

PLUMBING EQUIPMENT:

1. DESIGN STANDARD:

- 1.1 When domestic house pumps are required, the pumping system must pump the entire building. A full size bypass line with a shut off valve must be provided.
- 1.2 Acid dilution basins must be designed with sampling well.
- 1.3 Grease traps must be provided for all commercial kitchen applications.
- 1.4 Sump pumps and sewer ejector pumps must be provided to meet flow elevation requirements.
- 1.5 Provide domestic hot water circulation systems where directed by Rice University's Project Manager.

2. PRODUCT STANDARD:

- 2.1 For domestic pumping systems the Rice University prefers variable speed drives and prefers not to have a bladder tank. 2 stage at minimum.
- 2.2 All large domestic water heaters are to be steam to water shell and tube type heat exchangers.(Provided under mechanical sections.)
- 2.3 Master House/Residential Homes use gas fired hot water heaters.
- 2.4 Sewer and Storm Injectors.
- 2.5 Grease traps/interceptors.
- 2.6 Acid Neutralization basins with sampling well similar to Enfield.

3. PERFORMANCE STANDARD:

- 3.1 Sump pumps and Sewer Ejector pumps: ***Rice University to provide a list of acceptable manufacturers.***
- 3.2 Design grease traps per Code Requirements.
- 3.3 Hot water circulation system to be sized 5-10 gpm minimum at water heater.
- 3.4 Hot water heater sizing per code requirements.