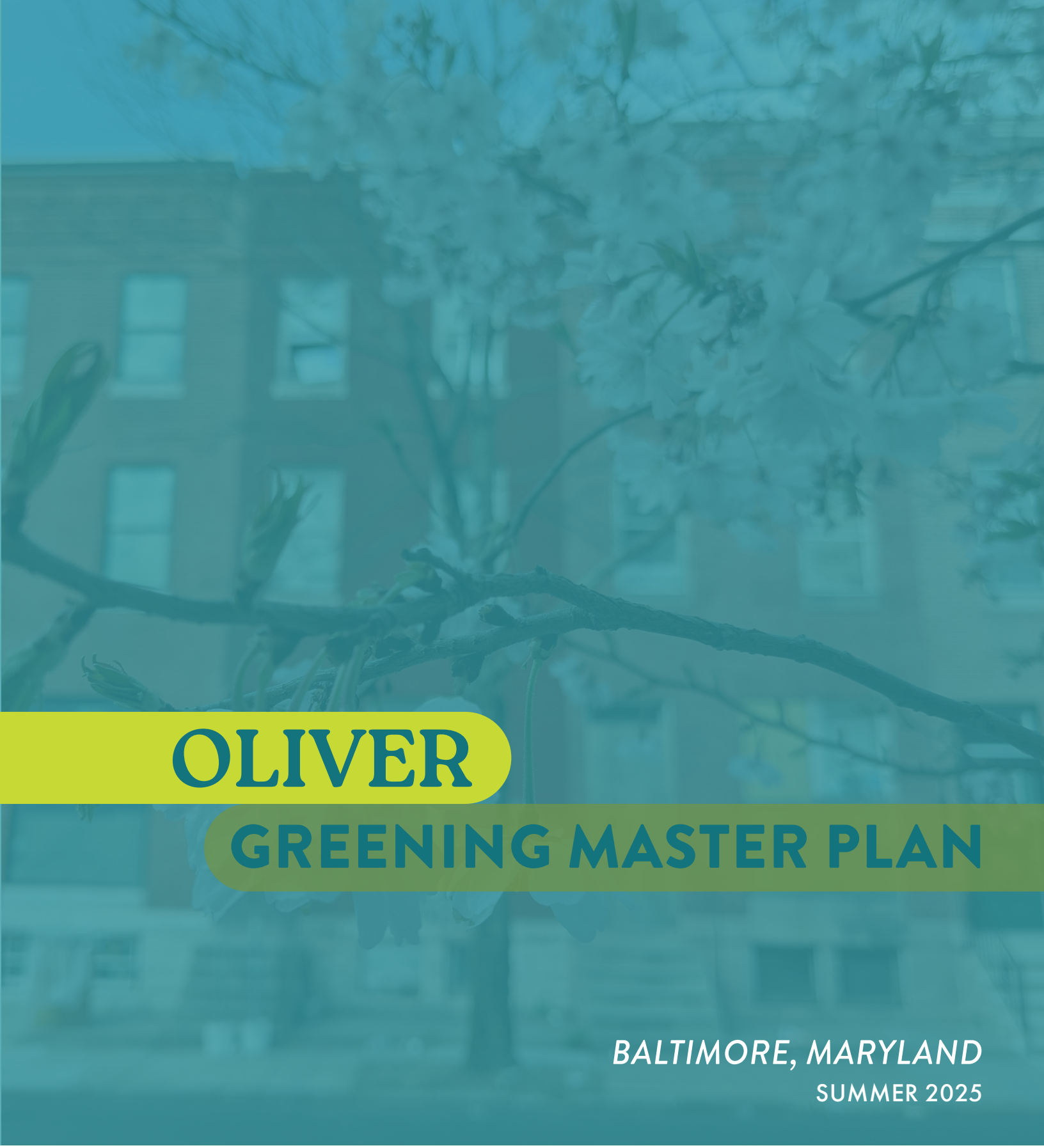

OLIVER
GREENING MASTER PLAN

BALTIMORE, MARYLAND

SUMMER 2025

Partners & Planning Team:

Chesapeake Bay Trust

EST. 1977 HISTORIC OLIVER COMMUNITY ASSOCIATION

enviro collab

CITYSCAPE ENGINEERING, LLC

CONTENTS

ACKNOWLEDGEMENTS

The Oliver Greening Master Plan was made possible by the following funders, partners, and collaborators:

Historic Oliver Community Association

Chesapeake Bay Trust

EnviroCollab Landscape Architecture & Urban Planning

CityScape Engineering

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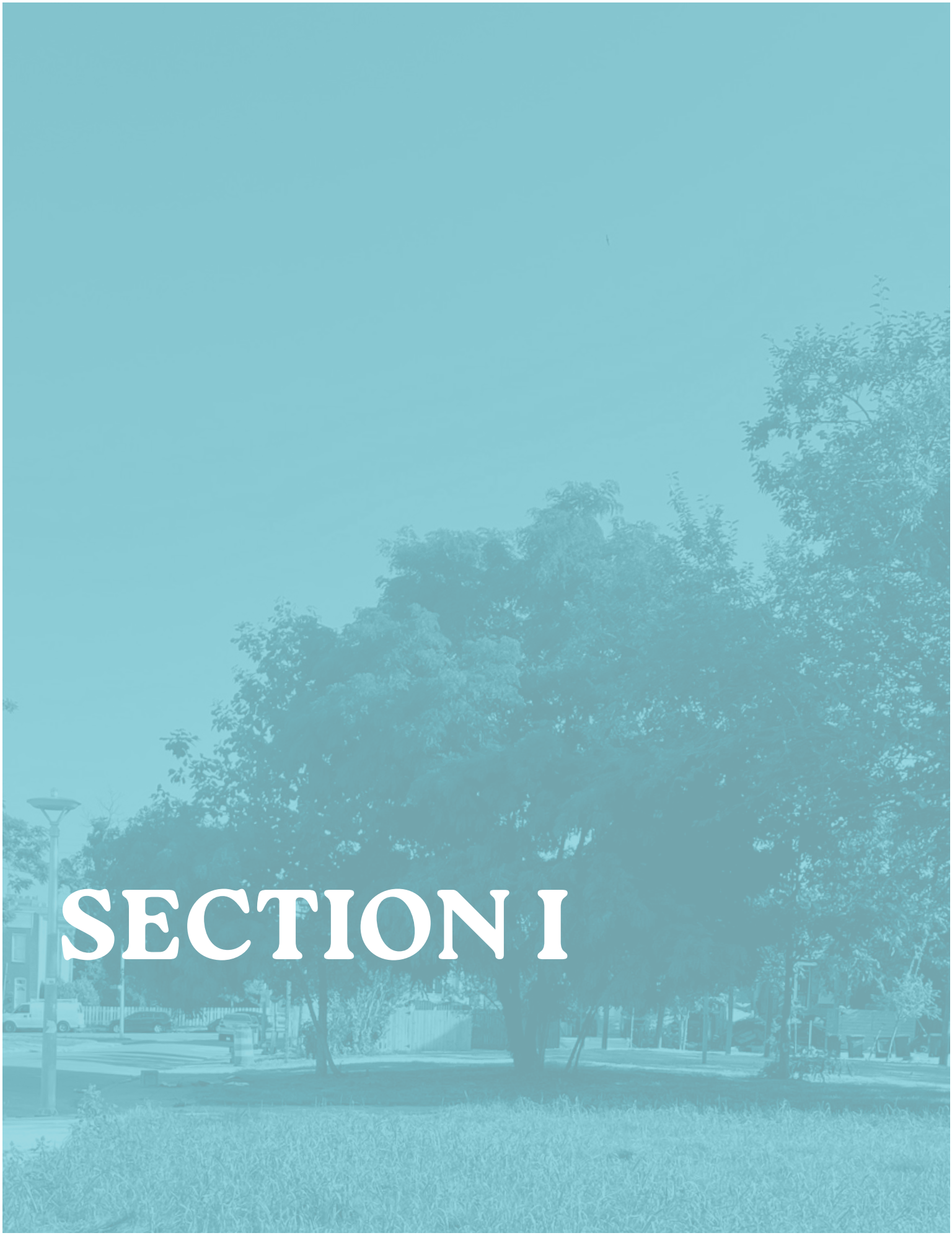


SECTION I

Chapter 1

INTRODUCTION

This report presents the framework for an Oliver Greening Master Plan (referred to here as the "Greening Master Plan" or "Master Plan"), a project of the Historic Oliver Community Association (HOCA) and the residents of Baltimore City's Oliver neighborhood. The Master Plan has been made possible utilizing grant funding from the Chesapeake Bay Trust. The broad goal of this project is to develop a vision for the future of Oliver that will combine economic and community development efforts with a respect for the importance of preserving the environmental resources of the neighborhood, Baltimore City, and the state of Maryland.

This report is divided into three major sections:

Section I contains the executive summary which presents HOCA's thinking around next steps for moving from concept to implementation.

Section II presents options for short- and long-term project recommendations, an introductory review of the stormwater issues facing Baltimore City, followed by conceptual graphics and accompanying narratives depicting several pilot projects.

Section III presents the results of the Master Plan's research and analysis.

The Greening Master Plan is intended to be complementary and compatible with Baltimore City's Watershed Implementation Plan (WIP) Milestones. Baltimore City's WIP Milestones are programmatic and project based goals designed to facilitate the city's compliance with its MS4 Permit, which is issued by the Maryland Department of the Environment pursuant to the U.S. Environmental Protection Agency's (EPA) National Pollutant Discharge Elimination System (NPDES) stormwater regulations and the Clean Water Act. This compatibility will help ensure a cohesive approach to improving environmental quality in Baltimore City and preserving the health of the Chesapeake Bay.

INSTITUTIONAL PARTNERS

HOCA commissioned the Oliver Greening Master Plan Report with funding from the Chesapeake Bay Trust, the Environmental Protection Agency's Chesapeake Bay Program, the Maryland Department of Natural Resources, and the Maryland Department of the Environment, awarded as part of their Watershed Assistance - Two-Year Milestone Support grant program. The Baltimore City Department of Public Works (as part of its implementation of its WIP Milestones), Department of Planning, and Department of Transportation also provided support and guidance to the Greening Master Plan.

HISTORIC OLIVER COMMUNITY ASSOCIATION

The Historic Oliver Community Association's (HOCA) mission is to engage in activities and services that promote positive enhancement and improved quality of life for residents of the Oliver community. The Oliver community is an historic community located in East Baltimore, in the Greenmount East district. The organization focuses on projects that increase safety, environmental responsibility, community service and trash reduction.

Ultimately, HOCA plans to use the Greening Master Plan to coordinate multiple green infrastructure retrofits according to an organized pattern, and in partnership with the local Baltimore City municipality, business owners, and residential leadership to ensure long term stewardship.

CHESAPEAKE BAY TRUST

The Chesapeake Bay Trust is a nonprofit grant-making organization dedicated to improving the Chesapeake Bay and its rivers through environmental education, community outreach, and local watershed restoration. Since its inception in 1985, the Trust has awarded $70 million in grants and engaged hundreds of thousands of citizen stewards in projects that have a measurable impact on the Chesapeake Bay and its tributaries.

MARYLAND DEPARTMENT OF NATURAL RESOURCES

The Department of Natural Resources leads the state in securing a sustainable future for Maryland's environment, society, and economy by preserving, protecting, restoring, and enhancing the State's natural resources. It is the responsibility of the Department of Natural Resources to effectively manage Maryland's bays and streams that lie within and tie into Maryland's watershed.

MARYLAND DEPARTMENT OF THE ENVIRONMENT

The Maryland Department of the Environment, created in 1987, is charged with protecting and restoring the environment to create healthy, vibrant, and sustainable communities and ecosystems in Maryland for the health and well-being of all Marylanders.

BALTIMORE CITY DEPARTMENT OF PUBLIC WORKS

The Baltimore City Department of Public Works[1] supports the health, environment, and economy of Baltimore City and the region by providing customers with safe drinking water and keeping neighborhoods and waterways clean. DPW is the lead agency with respect to implementation of Baltimore City's Watershed Implementation Plan, or WIP, developed in connection with the Maryland Department of the Environment's MS4 permit program. Baltimore City's most recent MS4 permit was issued in November of 2021. The City's WIP was developed, as required by the permit, to present strategies for achieving the goals set forth in the permit. As part of these strategies, the WIP lays out milestones to be reached in two-year increments.

BALTIMORE CITY DEPARTMENT OF PLANNING

The Baltimore City Department of Planning[2] manages the Baltimore Green Network, which is a multi-pronged

City initiative to increase open space and connections across Baltimore by creating new usable green space and active transportation corridors in neighborhoods experiencing population loss. In coordination with other agencies and organizations, the Department of Planning leads four initiatives aimed at reversing the effects of population loss and disinvestment that lead to extensive demolition in too many neighborhoods: 1) Greening Strategies; 2) Pilot Projects; 3) Green Network and Clean Corps; and 4) Greenway Trails.

BALTIMORE CITY DEPARTMENT OF TRANSPORTATION

The Baltimore City Department of Transportation[3] is responsible for project planning and prioritization of infrastructure investment that assists the City to create a multi-modal transportation system for citizens to live, work, learn and play. The Transportation Planning Division works strategically to rebuild, maintain and expand the city's multi-modal transportation network into one that addresses the transportation needs of residents, commuters, and visitors; supports economic development; incorporates sustainability goals; and realizes the vision of growing Baltimore's neighborhoods.

GREENING MASTER PLAN'S APPROACH

STEERING COMMITTEE

The Greening Master Plan had a Steering Committee comprised of non-profit representatives, city agency representatives, and neighborhood residents. This diverse committee guided the development of this plan.

- Celena Owens, Historic Oliver Community Association
- Mary Bianchi, Historic Oliver Community Association
- Pam Moore, Historic Oliver Community Association
- Giselle Bella, Historic Oliver Community Association
- Jenny Guillame, ReBuild Metro
- Phaedra Stewart, ReBuild Metro
- Akshita Siddula, The 6th Branch
- Briony Hansen, Neighborhood Design Center
- Imani Jasper, Baltimore City Department of Planning
- Danielle Bilot, Baltimore City Department of Planning

MASTER PLAN PROCESS

Initial conversations for the Greening Master Plan began in June 2024. The planning process was structured around three phases:

STEERING COMMITTEE MEMBERS

EST. 1977 HISTORIC OLIVER COMMUNITY ASSOCIATION

ReBUILD METRO
RADICAL \ RESTORATIVE \ REGENERATIVE

T6B THE 6TH BRANCH

the Neighborhood DesignCenter

CITY of BALTIMORE · DEPARTMENT of PLANNING

1. **Existing Conditions Analysis & Community Priorities**
   The design team gathered data that already exists, such as scientific papers, community reports, and neighborhood strategic plans, that pertain to the community's built environment. The team evaluated the current state of the neighborhood's watersheds through a stormwater assessment. Community members provided input regarding existing green assets and environmental challenges that affect the quality of life in Oliver.

   The design team also coordinated with Gensler, the lead planning team for the Oliver Vision Plan, to share the results of the previously conducted community outreach and established Vision Plan recommendations. In sharing of this information, the design team was able to to minimize duplicating conversations with the community around greening and open spaces. One goal of the Greening Master Plan is to have it recognized as an addendum to the Oliver Vision Plan, which was been formally adopted by Baltimore City as a neighborhood plan.

2. **Greening Strategies & Pilot Project Selections**
   The design team identified neighborhood sites for greening strategies that combine natural environmental systems with roadways, parking lots, sidewalks, and more to generate benefits, such as clean air, better stormwater management, and public health. The Steering Committee reviewed and ranked potential pilot projects.

3. **Final Plan Development & Recommendations**
   The design team and Steering Committee members finalized the master plan (to be officially released to the institutional partners and the broader public).

STORMWATER ISSUES

"Stormwater" is just what it sounds like: water that originates from rain storms. Stormwater may also be said to include water originating from melting snow and ice. In human occupied, built environments, like cities, stormwater must be managed in such a way as to protect people's interest in being clean, dry, and safe. We don't want stormwater in our homes or flooding our streets, sidewalks, and parks. However, "out of sight" should not be "out of mind". How we manage our stormwater can have large and long-term impacts on our environment, which in turn affects our health, community, and economy.

Green infrastructure offers a feasible and valuable solution for urban areas facing the challenges of frequent flooding, safety, waterway health, drinking water, urban heat island effect, and community investment. In addition, green infrastructure can increase neighborhood tree canopy, beautify parks and open spaces, and restore natural habitats.

Oliver is a historically redlined community that continues to struggle with underinvestment, which has led to significant crime, blight, and lack of inviting greenspaces. This disinvestment and inequitable practices have led to various blighted areas being taken over by open-air drug dealing and exploitation of the community. Because clogged storm drains are a problem in some segments of the community, the neighborhood experiences flooding in some areas. As HOCA continues to address the needs of the community as well as continue their beautification efforts, crime has been on the decline and interest in the community has greatly increased in the last several years. With the city's efforts to eliminate blight by tearing down abandoned buildings, it causes a whole new host of issues, like illegal dumping on these lots, overgrowth of trash and weeds, and unsightliness.

The Greening Master Plan will join Oliver's most recent community-led plans (Oliver Vision Plan) that demonstrate to the residents of Oliver that they

matter and that they too deserve a high quality of life, regardless of ethnicity or socioeconomic status. At each of HOCA's Quarterly Development Meetings, they regularly provide surveys and feedback sessions to gauge what the community desires and if the initiatives that they are proposing are acceptable. HOCA invites and encourages feedback from residents and want them to be full partners in the efforts to improve the community.

The Master Plan includes a focus on reducing and treating stormwater runoff, directly supporting both City and State TMDL efforts. Stormwater is one of five primary pollution source sectors targeted in the State's Phase III Watershed Implementation Plan (WIP), published in August 2019. Under the Phase III WIP, the State is currently calling for the treatment of an additional 20,500 acres of impervious surface within local MS4 communities, towards which Oliver's greening projects can be applied.

At the City level, the Master Plan will help meet the goals outlined in Baltimore City's MS4 and TMDL WIP. Baltimore City's Phase II WIP set the goal of restoring the equivalent of 20% of existing impervious area (equal to 4,700 ac.) within the City (Pg. v, Baltimore City MS4 and TMDL Watershed Implementation Plan).This equates to reducing a total of 40,000 pounds of nitrogen, 15,000 pounds of phosphorus, and 2,400 tons of sediment by the end of the permit period. The City estimated that 20% of these planned reductions would come from new stormwater BMPs, in which the Project would be included. The proposed work will also help Baltimore achieve its goal of reaching 40% tree canopy coverage by 2030.

Though the City has not yet completed the Small Watershed Action Plan (SWAP) for the Baltimore Harbor Watershed, where our proposed project is located, the majority, if not all other City SWAPS recommend tree planting and Environmental Site Design in parks and on school and institutional properties as high value opportunities. (e.g., Lower Jones Falls Small Watershed Action Plan. 2008. Pg 6). The Baltimore Harbor Watershed Assessment (2006) also lists as a general opportunity "engag[ing] non-profits, faith organizations, and businesses to implement stormwater retrofits, pollution prevention practices, and public outreach and engagement." (Baltimore Harbor Watershed Assessment, pg 91). This same report lists the Inner Harbor Subwatershed as a top priority for environmental restoration efforts (pg 65, Table 4-4).

Mark Cameron, with DPW's Watershed Planning and Partnerships section, informed HOCA that DPW is currently engaged in planning for bioretention projects and other stormwater practices as part of the City's MS4 Permit. They have identified Priority 1 and Priority 2 neighborhoods based on physical characteristics, socio-economic demographics, and health factors as initial areas for their planning, and the Oliver neighborhood has been listed as a Priority 1 neighborhood. DPW recognizes that a green infrastructure master plan for Oliver will complement DPW's planning efforts, which focus on the public right-of-way.

This Master Plan also supports the Baltimore Green Network Plan, which identifies the focus area boundaries along North Avenue and N. Broadway as priority green network corridors. Multiple areas within the Baltimore Oliver neighborhood are identified in the Green Network Plan as prospective "Community Nodes", which represent areas with high vacant land densities and redevelopment opportunities, where green planning efforts should center on active recreation and community gatherings spaces.

SCOPE OF THE DOCUMENT

The scope of the Master Plan encompasses a summary of the existing planning efforts, inventorying of the existing watershed characteristics, a summary of the user and community input, and recommendations for the community. The Master Plan sets the future direction of greening efforts with new stormwater facilities and improved landscaping for creating a greener and healthier Oliver.

GLOSSARY OF TERMS

These terms will be found throughout the report and the definitions of these terms are below.

Best management practice (BMP): A practice, or combination of practices, that is determined to be an effective and practicable means of preventing or reducing the amount of pollution generated by nonpoint sources.

Bioretention: A terrestrial-based (upland as opposed to wetland), water quality and water quantity control practice using the chemical, biological, and physical properties of plants, microbes, and soils for removal of pollutants from stormwater runoff.[7]

Greening strategies: Stormwater management strategies that mimic natural environmental systems through the use of plants and trees to manage stormwater runoff. They complement and, in some cases, replace the need for gray infrastructure, such as gutters, drains, and pipes.

Conservation landscaping: The practice of replacing turf grass of a traditional lawn with native plants that have adapted to local rainfall, weather, and soil conditions.

Environmental site design (ESD): An assortment of techniques, structures and practices that work together to minimize stormwater runoff. It is also frequently referred to as stormwater management practices.[8]

Green (stormwater) infrastructure: The range of measures that use plants or soil systems, permeable pavement or other permeable surfaces or substrates,

GREENING STRATEGIES

Various types of **Greening Strategies** will be referenced throughout the report. The images below may help visualize solution

stormwater harvest and reuse, or landscaping to reduce stormwater flows to sewer systems or to surface waters.

Open space: Any area of land that is designated for one or more of the following uses: (1) land for the preservation of natural resources; (2) land for the managed production of resources; (3) open space for outdoor recreation; (4) open space for public health and safety; and (5) protection of Native American cultural sites, including burial, historic or archaeological, sacred, or other cultural sites.

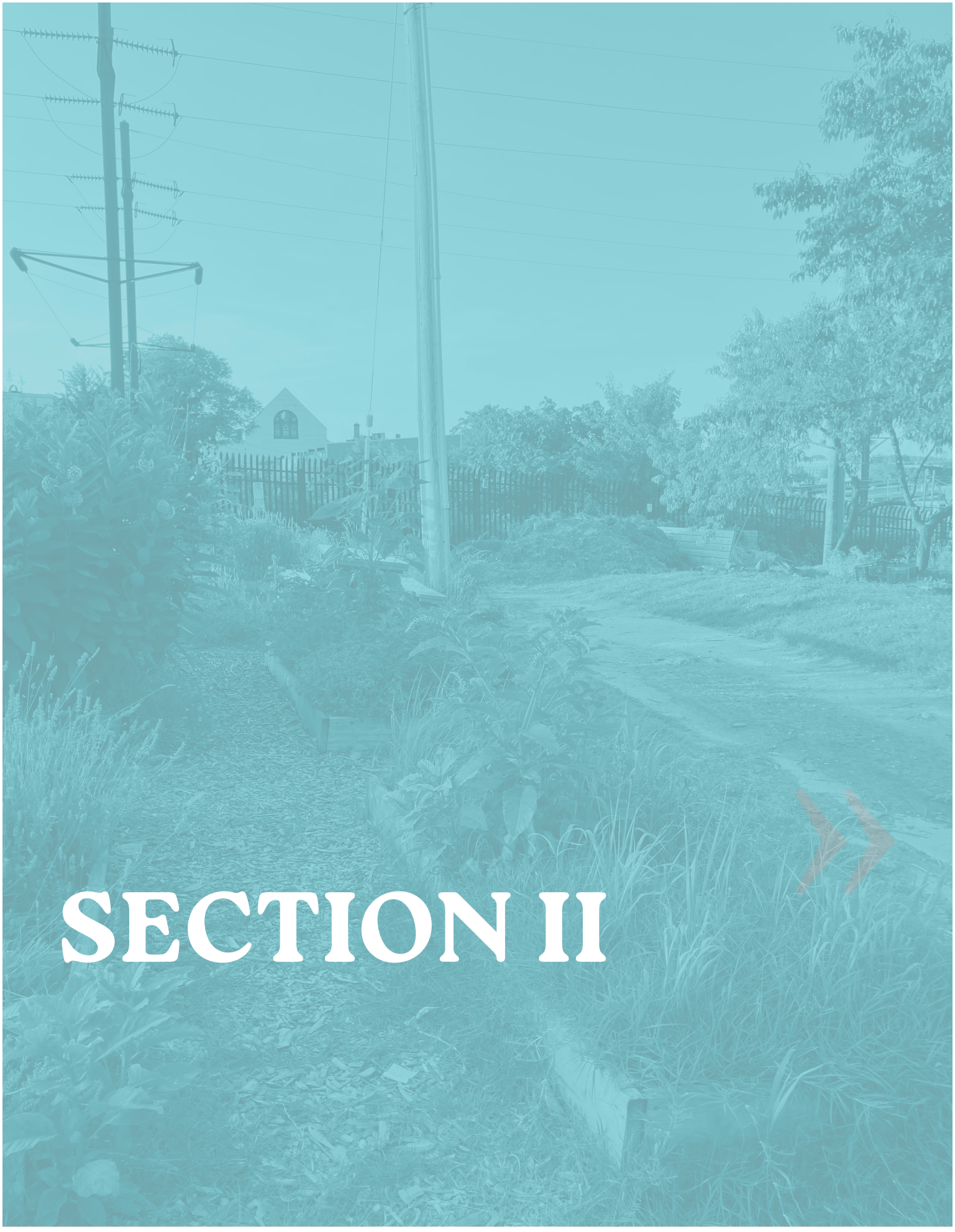
Project/Project site: A space designed for greening and public interaction or activity.

Park/green space: Public land for passive or active recreation.

Stormwater: Water that originates from rain, snow, or ice melt.

Stormwater facility: A built feature for stormwater management that creates opportunities to catch, hold, and/or use stormwater where it lands, rather than attempting to move it elsewhere immediately. They can range in size from the traditional garden bed to stormwater ponds. Baltimore City's MS4 Restoration and TMDL WIP identifies traditional BMPs (e.g. wetlands, detention basins, infiltration swales, and sand filters), ESD Practices (e.g. micro-bioretention, rain gardens, enhanced filters, permeable paving, and green roofs), and alternative BMPs (e.g. stream restoration), specifying the appropriate placement for each stormwater management type.

ns to addressing stormwater issues and inspire greening efforts throughout Oliver.



SECTION II

Chapter 2

EXECUTIVE SUMMARY

With a focus on small watershed projects, the Oliver Greening Master Plan seeks to accomplish the following goals:

COLLECTIVE SUSTAINABILITY
- Reducing potable water use
- Creating opportunities for urban agriculture

STORMWATER MANAGEMENT
- Improving water quality of stormwater runoff
- Increasing groundwater recharge

ENVIRONMENTAL RESTORATION
- Reducing noise pollution
- Reducing urban heat island effect
- Improving air quality
- Improving habitat for native species

QUALITY OF LIFE
- Increasing outdoor recrational opportunies
- Improving neighborhood aesthetics
- Improving community cohesion

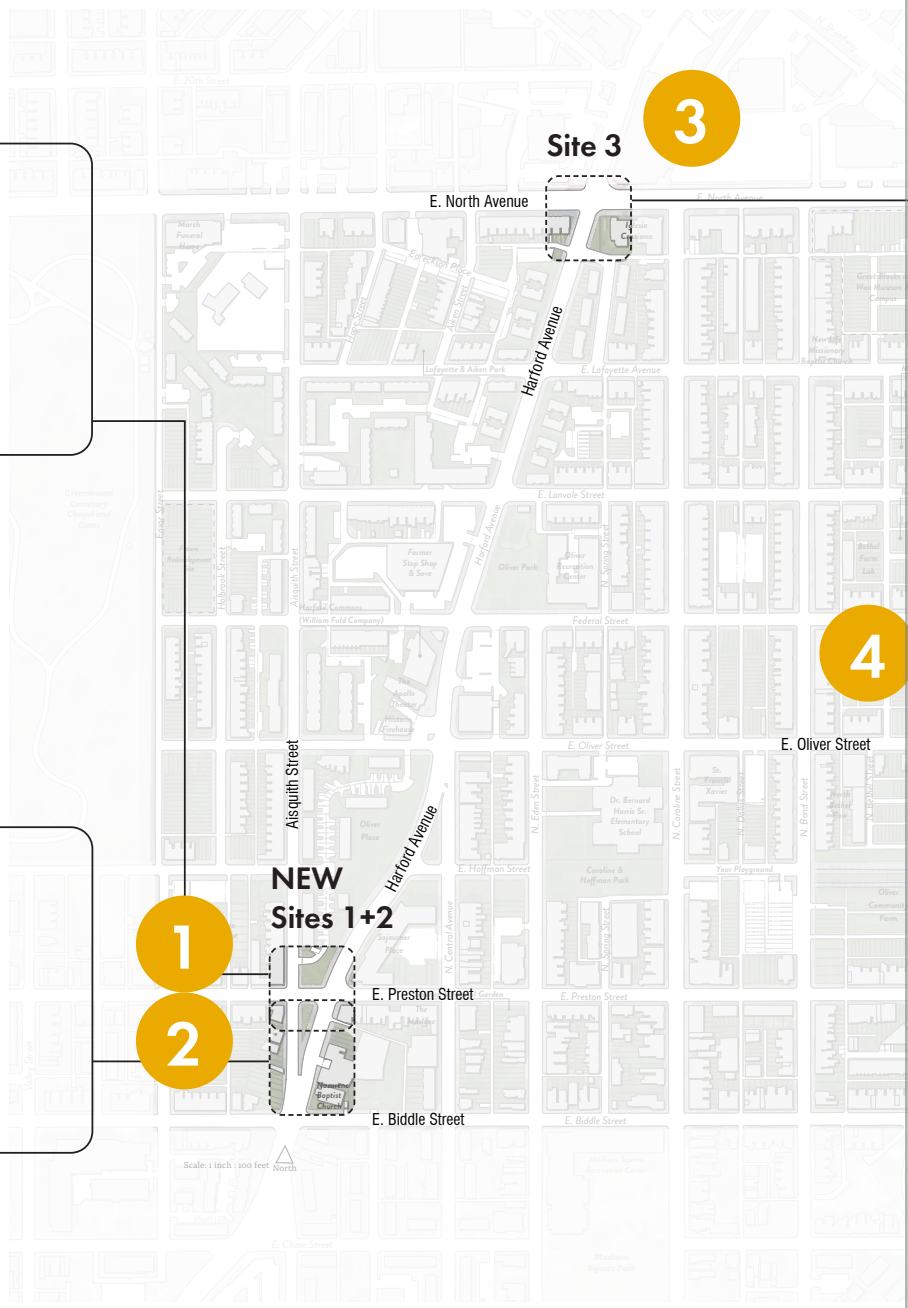
HOCA, in its role as lead stakeholder and implementer, has reviewed the recommendations rendered by the report and through consultation with the steering committee members and Baltimore City agencies, and has selected **four** project sites for kick-off implementation. While the report describes a variety of greening strategies to improve the management of stormwater and improve water quality, the four pilot projects – **Oliver Gateway sites** – were selected for their relative ease of implementation and likelihood of completion within twenty-four months. Next steps involve developing strategic partnerships, budget, resource development, and community engagement.

Pilot projects were selected after evaluation according to four primary criteria:

1. Immediate impact on neighborhood residents' quality of life. The neighborhood is primarily a residential area, and so priority is given to those projects which will have an immediate impact on local living standards. Neighborhood residents frequently move along Harford Avenue, either as pedestrians going to and from their place of residence or patronizing the local businesses, or as drivers heading to, or returning from, other parts of Baltimore City.
2. Visibility potential for both neighborhood residents and non-neighborhood residents. Project visibility is enhanced by concentrating greening projects along Harford Avenue. This corridor represents an opportunity to expose the following groups to greening strategies and associated neighborhood branding efforts: pedestrian and vehicular traffic moving along the Harford Avenue corridor; commercial customers; and future visitors of Oliver's soon-to-be redeveloped historical sites.
3. Community reports of a need for traffic calming.

PILOT SITE LOCATION MAP

1 HARFORD AVE + PRESTON ST SOUTHERN GATEWAY (PRIMARY)



2 OLIVER MEDIAN MICROFOREST SOUTHERN GATEWAY (PRIMARY)

Community members have reported speeding and unsafe pedestrian conditions along Harford Avenue, making these sites prime candidates for traffic calming in collaboration with greening efforts.

4. Compatibility with HOCA's existing goals of community building, quality of life prioritization, neighborhood reinvestment, and historic revitalization. HOCA is currently working with local businesses and historic organizations to reinvest in the neighborhood's commercial core on Harford Avenue. Implementing greening projects in those same areas represents an opportunity to build on, and validate, these current efforts.

Where environmentally appropriate, vibrant pilot projects connected to a high profile and high traffic commercial corridor, are expected to form a strong, and highly visible foundation for future greening and community development efforts.

Following is a summary of the target projects and community engagement strategies in order of their short-term and long-term trajectory.

SHORT TERM PROJECT – COMMUNITY ENGAGEMENT PLAN

- Continue to facilitate impervious surface removal and tree planting along neighborhood streets.
- Develop next generation environmental stewardship through leadership of a community youth group "green team" to promote and participate in planting days and maintenance.
- Establish a dedicated community greening plan committee to ensure that there is an entity whose singular concern is implementation of the Greening Master Plan projects. This entity need not be legally distinct and may be a sub-committee of HOCA.

LONG TERM PROJECT – COMMUNITY ENGAGEMENT PLAN

- Implementation of Green Streets interventions along Harford Avenue in conjunction with traffic calming, roadway narrowing, and Complete Streets interventions proposed by Baltimore City Department of Transportation's Complete Streets Manual.
- Invest in the redevelopment of commercial properties, modeling green infrastructure, within Oliver's commercial hub along Harford Avenue and highlighting the neighborhood's history. Capitalize on HOCA's partnership with the African American Fire Fighters Historical Society to rehabilitate the exterior of the International Black Fire Fighters Museum on Harford Avenue, modeling greening to visitors from and outside of the neighborhood.
- Implementation of stormwater management interventions, native habitat restoration, urban reforestation experimentation and research, and arboretum designation along Bethel Street Green Corridor. Connect green spaces to create a linear park.
- Construction of a Safe Streets Route along Oliver Street, dedicating a green "walking corridor" for students commuting to and from Dr. Bernard Harris Sr. Elementary School.
- Re-investing and expanding the existing playground and recreational spaces at Aiken Park, incorporating greening strategies and stormwater management within the park to encourage community recreation and along the adjacent roadways to contribute to traffic calming.

The short- and long-term projects listed are examples of some of the greening strategies identified in this report as appropriate for the Oliver neighborhood. These strategies are described in greater detail in the pages following this executive summary.

PILOT PROJECTS

The Oliver Greening Master Plan steering committee and design team identified four (4) sites as suitable candidates for hosting greening pilot projects. Pilot projects are the initial projects used to prove the viability of a community master plan. The design team developed landscape and engineered schematic design documents for the four pilot project sites.

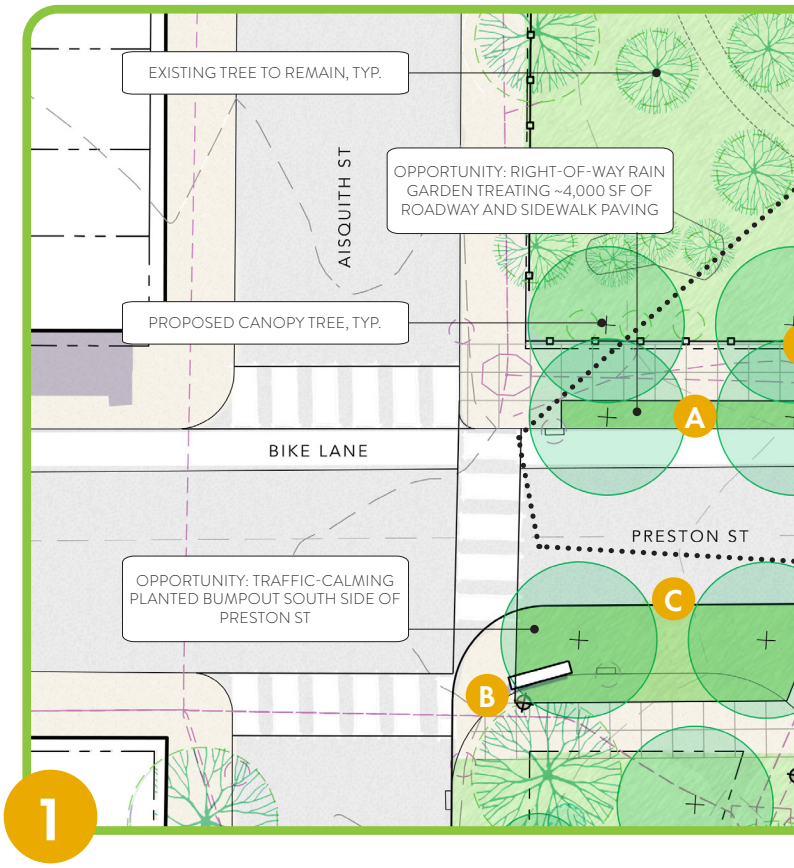
SITE 1. PRESTON ST.+HARFORD AVE. CORRIDOR IMPROVEMENTS

SITE + PROJECT DESCRIPTION

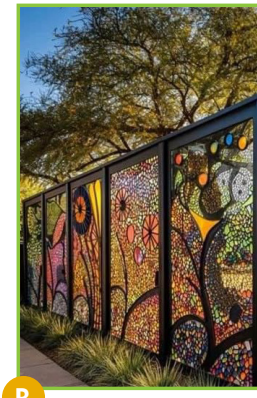
The proposed project site is located to the south of Oliver Place, a multi-unit residential community with large areas of communal green space. Preston Street is a two-lane, one-directional roadway, with a one-way striped bike lane on the north side of the roadway and parallel parking lanes on the north and south sides of the roadway. Green space fronts Preston Street. The existing sidewalk zones to the north and south of Preston Street vary from 8' to 16' wide.

ENVIRONMENTAL + STORMWATER BENEFITS

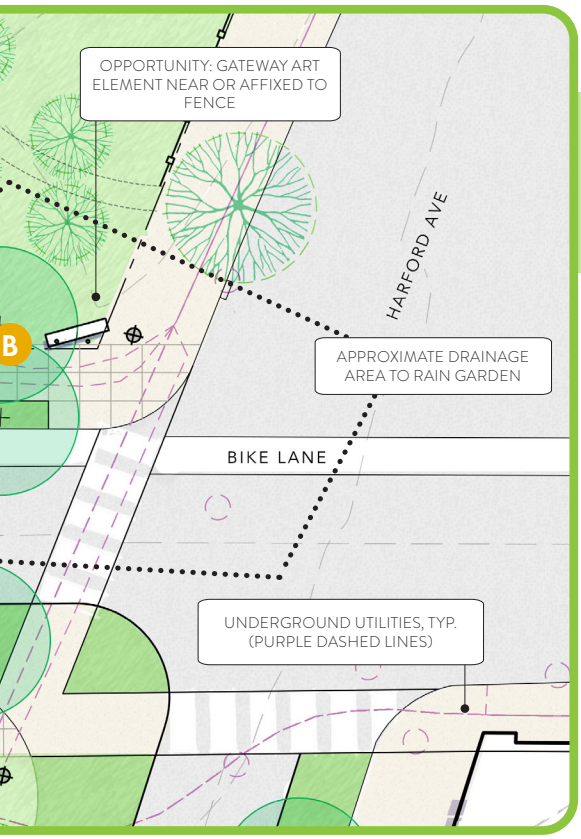
The generous width of concrete sidewalks present an opportunity to remove pavement from a portion of the public sidewalk while still accommodating pedestrian movement along Preston Street. The areas identified for pavement removal within the unused existing parking lanes and wide travel lanes are proposed to be converted to a conservation landscaping rain garden and planted bumpout that will accept stormwater runoff from the sidewalk and allow for water treatment and infiltration. The greening areas will be planted with low-growing native shrubs, perennials, and ornamental grasses, the roots of which will help absorb and filter runoff. They will also receive trees to shade the sidewalk; reduce urban heat island effect; and capture carbon from the air. The reduced width of the roadway will encourage traffic calming. There is an opportunity for a gateway art element near or affixed to the existing fencing Oliver Place property.



A CURBSIDE RAIN GARDEN



B FENCING ART/GATEW



SCALE: 1"= 10'

0' 10' 20' 40'

SITE 1 PRESTON ST + HARFORD AVE CORRIDOR IMPROVEMENTS

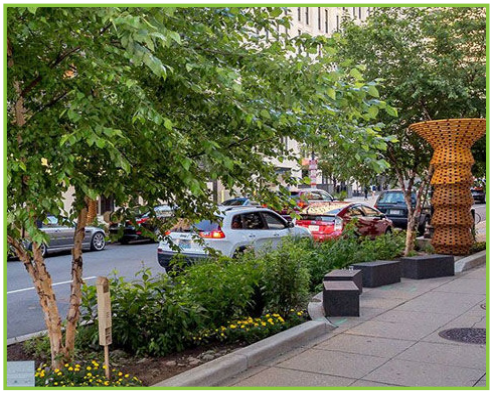
PROGRAMMATIC STRATEGIES

- POTENTIAL FOR DPW STORMWATER MANAGEMENT GRANT FUNDING OF RAIN GARDENS
- MANAGE LITTER AT RAIN GARDENS W/ VOLUNTEER PARK CLEANUPS
- REQUEST LITTER RECEPTACLE AT CORNER(S) W/ DPW STANDARD SERVICE
- ENGAGE WITH LOCAL ARTISTS FOR COMMUNITY IDENTITY + BRANDING

PRECEDENT IMAGES

WAY ELEMENTS

C TRAFFIC CALMING PLANTED BUMPOUTS



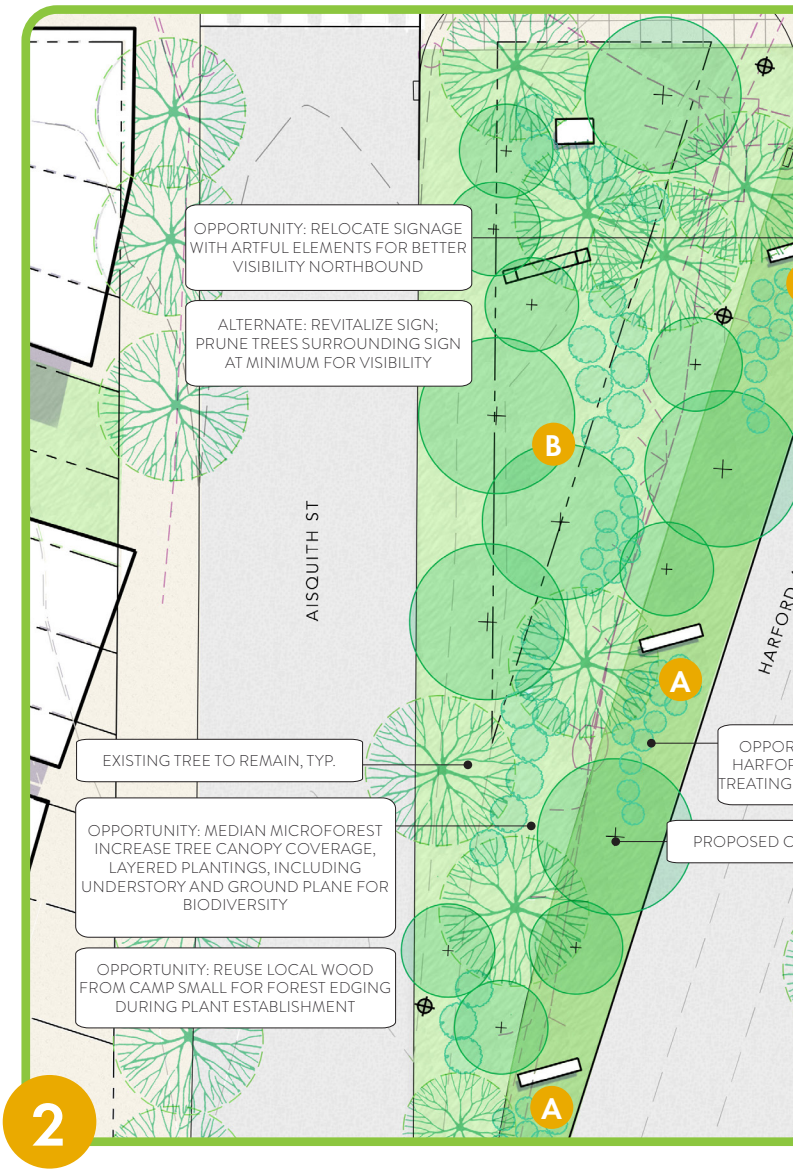
SITE 2. OLIVER MEDIAN MICROFOREST

SITE + PROJECT DESCRIPTION

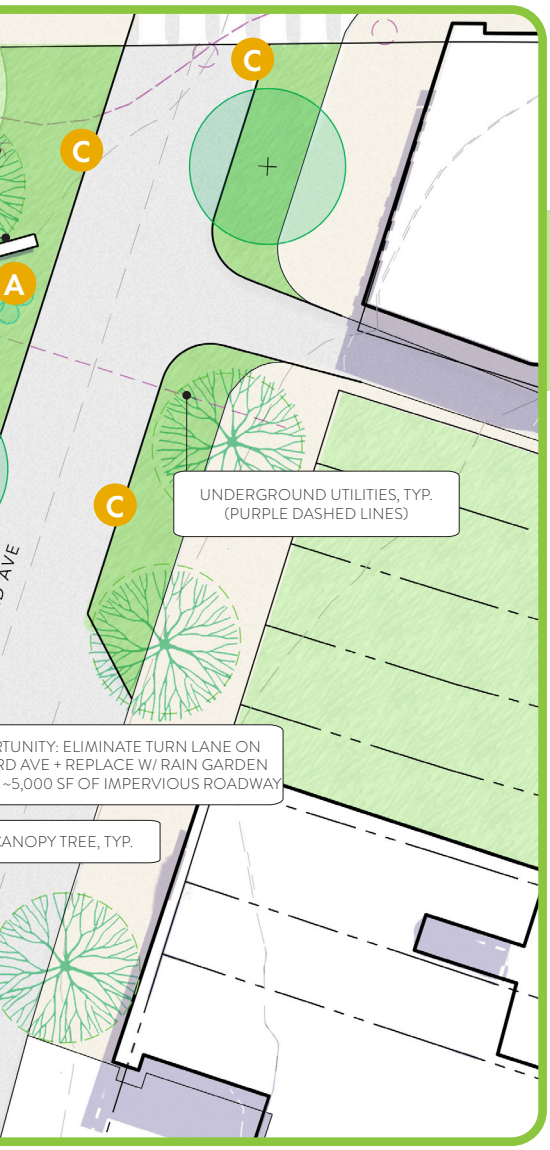
The proposed project site is located within an existing triangular median at the confluence of Harford Avenue, Aisquith Street, and Biddle Street. The existing median consists of mostly lawn and shade trees, with a large utility box located on the north side of the median. Unused parallel parking lanes/wide travel lanes are located along the east and west sides of the median. An Oliver neighborhood sign is located within the median.

ENVIRONMENTAL + STORMWATER BENEFITS

Unused parallel parking lanes and a wide travel/turn lane present an opportunity to remove pavement from the east side of the median and expand the green space, replacing it with rain garden treatment. A palette of several native, low-growing groundcover plantings will be planted in the expanded green areas. This landscaping will reduce mowing maintenance needs, as well as fossil fuel use, where lawn traditionally would have been used along the corridor. The reduced width of the roadway will encourage traffic calming along Harford Avenue. There is an opportunity to relocate the neighborhood gateway signage with artful elements for better visibility to northbound travel. There is also an opportunity to create a median microforest, increasing tree canopy converage and layered plantings for increased biodiversity.



A **ARTFUL GATEWAY SIGNAGE**



SCALE: 1"= 10'

0' 10' 20' 40'

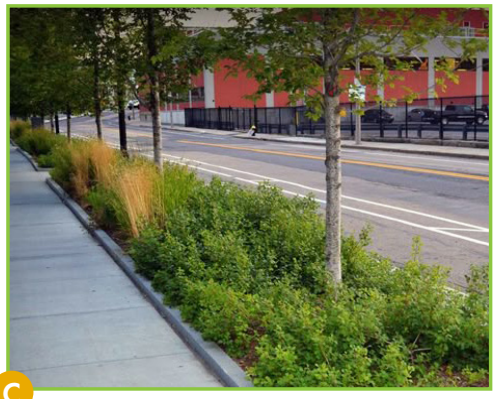
SITE 2 OLIVER MEDIAN MICROFOREST

PROGRAMMATIC STRATEGIES

- PURSUE FEE-IN-LIEU FUNDS FROM FOREST CONSERVATION (SUSTAINABILITY GRANT) FOR MICROFOREST INSTALLATION
- PARTNER WITH CAMP SMALL FOR LOCAL WOOD SOURCING AS MICROFOREST EDGING
- REQUEST LITTER RECEPTACLE AT CORNER(S) W/ DPW STANDARD SERVICE
- ENGAGE WITH LOCAL ARTISTS FOR COMMUNITY IDENTITY + BRANDING
- COORDINATE HARFORD AVE CORRIDOR TRAFFIC CALMING + GREENING EFORTS WITH COUNCILPERSON

PRECEDENT IMAGES

B MEDIAN MICROFOREST: LAYERED PLANTINGS FOR BIODIVERSITY



C TRAFFIC CALMING PLANTED BUMPOUTS

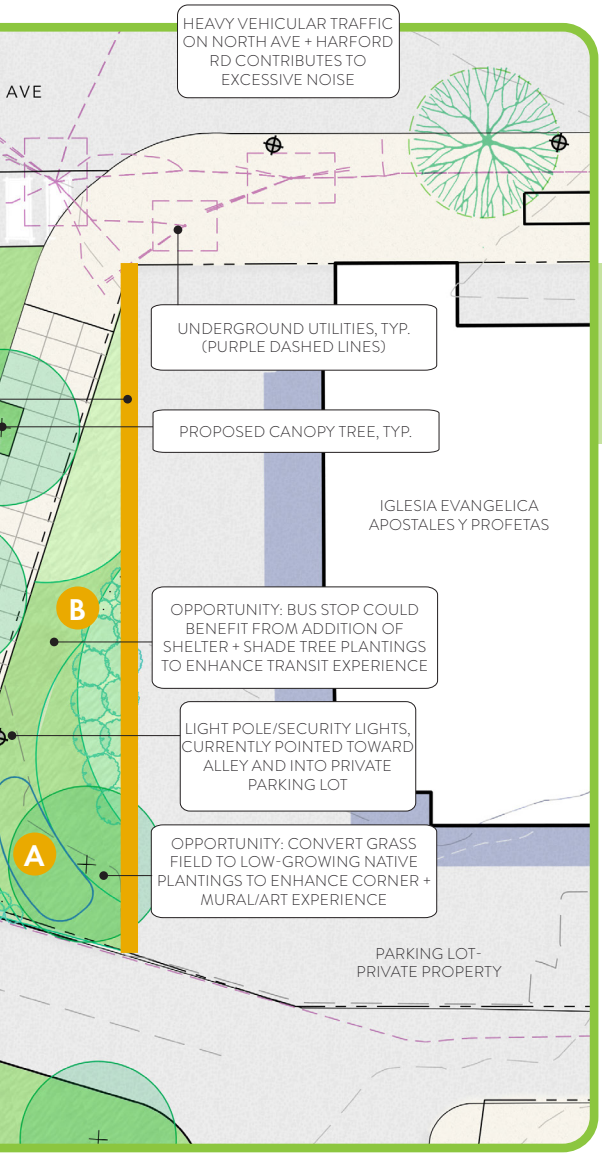
SITE 3. HARFORD AVE.+NORTH AVE. CORRIDOR IMPROVEMENTS

SITE + PROJECT DESCRIPTION

The proposed project site is located along the east and west sides of Harford Avenue, to the south of North Avenue. Four lanes of traffic and/or parallel parking are located within the roadway at this point of Harford Avenue. The sites are adjacent to commercial and institutional properties and consist of either pavement alone or pavement and some lawn. Murals decorate the walls of each adjacent property. A bus stop is located at the east site.

ENVIRONMENTAL + STORMWATER BENEFITS

Pavement will be removed from portions of the roadway to provide bumpouts for safer pedestrian crossings at North Avenue and slowing down traffic along Harford Avenue. Depaving small areas adjacent to the commercial property and special plantings along the west side of roadway will enhance the corner and public art. There is an opprtunity for the bus stop to benefit from the addition of a bus shelter and shade tree plantings to enhance the transit experience for riders. Converting the existing lawn on the east side of the roadway to low-growing native plantings, will also enhance the corner and mural/art experience on the east side.



SITE 3 HARFORD AVE + NORTH AVE CORRIDOR IMPROVEMENTS

PROGRAMMATIC STRATEGIES

- ENGAGE W/ DOT REGARDING CAMERA USAGE + DIRECTION
- REQUEST LITTER RECEPTACLE AT CORNER(S) W/ DPW STANDARD SERVICE
- ENGAGE WITH LOCAL ARTISTS FOR BUS SHELTER DESIGN + PLANTING AT MURAL CONSULT

PRECEDENT IMAGES

A PLANTED RAIN GARDEN WITHIN PUBLIC REALM

B PLANTED BUS STOP/SHELTER

C TRAFFIC CALMING PLANTED BUMPOUTS

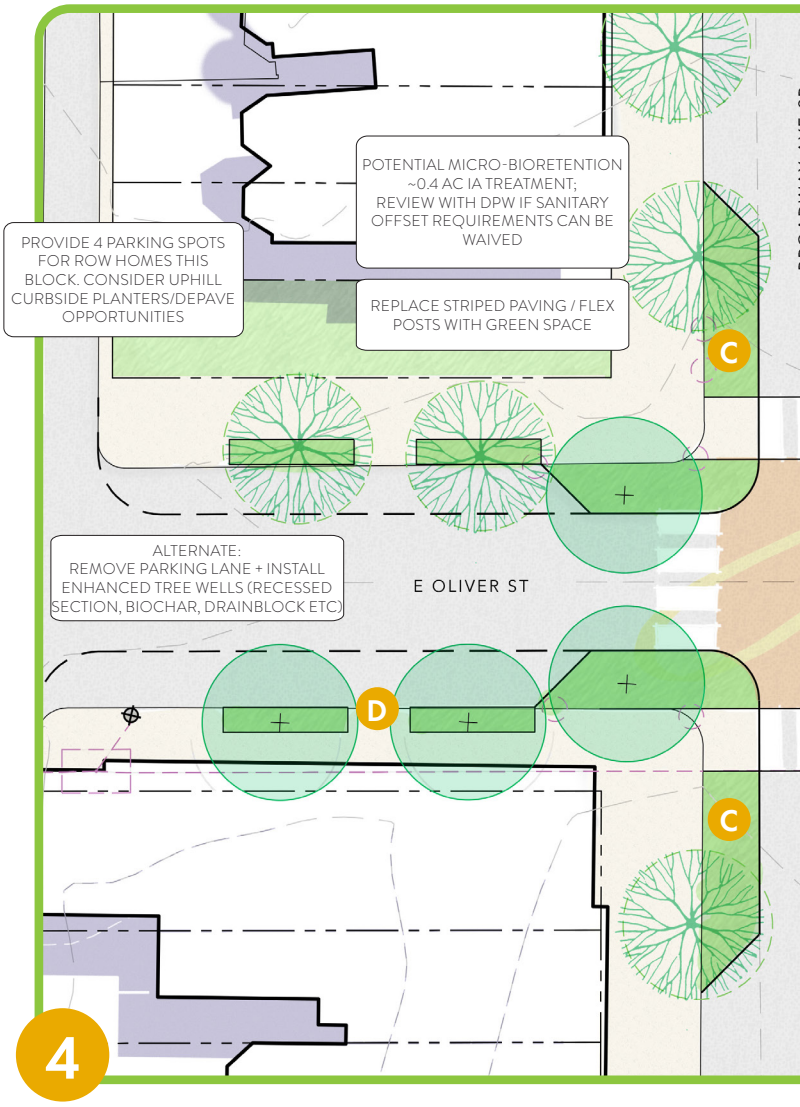
SITE 4. OLIVER ST.+BROADWAY CORRIDOR IMPROVEMENTS

SITE + PROJECT DESCRIPTION

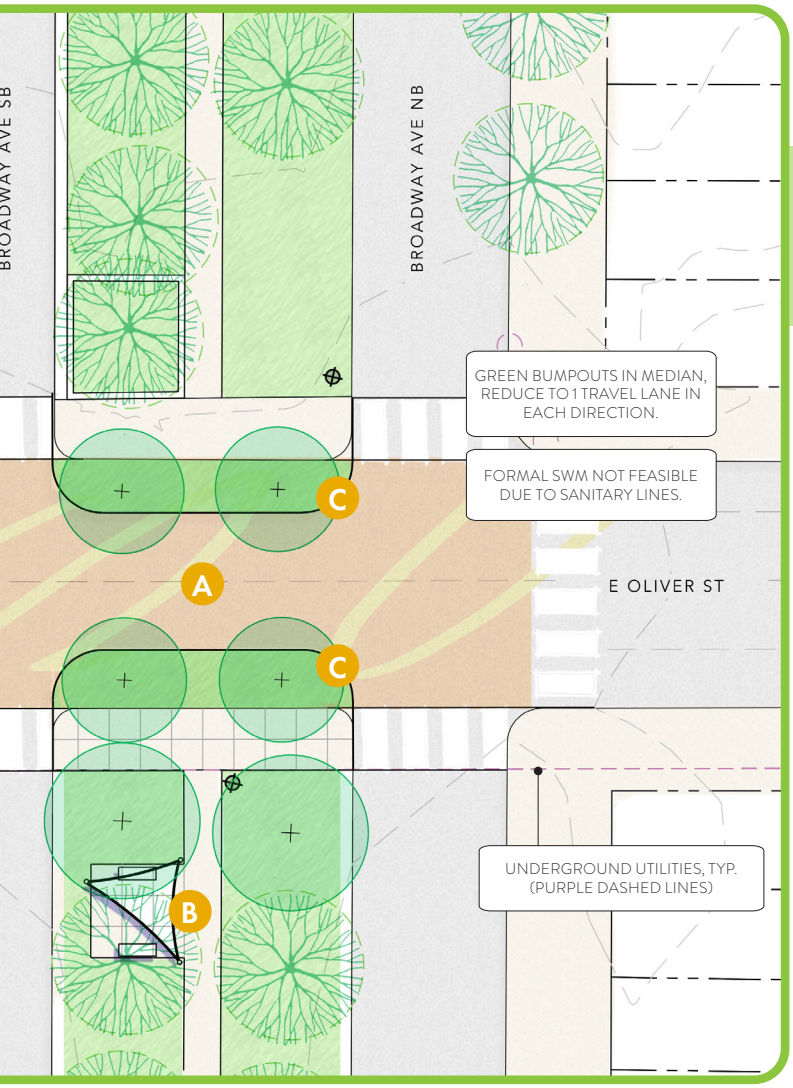
The proposed project site is located along Oliver Street, at the intersection of Broadway. The site is within a residential area of the neighborhood, as well as along a potential Safe Streets Route connected to Dr. Bernard Harris Sr. Elementary School. Underutilized parallel parking lanes are located along both sides of Oliver Street. Broadway is a multi-modal thoroughfare in East Baltimore, connecting multiple neighborhoods. It offers the opportunity to link greening efforts across neighborhoods, and in this case, across Oliver and Broadway East.

ENVIRONMENTAL + STORMWATER BENEFITS

Pavement will be removed from portions of the roadway to provide bumpouts for safer pedestrian crossings and slowing down traffic. Potential micro-bioretention treatments will replace the existing pavement, capturing stormwater runoff from both Oliver Street and Broadway. Removing the parking lanes along Oliver provide an opportunity to install enhanced tree wells and increasing the neighborhood canopy. Green bumpouts in the median of Broadway will reduce traffic to one travel lane in each direction, and installing a ground mural/art within the intersection roadbed creates another moment for gateway identity for the neighborhood.



NEIGHBORHOOD GATEWAY/ INTERSECTION PAVEMENT MURAL



SCALE: 1"= 10'

0' 10' 20' 40'

SITE 4 E OLIVER ST + BROADWAY CORRIDOR IMPROVEMENTS

PROGRAMMATIC STRATEGIES

- SAFE ROUTES TO SCHOOLS SIGNAGE IMPLEMENTATION
- CONSIDER UPHILL PAVEMENT REMOVAL + EXPANDED TREE WELLS WITHIN LARGER DRAINAGE AREA
- COMMUNITY GATHERING/ PROGRAMMING IN MEDIAN
- LITTER REMOVAL

PRECEDENT IMAGES

B SMALL COMMUNITY/POP-UP GATHERING SPACE AT EXISTING CONCRETE PAD

C TRAFFIC CALMING PLANTED BUMPOUTS

D EXPANDED TREE WELLS/DEPAVE AREAS WITHIN SIDEWALKS

Chapter 3

PROJECT AREA CONTEXT

THE OLIVER GREENING MASTER PLAN'S PROJECT AREA

The Oliver Greening Master Plan provides a greening vision for the Oliver neighborhood in east Baltimore City. Oliver is bounded by Biddle Street to the south, Ensor Street to the west, North Avenue to the north, and Broadway to the east. The entire Oliver neighborhood area is approximately 176 acres.

The Greening Master Plan seeks to reconcile the multiple interests (community, municipal, state, and federal) that are working to improve the environmental and public health of the land and waterways in and around Oliver.

CBT WATERSHED ASSISTANCE GRANT PROGRAM

Historic Oliver Community Association received a grant to develop the Greening Master Plan from the Chesapeake Bay Trust's Watershed Assistance Grant Program, which is managed by the Chesapeake Bay Trust (CBT) in partnership with the Maryland Department of Natural Resources (MDNR) and the Maryland Department of the Environment (MDE). The Watershed Assistance Grant Program provides support for watershed restoration project designs and permitting and for watershed planning and programmatic development. The ultimate goal of the projects funded through this opportunity will be to improve water quality in the entire State of Maryland.

This program directly engages homeowners, churches, businesses and others in on-the-ground restoration actions that improve the quality of life in communities throughout the watershed, while ultimately improving the health of the Chesapeake Bay.

GOALS AND OBJECTIVES

In meeting the requirements of the grant, the Master Plan seeks to address the two primary objectives of the Watershed Assistance Grant:

- Leverage resulting designs, plans, or projects to craft future proposals for implementation funding to the Maryland Chesapeake and Atlantic Coastal Bays Trust Fund, grant programs at the Chesapeake Bay Trust, or other sources of support;
- Develop deliverables that will support local planning efforts such as Financial Assurance Plans (FAPs), Total Maximum Daily Load (TMDL) Implementation Plans, county-wide Green Infrastructure Plans, watershed action plans, and State of Maryland Phase III Watershed Implementation Plan (WIP) strategies and associated State Two-year Milestones.

PREVIOUS PLANNING REPORTS

In reviewing previous relevant community planning efforts, the Greening Master Plan identified three plans as particularly important: the 2024 Oliver Vision Plan, Lower Jones Falls Watershed Small Watershed Action Plan, the 2016 Johnston Square Vision Plan, and the 2017 Oliver Deep Plan. Highlights of the four plans is included in this section, as well as comments regarding the ways in which the Oliver Greening Master Plan will build on these efforts.

These plans provide substantial detail on neighborhood district goals and needs, of which there are many. Those goals and metrics common to the Greening Master Plan consist of the following:

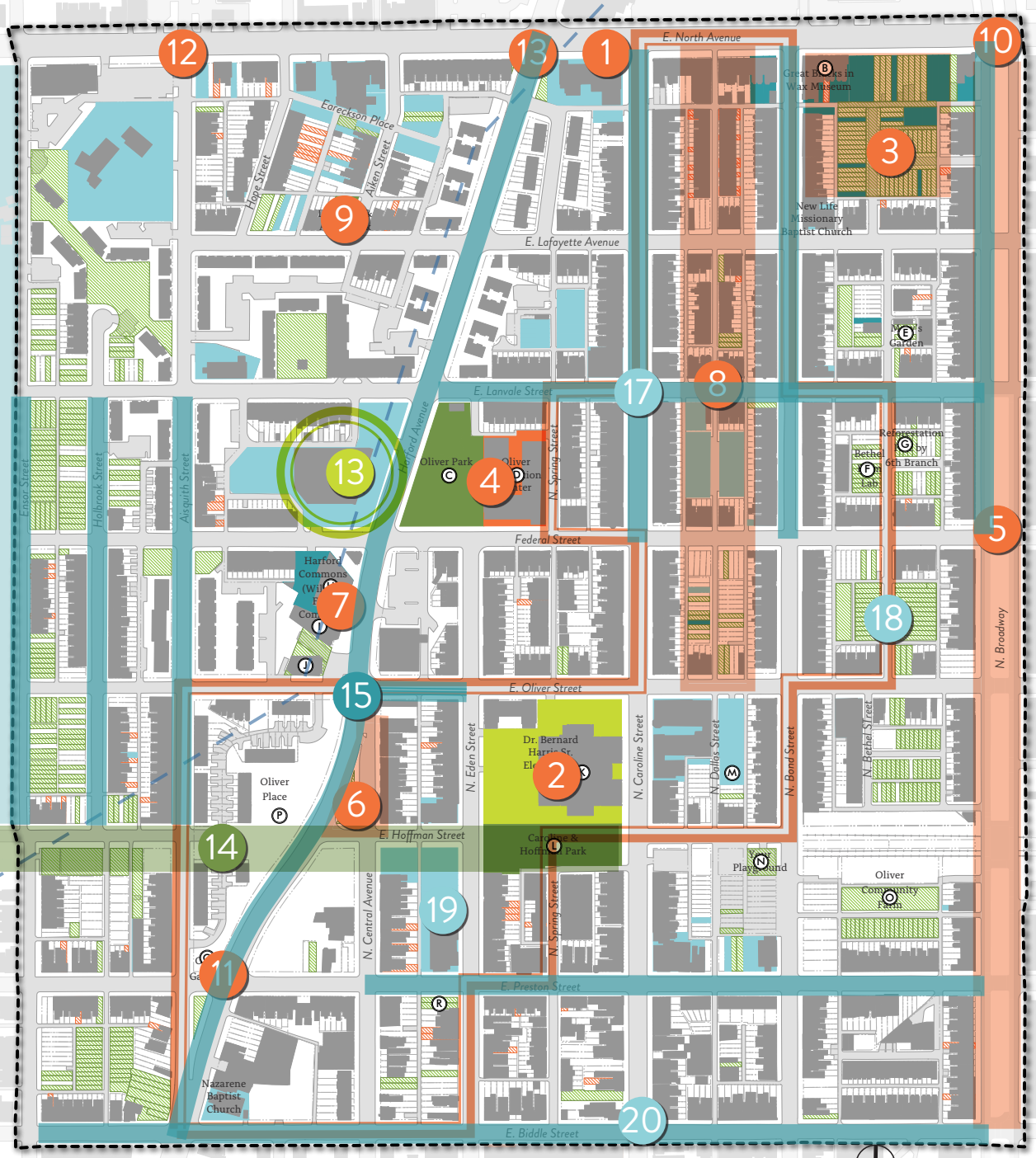
ADDITIONAL RESOURCES

Information about past and ongoing planning efforts within Oliver that were reviewed for this master plan can be found in the Appendix.

SITE-SPECIFIC RECOMMENDATIONS

(numbered to coincide with the callouts in the map to the right)

1. Dedicated Walking Trails (Oliver Vision Plan)
    - Historic Landmark Loop
    - Wellness Loops
2. Green spaces around the school for community uses
3. Programmed open spaces/gardens with GBIW
4. Reinvigorate the Oliver Recreation Center
5. Beautification and investment in Broadway's grand boulevard
6. Closing off Central Avenue to create a public plaza
7. Plaza along the historic fronts of the Apollo Theater and Firehouse
8. Arts Alley along Dallas Street
9. Basketball courts and neighborhood park
10. Sculpture parks as primary gateways (10 & 11)
12. Additional primary gateways to the neighborhood (12 & 13)
13. Hot spot for stormwater pollutants, indentified on property previously host to Shop and Save


E. North Avenue
E. Lafayette Avenue
E. Lanvale Street
Federal Street
E. Oliver Street
E. Hoffman Street
E. Preston Street
E. Biddle Street
N. Broadway
N. Eden Street
N. Caroline Street
N. Dallas Street
N. Bond Street
N. Bethel Street
N. Central Avenue
N. Spring Street
Harford Avenue
Holbrook Street
Asquith Street
Aiken Street
Hoen Street
Eareckson Place
Oliver Park
Oliver Place
Harford Commons
Dr. Bernard Harris Sr. Elementary
Caroline & Hoffman Park
Oliver Community Farm
Great Blacks in Wax Museum
New Life Missionary Baptist Church
Nazarene Baptist Church
Greenmount Cemetery Chapel and Gates
Scale: 1 inch : 100 feet
North
SCALE: 1"= 700'- 0"
Public Park or Open Space
City-owned Land
Public School Property
Historic Landmark
Religiously-affiliated Property
Public Building
City-owned Structure
Buildings
Roads/Pavement
Neighborhood Boundary

Grocery Store (Baltimore Harbor Watershed Assessment)

14. Hoffman Street Corridor Greenway (Johnston Square Vision Plan)
15. Street tree plantings (Oliver Deep Plan)

GENERAL RECOMMENDATIONS

- Special types of gardens: butterfly gardens, meditation gardens, water gardens, and other native plant landscapes in some of the inner block spaces
- Better distribution of playgrounds
- Repurposed vacant paved lots for pop-up events
- Emphasis on investing in existing green spaces
- History of community residents helping with the maintenance of public green spaces
- Neighborhood Walking Paths, Community Gardens and Outdoor Gathering Spaces were rated as the most popular community amenities to add/enhance in Oliver.
- Highest safe streets and traffic calming community priorities include increased lighting, beautification with art and street trees with the increased maintenance of public spaces.
- Restoration opportunities for tree plantings throughout the neighborhood

The Oliver Greening Master Plan offers additional value to the recommendations made by each of the previous planning reports in the following ways:

1. Providing illustrative renderings to stimulate community interest in enhancing the environmental quality, community resilience, and value and aesthetic properties of the neighborhood.
2. Providing design guidance in the form of a structuring principle (stormwater management).
3. Concentrating on smaller areas through pilot projects – residents who participate in stakeholder engagement activities will know that their efforts will be reflected in locations only a few minutes' walk from their homes.

The Greening Master Plan is intended to be a complement to City efforts; when City resources and energy are available to Oliver's residents, stakeholders can look for opportunities to implement projects that satisfy the goals of each community/watershed plan. When City resources are otherwise dedicated, the Greening Master Plan will provide guidance for independent, community driven efforts to continue to revitalize Oliver.

POTENTIAL GREENING PROJECT PARTNERS

As the community looks to who they can partner with on implementing and maintaining greening projects throughout the neighborhood, they may be able to build a local coalition of greening partners with past recipients of CBT grants. The following local community organizations, who are based in Oliver, previously received CBT grants and are already familiar with the goals of stormwater management and leveraging community grants to improve both water quality and quality of life (numbered to coincide with the previous map):

17. Street Tree Planting in the Oliver Neighborhood of Baltimor, Water Baltimore, 2022
18. Oliver Green, The 6th Branch, 2018
19. The Garden of Eden, Knox Presbyterian Church, 2020
20. Greening Communities – Oliver Community Urban Canopy Campaign, Baltimoreans United in Leadership Development, 2022

OTHER WATERSHED PLANS

In 2010, the Environmental Protection Agency (EPA) finalized the Chesapeake Bay TMDL, that provides guidelines for restoring the health of the Bay's waters by defining pollution reduction goals or "pollution diet" for nitrogen, phosphorus, and sediment by 2025. It requires that the jurisdictions within the Bay watershed

develop Watershed Implementation Plans (WIPs) that propose how allowable nitrogen, phosphorus, and sediment loads should be distributed among sources or sectors (e.g. municipal wastewater systems and urban stormwater) and describe the management steps necessary to meet water quality standards. Baltimore City issued their MS4 Restoration and TMDL WIP in 2015. The Baltimore Harbor, including the LNB Pataspco River, are listed as impaired by excessive nitrogen (TN), phosphorus (TP), sediments (TSS), and bacteria (E. Coli). Other TMDLs and impairments listed, but without load limits, include Chlordane, Zinc, Lead, Chromium, and other metals.

The Maryland Phase III WIP identifies critical two-year milestones for meeting the Chesapeake Bay TMDL. The following milestones will be positively contributed to by the implementation of subsequent projects identified in the Greening Master Plan:

- **Stormwater Goals (Milestone Priorities) – Contribute to impervious acreage retrofit requirement**
- **Stormwater Goals (Other WIP Milestones) – Reduction in pollutant loads that will assist Baltimore City in MS4 Permit Program**

It is clear that Federal and State requirements necessitate the accelerated implementation of stormwater management practices, such as those defined in the Maryland Stormwater Design Manual, in order to contribute to pollutant reduction goals. However, local Watershed Action Plans and Assessments prepared by Baltimore City and Non-Government Organizations (NGOs) have further analyzed the existing drainage areas, land cover features, and social statistics to develop goals tailored to community needs. The Oliver Greening Master Plan and Pilot Projects are intended to contribute to the goals defined by the Federal and State Guidelines, as well as local City and Community guidance and previous detailed analyses of these neighborhoods.

In short, the Greening Master Plan is intended to be as effective as possible in addressing the multitude of identified needs and build upon the well-documented opportunities shown in prior planning efforts.

Previous Planning Reports.


Baltimore County
Jones Falls
Gwynns Falls
Back River
Oliver Neighborhood
Patapsco River LNBr
Patapsco River
Baltimore Harbor
Anne Arundel County

Chapter 4

EXISTING CONDITIONS

A multi-faceted approach to data collection was used for the Oliver Greening Master Plan that included the following:

- Conducting an inventory and analysis at the neighborhood-level of the watersheds and natural resources.
- Performing on-site investigations of several community landmarks and corridors.
- Capitalizing on residents' knowledge/experience through an in-person survey and two community outreach events (discussed in Chapter 5).

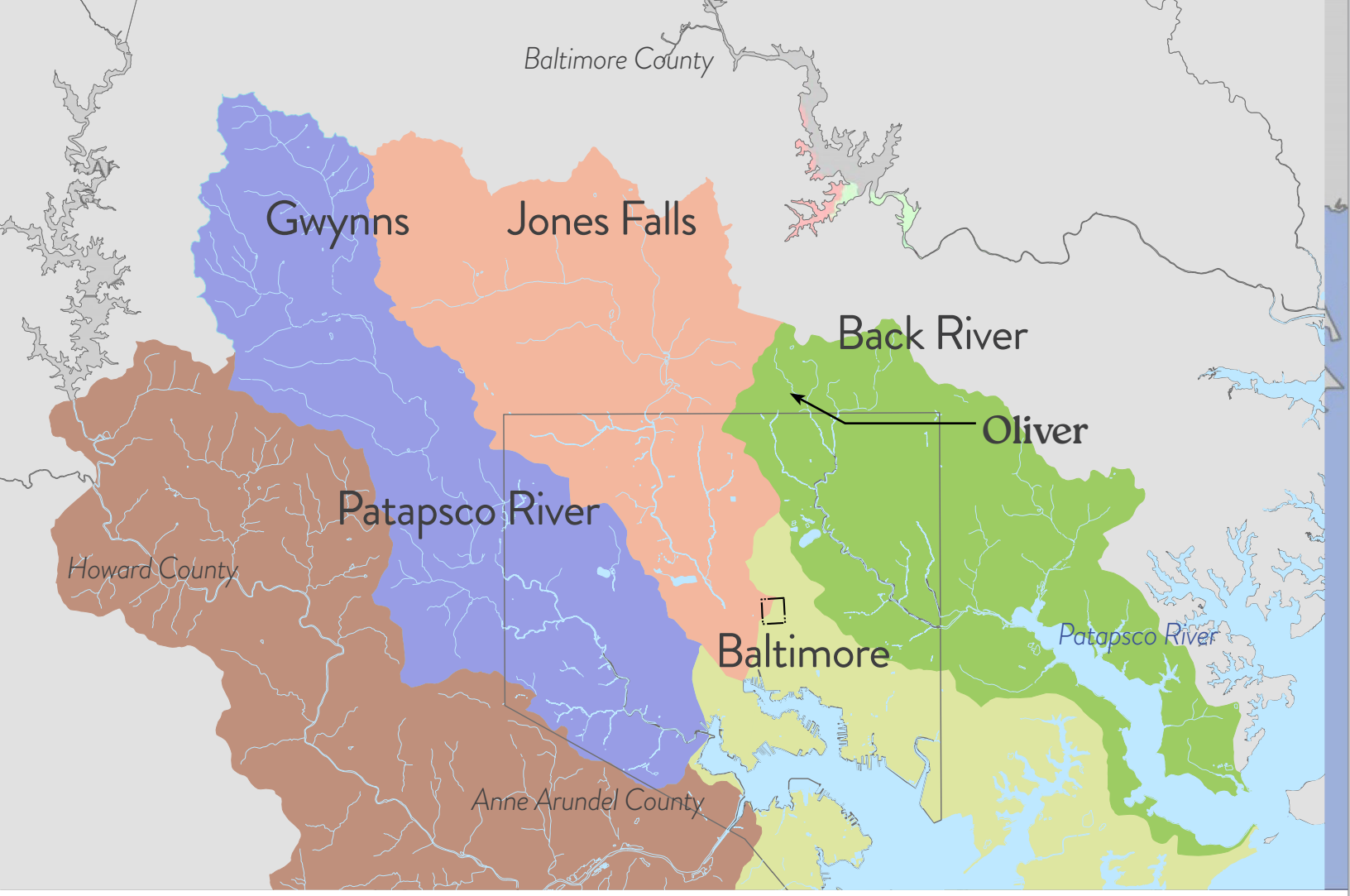
WATERSHED CHARACTERIZATION

The study area for the preliminary analysis was defined by Oliver's neighborhood boundary overlaid against existing watersheds (as shown on the map to the left).

PATAPSCO AND BACK RIVERS BASIN

The Oliver neighborhood, located in east Baltimore City, Maryland, is part of the Patapsco and Back Rivers basin of the Chesapeake Bay Watershed. According to MERLIN (Maryland's Environmental Resource & Land Information Network),

> "The Patapsco River flows 39 miles through central Maryland. The tidal portion of the river forms Baltimore Harbor. The area is heavily developed and urbanized, but the Patapsco River is still well-known for its diverse fish populations. The river's low gradient and shallow bed create scattered deep pools that are attractive to fish species such as trout, bass, and sunfish. The tidal Patapsco River is crossed by the Baltimore Harbor and Fort McHenry Tunnels and the Francis Scott Key Bridge. The Back River, a small system of urban and suburban streams, empties in the Bay north of Baltimore City. This river system is similarly impacted by human development and is a popular recreational area.[9]"
>
> **ECO HEALTH REPORT CARD**
>
> University of Maryland Center for Environmental Sciences



Baltimore City 8-digit Watershed Boundaries (from City of Baltimore MS4 WIP, 2015).

the major watersheds within the study area are the Jones Falls to the West and Baltimore Harbor to the East.

The water quality (or "Bay Health") of the Patapsco and Back Rivers is poor. The annual Chesapeake Bay report card developed by the University of Maryland Center for Environmental Science (UMCES) gave the Patapsco and Back Rivers a "D+" grade in 2023/2024, but bay health trends are "significantly improving."[10] The Chesapeake Bay report card compares 10 indicators (dissolved oxygen, nitrogen, phosphorus, chlorophyll a, water clarity, aquatic grasses, benthic community, stewardship, walkability, heat vulnerability index) to scientifically derive thresholds or goals. These indicators are combined into an Overall Health Index, which is presented as a subregion percent score. The Patapsco and Back Rivers was the lowest-scoring region (35%).

LOCAL WATERSHEDS (SUBWATERSHEDS)

Within the Patapsco and Back Rivers basin, two local watersheds (or subwatersheds) exist within Oliver: Jones Falls and Baltimore Harbor.

Pollutants impairing the water quality within the two subwatersheds include:

- **Bacteria**
- **Ions (chlorides and sulfates)**
- **Metals (zinc, copper, lead, chromium)**
- **Total Nitrogen, phosphorous, and suspended solids**
- **PCBs in fish tissue**
- **Pesticides (chlordane)**
- **Habitat alterations and channelization**

- **Trash/litter**

Maryland Department of Environment (MDE) designated the Use Classes of the waters of the Jones Falls as Use I: Water Contact Recreation, and Protection of Nontidal Warmwater Aquatic Life and the Baltimore Harbor as Use II: Support of Estuarine and Marine Aquatic Life and Shellfish Harvesting

Jones Falls

Approximately 45 acres (26% of the project area) of the Jones Falls subwatershed falls within the Oliver neighborhood. Untreated stormwater runoff from Jones Falls drains into the Inner Harbor, located to the south of the Oliver community.[11]

In the Harbor Heartbeat 2023 report, water sampling of throughout the Harbor and streams collected by Water Baltimore found bacteria levels to have improved (meaning less harmful bacteria was found), and, in particular, the Jones Falls saw the largest improvments.[12]

In its draft 2024 Integrated Report, MDE identified the waters of the Jones Falls subwatershed and its associated biological communities as being impaired by chlorides from road salt found in urban runoff/storm sewers.[13] Waters affected by chlorides are identified as a "Category 5s" and are high priority to be addressed through pollution control requirements and restoration approaches, and lower priority for TMDL development. The MDE Integrated Report designated the waters of the Patapsco River as Use I (Water Contact Recreation, and Protection of Nontidal Warmwater Aquatic Life).

Baltimore Harbor

Approximately 131 acres (74% of the project area) of the Baltimore Harbor subwatershed falls within the Oliver neighborhood. Untreated stormwater runoff from Baltimore Harbor drains from the north and northeast portions of the Oliver community into the Baltimore Inner Harbor waterway.

	Jones Falls		Baltimore Harbor					
	Use Classes							
Designated Uses	I	I-P	II	II-P	III	III-P	IV	IV-P
Growth and Propagation of fish (not trout), other aquatic life and wildlife	✓	✓	✓	✓	✓	✓	✓	✓
Water Contact Sports	✓	✓	✓	✓	✓	✓	✓	✓
Leisure activities involving direct contact with surface water	✓	✓	✓	✓	✓	✓	✓	✓
Fishing	✓	✓	✓	✓	✓	✓	✓	✓
Agricultural Water Supply	✓	✓	✓	✓	✓	✓	✓	✓
Industrial Water Supply	✓	✓	✓	✓	✓	✓	✓	✓
Propagation and Harvesting of Shellfish			✓	✓				
Seasonal Migratory Fish Spawning and Nursery Use			✓	✓				
Seasonal Shallow-Water Submerged Aquatic Vegetation Use			✓	✓				
Open-Water Fish and Shellfish Use			✓	✓				
Seasonal Deep-Water Fish and Shellfish Use			✓	✓				
Seasonal Deep-Channel Refuge Use			✓	✓				
Growth and Propagation of Trout					✓	✓		
Capable of Supporting Adult Trout for a Put and Take Fishery							✓	✓
Public Water Supply		✓		✓		✓		✓

Maryland's Designated Uses for Surface Waters of Oliver's subwatersheds.[15]

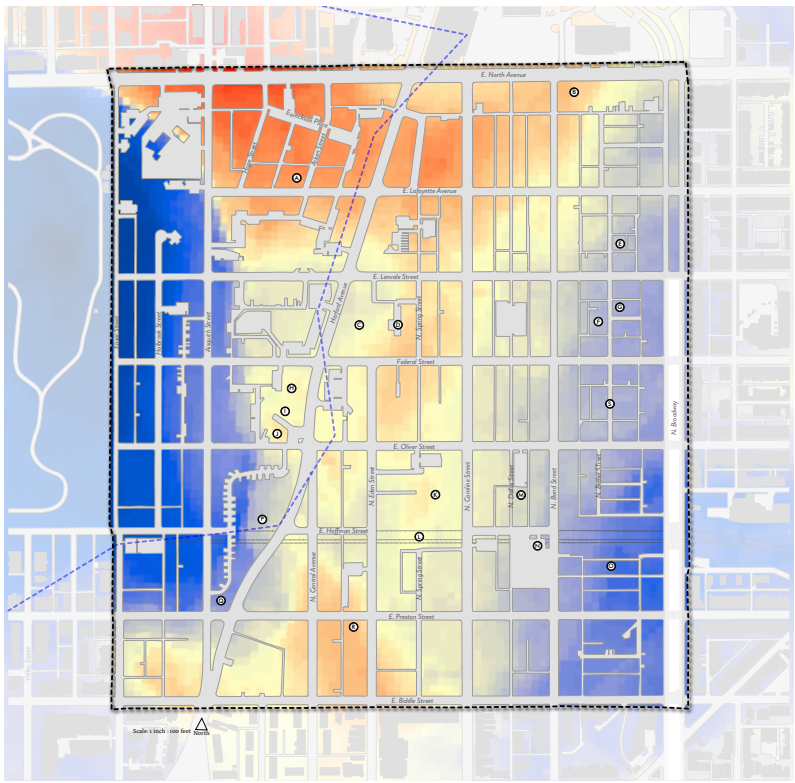
According to the Harbor Heartbeat 2023 report, Baltimore has invested over $1 billion in sewer infrastructure upgrades, legislators have passed critical environmental laws, and scientists have conducted extensive water monitoring to identify issues and track progress. As a result, sanitary sewer overflows have been reduced by 97%, over 450 tons of litter and debris are removed from the water each year, and plastic bags and foam containers have been banned. Routine testing shows that the Baltimore Harbor now meets the Maryland water quality standard set for swimming beaches most of the time in dry weather.[14]

LAND COVER & STORMWATER CONVEYANCE

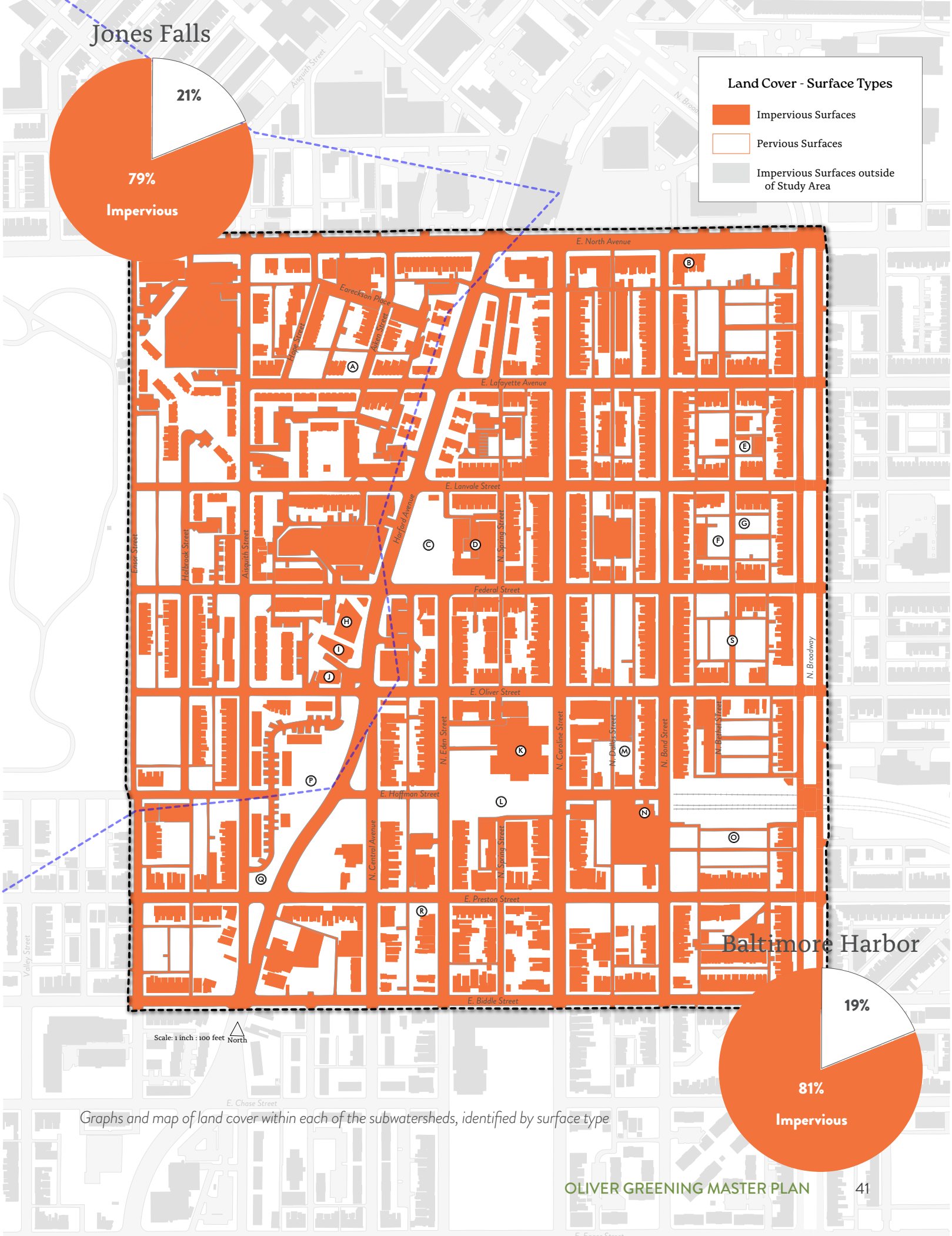
The Oliver neighborhood is a highly urban watershed. The land cover is 80% impervious area, consisting of buildings, sidewalks (primarily concrete), roadways (primarily asphalt). Impervious surfaces do not allow runoff to infiltrate into the underlying soils and carry runoff quickly toward storm drains, leading to increased runoff volumes downstream. The Oliver neighborhood has over 1,000 street trees; approximately 8% of the community (5% in the Jones Falls watershed and 10% in the Baltimore Harbor watershed) is covered by tree canopy.

In the Oliver project area, all stormwater runoff enters through one of its 150 inlets and flows through approximately 5 miles of storm drains, which continue underground through neighborhoods to the east and south of Oliver, eventually discharging directly to the Jones Falls or Baltimore Harbor. The amount of stormwater runoff that flows through Oliver via storm drains is not limited to the amount of rainfall within the project area. Stormwater runoff from areas north of the neighborhood flow through Oliver from storm drain inlets and underground pipes, combining with runoff from the Oliver community. Storm drain systems carry water and pollutants quickly, and do not allow water to filter through stone, vegetation or soil, as in natural channels. Field observations identified that many of the inlets in the community were compromised or clogged with litter, debris, and overgrown vegetation (as shown in the maps below and to the right).

Evening temperatures in summer time were compared to the areas of impervious surfaces. The map below shows the hottest temperatures occurring within the north central park of the neighborhood. Prioritizing geening projects in the areas of Oliver experiencing the hottest temperatures in summer time would serve to improve the quality of life and comfortability for residents in those areas.



Evening Temperatures in Summer Time



Graphs and map of land cover within each of the subwatersheds, identified by surface type

LAND COVER - URBAN FOREST

An urban forest includes any landscaping planted in the public right-of-way, including trees, understory plantings, and aboveground plantings. Planting in the public right-of-way enhances the physical, ecological, and cultural aspects of the city. Trees are one of the most overlooked methods for reducing stormwater volume and improving stormwater quality in communities. Trees lend not only to the neighborhood aesthetic but are also a less expensive alternative to more traditional stormwater infrastructure. Trees reduce stormwater runoff in several ways:

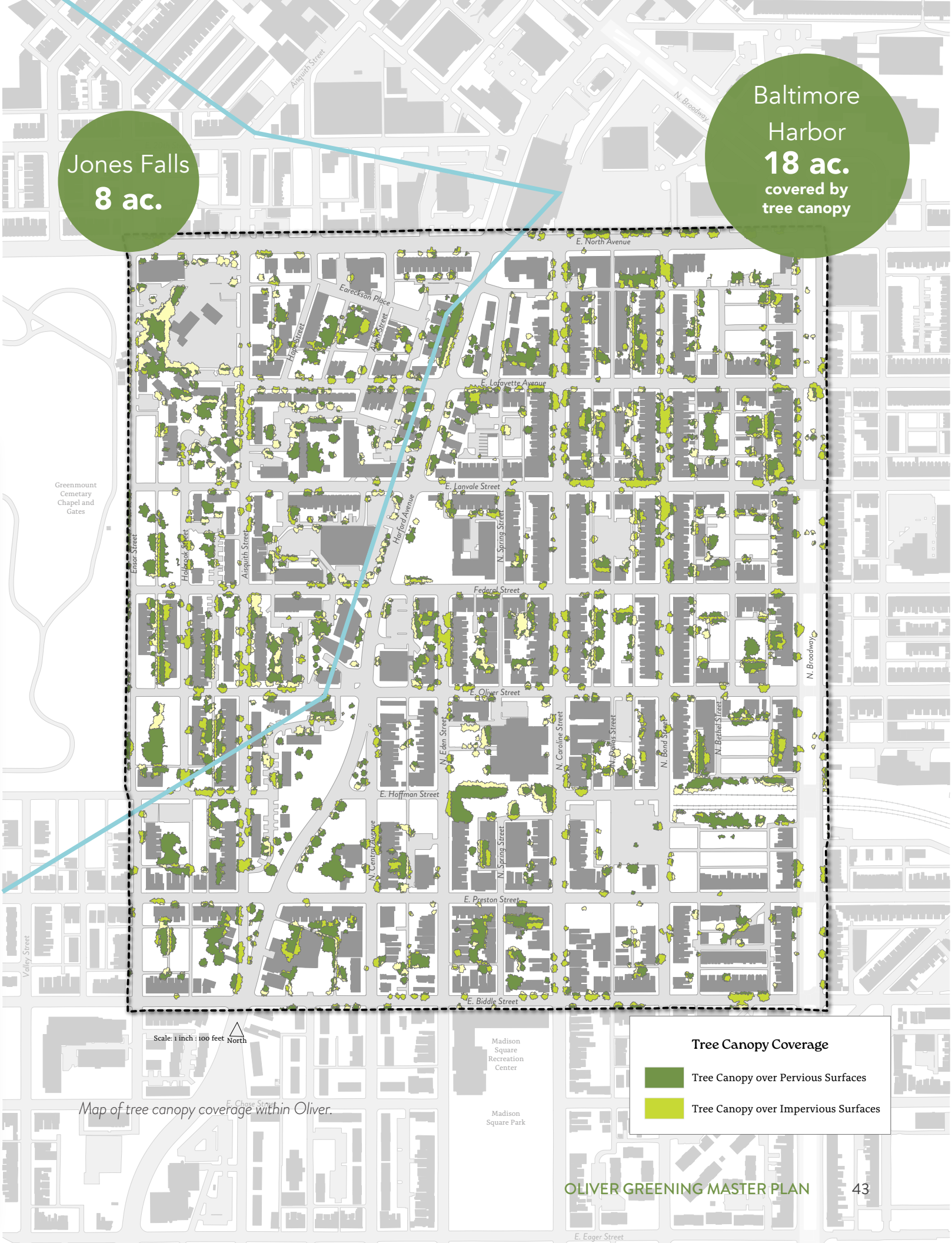
- Capturing and storing rainfall in their canopy and releasing water into the atmosphere.
- Tree roots and leaf litter create soil conditions that promote the infiltration of rainwater into the soil.
- Trees help slow down and temporarily store runoff and reduce pollutants by taking up nutrients and other pollutants from soils and water through their roots.
- Trees transform pollutants into less harmful substances.

Oliver has over 1,000 street trees! Tree canopy covers approximately 15 percent (26.2 acres) of the project area (as shown in the map to the right). During several site visits along Oliver's main corridors, the design team assessed street trees to provide a snapshot of the health of existing neighborhood trees. This urban forest community is dominated by Acer rubrum (Red Maple), Pyrus calleryana (Callery Pear), Zelkova serrata (Japanese Zelkova), Tilia americana (American Linden), and Quercus rubra (Northern Red Oak). Dominant understory species, mostly found in alleyways, include Morus alba (White Mulberry). A significant number of mature Oaks and Zelkovas are located in public parks of the community, i.e. Caroline and Hoffman Park. Threats from invasive species, such as Ailanthus altissima (Tree of Heaven), are found in neglected areas of alleyways and vacant lots, but overall, Oliver's urban forest is in good condition overall.

The Historic Oliver Community Association has done a great job of planting and establishing new street trees in the neighborhood, as evidenced by their healthy crown structure. If planting continues to occurr within at least 50% of the existing herbaceous and impervious areas (sidewalks, parking lots), Oliver could host approximately 1,500 more shade trees. Based on i-Tree Canopy estimations (see details below), Oliver could expect to gain approximately $135 in environmental benefits for each new tree that is planted.

The online application i-Tree Canopy[17] allows anyone to make a simple estimation of the benefits provided by individual trees. With inputs of location and land cover, users receive an understanding of tree benefits related to greenhouse gas mitigation, air quality improvements, and stormwater interception. Based on a survey of 100 points randomly selected within Oliver, i-Tree Canopy estimates annual existing tree benefits of $9,700.

- » $830 of stormwater runoff savings by intercepting 1,654 gallons of rainfall.
- » $2,735 of air quality improvement savings by absorbing and intercepting pollutants such as carbon monoxide, ozone, sulfur dioxide, nitrogen dioxide, and particulate matter; reducing energy production needs; and lowering air temperature.
- » $6,135 of carbon dioxide reduction savings by reducing 131 kilotons of atmospheric carbon dioxide through CO2 sequestration and decreased energy production needs and emissions.

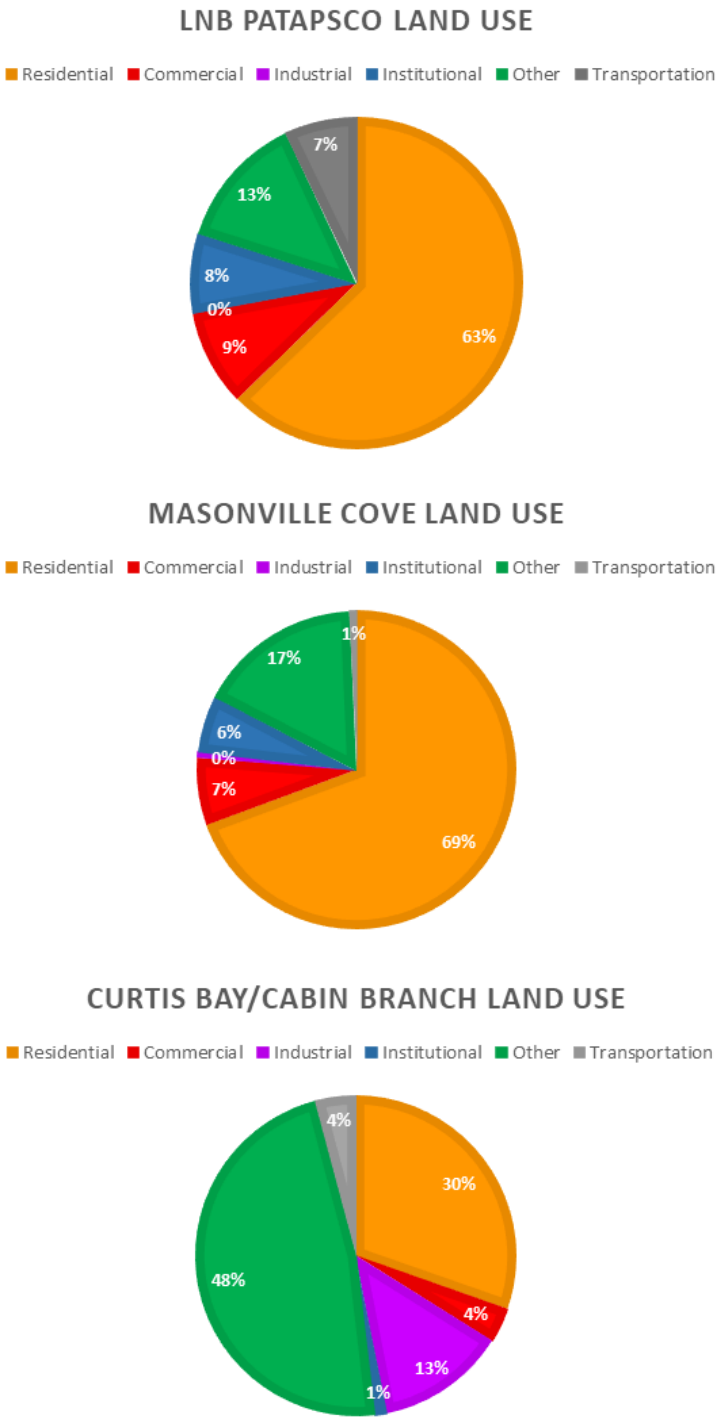


Map of tree canopy coverage within Oliver.

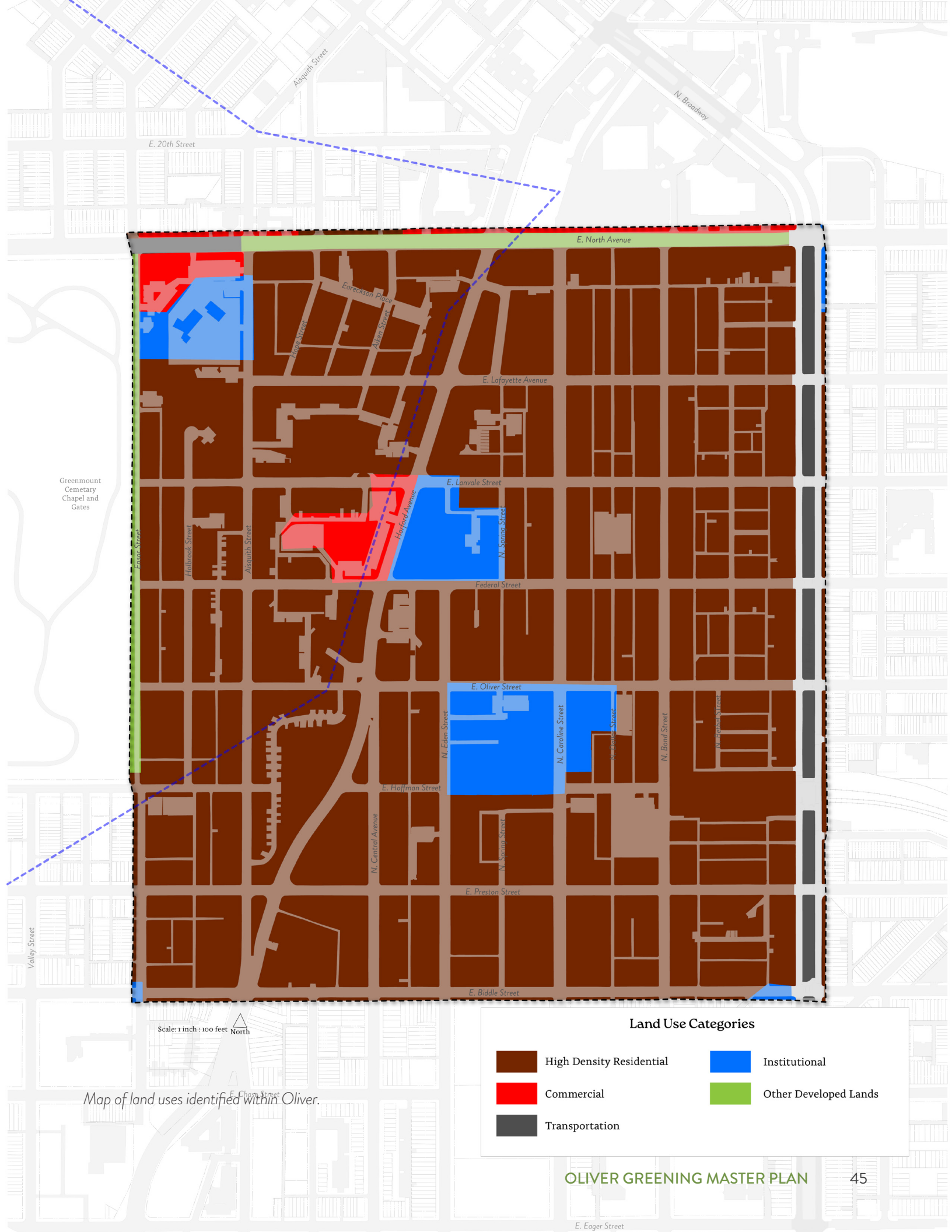
LAND COVER - LAND USE

Land use data was downloaded from the MD iMAP GIS portal[18] to identify targeted land uses for hosting new green strategies like stormwater facilities, environmental site design,[19,20] and for promoting community involvement in environmental stewardship and education. The predominant land use type present within Oliver is residential (high density). Residential land uses represent 20% of the Jones Falls and 65% of the Baltimore Harbor subwatersheds. Forests and parks, categorized as "Other Land Uses," make up 2% of the community's land uses. Commercial, industrial, transportation, and institutional land use types make up the remainder of the land area. The project has over 11 acres in institutionally zoned property, such as community centers, schools, and churches, that would be ideal for hosting new stormwater facilities for restoration because they are highly visible and have great buy-in from communities.

LAND USE BY SUBWATERSHED



Graphs of land cover within each of the subwatersheds, identified by land use.



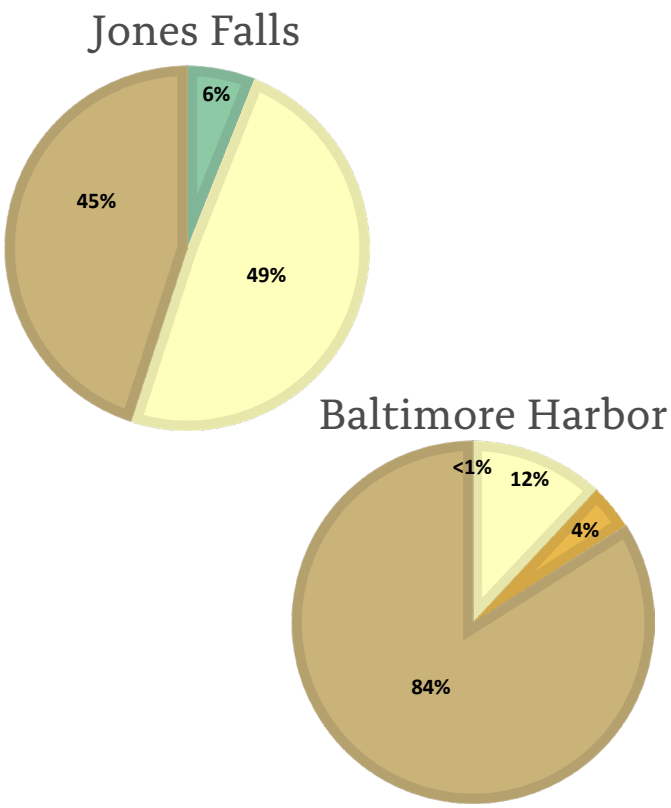
Map of land uses identified within Oliver.

LAND COVER – HYDROLOGIC SOIL GROUPS

Soil characteristics can determine the rate of infiltration, runoff, and erosion that occurs as a result of a storm, as well as determine the viability of hosting native plant communities. Based on data collected from the USDA Natural Resources Conservation Services' (NRCS) Web Soil Survey,[21] the four hydrologic soil groups for Oliver were identified and categorized by subwatershed (as shown in the graphs and map to the right). Seventy-seven (77) percent of the project area is made up of hydrologic soil groups C and D, which have low to very low infiltration rates (any proposed bioretention and micro-bioretention practices will require an underdrain). The project area's existing conditions of 74% impervious surface and soils that fall within hydrologic soil groups C and D contribute to a higher runoff potential.

There are still plenty of opportunities for greening including non-infiltration based strategies such as those shown below: conservation landscaping, rain gardens, tree plantings, and water harvesting. Infiltration practices take advantage of the soil's natural ability to soak up rainfall to reduce runoff while also recharging the shallow groundwater table, which is good for the health of local streams, wetlands, lakes, and other waterbodies.

HYDROLOGIC SOIL GROUPS BY SUBWATERSHED

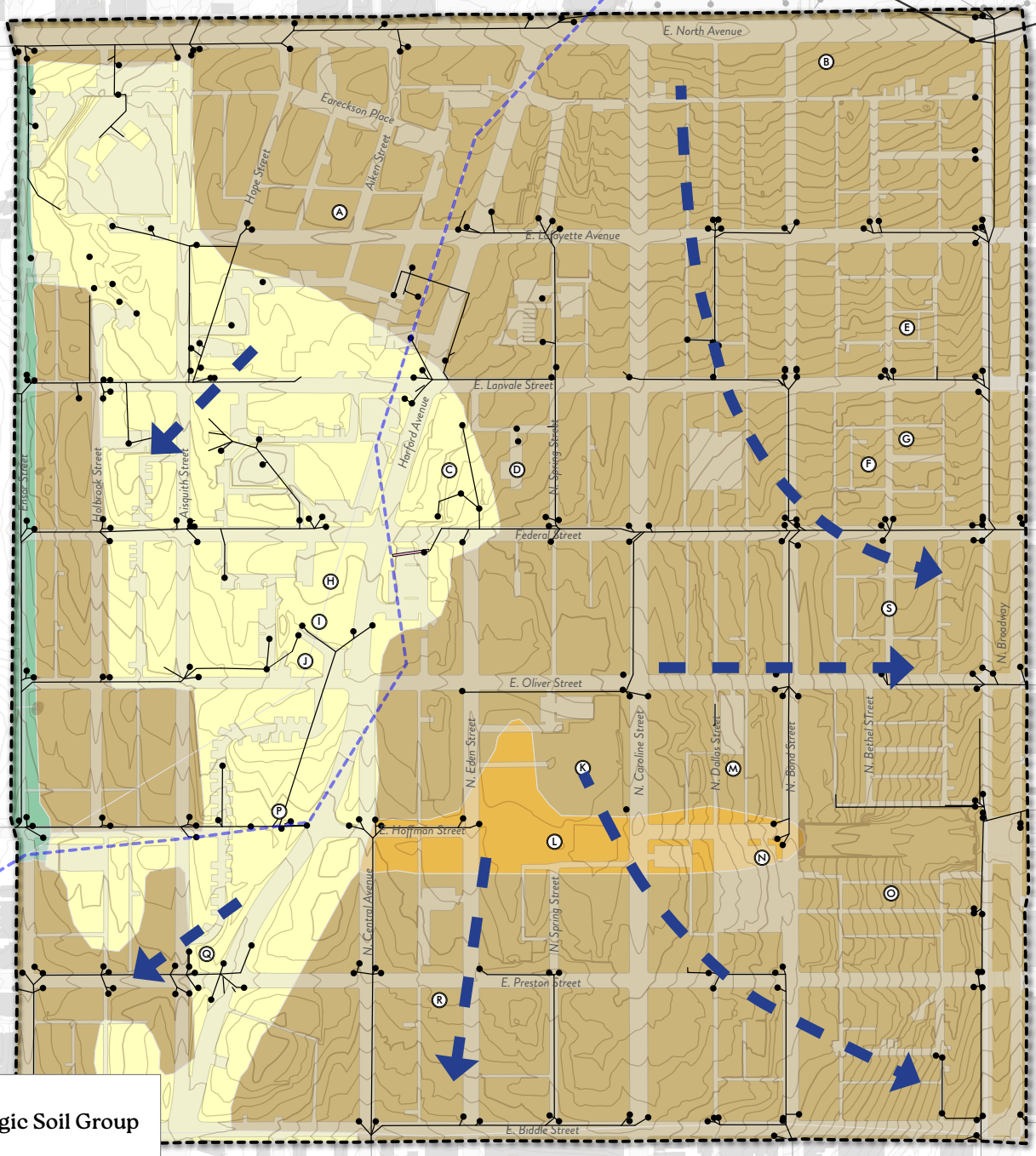


Graphs of hydrologic soil group within each of the subwatersheds

NON-INFILTRATION BASED GREENING STRATEGIES




Subwatershed Boundary

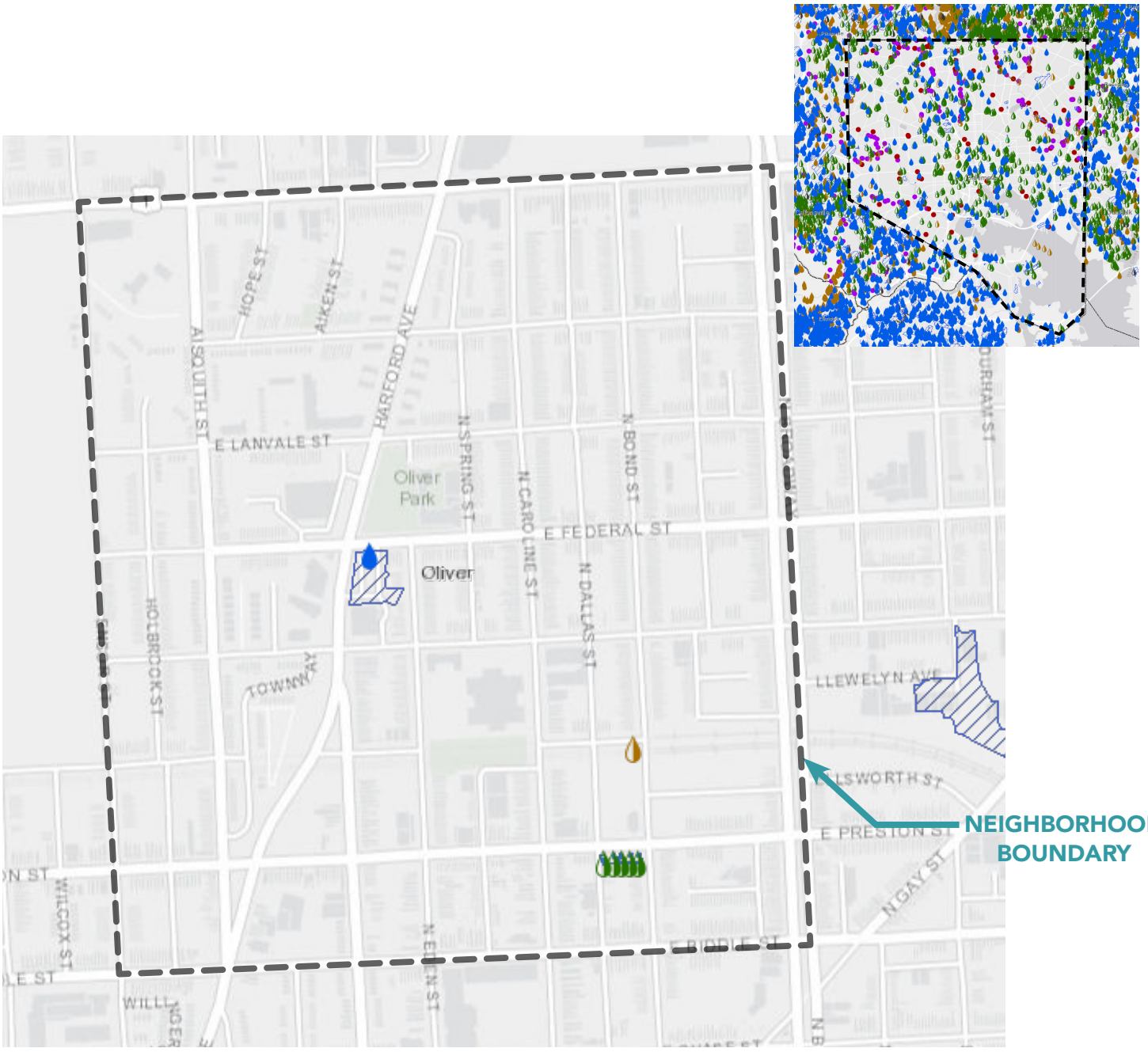


Hydrologic Soil Group

- Soil Group A
- Soil Group A/D
- Soil Group C
- Soil Group D

North

Map of hydrologic soil groups within Oliver,.



MDE StormPrint (https://mdewin64.mde.state.md.us/SSDS/SWP/index.html)

Existing stormwater facilities throughout Oliver.

EXISTING STORMWATER FACILITIES IN THE PROJECT AREA

A review of MDE's Stormwater Print[22] was conducted to identify the locations of various stormwater Best Management Practices (BMPs) throughout the Oliver project area. Baltimore City generally has a lower concentration of BMPs compared to surrounding areas. Existing BMPs within the Oliver study area include one detention pond, located on a commercial property (identified in), one area of impervious removal (identified in brown) and several improved tree wells (identified in green).

If you observe a problem in a stream or the harbor (such as a sanitary leak, a funny smell, or discolored water) contact 311 and report it as a "Waterway pollution investigation"! You can call, visit the 311 Web Page, or use the free 311 App.

REVIEW OF PREVIOUS WATERSHED PLANNING EFFORTS

This plan relates to other planning efforts in that it:

- Captures changes since previous efforts
- Brings greening in line with the new neighborhood strategic plan
- Provides additional details:
  - » **Greening types and locations for specific land uses**
  - » **Schematic plans for pilot sites**
- Will be added as an addendum to the city-recognized (Department of Planning) Oliver Vision Plan

LIST OF WATERSHED REPORTS AND GREENING PLANS THAT WERE REVIEWED

- Oliver Deep Plan (Water Baltimore, Baltimore City DPW, Neighborhood Design Center, 2017)
- Baltimore City Watershed Assessment for the Direct Harbor (Baltimore City)
- Baltimore City Implementation Plan for Non-Tidal Baltimore Harbor Sediment TMDL (Baltimore City, 2023)
- Lower Jones Falls Watershed Small Watershed Action Plan (Center for Watershed Protection,, 2008)
- Baltimore Green Network Plan (Baltimore City Dept. of Planning, 2018)
- Broadway East Greenprint (Unknown Studio, 2020)
- Johnston Square Vision Plan (Hord, Coplan, Macht, 2020)
- Oliver Strategic Implementation Plan (Vision Plan) (Gensler, 2024)

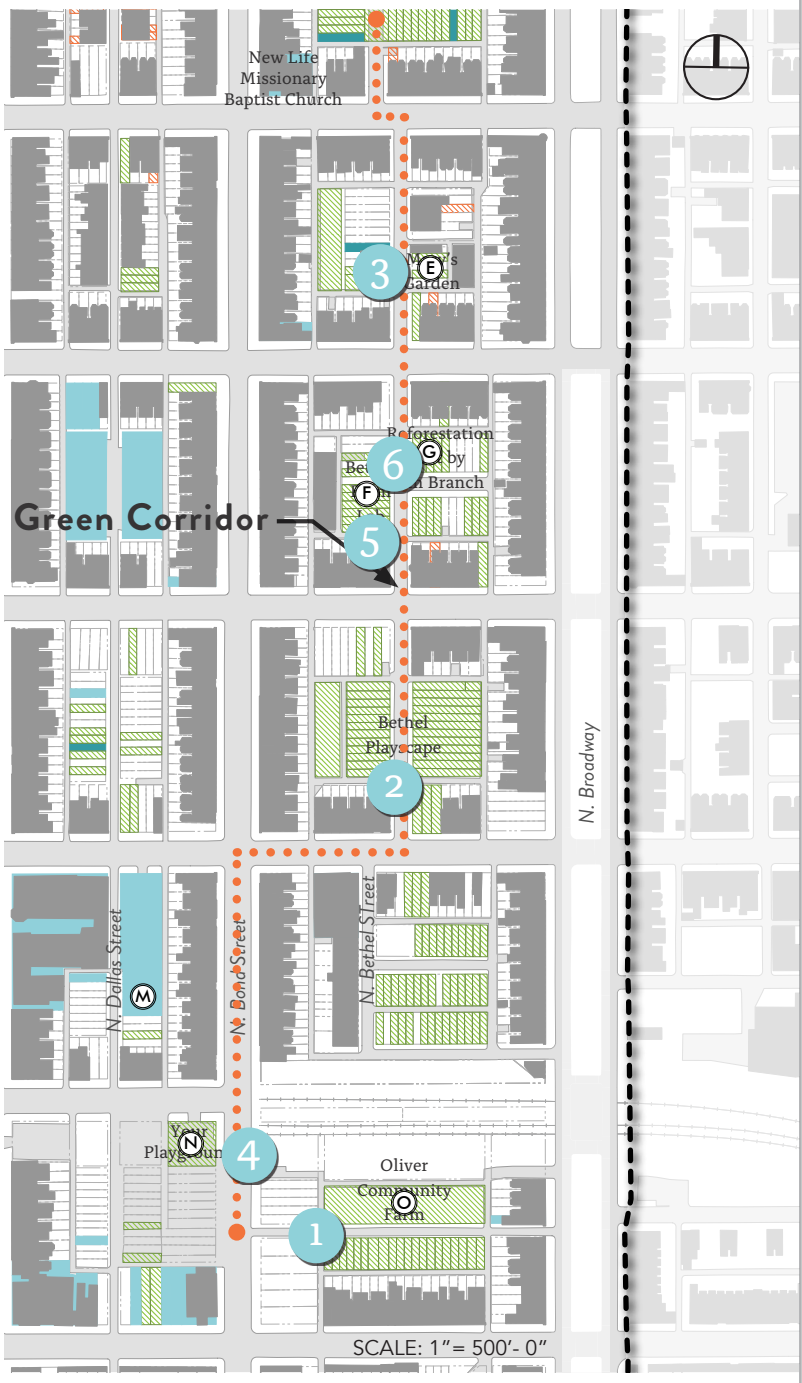
SITE VISITS OF COMMUNITY LANDMARKS AND CORRIDORS

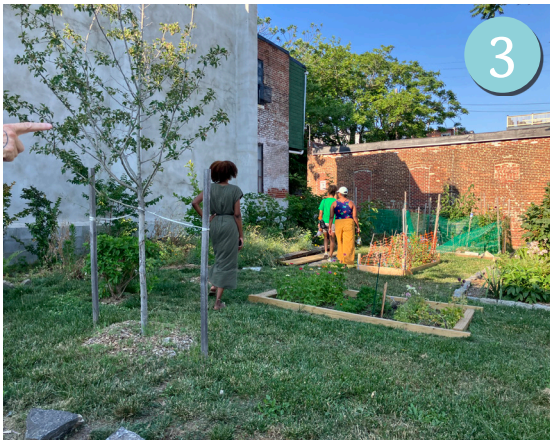
The design team conducted a neighborhood walk and site visits to several community landmarks and corridors,

OLIVER'S GREEN CORRIDOR

The design team visited local community green spaces along Bethel Street between Lafayette Street and Preston Street. The stretch of inner block green spaces, identified by the community as the "Green Corridor," runs north-south through the Oliver neighborhood. The Green Corridor is mainly made up of several inner block parcels and alleys, and includes the community-maintained spaces of Bethel Playscape, Oliver Community Farm, Bethel Farm Lab, and Mary's Garden, along with the privately-maintained Kaboom! playground.

Bethel Street is quiet and intimate with few rowhomes dotting the street and is not a major artery for vehicular traffic in and through the neighborhood. Ample opportunities exist for greening, hosting stormwater facilities, and depaving within public right-of-way and within each of the indiviudal inner blocks's community spaces. On the neighborhood walk, community members expressed an interest in the community spaces catering to flexible programming such as dining, entertainment, and special events.





DATE OF VISIT June 2024

PROJECT SIZE ~0.3 miles in length, ~2 acres

PROJECT TYPE Open Space Corridor

Land Uses:
Lined with single-family residential & open space

Topography:
- Consistent gradual slope from north to south
- Numerous options for granting accessibility to open spaces

Traffic Conditions:
Multiple blocks of unused on-street parking; observed slow, calm traffic

Vegetation:
Street tree health ranges mostly from poor to good, consists of native and non-native species

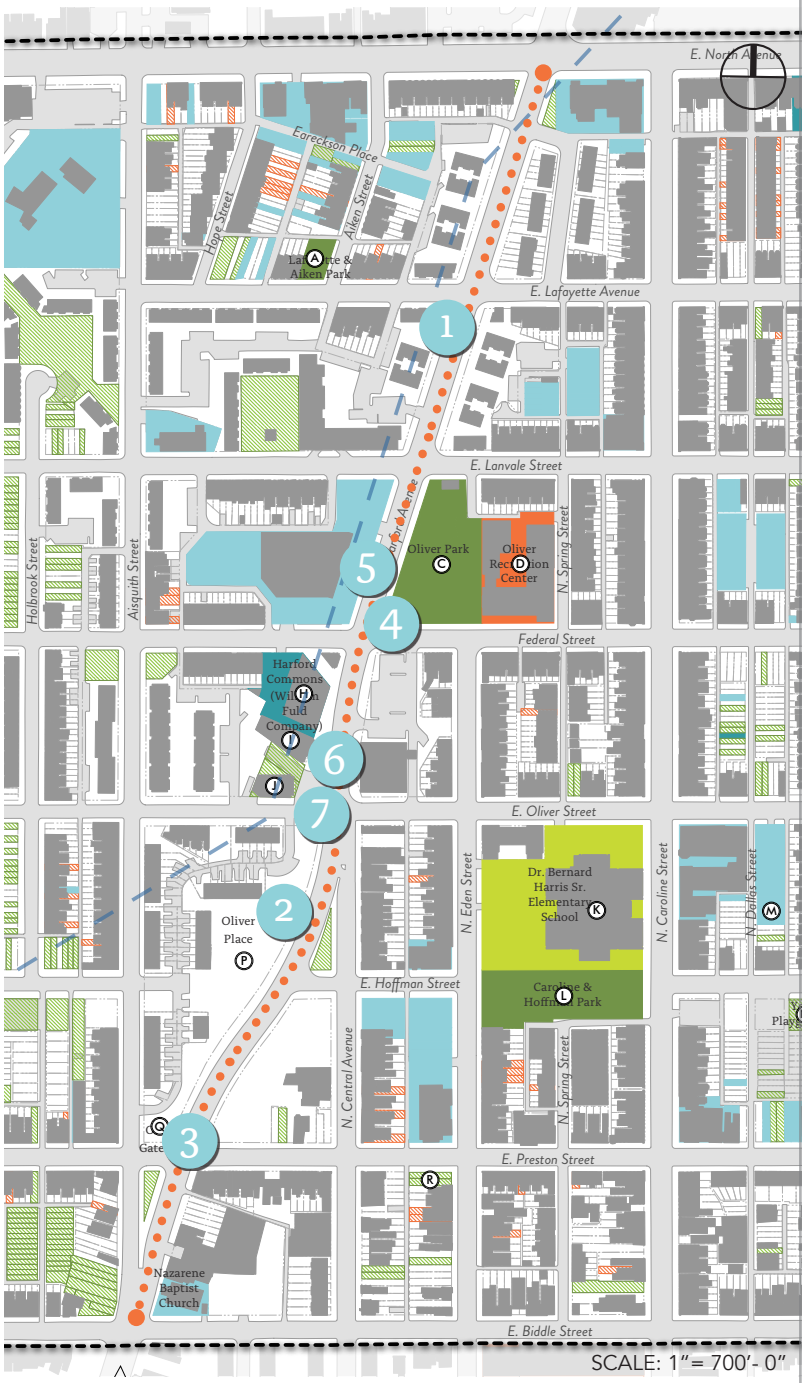
Utilities:
Overhead utilities remain close to the rear of adjacent homes that line the open spaces

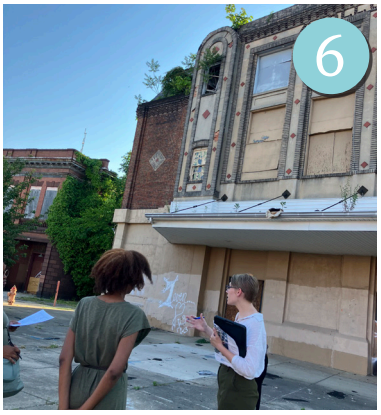
Community-expressed Wishes:
Hosting pockets of day-time and night-time activities along the corridor (e.g. event space/stage, outdoor cafe, community garden, public art)

HARFORD AVENUE CORRIDOR

The design team visited the Harford Avenue corridor between Biddle Street and North Avenue. The stretch of corridor considered for greening runs north-south through the Oliver neighborhood. Key landmarks along the corridor include the International Black Fire Fighters Museum (currently being redeveloped), the historic Apollo Theatre, and Oliver Rec Center.

The roadway is expansive, and multiple opportunities for depaving within public right-of-way exist along areas where the amount of on-street parking and vehicular travel lanes is greater than the current need. On the neighborhood walk, community members expressed an interest in investing in cafes and coffee shops within the more commercial area of the corridor, as well as reducing the width of the roadway (road diet) to slow down traffic speeding through the neighborhood. Community members expressed feeling unsafe and uncomfortable walking along or crossing Harford Avenue due to the existing traffic conditions.





DATE OF VISIT June 2024

PROJECT SIZE ~0.5 miles in length

PROJECT TYPE Commercial Corridor

Land Uses:
Lined with multi-family residential, commercial, & open space

Topography:
- Consistent gradual slope from northeast to southwest
- Numerous options for granting accessibility to open spaces

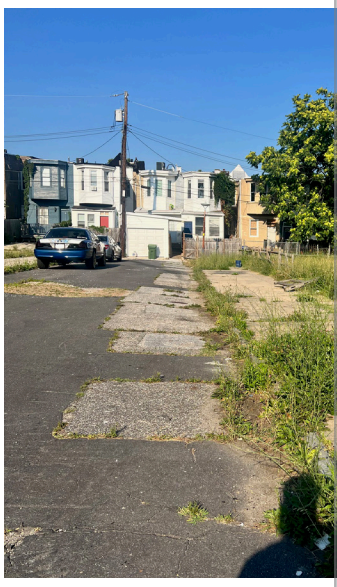
Traffic Conditions:
Multiple blocks of unused on-street parking; Traffic moves fast through the corridor

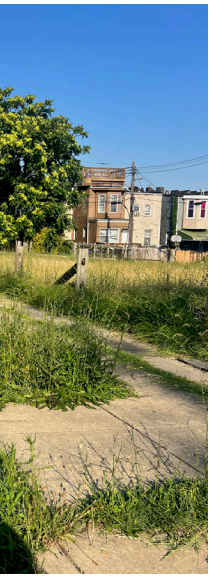
Vegetation:
Street tree health ranges mostly from fair to good, consists of native and non-native species

Utilities:
No overhead utilities; street lights line corridor

Community-expressed Wishes:
Creating a more pedestrian-centered corridor with neighborhood gateways, retail, historic event spaces, and slower traffic


Pollinator garden coming soon!
This garden will provide habitat for native plants, butterflies, birds, and bees.





GENERAL TAKEAWAYS & OVERALL IMPRESSIONS

The general takeaways from the neighborhood walk includes:

- **Numerous new street tree plantings. Street tree health ranges from poor to good, consists of native and non-native species. Issues related to maintenance of tree pits.**
- **Variously sized city- and community-maintained open spaces throughout the neighborhood, ranging from pocket parks to neighborhood parks.**
- **Storm drain inlets appear to be in poor shape, some debris and trash collecting at mouth of inlets.**
- **Existing grassroots campaign contributing to neighborhood greening.**
- **Coordination of greening efforts is key between the various stakeholders (i.e. community associations, homeowners' assocations, developers, the City)**
-

There are multiple opportunities for:

- **Depaving and greening strategies within the public right-of-way (ROW), to support both greening and traffic calming.**
- **Tree plantings with appropriate street tree species within ROW and on private property to boost neighborhood canopy coverage.**
- **Partnering with local businesses and private property owners to host greening strategies.**
- **Historic landmarks throughout the neighborhood that currently are or have the potential to become green hubs.**
- **Wide sidewalks can support new tree pits and depaving while maintaining accessibility; improvement is needed for ADA ramps and crosswalks.**
- **Wide streets may allow for re-allocating roadway to be part of the pedestrian realm**


ADD TO THE GREEN SPACES MAP
THE SITES HIGHLIGHTED BELOW WERE IDENTIFIED IN THE OLIVER VISION P
ISION PLAN WAS DEVELOPED BY THE GENSLER DESIGN & PLANNING FIRM

Chapter 5

COMMUNITY ENGAGEMENT

OUTREACH STRATEGY

The Greening Master Plan design team and HOCA board members used a combination of steering committee meetings, a paper survey, posts on social media, zoom meetings and public workshops, and door-to-door canvassing to reach as many neighborhood community members as possible. In addition to dispersing general information about the greening master planning process, these outreach efforts were opportunities for soliciting residents' concerns and opinions regarding the community's environmental health and development efforts.

HOCA PUBLIC MEETING #1

The Greening Master Plan design team participated in HOCA's Quarterly Meeting in August 2024 to introduce the master planning effort to the community! They co-faciliated conversations with community members and stakeholders to create a crowdsourced map, confirming recommended green sites from Oliver's Vision Plan, and solicit input from meeting attendees regarding their preferences about greening and types of green strategies, using a perspectives survey and participatory public engagement exercises. Oliver

> "I think my favorite place at this time is the swimming pool in Oliver and seeing all the kids and families taking advantage of this neighborhood perk!!!!!
>
> I envision greening to soften the hardscapes in Oliver to create a more human friendly environment. As well, greening desperately needs to be employed to calm traffic on Harford Avenue for the entire community.
>
> Greening could help cool down the neighborhood and make it more beautiful.
>
> I am unsure how but I do know I wish it to support with a healthy, sustaining community for our small wildlifes and humans."
>
> **OLIVER COMMUNITY MEMBERS**

residents, community members, and representatives from local businesses and non-profit partners attended and participated in the event.

A perspectives survey was administered at the start of the meeting, asking community members to share their perspective and experience with "greening" and green spaces in Oliver. Survey questions included personal experience with stormwater runoff issues/challenges, priorities for where greening can occur in Oliver, and level of interest in the involvement construction and maintenance of green spaces.

OLIVER GREENING MASTER PLAN: PUBLIC MEETING #1
PERSPECTIVES SURVEY

Thank you for attending tonight's meeting! Please take a few minutes to provide your perspective and experience with "greening" and green spaces in Oliver. Your input is valued and will be put towards developing recommendations for greening strategies in the Oliver Greening Master Plan.

1. **What is your favorite community outdoor space in Oliver?**
   Please tell us about it! _____

2. **How do you envision greening being used in your neighborhood?** _____

3. **Please tell us which of the following greening strategies you would be most interested in.**
   Please rank on a scale of 1 to 6, 1 being HIGHEST priority and 6 being LOWEST.
   - ☐ Having green elements in close proximity to site or building entrances, ensuring that all users are exposed to the associated green benefits as they enter and exit or view from a window (planting entrances)
   - ☐ Providing the presence of green elements within close proximity to all neighborhood dwellers, recognizing the importance of green space accessibility (bringing nature nearby)
   - ☐ Presence of "cool spots" where neighborhood dwellers can find protective temperatures during extreme heat events (creating refuge)
   - ☐ Continuous greenery at eye-level along a street or other transit paths, meant to encourage active transit and other forms of physical activity (connecting experiences)
   - ☐ Using green elements within the roadway to calm traffic speeds, slowing down vehicles while improving pedestrian visibility (traffic calming)
   - ☐ Sufficient canopy coverage and other greening infrastructure services to support a healthy and resilient living environment (optimizing green infrastructure)

4. **Have you experienced issues related to flooding, pollution, or sewer backups in Oliver?**
   Where? _____

5. **Tell us how you are interested in being involved in the Oliver Greening Master Plan!**
   - ☐ Building and Construction
   - ☐ Urban Agriculture
   - ☐ Maintenance
   - ☐ Other _____

Oliver Greening Master Plan — In partnership with: Historic Oliver Community Association, T6B The 6th Branch, ReBUILD Metro, the Neighborhood DesignCenter, Chesapeake Bay Trust, CB Trust

1

Oliver Greening Master Plan Perspectives Survey

PERSPECTIVES SURVEY - RESULTS

WHAT IS YOUR FAVORITE COMMUNITY OUTDOOR SPACE IN OLIVER?

1. Oliver Farm
2. Bethel Playscape
3. Mary's Garden
4. Swimming Pool & Tennis Court

HOW DO YOU ENVISION GREENING BEING USED IN YOUR NEIGHBORHOOD?

1. Beautification
2. Public Gathering Space
3. Sustainability
4. Improving Health
5. Traffic Calming & Environmental Education

WHICH GREENING STRATEGIES ARE YOU MOST INTERESTED IN? (RANKED)

1. Bringing Nature Nearby *(highest amount of interest)*
2. Optimizing Green Infrastructure
3. Traffic Calming
4. Creating Refuge & Connecting Experiences *(ranked equally)*
5. Planting Entrances *(lowest amount of interest)*

HAVE YOU EXPERIENCED ISSUES RELATED TO FLOODING, POLLUTION, OR SEWER BACKUPS IN OLIVER? (WHERE)

Flooding reported:

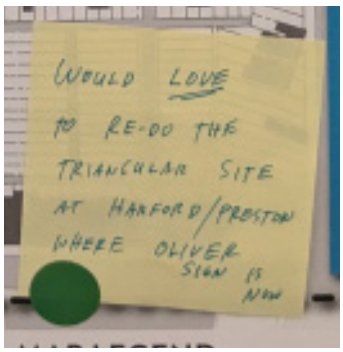
- 1700 block of Caroline Street;
- Intersection of Lanvale and Bethel Streets
- caused by sewer drains blocked by trash and litter.

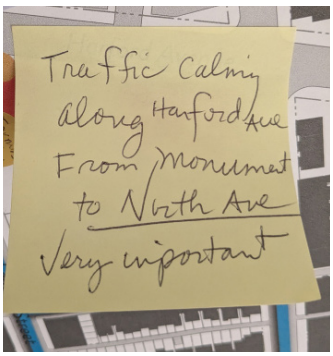
More regular trash pickup and street sweeping needed. More public trash receptacles needed throughout the neighborhod.

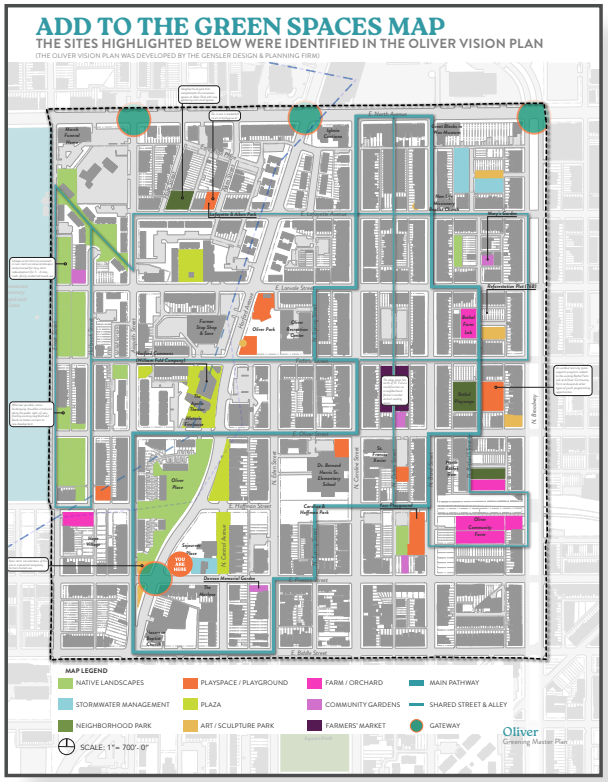
HOW ARE YOU INTERESTED IN BEING INVOLVED IN THE OLIVER GREENING MASTER PLAN?

- Similar levels of interest in building and construction, maintenance, and urban agriculture.
- A few members expressed interest specifically in planting

The mapping station prompted community members to share their thoughts on the open space recommendations from the Oliver Vision Plan. The goal of the exercise was to better understand what existing green spaces and assets the community values and confirm what green spaces proposed in the Vision Plan the community wants to see developed.







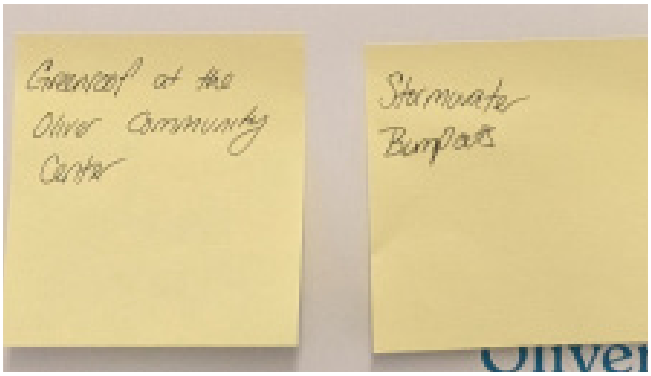
Mapping station materials.

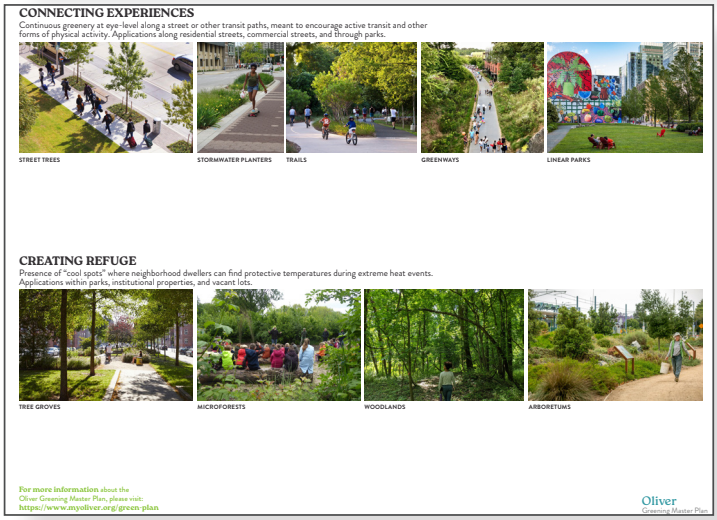
TYPES OF PROPOSED GREEN SPACES FROM THE OLIVER VISION PLAN (RANKED)

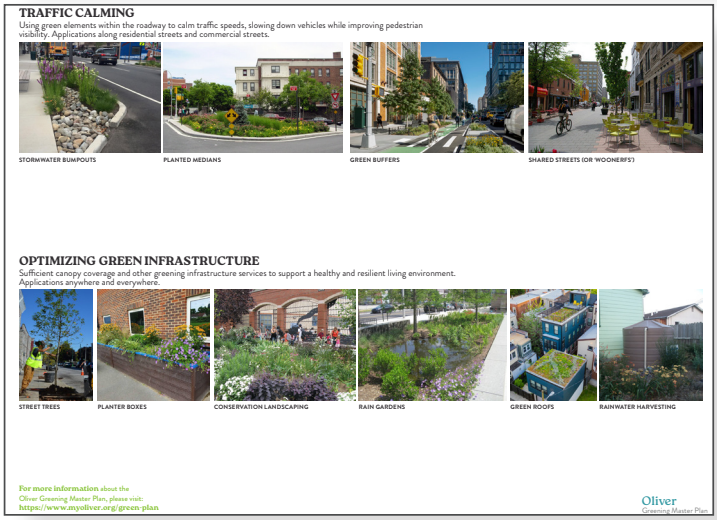
GREATEST INTEREST

LEAST INTEREST

The imagery station prompted community members to select images of greening strategies that resonated most with them. The goal of the exercise was to understand the community's perspective on ways to green and preference for interacting with each type of greening strategy.

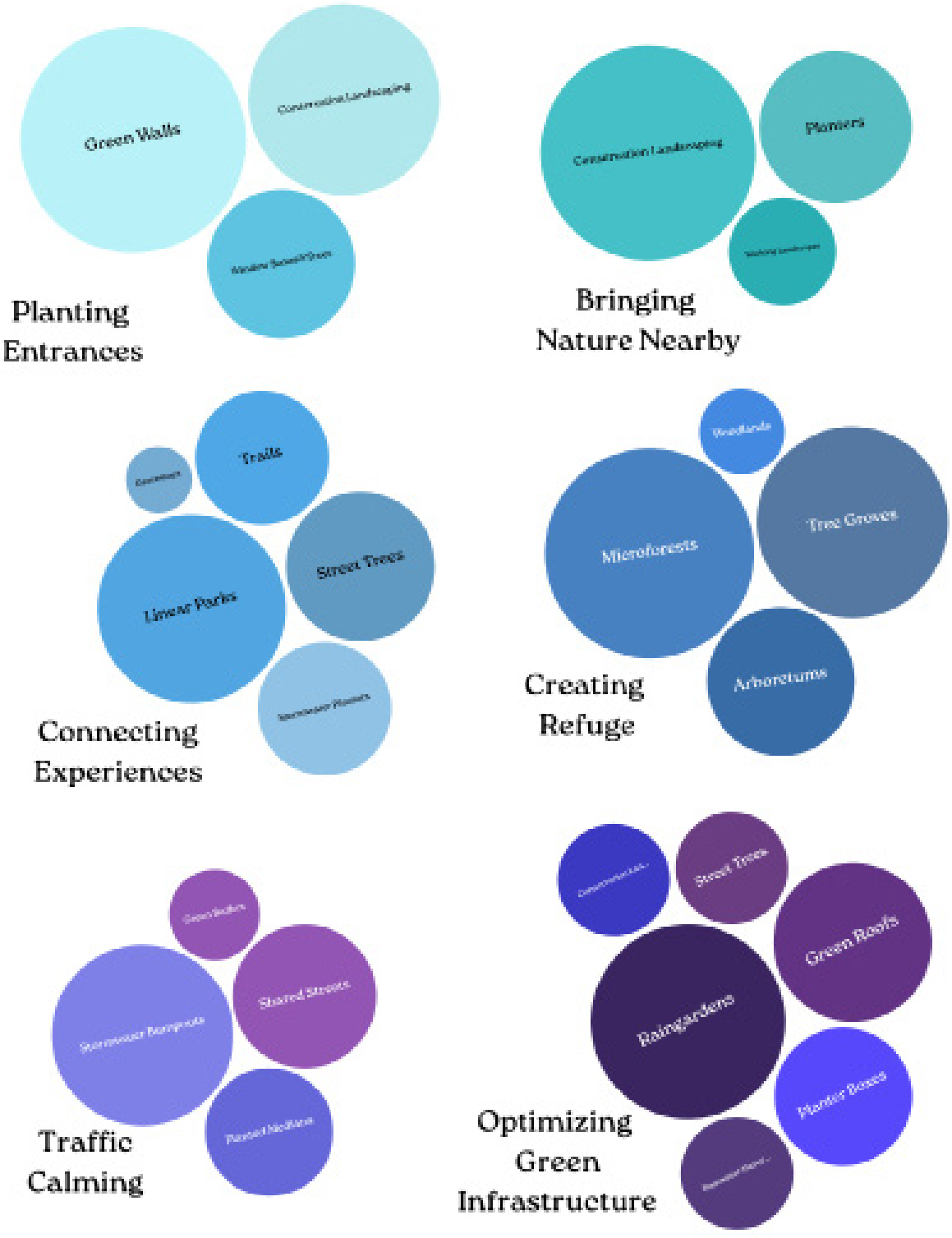






Community members providing input at imagery station.

HOW DO YOU ENVISION GREENING BEING USED IN YOUR NEIGHBORHOOD?



Community members providing input at imagery station.

The valued input from the stations, survey, and one-on-one conversations helped to develop recommendations for the Oliver Greening Master Plan. (Please see the Appendix for the public meeting materials.)

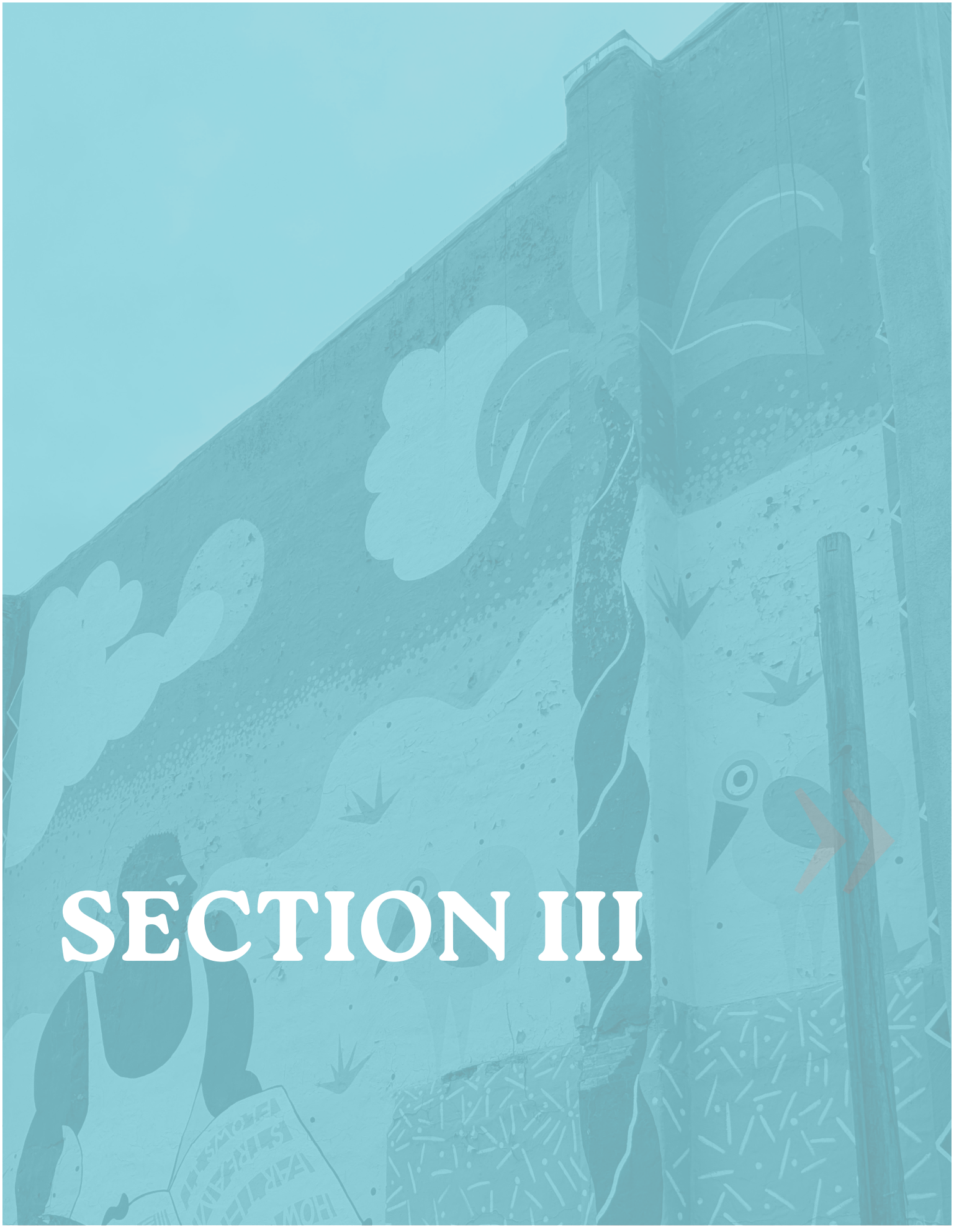
HOCA PUBLIC MEETING #2

The Greening Master Plan design team members co-facilitated a public meeting hosted by HOCA in June 2025, to solicit community feedback regarding recommendations of the master plan and public interest in the design of four pilot project sites. Oliver residents, community members, and representatives from local businesses and non-profit partners shared their thoughts on the benefits and viability of the master plan's recommendations and of each pilot site's design. Feedback was generally positive and encouraging of moving forward with the greening recommendations and four concept designs. The most common questions asked were related to maintenance and funding of greening.

Concept master plan rendering with community feedback.

Community members providing input about the pilot site schematic designs.

Schematic design rendering of Oliver Gateway pilot site with community feedback.



SECTION III

Parks | Playgrounds | Athletic Co

STORMWATER BUMPOUT

STREET TREE

MEADOW ESTABLISHMENT

CONSER
LANDSC

STORMWATER PLANTER

PLANTED MEDIAN

PERVIOUS PAVING

LINEAR PARKS

Streets | Alleys | Public Rights-of-Way

Chapter 6

MASTER PLAN RECOMMENDATIONS

The greening strategies presented in this section are presented with an eye towards leveraging concern for the neighborhood's environmental integrity to facilitate broader community revitalization and development goals. As such, the strategies are intended not only to manage stormwater but to enhance the human experience of the built environment so as to foster a feeling of community identity and attract positive economic activity to Oliver. Examples include combining greening strategies with pedestrian safety and traffic calming measures and beautifying commercial storefronts and businesses.

Environmentally sustainable infrastructure and land management techniques for greening projects were identified for Oliver. This plan proposes a comprehensive greening approach that seeks to highlight areas of low- and high-intensity redevelopment.

urts | Vacant Lots

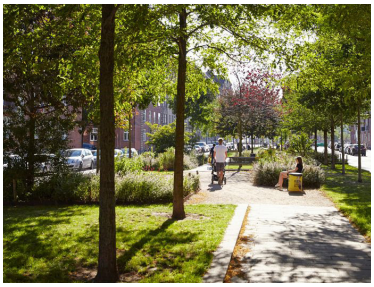
Homes

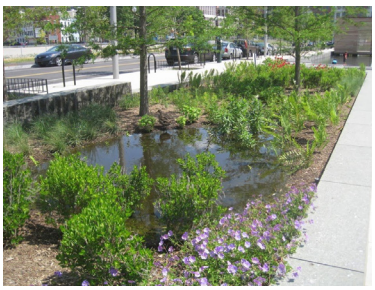
RVATION
CAPING

TREE GROVE

GREEN WALL

FLOW-THRU PLANTER





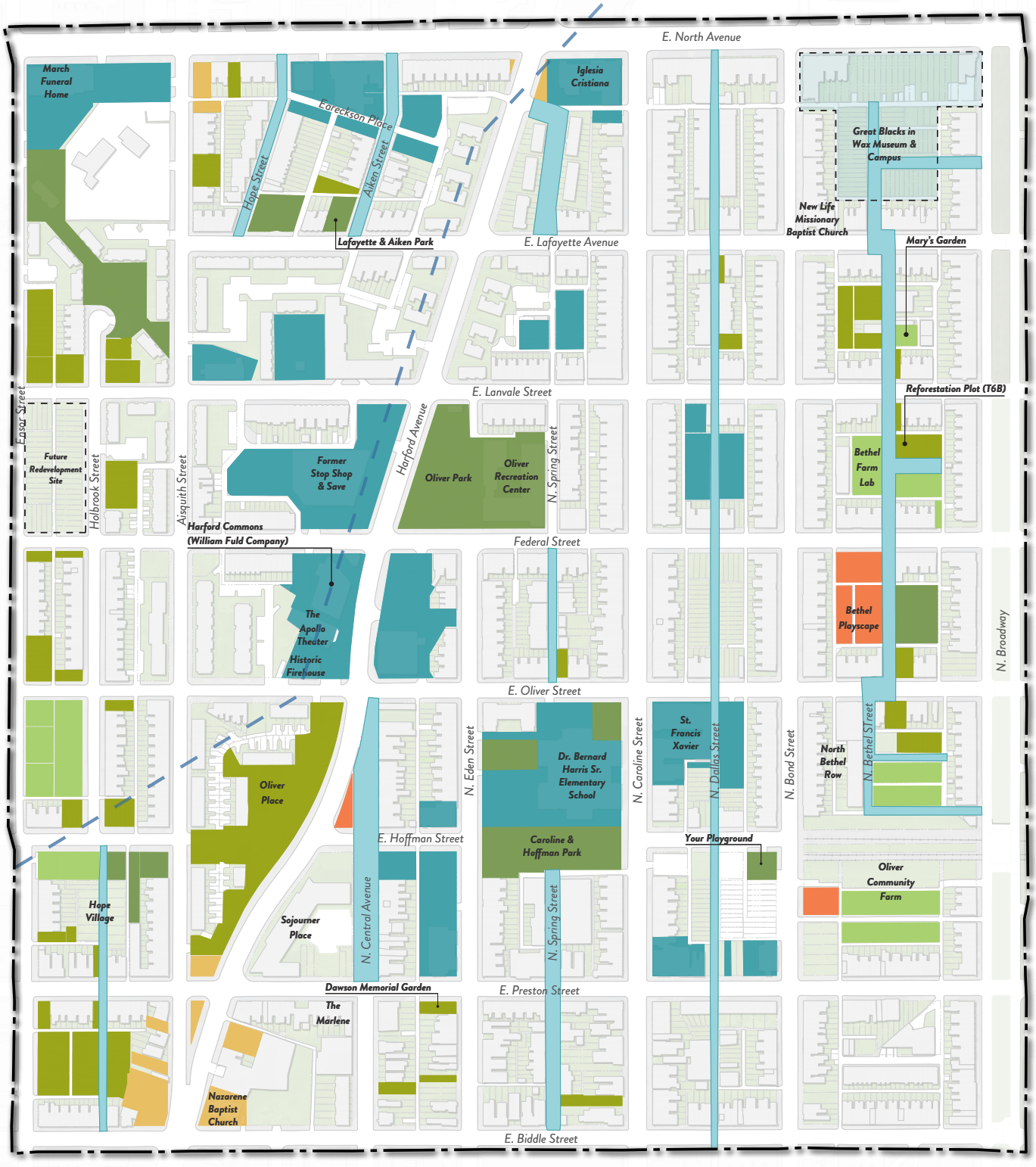
MICROFORESTS

RAIN GARDEN

GREEN ROOF

RAIN BARREL

Institutions | Businesses | Mixed-Use Properties



Scale: 1 inch : 100 feet North

Map of recommended green project sites.

OLIVER GREENING MASTER PLAN

The Oliver Greening Master Plan proposes 53 acres of greening, which equals approximately 30 percent of the total Oliver neighborhood project area (as shown in the map to the left). Stormwater management need not be an individual or conspicuous urban design element – it can be integrated into a variety of landscapes and development projects that enhance public spaces while also blending into the community fabric. Making Oliver a more ecologically sustainable community can repair environmental damage caused by stormwater runoff, improve neighborhood aesthetics, and build community interest in public open spaces, thereby increasing Oliver's potential development value.

To achieve these goals, the Greening Master Plan proposes multiple, coordinated tactics, broken down into "greening types" that highlight the kind of partnership needed to successfully implement stormwater management projects to detain, treat, and/or infiltrate stormwater runoff in the community.

Each greening type includes descriptions of specific Best Management Practices (BMPs) best suited for serving the goal of that greening type. The majority of the recommended BMPs are plant- and soil-based stormwater controls that are multipurpose, providing both functional (runoff volume reduction and pollutant removal) and aesthetic (enhancing the urban environment and increasing wildlife habitat) value. The purpose of these recommendations is to inform planning-level design decisions in the Oliver neighborhood – a vision to serve as a catalyst for future design efforts. They are not meant to be used as the sole basis for creating construction drawings.

GREENING TYPES

Greening typologies were developed as a way of classifying landscapes in Oliver, based on their land use (function), and physical and cultural characteristics. The purpose of these typologies is to support a diverse community identity, encourage the potential of different outdoor spaces, and inform design decisions at the community-level when approaching projects on any individual site.

GREENING TYPES

1 Green Streets

- Shared Streets ("Garden Streets")
- Residential & Commercial Routes
- Gateways

2 Green Places

- Institutional, Mixed-Use, and Commercial Properties

3 Open Spaces

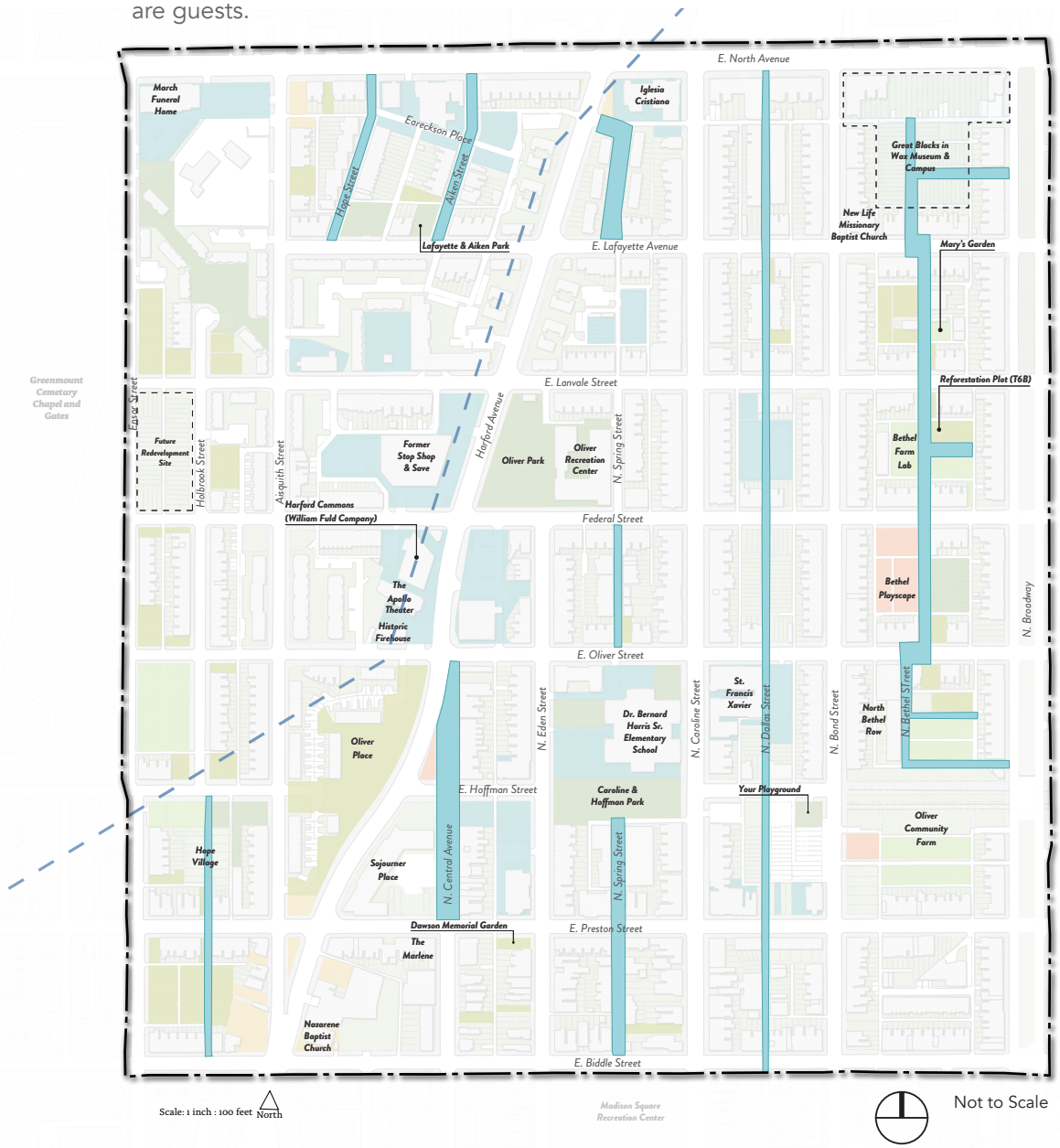
- Playspaces & Athletic Recreation
- Event Spaces
- Productive Landscapes
- Passive & Holding Landscapes

4 Green Homes

- Private Properties

1A. SHARED STREETS ("GARDEN STREETS")

Narrower streets and alleys that experience lower volumes of vehicular traffic and are not major vehicular transportation connectors across the neighborhood can be transformed with greening strategies into inviting, usable, pedestrian-centered public spaces. Alleys are often underutilized spaces and seen as a blight or nuisance in neighborhoods throughout the City. Shared streets provide pedestrians the right-ofway. Curbs are removed and the materials and space allocation indicate that vehicles are guests.



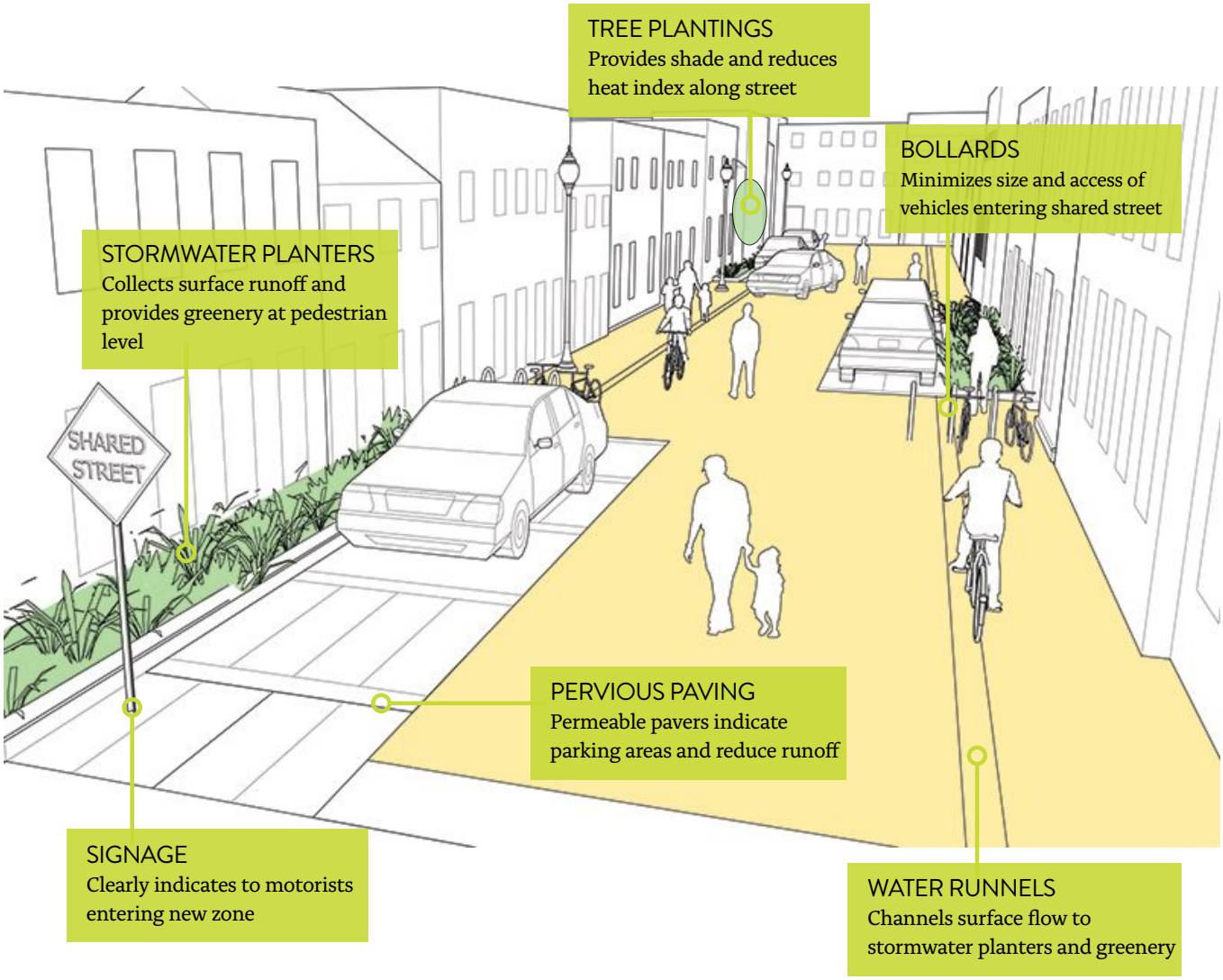
- Shared Streets ("Garden Streets")
- Residential/Commercial Routes
- Gateways
- Institutional, Mixed-Use, and Commercial Properties
- Playspaces & Recreation
- Event Spaces
- Productive Landscapes
- Passive/Holding Landscapes

EXAMPLE GREENING STRATEGIES

STREET TREES

PERVIOUS PAVING

STORMWATER PLANTERS



ENVIRONMENTAL BENEFITS

- IMPROVE AIR QUALITY
- IMPROVE WATER QUALITY
- REDUCE STORMWATER RUNOFF/FLOODING
- INCREASE BIODIVERSITY
- SAVE ENERGY
- REDUCE HEAT

COMMUNITY BENEFITS

- ENGAGE THE COMMUNITY
- SUPPORT EXERCISE & RECREATION
- IMPROVE ACCESS TO NATURAL ECOSYSTEMS
- ENHANCE LIVE, WORK, PLAY IN OLIVER
- SERVE ALL EQUALLY

ECONOMIC BENEFITS

- SPUR PRIVATE INVESTMENT
- CREATE LOCAL JOBS
- REVITALIZE THE NEIGHBORHOOD

MAINTENANCE PARTNERS

- BALTIMORE CITY DEPT. OF TRANSPORTATION
- BALTIMORE CITY DEPT. OF PUBLIC WORKS

An overview of the amount of maintenance required, the potential cost of installation, and the scale of the project.

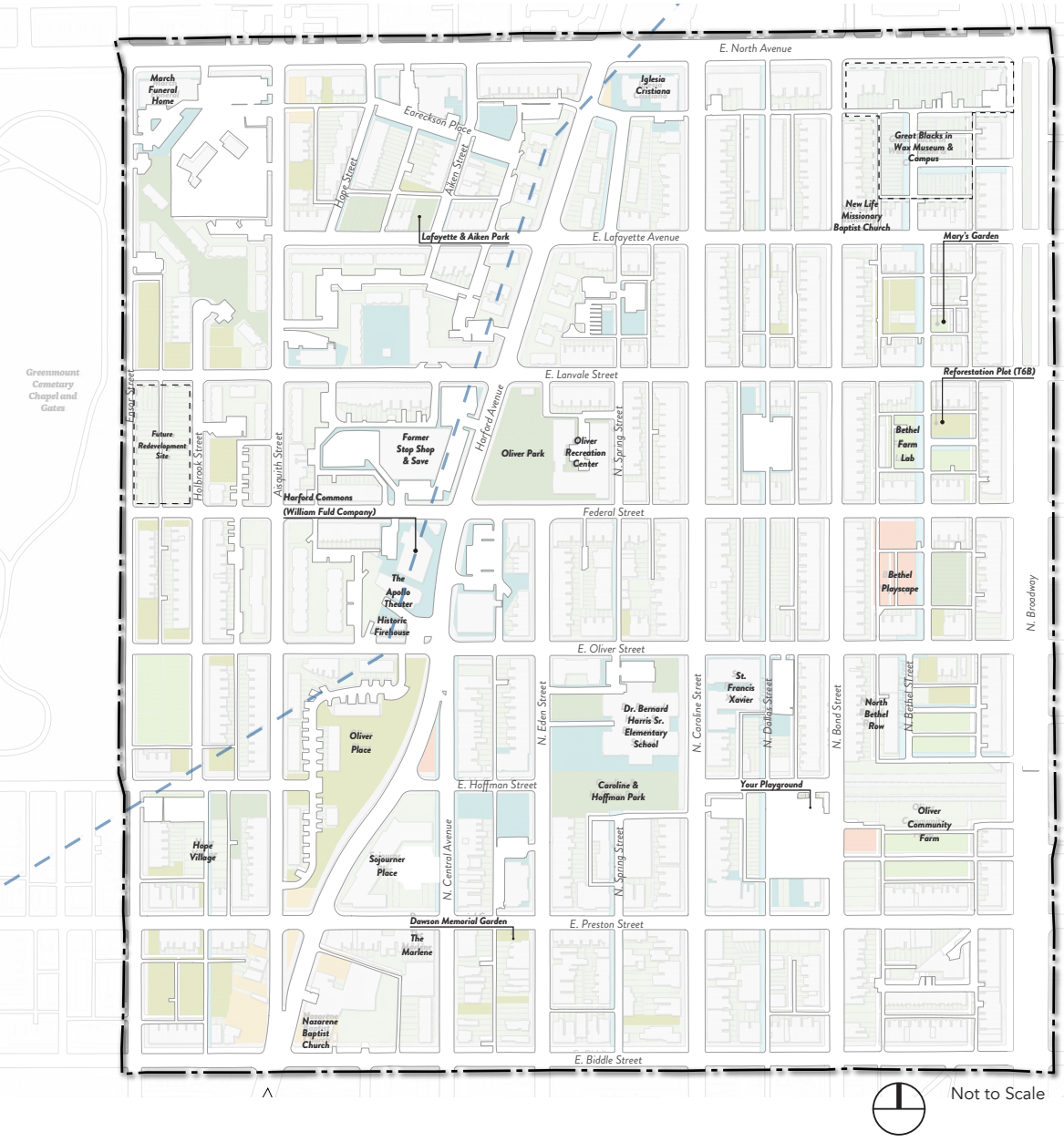
MAINTENANCE
(ease of cleaning/using the greening strategy)

COST
(typical cost of designing and building greening strategy)

SCALE
(typical size of project site)

1B. RESIDENTIAL & COMMERCIAL STREETS

Streets that experience high volumes of vehicular traffic and are major connectors through the neighborhood can use greening to slow down traffic, create safer intersection crossings for pedestrians, safely separate vehicles from bicyclists, and create shaded walking routes for pedestrians.



- Shared Streets ("Garden Streets")
- Residential/Commercial Routes
- Gateways
- Institutional, Mixed-Use, and Commercial Properties
- Playspaces & Recreation
- Event Spaces
- Productive Landscapes
- Passive/Holding Landscapes

EXAMPLE GREENING STRATEGIES

STREET TREES

DEPAVING

STORMWATER PLANTERS

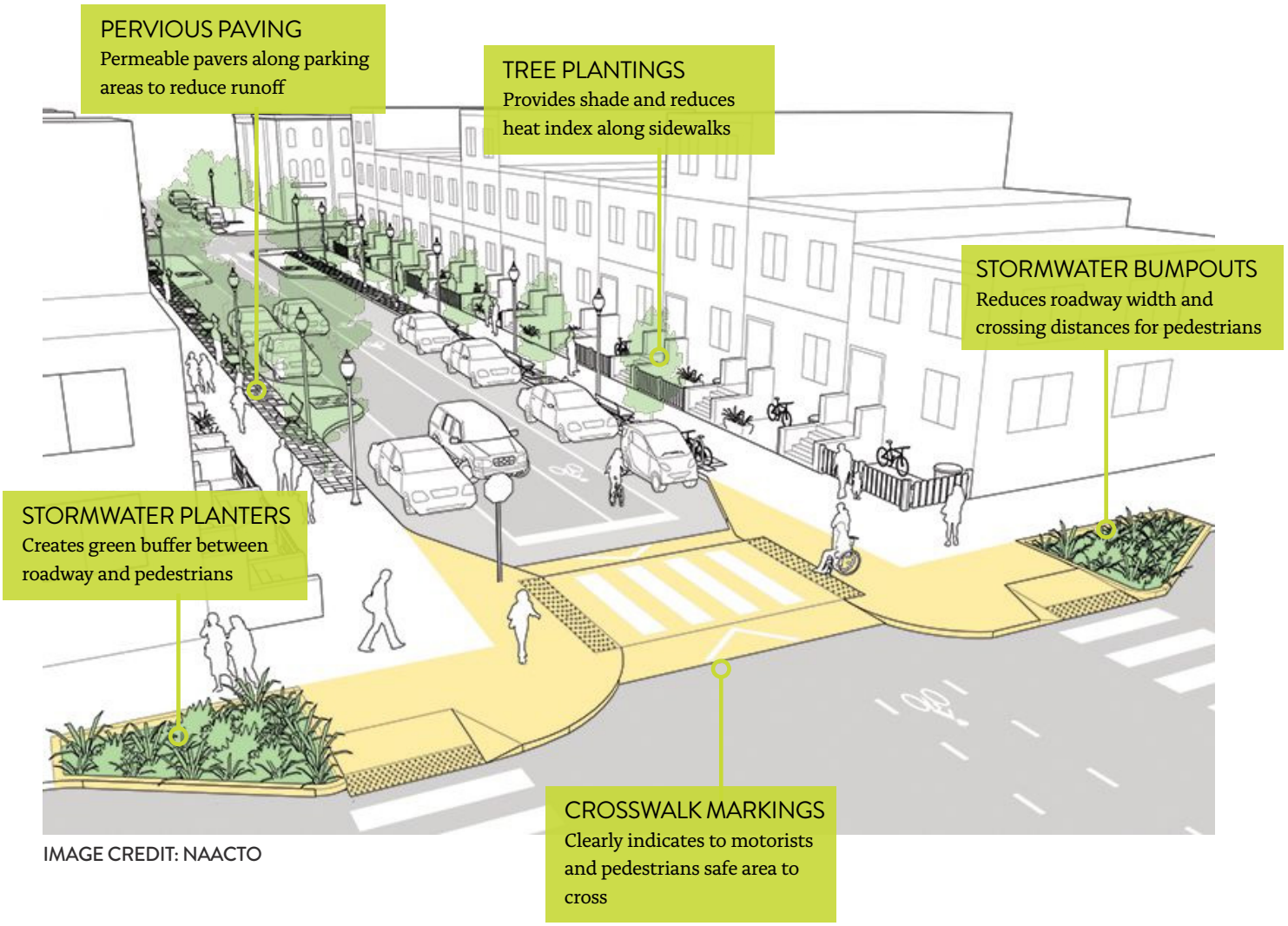


IMAGE CREDIT: NAACTO

ENVIRONMENTAL BENEFITS

- IMPROVE AIR QUALITY
- IMPROVE WATER QUALITY
- REDUCE STORMWATER RUNOFF/FLOODING
- INCREASE BIODIVERSITY
- SAVE ENERGY
- REDUCE HEAT

COMMUNITY BENEFITS

- ENGAGE THE COMMUNITY
- SUPPORT EXERCISE & RECREATION
- IMPROVE ACCESS TO NATURAL ECOSYSTEMS
- ENHANCE LIVE, WORK, PLAY IN OLIVER
- SERVE ALL EQUALLY

ECONOMIC BENEFITS

- SPUR PRIVATE INVESTMENT
- CREATE LOCAL JOBS
- REVITALIZE THE NEIGHBORHOOD

MAINTENANCE PARTNERS

- BALTIMORE CITY DEPT. OF TRANSPORTATION
- BALTIMORE CITY DEPT. OF PUBLIC WORKS

An overview of the amount of maintenance required, the potential cost of installation, and the scale of the project.

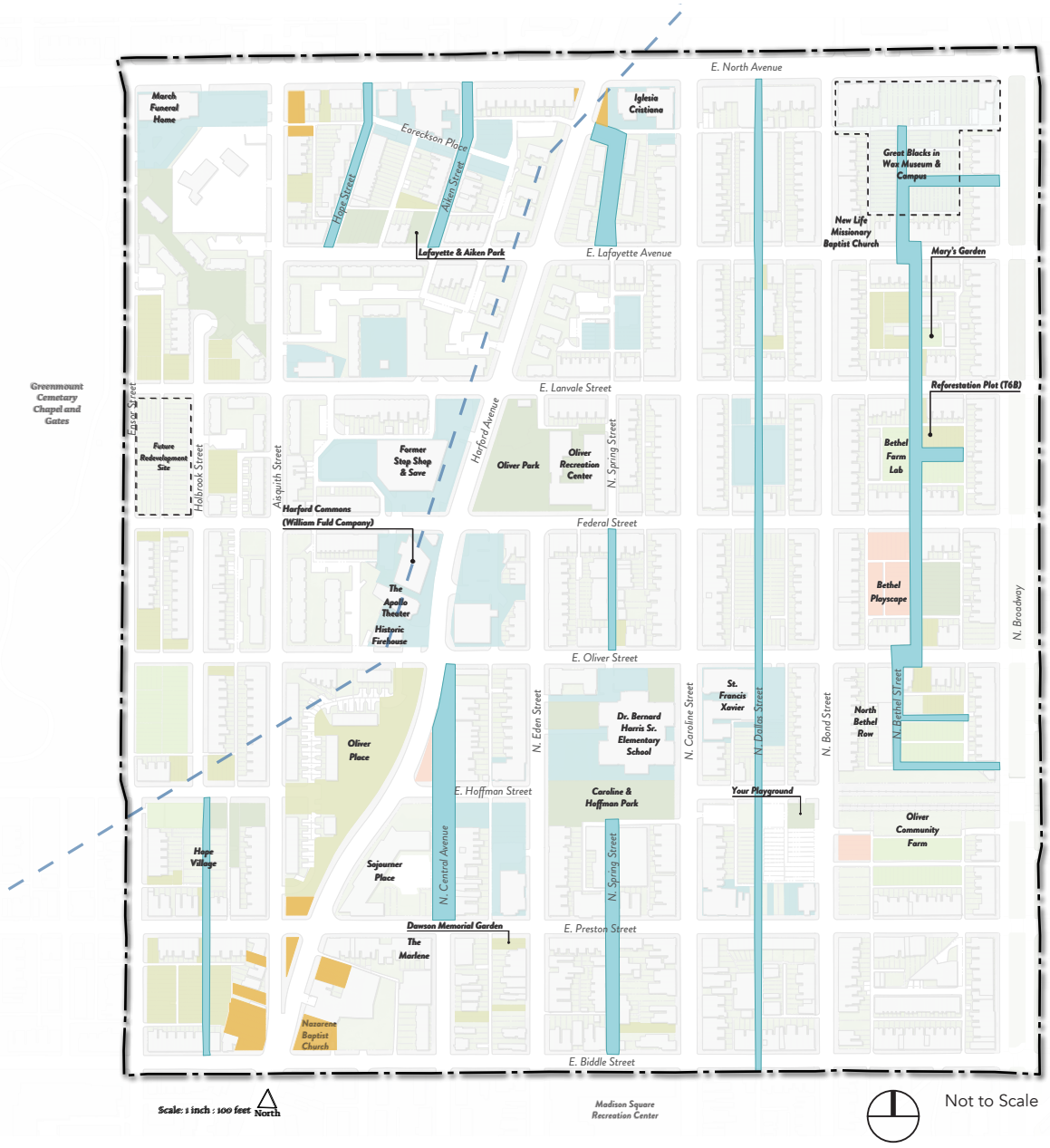
MAINTENANCE
(ease of cleaning/using the greening strategy)

COST
(typical cost of designing and building greening strategy)

SCALE
(typical size of project site)

1C. GATEWAYS

Greening can be used as landmarks for gateways into the neighborhood, signaling to residents and visitors that they've entered Oliver.



- Shared Streets ("Garden Streets")
- Residential/Commercial Routes
- Gateways
- Institutional, Mixed-Use, and Commercial Properties
- Playspaces & Recreation
- Event Spaces
- Productive Landscapes
- Passive/Holding Landscapes

EXAMPLE GREENING STRATEGIES

CONSERVATION LANDSCAPING

PLANTED BUMPOUTS

STREET TREES

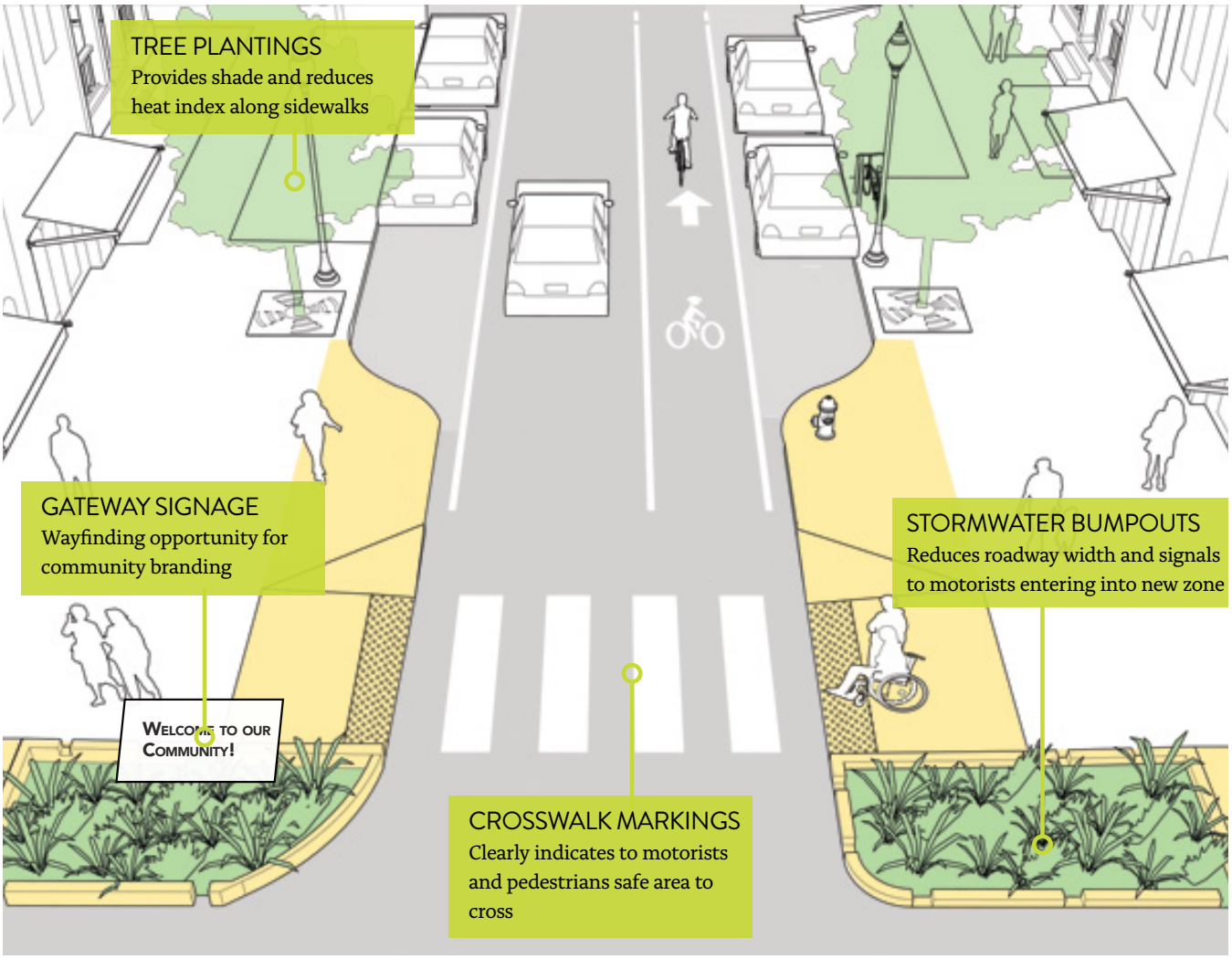


IMAGE CREDIT: NAACTO

ENVIRONMENTAL BENEFITS

- ○ IMPROVE AIR QUALITY
- ● IMPROVE WATER QUALITY
- ● REDUCE STORMWATER RUNOFF/FLOODING
- ○ INCREASE BIODIVERSITY
- ○ SAVE ENERGY
- ○ REDUCE HEAT

COMMUNITY BENEFITS

- ● ENGAGE THE COMMUNITY
- ○ SUPPORT EXERCISE & RECREATION
- ○ IMPROVE ACCESS TO NATURAL ECOSYSTEMS
- ● ENHANCE LIVE, WORK, PLAY IN OLIVER
- ○ SERVE ALL EQUALLY

ECONOMIC BENEFITS

- ○ SPUR PRIVATE INVESTMENT
- ○ CREATE LOCAL JOBS
- ● REVITALIZE THE NEIGHBORHOOD

MAINTENANCE PARTNERS

- ● BALTIMORE CITY DEPT. OF TRANSPORTATION
- ● BALTIMORE CITY DEPT. OF PUBLIC WORKS

An overview of the amount of maintenance required, the potential cost of installation, and the scale of the project.

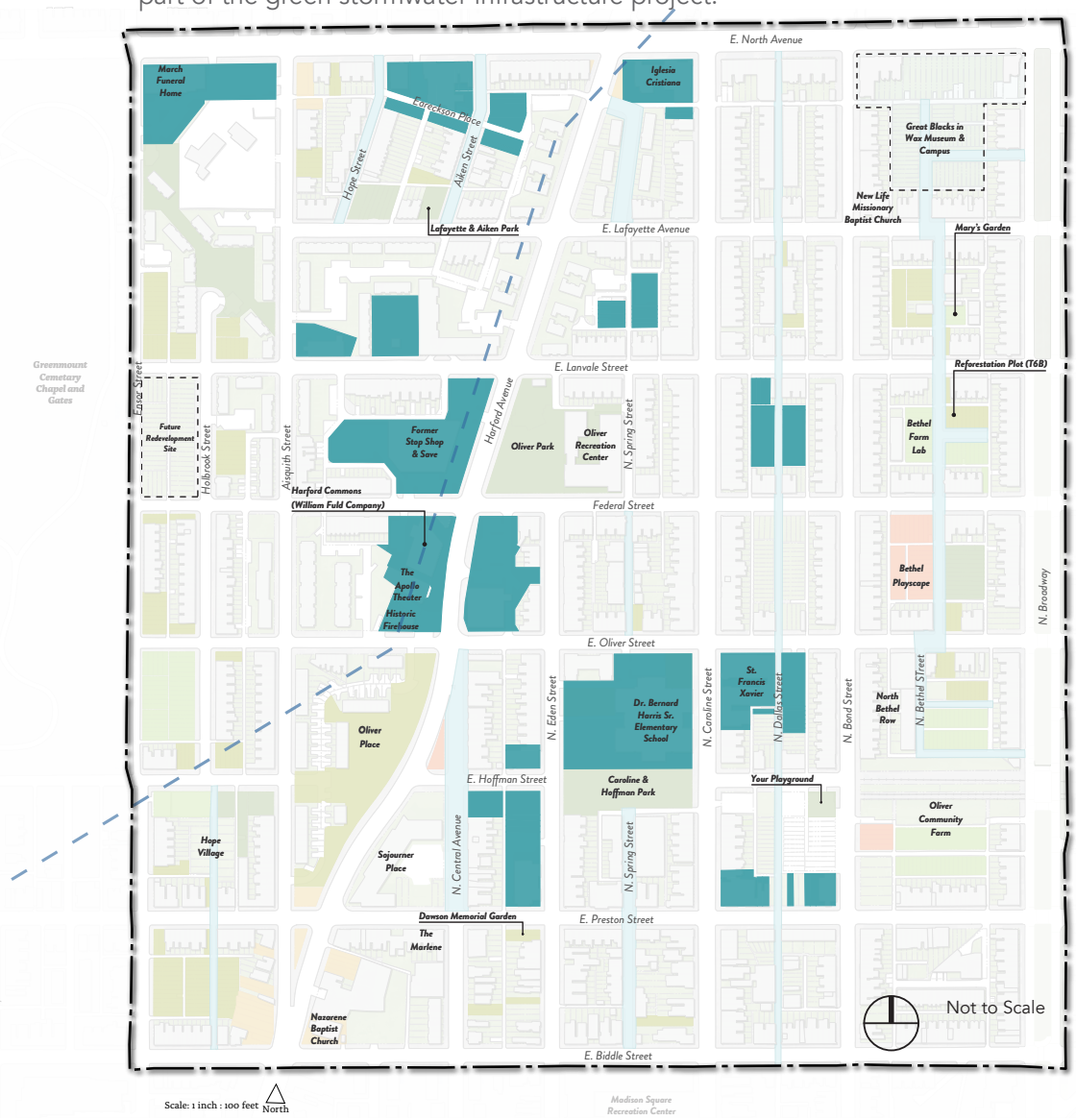
MAINTENANCE
(ease of cleaning/using the greening strategy)

COST
(typical cost of designing and building greening strategy)

SCALE
(typical size of project site)

2A. INSTITUTIONAL, MIXED-USE, & COMMERCIAL PROPERTIES

Greening projects on these properties (including parking lots) can manage stormwater in a visible way without affecting business or building operations in any significant way. Community buildings, such as schools and religious centers, are prime locations for demonstrating green stormwater infrastructure strategies. There is an opportunity to engage across various ages of community members and highlight the importance of clean water, the threat of stormwater and pollution, and how green stormwater infrastructure can manage runoff and provide additional benefits to communities. Community members and students can be involved in constructing or planting all or part of the green stormwater infrastructure project.



- Shared Streets ("Garden Streets")
- Residential/Commercial Routes
- Gateways
- Institutional, Mixed-Use, and Commercial Properties
- Playspaces & Recreation
- Event Spaces
- Productive Landscapes
- Passive/Holding Landscapes

EXAMPLE GREENING STRATEGIES

CONSERVATION LANDSCAPING

PERVIOUS PAVING

FLOW-THRU PLANTERS

ENVIRONMENTAL BENEFITS

- IMPROVE AIR QUALITY
- IMPROVE WATER QUALITY
- REDUCE STORMWATER RUNOFF/FLOODING
- INCREASE BIODIVERSITY
- SAVE ENERGY
- REDUCE HEAT

COMMUNITY BENEFITS

- ENGAGE THE COMMUNITY
- SUPPORT EXERCISE & RECREATION
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- ENHANCE LIVE, WORK, PLAY IN OLIVER
- SERVE ALL EQUALLY

ECONOMIC BENEFITS

- SPUR PRIVATE INVESTMENT
- CREATE LOCAL JOBS
- REVITALIZE THE NEIGHBORHOOD

MAINTENANCE PARTNERS

- BALTIMORE CITY DEPT. OF TRANSPORTATION
- BALTIMORE CITY DEPT. OF PUBLIC WORKS
- BALTIMORE HOUSING AUTHORITY
- BALTIMORE CITY PUBLIC SCHOOLS
- BUSINESS & PROPERTY OWNERS
- BALTIMORE TREE TRUST

An overview of the amount of maintenance required, the potential cost of installation, and the scale of the project.

MAINTENANCE
(ease of cleaning/using the greening strategy)

COST
(typical cost of designing and building greening strategy)

SCALE
(typical size of project site)

3A. PLAYSPACES & RECREATION

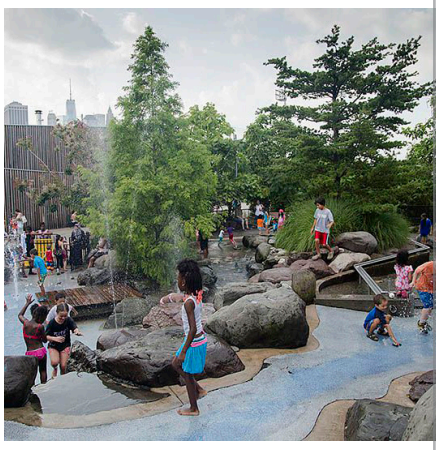
Greening can turn playgrounds and recreational/athletic facilities into living ecosystems, filled with trees and vegetation that host insects and birds, give children "loose parts" for play, and transform stormwater into engaging features for activity and learning.

- Shared Streets ("Garden Streets")
- Residential/Commercial Routes
- Gateways
- Institutional, Mixed-Use, and Commercial Properties
- Playspaces & Recreation
- Event Spaces
- Productive Landscapes
- Passive/Holding Landscapes

EXAMPLE GREENING STRATEGIES

STREET TREES

MEADOW ESTABLISHMENT



CONSERVATION LANDSCAPING

ENVIRONMENTAL BENEFITS

- IMPROVE AIR QUALITY
- IMPROVE WATER QUALITY
- REDUCE STORMWATER RUNOFF/FLOODING
- INCREASE BIODIVERSITY
- SAVE ENERGY
- REDUCE HEAT

COMMUNITY BENEFITS

- ENGAGE THE COMMUNITY
- SUPPORT EXERCISE & RECREATION
- IMPROVE ACCESS TO NATURAL ECOSYSTEMS
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- SERVE ALL EQUALLY

ECONOMIC BENEFITS

- SPUR PRIVATE INVESTMENT
- CREATE LOCAL JOBS
- REVITALIZE THE NEIGHBORHOOD

MAINTENANCE PARTNERS

- BALTIMORE CITY DEPT. OF PUBLIC WORKS
- BALTIMORE CITY DEPT. OF RECREATION & PARKS
- BALTIMORE CITY PUBLIC SCHOOLS
- THE 6TH BRANCH
- PROJECT CLEAN CORP.
- BALTIMORE TREE TRUST
- WATER BALTIMORE

An overview of the amount of maintenance required, the potential cost of installation, and the scale of the project.

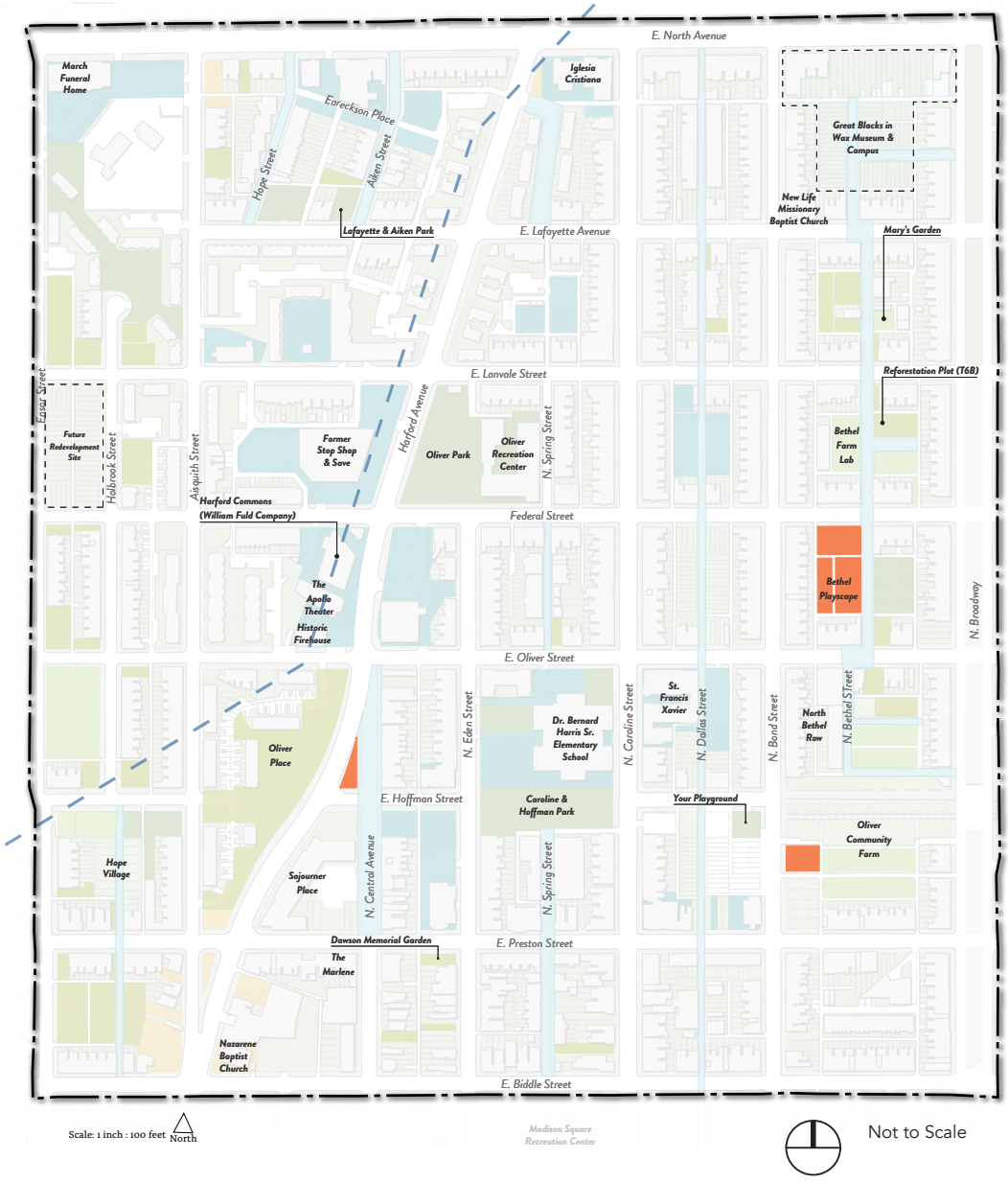
MAINTENANCE
(ease of cleaning/using the greening strategy)
medium to large

COST
(typical cost of designing and building greening strategy)
small to large

SCALE
(typical size of project site)
small to large

3B. EVENT SPACES

Event spaces are places where communities gather for social, recreational, or educational activities outdoors. These spaces provide an opportunity to use greening as an educational or demonstration tool and garner community support.



- Shared Streets ("Garden Streets")
- Residential/Commercial Routes
- Gateways
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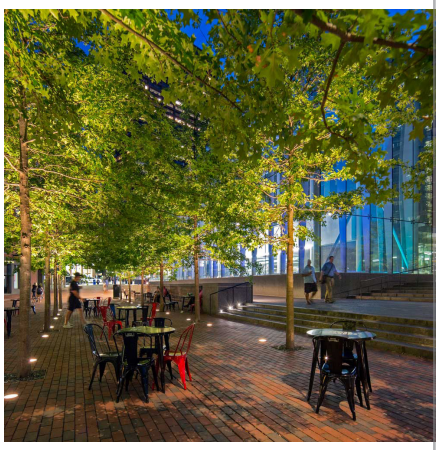
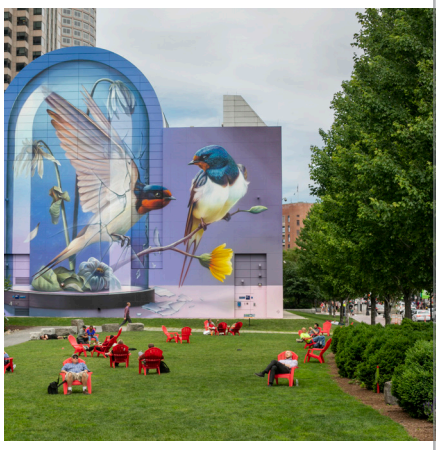
- Playspaces & Recreation
- Event Spaces
- Productive Landscapes
- Passive/Holding Landscapes

EXAMPLE GREENING STRATEGIES

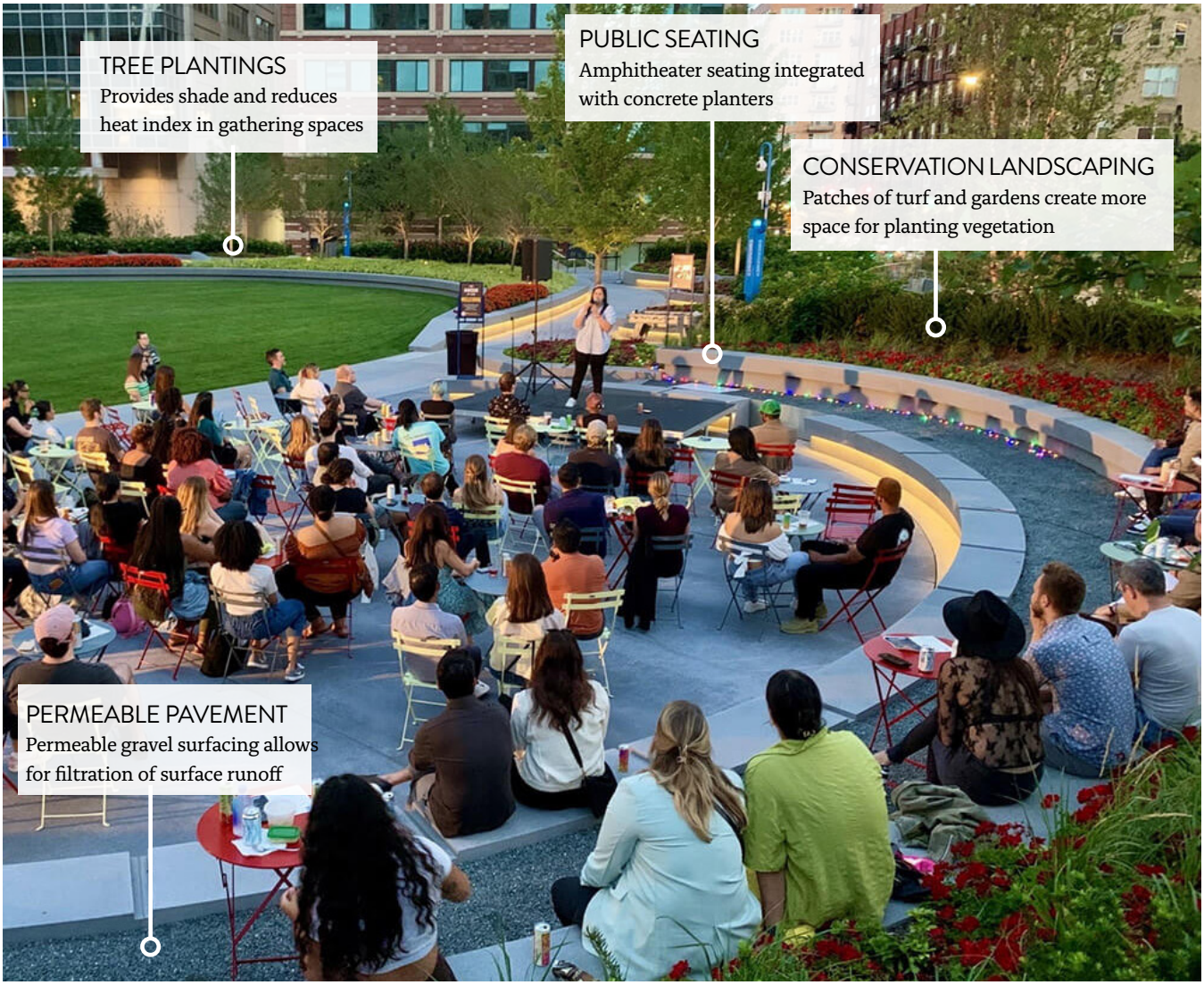


STREET TREES

PLANTERS



LINEAR PARKS



ENVIRONMENTAL BENEFITS

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- IMPROVE WATER QUALITY
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ECONOMIC BENEFITS

- SPUR PRIVATE INVESTMENT
- CREATE LOCAL JOBS
- REVITALIZE THE NEIGHBORHOOD

MAINTENANCE PARTNERS

- BALTIMORE CITY DEPT. OF PUBLIC WORKS
- BALTIMORE CITY DEPT. OF RECREATION & PARKS
- BALTIMORE CITY PUBLIC SCHOOLS
- THE 6TH BRANCH
- PROJECT CLEAN CORP.
- BALTIMORE TREE TRUST
- WATER BALTIMORE

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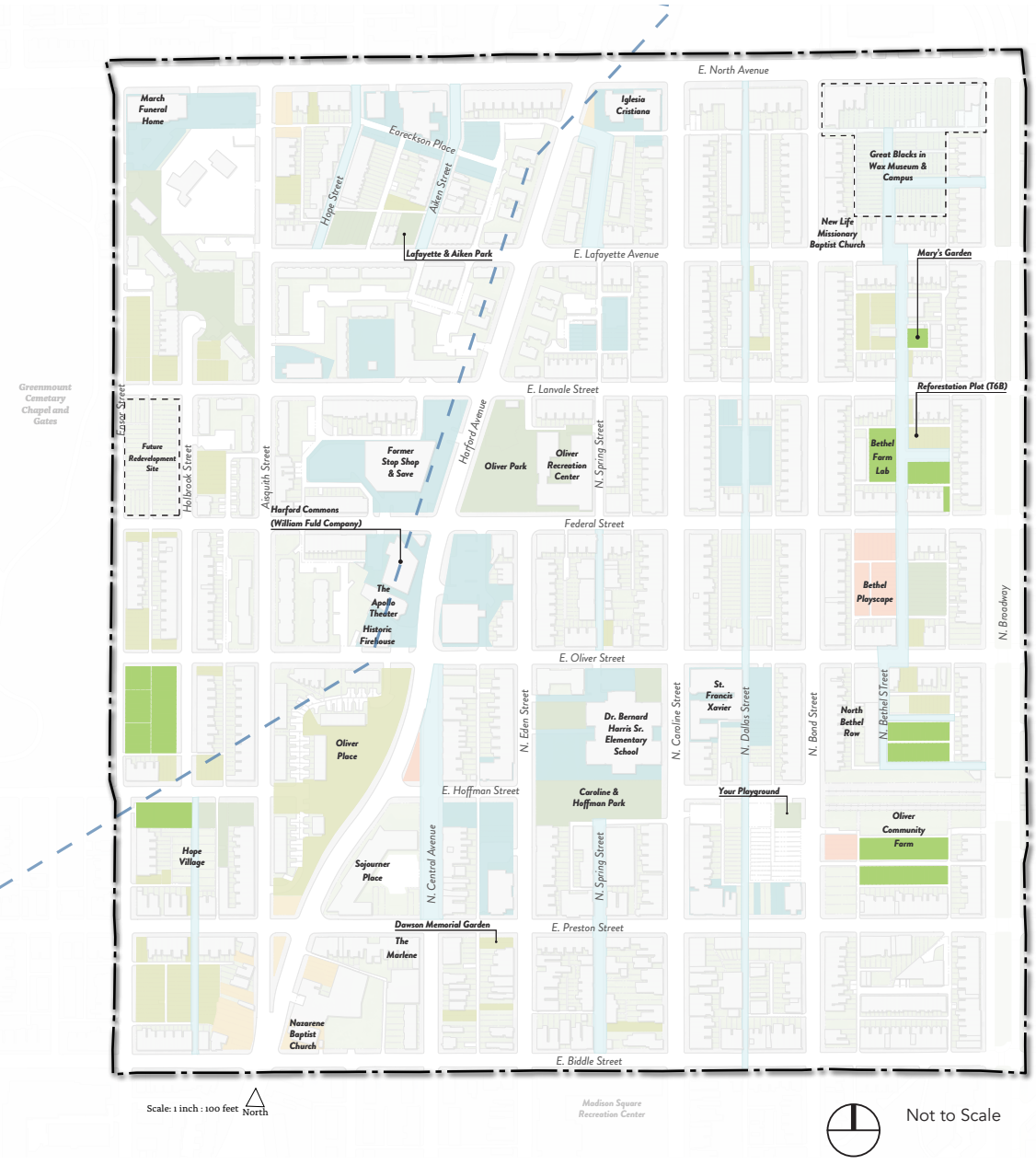
MAINTENANCE *(ease of cleaning/using the greening strategy)*: *medium to large*

COST *(typical cost of designing and building greening strategy)*: *small to large*

SCALE *(typical size of project site)*: *small to large*

3C. PRODUCTIVE LANDSCAPES

Community gardens, orchards, community farms, and tree farms can promote physical and mental well-being, improve food security and access to fresh produce, and create habitat for local wildlife.



- Shared Streets ("Garden Streets")
- Residential/Commercial Routes
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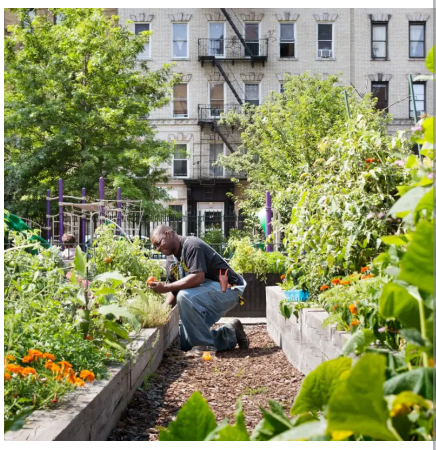
- Institutional, Mixed-Use, and Commercial Properties
- Playspaces & Recreation
- Event Spaces
- Productive Landscapes
- Passive/Holding Landscapes

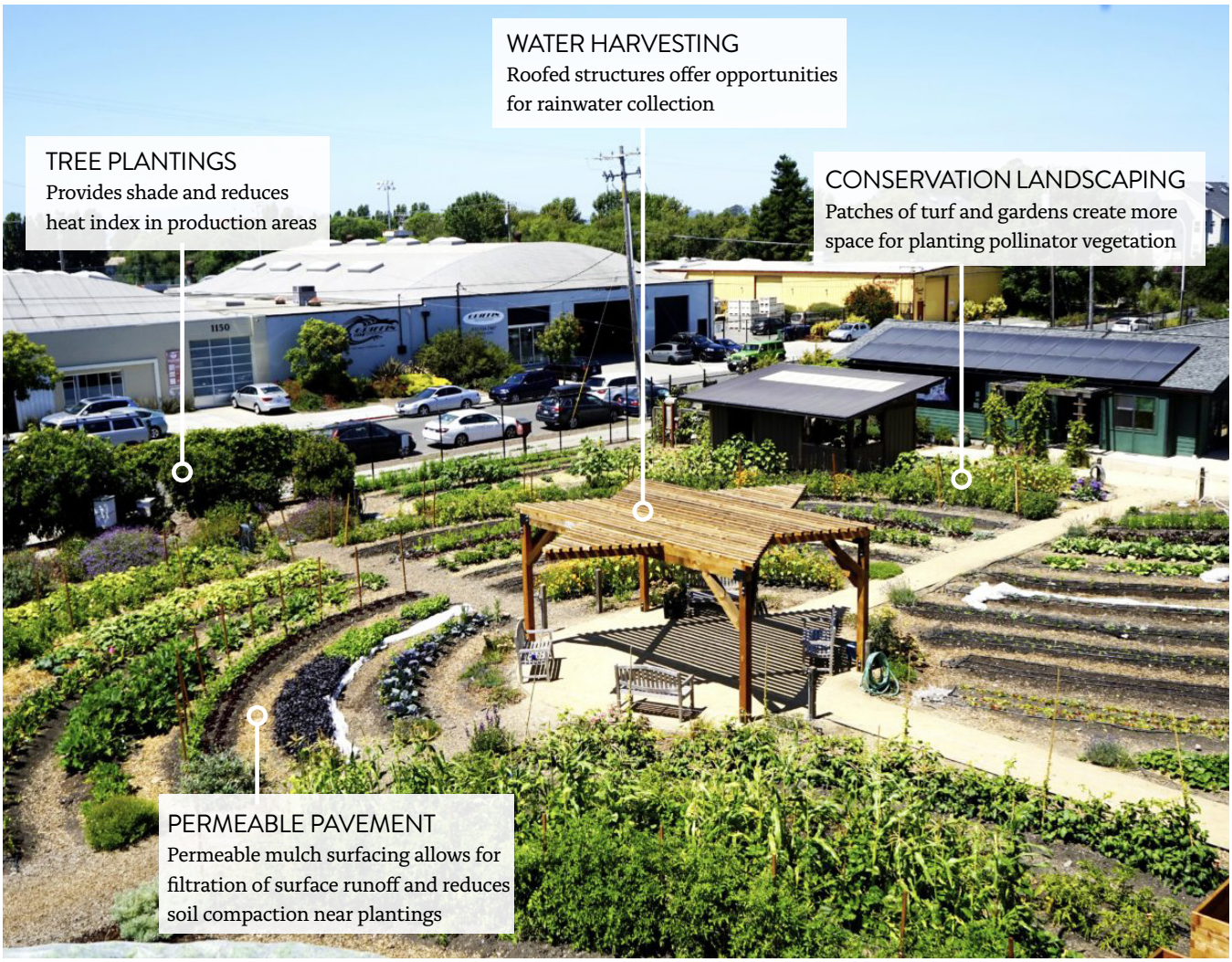
EXAMPLE GREENING STRATEGIES

TREE + PLANT NURSERY PRODUCTION

URBAN FARMS



COMMUNITY GARDENS



ENVIRONMENTAL BENEFITS

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MAINTENANCE PARTNERS

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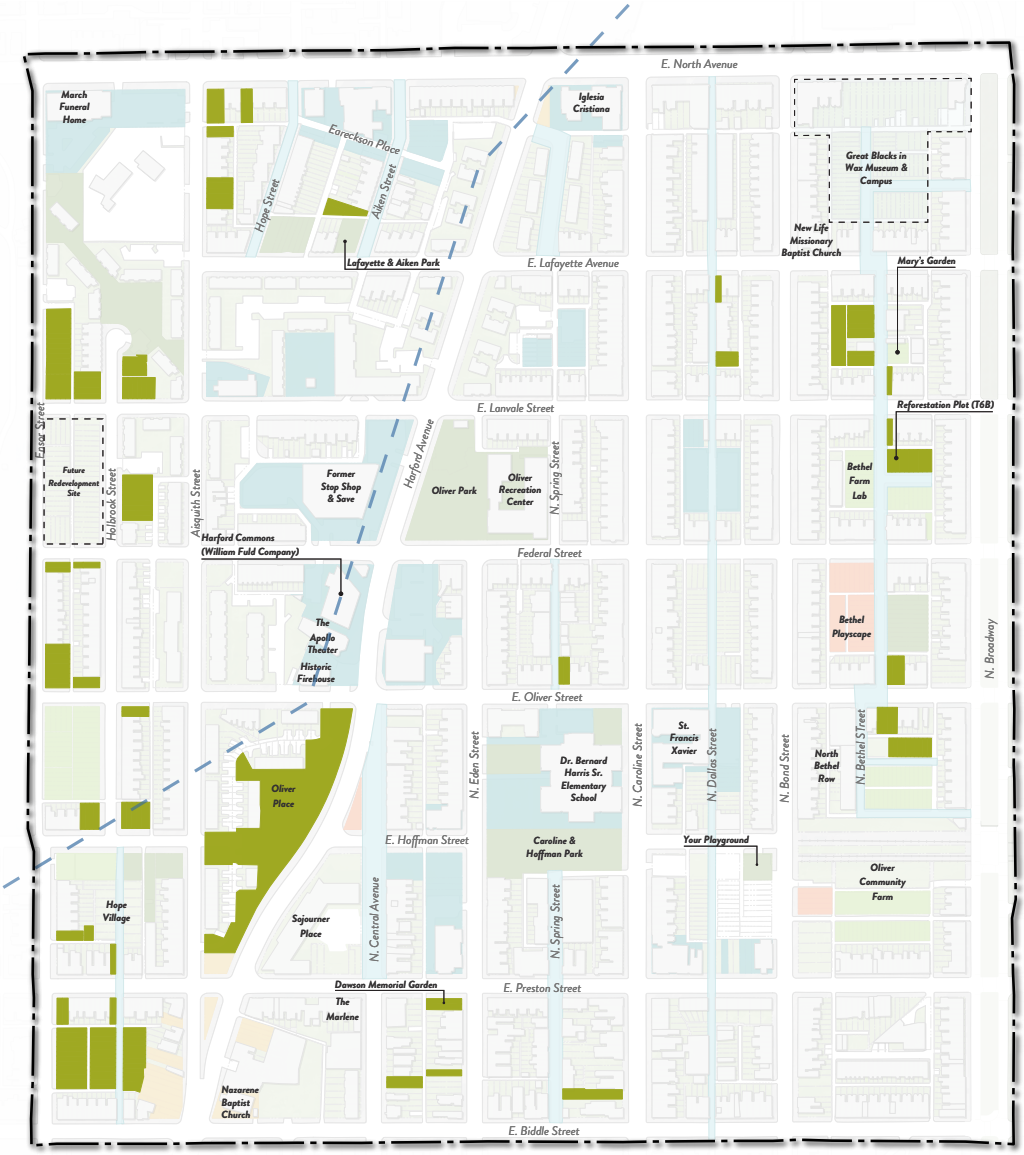
COST
(typical cost of designing and building greening strategy)

SCALE
(typical size of project site)

3D. PASSIVE & HOLDING LANDSCAPES

Vacant lots, especially publicly owned vacant lots, can be put to productive use through redevelopment or community greening. When these lots are not suitable for redevelopment, they can act as holding landscapes where conservation, restoration, and habitat creation can thrive alongside passive human activities. These landscapes can include microforests, reforestation plots, and meadows, requiring lower maintenace



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- Event Spaces
- Productive Landscapes
- Passive/Holding Landscapes

EXAMPLE GREENING STRATEGIES

MEADOW ESTABLISHMENT

MICROFORESTS

REFORESTATION

ENVIRONMENTAL BENEFITS

- IMPROVE AIR QUALITY
- IMPROVE WATER QUALITY
- REDUCE STORMWATER RUNOFF/FLOODING
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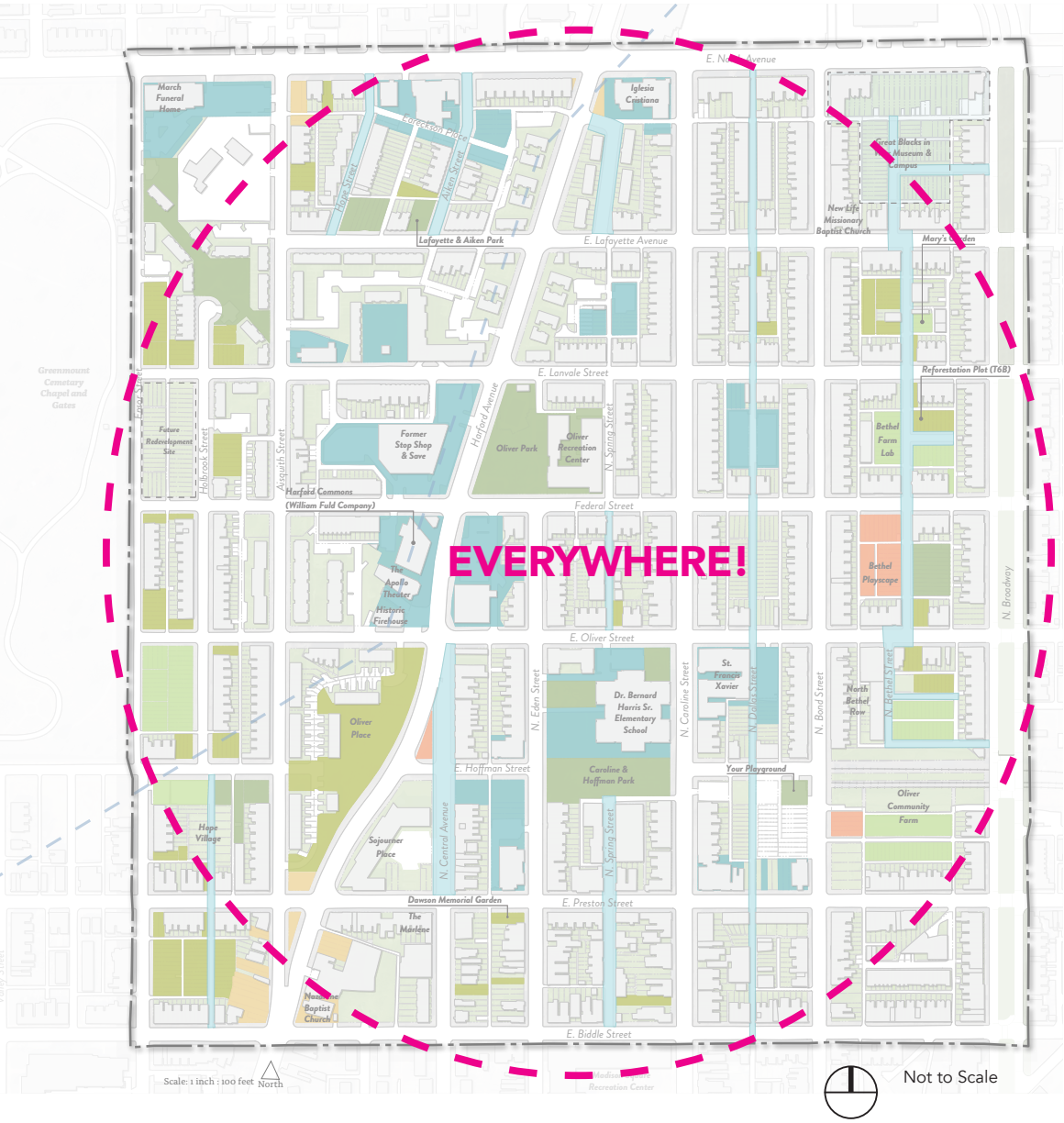
(ease of cleaning/using the greening strategy)

COST
(typical cost of designing and building greening strategy)

SCALE
(typical size of project site)

4A. PRIVATE PROPERTIES

Every greening project, no matter how small, adds up and accrues benefits. There are many types of greening that individual homeowners can install and use on their own



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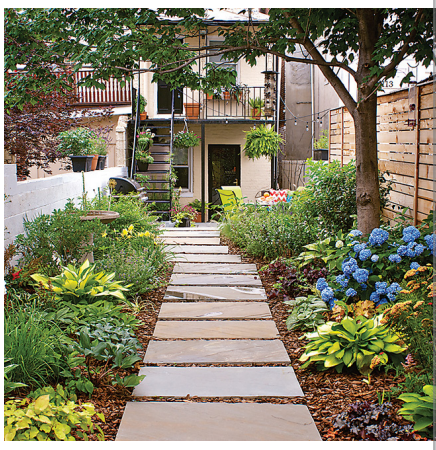
EXAMPLE GREENING STRATEGIES

RAIN BARREL + FLOW-THRU PLANTER

CONSERVATION LANDSCAPING



RAIN GARDEN

ENVIRONMENTAL BENEFITS

- IMPROVE AIR QUALITY
- IMPROVE WATER QUALITY
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MAINTENANCE
(ease of cleaning/using the greening strategy)

COST
(typical cost of designing and building greening strategy)

SCALE
(typical size of project site)

AREA OF FOCUS FOR GREENING

Based on community feedback and input from the steering committee, priorities for greening in Oliver can be set in the following zones (originally defined in the Oliver Vision Plan):

1 Central Oliver Zones

Oliver Central | Highlighting main street commercial activities and historic landmarks

Harford Gateway (South) | Enhancing neighborhood entrances that contribute to neighborhood identity

2 East Oliver Zones

Bethel Street Rowhomes & Recreation | Connecting existing green spaces into a linear neighborhood park

***Oliver Community Farm & Hub** | Supporting community activities focused on food production

***Neighborhood School Hub** | Enhancing outdoor learning, play, and walkability for all ages

3 West Oliver Zones

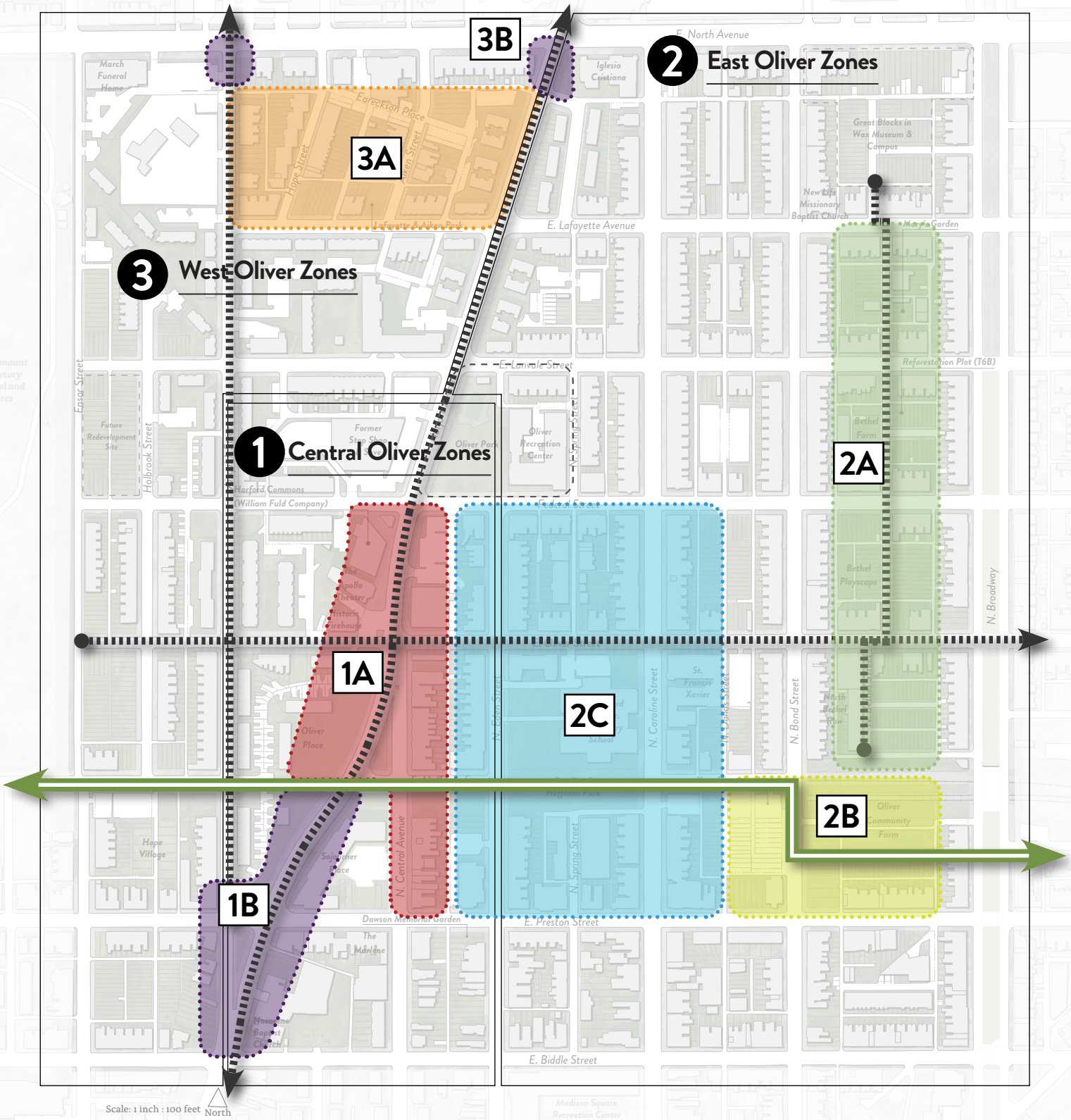
Hope-Aiken Revival | Invigorating neighborhood playing

Harford Gateway (North) | Enhancing neighborhood entrances that contribute to neighborhood identity

4 Public Realm

East Baltimore Greenline | Connecting neighborhoods via greenway in East Baltimore

Neighborhood Mainlines | Enhancing pedestrian-centered travel along main neighborhood connectors (Harford Avenue, Aisquith Street, Oliver Street, Bethel Street)


3B
2 East Oliver Zones
3A
3 West Oliver Zones
1 Central Oliver Zones
2A
1A
2C
2B
1B
E. North Avenue
E. Lafayette Avenue
E. Lanvale Street
E. Preston Street
E. Biddle Street
N. Broadway
N. Bond Street
N. Caroline Street
N. Central Avenue
N. Spring Street
Hope Street
Eareckson Place
Holbrook Street
Ensor Street
Scale: 1 inch : 100 feet
North

PRIORITY PROJECT AREAS

The Oliver Greening Master Plan steering committee and design team identified the following neighborhood areas as priority candidates suitable for kicking off greening efforts, hosting greening pilot projects, and catalyzing community buy-in. The community may consider an a la carte approach to addressing these project areas as funding for implementation and maintenance become available. The next phase of implementing greening in Oliver has been initiated with the selection by the steering committee of the "Harford Gateways | Oliver Gateways" sites for developing landscape and engineered schematic design documents (see Executive Summary). The community is looking to pursue multiple city and state grant options for design, construction, and maintenance.

1 Harford Gateways | Oliver Gateways

Multiple small scale sites that highlight entering Oliver's neighborhood boundary

2 Public Realm | Harford Avenue Corridor

City connector that runs through the neighborhood and hosts several local amenities

3 Oliver Central | Oliver Commercial Hub

Existing historic landmarks and commercial/mixed-up properties that support the local economy

4 Bethel Street Rowhomes & Recreation | Bethel Street Green Corridor

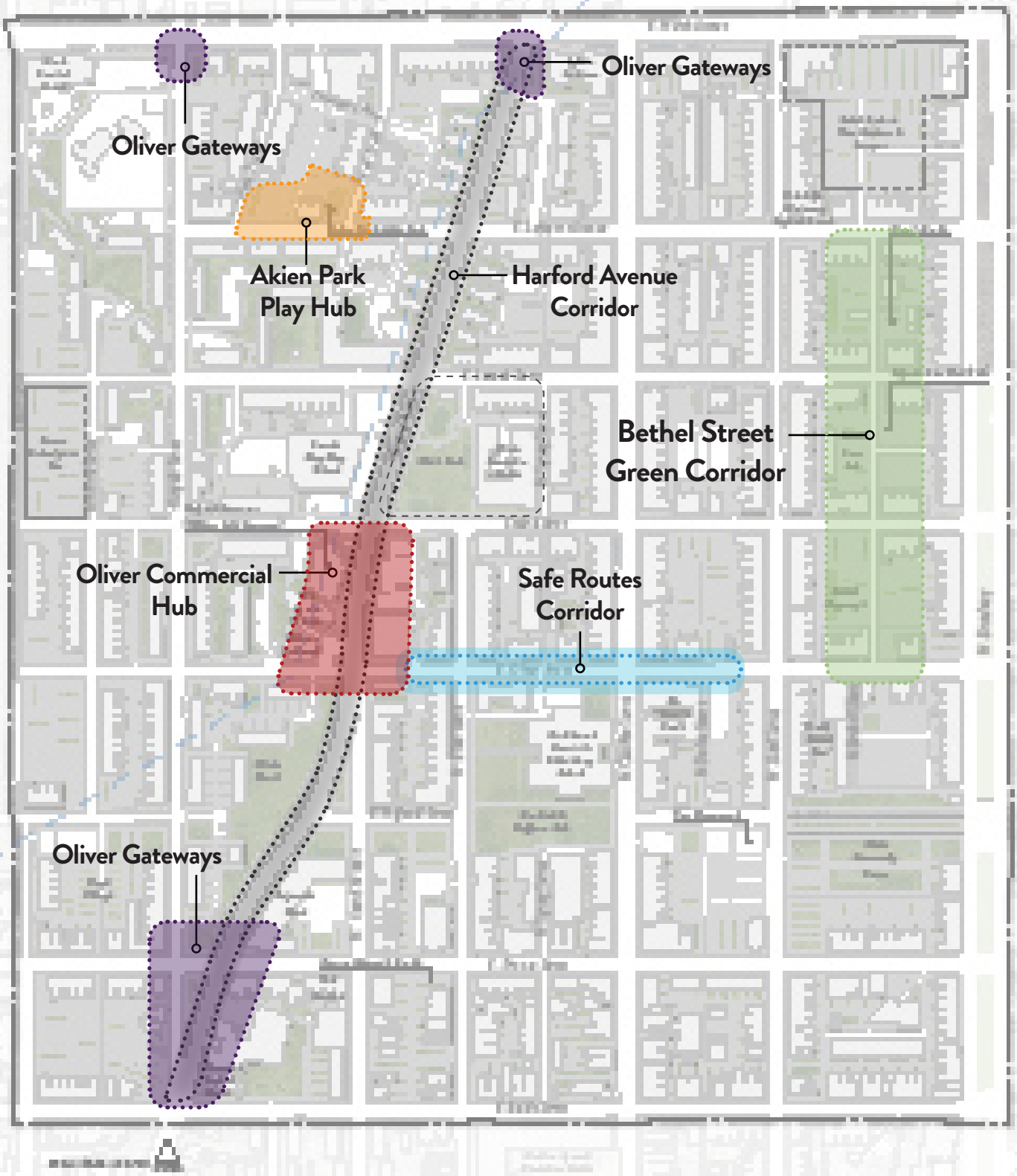
Linear green spaces that host community events and recreational activities

5 *Neighborhood School Hub | Safe Routes Corridor

Neighborhood connector that supports local pedestrian traffic near the elementary school

6 Hope & Aiken Revival | Akien Park Play Hub

Existing playground and city-owned lots to host play and recreational activities


Oliver Gateways
Oliver Gateways
Akien Park
Play Hub
Harford Avenue
Corridor
Bethel Street
Green Corridor
Oliver Commercial
Hub
Safe Routes
Corridor
Oliver Gateways

OLIVER GATEWAYS

Location: ~North Ave./Harford Ave., Preston St./Harford Ave., and North Ave./Aisquith St.

Project Size: Individual lots under <5,000 sf

Project Partners: Baltimore City Department of Transportation, Baltimore City Department of Public Works, businesses and merchants along the corridors

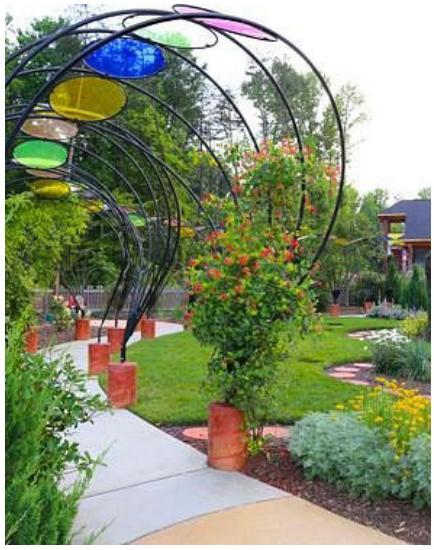
Potential Greening Strategies: Impervious surface removal, SWM bumpouts, conservation landscaping, tree planting

Opportunities: Highlights entrances into the neighborhood, provides branding opportunity for Oliver's neighborhood identity, located along highly visible and active corridors, property acquisition may be relatively easy (Adopt-a-Lot)

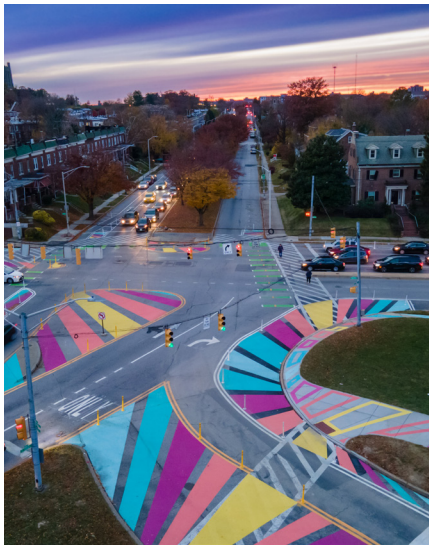
Challenges: Requires coordination with city agencies for design and implementation

Greening Strategy Examples

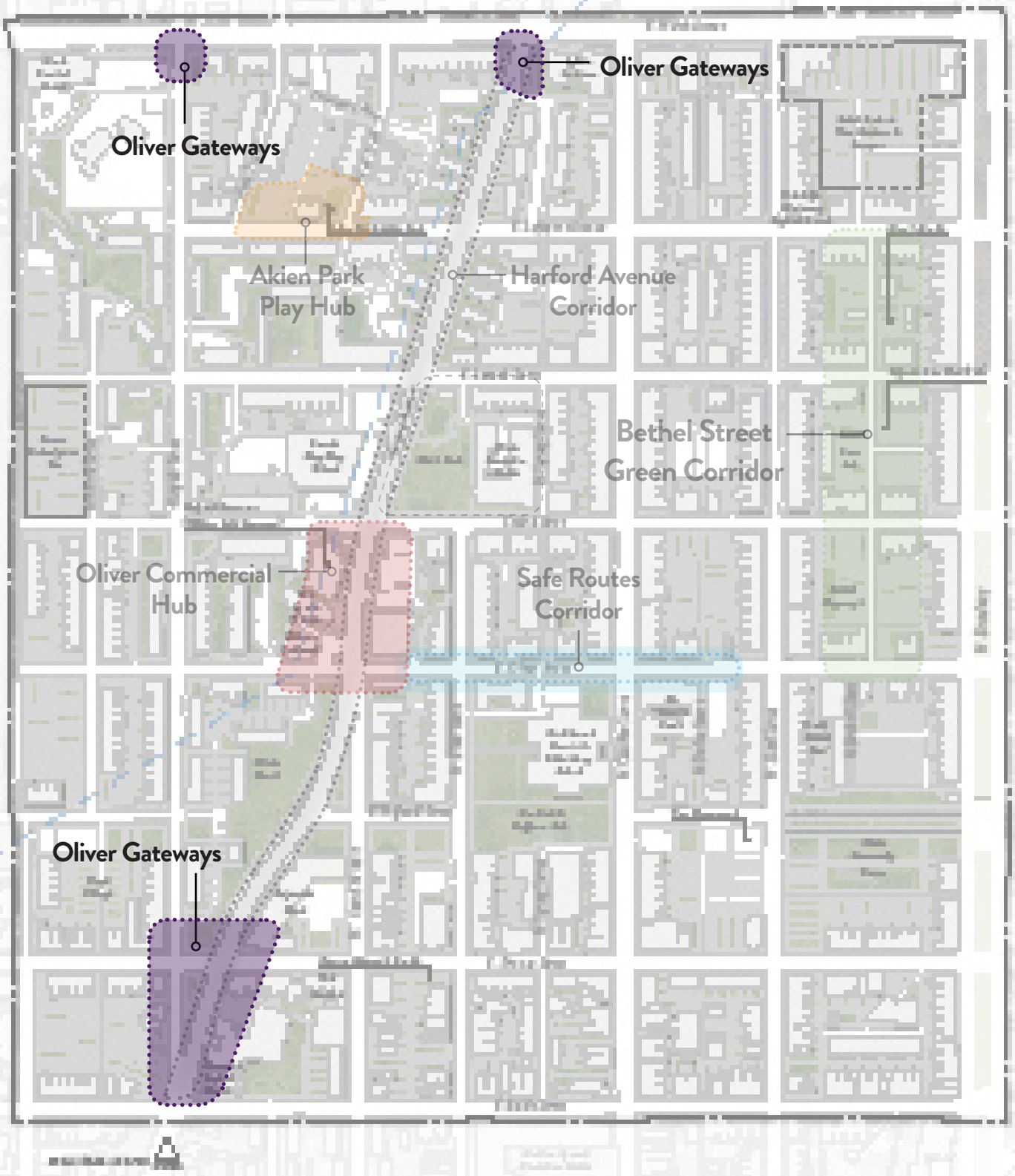
Stormwater Bumpouts + Signage



Conservation Landscape + Sculptures



Artful Sidewalks & Crosswalks


Oliver Gateways
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Akien Park
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Corridor
Bethel Street
Green Corridor
Oliver Commercial
Hub
Safe Routes
Corridor
Oliver Gateways

HARFORD AVENUE CORRIDOR

Location: Harford Ave. from North Ave. to Biddle St.

Project Size: Large scale, identify areas in public right-of-way along corridor for interventions under <20,000 sf total

Project Partners: Baltimore City Department of Transportation, Baltimore City Department of Public Works, businesses and merchants along the corridors

Potential Greening Strategies: Impervious surface removal, SWM bumpouts, conservation landscaping, tree planting, artful crosswalks

Opportunities: Encorage traffic calming, create green buffer between roadway and sidewalk, located along highly visible and active corridors

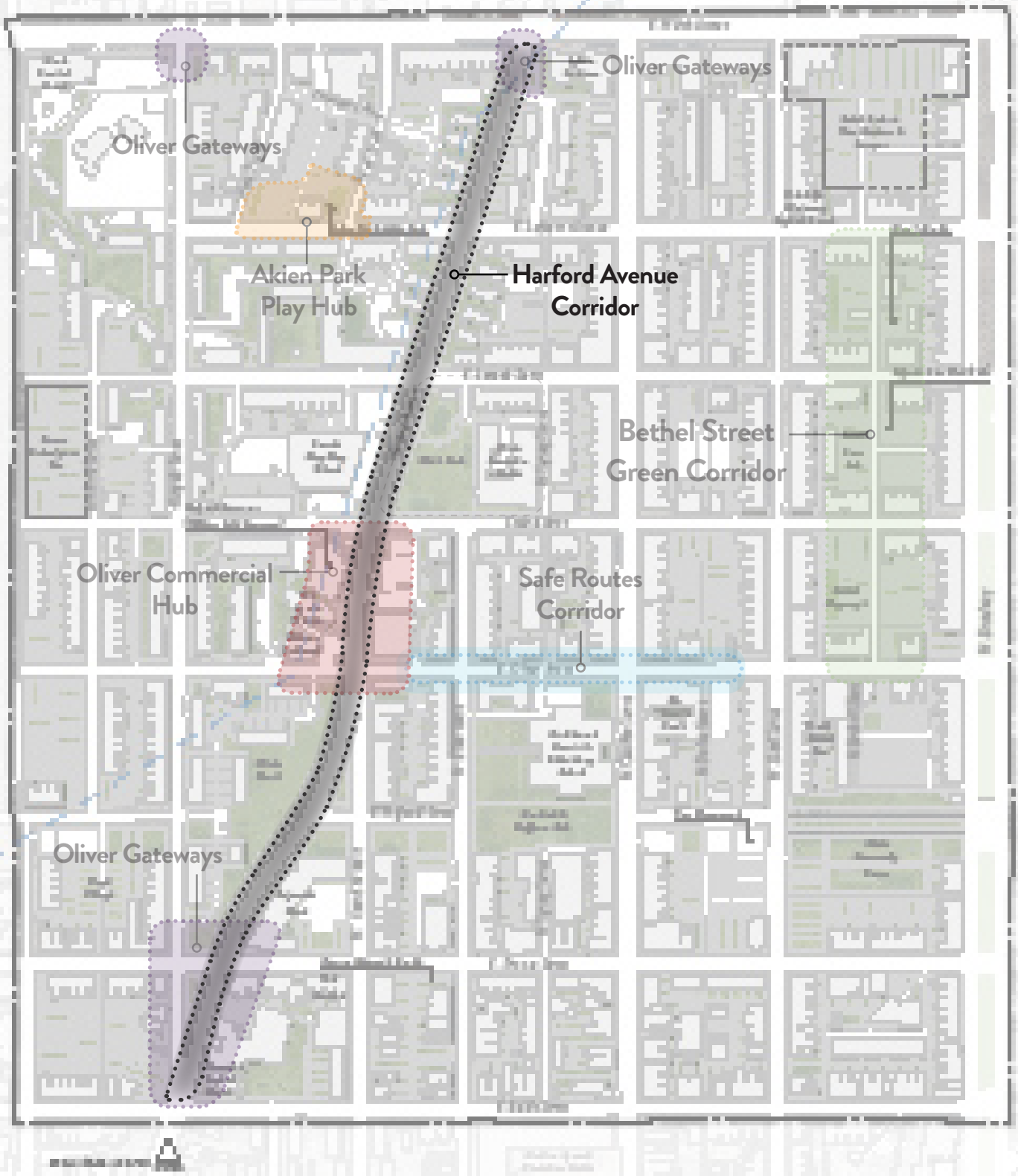
Challenges: Requires coordination with city agencies for design and implementation

Greening Strategy Examples

Bioretention Median

Stormwater Bumpouts

Stormwater Planters


Oliver Gateways
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Akien Park
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Corridor
Bethel Street
Green Corridor
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Hub
Safe Routes
Corridor
Oliver Gateways

OLIVER COMMERCIAL HUB

Location: Harford Ave. from Federal St. to Oliver St.

Project Size: Large scale, focus on frontages of historic landmarks and businesses/mixed-use properties and roadway intersections, for interventions under <20,000 sf total

Project Partners: BCDOT, BCDPW, businesses and merchants along the corridors

Potential Greening Strategies: Impervious surface removal, conservation landscaping, tree planting, artful crosswalks, flow-thru planters, SWM bumpouts,

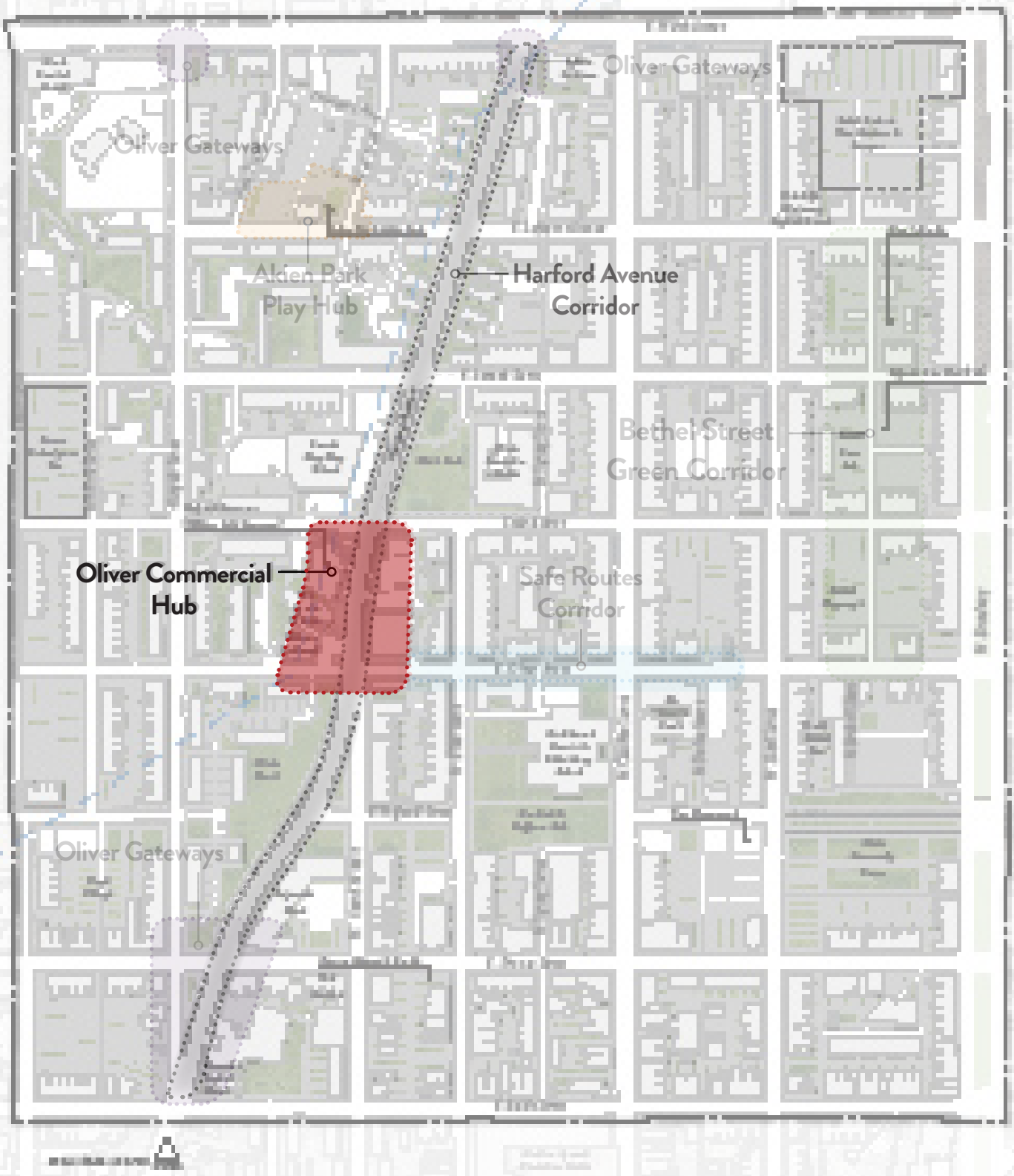
Opportunities: Highlight neighborhood history and commerce, beautify public gathering spaces, centered in highly visible and active pedestrian corridor

Challenges: Requires coordination with city agencies and property owners for design and implementation

Greening Strategy Examples

Impervious Surface Removal

Moveable Planters + Tree Plantings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Green Corridor
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BETHEL STREET GREEN CORRIDOR

Location: Bethel St. from Lafayette Ave. to Oliver St.

Project Size: Large scale, identify lots spread out along green corridor for interventions under <20,000 sf total

Project Partners: Baltimore City Department of Transportation, Baltimore City Department of Public Works, property owners

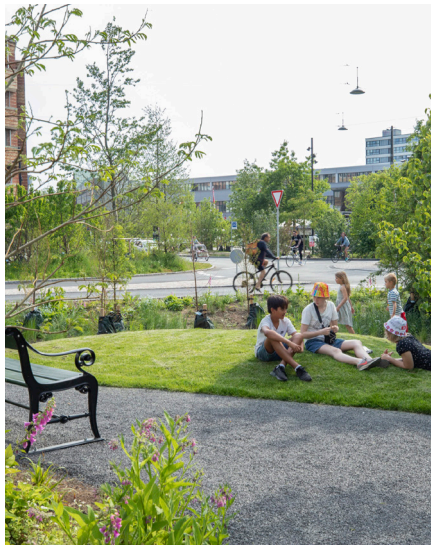
Potential Greening Strategies: Impervious surface removal, conservation landscaping, microforests, pervious paving, tree planting, artful crosswalks

Opportunities: Connect green spaces to create linear park, located along highly visible and active community spaces, increase biodiversity and wildlife habitats, increase neighborhood tree canopy

Challenges: Requires coordination with city agencies for design and implementation, requires coordinated property acquisition, large area to maintain

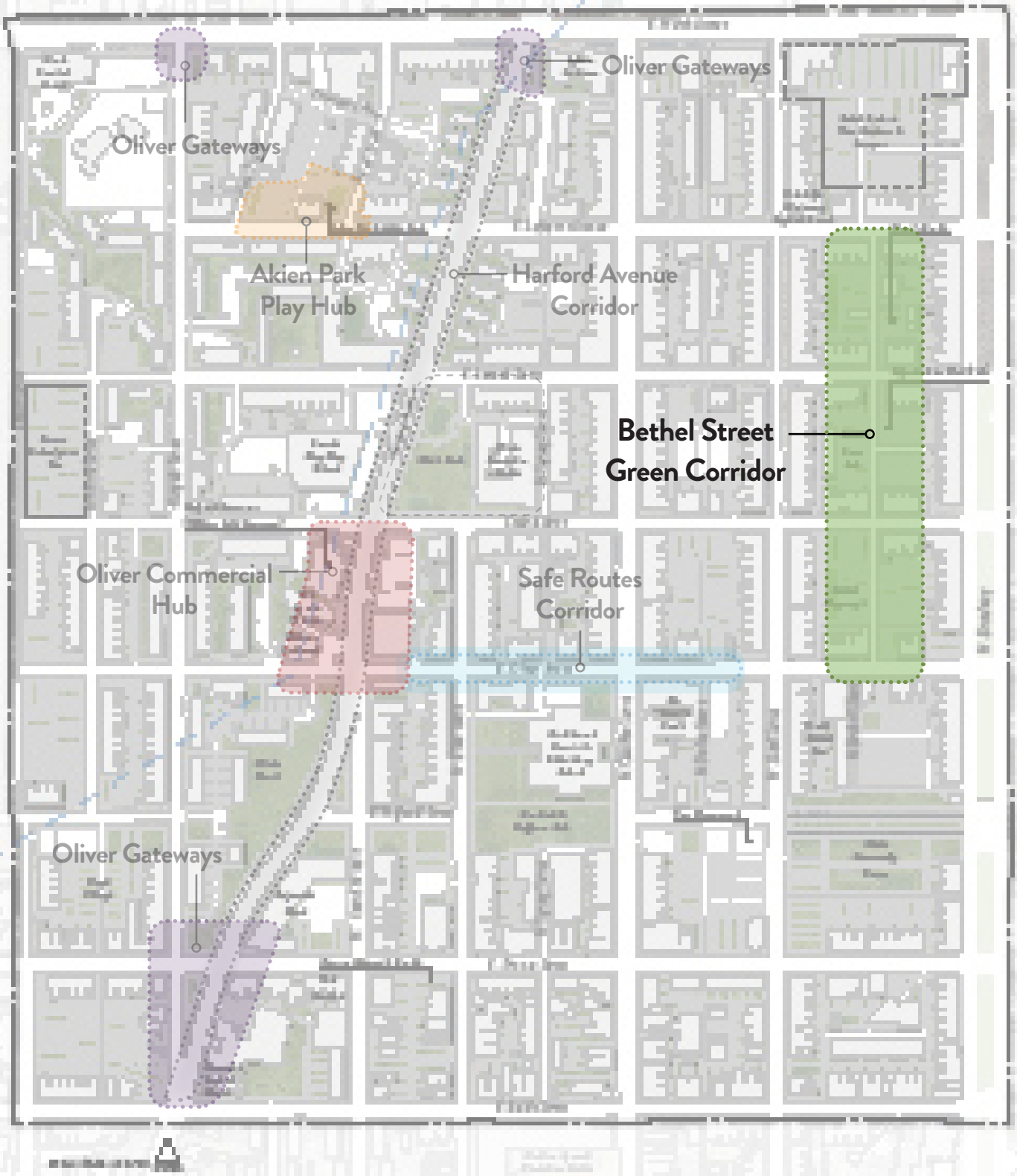
Greening Strategy Examples

Conservation Landscapes + Playscapes



Rain Gardens

Microforests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Bethel Street
Green Corridor
Oliver Commercial
Hub
Safe Routes
Corridor
Oliver Gateways

SAFE ROUTES CORRIDOR

Location: Oliver St. from Harford Ave. to Bond St.

Project Size: Large scale, identify areas in public right-of-way along corridor for interventions under <20,000 sf total

Project Partners: BCDOT, BCDPW, Baltimore City Public Schools, adjacent property owners

Potential Greening Strategies: Impervious surface removal, SWM bumpouts, stormwater planters, tree planting, artful crosswalks, moveable planters

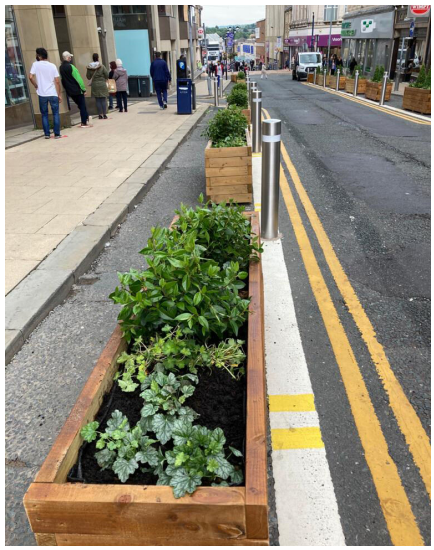
Signage: Educational, pedestrian crossings

Opportunities: Encourage traffic calming, dedicating space for walking to students, create green buffer between roadway and sidewalk, located along highly visible and active corridor

Challenges: Requires coordination with city agencies for design and implementation

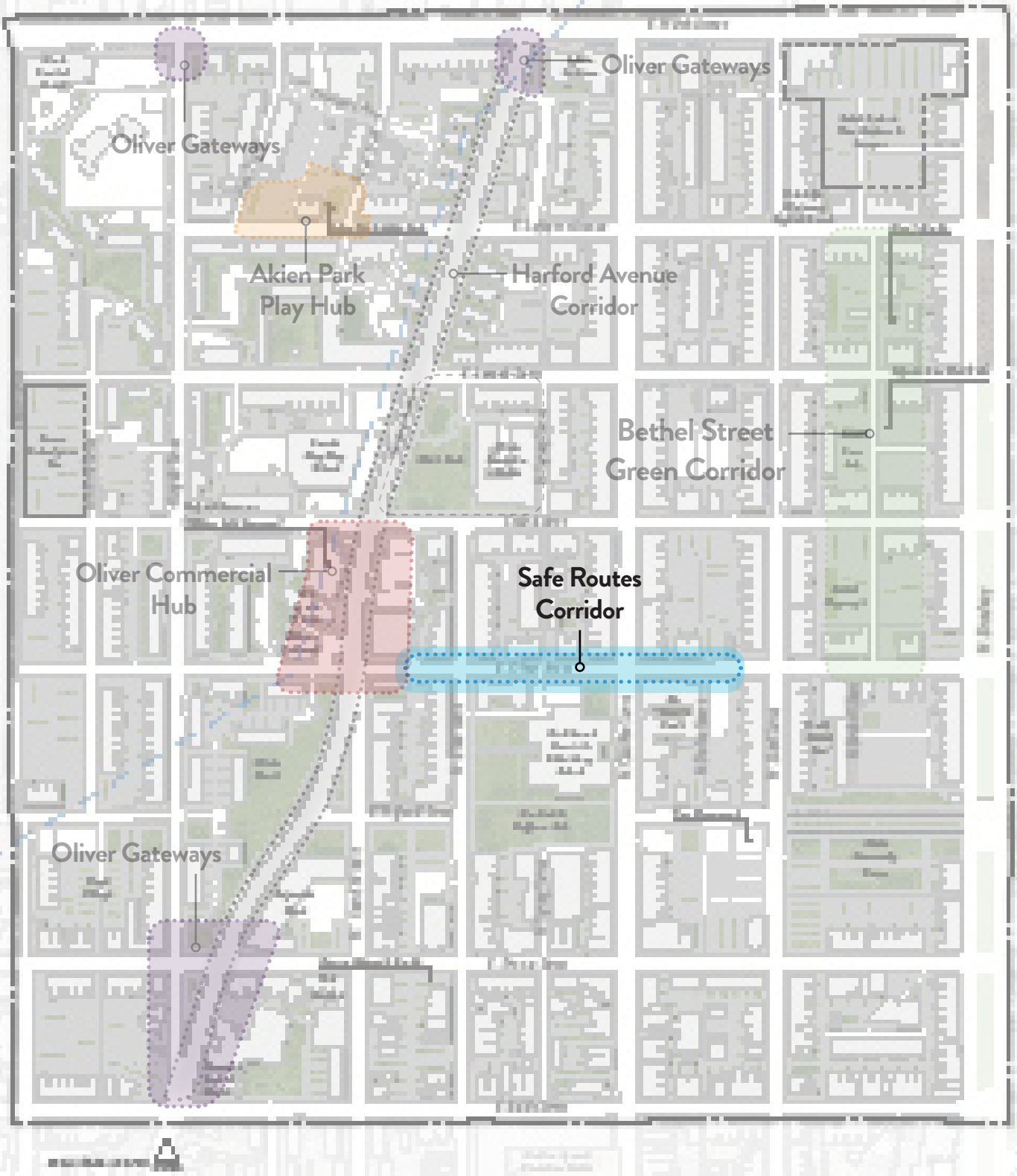
Greening Strategy Examples

Tree Plantings



Moveable Planters

Artful Crosswalks + Bumpouts


Oliver Gateways
Oliver Gateways
Akien Park
Play Hub
Harford Avenue
Corridor
Bethel Street
Green Corridor
Oliver Commercial
Hub
Safe Routes
Corridor
Oliver Gateways

AIKEN PARK PLAY HUB

Location: 1200 Lafayette Ave. and along Lafayette Ave. from Hope St. to Aiken St.

Project Size: Large scale, playground, vacant lots, and areas in public right-of-way along corridor for interventions under <20,000 sf total

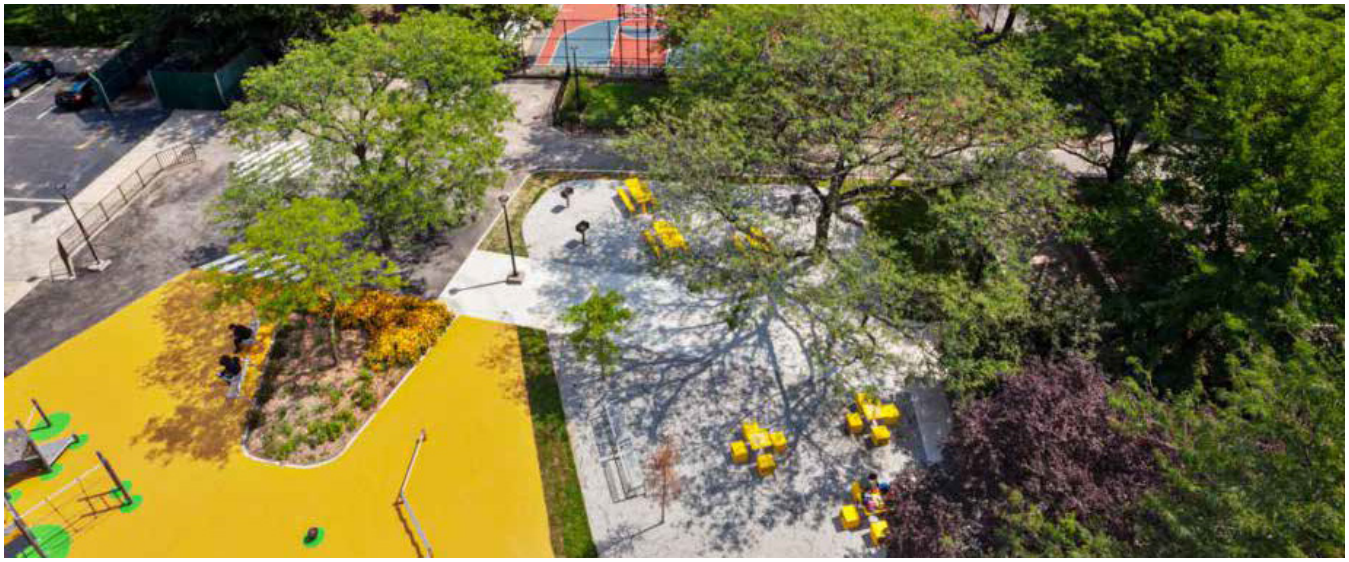
Project Partners: BCDOT, BCDPW, Baltimore City Recreation and Parks, adjacent property owners

Opportunities: Encourage traffic calming around playspaces, re-investing and expanding existing play and rec spaces, located along highly visible and active corridor

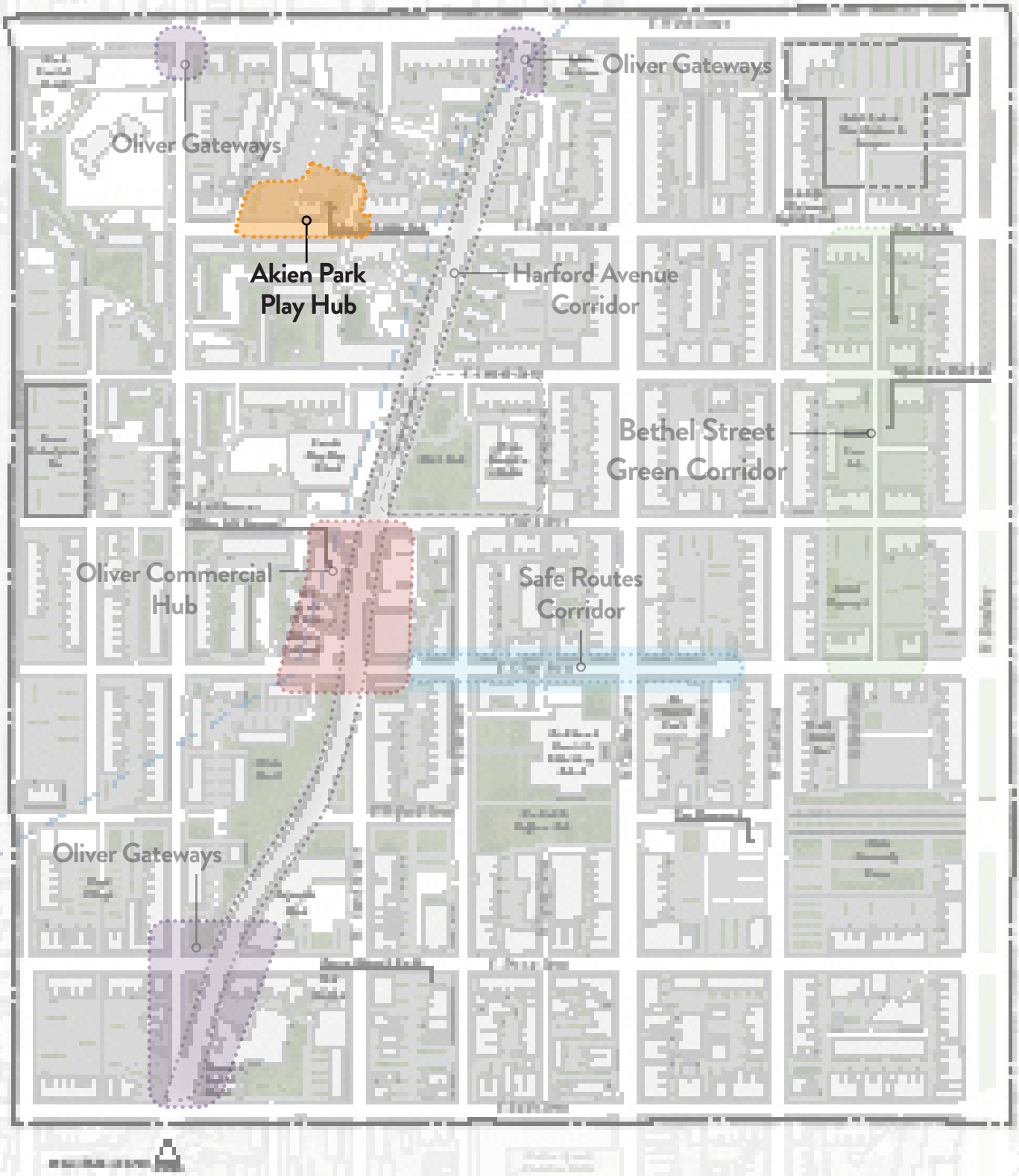
Potential Greening Strategies: Impervious surface removal, perivous paving, tree plantings, conservation landscaping, SWM bumpouts, stormwater planters, artful crosswalks

Signage: Educational, playzone, pedestrian crossing

Greening Strategy Examples



Impervious Pavement Removal + Tree Plantings + Conservation Landscapes + Rain Gardens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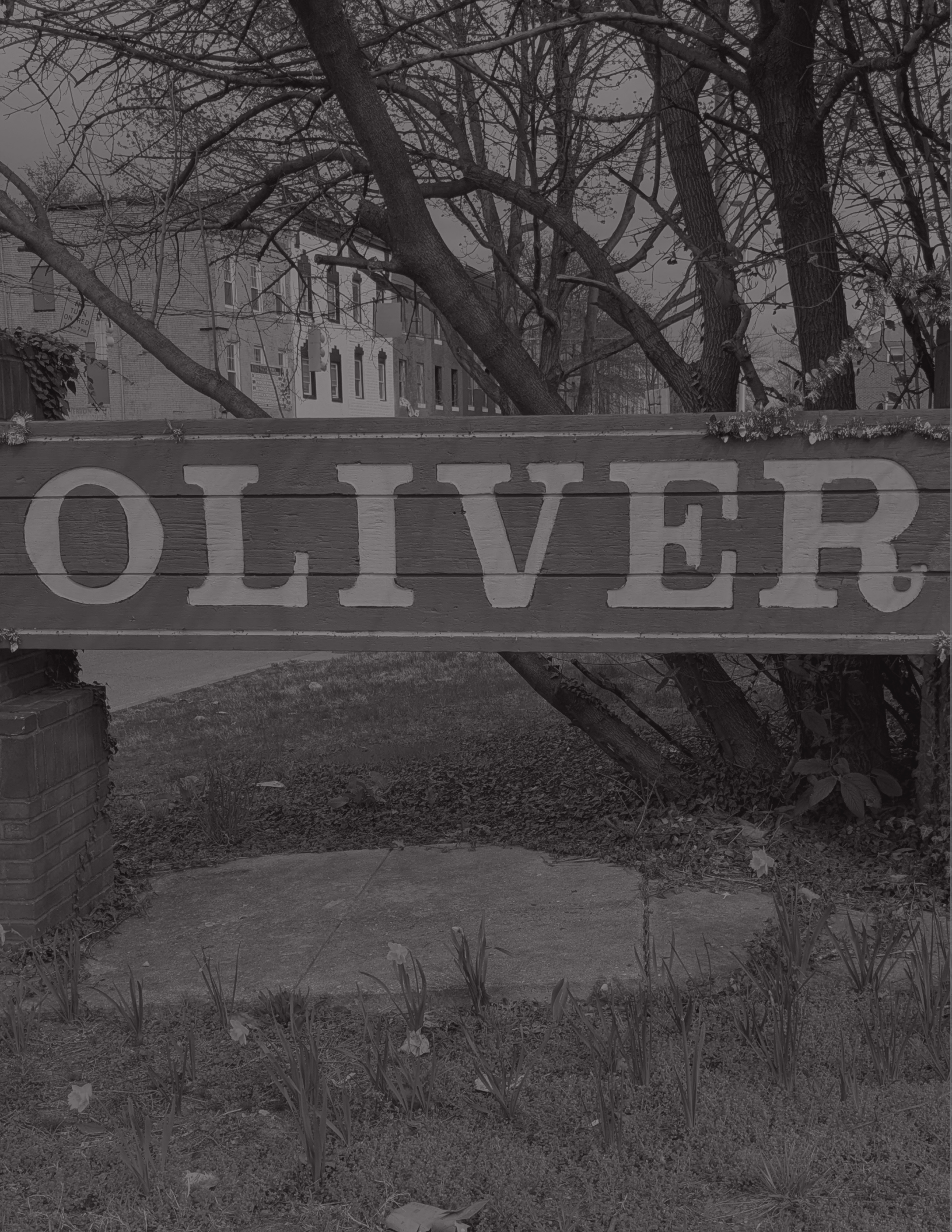
OLIVER

Chapter 7

IMPLEMENTATION & NEXT STEPS

OVERVIEW

This master plan is a framework to manage greening installations and enhancements in Oliver over the next ten to twenty years, and it intends to be a guiding, yet flexible document. The master plan can be viewed as a "menu" of projects, given unknown opportunities and challenges that may arise and the fiscal constraints that public projects face. Many of the identified master plan project sites will be further studied and vetted should they become projects. The plan also includes greening strategies shown for inspiration but able to be used for short-term, quickly implementable stormwater management and greening solutions where the opportunities arise.

The Historic Oliver Community Association will be the leading entity and catalyst for incrementally implementing the master plan; however, local and state government agencies, private sector, non-profit entities, and individuals will have a partnership role in many of the projects. As implementation of the master plan progresses over time, implementation partners may need to consider new technologies and/or strategies that are better suited for certain projects or that encourage innovation. As unforeseen challenges and opportunities emerge, the multi-objective vision and flexible approach offered in this master plan will guide the Historic Oliver Community Association and its partners to protect and enhance Oliver as a model, resilient community, with the East Baltimore neighborhoods better connected to each other and to the many green resources found within Baltimore City's watersheds.

IMPLEMENTATION TIMEFRAMES

Implementation timeframes will be determined by need, funding, emerging opportunities, and impacts/adjacencies related to the implementation of the Oliver Greening Master Plan. As of summer 2025, the pilot projects under the Oliver Greening Master Plan are moving through the design process, and are anticipated to start construction in FY2026.

IMPLEMENTATION PARTNERS

As the entity leading implementation of the master plan, the Historic Oliver Community Association will work among a partnership of public and private entities and individuals. Implementation partners will vary depending upon the specific project and may include neighborhood associations, business owners, property owners, advocacy groups, the private sector, and the public sector.

IMPLEMENTATION MATRIX

The Implementation Matrix, listed in the table below, is a summary of the recommendations and timeframes for implementation. The matrix is organized by greening types and focus areas and outlines the key plan actions for each. Implementing timeframes are noted as short (completion within three years), medium (four to eight years for completion), or long (eight or more years to implement fully). These periods align with Baltimore City's anticipated Capital Budgets. In some instances, implementation will occur over a span of time (i.e. short-mid, mid-long, or short-long). Others may be listed as ongoing to indicate they won't necessarily have a

IMPLEMENTATION MATRIX

Greening Type	Property Owner/Primary Responsible Party	Partners	Potential Pilot Project Area	Infrastructure Considerations		
				Establishment Timeframe Short-term (S), Medium (M), or Long-term (L)	Maintenance Responsibility Private (Pr) or Public (Pu)	Publicly Accessible Yes (Y) or No (N)
Green Streets						
Shared Streets ("Garden Streets")	BCDOT	BCDOT BCDPW Residents and property owners along corridors	**Oliver Central | Oliver Commercial Hub**	S-L	Pu	Y
Residential & Commercial Corridors	BCDOT	BCDOT BCDPW BCRP Businesses and merchants along the corridor	**Public Realm | Harford Avenue Corridor**	S-L	Pu	Y
Gateways	BCDOT	BCDOT BCDPW Residents and property owners along corridors	**Harford Gateways | Oliver Gateways**	S-L	Pu	Y
Green Places						
Institutional, Mixed-Use, and Commercial Properties	Baltimore City Mayor and City Council Private Property Owners	BCPS Maryland Stadium Authority Housing Authority of Baltimore City BCDOT BCDPW Private Property Owners	**Neighborhood School Hub | Safe Routes Corridor**	S-M	Pr	Y & N

KEY

- Baltimore City Department of Transportation (BCDOT)
- Baltimore City Department of Public Works (BCDPW)
- Baltimore City Recreation and Parks (BCRP)
- Baltimore City Public Schools (BCPS)
- Property Owner (PO)

completion date.

With this implementation matrix, it is important to note:

- Recommendations will not be implemented all at once. Rather, they will be implemented in phases over many years.
- The plan frameworks, elements, and actions are often interrelated; therefore, implementation will occur simultaneously and require coordination among recommendations in many instances.
- The order that the plan actions are listed does not indicate a prioritization.

Greening Strategies Category and Practice				Status of Green Space	
Infiltration Practices (Structural)	**Filtering Practices (Structural)**	**Infiltration Practices (Non-structural)**	**Other Practices and Infrastructure**	**Creating New Green Space** Yes (Y) or No (N)	**Adding to Existing Green Space** Yes (Y) or No (N)
Pervious Paving	Stormwater Planter Stormwater Bumpout	Conservation Landscaping Street Tree Planted Median Impervious Surface Removal	Sidewalk/Shared Use/ Trail Connections Bus Transit Facilities	Y	N
Pervious Paving	Stormwater Planter Stormwater Bumpout	Conservation Landscaping Street Tree Planted Median Impervious Surface Removal	Sidewalk/Shared Use/ Trail Connections Bus Transit Facilities	Y	N
Pervious Paving	Stormwater Planter Stormwater Bumpout	Conservation Landscaping Street Tree Planted Median Rain Garden Impervious Surface Removal	Sidewalk/Shared Use/ Trail Connections Bus Transit Facilities	Y	N
Pervious Paving	Stormwater Planter Stormwater Bumpout Green Roof Green Wall	Conservation Landscaping Street Tree Tree Groves Microforests Impervious Surface Removal Meadow Establishment Rain Garden	Bus Transit Facilities Environmental Education Rain Barrel Flow-thru Planter	Y	Y

IMPLEMENTATION MATRIX (CONTINUED)

Greening Type	Property Owner/Primary Responsible Party	Partners	Potential Pilot Project Area	Infrastructure Considerations		
				Establishment Timeframe Short-term (S), Medium (M), or Long-term (L)	Maintenance Responsibility Private (Pr) or Public (Pu)	Publicly Accessible Yes (Y) or No (N)
Open Spaces						
Playspaces & Recreation	Baltimore City Mayor and City Council	BCRP BCDPW BCDOT	**Hope & Aiken Revival | Aiken Park Play Hub**	S-L	Pu	Y
Event Spaces	Baltimore City Mayor and City Council	BCRP BCDPW BCDOT	**Bethel Street Rowhomes & Recreation | Bethel Street Green Corridor**	S-L	Pu	Y
Productive Landscapes	Baltimore City Mayor and City Council	BCDPW BCDOT	**Bethel Street Rowhomes & Recreation | Bethel Street Green Corridor**	S-L	Pu	Y
Passive & Holding Landscapes	Baltimore City Mayor and City Council	BCDPW BCDOT	**Bethel Street Rowhomes & Recreation | Bethel Street Green Corridor**	S-L	Pu	Y
Private Properties						
Private Residential Properties	Private Property Owners	BCDOT BCDPW	**Everywhere**	S-M	Pr	N

KEY

- Baltimore City Department of Transportation (BCDOT)
- Baltimore City Department of Public Works (BCDPW)
- Baltimore City Recreation and Parks (BCRP)
- Baltimore City Public Schools (BCPS)
- Property Owner (PO)

Greening Strategies Category and Practice				Status of Green Space	
Infiltration Practices (Structural)	**Filtering Practices (Structural)**	**Infiltration Practices (Non-structural)**	**Other Practices and Infrastructure**	**Creating New Green Space** Yes (Y) or No (N)	**Adding to Existing Green Space** Yes (Y) or No (N)
Pervious Paving	Stormwater Planter Stormwater Bumpout	Conservation Landscaping Street Tree Tree Groves Microforests Meadow Establishment Linear Park Rain Garden Impervious Surface Removal	Sidewalk/Shared Use/ Trail Connections Bus Transit Facilities Environmental Education	N	Y
Pervious Paving	Stormwater Planter Stormwater Bumpout	Conservation Landscaping Street Tree Tree Groves Microforests Meadow Establishment Linear Park Rain Garden Impervious Surface Removal	Sidewalk/Shared Use/ Trail Connections Bus Transit Facilities Environmental Education	N	Y
Pervious Paving	Stormwater Planter Stormwater Bumpout	Conservation Landscaping Street Tree Tree Groves Microforests Meadow Establishment Rain Garden Impervious Surface Removal	Sidewalk/Shared Use/ Trail Connections Bus Transit Facilities Environmental Education	N	Y
Pervious Paving	Stormwater Planter Stormwater Bumpout	Conservation Landscaping Street Tree Tree Groves Microforests Meadow Establishment Rain Garden Impervious Surface Removal	Sidewalk/Shared Use/ Trail Connections Environmental Education	N	Y
Pervious Paving	Green Roof Green Wall	Conservation Landscaping Street Tree Impervious Surface Removal	Rain Barrel Flow-thru Planter	Y	N

PLANNING FOR MAINTENANCE

To date, the 6th Branch has been instrumental in assisting with the care of several of Oliver's spaces, and they are working on increasing their capacity. This Master Plan raises the question to community partners about whether they would be willing to contribute to a community care fund to pay local residents to adopt and care for green spaces. This Master Plan also asks HOCA to explore collaborations with the City through their YouthWorks program and other workforce development initiatives in assisting with the maintenance of Oliver's green spaces.

Below describes the framework for creating a long-term management plan for Oliver's green spaces and strategies. The outline brings together information from several other documents to provide a general guide for greening management and maintenance in Oliver for the typical lifespan of a green space or green strategy (1 to 10 years and onward). This plan is not intended as a fully prescriptive or definitive 'maintenance' schedule but identifies key 'management and maintenance' requirements.

The implementation of this plan will be undertaken by the Oliver community and, where available, a

ANNUAL MAINTENANCE SCHEDULE

Greening Element	Maintenance Objective	Maintenance Task
Landscape Practices		
Trash Pickup	Maintain greening sites and ensure storm drains are free of litter and trash buildup.	Maintain and empty public trash cans. Collect, bag, and dispose of loose litter and trash within green spaces and adjacent storm drains.
Soil Testing	Have soil tested before planting a vegetable or flower garden, trees, and shrubs to ensure proper plant selection for soil conditions. Soil test results give you baseline information on soil pH, nutrient levels, and organic matter content and recommendations for fertilizing and adjusting soil pH.	Collect soil sample to submit to a soil testing lab. Review test results against list of plants deemed appropriate for that soil type/condition.
Trees	Maintain trees in as healthy and attractive condition for as long as possible, to ensure continuity in tree cover and their contribution to the landscape structure, biodiversity, and screening/amenity value of the site; and ensure that trees are healthy and safe, particularly in places in proximity to residential properties and with public access.	**Inspection:** Assess existing trees to determine need for invasives removal, pruning, crown lifting, removal of dead or dangerous trees. Visually check for the presence of any diseased or rotten wood; fungal or other infections/disease and stability. If any such issues are identified, then the advice of a qualified arboriculturalist (TreeBaltimore) should be sought. Operations should be carefully planned to minimize site disturbance. Operations should be carried out of the bird breeding season and ideally during early autumn when the soils are driest and there is least risk of disturbing nesting birds.
		Planting or Replacing: Calculate and order trees. Plant trees. Water new tree plantings regularly each week during growing season (April to September) and at least weekly in dry periods to maintain healthy growth.A young tree requires 20 gallons of water (10-15 minutes with low flow garden hose) per week between May and October for at least the first two summers after planting. (You can also split this up and water 10 gallons twice a week.)
		Pruning: Assess and conduct pruning appropriate to the species of tree.

management company with the necessary certificates of competence to implement landscape management operations on sites. As a majority of the maintenance efforts may fall to community volunteers, considerations for annual maintenance include not only the physical tasks required to maintain green landscapes but also ongoing funding and neighborhood capacity-building in terms of tools and training skills.

Where funding is available for maintenance assistance by a contractor, contractors with experience in habitat creation and biodiversity management should be sought. It's recommended that the Historic Oliver Community Association develop a "Green Team" of leaders that can assist in providing oversight and ensuring that the vision and goals of Oliver's greening efforts is maintained when working with any contractors.

As the Oliver community and its residents implement greening projects across the neighborhood, the table below can be used as a template and filled in with the management needs that are specific to the project being constructed. Over time, Oliver's management plan will grow with the growing lists of implemented greening projects and green spaces.

Dormant Season			Late Winter/Early Spring			Vigorous Growing Season			Plant Maturity Season		
Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct

ANNUAL MAINTENANCE SCHEDULE (CONTINUED)

Greening Element	Maintenance Objective	Maintenance Task
Landscape Practices		
Shrubs and Perennials/Grasses	Maintain gardens and plantings in as healthy and attractive condition for as long as possible, to ensure biodiversity, habitat restoration, and screening/amenity value to the site.	**Inspection:** Visually check for the presence of any diseased or rotten wood; fungal or other infections/disease; dead plants. If any such issues are identified, then the advice of a qualified gardener (UMD Extension Master Gardeners) should be sought.
		Planting or Replacing: Calculate and order landscape material. Plant landscape material. Water new plantings regularly each week during growing season (April to September) and at least weekly in dry periods to maintain healthy growth.
		Pruning Shrubs: Assess and conduct pruning appropriate to the species of shrub.
		Cut Back of Perennials/Grasses or Meadows: Cut back plants to about one foot height. This can be achieved using a string trimmer for smaller areas. Don't use herbicides!
Turf Renewal and Mowing	To maintain healthy and suitable lawn areas, appropriate to function and use.	Plant new turf as needed in the early spring and late fall. Mow 2 times per month in growing season (April to September) or as needed if less.
Weeding/Mulching	To conserve soil moisture, moderate soil temperatures, protect roots, reduce weeds, and help prevent trunk damage from lawnmowers and weed trimmers.	Weed around the base of trees and within landscape beds to prevent weeds from out competing native plantings. Add mulch to tree wells and landscape beds, but it should not exceed three inches in depth. Although organic mulches break down over time they should only be replaced as needed to maintain their original depth.
Irrigation	Provide efficient irrigation systems such as drip irrigation, soil soakers, and efficient sprinkler systems to maintain healthy landscapes and conserve water use.	Water landscapes only when the ground is dry and preferably no more than once a week. Water during the coolest part of the day (preferably morning).
Invasives Removal	To maintain healthy and sustainable landscapes to avoid being out-competed by aggressive invasives.	Remove and properly dispose of invasives within tree wells and landscape beds.

Dormant Season			Late Winter/Early Spring			Vigorous Growing Season			Plant Maturity Season		
Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct
					■			■		■	
■					■	■				■	■
			■							■	■
			■	■							
					■		■		■		
■						■		■		■	
					■	■	■	■	■	■	
■		■									

ANNUAL MAINTENANCE SCHEDULE (CONTINUED)

Greening Element	Maintenance Objective	Maintenance Task
Hardscape + Furnishing Practices		
Pervious Paving	Maintain functioning pervious paving that allows for maximum stormwater filtration.	**Inspection:** Remove sediment, leaves, weeds, and debris.
		Vacuuming/Pressure Washing: (as needed per manufacturer)
Site Furniture & Fencing	Ensure that all fixtures are safe, clean and comfortable to use.	**Inspection:** All fences and site furnishings should be checked for mechanical damage, vandalism, settlement, staining, litter and debris or any other defect. Any such defects should be documented, and a corrective methodology agreed with the community association and land owner.
		Fix or Replace Broken Pieces: Remove all defective elements and replace with new products.
Capacity-building Practices		
Submit Grant Applications	Develop funding stream for design, construction, and maintenance of neighborhood greening projects.	Draft grant applications with support materials for submissions.
Organize Volunteer Events	Build coalition of community volunteers to maintain and steward Oliver's greening projects.	Schedule and organize community volunteer events to coincide with landscape and hardscape + furnishings practices.
Training Sessions	Invest in community member capacity-building skills through city- and state-run training programs.	Schedule and organize community training events and workshops led by non-profit, city- and state-run environmental programs.

Dormant Season			Late Winter/Early Spring			Vigorous Growing Season			Plant Maturity Season		
Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct
(as needed per manufacturer)											
CBT Keep Maryland Beautiful	CBT Watershed Assistance Grant Program Environmental Education Grant Program			CBT Urban Trees Award Program Green Streets, Green Jobs, Green Towns (G3)				CBT Urban Trees Mini Grant Community Engagement and Restoration Mini Grant	CBT Outreach and Restoration Grant Program		
	TreeKeepers Intro to Pruning	TreeKeepers Intro to Pruning	Baltimore City Weed Warriors Pathway	TreeKeepers Core 1, 2, and Intro to Planting					CBLP Level 1: Green Infrastructure and Sustainable Landscape Training	TreeKeepers Core 1, 2, and Intro to Planting	Baltimore City Weed Warriors Pathway 1

MONITORING THE VISION

As the Master Plan projects are implemented, progress can be tracked and reviewed to determine how well the vision of the plan is being fulfilled through the goals and objectives, and enable transparency and accountability in plan implementation. The Historic Oliver Community Association should consider hosting an annual "Oliver Greening Coalition" to discuss ongoing partnerships; highlight past challenges and celebrate successes; and outline future projects, potential challenges and potential opportunities. All partners involved in working with the Historic Oliver Community Association to implement this plan should participate in this annual meeting. Tracking the success of this master plan will be critical to maintain the momentum of its implementation and keep partners energized.

FUTURE COMMUNITY ENGAGEMENT OPPORTUNITIES

This section identifies some of the lessons learned from community engagement opportunities to date, and also identifies possible avenues for new community engagement efforts, such that community engagement efforts are both "broadened" and "deepened".

CONTINUING EXISTING EFFORTS

People & Stakeholders

- **Oliver Greening Master Plan Steering Committee**
  Meeting throughout the course of the project, the Oliver Greening Master Plan Steering Committee members have displayed a high level of interest in, and support for, the Oliver Greening Master Plan with respect to both its environmental and community development goals.
- **Baltimore City Department of Planning**
- **Baltimore City Department of Public Works**
- **Baltimore City Department of Transportation**
  Each of the three entities, listed above, contributed to supporting the development of and reviewing the viability of the Master Plan. While the Plan to date has focused on community input and mobilization, future implementation efforts should be undertaken in close coordination with each of the agencies. The expertise provided by these entities should continue to be sought during the implementation phase of the Master Plan.

POSSIBLE NEW ENGAGEMENT OPPORTUNITIES

People & Stakeholders

- **Local Elementary and Middle Schools** As the Oliver Greening Master Plan develops and continues to gain traction, local school staff may be willing to dedicate time and resources to working to engage students with the Plan. There may be opportunities to connect with middle school-age neighborhood residents who are hardworking, ambitious, and civic minded.

REBATE, CREDIT, AND GRANT PROGRAM OPPORTUNITIES

Implementation of the projects discussed in this report, or of any projects inspired by this report, will require coordination of funding and material support from a variety of sources. The precise funding "recipe" for any given project will vary depending on several variables. Broadly, the two biggest variables influencing the appropriate funding mix for any particular project are likely to be (a) the project's purpose: does the project address stormwater management and environmental stewardship alone, or is the project pursuing other goals (e.g. economic development; community building) in a manner consistent with the principles of good environmental stewardship; and (b) whether the project is being executed as an individual effort by a single property or business owner, to take effect on a piece of privately owned land, or whether it is being executed under the auspices of a community or public

entity to take effect on property which is in some way open to the public or communally managed.

This section identifies target funding methods/sources, from the categories of tax/municipal fee credits and grant programs. The credits and grants discussed in this section align closely with the environmental restoration and collective sustainability goals of the Greening Master Plan.

GRANTS AND OTHER SUPPORT

Chesapeake Bay Trust (CBT)

The Chesapeake Bay Trust makes funding available to nonprofit entities and other groups through over 15 different grant programs, generally falling under one of four broad categories: Restoration & Retrofits; Environmental Education; Outreach; and Capacity Building. As projects recommended and described in this Report are implemented, appropriate funding will

EVENTS & ACTIVITIES

Community Centered Art

Art projects, either completed by local artists, or executed as a participatory community project (e.g. Candy Chang's "I Wish This Was"; "A Nice Place for a Tree"; and "Community Chalkboard" installations/ projects) can be an opportunity for community members to share experiences. Team members working to implement the Oliver Greening Master Plan can be on hand to guide the conversation towards topics at the intersection of environmental stewardship and community development. These projects may also represent an opportunity to begin developing themes for future implementation of signage and wayfinding projects.

Planting Days

In the past, HOCA has had success in mobilizing community participation in "Planting Days" throughout the neighborhood. Encouraging community "block captains" to organize planting days on their own blocks will achieve certain planting-related Master Plan goals in their own right, while also serving as a community building and mobilization opportunity that can be leveraged to implement future projects.

Youth Volunteer Programs

Oliver Greening Master Plan implementation efforts should look for ways to capitalize on the needs and energy of neighborhood children and teenagers. Pursuant to state requirements, Maryland schools have incorporated service learning into their graduation requirements. These service learning requirements, as implemented at schools near or within the Oliver Greening Master Plan project area, may represent opportunities to engage local youth in the implementation of the Master Plan. Additionally, these volunteer opportunities can represent a chance for college-bound students to enhance their applications with volunteer leadership activities. Looking ahead, successful youth volunteer programs may be leveraged to create youth employment programs.

be sought under the applicable Chesapeake Bay Trust grant programs.

Parks & People Neighborhood Greening Grants

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. Parks & People's Neighborhood Greening Grants are project grants of up to $1000 that are available twice a year. These grants are provided only for projects that benefit Baltimore communities.

Water Baltimore

Water Baltimore is a not-for-profit organization with a mission to restore the quality of Baltimore's rivers, streams and harbor to foster a healthy environment, a strong economy, and thriving communities. While not a grant making institution, Water Baltimore can offer resources, training, and expertise through several of its programs. These programs include: rain barrel workshops, hosted both by Water Baltimore, or another organization with assistance from Water Baltimore; community tree plantings facilitated by Water Baltimore; and free paving removal site assessments.

Baltimore Green Network

The Baltimore Green Network (formerly known as the Growing Green Initiative) is s a City-led effort to use sustainable, innovative, and cost-effective practices for stabilizing and holding land for redevelopment, and reusing vacant land to green neighborhoods, reduce stormwater runoff, grow food, and create community spaces that mitigate the negative impacts of vacant properties and set the stage for growing Baltimore. Growing Green provides funding to community groups through its "Care A Lot" program, which provides stipends to community groups who maintain vacant lots, and has in the past provided $300,000 in funding to community groups through its Growing Green Design Competition.

Tree Baltimore and Baltimore City Recreation and Parks' Forestry Division Tree Program

Tree Baltimore serves as the umbrella organization for all City agencies and private organizations in their effort to increase the tree canopy of Baltimore. Tree Baltimore's goal is to increase the city's tree canopy to 40% by 2037. Tree Baltimore offers several programs under which residents and business owners can request, and receive, free trees. In addition, the Baltimore City Recreation and Parks' Forestry Division a street tree

planting program under which residents may request to be put in a list to have new tree pits cut in the public right of way in front of their homes.

National Fish & Wildlife Foundation Chesapeake Bay Stewardship Fund

Already a valued partner in the current Master Plan, The National Fish & Wildlife Foundation (NFWF) operates multiple grant programs geared towards promoting better stewardship of the Chesapeake Bay, including local streams. Funds are available for both project implementation, and for enhancing grantee's technical capacity.

Baltimore Gas & Electric Green Grants

BGE Green Grants are grants of between $500 to $10,000 offered to communities within BGE's service area. BGE Green Grants are awarded to non-profit organizations implementing projects in one of four focus areas: conservation; education; energy efficiency; pollution prevention; and community engagement.

Baltimore City Department of Housing Community Development Block Grant Program

The Baltimore City Department of Housing's Community Development Block Grant (CDBG) program is a vehicle by which federal funds are distributed directly to non-profit and public agencies that support housing and public-service programs. The primary objective is to develop viable communities by providing low- to moderate-income families with decent, affordable housing, to create suitable living environments, and to expand local economic opportunities. The program has many objectives, the most relevant of which for the purposes of the Greening Master Plan is the CDBG program's interest in neighborhood revival (increasing internal and external market confidence in neighborhoods and creating conditions favorable to the flow of fiscal and social capital, such as by eliminating blight, capitalizing on underutilized assets, and landscaping vacant lots, et al). These priorities align well with the goals of the Greening Master Plan.

§319(h) Grants

Under the Federal Clean Water Act §319(h), grant funds are available to reduce or eliminate water quality impairments that are associated nonpoint source pollution. Nonpoint source pollution is pollution which does not come from a single source, but rather is caused when water from rainfall or snowmelt moves over and through the ground, picking up natural and human-made pollutants. In Maryland, the §319(h) Grant Program is administered by the Maryland Department of the Environment (MDE). The opportunity for §319(h) funding is offered to local and State entities including county and municipal agencies, Soil Conservation Districts, State agencies and State institutions of higher learning. Projects may include subcontracts for private firms and nonprofit organizations for consulting, engineering, construction and other tasks. This grant is most appropriate for projects implemented at or by public institutions within the Greening Master Plan project area, such as the Dr. Bernard Harris Sr. Elementary School.

U.S. Environmental Protection Agency Urban Waters Federal Partnership Grants

The EPA's Urban Waters Program helps local residents and their organizations, particularly those in underserved communities, restore their urban waters in ways that also benefit community and economic revitalization. EPA expects each award to range from approximately $40,000 to no more than $60,000 in EPA funding. The Urban Waters Federal Partership grants fund projects that meet the following four program objectives: address local water quality issues related to urban runoff; provide additional community benefits; and foster partnership between community-based organizations, local governments, and other key partners.

Maryland Environmental Trust "Keep Maryland

Beautiful Grants"

The Maryland Environmental Trust (MET) works with landowners, local communities, and citizen land trusts to protect Maryland's landscapes and natural resources as a legacy for future generations. MET makes grants available to land trusts and community environmental organizations within Maryland. These grants are subdivided into two categories: the Margaret Rosch Jones Award, which makes available up to $2,000 to non-profit groups or communities for ongoing projects or activities that have demonstrated success in solving a local or statewide environmental issue. The Bill James Environmental Grant makes available up to $1,000 to youth groups for proposed environmental education projects.

TAX/FEE CREDITS AND REBATES

Credit and rebate programs may be more appropriately treated as tools to lower costs, rather than to cover costs: qualification for, and receipt of, credits and rebates requires an expenditure on the "front end" of a project, the impact of which is mitigated after the fact by a reduction in financial liability (credits) or an amount of money returned after a given liability has been satisfied (rebates).

Baltimore City Single Family Property Stormwater Fee Reduction

Single-family property customers of Baltimore City's municipal water system may apply for credits on their water bill by undertaking measures to reduce demand upon the City's drainage system or reduce the City's cost of stormwater management. Credits may be earned for participation in approved public projects, such as stream clean-ups, tree plantings or de-paving events; for installing and maintaining simple best management practices on their property, such as constructing rain gardens, planting trees, and/or installing rainwater harvesting systems (e.g. rain barrels or cisterns); or for implementing more sophisticated best management practices as approved by the Maryland Department of the Environment.

Baltimore City Home Improvement Tax Credit

The Baltimore City Home Improvement Tax Credit program provides credits on property taxes for homeowners who improve their property. To be eligible, the property must be owner occupied for more than six months each year; have had improvements that do not exceed $100,000; and have experienced an increase in the assessed value of the property due to the improvements made to the property. Landscaping and similar improvements can and do contribute to the value of a property as assessed by the state of Maryland. More broadly, landscaping can contribute to the sale value of a property (itself a factor in determining the value of a home for tax purposes).

Homeowners may wish to explore the combined financial benefit of applying for both the Baltimore City Single Family Property Stormwater Fee Reduction and the Baltimore City Home Improvement Tax Credit to mitigate the cost of implementing more sophisticated best stormwater management practices.

CONCLUSION

The strategies and recommendations in this Master Plan are intended to serve as a catalyst for neighborhood engagement in the revitalization of their community. Oliver residents are encouraged to modify the ideas presented here to suit their needs, always mindful of their role as stewards of both the natural and built environment, and the importance of ensuring that future generations inherit a sustainable, functional, and livable Baltimore City.


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