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Executive Summary:

This report is an examination of the electrical system as it is currently designed. The main service as well as emergency service systems were examined, including all lighting, mechanical, and other miscellaneous equipment. In order to analyze the building, data obtained from the drawings, specs and panelboard schedules were used in order to determine appropriate sizing for equipment. NEC requirements for sizing of circuit breakers, wiring and conduit were observed during the analysis. Also analyzed were the rate structure and limitations on electricity rate due to the photovoltaics and cogeneration unit.

After the analysis, it was determined that (as expected) the building was designed appropriately to meet the NEC design requirements. The switchboard was found to be about 250A larger (1600A designed vs ~1350A required) than required, but since 1600A is a common size for switchboards, its is likely not cost effective to change this with a switchboard closer to the actual design amperage.