

**“Next Generation” 3<sup>rd</sup> prize 2008 North America**

**Responsive urban downtown activity center, Boston, USA**

**Project data**

**Type of project** Architecture (institutional)  
**Estimated start of construction** Not applicable

**Main author**

**Name** Andrew Edward Lantz  
**Profession** Student  
**Organization** Harvard GSD

**City/Country** Cambridge, United States

**Further author(s) & legal guardian(s)**

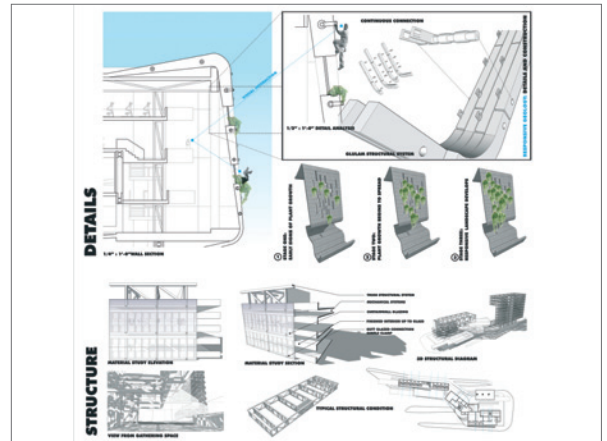
**Further authors:** Not applicable



Urban strategy.

**Comment of the Holcim Awards jury North America**

Locating itself on a bisecting garden and artificial path weaving through downtown Boston, the concept for a new YMCA proposes a continuation of this existing green space and to articulate the notion of a program as path which is made up of fitness, cultural and housing program elements. The unique idea is to gather and use the energy created with the activities intrinsic within each program category, such as running on a treadmill, for instance. The collected energy will then be stored in batteries and used for public purposes such as lighting the pathways or completely running the YMCA building. The striking vision of this project is the conviction that no energy source is too small to be exploited.



Details and structures: observation of possibilities.

**Project description by author**

Locating itself on the Greenway, a bisecting garden and artificial path that weaves through downtown Boston, the YMCA proposes a continuity of this green space through the articulation of program as path. This notion of program as path is formulated from initial sectional cartographies that sought to uncover undiscovered circulation paths along a section cut within the urban context. By analyzing these new notions of circulation both in relation to calories burned and difficulty of experience, a new intention for urban fitness was uncovered.

The site selection and urban strategy for this downtown YMCA is generated to illicit the vulnerability of experience through the intersection of an institutionally-based work-out and fitness plan with that of the challenges of an impromptu, geology of activity. The intersection of these two design intents creates a conceptual program that responds to both the seasonal attributes of the site, the ability for the emergence of chance with a user's experience and the ability to harness energy from this interaction at an urban scale.

With each category of program, as with culture, housing and fitness, there is a desire to gather and use the energy created in the activities intrinsic within each category. For instance, energy can be collected from the activity of an individual on typical exercise machines, such as the treadmill or the rowing machine, through the use of nanogenerator technology. This energy can then be used to light a series of secondary lights along the course of the Greenway, or more importantly could drive and power the entire infrastructural system of the actual building. This play between both a responsive program and a responsive geology is the crux of the urban and environmental design strategies for this proposal of an urban YMCA.

Along with this, environmental strategies helped to define the true limit of programmatic elements. The site's ability to undulate from season to season and through temporal changes helped to provide a new idea for efficiency in regard to the overall program. One example of this is the fluctuation of the basketball court into a seasonal pond. This overlap of program that responds to the environment helped to reinforce its usability within its urban context.

The YMCA proposal is made up of fitness, cultural and housing program elements. The fitness element requires spaces for working out, alternative health, a running track, administrative offices and storefront and aquatics center. The cultural element is made up of a retirement center, library and digital media space. The housing element is made up of single and family housing, with the ability for it to be made into a hostel form of housing.

**Relevance to target issues by author**

**Quantum change and transferability**

On a larger scale, this project proposes to diminish architectural typologies by figuring out ways in which urban understandings can accommodate for particular programmatic elements within a temporal understanding of urbanism. Along with this it desires to identify the technology through which user interaction can become a viable source of renewable energy.

**Ethical standards and social equity**

Although this project is only a conceptual design for a possibility, it could be believed that its occupants, financiers, consultants and others involved would adhere to a high ethical standard, and would function as a transparent political hybrid. It also is a socially viable project due to its integration within the urban context and community in general.

**Ecological quality and energy conservation**

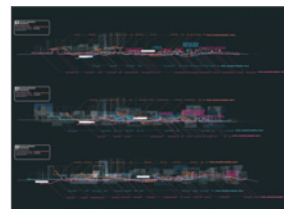
This project can be understood as a passive building with complete functionality derived from user interaction. By allowing for complete user control, a user can be made aware of how energy from fitness, living and basic interaction can become a means for keeping a building alive, literally.

**Economic performance and compatibility**

It would be planned that this project proposes to observe an economy of resources in its actual deployment of construction. By relying on local materials, the reusing of waste from the Boston Big Dig project and the overall questioning of how big to build, this project hopes to reevaluate the economic impact of the traditional architectural typology of institutional building.

**Contextual and aesthetic impact**

This project's contextual impact is made apparent through its ability to make urban space and interaction its guiding priority for design. By taking advantage of making this a public space, its implementation into its contextual fabric only furthers its use within Boston's downtown environment.



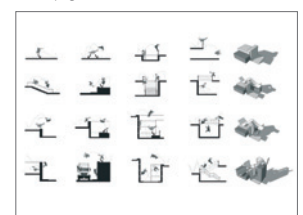
Caloric section cartography.



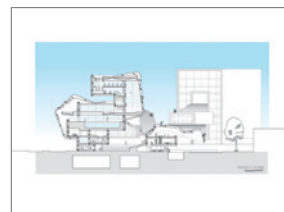
Blended program elements.



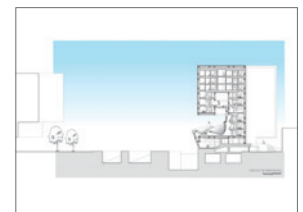
Programmatic energies.



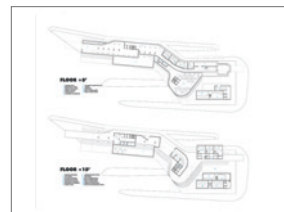
Parkour urbanism.



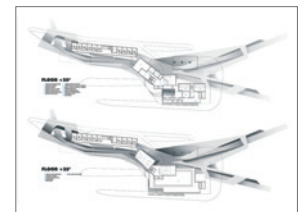
Section through fitness center.



Section through residential program.



Floor plans 1.



Floor plans 2.