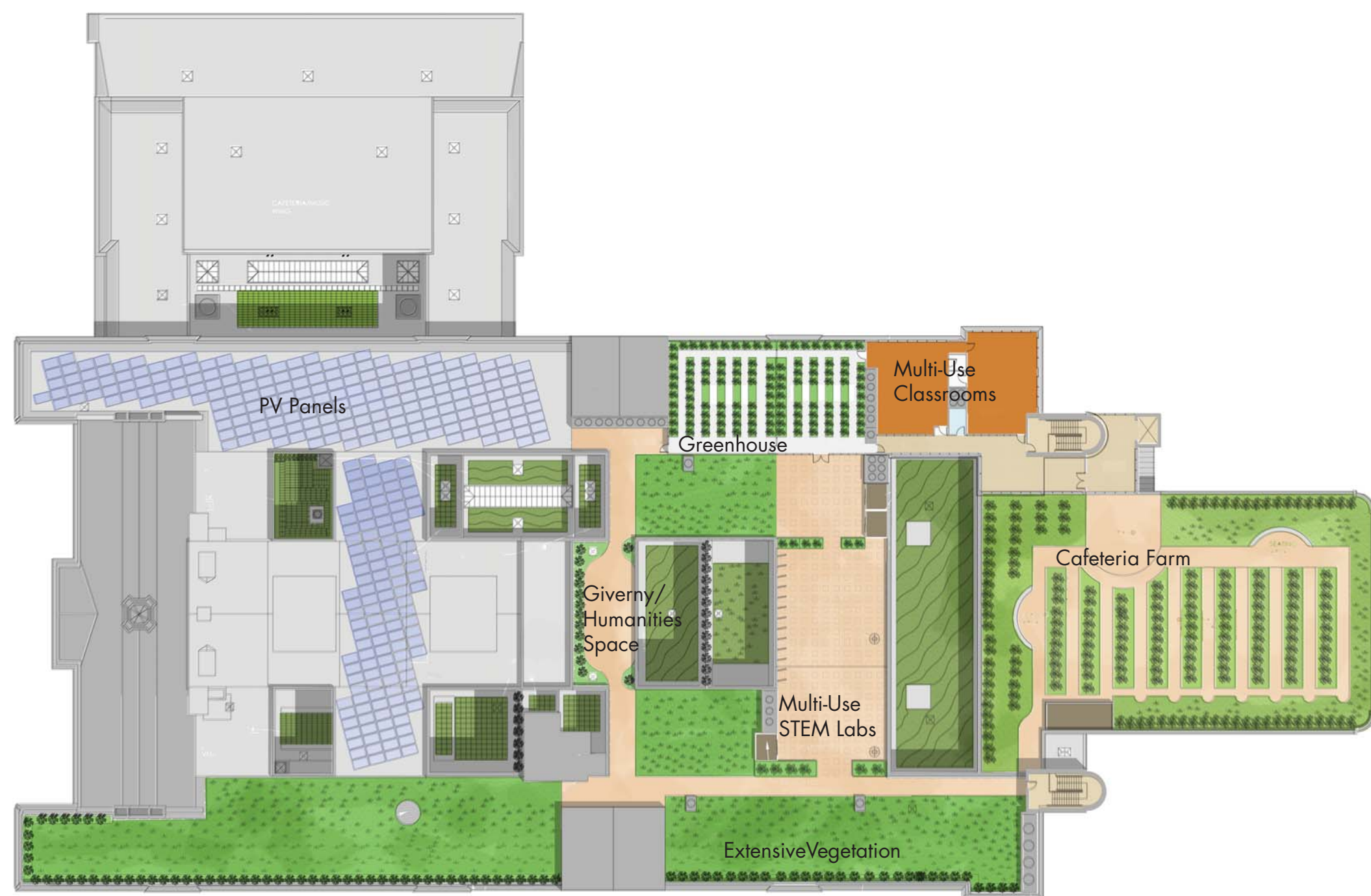


The Shared Green Roof at Boston Latin School

a community learning center for Boston students



INNOVATIVE DESIGN/INNOVATIVE EDUCATION

The Green Roof's natural environment is itself integral to the learning experience. Indoor exhibit and multipurpose spaces lead to a cafeteria greenhouse and outdoor culinary gardens. Outdoor laboratories for science, environment and technology include a weather station, CO2 measuring devices, and other data collection equipment. A space with contemplative garden, "Giverny at BLS," supports art and humanities classes. The greenhouse, gardens, labs, micro-environments and green roof systems offer enriching educational opportunities, as well as food and renewable resources. Extensive green roof systems in light courts at multiple floors are daily reminders of sustainability. An 'Education for Sustainability' curriculum will be piloted on the Shared Green Roof.

SOCIAL EQUITY

Students in Boston Public Schools will use the community learning center on field trips and webcam tours, through studying online data generated by experiments and monitoring equipment, and by participating in the Education for Sustainability curriculum. Rooftop summer garden camps and service projects will engage additional city youth. The Shared Green Roof connects urban youth with nature to enrich their education as well as enhance their health and well-being: studies show that children who spend time in nature score better on tests, have higher levels of concentration, are calmer, have lower BMIs and are more likely to feel a sense of stewardship for the planet.

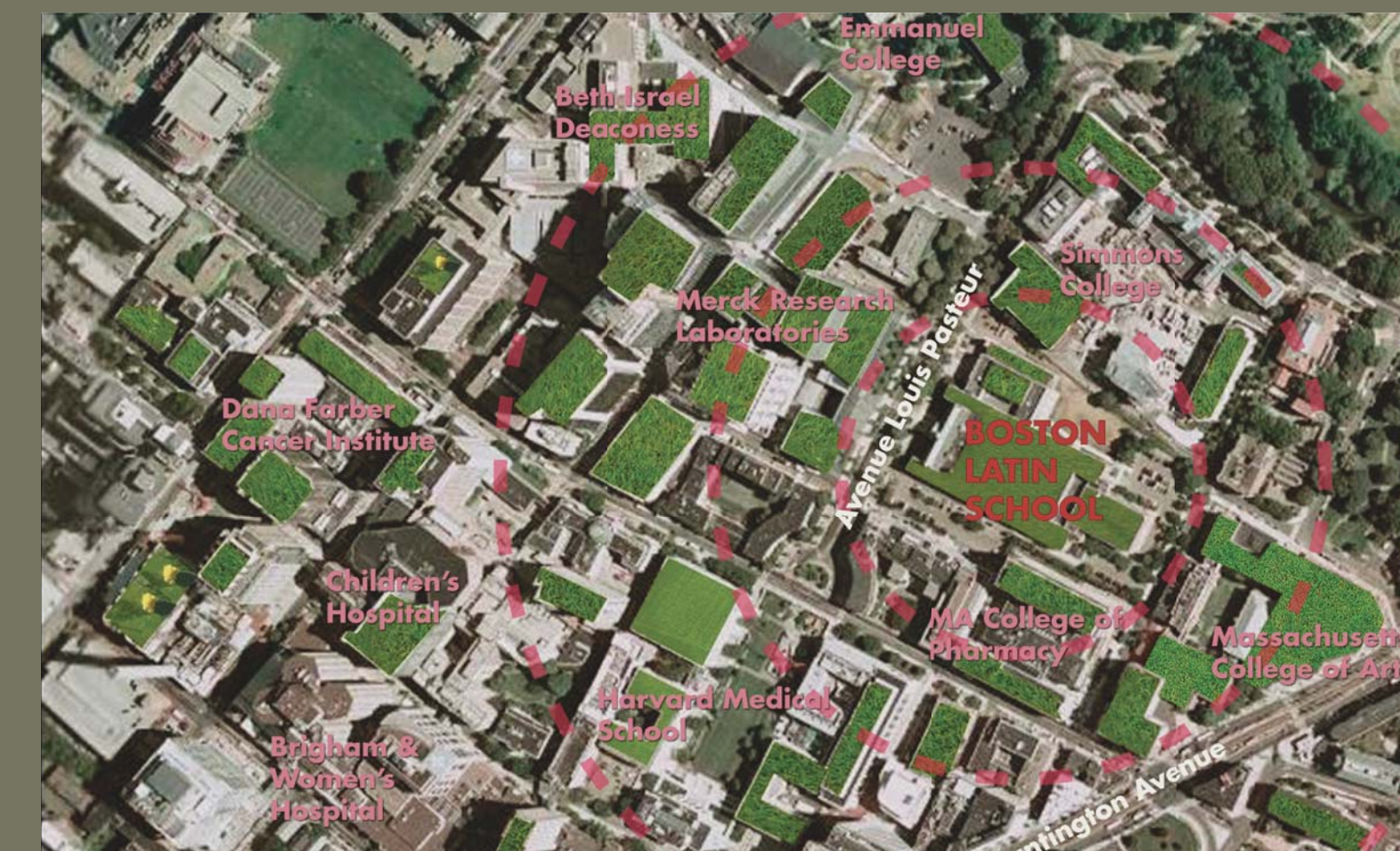
ENVIRONMENTAL IMPACT

The Green Roof reduces greenhouse gases, energy use, heat island effect, and stormwater runoff. Vegetated areas provide habitat for birds, bees and insects and captures rainwater for irrigation. The greenhouse uses solar gain + thermal banking for year round growing season, reducing food miles. Composted organic waste is reused as fertilizer. The anticipated 50kW PV array could deliver 65kW hours per year for school use. Solar thermal panels partially meet cafeteria hot water demand.



THE OLDEST SCHOOL/THE NEWEST THINKING

Located in Boston's densely built Longwood Medical Area, the school has no usable land. The Shared Green Roof transforms the unused roof of the nation's oldest school into a 21st century educational environment, while improving environmental performance. The project is a major initiative of a student environmental club, which has developed the design with the architect in visioning sessions and design charrettes. Students have also built partnerships with area colleges to support campus sustainability. Together they formed the Fenway Green Roof Coalition to create the first green roof enclave in Boston.



A REPLICABLE MODEL

The Shared Green Roof is a demonstration of an integrated educational environment, with inquiry-based, hands-on learning opportunities; data collection and evaluation; and renewable energy sources. Data and experience will be shared online with partner schools. Curriculum developed on the roof will be shared online and in teacher training sessions. Other schools are encouraged to create similar environments, on roof or at ground to offer students inquiry-based learning.



PROJECT
The Shared Green Roof at Boston Latin School
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SUBMISSION BY
Boston Latin School
Youth Climate Action Network

PROJECT TEAM
Studio G Architects
Architecture
Souza True and Partners
Structural Engineer
SAR Engineering
MEPFP Engineers
Byrne McKinney
Development Consulting

design and renderings by
Studio G Architects

- Image Key - clockwise starting with top left image:
- 1 Green Roof Plan
 - 2 Giverny: Contemplative Garden + Humanities Space
 - 3 Greenhouse Exterior
 - 4 Greenhouse Interior
 - 5 The Green Roof Design on Site
 - 6 Vision for Fenway Green Roof Enclave
 - 7 Multi Use STEM Labs
 - 8 Aerial View Toward East
 - 9 Green Roof Overview

SUBMISSION CATEGORY: BUILDING CONSTRUCTION