



## GREEN@LMA

*About the Longwood Medical and Academic Area activities to encourage a sustainable environment.*

### Renovating with the Environment in Mind

Driven by a desire to accommodate changing styles of worship and religious education, the demands of an expanding congregation and the need to update and preserve the historic 83-year-old building, **Temple Israel** recently completed an extensive 3-stage renovation project that accomplished these goals while delivering a number of environmental benefits.



#### Preservation, Sustainable Products, Removing Hazardous Materials

Environmental considerations were a primary focus during the planning and renovations. The most sustainable element of the project was renovating the existing structure rather than building a new one, harvesting the latent energy and materials of the original 1927 temple. "We preserved as much as possible from the original building, used sustainable materials wherever possible, removed and abated hazardous materials, and took the opportunity to use it as a 'teaching moment' in the school," says Marc Maxwell, a lay leader of the Temple, architect and chair of the Temple Building and Grounds committee. Planning for the project began in 1998. Construction was sequenced to allow continuous use of the building and took 4 years to complete. The project was funded through donations from the Temple Israel congregation.

#### From Boiler Space to Classrooms

The first phase of renovation replaced the Temple's enormous antique boilers with a much smaller but more efficient heating system that allows better temperature control. They abated the hazardous materials from the original boilers and recycled 200 tons of scrap steel, brick, concrete, dirt and sand. The space occupied by the old boilers was converted into a mezzanine with three classrooms and storage.

#### Preservation, Flexibility and Efficiency

The plan's second stage converted the sloped 1927-era Levi Auditorium into a flat-floored, accessible and cutting-edge multipurpose room. Preserving original features -- reusing the wooden paneling, creating trim for the renovated room from the old slate floor and restoring all of the stained glass and decorative metal Judaica -- earned the Temple an award from the Boston Preservation Alliance.



Improvements are extensive: A computerized energy management system was installed, 50-year-old roof-top air conditioners were replaced with energy-efficient models, and the building was outfitted with state-of-the-art fire protection systems. Hazardous materials -- insulation, roof flashing and ductwork -- were abated and disposed of by a licensed specialist. Wooden beams and coffers were preserved and reinstalled over new insulation, an acoustic ceiling, and an efficient, electronically-controlled lighting system. The stage is now a sustainable bamboo dance floor and a full catering kitchen; other enhancements include a comprehensive audio-visual system and motorized solar shades.

Next, the former balcony was converted into flexible classroom and meeting space. The original windows and brass and bronze chair rails were retained. The floor was leveled, and removable glass walls and flexible seating were put in place, allowing the new space to serve as a series of classrooms or be opened up as part of the main auditorium. This expanded the number of people who can be accommodated during holiday services and special events, and makes the space a valuable resource to the Temple and hospitals and colleges in the area.

#### Accessibility and Groundwater Supplies

The third and final stage of the project restored the building's front entry on The Riverway, which had not been used in 40 years. Granite stairs and LED lighting now grace the historic entrance, made fully-accessible thanks to a new ramp and aluminum and glass handrails.

A roof-top rainwater collection system was installed on the sanctuary. It fills three new

schoolbus-size perforated cisterns located under the courtyard as part of a groundwater recharge program that runs from Longwood Avenue to the Back Bay that is designed to maintain the groundwater levels that preserve the pilings under many Back Bay buildings.

For more information about Temple Israel's renovation project, contact Marc Maxwell at [marc@maxwellarchitects.com](mailto:marc@maxwellarchitects.com).

### Also In This Issue:

- [Commuter Transit Patterns Going Green](#)
- [Making Cycling Better](#)
- [Farm to LMA](#)
- [Green Spotlight – ReStore Inspires Creativity and Reduces Waste](#)
- [Renovating with the Environment in Mind](#)
- [Big Bellies Come to the LMA](#)
- [Emmanuel College Signs National College and University Climate Commitment](#)
  
- [Back to Green@LMA Table of Contents](#)

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