

Executive Summary

The purpose of this report is to evaluate The Gateway at MICA located in Baltimore, MD for its efficiency and energy consumption. It was evaluated using the LEED-NC 2.2 checklist, ASHRAE Standard 90.1-2004 and Carrier's HAP 4.20 Analysis Program.

In using the LEED-NC 2.2 checklist it was found that The Gateway at MICA was eligible for 13 of the 69 credits. Another 12 points are easily obtainable by choosing different materials for the building and implementing a few plans. This, however, is still not enough credits for a LEED certification as the minimum is 26 credits. Although at the point where 25 credits are obtained designing for an extra credit is extremely easy. So, if the owner were to decide that they want this building to be LEED certified it would not be too difficult to do.

The next part of the assignment was to check the compliance of the building with ASHRAE Standard 90.1-2004. In doing this evaluation the building envelope was checked for compliance as well as the HVAC systems and the lighting of the building. It was found that the building envelope did not comply with ASHRAE Standard 90.1-2004 but all other parts of the building evaluated with the standard did comply.

There was also an evaluation of lost rentable space due to mechanical equipment as well as the mechanical system first cost. This information can be found within the report.

The building energy and load data was found using Carrier's HAP program. The Gateway at MICA was modeled using this program and all load data as well as energy utilization data that was obtained from this program is included in this report.