the condensate tanks. Pumps are to be floor mounted and piped into the bottom of the condensate tank. Provide isolation ball valves in the pump suction and discharge piping. This arrangement prevents loss of condensate when the pumps require servicing and also prevents steam from escaping from the condensate receiver system. Note: Tanks should have a baffle in the tank to separate inlet side from pumping side and have a vent on the inlet side.

10. Mount condensate level control switches and pump alternators on the top of the condensate tank. Switches mounted on the side of the tank have been found to leak and are difficult to repair.

11. Float and thermostatic steam traps are preferred, with a minimum capacity of 2 ½ time the steam load. The pressure rating of the trap to be a minimum of 125% of the main steam header pressure. Duct c/w manual bypass required.
12. For variable steam loads (main and secondary control station) use Fisher regulating valves with a class 4 closure and a Fisher DPR-900 controller or equal products. Provide a parallel backup pressure reducing valve for the main station. Reference Steam Station and Utility Connection Specification located on the University Website.

13. For constant load steam station (building humidity and domestic hot water loads) use separate Fisher pressure reducing valves installed in parallel with the main pressure regulating station. Reference Steam Station and Utility Connection Specification located on the University Website (to be confirmed). Reference Mechanical Valves.