E+ Green Communities – Mission Hill DRAFT Development Guidelines

SUMMARY

The E+ Green Communities Program is seeking to advance Boston's green building and renewable energy efforts to the next level by creating deep green, energy positive, healthy and sustainable communities. E+ Communities expands upon the Mayor's E+ Green Building Program, which is to bringing a new generation of ultra-efficient, energy positive deep green residential prototypes to Boston's neighborhoods. This program is a pilot initiative of the City of Boston's Department of Neighborhood Development, Office of Environment & Energy and the Boston Redevelopment Authority and in partnership with the Enterprise Foundation.

This report represents the outcome of a Community Symposium and Charrette held in March 2012 and site specific Community Visioning and Planning meetings held in the spring and summer of 2012 for the City owned parcels at Parker and Terrace Streets in Mission Hill.

In support of this initiative, DND will issue a Request For Proposal seeking the participation of leading design, construction and development professionals in envisioning the next generation of sustainable neighborhoods and green buildings.

MISSION STATEMENT

Principals

- Engage the community in an inclusive and transparent planning process.
- Work in partnership with the Mission Hill Community
- Respect existing uses while promoting innovation and sustainability

Goals

- Redevelop parcels with new housing and commercial uses that enhance neighborhood sustainability while retaining community gardening and art space uses
- Develop productive and interactive landscapes that engage people and seek to create relationships between the built and natural environment.
- Demonstrate the feasibility of Energy Positive Deep Green multi-unit housing
- Build energy positive deep green buildings

COMMUNITY MEETINGS

A series of community meetings were held between January and August of 2012 including a Community Symposium and a Saturday morning Community Charrette, both held in March 2012. During these meetings and subsequent community workshops, DND and BRA gathered ideas, guidance and feedback from the broader community. Each meeting included presentations by DND and BRA staff followed by breakout groups and group discussions. The recommendations and thoughts from each group were documented and analyzed to inform the direction of the planning process.

Community comments and guidance culminated in the crafting of a Community Vision and Community

Development Guidelines both of which are included here and will be incorporated in the final RFP for the development of the City parcels.

COMMUNITY VISION

Grow Community Spaces and Uses

- Expand and enhance existing community gardening uses and permanently establish a community garden.
- Build upon the unique site characteristics of Art Park by creating new art spaces and programming. Include permanent and temporary art installations, exhibits, events and performances that engage people and celebrate the site and sustainability.

Enhances Neighborhood Sustainability

- Parker / Terrace should be a new model for sustainable neighborhood development and energy positive, deep green buildings that dramatically reduce building and transportation energy use and adverse environmental impacts.
- Connect new site uses with existing neighborhood uses and nearby assets that promote sustainability and restore the site to its best productive use.

Increase Safety and Vibrancy

- New residential development should add to the existing mix of ownership housing in the area. New residential development on Parker Street should reflect the character of adjacent residential buildings. New residential, commercial and/or light industrial uses on Terrace Street should add to the vibrant mix of existing uses along Terrace.
- New uses should increase safety, bring more active uses and provide passive surveillance “eyes on the street” for the site and adjoining streets.

Reduce Transportation Impacts

- All new buildings and uses should promote pedestrian, bicycle, and public transit use by only using the minimum parking necessary to allow new uses to flourish and calm existing traffic.
- Provide an attractive and well managed pedestrian connection through the site connecting Parker and Terrace Streets.

DEVELOPMENT ILLUSTRATION

A series of diagrams, site plans and architectural illustrations were produced to inform the Community Planning Process. The "ArtGarden" scheme discussed during the planning process is included here to give graphical representation to the Community's Vision for redevelopment of the site.

COMMUNITY DEVELOPMENT GUIDELINES

The City will seek proposals from leading design, building and development teams to redevelop the City owned parcels on Parker and Terrace streets in Mission Hill. Proposals will be evaluated in accordance with these Community Development Guidelines and additional criteria included in the RFP.

Respondents should demonstrate the vision and ability to deliver a highly sustainable development and deep green energy positive buildings.

Sustainable Neighborhood Development — Redevelopment proposals should demonstrate that they enhance the overall sustainability of the neighborhood and create benefits that will extend beyond the site and improve sustainability within the City of Boston.

Site Sustainability — Site and built uses should be organized and integrated to create synergies between the building program and landscape program. Proposed uses should seek opportunities to demonstrate sustainability through integrating the productive use of the landscape with the primary functions or use of the buildings.

E+ Green Buildings — New buildings should be deep green and energy positive employing both passive and active strategies to achieve and surpass USGBC requirements for LEED Platinum and energy positive performance.

Historic Context Proposals should reflect and build upon the historic uses of the site and character of the surrounding structures.

Local Business and Jobs Opportunities Redevelopment of these parcels should enhance the local economy and provide both local business and job opportunities. Preference will be given to responses that propose on-site construction and the creation of local jobs.

Projects must comply with the Boston Residents Jobs Policy ("BRJP") with additional consideration given to projects that exceed the BRJP.

Disposition The parcels will be offered as a single development opportunity.

Feasibility Proposed development projects must be economically feasible and financeable.

USE GUIDELINES

The primary uses of the site are to be residential housing, commercial uses and ArtGarden (community garden and art park space). Proposed uses should be programmed, scaled and configured to maximize the potential for cross benefits with the proposed uses and with surrounding uses. Give special consideration to the inter-connectivity of uses and strategies that increase site sustainability and building performance.

Housing Provide 35 to 46 residential units with 10 to 12 of the units located on Parker St. and the remainder fronting on Terrace St.

Housing units should be affordable to a range of income earners. The project must at minimum comply with the Boston Inclusionary Development Program with 15% of market units being affordable, of which 50% are affordable to households earning less than 80% of the Area Medium Income (AMI), and 50% are affordable to households earning between 80% and 120% of AMI.

Preference is for managed housing including rental, condominium, cooperative, and co-housing models. The selected developer will be required to execute binding agreements and / or deed restrictions to ensure owner occupancy and/or active on-site property management.

Provide a mix of family and work/live housing with one, two, three and / or four bedroom residential unit types.

Commercial Provide approximately 4,000 to 8,000 (max.) Sq. Ft of space for local retail, commercial, and or light industrial uses located on Terrace St. that complements existing area businesses and increases area sustainability by providing work space, and or access to needed goods and or services.

-Synergetic uses that support existing and new area uses such as material and waste material reuse and or distributive energy will be given preference.

-Suggested uses include: micro beer brewery, green building material supply or service company, restaurant or café, community, youth and or senior service provider, and / or on-site childcare.

Community ArtGarden Provide approximately 20,000 to 25,000 Sq. Ft of dedicated to community gardens, open spaces, and paths including areas for temporary, permanent and performing art.

- Garden Plots – provide approximately 10,000 Sq. Ft. of community gardening plots not including circulation paths. At least 2/3's of the gardening plots are to be dedicated to the local community.
- Art Park – provide approximately 5,000 Sq. Ft for outdoor community art space. Include a mix of larger and smaller areas interwoven within the Garden Plots, Open and Circulation Spaces and paths.
- Open and Circulation Space – provide approximately 10,000 Sq. Ft. of community open spaces, planting areas, circulation paths, walkways, and steps inter-connecting community Garden Plots and Art Park areas and connecting Parker and Terrace Streets. Include a mix of larger and smaller areas and varied landscapes including wooded / natural (existing and new), fruit bearing trees and plants, fauna friendly shrubs, soft-scapes, and hard-scapes.

The developer is required to design and construct the Community ArtGarden. See Design Guidelines for addition information.

Community ArtGarden Ownership and Management

Respondents should demonstrate the ability to create, organize, and maintain gardens, open space. Creative partnerships that include community garden management and art programming expertise are strongly encouraged. The selected development team will be required to work with the City and local community to develop an approach for establishing an entity (non-profit) to undertake ongoing management of the Community ArtGarden. Proposals should include strategies for permanently establishing the Community Garden Plots, Art Park, and Open and Circulation space including the use of a land trust and or deed restrictions.

Upon completion of construction and landscaping, the Community Garden, Orchard and Art Park area(s) is to be turned over to the local entity.

DESIGN GUIDELINES

Connection and Circulation

Provide multiple connections along Parker and Terrace Streets frontages that are inviting to the surrounding community.

Provide through site pedestrian access connecting Parker and Terrace Streets.

Orientation and Street Wall

Both Community Garden and Art Park should front prominently on Parker St. Both uses should extend into the site interior and, at least in part, connect to Terrace St. New uses should be arranged and / or interwoven with each other and form a cohesive whole.

New buildings should have primary frontage on either Parker St. or Terrace St. and align with adjacent buildings re-establishing and reinforcing existing street wall conditions.

Building Height and Massing

Building heights and massing should be responsive to and respective of the surrounding context.

Parker Street Building(s): should be two-and-a-half or three stories in height (approximately 35') and should relate to existing adjacent residential structures. Building type and massing should reflect and reinforce existing adjacent residential fabric.

Terrace Street Building(s): should be up to four stories in height (approximately 45') and should relate to existing adjacent building structures.

Buildings should be sited and configured so that roof areas have clear solar exposure for solar thermal and photo voltaic panels.

Architectural Typology

Parker Street: Two and three unit residential structures including flat over flat, duplex over flat, side-by-side, rowhouse / townhouse, and / or triple-decker typology.

Terrace Street: mixed use building with residential over commercial typology with active ground floor uses at the street edge.

Building Character and Materials

Proposed designs should be of high quality and include careful detailing and selection of exterior materials. Exterior finishes should be of high quality and reflective of the area character while also exemplifying the very best building performance and sustainable development practices. Building characteristics and materials should be consistent on all sides of any new buildings.

Building Open Space

Include private outdoor residential space(s) including balconies, porches and patios.

Include shared outdoor residential activity space(s) including lawns, yards, gardens, patios and terraces.

Include an outdoor seating as needed for restaurant or café uses.

Access and Parking

Parker Street: Site vehicle access for new uses should be building specific and limited to residential scale driveways for private vehicle parking.

Terrace Street: Site vehicle access for new uses should be building specific and limited to residential scale driveway(s) for both parking and services.

The City recognizes parking facilities are a significant project cost and seeks to reduce car dependency and ownership and to promote public health through the use of public transit, walking, and bicycling.

Provide the following:

- Residential Vehicle Parking: Provide 0.6 to 1 parking space for each residential unit.
- Commercial Vehicle Parking: Provide .05 to 1 parking space per 1,000 Sq. Ft. Use of shared spaces is encouraged
- Car Sharing: include one dedicated space for shared vehicle parking.
- Bicycle Parking: Provide at minimum one Secured / Covered bicycle parking space per residential unit located in an easily accessed storage area. Provide one visitor bicycle parking space per 10 residential units and two bicycle parking spaces per commercial business. Visitor bicycle racks should be located near each primary entry and should not block or impede pedestrian circulation or access.

Community ArtGarden

ArtGarden is intended to integrate with and compliment new residential and commercial uses on the site as well as surrounding uses. The completed space should be both open to the community and manageable for the abutting uses. Provide the following:

Community Gardening Plots

- Varying sized garden plots, accessible raised beds, new certified clean

gardening soil with good solar access.
- Pathways, accessible walkways / routes, steps, edging and fencing to control access.
- Garden infrastructure for rain water harvesting, irrigation, composting, material and tool storage.

Art Park
- Infrastructure for displaying temporary and permanent art, performing art, seating, seasonal shelters, pathways, accessible walkways / routes, lighting, and fencing for controlled access.

Open and Circulation Space
- Accessible pathways to community gardening plots, planting areas and art spaces including soft-scapes and hard-scapes, railings, handrails, steps, edging and landscaping.
- An accessible route connecting Parker and Terrace Streets.
- Access for materials, supplies and maintenance of the Community Gardens, Orchards and Art Park.
- Plantings, soil, infrastructure for rain water harvesting, irrigation, composting, material and tool storage.

GREEN BUILDING DESIGN

Buildings are to be designed and constructed to achieve and surpass the US Green Building Council's LEED for Homes Platinum requirements and / or LEED Platinum utilizing the most applicable LEED rating system. The Project Team should include both a LEED Homes Accredited Professional and a LEED Homes Rater; both should be identified on the Project Team. The developer is responsible for all LEED Rater expenses. Projects are to be registered upon designation and certified by the US Green Building Council within 9 months of construction completion. Green building strategies should include the following:

Indoor Environmental Quality

Provide high quality healthy indoor environments by maximizing fresh air indoors and minimizing moisture and exposure to toxins and pollutants. Strategies should include:
- Dry and mold free building designs including extended roof overhangs, proper ground surface drainage and non-paper gypsum board.
- Passive and active fresh air systems and active ventilation at moisture and combustion sources.
- Building products and construction materials free of VOC's, toxins, hazardous chemicals, pollutants and other contaminants.
- Entryway walk-off mats and smooth floor finishes that reduce the presence of asthma triggers, allergens and respiratory irritants.
- Safe and easily cleaned and maintained built conditions.

Energy Efficiency and Renewable Energy

Proposed projects should first minimize all energy demands before employing renewable energy sources. It is expected that buildings will be designed to achieve a HERS Index of 20 to 40 producing buildings that will use 60% to 80% less energy than a home built to the International Code Council's standards for minimum energy efficiency and surpassing the requirements for Massachusetts New Homes with Energy Star, Tier III. Energy efficiency strategies should at minimum include:

- High performance building envelops that are air tight, super insulated and eliminate thermal bridging with high efficiency windows and doors.
- Energy Star high efficiency appliances and equipment sized to meet but not exceed building needs.
- Passive (day) lighting strategies and high efficiency lighting fixtures including CFL and LED lighting technology.

Onsite renewable and clean energy sources should be provided to surpass the net annual energy needs of the buildings. Buildings should be designed to maximize solar photo voltaic, solar thermal renewable energy generation as well as clean energy sources such as combined heat and power systems.

Water Efficiency

Use innovative strategies to minimize water use and to reuse storm and waste water including:

- High efficiency low flow bathroom and kitchen fixtures.
- Gray water filtration systems for reuse and ground water recharge.
- Stormwater harvesting and onsite ground water recharging.
- Drought resistant planting and non-potable water irrigation.

Connectivity

Encourage and support non personal vehicle means of travel including public transit, walking and bicycling and reduced personal vehicle travel by promoting the use of close by schools, shopping, recreation, and work opportunities. Strategies should include easily accessible bicycle storage space, shared parking, car share program membership and transit pass programs.

Site Construction and Development

Employ low impact construction strategies and management practices to reduce erosion and eliminate construction phase stormwater runoff and off-site tracking of soils and construction debris. Include landscaping and other site elements that protect the land support area natural habitats.

Materials Selection

Use materials and resources selected from sustainably harvested, responsibly processed sources. Strategies should include:

- Products made with recycled and reclaimed materials.
- Materials and products from responsibly harvested and rapidly renewable sources.
- Locally sourced products and materials within 500 miles of Boston.

Education and Public Awareness

Provide for educating new and future homeowners about the building's equipment, green features and how to maximize building performance. Include owner training and operation manual, and active energy and water performance reporting and tracking systems capable of linking to online project performance tracking.

Provide for educating the area community and industry professionals on the benefits for green buildings and project design and construction practices including: construction phase open wall tours, construction phase documentation and post occupancy building performance reporting.

Innovation Project teams are strongly encouraged to utilize both "off-the-shelf" products and practices as well as innovative strategies and "cutting edge" products to increase the sustainability and performance of the buildings and achieve an energy positive development. In either case, replicability and ease of use of innovations and best practices for future Boston residential projects of similar scale must be highlighted.

NET ENERGY POSITIVE PERFORMANCE

A goal of the Mayor's E+ Green Communities Program is to demonstrate the feasibility of urban 2 to 4 unit and multi-unit residential buildings that are net energy positive. Buildings are to be design and constructed to be very energy efficient and include on-site renewable energy sources so as to produce more energy on-site than is needed for the buildings on an annual basis.

Net Energy Positive For the purposes of this program and RFP, a Net Energy Positive building produces enough energy on-site to exceed its annual energy use.

Utility Connected It is expected that projects will use existing electrical and gas services when on-site renewable energy generation does not meet buildings loads. When on-site energy generation exceeds building loads, it is expected that excess energy will be exported to the electrical grid.

Modeled Energy Performance Evaluation of proposals for Developer Selection will, in part, be based on the energy modeling performed by respondent. Additional energy modeling may be performed by or for the BRA. Any and all energy modeling, HERS scoring and related evaluations will be as determined by the BRA and final.

ADVANCE STORM WATER AND WATER USE MANAGEMENT

A goal of the Mayor's E+ Green Communities Program is to eliminate or dramatically reduce the use of potable water for site irrigation, eliminate or dramatically reduce the discharge of stormwater from the site, and eliminate or reduce stormwater pollutants. The site and buildings are to be designed and constructed so as to manage on-site the precipitation from 95th percentile rainfall event (equivalent to 1.5" of precipitation).

Rain Water Harvesting Harvest rainwater on site by collecting water from rooftops, paved surfaces, and other innovative forms for collecting water. Provide conveyance piping, filtration, storage, aeration, and related systems necessary for harvesting rainwater for reuse.

Proposals should demonstrate creative approaches to collecting, managing, distributing and reusing stormwater including artistic celebrations of water.

Re-use To reduce the use of potable water for irrigation, provide collection and storage capacity to substantially meet all onsite the irrigation needs including the community garden plots.

Infiltrate and Evapotranspire Include strategies to infiltration and evapotranspire onsite stormwater including rain gardens, bio-swales, and water courses.