

An aerial architectural rendering of a proposed waterfront development in Philadelphia. The foreground shows a large, modern building complex with multiple levels, glass facades, and green roofs. The buildings are situated along a waterfront area with a marina containing several sailboats. In the background, the dense urban landscape of Philadelphia is visible, including the city skyline with prominent skyscrapers like the Comcast Center and the Liberty Bell Center. A highway interchange is also visible in the mid-ground. The sky is clear and blue.

FINAL DRAFT JUNE 2011

MASTER PLAN FOR THE CENTRAL DELAWARE

TRANSFORMING PHILADELPHIA'S WATERFRONT



Note: It is recognized that there are several sites that have approved zoning, plans of development, and/or other entitlements with the city which are not shown on this plan. This plan is not intended as a legal document; it is a master plan with the intention of making recommendations for development in keeping with the overall vision for the waterfront.

Delaware River Waterfront Corporation (DRWC) is a nonprofit corporation organized exclusively for the benefit of the City of Philadelphia and its citizens. DRWC acts as the steward of the Delaware River waterfront to provide a benefit to all of the citizens and visitors of the City.

The fundamental purpose of DRWC is to design, develop and manage the central Delaware River waterfront in Philadelphia between Oregon and Allegheny Avenues. DRWC intends to transform the central Delaware River waterfront into a vibrant destination location for recreational, cultural, and commercial activities for the residents and visitors of Philadelphia. DRWC will serve as a catalyst for high quality investment in public parks, trails, maritime, residential, retail, hotel and other improvements that create a vibrant amenity, extending Philadelphia to the river's edge.

DRWC is open, transparent and accountable in connection with its operations and activities with respect to the waterfront. Through the judicious use of financing, land acquisition, and development capabilities, the Corporation will work cooperatively with civic groups, property owners, and its many other stakeholders, as well as with relevant City, State, and federal agencies, to ensure the successful implementation of this master plan.

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TRANSFORMING PHILADELPHIA'S WATERFRONT

Final Draft June 2011



Illustrative Rendering Showing Multi-use Trails Near Schirra Drive

ACKNOWLEDGEMENTS

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The Master Plan was developed in close consultation with the following stakeholder groups:

| | |
|--|---|
| Bicycle Coalition of Greater Philadelphia | Old City Civic Association |
| Central Delaware Advocacy Group | PennPraxis |
| Citizens for Pennsylvania's Future | Pennsport Civic Association |
| City of Philadelphia City Planning Commission | Pennsylvania Department of Community and Economic Development |
| City of Philadelphia Department of Commerce | Pennsylvania Department of Conservation and Natural Resources |
| City of Philadelphia Department of Parks and Recreation | Pennsylvania Department of Environmental Protection |
| City of Philadelphia Department of Streets | Pennsylvania Department of Transportation |
| City of Philadelphia Historical Commission | Pennsylvania Environmental Council |
| City of Philadelphia Law Department | Pennsylvania Horticultural Society |
| City of Philadelphia Mayor's Office of Sustainability | Philadelphia City Planning Commission |
| City of Philadelphia Mayor's Office of Transportation and Utilities | Philadelphia Industrial Development Corporation |
| City of Philadelphia Office of Arts, Culture, and the Creative Economy | Philadelphia Regional Port Authority |
| City of Philadelphia Office of Economic Opportunity | Philadelphia Water Department |
| City of Philadelphia Office of the Mayor | Port Richmond On Patrol & Civic Association |
| City of Philadelphia Redevelopment Authority | Preservation Alliance of Greater Philadelphia |
| Court at Old Swedes Homeowners' Association | Public Art Forum |
| Delaware River Port Authority | Queen Village Neighbors Association |
| Delaware Valley Regional Planning Commission | River's Edge Community Association |
| Development Workshop | Society Hill Civic Association |
| Fishtown Neighbors Association | Society Hill Towers Homeowners' Association |
| Franklin Bridge North | Southeastern Pennsylvania Transportation Authority |
| Neighbors Allied for the Best Riverfront | South Street Headhouse Business District |
| New Kensington Community Development Corporation | Whitman Council |
| Northern Liberties Neighbors Association | |

Many additional organizations and individuals have had input into this Master Plan and their contributions are recognized in the full report document.



Penn Treaty Park and PECO Plant

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Illustrative Rendering from South of Washington Park and Pier 38 and 40 Renovation

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A PHILADELPHIA WATERFRONT

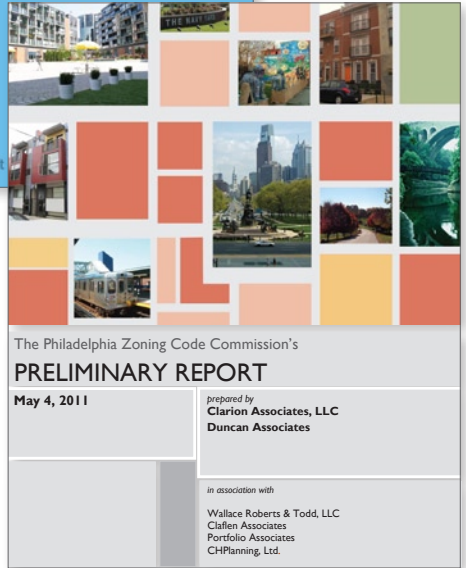
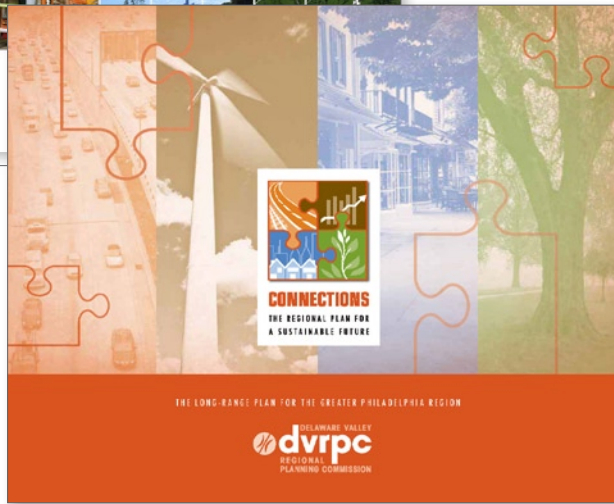
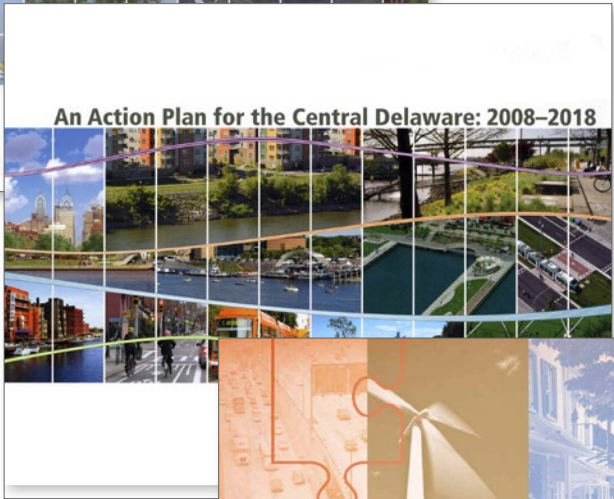
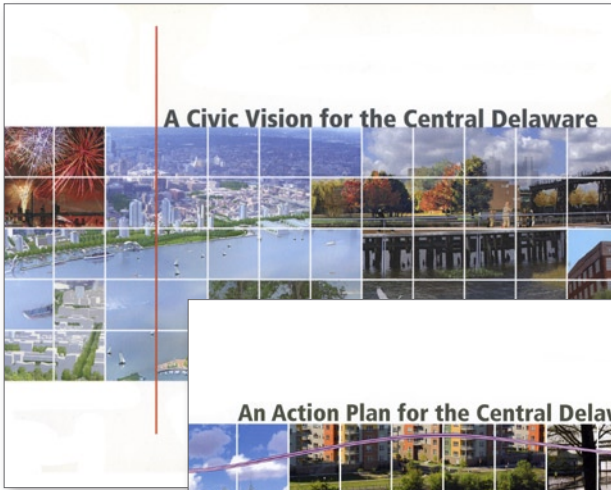
The goal of this master plan is to transform this six-mile length of Philadelphia's Central Delaware River Waterfront into an authentic extension of the thriving city and vibrant neighborhoods immediately to its west. Breathing life back into an abandoned industrial waterfront once at the heart of the Philadelphia economy is a tremendous challenge, but one that can yield great benefits to the city and its region. The City of Philadelphia is informal, innovative, proud, relaxed, walkable, resilient, and vibrant. How can those qualities be brought to the Delaware waterfront?

Unlike the Upper Schuylkill, which is rooted in a history of pastoral retreats and a natural preserve for the protection of the city's water supply, the Delaware River has historically been Philadelphia's front door, a center of activity, industry and commerce. Bounded at both the north and south ends by active port facilities, the Master Plan for the Central Delaware creates region-serving amenities while also reconnecting the city's residents and visitors with the waterfront.

The inspiration and foundations for this waterfront plan are found in its distinctive qualities:

- ***The singular geography: a sweeping bow of piers and wetlands that offers broad views up, down, and across the river***
- ***The many historic and cultural resources that are identifiable and integral to the character of Philadelphia's waterfront***
- ***The vibrancy and low-rise scale of the many adjoining upland neighborhoods***
- ***The powerful integration of the manmade piers and structures with natural ecological systems***

This Master Plan, created through the collective work of the design team, the Delaware River Waterfront Corporation, governmental, nonprofit and civic organizations, property owners and other stakeholders, provides a roadmap for transforming Philadelphia's distinctive Central Delaware River Waterfront.



THE PLANNING CONTEXT

Each great city has its own specific character; it also has a specific regulatory and planning context. The DRWC Master Plan for the Central Delaware is taking shape in the context of five interrelated planning and regulatory initiatives:

- ***A Civic Vision for the Central Delaware and An Action Plan for the Central Delaware***

These two documents, completed by PennPraxis in 2007 and 2008 respectively, are the culmination of a highly successful citizen engagement process which created a shared vision for the Central Delaware waterfront. The Master Plan for the Central Delaware utilizes the core principles set forth in the Civic Vision to establish the detailed framework for redevelopment of the waterfront.

- ***2009 Greenworks Philadelphia***

This City of Philadelphia Plan outlines sustainability goals and initiatives in the categories of energy, environment, equity, economy, and engagement. DRWC's plan proposes that the Central Delaware will be a leading example of how the principles and objectives of Greenworks can be applied to a regenerating waterfront district.

- ***Connections: the Regional Plan for a Sustainable Future***

This plan, completed by the Delaware Valley Regional Planning Commission in 2009, sets regional policy and agenda. The Master Plan supports numerous goals listed in this document.

- ***Philadelphia 2035: The Comprehensive Plan***

This plan is Philadelphia's first new comprehensive plan in six decades. It establishes a framework for the city and a basis for the development of 18 neighborhood-specific district plans. The Master Plan has been closely coordinated so that it supports the overall city-wide goals listed in the Connections Plan.

- ***Philadelphia's New Zoning Code***

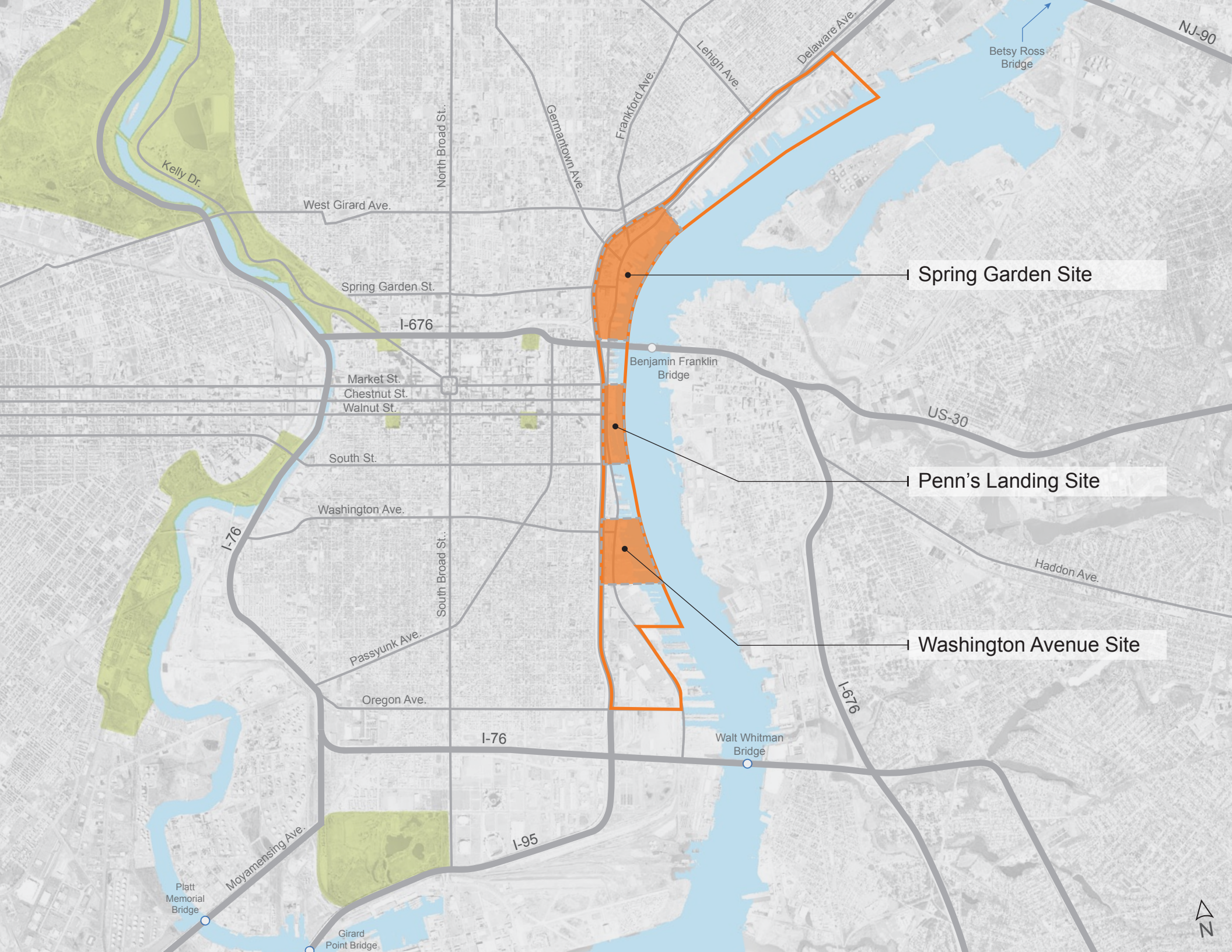
The City of Philadelphia has been preparing a revision to its Zoning Code over the past three years, and the waterfront will, like all other areas of the city, be subject to the new zoning provisions.



THE MASTER PLAN PROCESS

The Master Plan for the Central Delaware incorporates the principles of the Civic Vision into an implementable long-term framework of open space, cultural and environmental resources, and economic development for the waterfront. In the context of a 25-year perspective plan, it incorporates a highly-detailed short-term strategy to invest limited public funding in concentrated areas in order to begin the transformation of the waterfront. Based on careful parcel-by-parcel studies of constraints and opportunities, the master plan recommends land uses for specific sites and properties that are linked by public spaces and transportation improvements needed to accommodate these uses.

The master plan team has focused on economic feasibility and prepared a phased implementation strategy grounded in economic realities and market opportunities. The plan proposes investment in high-quality public spaces not only to provide valuable recreational, cultural, and entertainment attractions, but also to yield increased value on nearby privately-owned parcels. Higher value on these private parcels on the Central Delaware will allow property owners and developers to achieve a denser, higher-quality reuse of their properties.



Spring Garden Site

Penn's Landing Site

Washington Avenue Site

THE PROJECT AREA AND BEYOND

The Master Plan for the Central Delaware covers the entire waterfront area from I-95 to the river, from Allegheny Avenue in the north to Oregon Avenue in the south. The project area encompasses almost six miles of waterfront and over 1,100 acres of property - approximately 150 acres of which are underwater. Only 10 percent is publicly owned or under public control, so the realization of the plan and its principles will depend upon coordinated public and private investment.

Because the project area is large, it will take decades to achieve the transformation envisioned in this plan. In fact, two areas at the north and south extremes of the project area are not likely to undergo significant change within the 25-year time period of this plan. These areas are

- **Lehigh Avenue – Allegheny Avenue:** this heavy industrial area at the northern end of the project area is served by an active rail corridor owned and operated by Conrail
- **Mifflin Street – Oregon Avenue:** This area, extending from Mifflin Street past Oregon Avenue to Pattison Avenue and beyond, is an active port facility with supporting land uses.

Consequently the Master Plan focuses on the area between Mifflin Street on the south and Lehigh Avenue on the north. However, despite the current conditions and challenges for the far north and far south, considerable thought and effort has gone into making recommendations for trail and public realm connections through these north and south ends.

For the extensive area between Mifflin Street and Lehigh Avenue, the plan proposes development that can spread amongst the private and public sites between now and 2035. In order to phase and plan for this long-term development, the plan identifies three priority sites where strategic public investment should be focused as the starting points for the transformation of the waterfront, and these sites are more thoroughly developed in this plan.

The plan also incorporates important connections between the waterfront and the city and region which extend beyond the defined project area. The integration of the waterfront with the existing city is a critical part of the urban design and economic strategy because improvements to the streets connecting into the neighborhoods are essential to the success of the plan. Likewise, improving the eastern end of Market Street and reinvigorating Front Street are essential strategies for the success of a transformed Penn's Landing. Lastly, city-wide and regional trail connections are critically important to the objective of linking the larger city and region to the Delaware. Specifically these connections include the East Coast Greenway (which continues north past Allegheny Avenue and at Spring Garden Street proceeds west across the city), the Lehigh viaduct which is proposed as a future trail connection through North Philadelphia, and a connection to the Spruce and Pine Street bicycle lanes which run across the city.

PRINCIPLES FOR THE DEVELOPMENT OF THE CENTRAL DELAWARE WATERFRONT

As an early activity in the Master Plan process, the Board of the Delaware River Waterfront Corporation identified eight principles to advance the Civic Vision and provide direction for the Master Plan and its implementation. These principles are

1. Create a network of civic and public spaces that are distinctive public amenities as well as catalysts for private development

- enhance the value and development potential of private and publicly-owned properties
- become an amenity and quality-of-life improvement for all Philadelphia neighborhoods and residents
- enhance Philadelphia's identity and brand through creating a world-class waterfront attractive to local, regional, national and international visitors

2. Promote the development of new, low to mid-rise, dense and walkable residential neighborhoods

- address the realities of the market by spreading private development along the waterfront rather than concentrating it in a few locations
- design new residential development that complements the scale and character of adjacent neighborhoods
- include service retail, cafes, restaurants and other entertainment venues that support year-round activities

3. Accommodate diverse land uses along the waterfront

- protect and enhance the industrial uses at the south and north ends
- promote the development of flex-space buildings on the north end as a buffer between heavy industry and mixed development to the south
- introduce a mixture of residential, entertainment, and retail uses organized around a network of high-quality open space
- complement rather than compete with other major commercial office or large format retail elsewhere in the city

4. Incorporate best practices in sustainability

- encourage energy conservation by promoting innovative, high performance development goals for all new development, using publicly owned land to achieve gold and platinum LEED certification
- work with the Philadelphia Water Department to incorporate best practices in watershed management including restoration of wetlands and improved stormwater management
- demonstrate best practices and innovation in sustainable landscape design

5. Participate in creating a pedestrian-friendly and balanced transportation plan that supports the walkability of the waterfront and its strong connection to the city and the region

- promote the funding and implementation of a streetcar system that links waterfront destinations to each other, connects waterfront residents to employment centers, and serves visitors travelling from other parts of Philadelphia and the region
- create a distinctive waterfront boulevard using near-term and long-term investments that can calm traffic, provide enhanced pedestrian crossings, and accommodate interim bus service as the streetcar system moves toward funding and implementation
- enhance the appearance of existing underpasses on east/west streets to provide safe and attractive connections between adjacent neighborhoods and the waterfront
- provide bikeways for recreation and commuting for the entire length of the project area, and tie them into existing and future city bikeways

6. Create strong inclusionary opportunities for economic development for minority-owned, women-owned, and disadvantaged businesses

- utilize the private development of publicly owned land for engaging professional service firms and enterprises in design, construction, investment, and implementation
- create a pipeline of construction projects which can enable contractors to build capacity over time to undertake larger projects
- provide equity investment opportunities for firms and individuals
- create entrepreneurial opportunities in the retail sector

7. Create a plan that can be implemented in discrete increments, over time

- allow key elements of the plan to be designed, built and operated without requiring other major public investments to occur at the same time
- identify selected locations where publicly owned land can be used to initiate early development activity
- undertake both small and large projects to create and maintain a constant momentum of transformation throughout the waterfront area

8. Create a truly Philadelphia waterfront

- incorporate public art – both temporary and permanent – into all development, both public and private, working with Philadelphia’s rich array of cultural institutions
- preserve, interpret, and/or re-use historic, archaeological, and cultural resources as a vital component of the new waterfront
- increase the quality and quantity of public performances, events, and multicultural festivals in existing locations and expand this program to include other waterfront locations



Overall Illustrative Plan

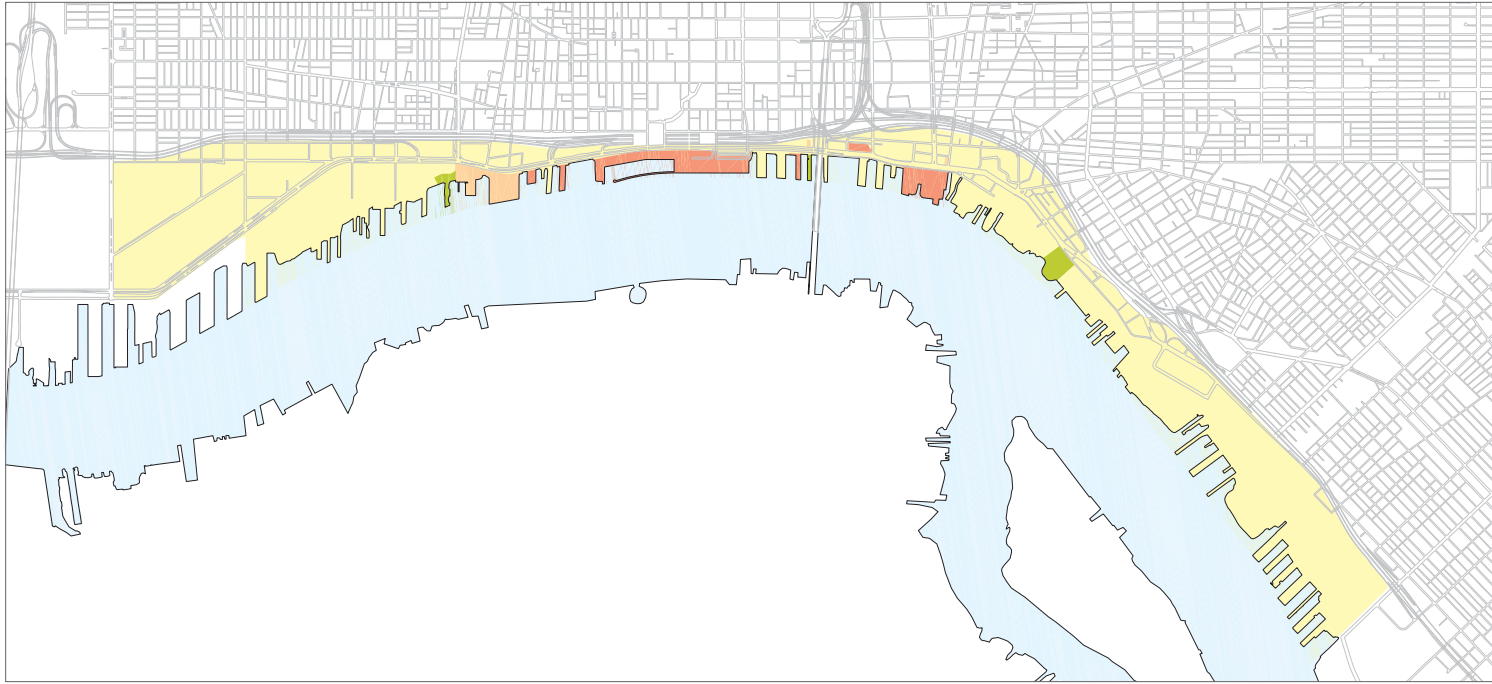


PLAN OVERVIEW

Overall Illustrative Plan

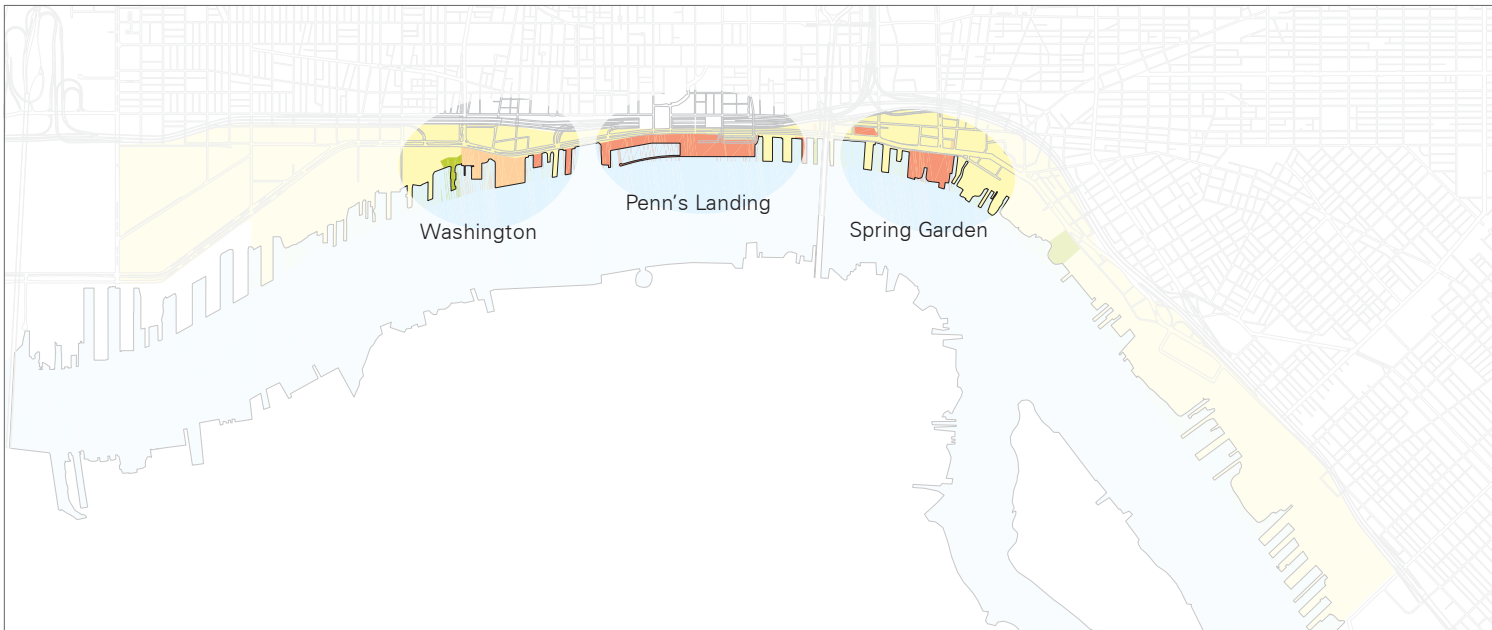
The illustrative plan and artistic renderings which follow are the graphical representation of the 25-year buildout of the combined elements of the Plan. These include a new street grid which creates new development blocks, new development on existing parcels, and a rich system of parks and trails. Additionally, certain elements of the transportation network are shown in the illustrative plan such as the multi-use trail stretching the length of the project area and critically important improvements to key connector streets. Lastly, the renderings also illustrate transportation elements such as improvements to Delaware Avenue/Columbus Boulevard and connector streets.

Each section of the plan that follows contains a narrative about the full 25-year build-out of the plan. The Plan was very carefully formulated to be implemented based on discussions with property owners, a detailed cost estimating and financing strategy, and with the input of numerous stakeholder groups. It is important to recognize that 90% of the project area is in private ownership; therefore each section also contains a discussion about current property ownership. Also many of the elements shown in the Plan are long-term improvements which may not be realized until nearly the end of the timeframe of this plan. Therefore, the narrative discusses phasing and describes which improvements are planned for the short-term.



- Privately owned or leased
- DRWC owned
- Publicly owned
- Public Park

Ownership - Less than 10% of the land on the waterfront is publicly controlled.



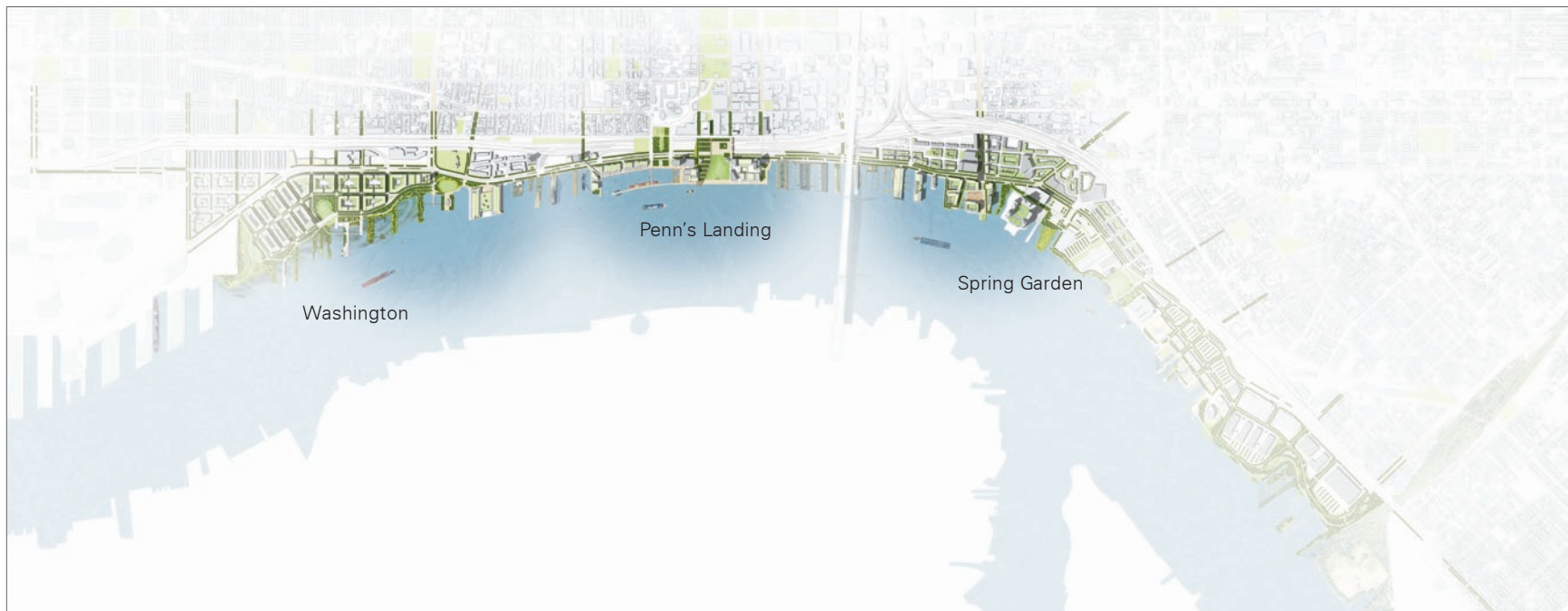
Ownership - Clusters of publicly controlled land.

Today's Ownership & Priority Sites











An important strategy is that three "Priority Sites" or nodes have been chosen where it is suggested that strategic public investment should be focused in the short-term:

- **Washington:** this site includes several parcels under both public and private ownership
- **Penn's Landing:** this site contains the DRWC-owned land between Lombard and Market Streets
- **Spring Garden:** this site is anchored by the Festival Pier and former City Incinerator sites (owned by DRWC) as well as a large area of privately owned parcels in between I-95 and the river, from the Ben Franklin Bridge to Frankford Avenue

Strategies for investing in these priority sites is further described in the Economics section of this Plan.

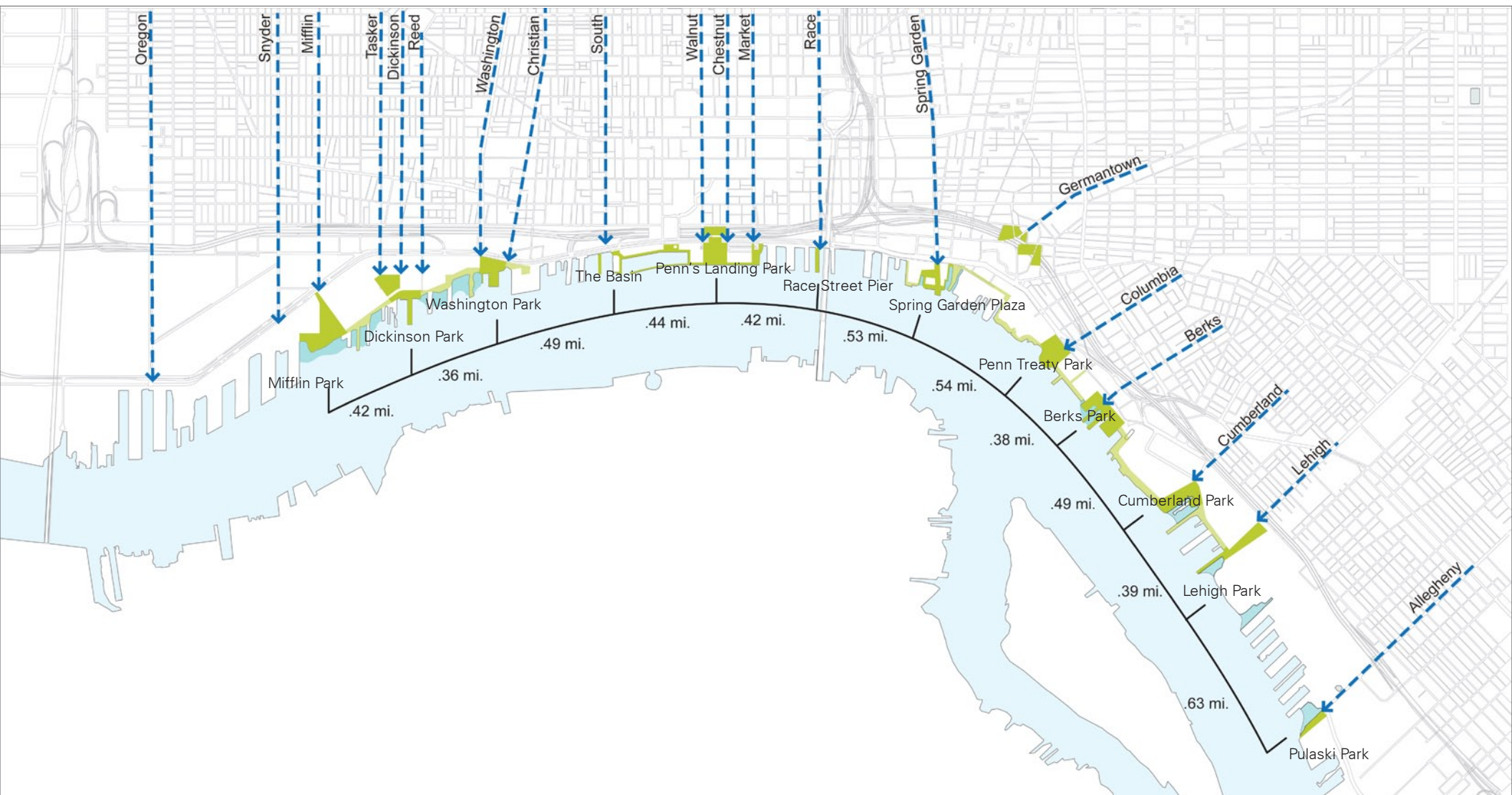




- | | | | |
|--|---------------------|---|--------------------|
|  | Residential |  | Casino |
|  | Office/Research |  | Light Industrial |
|  | Mixed Use |  | Parking |
|  | Civic/Institutional |  | Parks/Recreational |
|  | Hotel |  | Existing Land Use |

A Mixed-Use Plan

The land use framework for the Central Delaware is premised on extending the abutting neighborhoods to the waterfront and creating high density, low and mid-rise, mixed-use development organized by a rich network of open spaces serving the neighborhoods, city, and region. The Washington Avenue, Penn's Landing, Spring Garden priority sites are the focus of development analysis in the design team's work. The mixed-use development projected on these sites is targeted for market absorption by 2050. Beyond these early sites, large private land holdings for later development include the significant tracts of land south of Tasker Street, and between Schirra Drive and Conrail to the north. An Extended Plan proposes longer term land use changes as well as more park land, including the large format retail sites between Tasker Avenue and Mifflin Street on the waterfront, and properties west of Delaware Avenue between Tasker and Snyder.



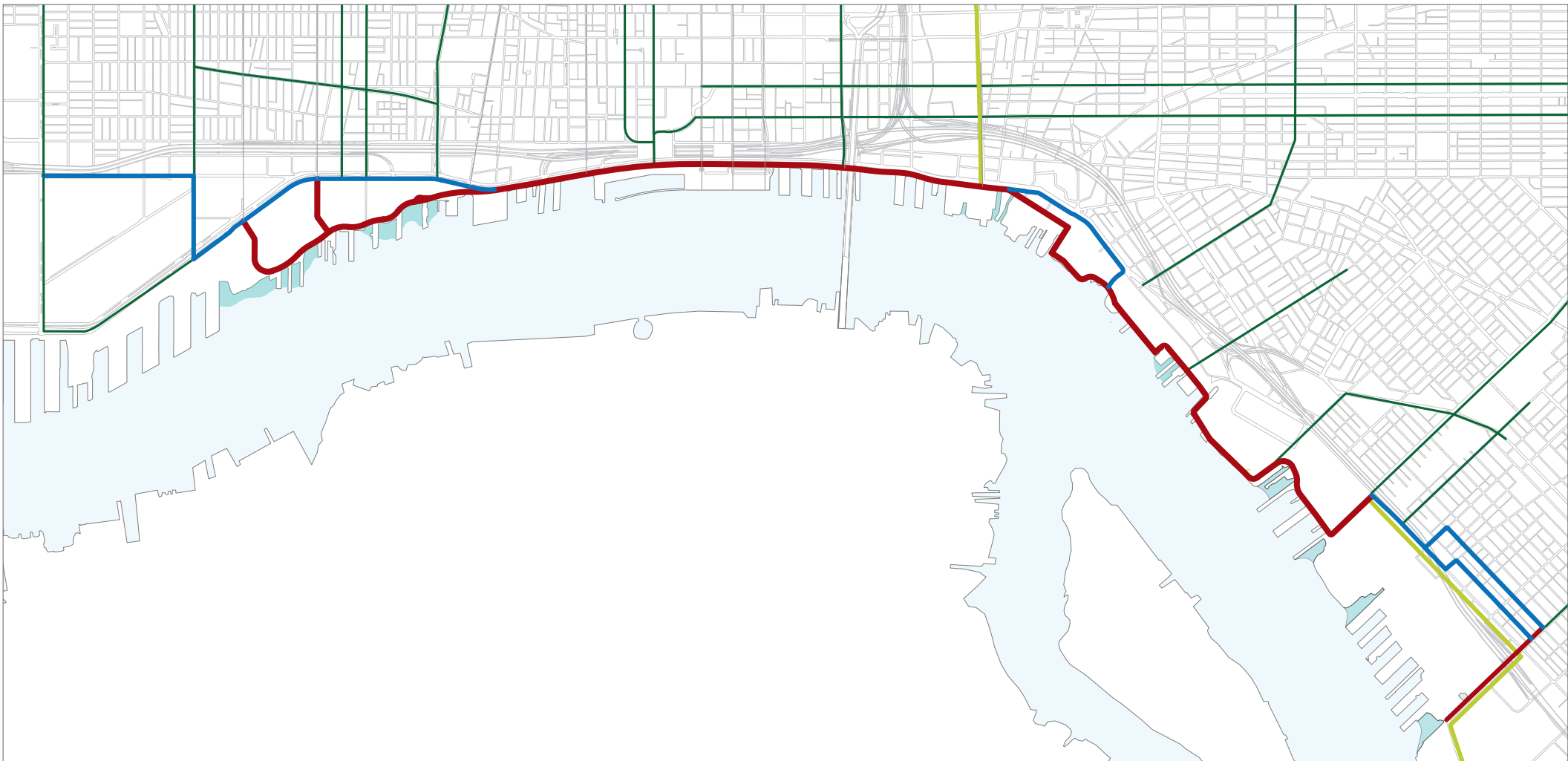
Open Space Plan

- Wetlands
- Neighborhood Parks
- Public Realm
- Primary Connector Streets

Parks Every ½ Mile

The plan proposes parks located every ½ mile along the waterfront at the end of key streets to provide amenities and add value to the adjacent neighborhoods and the city as a whole. The parks will have variety and be as distinct in their character, activities, and design as the neighborhoods they abut and the portions of the waterfront on which they are located.

The plan proposes ten parks along the six miles of waterfront at Mifflin Street, Dickinson Street, Washington Avenue, Penn’s Landing, Festival Pier, Germantown Avenue, Berks Street, Cumberland Street, and Lehigh Avenue to complement the existing public spaces at Race Street Pier, Penn Treaty Park, and Pulaski Park.



Trails Plan

- Multi-Use Trail
- Columbus Boulevard Trail
- Existing Regional Bikeway
- Existing Local Bikeway

Connected by a Bicycle and Trail Network

A multi-use trail for bicycles and pedestrians will extend the full length of the project area, though it will have different configurations across the waterfront. This trail connects on the north end with the North Delaware Greenway, which extends north from Allegheny Avenue, along Delaware Avenue, and is being developed by the Delaware River City Corporation. The section of trail from Allegheny Avenue south to Spring Garden Street is also a section of the East Coast Greenway, a 2,000 mile trail which stretches from Maine to Florida and passes through urban areas on the east coast. At Spring Garden Street, this trail proceeds west across the city to join the Schuylkill River trail at the Philadelphia Museum of Art. The Spring Garden portion of the trail is currently being developed by the Pennsylvania Environmental Council.

Additionally, the trail proposed in this plan makes a connection at Dock and Spruce Streets to the cross-town bicycle lanes on Spruce and Pine Streets.

In addition to serving as a continuous 6-mile waterfront trail, the trail connects the ½ mile parks and provides access to the development sites.

South of Mifflin Street a series of on-street bicycle improvements will provide connectivity to the existing bicycle lanes on Oregon Avenue. North of Cumberland Street an off-road trail is planned on the west side of Richmond Street to connect to Allegheny Avenue.

Transportation

The plan recommends important changes to the transportation system of the project area to support better access to the waterfront for pedestrians, bicyclists, and transit riders and to encourage mixed-use development that is transit-friendly, walkable and capable of contributing to the identity envisioned for the Central Delaware waterfront.

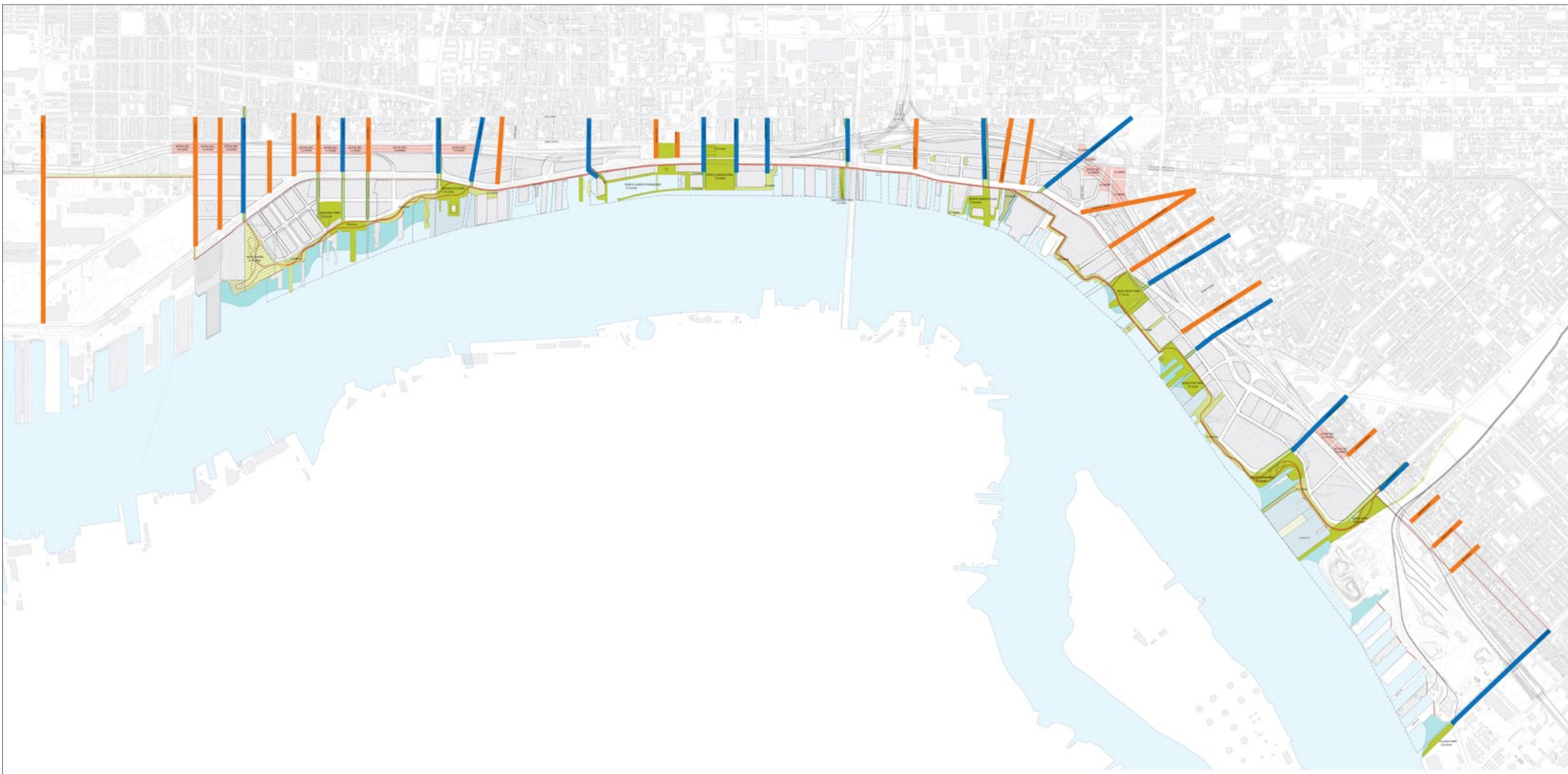
The current transportation system is centered on vehicular travel. I-95 carries local, regional, and national traffic, and Delaware Avenue/Columbus Boulevard is a major local and regional vehicular artery with three traffic lanes in each direction. The combined width of the roadways creates a visual and physically daunting barrier, making it difficult for pedestrians and cyclists to move easily to and from upland neighborhoods as well as around and within the project area. This plan proposes a transformation in both the physical form of Delaware Avenue/ Columbus Boulevard as well as the connection points between the adjacent neighborhoods and the waterfront.

Limited access interstate highways serve necessary functions in metropolitan regions, enabling commerce for businesses and industry, but the infrastructure of an interstate is inherently non-urban and greatly detracts from the adjacent urban fabric. I-95 has aged and is in need of major repairs, creating a timely opportunity to enhance waterfront connectivity as the Pennsylvania Department of Transportation (PennDOT) is undertaking a 20-year, estimated \$1 billion reconstruction and upgrade the roadway and access facilities. This project presents a great opportunity to create a new template for how urban highways are designed and how they function consistent with both local and regional mobility aims. The plan therefore makes recommendations about how to improve the areas in and around the interstate, including the numerous east-west connector streets and underpasses, to replicate and extend the pedestrian-friendly urban environment of the communities adjoining the waterfront.

The transformation of the waterfront’s transportation network will obviously take decades to complete; however, there are numerous improvements that can be made to the various components of the transportation network in the project area, in the short- and mid-term, that will significantly improve function and safety of the corridor for all users. These projects must be designed as a highly coordinated system that can nonetheless be implemented in increments as Federal, state and other funds become available.

The elements of the transportation plan for the Central Delaware Waterfront are

- ***Connector Streets that are “green” and pedestrian-friendly***
- ***A Multi-use Water-edge Trail***
- ***A Waterfront Boulevard created through improvements to the sidewalks, medians, crossings, intersections, and overall image of Delaware Avenue/Columbus Boulevard***
- ***Integration of Transit through waterfront bus service and a street-car system***
- ***A Parking Plan***



Street Improvements

- Primary Connector Streets
- Secondary Connector Streets

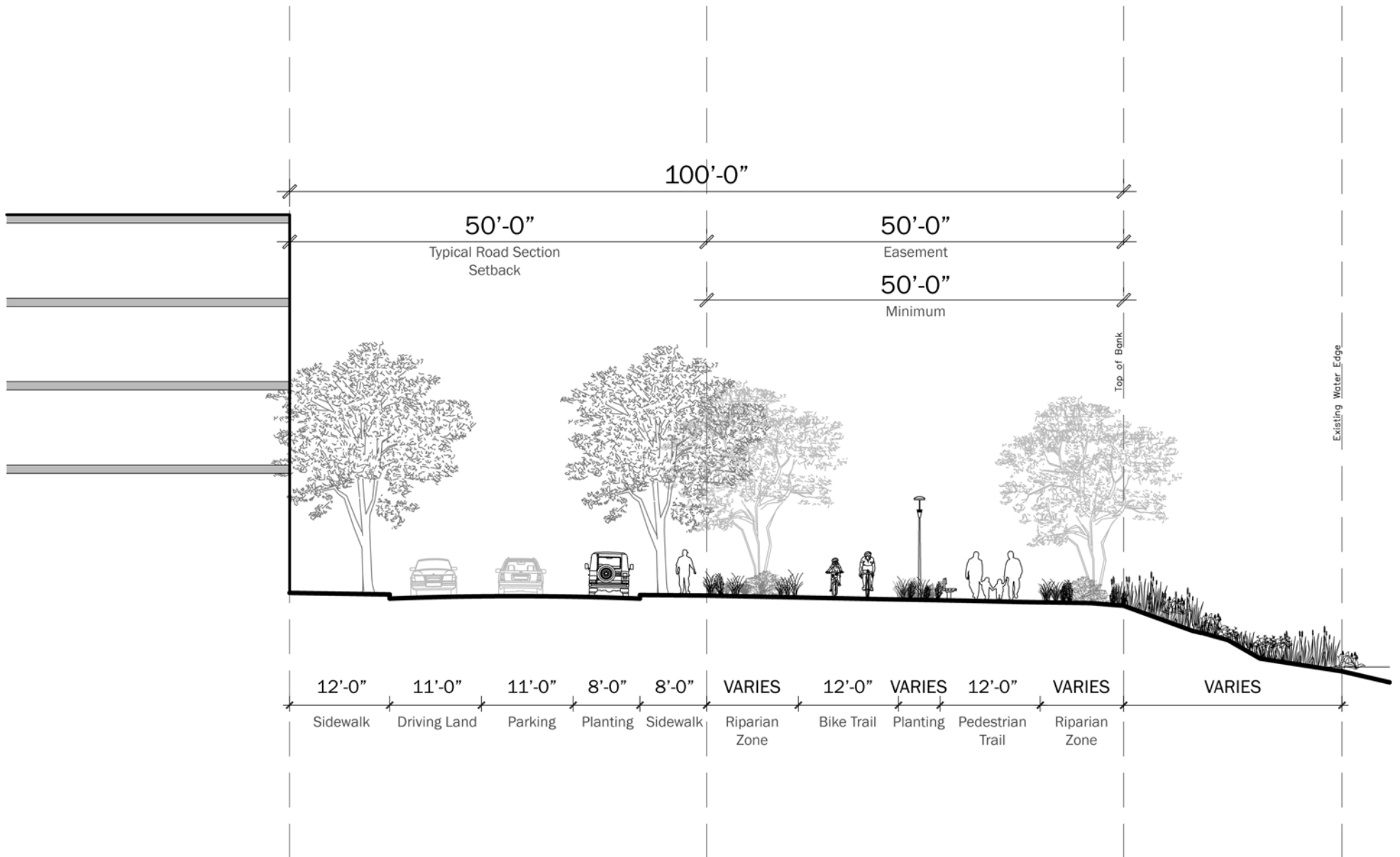
1. Connector Streets

Improvements to east-west connector streets are a primary means to create more inviting and safe waterfront access. A critical early discovery during the analysis phase of the planning process was that even though I-95 is perceived as a monolithic barrier, the structure of the interstate is actually much more porous than is generally perceived. From Oregon to Allegheny Avenue, there are 72 east-west streets in the project area that meet the I-95 right-of-way. 47 of these streets (65%) actually pass over or under the interstate, and half of the streets in the project area (34) connect to Delaware Avenue/Columbus Boulevard. The problem is not a lack of connection; it is that the connections are unattractive, uninteresting, and feel unsafe.

In this plan, the connector streets linking the city to the project area have been split into two categories: Primary and Secondary Connector Streets. Primary Connector Streets are those streets that directly connect neighborhoods with the waterfront parks proposed every ½ mile. These streets, which pass under or over I-95, require a high level of improvement in order to not only provide safe pedestrian and bicycle passage, but also to have a high-impact well-designed sense of welcome. Secondary Connector Streets are the other streets that pass under I-95, but do not end at a waterfront park.

DRWC will work with the Philadelphia Streets Department and PennDOT to create major improvements on all Primary Connector Streets within the first ten years of the master plan. Significant improvements to all Secondary Connector Streets are anticipated within the life of the plan. These improvements include the following elements:

- Safe and appealing pedestrian and bicycle facilities that connect the waterfront to the adjacent neighborhoods
- Signalization changes to manage traffic speed
- Improved streetscapes, including greening with landscaping and trees where appropriate
- Wayfinding signage to direct people to and from the waterfront and its amenities and landmarks
- Public art to create an interesting and aesthetically-pleasing atmosphere
- New lighting along the street, especially under the I-95 overpasses, to improve public safety. This lighting can and should have strong artistic elements.



2. Completion of a multi-use, water-edge recreational trail between Mifflin Street and Allegheny Avenue.

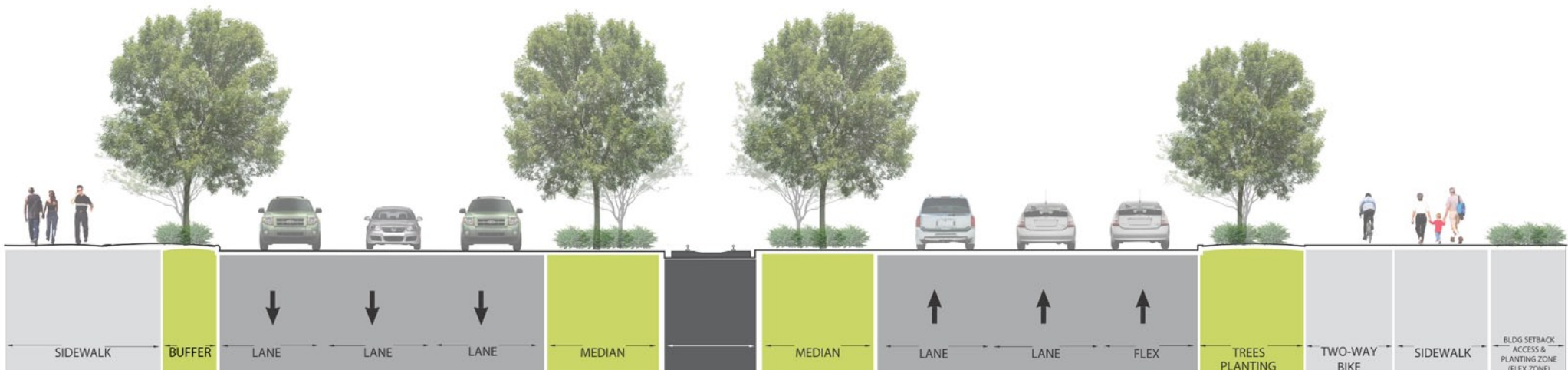
A critical element of the public realm plan is a continuous multi-use trail running the length of the project area, connecting at the north and south ends with other regional and city-wide trails. Though implementing this trail in its final form along the river's edge for the entire length of the 6-mile project area could take longer than the 25-year timeframe of this plan, the central sections will be completed in the short- to mid-term. Interim connections to provide a continuous 6-mile trail are also proposed.

- *Oregon Ave. to Mifflin St.:* In this location the waterfront is occupied by active port facilities, therefore the trail is planned to make a connection utilizing the Columbus Blvd., Snyder Ave., and Swanson St. rights-of-way to connect to Oregon Ave.
- *Mifflin St. to Washington Ave.:* this section of trail was constructed in an interim condition along the water's edge as an early action project by the Center City District and DRWC in 2010. In the future, the waterfront of this section is planned to be a significant wetlands park, and it is envisioned that at the time the wetlands are completed, the trail will be rebuilt into a 50 ft. wide landscaped multi-use trail.
- *Washington Ave. to Penn St.:* In this section through the central portion of the waterfront, the bicycle trail is located within the right-of-way of Columbus Blvd. (but separate from the vehicular cartway) since the roadway is immediately adjacent to the water's edge. The trail here would be located within a 38-foot wide section on the east side of the roadway which would accommodate a 12-foot sidewalk for pedestrians, a 14-foot multi-use trail, and two planted buffers. A separate waterfront walk will be provided for pedestrians.
- *Penn St. to Cumberland St.:* The trail in this section leaves the right-of-way of Delaware Ave. and proceeds along the river's edge. It utilizes Penn St. to join an existing section of trail on the SugarHouse casino property, and then proceeds along the river's edge through Penn Treaty Park to Cumberland Street.
- *Cumberland St. to Allegheny Ave.:* Long term, the goal is that this section of trail will continue along the waterfront to Allegheny Ave. through property currently owned by CONRAIL. A short- to mid-term trail alignment is planned alongside Richmond St. and utilizing space under I-95. DRWC will work closely with PennDOT, the Philadelphia Streets Department, and neighborhood organizations to coordinate the design and construction of a high quality interim trail which can serve the area until the long-term trail along the Conrail property can be installed.

3. Delaware Ave. / Columbus Blvd. Corridor

Over the years ahead, this corridor will be drastically changed by the addition of a waterfront light rail/streetcar system. When rail is implemented within the right-of-way of the waterfront boulevard (either in the center or on the eastern side), the boulevard will be substantially rebuilt to accommodate the following elements:

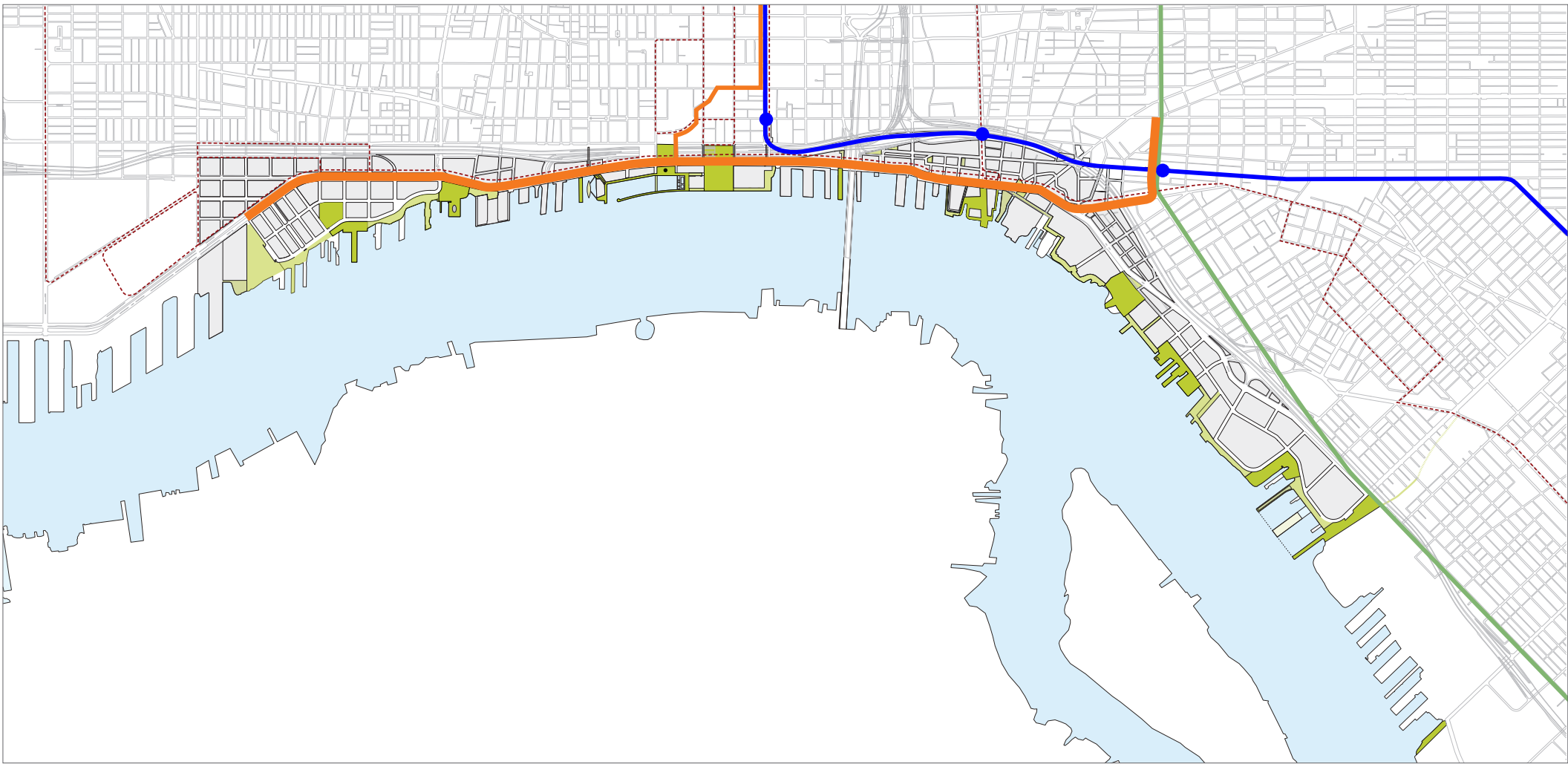
- A dedicated transit way with stations
- An ideal section of 2 lanes of vehicular traffic in each direction, with the ability to increase capacity if required at rush hour through removing parking and/or utilizing reversible traffic lanes
- A section of approximately 38 feet in width on the east side of the boulevard which accommodates a 12-16 foot multi-use recreational trail, a 12 foot pedestrian sidewalk, and planted buffers between the sidewalk and building edge and between the multi-use trail and the cartway
- On-street parking where appropriate







As discussed in the transit section below, inserting a dedicated transit-way will take years to accomplish. However, there are numerous improvements that are recommended in the short-term to drastically change the character of the boulevard:

- Enhance pedestrian crossings to improve safety
- Re-time signals to move traffic more efficiently
- Reduce the cross-section of the road where appropriate to shorten crossing distances for pedestrians and improve intersection operations
- Incorporate innovative traffic operations strategies to respond to various time-of-day/day-of-the-week roadway needs
- Install modern transit amenities to increase the speed and convenience of bus operations
- Develop an access management plan to ensure that new development along the waterfront does not needlessly degrade the functional roadway capacity of Delaware Avenue

In order to address many of these improvements, a comprehensive traffic study for the entire Delaware Avenue corridor is necessary. When work on the Master Plan began, it was anticipated that the next phase of the DRPA light rail study would occur simultaneously with the master plan and would include such a study. However, because the next phase of the DRPA light rail study was delayed, DRWC has separately funded a traffic study for the corridor, which is expected to be completed in the fall of 2011. This study will collect existing traffic count data for the entire corridor and make recommendations for several high-impact improvements to the boulevard that can be implemented in the short-term, specifically including the extension of the trail from Washington Ave to Penn St and traffic/pedestrian improvements.



Delaware Ave. Transit Corridor

-  New Delaware Avenue Transit
-  Existing Subway
-  Existing Trolley
-  Existing Bus Route

4. Transit

High-quality transit service connecting destinations along the waterfront and connecting the waterfront to the City's core is a critical component of the overall build-out of the master plan. The plan strongly supports the development of a light rail/streetcar system that would run the length of Delaware Avenue/Columbus Boulevard and connect to Center City transit hubs and destinations, such as the Convention Center and the downtown business core.

In 2010, the Delaware River Port Authority (DRPA) completed a planning study to evaluate various transit alternatives. This study recommended a system running along the waterfront with a connection back to Center City along Market St., utilizing the existing scissor ramps between Market and Chestnut Streets to navigate the over 30-foot elevation change between Columbus Blvd. and Market St. It became clear early in the master planning process that in order to fully realize the potential of the Penn's Landing site, the scissor ramps would need to be demolished. In addition, the ramp that crosses from 2nd and Market Streets over I-95 to the scissor ramps occupies all of the north side of the 100 block of Market Street, blighting this important block in the city's oldest historic area and creating a further barrier between the City and the waterfront. For the purposes of the Master Plan, these ramps are proposed to be demolished, creating more opportunity for development and open space as part of the revitalized Penn's Landing.

Consequently, a continuing evaluation of viable options for light rail connection to downtown must be accomplished in the next phase of study for the light rail system, which will consist of Preliminary Engineering and Environmental Assessment as defined by the Federal Transit Administration. In accordance with this Master Plan, once approved, these studies will

examine the potential for at-grade streetcar routes that will link east-west movement to Center City with north-south movement along the waterfront.

A realistic time frame for the design, permitting, and construction of the light rail system is in the range of ten years. DRWC believes that advancing the DRPA light rail project through the next phases of analysis is absolutely essential to establish a direction for short- and medium-term investment and development decisions.

Short and Medium Term Transit Recommendations

Prior to the implementation of the waterfront light rail/streetcar project, which isn't likely to initiate service until 2021, opportunities exist to expand, enhance and rebrand transportation services that touch the waterfront. Incremental increases in frequency, connections and geographic coverage will further boost the appeal. Technology already installed on SEPTA's bus fleet can be used to feed information to passengers in ways that will increase the user experience through time-specific route status and bus location information pushed to a user's smartphone or email address. Improvements envisioned include:

- Rebrand all existing bus services that serve the waterfront.
- Enhance the quality of services to improve the passenger experience.
- Introduce new services that more directly match critical residential and employment locations, tourist amenities to anticipated development on the waterfront from Frankford Avenue to Washington Avenue.

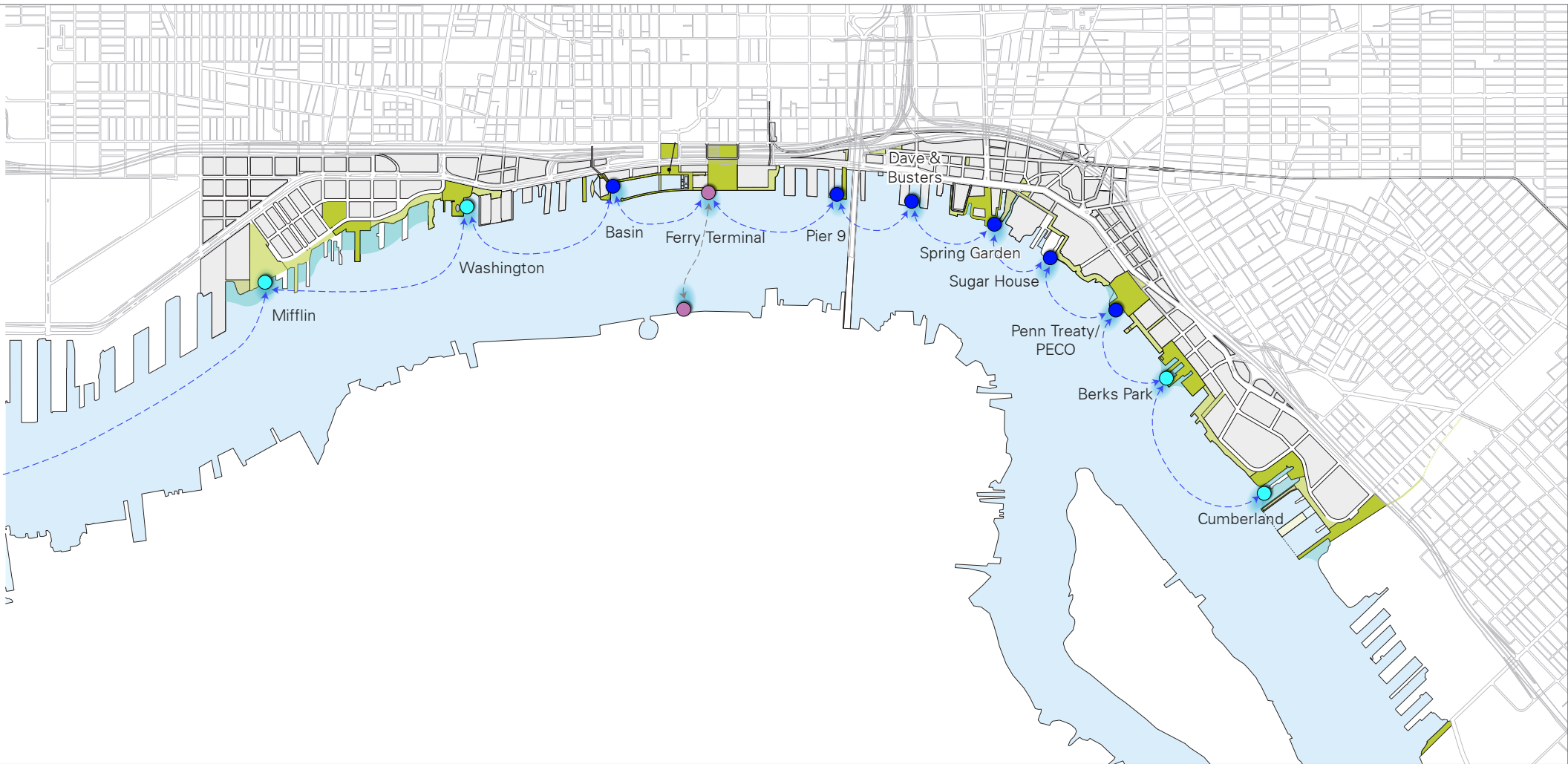


Illustrative Rendering Showing Delaware Ave. at Spring Garden Street

5. Parking

The primary transportation challenge of this plan is to move the waterfront from an auto-centric environment to an urban environment that accommodates a broadened range of options for movement to and within the waterfront area. This transition will take years. In the interim, a primary goal of this Plan is to provide for the necessary increases in automobile traffic and parking requirements while safeguarding the ability to increase the percentage of travel by other modes. At present there are many surface parking lots along the waterfront that are required in the short term in order to serve the existing attractions while autos are the primary mode of access. However, in the short-term these lots could perhaps have flexible uses which accommodate recreational spaces such as basketball courts when the space isn't needed for parking. Long-term, the Plan does not recommend surface parking as the highest and best use for valuable waterfront real estate. Over time, existing surface parking lots will find better use as development sites that contribute to the waterfront becoming a more urban and vibrant place. Simply eliminating parking will likely not be a viable option – some parking will always be needed. However, steps can be taken to provide additional on-street parking, to manage and design off-street parking, and to better incorporate parking into the design of developments to minimize the presence of parking facilities.

- On-street parking: Innovative practices, such as shared lanes with peak hour travel lanes and off-peak parking lanes, can be used to accommodate new on-street parking spaces. Pricing curbside parking based on market conditions can manage vacancy rates so that some curbside spaces are always available for short-term users. Time-of-day restrictions on curbside parking can be varied to reflect local uses and maximize the value in specific locations. Dedicated delivery zone hours can accommodate business needs while increasing parking inventory.
- Off-street parking: On-site parking facilities, primarily in structure or below grade, will be required on most development sites, to serve the uses provided there. Car sharing and reduced amounts of parking will be encouraged, consistent with market demand. The parking required for all new development at the priority sites identified in the plan will be self-contained and wrapped by buildings so that it is largely hidden from view along major frontages and open spaces, including the waterfront edge.
- Design strategies: The location and design of parking facilities is crucial to ensuring that they do not detract from urban walkability. Most parking should be located on the interior of blocks and screened by liner buildings. Proper access management will reduce the impact off-street parking has on the capacity of Delaware Ave. / Columbus Blvd., as well as the intrusion of driveways across the sidewalk.



Water Taxi and Ferries

- Near-term Stops
- Long-term Stops
- Existing RiverLink Ferry Stops

6. Water Transportation

The only existing water transportation is a ferry service that DRPA operates between Penn's Landing at the end of Walnut Street and the Adventure Aquarium on the Camden waterfront. Ferries operate daily between the Memorial and Labor Day holidays and on weekends during the months of May and September. During the summer season, ferry service runs on the hour. Long-term, it is envisioned that as activity increases along both sides of the waterfront, ferry service can be dramatically increased. DRWC plans to work closely with DRPA to examine how the ferry system can be expanded over time to strengthen the connections between various locations in New Jersey and various locations on the Central Delaware. These increased ferry connections will allow both states and their respective cities to plan and coordinate bi-state waterfront festivals or develop new point-to-point services where there is sufficient demand.

In addition, DRWC owns three water taxis and plans to begin a seasonal north-south service by the spring of 2012. These vessels can carry 24 passengers and can travel at speeds up to 12 knots. The master plan has identified several locations for short- and long-term water taxi stops based on existing or planned attractions as illustrated. Contemplated initial stops include the Hyatt Hotel/Independence Seaport Museum, the Ferry Pier at Walnut Street, Dave and Busters, and Sugarhouse Casino. Additional stops that could be added in the future, depending on demand, include the Navy Yard, Washington Street, the redeveloped Festival Pier site, and Penn Treaty Park.

Conclusion

Extensive transportation improvements are recommended for I-95, Delaware Ave/Columbus Blvd, trails, connector streets, transit, parking, and water transportation. Together all of these improvements will enhance the public realm while also creating the balanced transportation and multi-modal network of access that supports a distinctive waterfront of the 21st-century.



6th Street

5th Street

4th Street

3rd Street

2nd Street

Front Street

Snyder Avenue

Milfin Street

Tasker Street

Dickinson Street

Reed Street

Washington Avenue

Christian Street

Queen Street

Swanson Street

Delaware / Columbus Blvd.

I-95

MIM

Washington Avenue and The Far South

The Far South is defined as the area from Piers 38-40 south to Mifflin Street, in between Columbus Boulevard and the river. It has distinctive characteristics which will determine its quality and pace of development.

The Plan recommends the following public realm elements which help to organize and incentivize development on parcels that are now either privately owned or owned by other public agencies not affiliated with DRWC:

- three major new parks, Mifflin, Dickinson, and Washington, located at the ends of their respective primary connector streets. The Washington Park is located across the street from Old Swede’s Church.
- significant wetland restoration utilizing the degraded piers from Pier 53 at the foot of Washington Street south to Pier 72. This area has been identified by the Philadelphia Water Department as a valuable habitat for spawning fish and is therefore not suitable for river commerce or pier development.
- a 50-foot waterfront trail and linear park on the adjacent upland that would extend the same length as the wetlands park
- the extensions of Tasker Street, Dickinson Avenue, and Reed Street to a new road along the river’s edge, connecting the city to the new park and trail system



Illustrative Rendering from South of Washington Park and Pier 38 and 40 Renovation

Plan Overview: Washington Avenue and The Far South



Existing Conditions



Key Plan

In addition, based on preliminary discussions which DRWC has had with the respective property owners, the following changes in current use for properties just north of Washington Avenue are contemplated by the plan:

- the eventual conversion of Piers 38-40, which are owned by the Philadelphia Regional Port Authority, into mixed use residential piers. This conversion would necessitate the relocation of existing tenants, one port-related and one commercial.
- the eventual relocation of the Coast Guard station to a site, such as the Philadelphia Navy Yard, where there would be the opportunity to expand its offices and to be in a more secure environment. This relocation would allow for the extension of Washington Avenue from Columbus Blvd. to the river, as well as for the creation of a major new park on the existing Coast Guard site. It would require the consent of the US Coast Guard and a significant federal appropriation.

The Plan recommends that the primary use of the property between Washington Avenue and Tasker Street be a major new residential neighborhood, which would be organized in mid-rise buildings in such a way as to preserve and maximize view corridors to the river and the wetlands park and trail. The parking required for each parcel would be wrapped by the buildings. The western edge of this property fronting on Columbus Boulevard could consist of mid-rise residential with ground floor retail designed to make this section of the boulevard more walkable and pedestrian-oriented.



Illustrative Rendering of Wetland Park at Dickinson Street



Existing Conditions

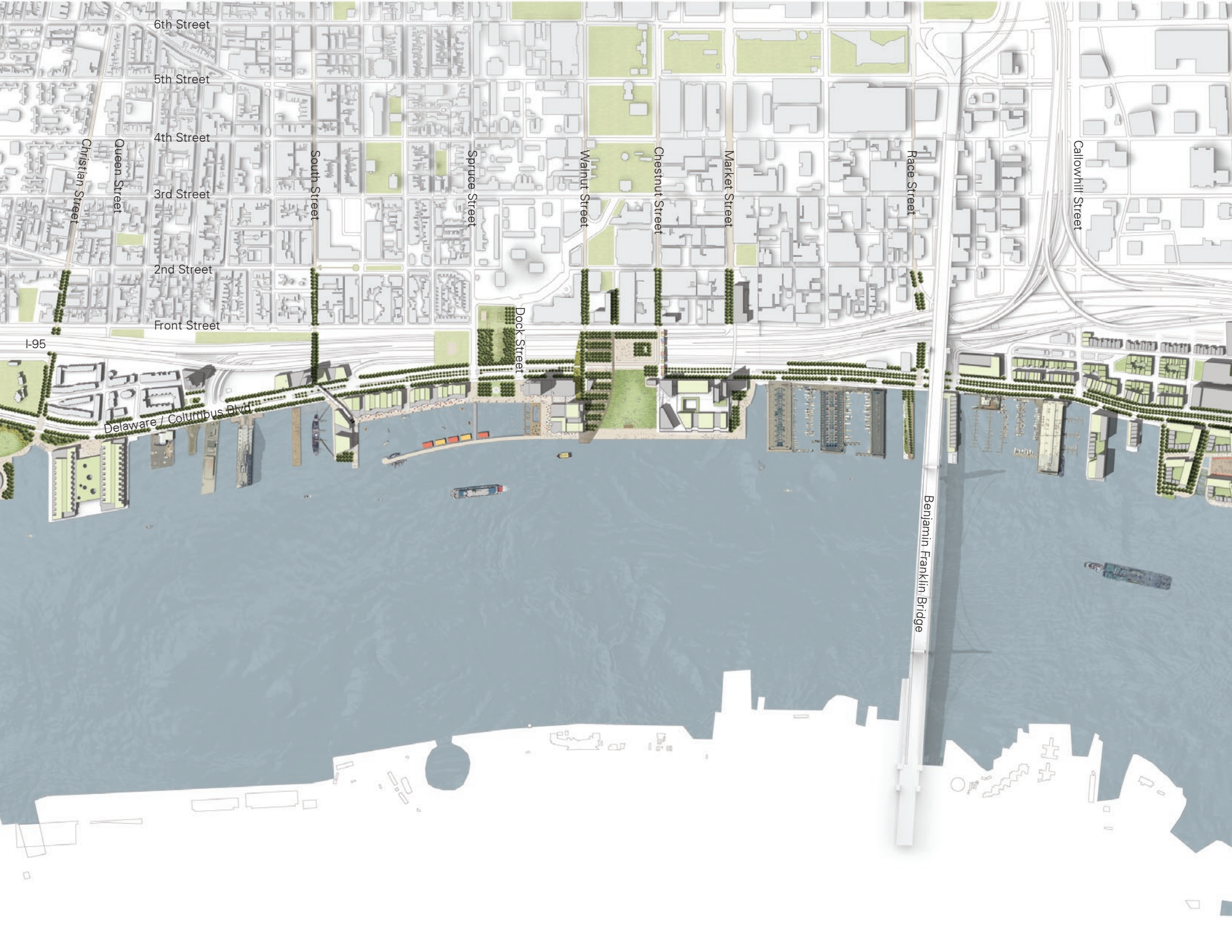


Key Plan

The Plan assumes that the large-format retail stores between Tasker and Mifflin Streets will remain in the short-term. However these large format retail stores are subject to frequent changes in form. The integration of these stores with other uses, including other retail, structured parking and possibly even residential uses would be encouraged. Long-term, this area is shown as residential development with neighborhood-scale retail.

In terms of phasing, DRWC plans to begin development of the future wetlands park by restoring habitat adjacent to Pier 53 and making the pier accessible to the public via an elevated boardwalk. At the same time, DRWC plans to continue to make improvements to the existing trail between Pier 53 and Pier 70 Blvd.

The timing of the recommended residential redevelopment of the area between Washington and Tasker will be determined by the ultimate disposition and re-use of the properties by their current or future owners. DRWC's role will be to help catalyze this development by making substantial investments in the public realm as described above.



6th Street

5th Street

4th Street

3rd Street

2nd Street

Front Street

Christian Street

Queen Street

South Street

Spruce Street

Walnut Street

Chestnut Street

Market Street

Race Street

Callowhill Street

I-95

Delaware / Columbus Blvd

Dock Street

Benjamin Franklin Bridge

Penn's Landing

Since its creation in the 1970s, Penn's Landing has been a major destination on the waterfront and the site for a large-scale events including concerts, ethnic festivals, and fireworks displays, as well as being a general gathering place for people seeking to enjoy the Delaware River.

The Plan maintains these large-scale civic functions, but enhances accessibility and year-round use. It also proposes substantial new residential and retail development.

A new, spacious green park will be constructed between Chestnut and Walnut Streets, stretching from the riverfront to Front Street. This park will be built over the remaining un-decked portion of I-95 and Columbus Blvd, and will be stepped gently from Columbus Blvd. to the river. The park will be approximately the same size as Rittenhouse Square and would accommodate a full variety of public uses, including space for daily passive recreation, large and small events, iconic public art, and a new ice-skating rink to activate the park year-round.

The creation of this park will effectively join Penn's Landing to Old City, and establish Front Street as the gateway to the waterfront.

The great water basin to the south of the new park, which is bordered on the north by the Independence Seaport Museum and on the northwest by the Hyatt Hotel, will be transformed into an intensely programmed marina and water activities, with kayaking, paddle boats, and fountains, and public art. The land on the west and south edges of the basin would be developed as mid-rise residential with waterfront restaurants and retail on the bottom two floors, as well as floating restaurants that would be attached to the inboard side of the quay. Two historic ships, the Jupiter and the Gazela, are in a high-visibility location at the end of the quay.



Illustrative Rendering Showing Penn's Landing Park and New Development at the End of Market St.

Plan Overview: Penn's Landing



Existing Conditions



Key Plan

The plan for the basin assumes that the Moshulu will be located to a nearby site acceptable to the owners, and that the Independence Seaport Museum will successfully divest itself of the battleship Olympia and the submarine Becuna.

The redevelopment of the basin will be greatly facilitated by an extension of the South Street pedestrian bridge from its current terminus on the west side of Columbus Boulevard to the southwest corner of the basin, thereby connecting the energy of South Street to the river.

Another major development site will be on the existing Market Street parking lot on the north side of the new park, which would be increased in size by the demolition of the scissor ramp infrastructure. This large, mixed-use development will contain residential, hotel and conferencing facilities, and retail and entertainment frontage that would be accessible to the public.

This site would be linked back to Old City by a new pedestrian bridge at Market Street which will provide direct access to the site.

The Plan recommends a phasing strategy that will start with the redevelopment of the marina basin, which requires relatively modest investments in public infrastructure. The creation of the new waterfront park that will span over Columbus Blvd. and I-95, as well as the development of the Market Street site, will involve significant amounts of public investment and are therefore planned to be implemented in later stages of the Plan.



Illustrative Rendering of Proposed Improvements at Penn's Landing Basin

Plan Overview: Penn's Landing



Existing Conditions



Key Plan



Illustrative Rendering Showing Penn's Landing Park

Plan Overview: Penn's Landing



Existing Conditions



Key Plan



Market Street

Race Street

Callowhill Street

Spring Garden Street

Fairmount Avenue

Germantown Avenue

I-95

Benjamin Franklin Bridge

Laurel Street

Frankford Avenue

Shackamaxon Street

Marborough Street

Columbia Avenue

Spring Garden

The Spring Garden area is one of the most complex, rich, and highly developable sections of the waterfront. It is anchored by substantial existing buildings, some of which will remain, including significant historical structures. Spring Garden Street, a wide and impressive major east-west street provides a connection across the city, and unlike the streets in the Penn's Landing area that proceed over I-95, Spring Garden is located under I-95 making an at-grade connection to the waterfront. A stop on the SEPTA Market-Frankford line at 2nd and Spring Garden provides the opportunity for transit-oriented development. Much of the energy that can be harnessed for the redevelopment of this area comes from the Northern Liberties neighborhood, where an impressive amount of creative new development has occurred in recent years.

For the purposes of the Plan, the Spring Garden area is divided into two sections: the 10 acre Festival Pier/former City Incinerator site, owned by DRWC, and an area designated as the "uplands" which encompasses all of the land and buildings between Delaware Avenue and I-95, from the Benjamin Franklin Bridge north to Frankford Avenue.

The Plan proposes that the Festival Pier site be redeveloped into a compact mixed-use residential community that would be surrounded on three sides by the Delaware River. The buildings would be organized around a new park and public plaza that would be activated at the street level by restaurants, retail activities, public events, and a linear water feature that connects the existing inlet through the Plaza to the Spring Garden view corridor. The Plan also recognizes an opportunity to create a wetlands park between this site and Waterfront Square.

The "uplands" section of the Spring Garden area contains many existing buildings as well as a considerable amount of vacant and underutilized land, particularly south of Spring Garden Street. The Plan proposes that the intimately-scaled and irregular street system, including the uniquely-shaped and historic Canal Street, be extended to the south, creating small blocks for conventional residential development, as well as small parks and recreational facilities, including some of the land under I-95. The environment in the uplands area will mirror historic Philadelphia in scale and intent. The pocket of buildings between Water and Front Streets between Callowhill and Vine Streets, known as the River's Edge neighborhood, is one of the only locations in Philadelphia where the original, colonial waterfront is preserved as much of the original waterfront was demolished when I-95 was constructed in the 1970s. The historic Wood Street Steps and the West Shipyard site are located in this area.



Illustrative Rendering of Development at Festival Pier Site

Plan Overview: Spring Garden



Existing Conditions



Key Plan

On the waterfront in this location an enhanced marina and new development are proposed for the piers owned by the Brandywine Realty Trust.

DRWC plans to make both the Festival Pier site and the uplands area more attractive for private investment by working with a variety of partners to design and install an attractive series of streetscape improvements on Spring Garden Street from Delaware Avenue to 2nd Street, including artistic and impactful lighting under the I-95 and Subway overpasses. These partners include the Northern Liberties Neighborhood Association, the Pennsylvania Environmental Council (which is designing a new bikeway on Spring Garden), the Philadelphia Streets Department, PennDOT, and SEPTA.

The Plan also proposes extending Germantown Avenue to connect to Delaware Avenue in order to rationalize traffic within and beyond the site and finally complete the southeast end of Germantown as an important city arterial.

To the north of the Spring Garden area, the Plan incorporates the previously permitted and approved build-out of Waterfront Square, as well as the expansion over time of the Sugarhouse Casino.

In terms of phasing, the Plan proposes that DRWC begin the redevelopment of the Festival Pier site by completing the environmental remediation of the Festival Pier while preparing a Request for Proposal for a qualified private developer. The complete build-out of the recommended development program, which would most likely be done in two or more phases, could be accomplished within the first 7-10 years of plan implementation.



Illustrative Rendering of Development at Festival Pier Site

Plan Overview: Spring Garden



Existing Conditions



Key Plan

The complete redevelopment of the “uplands” section of the Spring Garden area is anticipated to take longer, but will depend upon the investment decisions of some developers who are actively pursuing new opportunities in this area, as well as by DRWC’s ability to identify public funding for some of the street extensions and streetscape improvements.



Palmer Street

Montgomery Street

Belks Street

Girard Avenue

Cumberland Street

Huntingdon Street

I-95

Lehigh Avenue

Somerset Street

Cambria Street

Ann Street

Allegheny Avenue

Penn Treaty and The Far North

The Plan identifies two different sets of potential uses in this large area, which extends from Penn Treaty Park to Allegheny Avenue.

Penn Treaty District

The first area is the riverfront land east of I-95 between Penn Treaty Park and Berks Street. This area will have major new regional access when the I-95 Girard Avenue Interchange (GIR) project is completed in the next 5-7 years. The Plan proposes an exciting mixed-use area of recreational, cultural, and entertainment uses that could include the following elements, described from south to north:

- a renovated Penn Treaty Park, as detailed in the Penn Treaty Park Master Plan, completed by Philadelphia Parks and Recreation with the Friends of Penn Treaty Park and New Kensington Community Development Corporation
- the adaptive reuse of the historic PECO power plant, which would be acquired from PECO at the end of its remaining life and redeveloped into a vibrant mix of cultural, museum, archival, office, studio, gallery, retail, and entertainment uses. Although PECO has allowed DRWC to incorporate the possible re-use of these properties in the Plan, the utility has made no final decision as to the ultimate disposition or re-use of these power generating facilities.
- the development of a distinctive, seasonal performance venue that could accommodate up from 5,000 to 6,000 patrons. This facility, which would be under roof, would be designed to accommodate not

only the concert activities that currently occur at Festival Pier but also complement the existing festivals at Penn Treaty Park and provide a variety of community and city-sponsored events and other cultural performances that would be sponsored by DRWC and others.

- the creation of a new park at the end of Berks Street that would be developed into a major recreational facility that could include elements such as an urban beach, a boat launch, kayaking, playgrounds, and athletic facilities.

In terms of phasing for the development program described above, PECO estimates that the power plant has another six years of useful life, and the combustion turbines on the adjacent parcel have another 10 years of useful life.

The Far North

This section of the Plan covers recommended uses for the waterfront between the parcel owned by James Anderson, approximately 50 acres in size, which runs from an east/ west alignment roughly along the axis of Aramingo Avenue north to Cumberland; and the Conrail property, which runs from Cumberland north to Allegheny. The CONRAIL property is conceptually composed of two separate parcels: approximately 100 acres of vacant land located between Cumberland and Lehigh that is not rail served; and another 100 acres from Lehigh to Allegheny that is served by an active rail line.



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Illustrative Rendering Showing Multi-use Trails Near Schirra Drive



Existing Conditions



Key Plan

Based on studies conducted by the Philadelphia Industrial Development Corporation (PIDC, there is a significant unmet demand for large tracts of land that can be assembled in the Philadelphia area for light industrial space, particularly the flex building typology that combines office space, assembly or light manufacturing, and/or distribution. New flex buildings of this type tend to incorporate principles of sustainable design, including energy efficiency, green roofs, and innovative treatment of storm water runoff.

Because of the size of these parcels, and the access provided to the sites by the new I-95 Girard Avenue interchange, the Plan proposes that the Anderson property and the southern portion of the CONRAIL property be used to accommodate this demand. Buildings of varying sizes could be developed over time using attractive green building techniques to create an atmosphere compatible with the waterfront public realm of parks and trails, and given the acreage associated with these parcels generous setbacks for the public realm can be achieved.

The northern 100 acres of the CONRAIL property is expected to remain in its current heavy industrial use during the twenty-five year life of the Plan.

The public realm elements recommended in the Plan would include the following:

- two new parks that would be developed respectively at Cumberland Street and Lehigh Avenue, that would continue the recommended rhythm of a major park at one-half mile intervals
- improvements to the existing Pulaski Park, which are currently underway and led by Philadelphia Parks and Recreation which owns this park
- preservation of the spectacular Ore Pier structure near the park at Cumberland



Illustrative Rendering Showing New Performance Venue North of Renovated PECO Plant



Existing Conditions



Key Plan

- creation of a kayaking basin in the water between Cumberland Street and Lehigh Avenue
- a 50-foot trail and linear park that would run along the river's edge, providing continuous public access from the southern edge of the Anderson property to Lehigh Avenue, incorporating the three piers on the southern portion of the CONRAIL property
- an interim off-road multi-use trail which would connect back to the west side of Richmond Street, from Lehigh to Allegheny Avenues, portions of which would likely be under I-95, and which would make a connection to the North Delaware Greenway at Allegheny Avenue, currently being developed by the Delaware River City Corporation
- streetscape improvements to Cumberland Street, Lehigh Avenue, and Allegheny Avenue to make these important connector streets more attractive to people wishing to access the new park/trail system

The Plan also envisions a future beyond its twenty-five year horizon where, with the cooperation of CONRAIL, the park at Lehigh Avenue could be made larger and a permanent waterfront trail could eventually be extended from Lehigh to Allegheny. This public park would also ideally include the unused and degraded piers that abut the CONRAIL property, offering scenic overlooks and the opportunity to restore habitat for fish and wildlife.

The redevelopment of the Far North is by definition a longer-term element of the Plan. The timing of development of the flex commercial/industrial parcels will be a function of market conditions and decisions made by private developers and tenants. DRWC can potentially help catalyze this development by installing portions of the recommended public realm, and PIDC has an array of loan programs and financing mechanisms that can help accelerate this development.

MASTER PLAN FINANCING SUMMARY

Projected Costs

DRWC, in consultation with our consultant team, has developed a master plan order-of-magnitude cost estimate necessary to fund the public sector improvements for the entire 6-mile master plan as drawn. This total cost is estimated at \$770 million, calculated in 2011 dollars, spread out over a 30 year period. The estimate was compiled using specific criteria consisting of comparable projects similar in size and scope to the elements contained in the Central Delaware Riverfront Master Plan, with the assistance of a professional cost estimating firm. Each element was priced for a range of high and low costs. The \$770 million is a conservative estimate which represents the total of the high end of the range.

A key principle of the master plan is to utilize public funding to build infrastructure which creates value in private development sites and therefore leverages private development. Secondly, public funding should be used to create amenities which contribute to the quality of life for the city as a whole. Public funding is currently scarce, so the following strategy has been carefully formulated to target public funds first towards projects that leverage important private economic development and second towards projects that complete the public realm, but are not considered necessary for development to occur. The \$770 million total cost of the public realm was therefore divided into two categories of costs:

1. \$356 million: Public Funding to Spur Private Development

Funds in this category will be used to initiate value creation on three specific development nodes, or “priority sites,” where revenue-generating development should occur in the earlier phases of implementation. The funding will pay for public realm improvements like parks and trails on these sites as well as pre-development items such as streets and utilities.

The three priority sites have been carefully chosen to quickly spur private investment in surrounding areas. The sites were selected because they include publicly owned property and are strategically located near existing transportation and transit infrastructure.

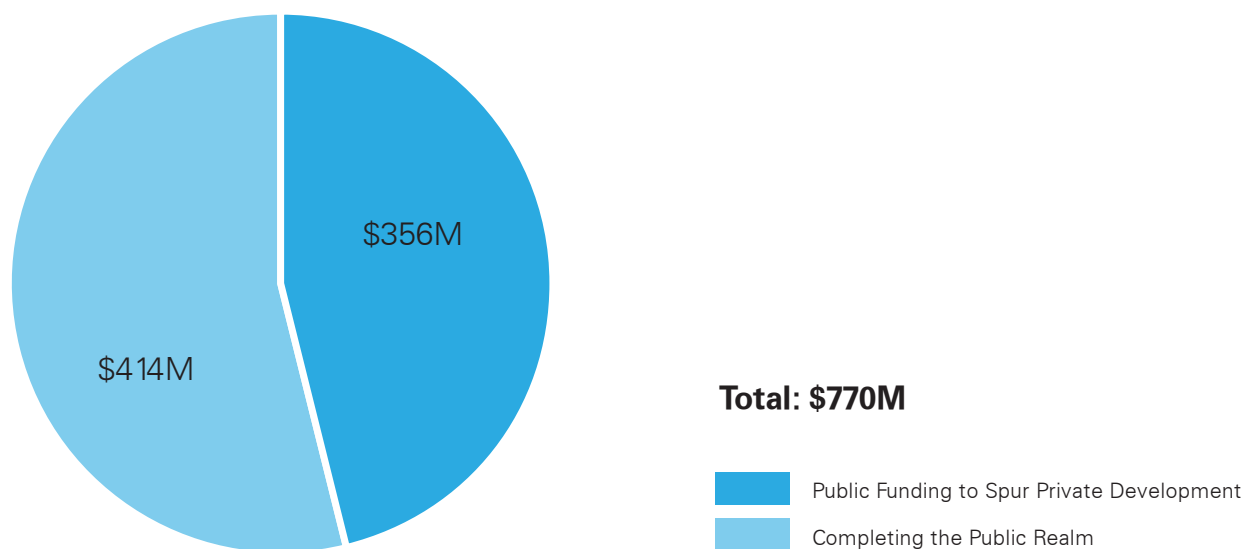
The three sites are

- Spring Garden (including the DRWC-owned Festival Pier/Incinerator site as well as all of the privately-owned parcels between Delaware Avenue and I-95)
- Penn’s Landing (including all DRWC-owned land between Lombard Street and Market Street)
- Washington Avenue (including a conglomeration of publicly and privately owned land between Piers 38/40 to Tasker Avenue)

2. \$414 million: Completing the Public Realm

Improvements in this category are also fundamental to the long-term future of the waterfront. Completing the public realm system of streets, parks, and trails has an indirect but significant economic impact for the city as a whole by creating a waterfront amenity that will make Philadelphia more attractive to new residents, developers, and investors. As funding becomes available for specific projects, some elements in this category could be built in the shorter term, but public funding for other projects may not become available until the long-term when a financial reservoir has been established.

NOTE: The total estimate of \$770 million excludes the cost to build the waterfront light rail system, estimated at over \$450 million, and also excludes PennDOT’s scheduled modernization of I-95, estimated at over \$1 billion.



Projected Revenue Sources

The revenue necessary to pay for these project costs is composed of three types of funding:

1. \$348 million: Federal and State Grant Programs, Foundation/Private Contributions

This funding is associated with specific Federal and State programs through the Federal Highway Administration, Army Corps of Engineers, Department of Housing and Urban Development, Environmental Protection Agency among others, as well as state agencies such as the Department of Conservation and Natural Resources, Department of Community and Economic Development, and the Department of Transportation. These sources are tied to specific projects such as improvements to I-95 infrastructure, Columbus Boulevard, wetlands creation, and gas infrastructure. This category of funding also includes foundation and private contributions for specific project.

2. \$174 million: Bonds Backed by Revenues

This financed revenue is backed by the following:

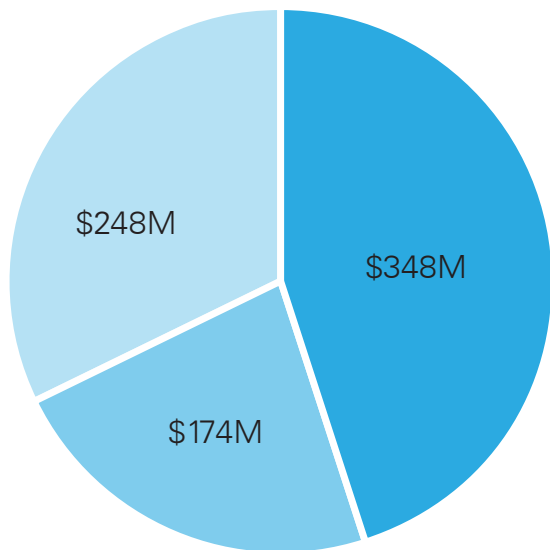
- Land Values for Priority Development Sites controlled by DRWC (land can be sold outright, leased with the rental stream securitized)
- Parking Revenues (securitized)
- Tax Increment Financing after ten year tax abatement

3. \$248 million: City and State Capital Funding


This capital funding is spread over 30 years, meaning that approximately \$8.25 million per year will be needed.

This level of ongoing investment is consistent with DRWC’s capital program for Fiscal Year 2011, which totaled \$9.9 million. DRWC completed the Master Plan and constructed the Race Street Pier, the Race Street Connector, Washington Avenue Green, and Phase 1 of the Delaware River Trail utilizing the following funding sources:

- \$2.9 million – City of Philadelphia Capital Funding
- \$2.9 million – DRWC Capital Reserves
- \$1.0 million – PA Dept. of Conservation and Natural Resources
- \$3.1 million – Foundation Funding



Total: \$770M

-  Federal and State Grant Programs, Foundation/Private Contributions
-  Bonds Backed by Revenues
-  City and State Capital Funding



IMPLEMENTATION

The ultimate success of this master plan will be determined by the speed and quality of its implementation.

A first step to assure ultimate success is for DRWC to work with the Philadelphia City Planning Commission to develop a framework that establishes clear and consistent zoning regulations and high quality design guidelines, while at the same time providing a simplified and transparent approval process for private land owners and developers.

The next step to success involves DRWC's strategy to implement an ambitious list of public projects and initiatives within the first five years which will help spur private development on land which DRWC owns and for which there is the likelihood of sufficient funding.

The successful implementation of these short-term projects will help create the momentum and public support needed to carry the plan through to its long term completion. This series of projects—detailed on the last page of this brochure—can also serve to accelerate the timetable for some initiatives that are slated for the later stages of implementation.

Finally, as these short-term projects are completed, the plan is designed to allow DRWC and its many civic, governmental, and private sector partners to be flexible and grasp opportunities which cannot be foreseen at this time but which inevitably arise in successful large-scale redevelopment projects.



SHORT-TERM PROJECTS

0-5 Years

■ **DRWC Projects**

- Washington Avenue Green Phase 2
- Install interim multi-use trail from Washington Avenue to Penn Street
- Completion of two additional waterfront trail sections
- Race Street Connector Phases 1 and 2
- Two additional Primary Connector Streets designed, funded, and constructed
- Delaware Avenue traffic study completed
- Short-term traffic improvements implemented for Delaware Avenue including signal re-timing and pedestrian safety improvements
- Site chosen for International Sculpture Garden and fundraising effort underway by DRWC and other partners
- Marina basin dredged and upgraded
- Water taxi service in operation
- Redevelopment of Pier 9
- Spring Garden former incinerator site environmentally remediated, permitted, and entitled. Request for Proposals process completed and private developer selected.
- Predevelopment work for Penn's Landing Basin completed
- Complete conceptual design and cost estimates for new Penn's Landing park and decks over I-95/Columbus Blvd.

■ **Projects to be Completed by Others**

- Completion of light rail preliminary engineering and environmental assessment by Delaware River Port Authority and others
- Support Philadelphia Parks and Recreation to improve Penn Treaty and Pulaski Parks
- Redevelopment of Race Street Pumping Station by Philadelphia Live Arts/Fringe Festival

Consulting Team

Cooper, Robertson & Partners Urban Design

OLIN Landscape Architect

KieranTimberlake Architecture / Sustainability

HR&A Economic Consultant

Parsons Brinckerhoff Transportation Consultant

Hurley Franks & Associates Outreach Consultant

UAC Wealth Building Consultant

Toni L. Griffin Waterfront Policy Advisor

KBE Activation Programming

KS Engineers Civil Engineer

CH Planning Planning Consultant

BlankRome Land Use Counsel

Kelly/Maiello Supporting Architect

Emily Cooperman PHD Historic Resources

Katherine Woodhouse-Beyer PHD Archeological Resources

Davis Langdon Cost Estimator

Brooklyn Digital Foundry Renderer

Delaware River
WATERFRONT
Corporation



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