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Executive Summary

The following technical report is an analysis of the existing lighting systems in The Virginia Commonwealth University. The information used in this report came from 1999 Bid Documents and *The IESNA Lighting Handbook* and ASHRAE 90.1 were referenced throughout.

The four areas of analysis are the Genetic Laboratory, the auditorium, the first and second floor lobby area, and the exterior walkway area between the classroom and laboratory buildings. The analysis included surface and furnishing characteristics, day lighting, light loss factors, controls, power density, tasks, and design criteria for each space. AGI 32 was used to develop models of the existing conditions for further analysis.

The lighting conditions throughout all of the spaces are satisfactory. The lighting and controls in each space are tailored to meet the needs of the specific tasks being performed in that area. The Genetics Lab is well lit for both classroom lectures and demonstrations and also adjustable for when performing experiments. A dimming system controls the auditorium's lighting system allowing for use of both marker boards and a projector screen along with enough light to perform tasks such as reading, note taking, and listening. The lighting system in the lobby provides direction for those passing through the space while highlighting the wood paneled walls. The exterior walkway between the laboratory and classroom buildings is lit so as to be able to see where one is going at night and to provide direction to the entrances of the buildings.