



# BUILDING A FRAMEWORK FOR HEALTHY HOUSING

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## Public Housing Greening Initiative

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Kari Smith, Assistant Director  
Community Greening Stewardship Program

# Overview



- Parks & People has developed an successful relationship with the Housing Authority of Baltimore City to work in public housing property to:
  - improve environmental conditions
  - provide education on the benefits and importance of green spaces
  - engage residents in community beautification



# Overview

- This session will provide an overview of the Public Housing Greening Initiative including its history, implementation, achievements, and future outlook.



# Objectives

- Broaden the definition of a healthy home to include the exterior as well as the interior
- Make the case for the value of green space including trees, gardens, permeable surfaces, and bioretention



# Objectives

- Illustrate greening in action
  - Greening movement in Baltimore
  - Parks & People's Community Greening Stewardship Program
  - Public Housing Greening Initiative



# Objectives

- Illustrate greening in action
  - Perkins Homes, Brooklyn Homes, Westport Homes, Dukeland Homes, & others
  - Other public / social housing efforts, national and international



# Objectives

- Provide some suggestions for replication related to:
  - Local, state, and national regulations
  - Watershed restoration efforts
  - Urban Tree Canopy Goals
  - Food Security / Urban Agriculture
  - Environmental movement



# Define 'Green'

- For the purposes of this initiative:
  - Green / Open Space
  - Trees
  - Gardens
  - Pervious / Permeable Surfaces
  - Bioswales and Rain Gardens
- Participatory and observational



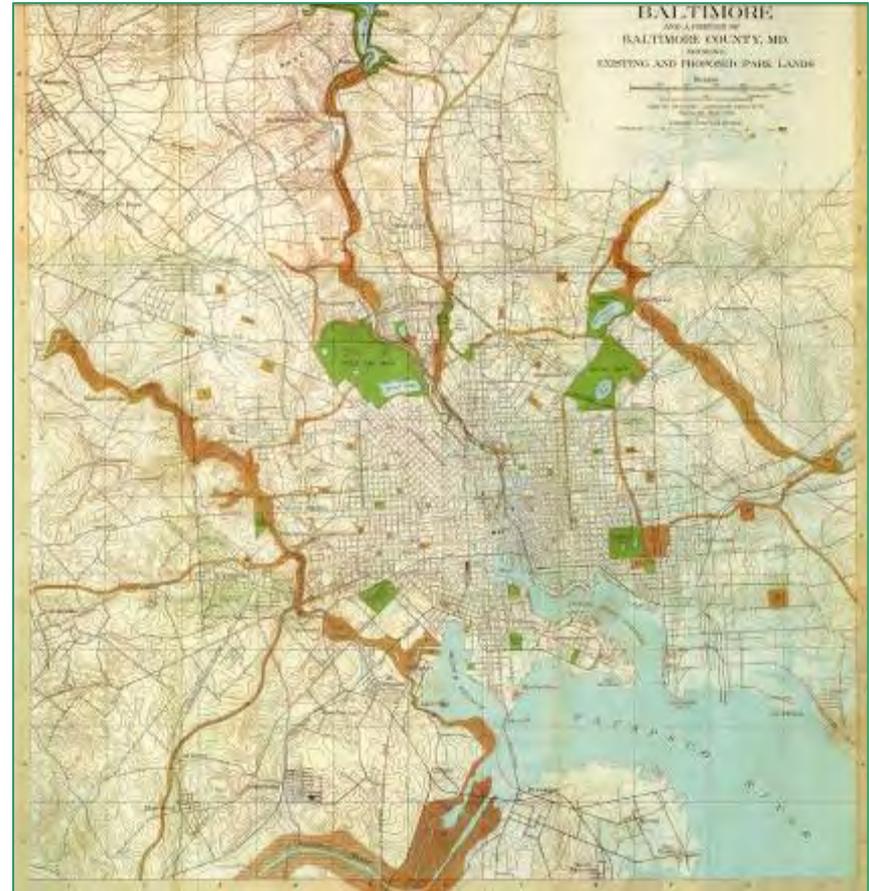
# Parks & People Foundation

- The Parks & People Foundation is dedicated to supporting a wide range of recreational and educational opportunities; creating and sustaining beautiful and lively parks; and promoting a healthy natural environment for Baltimore.



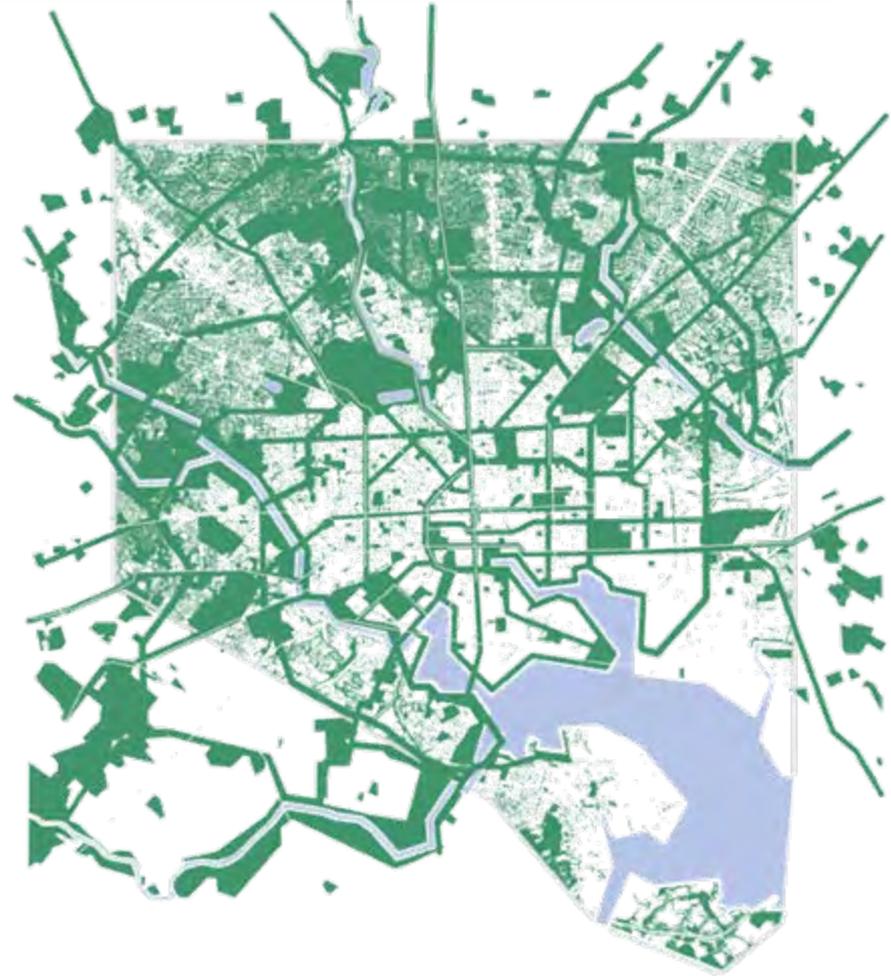
# ONE PARK

- A Concept for the Renewal and Use of Parks and Open Space in the City of Baltimore
- Olmsted legacy and vision for Baltimore's park system



# ONE PARK

- The Parks & People Foundation envisions a Baltimore in which every citizen benefits from a green network of open space.



# Public Housing's Role

- Public Housing plays an essential role in this city-wide greening vision



# Why Green?

- Why is the outside of a home important to the health of the inside?
- Why is green space so important to the livability of a community?
- Why do we envision a network of accessible green open space?



# Benefits of Green

- Studies cited conducted by:
  - Landscape and Human Health Laboratory, University of Illinois
  - USDA Forest Service
  - Trust for Public Land
  - University of Georgia
  - American Forests
  - Many others...



# Green / Open Space

- Improved self-discipline in girls
- Increased optimism and effectiveness in coping with poverty and difficult problems
- Lower rates of property and violent crime
- Friendlier, more supportive communities
- Better concentration among children with Attention Deficit Disorder



# Trees: Environmental Benefits

- Reduce noise pollution
- Improve local and global air quality
- Reduce storm water runoff and the potential for soil erosion and water pollution
- Support biodiversity



# Trees: Psychosocial Benefits

- Decrease mental fatigue which has been shown to inhibit coping skills
- Enhance visual and aesthetic qualities serve as a source of community image and pride



# Trees: Economic Benefits

- Conserve energy by providing shade and blocking wind
- Reduce air movement into buildings and conductive heat loss from buildings by up to 50%, translating into potential annual heating savings of 25%



# Gardens: Benefits for Individuals

- Improve the quality of life for people participating in gardening
- Create opportunity for recreation, exercise, therapy, and education
- Encourage self-reliance
- Stimulate social interaction



# Gardens: Benefits for Families

- Reduce family food budgets
- Provide nutritious food
- Create income opportunities and economic development



# Gardens: Benefits for Communities

- Preserve green space
- Reduce crime
- Beautify neighborhoods
- Provide a catalyst for neighborhood and community development
- Provide opportunities for intergenerational and cross-cultural connections



# Pervious / Permeable Surfaces

- Impervious: asphalt, concrete, stone, rooftops, compacted soils
- Impervious surfaces generate surface runoff and are found in high percentages in urban areas
- Absorb heat and contribute to the ‘heat island’ effect



# Pervious / Permeable Surfaces

- Pollutant accumulation
- Thermal pollution
- Nonpoint source pollution
- Alternatives
  - Pervious concrete and asphalt
  - Grass, gardens, and trees
  - Bioretention

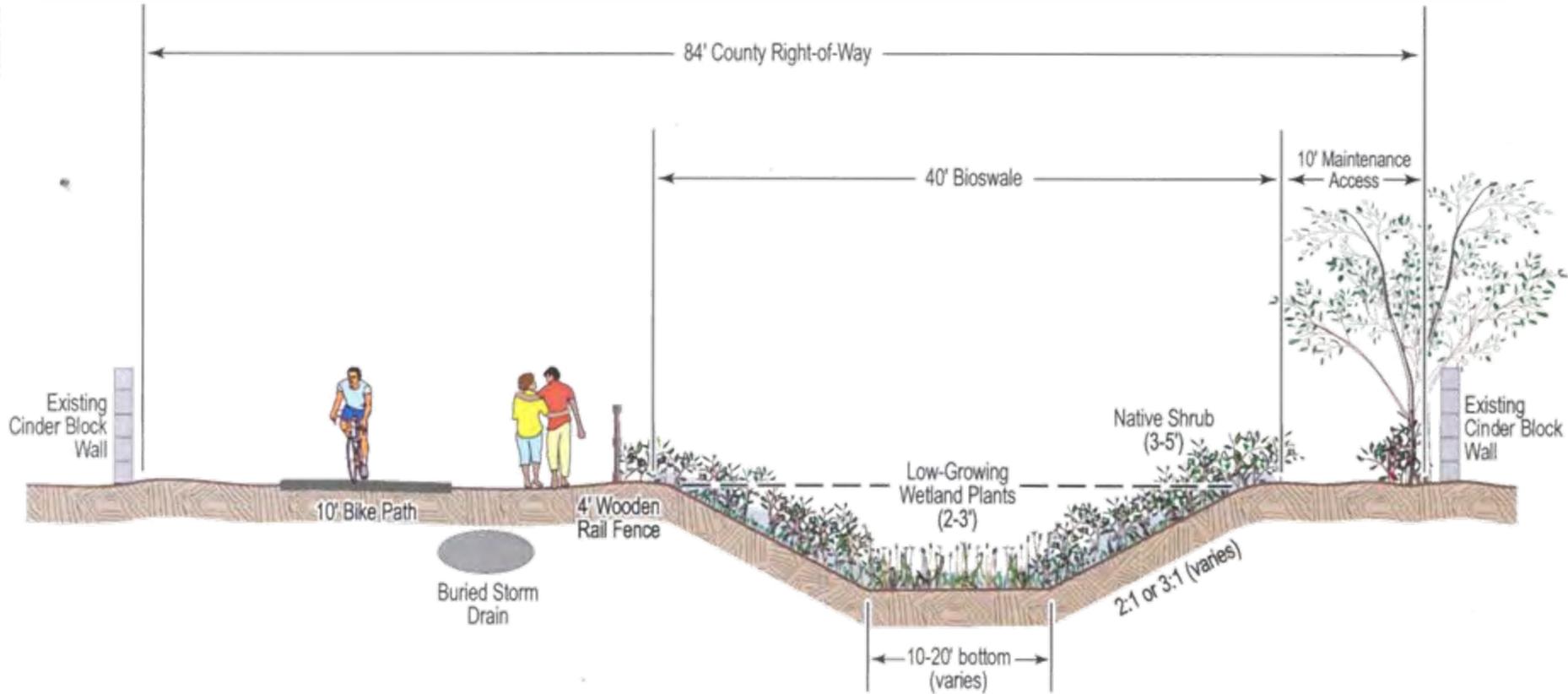


# Bioswales & Rain Gardens

- Retain stormwater runoff
- Trap and filter pollutants
- Slow volume and speed of water
- Promote biodiversity
- Reduces thermal pollution
- Utilize the landscape to protect an ecosystem & reduce erosion



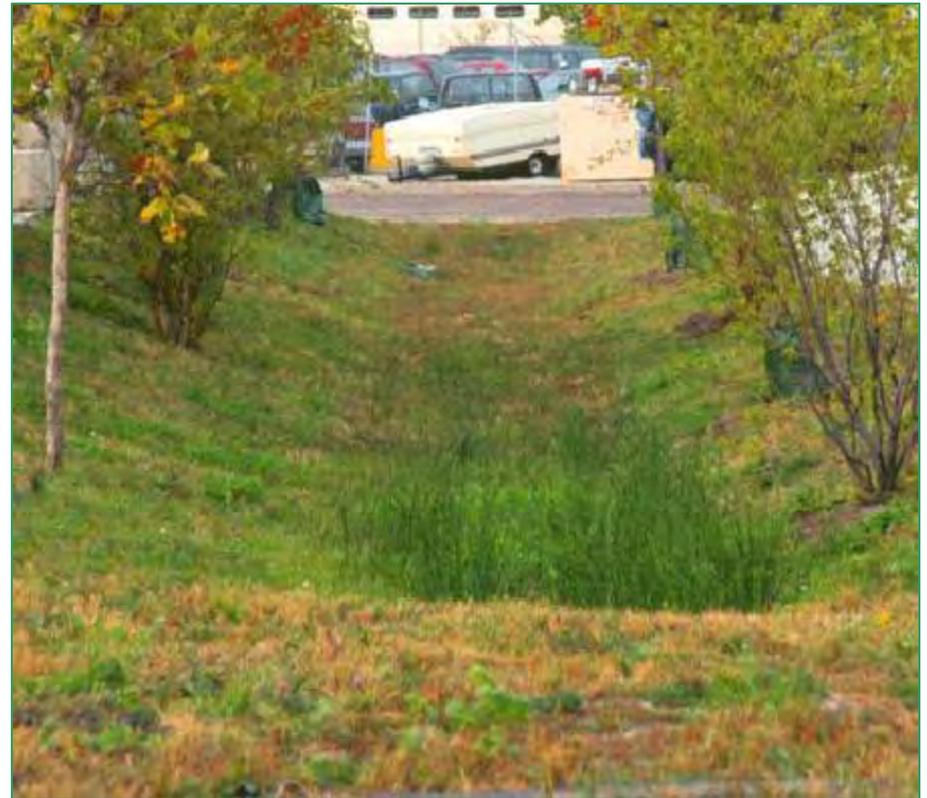
# Bioswales



Typical Cross Section



# Bioswales



# Public Housing Specific Research

- According to a study conducted in the Robert Taylor Homes, a public housing neighborhood in Chicago, by a University of Illinois College of Agricultural, Consumer and Environmental Sciences (ACES) team, the amount of trees and green spaces in a living environment has a measurable impact on quality of life.
- In addition, they found that more often than not, public housing neighborhoods have a deficit of trees and green spaces.



# Findings of ACES' Research

- People in buildings with trees knew and socialized more with neighbors from their buildings, had a stronger sense of community, and felt safer than people in buildings without trees.
- Adults and children gathered more often in spaces with trees, compared to places with no trees. By drawing people out of their homes, the trees created an opportunity for neighbors to interact and develop community relationships.



# Findings of ACES' Research

- Overwhelmingly, people living in housing developments want trees, yet thousands look out over concrete.
- When given comparison photos of communities with and without trees, residents identified settings with trees as places where they would feel safe.



# Findings of ACES' Research

- Although building managers and police had predicted that trees would increase feelings of fear, people living near trees reported feeling safer than those living in more stark surroundings.
- Children play in outdoor space about twice as often as in barren spaces, participating in both rule-bound and 'creative' play.



# Findings of ACES' Research

- Children playing among trees had more frequent contact with adults; adults were more likely to congregate outdoors in green spaces than in barren areas.
- Supportive studies indicate that creative play and access to adults are important to the cognitive and social development of children.



# Findings of ACES' Research

- As a result of ACES' findings, the City of Chicago spent \$10 million to plant 20,000 trees.



# Greening in Action

- Baltimore
- Parks & People
- Public Housing
- Nationally & Globally



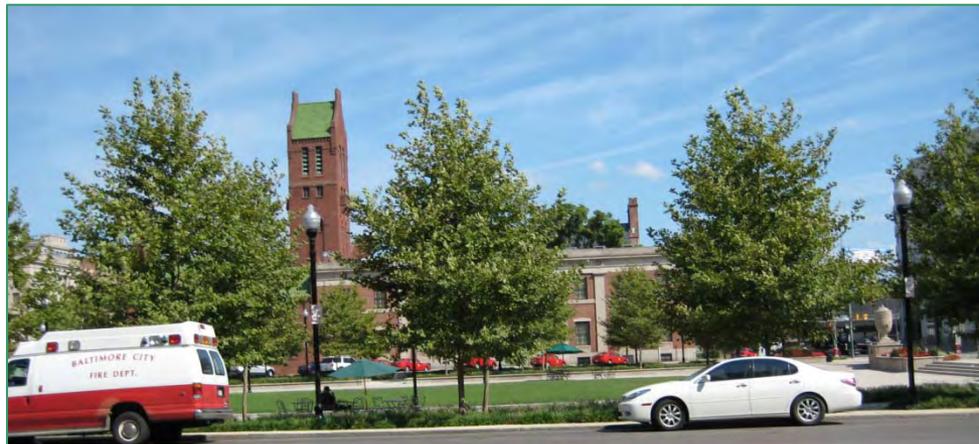
# Greening in Baltimore

- Mayor Dixon's Cleaner, Greener Baltimore
- Office of Sustainability and the Sustainability Plan
  - Green Infrastructure Working Group



# Greening in Baltimore

- Baltimore's Urban Tree Canopy Goal
  - Goal set in 2006 to double the tree canopy by 2036
  - Currently at 20% city-wide



# Greening in Baltimore

- Chesapeake Bay Watershed
  - 64,299 square miles
  - Largest estuary in the United States
  - Nutrient pollution & chemical contaminants
  - Erosion & landscape changes



# Parks & People Foundation

- Great Parks, Clean Streams & Green Communities - Helping to improve the physical, social and environmental quality of neighborhoods through greening activities and forming networks among communities to sustain natural resources.
- Motivating Youth - Programs nurturing children and supporting communities by working together to provide enriching activities for youth.

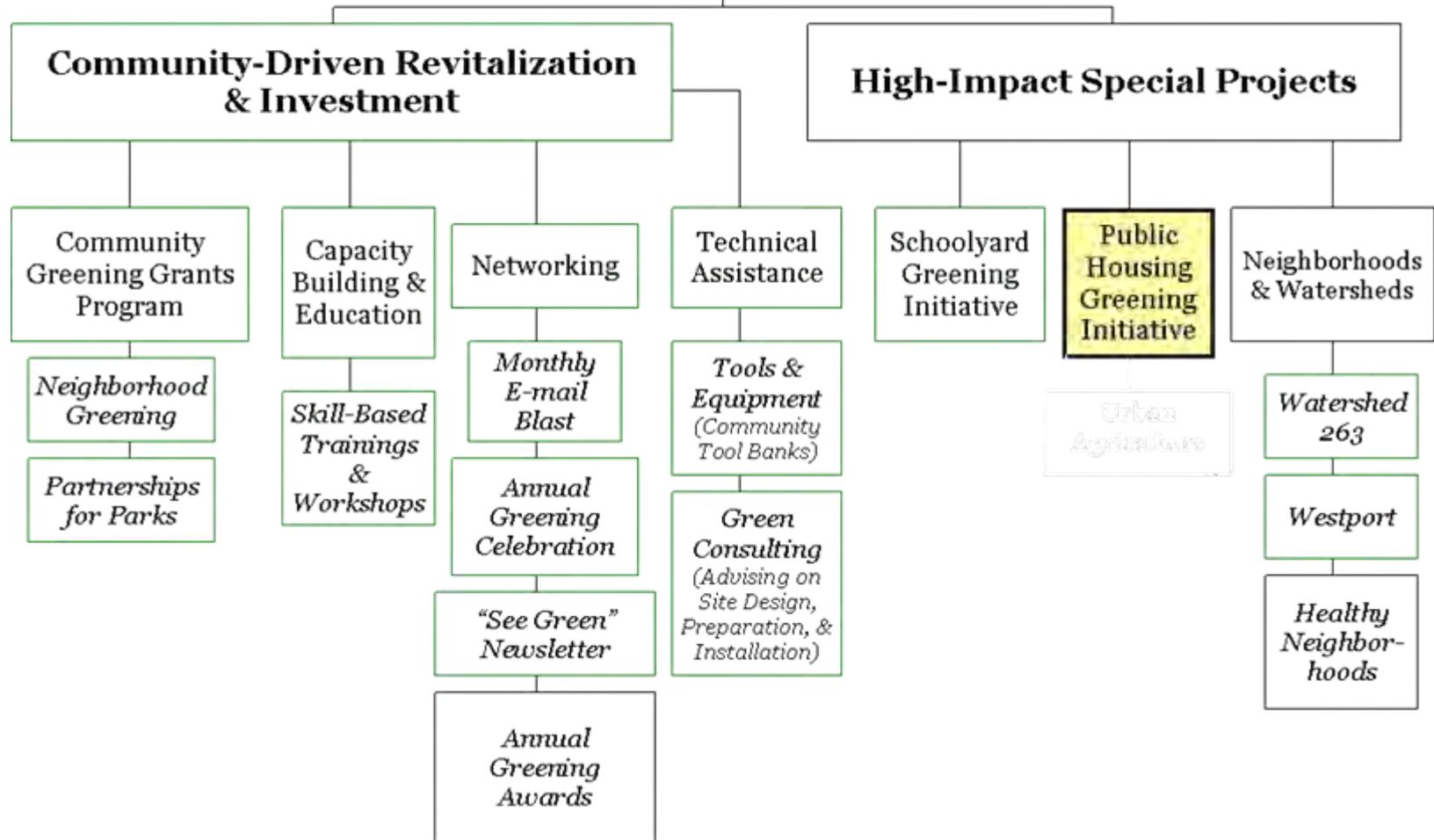


# Parks & People Foundation

- Great Parks Division
  - Urban Resources Initiative
  - Social Enterprise
  - Community Greening Stewardship Program

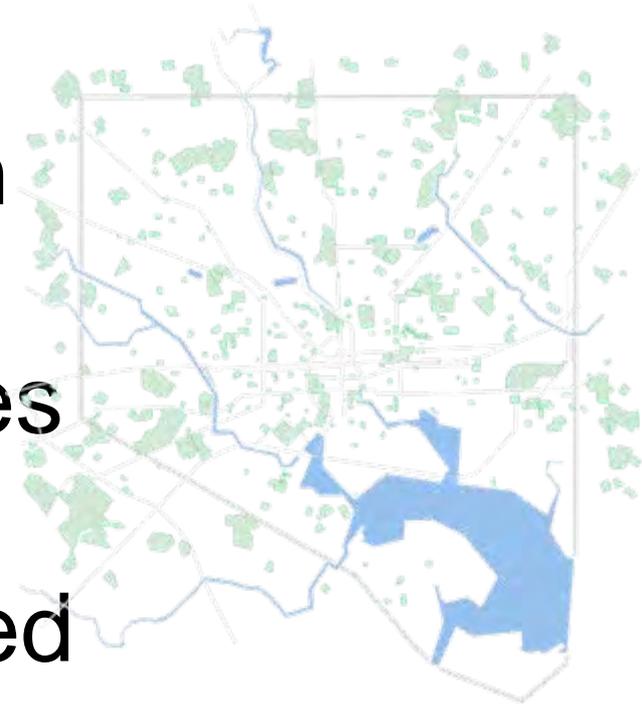


# Community Greening Stewardship Program



# Greening in Public Housing

- One Park / Olmsted vision of connectivity
- Equitable access to green space for all of Baltimore
- Significant change requires comprehensive efforts
- High potential for increased green space



# Greening Initiative Goals

- Create healthy learning and living environments
- Increase tree canopy
- Decrease impervious surfaces
- Ensure positive and productive use of land
- Provide environmental education and awareness
- Engage communities



# 'Greening Initiative' Model

- Replication of Schoolyard Greening Initiative
  - Over 17 acres of asphalt removed at 13 schools with more scheduled
  - Environmental Education (KidsGrow and Project BLUE)
  - Ecology Center



# Schoolyard Greening Initiative



# Schoolyard Greening Initiative



# Model Replication

- Similarities between school system and public housing
  - One overarching authority with many diverse and unique sites
  - High acreage of impervious surfaces
  - Low tree canopy cover
  - Minimal green space



# Model Replication

- Differences between schools and public housing
  - Security cameras
  - Year-round occupancy
  - Contractors in place
  - Residents vs. students



# Baltimore's Public Housing

- Housing Authority of Baltimore City (HABC) was established in 1937
- Over 40,000 individuals served
- Over 14,000 units occupied
- 5<sup>th</sup> largest public housing authority in the country



# Partners & Roles

- **Parks & People Foundation**
  - *Coordination, outreach, organization, fundraising / fundseeking*
- **Housing Authority of Baltimore City**
  - *Guidance, review and approval, broad greening goals*
- **Property (management & tenants)**



# Supporting Partners

- Baltimore City Forestry Division
  - *Tree species & locations*
- Developers
- Funders



# Public Housing Greening Initiative Timeline

- Summer 2007: Initial meetings with Housing Commissioner to discuss potential partnerships
- Summer/Fall 2007: Application for and award of funds from Chesapeake Bay Trust's Urban Greening Initiative grant program



# Public Housing Greening Initiative Timeline

- Fall 2007 - Spring 2008: Site Selection
  - Physical/Objective Assessment
  - Social/Subjective Assessment
  - Capacity/Priority Assessment
  - Short & Long Term Goal Development
  - Site Plan Implementation (multiple phases)



# Public Housing Greening Initiative Timeline

- Goals & projects developed site by site
  - Long-term goals developed and approved by HABC
  - Short-term goals/phases identified
  - Seasonal projects planned and facilitated
  - Sites evaluated for large-scale greening (asphalt removal, street trees, bioretention)

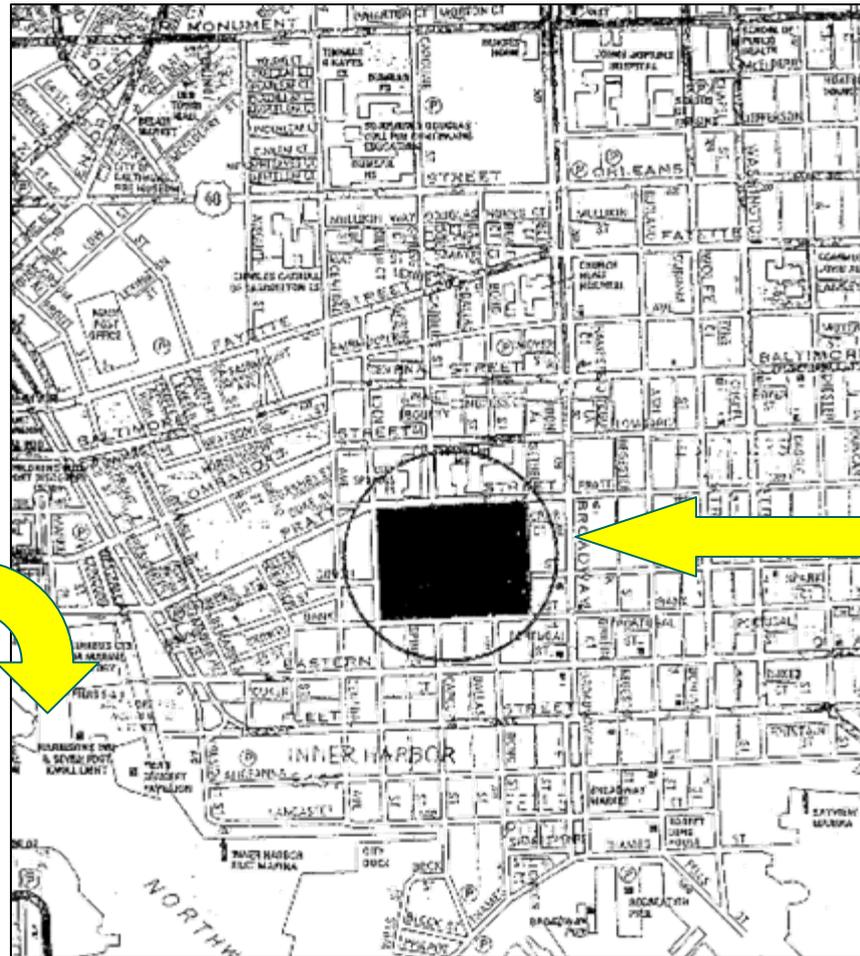


# 2007-2008 Achievements

- Summarize
  - 4 properties
  - 100+ project volunteers
  - 1000 square feet of gardens
  - 750 square feet of asphalt removed
  - 30 new trees and 400 plants
  - 50+ new street trees planned



# Perkins Homes

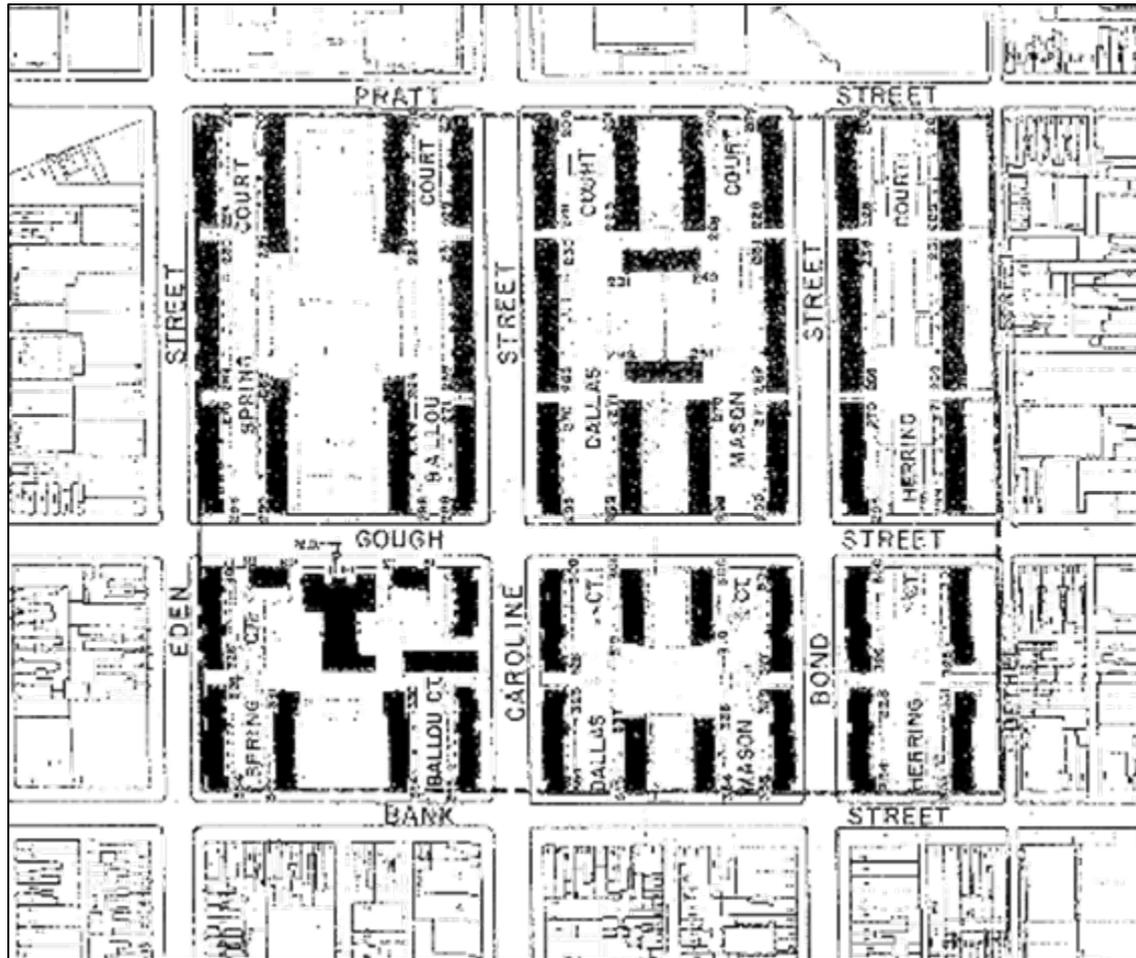


Inner Harbor

Perkins Homes



# Perkins Homes



# Perkins Homes

- Objective, subjective
- Beautification Committee
- Commissioner's Walk
- Earth Day
- Media coverage
- Street Trees
- Permeable Surfaces



# Perkins Homes



# Perkins Homes



# Perkins Homes



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# Perkins Homes



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# Perkins Homes

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LOCAL



## EARTH DAY SPRUCE

Residents, volunteers and employees of the Housing Authority of Baltimore City pitched in to help spruce up the Perkins Homes Commissioner's Walk Tuesday for an Earth Day event sponsored by the Parks and People Foundation Inc. Above, Denise Street of the resident advisory board and "Papa Joe" of the Housing Authority plant a flower garden. At right, Housing Authority employee Leonard Best helps plant a flower garden. — Photos by Kristine Bais/STAFF



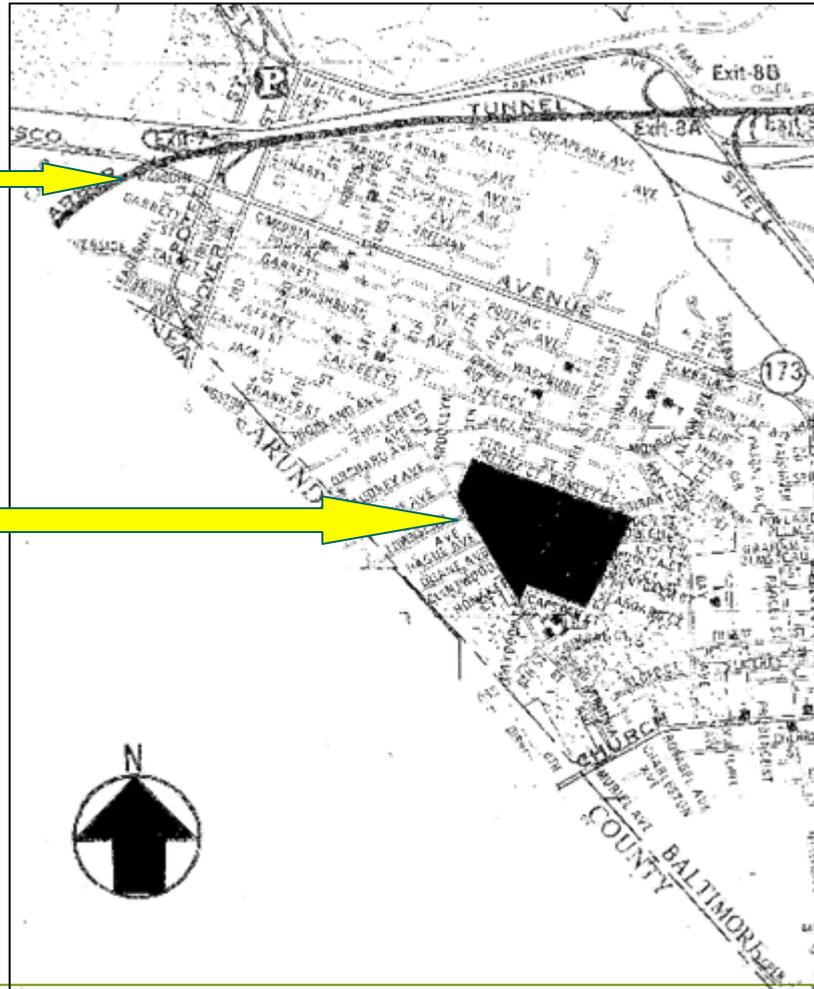
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# Brooklyn Homes

I-895



Brooklyn Homes



# Brooklyn Homes



# Brooklyn Homes

- Arbor Day
- Trees
- Boys & Girls Club



# Brooklyn Homes



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# Brooklyn Homes



# Brooklyn Homes



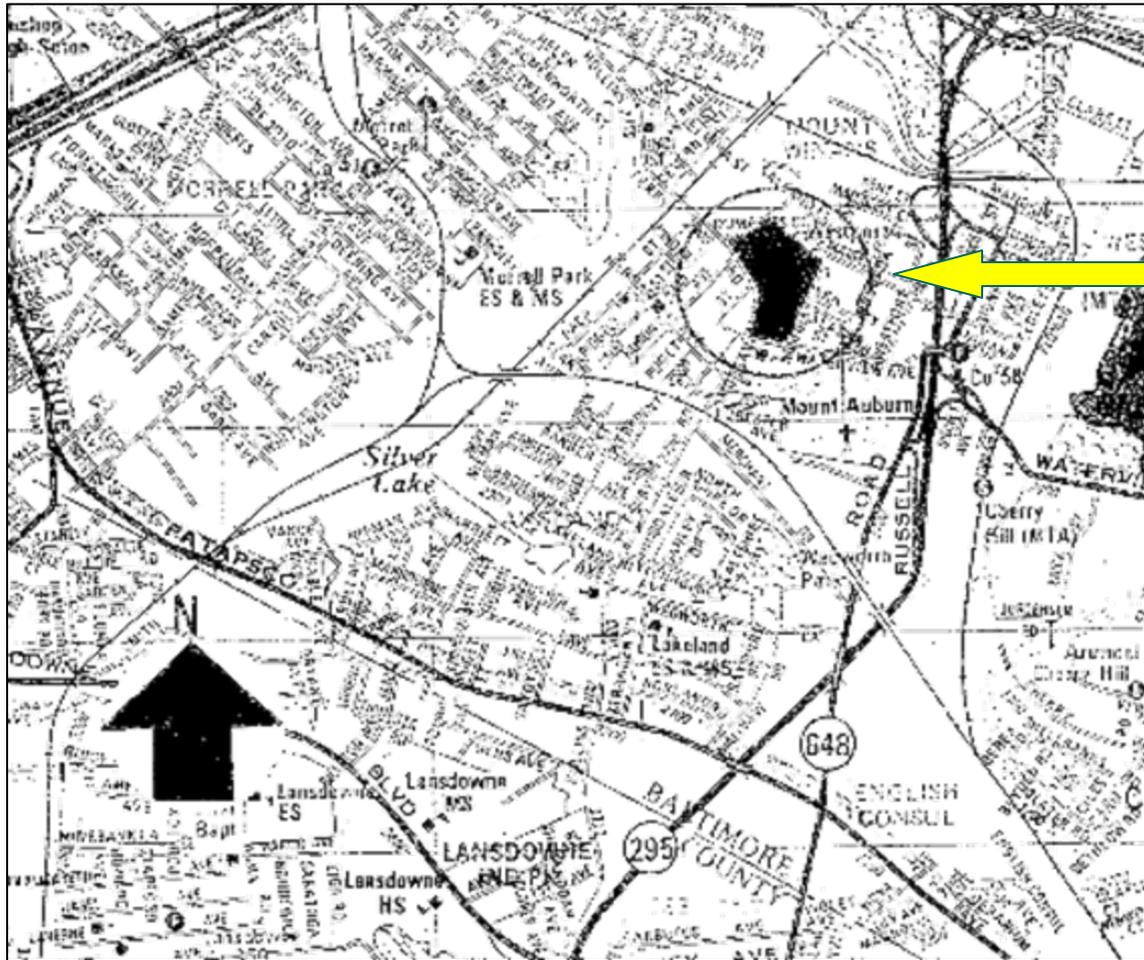
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# Brooklyn Homes



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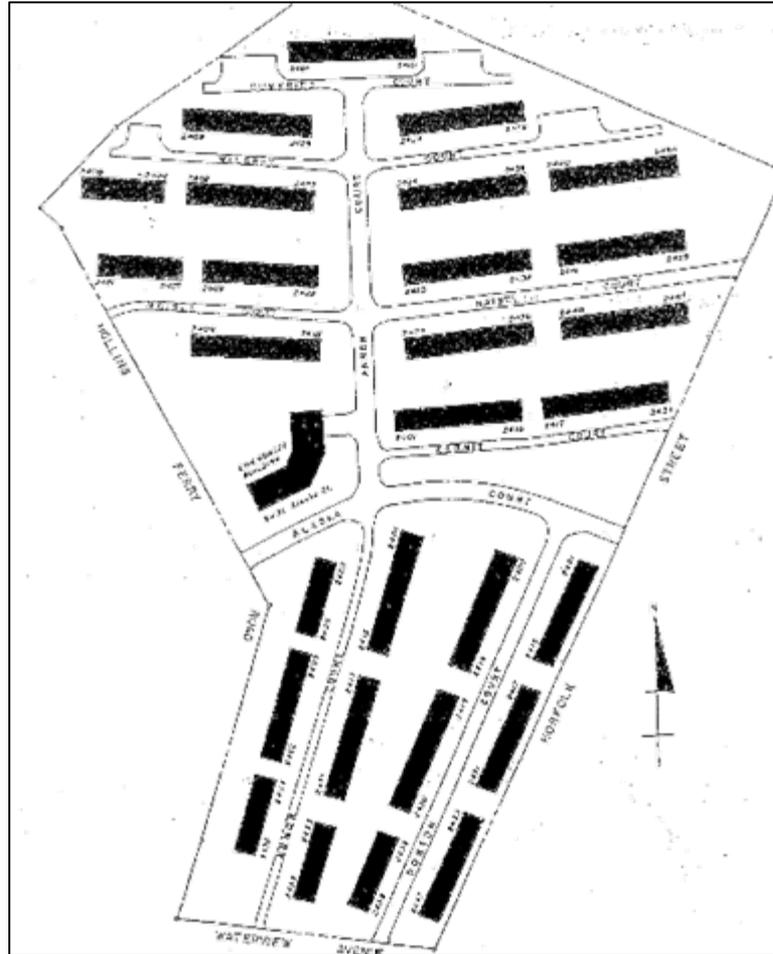
# Westport Homes



Westport  
Homes



# Westport Homes



# Westport Homes

- Westport, Westport Extension, Mt. Winans
- Turner Development's waterfront development



# Westport Homes



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# Westport Homes



# Westport Homes

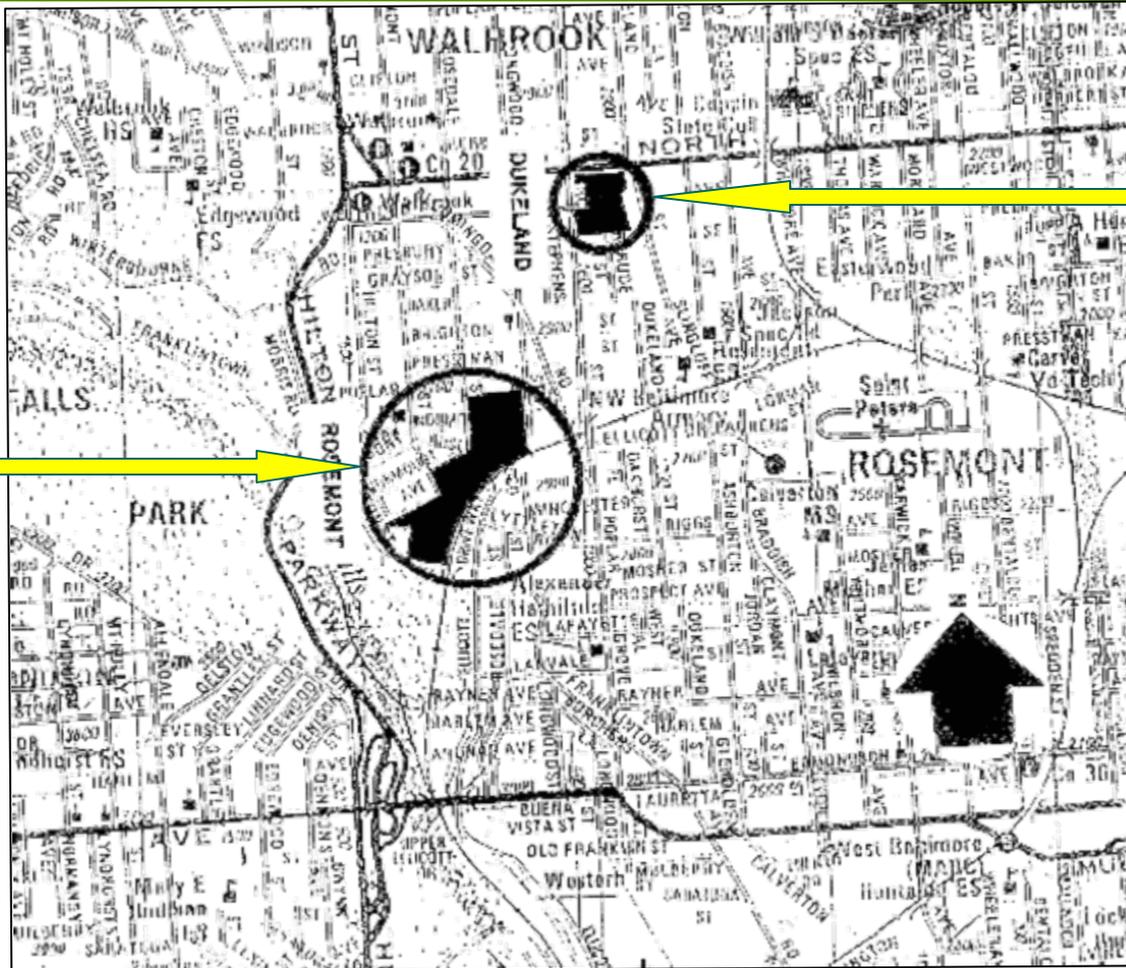


# Westport Homes



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# Dukeland Homes

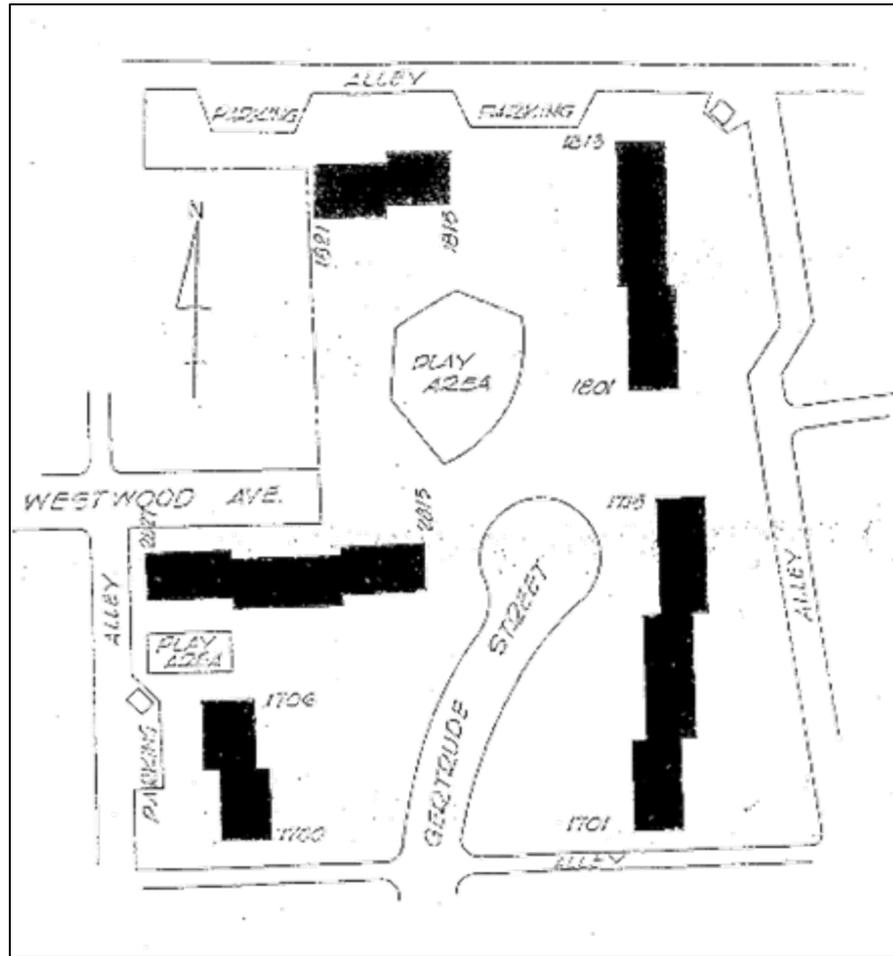


Dukeland Homes

Rosemont Homes



# Dukeland Homes



# Dukeland Homes

- Small property
- Enhance existing gardens
- Community art



# Dukeland Homes



# Dukeland Homes



# Dukeland Homes



# Dukeland Homes



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# Panel of Partners

- Parks & People
- HABC
- Property Manager
- Tenant's Council Representative



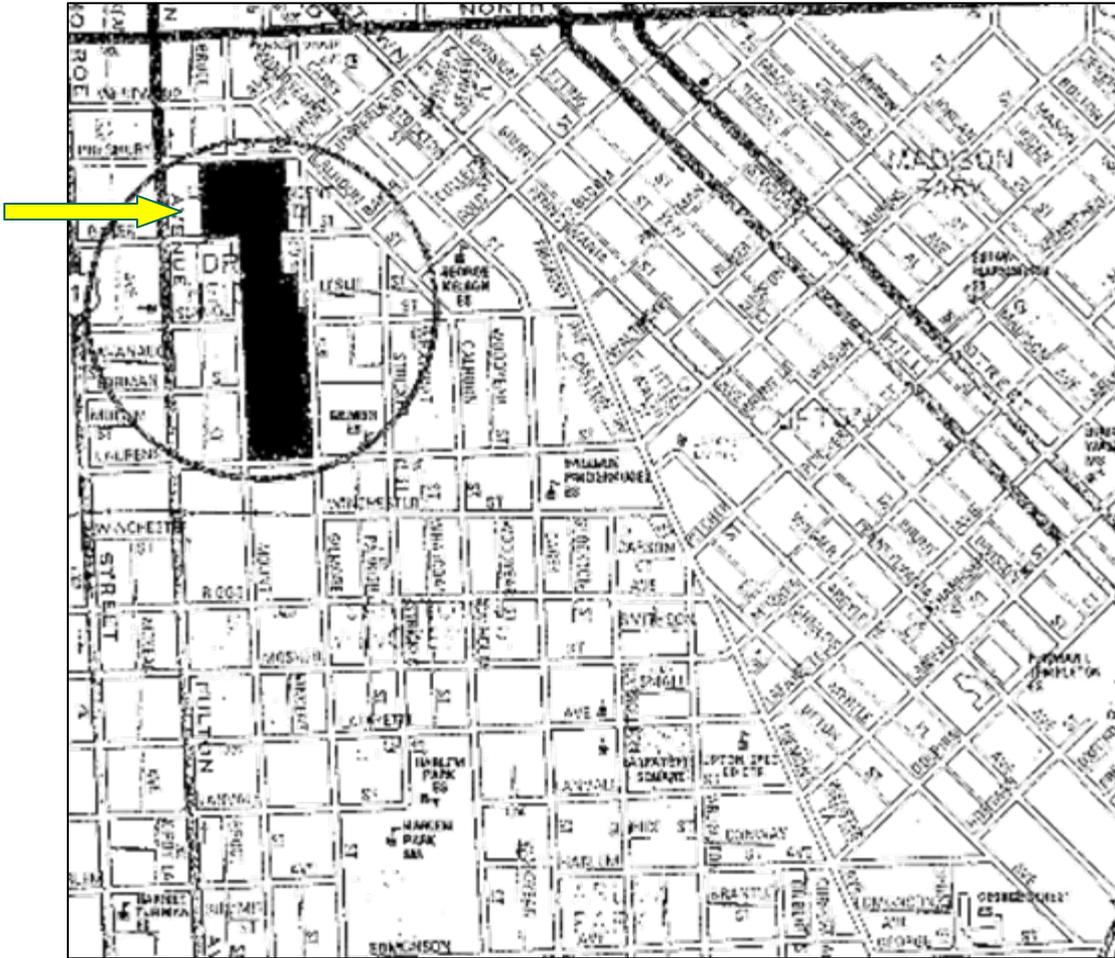
# Future and Potential

- Ongoing property-specific projects
- Asphalt removal and replacement with pervious or semi-pervious surfaces
- Bioswales / Bioretention

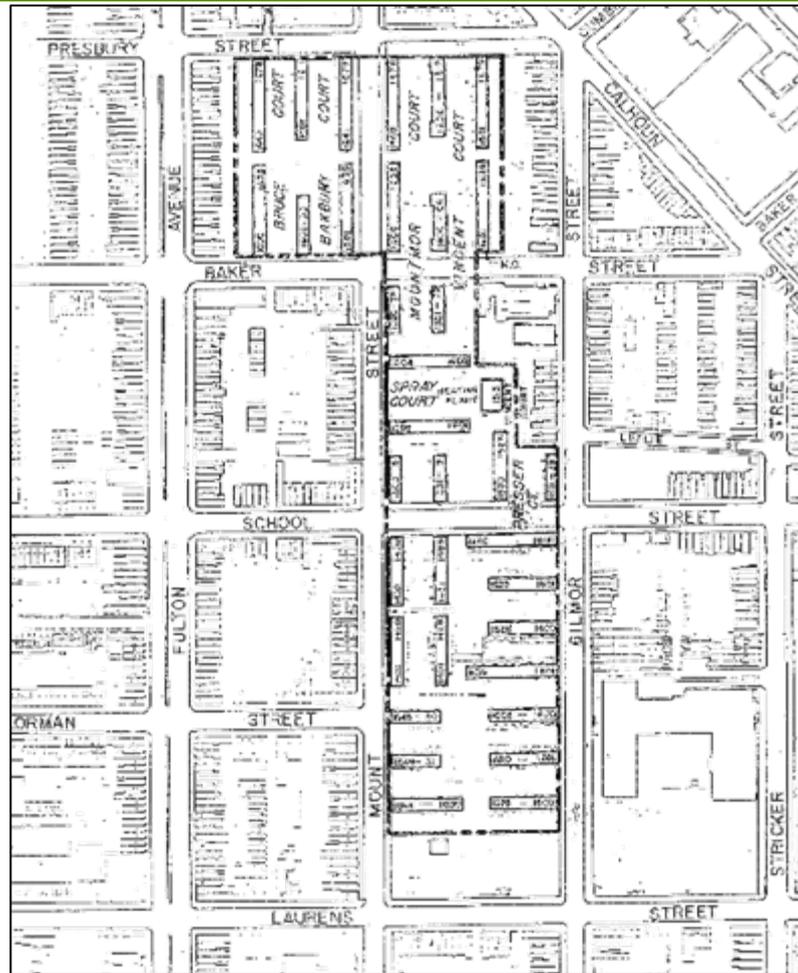


# Gilmor Homes

Gilmor  
Homes



# Gilmor Homes



# Other Public Housing Greening

- National and International
- Varies from contests and competitions to green buildings



# Yonkers, New York

- Groundwork Yonkers
- Community Supported Agriculture
- Community Gardens
- Benches & Murals



# Minneapolis, Minnesota

- Cedar Highrises
- Gardening program
- Annual awards and celebration
- Resident Councils provide funds and plants, some through Minnesota Green
- Public Housing Authority matches resident spending up to \$100 per highrise



# Washington, DC

- Green Summer Job Corps (2008)
- Part of Mayor Fenty's Annual Summer Youth Employment Program
- Clear garbage and invasives and perform minor landscaping at 8 DC Housing Authority (DCHA) Sites
- Partners: DDOE, DCHA, Dept of Employment Services, DPW, & Office of Property Management



# New York City, New York

- Million Trees NYC
- New York Parks Department and New York Restoration Project
- Public Housing included as one of 13 “tree planting opportunity” locations
- NYCHA Green Initiatives



# Milwaukee, Wisconsin

- Opened Highland Gardens facility in 2004
- Green roof, recycled materials, etc.
- Partners: City of Milwaukee Housing Authority and SET Ministry



# Australia: New South Wales

- New South Wales Community Greening Program
- “Gives new life to social housing by providing open spaces for people to come together and participate in a range of activities, including gardening.”



# Australia: New South Wales

- Over 50 acres devoted to community greening projects
- Around 3,000 residents participating
- Native gardens, floral displays, produce gardens, therapeutic gardens, and community nurseries
- Bidwell Community Garden



# Australia: Collingwood, Fitzroy, & Richmond Estates

- Community Garden plots, worked by individual households for a nominal annual fee
- 180 current plots with 130 being developed
- Initially funded by an interchurch association, then Dept of Human Services



# Australia: Northern Territory

- Annual Public Housing Garden Competition
- Best House/Unit Garden, Best Environmentally Friendly Garden, & Best Complex Garden
- Announced by Minister of Housing
- 22 entries in 2008



# Replication

- Assess current conditions
  - Map access to green spaces (maps & surveys)
  - Objective and subjective capacity
  - Partner with local non-profits and agencies
  - Cooperative Extension offices



# Replication

- State stormwater regulations
- State forest conservation
- Watershed Health
- Urban Tree Canopy (UTC) Goals
- Urban Agriculture



# Replication

- Clean Water Act
- Clean Air Act
- EPA's 2006-2011 Strategic Plan
  - Environmental Justice
  - Healthy Communities & Ecosystems
- LEED Certification



# Replication

- The ACES team has created the Landscape and Human Health Laboratory website (<http://www.aces.uiuc.edu/~herl/>) to make their findings more accessible to cities interested in or pursuing a green agenda.



# Replication

- Supporters of the Landscape and Human Health Laboratory include the US Forest Service, the National Urban and Community Forestry Advisory Council and the US Housing and Urban Development Agency.



# Questions

Kari Smith

Assistant Director

Community Greening Stewardship

[www.parksandpeople.org](http://www.parksandpeople.org)

[kari.smith@parksandpeople.org](mailto:kari.smith@parksandpeople.org)

(410) 448-5663 x109

