

What Makes Genzyme Center a Green Building?

Genzyme Center is designed to be one of the most environmentally-responsible office buildings ever built in the United States. From the earliest stages of the design process, Genzyme worked carefully to ensure that Genzyme Center would meet or exceed the highest standards for green buildings.

To help guide its decision-making, Genzyme registered the building with the U.S. Green Building Council under its Leadership in Energy and Environmental Design (LEED) Green Building Rating System. The LEED system is a voluntary, consensus-based national standard for developing high-performance, sustainable buildings, and it provides a complete framework for assessing building performance. Genzyme intends to apply for the highest possible (“platinum”) rating under the LEED 2.0 standard. If successful, Genzyme Center will become one of the first large-scale commercial office buildings to reach this standard in the United States.

A Five-Part Framework for Environmental Design

The LEED standard’s framework for environmental design is based around five core areas: sustainable site development, water savings, energy efficiency, materials selection and indoor environmental quality. Genzyme Center combines sophisticated technology and innovative design to meet or exceed the requirements of each of these five core areas.

Sustainable Site Development: Genzyme selected the new location for Genzyme Center after an exhaustive search, choosing the Kendall Square site for its strategic location near existing Genzyme facilities and its proximity to multiple modes of public transportation. Genzyme is proud that the new building will play a key role in the transformation of a contaminated “brownfield” site into a thriving, mixed-use urban community. The new building features a “living” vegetative roof, which will help reduce storm water runoff and heat island effects in the area.

Water Savings: Genzyme estimates that the new building will use 32 percent less water than a conventional office building. The building achieves this water efficiency through a careful combination of design and water-saving technology. Dual flush toilets and waterless urinals will cut down on water consumption inside the building, while moisture sensors in the landscaping will reduce unnecessary watering, a significant factor in corporate water use.

Energy and Efficiency: Genzyme estimates that energy costs for the new building will be 38 percent less than a comparable building. The building achieves this energy savings through multiple design features, including a concrete slab construction that helps to hold energy and moderate temperature changes in the building, a unique cooling system that uses waste steam from a nearby power plant to cool the building, and roof-mounted solar panels that were paid for in part by a grant from the Massachusetts Renewable Energy Trust.

The energy savings are also aided by the double-glass curtain wall that covers 32 percent of the building, which allows for both increased insulation and fresh airflow throughout the building. Furthermore, certain employee-friendly features – such as operable windows and an extensive natural light enhancement system that will allow 75 percent of all employees to work using natural light alone – will further reduce energy consumption.

Materials Selection: Genzyme's careful materials selection process for the new building had two core goals: to use sustainable and, whenever possible, recycled materials; and to make sure that these materials met or exceeded the top national standards for the emission of volatile organic compounds (VOCs), which can create an unhealthy working environment for employees.

Towards those ends, over 75 percent of all materials used in the building contain recycled content, and 50 percent of all materials came from local (within 500 miles) sources. Most of the wood used in the project is certified by the Forest Stewardship Council to ensure that it comes from well-managed forests. When complete, more than 90 percent of all waste from the Genzyme Center construction site will be recycled or reused. All materials meet or beat national standards for VOC emissions.

Indoor Environmental Quality: The focus of Genzyme Center is on providing a positive, healthy and exciting workplace for Genzyme employees, so the quality of the indoor environment is paramount. Genzyme will employ a sophisticated air monitoring system to ensure that the air quality in the building is optimal. Importantly, all materials used in the new building (carpets, paints, etc.) meet the strictest standards for VOC emissions. Moreover, the construction schedule for Genzyme Center allows for a commissioning period after construction is completed and before the building is occupied, during which time Genzyme will be able ensure that the building systems are functioning as designed and that the indoor environment is clean.

Other important employee qualities will make the building a fun and comfortable place to work: local temperature controls, operable windows, and views to the outdoors from every seat chief among them.