

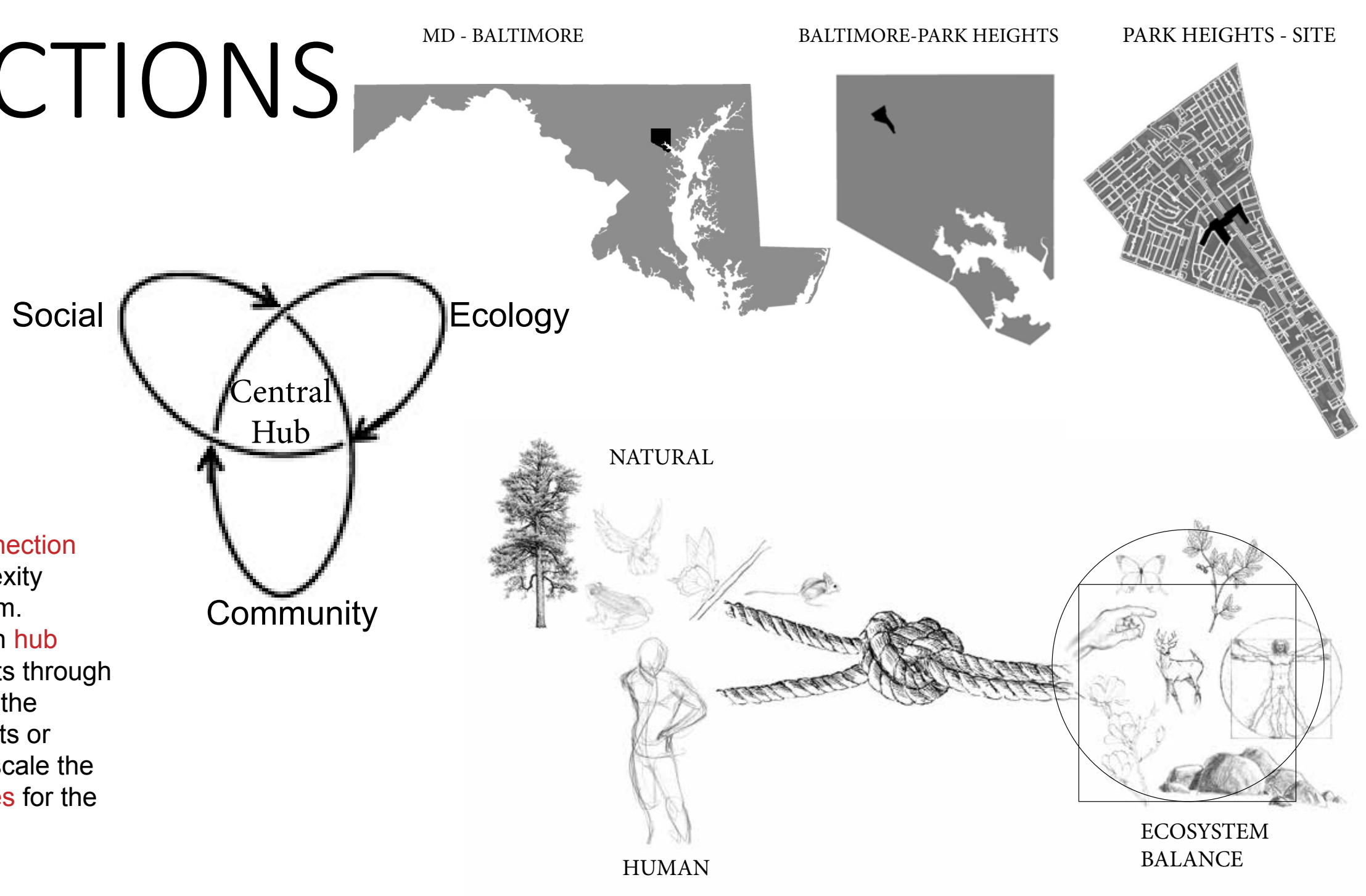
PARK HEIGHTS KNOT CONNECTIONS

BES | BALTIMORE ECOSYSTEM STUDY

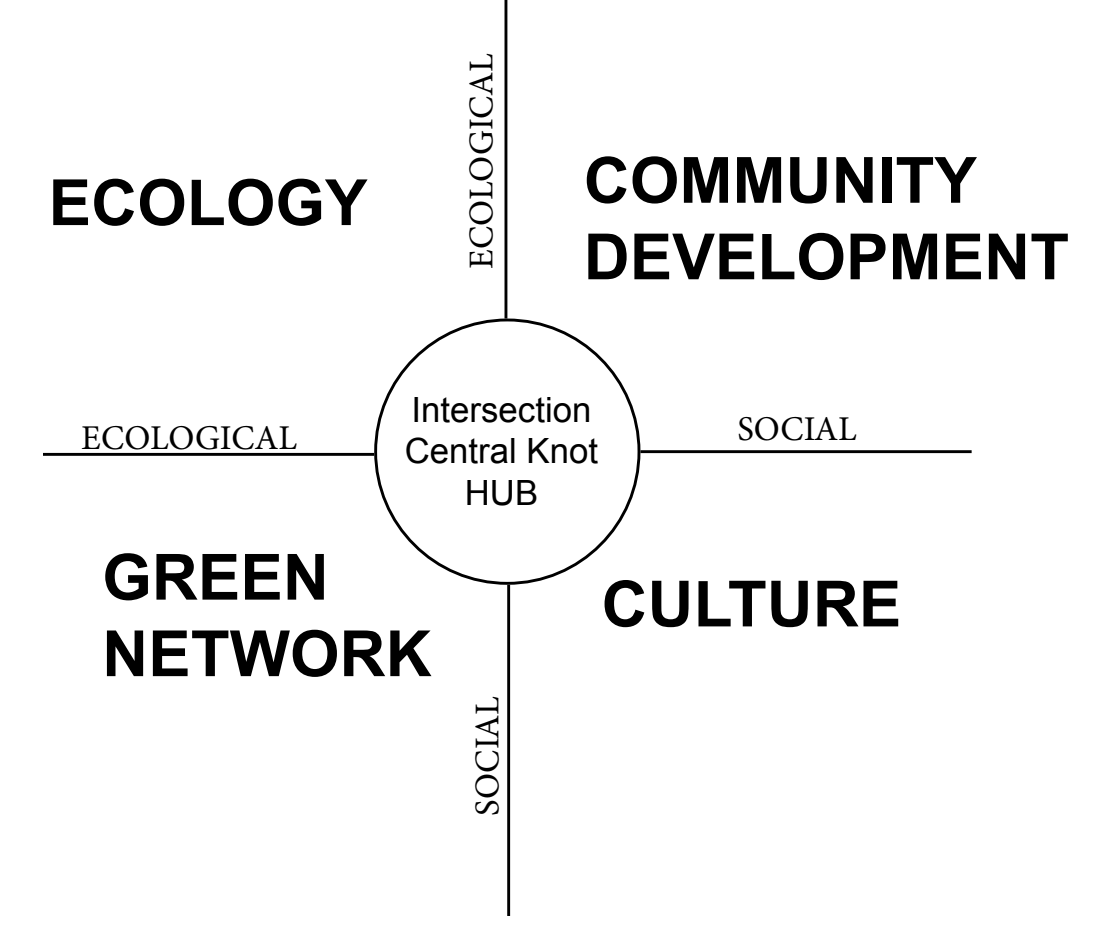
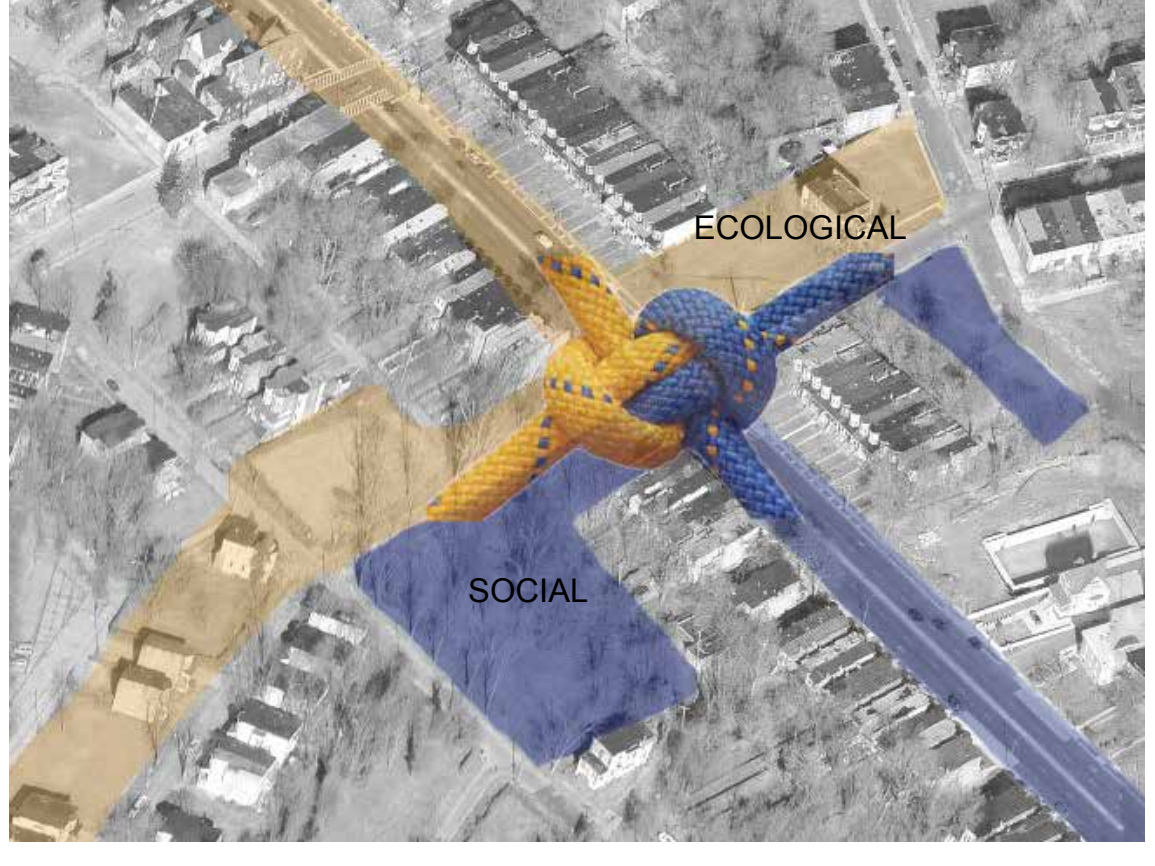
A study of the importance of intersections as social and ecological nodes in Park Heights, Baltimore, MD

CONCEPT OF KNOTS

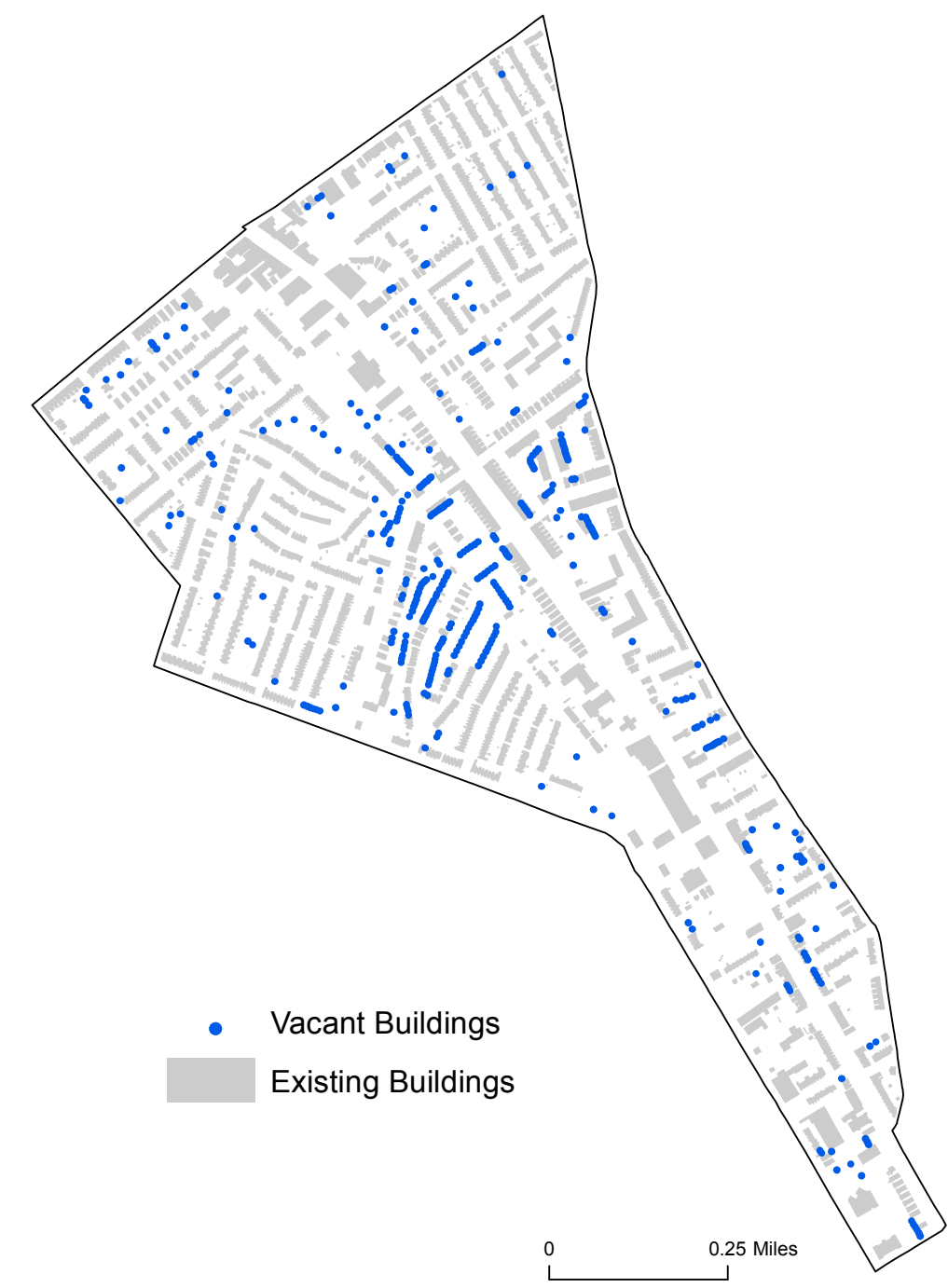
Knots are used to bring together two single pieces and connect them stronger as a whole. The connection of the knot can be interpreted as the connection of a **community** to its environment. The connection itself creates a complexity to the area where the connection occurs bringing together two separate elements and in return creating a stronger program. This project seeks to create a vision for repairing and reconnecting the core of Park Heights, Baltimore through a series on **hub networks**. Connects to the interests of the BES through links to **hydrological, ecological and social ecological** improvements through **urban renewal**. It poses as a precedent for road infrastructure redevelopment through social and ecological measures. At the design scale this can be seen as the intersection between two main roads. Each road represents either ecological elements or social elements coming together to create a space that celebrates **interaction** and ecological responsibility. At the human scale the programmatic character in each empty lot surrounding the intersection are a unique combination of the two **creating spaces** for the community to gather while strengthening the user's connections to their environment.



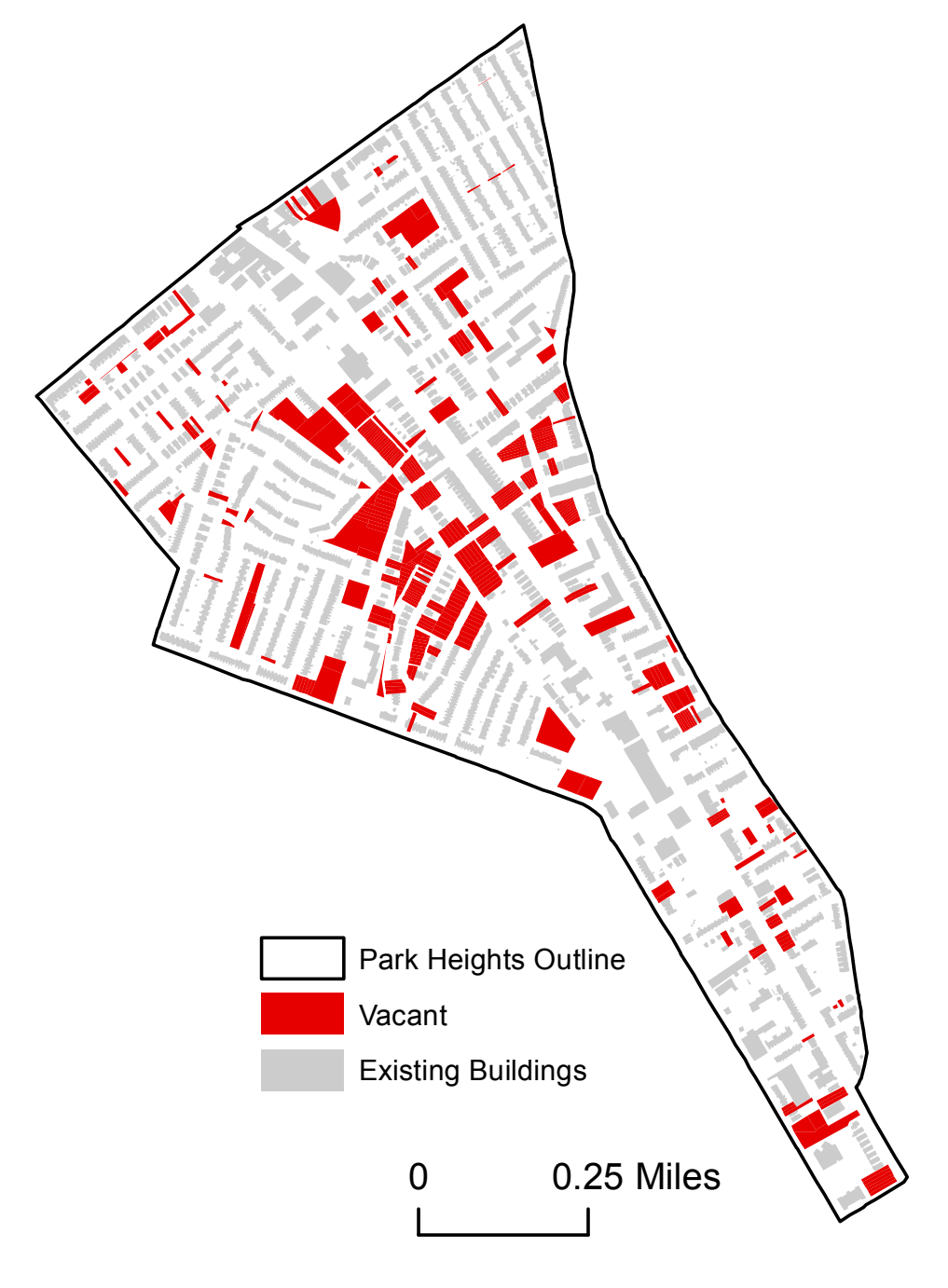
CONCEPT DIAGRAMS



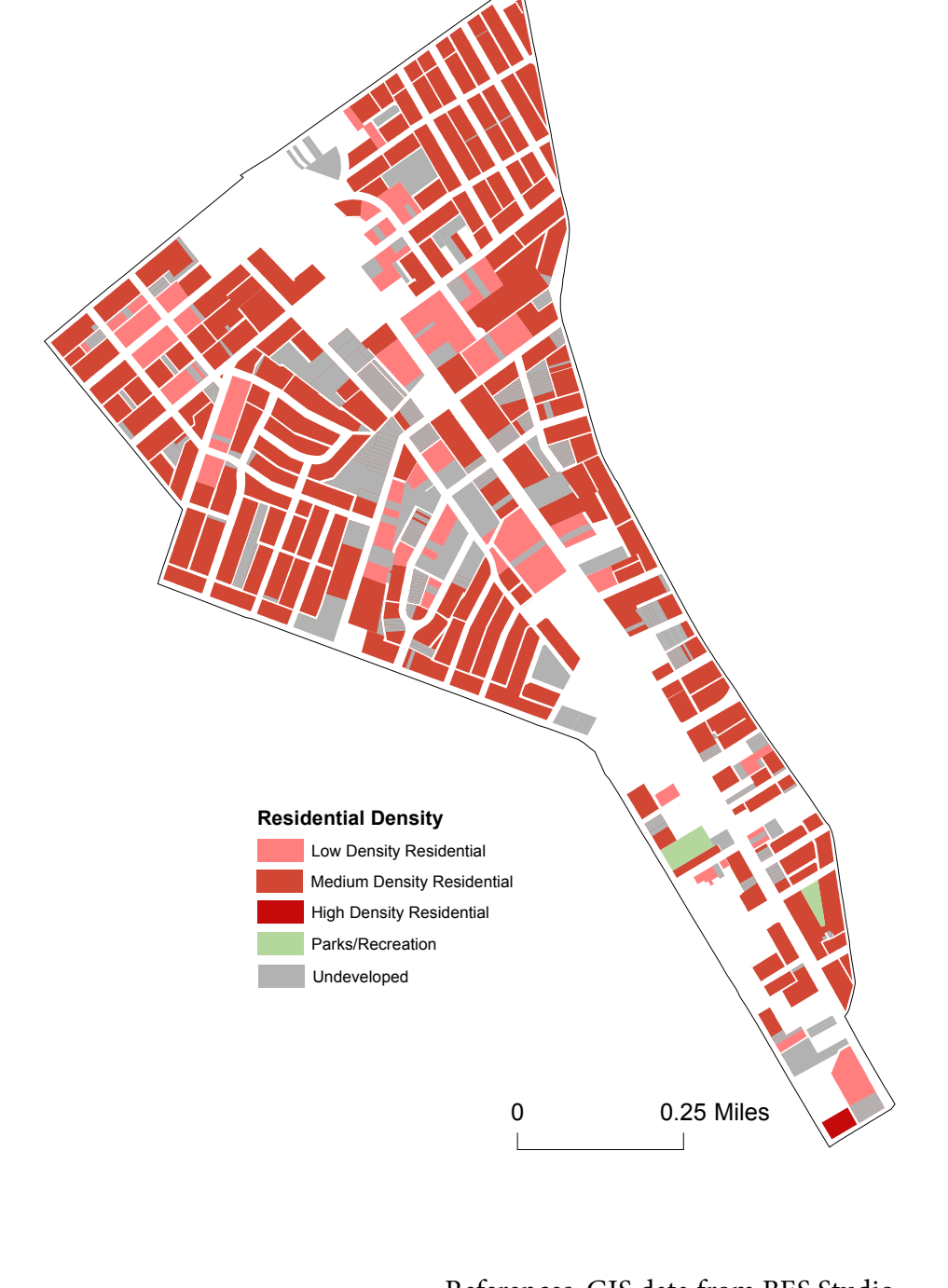
VACANT BUILDINGS



VACANT LOTS



RESIDENTIAL DENSITY



References: GIS data from BES Studio

Inventory and analysis pointed to this area of Park Heights as being an ideal location in need of revitalization. Vacancy of buildings provided knowledge into the magnitude of people living in the area and the demand in the area for social and ecological design. Vacant buildings can potentially provide spaces for future growth. Vacant land can be used as an opportunity for designed program to bring people back into the area. There is a limit to the amount of vacant lots in the surrounding context that can be sustainable in order to complement the community. The residential density is crucial in understanding how many people are going to potentially be utilizing the space. It is important to locate these sites and use them as knots to reconnect the communities together making them stronger as a whole.

Assessment of Existing vs. Proposed Landscape



PROGRAM RELATIONSHIP



SITE RELATIONSHIP



With an ecological program of green education and increase in tree coverage it creates an increase in urban forest opportunities along with social connection between public and biodiversity.

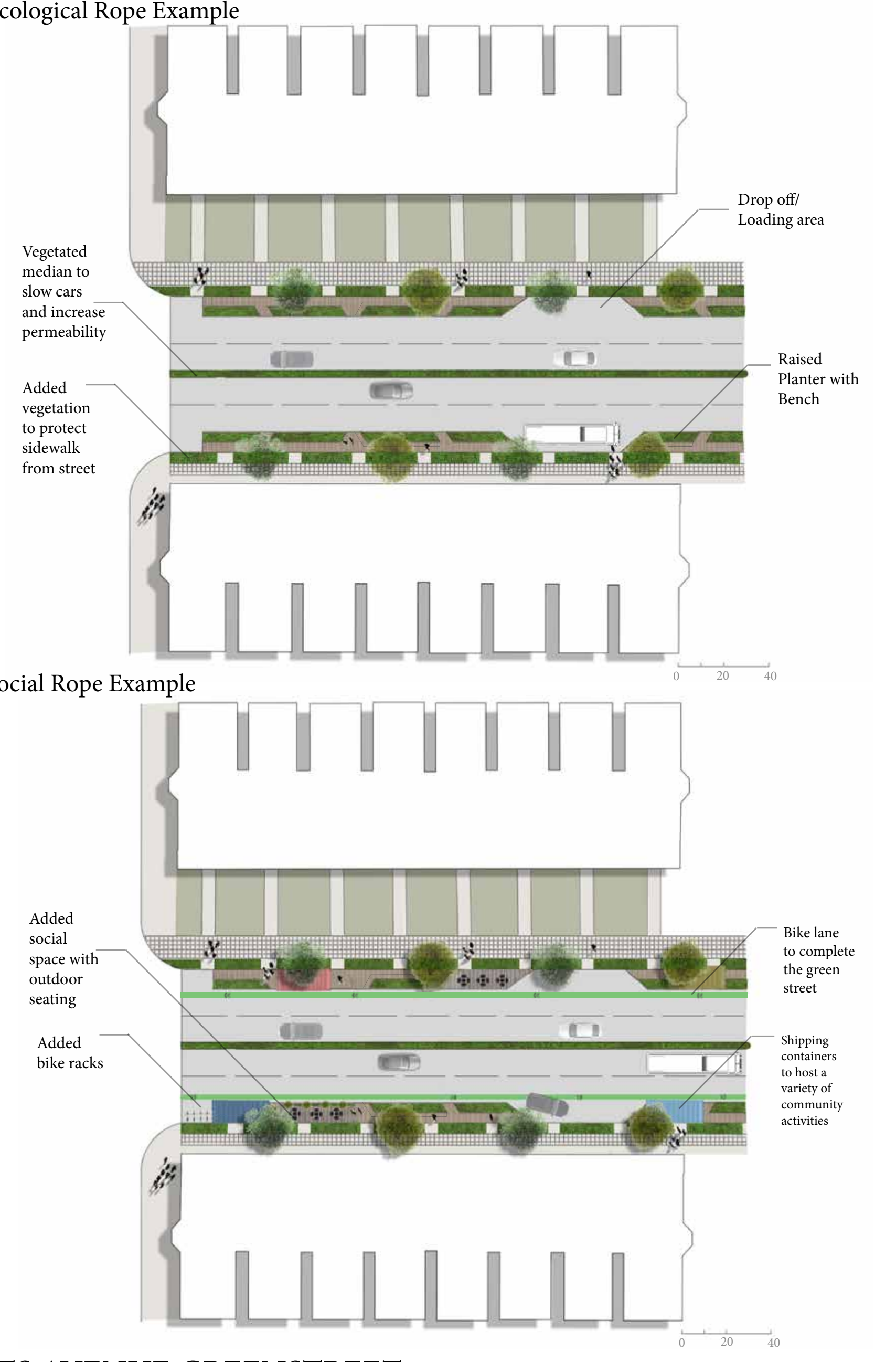
STREET ELEVATED PERSPECTIVE



CONCEPTUAL MASTER PLAN



EXPLODED STREET PLAN



INTERSECTION CONNECTION ACTIVITY



PARK HEIGHTS AVENUE GREENSTREET



WATER MOVEMENT



Water movement is directed down the street into the center stormwater gardens. The bioretention basin catches the water that comes in from the North East section of the site. The addition of the urban forest is able to retain a large portion of the rainwater that enters and falls on the site.

PLANTING PLAN



The planting plan indicates the separate planting types that are present on the site. Specific plants can be located in the planting palette.

STREET STORMWATER SECTION



The central and under-utilized spine of the district is re-imagined as an at-grade linear park featuring storm water management and ecological habitat while helping to unify adjacent neighborhoods. The green street network and knot connections help to stabilize distressed neighborhoods by greening and maintaining vacant lots so they are assets and not liabilities while strengthening the social fabric through bringing the community together into green vacant lot opportunities.

URBAN FOREST SITE SECTION

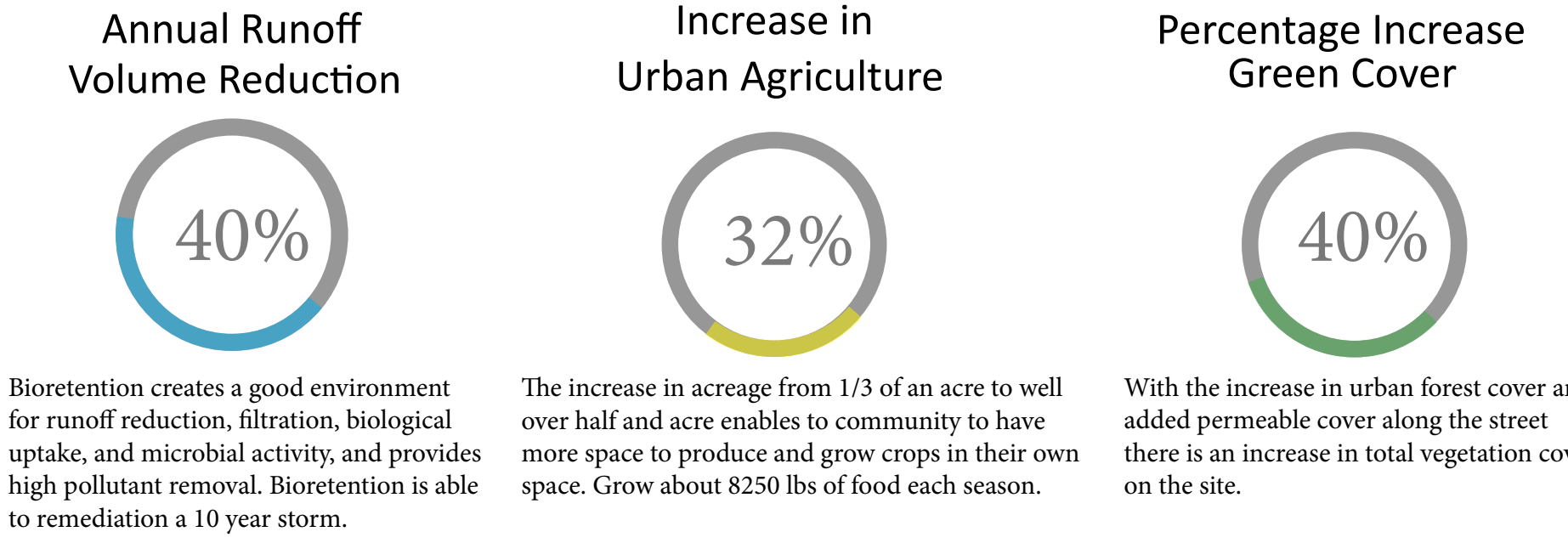


The increase in city tree canopy by planting trees on or near vacant land along the streetscape has a multitude of benefits including temperature reduction, connectivity, habitat, and overall neighborhood revitalization. Baltimore Ecosystem Study suggests urban forestry to create green corridors and reconnect forests that have been fragmented.

URBAN AGRICULTURE SECTION DIAGRAM



The section shows a typical area where a community member can come and request a plot to grow their own food. Opportunities for urban agriculture help to improve the health of the community living within a food desert while also bringing community members together.



Bioretention creates a good environment for runoff reduction, filtration, biological uptake, and microbial activity, and provides high pollutant removal. Bioretention is able to remediate a 10 year storm.

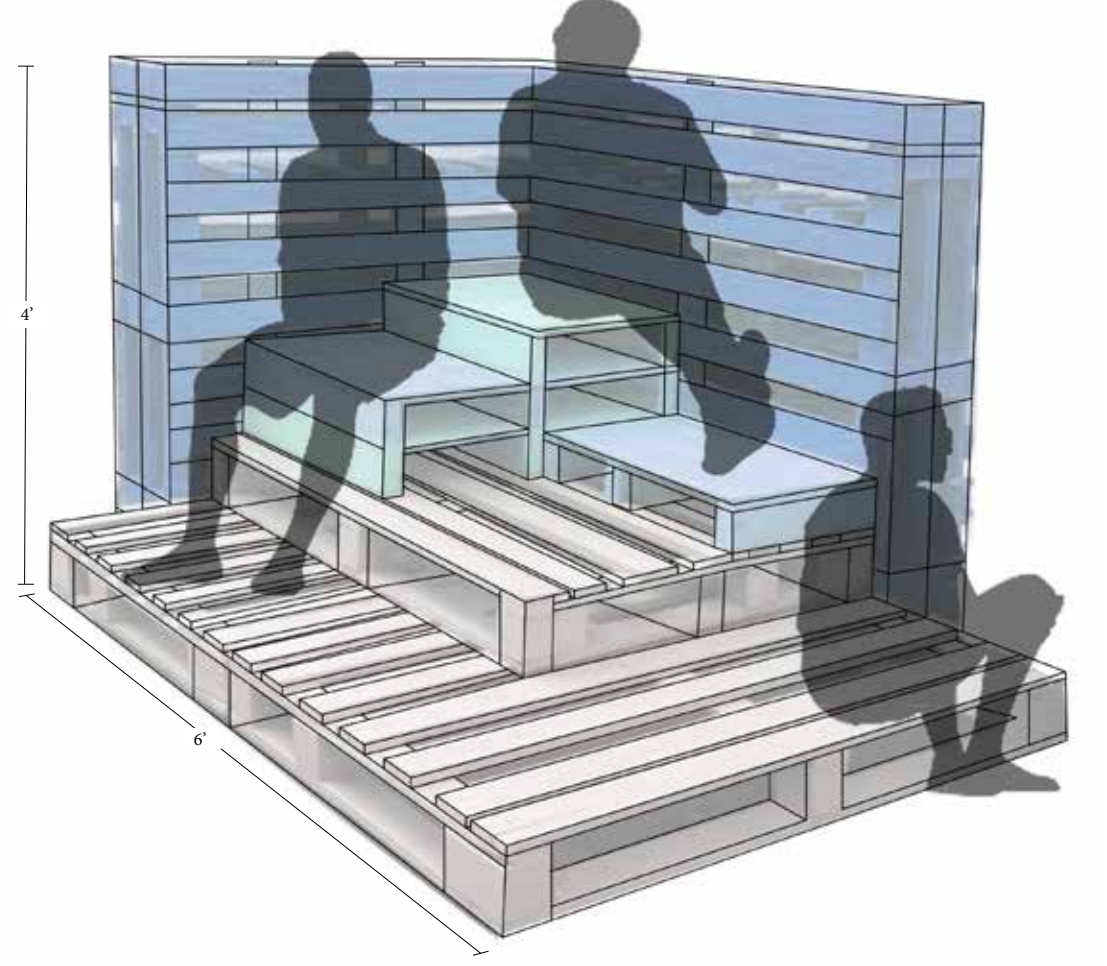
The increase in acreage from 1/3 of an acre to well over half an acre enables to community to have more space to produce and grow crops in their own space. Grow about 8250 lbs of food crops in their own space.

With the increase in urban forest cover and added permeable cover along the street there is an increase in total vegetation cover on the site.

WEST SITE PLAN



RECYCLED SHIPPING PALETTES



RECYCLED OR REFURBISHED MODIFIED SHIPPING CONTAINER



Plant Palette

MEADOW	FALL	WINTER	SPRING/SUMMER	Characteristics
<i>Asclepias tuberosa</i> (Butterfly Weed) <i>Filipendula rubra</i> (Queen of the Prairie) <i>Lupinus</i> (Lupines) <i>Panicum virgatum</i> (Switch Grass)				Attracts butterflies, Native, aromatic, colorful Attracts butterflies, Native, aromatic, colorful Attracts butterflies, Native, aromatic, colorful 3-6 ft., Controls erosion, Define space
URBAN FOREST <i>Betula</i> (Birch Tree) <i>Carpinus caroliniana</i> (American Hornbeam) <i>Cornus mas</i> (Cornelian Cherry Dogwood) <i>Acer rubrum</i> (Red Maple)				Suitable near overhead utility wires, Native, 30-40ft. Suitable near overhead utility wires, Native, Shade provider Suitable near overhead utility wires, Native, Shade provider 20-25 ft. Suitable near overhead utility wires, Native, Shade provider
DETENTION BASIN <i>Elymus virginicus</i> (Virginia Wild Rice) <i>Panicum virgatum</i> (Switch Grass) <i>Veronica hastata</i> (Blue Vervain) <i>Latrodium dactyloides</i> (Joe-Pye Weed)				Tolerates a range of conditions, 2-4 ft. Texture, Tolerates wet and dry conditions, 3-6ft Tolerates wet and dry conditions, 2-3ft. Blooming, Tolerates wet and dry conditions 3-7ft.
POLLINATOR <i>Monarda didyma</i> (Scarlet Gaura) <i>Lobelia cardinalis</i> (Cardinal Flower) <i>Phlox divaricata</i> (Phlox) <i>Amanitaceae</i> (Mushrooms)				Blooming Flower, Aromatic, Attract butterflies, Native, 2-3 ft. Blooms July-Oct, hummingbird and butterfly, Native, 2-5 ft. Aromatic, butterfly hawk, blooms April-Oct, Native, 1-2 ft. Aromatic, Shade provider, 10-25 ft.
STREET VEG. <i>Platanus occidentalis</i> (American Sycamore) <i>Ginkgo biloba</i> (Common Ginkgo) <i>Acer saccharum</i> (White Maple) <i>Acer campestre</i> (Hedge Maple)				Fast growing, Large shade provider, 60-70ft. High stress tolerance, upright shape, 30-40 ft. Fast growing, Large shade provider, 60-70 ft. Aromatic, Shade provider, 10-25 ft.

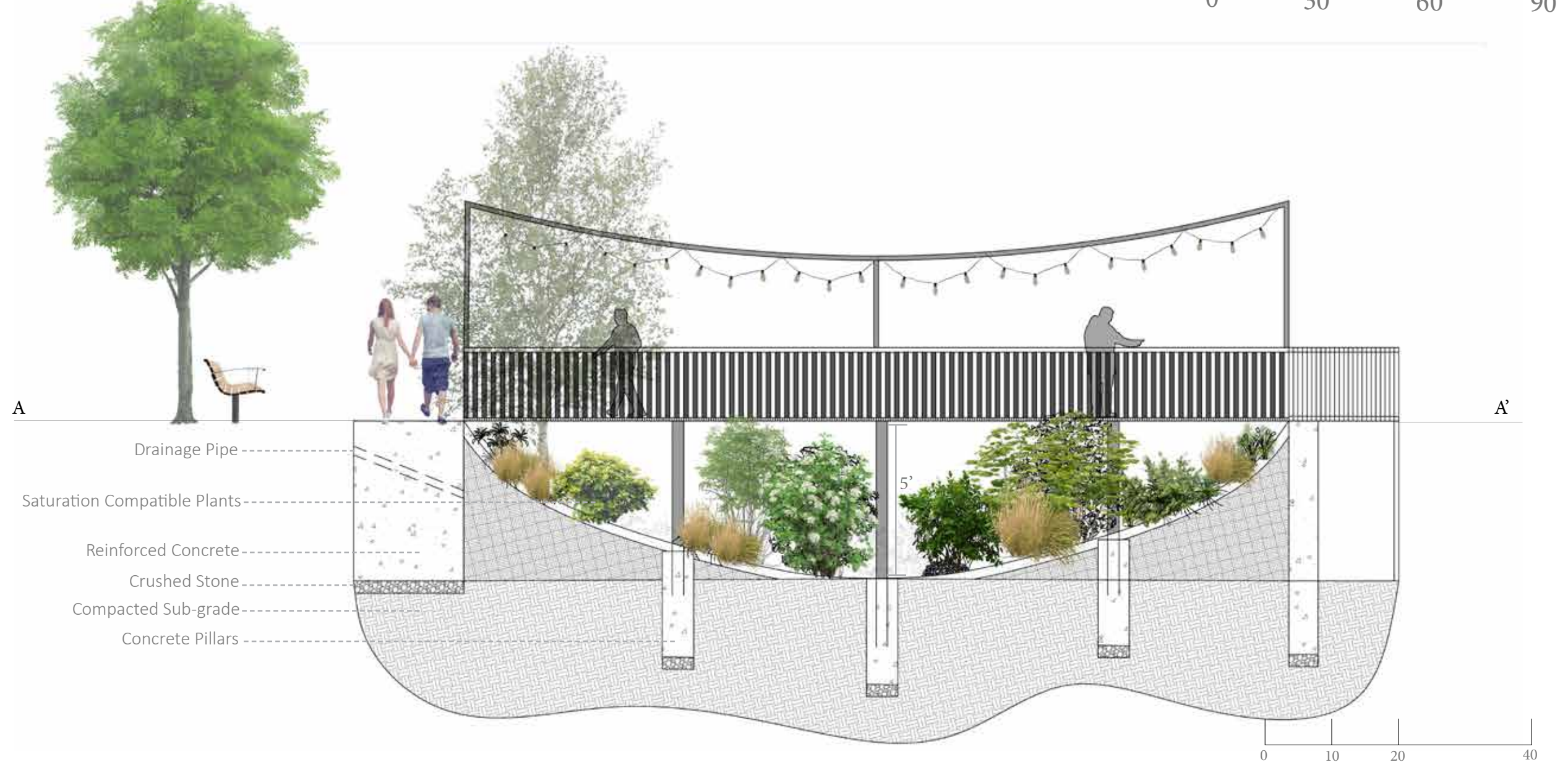
URBAN AGRICULTURE SOCIAL GATHERING SPACE



EAST SITE PLAN



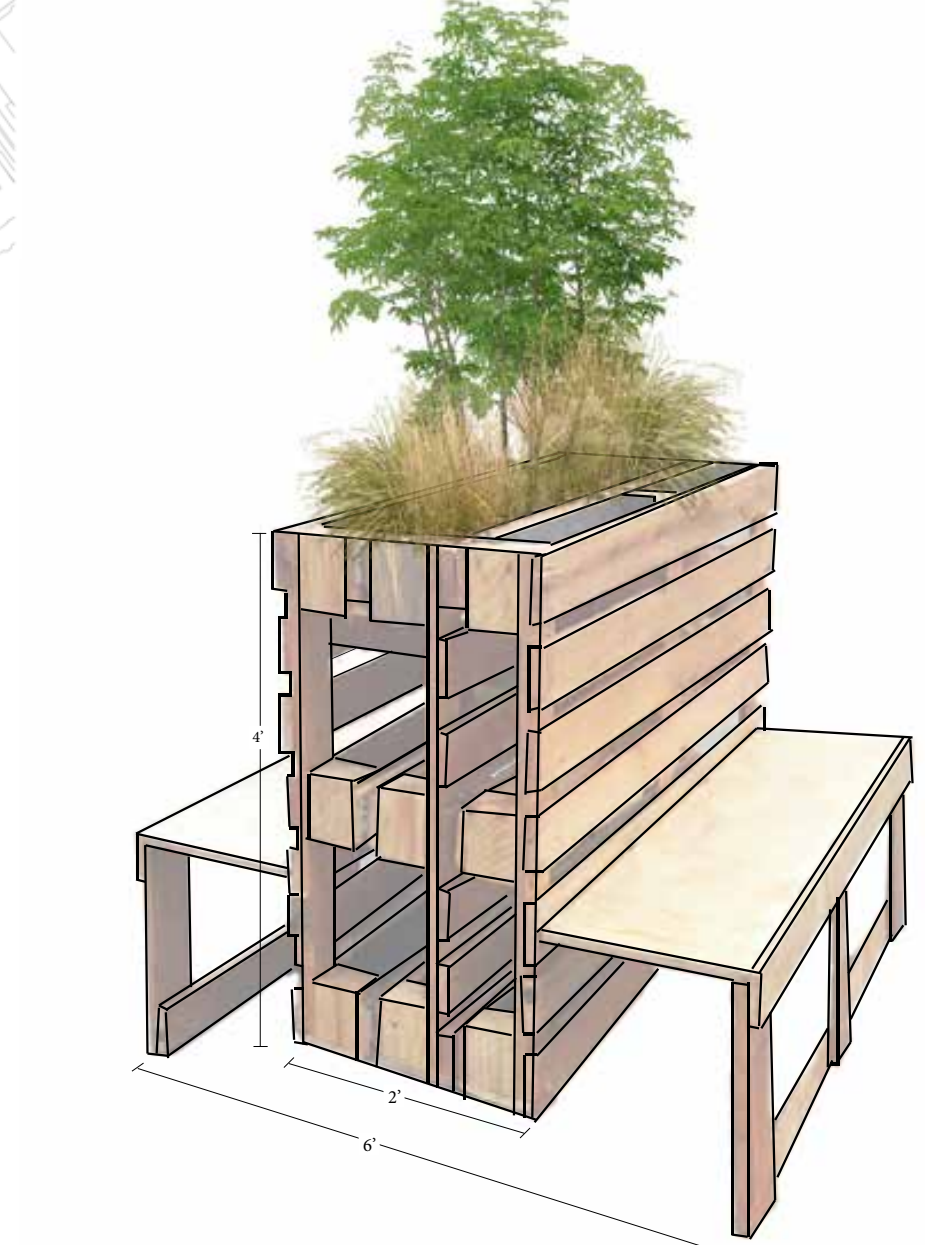
BIORETENTION BRIDGE DETAIL SECTION



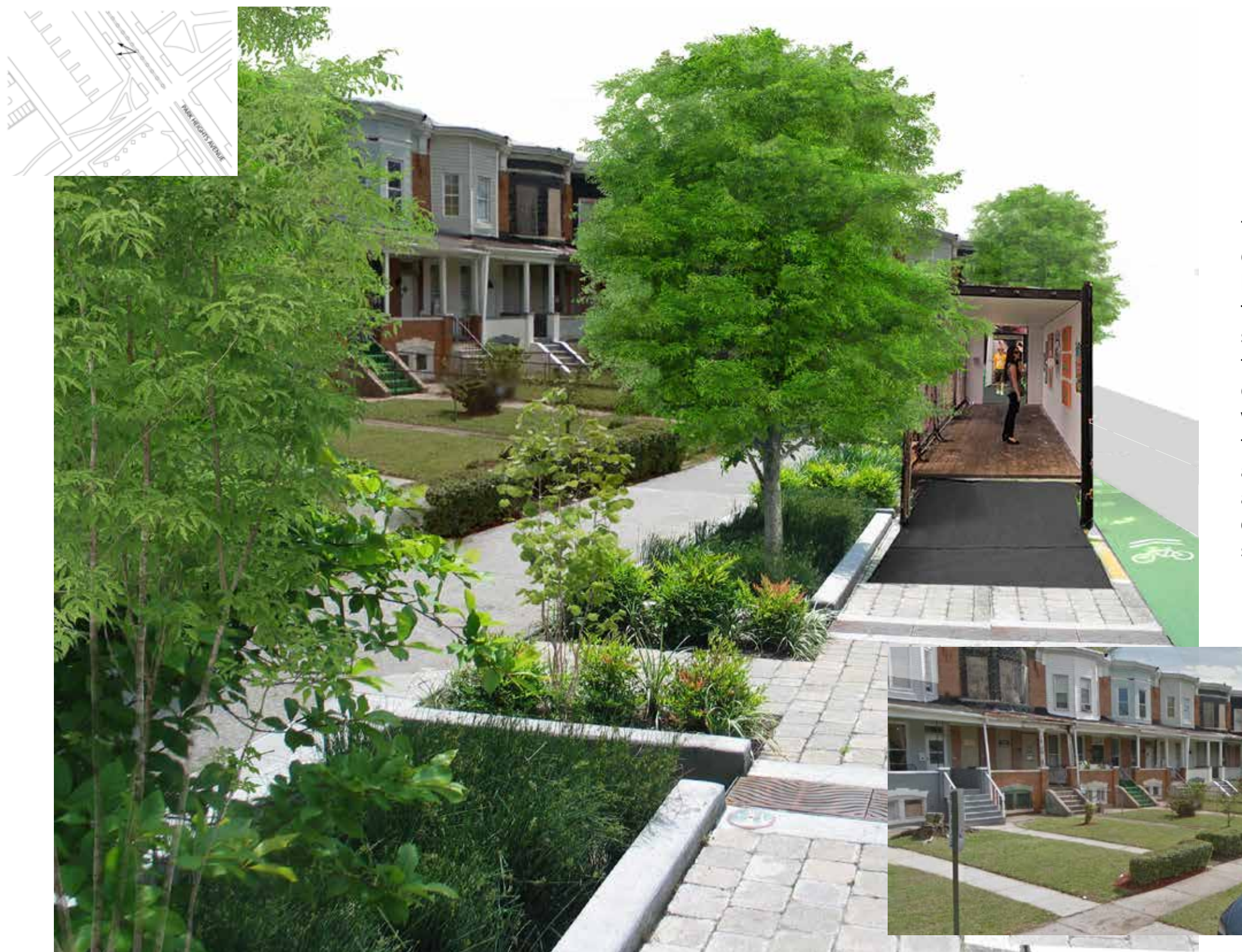
URBAN FOREST WALK ENTRANCE



RECYCLED SHIPPING PALETTES



SHIPPING CONTAINER STREET MODULARITY



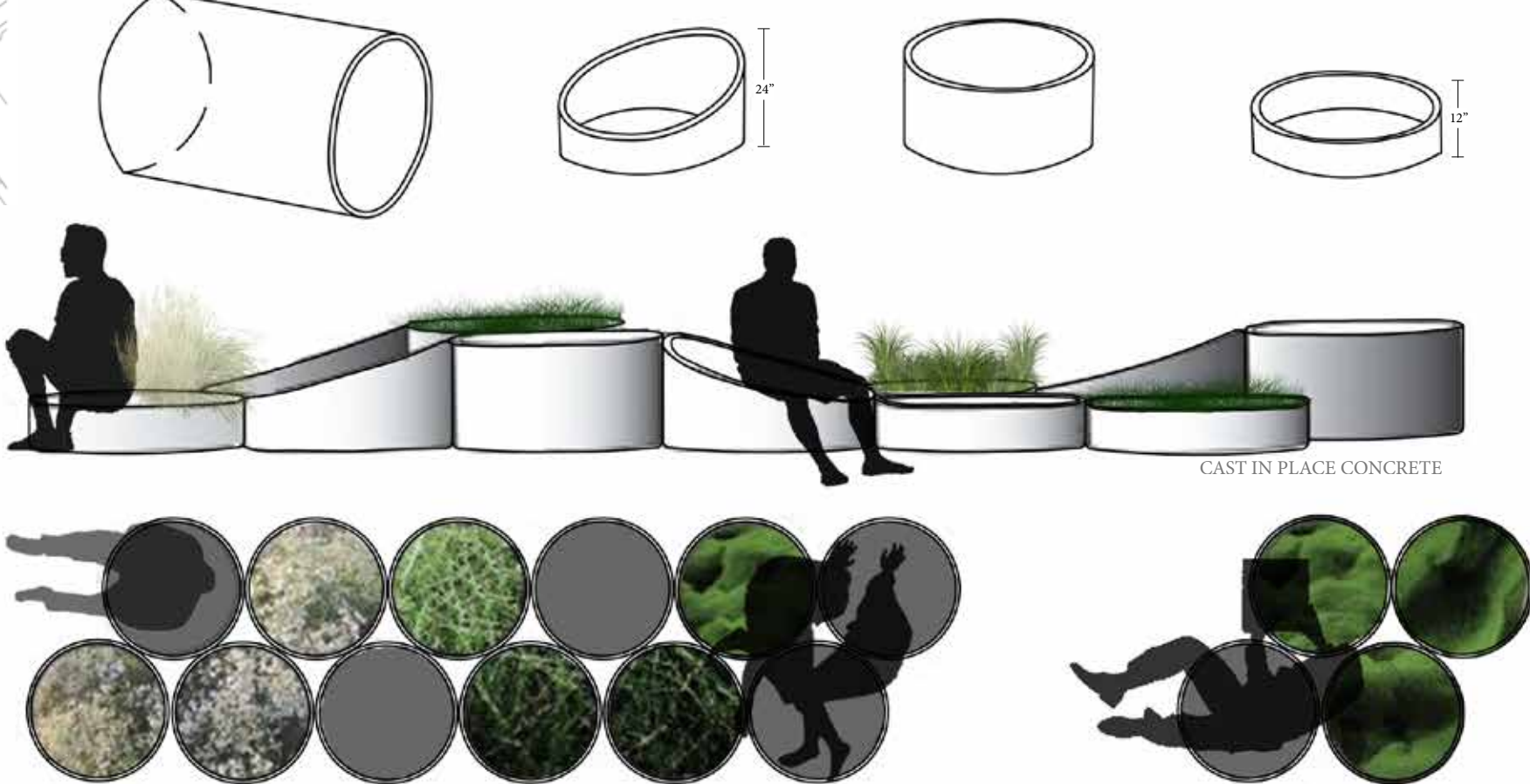
RECYCLED STOOP SEATING



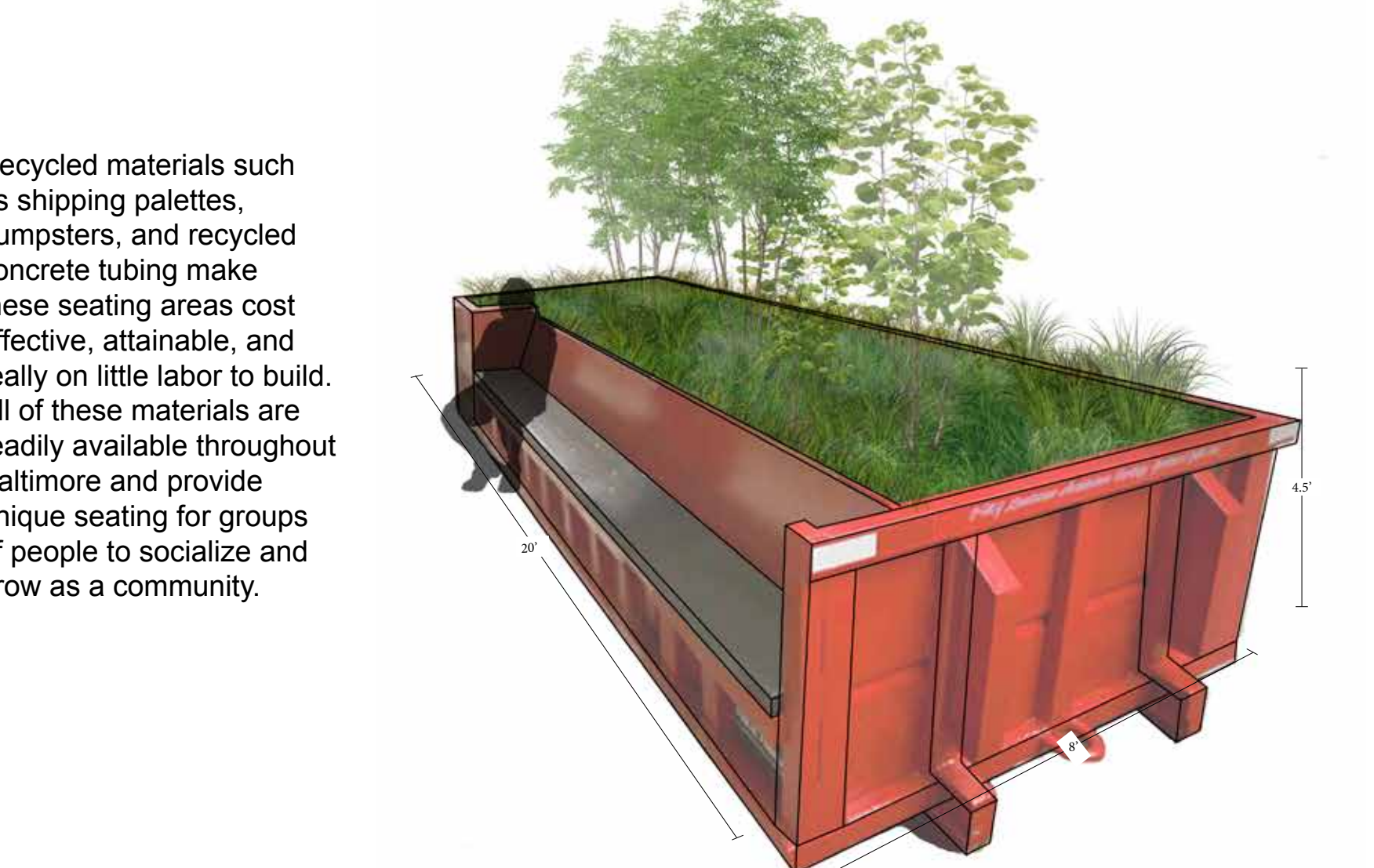
HUMAN HABITAT CONNECTION PLAN



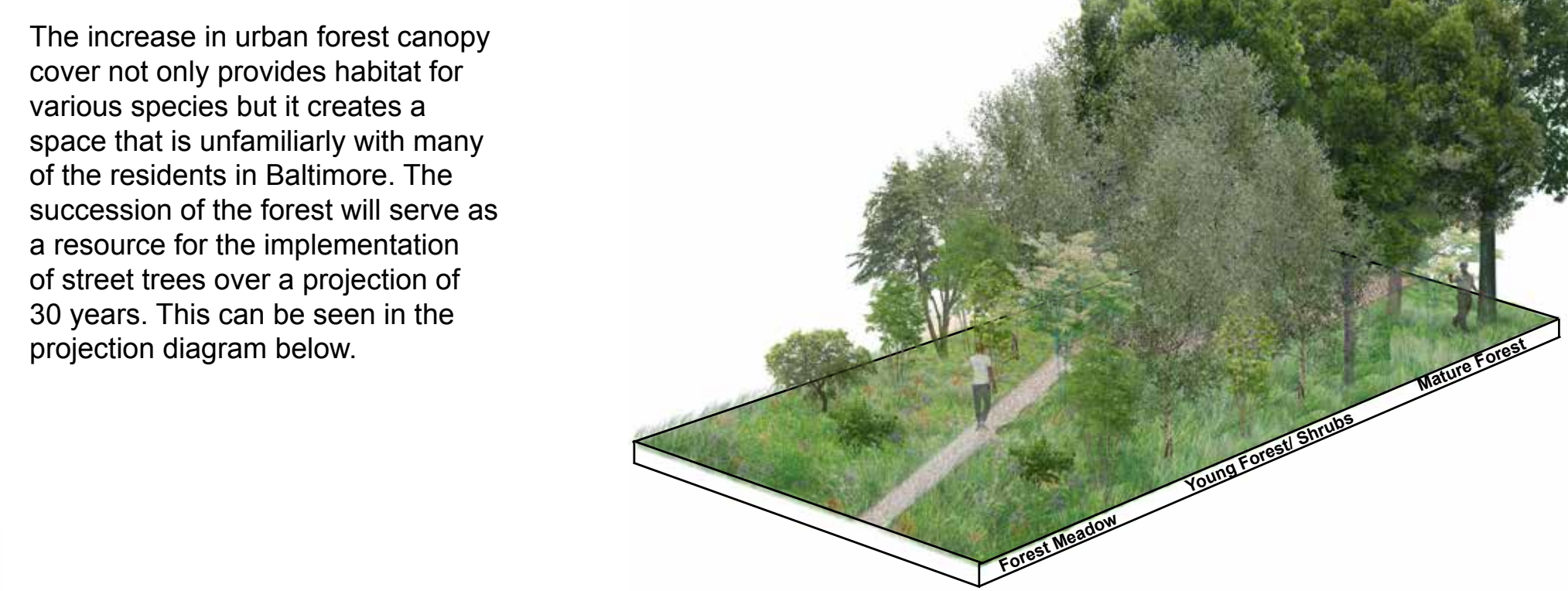
CIRCULAR SOCIAL AND ECOLOGICAL SEATING



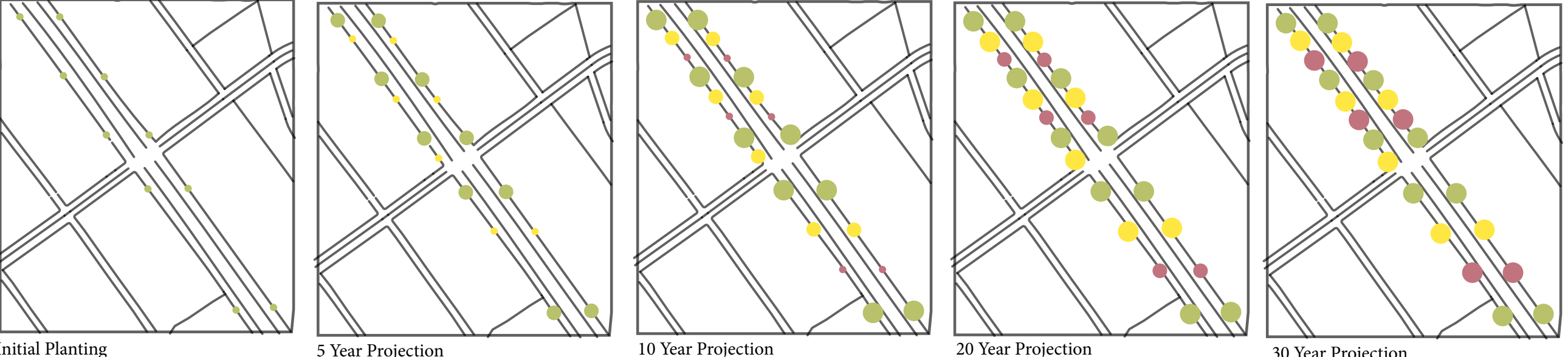
REFURBISHED MODIFIED DUMPSTER



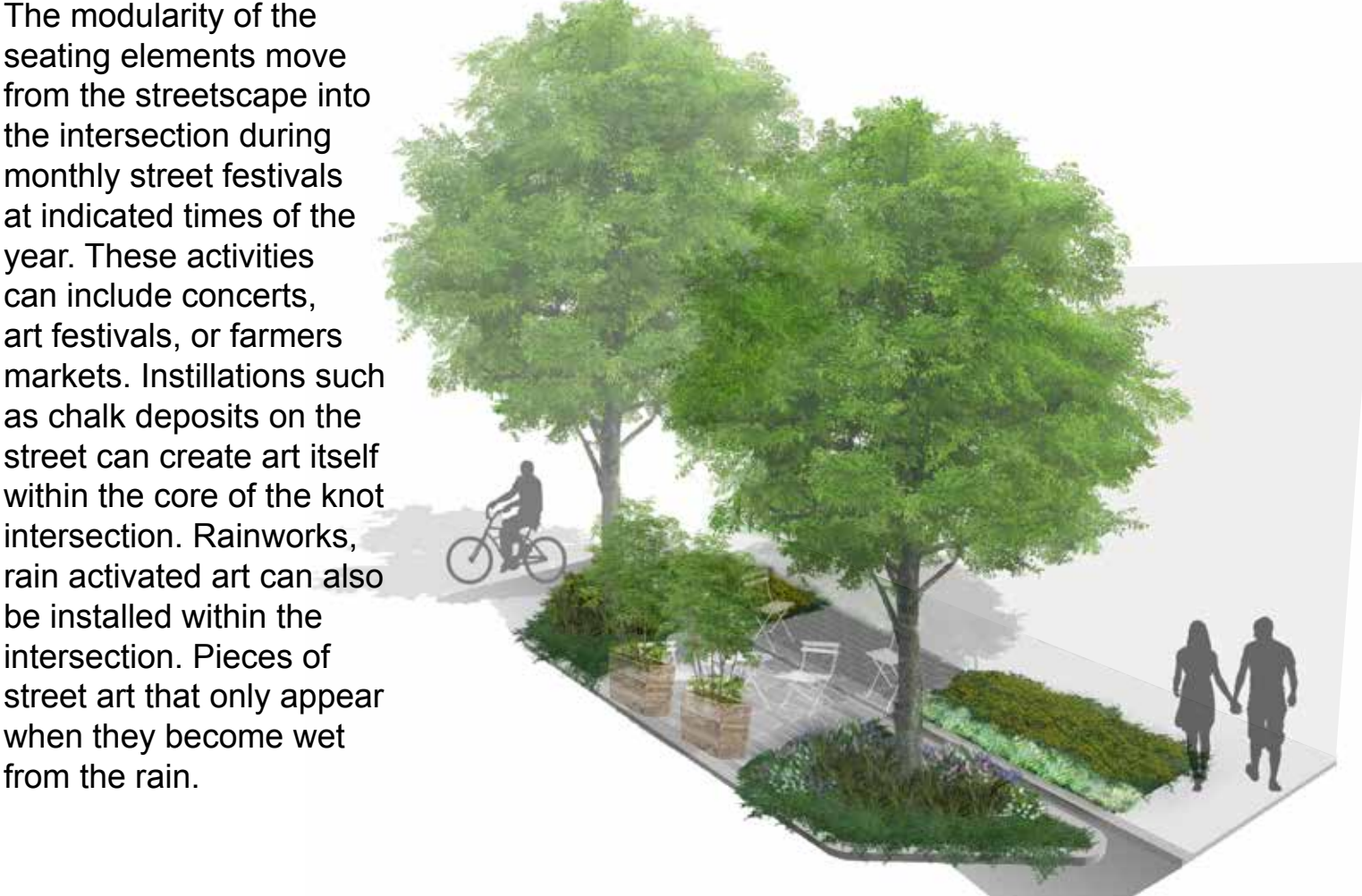
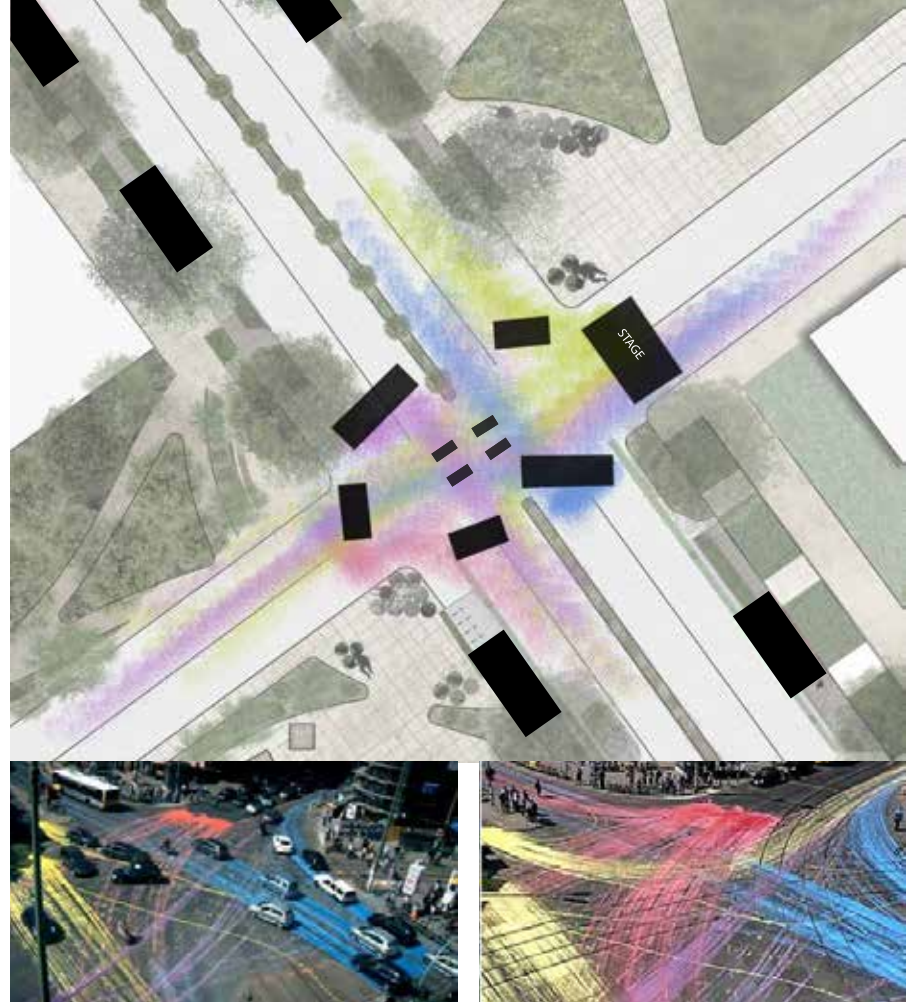
SUCCESSION OF URBAN FOREST (BIOLOGICAL COMPLEXITY)



PLACEMENT CONCEPT AND PROJECTION



KNOT MODULARITY ACTIVITY

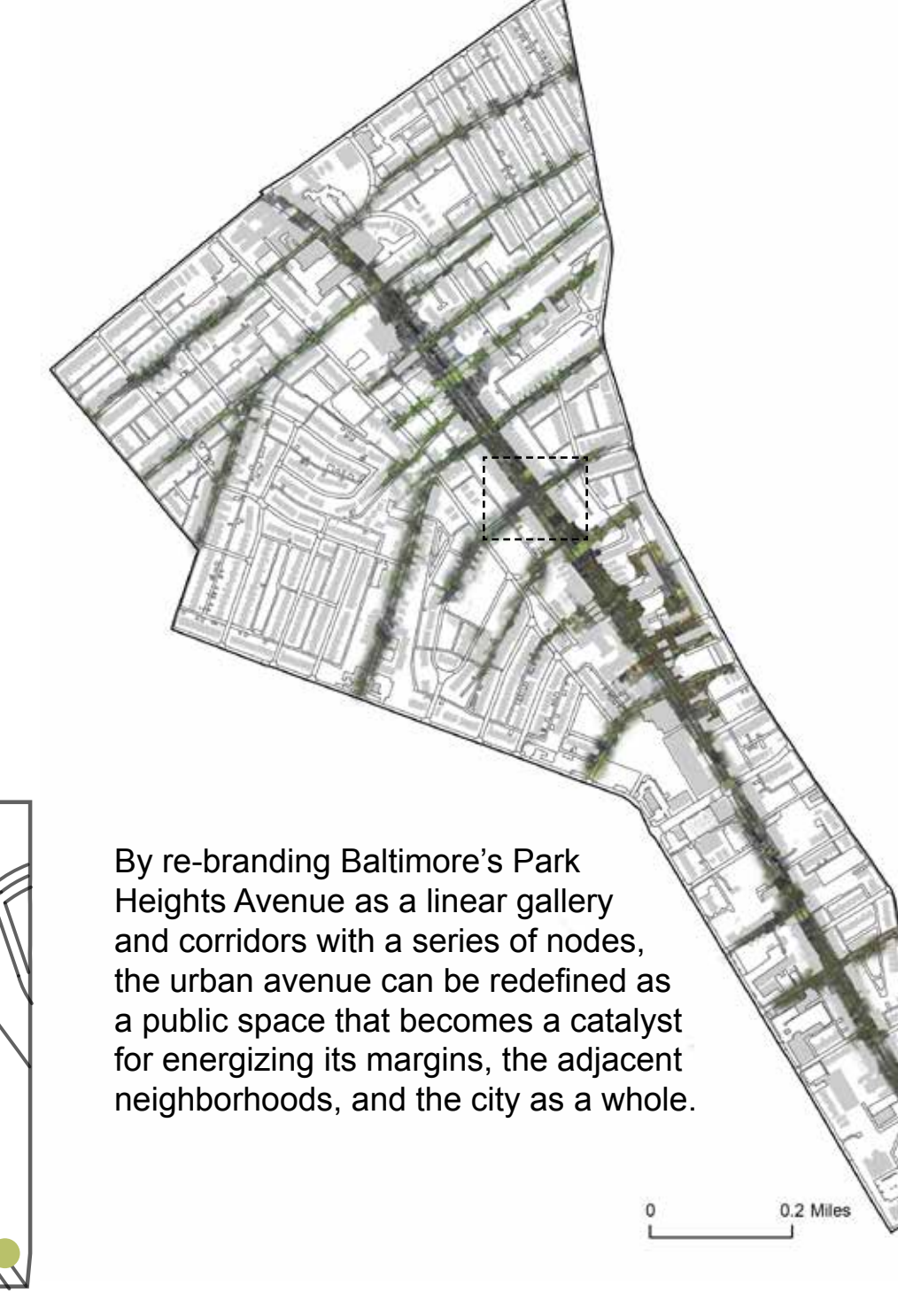


SEATING CURB BUMP OUT

RECYCLED OR REFURBISHED DUMPSTER



PARK HEIGHTS GREEN NETWORK PLAN



CREATING CONNECTIONS

