

Executive Summary

The following report contains a detailed analysis of the existing mechanical systems for University Ridge at East Stroudsburg University. The main design objectives of the project were to provide a comfortable living environment while still meeting energy and ventilation requirements. These requirements had to be dealt with while also trying to meet a strict budget.

The systems major components are the gas and hot water fired duct furnace air handling units. Each of these units also had a dedicated condensing unit for the cooling side. These systems were designed using ASHRAE 90.1 and 62.1 which gave the required maximum energy use and minimum ventilation to maintain occupancy comfort. These design loads obtained from previous Technical Reports were then compared to design information.

Information on the equipment was gathered and put into schedules. The equipment was also analyzed and summarized in schematic drawings. Also, the operation of the system was analyzed and described.

The overall system is also critiqued for University Ridge. It was found that the system has some room for improvement due to cost and time restraints of construction. Long term savings is one area that may contain potential savings but will need further analysis to be determined.