

Northeast Brandywine Riverfront
U.S. EPA Brownfields Area-Wide Plan
Wilmington, Delaware

ACKNOWLEDGEMENTS

A project of this scope and magnitude could not be realized without the support and commitment of many individuals. It is important to acknowledge the vision and leadership of those that assisted in the preparation of this plan, especially the elected officials of the City of Wilmington, as well as the City staff that supported technical work required.

All of the participants that played a valuable role in the project, including government, institutional, and community leaders, are too numerous to list.

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Abandoned rails of the former Brandywine Industrial Track, adjacent to Brandywine Mills Park.



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THE HISTORY - WHY PREPARE THIS PLAN?

This plan focuses on the opportunities to implement many of the planning concepts that have been discussed and worked-on by the Northeast Neighborhood over the past few years. The key aspect of this effort is the fact that the City is not only addressing neighborhood revitalization, it is also responding to new opportunities by rethinking how large swaths of land can set the stage for making its Brandywine riverfront more vibrant and serve as a major economic driver. Community planning in this context is more than preparing a preferred development proposal.

Instead, it represents the proactive role government can take in working with residents, property owners, and developers to ensure that the redevelopment of former or under-utilized industrial/brownfield sites are undertaken in a manner that fully maximizes their potential with regard to meeting community needs and the result is a greater quality-of-life for residents. Ultimately revitalization can be achieved in a manner that compliments the existing neighborhood and melds the new with the existing, to the benefit of all.

WHAT IS A BROWNFIELDS AREA-WIDE PLAN?

This Brownfields Area-Wide Plan (AWP) is focused on a defined area within the larger Northeast Neighborhood that includes a grouping of brownfields properties. The planning aspects of the project are not limited solely to those properties but evaluates a larger area that may have been influenced by the presence of environmental contaminants, other environmental related constraints, or by the resultant blight that the mere presence of the brownfields created, and therefore impeding investment over many years. The project area includes the Brandywine River to Vandever Avenue and N. Market Street to Northeast Boulevard.

In order to promote redevelopment activities that are context sensitive and mesh well with their surroundings

the City took the lead in undertaking the preparation of the AWP to advance initiatives that integrate land use, transportation, and economic development elements to create a comprehensive urban redevelopment strategy. The AWP process validated and updated all of the previous findings and conclusions from planning efforts. The plan considers site specific reuse and redevelopment and neighborhood improvements, including broader infrastructure needs required to attract and support private investment.

The AWP also should help to serve as a catalyst for increased community education around the incredible environmental and community value of the Brandywine as unique natural resource.

THE CATALYST BROWNFIELD SITES

Four Catalyst Brownfield sites were the focus of this reuse planning effort and through the AWP planning process additional smaller-scale potential brownfield sites were identified. The four Catalyst Brownfields sites are:



Diamond State Salvage Site (DE-0281)

This 4-acre site is located along the Brandywine River, immediately south of the 16th Street Bridge. It was a salvage yard from 1949 to 1992. Substantial environmental clean-up activities orchestrated by the U.S. EPA occurred on the site in 2000. These activities have removed a significant hurdle in redeveloping the site, additional site investigation and risk assessment work will be necessary to complete the DNREC Voluntary Cleanup Program process. This will be required to utilize the site for public recreational and residential uses, as proposed by the AWP site reuse plan.



Wilmington Maintenance Yard (DE-0313)

This site is less than 3-acres and is situated along the Brandywine River, adjacent to northern side of Northeast Boulevard. The AWP site reuse plan proposes that this property be utilized for the right-of-way for the 12th Street Connector Project (13th Street at this location). The remainder of the site would become a living shoreline and gateway treatment along the river’s edge and a parking lot on the inland side of the 13th Street.



Former Wiley Cork Site (DE-0324)

Most of this site, 4.25-acres of which are undeveloped, is covered with an asphalt “cap” as result of environmental assessment work completed by DNREC in 2005. The existing cap is an interim site-specific remedial action with a non-residential reuse restriction. The AWP site reuse plan proposes to redevelop the land as residential, therefore additional environmental remedial design and potential remedial actions will be required to achieve DNREC approvals for the intended end-use.



The Moyer School Property

This complex of buildings is located on two separate parcels divided by 17th Street. The school is closed and the buildings are vacant, boarded-up, and blighted. Portions of the property were previously owned by Hercules, Inc., a chemical business, which included the largest of the three buildings. Although there are records of underground storage tank removal occurring on the site in 1991, there are no other records regarding environmental conditions. The AWP proposes one possible option which included the acquisition of the Moyer School by the Boys and Girls Club. That long term proposal included razing the existing buildings for a new outdoor recreational facility associated with the club giving them one continuous campus. In mid-March 2019 it came to the attention of the City that the ownership of this site recently changed. Due to this recent property transfer coordination with the new property owner is not reflected as part of the Area Wide Plan. No communication with the new property owner has occurred regarding their intentions and no formal plans have been submitted to the City for the property. Any new plans for this property can be incorporated into future development and we do note that this is a Vision Plan and nothing is set in stone as to what may actually happen with any of the ideas expressed through this lengthy planning process.

THE OVERALL SITE REUSE VISION

The AWP Overall Site Reuse Vision Plan illustrates a potential build-out scenario for all of the key Catalyst Brownfield sites. It illustrates how land development activities link with public infrastructure, including the 12th Street Connector Project, a new riverfront park, green infrastructure and resiliency projects, into a fully-realized mixed-use neighborhood with civic amenities. The vision extends the Northeast neighborhood to the Brandywine to create a riverfront community that is reconnected to the water and its assets.

THE PRIORITY ACTIONS

Due to the complex nature of all of the inter-related factors and considerations needed to develop an economically viable and physically construct-able list of improvements, it is important to have a focused set of actions needed to support moving the plan from vision to reality. The following is a list of suggested high-priority actions that can serve as a roadmap for what needs to happen first, who is needed to lead each effort, and a potential strategy for how to undertake each effort. Emphasis is placed on those aspects that will be needed by the private sector to be able to prepare an accurate and informed development plan and pro forma, and also considering public infrastructure that will be needed to attract and support private investment.



Homes being rehabbed along Vandever Avenue.

1. First and Foremost - Focus on the Uplifting the Existing Residential Blocks – The emphasis of this effort is improving the existing residential housing stock within the neighborhood, starting with 17th Street and Vandever Avenue. The effort should focus on expanding affordable homeownership, preserving existing housing stock, and undertaking early improvement activities while more time-consuming roadway and other infrastructure projects are being designed and constructed. A major aspect of this action is creating the management capacity to lead the effort by organizing and overseeing all aspects of the initiative. Organizations need to be identified, recruited, and committed to play key roles in this effort—engaging the community on a property-by-property basis; undertaking necessary rehabilitation; and acquiring and managing long-term quality rental homes.



Site preparation of brownfields performed in accordance with regulatory requirements.

2. Complete Environmental Assessment & Remedial Plans – All of the Catalyst Brownfield sites require additional actions to be able to reuse them for their highest and best use as identified in the AWP. The City should work with the U.S. EPA and DNREC to finalize remaining environmental assessment activities, to develop remedial action plans, and undertake any require physical on-site clean-up work. There is a potential for remedial design funding activities funded through DNREC for the Diamond State Salvage site. The City has also applied for follow-up U.S. EPA funding to advance these activities throughout the AWP study area.



Future 12th Street Project alignment (New 14th Street Extension) through the Diamond State Salvage Site.

3. Advance the 12th Street Connector Project – After more than four decades of discussions and planning, efforts to move this long-desired connection towards reality are underway, through the leadership of WILMAPCO. This separate but coordinated effort with the AWP has identified a preferred routing alternative which aligns with the proposed site reuse plans in the AWP. The combined package of improvements will greatly enhance connectivity to the AWP, specifically the riverfront and the Catalyst Brownfield sites. Every effort should be made to support funding to complete engineering, permitting, and construction of the proposed improvements.



Highland Park, NJ
Image Credit: Cloud Gehshan Associates

4. Establish and Implement Branding, Signage, Security, and Gateway Projects – The community yearns for shorter-term improvements that reinforce the community commitment to their own neighborhood. Creating branding elements for the neighborhood and the riverfront can be lower-cost and shorter-term improvements to achieve visual results. An important aspect of this could be the creation of signing and landscape plantings at gateway entry points into the neighborhood. If branding and designs are undertaken early, larger elements could be folded into intersection improvements constructed as a part of the 12th Street Connector Project. In addition, the community expressed a desire for greater safety and security improvements. These could include shorter-term actions such as public safety camera systems, such as those being installed in portions of Old Brandywine Village. As new physical improvements are designed, the integration of visibility and site-line aspects to promote safer places should be considered.



The Lawn on D (Boston), MA
Image Credit: He+A

5. Consider Interim Uses to Increase Neighborhood Activity, Awareness, Engagement, and Pride – Through the AWP planning process, discussions were held regarding the ability to create activity without major investment. Many of the brownfield sites are not in a state that can support even interim use activity. The former Wiley Cork site is one site that was identified as having the potential to support temporary uses. The current asphalt engineering control or “cap” that exists on the site is capable of supporting temporary activities. Potential interim uses could range from a container nursery to grow vegetation for city stormwater, resiliency projects, as well as street trees. The site could also serve as a temporary venue for events such as festivals and fairs which New Density Fellowship is exploring. Pop-up uses focused on the riverfront should also be considered for the street-end terminus of Church Street and the riverfront, adjacent to the Elks Club.



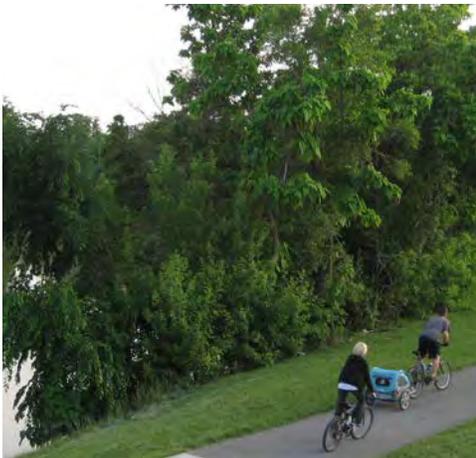
The Brandywine River's edge.

6. Increase Resiliency and Riverfront Recreation Together – Fully defining the parameters of the riverfront park on the Diamond State Salvage site will ensure that increased resiliency is achieved while supporting recreational opportunities and plugging-in private development. All of these elements need to work together seamlessly. This can only be achieved by undertaking a resiliency park master plan as a component of the remedial action plan design for the site. The development for the entire area should be designed from riverfront inland, since the relationship of buildings especially will be dependent upon the water line, the flood elevation, and the final elevation of the 12th Street Connector Project. This effort should include finalizing a recreational facilities program for the park to determine what uses and facilities are most desirable and sustainable in this location from the perspective of both the neighborhood's needs and those of the City's overall park system.



Village of Eastlake
Image Credit: Google

7. Work Towards the Larger-Scale New Development Phase – The ability to undertake substantial new development as depicted in the AWP will take time and is a longer-term action. The other actions listed here, especially focusing on the existing residential blocks and the public infrastructure investments, are critical to queuing-up private development. Each project should be thought of as a step towards the ultimate phases of development. And in the case of the Market Street corridor, new infill development could occur there sooner since many of the upfront public investments required further south in the AWP study area, are not required to proceed.



Riverfront trails promote connectivity to and along the riverfront.

8. Increase Neighborhood Connectivity – This is really a focus on upgrading the pedestrian and bicycle connections. Emphasis should be placed on upgrading sidewalks and streetscaping along Church and 17th Streets and Vandever Avenue. It also includes filling-in the greenway gap along the Brandywine, from Race Street to the 16th Street Bridge/Pine and Jessup Streets intersection. This connection would link to the planned multi-use side path as a part of the 12th Street Connector Project, extending the Northern Delaware Greenway Trail, south to Northeast Boulevard. Connectivity across the Brandywine is also important for pedestrians and bicyclists. Access to and from the Upper East Side and Downtown is very close so improved connectivity would spur greater opportunity for all areas.

| BROWNFIELDS REMEDIATION & SITE PREPARATION | | | |
|---|---|--|--|
| U.S. EPA Region 3 Targeted Brownfields Assessment (TBA) | • Provide assessment of eligible brownfields sites to be used for EPA | • Technical Assistance • Funding | • Coordinate with EPA Region 3 to submit TBA application to receive no cost assessment on key sites in AWP area |
| U.S. EPA Brownfields Cleanup Grant | • Provide funding to clean-up contaminated sites on public or privately owned property | • \$300,000 • Site needs identified • Deadline Fall 2019 | • Wilmington may be ready to apply for EPA Brownfields Cleanup funding for key sites in the AWP by the next round of EPA Brownfields grants in the fall of 2019 • Wilmington should continue to work with EPA on assessment and safety/contamination in general |
| U.S. EPA Brownfields Cleanup Revolving Loan Fund | • Provide loan financing for a revolving loan fund and programs to remediate sites owned by public, non-profit, and private entities | • Up to \$1 million • 20% match required • Counties Fall 2019 (Delaware and other areas) | • We anticipate that full grants will be submitted in late fall of 2019 • RLF would allow Wilmington to manage loans and judgments for multiple brownfields sites within the AWP area |
| DNREC Site Investigation & Restoration (SIRS) Hazardous Substance Site Cleanup Loan Program | • Provide low interest loans to property owners and businesses who are potentially responsible parties or hazardous site operators with an executed agreement with the Department | • Loan amount • Maximum loan: \$100,000 • Being Submitted | • Potential source of funding for additional brownfields projects in the AWP area |

9. Establish a Capital Improvement Programming and Funding/ Financing Plan – As is depicted in Chapter 3 of this report, all of the follow-up design and engineering, as well as construction, will require significant capital expenditures. The City should reference the proposed projects to include them in the City’s overall Capital Improvement Program (CIP). The CIP should program capital costs for public investments and determine what will be public and also how private investments relate in order to maximum the ability to leverage all expenditures as match for public funding applications. This work should be done in conjunction with the City’s project Task Force, to ensure the programming of capital projects are timed with the development phasing and the ability to maximize the ability to garner public funds to undertake all of the required investments.



An activity and engaged project Task Force is important to keep momentum going.

10. Form a Project Task Force and Dedicated Project Manager – Finally, a project of this scale and magnitude requires a dedicated team to oversee and coordinate. A dedicated project manager within the City should be identified to coordinate all activities, both public and ultimately private. This person would also serve as the leader of a Northeast Neighborhood Brandywine Riverfront Revitalization Task Force consisting of City department officials and Northeast Blueprint Communities team, as well as, private sector partners, non-profit and community groups, supportive and involved State of Delaware officials, project consultants working on key initiatives, and others.

WHAT ARE THE BROWNFIELDS AREA-WIDE PLAN’S LIMITATIONS?

The recommendations in this document are purely for guidance in decision-making; the plan is not the letter of the law. The decision-makers include multiple parties and therefore the plan should serve as a common reference for all parties, as step-by-step decisions are made.

The redevelopment plans developed for the targeted site reuse areas illustrate one or more potential build-out scenarios for the properties that are the focus of redevelopment efforts. The proposed physical layouts depicted on the reuse plans were developed

in conjunction with the input from a diverse group of stakeholders, including residents. Ultimately, the final configurations of the development plans will change as the level of design progresses. So why is this effort important? By developing a likely build-out scenario for each targeted site reuse area it allows the City and other public agencies to fully understand the real physical and economic constraints and opportunities of each of the targeted reuse areas and their key sites. It also serves as a valuable tool for working with the private sector as incremental development proposals are prepared and submitted to the City for review and approval.

This effort is not one that can lead directly to bricks and mortar building. Although the AWP focuses heavily on key next steps, it is a plan that organizes an overall strategy with priorities to establish a focused list of actions, especially for public infrastructure. It provides context within which decision-making can occur over time, including for opportunities or issues that might arise that could not be anticipated at the time this plan was developed. The plan also outlines the strategic next steps for the key priority projects, which in many cases includes performing the detailed design and engineering required to permit and construct physical improvements.

Although there is a desire by many to see immediately implementable projects, an effort of such magnitude inevitably results in a series of recommendations that require further effort to advance toward true realization. In the vast majority of cases, the next steps require determining specific details through a design and engineering process, together with a focused effort to secure financing and other resources needed for implementation. These steps will determine how a project should be realized, its functional refinements, and the exact specifications needed to advance towards construction. This AWP does not, however, go “back to the drawing board” with regard to recommending to conduct further analysis as to whether or not a specific recommendation should be pursued at all. In most cases this planning effort is the culmination of other early efforts, so the time is here to move towards implementation and realization – not more high-level planning.

THE IMPORTANCE OF COMMUNICATION, COORDINATION, AND EDUCATION

Building on the notion of a creating a dedicated team focused on the implementation of the recommendations in this plan there are three key elements that will be important to that group’s success.

Communication. In order to fully realize this plan, it is recommended that a formal communication strategy be consider that provides regular community updates on all of the steps and projects. This includes requiring that private developers provide public engagement as a part of their development process.

Coordination. It is also recommended that this project coordinates closely with all of the partners required to make the ultimate realization of the development truly great; this includes the City, the Northeast Blueprint Community team, U.S. EPA, WILMAPCO, DNREC, DELDOT, as well as many others.

Education. In order for the outcomes of this AWP to happen and for them to be successful, the role of education is important. This is especially true for the relationship of addressing brownfields conditions in a way that is safe and sound and provides assurance to the public that human and ecological health are being protected. This land-based element extends to the importance of the Brandywine as a special natural resource worth protecting and improving. There are numerous regional and local efforts focused on improving the quality the river. These efforts need to be promoted at the neighborhood level. Many residents already appreciate the potential that exists to reach and experience the river. Education for others regarding this opportunity is the pathway to building broader support for garnering the resources needed to achieve all that is possible for the neighborhood - as a riverfront community.

Reference the AWP as a “Living” Guidance Document. This plan is purely meant to guide decision-makers in the development of the study area, it is not the letter of the law. This makes coordination and communication critical. Key stakeholders are wide-ranging, both public and private, and so it is important that this document serves as a common reference and a starting point for decision making and the AWP should be updated regularly to reflect project progress and as conditions change and evolve.

Overall Site Reuse Vision Plan



Northeast Brandywine Riverfront U.S. EPA
Brownfields Area-Wide Plan
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Stately homes along Vandever Avenue.

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1.1 HISTORY & BACKGROUND

History

The AWP study area is part of a larger Northeast Wilmington neighborhood called Price's Run. The presence of brownfields is the basis of the AWP and as is typically the case for communities that receive U.S. EPA Brownfields funding, there is an industrial legacy here. The AWP study area's waterfront location was the original driver of its industrial history. Pre-19th century, much of the land was marshland. The land was incrementally filled-in and over time numerous mills and manufacturing industries, such as the Jessup & Moore Paper Company and the Lamont Cotton Factory, located here to capitalize upon the ability to utilize the Brandywine as an exploitable energy source and production resource. Larger uses arrive in the late 19th century, such as the Delaware Granite and Mining Company, which created the quarry pond that exists today. In the 20th century new uses were attracted by the presence of available land close to existing industry, such as the former Wiley Cork Company which opened in the 1920s. Later, the demise of early-industrial industries, led to a new generation of activities such as auto and metal salvage. Although there are a few active and vibrant industrial operations in the AWP, including Franklin Fibre – Lamitex Corporation and Masley Enterprises, makers of Masley Gloves, by the 1980's most of the other industries closed. This left, large

swaths of environmentally-constrained and blighted properties, impacting the adjacent neighborhoods and reducing the overall economic vibrancy of the City and driving the community desire to promote a new future.

Previous Planning Efforts

The U.S. EPA Brownfields Area-Wide Planning Program seeks to identify and implement the unified visions and objectives of residents, property owners, and local governments for the reuse of areas that have multiple brownfields. Previous planning efforts provide a starting point to build upon and in the case of Wilmington, recent plans and city policy initiatives anticipate that future development could be an opportunity to re-connect the neighborhood to the Brandywine for the first time in more than a century. This river-oriented approach could also serve as an anchor to attract significant new economic investment. In addition to learning from the previous work done, the AWP effort is conscious that 'planning fatigue' is an issue here. Because many members of the community have participated in numerous planning exercises but have seen little progress, the AWP has been tasked with focusing on validating previous recommendations, refining proposals and targeting implementation strategies.

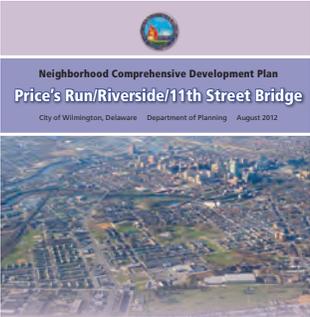


1931 Aerial view of the AWP study area showing the former industrial uses along the Brandywine, the Delaware Granite and Mining Company quarry pond, and the adjacent residential blocks of 17th Street and Vandever Avenue beyond. Note the smaller pond on the former Wiley Cork site to the right. This pond was located where the current asphalt cover exists today.

Summary of Previous and Related Planning and Improvement Efforts



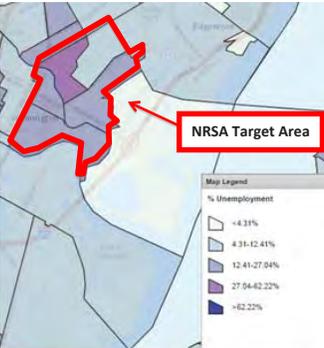
2004 | Waterfront Development District - The City adopted a slate of ordinances to guide reinvestment along the Christina and Brandywine waterfronts. Typically, this applies to large industrial sites that can support more complicated, mixed-use development, and can also provide dedicated, publicly accessible open space. The ordinances also establish design standards and design review protocols that would apply directly to the two Catalyst Brownfield Sites.



2012 | Neighborhood Comprehensive Development Plan for the Price's Run/Riverside-11th Street Bridge Analysis Area - This adopted plan guides policy and development decisions for a part of the City that includes the study area. Key recommendations include support for a future mix of residential and commercial uses: encourage housing types accessible to households of varying incomes – both market rate and affordable housing, establish design and façade controls, solicit private investment, advance homeownership, improve Northeast/Governor Printz Boulevard streetscape, and establish a river walk along the Brandywine. The document also recommends filling the quarry to create open space.



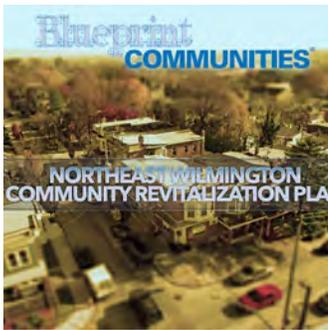
2013 | Brandywine River/Northeast Wilmington Redevelopment Plan - This plan commissioned by the Wilmington Housing Partnership, provides an overview of development determinants including the location of the floodplain, environmental concerns, and the unattractive nature of Northeast/Governor Printz Boulevard. It offers illustrative site plans of several build-out scenarios. By necessity, site development concepts are organized around a hypothetical alignment for the “12th Street Connector.”



2016 | City of Wilmington Delaware Neighborhood Revitalization Strategic Area (NRSA) - This plan was prepared by the City's Department of Real Estate and Housing to support application for a Neighborhood Revitalization Strategic Area amendment. Though the study area is a fraction of the overall “target area,” it is important because of its river frontage and several large developable parcels. The plan recommends an amendment to the Comprehensive Plan that establishes a NRSA designation for the Eastside/Northeast Corridor planning district, which includes the study area. This designation enables greater flexibility in the deployment of HUD Community Development Block Grant funds, establishes development planning objectives and outcome goals, and provides for annual monitoring of progress.



2016 | City of Wilmington Brandywine Riverfront Northeast Living Shoreline - This study provides design concepts for shoreline and streambank stabilization, improving water quality, and providing access and amenity in response to community needs. The proposals are “designed to fit like a puzzle piece with future projects” and to establish long-term resiliency, augmenting shoreline protection with native materials such as vegetation and living, natural elements often times in combination with harder shoreline structures. Highlights include: paddle sport access, a river taxi stop, coordinated improvements at the combined sewer overflow outfalls, continuous riverside trail with benches, public parking areas, bike racks and paddle sport storage, and dedicating places for exercise, education, the arts, gardening, and urban farming.



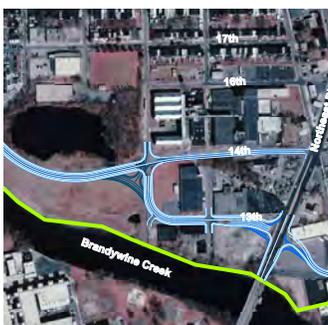
2017 | (Ongoing) Blueprint Communities Northeast Community Revitalization Plan - An interim step in a multi-year revitalization initiative, the focus of this effort is to grow the capacity of area organizations and individuals working to enhance the economic, social, cultural, and physical conditions of Delaware communities; fostering revitalization by incorporating community engagement and involvement in the planning process. The Plan covers Northeast neighborhoods, including the study area, and identifies specific opportunities such as recreational business, eateries, for-fee heritage tourism, rehabilitation of existing structures, increased home ownership in residential development, and pedestrian safety enhancements.



2018 | (Ongoing) Wilmington 2028 Comprehensive Plan for our City and Communities - This effort focuses on preparing a new city-wide comprehensive plan that will update city policy, shape public investment, and guide private development.



The Wilmington DeIDOT Transportation Alternative Program Grant Award (\$1M) - This includes street, lighting, sidewalk and other necessary changes along Vandever Avenue from North Market Street to Jessup Street, and then south on Jessup Street to the Brandywine River.

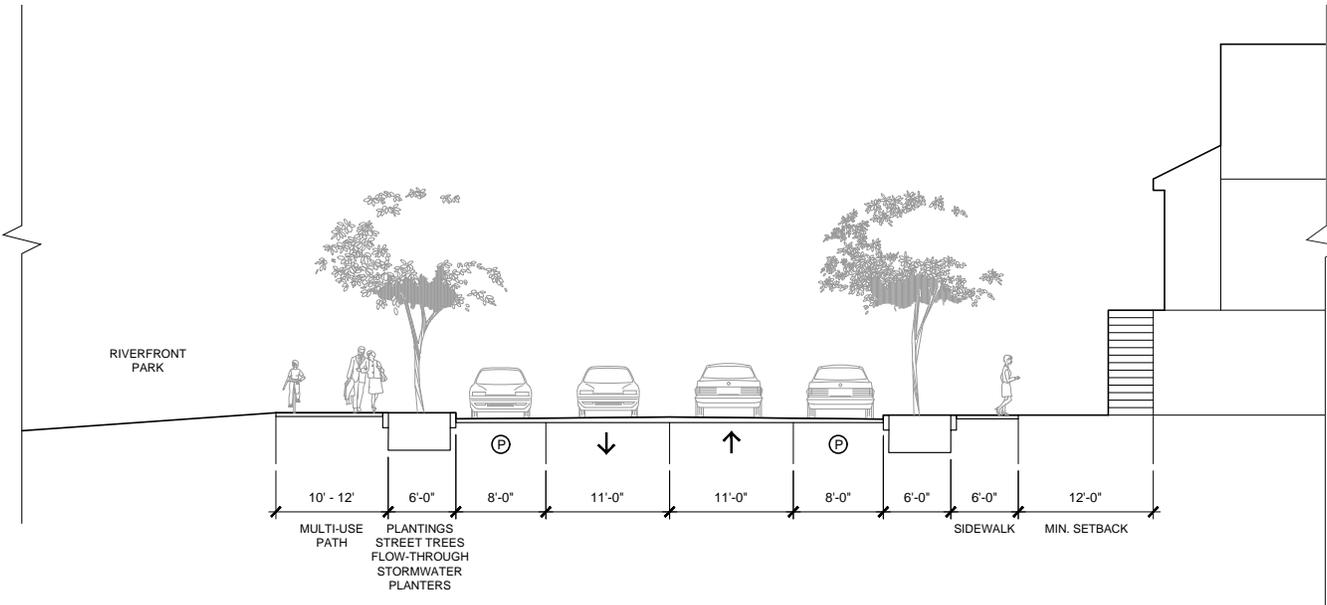


2018 | (Ongoing) 12th Street Connector Alignment Study - This project will evaluate and recommend the optimal location and design for the proposed 12th Street Connector, a roadway which will provide a more direct route from I-495 to downtown, redirect current traffic from Price’s Run, Riverside, and East Side neighborhoods, and create multi-modal connections for residents to access the Brandywine Riverfront. The concept will generate economic development opportunities by opening new land in the vicinity of and along the Brandywine Creek while providing the necessary roadway improvements to reduce neighborhood congestion and make the area more bicycle and pedestrian friendly.

2019 | The 12th Street Connector Project

The 12th Street Connector Project is inextricably linked to the development of the AWP. This new multi-modal connection will provide greatly enhanced access to all of the Brownfield Catalyst Sites and its ultimately location and character will be one of the largest influencing factors for all of the site reuse strategies.

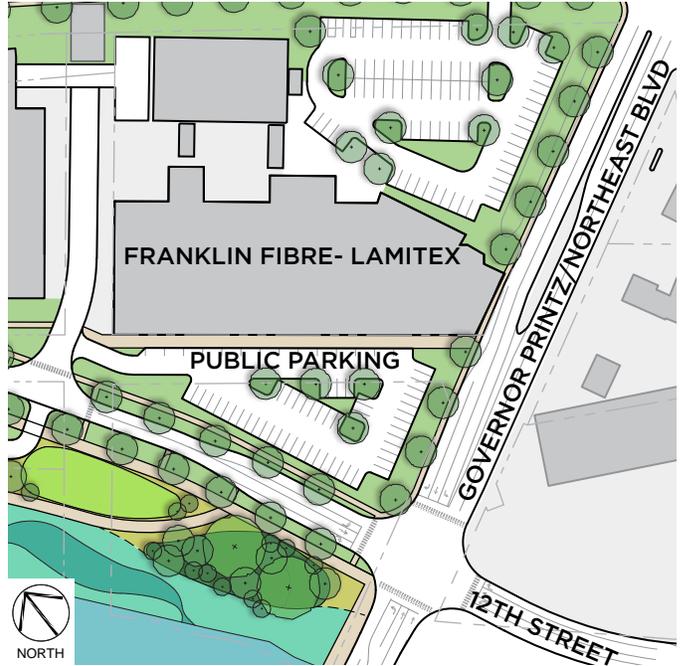
The 12th Street Connector Project, led by WILMAPCO, was a simultaneous effort that was undertaken with close coordination with the AWP, and vice-versa. This effort is inextricably linked to the development of the Northeast Brandywine Riverfront AWP and both projects are being coordinated. This new connection will provide better access to some of the large undeveloped parcels in the study area and its placement will impact the layout of new development. Essential design considerations that will determine the project’s success include pedestrian connectivity, multi-modal accommodations, traffic calming strategies, access for existing uses, and land development.



The new roadway segments of the 12th Street Connector Project will consist of a complete street approach focused on providing connectivity in a manner that support reuse planning. The project proposes to include only one travel lane in each direction, on-street parking, a dedicated multi-use side path separated from the roadway by a linear rain garden stormwater management area. The opposite side of the roadway will include sidewalks and street trees. The project should also consider architectural street lighting.



The intersection of Church and 14th Street will become a major focal point in the neighborhood. The 12th Street Connector Project is considering a roundabout as a traffic control device that will also increase pedestrian safety and act as a signature urban design element with landscaping.



In order to align the proposed roadway with 12th Street and Northeast/Governor Printz Boulevard, the Wilmington Maintenance Yard Brownfields Catalyst Site will be bisected by the new roadway.



The limits of the proposed 12th Street connector project.

1.2 MARKET SUMMARY

The market analysis undertaken as part of the AWP sheds light on the market opportunities present in the study area. This information is foundational for the determination of a feasible development program and implementation plan.

The Market Analysis for the AWP evaluates the market feasibility of potential redevelopment opportunities for several key sites including two high-priority Brownfields Catalyst sites owned by the City – the Diamond State Salvage site and the Wilmington Maintenance Yard. It is important to note that although these market opportunities were identified, they may not be appropriate or viable depending on the physical conditions and factors that exists within each of the targeted site reuse areas shown in Chapter 2 of this report. The local real estate market conditions were assessed to determine the economic viability of a variety of potential new uses for the area. Markets examined include retail, market-rate and affordable rental housing, sales condominiums, office, industrial/flex, and hotel, as well as agricultural, and recreational uses. Following are key market findings of the analysis.

Retail Market

A retail market analysis was conducted to identify gaps and opportunities for the potential development of new retailing at the four development opportunity sites. Examining retail supply and demand within a trade area encompassing the AWP study area, as well as a larger 3- and 5-Mile Radius trade area, the following retail opportunities exist with the area, although not all of them may be appropriate for the sites available for redevelopment with the AWP study area:

- A high-quality destination full-service restaurant;
- 25,000 SF in limited-service restaurants (up to 12 restaurants);
- An 18,000 SF supermarket;
- 18,000 SF in family clothing stores (6 or 7 stores);
- 8,000 SF in shoe stores (3 or 4 stores);
- 6,000 SF in specialty sporting goods stores (2 or 3 stores);

- 12,000 SF in furniture stores and 9,000 SF in home furnishing stores (3 or 4 stores);
- A 4,000 SF hardware store;
- A 7,000 nursery/garden center; and
- A 3,000 SF medical supply store.

Together, these opportunities could add over 115,000 SF of new retailing to the AWP study area.

Sales/Condominium Housing Market

To identify local trends in residential real estate and determine the potential for the development of new housing in the AWP study area, the Wilmington-area condominium market was evaluated. Given the area's condominium market conditions, one could expect a sales price of approximately \$150 to \$160 per SF for a new unit in the study area. Considering area sales prices and popular unit sizes among examined complexes, new units in the study area could likely command the following prices:

- \$225,000 to \$245,000 for 1,500 SF
- \$330,000 to \$255,000 for 2,200 SF

Regarding absorption rates, it appears that new condominiums in the study area could be absorbed at a pace of four to six units per year. That rate of sales would require a building type that could be constructed incrementally. Townhomes or smaller stacked townhome condominiums constructed in phased modules on one or a combination of development opportunity sites in the study area is a recommended prototype for this location. The study area could likely support 72 phased units.

Market-Rate Rental Housing Market

The market-rate rental housing market was examined to determine the potential for new construction apartments in the AWP study area. Given the area's rental market conditions, it appears that new modest market-rate rental housing could be a viable immediate development opportunity in the study area. The market findings result in a recommended complex of at least 150 units for the

most efficient building management and operations. A new development should include one- and two-bedroom units oriented to the mid-level market. These units could command:

- \$1,200 per month for an 800 SF to 1,000 SF one-bedroom unit
- \$1,425 per month for a 1,000 SF to 1,200 SF two-bedroom unit

Affordable Rental Housing Market

The affordable rental housing market was also assessed to determine the potential for an affordable component of new rental housing in the AWP study area. Considering the area's affordable housing market conditions, it appears that an affordable product could be viable for the study area on one of the development opportunity sites. Alternatively, a new rental development could include a mix of market-rate and affordable units. Affordable apartments should be one- and two-bedroom units with rents of \$760 per month for a 1 BR unit and \$800 per month for a 2 BR unit.

Office Market

To identify the potential for new office/commercial space in the AWP study area, current property listings were evaluated and the market conditions were assessed for multi-tenant office space, mostly in the downtown area. Because of office market conditions in the area, speculative traditional office space does not appear to be a viable use for the development opportunity sites or within the study area in general.

Industrial/Flex Market

To identify the potential for new industrial/flex space in the AWP study area, current property listings and assessed the market conditions for this type of multi-tenant space were also evaluated. Given the area market conditions, absent an interested dedicated user, industrial space does not appear to be a viable use for the development opportunity sites or within the study area in general.

Recreational and Agricultural Use

Finally, several recreational and agricultural opportunities for the AWP study area were assessed, most of which have been identified through prior efforts and plans for the area. For the recreational uses examined – including canoeing/kayaking, fishing, diving, and water taxi service – not only is there either interest or potential for these operators to expand to the AWP study area, especially if the Living Shoreline concept comes to fruition, but the retail market analysis conducted as part of this study indicates that there is sufficient demand to support two or three stores. As a result, it appears that these recreational uses and their associated business activity could be viable in the study area. Building on the unique aspects of the location and based on current interest and land availability, it appears that urban agriculture may be a viable use for the study area as part of a larger development plan on various key opportunity sites. These could be either an interim or longer-term use, but would be subject to the availability and environmental status of the land for which these uses might occur, which in turn may be a greater limiting factor than market opportunity.

1.3 COMMUNITY ENGAGEMENT

The AWP planning effort was well-supported by public engagement throughout the process and duration of the project. The planning process employed a strategy of inclusiveness, transparency, education, careful design, and commitment to identifying real and implementable actions. Over the course of the planning process started in January 2017, the project brought together public, private, and civic interests to give form to a vision and to prioritize the numerous elements needed to ultimately achieve the vision. The overarching intent is to create a comprehensive brownfield reuse strategy that ties together existing neighborhood assets and opportunities into one cohesive redevelopment and revitalization vision. The visioning process utilized several key components to gather input, explore opportunities, and solidify recommendations to achieve these results.

Project Steering Committee

The steering committee included elected and staff members from the City as well as representatives from key agencies, institutions, property owners, residents, and local business leaders. Many of the members of the steering committee are also active in other neighborhood, city-wide, or regional planning efforts and provided valuable insight and direction throughout the planning, review, and recommendation development process. The steering committee meetings were held on a regular basis, either separately or in conjunction with public workshops, to discuss the vision, goals, and objectives for the project as well as to develop specific redevelopment and infrastructure improvement concepts and evaluate alternatives as they were developed.

Community Planning & Design Workshop

A three day-long community planning and design workshop was held in May 2018. This intense, time-compressed series of on-site work sessions coordinated around community and key stakeholder engagement provided the opportunity to engage the community on multiple topics and to quickly shape the parameters of a desired redevelopment strategy. This event included a series of sessions focused on specific topics, such as parks, economic development, environment, transportation, land use and design, etc., while others were intended to gather and provide general information.

The intent of the community visioning workshop was to gather interested stakeholders together to efficiently inform the planning process and lead to expedited and well-informed decisions. Through effective on-site interaction with the place and the people of Huntington, planners were able to best learn how to craft and apply the ideas, tools, and techniques needed. The intense planning process allowed for “ground-proofing” of ideas, in real time, forming consensus quickly and building on the momentum and enthusiasm for the project. In this case, the intense interaction also fostered a creative design environment of discovery for City staff and planners, together with community participants.

The community visioning process included two separate highly interactive community engagement workshops. The first was held on an evening in May 2018 and the second October of the same year. At the first workshop community participants were asked to break-out into workgroups around tables. Each workgroup was given a series of visioning questions in sealed envelopes along with a series of color-coded dots and maps of the study area to record their responses. In addition, a visual preference survey was available for participants to rate and comment on a wide variety of uses and types of developments as way to inform the planning and design process.

The second workshop focused on evaluating two distinct reuse alternatives along with commenting on various potential public infrastructure and civic improvement options. Both events were very well attended and the planning team obtained valuable insight related to the issues, opportunities, and desires of the community regarding future improvement considerations with the study area and in some cases, the City as a whole.

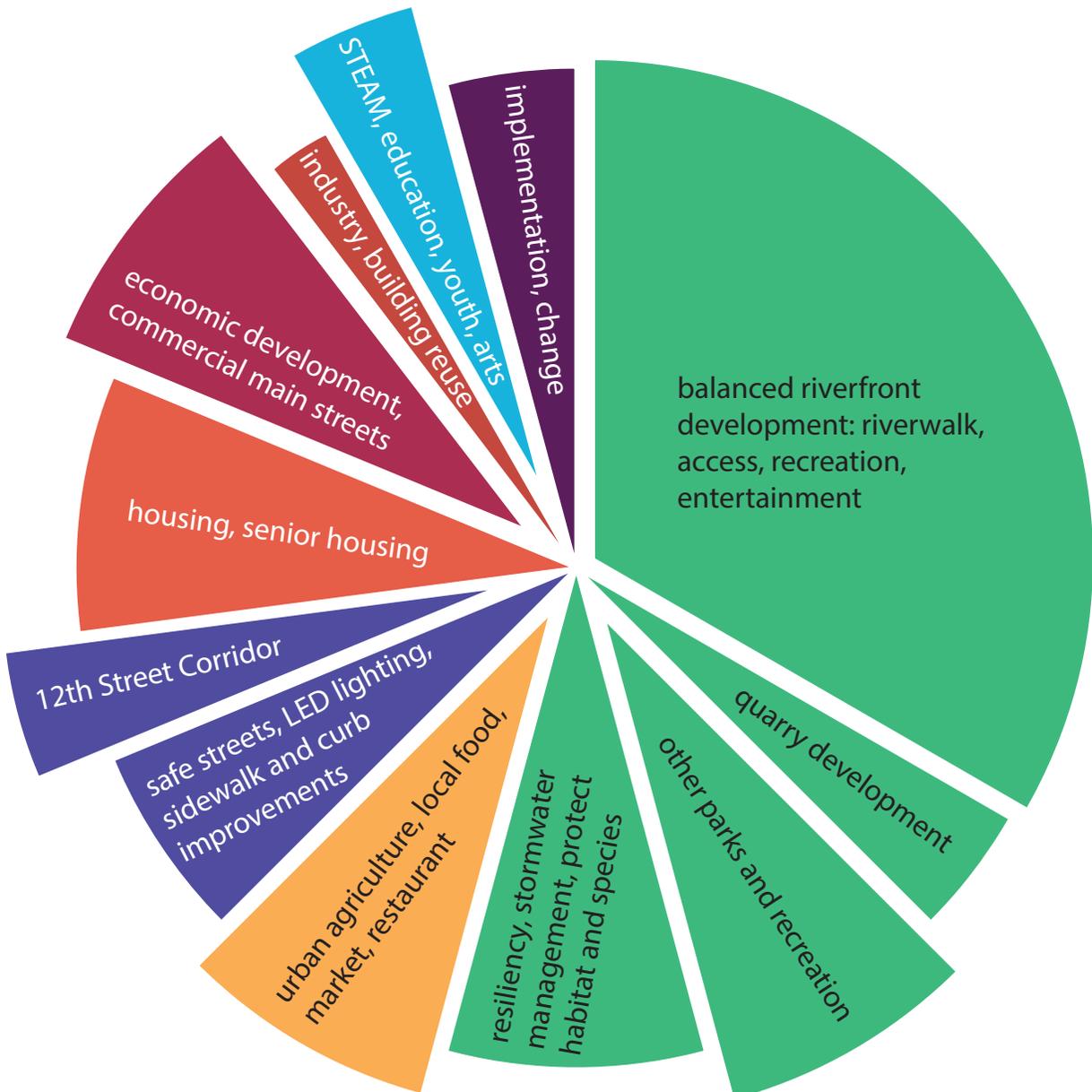


Public Workshop Findings:

- The community overwhelmingly desires a connection to the riverfront with the provision of recreational opportunities that capitalizes on this unique neighborhood asset.
- The community supports new development and investment if the character and form of future development is sensitive to neighborhood scale and character and does not preclude public access to the riverfront. New development must not cut-off local residents to the riverfront.
- The community is especially supportive of commercial uses that capitalize on the river's recreational and scenic potential, as well as other potential interim activities such as pop-up events such as markets and fairs, and possibly urban agriculture and opportunities to increase access to fresh food.
- Overall, there were no negative ratings of the visual preference options provided and this speaks to overall positive response the neighborhood has towards to seeing revitalization and redevelopment occur.
- The community is concerned that if substantial new development occurs, gentrification will also occur and make the neighborhood un-affordable for long-standing residents. They want a balance approach that focuses on both the existing residential neighborhood, including long-term affordability, and attracting new development and investment to the area.
- Overwhelmingly what the community wants to see most is near-term results. The community is looking to see real and tangible results from the extensive amounts of planning that has gone on over the past several years, as well as this effort.

Community Priorities

In order to gauge community priorities, workshop participants were provided with a comment card that asked, “If you could choose one projects as the top priority for future development, what would it be?” The prioritization results are categorized below.



From the Responses Received:

33% of people prioritize balanced riverfront development including a riverwalk, public access, recreation, and entertainment.

54% of people’s priorities were related to parks, recreation, and environmental protection/resiliency at the riverfront.

1.4 RESIDENTIAL REINVESTMENT

One the most voiced community concerns throughout the AWP planning process focused on the issues associated with the existing residential blocks within the neighborhood. The community understands that the desire and importance of promoting new development on larger sites, however, this should not overshadow the importance of helping those already vested in the neighborhood. This is a combination of supporting existing homeowners and addressing the overall conditions of aging housing stock that much of which is rental and in some cases abandoned or vacant.

Current Situation

As a starting point, it is important to understand the current dynamics at-work with the residential blocks within and adjacent to the AWP study area. There are 269 smaller residential structures on Vandever Avenue, the 700 to 900 blocks of E. 17th, and Buena Vista Street. As many as 119 of these structures may be owner-occupied and at least 150 are rentals.

Nine homes from 81 to 97 Vandever Avenue were constructed by Habitat for Humanity in 2013 and sold to homeowners at prices in the \$116,000 to \$124,000 range. Two homes at 513 and 515 Vandever Avenue were rehabilitated by the Wilmington Housing Partnership and sold in 2015 and 2016 for prices in the \$107,000 to \$110,000 range. Otherwise, sales of existing homes to new owner-occupants have been very limited—only three between 2008 and 2017. During the same ten-year period, 50 properties were purchased by investors, include 21 by 10 owners who also own multiple other residential properties in the neighborhood.

With regards to owner-occupancy, 62 of the 119 homes that appear to be owner-occupied and they have been owned for 30 years or more. Whether all these properties are actually occupied by these listed homeowners is questionable. Many may have shifted to occupancy by a relative/inheritor or to rentals.

Objectives of a Home Improvement Strategy

Prior to any actions with the AWP study area focused on the undertaking of substantial new development within the targeted site reuse areas, an emphasis should be placed on improving the existing residential housing

stock. The four recommended key actions that should be focused on this effort:

- Improving housing conditions for current residents.
- Expanding affordable homeownership.
- Preserving existing housing stock.
- Undertaking early improvement activity while more time-consuming roadway & other infrastructure is being planned and constructed.

Early Actions

Capacity-Building & Commitment - Organizations need to be identified, recruited, and committed to play key roles in this effort—engaging the community on a property-by-property basis; undertaking necessary rehabilitation; and acquiring and managing long-term quality rental homes.

Engagement of Homeowners, Landlords, and Renters

- The identified community engagement organization needs to perform one-on-one outreach to homeowners, tenants, and landlord/property owners. They need to identify

- Properties in need of improvement, including owner-occupied homes.
- The potential for existing tenants to become homeowners.
- Landlords interested in selling their properties.

They also need to work with City staff to create a database and map potential reinvestment properties and develop prioritization for action among properties.

Develop a Detailed Phased Improvement Strategy - With the information collected by the property engagement organization, a detailed improvement strategy needs to be developed and phased and the resources to carry out this phased program need to be committed. These resources may be public, private, or corporate/philanthropic.

Rehabilitation for homeownership will likely be one key initiative. However, since most current residents are renters, efforts to improve the physical stock (code enforcement, rehab loans) may increase pricing

and squeeze current renters. Therefore, packaging project-based housing choice vouchers with physical improvement funds may be necessary to assure on-going affordability.

Undertake Initial Implementation - It's important that some property-specific activities occur quickly to both confirm the reality of the initiative and to maintain credibility with the community. These actions will also provide the ability to promote affordability, in the event that new development activities begin to increase rental rates and property values, and ensure that long-standing residents can participate in and benefit from the overall neighborhood improvements, as they occur over time.

1.5 THE BROWNFIELDS AREA-WIDE PLAN FRAMEWORK - GUIDING PRINCIPLES FOR SITE REUSE PLANNING

A successful plan acknowledges the unique and complex inter-related components needed to achieve its vision. The Northeast Brandywine Riverfront U.S. EPA Brownfields Area-Wide Plan is based on a framework of input and opportunities uncovered during the planning process. The framework is the culmination of findings from the physical conditions, community input, market opportunities, and the proposals developed through the 12th Street Connector Project. The investigation of these framework elements has led to the establishment of six guiding principles that inform the proposed site-specific reuse plans.

Guiding Principles for Site Reuse Planning

Proposed site reuse plans and infrastructure recommendations should:

- Realize the full potential of the Brandywine River as a community asset that draws local residents as well as visitors;
- Achieve a balance between economic and recreational development opportunities in a way that benefits the local community and fits with existing neighborhood character;
- Improve existing transportation infrastructure and establish new multi-modal connections that increase neighborhood walkability and bicycle friendliness;
- Formulate a strategy for the redevelopment of the Catalyst Brownfield Sites as well as other key brownfield sites in the study area;
- Address stormwater management, flooding, resiliency, and sustainability issues in the AWP study area; and
- Prioritize implementation by identifying specific next steps, phasing, and potential funding opportunities.

These principles were utilized to shape schematic site reuse concept plans and the various infrastructure improvement proposals in the remainder of this AWP report and form the vision for “what” is desirable and “how” it is achievable.



Downtown vista from the H. Fletcher Brown Boys and Girls Club.

02

I Executive Summary

01 The Area-Wide Plan

02 Site Reuse Planning

2.1 Placemaking and Brownfields Redevelopment

2.2 Targeted Reuse Area 1- Diamond State Salvage Site

2.3 Targeted Reuse Area 2- Former Quarry/
Boys & Girls Club Lands

2.4 Targeted Reuse Area 3- Former Wiley Cork Site

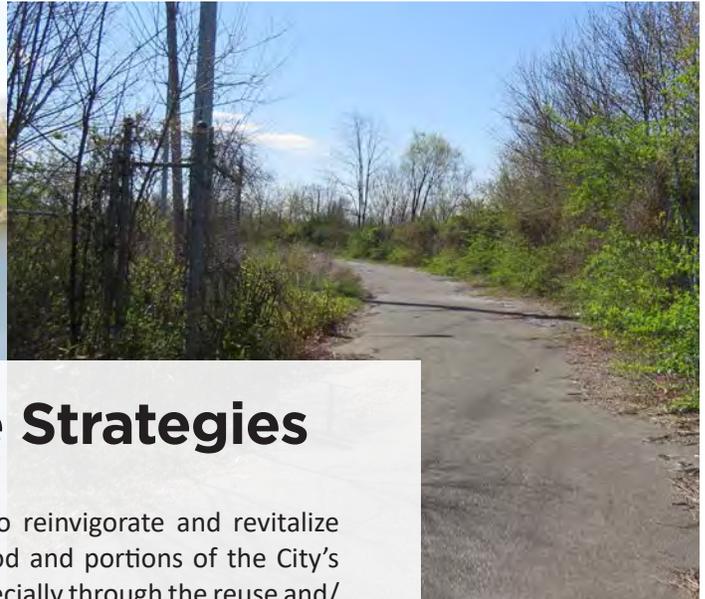
2.5 Targeted Reuse Area 4- North Market Street Corridor

03 Public Facilities and Implementation Strategies

04 Resource Roadmap and Funding

Appendix A Background Report

Appendix B Market Analysis Report



Site Reuse Strategies

The goal of this effort is to reinvigorate and revitalize the Northeast Neighborhood and portions of the City's Brandywine Riverfront, especially through the reuse and/or redevelopment of many of its former manufacturing/post-industrial properties. Utilizing potential redevelopment opportunities through the existing conditions analysis and public engagement activities, including an assessment of market opportunities, viable and neighborhood appropriate reuse strategies for several sub areas, referred to as Targeted Reuse Areas, were identified. Draft reuse concepts were presented throughout the process and included one-on-one meetings and discussions with many property owners. No two areas or sites are the same, whether due to physical attributes of a site or context, or as a result of known or perceived environmental barriers to reuse. Furthermore, the finalization of transportation infrastructure, especially the proposed 12th Street Connector which represents a major opportunity to provide public access to the riverfront and greatly increase its exposure for new investment. Timing is a major consideration for reuse plan, so in some cases, potentially viable near-term reuse alternatives were identified for sites that could support such as use, whereas in other instances only a potential long-term reuse is discussed.



2.1 PLACEMAKING AND BROWNFIELDS REDEVELOPMENT AS AN OVERALL APPROACH TO NEIGHBORHOOD REVITALIZATION

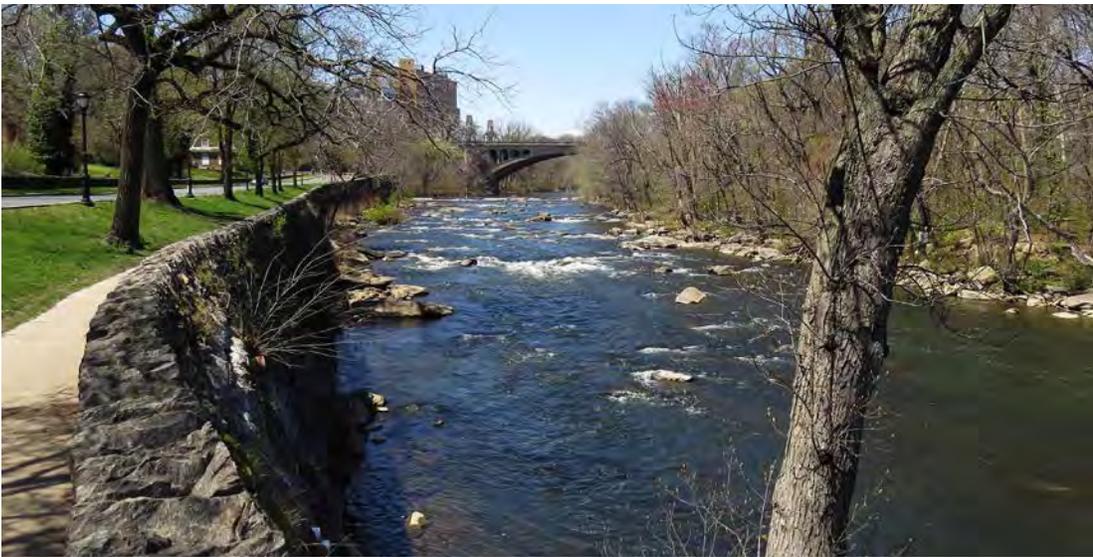
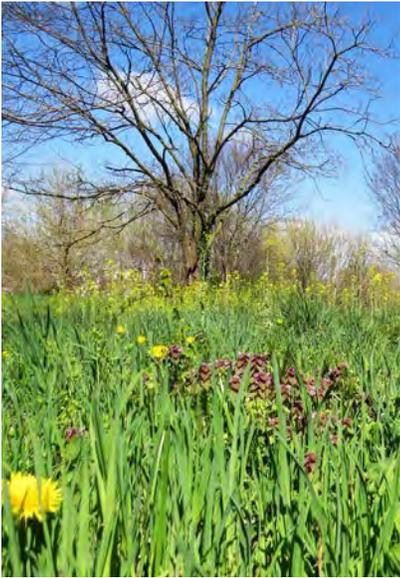
The proposed site reuse strategies for the AWP study area follow broad placemaking principles and speculates a potential build-out based on a physical assessment of the sites, their context, and the overall intent to create a high quality-of-life neighborhood for all, capitalizing on its opportunity to connect to a vibrant riverfront. This in turn will support the goal of the City to promote affordable housing, increased housing ownership, and encourage safe and stable neighborhoods.

The AWP's fundamental approach emphasizes the notion of the creation of new "places" versus parcel-by-parcel "developments." The foundation of this idea is the desired outcome that both public and private activities should result in the creation of highly desirable places for people, and as they are expanded, ones that mesh seamlessly with their surrounding context. This approach emphasizes the notion that street life and the relationship of homes and business to the public realm is a fundamental aspect of urban living. The creation of successful places is a function of a thoughtfully considered mix of uses and the design and functionality of infrastructure systems. These two items working together form economically vibrant and sustainable building blocks of an overall community. As redevelopment occurs, new development should feel like a modern interpretation of the traditional, well-established and highly functional pattern of the city versus suburban development that mostly considers auto-convenience, with little physical, functional, or social connection to its surroundings. In the case of the AWP study area, this also means considering the scale of buildings and how they relate to the existing residential row-home block patterns.

Great places are not easily formed. They are certainly not created by policy alone, but often rely on strong partnerships between many public-private sector partners. The overall reuse and redevelopment strategies presented, including for the targeted brownfield properties, consider all aspects of the placemaking equation; however, they focus especially on those aspects that can be most defined and shaped by the public sector such as transportation, stormwater management, and public spaces. These components of the framework can serve as the skeleton upon which each individual private sector action can connect. In some cases, the division between public and private sector activities are well defined, but sometimes they are a function of inter-

related aspects which when combined, add up to a result that is greater than the sum of the individual pieces. In both cases, they serve the notion of forming truly great places and establishing the Northeast Neighborhood and the Brandywine riverfront with a reputation as an attractive and desirable community and place to live, work, and grow.

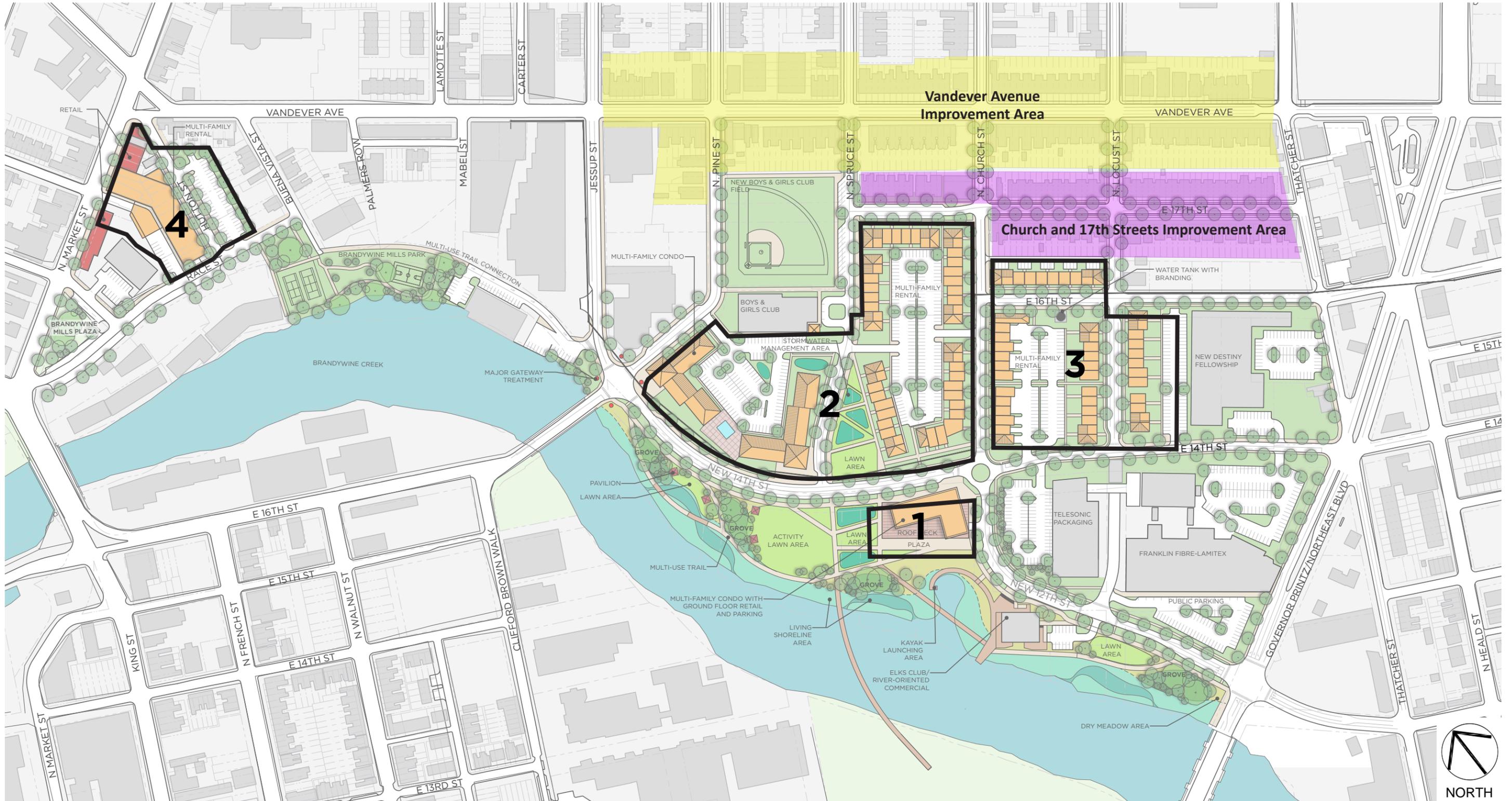
The proposed reuse strategies are based on the notion that local needs and character are the basis for a vibrant economy – Unique assets and local character make a place distinctive. Keeping investments circulating close to home and attracting new resources to the neighborhood will grow the local economy incrementally over time. They firmly reinforce its role as another great Wilmington neighborhood. In the case of the AWP study area, the Brandywine is a local asset that many other neighborhoods wish they could have, so building upon and enhancing this valuable resource is fundamental to a viable revitalization approach. It is the common thread which link the majority of the proposed reuse strategies and recommendations.



There are numerous character elements within the neighborhood and along the Brandywine Creek that can inform the design of new projects to ensure that each effort supports the idea of locally-based placemaking.



Targeted Site Reuse Areas



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2.2 TARGETED REUSE AREA 1 – DIAMOND STATE SALVAGE SITE

The focus of this area is the creation of a public riverfront park which include a new anchor private development that capitalizes upon the location and partially supports the overall economic investment required for the public improvements. This area is composed of properties the comprise the former Diamond State Salvage site.

Project Facts and Drivers

- **The 4.25-acre Diamond State Salvage site is owned by the City.** The City has been working with DNREC since 1994 to assess and clean-up the site in order to support new uses and development. Even after completion of sampling work in 2017 and 2018, DNREC has indicated that addition investigation and risk assessment work will be necessary to obtain site closure under DNREC’s Voluntary Cleanup Program.
- **A significant portion of the Diamond State Salvage site is located within the floodplain making flood resiliency measures an important consideration for any future activities on the site.**
- **The community has expressed a strong desire to see public access to the river’s edge be provided in this location along with some private development.**
- **Increased activity and exposure to the area is critical to make it is a safe and inviting place to be.** Development which generates 24-hour activity may be an important way to instill safety.
- **Views of the Brandywine and of downtown are assets that make the site attractive for public space and development.**
- **The area should be thought of as a link in a chain of interconnected public spaces along the Brandywine.** The community would like to see the Northeast Neighborhood be considered a riverfront community, which is not the case today.
- **Opportunities exist to capitalize on the riverfront aspect of the area for commerce and recreation-oriented commercial and educational uses.**
- **Church Street is considered a key connector or “spine” through the neighborhood.** It represents the opportunity to connect Winchester Brown-Burton Park with the riverfront, as it extends through the residential neighborhood.

Overall Reuse Vision

The conceptual reuse vision for the area is to create a linear greenway park along the Brandywine from the 16th Street Bridge down to Church Street and beyond. The park would be defined by the river’s edge and the new 12th Street Connector roadway and multi-use trail. Development would be strategically located to capitalize on the park, yet not impede public uses or access to the river’s edge and supporting recreation uses. A few of the key proposals for this area include:

- **Enhancing the river’s edge utilizing a living shoreline approach which maintains as much of the existing vegetation at the edge and adjusting the grade behind to provide increased vegetated habitat to absorb storm events.**
- **Creating a series of multi-use trails and pathways that connect this portion of the riverfront to areas to the north and south and into the adjacent neighborhood.** The proposed vision includes a 12-wide multi-use path as a part of the new roadway cross section for the 12th Street Connector (labeled as New 14th Street Extension on this segment on the plan). This would be the primary bicycle and pedestrian connection through the area as a hardscaped paved facility. A secondary, slower-pace and naturalized trail is proposed closer to the river’s edge which could support more leisurely use.
- **Active and passive recreation facilities such as open lawn areas, pavilions, nature-based children’s play areas and naturalized landscape zones with boardwalks can be accommodated within the park area.** The opportunity exists to have designed elements within the riverfront park relate to other parks and public spaces within potential development on the opposite side of the proposed New 14th Street Extension. Circulation across the new roadway between the new development and the riverfront park is especially important to ensure maximum access and connectivity for new and existing residents to the river’s edge.
- **The existing landform of the river’s edge includes a small lake area within the existing Diamond State Salvage site, near the terminus of Church Street.** This area could be increased in size to create a cove condition at the edge of the river, providing for an

excellent location of kayak and non-motorized boat launching.

- **The nearby Elks Club building represents a great opportunity to create a venue that both accommodates the club's needs and utilizes the remainder of the building as potential for river-oriented commercial or non-profit uses.** These include bicycle and kayak rentals, fishing and outdoor-related retail equipment, a small riverfront restaurant/cafe (possibly sharing commercial kitchen facilities with the Elks Club), and an environmental educational/multi-purpose space. The Elks Club building can potentially be modified by raising the finished floor elevation to make the building flood resilient. Elevated decks and boardwalks around the structure could provide venues for outdoor seating and events and afford better views of the riverfront and downtown.
- **The corner of the Diamond State Salvage site that fronts on the proposed intersection of Church Street and the New 14th Street Extension could be a signature anchor development location.** The proposed site reuse plan shows how a four or five story structure could be placed oriented both towards the street and to take advantage of the views and frontage of the park. The building could have a band of ground floor retail fronting on the New 14th Street Extension. There would be enclosed ground level parking behind the retail and the building would be elevated to respond to the flood zone requirements. Multi-family residential units would be located on the upper floors. The plan shows how the upper floor structure could be skewed to maximize views up and down the river and create a private roof deck over the park level, for the building's residents.

Recommendations and Actions

- **As the property owner, the City should initiate the recommended site investigation and risk assessment work necessary to complete the DNREC Voluntary Cleanup Program and obligations under the Brownfield Development Agreement.**
- **Develop a remedial action plan for the Diamond State Salvage site that integrate site development features with remedial controls in order to control costs and to achieve the most natural-looking land**

forms within the recreational areas. Integrate site development features with remedial controls in order to control costs and to achieve the most natural-looking land forms within the recreational areas, especially to related to the grading requirements of a living shoreline approach and the ability to manage stormwater within portions of the park.

- **Coordinate final design and engineering of the 12th Connector project to ensure that the final placement of the roadway, the elements included, and its interface with the adjacent land allows for the desired end-uses.** This includes considering the various treatments for sidewalks at corners, pedestrian/bicycle connections and crossings, and the ability to provide limited but strategic curb cuts to development, etc.
- **Determine a subdivision strategy to divide-off a potential parcel for private development.** It may be desirable to subdivide the parcel prior to issuing a developer RFP or soliciting for private development proposals in order to provide a shovel-ready development parcel with DNREC clearance for residential end-use.
- **Advance the design of the living shoreline resiliency aspects of the park.** This includes developing preliminary engineering and habitat restoration plans that are developed in tandem with the remedial action plan for the site, under the DNRC brownfields review process.

Targeted Reuse Area 1 - Diamond State Salvage Site



2.3 TARGETED REUSE AREA 2 – FORMER QUARRY/BOYS AND GIRLS CLUB LANDS

The intent for this area is the creation of a new mixed-use, mixed-income, neighborhood focused on the redevelopment of the former Delaware Granite and Mining Company quarry site, including the filling of the existing quarry lake. The concept is based on extending the street network through the site, specifically Spruce Street, as a way to establish traditional neighborhood blocks. It also explores the possibility of swapping land of the existing (now vacant) Moyer School site with the Boys and Girls Club in order to create greater redevelopment potential and to improve the Boys and Girls Club's campus.

Project Facts and Drivers

- **The former quarry lake has been owned by the Boys and Girls Club since the early 1970s when the organization relocated its facility from the corner of 17th and Church Streets (the current ballfield) to the location of the former granite extraction site, where its building now sits.** The existing Boys and Girls Club building is in the unusual location because the rear walls, facing Pine Street and the closed Moyer School were pre-existing granite quarry walls. Although the placement of the current building affords wonderful views of the downtown skyline, it results in the facility being hidden and having to descend to gain access to its entrance.
- **There have been numerous drownings in the quarry lake over the more than a century it has existed.** A 7-year child's drowning in 1979, after the Boys and Girls Club took ownership of the property, resulted in the property being fenced-off for security purposes. Due to the potential hazard of the site, the organization has sought ways to transfer ownership of the site, and ideally due to its close proximity to its facility, fill it. The organization has established an agreement for potential sale of the property to a local developer that is exploring options for how to reuse the property, including filling the quarry lake.
- **The redevelopment plan for this area is conditional upon the ability to fill the quarry lake.** Based on information provided by the Boys and Girls Club organization and the pending purchaser of the property, the regulatory process and the physical and economic feasibility of this are currently being explored, with indications that it is feasible. The site was formally designated a Brownfield by DNREC in August of 2018. It is not clear how long it would take to obtain approvals and perform filling activities to make the site suitable for new development activities.
- **The Moyer School site is owned by K12 Management, Inc.** The site is less than 2-acres in size and has three buildings that are vacant. There is limited environmental information available for the site, however the past historical uses would not indicate significant environmental issues relative to reuse of the site although the presence is possible.
- **When considering how the degree of accessibility and perception of the area will change once the 12th Street Connector Project is completed (New 14th Street Extension) and if improvements are made on the former Diamond State Salvage site, the entire Boys and Girls Club will have greater redevelopment value.** It is located at the gateway into the neighborhood when crossing the 16th Street bridge and it is afforded excellent views of the Brandywine and the downtown.
- **The overhead power lines represent a challenge in this area, since they roughly follow the development side of the new roadway.** They are however, of significant height and the pole spacing is wide, so that development could occur in this area without major detriment to viewsheds.

Overall Reuse Vision

The conceptual reuse vision creates a series of primarily residential development blocks by extending the street grid through the site and framing a central green public space that widens as it extends towards the riverfront.

- **Creating a series of development blocks, the concept promotes the idea that new primarily residential units of mixed unit types would front onto Pine Street, the New 14th Street Extension, and the extension of Spruce Street to 14th Street.**
- **Three story multi-family buildings are proposed for the first block closest to Pine Street and the 16th Street bridge.** These buildings could include limited

ground floor commercial, especially at the higher visibility corners, oriented towards the intersections. Parking is provided by surface lots tucked into courts at the rear of the buildings. The opportunity exists to provide on-site amenities such as an outdoor pool area for buildings residents.

- **Spruce Street would be extended as complete street with on-street parking of various forms (diagonal pull-in adjacent to the Boys and Girls Club and parallel parking closer to the New 14th Street Extension).** A wide multi-use path would be located on the south side of Spruce Street, fronting on a central green space, and connecting the neighborhood and the Boys and Girls Club to the riverfront park. The bend in the street's alignment is to accommodate the descending grade from the upper level of the existing Boys and Girls Club parking lot, down to the riverfront, through the area of the quarry lake that would be filled. The new streets should be improved as complete streets with on-street parking, sidewalks, street trees, green infrastructure, and architectural street lighting.
- **The plan assumes that existing buildings on the Moyer School site would be demolished to make way for new outdoor facilities for the Boys and Girls Club, opening up the potential to develop the existing ballfield block.** The plan illustrates a series of townhouse-format residential blocks that could be established from 17th Street descending down toward the riverfront, from Church Street to Spruce Street. The units could be true townhomes or stacked rental apartments that are designed to appear as traditional Wilmington row-home units, which the City has followed for some of its recent newer housing development such as those built on the 1400 block of N. Walnut Street, just across the 16th Street bridge.
- **With the elimination of the quarry lake, there is an opportunity to create a greatly improved entrance to the Boys and Girls Club with additional off-street parking located nearby.**
- **A triangular central neighborhood green is proposed along the lower block of Spruce Street.** This green space would exist with the area that is currently part of the quarry lake. The concept is to create a neighborhood-scaled public space for local residents that would also serve as a necessary central stormwater management facility, as well as providing

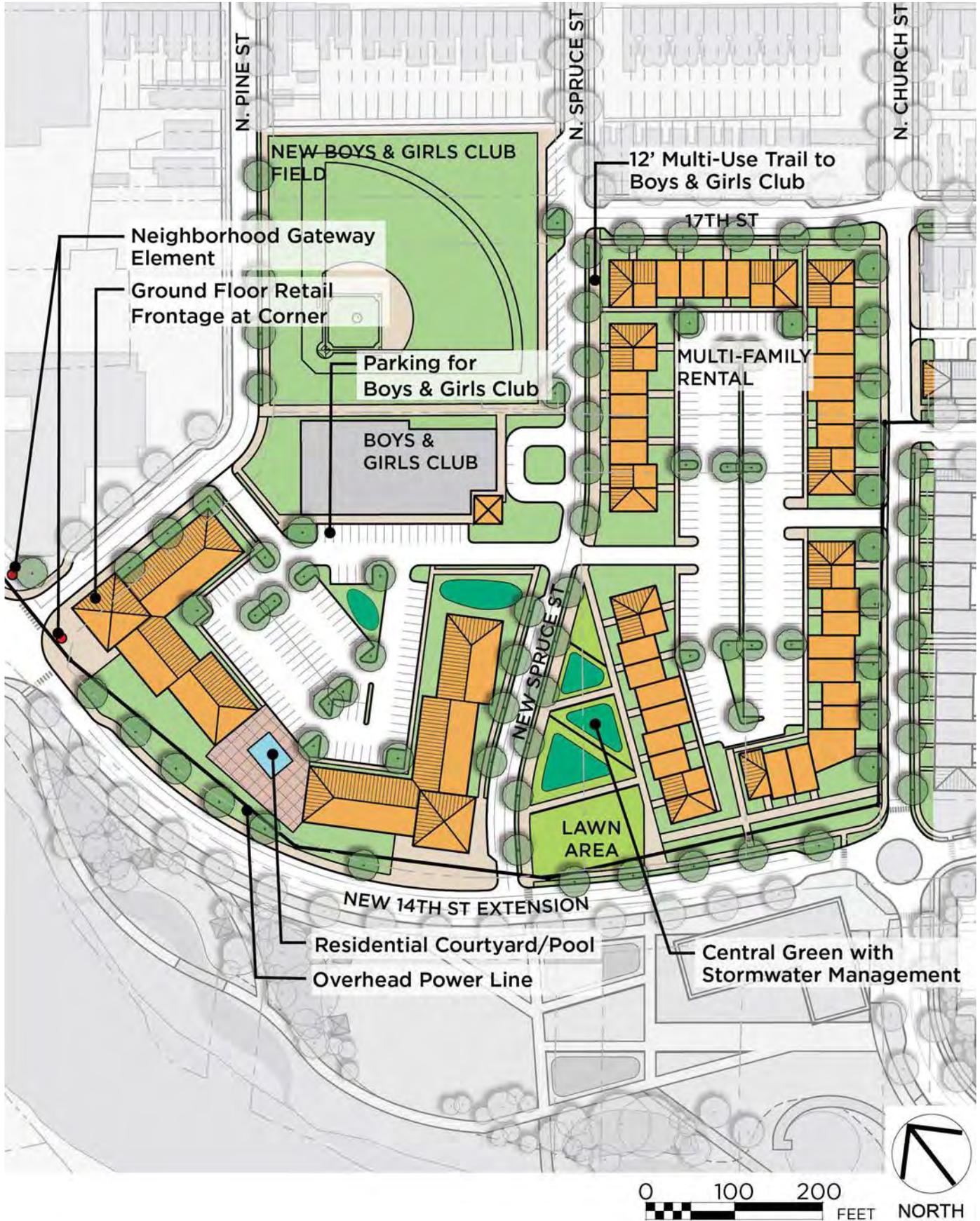
a landscape amenity. Residential units would front on both sides of the park. This follows a pattern of central public spaces that exists around other neighborhood parks in the City, such as William Judy Johnson Memorial Park and Tilton Park. The central green should be design so that the pedestrian circulation closely relates to the riverfront park, creating a sense of extension of the riverfront into the neighborhood.

- **Buildings are proposed to be setback further than on other streets (30' to 50') from the New 14th Street Extension as a response to the overhead power lines.**

Recommendations and Actions

- **It assumed that the construction of the 12th Connector (New 14th Street Extension) would occur prior to completing the filling of the quarry lake, assuming that action is approved.** These efforts should be coordinated, especially to accommodate future connectivity for Spruce Street as it is extended as well as bicycle and pedestrian facilities.
- **The City should work with the potential purchaser or developer of the quarry property and DNREC on the coordination of permitting review and approvals and determine the best way to address filling the quarry lake in a manner that ensures public safety and addresses potential community impacts during the filling time period and prepares the site for future reuse.**
- **The future of the closed Moyer School site should be determined.** Since some of the buildings were re-purposed from earlier industrial uses, the environmental status of the all buildings as well as the property itself should be assessed. Evaluations of the building for asbestos-containing materials and lead-based-paint should be performed as part of any planned demolition of the existing buildings. The ability to facilitate land transfers that would allow for the creation of new and improved outdoor facilities for the Boys and Girls Club on the former school site should be determined. This would include exploring the ability to abandon the segment of 17th Street between Pine and Spruce Streets required to accommodate adequate land area for a new ballfield and other outdoor recreation amenities.

Targeted Reuse Area 2 - Former Quarry/Boys & Girls Club Lands



2.4 TARGETED REUSE AREA 3 – FORMER WILEY CORK SITE

Redevelopment in this area would occur on the former Wiley Cork site and would be comparable to the residential development proposed on the adjacent blocks across Church Street between 14th and 16th Streets.

Project Facts and Drivers

- **The former Wiley Cork site received a Certification of Completion of Remedy that provides for the safe condition of the site in its “capped” state with a soil and asphalt cover subject to the following restrictions/conditions:**
 - Cover the site with pavement or 2 feet of clean soil.
 - Prohibit groundwater as a source of potable water.
 - Prohibit soil excavation and use.
 - Restrict the site to non-residential (commercial/industrial) uses.
 - Implement a plan to establish regular inspections of the pavement/soil cover and promote its long-term integrity.
- **New Destiny Fellowship, Inc. owns the former Wiley Cork site and has re-purposed portions of the site that has existing structures.** They have expressed a desire to support the redevelopment of the site for new affordable housing to support neighborhood revitalization.

Overall Reuse Vision

The conceptual reuse vision creates a series of primarily residential development blocks within the existing street grid. There is an emphasis on lining both side of Church Street with residential units to create a much stronger physical connection of the residential character of the neighborhood to the river’s edge.

- **The plan illustrates a series of townhouse-format residential blocks that could be established from 16th Street descending down toward the riverfront to 14th Street.** The units could be true townhomes or stacked rental apartments that are designed to appear as traditional Wilmington row-home units. The City has been building models of what is possible in some of its recent newer housing redevelopment projects, such as those built on the 1400 block of N. Walnut Street, just across the 16th Street bridge and

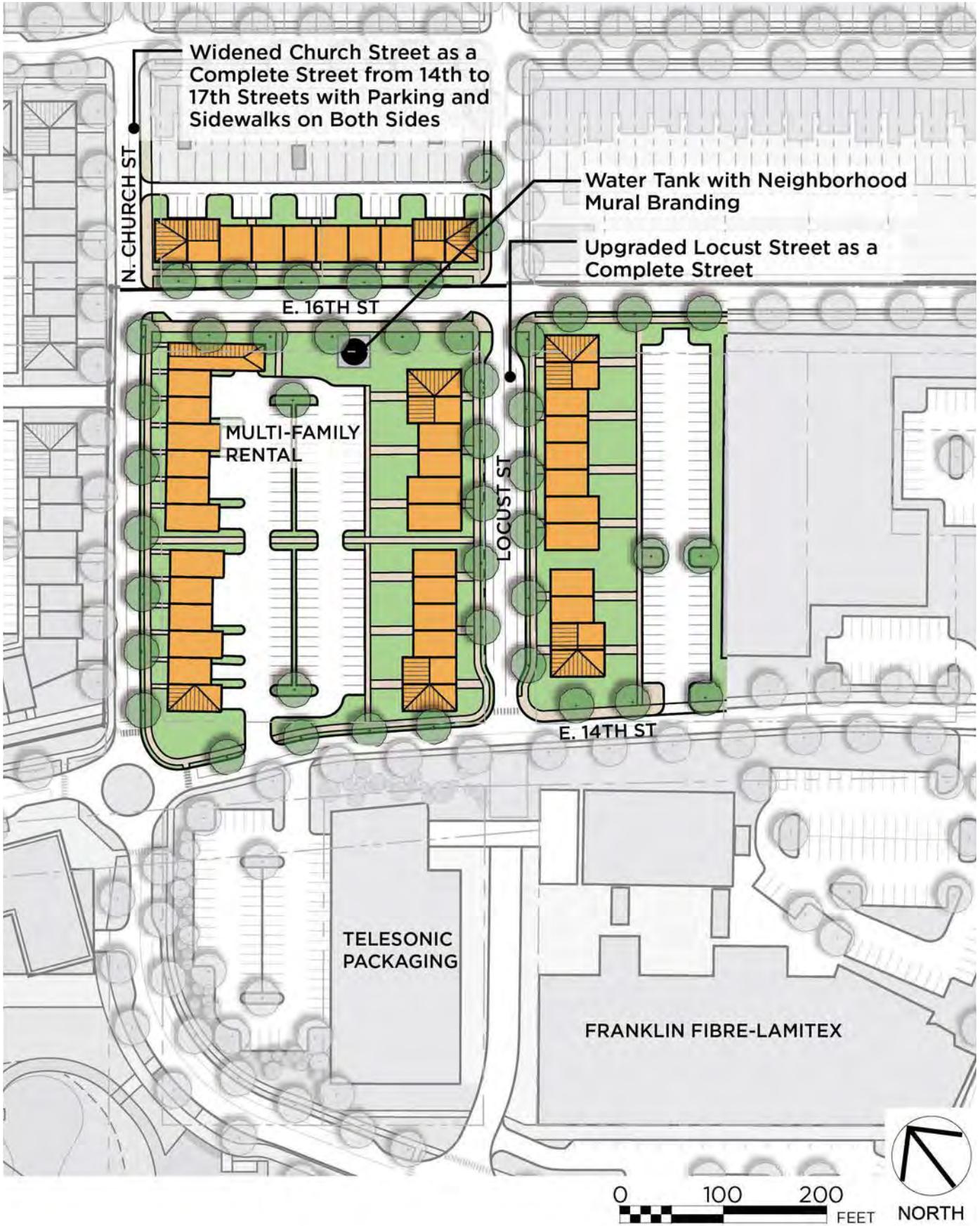
the large neighborhood revitalization project, Village of Eastlake at N. Locust Street and 23rd Street.

- **Church, Locust, and 16th Streets should be improved as complete streets with on-street parking, sidewalks, street trees, green infrastructure, and architectural street lighting.**
- **Buildings are proposed to be setback further than on other streets (30’ to 50’) from the New 14th Street Extension as a response to the overhead power lines.**

Recommendations and Actions

- **The developer must work with DNREC to remove restrictions that have been placed on the Wiley Cork site that are in conflict with the proposed redevelopment plans.** Remedial actions should take into account earthwork required for building foundations as well as the possibility of excavating soil underneath proposed parking courts for underground stormwater detention facilities.
- **The final design of the upgrade of Church Street from 14th Street to Vandever Avenue should be determined as a part of the final design of the 12th Street Connector Project.** Although the upgrade of the roadway may not be part of the 12th Street Connector Project construction, it is important to determine the ultimate traffic flow and amenities that can be included.

Targeted Reuse Area 3 - Former Wiley Cork Site



2.5 TARGETED REUSE AREA 4 – NORTH MARKET STREET CORRIDOR

The focus of this area is the redevelopment of numerous small structures along Market Street, vacant lots behind them, and former industrial buildings (occupied by Habitat for Humanity operations) along Hutton Street.

Project Facts and Drivers

- **This area has been the focus of the community for many years in order to extend economic development activities from downtown extend across the Brandywine and begin to support greater neighborhood investment and identity.**
- **There is a major adaptive reuse project underway at the former Historic Cathedral Church of St. John at North Market Street and Concord Avenue, across the street from this target reuse area.** The complex is being redeveloped by the Ministry of Caring as 53 senior lower and moderate-income affordable housing units called the Village of St. John.
- **Based on the success of the Village of St. John, the intention is to expand redevelopment activities with additional affordable tax credit funded housing and mixed-use development on the targeted reuse area along Market Street.**

Overall Reuse Vision

Lining both sides of the Market Street with revitalized housing and mixed-use retail from Vandever Avenue to the Brandywine will serve as a major gateway to the Northeast Neighborhood.

- **Create an infill development with a mix of residential and ground floor retail/commercial buildings fronting onto Market Street.**
- **An important consideration relating to how development should occur along these blocks of Market Street is the relationship of the buildings on each side of the street.** There are numerous historic contributing structures within the Historic Brandywine Village District. These buildings, and the older but not historic structures within the target reuse area on the south side of Market Street, are generally narrow and tall buildings. Therefore, a large, monolithic slab of a single multi-family building would appear to be very dominating along the streetscape. The opportunity exists to turn a multi-family building so the narrow

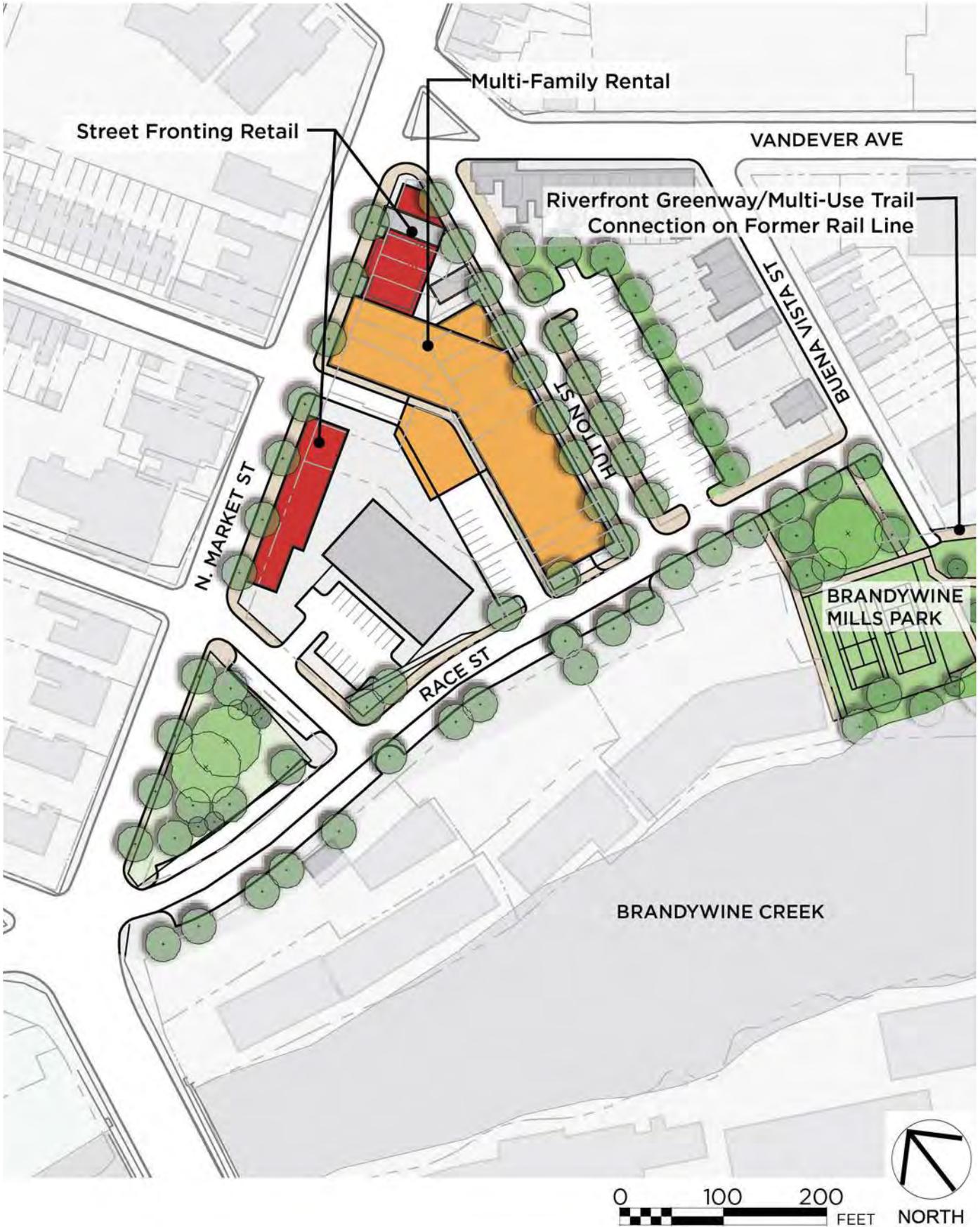
frontage faces Market Street and the longer front faces Hutton Street. Additional smaller scale or rehabbed existing retail commercial structures could occur on each side of the larger structure.

- **If the existing former industrial structures along Hutton Street are incorporated into the redevelopment project, possibly for surface parking, a greater residential unit density may be achievable.**

Recommendations and Actions

- **The City should work with the existing property owner of the properties along Market Street and interested developers, including the Ministry for Caring , to support land assemblage, tax incentives, and supporting public realm investments, such as streetscaping along Market Street.**
- **Environmental site assessments should be performed on any site planned for demolition and on any former industrial sites prior to redevelopment of those sites.**

Targeted Reuse Area 4 - North Market Street Corridor





View of the quarry lake created by the former Delaware Granite and Mining Company.

03

I Executive Summary

01 The Area-Wide Plan

02 Site Reuse Planning

03 Public Facilities and Implementation Strategies

3.1 Brownfield Environmental Site Assessment Activities

3.2 Multi-Modal Transportation Connectivity

3.3 Parks and Public Spaces

3.4 Green Infrastructure and Resiliency

04 Resource Roadmap and Funding

Appendix A Background Report

Appendix B Market Analysis Report

Public Facilities and Implementation Strategies

In addition to the site reuse plans described in the prior chapter, a major focus of the overall AWP planning effort was placed on the public site preparation actions and infrastructure work needed to support the site reuse recommendations and broader neighborhood revitalization. The following information summarizes the key strategies for advancing public infrastructure projects by topic area.

Tables which outline specific projects and project components, along with next steps and potential level-of-magnitude costs are provided by infrastructure type. The tables cover the primary elements and actions needed to advance the overall AWP vision.

3.1 BROWNFIELD ENVIRONMENTAL SITE ASSESSMENT ACTIVITIES

Although extensive environmental site assessment (ESA) work has been performed on many of the target brownfields sites, there is still a need for additional environmental work, and in some cases additional Phase I and II assessment activities are recommended. The exact amount of funds required to perform the following items will be dependent upon the timing of actions, and final outcomes from more detailed site planning and preliminary engineering for end-uses. The activities proposed should be eligible to be funded with U.S. EPA Brownfields Assessment funding if obtained.

Former Diamond State Salvage Site

At the completion of assessment work performed in 2017, DNREC concluded that the site was sufficiently cleaned-up for commercial reuse, but not for residential end-uses. Developing a remedial action plan for the portion of the Diamond State Salvage site that is proposed for recreational end-uses and integrating site development features with remedial controls, is important in order to control costs and to achieve the most natural-looking land forms within the recreational areas. Since DNREC has determined that the Diamond State Salvage site is already suitable for non-residential end-uses, initial efforts should focus on the anchor redevelopment project proposed for the portion of the site located at Church and 14th Streets.

Public Maintenance Yard

The Wilmington Public Maintenance Yard site is less than 3-acres situated along the Brandywine River on the northern side of Northeast Boulevard.

DNREC has conducted environmental assessments of this parcel and has determined that soils have elevated concentrations of PAHs and regulated metals, such as arsenic and lead and that groundwater has elevated concentrations of metals, such as arsenic, and benzene, which is a common constituent of fuels. No remedial action plans have been developed for the site.

A significant portion of the property will be utilized either as right-of-way for the proposed 12th Street Connector Project or as portions of the proposed Living Shoreline project. Concentrations of contaminants should be re-evaluated in the context of proposed end-uses to determine if any remedial actions are necessary or if protective measures should be taken during construction activities.

Former Wiley Cork Site

The property owner or developer must work with DNREC to remove restrictions that have been placed on the Wiley Cork site that are in conflict with the proposed redevelopment plans for housing. Remedial actions should take into account earthwork required for building foundations as well as the possibility of excavating soil underneath proposed parking courts for underground stormwater detention facilities.

Former Railroad Right-of-Way between Race Street and the 16th Street Bridge/Pine and Jessup Street Intersection

Prior to utilizing the rail right-of-way as a public trail facility, especially the portion with existing rail and creosote ties, a Phase I ESA should be performed.

Market Street Corridor Area/Hutton Street Properties

Environmental site assessments should be performed on any site planned for demolition and on any former industrial sites prior to redevelopment of those sites.

3.2 MULTI-MODAL TRANSPORTATION CONNECTIVITY

The focus of the AWP transportation framework is to improve mobility for people and goods moving throughout the AWP study area, especially in relation to opening-up the targeted brownfields sites with increased access, and expanding access between the existing neighborhood and the riverfront.

Through the establishment of new connections, increased consideration for promoting multi-modal transportation, and the upgrading of existing roads and intersections, it is possible to improve upon current transportation conditions. This includes providing increased traffic volumes associated with infill development while making the neighborhood increasingly more attractive for walking, bicycling, and transit use.

In and around the targeted brownfields sites, the establishment of a sense of a new neighborhood, including one that consists of a vibrant mix of uses, depends upon a consistently good pedestrian experience. In the case of the AWP study area, the primary opportunity is to provide incremental residential blocks that form neighborhoods. Ultimately, the result will include a mix of land uses (residential, retail, civic uses, etc.) and a mix of housing types and household income levels arranged to provide a variety of living options, all within walking distance of each other. The value of high-quality multi-modal streets in supporting the redevelopment efforts of this plan cannot be understated. The prime determinant of the pedestrian experience is the quality of the streetscape; “complete” walkable streets are visually stimulating, while environments that are hostile or uninteresting immediately turn pedestrians away. Specifically, the most important element of a good streetscape is the quality of street frontage – the manner in which the public realm of the street and sidewalk meet the private line of building facades. Streets and other thoroughfares are public spaces balanced for function and character. Streets shape blocks. Larger voids in the block structure should generally only exist as public spaces such as plazas, playgrounds, and parks, not as pedestrian “inactivity zones.” Promoting a safe and quality pedestrian experience, however, does not mean that efficient vehicular traffic circulation must suffer. Instead, it advocates the desire of a high-

quality pedestrian environment not being immediately sacrificed for the sake of the automobile. Transportation design decision-making must be made using a balanced approach between all modes, considering that a minimum base-line of pedestrian services be achieved that are above the typical norm. This multi-modal approach is the fundamental basis for all transportation recommendations in the AWP and can be used to inform future schematic designs and engineered plans and includes the following approaches:

The existing street grid of the neighborhood provides the basis for a sound transportation network. Creating a connected network of street and thoroughfares that extends the neighborhood existing street grid and block structure to the riverfront can serve as a framework to link new development with the surrounding neighborhood and the overall transportation framework of the city.

Street and thoroughfare typologies should be determined in relation to both multi-modal transportation needs and urban design guidelines for the uses and buildings that front onto them. Employing a “complete street” approach to the design of all streets and thoroughfares will provide the maximum opportunity of a balanced benefit to all modes. Ensuring that streets are constructed to include the appropriate number and limited widths of travel/parking lanes, bicycle and pedestrian facilities as well as supporting streetscaping and green infrastructure elements such as street trees, landscaping, street fixtures, flow-through stormwater planters, etc. will support the redevelopment goals of this plan.

Strategic intersections within the study area should receive special design consideration. Improving key intersections along major streets and thoroughfare corridors into and exiting the neighborhood ensures that maximum transportation connectivity (for all modes) is achieved along with mitigating future impacts to the transportation network as new developments are constructed. Some of these intersections include: the 16th Street Bridge/Pine and Jessup Streets intersection proposed to be improved as a part of the 12th Street Connector Project, the intersection of Church Street and 14th Street, 12th Street at Northeast Boulevard, and the intersection of North Market Street and Vandever Avenue.

Transportation infrastructure decision-making should consider multi-modal needs, including current and future transit services. Maximizing interconnectivity and providing transit supportive elements such as transit shelters and stop locations, or at a minimum adequate space for future facilities, ensures that full transit mobility is not precluded now or in the future. Reinforcing transit service along exist routes with support facilities, especially along Vandever Avenue through the entirety of the AWP study area.

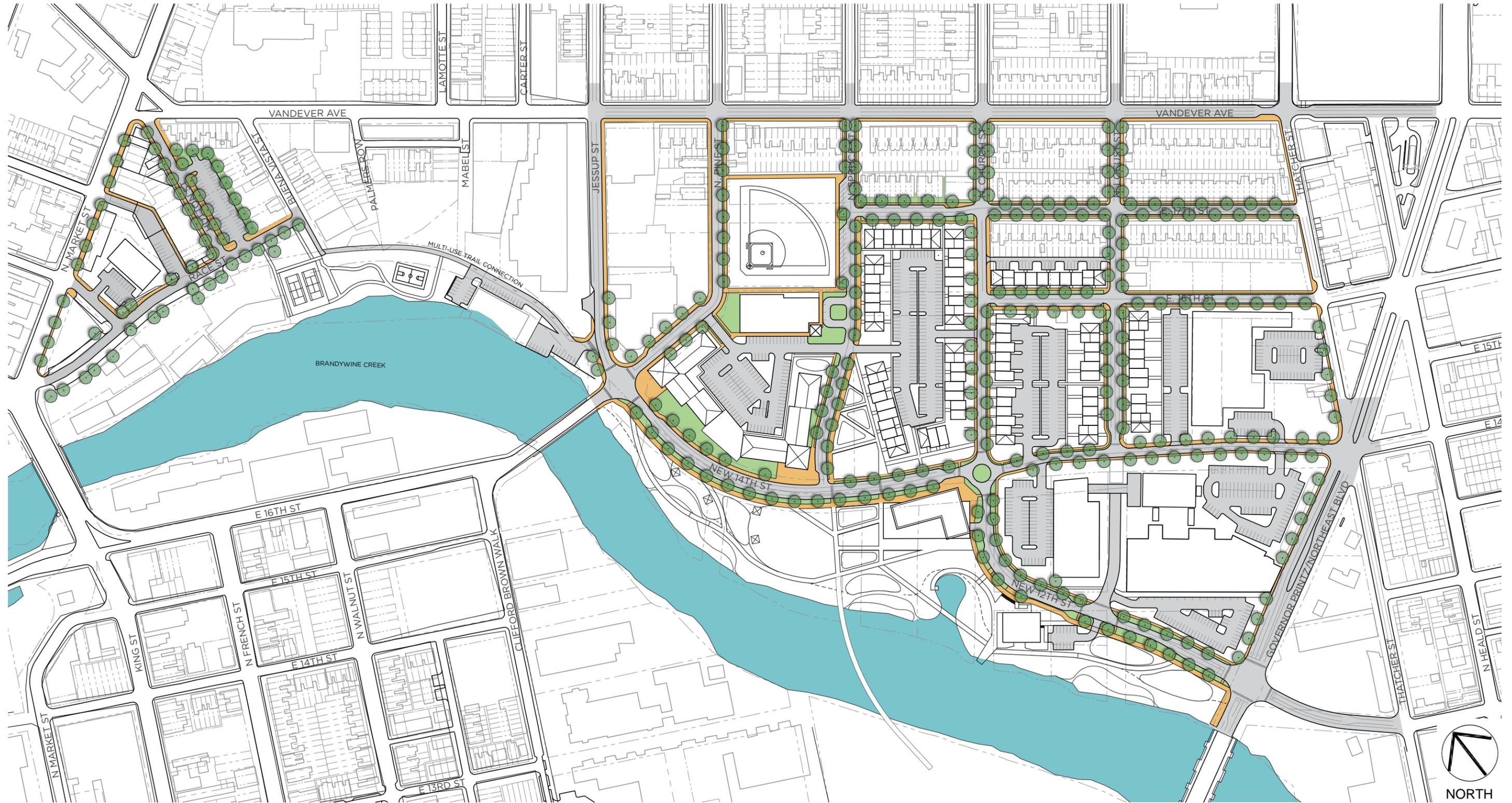
Area-wide traffic calming strategies should be considered for new and existing streets as they are designed. While transportation efficiency is a goal, it should not be achieved at the cost of safety and street designs should be evaluated to determine the need “calm” traffic to an appropriate speed. This is especially important for the design of the 12th Street Connector Project and as other streets are improved or extended in support of new development. Traffic calming devices such as curb bump-outs at corners and at mid-block pedestrian crossings, chicanes, and traffic roundabouts should be considered as part of the palette of options to create a stronger sense of a balance environment between pedestrian, bicyclist, and motorists. Again, this is especially important to ensure that the increased connectivity benefits of the 12th Street Connector Project does not also lead to unintended consequences of new cut-through traffic in primarily residential streets, such as Church or Spruce Streets.

Roundabouts are one potential traffic management device that the city should consider. The plan illustrates one proposed roundabout at the key intersection of Church and 14th Streets, as a part of the 12th Street Connector Project. The final determination of the best traffic control device at this intersection will be a function of the final design of the 12th Street Connector Project. According to the Federal Highway Administration (FHWA) studies, roundabouts can reduce fatalities at some intersections by 90%, reduce injury crashes by 76%, and reduce pedestrian crashes by 40%. Since pedestrians are only looking in one direction when crossing a roundabout intersection, they can make intersections that have a significant volume of turning movements (which would be the case at the Church and 14th Streets intersection) much safer for pedestrian travel.

There is a special opportunity to achieve neighborhood-wide, city-wide, and regional bicycle/pedestrian multi-use trail connections within the AWP study area. Nearly all of the riverfront within the AWP has the potential to have a parallel multi-use trail network, creating a linear greenway along the Brandywine. The plan depicts how a hybrid approach of dedicated trails and special pavement marks (sharrows) a continuous greenway achievable.

Pedestrian and bicycle trail connections should be constructed to provide dedicated interconnections between residential, parks, and commercial corridors. The city has begun to emphasize the need to create dedicated bicycle and pedestrian trails as well as on-street bike lanes and sharrows. Providing multi-use paths along new streets and through parks, public spaces, and interconnected stormwater management greenways provides the opportunity to create an armature for neighborhoods and commercial areas to connect. In addition to the proposed 12’ wide multi-use path along the 12th Street Connector Project, consideration should be given to the creation of dedicated bicycle and pedestrian feeders along Church and Spruce Streets that connect the neighborhood and converge on the riverfront.

Proposed Street Network



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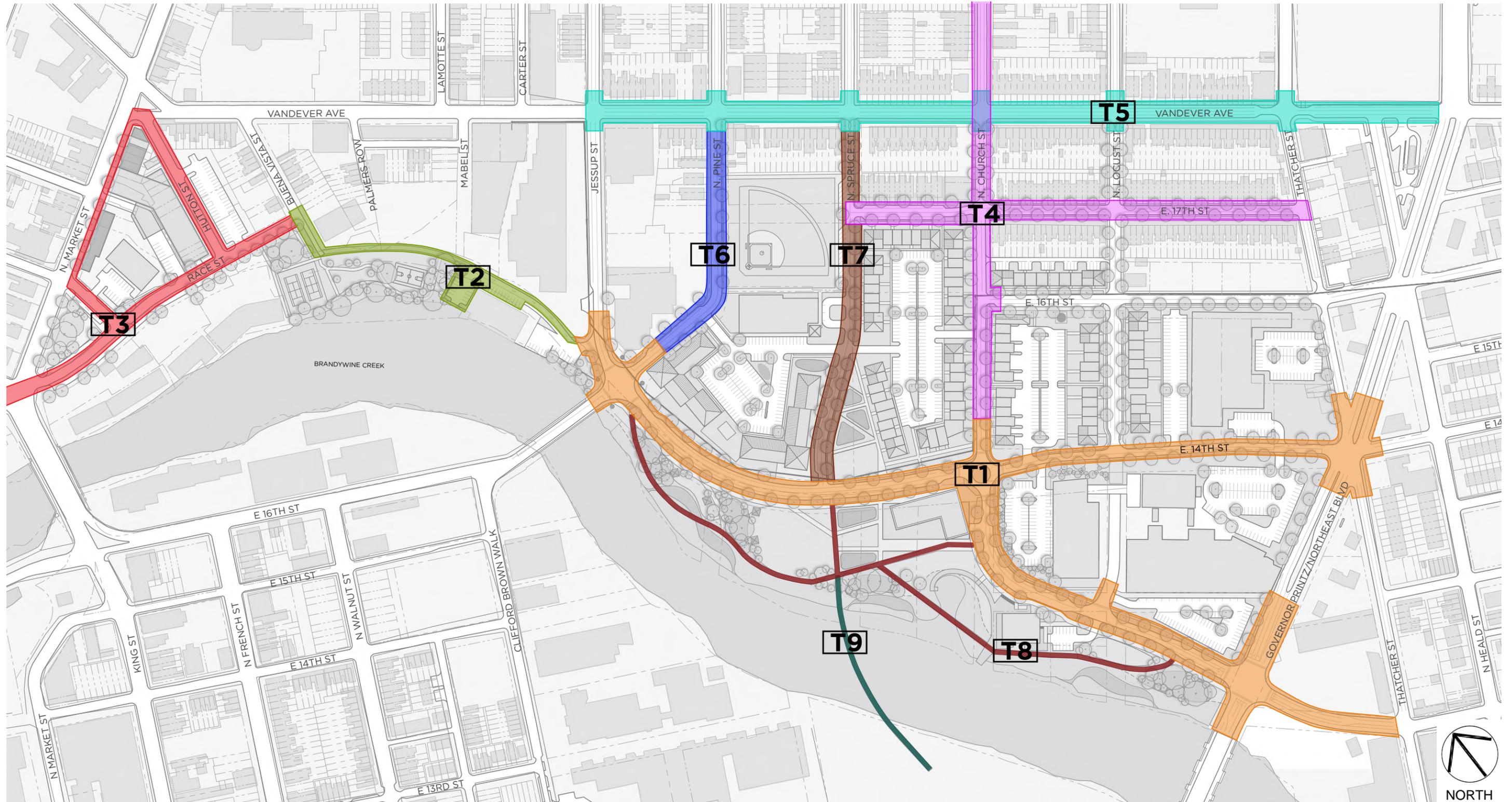
| PROJECT RECOMMENDATIONS - TRANSPORTATION | | | | |
|--|-----------|--|--|--|
| Map Key # | Priority | Project | Estimate of Probable Costs * | Description |
| T1 | MID TERM | 12th Street Connector Project | TBD - Final Design TBD - Construction | <p>This project is integral to providing the multi-modal access needed to be able to redevelop the targeted brownfield sites and adjacent properties. The key elements of the design are a slow-speed complete street with multi-modal elements including traffic calming, a 12' wide multi-use side path on the riverside of the roadway, sidewalks, street trees, integrated green infrastructure for stormwater management, architectural street lighting, and other site amenities.</p> <p>This project includes improvements to multiple streets and intersections as part of an overall connectivity strategy as not solely a new roadway connection between Northeast Blvd. and the 16th Street Bridge/Pine and Jessup Streets intersection.</p> <p>See the detailed WILMAPCO led 12th Street Connector Preliminary Design Report for greater detail.</p> |
| T2 | NEAR TERM | Brandywine Greenway Trail Connection - Buena Vista St. to the 16th Street Bridge | \$20K - Survey \$75K - Design/Permitting \$400K Construction | <p>The ability to create a direct multi-modal trail from Brandywine Park at Market Street to the 16th Street Bridge, would extend the reach of the Brandywine Greenway south along the riverfront. The completion of the 12th Street Connector Project which includes a multi-use side path on the riverside of the new roadway from the 16th Street Bridge/Pine and Jessup Streets would provide trail access to Northeast Blvd. The project will likely include engineering of retaining walls to provide for a parking supply swap with the Masley Glove property to accommodate the trail connection.</p> <p>Project should include sharrow marking on Race Street and intersection crossing accommodation at Market Street at Glen Street (see T3).</p> |
| T3 | LONG TERM | Market Street Corridor Improvements | \$40K - Conceptual Streetscape Design Master Plan TBD - Engineering/ Construction | <p>In support of redevelopment efforts within this area, streetscapes should be upgraded in tandem with new investment. These improvements include new sidewalks, street trees, integrated green infrastructure for stormwater management, architectural street lighting, and other site amenities.</p> <p>Race Street upgrades should accommodate sharrows and other bicycle safety elements as a part of the Brandywine Greenway connection (see T2).</p> |
| T4 | MID TERM | Church and 17th Street Improvements | \$300K - Surveying/ Design/Permitting \$2M - Construction | <p>These two street segments support near and long-term plan recommendations for the revitalization of the existing residential neighborhood adjacent to the targeted brownfields site. Proposed improvements focus on the upgrading of curbs and sidewalks, modification to the curb lines in some locations to improve on-street parking, the introduction of street trees, green infrastructure, and architectural street lighting. Church Street would be upgraded to include complete street amenities, with the goal of creating a quality connection between Vandever Avenue, existing and new residential blocks, and the riverfront.</p> |
| T5 | LONG TERM | Vandever Avenue Improvements | \$750K - Surveying/ Design/Permitting \$5M - Construction | <p>As the central neighborhood spine, Vandever Avenue should be a functional and vibrant street. In addition, new housing is underway with several infill projects are under construction or completed. Proposed improvements focus on the upgrading of curbs and sidewalks, modification to the curb lines in some locations to provide for intersection bump-out, the introduction of street trees, green infrastructure, and architectural street lighting, banners/branding elements, and amenities.</p> |

| PROJECT RECOMMENDATIONS - TRANSPORTATION | | | | |
|--|-----------|---|--|---|
| Map Key # | Priority | Project | Estimate of Probable Costs * | Description |
| T6 | MID TERM | Pine Street Streetscape and Gateway Improvements | \$100K - Surveying/ Design/Permitting \$1.2M - Construction | This project could be done in tandem with the completion of the 12th Street Connector Project improvements at the 16th Street Bridge/Pine and Jessup Streets intersection or independently. It focuses on installing sidewalks and major landscape elements on the south side of Pine Street where none exists today along with complete street amenities. This corridor from the bridge to Vandever Avenue is an important gateway into the Northeast Neighborhood. |
| T7 | MID TERM | Spruce Street Extension & Improvements | \$25K - Survey \$200K - Design/Permitting \$2M - Construction | The extension of Spruce Street to the New 14th Street Extension (as a part of T1) will establish a street block structure through the former quarry site. This project could occur in phases with the first piece occurring in conjunction with project T4 and the later phase commencing once redevelopment of the quarry site is ready. |
| T8 | LONG TERM | Riverfront Park Multi-Use Trail Network | \$35K - Survey \$420K - Design/ Permitting \$4.2M - Construction | There is a desire to have a trail network that is located close to the river's edge, providing a secondary bicycle and pedestrian circulation route to the main multi-use side path as a part of project T1. The extent of the trail(s) and their routing will be dependent upon the final design of the living shoreline and park and recreation amenities for the new riverfront park. |
| T9 | Long Term | Signature Multi-Use Trail Bridge - River Crossing | \$60K - Conceptual Bridge Design TBD Based on Concept Design - Construction | A long-term opportunity exists to create a series of interconnected parks, public, and other greenspaces along the Brandywine to form a cohesive greenway network. As a multi-use trail network is extended south along the Brandywine from Market Street to Northeast Blvd., a connection across the river to Kirkwood Park would be highly desirable to create a direct bicycle and pedestrian connection to public spaces on both sides of the river in this location. In addition, the bridge, if designed as a signature element, could be a destination unto itself, further promoting economic development activities at each end. The Liberty Trail Bridge in Greenville, SC is a good example of what could be possible and the potential economic impact. See: www.greenvillesc.gov/175/The-Liberty-Bridge . |

NEAR TERM = 1-4 years
MID TERM = 5-9 years
LONG TERM = 10+ years

**These numbers do not include right-of-way and property acquisition, utility improvements and coordination, grant requirements (such as NEPA), and environmental and Geo-technical unknowns. Some and/or portions of projects maybe included/integrated into private developments therefore not publicly led/funded efforts.*

Transportation Improvement Projects



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3.3 PARKS AND PUBLIC SPACES

A significant part of the AWP focuses on the creation of a new public park and living shoreline along the Brandywine. Creating a signature riverfront park and a destination within the neighborhood represents an opportunity to capitalize on a natural asset that many neighborhoods in the city do not have, while also creating a necessary flood management infrastructure component through a living shoreline approach. The park approach which include active and passive recreation amenities and thinks of the park as a component of a larger greenway along the Brandywine and considers several important elements, including:

Maintaining as much of the existing river-edge vegetation as possible and integrating (through land form grading) naturalized flood resilient areas behind. This layering approach would provide greater resiliency protection and provide greater variability in habitat creation and protection. Traditional park-like landscapes could occur further inland, including lawn areas for flexible recreational use.

Riverfront parklands should provide a mix of active and passive recreational opportunities. The community expressed a desire for a park in this area to be distinct within the city and when compared with other park spaces upstream along the Brandywine. The ultimate programming of public park and recreation facilities should be determined through a process of master planning that includes neighborhood input and complementing the City's overall parks system needs. In general, the park should capitalize on water-based opportunities, including kayaking, fishing, etc. while also providing places for the local residents to walk, gather, and recreate. Elements such as nature-based play areas for children, open lawn areas, picnic pavilions, and walking paths were commonly expressed by the community. The future park should also carefully engage with the adjacent development including the mixed-use development at the corner of Church and 14th Streets and commercial activities that could occur at the Elks Club property, at the river's edge. In addition, the ability to inter-connect park spaces across the New 14th Street Extension, into the new residential development would be beneficial. A visual "design" connection as well as an actually physical connection would increase the feeling of connection to the riverfront and the river's edge and expand the economic impact of the park investment along the Brandywine.

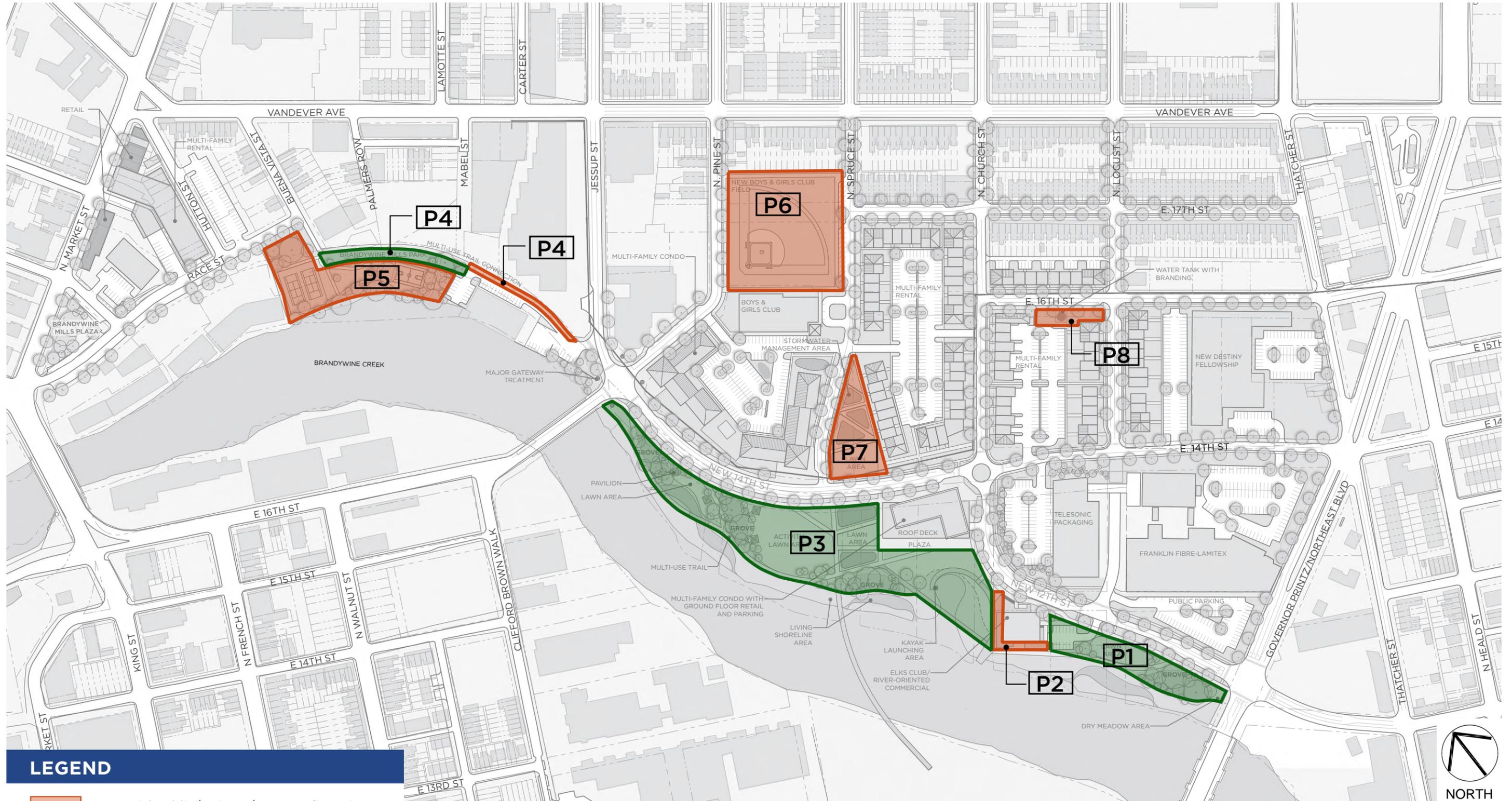
Smaller-scaled central green space(s) are important within the new adjacent residential development. Local resident-focused park spaces are important for establishing a strong sense of a neighborhood identity. They provide the framework for the overall development spine for future infill buildings and redevelopment activities by creating small public gathering spaces, tot lots, etc. These spaces can also achieve necessary stormwater management services and act as landscape amenities.

The "form" of proposed park designs should respond to the flooding dynamics and needs. This action includes the integration of varying types of flood storage, stormwater treatment, the need to retain excavated soil on-site, habitat diversification, circulation and the ability to serve various public park programmatic uses.

| PROJECT RECOMMENDATIONS - PARKS AND PUBLIC SPACE RECOMMENDATIONS | | | | |
|--|-----------|---|---|--|
| Map Key # | Priority | Project | Estimate of Probable Costs* | Description |
| P- RIVER-FRONT - WIDE | NEAR TERM | Riverfront Park - Master Plan | Costs included in Living Shoreline Preliminary Engineering Project LSX | A master plan for the public parks and recreation facilities should be developed which merges resiliency elements at the river's edge, stormwater management aspects for the potential Target Site Reuse Area - 1 development at the corner of the New 14th Street Extension and Church Street, and civic uses occurring at the terminus of Church Street at the riverfront (Projects P2 and LS2). The environmental remedial action plan for final site clearance and permitting should consider proposed location of park amenities. |
| P1 | LONG TERM | Riverfront Park - Lower Greenway Access Area | \$45K Final Design/ Engineering \$275K - Construction | Public park elements of project LS1. Non-resiliency elements limited to landscape planting, pedestrian circulation, and branding elements. |
| P2 | MID TERM | Riverfront Park - Civic Access Area | \$45K Final Design/ Engineering \$275K - Construction | This area would be provide a the first public river access, starting at the terminus of Church Street at the river's edge. A river's edge trail connection via an easement would be included and integrated in the resiliency improvements and a part of the project LS2. |
| P3 | NEAR TERM | Riverfront Park- Diamond Park Area | \$500K+ Final Design/ Engineering \$5M+ - Construction | This area would be the primary public riverfront park space. Designs should include passive park amenities including native/habitat plantings, pavilions, nature-based play areas, active lawn areas, and hardscape areas. The design should mesh with adjacent mixed-use development at the corner of the park. |
| P4 | LONG TERM | Riverfront Park- Greenway Trail Connection Landscape Improvements | Design costs included in Project T2. \$75K - Construction | Additional landscape and park user amenities such as lighting, landscaping, fencing, etc. associated with trail connection (Project T2) to enhance the park qualities. |
| P5 | MID TERM | Brandywine Mills Park Upgrade Master Plan | \$90K Park Master Plan | Master planning effort to include programming evaluation, public engagement process, management and maintenance strategy, potential acquisition, and structure evaluation of bulkhead (Project LS5). |
| P6 | LONG TERM | Boys & Girls Outdoor Recreation Complex | \$20K - Survey \$110K - Design/ Engineering/ Permitting \$1M - \$1.2M - Construction | This project creates an improved outdoor recreational campus for the Boys and Girls Club that is linked directly with its indoor facility. The final elements of the project will need to be determined based on the exact needs of the Boys and Girls Club but could include a new regulation-sized ballfield, children's play area, outdoor classroom/pavilions, and parking for the complex. |
| P7 | NEAR TERM | Spruce Street Neighborhood Green/Stormwater Park | \$10K - Survey \$250K - Design/ Permitting \$1M - \$1.5M Construction | This project could be pursued as a public-private partnership since it would provide both a development-specific benefit and a regional benefit, in terms of stormwater management. The goal it to create a signature public spaces within the residential area, that also links the riverfront and the Boys and Girls Clubs to the riverfront. Final design would be dependent upon the ultimate layout of the Spruce Street extension (Project T2) and the residential development in this area. |
| P8 | LONG TERM | Play Lot | \$18K - Design/ Permitting \$150K - Construction (Play Area only) | The creation of a children's play area in this location would provide a local neighborhood benefit. It also is tied to the concept of maintaining the water tank as a branding element within the neighborhood and an artifact of the former industrial legacy of the area. |

NEAR TERM = 1-4 years
MID TERM = 5-9 years
LONG TERM = 10+ years

*These numbers do not include right-of-way and property acquisition, utility improvements and coordination, grant requirements (such as NEPA), and environmental and Geo-technical unknowns. Some and/or portions of projects maybe included/integrated into private developments therefore not publicly led/funded efforts.



LEGEND

- Potential Public/ Private/ Non-Profit Project
- Public Project

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3.4 GREEN INFRASTRUCTURE AND RESILIENCY

The AWP promotes the integration of blue/green infrastructure elements into the ultimate design and execution of projects, especially within public spaces. Based on the local and regional conditions there are several factors that should be considered when designing public infrastructure and private site development projects throughout the AWP study area. These elements are also especially important to support funding strategies, since many state and federal agencies place emphasis on projects which include such green infrastructure measures.

An important consideration when utilizing numerous smaller stormwater elements as a part of a system-wide approach is the fact that stormwater and drainage are inherently part of networks. Water flows downhill into continually larger, more concentrated conveyance systems. If stormwater management systems are treated as an area-wide network of interconnected components, it ensures effectiveness while providing the benefit of overlaying other uses that also want to interconnect. This is especially true for parks, public spaces, trails, and greenways that may connect from a public space function as well as serve as an inter-connected chain of stormwater management facilities if they are designed to function in that manner.

In the case of the AWP study area, there are two dynamics that are important to consider. The first is mitigating as much as possible the amount of stormwater flowing towards the river from up-gradient runoff. The second, is the need to retain, manage, and pre-treat runoff created by new development activities within the neighborhood. In order to address these conditions, the ability to engage stormwater at the most local level, will improve overall environmental quality and incremental reduce flooding.

Stormwater is often considered a liability that must be “mitigated,” but it can also be viewed as a vital asset. The creative storage and reuse of stormwater runoff from buildings and paved surfaces to irrigate civic landscapes, streetscape, and urban beautification plantings, parks, and community gardens can offer cost-savings and should be encouraged.

Beyond stormwater, there are other sustainable principles that the City and developers can implement during the redevelopment of areas. Street trees utilized as a beneficial feature for stormwater management are

also helpful for improving air quality and reducing heat island effect by providing shade. There is an opportunity to expand Wilmington’s excellent street program in this area for both the environmental and aesthetic benefit of the neighborhood.

Overall resiliency for the area is proposed through the utilization of the living shoreline approach to the Brandywine’s natural edge. This concept promotes the notion of creating the ability for the edge to strategic absorb flooding events, through carefully designed naturalized planting areas. This approach provides greater flood protection for the adjacent development, increasing environmental quality. It is also less cost-intensive approach when compared to traditional flood engineering approaches, such as flood walls.

With regards to resiliency, the AWP considers ways to minimize locating buildings within the flood zone and how to safely respond to those conditions through specific design approaches. These buildings will need to be elevated in conformance with regulatory requirements in response to the actual flood elevation. In addition, all of the buildings proposed that are within this flood zone would either have parking underneath residential floors, or have limited commercial uses that could be designed to accommodate and respond to potential flood conditions. All new buildings should be resilient to known flood conditions.

The following principles should be considered as ways to integrated blue/green infrastructure and resiliency to all projects and improvements with the AWP study area:

Filtration Best Management Practices (BMPs) which improve water quality of runoff by removing sediment and nutrients should be employed where there are opportunities. Considering the direct link between runoff and the environmental quality of the Brandywine, this aspect is especially relevant in further enhancing this important regional and local resource. The goal should be to remove sediment and pollutants in runoff before these negative elements end up in surface water bodies such as the Brandywine.

Pollution filtration BMPs can also provide storage/detention for the purposes of reducing local flooding in large storm events. This mean integrating facilities into the streetscapes, parking lots, parks and other open

spaces to maximize the opportunity to retain rainfall during storm events, and slowly release it after the event, and the peak flooding potential, have past. Vegetated swales with micro-pools, flow-through planters, and other similar facilities should be integrated into transportation facilities where possible. Flow-through planters can be placed along street edges with underdrain connections back to conveyance system or for landscape irrigation storage devices.

Runoff from roads and sidewalks is particularly important to capture as de-icing materials and other runoff from roadways can be harmful to water quality, especially considering the close proximity of the Brandywine, if direct discharge were to occur. Systems and flow should foster natural drainage patterns as much as possible and prevent runoff from directly entering the river(s) from road to pipes to outfall. This is where the interconnection of facilities between in-street and parks and public space elements can be especially effective.

Protection and improvement of the Brandywine riparian buffers will improve the health and habitat along the river and prevent erosion of riverbanks during flooding events. Resiliency approaches to maintain quality habitat and enhance the natural functionality of the riparian systems are extremely important. They also potentially provide additional protection to any remedial action on brownfield sites.

Incorporating other structural technologies such as green roofs or grey water capture within buildings will maximize local utilization and detention capacity during major storm events. Every opportunity to capture and store runoff during peak events should be considered as a way to incrementally reduce flooding within the existing combined-sewer overflow (CSO) network within the neighborhood. These combined approaches would reduce the amount of direct CSO that currently discharges into the Brandywine at the terminus of Church and Locust Streets, during major flood events. If the river is to become a major driver of the neighborhood's economic revitalization, it needs to have a real and perceived sense of improve environmental health. Reducing the amount of sewer effluent that is often discharged directly into the Brandywine, is an important aspect of promoting neighborhood human-health and environmental welfare.

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Example of Integrated Blue/Green Infrastructure Elements



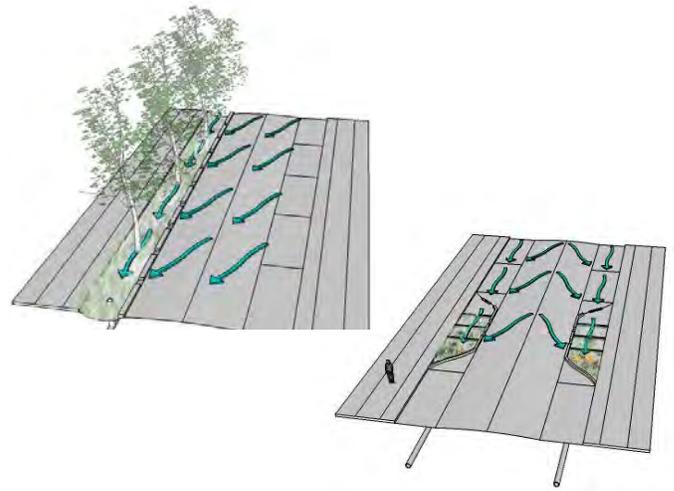
Bio-Retention Planter.



Micro-Pool Stormwater Swale.



Streetscape Vaulted Paving Stormwater capture and Irrigation System.



Flow-Through Rain Garden Planter.



Flow-Through Rain Garden Planter.



Flow-Through Rain Garden Planter.



Permeable Paving and Gray Water Capture, Retention, and Park Irrigation System.



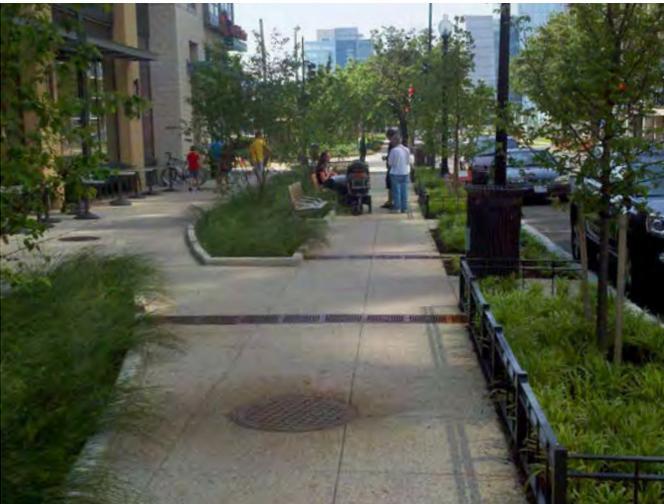
Permeable Paving and Gray Water Capture, Retention, and Park Irrigation System.



Canopy Interception.



Bio-Filtration Stormwater Swale and Plazas.



Bio-Filtration Stormwater Swale and Plazas.



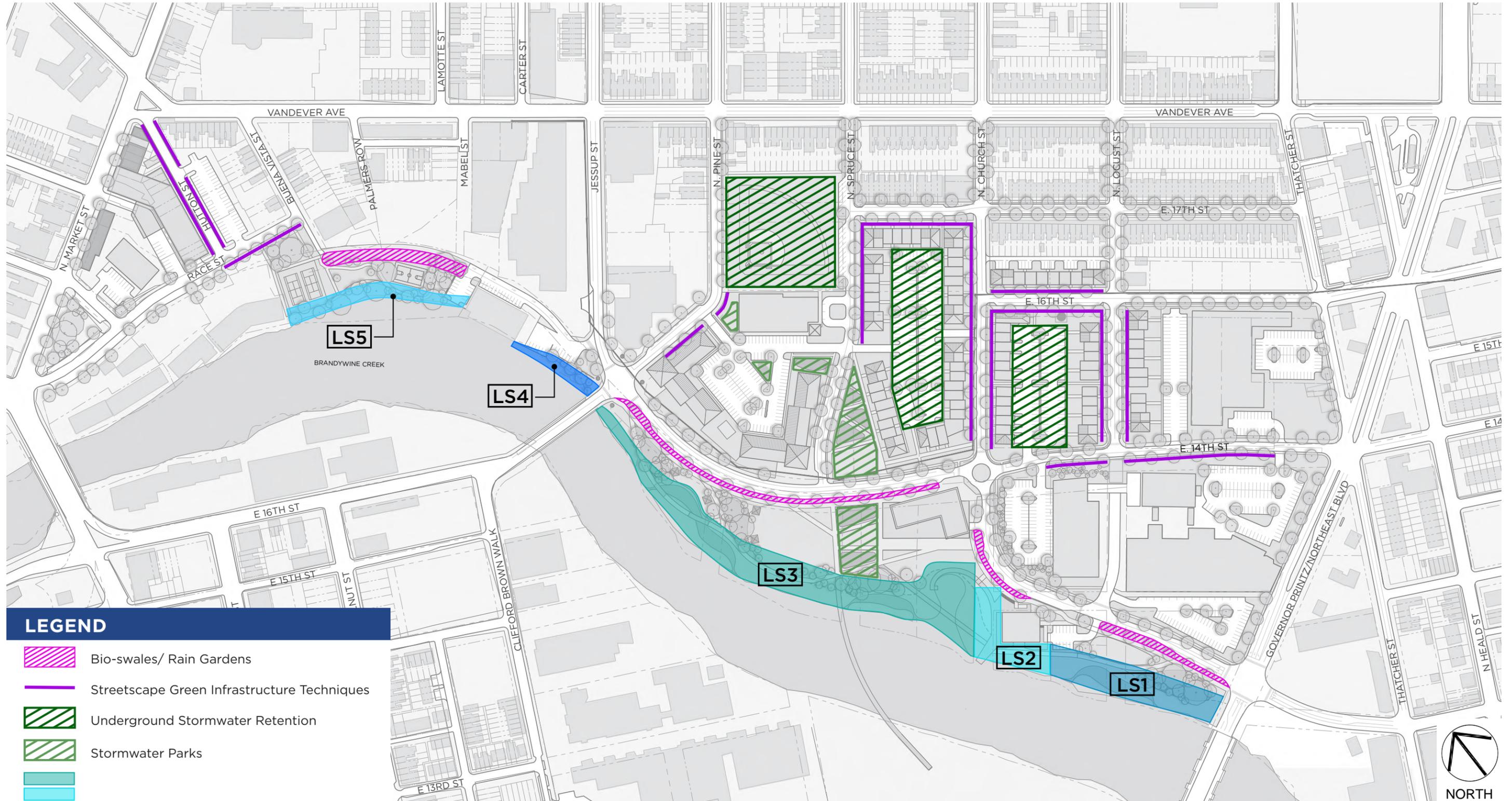
Bio-Filtration Stormwater Swale and Plazas.

| PROJECT RECOMMENDATIONS - RESILIENCY INFRASTRUCTURE | | | | |
|---|-----------|--|--|--|
| Map Key # | Priority | Project | Estimate of Probably Costs* | Description |
| LS-RIVER-FRONT - WIDE | NEAR TERM | Living Shoreline/ Resiliency Preliminary Engineering | \$50K - Survey \$125K - Preliminary Engineering | This work would advance the concepts developed through this planning effort and the earlier Living Shoreline Concept Plan. The effort would link brownfields closure permitting with required earthwork and grading required to achieve sufficient flood resilience goals. Work could be performed as a part of remedial action work plan activities. Project should also occur prior, or in conjunction, with the final engineering of the 12th Street Connector Project (Project T1). Preliminary engineering would include areas LS1 through LS3 and cover park master planning elements. |
| LS1 | MID TERM | Living Shoreline - Lower Greenway Access Area | \$45K Final Engineering/ Permitting \$275K Based on Concept Design - Construction | This area includes portions of the City Public Works Yard and the 2103, Inc. properties. The focus would be on flood protection, habitat protection, the greenway multi-use trailhead. Also a secondary neighborhood gateway landscape treatment should be included. |
| LS2 | NEAR TERM | Living Shoreline - Civic Access Area | \$75K Final Engineering/ Permitting \$500K - Construction | The focus on this effort is to create a first public activity point at the river's edge. Linked to the Project P2 with an emphasis of civic improvements that would include a water overlook and habitat restoration. This resiliency project would also act as a component of flood-proofing the Elks Club building. |
| LS3 | MID TERM | Living Shoreline - Diamond Park Area | \$150K Final Engineering/ Permitting \$1.5M - Construction | This area is the primary living shoreline element of the riverfront park area and includes all of the linear frontage of the former Diamond State Salvage site. Project should accommodate the riverfront multi-use trail network elements (Project T8). |
| LS4 | NEAR TERM | Bulkhead - Special Access Area | \$6K Structural Engineering Evaluation \$18K Final Engineering/ Permitting \$70K- \$90K - Construction | Repair of existing riverfront bulkhead and accommodation of future river access point. |
| LS5 | NEAR TERM | Brandywine Mills Park - Bulkhead/ Promenade Rehabilitation | \$20K - Structural Engineering Evaluation | Collaborate with ownership entity to evaluate bulkhead conditions and potential repairs. Structural evaluation should be done in conjunction with park master plan (Project P5) to determine the most desirable river edge treatment, if major modifications/repairs to existing structure are required. |

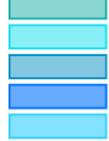
NEAR TERM = 1-4 years
MID TERM = 5-9 years
LONG TERM = 10+ years

*These numbers do not include right-of-way and property acquisition, utility improvements and coordination, grant requirements (such as NEPA), and environmental and Geo-technical unknowns. Some and/or portions of projects maybe included/integrated into private developments therefore not publicly led/funded efforts.

Resiliency Infrastructure Improvements



LEGEND

-  Bio-swales/ Rain Gardens
-  Streetscape Green Infrastructure Techniques
-  Underground Stormwater Retention
-  Stormwater Parks
-  Living Shoreline Elements

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The AWP was informed by extensive community involvement at all stages of the planning process, including participating at numerous community workshops.

04

I Executive Summary

01 The Area-Wide Plan

02 Site Reuse Planning

03 Public Facilities and Implementation Strategies

04 Resource Roadmap and Funding

4.1 Fundable Project Categories

4.2 Organizing for Effective Resource Advocacy

4.3 Funding Sources Matrix

Appendix A Background Report

Appendix B Market Analysis Report

Resource Roadmap and Funding

This Resource Roadmap recommends a strategy for seeking resources that can help pay for the implementation of the AWP. The Resource Roadmap includes recommendations on how the City of Wilmington and its partners can organize to be most effective in pursuing resources, and highlights the best sources of potential funding in a Funding Matrix that aligns key projects with attainable include federal, state, and philanthropic grants, loans, and technical assistance opportunities. The Funding Matrix includes program descriptions, estimated grant opportunity deadlines, funding amounts, and matching requirements. This section also considers how the City of Wilmington can best facilitate and leverage investment the federally-designated Opportunity Zone that encompasses the AWP project area.

4.1 FUNDABLE PROJECT CATEGORIES

This Resource Roadmap focuses on components of the overall AWP that are most likely to be competitive and well-positioned to receive funding federal, state, and philanthropic grant opportunities or the private sector. Fundable priority projects in the AWP study area include:

- **Site preparation, brownfields cleanup, and economic development** on catalytic sites;
- **Public infrastructure improvements**, including the 12th Street Connector, complete street upgrades along Market Street, street upgrades along, and improve connectivity on the street grid in the project area;
- **Parks, trails, and recreational facilities**;
- **Waterfront resiliency**, including stormwater management and a living shoreline restoration; and
- **Affordable housing** development.

4.2 ORGANIZING FOR EFFECTIVE RESOURCE ADVOCACY

The section provides recommendations on how the City of Wilmington can best organize itself to pursue and secure resources for implementation of key projects. The recommendations here outline an approach that is robust and pro-active, and that could propel progress in the targeted revitalization neighborhoods more quickly and effectively.

An effective approach to resource advocacy would involve the following steps:

Step 1: Maintain a Vibrant Project Team with Identified Leaders & Managers

The AWP Planning process is an important first step in coalescing community leaders to plan for revitalization on the riverfront. Building upon this process, the community should establish a formal “Northeast Neighborhood Brandywine Riverfront Revitalization Task Force” of key stakeholders to promote coordinated project management, resource allocation, leveraging and momentum for progress. This ongoing task force could be a subcomponent of the Northeast Blueprint Communities team or separate group that coordinates with the larger group. It should include various municipal department officials, private sector partners, non-profit and community groups, supportive and involved State of Delaware officials, project consultants working on key initiatives, and others.

Wilmington has been effective in having a designated project manager for the Area-Wide initiative, and the City should continue to have an engaged manager with sufficient authority and access to support. Further, it is important that to keep Wilmington’s elected leadership engaged and supportive, both to maintain community backing and so that they can serve as spokespersons to funders and potential partners in the implementation process. Maintaining this level of organization will have the positive impact of demonstrating to funders that Wilmington has the buy-in and support of key stakeholders and the community, and that you are well prepared to receive and utilize grant resources and get the job done.

Step 2: Identify Priority Public Sector Projects

Grants and other resources are provided for specific, discreet projects or project components. The Wilmington team must identify the specific projects and project components that are most catalytic for the transformation of the targeted area. Only with clear priorities can the community determine how it will allocate its time and resources, pursue external funding, and set the right expectations for how implementation will proceed.

This AWP recommends a number of specific projects and project components including land acquisition projects, roadway and intersection improvements, streetscaping, park and recreational facilities, stormwater management, resiliency, and green infrastructure, and economic development projects. The Wilmington team and lead departments should confirm the list of projects to pursue, and identify which ones are the highest priorities for implementation. These priorities should be re-evaluated and re-confirmed as the project progresses, based upon how private sector redevelopment progresses and what local/state/federal resources become available. At the time that this AWP plan was finalized in March 2019, the following key areas have emerged as project priorities which could help achieve the goals of this overall AWP initiative:

- **Transportation Infrastructure:** Central to the AWP for the Northeast Brandywine Riverfront is the 12th Street Connector Project, which will connect 12th Street from I-495 to the Brandywine Waterfront and the 16th Street Bridge. An important link between I-495, downtown Wilmington, and the Route 202 corridor, the 12th Street Corridor's proximity to downtown, I-495, and the Brandywine riverfront makes this project critical for redevelopment that will spur economic growth in the Northeast Neighborhood's brownfields area. The City of Wilmington, in coordination with Wilmington Area Planning Council (WILMAPCO), Delaware Department of Transportation (DelDOT), and Delaware Transit Corporation (DART), is underway with a transportation planning study for the project, which will be completed in tandem with the AWP, in the spring of 2019. The proposed transportation connection will reduce traffic congestion on local neighborhood streets, improve walkability, and revitalize the community. The project is currently listed as a Long-Range Planning priority for DelDOT, slated to receive project development funds sufficient to support the entire project by 2025. This Resource Roadmap includes several grant programs that could serve to backstop the funding from DDOT/WILMAPCO, as well as to support additional transportation upgrades including upgrades to existing neighborhood streets and a series of other smaller connecting streets that will facilitate development in the AWP area.
- **Parks, Green Infrastructure, & Riverfront Resiliency:** A major goal of the AWP is to improve access to greenspace and enhance resiliency along the Brandywine Riverfront with living shoreline restoration, green infrastructure, and parks and recreational upgrades. The AWP also aims to help reduce combined sewer overflows (CSOs) with improved stormwater management infrastructure. This Resource Roadmap includes funding sources that can support ecological restoration efforts, as well as stormwater approaches that utilize green infrastructure and low impact development techniques, and that aggregate stormwater infrastructure in common areas such as parks and upgraded roadways which can lessen the burden on individual development projects and provide other community amenities. This Resource Roadmap also contemplates potential funding sources for the placement of large CSO storage facilities at the former quarry in the event this could help mitigate the costs that have currently been deemed prohibitive of this approach.
- **Site & Economic Development:** This AWP calls for mixed-use development, retail, and commercial economic activities in the targeted reuse areas and on brownfield sites. Key areas for public sector support for such economic development could include brownfield cleanup support and site preparation. The Opportunity Zone designation can be leveraged to attract private equity partners for key projects in the AWP.
- **Affordable Housing:** This AWP recommends the construction affordable housing and efforts to increase homeownership. This Resource Roadmap provides recommendations for resources to support existing efforts by the City, Habitat for Humanity, the Wilmington Housing Partnership, and the Neighborhood Conservancy Land Bank to redevelop

existing structures and vacant sites into affordable housing options that will help prevent gentrification in the AWP area. Some of these resources are dependent on current efforts to establish a community development corporation (CDC).

Step 3: Delineate Project Phasing & Estimate Project Costs

When seeking funding, it is often best to consider “eating the elephant” one bite at a time, otherwise the financial burden can seem daunting. Each discrete project may involve different components (such as infrastructure, stormwater, and vertical development activities). Likewise, each distinct project should be considered as a multi-phase project, with each stage potentially fundable (and sometimes from different sources). For example, a typical public works project consists of phases including planning, design and engineering, right of way (ROW) acquisition, permitting, construction, and operation. Often, funders who support an early stage of a project can continue to provide funding in the later stages. As small steps of progress are made into successive phases, it is important to inform and engage the community in order to maintain support and build momentum.

Once priority projects have been identified and their key components and phases have been delineated, the project team should establish estimated project costs for each project and its core components. This will help Wilmington to better identify the best potential funding sources, understand the levels of matching funds required, and tailor advocacy efforts to gain political support for funding requests. The project team can enlist municipal staff with project management and cost-estimation expertise, obtain expert consulting support to help confirm cost estimates for key projects, and/or even ask vendors for their estimates on what a job might take. Most importantly, determine costs for the immediate next stages of each project and secure support for that stage. Federal agencies and philanthropic funders are often most interested in projects in which they can leverage existing funding to fill project gaps.

Step 4: Align Funding Sources with Project Components and Phases

This Resource Roadmap section compiles information on

the best and most significant sources of federal, state, local, private sector, and philanthropic funds for priority projects of this AWP. It is important to review grant solicitations and confer with funding officials to determine whether the key projects are eligible and competitive for specific resources, and consider whether and how a particular project can be shaped or changed to reflect the priorities of funders. Contacting agency officials prior to applying also helps to familiarize the agency with the project, upping your chances for thorough and favorable consideration once it becomes time to apply.

Step 5: Create Strategic Plans & Outreach Materials for Each Priority Project

When ready to proceed on a specific project or project component, there is high value in creating a written, step-by-step strategy for securing funding and other support for that specific project and specific funding opportunities. This memo can describe the specific objective for that project, describe the targeted source(s) of funding, identify the necessary entities and stakeholders, specify those responsible for each task, establish timelines, and identify contingency plans.

Further, the team should breakdown project needs with a concise briefing sheet for each specific project, phase, and/or component as appropriate to provide stakeholders and potential funders with a succinct explanation of the project scope, objectives, benefits, status, supporters, and active requests.

Developing briefing sheets on the front end of a project often helps to formulate a consensus on a cohesive project concept before moving forward with a full grant application. Additional briefing sheets specific to specific project components/phases can also be beneficial for more targeted advocacy efforts, as well as for providing information to key stakeholders when seeking letters of support or commitments for grant applications. These sheets will also be helpful for attracting Opportunity Fund investment, discussed further in Step 11.

Step 6: Seek State Funding

Often, the best sources of funding, grant matches, and other support can be found at state agencies, such as the Office of State Planning Coordination (OSPC), the Delaware

Department of Natural Resources and Environmental Control, the Delaware Division of Small Business, the Delaware Department of State, Division of Historic and Cultural Affairs, DelDOT, and other state agencies. It is valuable to coordinate closely with these agencies, regardless of whether there are applications for funding pending. Further, federal, philanthropic, and private sector funders will typically be more supportive if they understand that the Governor, state agency leadership, and other key state officials support a project (and may even be willing to commit state match or leverage). Work with your state legislative representatives, who can play decisive roles in advocating for support for your projects.

Step 7: Collaborate with Federal Agency Officials

It is critical to be engaged with relevant federal agency and program officials on a project and its key components before asking them for money. Potential agency partners include the U.S. Economic Development Administration (EDA), the Federal Emergency Management Administration (FEMA), the U.S. Department of Transportation (DOT), the U.S. Department of Housing & Urban Development (HUD), and other agencies can be supportive guides and advocates. Approach agency leaders to build their understanding and support for Wilmington's AWP projects and funding requests. Plan and conduct visits to funder HQs (Washington DC) and regional offices (typically Philadelphia); invite federal agency representatives for site and project tours in Wilmington; and conduct collaborative roundtable events and project workshops to build their ongoing support.

Step 8: Prepare for Grant Writing & Establish Matching/Leverage Strategies

Prepare ahead of time to write effective grant applications and do not wait until you see a notice of funding opportunity and submission deadline. Determine the best local agency or other entity to be the lead applicant and confirm key application partners. Identify the internal/external grant writer(s) for each application and have the lead grant writer review past application materials to consider how to position future applications to be more effective. If you have applied unsuccessfully for those resources previously, seek a debrief from the agency on why you were not selected for funding.

Confirm project costs and seek to solidify matching and leverage commitments. Consider using the recently produced architectural rendering for downtown spaces, charts, and other visual designs to make the application look its best.

The most competitive funding requests will have committed matches and high leverage, which takes municipal financial planning, budgeting, and requests to key funding stakeholders well before grants become due. Create a match/leverage strategy for each funding request, and do the work necessary to explore and secure match commitments from key funding partners in the City, New Castle County, WILMAPCO, the State of Delaware, community groups, foundations, and other private sector entities.

Step 9: Secure Congressional Support

When funding requests are ready to be submitted, seek and secure congressional support from Senator Carper, Senator Coons, and Congresswoman Rochester, working with their local district staff, as well as the relevant staff in their Washington DC offices. It is important to ask the Members and their staff for support beyond the standard letter, which will not have a major impact by itself. Instead, ask that they make calls and have meetings with federal agency leaders running the funding programs, the White House, and other decision makers, or even to host federal officials in Wilmington to discuss the progress and potential of key projects.

Step 10: Establish Matching/Leverage Strategies & Assess Feasibility of Debt Financing

Many projects will require more funding than grants alone can supply, meaning that some projects may need to be financed with some form of municipal debt, particularly for the big construction phases of public works projects. There are many good sources of publicly-backed or subsidized lending, but these are only feasible and will only be available for applicants who can demonstrate a viable repayment strategy.

The project team should undertake an analysis that considers the possible revenue streams for servicing debt, the eligibility and competitiveness of the project for local bonding, the potential sources of state- or federally-

backed debt that can provide lower-cost financing, and the political feasibility of debt strategies. Revenue streams that might be available to service debt for projects within the AWP area could include development fees, stormwater fees, or incremental future tax revenues associated with economic development.

Step 11: Leverage and Facilitate Opportunity Fund Investment

Commercial and residential real estate projects, including affordable housing projects, located within Wilmington’s designated Opportunity Zones may be good candidates for equity investment from Opportunity Funds. The Wilmington team can take several actions to position its key projects for Opportunity Investment including through:

- Building a Wilmington Opportunity Zone team with representation from key economic development and affordable housing stakeholders.
- Engaging developers to identify strong projects in the AWP that are ready-to-go but for the lack of financing.
- Building relationships with officials in the Delaware Division of Small Business, which is managing Delaware’s approach to the Opportunity Zone Program.
- Ensuring that key AWP projects appear on and link to the publicized project list run by the State. Currently, the State’s Opportunity Zone mapping tool does not list specific highlights in the AWP census tract. Wilmington should work to update this site with detailed information on the most shovel-ready projects in the AWP.
- Developing an “investment prospectus” to provide investors with key due diligence information on the City’s economy, industries, and priority projects.
- Conducting tours and forums with key stakeholders (developers, business groups, banks, wealth advisors, tax experts) to build interest in the AWP Opportunity Zone.

- Gauging interest of the local/regional financial community in creating a Wilmington-focused Opportunity Fund.
- Reaching out to Opportunity Fund managers to discuss key projects.

Step 12: Celebrate Success!

Success breeds success. As implementation activities progress, invite key stakeholders, including funders, federal and state elected officials, and others, to groundbreaking and ribbon-cuttings and work with the media to publicize progress. This will create momentum for the project and encourage federal agencies that seek to collaborate to join in and share in the success.

4.3 FUNDING SOURCES MATRIX

| OPPORTUNITY | PURPOSE | AMOUNT, MATCH, & DEADLINE | POTENTIAL USES & KEY CONSIDERATIONS |
|--|---|--|--|
| BROWNFIELDS REMEDIATION & SITE PREPARATION | | | |
| U.S. EPA Brownfields Assessment Grants | <ul style="list-style-type: none"> ▪ Provides funding for Environmental Assessment Activities ▪ Remedial Action Work Plans ▪ Site Reuse Planning and Public Engagement | <ul style="list-style-type: none"> ▪ \$200,000 for Hazardous Waste Sites ▪ \$100,000 for Petroleum Based Sites ▪ Deadline: Fall 2019 | <ul style="list-style-type: none"> ▪ The City of Wilmington applied for this funding in January of 2019. Awards are anticipated in the summer of 2019. |
| U.S. EPA Region 3 Targeted Brownfields Assessment (TBA) | <ul style="list-style-type: none"> ▪ Provides assessment of eligible brownfields site at no cost to City | <ul style="list-style-type: none"> ▪ Technical Assistance ▪ Rolling | <ul style="list-style-type: none"> ▪ Coordinate with EPA Region 3 to submit TBA application to receive no cost assessment on key site(s) in AWP area |
| U.S. EPA Brownfields Cleanup Grant | <ul style="list-style-type: none"> ▪ Provides funding to cleanup contamination on public or non-profit properties | <ul style="list-style-type: none"> ▪ \$200,000 ▪ 20% match required ▪ Deadline Fall 2019 | <ul style="list-style-type: none"> ▪ Wilmington may be ready to apply for EPA Brownfields Cleanup funding for key sites in the AWP by the next round of EPA Brownfields grants in the fall of 2019 ▪ Wilmington should prioritize sites where Phase I & II assessment are completed and catalytic redevelopment is planned |
| U.S. EPA Brownfields Cleanup Revolving Loan Fund | <ul style="list-style-type: none"> ▪ Provides seed money for a revolving loan fund and subgrants to remediate sites owned by public, non-profit, and private entities | <ul style="list-style-type: none"> ▪ Up to \$1 million ▪ 20% match required ▪ Deadline: Fall 2019 (offered every other year) | <ul style="list-style-type: none"> ▪ It is anticipated that RLF grants will be offered in the fall of 2019 ▪ RLF would allow Wilmington to manage loans and subgrants for multiple concurrent cleanup projects within the AWP area |
| DNREC Site Investigation & Restoration (SIRS) Hazardous Substance Site Cleanup Loan Program | <ul style="list-style-type: none"> ▪ Provides low-interest loans to nonprofit organizations and businesses who are potentially responsible parties or brownfield developers with an executed agreement with the Department | <ul style="list-style-type: none"> ▪ Low-interest ▪ Minimum loan of \$10,000 ▪ Rolling Submission | <ul style="list-style-type: none"> ▪ Potential source of funding for additional cleanup actions needed on AWP brownfield properties |
| DNREC SIRS Grants | <ul style="list-style-type: none"> ▪ Distributes funding on “first-come, first-serve” basis for cleanup of eligible, certified brownfields properties | <ul style="list-style-type: none"> ▪ Up to \$625,000 to public & non-profit entities; 1:1 match required for each dollar over \$500,000 ▪ Rolling submission | <ul style="list-style-type: none"> ▪ Must apply to DNREC for funding |
| DNREC Delaware Brownfields RLF Loans | <ul style="list-style-type: none"> ▪ Helps eligible borrowers pay for the cleanup of brownfields | <ul style="list-style-type: none"> ▪ Loans can range from \$10,000 up to \$400,000 ▪ Rolling submission | <ul style="list-style-type: none"> ▪ Broad site eligibility ▪ Maximum loan term is 10 years ▪ Interest rates are fixed at or below prevailing prime interest rate ▪ DNREC Contact:Melissa Leckie <ul style="list-style-type: none"> ▪ P: 302-395-2600 ▪ E: Melissa.Leckie@state.de.us ▪ Advertise this loan funding source to potential developers |

| OPPORTUNITY | PURPOSE | AMOUNT, MATCH, & DEADLINE | POTENTIAL USES & KEY CONSIDERATIONS |
|--|---|--|---|
| ECONOMIC DEVELOPMENT & COMMUNITY REVITALIZATION, & AFFORDABLE HOUSING | | | |
| U.S. EDA Public Works & Economic Development Facilities Grant | <ul style="list-style-type: none"> ▪ Supports public infrastructure and site development for projects that will result in demonstrable job creation and economic diversification | <ul style="list-style-type: none"> ▪ Average grant is \$1 million, but up to \$3 million ▪ Matching requirements on sliding scale; AWP census tract 6.02 meets criteria for 60% federal share ▪ Two-phase rolling submission & review process | <ul style="list-style-type: none"> ▪ EDA Public Works funding can support site preparation and infrastructure needs at key sites in the AWP where redevelopment will support job creation. ▪ Depending upon reuse of quarry property, possible source of funding to fill quarry and potentially to install stormwater management tank. Would need to coordinate closely with EDR (below). ▪ Delaware Economic Development Representative: Craig McKaige <ul style="list-style-type: none"> ▪ P: 215-597-9522 ▪ E: cmckaige@eda.gov |
| U.S. HHS Community Economic Development Grant | <ul style="list-style-type: none"> ▪ Supports employment and business development projects that provide economic self-sufficiency for low-income residents and their communities | <ul style="list-style-type: none"> ▪ Awards range from \$100,000 to \$800,000; no match ▪ Expected Deadline May 2019 | <ul style="list-style-type: none"> ▪ As applicants must be Community Development Corporations (CDC), the availability of this funding will depend upon Wilmington’s efforts to establish a CDC ▪ Wide variety of business start-up or business expansion activities, see examples of previous projects. ▪ Contact:Rafael Elizalde <ul style="list-style-type: none"> ▪ P: 202.401.5115 ▪ E: ocsgrants@acf.hhs.gov |
| Delaware State Housing Authority (DSHA) Strong Neighborhoods Housing Fund | <ul style="list-style-type: none"> ▪ Supports acquisition, renovation, and sale of vacant, abandoned, foreclosed or blighted property | <ul style="list-style-type: none"> ▪ Grants range from \$250,000 to \$750,000; maximum of \$50,000 per unit ▪ Expected deadline early spring of 2020 | <ul style="list-style-type: none"> ▪ The AWP area is one the homeownership priority areas map, making projects in the AWP more competitive for this funding source ▪ This program could support reinvestment into existing housing stock in the adjacent blocks of the 17th Street and Vandever Ave. ▪ This program could potentially also be used to establish a homeownership initiative in the AWP, potentially through a Community Land Trust approach |
| Wilmington Neighborhood Conservancy Land Bank | <ul style="list-style-type: none"> ▪ Strategically acquires vacant, dilapidated, abandoned, and delinquent properties to convert to productive use in order to strengthen and revitalize our neighborhoods and spur economic development | <ul style="list-style-type: none"> ▪ N/A – AWP team should consider funding opportunities in this section to support a partnership with the Land Bank | <ul style="list-style-type: none"> ▪ The AWP team should consider partnering with the Wilmington Neighborhood Conservancy Land Bank on efforts to renovate housing stock within the 17th Street/Vandever Ave. targeted investment areas ▪ Land Bank works to transform dilapidated Wilmington properties into affordable home-ownership units |
| Delaware Low Income Housing Tax Credit | <ul style="list-style-type: none"> ▪ Supports acquisition, demolition, rehabilitation, new construction, conversion of non-residential and/or historic housing to multi-family housing | <ul style="list-style-type: none"> ▪ Households with incomes that do not exceed 60% of median income based on family size and county location are eligible to live in LIHTC properties ▪ Owner of low-income building must rent a min 20% of units to HHs with 50% or less than AMI or 40% of HHs with incomes 60% or less AMI | <ul style="list-style-type: none"> ▪ AWP team should partner with developers to leverage LIHTC with other funding opportunities (including potentially Opportunity Fund Investment) to development new affordable housing ▪ Project must comply with a number of requirements including timeframe from award to when the building is placed in service, tenant income, maximum rent levels, and % of low-income occupancy. All buildings financed with the LIHTC are subject to a covenant in the land record to enforce compliance and must remain affordable and in compliance with other program restrictions for min. of 30 years |

| OPPORTUNITY | PURPOSE | AMOUNT, MATCH, & DEADLINE | POTENTIAL USES & KEY CONSIDERATIONS |
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| ECONOMIC DEVELOPMENT & COMMUNITY REVITALIZATION, & AFFORDABLE HOUSING | | | |
| U.S. HUD Choice Neighborhoods Implementation Grants Program | <ul style="list-style-type: none"> ▪ To support development and implementation of comprehensive neighborhoods and housing revitalization “Transformation Plans” | <ul style="list-style-type: none"> ▪ Up to \$30 million ▪ No match required ▪ Expected deadline late summer 2019 | <ul style="list-style-type: none"> ▪ Eligible communities must have “severely distressed” public housing, be in a distressed neighborhood by poverty or violent crime statistics, and have a strong community vision and plan for the neighborhood ▪ If there is sufficiently dilapidated public housing within the AWP, Wilmington could consider seeking CN funding to support revitalization ▪ Wilmington Housing Authority received CN Planning funding in 2010 to support the Southside neighborhood, however ran into issues seeking CN Implementation funding in 2015 due to the requirement to guarantee a \$30 million loan. |
| Opportunity Funds | <ul style="list-style-type: none"> ▪ Incentivize private investment in distressed areas through deferred capital gains taxes | <ul style="list-style-type: none"> ▪ Capital gains tax benefits that depends on duration of investment ▪ Nominations announced in March 2018, investment clock driving early action | <ul style="list-style-type: none"> ▪ AWP census tract is designation Opportunity Zone ▪ Real estate investment, including affordable housing, is well-positioned for equity partnership from Opportunity Funds ▪ Potential source of funding for developer converting church into single low-income housing; could be leveraged with LIHTC or Historic Preservation Tax Credits ▪ See Step 11 for strategy to attract Opportunity Fund investment |
| National Development Council (NDC), Public-Private Partnership (P3) | <ul style="list-style-type: none"> ▪ NDC designs-finances-builds-operates public facilities and bring non-profit bonding funds ▪ Municipality would lease to own facility from NDC | <ul style="list-style-type: none"> ▪ Guarantees a fixed-price of ~25% less than local bid costs ▪ Rolling | <ul style="list-style-type: none"> ▪ Contact Stephanie Dugan at 325.668.6555 and Joe Gray at 561.537.0933 to discuss viability of NDC model for prospective development projects (community center, senior housing, etc.) |
| U.S. Treasury New Market Tax Credits | <ul style="list-style-type: none"> ▪ For infrastructure and development that supports job creation ▪ A qualified “Community Development Entity” can invest in a project, compensated by an investment tax credit | <ul style="list-style-type: none"> ▪ Can subsidize up to 20% of a project’s capital needs with NMTC ▪ Projects typically amount to \$3-\$7.5 million in equity investment ▪ Begin work mid-year for preparing investments in the following year | <ul style="list-style-type: none"> ▪ AWP area meets eligibility criteria for NMTC investment ▪ NMTC can be used in concert with Opportunity Fund investment ▪ Cinnaire was looking to invest NMTC allotment in Wilmington but needs viable project |
| U.S. Conference of Mayors and Wells Fargo CommunityWINS | <ul style="list-style-type: none"> ▪ Supports local projects that invest, strengthen, and promote long-term economic prosperity | <ul style="list-style-type: none"> ▪ Two awards for “medium” cities: \$150,000 winner & \$50,000 outstanding achievement ▪ No match required ▪ Deadline March 22, 2019 | <ul style="list-style-type: none"> ▪ Mayor Purzycki is USCM member and eligible to nominate up to 3 non-profits to apply for funding ▪ Funding could be used to support non-profit work to stabilize neighborhood and launch homeownership initiative in AWP |

| OPPORTUNITY | PURPOSE | AMOUNT, MATCH, & DEADLINE | POTENTIAL USES & KEY CONSIDERATIONS |
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| TRANSPORTATION INFRASTRUCTURE | | | |
| U.S. DOT Better Utilizing Investments to Leverage Development (BUILD) Transportation Discretionary Grant | <ul style="list-style-type: none"> Supports transportation projects that promote safety, accessibility, mobility, and economic redevelopment | <ul style="list-style-type: none"> Average grant is \$13 million; minimum of \$5 million 20% match minimum; competitive projects will match >30% Expected Deadline July 2019 | <ul style="list-style-type: none"> Could serve as a backstop for funding for the 12th Street Connector Project in event that the WILMAPCO funding does not come through Could also support other street connections and complete streets within AWP that will facilitate economic development, such as North Church Street Previous round allowed for planning applications but did not award any funding for planning; read NOFO carefully and consider contacting USDOT directly prior to submitting a planning application for design and engineering funding |
| WILMAPCO & DeIDOT Transportation Alternatives Program | <ul style="list-style-type: none"> Supports design & construction of sidewalks, streetscapes, trails, and bike/pedestrian facilities, as well as environmental mitigation and stormwater management | <ul style="list-style-type: none"> Projects range from <\$1 million to >\$80 million 20% required cost share Expected deadline: Spring 2019 | <ul style="list-style-type: none"> TAP funding could support the planned promenade along the river, which will not be covered under the WILMAPCO funding for the 12th Street Connector. This funding could also support streetlighting, stormwater management facilities, and other key projects that connect into, but are not covered by the 12th Street Connector project. This source can also be used to backstop bike and pedestrian elements of the 12th Street Connector. For projects within the WILMAPCO jurisdiction applications are submitted by email to WILMAPCO and evaluated using WILMAPCO's project prioritization process |
| Capital Improvement Committee's Community Transportation Fund | <ul style="list-style-type: none"> Permits individual legislators to address small transportation projects that may not meet DeIDOT priorities | <ul style="list-style-type: none"> Small upgrades to subdivision streets Follows legislative cycle | <ul style="list-style-type: none"> Work with Representative Nnamdi O. Chukwuocha or Representative Stephanie Bolden (depending on address of project) to prioritize small-scale transportation upgrades to subdivision streets within AWP |
| See EDA Public Works & Economic Adjustment Assistance | | | <ul style="list-style-type: none"> EDA Public Works funding could be used to support transportation projects (access roads, exits, etc) that are necessary for key AWP redevelopment sites that can be linked to demonstrable job creation |
| PARKS & RECREATION | | | |
| Outdoor Recreation Legacy Partnership Program | <ul style="list-style-type: none"> Funds projects that increase recreational access in distressed urban areas | <ul style="list-style-type: none"> Up to \$750,000 50% match required DNREC deadline for next round likely summer Expected federal deadline late summer/early fall 2019 | <ul style="list-style-type: none"> Wilmington received an ORLP grant in 2017 to support Father Tucker Park While previous win may make Wilmington less competitive in upcoming round, Wilmington should consider this resource for future parks and recreation needs in the AWP area, which should be highly competitive for this funding |

| OPPORTUNITY | PURPOSE | AMOUNT, MATCH, & DEADLINE | POTENTIAL USES & KEY CONSIDERATIONS |
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| PARKS & RECREATION | | | |
| DNREC Outdoor Recreation, Parks and Trails Program | <ul style="list-style-type: none"> ▪ Provides funding for public park land acquisition and outdoor recreation facility development, including design, engineering, and construction of trails, riverwalks, greenways, and blueways | <ul style="list-style-type: none"> ▪ Projects range from approx. \$10,000 to \$500,000; 50% match ▪ Deadline TBD | <ul style="list-style-type: none"> ▪ This funding could support the design and redevelopment of the Diamond Salvage Site as a riverfront park, or other key parks and recreation activities, including the planned riverfront promenade ▪ Contact: Bob Ehemann <ul style="list-style-type: none"> ▪ P: 302.739.9241 ▪ E: Robert.Ehemann@state.de.us |
| PeopleForBikes Community Grant | <ul style="list-style-type: none"> ▪ Supports bicycle infrastructure, trails, facilities, parks, pump tracks, BMX facilities, and campaigns and programs that promote bike use | <ul style="list-style-type: none"> ▪ Up to \$10,000; 1:1 match ▪ 2 cycles per year; July and October | <ul style="list-style-type: none"> ▪ Funding could support bike infrastructure and trails along the riverfront ▪ Contact: Zoe Kircos <ul style="list-style-type: none"> ▪ P: 303.449.4893 x106 ▪ E: zoe@peopleforbikes.org |
| STORMWATER MANAGEMENT & RIVERFRONT RESILIENCY | | | |
| Delaware Water Infrastructure Advisory Council's Surface Water Matching Planning Grants | <ul style="list-style-type: none"> ▪ Supports planning, preliminary engineering, and feasibility analysis of surface water improvement projects, such as: retrofitting stormwater systems; establishing green technology practices; restoring streams and wetlands; small watershed studies; master surface water and drainage plans | <ul style="list-style-type: none"> ▪ \$50,000; 1:1 cash match requirement ▪ Grants due 4 times a year in February, May, August, and November | <ul style="list-style-type: none"> ▪ This program could support design of green infrastructure improvements for stormwater management and potentially living shoreline restoration |
| NFWF Five Star and Urban Waters Restoration Program | <ul style="list-style-type: none"> ▪ Funds projects that build capacity and educate communities to improve urban water quality, watersheds, and habitats | <ul style="list-style-type: none"> ▪ Up to \$50,000, average grant will be ~\$30,000 ▪ 1:1 match is required ▪ Expected deadline January 2020 | <ul style="list-style-type: none"> ▪ Could support green infrastructure projects and potentially living shoreline activities |
| DNREC Community Water Quality Improvement Grant | <ul style="list-style-type: none"> ▪ Supports measurable improvements to surface water and ground water quality through installation of stormwater management improvements, restoration, community involvement, and education | <ul style="list-style-type: none"> ▪ Grants range from \$25,000 to \$75,000; 25% match ▪ Expected deadline fall of 2019 | <ul style="list-style-type: none"> ▪ This program could support design and installation of green infrastructure for stormwater management, including green infrastructure on new streetscapes on Locust Street and other streets contributing to CSO issues, as well as public spaces with integrated stormwater parks ▪ Program Contact: Sharon Webb <ul style="list-style-type: none"> ▪ E: Sharon.Webb@state.de.us |

| OPPORTUNITY | PURPOSE | AMOUNT, MATCH, & DEADLINE | POTENTIAL USES & KEY CONSIDERATIONS |
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| STORMWATER MANAGEMENT & RIVERFRONT RESILIENCY | | | |
| FEMA Flood Mitigation Assistance Grant Program | <ul style="list-style-type: none"> ▪ Reduces risk to population and structures from hazards and reduce reliance on federal funds in future disasters | <ul style="list-style-type: none"> ▪ Up to \$100,000 for community flood mitigation advance assistance; up to \$10 million for community flood mitigation projects; up to \$100, for mitigation planning ▪ Expected deadline January 2020 | <ul style="list-style-type: none"> ▪ Can be used to plan and implement flood mitigation activities in the AWP area ▪ Must first coordinate with and submit applications to Delaware Emergency Management Agency |
| NFWF/Wells Fargo Resilient Communities | <ul style="list-style-type: none"> ▪ Supports adaptation through regional conservation projects and capacity building | <ul style="list-style-type: none"> ▪ Up to \$500,000 ▪ Competitive projects will have a 1:1 cash/in-kind match ▪ February 19, 2019 for pre-proposal ▪ April 25, 2019 for full app | <ul style="list-style-type: none"> ▪ Regional priority for Eastern seaboard is sea level rise adaptation ▪ Could support living shoreline activities ▪ Contact: Chloe Elberty <ul style="list-style-type: none"> ▪ P: 202-595-2434 ▪ E: Chloe.Elberty@nfwf.org |
| NFWF National Coastal Resiliency Fund | <ul style="list-style-type: none"> ▪ Funds projects that restore, increase, and strengthen natural infrastructure protect coastal communities while enhancing habitats for fish and wildlife | <ul style="list-style-type: none"> ▪ Up to \$3 million ▪ Avg. award between \$250,000 - \$1.5 million ▪ 1:1 match required (up to 100% can be in-kind) ▪ Exp. Deadline Summer of 2019 | <ul style="list-style-type: none"> ▪ Could support living shoreline restoration ▪ 2018 awards can be found here ▪ Contact: Erika Feller at <ul style="list-style-type: none"> ▪ P: 202.595.3911 ▪ E: Erika.feller@nfwf.org |
| U.S. Army Corps of Engineers Section 7001 of WRRDA 2014 | <ul style="list-style-type: none"> ▪ Supports non-federal projects for water resources development, improvements, or feasibility assessment | <ul style="list-style-type: none"> ▪ Varies ▪ Rolling submission | <ul style="list-style-type: none"> ▪ Develop briefing sheet about living shoreline or other project to send to the U.S. Army Corps of Engineers Philadelphia Regional Office to set up a call to discuss the variety of approaches to seeking US Army Corps assistance |
| Green Project Reserve | <ul style="list-style-type: none"> ▪ Provides loan funding for green infrastructure, water and energy efficiency, or other environmentally innovative projects | <ul style="list-style-type: none"> ▪ Low-interest loan program for planning, design, and construction of facilities ▪ Rolling | <ul style="list-style-type: none"> ▪ Must be on Delaware Water Pollution Control Revolving Fund Project Priority List ▪ Contact: Greg Pope, P.E <ul style="list-style-type: none"> ▪ P: 302.739.9941 ▪ E: Greg.Pope@delaware.gov |
| U.S. EPA Region 3 Environmental Finance Center | <ul style="list-style-type: none"> ▪ Part of a national network, these centers provide research, training, and assistance to communities in their region on energy and water programs | <ul style="list-style-type: none"> ▪ Technical assistance and training for demonstration and applied research projects ▪ No deadline | <ul style="list-style-type: none"> ▪ Review existing research programs on management for water systems, wastewater, and other strategies ▪ Contact program staff to discuss specific projects or strategies |

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