

Executive Summary

An evaluation of an existing building is incomplete without an evaluation of all of its existing systems and components. To provide a quality evaluation, all aspects of the given system should be known. In-depth research and several pertinent calculations about the building and its systems are required for a full analysis. The mechanical systems of the Eberly Campus Community Center are currently being analyzed through a series of reports. Therefore, an existing conditions analysis is a logical extension of the current studies of the community center. Within this report is a detailed overview of the mechanical systems and equipment included in the Eberly Campus Community Center.

Detailed within this overview are several analyses and large quantities of data sheets. The analyses have already been performed during previous reports on the center and are only presented here as pertinent information. Analyzed within are the utility sources and rates, the building base ventilation requirements, the building heating and cooling demand loads, as well as the building monthly and yearly energy consumption and costs. Data sheets include building base design goals, indoor and outdoor design conditions, schedules of the existing mechanical equipment, and the operating history of the current system. Each of these included calculations and information are key components of the existing building systems evaluation.

After the compilation of the analysis and the data, the current operating conditions and efficiency of the system become clear. The system meets the majority of its original design goals, though the energy efficiency of the system could be improved. Several outstanding conditions – problems within the operating history - must be addressed in future reports to provide a system operating at its optimum point of both interior environmental quality and energy efficiency. This report provides a definitive overview both of the existing mechanical systems within the Eberly Campus Community Center as well as the possible problems that must be resolved within the future of the building.