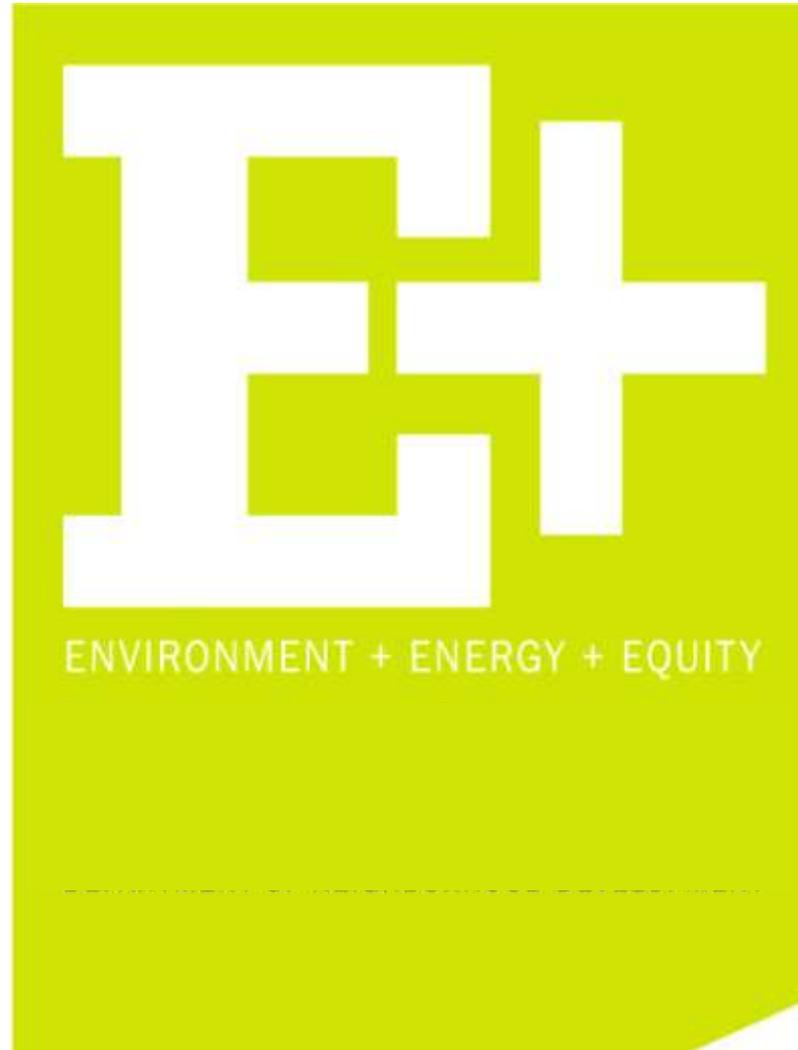


E+ Green Community Charrette





Mayor Thomas M. Menino's
E+ Green Building Program
Bringing energy positive homes to Boston's neighborhoods.

AGENDA

E+ Green Building Community Charrette

Presented by The Boston Redevelopment Authority and the Department of Neighborhood Development

- 8:30 Open House and Coffee**
- 9:00 Welcome and Introductions**
 Opening Remarks. John Dalzell, BRA
 Symposium Overview. David Grissino, BRA
- 9:10 Planning Process and Charrette Overview**
 Community Process Overview. David West, DND
 Charrette Overview and Objectives. John Dalzell, BRA
- 9:20 Sustainable Communities, Green Buildings, and Boston**
 E+ and Green Building Overview. John Dalzell, BRA & Jay Lee, DND
 Current Conditions. David West & Bob Jones, DND

Breakout Sessions

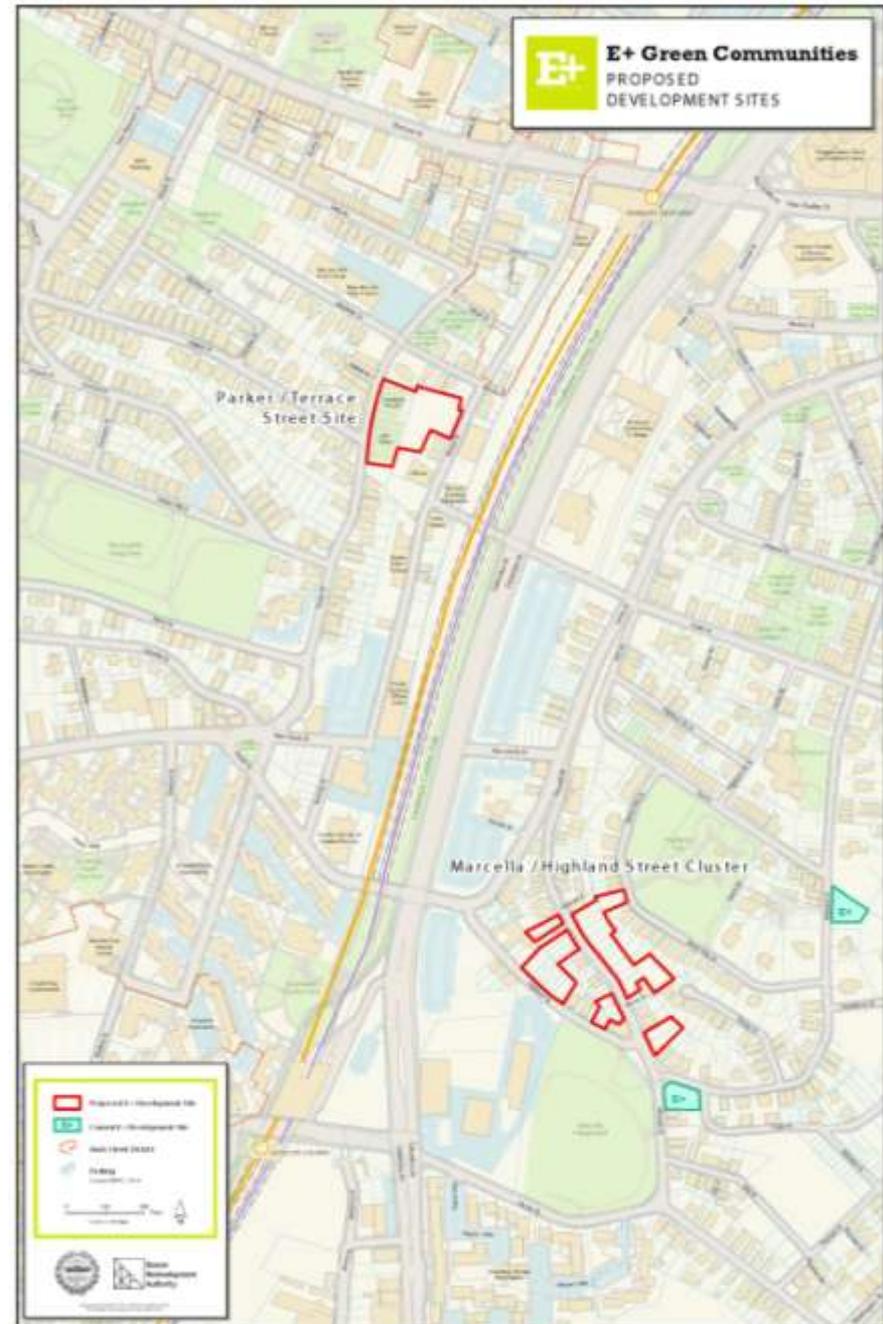
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 - Environmental
 - Energy and Water Performance
 - Social and Community
- 11:20 Community Vision for Use and Urban Design**
 - Uses and Configuration
 - Massing and Character
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For additional information, maps and documents, please visit the BRA Web site: <http://www.cityofboston.gov/bra>, select "Planning Initiatives", and "E+ Green Buildings".

For questions or to be added to our contact list Contact John Feuerbach, Senior Development Officer for Housing, DND at 617.635.0353 or jfeuerbach.dnd@cityofboston.gov, or John Dalzell, Senior Architect, BRA, at 617.918.4334 or John.Dalzell.BRA@cityofboston.gov

In partnership with:

Sponsored by:





Symposium Overview

Community Symposium

March 1st, 2012

Roxbury Community College

*Envisioning E+ Green
Communities*



PROGRAM

Envisioning E+ Green Communities

Mayor Thomas M. Menino

Kairos Shen

Chief Planner, City of Boston

Sustainable Neighborhoods

Katie Swenson

Vice President, Design,
Enterprise Community Partners

Sustainable Sites and Placemaking

Chris Reed

Founding Principal,
StoSS Landscape Urbanism

Green Buildings and Communities

Phillip Thompson

Associate Professor of Politics and Planning,
Department of Urban Studies and Planning, MIT

Presented by The Boston Redevelopment Authority and
the Department of Neighborhood Development

For further information, contact:



John Datzell
john.datzell@bra
@cityofboston.gov



John Feuerbach
jfeuerbach@dnd
@cityofboston.gov

(Scan to save directly to your phone)

Program Partners:



 Enterprise



 BSA



Hawthorne **Eco**Village



Helping people help themselves



Partners



Transforming Lives and Landscapes



Lead Funder



Minneapolis
City of Lakes

NORTHSIDE
HOME FUND

Lead Supporters



FAMILY
HOUSING
FUND



Protect it. Pass it on.

MISSISSIPPI
WATERSHED
MANAGEMENT
ORGANIZATION





TREE NURSERY ▪ 2008





**Hawthorne EcoVillage
DESIGN WORKSHOPS**

Workshop 1: Introduction to the process and the goals of the design process.

Workshop 2: Site analysis and conceptual design.

Workshop 3: Preliminary design and site plan.

Workshop 4: Final design and construction documents.

The process of design is a series of steps that lead to the final design. Each step is a workshop where we will work together to develop a design that meets the needs of the community and the environment. The process is iterative and collaborative, and we will be working together to develop a design that meets the needs of the community and the environment.



DESIGN WORKSHOPS ■ 2009



THE N.E. BLOCK: THE GREEN MALL

looking east from 6th street

DOUBLE-LOADED MULTI-FAMILY HOUSING
WITH UNDERGROUND PARKING
EACH BUILDING 4 FLOORS @ 4300 SF
EST. 24 UNITS AT 2200 SF IN NE BLOCK

EXTENDED ALLEY WITH
GREEN DRAINAGE RIBBONS



LOWRY AVENUE

COMMUNITY GREEN

30'

6th STREET

TERRACES, ROOF GARDENS, OR GREEN ROOFS

SINGLE FAMILY TOWN HOMES WITH
ATTACHED GARAGES AND WATER
COLLECTION DEVICES (6 UNITS @1,600 SF)

SINGLE FAMILY IN-FILL
HOUSING (2 new units)

MAKE LANDSCAPES PRODUCTIVE

-  food
-  energy
-  healthy bodies
-  art/culture/performance
-  one-of-a-kind experiences
-  clean soil
-  remediation technologies
-  research/knowledge (urban ecology, e.g.)
-  training opportunities / jobs
-  revenue
-  ecology
-  habitat
-  clean water
-  plant stocks (nursery, e.g.)
-  social life (in many forms)

**SINGLE-USE, PASSIVE
LANDSCAPES ARE
RESOURCE-CONSUMPTIVE;
CONTEMPORARY
LANDSCAPES CAN
GENERATE RESOURCES.**

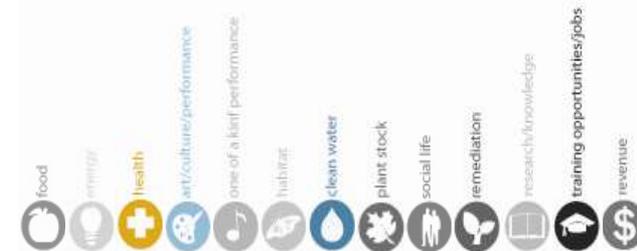
More than just utilizing land, open-space activation produces glocal products while tapping into under-utilized resources, potential labor, and Detroit's waste streams.

7. Water Treatment

Grossenhain Landesgartenschau, Grossenhain, Germany



- Wetland system uses plants to filter water for a swimming pool
- Eliminates the need for chlorine or other chemicals
- Wetland incorporates sculptural element with practical function: Two mossy cupped hands reach from the bank into the pond. As water flows into the hands a misting fountain aerates it and moistens the mosses, which in turn, purify the water.
- 2001, Artist – Jackie Brookner



12. Cultural Enterprise/Event Landscape Westergasfabriek, Amsterdam, Holland



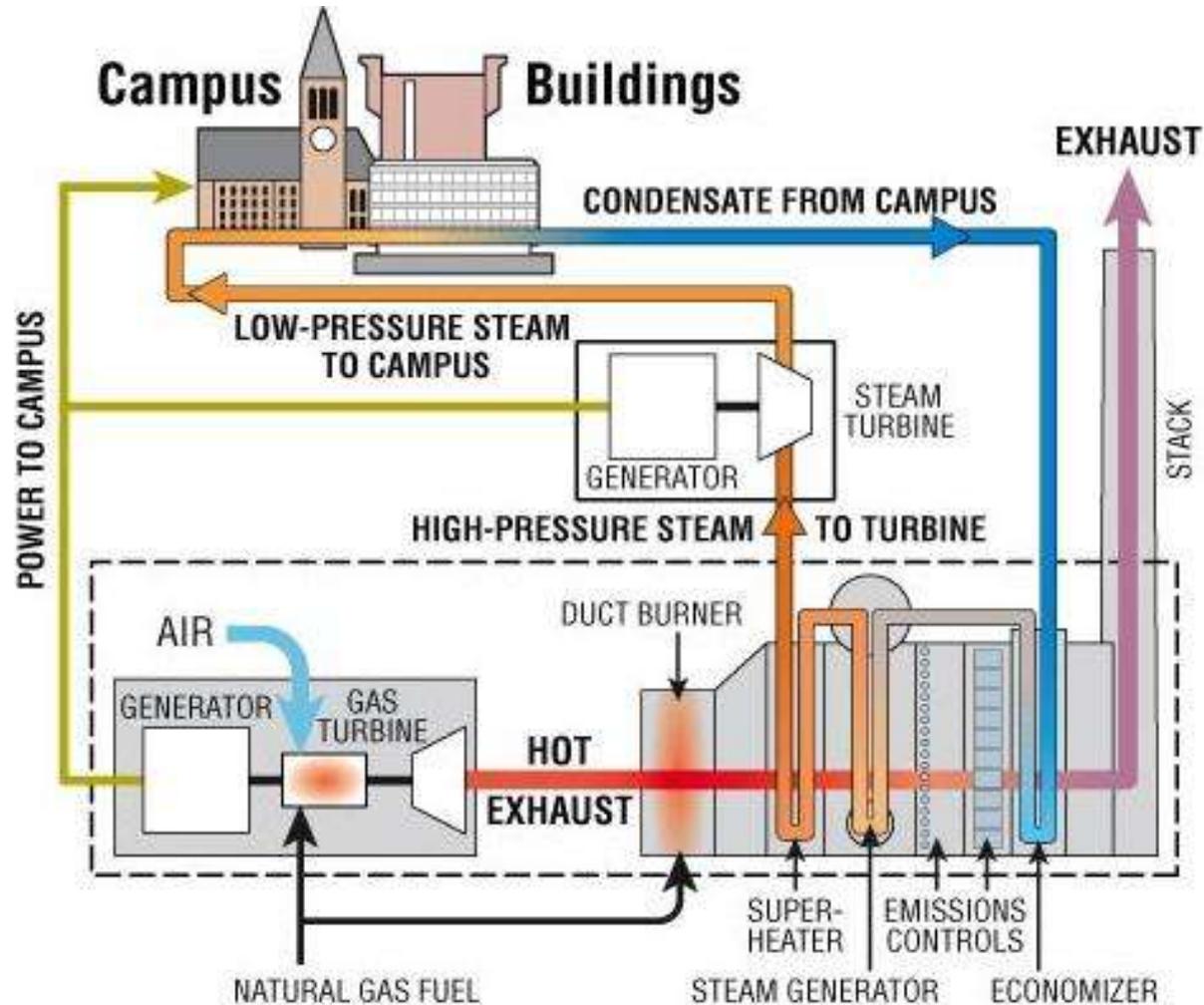
- 1993 energy corporation vacated buildings
- Temporary uses were organized until the buildings were modified for their final use
- Initial groups using the spaces consisted of a film studio (Studio Wenek) and an artist collective (patchwork)
- To keep the interim uses as diverse as possible a program was organized by Liesbeth Janse
- Other activities included a circus, bar restaurant, carnivals, festivals, fun fairs, 'Puck en Hans' fashion show and Netherlands largest Opera (2000 people)
- Temporary events continued for 7 years due to their success



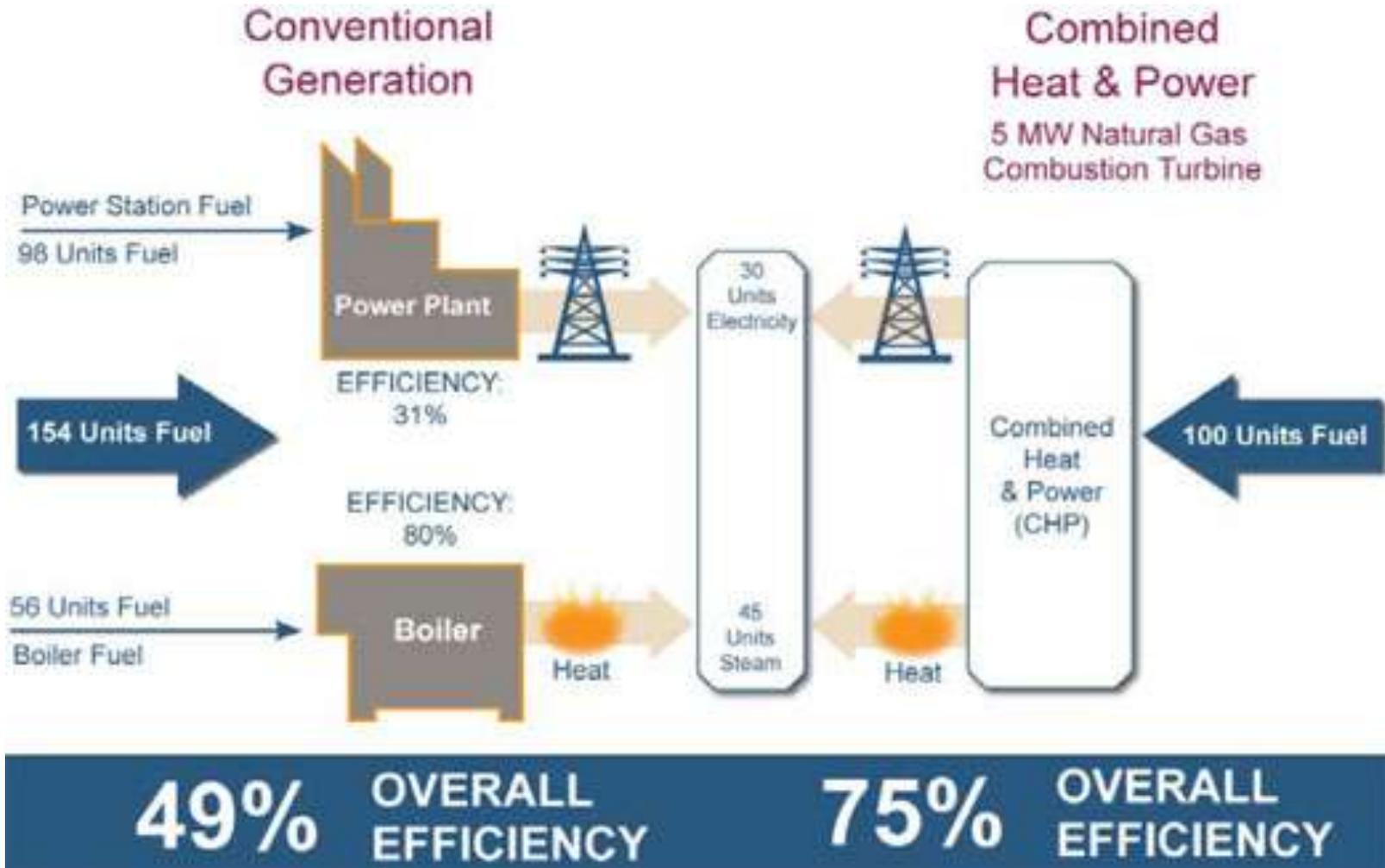




Combined Heat & Power (CHP)

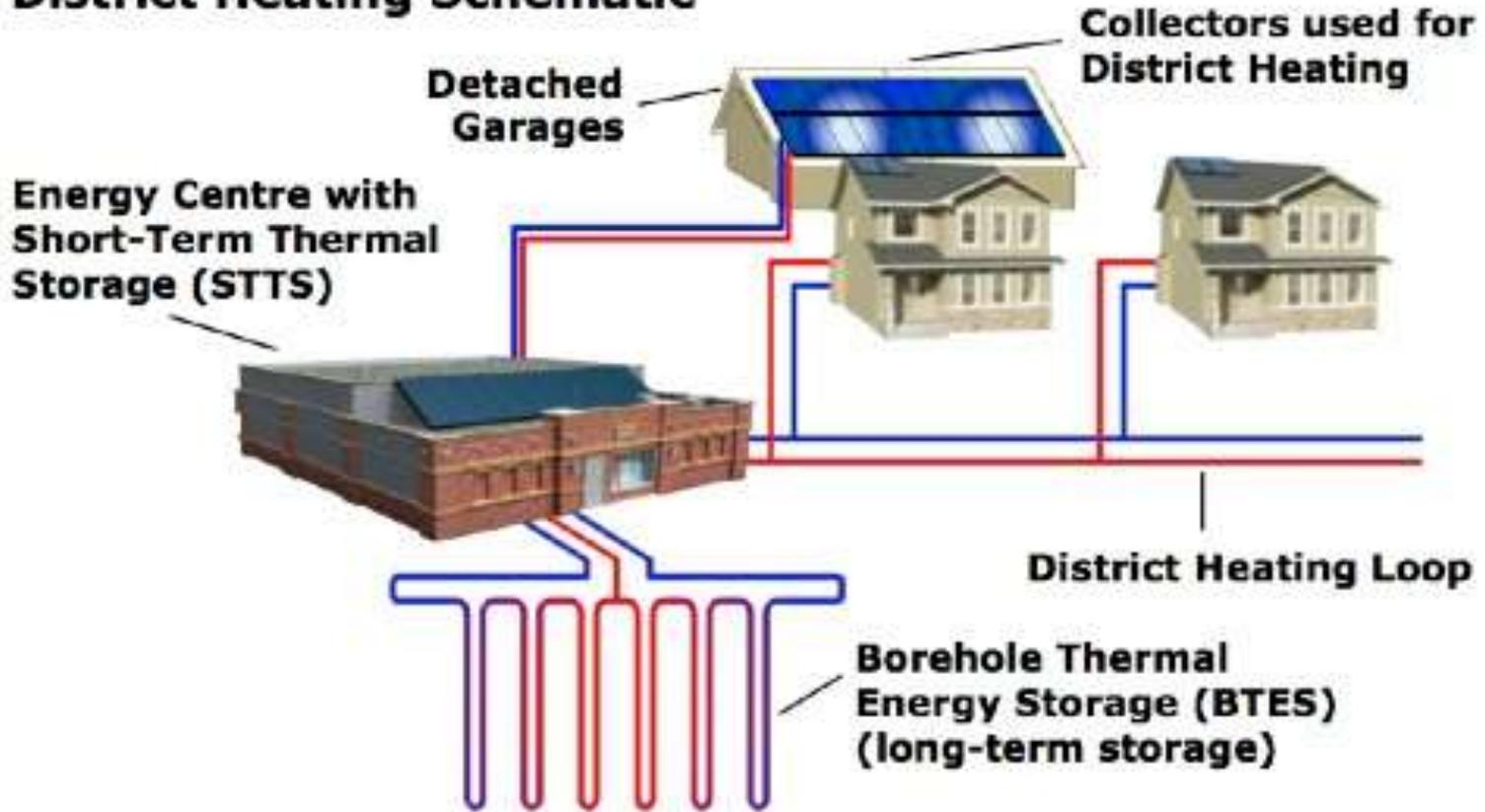


Combined Heat & Power (CHP)



District Heating

District Heating Schematic





Community Planning Process

- Community Meeting – Outline E+ Green Communities Initiative and discuss potential Mission Hill and Highland Park sites
- Symposium *Envisioning E+ Green Communities* – Discussing sustainable communities, Place-making, and green buildings
- Community Charrette – Today!
- Community Meeting - Report back from Charrette and refine Community Vision, Use & Design Guidelines - April
- Community Meeting - Review and finalize Community Vision and Use & Design Guidelines for Request for Proposals (RFP) - May
- Issue RFP – Late Spring
- Proposals Due- Late Summer
- Community Meeting – Review Submissions - Fall



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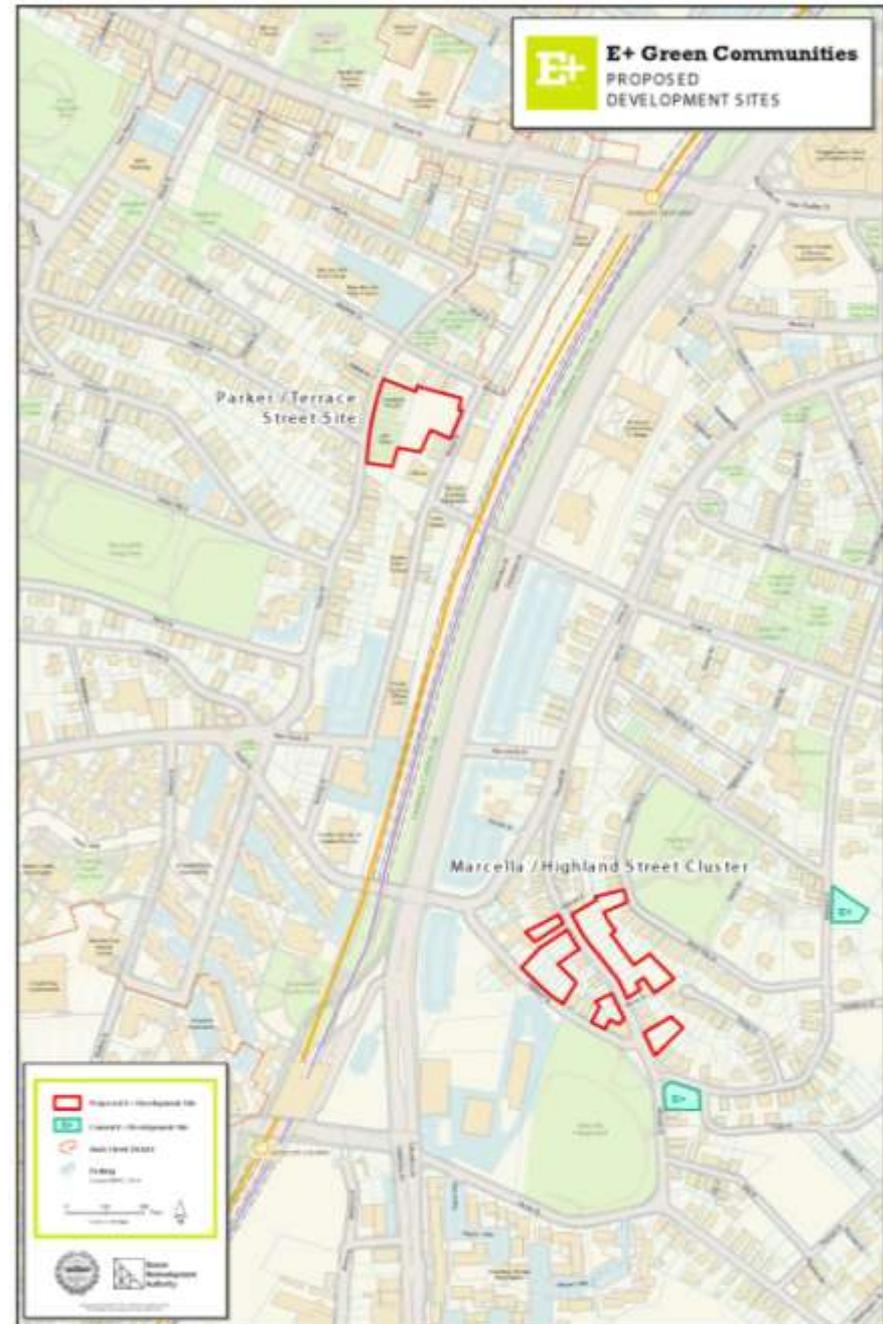
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Sustainable Communities, Green Buildings, and Boston

Mayor's Green Building Task Force Recommends 10 Point Action Plan

- LEED By Example - LEED Silver for City Buildings
- Require LEED "Certifiable" for City Supported Projects
- Amend Article 80 to Require LEED "Certifiable"
- Craft A Three Year Implementation Plan
- Provide Training for City Employees
- Provide Technical Assistance – *Feasibility Grant Program*
- Provide Predevelopment Funding
- Assistance Residents – *Renew Boston*
- Residential Recognition – *Mayor's Annual Green Awards*
- Distributed Generation – *Energy Protocol*

FALL
2004

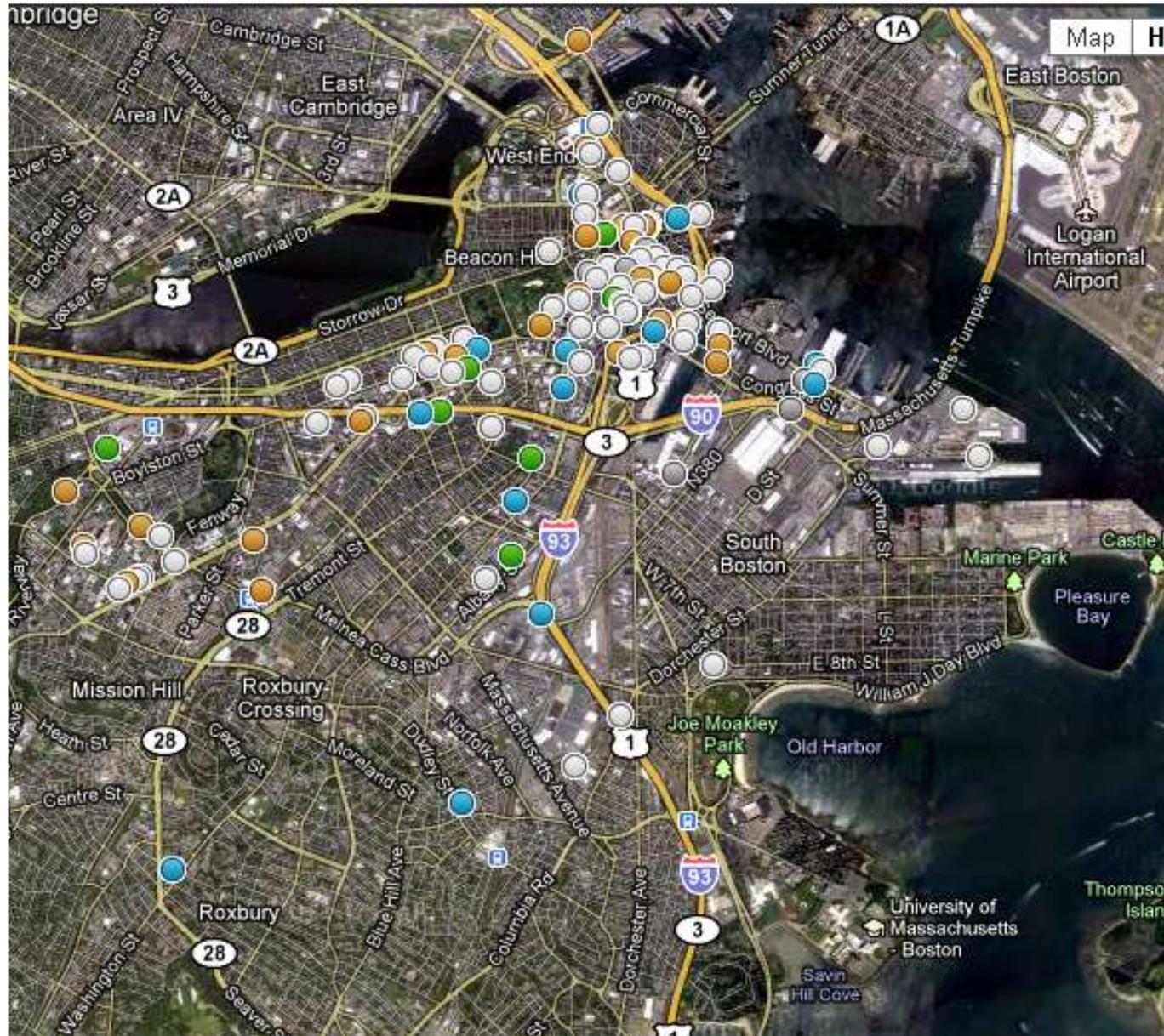


Green Building Zoning

Article 37 Review
40 Plus Projects Approved
11M+ SF
2/3rd USGBC Certified

LEED Certified Projects
100 Plus Projects Certified
26.5 M+/- SF
7 Platinum
49 Gold
25 Silver
19 Certified Projects

LEED Registered Projects
170+ Projects Registered
56.5 M+ SF





Green Buildings

Launch E+ Green Building Demonstration Program

March 2011

Prove the Feasibility

Construct High Performance Green Residential Prototypes

Educate

Change Practices



LEADERSHIP

Mayor Menino's E+ Green Building Program has challenged leading architects, builders, and developers to work together to construct high performance, green, urban homes and to demonstrate the feasibility of regenerative buildings in Boston. Five key objectives guide the program and selection process:



FEASIBILITY

Demonstrates the performance, construction, and financial potential for locally built, energy positive, deep green, urban buildings with on-site renewable energy resources.



FUTURE PROTOTYPES

Construct high performance, green buildings using "on-the-shelf" products and materials, and replicable strategies that can serve as models for future practice.



HOUSING OPPORTUNITIES

Provide new housing opportunities affordable to a range of income earners in sustainable neighborhoods that are connected to nearby transit, work, and amenities.



AWARENESS

Raise public and professional awareness of the importance and potential for high performance, residential, green buildings and design and construction practices.



URBAN DESIGN

Reinvigorate Boston neighborhoods with new development that is both expressive of its high performance, green building features and is respectful of its context.

"E+ Green Buildings produce more energy than they use on an annual basis, giving energy back to the grid and saving homeowners money."

*- Thomas M. Menino, Mayor
City of Boston*



RFP for Three City Sites

Fourteen Proposals

- Leading builders, developers, architects, sustainability experts working together
- Three Development Teams
- Range of Approaches
- Varying Building Prototypes
- All Energy Positive
- All Deep Green
- All Contributing to the Community

Three Teams Selected

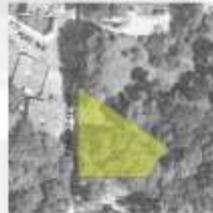
September 2011



LOCATION

Building new homes in compact neighborhoods that are connected to nearby transit service and local amenities reduces transportation-related energy use, pollution, and saves homeowners money. Redeveloping vacant parcels saves land, reduces sprawl, revitalizes existing neighborhoods, and promotes sustainable communities.

156 HIGHLAND STREET



64 CATHERINE STREET



61 MARCELLA STREET



"Often, when your goal is driving real change in the marketplace, it's best to show – not just tell...E+ is another example of Boston's leadership under Mayor Menino."

- Rick Fedrizzi, President, CEO, and Founding Chair of the U.S. Green Building Council



High Energy Efficiency

- Building Envelop
- Equipment & Systems
- Appliances

Utilizing 30% the energy of a typical new home

Solar Photo Voltaic Panels

- Exceed Electrical Loads

Solar Thermal Panels

- Provide Hot Water



ENERGY POSITIVE

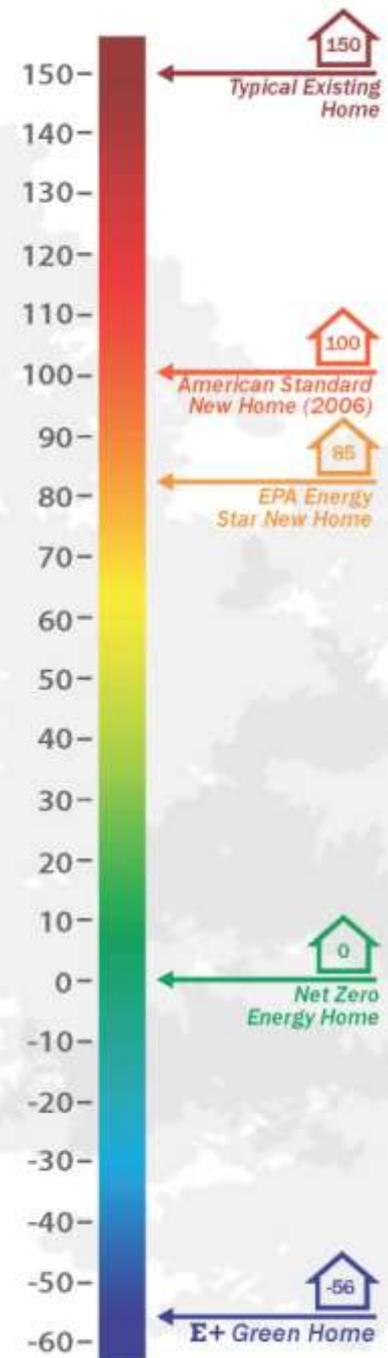
Home Energy Rating System (HERS)

The E+ Green Building program requires buildings that generate more energy than they use annually as indicated by a HERS Index of less than zero.

Developed by Residential Energy Services Network, the HERS models building energy performance. A comparable home, the HERS Reference Home, which is built to the specifications of the 2006 International Energy Conservation Code, scores a HERS Index of 100. A Net Zero Energy home scores a HERS Index of 0 and an E+ Green Home scores a negative HERS Index.

Each 1-point decrease in the HERS Index corresponds to a 1% reduction in energy consumption compared to the HERS Reference Home. An Energy Star home must have a HERS Index of 85, or lower, and is 15% more energy efficient than the HERS Reference Home.

The HERS Index system has been developed by Residential Energy Services Network (RESNET). Text courtesy of RESNET. www.resnet.us





Deep Green Buildings

- USGBC LEED Certified Platinum

Low Impact Site Development

Water Wise

Sustainable Material Use

Healthy Materials & Indoors

Location Efficiency



BEYOND PLATINUM

Green Building Leadership in Energy & Environmental Design (LEED)

The E+ Green Building Program requires buildings that are environmentally positive and exceeding LEED for Homes Platinum, the highest certification level.

LEED® is the US Green Building Council's internationally-recognized green building certification system that provides building owners and operators with a framework for identifying and implementing practical and measurable green building design, construction, operations, and maintenance solutions. LEED for Homes scales credit requirements to the size of the building and both measures and verifies practice in eight key sustainability and environmental impact categories:



Sustainable Sites

Discourages building on previously undeveloped land, seeks to minimize a building's impact on ecosystems, encourages regionally appropriate landscaping, rewards smart transportation choices, and promotes reduction of stormwater runoff, erosion, soil compaction, and construction-related pollution.



Indoor Environmental Quality

Promotes strategies that improve indoor air quality as well as those that provide consistent access to natural daylight and views and improve acoustics.



Water Efficiency

Encourages smart use of water, inside and out. Water reduction is typically achieved through more efficient appliances, fixtures and fittings inside, and water-conserving landscaping outside.



Locations & Linkages

Encourages building on previously developed and well-served and away from environmentally sensitive areas. Rewards homes that are built near existing infrastructure, community resources, and transit and in locations with access to open space for walking, physical activity and time outdoors.



Energy & Atmosphere

Encourages comprehensive energy use monitoring, efficient design and construction, efficient appliances, systems, and lighting, the use of renewable and clean sources of energy, alternate fuels or other, and other innovative measures.



Awareness & Education

Encourages home builders and real estate professionals to provide homeowners, tenants and building managers with the education and tools they need to understand what makes their home great and how to make the most of these features.



Materials & Resources

Encourages the selection of sustainably grown, harvested, produced, and transported products and materials. Promotes waste reduction as well as reuse and recycling, and rewards the reduction of waste at a product's source.



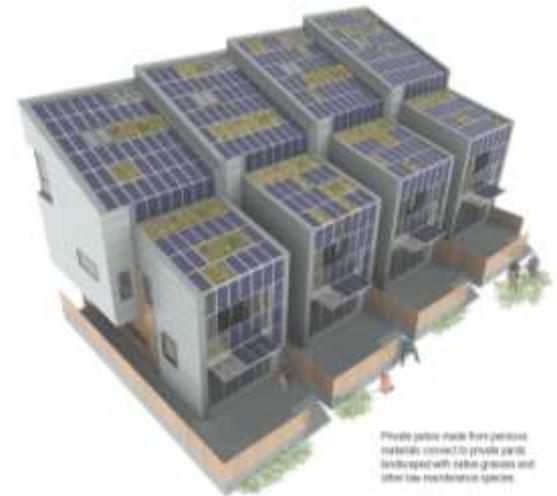
Innovation in Design

Rewards the use of innovative techniques and strategies to improve a building's performance well beyond what is required by other LEED credits, or to reward green building considerations that are not specifically addressed elsewhere in the LEED rating system.

The LEED® Rating systems has been created by the US Green Building Council. Symbols and text courtesy of the USGBC. For more information on LEED, please visit: www.usgbc.org



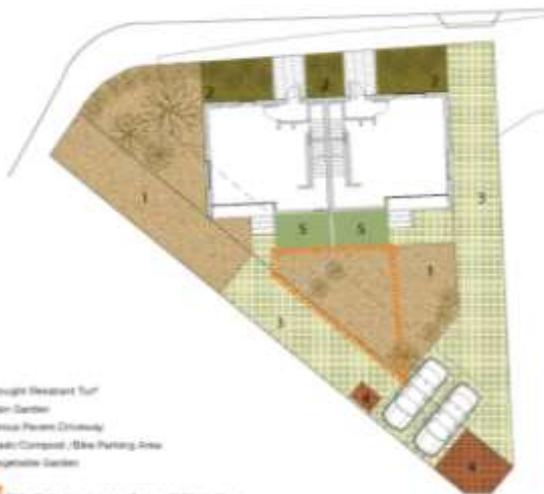
61 Marcella Avenue Highland Park



Urbanica



64 Catherine Street Wood Bourne, JP



GFC Development



Expanding to E+ Green Communities

Building on E+ GB Success

- Two City Owned Parcels
- Community Charrette and Planning Meetings
- E+ GB Goals PLUS
 - Neighborhood Sustainability
 - Place-making and Site Planning
 - Building and Community Sustainability
- RFP Seeking Leading Teams



Current Conditions



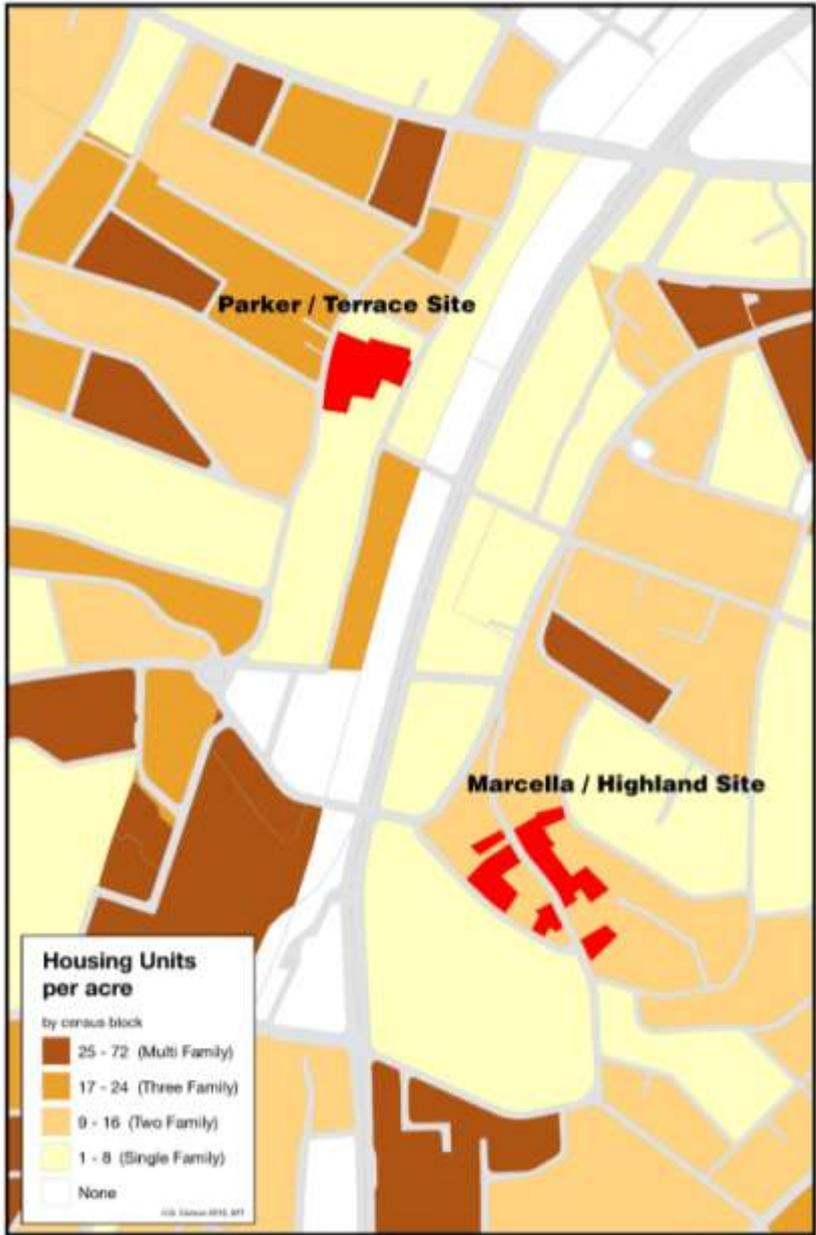
E+ Green Communities
PROPOSED
DEVELOPMENT SITES

2008 Oblique Imagery
Courtesy of Pictometry Inc.



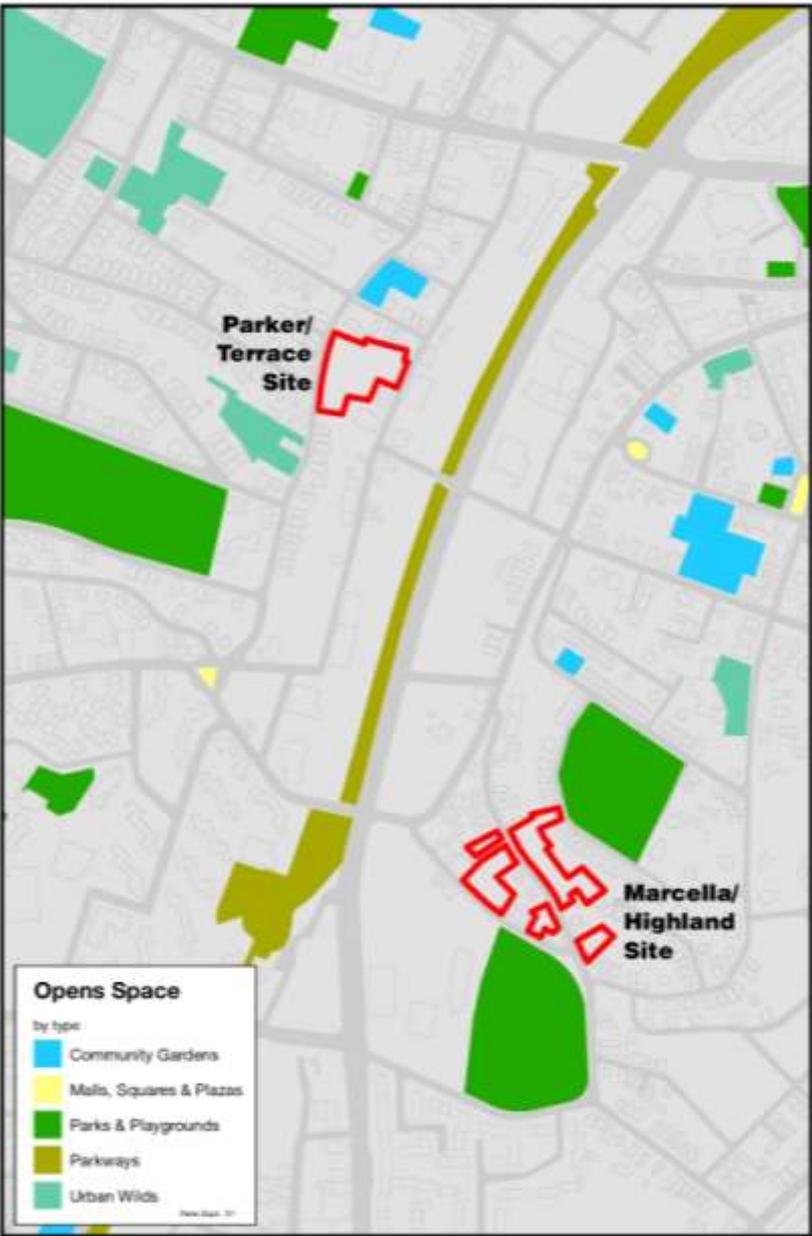


Housing and Population



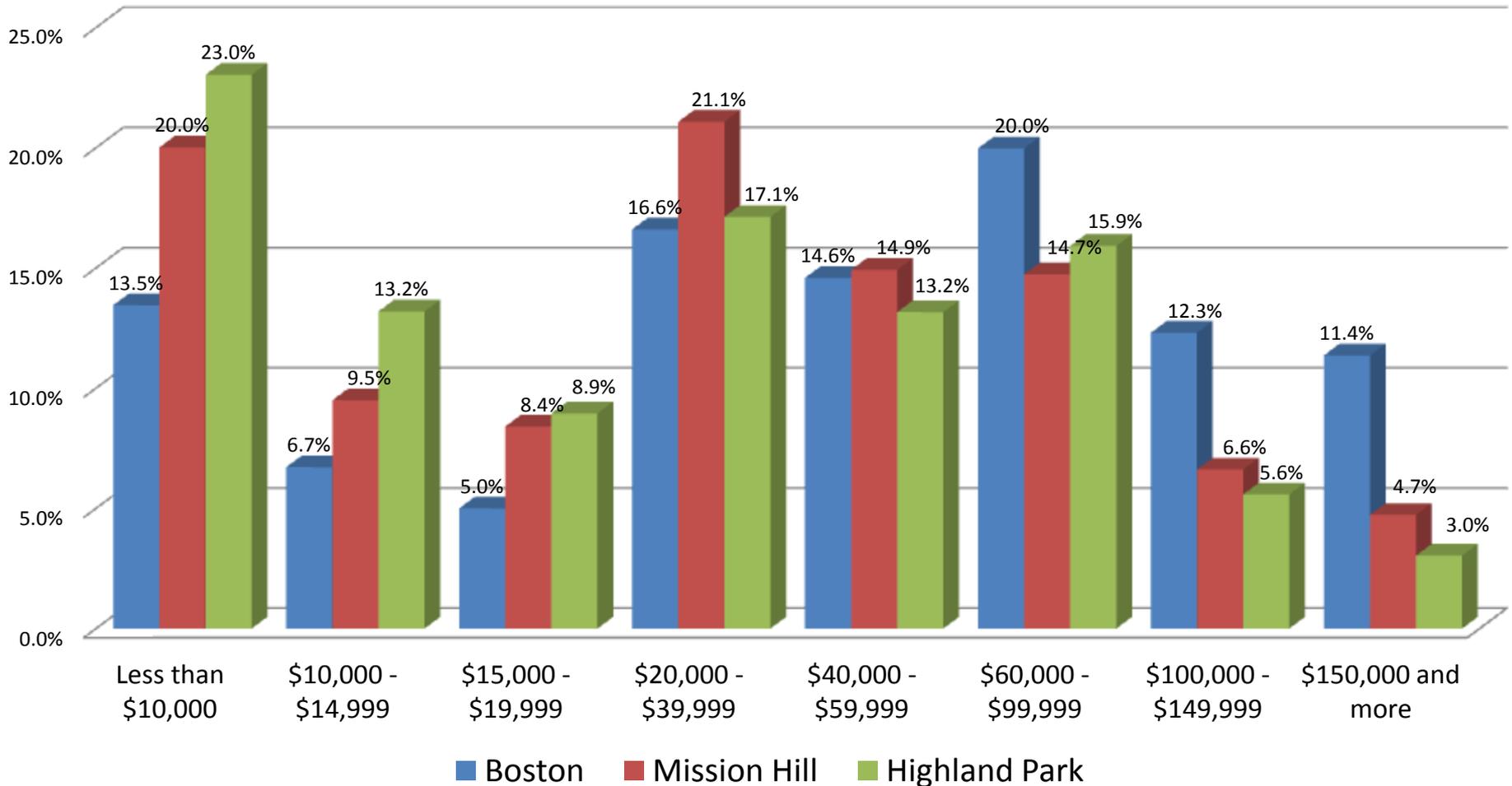


Open Space and Household Income





Household Income: In 2010 Inflation-Adjusted Dollars



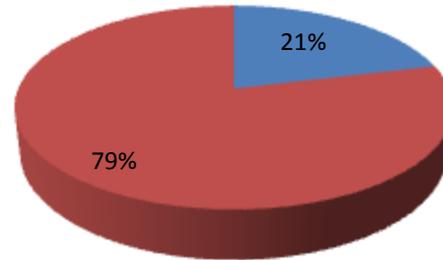
➤ Source: U.S. Census Bureau, 2006-2010 ACS 5 Year Estimate.



Poverty Status

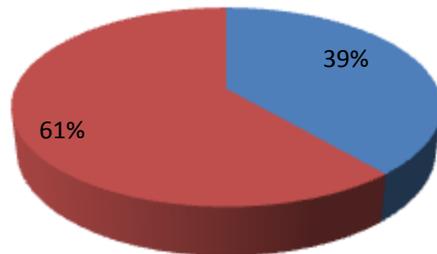
Boston

- Income in past 12 months below poverty level
- Income in past 12 months above poverty level



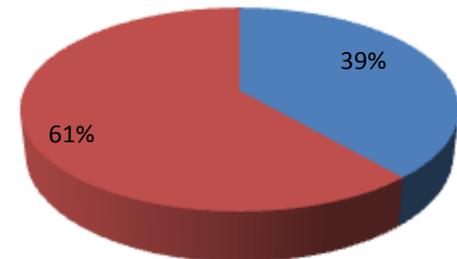
Mission Hill

- Income in past 12 months below poverty level
- Income in past 12 months above poverty level



Highland Park

- Income in past 12 months below poverty level
- Income in past 12 months above poverty level



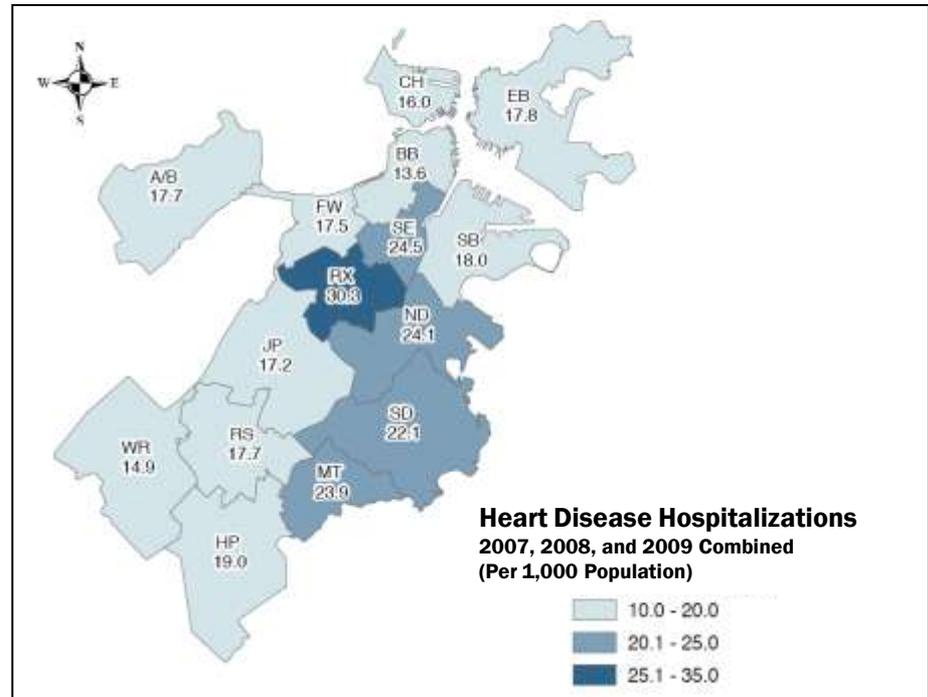
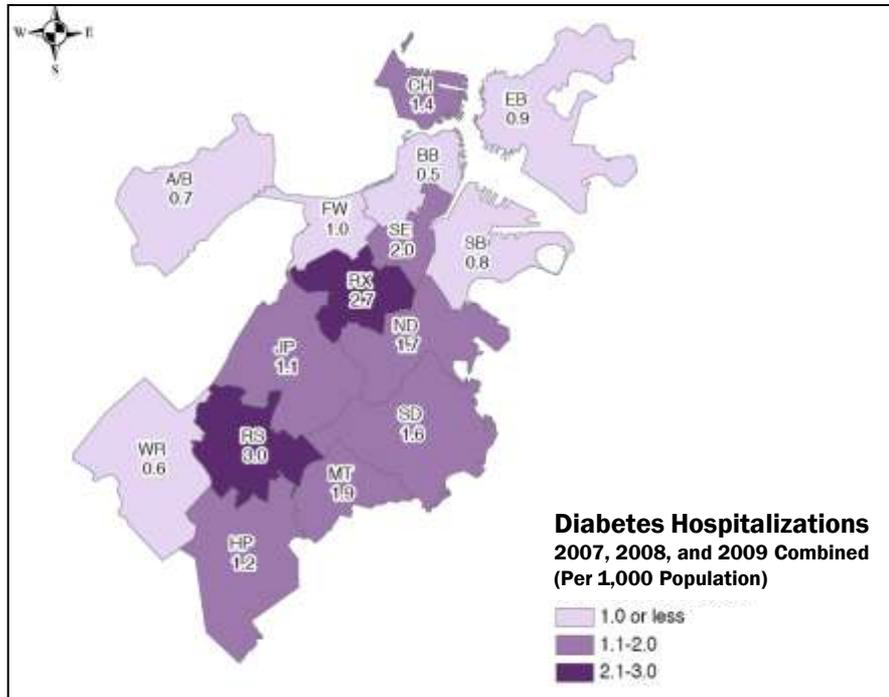
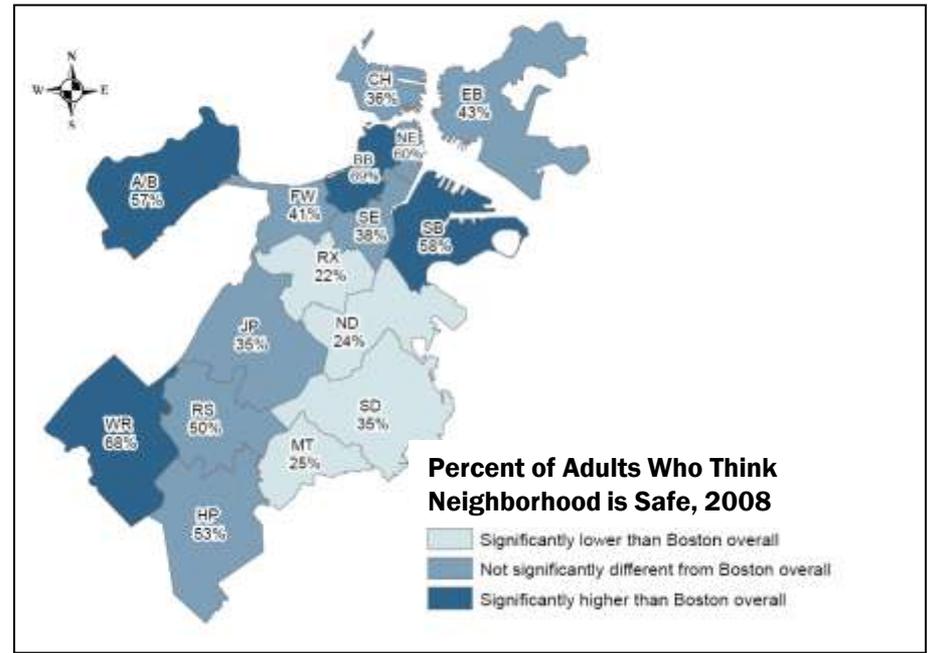
➤ Source: U.S. Census Bureau, 2006-2010 ACS 5 Year Estimate.



Neighborhood Health

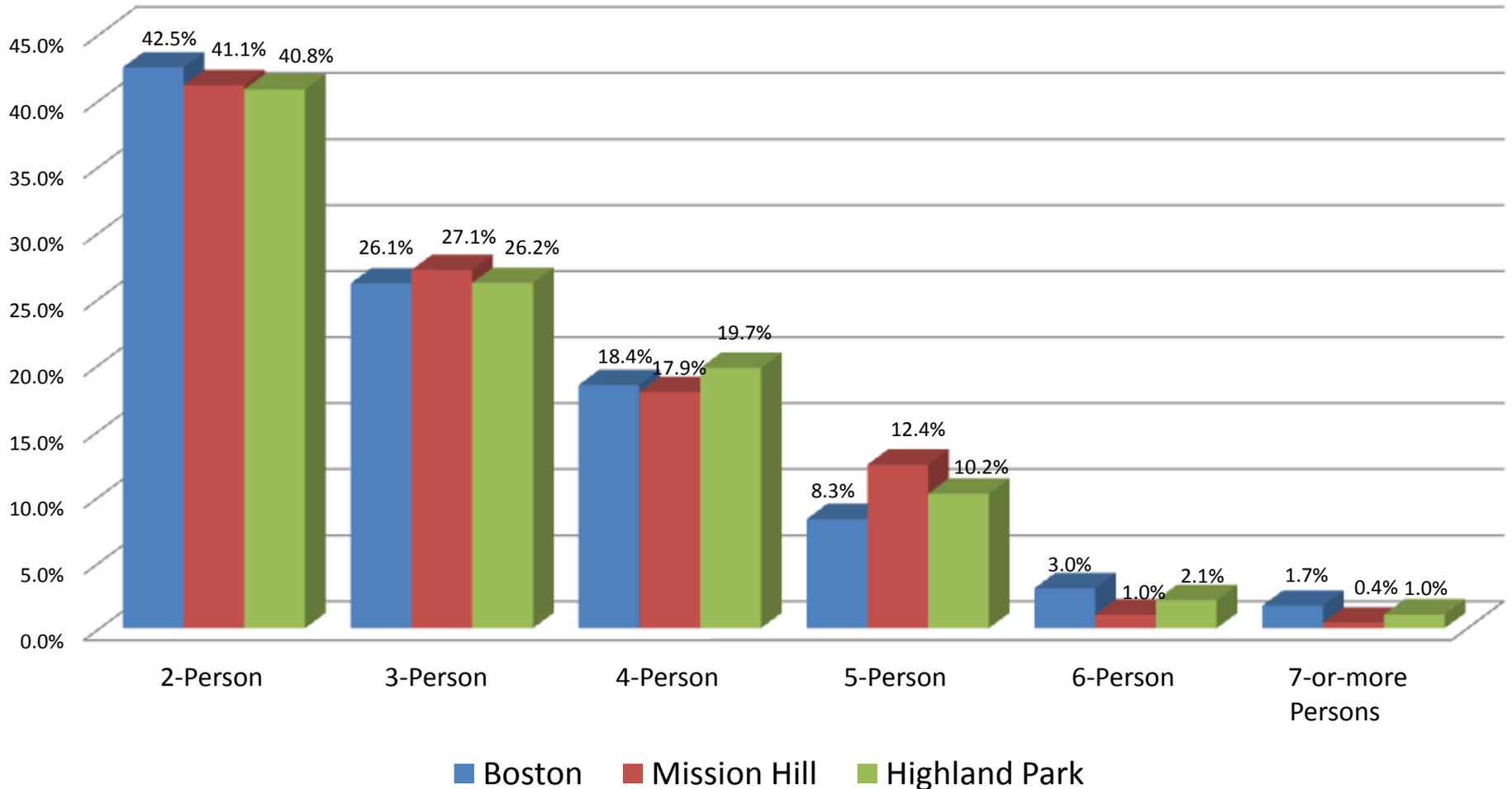
Roxbury Neighborhood

- Diabetes 2.7 / 1,000
- Heart Disease 30 / 1,000
- Neighborhood Safe? 22%





Family Household Size



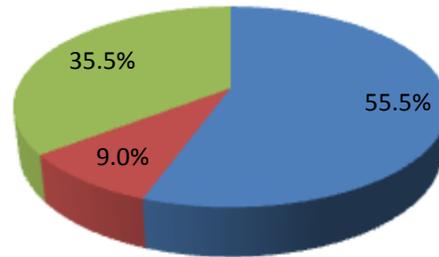
➤ Source: U.S. Census Bureau, 2006-2010 ACS 5 Year Estimate



Family Household by Type

• 44.9% of households with one or more persons under 18 years were managed by females without husbands present

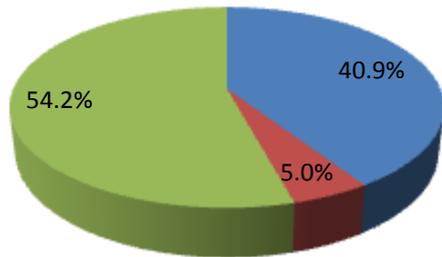
Boston



- Husband-Wife Family
- Male householder, no wife present
- Female householder, no husband present

• 68.6% of households with one or more persons under 18 years were managed by females without husbands present

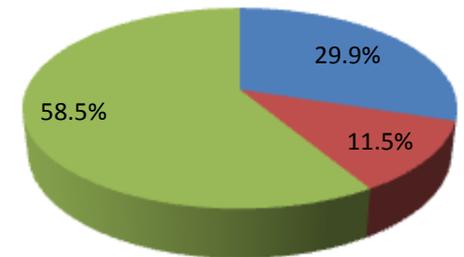
Mission Hill



- Husband-Wife Family
- Male householder, no wife present
- Female householder, no husband present

• 63.4% of households with one or more persons under 18 years were managed by females without husbands present

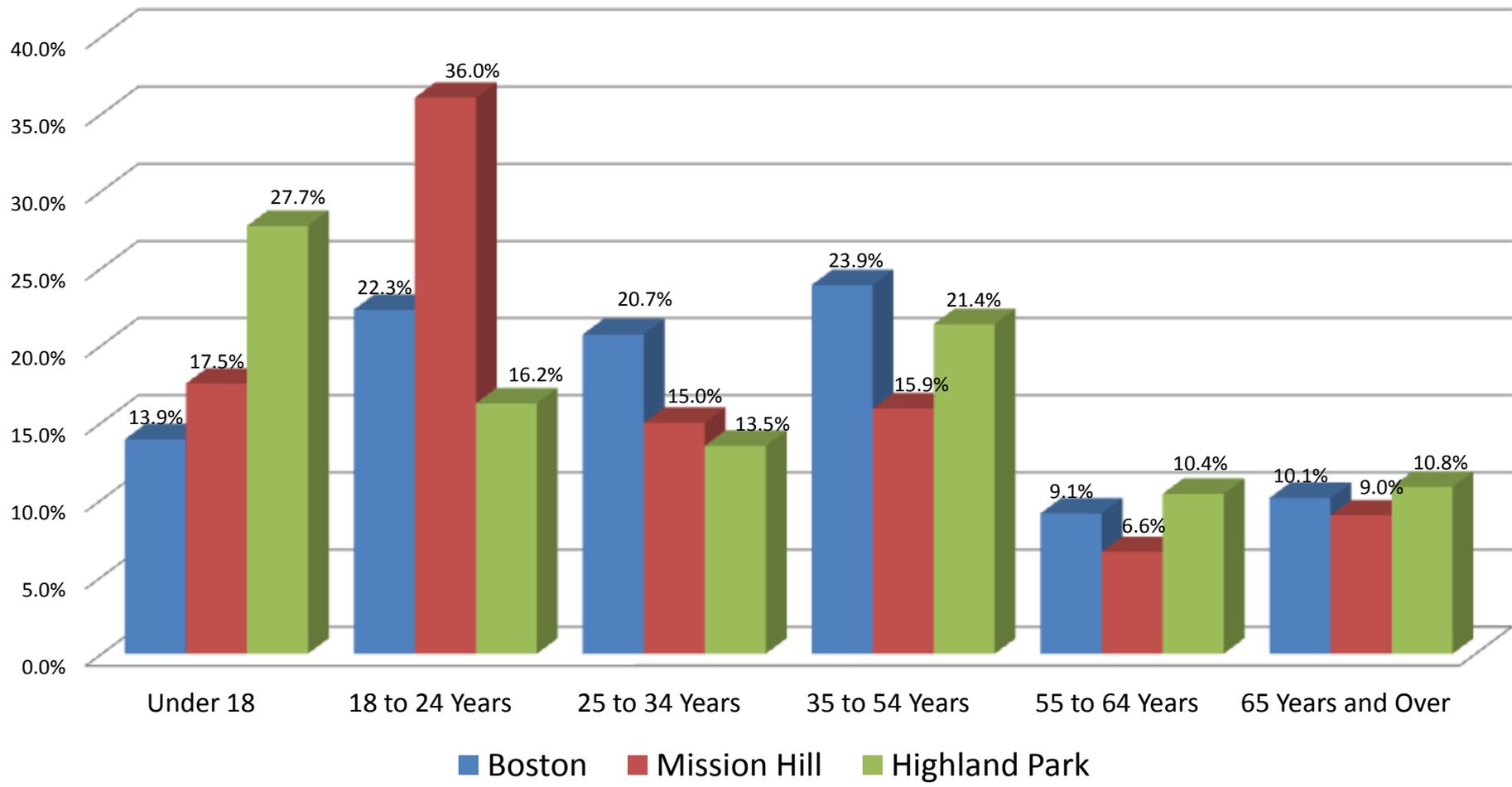
Highland Park



- Husband-Wife Family
- Male householder, no wife present
- Female householder, no husband present



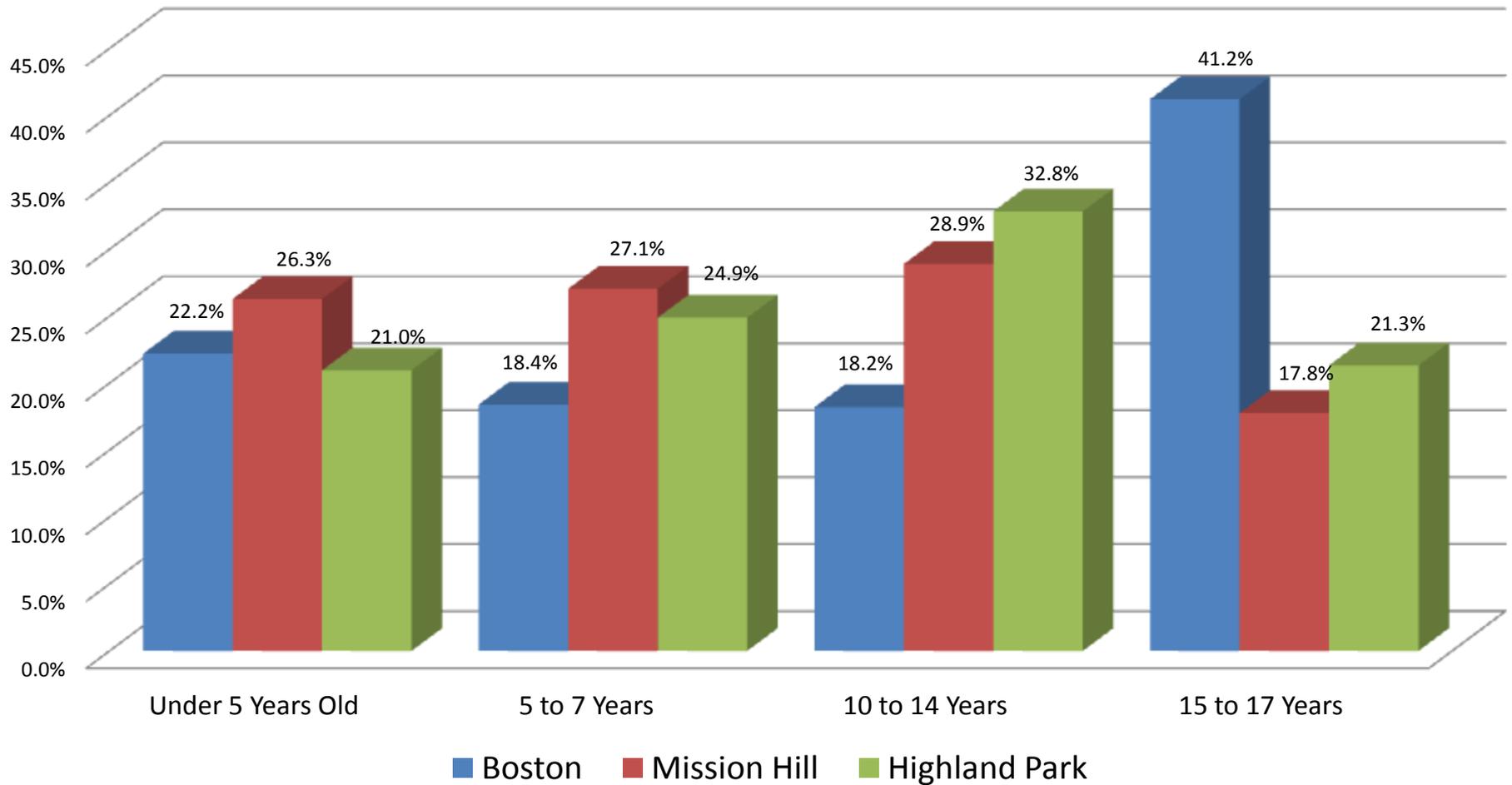
Age- Total Population



➤ Source: U.S. Census Bureau, 2006-2010 ACS 5 Year Estimate



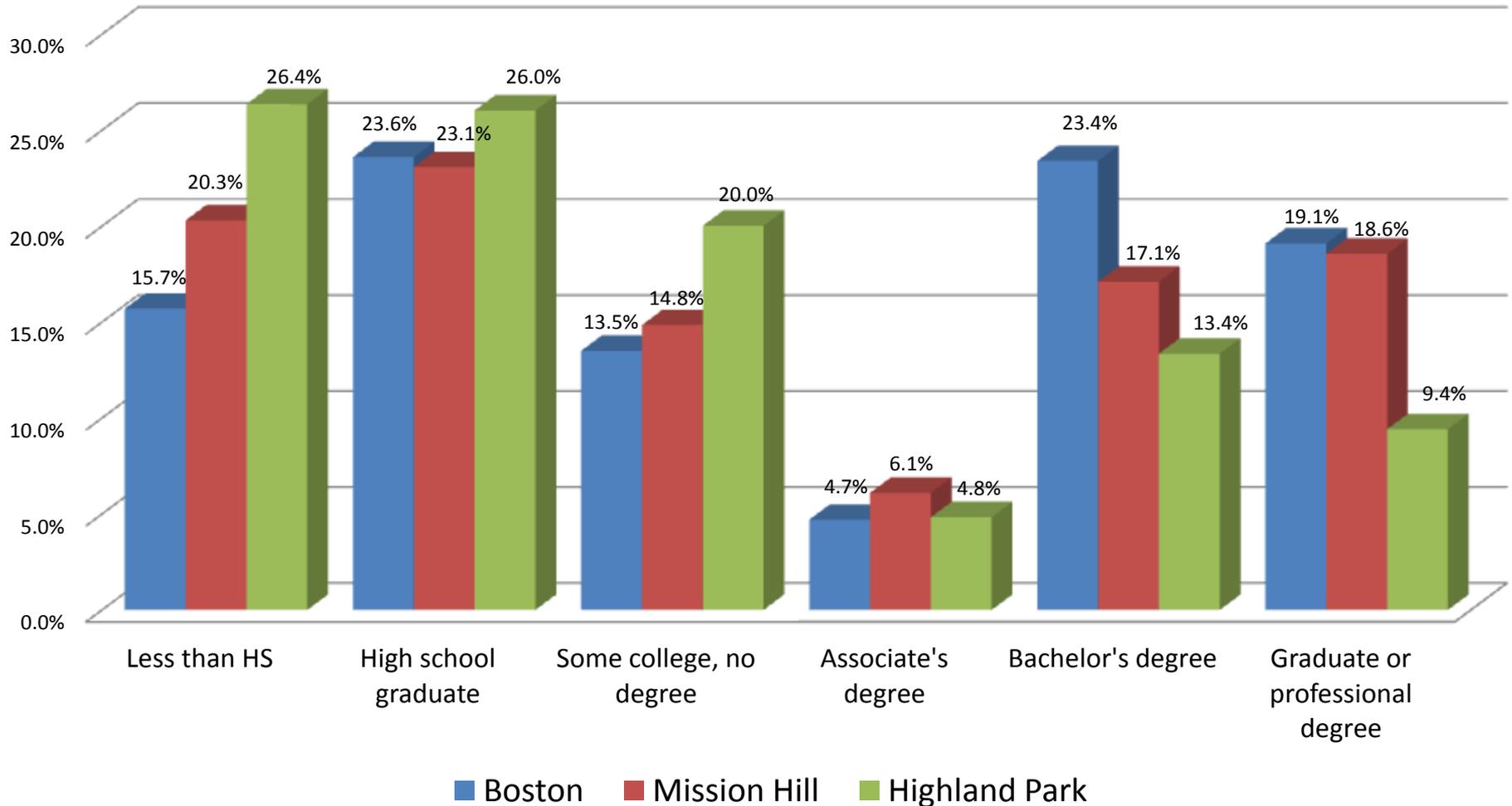
Age-Youths Under 18 Years Old



➤ Source: U.S. Census Bureau, 2006-2010 ACS 5 Year Estimate



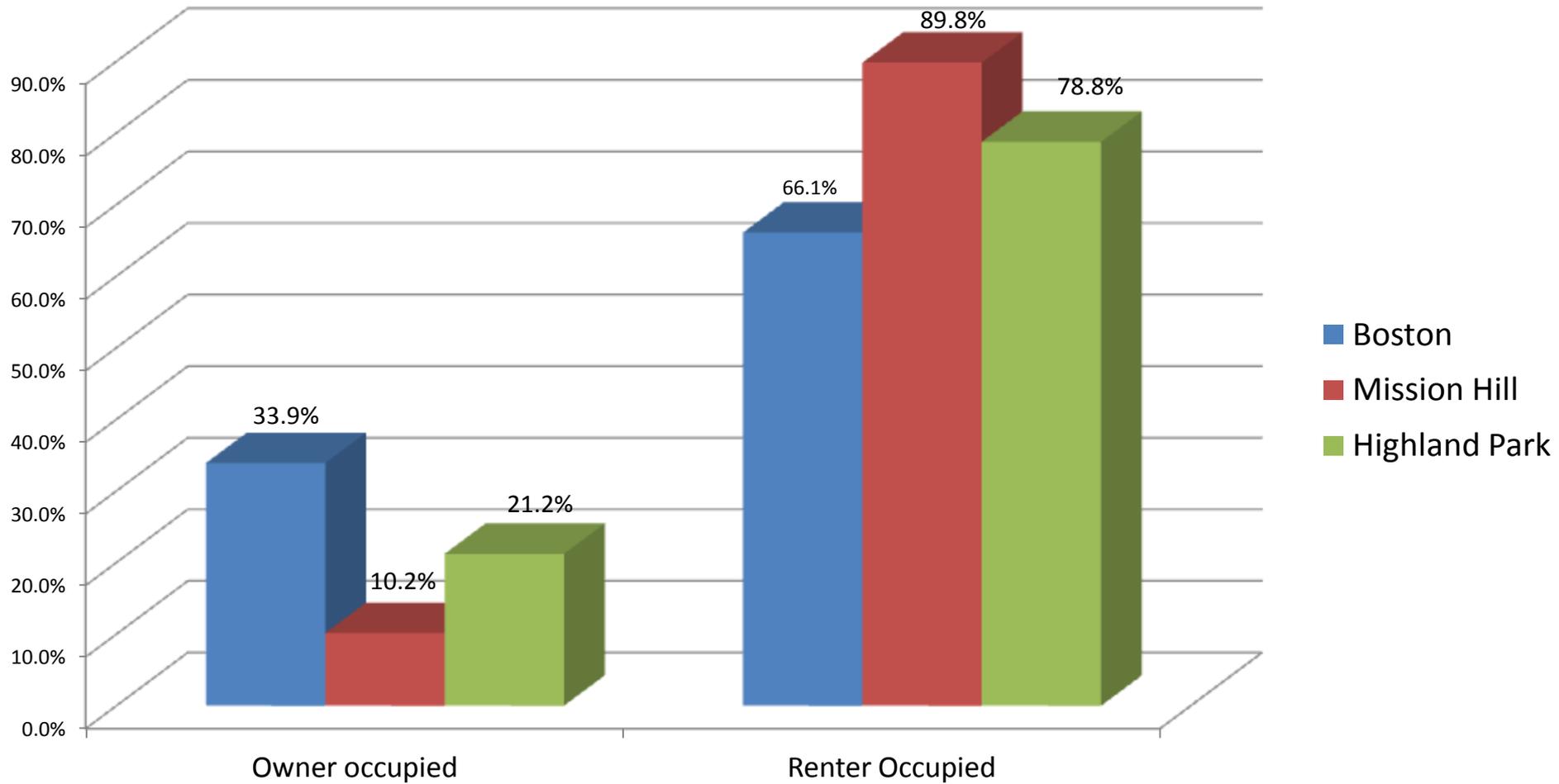
Educational Attainment: For the Population 25 Years and Older



➤ Source: U.S. Census Bureau, 2006-2010 ACS 5 Year Estimate



Housing Tenure



➤ Source: U.S. Census Bureau, 2006-2010 ACS 5 Year Estimate



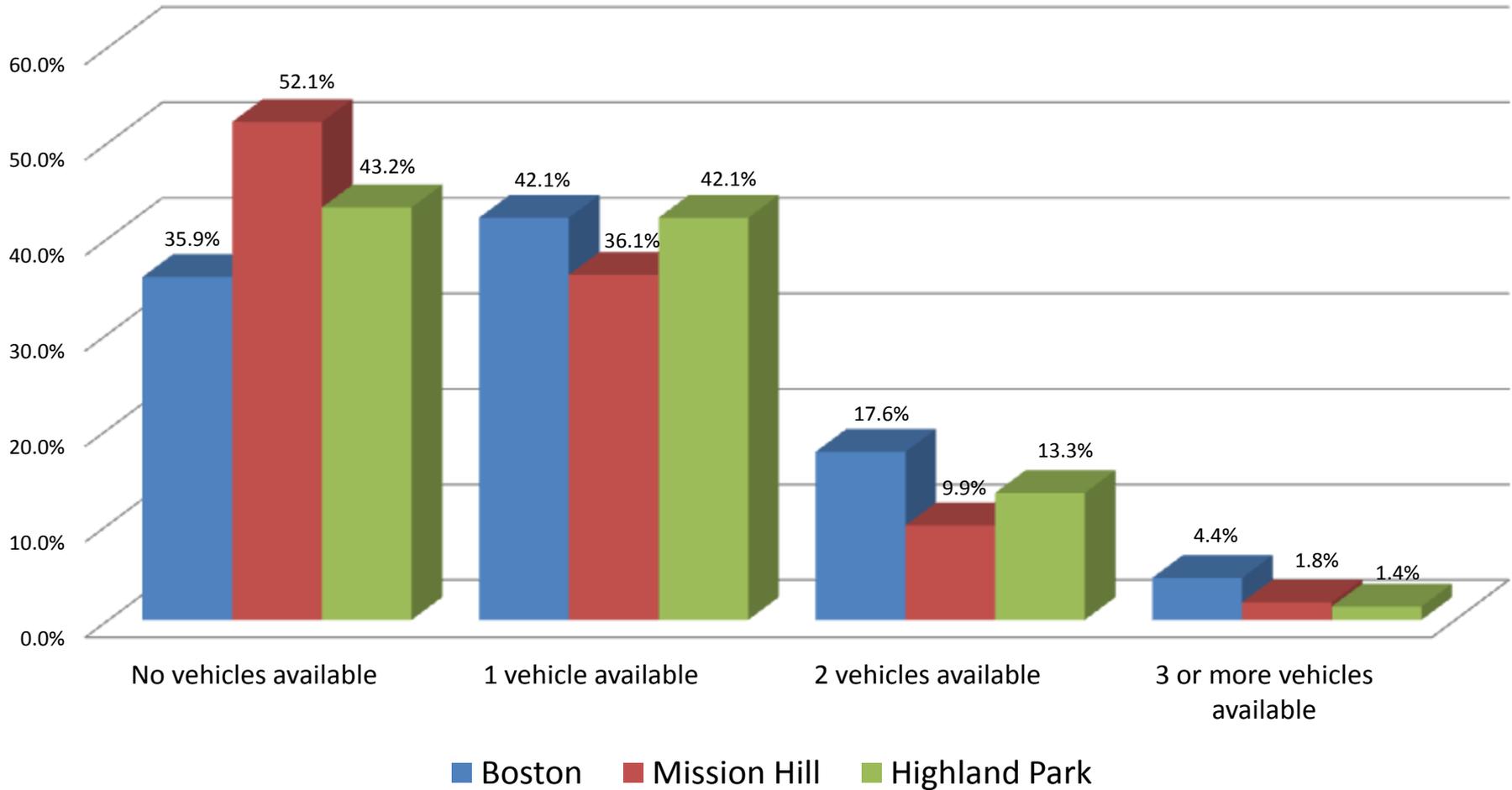
Housing Occupancy

	Boston	Mission Hill	Highland Park
Total Housing Units	100.0%	100.0%	100.0%
Occupied	92.7%	95.4%	93.3%
Vacant	7.3%	4.6%	6.7%
<i>For rent</i>	46.4%	53.5%	53.4%
<i>Rented, not occupied</i>	3.2%	3.0%	1.8%
<i>For sale only</i>	9.6%	14.9%	5.2%
<i>Sold, not occupied</i>	3.0%	1.9%	2.9%
<i>For seasonal, recreational, or occasional use</i>	15.2%	6.0%	2.3%
<i>Other vacant</i>	22.7%	20.7%	34.4%

➤ Source: U.S. Census Bureau, 2006-2010 ACS 5 Year Estimate



Number of Vehicles per Occupied Housing Unit



➤ Source: U.S. Census Bureau, 2006-2010 ACS 5 Year Estimate



Partners and Sponsors

- Enterprise Community Partner
- National Grid and NSTAR
- Massachusetts USGBC Chapter
- Boston Society of Architects
- US Green Building Council

Partners and Sponsors

Presented by the Department of Neighborhood Development and the Boston Redevelopment Authority



ENVIRONMENT + ENERGY + EQUITY



Thomas M. Menino
Mayor

Boston Redevelopment Authority
Boston Public Health Commission
Department of Neighborhood Development