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AFFECTED ENVIRONMENT

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3.1

SOCIO-ECONOMIC RESOURCES

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3.1.1 Land Use

The Poplar Point Project Area is located within Anacostia Park in the southeast quadrant of Washington, DC. Land uses within and around the Project Area were inventoried to characterize the current setting. The inventories were conducted using existing reports, field inspections and surveys, comprehensive plans, aerial photography, and maps. The Land Use study area includes the Poplar Point Project Area and a surrounding context area with a radius of approximately one to two miles. A larger study area is necessary for this analysis because changes to land use or development patterns at the scale contemplated under the Action Alternatives would likely have impacts beyond the immediate location.

3.1.1.1 Project Area Land Uses

The current land use classification for the Project Area is parkland/open space. Specific land uses within Poplar Point include the NPS Administrative Complex, former plant nurseries, transportation infrastructure, and parkland/open space. The remainder of the Project Area, including southern Anacostia Park and the North Field, consists of parkland/open space. Specific land uses include the Anacostia Field House, boat launch, riverwalk, playfields, playgrounds, picnic facilities, tennis and basketball courts, meadows, a skate pavilion, and parking.

3.1.1.2 Adjacent Land Uses

There are a variety of land uses within the vicinity of the Poplar Point Project Area. While the adjacent areas generally consist of infrastructure or government use, there are a number of existing residential neighborhoods and ongoing redevelopment projects in the nearby area. Figure 3.1.1 shows the existing and proposed uses in the vicinity of the Project Area.

The northern portion of Anacostia Park is located north and west of the Project Area. It contains a total of more than 1,200 acres, including the Project Area, and extends north to encompass Kenilworth Park and Aquatic Gardens, the Langston Golf Course and Kenilworth Marsh. Anacostia Park is owned by the federal government and managed by NPS.

A large parking garage for WMATA's Anacostia Station occupies approximately 9 acres adjacent to the Poplar Point Project Area. The Metro garage serves riders on Metro's Green Line. Also adjacent to the Project Area, the Howard Road parcels encompass approximately 11 acres of land located along Howard Road north of I-295. These parcels are privately owned and have been in negotiations for redevelopment.

Other nearby uses include a WASA pump station located amongst the ramps leading to the Anacostia Freeway, and the Anacostia Naval Station. The pump station is a two-story structure that pumps combined wastewater from the Anacostia Main Interceptor to the outfall sewers that lead to the Blue Plains Wastewater Treatment Plant. The Anacostia Naval Station is located west of the Project Area and it is home to the Defense Information System Agency's White House Communications Agency and the Navy Housing Office. Bolling Air Force Base is located south of the Anacostia Naval Station near the confluence of the Potomac and Anacostia Rivers. It hosts the 11th Wing and the primary mission is to provide comprehensive

base operating support to all assigned Air Force organizations and personnel along with flagship ceremonial and musical ambassadorship worldwide.

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Figure 3.1.1 Site Context Map

Source: AECOM, 2010

3.1.1.3 Surrounding Land Uses

The larger community surrounding the Poplar Point Project Area includes a variety of neighborhoods located east and west of the Anacostia River (See Figure 3.1.2). The Martin Luther King Jr. (MLK) Avenue business corridor serves as the main commercial spine of historic Anacostia. The predominant land use along MLK Avenue is mixed-use with retail and commercial businesses occupying most of the buildings' ground floors, with office and residential uses on the upper floors.

Anacostia Heights is a geographically large neighborhood located directly south of MLK Avenue and bounded to the northeast by Good Hope Road, to the southwest by Howard Road, and to the southeast by Fort Stanton Park. The predominant land use in the neighborhood is residential, as it primarily consists of single-family detached and row housing.

The Fairlawn neighborhood is located north of Anacostia Heights and east of the MLK Avenue business corridor. Existing uses include single-family detached residential houses and several multi-family residential buildings.

The Barry Farm neighborhood is located adjacent to historic Anacostia and consists of multi-family units of public housing. A redevelopment plan for Barry Farm was completed in 2006 and proposes strategies to increase residential capacity and physically improve the neighborhood in conjunction with a financial strategy to accomplish the vision. The goal of the plan is to create a community that provides affordable housing options, civic and cultural engagement, economic opportunity, and increased safety. The plan attempts to reestablish a connection with the greater Anacostia community and integrate itself with concurrent redevelopment efforts.

In addition to these existing residential and commercial areas, the St. Elizabeths campus is currently undergoing redevelopment. The District operates a hospital on the east campus and has prepared a plan for its redevelopment. The west campus was acquired by the General Services Administration (GSA) in 2004 and is currently being developed with federal office space to house the Department of Homeland Security.

West of the River, the Capitol Riverfront Area is also undergoing redevelopment. The Washington National's Ballpark was completed in 2008, but the mix of retail, restaurant, conference, and other uses planned for the perimeter of the Ballpark have not yet been fully implemented. In particular, the WMATA bus garage and the Florida Rock batch cement plant are currently slated for redevelopment as mixed-use projects. In addition, nearby Buzzard Point contains a power plant owned and operated by PEPCO that is expected to be retired by 2012 and available for redevelopment.

The Southeast Federal Center (SEFC) is located across the Anacostia River from the Project Area, immediately west of the Washington Navy Yard. It is being redeveloped as "The Yards," a mixed-use, higher-density neighborhood on the waterfront with residential, retail, and commercial space. The 42-acre development will ultimately include 3.2 million square feet of residential and office space and more than 5 acres of open space, including a new waterfront park that recently opened. The development is planned as a multi-phased project, anticipated to take between 10 and 20 years to fully complete.

The Washington Navy Yard is located directly across the Anacostia River from the Project Area and is a secure, active military center. A waterfront promenade runs along the Navy Yard's water frontage, ending at the property line between the Navy Yard and the Southeast Federal Center. There is currently no waterfront connection between the Navy Yard and bordering properties.

East Potomac Park is a large expanse of open space in the southwest quadrant of Washington, DC. It is located at the confluence of the Potomac and Anacostia Rivers. The park contains public recreational facilities such as East Potomac Golf Course, a mini-golf course, a public pool, and the East Potomac Tennis Center.

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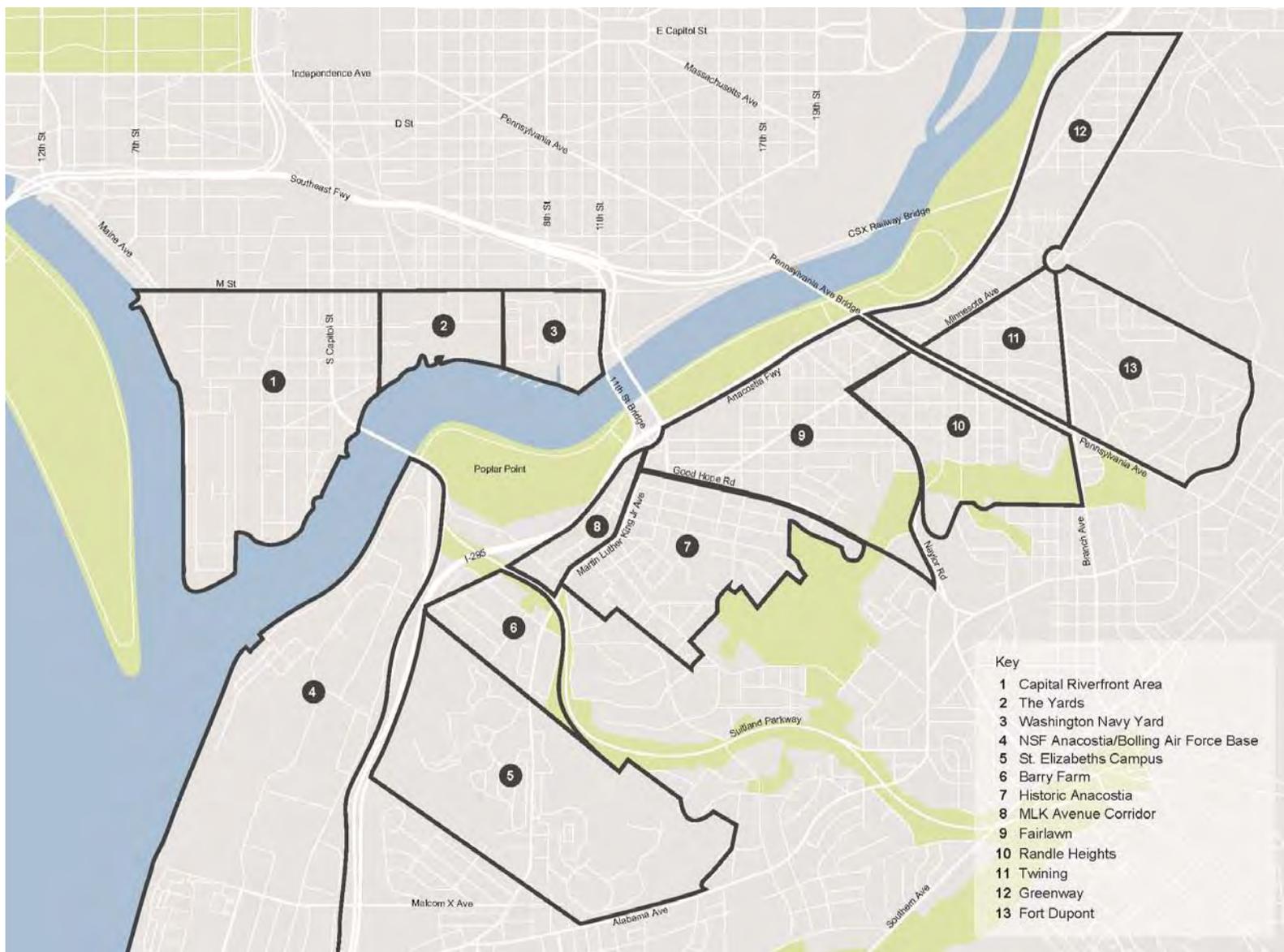


Figure 3.1.2 Anacostia Neighborhoods Map

Source: AECOM, 2010

3.1.2 Planning Controls and Policies

The federal land transfer and redevelopment of Poplar Point is subject to several plans and policies put forth by a variety of regulatory agencies. The controls that guide land use planning at both the federal and local levels establish the regulatory framework for the sites' potential development. A review of these plans and policies is provided below.

3.1.2.1 Federal Plans and Policies

Comprehensive Plan for the National Capital: Federal Elements

The Comprehensive Plan for the National Capital is the principal planning document for the National Capital region. The *Comprehensive Plan* includes both Federal and District Elements (described below) and contains goals, objectives, and planning policies to guide growth and development in the District of Columbia and the greater metropolitan area.

Federal Environment: The Federal Environment Element of the Comprehensive Plan states: "it is the goal of the federal government to conduct its activities and manage its property in a manner that promotes the National Capital Region as a leader in environmental stewardship and preserves, protects, and enhances the quality of the region's natural resources, providing a setting that benefits the local community, provides a model for the country, and is worthy of a national Capital." The policies relevant to local water quality include upgrading the sewage treatment system and separating it from the sanitary sewer system, providing vegetative buffers adjacent to water bodies, and using stormwater management techniques to reduce surface runoff impacts on water quality. Policies also encourage sensitivity towards land resources, such as floodplains, wetlands, soils, vegetation, and wildlife. These policies include avoiding the destruction of wetlands, using Best Management Practices (BMPs), retaining existing vegetation and incorporating new native vegetation, and discouraging development on steep slopes.

Parks and Open Space: The Parks and Open Space Element states that "it is the goal of the federal government to conserve and enhance the park and open space system of the National Capital Region, ensure that adequate resources are available for future generations, and promote an appropriate balance between open space resources and the built environment." The following policies relevant to the Project Area include the recommendation to enhance parks and preserve open space for future generations and improve the long-term quality of life of a neighborhood or the region, link open space along the waterfront to provide a continuous public open space system, develop the banks of the Anacostia River as a high-quality urban park with a mix of active and passive recreational opportunities, and ensure that the park functions as a regional recreation resource.

Preservation of Historic Features: The *Comprehensive Plan* states that "it is the goal of the federal government to preserve and enhance the image and identity of the Nation's Capital and region through design and development respectful of the guiding principles of the L'Enfant and McMillan Plans, the enduring value of historic buildings and places, and the symbolic character of the capital's setting." Applicable historic preservation policies include preservation of the horizontal character of the national capital through

enforcement of the 1910 Height of Buildings Act, and protection of the skyline formed by the region's natural features, particularly the topographic bowl around central Washington.

Extending the Legacy

The National Capital Planning Commission (NCPC) prepared *Extending the Legacy* (Legacy Plan) in 1997 to strengthen the District of Columbia's urban design framework of open spaces and visual axes, re-center the city on the U.S. Capitol, and restore elements of the L'Enfant Plan that have been disrupted. Specific to the Project Area, the *Legacy Plan* includes several concepts applicable to the Project Area. The *Legacy Plan* recommends redevelopment of the South Capitol Street corridor with museums, restaurants, housing, parks, stores, and offices that "would complement the historic scale of the nearby Old Anacostia neighborhood, which will be reconnected to its waterfront once the Anacostia Freeway is depressed." In addition, the *Legacy Plan* suggests that the Anacostia waterfront should accommodate special activity and destination areas connected by a water taxi system, but that it should remain primarily undeveloped and relaxed in character due to the surrounding neighborhood setting. Furthermore, it recommends that museums and memorials should be located along the waterfront and that "sites that strengthen visual and symbolic connections to the Capitol should have top priority."

Memorials and Museums Master Plan

NCPC's *Memorials and Museums Master Plan* (2M Plan) was developed in 2001 to guide the development and placement of future commemorative works and cultural facilities. The *2M Plan* identified 100 new sites for memorials and museums within monumental corridors that were part of the original L'Enfant Plan, along the city's 22 miles of waterfront, and in Washington's diverse neighborhoods, parks, and scenic areas. One of the prime sites recommended in the *2M Plan* is located within Poplar Point on axis with New Jersey Avenue. It is considered a prime site because its prominent location on the waterfront offers sweeping views of the monumental core and greater Washington, and because of its proximity to other significant historic and cultural resources. Also, due to the large amount of space and convenient Metrorail access, the *2M Plan* suggests that the Project Area could be the location for a major destination museum or memorial.

1910 Height of Buildings Act

The Height of Buildings Act was passed in 1910 to preserve the horizontal character of the National Capital through the regulation of building heights throughout the District of Columbia. The Act establishes a maximum building height proportionate to, and determined by, the width of the adjacent street. The allowable building height is limited to the width of the street plus 20 feet to a maximum of 130 feet as measured from the curb in front of a building. As a result, building heights for the mixed-use core of the District typically range from 90 to 110 feet; however, certain portions of Pennsylvania Avenue can extend to 160 feet. Although there are no current height limits for the Project Area, it is assumed that no building taller than 130 feet would be permitted.

3.1.2.2 District of Columbia Plans and Policies

Comprehensive Plan for the National Capital: District Elements

The District Elements of the *Comprehensive Plan* guide public and private land use throughout the District of Columbia. The *Comprehensive Plan* also includes a generalized land use map for the District of Columbia, as shown in Figure 3.1.3. The District Elements include two categories: Citywide Elements and Area Elements. Citywide Elements provide policies relevant to broad topics or resources, and many of the policies are interrelated. Area Elements present visions specific to planning areas or individual locations within the city.

Land Use Element: The Land Use Element of the *Comprehensive Plan* outlines the policies that shape the physical form of the city by guiding the range of development, conservation, and land use compatibility issues that may arise in the future. In addition to planning for future development, the land use element proposes ways to improve the existing cityscape by making it more vibrant, environmentally sustainable, and accessible. The following land use policies apply to the Proposed Action:

- **Reuse of Large Publicly-Owned Sites – LU1.2.1:** Recognize the potential for large, government-owned properties to supply needed community services, create local housing and employment opportunities, remove barriers between neighborhoods, provide large and significant new parks, enhance waterfront access, and improve and stabilize the city's neighborhoods.
- **Mix of Uses on Large Sites – LU1.2.2:** Ensure that the mix of new uses on large redeveloped sites is compatible with adjacent uses and provides benefits to surrounding neighborhoods and to the city as a whole. Zoning on such sites should be compatible with adjacent uses.
- **Public Benefit Uses on Large Sites – LU1.2.5:** Given the significant leverage the District has in redeveloping properties which it owns, include appropriate public benefit uses on such sites if and when they are reused. Examples of such uses are affordable housing, new parks and open spaces, health care and civic facilities, public educational facilities, and other public facilities.
- **New Neighborhoods and the Urban Fabric – LU1.2.6:** On those large sites that are redeveloped as new neighborhoods, integrate new development into the fabric of the city to the greatest extent feasible. Incorporate extensions of the city street grid, public access and circulation improvements, new public open spaces, and building intensities and massing that complement adjacent developed areas. Such sites should not be developed as self-contained communities, isolated or gated from their surroundings.
- **Large Sites and the Waterfront – LU1.2.8:** Use the redevelopment of large sites to achieve related urban design, open space, environmental, and economic development objectives along the Anacostia Waterfront. Large waterfront sites should be used for water-focused recreation, housing, commercial, and cultural development, with activities that are accessible to both sides of the river. Large sites should further be used to enhance the physical and environmental quality of the River.
- **Development Around Metrorail Stations – LU1.3.2:** Concentrate redevelopment efforts on those Metrorail station areas which offer the greatest opportunities for infill development and growth, particularly stations in areas with weak market demand, or with large amounts of vacant or poorly utilized land in the vicinity of the station entrance. Ensure that development above and around such stations emphasizes land uses and building forms which minimize the necessity of automobile use and maximize transit ridership while reflecting the design capacity of each station and respecting the character and needs of the surrounding areas.

- **Design to Encourage Transit Use – LU1.3.4:** Require architectural and site planning improvements around Metrorail stations that support pedestrian and bicycle access to the stations and enhance the safety, comfort and convenience of passengers walking to the station or transferring to and from local buses. These improvements should include lighting, signage, landscaping, and security measures. Discourage the development of station areas with conventional suburban building forms, such as shopping centers surrounded by surface parking lots.

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Figure 3.1.3 Existing Land Use
Source: DC Office of Planning, 2008

Economic Development Element: The Economic Development Element includes policies and goals to create new economic opportunities in places where they are currently lacking. Policies are aimed at creating new jobs by diversifying the economic base, sustaining small, locally owned businesses, and attracting new businesses to the region. A key goal is to attract quality jobs with higher wages that support investment in educational and training opportunities for residents. Other policy goals in this element include: defining the District's role in the national and regional economies, identifying locations for future job growth, and enhancing and revitalizing the city's retail districts. The following economic policies are relevant to the Proposed Action:

- **Use of Large Sites – ED1.1.5:** Plan strategically for the District's remaining large development sites to ensure that their economic development potential is fully realized. These sites should be viewed as assets that can be used to revitalize neighborhoods and diversify the District economy over the long term. Sites with Metrorail access, planned light rail access, and highway access should be viewed as opportunities for new jobs and not exclusively as housing sites.
- **Neighborhood Shopping – ED2.2.3:** Create additional shopping opportunities in Washington's neighborhood commercial districts to better meet the demand for basic goods and services.
- **Destination Retailing – ED2.2.4:** Continue to encourage "destination" retail districts that specialize in unique goods and services, such as furniture districts, arts districts, high-end specialty shopping districts, and wholesale markets. Support the creative efforts of local entrepreneurs who seek to enhance the district's destination retailing base.
- **Business Mix – ED2.2.5:** Reinforce existing and encourage new retail districts by attracting a mix of nationally-recognized chains as well as locally-based chains and smaller specialty stores to the city's shopping districts.
- **Grocery Stores and Supermarkets – ED2.2.6:** Promote the development of new grocery stores and supermarkets, particularly in neighborhoods where residents currently travel long distances for food and other shopping services.

Parks, Recreation, and Open Space Element: The Parks, Recreation, and Open Space Element provides policies and goals that protect existing and create new open space within the District of Columbia. These policies recognize the significant role open space plays in urban aesthetics, environmental quality, neighborhood character, and recreation. The following open space policies are relevant to the Proposed Action:

- **Improving Access – PROS1.2.2:** Improve access to the major park and open space areas with the city through pedestrian safety and street crossing improvements, bike lanes and storage areas, and adjustments to bus routes.
- **Parks and Environmental Objectives – PROS1.3.2:** Use park improvements to achieve environmental objectives such as water quality improvement, air quality improvement, and wildlife habitat restoration.
- **Protecting Waterfront Open Space – PROS3.2.1:** Recognize the importance of the city's waterfronts for recreation, public access, ecological protection, and scenic beauty.
- **Connecting Neighborhoods to the Rivers – PROS3.2.2:** Develop open space linkages between the Anacostia and Potomac Rivers and adjacent neighborhoods.

- **Linkages Between the Waterfront and Nearby Neighborhoods – PROS3.2.3:** Establish stronger linkages between the waterfront and adjacent upland neighborhoods including Fairlawn and Historic Anacostia. Maximize public access to the waterfront from these areas through the development of a riverwalk and shoreline trail, improved public transportation, redesigned bridges and freeways, and the extension of neighborhood streets and avenues to the water's edge.
- **Waterfront Visibility and Accessibility – PROS3.2.4:** Improve access to the shoreline parks from across the city, and reduce barriers to waterfront access created by railroads, freeways, and non-water dependent industrial uses.
- **Waterfront Park Design – PROS3.2.7:** Require the design and planning of waterfront parks to maximize the scenic and recreational value of the rivers. Activities such as parking lots and park maintenance facilities should be located away from the water's edge, and environmentally sensitive resources should be protected; and

Urban Design Element: The Urban Design Element of the *Comprehensive Plan* provides policies to ensure that the physical and aesthetic character of Washington is preserved. The following urban design policies are relevant to the Proposed Action:

- **National Image – UD1.1.1:** Strengthen and enhance the physical image, character and outstanding physical qualities of the District, its neighborhoods, and its open spaces, in a manner that reflects its role as the national Capital.
- **Height Act of 1910 – UD1.1.4:** Protect the civic and historical character of the city, particularly the "horizontal" urban quality of central Washington, by limiting building heights in accordance with the Height Act of 1910.
- **Waterfront Public Space and Access – UD1.3.2:** Develop public gathering spaces along the waterfronts, including promenades, viewpoints, boating and swimming facilities, and parks. Such space should be designed to promote continuous public access along the rivers, and to take full advantage of site topography and waterfront views. Design treatments should vary from "hardscape" plazas in urban settings to softer, more passive open spaces that are more natural in character.
- **Design Character of Waterfront Sites – UD1.3.4:** Ensure that the design of each waterfront site responds to its unique natural qualities. A range of building forms should be created, responding to the range of physical conditions present. New buildings should be carefully designed to consider their appearance from multiple vantage points, both in the site vicinity and at various points on the horizon.
- **River Views – UD1.3.5:** Protect and enhance river views in the design of buildings, bridges, and pedestrian walkways on or near waterfront sites. The scale, density and building form along the city's waterfronts should define the character of these areas as human-scale, pedestrian-oriented neighborhoods and should protect views from important sites.
- **"Activating" Waterfront Spaces – UD1.3.6:** Encourage design approaches, densities, and mixes of land uses that enliven waterfront sites. Architectural and public space design should be conducive to pedestrian activity, provide a sense of safety, create visual interest, and draw people to the water.

- **Neighborhood Connectivity – UD1.3.7:** Improve the physical connections between neighborhoods and nearby waterfronts. Where feasible, extend the existing city grid into large waterfront sites to better connect nearby developed areas to the shoreline.
- **Avenue/Boulevard Vistas and View Corridors – UD1.4.3:** Create more distinctive and memorable gateways at points of entry to the city, and points of entry to individual neighborhoods and neighborhood centers. Gateways should provide a sense of transition and arrival, and should be designed to make a strong and positive visual impact.
- **Reintegrating Large Sites – UD2.3.1:** Reintegrate large self-contained sites back into the city pattern. Plans for each site should establish urban design goals and principles which guide their subsequent redevelopment.
- **Large Site Scale and Block Patterns – UD2.3.2:** Establish a development scale on large sites that is in keeping with surrounding areas. “Superblocks” (e.g., oversized tracts of land with no through-streets) should generally be avoided in favor of a finer-grained street grid that is more compatible with the texture of Washington’s neighborhoods. This also allows for more appropriately scaled development and avoids large internalized complexes or oversized structures.
- **Design Context for Planning Large Sites – UD2.3.3:** Ensure that urban design plans for large sites consider not only the site itself, but the broader context presented by surrounding neighborhoods. Recognize that the development of large sites has ripple effects that extend beyond their borders, including effects on the design of transportation systems and public facilities nearby.

Lower Anacostia Waterfront/Near Southwest Area Element: This Element addresses an area that includes Poplar Point, and Anacostia Naval Station east of the Anacostia River, and the entire land area south of the Southwest Freeway to Pennsylvania Avenue SE. The *Comprehensive Plan* acknowledges the *Anacostia Waterfront Initiative Framework Plan* and describes many similar goals and objectives. The major goal is to transform the area from primarily industrial, transportation, and government uses to new mixed-use neighborhoods, workplaces, civic spaces, parks and restored natural areas. Redevelopment and revitalization of several parcels of land has the potential to create a widespread positive effect on the area as a whole. The *Comprehensive Plan* offers general recommendations for the broader area along with site-specific recommendations for the Poplar Point Project Area. The following are both general and site-specific recommendations:

- **New Waterfront Neighborhoods – AW1.1.2:** Create new mixed use neighborhoods on vacant or underutilized waterfront lands, particularly on large contiguous publicly-owned waterfront sites. A substantial amount of new housing and commercial space should be developed in these areas, reaching households of all incomes, types, sizes, and needs.
- **Waterfront Cultural and Commemorative Sites – AW1.2.2:** Encourage the siting of new museums, memorials, civic gathering places, and cultural attractions on or near the Anacostia River as a way to catalyze revitalization and meet the demand for additional commemorative works without further crowding the National Mall and monumental core of the city. Such facilities should make the most of their waterfront locations and create an integrated system of gracious, beautiful, and vibrant places.
- **Anacostia River Parks – AW1.2.4:** Create a connected network of waterfront parks from Hains Point to the Sousa Bridge, and continuing through adjacent upriver Planning Areas to the Maryland border.

These parks should be easily accessible to surrounding neighborhoods and accommodate the need for more local and regional serving recreational activities in the city. New parks should be an integral part of any new waterfront neighborhood, and should showcase the remarkably diverse landscape along the Anacostia River. A variety of active and passive recreational settings should be provided.

- **Poplar Point Park – AW2.4.1:** Create a great urban park at Poplar Point that serves neighborhoods across the city, and includes a variety of active and passive recreation areas. The park should be designed to serve a variety of users, including children, youth, families, and seniors.
- **Environmental Restoration at Poplar Point – AW2.4.2:** Restore the natural environment at Poplar Point, especially the wetlands and Stickfoot Creek. The creek should be daylighted and restored as a natural habitat area.
- **Poplar Point Mixed-Use Neighborhood – AW2.4.3:** Create a new transit-oriented mixed use neighborhood oriented around the Poplar Point Park, and linked to the Anacostia Metrorail station and new Anacostia streetcar line. The neighborhood should include a significant component of affordable housing, and should also include retail and civic uses that benefit the adjacent communities east of I-295. To minimize the loss of useable open space, development should utilize the land recovered after the realignment and reconstruction of the Frederick Douglass Bridge.
- **Poplar Point Cultural Facilities – AW2.4.4:** Support the development of regional cultural facilities at Poplar Point, such as museums, memorial sites, gardens, nature centers, amphitheaters, and public gathering places.
- **Scale of Development at Poplar Point – AW2.4.5:** Provide a scale and pattern of development in Poplar Point that is compatible with the fine-grained pattern found in nearby Historic Anacostia. Development should be pedestrian-oriented and should include active ground floor uses. The massing, height, and bulk of buildings and related features such as parking also should respect adjacent park uses and environmentally sensitive areas.
- **Poplar Point as an Economic Catalyst – AW2.4.7:** Use development at Poplar Point to bring economic development opportunities to adjacent neighborhoods, particularly Barry Farms and historic Anacostia. Economic activities at Poplar Point should foster the success of existing businesses in historic Anacostia, provide job opportunities, and create cultural, educational, and institutional uses that benefit East of the River communities.

Center City Action Agenda 2008

The *Center City Action Agenda* (Action Agenda) recommends investment in key places, corridors, and transit to ensure economic vitality, sustainability, and cultural diversity. Poplar Point has been identified as one of the eight target areas. The *Action Agenda* envisions Poplar Point as a reinvigorated waterfront park and neighborhood with housing, jobs, and a mix of retail and entertainment venues. The Agenda recommends actions that would encourage investment at Poplar Point with the intent that reinvestment in Poplar Point would benefit the historic Anacostia neighborhood and contribute to the revitalization of Martin Luther King, Jr. Avenue.

Anacostia Waterfront Initiative (AWI) Framework Plan

Poplar Point is one of the Target Areas identified in the *Anacostia Waterfront Initiative Framework Plan* (AWI Framework Plan). The *AWI Framework Plan* outlined a new vision for the Anacostia River corridor and provided a revitalization strategy to improve waterfront parks, recreational uses, and urban settings to reunite communities on both sides of the River. The *AWI Framework Plan* promoted coordination of waterfront development, open space conservation, development of enhanced park areas, and increased access to the waterfront from neighborhoods on both sides of the River. **Due to the Poplar Point's prominent location at the confluence of the Anacostia and Potomac Rivers, the *AWI Framework Plan* recommends transforming Poplar Point into a signature waterfront park and a gateway to the Anacostia River and River Parks system.** The *AWI Framework Plan* envisions Poplar Point as the catalyst for economic development and neighborhood revitalization for historic Anacostia. Initiatives and themes relating to water quality, circulation, open space, cultural destinations, and community development specific to Poplar Point, and not superseded by more recent plans or policies, include:

- Extend Howard Road to provide a direct connection between Historic Anacostia and the waterfront
- Provide additional sports and recreation fields
- Construct a new amphitheater
- Create more than 4 acres of new wetlands
- Expose Stickfoot Creek

3.1.2.3 Ward 8 Planning Policies

In addition to the city-wide planning documents that guide future development, localized plans have been developed for specific DC Wards to guide growth and ensure that the community's own vision for the future is achieved. These plans recommend initiatives and goals specific to the Project Area.

East of the River Project Plan

The *East of the River Project Plan* is the result of joint efforts between the DC OP and the DC Department of Housing and Community Development. The *East of the River Project Plan* provides the framework for future development in areas lying east of the Anacostia River. The *East of the River Project Plan* emphasizes expanding job opportunities, new commercial and retail services, new and rehabilitated housing, and improved infrastructure. Additional goals of the plan include strengthening and preserving the character of East of the River neighborhoods and providing housing that meets the demands for all income levels. The Project Area partially falls within the Anacostia Gateway target area, which the plan envisions as a potential government center site and an area for commercial revitalization.

Anacostia Transit Area Strategic Investment Plan

The *Anacostia Transit Area Strategic Investment Plan* includes broader area-wide recommendations along with several node-specific guidelines that focus more on individual development opportunities. The area-wide recommendations include enhancing pedestrian quality and connectivity, building a transit focused plan, improving connectivity throughout the neighborhood, encouraging sensitive development, and promoting sustainable principles. The node-specific recommendations include increasing riverfront access and improving neighborhood-waterfront connections, optimizing development opportunities, and improving the environment.

Strategic Neighborhood Action Plans

The Strategic Neighborhood Action Plans (SNAPs) were developed by residents and Neighborhood Action Teams to identify priority planning issues in their local neighborhood cluster. This process encourages future plans and developments to address the issues that each community has cited as important. The neighborhood cluster in the vicinity of the Project Area (cluster 28) includes Anacostia and Historic Anacostia and is bounded to the north by Good Hope Road, on the east by Fort Stanton Park, on the south by Morris Road, and on the west by southern Anacostia Park. Cluster 28 is composed primarily of low-to moderate-density residential land uses with additional federal and commercial uses. Cluster 28 is home to a significant historic resource in Anacostia, the Frederick Douglass National Historic Site. Other assets include the proximity to the Anacostia River, panoramic views of the Washington skyline, and ample green spaces in Anacostia Park. The residents have identified the following four priorities as part of their action plan:

- **Neighborhood Economic Development:** Residents expressed the desire to promote development in the local economic corridors: Good Hope Road and Martin Luther King Jr. Avenue. To attract economic growth, the residents suggested providing aid to existing businesses, marketing the corridors to minority and disadvantaged contractors and consultants, creating a “critical mass” of

services and people, and attracting new businesses by publicizing the diversity of services and retail needs that are currently lacking in the area.

- **Housing and Protection of Historic Resources:** Residents expressed their admiration of Cluster 28's historic resources and the need to preserve them. Many were distressed to see buildings in the community in such a dilapidated state due to many years of neglect. To reduce the historic structures' deterioration, the residents suggested that educational resources be devoted to train residents in historic restoration techniques, providing resources for homeowners and demonstrations of affordable restoration methods, and utilizing the Frederick Douglass National Historic Site as a point of attraction and catalyst to change negative perceptions of the neighborhood.
- **Clean and Safe Services:** Residents overwhelmingly expressed that basic government services intended to make the community clean and safe were lacking. They cited the trash-strewn and overgrown alleys, nuisance properties, obvious drug activity, and continuing perceptions of Anacostia as a high-crime area as examples of substandard government services. Recommendations from the residents included upgrading and improving street lighting, reinvigorating citizen watch programs, prohibiting facilities that are typically magnets for crime, and increasing resources for SHPO inspectors and Department of Public Works staff members and equipment.
- **Enhance the Environment, Recreation and Open Space, and Ensure Appropriate Development:** Another widespread topic of interest for the residents was to ensure that future development reinforce the neighborhood character rather than detract from it. Suggestions on how to accomplish this included changing zoning regulations to prohibit undesired uses and research to attract additional private investment in the neighborhood. Residents generally supported the AWI, but wanted to ensure that it would benefit the existing community. Many of the suggestions expressed by residents are part of the Initiative, such as increased access to the waterfront.

3.1.2.4 Zoning

The District's Zoning regulations control the density, configuration and use of buildings within the city. This promotes orderly development patterns and also ensures public safety. In general, the District government provides for several types of allowable uses as well as several uses that require the issuance of a special permit or other government approval.

The zoning classification for the Project Area is GOV (Government) as the approximately 1,200 acre Anacostia Park is owned by the federal government and operated by NPS. Federally owned property is exempt from District zoning regulations.

The areas adjacent to and surrounding the Poplar Point Project Area contain several zoning designations, including low-bulk commercial, light manufacturing, and residential. A summary of the zoning classifications found in the vicinity is provided in Table 3.1.1 below.

Table 3.1.1 District of Columbia Relevant Zoning Classifications

Zoning Code	Description	Allowable Uses
C-2-A	Community Business center-low moderate density	Permits matter-of-right low density development, including office employment centers, shopping centers, medium-bulk mixed use centers, and housing to a maximum lot occupancy of 60% for residential use, a maximum FAR of 2.5 for residential use and 1.5 FAR for other permitted uses, and a maximum height of fifty (50) feet. Rear yard requirements are twenty (20) feet; one family detached dwellings follow R-1 side yard requirements, one family semi-detached dwellings follow R-2 side yard requirements.
C-3-A	Medium bulk major business and employment	Permits matter-of-right medium density development, with a density incentive for residential development within a general pattern of mixed-use development to a maximum lot occupancy of 75% for residential use, a maximum FAR of 4.0 for residential and 2.5 FAR for other permitted uses and a maximum height of sixty-five (65) feet. Rear yard requirements are twelve (12) feet; one family detached dwellings follow R-1 side yard requirements, one family semi-detached dwellings follow R-2 side yard requirements.
C-M-1	Low bulk commercial and light manufacturing	Permits development of low bulk commercial and light manufacturing uses to a maximum FAR of 3.0, and a maximum height of three (3) stories/forty (40) feet with standards of external effects and new residential prohibited. A rear yard of not less than twelve (12) feet shall be provided for each structure located in an Industrial District. No side yard shall be required on a lot in an Industrial District, except where a side lot line of the lot abuts a Residence District. Such side yard shall be no less than eight (8) feet.
R-3	Row dwellings and flats	Permits matter-of-right development of single-family residential uses (including detached, semi-detached, and row dwellings), churches and public schools with a minimum lot width of 20 feet, a minimum lot area of 2,000 square feet for row dwellings, 30 feet and 3,000 square feet for single-family semi-detached dwellings, 40 feet and 4,000 square feet for all other structures and 120 feet and 9,000 square feet for schools, a maximum lot occupancy of 60% for row dwellings, churches and schools and 40% for all other structures, and a maximum height of three (3) stories/forty (40) feet. Rear yard requirement is twenty (20) feet.
R-4	Row dwellings and flats	Permits matter-of-right development of single-family residential uses (including detached, semi-detached, row dwellings, and flats), churches and public schools with a minimum lot width of 18 feet, a minimum lot area of 1,800 square feet and a maximum lot occupancy of 60% for row dwellings, churches and flats, a minimum lot width of 30 feet and a minimum lot area of 3,000 square feet for semi-detached structures, a minimum lot width of 40 feet and a minimum lot area of 4,000 square feet and 40% lot occupancy for all other structures; and a maximum height of three (3) stories/forty (40) feet. Conversions of existing buildings to apartments are permitted for lots with a minimum lot area of 900 square feet per dwelling unit. Rear yard requirement is twenty (20) feet.

R-5-A	Low density apartments	Permits matter-of-right development of single-family residential uses for detached and semi-detached dwellings and, with the approval of the Board of Zoning Adjustment, new residential development of low density residential uses including row houses, flats, and apartments to a maximum lot occupancy of 40%, 60% for churches and public schools; a maximum floor area ratio (FAR) of 0.9, and a maximum height of three (3) stories/forty (40) feet. Rear yard requirements are twenty (20) feet, side yard requirements are not less than eight (8) feet. If all other provisions of the zoning regulations are complied with, conversion of existing buildings to flat or apartment use is permitted as a matter-of-right.
R-5-B	Moderate density apartment houses	Permits matter-of-right moderate development of general residential uses, including single-family dwellings, flats, and apartment buildings, to a maximum lot occupancy of 60%, a maximum FAR of 1.8, and a maximum height of fifty (50) feet. Rear yard requirements are not less than fifteen (15) feet.
W-3	High Density mixed residential-commercial	Permits matter-of-right high density residential, commercial, and certain light industrial development in waterfront areas to a maximum lot occupancy of 75% for residential use, a maximum FAR of 6.0 for residential and 5.0 for other permitted uses and a maximum height of ninety (90) feet. Rear yard requirements are not less than twelve (12) feet.

The WMATA Garage is situated directly south of the Poplar Point Project Area. This parcel is zoned GOV as the garage is owned and operated by the WMATA. As a result, the WMATA Parking Garage is exempt from District zoning regulations. The Howard Road Parcels consist of 11 acres of land zoned W-3. Of the three waterfront zoning districts, W-3 allows for the greatest building height and development density.

Existing Zoning Regulations – Surrounding Area

- *Martin Luther King Jr. Avenue Central Business Corridor:* The Martin Luther King Jr. Avenue corridor contains several different zoning classifications within its boundaries. Along Martin Luther King Jr. Avenue itself are the C-2-A zone and C-3-A classifications that allow low and medium density business uses. North of Martin Luther King Jr. Avenue along Shannon Place is zoned R-5-A; east of this area are parcels zoned for C-M-1. The eastern most end of the Martin Luther King Jr. Avenue corridor is zoned W-3.
- *Anacostia Heights:* The Anacostia Heights Neighborhood is comprised of five distinct zoning districts: R-3, R-4, C-2-A, R-5-A, and GOV. The Frederick Douglass Historic Site, located in the center of the neighborhood, is zoned GOV and exempt from District zoning regulations. East of the Douglass House are parcels zoned R-5-A. The majority of the Historic Anacostia neighborhood is zoned R-3 with small pockets of R-4 zoning exist in areas proximate to major roads such as Howard Road and MLK Jr. Avenue. Finally, an area zoned C-2-A exists along Good Hope Road

- *Fairlawn Neighborhood:* The Fairlawn Neighborhood is comprised of three distinct zoning classifications: R-3, R-5-B, and C-M-1. The R-3 district is primarily located north of Minnesota Avenue, while the R-5-B district is located south of Minnesota Avenue, with a small portion existing north of Minnesota Avenue in eastern Fairlawn. The C-M-1 district is located along the northern boundary of the Fairlawn neighborhood.
- *Barry Farm Neighborhood:* The Barry Farm Neighborhood is completely zoned R-5-A.
- *St. Elizabeths Campus:* This land is zoned GOV and exempt from District zoning regulations

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3.1.3 Community Facilities

The Poplar Point Project Area is located within Ward 8 of Washington, DC and contains many District and federal community facilities. These include public and private schools, places of worship, parks and recreation facilities, police stations, and fire stations that support the neighborhoods of Ward 8.

3.1.3.1 Educational Resources

The District of Columbia Public Schools System (DCPS) currently operates 62 elementary schools, 22 PK-8 schools, 12 middle schools, 18 senior high schools, and 6 special education centers. There are also 65 public charter schools in District of Columbia and a host of private schools. The following schools, public and private, are located in the vicinity of the Project Area:

- Elementary Schools
 - Howard Road Academy PCS- 701 Howard Road SE
 - Savoy Elementary School- 2400 Shannon Place SE
 - Birney Elementary School- 2501 Martin Luther King Jr. Ave
 - Our Lady of Perpetual Help (V Street Campus)- 1409 V Street SE
 - Ketchum Elementary School- 1919 15th Street SE
 - The Ambassador Baptist Church Christian School- 1412 Minnesota Avenue SE
- Middle and Junior High Schools
 - Johnson Junior High School- 1400 Bruce Place SE
 - Kramer Middle School- 1700 Q Street SE
- High Schools
 - Anacostia Senior High School- 1601 16th Street SE
 - Choice Academy at Douglass- 2600 Douglass Place SE
 - Thurgood Marshall Academy- 2427 Martin Luther King Jr. Ave

Enrollment statistics for the District of Columbia's public schools within are provided in Table 3.1.2. Specific data on enrollment and capacity for charter and private schools in the area was unavailable.

Table 3.1.2 Study Area School Enrollment

School Name	Type	'08 - '09 Enrollment	Building Capacity	% of Utilization
Savoy	Elementary (PS-6)	368	479	77%
Birney	Elementary (PS-6)	330	560	59%
Ketchum	Elementary (PS-6)	259	461	56%
Prospect LC	Spec. Ed.	111	N/A	N/A
Johnson	Middle (6-8)	289	1015	28%
Kramer	Middle (6-8)	307	655	47%
Anacostia	Senior High (9-12)	884	1040	85%

Source: District of Columbia, Public Schools – School Profiles

Five universities are located in the vicinity of the Project Area, including:

- Southeastern University- 1310 Southern Avenue SE
- Central Texas College (Satellite Office)- Bolling Air Force Base
- National Defense University- 300 5th Avenue SW
- University of Maryland (Satellite Office)- 499 S Capitol Street SE
- Webster University (Satellite Office)- 112 Brookley Drive, Bolling Air Force Base

Two libraries are located near the Project Area: the Parklands Turner Library and the Anacostia Neighborhood Library, both of which are branch libraries of the District of Columbia Public Library System. Parklands Turner Library is located at 1720 Alabama Avenue SE and the Anacostia Neighborhood Library is located at 1800 Good Hope Road SE.

3.1.3.2 Recreational Resources

Open Space Resources

The primary open space resource in the area includes Anacostia Park, the southern portion of which is within the boundaries of the Poplar Point Project Area. Anacostia Park is a linear park comprised of more than 1,200 acres on both sides of the Anacostia River and includes 11 miles of shoreline. Public facilities within Anacostia Park include the Langston Golf Course, picnic areas, and recreational fields and courts. There is also a large pavilion containing more than 3,000 square feet of roller skating space. Anacostia Park provides access to the Anacostia River through three concession-owned boating marinas, four boat clubs, and a public boat ramp. In addition to these facilities, Anacostia Park contains natural open space features including Kenilworth Marsh, Kenilworth Aquatic Gardens, and many acres of forested land.

Another large park system in the vicinity of the Project Area is the Fort Circle Parks system. The Fort Circle Parks system currently consists of 17 sites located at various points around the perimeter of Washington. The park located closest to the Project Area is Fort Stanton Park, located on Erie Street near Morris Road and adjacent to Our Lady of Perpetual Help Catholic Church. Fort Stanton Park provides the following recreational amenities: two baseball fields, a football field, a basketball court, a playground and computer facilities. It also includes the Washington Overlook, a wooded area that offers panoramic views of the city.

The Frederick Douglass National Historic Site, maintained by NPS, is also located in the vicinity of the Project Area. The site contains Cedar Hill, the former home of Frederick Douglass, and the surrounding land that has been preserved as a park. Amenities include a bookstore, cultural and historic education programs, and long views of the U.S. Capitol Building, the Washington Monument, and the U.S. Air Force Memorial.

Recreational Facilities

Recreational facilities in the vicinity of the Project Area include a the Southeast Tennis and Learning Center (701 Mississippi Avenue SE), THEARC (1901 Mississippi Avenue SE), Smithsonian Institution's Anacostia Museum and Center for African American History (1901 Fort Place SE), several neighborhood recreation/community centers, and various religious institutions.

The Southeast Tennis and Learning Center is a 14,718 square foot facility that houses four indoor and six lighted outdoor tennis courts, multi-purpose rooms, a computer lab, locker and shower rooms, and a kitchenette. The center sits on a four-acre parcel of land located off Mississippi Avenue SE.

THEARC, the Town Hall Education, Arts, and Recreation Campus, opened in October 2005, and is also located off of Mississippi Avenue SE. The purpose of the facility is to provide residents with recreational opportunities and health services such as music and dance classes, fine arts, academics, continuing education, mentoring, tutoring, recreation, and medical and dental care. Services are offered at a significantly reduced or no cost. The campus is 110,000 square feet and is comprised of a 365-seat community theatre, regulation sized gymnasium, a computer lab, an art gallery, and music and dance studios.

The Smithsonian Institution's Anacostia Museum and Center for African American History and Culture is located near Fort Stanton Park and is often referred to as the Anacostia Community Museum. The museum was established in 1967 to serve as a center for outreach in a largely African-American community. Over time, the center has become a museum preserving and interpreting local and community African-American history. The museum offers a wide variety of educational programs and civic events with the goal of promoting Anacostia's history and culture.

Two neighborhood recreation/community centers are within a half-mile of the Poplar Point Project Area. The Barry Farm Recreation Center is located at 1230 Sumner Road SE. It includes a lighted athletic field with baseball diamond, picnic area, two playground areas, a multi-purpose room, a kitchenette, and a computer room. The Savoy Recreation Center is co-located with the Elementary School located at 2440 Shannon Place SE. The facilities include an indoor basketball court and a multi-purpose room.

Across the River, several recreation centers also serve the community. The King Greenleaf Recreation Center is located at 201 N Street NW within the Greenleaf Housing complex, serving Greenleaf, Syphax Gardens, and James Creek residents. Organized programs include after school tutoring, mentoring, and cheerleading. The facility provides basketball courts, a soccer field, tennis courts, softball fields, indoor meeting spaces, exercise rooms, locker rooms, and learning centers. The Randall Recreation Center is also located nearby at South Capitol and I Streets SW. In addition to the sporting fields and ball courts, the center has an outdoor swimming area and playground for the public.

Religious Institutions

Many religious institutions are located near the Poplar Point Project Area. These institutions include:

- Holy Temple Church - 2635 Martin Luther King Jr. Ave SE
- Macedonia Baptist Church - 2625 Stanton Road SE
- Matthews Memorial Baptist Church - 2616 Martin Luther King Jr. Ave SE
- Refshint Rock Church COGIC -568 Lebaum St SE
- Campbell AME Church - 2562 Martin Luther King Jr. Ave SE
- Allen Chapel AME Church - 2498 Alabama Avenue SE
- Universal Holiness Church - 2426 Elvans Road SE

- Bethuel Temple Church -2406 Martin L King Jr. Ave SE
- Bethlehem Baptist Church - 2458 Martin Luther King Jr. Ave SE
- Rehoboth Baptist Church - 621 Alabama Avenue SE
- Jerusalem Church of God-Christ - 3128 Martin Luther King Jr. Ave SE
- Temple Missionary Baptist Church - 3105 Martin Luther King Jr. Ave
- Congress Heights United Methodist - 421 Alabama Avenue SE
- Morning Star Baptist Church - 3204 Brothers Place SE
- Our Lady of Perpetual Help Catholic Church - 1600 Morris Road SE

3.1.3.3 Emergency Services/Public Safety Resources

The construction of the Unified Communications Center was an effort initiated by the DC Office of Unified Communications to improve the response time to public safety problems. To accomplish this improvement, the dispatching of vital public safety services was consolidated into one location: the Unified Communications Center. As a result of this consolidation, all inquiries requiring a response from police, fire, emergency medical services, emergency management agency, and public services are routed to the Unified Communications Center. This service improves efficiency and response time because the central control center can notify the closest service provider, rather than a resident calling one service provider and being rerouted to another. The consolidation of personnel, equipment and systems reduces cost overhead and as a result has become a more cost-effective solution. The Center is located at 2700 Martin Luther King Jr. Avenue SE on the East Campus of St. Elizabeths Hospital.

Fire and rescue services are provided throughout the District of Columbia by the DC Fire and Emergency Medical Services Department. Ward 8 is home to four Fire and Emergency Response Stations with the closest station being Engine Company 15/Rescue 3. Engine Company 15/Rescue 3 is located at 2101 14th Street SE, which is approximately one mile from the Project Area. The station is equipped three rescue squad vehicles and two fire engines.

The Poplar Point Project Area is located within the jurisdiction of both the Sixth and Seventh Districts of the Metropolitan Police Department (MPD). The closest police station is located at 2455 Alabama Avenue SE. In addition, a substation is located at 2701 Pennsylvania Avenue SE. The Project Area is within four of the District of Columbia's Police Service Areas (PSAs). PSA 703 and PSA 701 serve the western portion of the Project Area, while PSA 607 and PSA 605 serve the eastern portion of the Project Area.

The most recent crime data indicates that there has been a decrease in criminal activity within the Project Area. In the past year, crime has fallen by 23%. The decrease in crime in District Seven is substantially greater than in DC as a whole, which has experienced an overall decrease of 1%. Table 3.1.3 contains crime data comparing July 2008 through July 2010.

Table 3.1.3 Recent Crime Statistics

Crime	07/08- 07/09	07/09- 07/10	% Change
Homicide	3	2	-33
Sexual Assault	3	1	-67
Robbery	30	22	-27
Assault with a Deadly Weapon	26	28	8
Burglary	15	14	-7
Theft	31	32	3
Theft from Auto	52	37	-29
Stolen Auto	51	28	-45
Arson	1	0	100
<i>Project Area Total</i>	<i>212</i>	<i>164</i>	<i>-23</i>
<i>DC Total</i>	<i>32,194</i>	<i>32,031</i>	<i>-1</i>

Source: Metropolitan Police Department, DC Police Crime Mapping, 2010

3.1.3.4 Medical Resources

The community medical facility located closest to the Project Area is the Greater Southeast Community Hospital, located at 1310 Southern Avenue SE. The hospital is approximately three miles from the Project Area. The facility is a full-service hospital offering inpatient and outpatient services. The hospital currently has 450 beds.

3.1.4 Demographics and Housing

The Poplar Point Project Area is located within an economically and racially diverse area of Washington, DC. Ward 8 consists of a series of neighborhoods that lie east of the Anacostia River including: Barry Farm, Historic Anacostia, Fairlawn, Anacostia Naval Station, and Bolling Air Force Base. In addition to the neighborhoods east of the Anacostia River, several neighborhoods west of the River were analyzed. This analysis allows for a broader understanding of the area's demographic makeup and the ability to draw comparisons between the communities. In general, the study area is characterized by a high proportion of minority and low-income residents. The larger context area is a target for revitalization, with several large redevelopment projects currently underway, as discussed in the cumulative project section. Nearby revitalization projects include the Southeast Federal Center (The Yards) and the Washington Navy Yard.

3.1.4.1 Methodology

The 2000 Census provides the most complete and recent demographic data set available and provides the basis for analyzing the demographic composition of the study area. Data from the 1990 Census is also presented to show how the demographic composition of the area has changed over time. This analysis uses Census Tract level data to examine population growth, age and race, educational attainment, households, income and housing units. Figure 3.1.4 illustrates the locations of the Census Tracts studied within this section.

Population

Population for an area is determined by persons enumerated at their usual place of residence. Population characteristics, including growth (or loss), age, race, and educational attainment, are the essential variables in understanding the demographic profile of a given geographic area. In the 2000 Census, persons identified themselves as belonging to one of the seven racial subgroups: White; Black; American Indian or Alaskan Native; Asian; Native Hawaiian or other Pacific Islander; Some Other Races; or of Two or More Races. The latter two categories were added to the 2000 Census. Besides these racial categories, the Census also enumerates Hispanic or Latino persons who can be of any race.

Households

According to the U.S. Census Bureau, households include all related family members and unrelated persons who occupy a single housing unit. Households are an important component of a demographic analysis because they are a fundamental economic unit. The Census count of "households" excludes group quarters, such as halfway houses, rooming houses, and staff quarters. "Non-family" households identify general population and housing trends. A "non-family" household is one that is made up of people living together who are not "related by birth, marriage, or adoption." Non-family households can include people living alone, or unrelated persons living together as roommates.

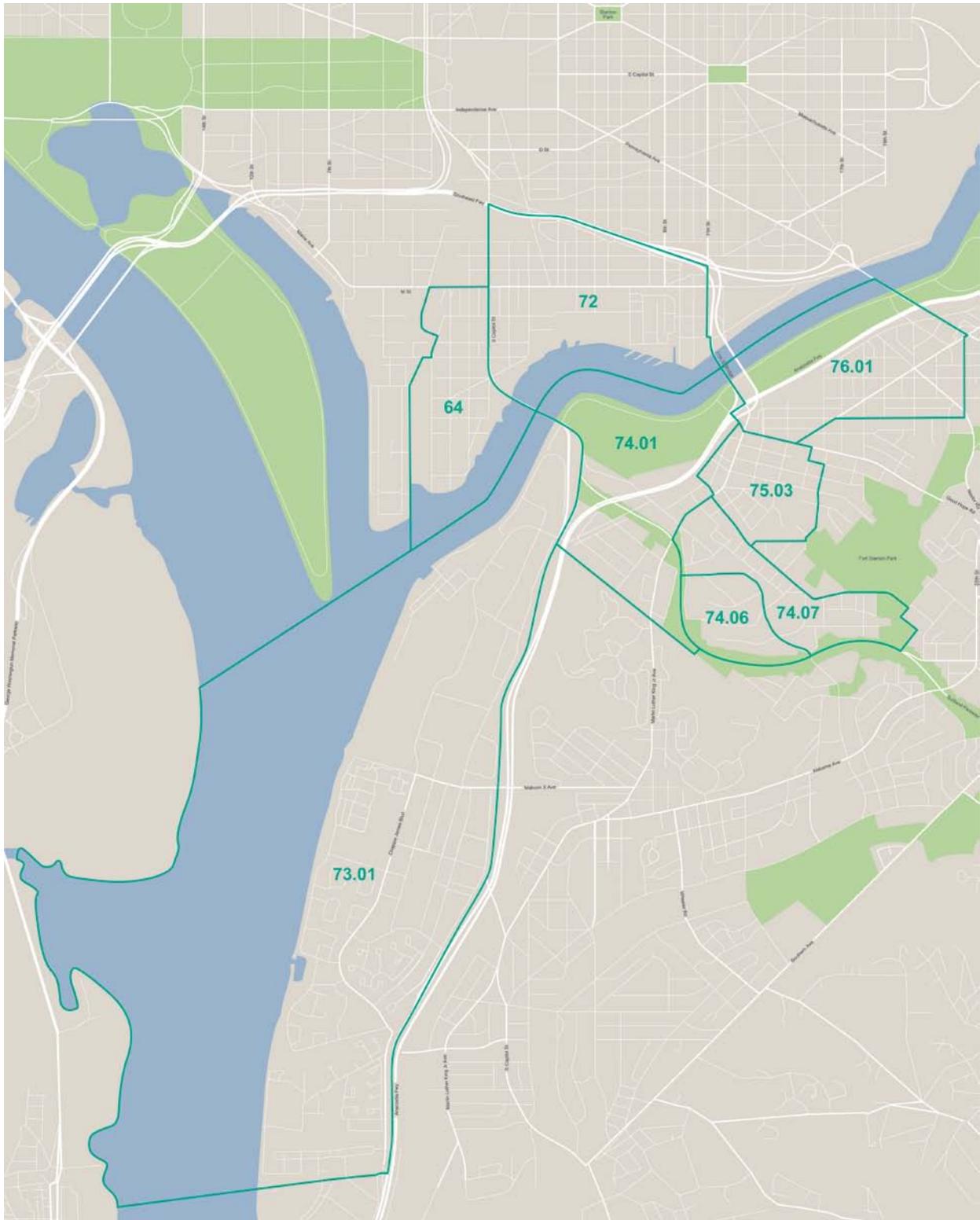


Figure 3.1.4 Census Tract Location Map
Source: AECOM, 2010

Housing Units

Housing units, defined as “any room or group of rooms intended to be occupied as separate living quarters,” are the basic unit for housing data. Key attributes, such as age of the housing stock and the number of units in a structure can reveal the character and quality of an area’s housing stock. Occupancy/vacancy rates and the tenure of housing units (rented or owned) serve as an indicator of a neighborhood’s desirability. Homeownership is generally viewed as an indicator of neighborhood stability and low homeownership rates can be indicative of a more transient population.

The level of affordability, measured by the gross rent as a percentage of the household’s income, indicates whether the housing is matched to the needs of the local population. Rent burden is often used as a measure of affordability, with households allocating greater than 30% of their income to housing expenses considered to be facing a rent burden. Housing affordability has become a major problem for low-income populations over the last several decades.

Housing values, as opposed to rents, are reported for owner-occupied units. Reported housing values are based on the most recent data available from 1999. Although somewhat out of date and not reflective of the ongoing changes in the study area, the 1999 figures are useful as a means of comparing the study area to the District of Columbia as a whole.

Income

The general income level for the Poplar Point Project Area is determined through a combination of Census variables including household income, poverty status, and public assistance. The 2000 Census reports these income variables based on 1999 data. The Census Bureau defines poverty levels by using a set of income thresholds that vary by family size and composition; a family whose income is less than the established threshold is considered to be poor. The 2000 poverty threshold ranged from \$8,259 for one person aged 65 years and older, to \$33,291 for a family with eight or more children.

Public assistance is defined as cash payments to low-income people, such as aid to families with dependent children (AFDC, ADC), temporary assistance to needy families (TANF), general assistance, and emergency assistance. Since the value of the dollar fluctuates over time, it is appropriate to compare the study area’s median income with the median income for the entire District of Columbia as a reference area.

Study Area

The Poplar Point Project Area is located within Census Tract 74.01 (Project Tract) in the southeast quadrant of the District of Columbia. However, the Project Area does not contain any housing units or residents and is highlighted to create a frame of reference for the impact analysis. A larger study area for demographics and housing encompasses seven additional Census Tracts, including 73.01, 74.06, 74.07, 75.03, and 76.01 located east of the Anacostia River and Tracts 64 and 72 located west of the Anacostia River (see Figure 3.1.2). The information is presented at the individual Census Tract, neighborhood, and study area levels. For the purposes of comparison, the appropriate unit of geographic analysis is the District of Columbia.

3.1.4.2 Population

According to the 2000 Census, there are 25,113 people living within the study area (see Table 3.1.4). In general, the study area has experienced a significant decrease in population between 1990 and 2000. Despite this, the Project Tract (Tract 74.01) has experienced an almost 12% population increase over the same time period. Even larger gains were seen in Tract 74.06 at around 30%. Tracts 73.01 and 74.07 had the largest decreases in population with losses of 32.6% and 21.8%, respectively. It is logical to assume that many of the census tracts would have lost residents as the city of Washington's population has decreased by 5.7% over the 10-year period. The population losses in and around the Project Area were disproportionately large compared to the city as a whole. As a result, while the District has experienced population growth since 2000, the majority of the increased population has occurred in redeveloped areas in the Center City, not in Anacostia.

Table 3.1.4 Population

Tract	1990	2000	% Change
<i>West of River</i>			
Tract 64	2,626	2,159	-17.8%
Tract 72	2,160	1,853	-14.2%
<i>Anacostia</i>			
Tract 73.01	7,767	5,234	-32.6%
Tract 74.06	2,414	3,148	30.4%
Tract 74.07	3,136	2,452	-21.8%
Tract 75.03	2,941	2,699	-8.2%
Tract 76.01	5,226	4,572	-12.5%
<i>Project Tract</i>			
Tract 74.01	2,685	2,996	11.6%
<i>Study Area Total</i>	<i>28,955</i>	<i>25,113</i>	<i>-13.3%</i>
<i>Total DC</i>	<i>606,900</i>	<i>572,059</i>	<i>-5.7%</i>

Source: U.S. Census Bureau 1990 and 2000 Census

Table 3.1.5 provides a breakdown of the population by age and gender. Further demographic analysis shows that 54.2% of the residents in the study area are female. This proportion is expected because the city of Washington is comprised of around 52.9% female residents. In general, the study area accurately reflects the age cohort composition of the entire city of Washington. One major discrepancy is in the large amount of residents aged younger than 18, which is more than 15% higher than the city as a whole. This is most likely due to the large number of families living east of the Anacostia River. Another factor is the presence of military installations (Tract 73.01) near the Project Area, where many families are housed when a spouse is stationed there. The military installations have also led to Tract 73.01 to have a higher proportion of young professional and middle-aged residents, as well. Higher concentrations of residents aged over 65 are found primarily west of the Anacostia River likely due to the presence of senior housing complexes within those tracts.

Table 3.1.5 Population and Age Characteristics

Tract	Female	Under 18	18-24	25-34	35-44	45-54	55-64	Over 65
<i>West of River</i>								
Tract 64	56.6%	26.0%	8.4%	10.4%	14.6%	13.4%	7.5%	17.4%
Tract 72	55.3%	31.0%	8.2%	8.8%	15.2%	12.8%	8.7%	15.4%
<i>Anacostia</i>								
Tract 73.01	47.0%	37.4%	15.6%	23.1%	18.2%	4.5%	0.8%	0.4%
Tract 74.06	59.1%	47.9%	12.2%	14.3%	11.7%	7.1%	4.0%	2.9%
Tract 74.07	56.0%	39.7%	16.6%	14.2%	15.5%	10.5%	7.7%	9.3%
Tract 75.03	57.4%	37.4%	9.4%	13.4%	13.3%	9.9%	7.7%	8.8%
Tract 76.01	54.0%	24.5%	9.2%	12.9%	16.8%	14.2%	11.2%	11.2%
<i>Project Tract</i>								
Tract 74.01	58.0%	58.6%	10.6%	15.4%	12.8%	12.6%	5.3%	6.4%
<i>Study Area Total</i>	<i>54.2%</i>	<i>35.2%</i>	<i>11.6%</i>	<i>14.6%</i>	<i>15.1%</i>	<i>9.8%</i>	<i>6.1%</i>	<i>7.5%</i>
<i>Total DC</i>	<i>52.9%</i>	<i>20.1%</i>	<i>12.7%</i>	<i>17.8%</i>	<i>15.3%</i>	<i>13.2%</i>	<i>8.7%</i>	<i>12.2%</i>

Source: U.S. Census Bureau 2000 Census

Table 3.1.6 provides a breakdown of the study area by race/ethnicity. The proportion of Black residents within the study area is more than 20% higher than in Washington, DC as a whole. The Project Tract had an even higher proportion (98.2%) compared to the rest of the study area. Tract 73.01 has a much smaller percentage of Black residents due to the increased diversity of the military installations. If Tract 73.01 was removed from the study area, the resulting percentage would be similar to the Project Tract percentage. There is a notably smaller percentage of Hispanic or Latino residents within the study area with figures around 2% or less for most of the Census Tracts. Overall, the study area reflects a less diverse racial makeup than is present within Washington, DC as a whole.

Table 3.1.6 Race/Ethnicity

Tract	Black Alone	Am. Ind./ Alaskan Native Alone	Asian Alone	Native Haw./Other Pacific Isl. Alone	Other Races Alone	Two or More Races	Hispanic or Latino
<i>West of River</i>							
Tract 64	90.8%	0.5%	2.0%	0.0%	1.3%	1.8%	2.7%
Tract 72	94.9%	0.2%	0.4%	0.1%	0.2%	0.9%	1.2%
<i>Anacostia</i>							
Tract 73.01	30.0%	0.7%	3.5%	0.7%	3.2%	3.9%	8.4%
Tract 74.06	99.4%	0.2%	0.0%	0.0%	0.0%	0.2%	0.7%
Tract 74.07	97.1%	0.4%	0.3%	0.0%	0.2%	0.7%	1.1%
Tract 75.03	97.2%	0.1%	0.2%	0.0%	0.2%	1.2%	1.0%
Tract 76.01	95.8%	0.2%	0.1%	0.0%	0.6%	0.8%	1.2%
<i>Project Tract</i>							
Tract 74.01	98.2%	0.0%	0.0%	0.0%	0.4%	0.9%	0.9%
<i>Study Area Total</i>	<i>82.1%</i>	<i>0.3%</i>	<i>1.0%</i>	<i>0.2%</i>	<i>1.0%</i>	<i>1.5%</i>	<i>2.7%</i>
<i>Total DC</i>	<i>60.0%</i>	<i>0.3%</i>	<i>2.7%</i>	<i>0.1%</i>	<i>3.8%</i>	<i>2.4%</i>	<i>7.9%</i>

Source: U.S. Census Bureau 2000 Census

3.1.4.3 Households

As shown in Table 3.1.7, Census Tract 74.01 has 971 households, an 8.7% decrease from the 1990 Census. The study area as a whole saw an even greater decline in households at a rate of 13.5% over the 10-year period. The Project Tract had an overall higher percentage of households with more than one resident and a much lower percentage of non-family households when compared to the District of Columbia as a whole. Census Tract 73.01 lost the most households with a rate of 27%. On average, neighborhoods located west of the Anacostia River lost a larger percentage of households than Tracts located east of the river. During the same period, the District of Columbia as a whole lost 1.3% of its households.

Table 3.1.7 Households Change Over Time

Tract	1990	2000	% Change
<i>West of River</i>			
Tract 64	1,296	1,037	-20.0%
Tract 72	1,199	952	-20.6%
<i>Anacostia</i>			
Tract 73.01	1,987	1,450	-27.0%
Tract 74.06	1,025	1,002	-2.2%
Tract 74.07	1,290	1,111	-13.9%
Tract 75.03	1,117	989	-11.5%
Tract 76.01	2,222	2,171	-2.3%
<i>Project Tract</i>			
Tract 74.01	1,063	971	-8.7%
<i>Study Area Total</i>	<i>11,199</i>	<i>9,683</i>	<i>-13.5%</i>
<i>Total DC</i>	<i>278,489</i>	<i>274,845</i>	<i>-1.3%</i>

Source: U.S. Census Bureau 1990 and 2000 Census

The majority of households within the study area are comprised of single and two-person residences (see Table 3.1.8). Census Tracts west of the river tended to have a higher percentage of single family residences, with Census Tracts east of the river having a higher percentage of two-person residences. The Census Tracts 64 and 72 has the highest percentages of non-family households, at 41.2% and 52.8% respectively.

Table 3.1.8 Household Composition

Tract	% with 1 Person	% with 2 Persons	% with 3 Persons	% with 4 Persons	% with 5 or more Persons	% Non-Family
<i>West of River</i>						
Tract 64	37.1%	33.2%	13.5%	8.7%	7.4%	41.2%
Tract 72	48.6%	20.5%	12.7%	9.6%	8.6%	52.8%
<i>Anacostia</i>						
Tract 73.01	2.4%	26.1%	23.7%	30.3%	17.5%	3.2%
Tract 74.06	12.7%	20.5%	24.8%	19.4%	22.5%	15.1%
Tract 74.07	27.4%	29.5%	17.8%	12.9%	12.4%	33.1%
Tract 75.03	27.1%	23.0%	19.4%	11.5%	19.0%	33.1%
Tract 76.01	34.9%	29.0%	15.4%	10.3%	10.3%	41.2%
<i>Project Tract</i>						
Tract 74.01	15.8%	23.4%	22.1%	14.9%	23.9%	18.6%
<i>Study Area Total</i>	<i>25.4%</i>	<i>26.1%</i>	<i>18.6%</i>	<i>15.1%</i>	<i>14.8%</i>	<i>29.5%</i>
<i>Total DC</i>	<i>43.8%</i>	<i>27.5%</i>	<i>12.8%</i>	<i>8.1%</i>	<i>7.8%</i>	<i>54.0%</i>

Source: U.S. Census Bureau 2000 Census

3.1.4.4 Housing Units

The Poplar Point Project Area currently contains no housing units; however, within Census Tract 74.01, 971 units were recorded (see Table 3-10). The primary location of these residences is within the Barry Farm neighborhood, situated southwest of the Project Area between Firth Sterling Avenue, SE and Martin Luther King, Jr. Avenue, SE. The Barry Farm neighborhood is characterized by multi-family residential structures.

Table 3.1.9 Housing Stock/Tenure Characteristics

Tract	Total Housing Units	% in Structures with 1-9 Units	% in Structures with 10 or more Units	% Vacant	% Renter Occupied	Median Year Built
<i>West of River</i>						
Tract 64	1,073	76.6%	23.4%	7.3%	76.7%	1961
Tract 72	952	60.4%	39.6%	6.5%	85.7%	1955
<i>Anacostia</i>						
Tract 73.01	1,450	98.6%	1.4%	6.1%	92.0%	1974
Tract 74.06	1,002	18.3%	81.7%	8.9%	90.8%	1968
Tract 74.07	1,111	54.2%	45.8%	13.1%	53.1%	1960
Tract 75.03	989	80.7%	19.3%	7.8%	58.4%	1952
Tract 76.01	2,171	78.0%	21.7%	11.4%	48.1%	1948
<i>Project Tract</i>						
Tract 74.01	971	78.0%	22.0%	7.5%	85.9%	1955
<i>Study Area Total</i>	<i>9,719</i>	<i>70.6%</i>	<i>29.3%</i>	<i>8.9%</i>	<i>71.3%</i>	<i>1948-1974</i>
<i>Total DC</i>	<i>274,845</i>	<i>58.6%</i>	<i>41.3%</i>	<i>8.5%</i>	<i>53.5%</i>	<i>1949</i>

Source: U.S. Census Bureau 2000 Census

Within the broader vicinity of the Project Area, there were 9,719 housing units in 2000. According to the 2000 Census data, an overwhelming amount of residential structures contain less than 10 units. This can be attributed to the large presence of single-family homes in neighborhoods east of the Anacostia River. Of the eight Census Tracts, Tract 73.01 had the highest proportion of rental units at approximately 92%. Approximately 71.3% of units that are renter occupied which is significantly higher than the total DC average. Housing vacancy rates for the study area are in-line with the District-wide average of 8.5%.

As shown in Table 3.1.10, census Tract 72 reported the lowest median gross rent in the area, at \$144 per month. All of the Census Tracts within the study area have lower median gross rents lower than the total DC figures except Tract 73.01. Most resident within the study area paid a similar or slightly higher percentage of their income towards rent when compared to the DC average. The highest percentage was found in Census Tract 75.03 and was just over 31%. The median value of owner-occupied units within the study area ranges from \$87,200 in Tract 74.06 to \$142,900 in Tract 74.01 (Project Tract). Overall, this range of values was lower than the \$157,000 District-wide median home value.

Table 3.1.10 Housing Economic Data

Tract	Median Gross Rent	Median Gross Rent as % of 1999 Income	Median Value (of occupied units)
<i>West of River</i>			
Tract 64	\$272	25.9%	\$108,400
Tract 72	\$144	24.9%	\$126,800
<i>Anacostia</i>			
Tract 73.01	\$1,031	25.1%	\$95,000
Tract 74.06	\$515	28.8%	\$87,200
Tract 74.07	\$598	24.0%	\$86,900
Tract 75.03	\$486	31.5%	\$99,800
Tract 76.01	\$517	22.5%	\$105,300
<i>Project Tract</i>			
Tract 74.01	\$288	23.7%	\$142,900
<i>Study Area Total</i>			
Total DC	\$618	24.8%	\$157,000

Source: U.S. Census Bureau 2000 Census

3.1.4.5 Income

According to the 2000 Census poverty data for the Project Tract, more than 57.7% of residents were living below the poverty level, while over 68% of residents under 18 years old and 57% of black residents were living in poverty.¹ Poverty levels for the study area were around 33%, which is much higher than the total DC percentage of 20%. Percentages for the study area may be skewed due to the presence of the military installations in Census Tract 73.01. Due to adequate pay by the military, residents within that Tract are significantly less likely to live below the poverty level. Table 3.1.11 shows income characteristics within the study area.

¹ According to the Census Bureau, families and persons are classified as below poverty if their total family income or unrelated individual income was less than the poverty threshold specified for the applicable family size, age of householder, and number of related children under 18 present. Therefore, for residents under 18, poverty status is based on family income. The Census Bureau uses the federal government's official poverty definition.

Table 3.1.11 Income Characteristics

Tract	Below Poverty Level	Black Below Poverty Level	Under 18 Below Poverty Level	65 and Over Below Poverty Level
<i>West of River</i>				
Tract 64	42.5%	44.6%	45.9%	60.7%
Tract 72	62.1%	64.0%	78.1%	72.9%
<i>Anacostia</i>				
Tract 73.01	2.5%	3.4%	2.4%	0.0%
Tract 74.06	51.7%	51.4%	62.9%	23.6%
Tract 74.07	24.4%	23.6%	34.6%	14.6%
Tract 75.03	37.6%	35.8%	52.1%	15.9%
Tract 76.01	21.0%	20.2%	25.7%	18.5%
<i>Project Tract</i>				
Tract 74.01	57.7%	57.1%	68.3%	40.9%
<i>Study Area Total</i>	<i>33.1%</i>	<i>38.2%</i>	<i>42.0%</i>	<i>36.6%</i>
<i>Total DC</i>	<i>20.2%</i>	<i>25.5%</i>	<i>31.7%</i>	<i>16.4%</i>

Universe: Persons for whom poverty status is determined, 1999 data

Source: U.S. Census Bureau 2000 Census

Table 3.1.12 shows the household income composition of the census tracts located within the study area. According to the 2000 Census, the area surrounding the Project Area has a wide range of median household incomes. In Tract 72, the median was \$8,089, just 20% of the District of Columbia median (\$40,127). By contrast, tract 73.01 has a median household income of \$49,122, a few thousand dollars higher than the District of Columbia median. The average of the median incomes within the study area is \$23,487, 41% of the District of Columbia average. Approximately 14.7% of the study area households received public assistance, nearly three times the District of Columbia average. Tracts 74.06 and 74.01 (Project Tract) had the highest proportion of household receiving public assistance, approximately 36.2% and 30.7%, respectively.

Table 3.1.12 Household Income Composition

Tract	Total Households	% Households with Public Assistance	Median Household Income
<i>West of River</i>			
Tract 64	1,044	11.9%	\$13,264
Tract 72	859	12.9%	\$8,089
<i>Anacostia</i>			
Tract 73.01	1,358	2.5%	\$49,122
Tract 74.06	967	36.2%	\$15,877
Tract 74.07	898	8.6%	\$33,125
Tract 75.03	908	21.5%	\$21,402
Tract 76.01	1,859	6.9%	\$32,930
<i>Project Tract</i>			
Tract 74.01	899	30.7%	\$14,083
<i>Study Area Total</i>	<i>8,792</i>	<i>14.7%</i>	<i>\$23,487 (average)</i>
<i>Total DC</i>	<i>248,590</i>	<i>5.5%</i>	<i>\$40,127</i>

Source: U.S. Census Bureau 2000 Census

3.1.5 Environmental Justice

Environmental Justice analyses are guided by Executive Order 12898, “Federal Actions to Address Environmental Justice in Minority and Low-Income Populations.” Published in 1994, this Executive Order requires that agencies identify and address any disproportionately high and adverse effects on human health or the human environment on minority and/or low-income populations resulting from government programs, policies and activities. In response to the Executive Order, the EPA Office of Federal Activities issued guidance for incorporating environmental justice goals into environmental documentation. This guidance provides the framework for the following environmental justice analysis.

EPA’s Office of Environmental Justice defines environmental justice as, “the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies.” Fair treatment means that no racial, ethnic, or socioeconomic group should bear a disproportionate share of adverse environmental consequences resulting from federal, state, or local actions. Meaningful involvement requires community input in the environmental planning process. It further requires that meetings and notices are accessible to low-income and minority populations potentially affected by a project.

3.1.5.1 Methodology

An “Environmental Justice Community of Concern” is defined as a “neighborhood or community, composed predominantly of persons of color or a substantial proportion of persons living below the poverty line that is subjected to a disproportionate burden of environmental hazards and/or experiences a significantly reduced quality of life relative to surrounding or comparative communities.” Census data are widely accepted as a reliable statistical source for Environmental Justice analysis. Due to the size of the study area and the geographic specificity of the data, Census Tract data forms the basis for this discussion.

Characterization of a Census Tract as an Environmental Justice Community of Concern requires the fulfillment of at least one of the following criteria:

- A low-income population based on the Bureau of Census Current Population reports (Criterion A);
- A minority population of the affected area that exceeds 50% (Criterion B); or
- A minority population meaningfully greater than the minority percentage in the general population or other appropriate unit of geographic analysis (Criterion C).

For the purpose of this analysis, minority populations were defined as any group of persons that identified themselves as “Black Alone,” “American Indian or Alaskan Native Alone,” “Asian Alone,” “Native Hawaiian or other Pacific Islander Alone,” “Other Races Alone,” or “Two or More Races.” Low-income populations were identified using Census data on “Poverty Status in 1999.”

The presence of public and assisted living housing and minority business can also be a reliable indicator of minority and/or low-income populations. Thus, the District of Columbia Housing Authority (DCHA) and the Department of Housing and Urban Development (HUD) were consulted to determine the level of public and

assisted living housing within the study area. Similarly, the District of Columbia Office of Local Business Development's list of certified local, small, and disadvantaged business enterprises provided information on minority businesses in the study area. This analysis considers the Disadvantaged Business Enterprise (DBE) certification to be an appropriate indicator of minority businesses.

The study area for this Environmental Justice analysis is made up of eight Census Tracts, as shown in Figure 3.1.2. The tracts included are: Tract 74.01, the project site and Barry Farm neighborhood; Tract 73, the Anacostia Naval Station and Bolling Air Force Base; Tracts 74.06, 74.07 and 75.03, the majority of what is known as Historic Anacostia; Tract 76.01, the Fairlawn neighborhood; Tract 64 west of South Capitol Street, in Near Southeast; and Tract 72 east of South Capitol Street, in Near Southeast. For the purposes of comparing population percentages under Criterion C, the selection of Washington, DC as the comparison population prevents an artificial dilution or inflation of the affected minority populations.

3.1.5.2 Potential Environmental Justice Residential Communities

As indicated in Table 3.1.13, Census data reveals that all tracts within the study area qualify as potential Environmental Justice Communities of Concern. These tracts satisfy Criterion B, which requires that at least 50% of the resident population be comprised of minorities. In almost all of the tracts within the study area this proportion was significantly higher than 50%. Furthermore, Tracts 64 and 74.06 reported 100% minority populations. Tracts 64, 72, 74.06, 74.07, 75.03, 76.01, and 74.01 also satisfy Criterion A, because of the large percentage of residents living below the poverty line. The poverty levels for all tracts within the study area were compared to the District-wide total to determine if the percentage of residents under the poverty level was significant. Finally, all tracts except for Tract 73.01 satisfy Criterion B because the percentage of minorities is higher than the District-wide percentage. Of all the tracts studied, Tract 73.01 only qualified as an Environmental Justice Community of Concern because of one Criterion. This is due in large part to the presence of military installations. Due to adequate pay and a commitment to diversity by the military, communities with military installations are less likely to be Communities of Concern.

Table 3.1.13 Study Area: Environmental Justice Data

Data Category	West of River		Anacostia					Project Tract	Study Area	Total DC
	Tract 64	Tract 72	Tract 73.01	Tract 74.06	Tract 74.07	Tract 75.03	Tract 76.01	Tract 74.01		
Total Population	2,159	1,853	5,234	3,148	2,452	2,699	4,572	2,996	25,113	572,059
Total Minority	100.0%	97.4%	50.8%	100.0%	99.6%	99.4%	98.8%	99.3%	89.2%	77.2%
Black Alone	91.4%	97.1%	30.4%	99.5%	97.3%	96.2%	94.2%	98.0%	82.5%	60.0%
Am. Ind. Or Alaskan Native Alone	0.0%	0.0%	0.8%	0.0%	0.0%	0.3%	0.8%	0.0%	0.3%	0.4%
Asian Alone	0.9%	0.0%	3.8%	0.0%	1.0%	0.4%	0.2%	0.0%	1.0%	2.6%
Native Hawaiian or Other Pac. Isl. Alone	0.0%	0.0%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.1%
Other Races Alone	2.3%	0.0%	3.5%	0.0%	0.0%	0.0%	0.0%	0.7%	1.0%	3.8%
Two or More Races	1.9%	0.3%	3.1%	0.5%	1.2%	1.8%	2.3%	0.0%	1.6%	2.6%
Hispanic or Latino	3.6%	0.0%	8.8%	0.0%	0.0%	0.7%	1.3%	0.7%	2.5%	7.9%
Below Poverty Level	41.8%	61.8%	2.3%	51.4%	24.0%	37.6%	20.9%	58.4%	32.2%	19.1%
Black Below Poverty Level	44.6%	63.7%	3.0%	51.4%	23.9%	37.2%	21.3%	57.1%	37.7%	24.5%
Minority Below Poverty Level	40.9%	63.5%	3.0%	51.4%	23.6%	37.6%	21.1%	57.7%	35.7%	21.4%

Universe: Persons for whom poverty status is determined, based on 1999 data

Source: U.S. Census Bureau 2000 Census

Due to the self-reporting nature of the Census, there is a potential for undercounting minority and low-income populations. Thus, to validate the Census data, DCHA and HUD listings of public and assisted housing within the District of Columbia were consulted. The DCHA and HUD listings support the designation of Tracts 64, 72, 74.01, 74.06, and 75.03 as potential affected communities.

The study area contains almost 4,000 public or assisted housing units spread throughout 15 public housing complexes as shown in Table 3.1.14. Four of these complexes are located west of the Anacostia River in Census Tract 64. Of the four, three are public housing complexes and one is an assisted housing complex. The first of these, Greenleaf Senior, contains 215 one- and two-bedroom apartments for senior citizens. The second complex, James Creek, contains 239 one- to six-bedroom townhouses. Syphax Gardens has 174 two- and three-bedroom units in three-story walk-up buildings. The final complex, Tel Court Cooperative, is an assisted housing complex that provides 56 subsidized units.

Table 3.1.14 Public and Assisted Housing

Name of Project	# of Units	Address	Census Tract
<i>Public Housing</i>			
Greenleaf Senior	215	1200 Delaware Avenue, SW	64
James Creek	239	1265 Half Street, SW	64
Syphax Gardens	174	1501 Half Street, SW	64
Town Homes on Capitol Hill/Barry Farm	432	1230 Sumner Road, SE	74.01
Wade Apartments	12	1249 Eaton Road, SE	74.01
Elvans Road	20	2400 Elvans Road, SE	74.06
<i>Assisted Housing</i>			
Tel Court Cooperative	56	34 O Street, SW	64
Parkchester Associates Apartments	94	2704 Wade Road, SE	74.01
Parkchester Housing Cooperative	128	2906 Pomeroy Road, SE	74.01
Forest Ridge/The Vistas	398	2549 Elvans Road, SE	74.06
Sayles Place Homes, INC.	62	2700-07 Douglas Place, SE	74.06
Carver Hall Apartments	95	2338 Pitts Place, SE	75.03
Frederick Douglass/Stanton Dwellings	650	1452-62 Bangor Street, SE	75.03
Morris Road	30	1360 Morris Road, SE	75.03
<i>Redeveloped Public Housing</i>			
Capper/Carrollsborg Hope VI	707 public, 525 affordable rental, (planned)		72

Source: DCHA and HUD, 2009

Six of the housing complexes are located east of the Anacostia River and are also a mix of public housing and assisted housing. These complexes are contained within Census Tracts 74.06 and 75.03. Elvans Road is a public housing complex comprised of 20 three- to five-bedroom units. The Forest Ridge/The Vistas is an assisted housing complex comprised of 398 subsidized units for families, ranging from one- to four-bedrooms. Sayles Place Homes, INC is an assisted housing complex containing 62 subsidized units for families, ranging from three- to more than five-bedrooms. Carver Hall Apartments is an assisted complex comprised of 95 subsidized units for families, ranging between one- and two- bedrooms. The Frederick Douglass/Stanton Dwellings is a large assisted housing complex that contains 650 subsidized units for families that range between one- and three-bedrooms. Finally, Morris Road is an assisted housing complex that is comprised of 30 subsidized units for families that range between two- and three-bedrooms.

There are currently no housing units located within the Project Area, itself; however, four of the housing complexes exist within the Project Tract (Census Tract, 74.01). Two of the complexes are public housing and the remaining two are assisted housing. The first is the Town Homes on Capitol Hill/Barry Farm complex, a large housing complex consisting of 432 public housing units ranging from two- to six-bedrooms. The Wade Apartments is a smaller apartment building that contains 12 public housing units ranging from one- to two-bedroom units. The Parkchester Associates Apartments is a complex for families containing 94 assisted housing units ranging from one- to three-bedrooms. Finally, the Parkchester Housing Cooperative is an assisted housing complex containing 128 units for families that range from one- to four-bedrooms.

One additional complex, which consisted of four components, was formerly located east of the Anacostia River in Census Tract 72. The Arthur Capper Dwellings, the Carrollsburg Dwellings, the Carroll Apartments, and Arthur Capper Senior together comprised 758 public housing units. The 23-acre area is now under redevelopment, replacing the old structures with a mixed-use, mixed-income development. In 2001, DCHA received a grant of \$34.9 million through HOPE VI for the revitalization of the four complexes. The initial grant was leveraged to provide over \$424 million for the creation 1,562 rental and home ownership units. This will include 707 public units, 525 affordable rentals, and 330 market rate houses. Arthur Capper/Carrollsburg is the first HOPE VI project in the country to provide one-for-one replacement of demolished public housing units. In addition to housing, the complex will include 500,000 square feet of office space, an 18,000 square foot community center, and 51,000 square feet of retail space. Construction of the first phase of townhouses began in June 2008.

3.1.5.3 Potential Environmental Justice Business Communities

Based on the District of Columbia Office of Local Business Development's list of certified local, small, and disadvantaged business enterprises, there are no certified disadvantaged businesses located within the Project Area. However, there are 48 certified disadvantaged businesses within the study area. To qualify as a disadvantaged business enterprise, at least 51% of the ownership, operation, and control of the business must be by individuals that are socially and economically disadvantaged. Three of these businesses are located within Census Tract 72, 4 are located in Census Tract 74.01, one is located within Census Tract 74.07, 35 are located within Census Tract 75.03, and 5 are located within census Tract 76.01.

3.1.5.4 Public Participation

The definition of Environmental Justice reference at the beginning of this section includes a requirement for “meaningful involvement.” This direction requires opportunities for significant community input in the environmental review process for new development. To this end, five meetings were held to both educate the community about the Proposed Action, and to solicit their concerns. As discussed in Chapter 1, the public meetings were held on July 29, 2008; October 7, 2008; November 20, 2008; June 24, 2008, and July 18, 2009.

3.1.6 Economic/Fiscal Resources

3.1.6.1 Regional Economic Conditions

The Washington, DC metropolitan area (the District of Columbia proper and nearby Maryland and Virginia suburbs) has been one of the strongest economic markets in the nation over the last several years. The area outpaced the nation in job creation between 1997 and 2007, adding 700,000 net new jobs. Of the 10 largest metropolitan areas, only New York exceeded this level of job growth for the same period. Anchored by the Federal government workforce, and catalyzed by the growth of the tech sector and burgeoning green sector, the DC metropolitan area ranked fourth in the nation with a Gross Regional Product of \$407 billion in 2007 (Greater Washington Initiative, 2008).

A U.S. Census report, released on July 1, 2008, shows that the DC metropolitan region’s population growth parallels the region’s strong economic performance. The DC metropolitan statistical area (DC MSA) had a 2008 population of approximately 5.4 million. This figure represents a more than doubling of the population since 1960. The DC MSA has had an average growth of approximately 70,000 persons per year, or a total of 561,947 persons since 2000. Future estimates of the MSA’s population can be projected using these trends and data. The growth rate between 2000 and 2008 was 1.39%, which can then be applied out to the year 2015. By 2015, 5.7 million people are projected to reside within the DC metropolitan area. This annual rate is slightly higher than that for the nation, which is .97%. (U.S. Census Bureau, 2008)

In part due to economic growth in the DC metropolitan area, the unemployment rate between 1994 and 2004 trended downwards from 4.10% to 3.20%, a 22% overall decrease. This compares favorably to the national annual average unemployment rate, which decreased from 6.10% to 5.30%, a 13% decrease, during the same period. However, the unemployment rate across the United States has been increasing in recent years. In November of 2009, according to the U.S. Bureau of Labor Statistics, the unemployment rate for the DC metropolitan area had grown to 6.1%, still faring better the national average of 9.4% for the same month (Woods &Poole, 2009).

Projections for average household income show similarly strong growth trends, rising from \$124,621 in 2005, to over \$171,256 in 2015. This increase represents a compound annual rate of 3.23% from 2005 to 2015. Over the same period, the average household income in the nation is projected to increase to \$121,252, increasing at a compound annual rate of 3.28% (Woods &Poole, 2009).

Employment estimates in a given region are a significant indicator of overall economic vitality. Among other factors, a diverse and stable employment base acts to maintain—and can also bolster—real estate values in a market area. Nonagricultural employment in the DC metropolitan area increased by 347,600 jobs between the years 1990 to 2000, showing a compound annual rate of 1.58%.² From 2005 to 2015, the nonagricultural employment base is projected to increase by 470,130 jobs. This compound annual rate of 1.67% ranks above the national average annual rate of 1.25% (Woods & Poole, 2009).

3.1.6.2 Local Economic Conditions

District of Columbia

In 2008, the District of Columbia provided a monthly average of approximately 704,800 jobs, a 1.6% increase over 2007 (Bureau of Labor Statistics, 2009). The DC average for 2008 of 704,800 jobs is composed of about 33% (234,600) government sector jobs and 67% (470,200) private sector jobs (Bureau of Labor Statistics, 2009). As these numbers show, employment in the District of Columbia is heavily concentrated in government jobs. In 2008, the federal government, in particular, represented over 33% of all employment and 17% of the total wage in the District of Columbia (Bureau of Labor Statistics, 2009). As is covered in greater detail in Section 3.1.6.4, healthy job growth is projected to continue in the District of Columbia through 2015, particularly in the government and service sectors.

According to the U.S. Census Bureau figures for 2008, the District of Columbia had a per capita personal income of \$42,069 that was substantially higher than the national average of \$27,589. For the District of Columbia, this per capita personal income represented a 13.5% increase from 2007. During the same period, the national per capita personal income increased by 9%. Median household income in the District of Columbia was \$57,936 in 2008, compared with a nationwide median household income of \$52,029. While the District of Columbia compares favorably with the nation on these indicators, figures for families and individuals below the poverty level are less favorable. Both numbers exceed national percentages by a significant margin and are illustrated, along with income, in Table 3.1.15 below.

Table 3.1.15 Income and Poverty Levels by Percent, DC and US

Area	Median Household Income	Median Family Income	Per Capita Personal Income	Families Below Poverty Level	Individuals Below Poverty Level
D.C.	\$57,936	\$66,722	\$42,069	13.7%	17.20%
U.S.	\$52,029	\$63,366	\$27,589	9.7%	13.20%

Source: U.S. Census Bureau, 2007 American Community Survey

* In 2007 Inflation Adjusted Dollars

² Agricultural employment is defined as persons who work as owners and operators of farms, as unpaid family workers on farms, and as hired workers who are engaged in farm activities. Nonagricultural employment is work in nonfarm establishments.

Another indicator of the economic health of a particular city or region is the level of education attainment of the population. As displayed in Table 3.1.16, the District of Columbia fares well comparatively with the nation in the aggregate, hosting a more highly educated population. In 2008, 27.7% of the population 25 years and over in the United States were college graduates, compared with 48.2% in the District of Columbia. From 2000 to 2008, the percent of college graduates in the United States increased by 13.5%, while increasing in the District of Columbia by a significantly higher 23%.

Table 3.1.16 Educational Attainment of the Population 25 Years and Older

Area	Percent High School Graduates			Percent College Graduates		
	2008	2007	2000	2008	2007	2000
D.C.	85.80%	85.70%	77.80%	48.20%	47.50%	39.10%
U.S.	85.00%	84.50%	80.40%	27.70%	27.50%	24.40%

Source: U.S. Census Bureau, 2008 American community Survey

Ward 8

While the economy of the District of Columbia, as a whole, is relatively healthy, the Project Tract has historically been considered economically depressed, due to a lack of retail, residential, and commercial development and economic activity, coupled with the prevalence of public and subsidized housing over market rate housing. The unemployment rate for Ward 8, in which the Project Area is located, in December 2009, was 28.7% (D.C. Department of Employment Services, Office of Labor Market Research and Information, 2007). This figure represents the highest rate in the District of Columbia for that month, in keeping with historical trends, and also compares to a rate of 12.1% for DC as a whole in that same month. The worldwide economic contraction and national recession that began in 2007 and continues into 2010 likely is responsible for these elevated unemployment numbers. However, prior to the current recessionary economic climate, in December of 2006, District of Columbia unemployment was at 6.2%, with a comparative rate of 16.4% in Ward 8. Therefore the same relative economic disparity existed between Ward 8 and the District of Columbia in the aggregate prior to the current economic climate (D.C. Department of Employment Services, Office of Labor Market Research and Information, 2007).

The median income for Ward 8 in 2007 was \$28,120, compared to \$49,508 for DC as a whole. The comparative income numbers were similar in 2000, with the median income for Ward 8 at \$23,644, and the median income for the District of Columbia at \$40,127 (D.C. Office of Planning, 2008). As a further indicator of economic disparity across the city, in 2008 Ward 8 had the highest number of persons receiving food stamps in the District of Columbia, at 27,515 persons.

Study Area

Employment in the study area is more heavily skewed toward federal government jobs than the District of Columbia as a whole. The greatest concentration of these federal jobs in the study area is at the Washington Navy Yard. The Navy Yard is located just north of the Project Area and across the Anacostia River, and is home to approximately 11,000 jobs. Other federal employment centers include Andrews Air Force Base and Anacostia Naval Station, adjacent and to the west of the Project Area, and the Southeast Federal Center,

which lies directly north of the Project Area across the Anacostia River. The Southeast Federal Center is a federal employment district within Southeast DC, positioned between the baseball stadium to the west, the Washington Navy Yard to the east, and bounded to the south by the Anacostia River. Approximately 2,000 federal employees use the current facilities at the Southeast Federal Center. Local government agencies, such as the DC WASA and the DC Department of Public Works, are also substantial sources of government employment in the study area.

There are several current and planned development, redevelopment, and economic revitalization activities within the study area that may result in expanded economic opportunities in the coming years. The development initiative at the Southeast Federal Center, known as The Yards, currently under construction, includes 2,800 residential units, 1.8 million square feet of new office space, 400,000 square feet of retail shops and dining places, and a riverfront park. The U.S. Department of Transportation is currently housed here along with other federal offices and retail and residential uses.

The Anacostia waterfront has also been the subject of revitalization in the study area. In March 2000, the AWI was formed as a partnership between federal and District agencies with the aim of transforming the Anacostia River into a revitalized urban waterfront. Long-term goals include pedestrian friendly mixed-use development along the waterfront, the development of 20,000 residential units, and 5 million square feet of office space. Other components of the District of Columbia's plans to revitalize the Anacostia waterfront include the 11th Street Bridges project, the revitalization of the South Capitol Street corridor, and the replacement of the Frederick Douglass/South Capitol Street Bridge.

North of the Project Area, at 2nd and M Streets SE, the revitalization of the Arthur Capper/Carrollburg Dwellings is planned for delivery in 2010. The overarching goal is to transform the outmoded public housing site into a socially vibrant neighborhood. The transformation is supported by a \$34.9 million HOPE VI grant from HUD. The project will include approximately 1,600 residential units, some of which are designated for low and moderate income families. Additional features of the project include a 20,000 square feet community center, 51,000 square feet of retail, and 702,000 square feet of commercial space.

Just north of the Project Area, across the Anacostia River and south of the new baseball stadium, the FRP Development Corporation is planning the Florida Rock Development. The 5.8 acre site sits east of South Capitol Street, at 100 Potomac Ave SE, and is planned as a mixed office-retail-hotel-residential plaza development. With delivery slated for 2020, current plans call for 600,000 square feet of office, 60,000 square feet of retail, 160 residential units, a 325-room hotel, and over 1,000 parking spaces. The office/retail buildings on the eastern part of the site will be developed first and construction was scheduled to begin in late 2008.

After a long period of disinvestment and minimal construction within Ward 8, several planned redevelopment and developments projects are currently in planning and design phases or under construction, including the redevelopment of Barry Farm/Park Chester/Wade Road, and the proposed development at St. Elizabeths East Campus and the Congress Heights Metro Station. Additionally, the District of Columbia government, the Anacostia Development Corporation (AEDC), and multiple non-profit organizations and private sources are together working to revitalize the economic environment in Ward 8 by

focusing on expanding economic activity at key nodes. Some examples are the revitalization of Anacostia's Historic Main Street and plans to restore retail activity and housing along Good Hope Road and Martin Luther King, Jr. Avenue.

While the many examples discussed above do not represent an exhaustive list, they indicate the rapid growth of development activity in the study area in recent years. Substantial development has occurred along M Street SE including new federal buildings and office space. After the DC City Council passed the required stadium lease agreement in February 2006, the Washington Nationals' new baseball stadium was developed at the intersection of Potomac Avenue and 1st Street SE. The Nationals Stadium, as a major development anchor, has since catalyzed revitalization and development projects in the area, along with increasing the demand for goods and services.

3.1.6.3 Economic Activity within the Project Area

The Project Area is located within the southwestern end of Anacostia Park. Owned and administered by the NPS, the park includes over 1,200 acres, at multiple sites, of federally-administered parkland. As such, the Project Area is currently not a source of commercial tax revenue or property tax revenue for the District of Columbia.

The headquarters of NACE, an administrative grouping of a number of NPS sites in the region, is located within the Project Area in the northeast portion of Poplar Point. The headquarters of the USPP helicopter aviation unit is also located in this portion of Poplar Point. Currently, these are the only major employment centers in southern Anacostia Park, hosting federal jobs for a limited number of employees in these facilities.

3.1.6.4 Employment

A region with strong economic vitality is usually characterized by a stable, diverse employment base and low unemployment rates. Stable refers to a minimal loss of jobs over a period of time, while diverse refers to a wide array of industries represented in the economy. Table 3.1.17 illustrates the Washington, DC Metropolitan Statistical Area's previous employment levels and also forecasts future employment levels in 2020.

Table 3.1.17 Distribution of Employment

Industry	1990		2000		2005		2010		2015	
	Number	%								
Natural Resources, Mining & Construction	139,200	6.8%	153,100	6.4%	186,600	7.2%	205,007	7.2%	225,476	7.3%
Manufacturing	73,400	3.6%	80,700	3.4%	65,400	2.5%	62,893	2.2%	60,444	2.0%
Trade										
Transportation and Utilities	381,200	18.6%	393,600	16.4%	406,500	15.6%	415,226	14.7%	424,064	13.8%
Information	82,300	4.0%	126,800	5.3%	99,800	3.8%	106,255	3.8%	112,956	3.7%
Financial Activities	138,100	6.7%	145,500	6.1%	160,400	6.2%	168,444	5.9%	176,727	5.7%
Services	660,300	32.1%	925,100	38.5%	1,057,500	40.5%	1,226,150	43.3%	1,410,297	45.8%
Government	580,400	28.2%	577,700	24.1%	632,100	24.2%	650,130	22.9%	668,466	21.7%
Total	2,054,900	100%	2,402,500	100%	2,608,300	100%	2,834,105	100%	3,078,430	100%

Source: Bureau of Labor Statistics, SAE Database

From 1990 to 2005, nonagricultural employment in the DC metropolitan statistical area increased by 553,400 jobs, a compound annual rate of 1.60%. All industry sectors showed various levels of growth except the manufacturing sector which lost a total of 8,000 jobs. The largest gains were seen in the services industry which gained 397,200 jobs over the 15 year period. The services industry is the aggregate of several smaller industries including hospitality, educational, health, and professional and business services.

In addition to presenting the previously collected data, projections for the years 2010 and 2020 were also calculated. This calculation was done by using the compound annual rate of growth for each industry and applying it for both 5 and 10 years out. Between 2005 and 2010 the MSA gained 225,805 jobs and between 2010 and 2015 the MSA gained an additional 244,325 jobs. The overall compound annual growth rate between 1990 and 2015 for the MSA was 1.63%.

Each industry's share of the total job pool must be analyzed to provide insight into the emerging and declining industries within the MSA. The largest percent increase was seen in the services sector at over 13%, which is projected to occupy over 45% of the market. The manufacturing, trade, transportation and utilities, information, financial activities, and government sectors all had decreases with the largest losses being seen in the government sector. Individual industries demonstrated similar growth patterns between the 2005 and 2010 projection and the 2010 and 2015 projection. The services industry saw the largest gains in market share with a steady increase of over 2% through 2015. In addition to the analysis conducted for the entire MSA, a similar analysis was conducted for Washington, DC proper. The results of this analysis are presented in the Table 3.1.18.

Table 3.1.18 Employment Distribution, Washington, DC

Industry	1990		2000		2005		2010		2015	
	Number	%								
Natural Resources, Mining & Construction	13,900	2.0%	11,300	1.7%	12,600	1.9%	13,987	2.0%	15,464	2.1%
Manufacturing	7,300	1.1%	3,700	0.6%	2,100	0.3%	975	0.1%	281	0.1%
Trade										
Transportation and Utilities	45,000	6.6%	29,600	4.6%	27,800	4.1%	26,067	3.6%	24,400	3.2%
Information	26,000	3.8%	25,500	3.9%	22,600	3.3%	19,904	2.8%	17,407	2.3%
Financial Activities	30,300	4.4%	30,000	4.6%	30,200	4.4%	30,401	4.2%	30,603	4.1%
Services	286,300	41.7%	326,300	50.2%	353,300	51.8%	381,612	53.4%	411,257	54.6%
Government	277,300	40.4%	223,900	34.4%	233,700	34.3%	243,754	34.0%	254,065	33.7%
Total	686,100	100%	650,300	100%	682,300	100%	716,700	100%	753,477	100%

Source: Bureau of Labor Statistics, SAE Database

In 2005, the city of Washington, DC captured approximately 26% of the entire MSA's employment market compared to over 33% in 1990. This decrease could be attributed to the government relocating jobs to areas outside of the city as illustrated by the 6% reduction in the government job market share within DC over the 15 year period. This trend continues into the projections, and in 2015 the city is forecasted to contain approximately 24% of the MSA's jobs. In total, Washington, DC gained over 67,300 jobs and had a compound annual growth rate of 0.38%. This shows a clear lagging in the job market compared to the entire region as the MSA had a compound annual growth rate of 1.63%. This disparity can be attributed to many factors; however, it is likely due in part to high property values and restrictive zoning regulations.

Another trend illustrated by the data is the loss of government jobs at both the city and MSA levels. The federal government has been the largest employer in the area for many years and had led many to view the area as "recession-proof." However, the area did experience a recession in the 1990s that was a result of a combination of falling real estate prices and higher levels of unemployment. The federal government was forced to downsize, which is reflected in the overall decrease in government jobs during the study period. One of the residual effects of this downsizing is an increase of federal contracts and expenditures offered to the private sector. The result has been a steady increase in the amount of service sector jobs during the 25-year span and the capture of over 40% of the MSA job market and over 50% of the city job market.

The District of Columbia's Department of Employment Services produces an annual report named "Top 200 Chief Executive Officers and Major Employers in the District of Columbia." The report highlights the area's most successful residents and employers for the purpose of business development, employment and networking. Nine of the 10 largest organizations listed fall within the education or health services industries, which is expected given the prominence of the service industry. In 2007, the ten largest employers in the District of Columbia were those shown in Table 3.1.19 below.

Table 3.1.19 Largest Employers in Washington, DC-2007

Rank	Employer
1	Howard University
2	Georgetown University
3	George Washington University
4	Washington Hospital Center
5	Children's National Hospital
6	Fannie Mae
7	Georgetown University Hospital
8	American University
9	Howard University Hospital
10	Providence Hospital

Source: Top 200 Chief Executive Officers, Major Employers in the District of Columbia, Office of Labor Market Research and Information, 2007

3.1.6.5 Multi-Family Residential Market

Since 2000, the number of multi-family building permits issued by the District of Columbia Office of Zoning has increased at an average annual rate of 21%. In 2006 alone, the District of Columbia issued 1,979 multifamily building permits, an amount greater than any county in the DC metropolitan area. As of early 2009, planned residential projects in the District of Columbia included the delivery of nearly 12,000 rental and for-sale units by 2012, with an additional 20,000 units proposed for the long-term.

The number of condominium units sold (including conversions) in the District of Columbia in 2006 was just over 1,620, compared to 2,650 units in 2005, and 3076 units in 2004. For the year 2007, sales volume of condominiums in the aggregate in the District was down 12% from 2006. While definitive numbers are not available for 2008, it is widely anticipated that the continued softening of the real estate market due to the current recessionary economic climate will be reflected in further reductions in the sales volume of condominiums in the District of Columbia for that period, and continuing into 2009. These market conditions notwithstanding, a District-wide demand analysis performed by Economic Research Associates (ERA) in 2009 showed that the District of Columbia can support or absorb approximately 1,250 new, comparably-priced condominium units annually (including condo conversions and recently completed units listed on the resale market) and about 2,300 rental units.

Data for the multi-family rental market in the District of Columbia is displayed in Table 3.1.20 below. The US Department of Housing and Urban Development HUD data shows that fair market rents in the District of Columbia increased by 84%, between 2000 and 2010, for efficiency and one-bedroom apartments. For two-bedroom and three-bedroom apartments, the increases for the same period were 78% and 68%, respectively.

Table 3.1.20 DC Asking Rents By Number of Bedrooms, 2000-2010

Year	Efficiency	One-Bedroom	Two-Bedroom	Three-Bedroom	Four-Bedroom
2000	\$630	\$716	\$840	\$1,145	\$1,380
2001	\$680	\$773	\$907	\$1,236	\$1,491
2002	\$707	\$804	\$943	\$1,285	\$1,550
2003	\$865	\$984	\$1,154	\$1,573	\$1,897
2004	\$913	\$1,039	\$1,218	\$1,660	\$2,002
2005	\$915	\$1,045	\$1,187	\$1,537	\$2,000
2006	\$948	\$1,080	\$1,225	\$1,580	\$2,068
2007	\$995	\$1,134	\$1,286	\$1,659	\$2,171
2008	\$1,025	\$1,168	\$1,324	\$1,708	\$2,236
2009	\$1,002	\$1,131	\$1,288	\$1,647	\$2,157
2010	\$1,156	\$1,318	\$1,494	\$1,927	\$2,522

Source: U.S. Housing and Development Department, 2009

Federally Subsidized Multi-family Housing

In recent years, as housing prices have generally appreciated across the District of Columbia's wards and neighborhoods, the need for affordable housing has similarly increased. Affordable housing is a term used to describe dwelling units whose total housing costs are deemed "affordable" to a group of people within a specified income range. The term is often applied to rental housing that is within the financial means of those in the lower income ranges of a given geographical area.

HUD's Section 8 Rental Voucher Program increases affordable housing options for very low-income households by allowing families to choose privately owned rental housing. The public housing authority (PHA) usually pays the landlord the difference between 30% of household income and a determined payment standard—about 80 to 100% of the fair market rent. There are several assistance programs within Section 8. The voucher and certificate programs collectively help more than 1.4 million households in the United States. Table 3.1.21 indicates the number of Section 8 units by ward and illustrates the downward trend in supply of affordable multi-family housing availability across wards, between 2000 and 2007.

Table 3.1.21 Section 8 Multi-family Units by Ward, Washington, DC

	Ward 1	Ward 2	Ward 3	Ward 4	Ward 5	Ward 6	Ward 7	Ward 8	DC Total
Current active units (as of Jan 1, 2008)	1,972	1,127	58	54	1,736	1,384	1,228	2,407	9,966
Upcoming expiring (Jan 2008 - Dec 2008)	591	294	40	0	178	761	466	399	2,729
Expirations (Jan 2007 - Dec 2007)	46	105	0	0	0	248	113	762	1,274
Renewals (Jan 2007 - Dec 2007)	942	330	40	0	781	1,060	894	692	4,739
Cumulative losses (Jan 2000 - Jun 2007)	100	310	0	0	327	116	51	1,091	1,995

Source: HUD Section 8 database (12/28/07 and earlier) tabulated by NeighborhoodInfo DC.

According to the data, 6 out of 8 wards lost significant numbers of Section 8 multi-family housing stock between 2000 and 2007. Ward 8, where the Project Area is located, lost the largest amount, at a total of 1,091 units.

Ward 8

Ward 8's market rate rental market is composed primarily of older housing stock with minimal amenities. For rental communities of comparable age and number of amenities, asking rents are generally lower in Ward 8 than in other wards. Table 3.1.22 below illustrates the asking rents for market-rate units in Ward 8 along with relative square footages.

Table 3.1.22 Ward 8 Market-Rate Rental Rates and Square Footages

Bedroom Type	Rental Rates		Square Feet	
	Low	High	Low	High
Studio	\$650	\$770	400	550
1 Bedroom	\$665	\$975	450	750
2 Bedroom	\$765	\$1,170	700	1000
3 Bedroom	\$865	\$1,495	950	1150

Source: Bay Area Economics, 2008

Asking rent trend data for apartments, which includes annualized growth patterns in the District of Columbia, is available for each of nine submarkets. The Project Area is located within the Anacostia/ Northeast DC submarket. As illustrated in Table 3.1.23, asking rents in this submarket decreased by 0.5% for the year between December 31, 2007 and December 31, 2008. During the same period, asking rents in the District of Columbia as a whole and the nation increased at 4% and 2.4%, respectively. Over the next five years, rents are anticipated to grow at a rate of 1.4% in the Anacostia/NE submarket, compared with an anticipated growth of 1.8% and 1.7% for the District of Columbia and the nation as a whole.

Table 3.1.23 Asking Rent Growth Comparisons

Location	Asking Rent Growth							
	Quarterly			Annualized				
	4Q08	3Q08	YTD Avg	1 Year	3 Year	5 Year	5 Yr. Forecast	
Anacostia NE DC	-1.2%	0.1%	-0.1%	-0.5%	4.2%	4.5%	1.4%	
District of Columbia	1.2%	1.0%	1.0%	4.0%	5.8%	4.7%	1.8%	
South Atlantic	0.0%	0.5%	0.5%	2.1%	3.1%	2.7%	1.8%	
United States	-0.1%	0.6%	0.6%	2.4%	3.6%	3.1%	1.7%	
Average over period ending	12/31/08	9/30/08	12/31/08	12/31/08	12/31/08	12/31/08	12/31/13	
Submarket Ranks								
Submarket Rank Compared to:	Total Subs	4Q08	3Q08	YTD	1 Year	3 Year	5 Year	5 Yr. Forecast
District of Columbia	9	9	9	9	9	7	5	9
South Atlantic	242	208	153	207	207	39	19	178
United States	819	691	549	733	733	174	87	589

Source: SubTrend Futures, REIS, Inc., 2008

Vacancy rates for the Anacostia/NE submarket have remained relatively steady over the last five years, hovering between 4.3% and 4.6%. Over the next five years, vacancy rates are projected to increase slightly, to 5.9%, due to a projected growth in inventory. By way of comparison, the anticipated vacancy rate for the nation over the next five years is 7.0% see Table 3.1.24.

Table 3.1.24 Vacancy Rate Comparisons

	Vacancy Rates						
	Quarterly			Annualized			
	4Q08	3Q08	YTD Avg	1 Year	3 Year	5 Year	5 Yr. Forecast
Anacostia NE DC	4.0%	4.3%	4.0%	4.6%	4.4%	4.3%	5.9%
District of Columbia	4.8%	4.6%	4.5%	4.4%	4.1%	4.4%	5.1%
South Atlantic	7.8%	7.3%	7.3%	7.2%	6.7%	6.9%	8.0%
United States	6.6%	6.2%	6.2%	6.2%	6.0%	6.2%	7.0%
Average over period ending	12/31/08	9/30/08	12/31/08	12/31/08	12/31/08	12/31/08	12/31/13

Submarket Rank Compared to:	Submarket Ranks							5 Yr. Forecast
	Total Subs	4Q08	3Q08	YTD	1 Year	3 Year	5 Year	
District of Columbia	9	4	5	5	6	6	6	7
South Atlantic	242	11	31	19	36	36	37	46
United States	819	127	207	155	230	230	204	278

Source: SubTrend Futures, REIS, Inc., 2008

3.1.6.6 Office Market

For the purposes of this study, the office market includes the zip codes of 20019, 20020, and 20032, as well as an area of southeast DC just north of the Anacostia River. As shown in Figure 3.1.5, the target area for the office market is positioned outside of the primary District of Columbia office market and central business district.

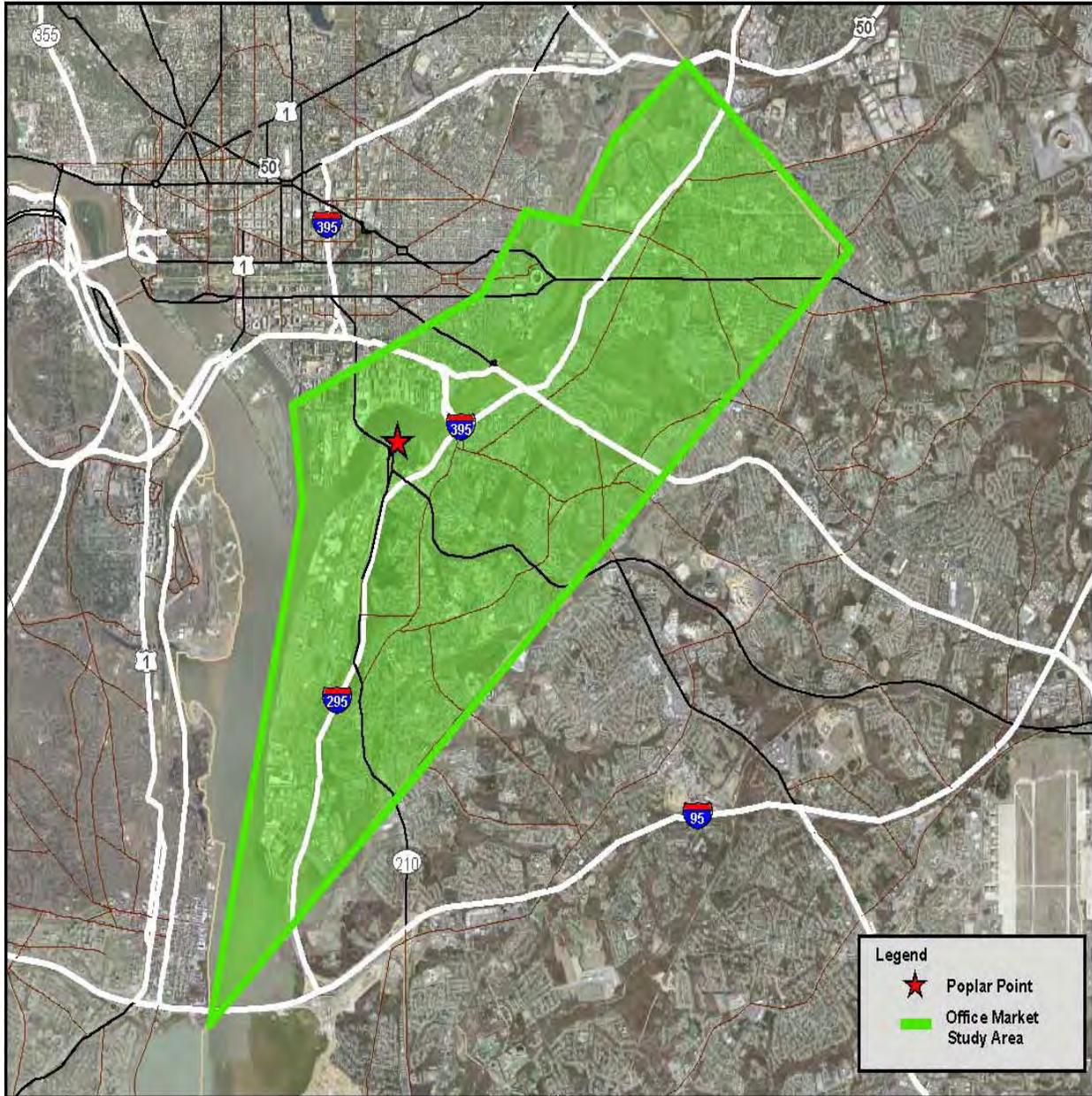


Figure 3.1.5 Office Market Study Area
Source: AECOM, 2009

Within the office market study area, in 2006, rents averaged \$40.20 per square foot across all classes (A, B, and C), with generally positive trends in absorption and rental rates in 2006. Total Rentable Building Area (RBA) in the market area was 4,575,681 square feet. Of this RBA, 59.9% was Class A office space, 16.8% Class B, and 23.3% Class C space. Vacancy Rates for Class A, B, and C space were 8.8%, 24.0%, and 3.7% respectively. The average vacancy rate for the market area was 10.2%. Table 3.1.25 below provides further detail.

Table 3.1.25 Office Market Supply Data for Project Area Market

Building Class	Number of Buildings	Total RBA	RBA as % of Submarket	Vacancy Rate	Average Rental Rate/SF
A	7	2,740,939	59.9%	8.8%	\$43.30
B	19	767,174	16.8%	24.0%	\$31.61
C	71	1,067,568	23.3%	3.7%	\$29.48
<i>Total</i>	<i>97</i>	<i>4,575,681</i>	<i>100.0%</i>	<i>10.2%</i>	<i>\$40.20</i>

Source: SubTrend Futures, REIS, Inc., 2008

DC Office of Planning's *Center City Action Agenda* (2006) offers some comparative numbers for the District of Columbia as a whole versus the above office market study area. The District of Columbia had the second highest Class A rental rates in the nation, at \$48.00 per square foot. This figure is 9.8% higher than the average Class A rental rate of \$43.30 for the office market study area during the same period. The overall office vacancy rate for the District of Columbia in 2006 was 6.8%, the lowest in the nation, compared with a significantly higher 10.2% for the Project Area office market study area.

3.1.6.7 Retail Market

According to the 2002 Economic Census, there were 1,877 retail establishments in the District of Columbia with annual sales totaling over \$3 billion. Annual payrolls for these retail establishments were over \$383 million and they employed 18,513 people. Proportionally, the largest share of retail trade was the food and beverage category, with just over 500 establishments. The second largest share offered clothing and accessories, with 355 stores. Two other major categories were health and personal care (185 stores) and home furnishings (107 stores).

The primary retail trade study area included a 5-mile radius primary trade area and an approximately 10-mile radius secondary trade area. These primary and secondary trade areas were defined in a study by Economic Research Associates in 2009 and shown in Figure 3.1.6.

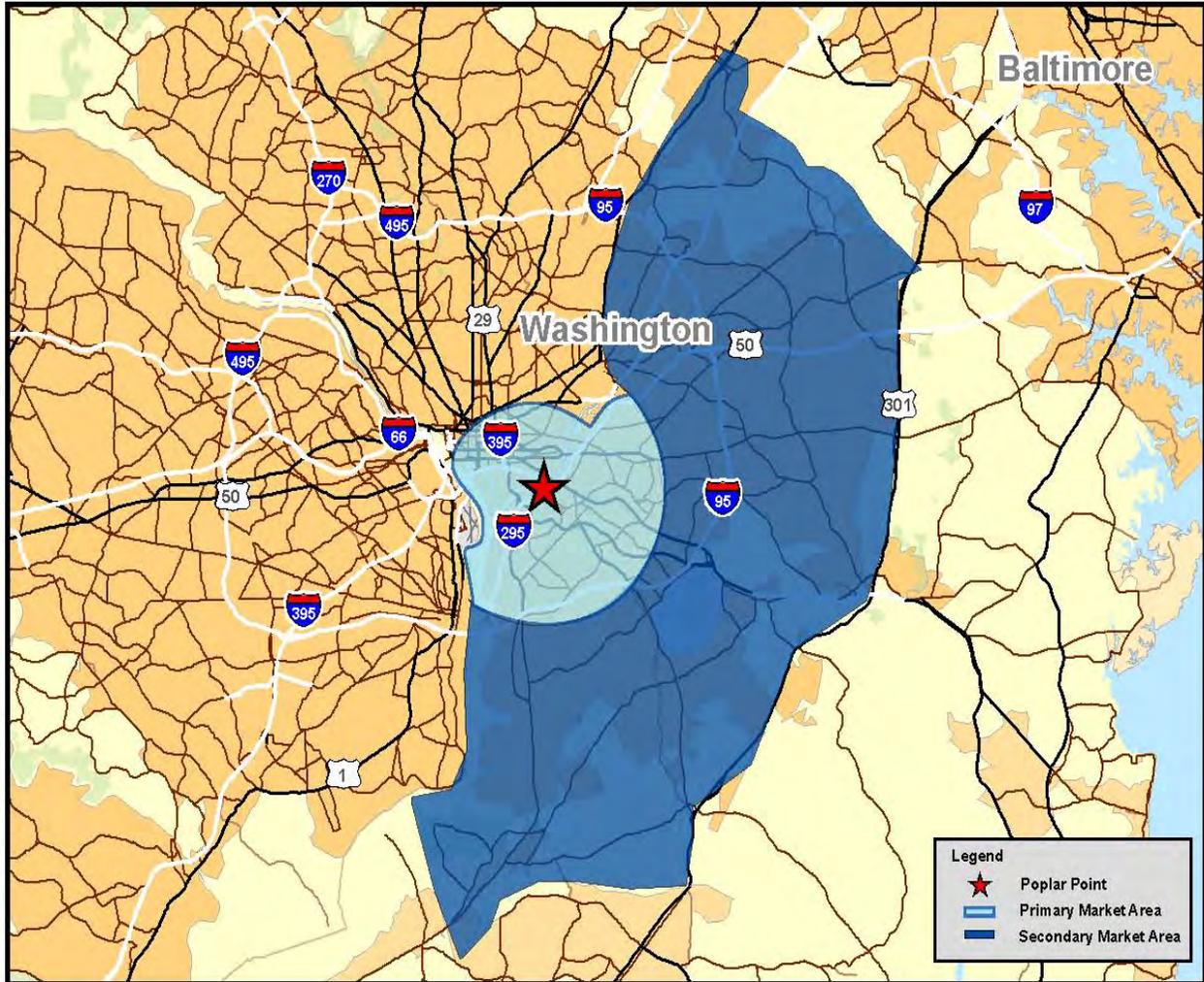


Figure 3.1.6 Primary and Secondary Retail Market Study Areas
Source: Economic Research Associates

According to Economic Research Associates, southeast DC has historically been undersupplied with retail, particularly major retail establishments, causing many residents to travel to Prince George's County for basic shopping needs. Table 3.1.26 lists the major shopping centers, anchor tenants, distance from the project site, and gross leasable area (GLA).

Table 3.1.26 Retail Supply in Study Area

Shopping Center Name	Anchor Tenant	Distance from Project Area (Miles)	Gross Leasable Area (GLA)
Waterfront	Safeway	2	100,000
Gallery Place	Bed, Bath & Beyond	2.5	270,000
Union Station	B.Dalton Booksellers	2.5	214,500
Rivertowne Commons	K-Mart	5.5	381,273
Boulevard at the Capital Centre	Border's Books	6	490,000
Penn Station	National Wholesale	6	245,105
Great Eastern Plaza	Giant Foods	6.5	255,398
Iverson Mall	Value City	7.5	615,214
Capital Plaza Mall	N/A	8	435,000
Centre @ Forestville	JCPenney	8	458,996
Landover Mall	Sears	10	1,300,000
Penn Mar	Burlington Coat Factory	10.5	381,933
Largo Town Center	Regency Furniture	11	284,000
Greenway Center	Safeway	11.5	264,601
Beltway Plaza Mall	Target	13.5	1,000,000
Bowie Town Center	Hecht's	17.5	560,675
Free State Mall	Giant Foods	18	281,291

Source: ESRI Business Analyst, 2007

According to the data in Table 3.1.26, the average distance from the Project Area to major retail shopping centers in the trade area is approximately 8.6 miles. The closest major shopping center is Waterfront Plaza, located two miles northwest and across the Anacostia River from the Project Area. Retail offerings are relatively limited there beyond groceries available from the anchor tenant, Safeway.

Outside of the primary and secondary trade areas, the majority of regional or large-scale shopping centers with over 600,000 square feet of retail space are located a minimum of three miles west of the Project Area. They include Tyson's Corner and Tyson's Galleria (approximately 13 miles away), Landmark Mall (7 miles away), Mall at Prince George's (7 miles away), and Fashion Centre at Pentagon City (less than 3 miles away).

Economic Research Associates' study of the primary and secondary trade areas concluded that, based on current consumer spending patterns, the Project Area could support nearly 600,000 square feet of retail and entertainment spending. Further, Economic Research Associates estimates that the Project Area could support an additional 100,000 to 200,000 square feet of retail (totaling more than 800,000 square feet of space at build-out) if households and household incomes in the primary trade area increase, large and

medium format anchors are secured, and the currently proposed retail pipeline in the primary trade area decreases.

3.1.6.8 Taxes and Revenue

The gross expenditure budget for the District of Columbia in the fiscal year (FY) 2010 totals \$10.2 billion, a figure 0.1% higher than the FY 2009 approved budget of \$10.1 billion. A full 54.1% of the District of Columbia’s gross expenditure budget, or \$5.5 billion, is accounted for by local revenue including dedicated taxes. The second largest source of funds for the District of Columbia budget is federal grants and Medicaid, accounting for \$2.6 Billion and 25.2% of the total budget. Figure 3.1.5 illustrates the sources of gross funds for the District of Columbia’s FY 2010 budget (District of Columbia, 2009).

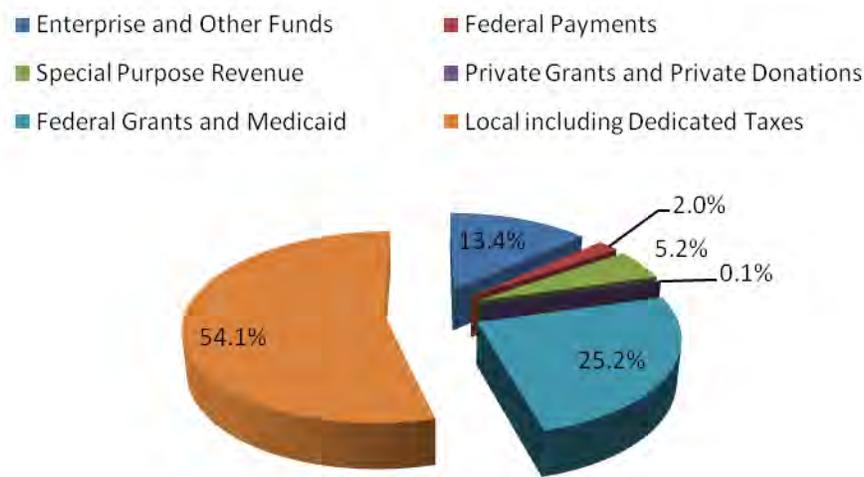


Figure 3.1.7 District of Columbia Sources of Gross Funds FY 2010
 Source: FY 2010 Proposed Budget and Financial Plan, DC Government

As is depicted in Figure 3.1.7 above, local revenue accounts for the largest source of gross funds for the District of Columbia budget. Figure 3.1.8 below provides an illustration of the actual distribution of this local revenue in the District of Columbia. The largest source of local revenue in the District of Columbia in FY 2010 was property taxes, mostly real property tax, accounting for 34.1% of overall revenue. In 2008, the total value of real property in the District of Columbia was \$1.996 billion, an increase of 31.8% from 2006. The District of Columbia, however, has unique qualities, and differs from most other major cities around the country in multiple ways that impact real property tax revenues. Most significant of these differences is the large amount of tax-exempt real property, roughly 57% of the city’s land area. In 2007 the total value of tax-exempt property was \$57.7 billion, an amount representing 32% of all real property value. These tax-exempt properties primarily include federal government property, foreign government property, non-profits, educational institutions, and the District of Columbia government. Growth in real property tax revenues therefore is contingent upon the amount of taxable real property, and the overall health of the real estate market in the District of Columbia (District of Columbia, 2009).



Figure 3.1.8 General Fund Local Revenue Distribution FY 2010
 Source: FY 2010 Proposed Budget and Financial Plan, DC Government

The second largest source of local revenue is income taxes. Individuals who maintain a permanent residence in the city at any time during the tax year, and individuals who maintain a residence for 183 days or more during the tax year are required to pay individual income tax. Income taxes accounted for 27.6% of overall local revenue in FY 2010. Due to a slowdown in the local, regional, and national economy, it is anticipated that individual income tax revenue will decline by 37.3% in FY 2010, representing revenues of \$70,900,000. It is projected that the FY 2011 income tax revenue will increase by 20.7%, to \$85,600,000 (District of Columbia, 2009).

Sales taxes represent the third largest source of local tax revenue in the District of Columbia, accounting for 15.5% of total revenues in FY 2010. Revenue collected from the District of Columbia general sales and use tax employs a five-tier structure. Growth in net sales tax collections is contingent upon the amount of business and sales volume, along with the general health of the economy. Net sales tax revenues are projected to grow steadily to \$1,025,700,000 by FY 2011, representing a 3.8% overall increase from FY 2010 (District of Columbia, 2009).

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3.2

CULTURAL RESOURCES

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3.2.1 Historic and Archaeological Resources

This section documents historic properties and visual resources that are present within the Project Area, as well as within surrounding areas. This information was derived from various sources including National Register nominations, field survey, historic maps, and previous studies.

3.2.1.1 Regulatory Environment and Terminology

The National Historic Preservation Act (NHPA) of 1966 is the guiding legislation for the preservation of historic properties. As broadly defined by 36 CFR 800, historic properties are “any prehistoric or historic district, site, building, structure, or object included in, or eligible for, inclusion in the National Register of Historic Places.” This EIS identifies historic resources that could potentially be affected by the land transfer and proposed redevelopment of Poplar Point.

According to the NHPA, properties that qualify for inclusion in the National Register of Historic Places (National Register) must meet at least one of the following criteria:

- Criterion A: Be associated with events that have made a significant contribution to the broad patterns of our history;
- Criterion B: Be associated with the lives of persons of significance in our past;
- Criterion C: Embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
- Criterion D: Have yielded, or may be likely to yield, information important in prehistory or history (36 CFR 60.4).

Properties that qualify for the National Register must also possess integrity. The seven aspects of integrity are location, design, setting, materials, workmanship, feeling, and association. The term “eligible for inclusion in the National Register” describes properties formally designated as eligible and all other properties determined to meet National Register Criteria. For the purposes of this discussion, the term “archaeological resources” refers to subsurface prehistoric or historic sites, including but not limited to Native American sites, cemeteries, and ruins. A “cultural landscape” is a historic resource defined by NPS as “a geographic area, including both cultural and natural resources and the wildlife or domestic animals therein, associated with a historic event, activity, or person or exhibiting other cultural or aesthetic values.” Historic structures and districts are assumed to be above-ground resources.

National Historic Landmarks (NHL) are designated by the Secretary under the Historic Sites Act of 1935, which authorizes the Secretary to identify historic and archaeological sites, buildings, and objects which “possess exceptional value as commemorating or illustrating the history of the United States.” Section 110(f) of the NHPA requires that federal agencies exercise a higher standard of care when considering undertakings that may directly and adversely affect NHLs. The law requires that “Prior to the approval of any Federal

undertaking which may directly and adversely affect any National Historic Landmark, the head of the responsible Federal agency shall, to the maximum extent possible, undertake such planning and actions as may be necessary to minimize harm to such landmark, and shall afford the Advisory Council on Historic Preservation a reasonable opportunity to comment on the undertaking.” In those cases when an agency's undertaking directly and adversely affects an NHL, or when federal permits, licenses, grants, and other programs and projects under its jurisdiction or carried out by a state or local government pursuant to a federal delegation or approval so affect an NHL, the agency should consider all prudent and feasible alternatives to avoid an adverse effect on the NHL [Sec. 110(a)(2)(B) and Sec. 110(f)].

3.2.1.2 Section 106 Process

In accordance with Section 106 of the NHPA, federal agencies are required to consider the effects of a proposed project on properties listed in, or eligible for listing in, the National Register of Historic Places. If it is determined that an action may affect a historic property, the lead agency must enter into consultation with the State Historic Preservation Officer (SHPO) and other interested agencies and individuals to identify historic properties that could be affected, to assess potential adverse effects, and to resolve the adverse effects through mutually agreed upon avoidance, minimization, or mitigation measures. As recommended by the Council on Environmental Quality regulations implementing NEPA, the environmental review and Section 106 process are coordinated.

The Section 106 process was initiated by NPS in a letter to the DC SHPO dated September 22, 2008. An initial Section 106 consultation meeting was held on August 6, 2009 at the offices of the DC SHPO where the proposed alternatives for the Poplar Point redevelopment project were described and the area of potential effects (APE) was discussed. Additional meetings occurred in December 2009 and January 2010. A meeting with the DC SHPO, NPS, District of Columbia officials, consulting parties, and members of the public was held on March 10th, 2010. In addition to the identified Section 106 meetings, issues pertaining to cultural resources were raised at a scoping meeting held June 24, 2008. Consultation meetings will continue through the environmental review process. A summary of the March 10th, 2010 meeting is included in Section 5.0, Consultation and Coordination.

3.2.1.3 Methods for Identifying Archaeological Resources; Historic Structures and Districts; and Cultural Landscapes

Area of Potential Effects

An initial step in the Section 106 process is the determination of the area within which historic properties will be affected or are likely to be affected. The APE as defined by 36 CFR 800.16(d) represents “the geographic area within which an undertaking may directly or indirectly cause alterations in the character or use of historic properties, if any such properties exist. The area of potential effects is influenced by the scale and nature of an undertaking and may be different for different kinds of effects caused by the undertaking.”

In deriving the APE for archaeological resources, it was determined that the proposed project's only effects on archaeological resources would occur as a result of ground disturbing construction activities. Thus, the APE for archaeological resources is the Project Area, as defined in Figure 3.2.1.

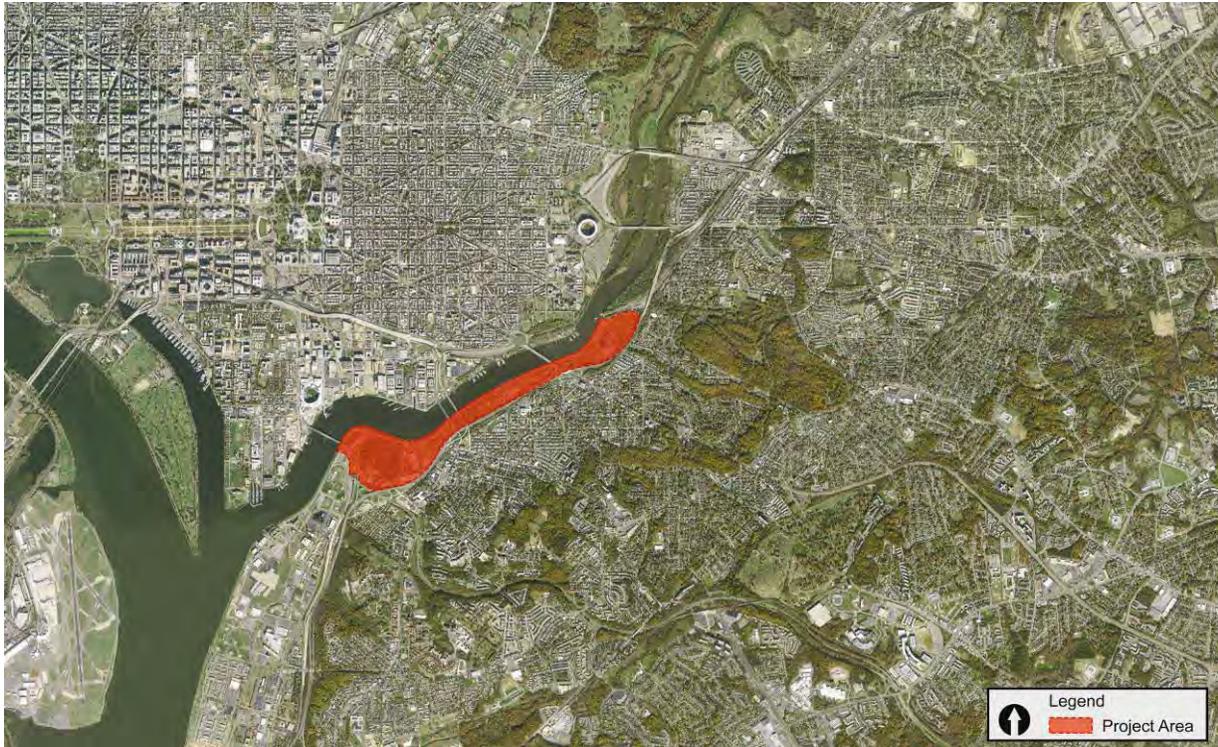


Figure 3.2.1 Project Area for Archaeological Resources

Source: AECOM, 2010

For the purposes of this section, the APE for historic buildings, structures, sites, districts, and cultural landscapes, includes the area that could be directly or indirectly affected by each of the alternatives. In estimating the visibility of the proposed Poplar Point redevelopment and the relocation of the U.S. Park Police Headquarters and Aviation Facility to North Field, topography was a key consideration. To assist in the definition of the area, 3-dimensional models of each of the alternatives were developed and then placed within a model of the city. This process is discussed in greater detail Section 4.3.4. The APE, as shown in Figure 3.2.2, includes land on both sides of the Anacostia River, as well as across the Potomac River in Arlington, Virginia.

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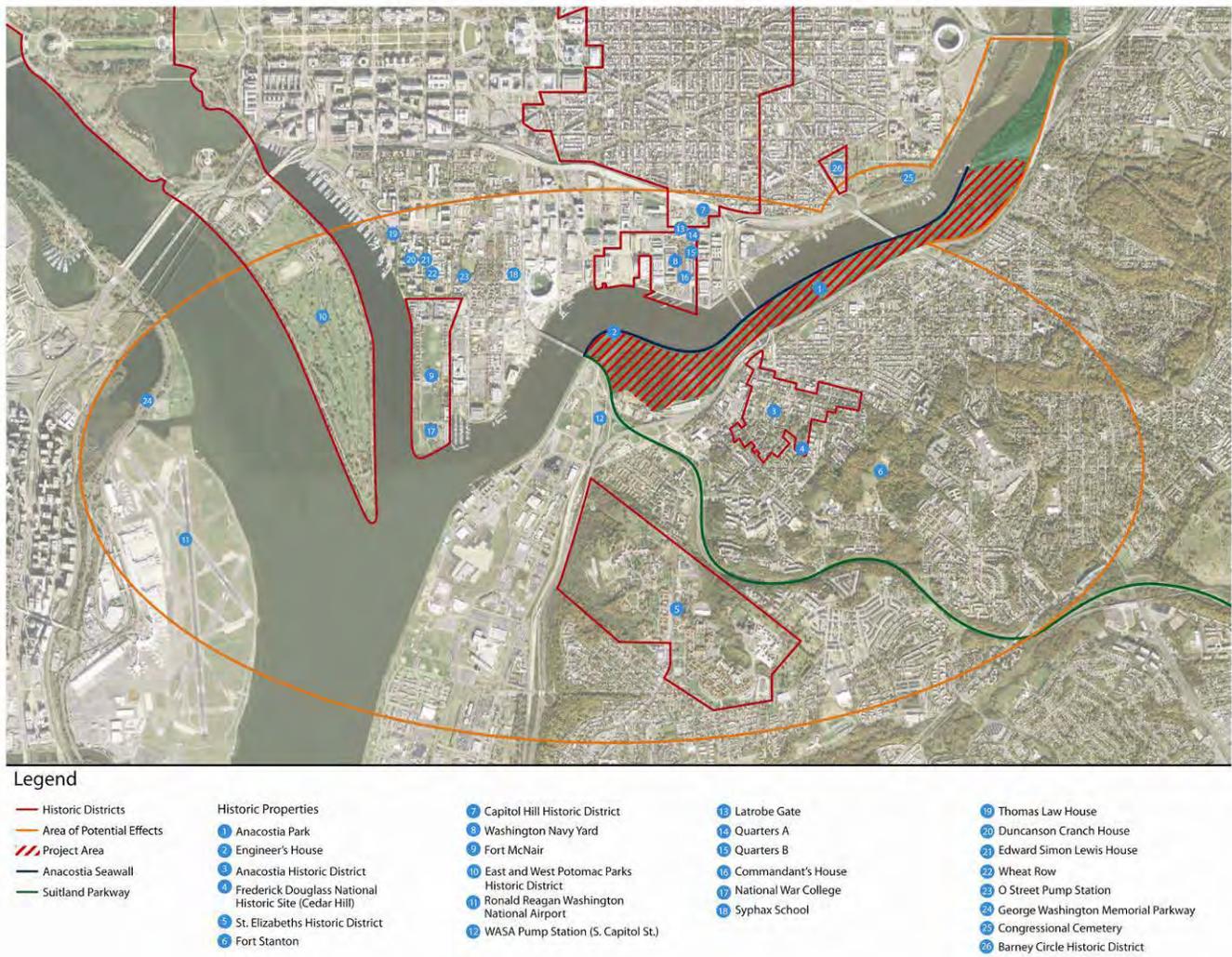


Figure 3.2.2 Area of Potential Effects and Key Historic Resources
 Source: AECOM, 2010

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Efforts to Identify Historic Properties

The identification of potentially affected historic properties is a critical step in meeting the requirements of both Section 106 of the NHPA and NEPA. Research to identify historic properties was conducted through the DC SHPO, the DC Inventory of Historic Sites, and the National Register of Historic Places. In addition, information was derived from public scoping and coordination meetings; the review of previous investigations; historic maps and photographs contained within various libraries and archival facilities; and secondary sources. Efforts to identify historic resources will continue as the NEPA and Section 106 processes progress.

3.2.1.4 Background and Historical Significance

This section is intended to place the identified historic resources within a framework for interpretation and understanding. A discussion of individual historic resources located within the APE follows.

Prehistory

The prehistory of the site can be divided into three cultural periods consistent with the overall prehistory of the eastern United States: the Paleoindian Period, the Archaic Period, and the Woodland Period (Knepper, et al, 2006; Griffin, 1967; Moore and McNett, 1992; Dent, 1995). The earliest documented occupation of the Mid-Atlantic States occurred during the Paleoindian Period, prior to 8,000 B.C. (Funk, 1978; Knepper, et al, 2006). This pan-continental cultural period is associated with full glacial environmental conditions in the northern hemisphere beginning around 14,000 B.C. Lowered sea-levels during this time created a “land-bridge” between northeastern Asia and North America and may also have created conditions favorable for the navigation of coastal waters connecting the two continents. Archaeologists generally agree that human occupation of the Americas increased substantially as glacial conditions advanced, but there is still debate as to whether human occupation occurred prior to the last glacial advance 30 to 40,000 years ago (Stanford, 1991; Waters and Stafford, 2007). Throughout North America, many of the earliest archeological sites have yielded large, fluted, Clovis-type spear points, now thought to be dated around 11,300 B.C to 10,850 B.C. (Stanford 1991; Waters and Stafford 2007). Paleoindian groups originally were thought to have focused their pursuits on the hunting of now extinct Pleistocene megafauna, but more recent data have suggested that a more generalized hunting and gathering strategy was typical in many regions, including the mid-Atlantic states and the Chesapeake region in particular (Dent, 1995; Knepper, et al, 2006). It has been argued that the Potomac River valley below the Fall Line¹ would have been a favorable locale for Paleoindian groups, but relatively little is known of Paleoindian settlement patterns in that location (Flanagan, et al, 1985). Primary Paleoindian occupation areas may have been further downriver (Dent, 1995). While fluted points have been collected from the ground surface both in Anacostia and in Northwest Washington, no scientific excavations of Paleoindian sites have occurred there (Moore and McNett, 1992). Two Paleoindian sites have been report in the Potomac Valley above the Fall Line (Dent, 1995).

¹ The Fall Line is a low, east-facing cliff, paralleling the Atlantic coastline from New Jersey to the Carolinas, separating hard Paleozoic metamorphic rocks of the Piedmont from the softer, gently dipping sedimentary rocks of the Coastal Plain.

The Archaic Period in the Mid-Atlantic States, dating between 8,000 and 1,000 B.C., is generally interpreted to be the time when Native American groups progressively adapted to more modern environmental conditions (Knepper, et al 2006; see also Dent, 1995). Sea-level rise, which was relatively rapid until about 4,000 B.C., resulted in the flooding of lower river terraces and the creation of highly productive estuaries and wetlands along the coastal plain; further inland, hardwood forests expanded at the expense of Boreal forests (Potter, 1982; Dent, 1995). Early Archaic period artifacts were collected in the 19th century along the east bank of the Anacostia River between the Sousa and Benning Bridges (Flanagan, et al, 1985). Locally, the Chesapeake Bay estuary was established during the Middle Archaic period and reached its current extent by about 1,000 B.C. (Dent 1995). Artifact assemblages became increasingly diversified regionally; ground stone artifacts and fishing gear became widespread and increasingly complex (Tuck, 1978). The Accokeek Creek site, across the Potomac from Mt. Vernon, was occupied by the Middle Archaic period and possibly earlier (Stevenson and Ferguson, 1963). By the Late Archaic period, Native American groups were intensively using and managing diverse regional environments, including riverside habitats similar to those of the Project Area, and were cultivating plants. Native American economies in the Chesapeake Bay region became increasingly intensified at this time (Dent, 1995). Artifacts from the Late Archaic period comprise a large portion of the items collected in the 19th Century along the east banks of the Anacostia River. Along the river, Archaic sites are often buried by later floodplain deposits (Dent, 1995).

The introduction of pottery around 1,000 B.C. marks the beginning of the Woodland period. Increasing economic and stylistic regionalization, begun during the Archaic, continued through the Woodland period (Fitting, 1978; Dent, 1995). Trade networks in the middle Atlantic region became increasingly active. Maize horticulture achieved a more prominent role in the economy by the Late Woodland period, beginning around A.D. 900 (Dent, 1995; Knepper, et al 2006). Palisaded villages became more common during the Late Woodland period, suggesting that inter-group conflict had intensified. Regional scale political alliances, identified later by the earliest European explorers and settlers, probably began to evolve at this time. Sites somewhat inland of major riverine confluences, like the Accokeek Creek site, generally experienced intensified occupation during this time (Stevenson and Ferguson 1963). Settlement of the Chicacoan area near the mouth of the Potomac began by A.D. 200 and increased in intensity until the introduction of European colonies (Potter, 1993). As in the Archaic period, though in smaller quantities, pottery and stone tools from the Woodland period were collected on the east bank of the Anacostia River between the Sousa and Benning Bridges in the late 19th Century (Flanagan, et al, 1985). Evidence for occupation of these sites declined substantially thereafter.

Spanish exploration of the Chesapeake Bay region began by A.D. 1580 or earlier, but the earliest historical record relevant to Native American occupation of the Potomac River valley was the result of Captain John Smith's exploration of the area in 1608 (Dent, 1995). Smith recorded the settlements of Nameraughquend on the Virginia side of the river near Roosevelt Island and Nacotchtank at the confluence of the Anacostia River (Knepper, et al, 2006). A particular pointed blade has been associated with the village of Nacachtank (Proudfit, 1889). Residents of these two sites may have been related to two distinct regional polities: the Powhatan confederacy on the Virginia side and Conoy confederacy on the Maryland-DC side (Feest, 1978a, 1978b; Ferguson and Ferguson, 1963). However, more recent information suggests that the settlements on Virginia side were probably largely independent of the Powhatan polity, and possibly more closely allied with

the Conoy (Potter, 1982). The residents of the settlements in the Washington, DC area spoke related languages of the Eastern Algonquian family (Goddard, 1978).

Early History

European exploration in the Chesapeake Bay began in the late 16th century. Captain John Smith first mapped Virginia in 1606, and amidst the marshy areas at the juncture of two rivers, a settlement called “Nacotchtanck,” meaning “the trading town,” was indicated on Smith’s map (see Figure 3.2.3) (Engineering-Science, 1989). Located near the current site of Project Area along the Potomac River and the Eastern Branch of the Potomac River (Anacostia River), the settlement was an established village, possibly the most important trading post in the region (Hutchinson, 1975). By 1632, explorer Henry Fleet referred to the people living there as “Nacostines,” which name was further Latinized by Jesuit missionaries as “Anacostines.” Eventually, the entire region southeast of the Eastern Branch became known as Anacostia, and the Eastern Branch itself was renamed the Anacostia River (Hutchinson, 1975; Engineering-Science, 1989).

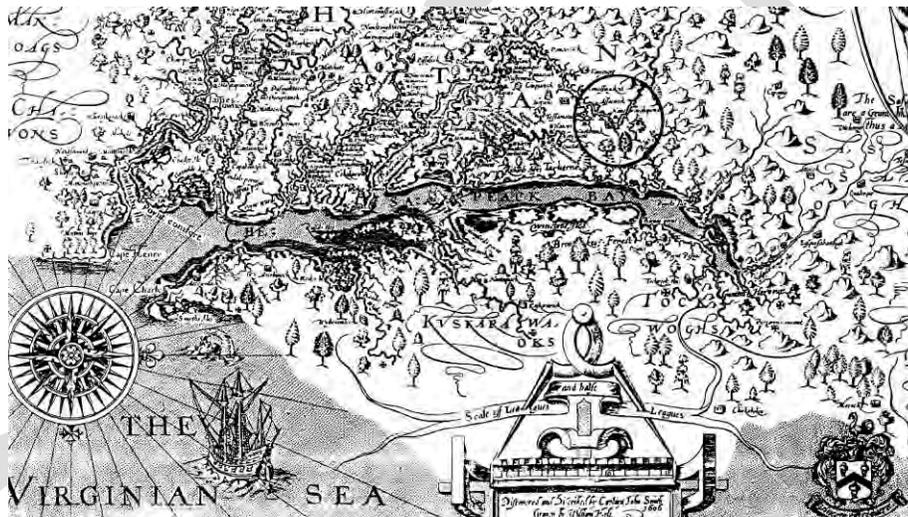


Figure 3.2.3 Portion of map entitled: “Virginia / discovered and discribed by Captayn John Smith, 1606; graven by William Hole” (the Nacotchtanck settlement is shown in the circle)
 Source: Library of Congress, Geography and Maps Division, G3880 1624 .S541

Colonial Era

Surveyed in the 1660s, the Anacostia portion of land southeast of the Potomac River was divided into large, irregular tracts as part of Prince Georges County in the Maryland colony. Lord Baltimore granted the first tract in Anacostia—the St. Elizabeth tract—to George Thompson, a tobacco farmer and land speculator, in 1662. The adjacent Chichester tract to the north was granted to John Meekes, a surgeon, in 1664. The tracts were used for agricultural development and for land speculation. Tobacco cultivation was the essential cash crop industry and the foundation of the plantation economy. However, in the late 18th century, increased tobacco production flooded the market and crops were diversified to include more wheat, corn, and hay (Hutchinson, 1977). Labor was performed by both white and African American workers, tenant farmers, indentured servants, and slaves. The rural landscape was sparsely occupied and generally isolated, with few roads leading to the river for access to ferries that connected larger settlements. While agriculture was the

dominant industry through the colonial era in the Anacostia region, it was supplemented by shipping and real estate ventures. River commerce and fishing were important factors in the overall development of the region, but Anacostia remained a largely isolated rural farming community even as the District of Columbia was established and developed into the new nation's capital city.

Establishment of the City

At the end of the Revolutionary War in 1783, the Continental Congress convened and a debate ensued to determine the location of a permanent capital city, with dozens of sites under consideration. The main problem was the divide between the southern and northern states, which led to the suggestion that there should be two capitals. For years the location could not be agreed upon, but in 1787, as part of the proposed Constitution, the provision for a 10-square-mile government seat was adopted by Congress. In a compromise, southern states supported a northern measure on finance, and in return, northern states supported the southern location of the capital near Georgetown. The Residence Act of 1790 authorized President Washington to select the site along the Potomac River. Washington personally inspected the proposed area, including portions of Maryland to the southeast of the Eastern Branch. In January 1791, Washington presented his selection to Congress, and suggested annexing the land, present-day Anacostia, to the District of Columbia.

Three commissioners were appointed to administer the District of Columbia, and two surveyors, Andrew Ellicott and Pierre L'Enfant, were appointed to define the District of Columbia. Within the District of Columbia, Washington negotiated with landowners for the location of the new city, acquiring a large tract for which L'Enfant would design a "grand plan" (Reps 2009). The L'Enfant Plan, designed in 1791, planned for Baroque grandeur with broad avenues, symmetrical design, designed open spaces, and prominent monuments (see Figure 3.2.4) (Reps, 2009). Just outside of the planned city but within the District of Columbia, Anacostia was not included in L'Enfant's grand scheme and remained largely undeveloped.

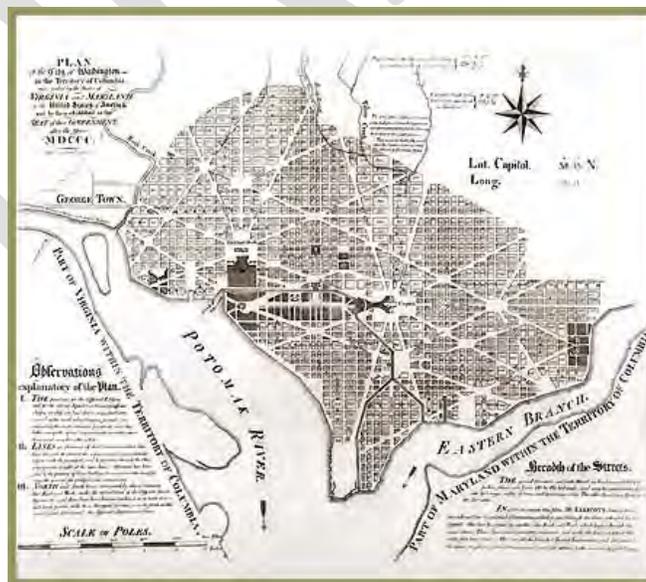


Figure 3.2.4 Andrew Ellicott's plan based on L'Enfant's Plan, 1792
Source: NCPC, 2009

Washington Navy Yard

In 1799, the Washington Navy Yard was established in the marshland along the north side of the Eastern Branch, under the command of Commodore Thomas Tingey. The Navy Yard was the largest shipbuilding and shipfitting facility, with a wide range of navy ships built and maintained there. During the War of 1812, the Navy Yard functioned as a support facility for the American fleet, servicing famed ships such as the U.S.S. *Constitution*, and as a vital defensive point. The British advanced on Washington in 1814, and in a preemptive action, Tingey ordered the yard to be burned to prevent its capture. Few of the buildings survived and the yard was looted by locals, but the facility was rebuilt and reinforced, again under the command of Tingey. By that time, the Eastern Branch was found to be too shallow and too distant from the open sea to be practical for larger vessels. Although its shipbuilding activities decreased after the War of 1812, the Navy Yard became an important center of technology, ordnance manufacture, and research and development. One of the earliest steam engines in the United States was used in the yard to manufacture anchors, chain, and steam engines for warships. These activities had a tremendous effect on Anacostia's early development, as the Navy Yard (see Figure 3.2.5) employed hundreds of workers who took up residence nearby on the opposite bank of the Eastern Branch.



Figure 3.2.5 Washington Navy Yard, 1866 with Anacostia in the Distance
Source: Naval Historic Center, Washington, DC, Photo # NH 57928

Early Development in Anacostia

Anacostia, historically a trading post, was a center for commerce at the mouth of the Eastern Branch. However, development of commercial wharves, initially spurred by plans for a canal system to connect the Potomac and the Eastern Branch, stagnated as the Eastern Branch became a non-navigable “physical and psychological barrier separating the village from the mainstream of the economic life of the city” (Hutchinson, 1977). In the early 1800s, Anacostia was only linked to the city by the Eastern Branch Ferry, and then eventually by two bridges known as the upper bridge and the lower bridge (Burr, 1920). The Navy Yard Bridge, built in 1811, allowed for suburban development in Anacostia into the 19th century. Figure 3.2.6 shows the East and West Branches of the Potomac River.



Figure 3.2.6 East and West Branch of the Potomac River below Washington (the East Branch is now known as the Anacostia River)

Source: *Library of Congress, Prints and Photographs, DRWG/US - Kollner, no. 18 (A size)*

Captain James Barry purchased the original and intact St. Elizabeth tract in 1800, and built a “pretentious mansion,” a store, warehouse, and wharf at Poplar Point (Hutchinson, 1977). Barry was a Consul General of Portugal, and he and his family moved from Lisbon to Baltimore initially, and then moved to the capital. Around that time, William Marbury, an appointed naval agent engaged at the new Washington Navy Yard and eventually as the Washington County justice of the peace, owned the Chichester tract which was also intact. Local roads connected to the waterfront, and small settlements began to appear along the riverside (Hutchinson, 1977) (see Figure 3.2.7).

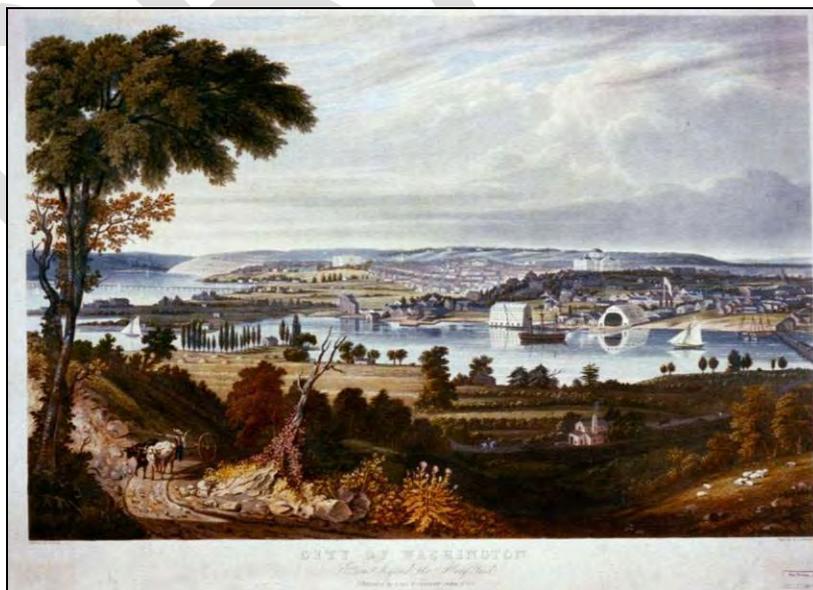


Figure 3.2.7 Barnett’s 1834 engraving of J. Cooke’s “City of Washington from beyond the Navy Yard”

Source: *Library of Congress: cph 3b51990*

Good Hope

In the 1820s, the first permanent white settlement in Anacostia was established on the site of the original Nacotchtank settlement at the east end of the Navy Yard Bridge, which led to the road to Bladensburg, Maryland (Burr, 1920). Good Hope initially started with a small number of structures, but several factors increased settlement in the mid-19th century, including the establishment of churches and businesses there and further into Anacostia. The settlement included many free African Americans, primarily slaves who had purchased their freedom. The area was officially renamed “Anacostia” with the establishment of the Post Office in 1849 (Burr, 1920). The first public school for white children did not open until 1861.

U.S. Government Hospital for the Insane/St. Elizabeths Hospital

The southern portion of the St. Elizabeths tract was purchased by Thomas Blagden who in turn sold it to the U.S. Government in 1852 for the establishment of an insane asylum. Founded by Congress under the urging of Dorothea Dix, the U.S. Government Hospital for the Insane was designed by Thomas U. Walter according to the nascent principles of the Kirkbride Plan as a state-of-the-art mental illness facility. Set in an idyllic, rural landscape isolated from polluted urban areas, the hospital was meant to provide an ideal sanctuary for recovery. Patients had very little exposure to the neighborhood, although locals could walk through the grounds and interact with patients through barred windows (Cantwell, 1974).

During the Civil War, the hospital also housed wounded soldiers who referred to it as St. Elizabeths, rather than as the insane asylum, although the name wasn’t officially changed until 1916. Thousands of patients and Civil War soldiers may be interred on the St. Elizabeths campus, although in unmarked and unidentified graves. From 1852 to 1986, it is estimated that over 125,000 patients at St. Elizabeths were treated with the use of innovative therapeutic techniques and studied to develop progressive clinical approaches to mental health. Though the hospital was originally secluded, hospital employees began to settle locally in Anacostia. Even as development encroached upon St. Elizabeths, it remained a prominent institution and employer in Anacostia.

Uniontown

In 1854, real estate speculators John Van Hook, John Fox, and John Dobler formed the Union Land Association to capitalize on the proximity of the Navy Yard Bridge to Anacostia in order to appeal to the Navy Yard’s working-class employees who needed housing (Burr, 1920). The association purchased 240 acres of land in the Chichester tract, divided it into lots and created one of the District of Columbia’s first planned suburbs. Providing easy access to the bridge, the suburb was intended to provide housing lots for laborers working at the Navy Yard. Seven hundred lots were for sale; half were sold in the first year, and the majority by 1860. Many lots were sold to speculators, and several others to laborers who could not yet afford to build on their own land. Construction of homes was gradual until the turn of the 20th century. Limited public access, a reduction in shipbuilding activities at the Navy Yard, and competition with affordable city lots hindered the rapid development of Uniontown. Today, Uniontown forms the core of Historic Anacostia.

The Civil War and Fort Stanton

The Civil War and the efforts to defend the Union capital changed Anacostia. The Washington Navy Yard was a key strategic facility during the Civil War. Efforts to defend it included the construction of Fort Stanton, built in 1861, one of the first in a circle of fortifications around the city. Fort Stanton was intended to protect the Navy Yard and the Navy Yard Bridge from Confederate attacks. Fort Stanton was expanded throughout the war and was supplemented with Fort Ricketts and Fort Snyder. After the Army of Northern Virginia surrendered (marking the end of the Civil War) Fort Stanton was abandoned and then dismantled, never having seen wartime action.

After the Civil War, the Navy Yard continued to be the most prominent institution affecting the livelihoods of many Uniontown and Anacostia residents. The 1880 census records showed that the majority of inhabitants in Uniontown were engaged in occupations specific to the Navy Yard, such as carpentry, blacksmithing, boilermaking, shipmaking, and as enlisted and commissioned Navy personnel, rather than the agrarian occupations common in other suburbs (Hutchinson, 1977). In 1886, the Navy Yard became the national center of all naval ordnance manufacturing. Through the 19th century and the World War I and World War II eras, it was the largest manufacturer of ordnance and armaments for the Navy. By the late 20th century, the Navy Yard shifted from production to administration with offices occupying the old factories. Currently, the Navy Yard houses the headquarters of Washington's Naval District and Historical Society, and is the Navy's longest continuously operated federal facility.

Post-Civil War Anacostia

The most significant effect of the Civil War on the Anacostia's development and history was the 1862 emancipation of slaves in the District of Columbia and the resultant influx of local freedmen and former slaves from other states.

Barry's Farm

In 1861, there were four distinct farms in the Project Area belonging to Barry Family heirs. In 1867, under special order, the U.S. Bureau of Refugees, Freedmen, and Abandoned Lands acquired 375 acres from Juliana and David Barry for \$52,000 to create a distinct area for the growing population of freedmen. By that time, a "white backlash" against newly-emancipated African Americans, seen as a threat to the white labor force, was active in the District of Columbia (Hutchinson, 1977). The Barry's Farm planned community was a subdivision of the land into one-acre lots that were sold on installment plans to freed slaves and other African Americans. Benjamin D. Carpenter platted the community, and George F. Marble, Superintendent of Barry's Farm, oversaw surveying and clearing starting in 1868.

By the end of 1868, Barry's Farm had 180 lots and 80 houses (Hutchinson, 1977). Lots and building materials sold for \$125 to \$300 per family on a two-year loan. The government provided lumber for sale, house plans, and some carpentry assistance. Materials were standardized in kits to construct a 14-foot x 24-foot house in an approved pattern. Houses had to be setback 20 feet and sited parallel with the street. Initially, these

guidelines were strictly enforced by the Superintendent. By July 1868, 11 houses had been ordered (Hutchinson, 1977). By 1869, at least 500 African American families had moved into Barry's Farm.

Many freedmen made down payments but were unable to continue to pay back their loans. Settlement proceeded erratically into the 1870s. Some areas of the subdivision were developed earlier than others, as many new owners continued to live and work in the city to save enough money to construct new homes. Many settlers worked in the city during the day, and then crossed the bridge to build their homes during the night (Hutchinson, 1977). As Barry's Farm (in some areas referred to as Potomac City) developed, the community established a church, a private school, and a civic association. The first school for African American children in Anacostia was established in 1871. The Barry's Farm community renamed itself "Hillsdale" and developed an identity that was further enhanced when Frederick Douglass moved to Anacostia in 1877. Douglass purchased and renovated Cedar Hill, originally the home of Uniontown developer John Van Hook.

Housing became Anacostia's dominant industry, although it was not systematic in its development (Cantwell, 1974). Unregulated development of Hillsdale and additional subdivisions in Anacostia, including Whittingham, Griswold, Shannon, and Duvall, continued in the 1880s. Dwellings remained modest single-family houses in keeping with the low- to middle-income demographic of the Anacostia residents.

The rail line was important to the residential development of Anacostia. The Southern Maryland Railroad Company purchased land for the tracks in 1871, but did not develop it for a few years. The line became the Baltimore and Ohio and extended along the east bank to Uniontown, where its tracks were laid on trestles in the river to extend to Giesboro Point, with a terminus at Blue Plains. A railway freight yard was located along the river just south of the East Capital Street rail tracks. Railroads granted easier transportation for people and freight. Two bridges, the Benning Road Bridge and the Navy Yard Bridge were the only land access from the river until the Pennsylvania Avenue Bridge opened March 20, 1890. The opening of the Pennsylvania Avenue Bridge provided additional access to the city and acted as a catalyst for further development in Anacostia (Engineering-Science, 1989). In 1892, Arthur Randle, a major developer, proposed the construction of an additional bridge between the Benning Road and Navy Yard bridges. Into the early 20th century, the population continued to grow, centered on major commercial districts, particularly along Good Hope Road, Anacostia Road, Howard Road, and Nichols Avenue (currently Martin Luther King, Jr. Ave). The Project Area was completely divided into lots and occupied as part of Barry's Farm (Potomac City).



Figure 3.2.8 J.F. Campbell Hardware and Stoves, Good Hope Road, c. 1910
Source: Library of Congress, Prints and Photographs, LC-F82-10302

Dredging the Anacostia River

Washington, DC's marsh land and the high water table created several problems for the growing capital and its development. Sewers drained into grounds around the Washington Monument parade grounds. The Anacostia River contained sewer waste, as well as silting from commercial waste, sewage, and runoff from regional farming. In 1872, the Army Corps of Engineers began a comprehensive study of the Potomac and Anacostia Rivers, including the mudflats along the southeast riverfront in Anacostia. The navigation study, requested by Congress, included the assessment of the wetlands and riverbeds. The study was completed in 1876, and the estimated cost of repairs to dredge the mudflats and to define harbor lines was approximately \$6 million (NPS, 2008b).

The Army Corps of Engineers produced recommendations for the navigational study, with proposals in the early 1890s to fill in portions of the lower Anacostia River tidal flats to improve the navigational channel. In 1891, Lieutenant Colonel Peter C. Hains produced a map that indicated areas for potential fill, including an area near Poplar Point (see Figure 3.2.9) (Parsons, 2007). Dredging was planned for the opposite bank of the river near the Navy Yard; as the plans were initiated by the military, it may have been associated with Navy Yard expansions (Parsons, 2007). The Army Corps of Engineers was focused primarily on the reclamation of the Potomac River mudflats, with a Congressional Appropriation of \$288,000 in 1890 (NPS, 2008b). The Anacostia River projects received \$20,000 of that money, and infill activities began in the 1890s (NPS, 2008b). Transportation maps show that the beginning of infilling around Poplar Point began by the 1900s, with the majority of the infill completed in the 1920s (Soil Systems, 1981).

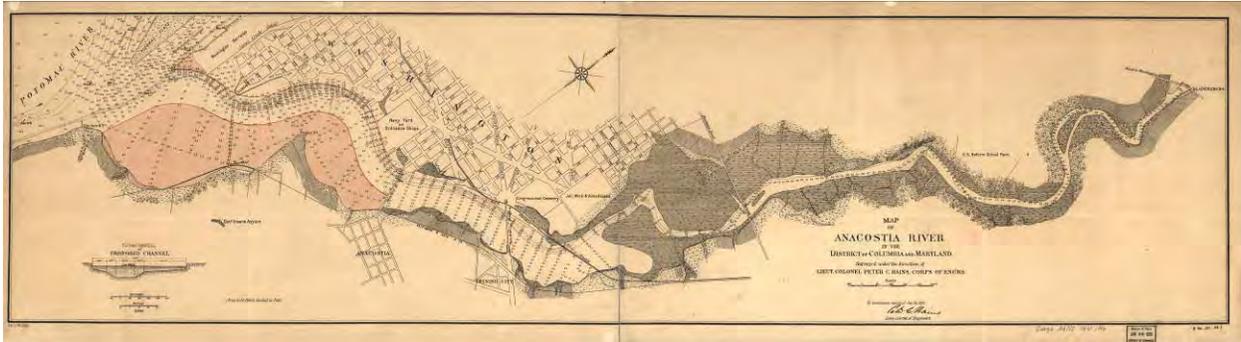


Figure 3.2.9 Map of the Anacostia River by Peter C. Hains, 1891

Note: Area to be Filled Shaded in Red

Source: *Library of Congress, Geography and Maps Division, G3852.A5N2 1891 .H3*

After the dredging started in 1891, construction began on the Anacostia River seawall. Portions of seawalls were constructed near Fort McNair and the Navy Yard that delineated new embankments made with dredged material. The dredged material was also used to form one embankment on the east shore between the Project Area and St. Elizabeths, and another on the western shore. The seawall and new embankments did not extend to the rest of the Anacostia shoreline. Limited funding stalled the infill projects, and in 1898 Congress approved a joint resolution to appropriate funds for further improvements including more extensive reclamation of the Anacostia River marshes (NPS, 2008b). The 1902 River and Harbor Act authorized further improvements to the navigation channel including dredging a 20-foot deep by 400-foot wide channel to a depth of 6 feet. However, the seawalls and embankments in the Project Area were not constructed until 1905.



Figure 3.2.10 Anacostia Flats, 1912

Source: *Library of Congress, Prints and Photographs, LC-F81- 524*

Planning for and the Establishment of Anacostia Park

Throughout the 19th century, Washington, DC was developed according to L'Enfant's Plan for the city. In 1901, Congress directed the McMillan Commission to develop a new plan for Capital City. Influenced by the City Beautiful Movement, a Progressive movement espousing urban beautification to enhance civic virtue, the McMillan Commission developed a new plan for the District of Columbia, focusing on park lands and public spaces. On the Commission were well-known architects, landscape architects, and artists including Daniel H. Burnham, Frederick Law Olmsted, Charles F. McKim, and Augustus St. Gaudens. Using the L'Enfant Plan as the framework for its plans, the Commission proposed a park system that extended through the city and beyond.

With the goal of implementing a comprehensive plan for the District of Columbia, the 1902 McMillan Report included imagery for the proposed parks and a map series that compared Washington with other cities. The report recommended sites for parks, including Olmsted's suggestion for the reclamation of land for a park that would benefit Anacostia residents (NPS, 2008b). The proposed Anacostia Park was an integral part of the new plan. The Commission based its proposal for Anacostia Park on the established plans for reclamation (see Figure 3.2.11).



Figure 3.2.11 View Looking North From Anacostia by John Trout, c. 1901

Source: *Library of Congress, Geography and Maps Division, G3851.A3 1901 .T7*

The Anacostia flats were reclaimed in 1909 and developed through 1928 (NPS, 2008b). The dredged material used to fill the embankments was supplemented by refuse including demolition materials from the Long Bridge, the Old Navy Yard Bridge, and the Washington Aqueduct. The seawall was not completed until the 1940s (NPS, 2008b).

A new advisory committee, the Commission of Fine Arts, was formed in 1910 to succeed the McMillan Commission. The Commission included Burnham and Olmsted, as well as Thomas Hastings, Francis D. Millet, Cass Gilbert, and Daniel Chester French. The Commission continued the work of the McMillan Commission in advising on the design of statues, fountains, monuments, and any matters relating to public art. Anacostia

Park was included in the Commission's 1914 Annual Report as Anacostia Water Park. The plans for Anacostia Water Park included damming the river to create a manmade lake for boating (NPS, 2008b). Anacostia Park was officially established in 1919, and construction began in 1923. With approximately 1,200 acres of open recreational area, few permanent structures, and a five-mile stretch of riverfront, the park became the District of Columbia's largest park and catered to the needs of the surrounding urban neighborhood (NPS, 2008b). Throughout the 1920s, the citizens of Washington, DC used the park as a recreational area to go boating, fishing, and walking.

The Bonus March

In 1924, Congress passed the Adjusted Compensation Act in order to appease WWI veterans who had been demanding additional compensation for their wartime service. Under the 1924 Act, veterans were promised interest-bearing certificates worth \$1 to \$1.50 for each day of their service, not to be paid out until 1945 or at the time of their death to their beneficiaries (NPS, 2008b). While this act was meant to appease the veterans, the demand for this Soldiers' Bonus became a hot political topic. The Veterans of Foreign Wars (VFW) and certain congressional leaders generated and supported the movement to demand the full and immediate cash payment of the deferred Bonus. By 1929, the Bonus became the VFW's signature issue based on the notion that wartime service severely disrupted the economic lives of veterans (Ortiz, 2006).

The momentum of the Bonus movement escalated between 1929 and 1932, and was further exacerbated by the onset of the Great Depression (Ortiz, 2006). Political divisions between Republicans and Democrats over this issue were significant during the election year, as President Herbert Hoover was opposed to the immediate payment of the deferred Bonus. The stock market crash and the ensuing Depression contributed to the sense of unfairness at the veterans' unstable economic situation, with Veterans' Administration 1930 and 1931 statistics showing that veterans had a 50 percent higher unemployment rate than their non-veteran counterparts (Ortiz, 2006). The VFW undertook a publicity campaign and aggressively rallied veterans' support in the introduction of a new bill to Congress for the Bonus payment. In April 1932, the VFW organized the first Bonus procession to the Capital with between 1,500 and 2,000 regional supporters for the new Bonus Bill (Ortiz, 2006). The bill was shelved on May 6, 1932, and the Bonus March demonstration began four days later with hundreds of veterans setting out to march on Washington, DC.

Veterans continued their protest by convening in Washington, DC and lobbying at the Capital. The protesters called themselves the Bonus Expeditionary Force (BEF). Twenty thousand veterans, the majority of which had served in the 3rd, 4th, 5th and 6th Regiments, along with their families and other protesters, took part in the Bonus March in May 1932. The BEF set up their camp in Anacostia Park, just north of Poplar Point, with access to the Capital via the 11th Street drawbridge (NPS, 2008b). Although the BEF veterans were spread throughout the city, squatting in abandoned buildings and other camps, the Anacostia camp was the primary location of the BEF. The encampment was called Camp Marks, housing almost fifteen thousand people in an extensive and integrated community of generally unemployed veterans and their families, as well as a small Communist faction of veteran supporters (see Figure 3.2.12).



Figure 3.2.12 Bonus Expeditionary Force Camp, 1932

Source: *Library of Congress, Prints and Photographs, LC-F8314- 18039-X*

Camp Marks was a shantytown comprised of tents and temporary shelters made of cardboard and discarded materials from the local dump. Many slept outside with no shelter, and there were sanitary problems, as well as food shortages. Despite its squalor, Camp Marks had delineated streets and basic organization. Food and entertainment were shared amongst the desegregated camp residents, even drawing locals from nearby neighborhoods into Camp Marks (NPS, 2008b).

After weeks of peaceful protests and marches, the Bonus Bill was put to a vote, passing first in the House of Representatives, but summarily defeated in the Senate on June 17. Between 5,000 and 6,000 veterans received money from the government to return home; thousands remained in the camps insisting that they would not leave before receiving the Bonus even as more veterans arrived. Tensions grew as camp conditions and disgruntlement worsened. On July 28, 1932, the government began attempts to expel the BEF from the city using the local police, which resulted in riots and the death of two veterans. Hoover then ordered U.S. Army forces under the command of Maj. General Douglas MacArthur to force the BEF from the Capital and the city. MacArthur carried out the order, using tear gas, tanks, and cavalry to drive the marchers out of Camp Marks, and then burned it down (Ortiz, 2006).

The Bonus March was one of the first demonstrations in the long tradition of protests in the capital's public spaces. The timing, magnitude, and duration of the protest during the Depression made the Bonus March a significant event in the political and social arena. Although Hoover insisted that the March had been organized by Communists, hoodlums and ex-convicts, his political career was forever marred by the cruelty and insensitivity he displayed by ordering armed soldiers to use force against destitute veterans. Hoover's marred reputation gave Roosevelt fodder for a strong campaign in the reelection, which Roosevelt won (American History, 2004).

Anacostia Park Expansion

In 1933, management and oversight responsibilities for Anacostia Park were taken away from the Secretary of War and placed under the jurisdiction of NPS. New areas were added to the park, including the Kenilworth Aquatic Gardens, the Langston Golf Course, and a segregated community recreational center with a field house and a swimming pool for white patrons.

After the Civil War, Walter B. Shaw purchased 37 acres of land on the Anacostia River flats. The parcel had an ice pond built in the wetlands, and Shaw successfully planted 12 hardy American white lilies in the pond from his native state, Maine. Shaw developed the parcel with more ponds by damming areas of the floodplain and grew a wide variety of flowers. Then known as the Shaw Gardens, the lily ponds were initially Shaw's hobby. Shaw and his daughter L. Helen Shaw Fowler began a commercial enterprise to sell 63 varieties of lilies in 1912, and sold their experimental hybridized lilies nationally. Fowler took over the business after her father's death in 1921, and developed the Shaw Gardens into a local attraction. Thousands of visitors, including U.S. presidents and their wives, visited the lily ponds during the 1920s and 1930s (NPS, 2008b). In 1938, Congress authorized the purchase of 8 acres for \$15,000 and added them to Anacostia Park. Later renamed Kenilworth Park and Aquatic Gardens, the park has remained intact and was listed in the National Register of Historic Places in 1978.

Another significant addition to Anacostia Park in the 1930s was the 145-acre Langston Golf Course. Named for the African-American abolitionist and Congressman John Mercer Langston, the golf course was developed as the first public golf course specifically for African American golfers. In 1927, John Langford, a prominent architect and member of the Capital City Golf Club (later the Royal Golf Club), petitioned the U.S. Navy to allocate land for a golf course in the planned redevelopment of the Anacostia riverfront.

In 1934, after more years of campaigning, representatives of the Royal Golf Club—the first golf club for African Americans—were finally invited to plan a course with the Navy. Designed by S.G. Leoffler Company, the first nine holes of the course were constructed by the Civilian Conservation Corps (CCC) and the Works Project Administration (WPA) (Dawkins and Kinloch, 2000). Although limited to 9 holes rather than 18, Langston Golf Course opened on June 11, 1939. The Royal Golf Club continued to push for desegregation of the city's public courses until desegregation of all public facilities was mandated in 1955. Also in 1955, the course was expanded to 18 holes and a driving range. The Langston Golf Course was listed in the National Register of Historic Places in 1991 for its association with the development of golf as a popular recreational and professional sport for African Americans and for its association with the first golf clubs built specifically for African American golfers (NPS, 2008b).

The 1930s development of recreational facilities at Anacostia Park also included the construction of the Anacostia Field House and a community swimming pool in 1932 (see Figure 3.2.13). Constructed by the WPA, it was one of six swimming pools built at public parks in the city. Although the six public pools managed by the federal government were nominally desegregated, discrimination prevailed based on custom and official practices. Between June 25 and June 29, 1949 African American protesters attempted to swim at McKinley swimming pool and Anacostia swimming pool, challenging the segregation. At McKinley, they succeeded with no incident; however, this was not the case at the Anacostia pool. A fight was broken up by the police, with

five arrests and violence causing tensions across the city. Although about 400 people were involved, the magnitude of the event was effectively squelched in the media in an attempt to avoid race riots (Gilbert, 1994). The pool was closed and reopened the following year as an integrated facility. The original elements of the facilities are intact, and the field house and swimming pool were nominated to the National Register of Historic Places in 2002 as part of the entire Anacostia Park for their association with the important events in the struggle for civil rights (NPS, 2002).



Figure 3.2.13 Anacostia Park Pool, 1937
Source: Gilbert 1994

Anacostia Park became part of the National Park system, transferred under legislation to the jurisdiction of NPS in 1953. While this transfer ensured the maintenance of the park by NPS, the construction of the Anacostia Freeway in 1958 divided Anacostia Park from the adjacent neighborhoods. The construction of the freeway disrupted its easy access by Anacostia residents.

Post-World War II Anacostia

Systematic housing development due to the effects of WWII transformed Anacostia from semi-rural to urban, with the housing stock nearly tripling between 1940 and 1950 (Cantwell, 1974). With a housing boom during the War and urban renewal following, many of the older structures were replaced with multi-family apartments. Activities at the Navy Yard necessitated the construction of housing all over the city, and particularly in the Hillside area with the Barry Farms Dwellings. With 442 garden apartments, the two-story brick dwellings encompassed six acres in the original Barry's Farm development.

To improve transportation for defense industry employees during WWII, Roosevelt authorized the construction of the Suitland Parkway. As a national defense road, it provided access from Bolling Field to Camp Springs Army Air Base (Andrews Air Force Base) in Maryland. The parkway officially opened on December 9, 1944, creating a major thoroughfare in Anacostia. An additional bridge connecting South Capitol Street to the Suitland Parkway was constructed in 1949, and dedicated as the Frederick Douglass Memorial

Bridge in October 1965. Although the Frederick Douglass Bridge and Suitland Parkway provided new access to and from Anacostia, they also served to disconnect Barry Farm from Anacostia Park and the riverside. The Anacostia Freeway (I-295) further disrupted access to the Project Area from Historic Anacostia.

In 1978, the Anacostia Historic District was listed in the National Register of Historic Places. The historic district includes the original Uniontown neighborhood, an 1879 addition, and some adjacent parcels. Anacostia Park has also been determined eligible and is being nominated to the National Register.

DRAFT

3.2.1.5 Archaeological Resources

Archaeological Surveys and Sites

Surveys

Several archaeological surveys have been conducted in the Project Area, as shown in Table 3.2.1. WMATA conducted surveys prior to construction of the Anacostia Metro station (Soil Systems, 1981; Louis Berger, 1986) and DDOT conducted studies for the South Capitol St. Bridge project (Parsons Brinkerhoff, 2006 and 2007). The National Park Service also conducted investigations for Anacostia Park (Engineering-Science, 1989a); this was a Phase 1a investigation only and no subsurface testing occurred. A Phase I investigation was also accomplished at the north end of Bolling Air Force Base in the mid-1990s and the Anacostia Annex (Louis Berger, 1995 and 2005). Currently, Elizabeth Anderson Comer/Archaeology (EAC/A) is conducting investigations in association with the 11th Street Bridges project. The report (432) is currently in draft. There are also investigations on a property just south of the Project Area (personal communication with Ruth Troccoli).

Table 3.2.1 Archaeological Surveys in or near the Project Area

Name	Project Type	Report Number	Agency	Consultant	Related Reports
Anacostia Park Historical Study	Intensive Archival	88	NPS	Engineering-Science 1989	
Green Line Segment F5 Anacostia Station, Section 2	Phase I Intensive	90	WMATA	Soil Systems 1981	114
Green Line Segment F5 Anacostia Station, Section 1	Phase I Intensive	90	WMATA	Soil Systems 1981	114
Green Line Segment F5 Anacostia Station, Section 3	Phase I Intensive	90	WMATA	Soil Systems 1981	114
Barry's Farm Assessment Howard Rd./	Survey Report	91	NPS	Engineering-Science 1989	
Anacostia Metro Station	Phase III	114	Wallace, Roberts & Todd/ WMATA	Louis Berger 1986	90
Barney Circle Ph.II Seg.A	Phase II	150	DDOT/ FHWA	Engineering-Science 1989 (Artemel et al.) Berger 1984 (LeeDecker & Friedlander)	149
Anacostia Rec Center Building	Phase I Reconnaissance	135	DC Parks and Recreation (DPR)	Engineering-Science 1990 (Bromberg et al.)	150
Barney Circle Ph.II Seg.B	Phase II	149	DDOT/ FHWA	Engineering-Science 1989 (Artemel et al.)	149
Barney Circle Ph.II Seg.C	Phase II	150	DDOT/ FHWA	Engineering-Science 1989 (Artemel et al.)	149

Barney Circle Ph.II Seg.E	Phase II	149	DDOT/ FHWA	Engineering- Science 1990 (Bromberg et al.)	150
Barney Circle Ph.II Seg.G	Phase II	150	DDOT/ FHWA	Engineering- Science 1989 (Artemel et al.)	149
Barney Circle Ph.II Seg.J	Phase II	150	DDOT/ FHWA	Engineering- Science 1989 (Artemel et al.)	149
WSSC Anacostia Force Main	Phase I Reconnaissance	203	WSSC and NPS	Hume 1975	
Approximate APE Anacostia Basin Environmental Restoration, Kingman Lake & wetlands	Intensive Archival	279	USACE	USACE, Balt. Distr. 1994 (Baumgardt) Greenhorne & O'Mara 2007 (Kreisa et al.)	296, 297
St. Elizabeths West Campus Area M	Phase I Intensive	295	GSA for DHS	Greenhorne & O'Mara 2007 (Kreisa et al.)	296, 297
St. Elizabeths West Campus Fly Ash Area	Phase I Reconnaissance	295	GSA for DHS	Greenhorne & O'Mara 2007 (Kreisa et al.)	296, 297
St. Elizabeths's West Campus	Phase I Reconnaissance	297	GSA/ Farewell Mills Gatsch Architects	Hunter Research 2005 (Burrow et al.)	295, 296
South Capitol Street Corridor Phase Ib	Phase I Intensive	336	DDOT	Parsons Brinkerhoff 2007 (Ward & Reed)	337 (Phase 1a)
South Capitol Street Corridor Phase Ia	Phase Ia -Intensive Archival	337	DDOT	Parsons Brinkerhoff 2006	336 (Phase 1b)
Naval Annex Anacostia Annex Assessment	Phase I Reconnaissance	338	Naval District Washington	Louis Berger 2005 (Geoarch Wagner)	See 280
Anacostia Force Main 50 ft. wide corridor	Phase I Reconnaissance	406	WSSC	Evans 1978 (PRAS, AU Anthro Dept) Elizabeth A Comer /Archaeology (EAC/A); Chadwick geoarch	203
11th St. Bridges Anacostia Park & geoarchaeology	Phase I Intensive	432	DDOT; FHWA; HNTB managing	EAC/A; Chadwick geoarch	
11th St. Bridges CSX ROW & geoarchaeology	Phase I Intensive	432	DDOT; FHWA; HNTB managing	EAC/A; Chadwick geoarch	
11th St. Bridges Anacostia Park Ph II - approx	Phase II	432	DDOT; FHWA; HNTB managing	EAC/A	
11th St. Bridges Anacostia Park Ph II - approx	Phase II	432	DDOT; FHWA; HNTB managing	EAC/A	

Source: DC Historic Preservation Office

In addition to relatively recent archaeological investigations, informal survey of the area was accomplished in the late 19th and early 20th centuries around the Project Area, resulting in large collections of prehistoric

material at the National Museum of Natural History of the Smithsonian Institution (Humphrey and Chambers, 1985). Archaeologists such as S.V. Proudfit, Armistead Peter III, and William Henry Holmes collected archaeological materials from a variety of locations within and around the Project Area. However, the records regarding the exact provenance of these artifacts are old and somewhat contradictory, so it is difficult to determine where the artifacts came from with any certainty. Nevertheless, the record does indicate that Native American cultural material was prevalent in the Project Area. Holmes and others identified this area as being one of the most prolific (Engineering-Science, 1989a: 39). In the late 1800s, Proudfit interpreted both the archaeological record and Captain John Smith's account of Anacostia from his visit in 1608 to conclude that there were once dispersed Native American villages on the banks of the Anacostia. These villages were said to have dwellings that were within 300 feet of the shoreline (Engineering-Science, 1989a).

Previously Recorded Archaeological Sites

The sites identified during both informal and formal surveys in and around the Project Area are included in Table 3.2.2.

Table 3.2.2 Archaeological Sites within and in the Immediate Vicinity of the Project Area

Site Number	Description	In Project Area	Reference
P09	Mixed historic and prehistoric	Yes	Dupin 2008
51SE003	Historic and Prehistoric; not relocated	Possibly*	Bruce Powell map-NPS
51SE005	Historic and Prehistoric; Not relocated.	Possibly*	Bruce Powell map-NPS
51SE008	Historic and Prehistoric; Not relocated;	Possibly*	Bruce Powell map-NPS/Proudfit
51SE009	Smithsonian collections Historic and Prehistoric;	Possibly*	Hume 1975; Powell map Proudfit
51SE010	Smithsonian collections Historic and Prehistoric;	Possibly*	Bruce Powell map-NPS/Proudfit
	Not relocated;		
	Smithsonian collections (sherds, steatite)		
51SE011	Campsite of mixed age	Yes, reportedly within the nursery	Smithsonian Records; DC SHPO report #203
51SE012	Campsite of mixed age	No	Smithsonian Records; DC SHPO report #203
51SE013	Prehistoric; Smithsonian collections	Possibly*	MacCord 1957; Hume 1975
51SE014	Prehistoric; Not relocated; Smithsonian collections	No	
51SE015	Prehistoric; Not relocated; Smithsonian collections	Possibly*	W.H. Holmes; J Bury
51SE018	Prehistoric; Not relocated; Smithsonian collections	No	Smithsonian Peter Collection

51SE019	Prehistoric; Not relocated; Smithsonian collections	Possibly*	Smithsonian -Rau Collection
51SE022	Prehistoric; Not relocated; Smithsonian collections	Possibly*	Smithsonian Peter Collection
51SE024	Prehistoric	Possibly*	Smithsonian Records
51SE034	Historic and Prehistoric Site	No	Soil Systems 1981; Louis Berger 1986
51SE036	Barry's Farm Site	No	Engineering-Science 1989b
51SE058	Prehistoric Camp (Archaic to Woodland); 19th-20th c.; NRHP eligible (D)	Yes	EAC/A doing Phase I/II
51SE059	Prehistoric lithic scatter	Yes	EAC/A doing Phase I/II
51SE060	Prehistoric (Possibly Late Archaic)	No	EAC/A doing Phase I/II
51SE061	Historic and prehistoric; Not relocated; Smithsonian collections	No	EAC/A doing Phase I/II
BP 25	Prehistoric Camp	Possibly*	1966 Bruce Powell map
BP 26	Prehistoric Camp	Possibly*	1966 Bruce Powell map

Source: DC Historic Preservation Office

*See discussion in text about the accuracy of mapped site locations

Just southeast of the western end of the Project Area, Louis Berger and Associates (1986) uncovered a multicomponent site (51SE34) next to the former floodplain of the Stickfoot Branch. The site's prehistoric component contained lithic debitage, projectile points, and ceramics and appeared to date to the Late Archaic period through the Late Woodland period. The historic component was related to the Barry's Farm settlement established by the Freedmen's Bureau to help former slaves transition into free society. The archaeological site and the associated standing structures formed the Howard Road Historic District with a period of significance from 1880-1920.

A recent study around the 11th Street Bridges has also yielded both historic and prehistoric materials. The study is still being completed and information on the materials found is forthcoming (personal communication with Ruth Troccoli; Report Number 432 in draft). In addition, on the Navy property south of Poplar Point, archaeologists have recently found prehistoric materials (personal communication with Ruth Troccoli).

Several archaeological sites are reportedly within the Project Area, (though their exact locations are not known) and they are discussed below. Four of the sites (51SE011, 51SE012, 51SE013, and 51SE024) were identified by looking at records from the informal surveys at the National Museum of Natural History. The exact locations of these sites are not known because the land was filled in, obscuring the locations before they were mapped by archaeologists. Therefore, three of the sites (51SE011, 51SE013, and 51SE024) are currently mapped within the Project Area but this should be further verified. One of the sites, 51SE012, is currently mapped just outside the Project Area but its exact location is also yet to be verified. Likewise, two more sites (BP25 and BP26) are mapped within the Project Area based on a map that National Park Service archaeologist Bruce Powell prepared in 1966 (personal communication with Ruth Troccoli). It is possible that

these two sites are actually part of sites 51SE011 or 51SE012. Further analysis of the material housed at the National Museum of Natural History may help to clarify some of this information. Other sites, marked as being part of the Smithsonian collections in Table 3.2.2, were documented as part of various surveys prior to the 1980s and their exact locations are also not known. There is also little information as to what was contained in those sites.

Several sites are known to be within the Project Area. One was recently found and mapped by avocational archaeologist Doug Dupin, who conducted a survey on private property just outside the Project Area and identified intact subsurface deposits now known as P09 (Dupin, 2008).

Four sites (51SE058, 51SE059, 51SE060, and 51SE061) were recently found by EAC/A while working on the 11th Street Bridge project (Harris et al. 2010 draft). The report is still being drafted but early results indicate the presence of archaic and woodland period resources as well as 19th and 20th century materials.

Archaeological Potential

Archaeological Evidence of Archaeological Potential

In the project vicinity where archaeological investigations have been undertaken, the archaeological sensitivity has been variable. The area around 51SE34 was previously considered to have a low sensitivity for the presence of archaeological sites because the Stickfoot Branch stream channel had been filled in with soil. Although portions of the site lacked good preservation (for instance, bone and structural evidence such as postholes were absent from the prehistoric component) the study found that the fill soil was imported from elsewhere and seemed to have protected portions of the site. Other land in the vicinity (such as an area south of Howard Road) was disturbed by landscaping activities that actually served to displace prehistoric materials and destroy the research potential (Louis Berger, 1986: 339). In some areas, repeated plowing also limited the research potential of archaeological deposits, most of which were in the plowzone.

A Phase 1(b) archaeological study done for the South Capitol Street Project (Parsons Brinkerhoff, 2007) showed that the east side of the Anacostia River, south of Howard Road, had the potential for the presence of archaeological resources. The study used maps showing the original pre-fill shoreline from the late 1800s to indicate where the highest potential was. The Project Area was bounded by Howard Road, Firth Sterling Avenue, and South Capitol Street.

The presence of four sites recently found by EAC/A (51SE058, 51SE059, 51SE060, and 51SE061) is further indication of the archaeological potential within the Project Area (Harris et al. 2010 draft).

Historical Evidence of Archaeological Potential

An historical site (Anacosten Fort) is thought to be near the Project Area (Engineering-Science, 1989b: 13). Anacosten Fort was a pallisaded village which has never been located. Engineering-Science conducted an archival study of the area from the 11th Street Bridges to the Benning Bridges and concluded that the Anacosten Fort was possibly near the Sousa Bridge (1989b).

Historic maps indicate that several residents were living along Howard Road from about the 1860s. These houses were part of the Barry's Farm development. When comparing an 1867 map of the parcels that were part of the development with the current Project Area, it appears that approximately 11 parcels were at least partially within the Project Area.

Several historic maps also indicate that portions of the Project Area had structures on them. A map from 1861 (Boschke) shows that the largest portion of land within the current Project Area at that time was in the western end of the Project Area (Figure 3.2.14). The remaining Project Area is primarily part of the river or mud flats/riverbank transition at this point in time. The map shows a complex of buildings that are mostly just outside the southwestern edge of the Project Area labeled "Barry." One of the buildings appears to be within the Project Area. Also within the southwestern end of the Project Area are two areas with trees and a structure nestled in among them. Further to the northeast, between the current 11th Street Bridge and Pennsylvania Avenue, are two other complexes with the names "A. Garden" and "T. Talbert" next to them.

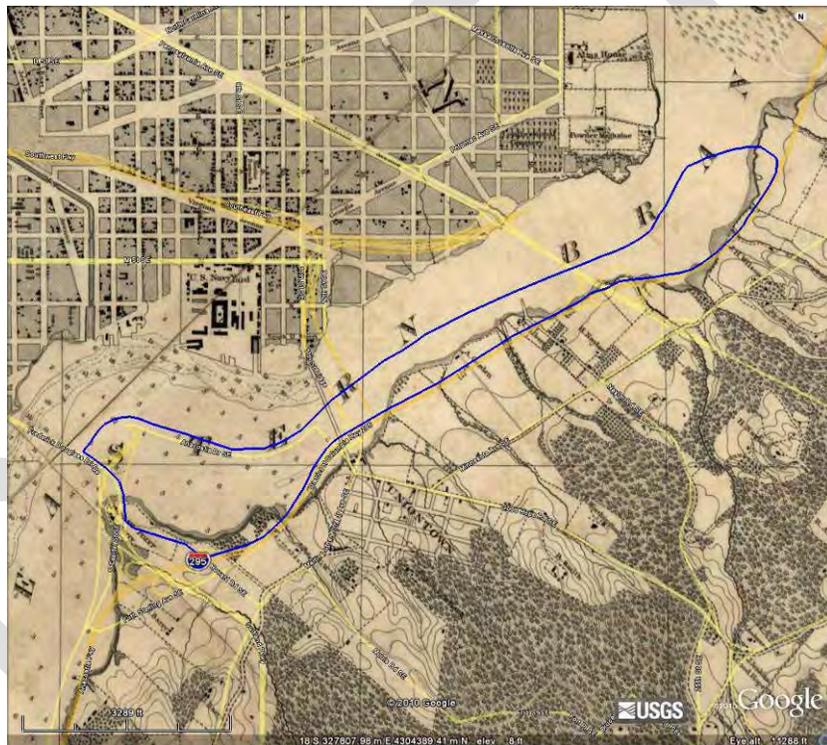


Figure 3.2.14 1861 Boschke Map overlying Google Earth Imagery of the Project Area (blue outline is approximate project boundaries)

Source: AECOM, 2010; Boschke, 1861

An 1862 map (Arnold) shows the Barry structures on what is labeled "Giesboro Pt," but is actually Poplar Point. The main structure itself was on the tip of Poplar Point and may lie just outside the Project Area, but outbuildings that would have been associated with it may have stood within the Project Area. Just to the northeast of the Barry structure, and south of the Navy Bridge, is another structure with the name "G.W. Talbert" next to it. This structure is within the boundaries of the current Project Area. Further to the

northeast, the “T. Talbert” structure from the 1861 map is also present but there is no indication of the “A. Garden” structure.

The 1903 map (Figures 3.2.15 and 3.2.16) shows 13 parcels within or partially within the Project Area and there are 8 to 9 structures on them (Baist, 1903). This map also shows that the structures labeled with the name “G.W. Talbert” in 1862 are now labeled “Catherine Talbot.” The portion of the Project Area between the current 11th Street and Sousa Bridges also shows structures with the names “Ann and Alex B. Garden,” “John C. Garden,” and “Margaret Little.” At this time, there is also a small island in the middle of the River which the northern end of the Project Area touches.



Figure 3.2.15 1903 Baist Map overlying Google Earth Imagery of the west portion of the Project Area (blue outline is approximate project boundaries)

Source: AECOM, 2010; Baist, 1903



Figure 3.2.16 1903 Baist Map overlying Google Earth imagery of the east portion of the Project Area (blue outline is approximate project boundaries)

Source: AECOM, 2010; Baist, 1903

Geomorphic/Geoarchaeological Studies and Archaeological Potential

In addition to the archaeological and historical information that indicate the potential for archaeological materials near the Project Area, geomorphic investigations have also provided information on archaeological potential. Three such investigations have taken place near the Project Area; one was undertaken in 2009 near the 11th Street Bridges; one was conducted in 1995 on Bolling Air Force Base land; and the third was took place in 2005 in the Anacostia NSF. These studies involved core samples and trenching. The first two yielded the best information. Geoarchaeological testing for the third study was inconclusive owing to the extremely rocky character of the surface deposits.

In May and June of 2009, John Milner Associates (JMA), Inc. (June 18, 2009) conducted the geoarchaeological investigations for the 11th Street Bridges Replacement Project. These studies included geomorphic investigations of areas that would be impacted by the project. The intent was to determine whether cultural materials were present and if so, whether they had any integrity. These studies were meant to establish the presence or absence of archaeological resources. On the east side of the Anacostia River, 11 auger locations and five backhoe trenches were examined. They resulted in the identification of buried cultural materials potentially related to both the historic and prehistoric periods. The investigations within Anacostia Park revealed a stratified fill sequence up to 4 feet overlying nearly 8 feet of intertidal layers, overlying a buried floodplain. They also revealed the presence of a paleo-tributary channel. This channel was probably much like the Stickfoot Branch and likely would have meandered across the floodplain before it was filled.

The investigations at Bolling Air Force Base showed that one of the trenches spanned what appeared to be the transition from shoreline to river bottom. Natural soils were found at a depth of approximately 6 feet and were said to be a "...Pleistocene terrace of the Anacostia River lying at a height of roughly 9 feet above modern sea level" (Louis Berger, 1995). The investigation posited that earlier in the Holocene, the terrace would have been higher and had better drainage, making it very suitable for human occupation. Even in historic times, it was thought to be well drained enough for cultivation, due to the plow scars that were present in the trench.

Archaeological Potential within the Project Area

Much of the area around Poplar Point and southern Anacostia Park has a high archaeological sensitivity. Figure 1 of the Humphrey and Chambers study (1985) shows a Nacochtanke Village site in the vicinity and a number of sites (both historic and prehistoric) have been found within the area. The terraces lining the river in other areas have proven to be of high sensitivity for both prehistoric and historic activities due in part to the fact that proximity to the river would have made fishing and agriculture viable pursuits. There are outcrops of lithic materials suitable for making stone tools not far from the Project Area as well (Engineering-Science, 1989b: 13).

Much of the current Project Area is made up of fill that was placed there in the late 19th and early 20th century in order to reclaim land from the Anacostia River. In general, this would imply a low level of sensitivity for archaeological resources due to the fact that the fill either obscured materials or it covered areas that represented the original river bottom. However, in the Project Area vicinity it has been shown that

archaeological resources exist within the land that represents the original shoreline. In addition, some of the investigations have shown that the filled land near the Project Area has preserved archaeological materials rather than destroying them (e.g., Site 51SE34).

Most of the 19th century maps show that the depth of the offshore area that is now within the current Project Area was between one and six feet. Because the level of the Anacostia River is related to the tides, a zone adjacent to the shoreline would have alternated between being inundated with water and being a mud flat. In addition, there have been periods during Native American occupation of the area when the sea level was lower than it is today so areas now inundated may have been solid ground at some point.

The results of the geomorphic investigations for the 11th Street Bridges project revealed that the south side of Highway 215 had a high sensitivity for archaeological resources because there was less than three feet of fill. The north side of the highway had 3-10 feet of fill, resulting in a range of high to low sensitivity. While the original shoreline can be estimated (see Figure 3.2.17), the amount of fill is not known for the current Project Area.

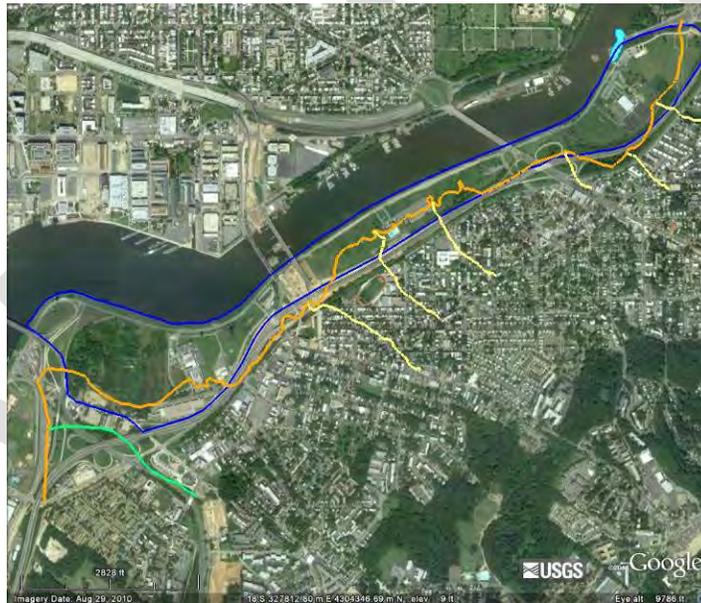


Figure 3.2.17 Shoreline as mapped in 1903 (Baist) overlaying current aerial photograph (historic shoreline in gold, Stickfoot Branch in green, unnamed creeks in yellow, island in light blue) Blue outline for Project Area is approximate.

Source: AECOM, 2010

Within the current Project Area, the original shoreline appears to have been mostly along the southern portion and sites have been recorded within this area as well as the area that would have been offshore in the 1800s (although their exact location is no longer known). The area that represents the original shoreline is of highest archaeological sensitivity for both historic and prehistoric sites. Using the protocol established in the JMA assessment, the area adjacent to the original shoreline is of a moderate sensitivity due to the fact that remnants of Native American fishing and other activities could be present within this area.

3.2.1.6 Historic Buildings, Structures, Sites, Objects, Districts, and Cultural Landscapes

The APE for historic resources contains a number of historic buildings, structures, sites, objects, districts, and cultural landscapes. The location of these resources is shown in Figure 3.2.2. A summary of their significance and relationship to the Project Area is outlined below.

Anacostia Park

Just after the turn of the 20th century, the McMillan Commission developed a plan for Washington, DC that focused on park lands and public spaces. Frederick Law Olmsted, a member of the Commission, identified the need for a park for Anacostia residents, and called for reclamation of the Anacostia flats. Responding to this plan, the Army Corps of Engineers began filling the flats in 1909, bordering the new land by a seawall. The seawall provided the structure for the placement of fill materials behind the wall, resulting in fast land. Its construction is considered to be a major feat of engineering.

Anacostia Park was formally established in 1919, and its construction began four years later. With approximately 1,200 acres of open recreational area, few permanent structures, and a five-mile stretch of riverfront, the park became the District's largest park and catered to the needs of the adjacent urban neighborhoods, providing space for boating, fishing, and walking. The Park was also the site of the Bonus Army encampment, Camp Marks, in 1932, and an incident at the Anacostia Park Pool associated with the desegregation of public facilities in Washington, DC.

Key features of the park include its spatial organization, topography, buildings and structures, circulation, and its natural and constructed setting. Buildings, parking, and recreational amenities are clustered within Poplar Point and southern Anacostia Park; the balance of the Project Area is open space, primarily grassy fields (see Figure 3.2.16). The majority of the park is buffered from I-295 to the south by treecover. The setting of the park, including its relationship to the Anacostia River to the north and Historic Anacostia to the south were integral elements in its design. The topography of the site is level, reflecting its origins as tidal flats. Key buildings and structures within the Project Area include the Anacostia Seawall, the Engineers House, and Anacostia Fieldhouse.

Anacostia Park was listed in the DC Inventory of Historic Sites in 1964. It has been determined eligible for listing in the National Register of Historic Places and a draft National Register Nomination was prepared in 2008. It is eligible under Criterion A for its association with the Bonus March, as well as for its association with the desegregation of public facilities in Washington, DC. Further, it is considered eligible for listing under Criterion C for its design and construction, and under Criterion D for its potential to yield both prehistoric and historic information. The nomination identifies two contributing buildings, the Engineer's House (see Figure 3.2.19) and the Anacostia Fieldhouse, and one contributing structure, the Anacostia seawall, within the Project Area (see Figure 3.2.20). In addition, the site may contain prehistoric and historic archaeological materials. Kenilworth Aquatic Gardens (a contributing site) and Langston Golf Course (a contributing historic district) also lie within the park, but are located outside of the Project Area.



Figure 3.2.18 Anacostia Park
Source: AECOM, 2009



Figure 3.2.19 Engineer's House
Source: AECOM, 2009



Figure 3.2.20 Anacostia River Seawall

Source: AECOM, 2009

Anacostia Historic District

The Anacostia Historic District is roughly bounded by Martin Luther King Avenue on the west, Good Hope Road on the north, Fendall Street and the rear of the Frederick Douglass National Historic Site on the east, and Bangor Street and Morris Road on the south. It is significant both for its historic and its architectural contributions to Washington, DC. The core of the District is Uniontown, a 17-block subdivision established in 1854 to house the working class laborers at the Washington Navy Yard. The District contains approximately 550 buildings dating from c. 1854-1930, with dominant styles including the Cottage, Italianate, and Washington Row (see Figure 3.2.21).



Figure 3.2.21 Anacostia Historic District

Source: AECOM, 2009

Frederick Douglass National Historic Site (Cedar Hill)

The Frederick Douglass National Historic Site is located within the Anacostia Historic District, at 1411 W Street, SE. The house was constructed between 1855 and 1859 probably as a brick 2-1/2 story center hall structure. It was added to substantially in subsequent decades, likely after 1877 when Douglass purchased the property. Additions included a two-story kitchen wing, two one-story bays off the central parlor, and a second story wing over the original library. A series of outbuildings were also constructed on the grounds (see Figure 3.2.22).

Douglass was born into slavery, but escaped to the north at the age of 21 and became an important leader in the Abolition movement. He was initially an agent of the Massachusetts Anti-Slavery Society and later became a leader in the Underground Railroad and the editor of the *North Star*, an abolitionist paper. Perched on a hill at the south end of the Anacostia Historic District, the house and grounds afford sweeping views of the Capital City. These views include Poplar Point in the foreground. The property was identified as a National Historic Site and listed in the DC Inventory of Historic Sites in 1964. In 1966, it was listed in the National Register of Historic Places.

The Frederick Douglass National Historic Sites is recognized by NPS as a cultural landscape, a representation of a gentleman's farm, family home, and retreat. The site displays integrity through its natural systems and features, spatial organization, topography, land use, circulation, vegetation, buildings and structures, and views and vistas. Character-defining features that contribute to the integrity of the landscape include: the terraced hillside; the carriage house ruins; the stable, chicken coop, and barn structure; the paths and driveway; oak, magnolia, and cedar trees on the property; the residence; and the expansive views from property of DC and the Anacostia River (NPS, 2007).



Figure 3.2.22 Frederick Douglass National Historic Site (Cedar Hill)
Source: AECOM, 2009

St. Elizabeths Hospital Historic District

St. Elizabeths Hospital was established in the 1850s as the Government Hospital for the Insane. Located on a portion of Barry Farm, the site affords sweeping views of the Anacostia River and the Monumental Core of Washington, DC. The original hospital building was designed in the Gothic Revival style by Thomas U. Walter. By the 1890s, the facility had grown to include a complex of residential, treatment and support structures. Around 1900, the facility was expanded substantially with a number of new buildings designed by the firm of Shepley, Ruttan and Coolidge in the popular Italianate style. The facility was one of the first mental hospitals designed based on the “Kirkbridge” or “Linear” Plan. It served as a model for later institutions, both for its humane treatment of residents and its use of innovative techniques. The St. Elizabeths Hospital Historic District was listed in the National Register in 1979, identified as a National Historic Landmark in 1990, and listed in the DC Inventory of Historic Sites in 2005. A Cultural Landscape Report was undertaken by the General Services Administration in 2008 that documents character-defining features of the campus, including historic structures and objects, walls, walkways, lawns, woodlands, a cemetery, and key viewsheds.

Civil War Fort Sites and Fort Circle Park System

During the Civil War, Union forces built a ring of forts to defend the Capital City, including Fort Stanton and Fort Dupont in proximity to the Project Area (see Figure 3.2.23). At the end of the war in 1865, there were 68 enclosed forts and batteries, 98 unarmed batteries, three blockhouses, and more than 20 miles of trenches connecting the defenses. The majority of the defenses have not survived; however, the land that contained them now forms a 23-mile greenbelt that includes the Anacostia Highlands. The Civil War Fort Sites and Fort Circle Park System were listed in the DC Inventory in 1964 and in the National Register in 1974. They are recognized by NPS to be cultural landscapes.



Figure 3.2.23 View from Fort Stanton with the U.S. Capitol Building and Washington Monument in the Distance
Source: AECOM, 2009

Suitland Parkway

Suitland Parkway extends more than nine miles from the Anacostia River adjacent to the Project Area to Andrews Air Force Base in Maryland. Planned by NCPC in 1937, it was not built until 1943-1944. One of a series of parkways constructed within the National Capital area during this period, the plans for Suitland Parkway grew out of recommendations made by the McMillan Commission to develop a network of parks and parkways within the city. Its construction was also important from a military standpoint as it provided a swift connection between the Capitol and a major U.S. airfield. As a designed landscape, its rolling topography, circulation system, and views are all key elements (see Figure 3.2.24). Suitland Parkway was listed in the National Register of Historic Places in 1995.



Figure 3.2.24 Suitland Parkway at Firth Sterling Avenue

Source: AECOM, 2009

Washington Navy Yard Historic District

Established in 1799 as the nation's first naval yard and home port, the Washington Navy Yard became the center for naval operations in the 19th century (see Figure 3.2.25). After the War of 1812, the site became a testing ground for ordnance and other naval technology, and at the end of the 19th century the Navy Yard was expanded to the west to accommodate more gun and ordnance manufacture. In 1962 the Naval Gun Factory was closed; today the Navy Yard functions as a naval administrative center. The Washington Navy Yard Historic District was listed in the DC Inventory of Historic Sites in 1964, in the National Register in 1973, and as a National Historic Landmark in 1976. In 2008, the District was expanded to include the former Navy Yard Annex. The Navy Yard East Extension, which continues from Parsons Avenue, SE, east to 11th Street, is an integral part of the Navy Yard's complex of industrial buildings and has also been determined eligible for listing in the National Register. The District includes several structures that are individually listed in the DC Inventory and the National Register including the Latrobe Gate, Quarters A, Quarters B, and the Commandant's Office.



Figure 3.2.25 Washington Navy Yard

Source: AECOM, 2009

Main Gate, Washington Navy Yard (Latrobe Gate)

The Washington Navy Yard's Main Gate, located at 8th and M Streets, SE was designed by Benjamin Henry Latrobe in 1804 (see Figure 3.2.26). It was one of a few structures that survived the 1814 fire at the yard and today is the only extant structure attributed to Latrobe at the facility. Latrobe designed the gateway in the Greek Revival style, with north and south facades placed 40 feet apart and connected by a double Doric colonnade. The structure was capped by a hipped roof and flanked on the east and west sides by one-story brick guard houses. In the 1880s, the gate was incorporated into the first story of a three-story Victorian style building. At this time the guard houses were demolished. The gate is significant as one of the oldest surviving examples of Greek Revival architecture in the U.S., as an important example of the work of Latrobe, and as a key component in the overall design of the Washington Navy Yard. The Main Gate was listed in the DC Inventory of Historic Sites in 1964 and in the National Register of Historic Places in 1973. It is also a contributing element within the Washington Navy Yard Historic District.



Figure 3.2.26 Latrobe Gate at the Washington Navy Yard
Source: AECOM, 2009

Quarters A, Washington Navy Yard (Commandant's House)

Quarters A, also known as the Tingey House or Commandant's House, was constructed in 1804 within the Washington Navy Yard (see Figure 3.2.27). The two-and-one-half-story Flemish bond brick structure was originally designed in the late-Georgian style; however, over time the windows were lengthened and other Victorian features were added. The building has served as the residence for every Commandant of the Washington Navy Yard since its construction. Quarters A was listed in the DC Inventory of Historic Sites in 1964 and in the National Register of Historic Places in 1973. It is also a contributing element within the Washington Navy Yard Historic District.



Figure 3.2.27 Quarters A, Washington Navy Yard
Source: NPS, National Register of Historic Places

Quarters B, Washington Navy Yard (Second Officer's House)

Quarters B is located at the north portion of the Washington Navy Yard facing west on Charles Morris Avenue (see Figure 3.2.28). The building was constructed in 1801 as a two-and-a-half-story Federal-style brick residence with a slate gabled roof. Over the next sixty years, the structure was expanded substantially. It is significant as the first permanent structure erected at the Washington Navy Yard, as well as the quarters of the second ranking officer at the Navy Yard. Quarters B was listed in the DC Inventory in 1964 and the National Register in 1973. In addition, it is a contributing element in the Navy Yard Historic District.



Figure 3.2.28 Quarters B, Washington Navy Yard
Source: NPS, National Register of Historic Places

Commandant's Office, Washington Navy Yard

Constructed between 1837 and 1838, the Commandant's Office at the Washington Navy Yard occupies a prominent location at the end of Dahlgren Avenue. The two-story brick structure is surrounded by two-story frame porches and is capped by a bellcast hipped roof. It is significant both for its design and as an administrative center within the Navy Yard. The Commandant's Office was listed in the DC Inventory in 1964 and in the National Register in 1973. In addition, it is a contributing element in the Washington Navy Yard Historic District.

L'Enfant and McMillan Plans (The Plan of the City of Washington)

Pierre Charles L'Enfant conceived his plan for the city in 1791. Considered to be one of the country's most important achievements in urban planning, the L'Enfant Plan is characterized by an orthogonal grid overlaid by a system of radiating avenues, vistas, and parks. More than a decade later, the McMillan Commission expanded upon the L'Enfant Plan, terminating several visual axes with monuments (see Figure 3.2.29). One component of the McMillan Plan was a coordinated system of parks that would serve residential neighborhoods at the edges of the L'Enfant City. This plan included designs for Anacostia Park, as well as the Fort Circle Park System. The Plan of the city of Washington is listed in the National Register of Historic Places, as well as the DC Inventory of Historic Sites (NPS, 1994b).

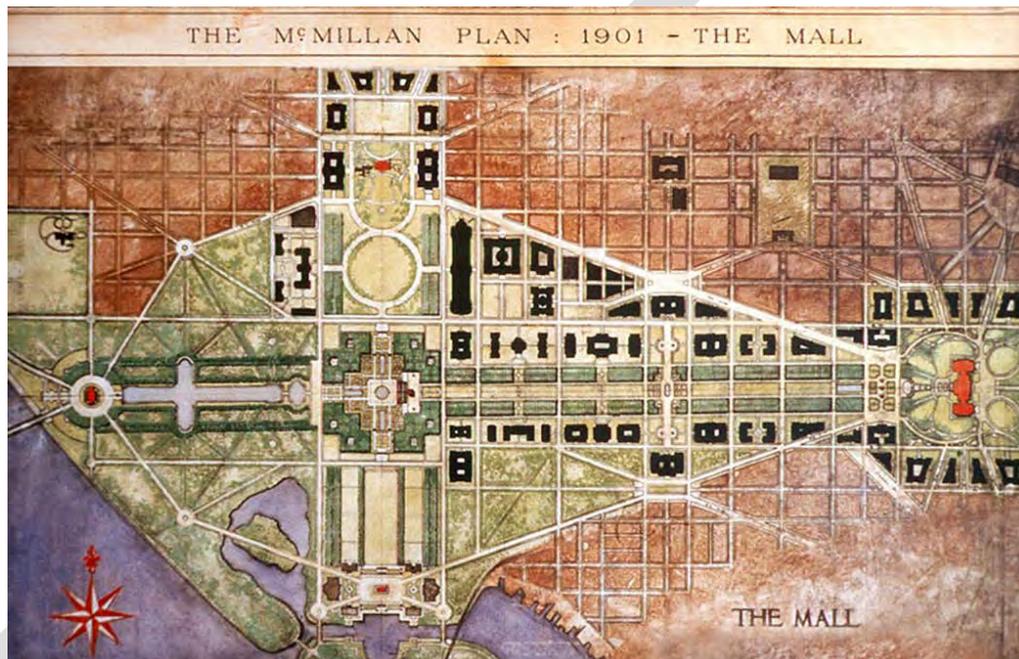


Figure 3.2.29 McMillan Plan for the City of Washington
Source: NCPC

National War College (Army War College)

The National War College is located on Greenleaf Point, a prominent site at the confluence of the Potomac and Anacostia Rivers. Part of L'Enfant's Original Appropriation #5, the property was the former site of the historic Washington Arsenal. It is also located within Fort McNair (see discussion of the Fort McNair Historic District below). The Arsenal, dating to the early 19th century, was torn down between 1901 and 1903 to make way for the National War College. The College was intended to centralize Army education and planning, and served as the center for joint Army-Navy training. It is an important representation of the rise of the U.S. as a military and economic power. The College building, designed in the Beaux-Arts style by McKim, Meade, and White, was constructed of beige brick with granite trim and is capped by a domed central pavilion (see Figure 3.2.30). The National War College was listed in the DC Inventory of Historic Sites in 1964 and in the National Register of Historic Places in 1972. It was also designated a National Historic Landmark in 1972. The Project Area is included in views southeast from the Naval War College across the Anacostia River.



Figure 3.2.30 National War College
Source: NPS, *National Register of Historic Places*

Fort McNair Historic District (Washington Arsenal)

Located at 4th and P Street, SW, Fort McNair was established in 1791 on the banks of the Anacostia River and today is the third oldest U.S. Army installation in continuous use. At the end of the 18th century, a one-gun battery and other defenses were installed in order to defend the fledgling city. In 1803, an arsenal building, called the Washington Arsenal, was constructed to store the munitions for Washington, DC. Between 1826 and 1831, the Federal Penitentiary for the District of Columbia was constructed just north of the Arsenal. The Arsenal itself was enlarged in the middle of the nineteenth century to allow for the construction of a hospital and the penitentiary was subsequently closed to accommodate the expansion of activities at the Arsenal. Between 1901 and 1903 the Arsenal was torn down and the installation was redesigned in the Beaux-Arts style by McKim, Meade, and White to house the Army War College (see Figure 3.2.31). Since 1966, the facility has served as the headquarters of the Army's Military District of Washington. The complex was listed in the DC Inventory of Historic Sites in 1964, and determined eligible for listing in the National Register in 1978. In addition, it is located within L'Enfant's Original Appropriation #5. The Project Area is included in views southeast from Fort McNair across the Anacostia River.



Figure 3.3.31 Gates to Fort McNair on P Street SW
Source: AECOM, 2009

East and West Potomac Parks Historic District

An essential element of the McMillan Plan for the city, East and West Potomac Parks were established through the reclamation of the flats along the Potomac River. As designed, the core of West Potomac Park was intended to contain passive recreational uses, while active uses were envisioned for East Potomac Park. Key features of this historic designed landscape include its flat topography, buildings and structures, spatial relationships, and views and vistas. A primary view within East Potomac Park is the view southeast from Hains Point towards Poplar Point. The East and West Potomac Historic District was listed in the DC Inventory of Historic Sites in 1964 and in the National Register of Historic Places in 1973.

Syphax School

The Syphax School was named for William Syphax, the first president of the *Board of Trustees of Colored Schools of Washington and Georgetown* (established 1868). William Syphax argued for equal educational standards and a unified school system in Washington, DC. Designed in the Colonial Revival style, the school is a two-and-one-half-story red brick structure with white terracotta trim. It is capped by a dentiled cornice and hipped roof (see Figure 3.2.32). In 1941, the building was expanded substantially. The Syphax School was listed in the DC Inventory in 1999 and in the National Register in 2003.



Figure 3.2.32 Syphax School

Source: AECOM, 2009

Capitol Hill Historic District

The largest residential historic District in the city, the Capitol Hill Historic District is also one of the oldest residential areas in the country. The District grew from two primary areas. At the west end of the District, adjacent to the Capitol complex, a boarding house community was built that generally served members of Congress. At the southeast end of the District, residences were constructed outside of the gates of the Washington Navy Yard to house Navy Yard employees. The District includes rowhouses constructed in a variety of materials and styles, from simple, unadorned frame to elaborately decorated brick residences. These diverse structures form a continuous building line along L'Enfant's grid of streets (see Figure 3.2.33). In addition to residential buildings, the District includes historic commercial buildings and several L'Enfant Reservations. The Capitol Hill Historic District was preliminarily listed in the DC Inventory in 1964 and in the National Register in 1973. The District was expanded in 2002 and the period of significance was expanded in 2003.



Figure 3.2.33 Capitol Hill Historic District
Source: AECOM, 2009

Thomas Law House (Honeymoon House)

The Thomas Law House was constructed as a speculative building when the seat of government was being moved from Philadelphia to Washington, DC. Located at 1252 6th Street, SW, the Federal-style brick residence is three stories high and distinguished by its simple proportions and symmetrical facades. The property was listed in the DC Inventory in 1964 and the National Register in 1973.

Duncanson Cranch House

Like the Thomas Law House, the Duncanson Cranch House was developed as a speculative property just before the turn of the 19th century. The three-story Flemish bond brick residence displays vernacular elements typical of early architecture in the Capital City. Key details include recessed arches on the second

story of the north façade, and a wooden cornice with a fluted frieze and paired modillions. The Duncanson Cranch House was listed in the DC Inventory in 1964 and the National Register in 1973.

Edward Simon Lewis House

Located at 456 N Street SW, the Edward Simon Lewis House was constructed around 1817. The two-and-one-half-story, three-bay, Federal-style brick residence is one of only a few older buildings preserved during the urban renewal of Southwest, DC. It is representative of early 19th century vernacular building in Washington, DC. The Edward Simon Lewis House was listed in the DC Inventory in 1964 and the National Register in 1973.

Wheat Row

Wheat Row comprises four attached three-story brick residences. Located at 1315, 1317, 1319, and 1321 Fourth Street SW, these structures were built at the end of the 18th century as speculative properties. The main bodies of the buildings are Flemish bond brick founded on stone basements. The main facades are symmetrical and characterized by stone sills, lintels, and keystones. Wheat Row was listed in the DC Inventory in 1964 and the National Register in 1973.

WASA Pump Stations (S. Capitol Street and O Street)

Constructed c. 1915, the South Capitol Street Pump Station is a two-story, concrete and stucco building designed in the Art Deco style. It is located within the infrastructure for the South Capitol Street Bridge on the east side of the Anacostia River. The O Street Station is a two-story Beaux Arts-style brick structure located on the west side of the Anacostia River (see Figure 3.2.34). These two stations, as well as the Engineer's House within Poplar Point, were determined eligible for listing in the National Register in 2006.



Figure 3.2.34 WASA Pump Station (South Capitol Street)

Source: AECOM, 2009

Congressional Cemetery

Located at 18th and E Streets SE, Congressional Cemetery was established in 1807 with the purchase of 4.5 acres of land from the federal government. The property grew over time to eventually encompass approximately 30 acres, with numerous politicians, judicial and military officers interned there (see Figure 3.2.35). It is significant as one of the first true national cemeteries, since Arlington Cemetery and others were reserved for the military. The cemetery was listed in the DC Inventory in 1964 and the National Register in 1969.



Figure 3.2.35 Congressional Cemetery
Source: AECOM, 2009

Barney Circle Historic District

The proposed Barney Circle Historic District is bounded by 17th Street, SE on the east, Potomac Avenue, SE on the north, Kentucky Avenue, SE on the west, and Barney Circle on the south. Located just west of Congressional Cemetery, the Barney Circle neighborhood is a residential row house community that traditionally housed Navy Yard employees. The structures are modest in scale and were constructed in the Colonial Revival style as “daylight” or front porch houses. It is potentially significant both for its design features and for its place in the planning and development of the city of Washington. The DC SHPO is in the process of preparing a National Register nomination for the district.

The George Washington Memorial Parkway

Beginning with the Capper-Cramton Act of 1930, and constructed in stages from 1930 to 1966, the George Washington Memorial Parkway (GWMP) extends from Memorial Bridge south to Mount Vernon, and north and west on the Potomac River to the Capital Beltway. The GWMP preserves a portion of the natural terrain that existed when the city of Washington was founded by George Washington, providing important views of the city and the Potomac River. Further, the parkway is associated with planning for the city of Washington

that occurred over several centuries, from the founding of the city with the L'Enfant Plan, to the extension of the Permanent System of Highways Plan in 1898, and the McMillan Plan in 1902. Landscape architects Frederick Law Olmsted, Jr., Charles W. Eliot II, and Gilmore D. Clarke were involved in the planning and execution of the parkway over this period. Thus, its importance is derived from its landscape features, formal landscape design elements, role in planning for the federal city, and as the first modern motor parkway. The parkway contains a wide range of wildlife habitats, recreation areas, historic sites, and memorials. Other key features include its varied topography, views and vistas, particularly of the Potomac River and opposite shorelines in Maryland and the District, the roadway, and varied small-scale features. The south section of the Parkway was listed in the Virginia Landmarks Register in 1981 and in the National Register in 1991. The north section of the GWMP was listed in the Virginia Landmarks Register in 1991 and in the National Register in 1995.

Washington National Airport Terminal and South Hangar Line

Washington National Airport Terminal was designed in 1941 as part of a larger airport complex. The terminal is a four-story, arc shaped structure that blends elements of Art Deco/Streamlined Moderne, Colonial Revival, and Stripped Classical styles (see Figure 3.2.36). Its stepped massing, banded window, modern materials, and horizontal orientation are all hallmarks of the Art Deco/Moderne movement. The building affords sweeping views of the DC skyline, as well as the runways that lie between the terminal and the river. These views are important to the modern notion of the “spectator airport.” The South Hangar Line was constructed between 1941 and 1948, and represents an important technological advance in the construction of airplane hangars. The terminal and south hangar line were listed in the Virginia Landmarks Registry in 1995 and in the National Register in 1997.



Figure 3.2.36 Washington National Airport

Source: AECOM, 2009

Additional Resources

Additional properties located within the APE that have been determined eligible, or may potentially be eligible, for listing in the National Register of Historic Places, include Carrollsburg Place, the Old National Capital Pump Station, the Metrobus Garage at 17 M Street, SE, the PEPCO Power Plant on Buzzard Point, and Bolling Air Force Base. Carrollsburg Place, the PEPCO Power Plant, 17 M Street, SE, and the Old National Capitol Pumphouse were identified as potentially eligible within a survey of historic architectural resources completed in support of the South Capitol Street EIS. As documented within the St. Elizabeths EIS, the Anacostia Freeway may also be eligible for listing in the National Register of Historic Places. Other historic properties may also be located within the APE. Efforts to identify and evaluate historic resources may continue as the NEPA and Section 106 processes continue.

3.2.2 Visual Resources

3.2.2.1 Methodology

The existing visual resources of the areas that are in proximity to the Project Area were determined through field reconnaissance. These visual resources are categorized into a series of subareas or “visual character areas” in the description of the study area. The visual character areas include the neighborhoods, open space, and street corridors that surround the Project Area, such as Historic Anacostia, St. Elizabeths, and Barry Farm, as well as those areas across both the Anacostia and Potomac Rivers that are visually connected to the site due to the open expanse of the river or topography. The visual character areas are identified in Figure 3.2.37.

3.2.2.3 Historic Urban Design Framework

The physical structure and design of Washington, DC is based upon the L’Enfant Plan of 1791, viewed as one of the most important achievements in urban planning. The new city was sited within a topographic bowl, formed by a ridgeline that encircles the city. The plan incorporates a coordinated system of radiating avenues, vistas, and parks overlaid on an orthogonal grid of streets. The diagonal avenues provide physical as well as visual connections between prominent features throughout the District of Columbia (NPS, 1994b). The Mall forms an uninterrupted greensward from the U.S. Capitol Building to the Washington Monument, and North, South, and East Capitol Streets form the main axes of the city, radiating from the U.S. Capitol Building.

While the L’Enfant Plan encompassed the area west of the Anacostia River, it did not address development east of the Anacostia. At the turn of the century, the McMillan Commission envisioned a coordinated system of parks that would serve residential neighborhoods at the edges of the L’Enfant City. This resulted in the establishment of Anacostia Park on the eastern bank of the Anacostia River. Looking beyond L’Enfant’s Plan area, the McMillan Commission also considered the opportunities presented by the Civil War Forts that ran along the city’s escarpment. The McMillan Commission envisioned Fort Circle Drive as a ring of parkland formed by the forts and connected parkland. Although Fort Circle Drive was never completed, the ring of parkland is nevertheless an important defining element of the Capital City.



Figure 3.2.37 Visual Character Areas
Source: AECOM, 2010

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3.2.2.4 Visual Environment

Project Area

The following discussion of the visual character of the Project Area is divided into two sections: Poplar Point, and southern Anacostia Park and North Field.

Poplar Point

The existing visual environment of Poplar Point can be characterized as predominantly open space on the eastern portion of the site with varying degrees of development on the western portion (see Figure 3.2.38). The eastern boundary is formed by the 11th Street Bridges and its associated interchanges. The eastern portion of the site is also home to NPS Complex, which houses the USPP Aviation Facility, the USPP Anacostia Operation Facility, and the NPS NACE Headquarters. Contained within the western part of the site are the former DC Lanham Tree Nursery and the Architect of the Capitol Nursery. Further west is transportation infrastructure that includes the Frederick Douglass Bridge, and the Suitland Parkway interchange. The southern boundary of the site is formed by the Anacostia Freeway (I-295), which physically and visually divides the site from Historic Anacostia.



Figure 3.2.38 West end of Poplar Point

Source: AECOM, 2009

The western portion of Poplar Point is comprised of a complex of greenhouses, formerly used by DC Lanham and the Architect of the Capitol. They are a single story in height and long and narrow in mass. The buildings were constructed in the 1920s and occupied until 1993. Since then, they have fallen into a state of disrepair. The greenhouse area has been fenced off and invasive plant species have grown such that they obscure views of the greenhouse buildings. A large parking lot for buses can also be found west of the greenhouses, in proximity to the Frederick Douglass Bridge. The northbound approach to the Frederick Douglass Bridge screens the parking area from view when looking west. Between the bridge infrastructure and the greenhouses is a large tract of grassy open space. Poplar Point's prominent location along the Anacostia River

affords it impressive views of the Capital City (see Figure 3.2.39). When looking north from western portion of the site, the viewshed includes the U.S. Capitol Building along New Jersey Avenue, a direct line-of-site towards the Washington Monument northwest of the site, the National's Ballpark, the Southeast Federal Center, and the Washington Navy Yard. Looking west from Poplar Point, Hains Point, Bolling Air Force Base, and Buzzard Point are visible. Looking south, most of views are obscured by the vegetation and the Anacostia Freeway.



Figure 3.2.39 View north from Poplar Point towards the U.S. Capitol Building
Source: AECOM, 2009

The NPS Complex lies within the eastern portion of Poplar Point. The buildings range from one to three stories and are connected to each other through shared surface parking lots and sidewalks. The buildings are uniformly block-like in design and lack distinguishing architectural characteristics. A seawall runs along the northern end of this section of the site and follows Anacostia Drive, SE westward to its terminus at Good Hope Road. West of the NPS Complex is a large tract of open space with a small grove of trees near the helipad. Significant views include the Southeast Federal Center and the Navy Yard north of the project site across the Anacostia River. Views to the west are obscured by the thick vegetation, while views to the east are partially obscured by the 11th Street Bridges. Views looking directly south from the NPS Complex are obscured by the WMATA garage.



Figure 3.2.40 Panoramic View Towards the 11th Street Bridges from the WMATA garage
Source: AECOM, 2009

Southern Anacostia Park and North Field

This portion of the Project Area contains open fields bordered to the east, west, and south by bands of trees. The Anacostia Fieldhouse, a multi-story frame and brick structure capped by a cupola (see Figure 3.2.41), as well as a pool, tennis courts, playground, and large surface parking lot are located between the 11th Street and Sousa Bridges. Anacostia Drive, a narrow two-lane right-of-way, runs along the edge of the park by the water. Between the Sousa Bridge and the CSX Railroad Bridge, Anacostia Drive forms a loop, encircling a series of basketball courts, a roller rink, and a surface parking area. The roller rink is a large, modern open-air structure capped by a flat roof. It rests within an open, grassy landscape dotted by trees. North Field, an open expanse of grass, is located at the east end of the Project Area (see Figure 3.2.42).



Figure 3.2.41 Anacostia Fieldhouse within southern Anacostia Park

Source: AECOM, 2009



Figure 3.2.42 North Field

Source: AECOM, 2009

Visual Character Areas

The visual character areas surrounding the Project Area that could potentially be affected by the land transfer and redevelopment of Poplar Point, as well as the relocation of the NPS facilities and recreational improvements within southern Anacostia Park, were determined through field reconnaissance. These areas are discussed below.

Historic Anacostia

The area known as Historic Anacostia is bounded by the Howard Road and the Anacostia Freeway to the north, Fort Stanton Park to the south, the Suitland Parkway to the west and Good Hope Road to the east. Two distinct visual areas exist within Historic Anacostia: the Martin Luther King, Jr. Avenue commercial corridor and the surrounding residential areas. The Martin Luther King, Jr. Corridor serves as one of the main commercial corridors in Anacostia. The wide, four-lane roadway is lined on both sides by mixed-use buildings constructed in a variety of architectural styles. The majority of the buildings are small, older two-story structures (see Figure 3.2.43); however several larger, modern buildings are interspersed along the Avenue. Indicative of the area's urban setting, many of the buildings have no setback from the curb and are spaced close together. Views along Martin Luther King, Jr. Avenue towards the project site are largely obscured by the Anacostia Freeway, although the site is partially visible from the roadway's intersection with W Street.



Figure 3.2.43 Martin Luther King Jr. Avenue Looking Northeast
Source: AECOM, 2009

The area south and east of Martin Luther King, Jr. Avenue is largely residential. Developed in the 19th century as worker housing for employees at the Washington Navy Yard, this portion of Historic Anacostia is dominated by detached single-family row houses displaying a range of architectural styles. Many of the homes are spaced very close together with minimal setback from the sidewalk. The streets are largely tree-

lined, framing views along these corridors (see Figure 3.2.44). Elevations rise as you move south up the Anacostia escarpment; views of the Monumental Core are provided along Howard Road, Maple View Place, and Talbert Street at these higher elevations. The Frederick Douglass National Historic Site is located on a prominent hill in the center of the community. This location provides panoramic views of downtown Washington, DC, as well as the Anacostia River and Poplar Point.



Figure 3.2.44 Historic Anacostia
Source: AECOM, 2009

Good Hope Road Corridor

Good Hope Road, which runs perpendicular to Martin Luther King, Jr. Avenue and extends south to Fort Stanton Park, is comprised of mainly one- and two-story commercial buildings. These buildings tend to front the street with little to no setback and are visually connected by brick sidewalks that run from Martin Luther King, Jr. Avenue to Minnesota Avenue on both sides of the road (see Figure 3.2.45). Views looking north and south along Good Hope Road are tightly framed by these buildings. A small triangular park is located at the intersection of Good Hope Road and Minnesota Avenue. Surface parking lots are also interspersed along the corridor. Views towards the site at the northern end of the corridor are obscured by the Anacostia Freeway. Moving south on the right-of-way, however, the topography rises affording views of downtown Washington, DC.



Figure 3.2.45 View North on Good Hope Road
Source: AECOM, 2009

Fairlawn/Greenway

Minnesota Avenue, SE is a broad, four-lane thoroughfare that connects Anacostia with Prince George's County. The alignment of the roadway runs roughly parallel to the Anacostia Freeway between Good Hope Road, SE and Massachusetts Avenue. Between Minnesota Avenue and the Anacostia Freeway is an expansive residential district. The Fairlawn neighborhood lies at the southwest end of this district (see Figure 3.2.46) and is comprised primarily of single-family detached homes, semi-detached residences, attached townhouses, and low-scale apartment buildings. The Greenway neighborhood lies northeast of Fairlawn and is less dense, particularly at its east end where lot sizes are larger and single-family residences dominate. The project site is physically and visually divided from this area by the Anacostia Freeway.



Figure 3.2.46 View along Minnesota Avenue in the Fairlawn Neighborhood
Source: AECOM, 2009

Southeast Waterfront

The Southeast Waterfront spans the area between North Field, at the north end of the Project Area, and the Whitney Young Bridge. It is bordered to the east by I-295 and to the west by the Anacostia River. The southern boundary is defined by railroad tracks that cut diagonally across the river, then running north parallel to I-295. The railroad tracks bracket a small one-story building, several antennae, and surface parking lot (Figure 3.2.47). The balance of the area is densely wooded, obscuring views to and from the river.



Figure 3.2.47 Railway infrastructure just north of North Field
Source: AECOM, 2010

Fort Circle Parks

The Fort Circle Parks include land that was utilized for Union fortifications during the Civil War. In the mid-20th century, a plan to reuse the forts was developed by the federal government. The plan called for the creation of park system that connected the forts while creating a ring of green space around the District. Two of the forts in proximity to Poplar Point are Fort Stanton and Fort Dupont. Fort Stanton is located southwest of the site at the top of the Anacostia escarpment. It is primarily wooded; however, there is an open grassy area along Morris Road (see Figure 3.2.48). The original Fort has been removed, however, the vantage point from where the fort once stood affords a panoramic view of downtown Washington, DC, including Poplar Point. Fort Dupont is located further east than Fort Stanton, near the intersection of Massachusetts Avenue and Alabama Avenue. Similar to Fort Stanton, the original fort structure does not exist; however, the area where it once stood has been converted to a picnic area. Looking towards Poplar Point and southern Anacostia Park, the thick vegetation of the park has obscured any potential views.

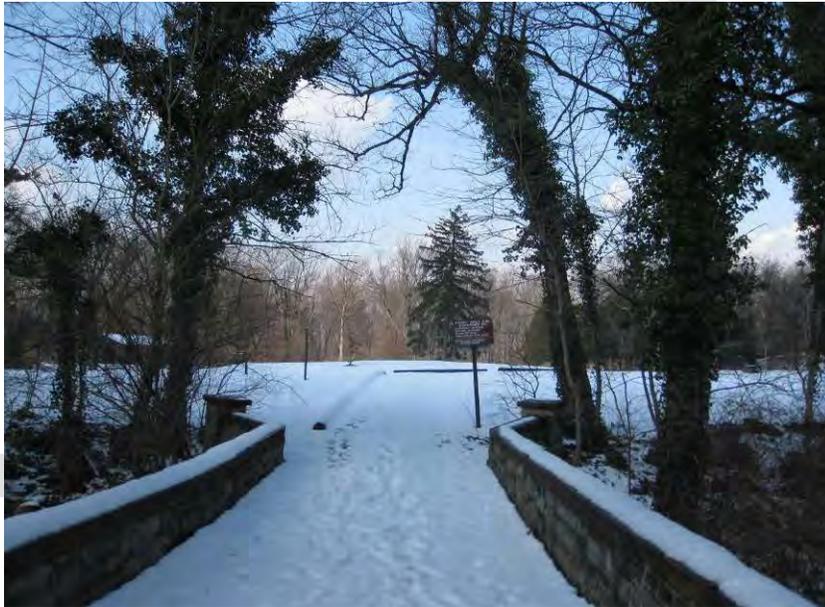


Figure 3.2.48 Fort Dupont
Source: AECOM, 2009

Bolling Air Force Base/Naval Support Facility Anacostia

Directly adjacent to Poplar Point to the west are Bolling AFB and NSF Anacostia. These bases are bordered to the north by the Frederick Douglass Bridge, to the west by the expanse of the Potomac River, and to the east by the Anacostia Freeway. The Blue Plains Wastewater Treatment Plant lies south of the bases. Bolling AFB features historic two-story brick homes near the base's eastern perimeter and modern, two-story family housing occupies a large area of land near the western shoreline. Buildings in the interior of the base also vary in size and age from smaller one- and two-story historic buildings to two- to four-story infill buildings with the exception of one large, nine-story barracks building. NSF Anacostia is generally characterized by large, interspersed buildings separated by wide open spaces with small landscaped areas and large surface parking lots (see Figure 3.2.49). Bolling AFB and NSF Anacostia afford significant panoramic views of Buzzard Point, Fort McNair, East Potomac Park, and Hains Point to the north and west, with the Washington Monument in the distance. Views of the U.S. Capitol Building up South Capitol Street are tightly framed by buildings across the river. Views directly west from the site include the Ronald Reagan Washington National Airport. Poplar Point can be seen from the northern part of NSF Anacostia, however, it is partially obscured by the Frederick Douglass Bridge and associated infrastructure.



Figure 3.2.49 View of NSF Anacostia from Frederick Douglass Bridge

Source: AECOM, 2009

St. Elizabeths Campus

The St. Elizabeths Campus is located southwest of Poplar Point on an upland plateau. The western portion of the campus that abuts I-295 is densely wooded; the topography drops dramatically at the western edge of the property. East of this, an open grassy lawn dotted by trees forms the center of the west campus. The four-story Victorian hospital building sits in the center of this area and is surrounded by brick and frame structures in a variety of architectural styles and heights. A brick and stone wall with entry gates borders the west campus along Martin Luther King, Jr. Avenue. The northern edge of the west campus, where the topography begins to drop, affords panoramic views of the city, including the Washington Monument and the U.S. Capitol Building. The east campus is dominated by red brick structures capped by red tile roofs in a variety of styles and heights (see Figure 3.2.50). They are encircled by a high iron fence. A dense tree line divides the east campus buildings from Suitland Parkway.



Figure 3.2.50 View of St. Elizabeths Gate from Martin Luther King Jr. Avenue
Source: AECOM, 2009

Barry Farm

Southwest of the project site lies the Barry Farm neighborhood. Dating from the 1950s, Barry Farm is comprised of a series of two-story multi-family residential structures. The buildings are clad in stucco and each contains between four and eight residential units (see Figure 3.2.51). The structures are arranged in a rectilinear fashion along tree-lined streets, and many are bounded by chain link fences. A large recreational center is located on the north side of the development, near Martin Luther King, Jr. Avenue. The development is physically and visually divided from surrounding areas by highway infrastructure, including Anacostia Freeway to the north and west, and Suitland Parkway to the east. As such, views north towards the city are obscured.



Figure 3.2.51 View of a typical Barry Farm Housing Unit
Source: AECOM, 2009

Buzzard Point/Nationals Ballpark

Northwest of Poplar Point along the Anacostia River is Buzzard Point. Bounded on three sides by the Potomac and Anacostia Rivers and to the north by M Street, SW, this area includes the Florida Rock property, the massive PEPCO Power Plant, the James Creek Marina, and Fort McNair. Fort McNair, forming the western shoreline of Buzzard Point, is generally comprised of one to three-story buildings clustered at the edges of the property. An expansive lawn oriented north-south runs through the center of the campus, broken at its mid-point by several buildings and tennis courts. The southern end of the Fort is anchored by the monumental Army War College building. North and east of the Fort, the James Creek Marina and several mid-rise block-shaped buildings line the waterfront. Further east, the Florida Rock property is industrial in nature and dominated visually by large piles of gravel, heavy machinery and trucks, paved areas and limited structures. North and east of Florida Rock, beyond the Frederick Douglass Bridge, the massive Nationals Ballpark is a dominant visual feature on the waterfront (see Figure 3.2.52). The ballpark affords unencumbered, panoramic views of Poplar Point and southern Anacostia Park. Views from the southern tip of Buzzard Point (along with views from north and west of there) towards the site are partially obscured by the Frederick Douglass Bridge.

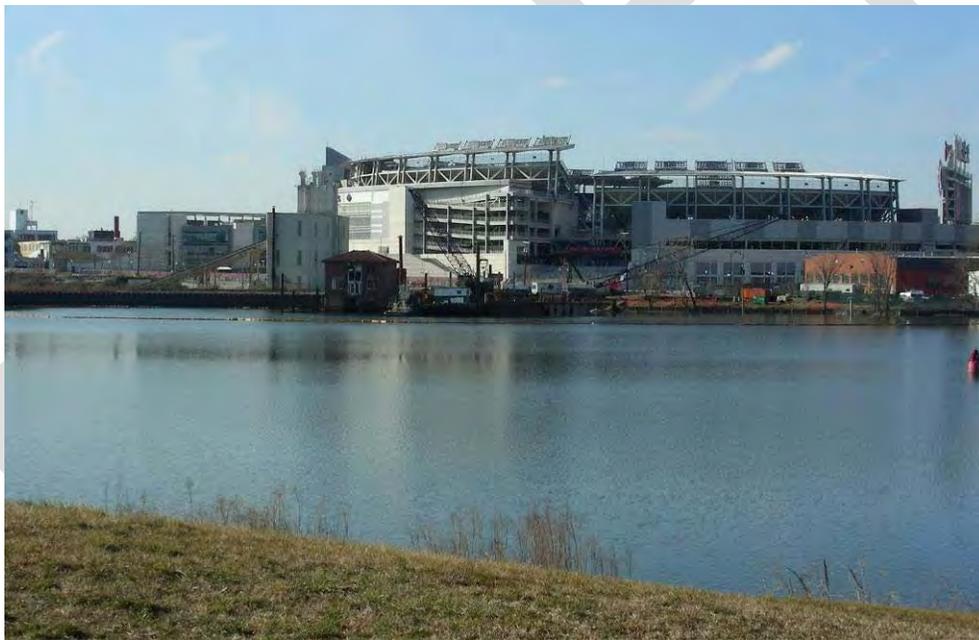


Figure 3.2.52 Nationals Ballpark as Viewed from Poplar Point
Source: AECOM, 2009

Washington Navy Yard/Southeast Federal Center

Directly north of the Project Area and across the Anacostia River is the Washington Navy Yard and Southeast Federal Center (SEFC). Buildings within this area range from two to ten stories. The Washington Navy Yard is comprised of a combination of 19th and early 20th century industrial structures, several historic residences, a series of modern office buildings and surface and structured parking. The predominant building material is brick, and a brick wall surrounds the property on the north and east sides (see Figure 3.2.53). The USS Barry, a Navy destroyer, is a dominant visual element along waterfront. The Southeast Federal Center, located just west of the Washington Navy Yard, is undergoing redevelopment. Like the Navy Yard, the dominant building material is brick; however, the Southeast Federal Center contains a larger proportion of modern structures. M Street, SE, along the northern border of the Southeast Federal Center and Navy Yard, is bordered by a series of modern mid-rise office buildings. The Department of Transportation Headquarters, a mid-rise brick and glass office building, is a dominant element in views along M Street as well as views from across the Anacostia River.



Figure 3.2.53 10th Street within the Washington Navy Yard

Source: AECOM, 2009

Northeast Waterfront

The Northeast Waterfront spans the area between the Washington Navy Yard and the Whitney Young Bridge (see Figure 3.2.54). At the west end of the waterfront, two modern four-story buildings are located at the corner of M and 12th Streets, SE, while a series of boathouses and marinas line the river between the 11th Street and Whitney Young Bridges. The Southeast Freeway borders this area to the north, physically and visually segregating it from Capitol Hill. Another marina is located east of the 11th Street Bridges, while the open space that comprises Congressional Cemetery rests on a hill to the north. DC General Hospital, the Army National Guard Armory, and RFK Stadium are dominant elements further east, approaching the Whitney Young Bridge. The Anacostia Riverwalk trail runs near the water between Pennsylvania Avenue and East Capitol Streets. The Project Area is visible from the boathouses and marinas along the waterfront. Looking north and east from the Project Area, views of the waterfront are partially obscured by the 11th Street Bridges.



Figure 3.2.54 View of the Northeast Waterfront
Source: AECOM, 2009

East Potomac Park/Hains Point

East Potomac Park and Hains Point lie northwest of Poplar Point across the Anacostia River. The area extends from the Tidal Basin and National Mall southward towards the confluence of the Anacostia and Potomac Rivers. The topography of the park is flat, and the landscape is largely open grass punctuated by trees (see Figure 3.2.55). Trees border the waterfront on both the east and west sides of the park. The center of the park is dominated by a golf course with tree-lined fairways. The park also includes a mini golf course, tennis courts, and a pool. A picnic area and small one-story visitor center are at the southern end of the park on the point; however, the visitor center is largely screened by vegetation. Views from Hains Point towards the Project Area are partially obscured by NSF Anacostia and the Frederick Douglass Bridge.



Figure 3.2.55 East Potomac Park
Source: AECOM, 2009

National Mall

Anchored in the east by the U.S. Capitol Building and the west by the Lincoln Memorial, the National Mall is an expansive greensward that runs through the center of Washington, DC. A key element in both the L'Enfant and McMillan Plans for the city, the Mall is characterized by a central tree-lined lawn with museums located along the edges of the greensward on the eastern end (see Figure 3.2.56). The Washington Monument sits on a slight rise near the center of the National Mall, on axis with the U.S. Capitol Building and the Lincoln Memorial. The landscaped gardens of the Ellipse and the White House Grounds lie north of the Washington Monument.



Figure 3.2.56 National Mall
Source: AECOM, 2009

Capitol Hill

Capitol Hill rises topographically north of the Washington Navy Yard and Southeast Federal Center. The street patterns reflect L'Enfant's plan for the city, with a north-south grid punctuated by diagonal avenues. The area dominated by row-houses of varying heights, materials, and styles constructed over the last two centuries (see Figure 3.2.57). Pennsylvania Avenue and 8th Street, SE are major commercial corridors within the district. Street trees line the roadways, framing views along the corridors. The area is bounded to the south by the elevated Southeast Freeway, a dominant visual element in this portion of DC. The U.S. Capitol Building, sited at the peak of the hill, is visible along South Capitol Street, as well as from points across the Anacostia River, including Poplar Point, the Frederick Douglass National Historic Site (Cedar Hill), and Fort Stanton. Views towards Poplar Point from Capitol Hill are largely obscured by the street trees, the Washington Navy Yard, and the Southeast Freeway.



Figure 3.2.57: Capitol Hill
Source: AECOM 2010

West of the Potomac River

The area west of the Potomac River, in Arlington, Virginia, varies widely in its visual character. It is comprised of low-scale residential areas, high-rise commercial and residential structures, roadway infrastructure, open space, and a commercial airport (see Figure 3.2.58). Views that include the project site are limited to points along the Potomac River, and topographic highpoints, including the Iwo Jima Memorial and Arlington House.



Figure 3.2.58 Washington National Airport from Gravelly Point
Source: AECOM, 2009

Night Lighting

Outdoor lighting is provided in Washington, DC for visibility and security on roadways, parking lots, pedestrian pathways, and buildings. The degree of a visual lighting impact is affected by a lighting source's contrast with the ambient lighting background, as seen by the viewer. Sources of light within the Project Area are minimal. In views from the west side of the Anacostia River, the Anacostia Freeway, which borders the project site to the south, is dimly lit. Little light is also emitted from Historic Anacostia and the Anacostia Highlands. The Frederick Douglass Bridge is a prominent feature in night views to the south from the west bank of the Anacostia River, as it is brightly lit with a series of blue lights. Portions of Bolling/Anacostia are also dominant light sources, as is an apartment complex southeast of Poplar Point off of Good Hope Road, and National Airport across the Potomac River. In night views from the east side of the Potomac River, the Nationals Ballpark is the predominant light source, although only when in operation. Portions of the waterfront at the Washington Navy Yard are also brightly lit.

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3.3

NATURAL RESOURCES

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3.3.1 Geophysical Resources

3.3.1.1 Geology

The Project Area falls within the Atlantic Coastal Plain Physiographic Province. The western border of the Atlantic Coastal Plain is a geographic Fall Line that spans a majority of the east coast and delineates the crystalline (Piedmont Physiological Province) and sedimentary (Atlantic Coastal Plain) rock formation regions present there. The Project Area is southeast of the geological Fall Line. The Atlantic Coastal Plain's geology is characterized by unconsolidated and semi-consolidated deposits ranging in geologic age from the Cretaceous to Quaternary periods.

The unconsolidated materials on-site are classified as Alluvium and Artificial Fill (Qal). Alluvium is characterized by level or minimally sloping planes of sedimentary deposits of clay, silt, sand, gravel, and even large fragments of rock. These areas are generally associated with past or present drainage courses. No significant geological features exist in the Project Area. Bedrock was not encountered in any soil borings taken in 2002 (Ridolfi, 2003a).

3.3.1.3 Topography

The Project Area is generally flat, with gently sloping terrain towards the Anacostia River, which comprises the Project Area's northern border. In the Poplar Point portion of the Project Area, ground surface elevations are relatively consistent throughout ranging from a high point of 13 feet above mean sea level (msl) to a low point of one foot above msl. The highest recorded elevations are found in the southwest corner of Poplar Point and ranged from 9 to 13 feet above msl. The lowest recorded elevations are found in the central portion of Poplar Point within Wetland C and ranged from one foot to 5 feet above msl. The eastern portion of Poplar Point had similar characteristics as the southwest corner with elevations ranging between 5 and 12 feet above msl. The elevation near the southern greenhouses is approximately 6 feet above msl (Ridolfi, 2003a).

Southern Anacostia Park is also relatively flat with surface elevations ranging from 4 to 17 feet above msl with a majority of the site following between 7 to 9 feet above msl. The overall flat topography of the site is indicative of its primary use as recreation and athletic fields. The highest recorded elevations were found around in the central portion of the park near the Anacostia Park Fieldhouse and pool. The lowest elevation is found at the eastern end of the site near the playground and picnic area with a recorded elevation of 4 feet above msl.

The North Field portion of the Project Area also has a generally flat topography with most elevations ranging from 12 to 16 feet above msl. Steeper slopes exist along the Anacostia Freeway to meet the higher elevation of the highway. These slopes flatten out as you move away from the Anacostia Freeway towards the River, providing a flat surface for the Skating Pavilion, Parking and Urban Treehouse that all exist at the North Field. The site where the U.S. Park Police Facility is proposed has an overall flat grade with an elevation of 12 feet above msl.

The natural topography of Poplar Point was altered by the dredging and filling of the Anacostia and Potomac Rivers. In order to widen the navigable channels of the rivers and to fill in the mudflats at Poplar Point, the riverbed was dredged and the dredging spoils most likely placed on Poplar Point due to its proximity to the Rivers' junction. Prior to the dredging, which occurred between 1910 and 1920, much of Poplar Point consisted of tidally influenced mudflats periodically submerged under 3 to 5 feet of water. This historic condition was confirmed through an examination of historic nautical maps dating back to the late 1800s. In addition to the introduction of dredging spoils, grading activities have also played a large role in shaping the Project Area's topography.

3.3.1.3 Surface Soils

Poplar Point contains several different soil types. In general, the surface soils consist of fill material and dredged spoils comprised of silt, clay, gravel, and sand with occasional solid materials interspersed such as brick, glass, wood and concrete fragments. The depths of surface soils vary throughout Poplar Point, ranging from 0.5 to 20 feet. Surface soil depth, in general, follows the topographic contours of the site with thickness ranging from 4 to 20 feet in the southwest corner of the site and 2 to 3.5 feet in Wetland 1. Along the eastern side of the site, soil boring tests revealed surface soil thickness ranging between 10 to 13 feet. Near the southern greenhouses, soil thickness ranged between 0.5 and 4 feet thick (Ridolfi, 2003a).

In order to investigate the specific classifications of the Project Area's surface soils, the U.S. Geologic Survey (USGS) was consulted. The following soils classifications exist within the Project Area: Udorthents; Udorthents,smoothed; Udorthents,sandy; Urban land; Melvin silt loam; and luka sandy loam.

- Udorthents are comprised primarily of heterogeneous earth fill deposited on somewhat excessively or poorly drained soils. Composition of these soil types is approximately 80% earthy material and 20% other materials that are generally man-made. The earthen fill material is comprised of organic and inorganic waste material along with various soils. Thickness varies by location, but is typically more than 20 inches. Permeability, available water capacity, runoff, and internal drainage are also variable. Due to these physical properties, most areas of Udorthents are subject to subsidence and have poor suitability for use as building sites. The Project Area contains three distinct Udorthent classifications: Udorthents (U1); Udorthents, sandy (U3); and Udorthents, smoothed (U6). The various types of Udorthents comprise a majority of the site's soil content. Udorthents (U1) is found in the central portion of the Project Area and along the Anacostia River banks. Udorthents, sandy (U3) is found in the eastern portion of the Project Area near the 11th Street Bridges. Udorthents, smoothed (U6) is found mostly along the southern edge of the Project Area with a large concentration adjacent on the west to the Melvin silt loam soil group.
- Urban land (Ub) is characterized as land with more than 80% of its surface covered by buildings, concrete, asphalt, or other impervious surfaces. It also includes lands containing miscellaneous fill over streams, swamps, floodplains, and tidal marshes. This soil can be found in the developed areas of the Project Area including the NPS and US Park Police Facilities, WMATA Parking Garage, and along Howard Road Parcels.
- Melvin silt loam (Mp) soils are characterized as nearly level and very poorly drained. Permeability of this soil is moderate with slow runoff and little to no hazard of erosion. The soil is located primarily

along the River and is subject to flooding. Due to the soil's wetness and the hazard of flooding, it has poor potential for building sites, planting, lawns, and vegetable gardens. It has fair to poor potential for most recreational uses. This soil can be found in the western-central portion of the Project Area near the wetlands.

- Iuka sandy loam (Ik) soils are characterized as nearly level, with slopes ranging from 0 to 2 percent, and moderately well drained. The soil's proximity to the River makes the frequency of flooding occasional and the depth to the water table ranges between 1 to 3 feet. These features limit the development that could occur in this portion of the Project Area. The soil is located primarily in the central portion of Southern Anacostia Park, where a majority of the playing fields and Fieldhouse are located.

According to the USGS, the Melvin silt loam soils are considered "farmland of statewide significance." Due to this designation, portions of the site are subject to the Farmland Protection Policy Act (FPPA) as amended in 1984 and 1994. The FPPA was proposed by the U.S. Department of Agriculture "to minimize the extent to which federal programs contribute to unnecessary and irreversible conversion of farmland to nonagricultural uses, and to assure that federal programs are administered in a manner that, to the extent practicable, will be compatible with State, unit of government, and private programs and policies to protect farmland."

The Melvin silt loam is also considered to be hydric soil. Hydric soils are defined as soils sufficiently saturated during the growing season to support the growth and reproduction of hydrophytic vegetation. These soils can generally be found in or near the wetlands, as is the case at Poplar Point.

3.3.1.4 Subsurface Soils

A geophysical survey was conducted to provide insight on the subsurface soil conditions of the site. As previously stated, the uppermost layer consists primarily of fill and dredging spoils that vary in thickness from 6 inches to 20 feet. Under this layer of surface fill, the survey identified five distinct subsurface soil groups: Holocene Clay, Upper Permeable Unit, Middle Permeable Unit, Lower Permeable Unit, and Underlying Cretaceous Clay (Ridolfi, 2003a).

- Holocene Clay was encountered throughout most of the Project Area at a depth of approximately 20 feet. The clay is characterized as soft gray silty clay with occasional organics and pockets of peat. The clay displays a transgressive character evident in the fine-grain sediments organized in an aggradational pattern. This type of occurrence is caused by a major rise in base level, which occurred in the Holocene epoch. It is likely that areas where no Holocene Clay was encountered represent the former shoreline of Poplar Point. These areas are primarily concentrated in the southwestern portion of the Project Area and are consistent with historic maps of the Project Area. The thickness of the Holocene Clay varies between 35 to 42 feet below msl in the northern, central, and western portions of the site. This compares to elevations ranging between 20 feet below msl to one foot above msl in the southwestern and south-central portions of the Project Area. Due to the varying depths of the Holocene Clay, it is believed that a channel and terrace feature was present prior to the placement of fill with the terrace located in the southwestern and south-central portions of the Project Area (Ridolfi, 2003a).

- The Upper Permeable Unit was encountered at some soil borings underneath the surface fill and above the Holocene clay. The unit is characterized as a coarse to fine-grained wet sand and is similar to the surface fill in composition. The similarities are so great that it is reasonable to believe that the upper permeable unit is fill material deposited in the early stages of dredging. The major distinguishing characteristics between the two soils are the upper permeable unit contained no man-made materials and is comprised of pockets of mottled clay. Surface soils associated with this unit are generally fine sand and consistent over large area. There also appears to be two distinct bodies of this unit found north of the terrace as it was encountered near Wetland 1 and between the southern and northern greenhouses (Ridolfi, 2003a).
- The Middle Permeable Unit was encountered at several borings throughout the Project Area. This unit is characterized as a wet, brown, fine sand and sandy, rounded gravel. It ranges in depth to 25 feet at its lowest point and appears to also be situated on top of the former terrace (Ridolfi, 2003a).
- The Lower Permeable Unit is similar in character to the middle permeable unit as it is a wet, fine sand with sandy, rounded gravel. Despite their similarities, the lower permeable unit and middle permeable unit were not connected at any boring. The lower permeable unit was encountered at depths varying from 37 feet to 40 feet below msl and extended to depths ranging from 46 to 51 feet below msl. In relation to the other soil units, the top of the lower permeable unit is approximately 12 to 15 feet below the middle permeable unit (Ridolfi, 2003a).
- The Cretaceous Clay is the lowermost subsurface soil unit encountered. It is characterized as a hard, silty, orange and gray mottled clay with sand and gravel. The clay was encountered below and in direct contact with the middle and lower permeable units and in one location in contact with the Holocene clay (Ridolfi, 2003a).

3.3.2 Water Resources

3.3.2.1 Surface Water

The Project Area is located adjacent to the Anacostia River, which is a jurisdictional Water of the United States and subject to the regulatory control of the US Army Corps of Engineers (USACE). The Anacostia River joins the Potomac River approximately one mile downstream from the Project Area and the Potomac eventually discharges to the Chesapeake Bay in southeastern Virginia, approximately 110 miles downstream from this confluence. The Anacostia River and its tributaries are considered part of the Chesapeake Bay watershed. The District of Columbia, Pennsylvania, Maryland, and Virginia, are subject to the 1983 Chesapeake Bay Agreement. While the District of Columbia does not have regulations specifically designated as Chesapeake Bay Program regulations, its ordinances for erosion, sediment control, and stormwater management support the mission of the Chesapeake Bay Program by protecting the Potomac and Anacostia Rivers from surface runoff.

The Anacostia River watershed includes the District of Columbia and parts of Maryland, totaling approximately 176 square miles of predominantly urban developed land. The geographic distribution of the watershed is comprised of three jurisdictions. The majority of the area is within Prince Georges County, MD (49%), followed by Montgomery County, MD (34%), and the District of Columbia (17%). Historically, there

have been additional surface water tributaries to the Anacostia River; however, over time, they have been captured by storm drains and lost their status as surface water (DDOT/FHA, 2007)

The Anacostia River is unique in that it is completely fresh water; but remains tidally influenced. The northern extents of the tidal influence are the Northeast and Northwest branches, which are the River's main tributaries. The confluence of these two branches is located approximately 8 miles upstream from the Project Area. The fluctuation in flow is akin to a tidally influenced lake, where, depending on the time of day, water levels can vary by approximately 2 feet. During the wet seasons of spring and fall, the direction of the River is predominantly downstream due to large quantities of runoff. This condition is different in the dry seasons when flow direction is influenced primarily by the tide. The average tidal prism, or volume of water exchanged during the tidal cycle, is estimated to be 20% of the river volume (DDOT/FHA, 2007).

One of the tributaries to the Anacostia River that flows through Project Area is Stickfoot Storm Sewer, a captured stream. The stream, called Stickfoot Creek, once meandered through Poplar Point, feeding wetlands and eventually draining into the Anacostia River. Over time, however, the stream has been rerouted and placed within an approximately 72-inch culvert that ends at the Combined Sewer Overflow (CSO) outflow in the central portion of Poplar Point. A survey of the existing sewer conditions found that the manhole near the pump house sits approximately 12 feet above msl, while the creek bed is approximately 1 foot above msl (Ridolfi, 2003a).

During the wetland investigation, a surface water body was found within the eastern wetland complex. It is suspected that the water body was created, and currently sustained, by a broken pipe that runs underneath it. Aside from this man-made surface water resource, no other bodies of water are documented on-site (Ridolfi, 2003a).

3.3.2.2 Groundwater

The Project Area is located within the Lower Anacostia Watershed, part of the Northern Atlantic Coastal Plain. The Coastal Plain is characterized by numerous water bearing zones (aquifers) that exist among permeable materials, primarily sands and gravels. The primary aquifers located under the District of Columbia are part of the regional Potomac Group aquifers. The aquifers are separated by less permeable zones of silts and clays (confining layers). Within Holocene age alluvium in the Coastal Plain, the ground water table is generally within a few feet of the surface, especially in alluvium near major streams. Infiltration from these underground streams contributes to groundwater recharge.

According to the USGS, groundwater wells for aquifers in the Potomac Group range from 30 feet below ground surface to 1,250 feet below ground surface. District-wide, the median depth to ground water observed in wells is 15 feet below ground surface.

A groundwater survey was completed in 2002 to monitor the discharge and recharge rates along with the extent of contamination within Poplar Point. This survey was conducted by placing staff gauges, seepage meters, and piezometers at various locations throughout the site. The staff gauges and piezometers are used to measure the hydraulic head relationship between the surface water bodies and the surrounding shallow

ground water. Seepage meters are used to determine if surface water is recharging the groundwater or if groundwater is discharging into surface water and the rate at which this exchange occurs. The monitors were left in place for an extended period of time to capture readings during a wide array of weather conditions (rain events or draughts).

The median depth to groundwater within Poplar Point was 3.6 feet below ground surface (Ridolfi, 2003a). Groundwater flows to the north in the southern portion of the site and to the west in the area of Wetland D. Groundwater elevations of the Upper Permeable Unit ranged between 1 foot above msl in the south-central portion of Poplar Point and 3.38 feet below msl in the northern portion of Wetland D.

3.3.2.3 Water Quality

Water quality of the Anacostia River has been degraded predominantly by non-point sources, such as uncontrolled stormwater runoff from urban development as well as point source discharges into the River, including Combined Sewer Overflows of untreated sewage. An extensive urban storm drainage system conveys runoff from streets and parking lots, depositing contaminants into the River. Sediment and contaminants are deposited into the River via stormwater runoff from exposed soils at higher elevations and along the River shorelines, and from impervious surfaces. Sediment loads have increased over the years as shoreline vegetation, which buffers the River, has been cleared to accommodate construction activity.

The following pollutants have been identified as having the potential to be present in the Project Area based on a Phase I Environmental Site Assessment: oil, paint, cleaners and solvents, bacteria, and floatable materials (paper and trash). Water quality contaminants include fecal coliform, volatile organic compounds, inorganics (metals), pesticides, phosphorus, nitrates, PCBs, and petroleum hydrocarbons. These contaminants have the potential to contribute to the impairment of the river via uncontrolled stormwater runoff from urbanized areas.

The DC Department of Health (DC DOH), Water Quality Division is responsible for water quality control in the District of Columbia, including oversight of River sediments and contaminant levels, stormwater runoff, and submerged aquatic vegetation. Measurable parameters determining water quality include pH, total suspended solids, dissolved oxygen, conductivity, turbidity, temperature, and biological and chemical oxygen demand. Water quality of the River is currently monitored in the vicinity of the Project Area. Pursuant to the Clean Water Act procedure, the Water Quality Division issues a report to the EPA and Congress every two years describing the water quality of water bodies within the District of Columbia and to what degree water quality affects the use of the water bodies. According to the most recent water quality report for the District of Columbia, the water quality of the Potomac River does not support the use of the River for primary contact recreation (i.e.; swimming) or for the use of fish and shellfish for human consumption (DC EHA, 1998). The water quality in the Lower Anacostia River and the Potomac River between Key Bridge and its confluence with the Anacostia River does, however, support its use for the protection and propagation of fish, shellfish, and wildlife (DC EHA, 1998).

In an attempt to remediate the Anacostia River's poor water quality, several federal and local programs have been developed.

Testing for groundwater contamination was conducted as part of a physical site assessment. Due to the previous site uses, including horticulture and military, some degree of contamination was expected to be present. Throughout Poplar Point, the concentration of several chemicals was recorded and compared to the lowest applicable screening level. Hazardous materials found at Poplar Point are discussed in greater detail in Section 3.6.3.

- Diesel, motor oil, or fuel constituents were detected above screening levels at monitoring wells located throughout Poplar Point, with the largest concentration located near the former storage tanks (aboveground and underground).
- Methyl tert-butyl ether, vinyl chloride, and benzene were all found in monitors located near the former AOC garage.
- Several inorganic and organic chemicals were found throughout Poplar Point. The inorganic chemicals were often found in isolated perches throughout the fill and are likely not widespread. The organic compounds also did not seem to indicate a pervasive problem in groundwater.

3.3.2.4 Wetlands

Wetlands, as defined by the USACE, are those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support—and that under normal circumstances do support—a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands typically include swamps, marshes, bogs, etc., and are delineated by three factors: the presence of (1) hydrophytic vegetation, (2) hydric soils, and (3) wetland hydrology. Wetlands connected to waters of the United States are jurisdictional to the USACE, and are subject to Section 404 of the Clean Water Act; permits are required to fill or excavate in a wetland or “Waters of the United States”.

The wetlands found on the Project Area were originally delineated as part of the South Capitol Street realignment initiative in a report entitled “Wetland Delineation, South Capitol Street Project,” dated March 16, 2005. The results showed the existence of four wetland systems on Poplar Point, and the results were confirmed by the USACE during a Jurisdictional Determination Meeting held on April 15, 2005. This meeting was also intended to determine which of the wetlands found on-site are considered “Waters of the United States” and subject to USACE control. Additional analysis was completed in the spring and summer of 2009 for several reasons. The first reason was to validate the previous delineation as the results expire after five years. The second reason was to assess the functions and values of each wetland found on-site, determining their biological and societal value. Function is defined as the physical and chemical processes that characterize wetland ecosystems. Values are the human-perceived benefits derived from functions or other characteristics of a wetland ecosystem. The analysis conducted in 2009 used four common methodologies for determining a wetland’s function and value. The methodologies utilized were:

- The Delaware Rapid Assessment Procedure;
- The US Army Corps of Engineers Highway Method;
- The Virginia Institute of Marine Science’s Technique for the Functional Assessment of Non-Tidal Wetlands in the Coastal Plain of Virginia; and
- Evaluation for Planned Wetlands.

An important component of this analysis was the use of a reference wetland to form a basis of comparison. A reference wetland displays the representative ecological conditions that are expected for a wetland of a particular type in a particular region. For the Poplar Point wetland comparison, the wetlands (Wetlands A and B) located at Huntley Meadow Park in Fairfax, VA were selected. Huntley Meadows is similar to Poplar Point because they both contain non-tidal wetlands located within the coastal plain. Wetlands specifically chosen for the assessment were a palustrine forested wetland and a palustrine emergent wetland.

The following details for each of the four wetlands found at Poplar Point. Figure 3.4.1 shows the locations of wetlands within Poplar Point.



Figure 3.4.1 Existing Wetlands

Source: *Wetlands Studies and Solutions, 2009*

- **Wetland C:** A small palustrine forested (PFO) wetland in the western portion of Poplar Point was determined to be isolated and not jurisdictional by USACE. However, this wetland is regulated by the District of Columbia. This wetland is a forested depressional wetland that has no inlet or outlet and has no jurisdictional connection to other waters of the United States. The primary water source of this wetland appears to be stormwater runoff. Wetland C provides sediment and toxicant retention and nutrient removal functions; however, it is also fenced off from the public, which detracts from its overall value.

- **Wetland D:** The wetland in the western portion of Poplar Point was determined to be jurisdictional by USACE and the District of Columbia because it is connected to the Anacostia River by a system of underground pipes. This wetland consists of a mosaic of wetland community types – the dominant community type is PFO wetland with smaller areas of palustrine scrub-shrub (PSS) and palustrine emergent (PEM) wetlands located along the wetland edge. A narrow channel meanders through the wetland system. The primary source of hydrology to this wetland appears to be stormwater runoff. The outlet to this wetland is somewhat constricted due the buildup of sediment and debris at the culvert. Wetland D provides sediment and toxicant retention and nutrient removal functions.
- **Wetland E:** Two PEM wetlands were identified in the central portion of Poplar Point. These wetlands occur in an area that has been graded in the past. In the delineation report, Coastal Resources, Inc. indicates that the source of hydrology for the two PEM wetlands may be a broken water main line. The PEM wetlands were determined to be isolated and not jurisdictional by the USACE. However, these wetlands are jurisdictional by the District of Columbia’s regulations. The two PEM wetlands are similar in composition, and during Wetland Studies and Solutions’ (WSSI) field evaluation did not appear to have a distinct break in vegetation separating one from the other. Thus, for purposes of the functions, values, and conditions assessments, these wetlands were evaluated as one wetland system. Wetland E does provide some public value due to its accessibility from the road.
- **Wetland F:** Wetland F is a small PEM wetland in the western portion of Poplar Point. This wetland was determined to be jurisdictional by the USACE and the District of Columbia because the wetland is connected to the Anacostia River and to Wetland D by a system of underground pipes. Water ponds within this small depressional wetland due to its tightly compacted soils. Wetland F does provide some public value due to its accessibility from the Anacostia Park Drive.

Based on the assessment methods applied, the wetlands at Poplar Point do successfully perform several wetland functions including flood storage and flood flow alteration, sediment and toxicant retention, and nutrient removal. However, the assessment methods also indicate that the wetlands at Poplar Point are severely stressed. Comparison of the assessed functions and values of reference wetlands (chosen to represent the expected ecological conditions of similar wetlands in the region) to the wetlands at Poplar Point suggests that the functions and values services of the Poplar Point wetlands may increase if the conditions of the wetlands improve.

3.3.2.5 Floodplains

The Project Area is located directly adjacent to the Anacostia River. The northern border of the Project Area comprises a prominent segment of the Anacostia River waterfront. According to FEMA’s Flood Insurance Map effective since November 1985, several areas of Project Area are within the river’s 100- and 500-year floodplain. The areas that fall within the 100-year floodplain are located along the waterfront. At its greatest extent, the 100-year floodplain extends approximately 130 feet inland across the central portion of Poplar Point and almost to the Anacostia Freeway in Southern Anacostia Park. The notation on the FEMA Flood Insurance Map is “Zone A10.” This designation implies that the area is within the 100-year floodplain, the base flood elevation has been set at 10 feet, and flood hazard factors have been determined. Areas located

within the 500-year flood plain are found in portions of Poplar Point, Southern Anacostia Park and the North Field that are further from the River than the A10 zone. The notation on the FEMA Flood Insurance Map is “Zone B.” The largest tract of land that falls within Zone B is in the central portion of Poplar Point near the wetlands. Another large concentration of land within the 500-year flood plain can be found around the Anacostia Fieldhouse and in the North Field. The designation of Zone B implies that the land is between the 100- and 500-year floodplains, or certain areas are subject to 100-year flooding with average depths less than one foot or where the contributing drainage area is less than square mile. The remainder of Poplar Point is outside of the 500-year flood plain and has the designation of “Zone C.” These floodplains are illustrated in Figure 3.3.2.

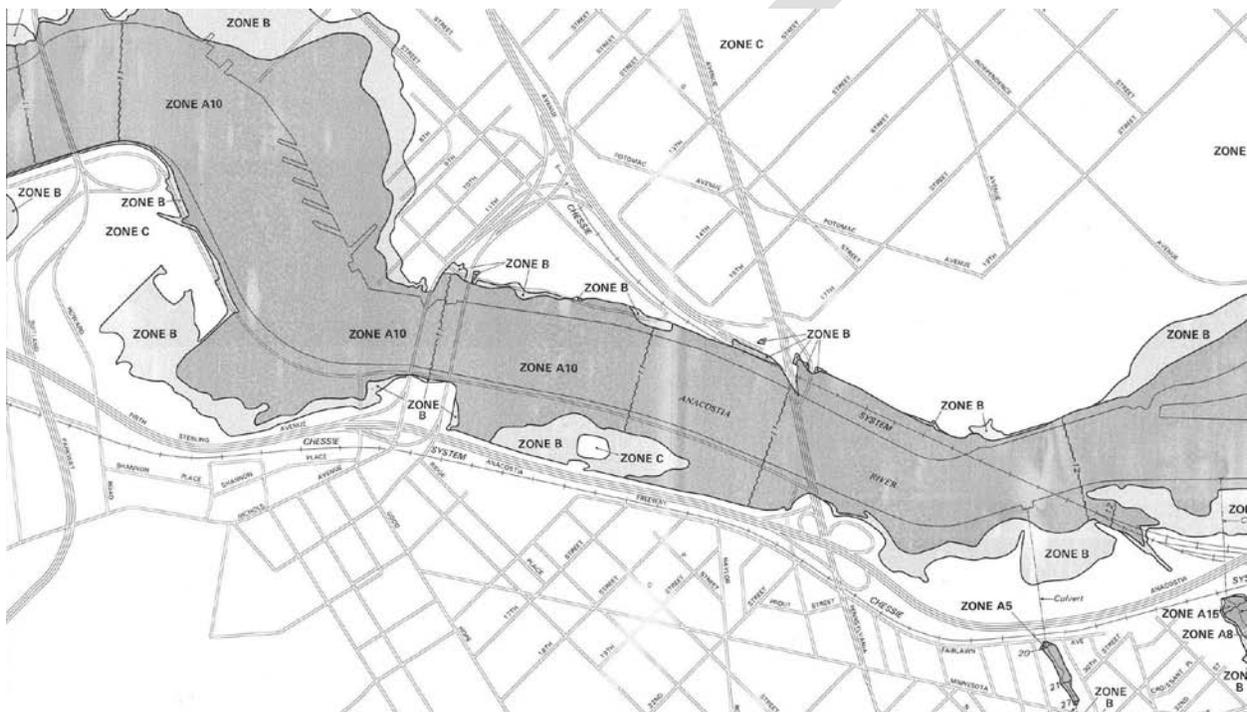


Figure 3.3.2 Existing Site Floodplains
Source: FEMA, 2010

Flooding of the Anacostia River is a complex phenomenon that generally arises from factors like storm surges caused by a hurricane or by major storm tidal flooding. The most severe floods were the storm surge tide of 1933, and the floods of March 1936, October 1942 and Hurricane Agnes in June 1972. Floods due solely to high river flows have been relatively minor and have never defined floodplain boundaries. In response to flooding of the Anacostia River, in 1955 the USACE initiated a flood control program for the River to address the persistent flooding problems. This flood control program included the construction of two twenty-two foot high levees along either bank of the River and dredging the River to create a wider channel. This channel is 190-foot wide in the upper Anacostia and increases in width to 600-feet at its widest point. The widened river provides increased flow capacity in the event of a flood, reducing the extent of on-shore flooding (GSA, 2002).

3.3.3 Vegetation and Wildlife Resources

3.3.3.1 Aquatic Ecology

The Project Area's northern boundary is formed by the Anacostia River, which is home to a wide diversity of plant and animal species. The following section outlines the aquatic vegetation and animal species present in and along the River.

Submerged Aquatic Vegetation

Submerged Aquatic Vegetation (SAV) is defined as vascular plants that remain below the water surface throughout the year. These plants have developed several adaptations over time, allowing them to thrive in a completely aquatic environment. These adaptations include a thin or complete lack of cuticle as there is no need to prevent water loss in the environment they live in. SAV requires the proper water quality, water temperature, water depth and salinity to thrive. The result is that SAV tends to exist in high quality river and stream systems. SAV is also an important component in the larger aquatic ecosystem because it provides several vital functions that enhance the quality of life for other organisms. These functions include: generating habitat and food, adding oxygen to the water column as a byproduct of photosynthesis, prohibiting the growth of algae through the absorption of nutrients such as nitrogen and phosphorus, and filtering and sediment retention.

For the last several years the Virginia Institute of Marine Science (VIMS), a graduate school of oceanography at the College of William and Mary, has conducted field surveys of the extent of SAV in the tidal reaches of the Chesapeake Bay watershed. This survey area includes portions of the Potomac and Anacostia River that are near the Project Area. Between 1999 and 2002 VIMS findings showed that small pockets of SAV exist in the Anacostia River around the Frederick Douglass Memorial Bridge. However, since 2004 their findings have shown no presence of SAV near the Project Area.

Removal or alteration of SAV must be done in accordance with Section 404 of the Clean Water Act of 1977, as amended, and Section 10 of the Rivers and Harbors Act of 1899. Thus, SAV falls under the jurisdiction of the USACE. Locally, actions altering SAV must be pursuant to the District of Columbia's Water Pollution Control Act of 1984 (D.C. Law 5-188, DC Code §6-293).

Benthic Macroinvertebrates

In an aquatic ecosystem, the bottommost layer in the water column is referred to as the benthic layer. The benthic layer also includes the sediment surface and some sub-surface layers. Organisms that inhabit the benthic zone are collectively called benthos and can tolerate low oxygen levels and cool temperatures. Several types of benthos are permanently attached to the sediment or burrow within the sub-surface layers. Macroinvertebrates are animals without vertebrae (backbones) and are larger than ½ millimeter. Common benthic macroinvertebrates include crustaceans, mollusks, aquatic worms, and the immature forms of aquatic insects. Benthos play an important role in an ecosystem by acting as the middle link in the food chain. Their main diet consists of algae and aquatic plant life and, in turn, they are consumed by larger organisms

such as fish. The most prevalent organism found in the Project Area were pollution-tolerant oligochaetes (aquatic worms), which comprised between 80% and 90% sample population (DDOT/FHA, 2007)

Fish

The resident fish in the Anacostia River can be divided into three categories based on their spawning and life cycle characteristics. The first category is the freshwater resident fish population that completes both their spawning and life cycles in freshwater. This category includes species such as the brown bullhead (*Ameiurus nebulosus*), pumpkinseed (*Lepomis gibbosus*), and the spottailed shiner (*Notropis hudsonius*). The second category is the anadromous fish population that lives in marine or estuarine waters but return to freshwater to spawn. This category includes the gizzard shad (*Dorosoma cepedianum*), striped bass (*Morone saxatilis*) and white perch (*Morone americana*). The final category is the catadromous fish which live in freshwater but migrate to the sea to spawn. The only species present in the Chesapeake Bay watershed that falls within this category is the American eel (*Anguilla rostrata*). According to a fish study of the Anacostia River conducted by the Department of Consumer and Regulatory Affairs in 1994, 47 species, 13 families, and 30 genera were collected.

The National Marine Fisheries Service has determined that the shortnose sturgeon (*Acipenser brevirostrum*) is present in the upper tidal Potomac River. Thus, the species may be present in the Anacostia River, due to the proximity and confluence of the two water bodies. The shortnose sturgeon is on the federally endangered species list and will be discussed in further detail in the Threatened and Endangered Species section of this EIS.

3.3.3.2 Terrestrial Ecology

The Project Area provides an unusual habitat, given its urban context, for terrestrial vegetation and wildlife. Large tracts of contiguous habitat and wetland habitat are generally not found in urban areas. The Project Area also provides a crucial connection between the Potomac River Corridor (Oxon Cove, Shepherd Parkway) and the upper Anacostia River Corridor (including the remainder of Anacostia Park). Not only is the Project Area unusual in its context, but it also provides two distinct habitat types: wetland and upland. The following discussion presents the types of vegetative and animal communities that can be found within the Project Area. Contained within the discussion are several common species were listed to aid in the understanding of the site's ecological resources.

Vegetation

The upland habitat of Project Area consists primarily of meadows and recreation fields. This habitat is located in the interior of the park with a higher concentration in the eastern portion of the site. The meadows can be characterized generally as open fields comprised of grasses and shrubs, with a sparse tree population. A large strip of meadow also runs north of Anacostia Drive SE providing a green buffer between the road and the river. Several trees can be found along the river also providing a buffer for the site. Another meadow habitat can be found in the far western part of the site in the area known as the "point". Typical vegetation found in this area includes a variety of grasses and other non-woody plants, such as: Redtop bentgrass (*Agrostis*

gigantea), Rescue grass (*Bromus willdenowii*), Bermuda grass (*Cynodon dactylon*), and Barnyard grass (*Echinochloa crusgalli*), Small-flowered morning glory (*Ipomoea lacunosa*), White sweet clover (*Melilotus alba*), Black bindweed (*Polygonum convolvulus*), Field hedge-parsley (*Torilis arvensis*) and Red clover (*Trifolium pretense*).

The wetland habitat is found in the central portion of Poplar Point. A substantially higher number of trees and shrubs are found in this area due to Poplar Point's former use as a tree nursery. The unusually high number of vegetation can also be attributed to the fact that this area has been fenced off for quite some time. The absence of human activity over the years has allowed many species to mature and develop. Typical wetland vegetation such as the Common reed (*Phragmites australis*), Box elder (*Acer negundo*), Red Maple (*Acer rubrum*), Small-spike false-nettle (*Boehmeria cylindrical*), Poison ivy (*Toxicodendron radicans*), and Grape vine (*Vitis sp*) were found throughout the wetland habit in the Project Area. Additionally, some invasive species such as: Japanese honeysuckle (*Lonicera japonica*) and Purple loosestrife (*Lythrum salicaria*) were also found.

Mammals

As a result of the maturation of the site's vegetation and development of ecosystems a variety of mammals, reptiles, insects and birds have been documented within the Project Area. Mammals typically associated with developed areas such as raccoons (*Procyon lotor*), woodchucks (*Marmot monax*), house mice (*Mus musculus*) and grey squirrels (*Sciurus carolinensis*) can be found at the project site. However, several species not often found in urban environments were also documented on-site, including the meadow vole (*Microtus pennsylvanicus*), the red fox (*Vulpes vulpes*), the short-tailed shrew (*Blarina species*) and white-tailed deer (*Odocoileus virginianus*). In addition, because the Project Area is accessible by water, other mammals such as beavers (*Castor Canadensis*) and muskrats (*Ondatra zibethica*) are found. Finally, the site's vegetation offers refuge for winged mammals such as the big brown bat (*Eptesicus fuscus*), the eastern pipistrelle (*Perimyotis subflavus*), and the silver-haired bat (*Lasionycteris noctivagans*).

Reptiles/Amphibians/Invertebrates

The Project Area's proximity to the Anacostia River makes it a suitable habitat for reptiles such as the Red-eared slider turtle (*Trachemys scripta elegans*) and Common snapping turtle (*Chelydra serpentina*) to come ashore to lay and bury their eggs. Other reptiles like the Eastern garter snake (*Thamnophis sirtalis*), and Five-lined skink (*Plestiodon fasciatus*) are drawn to the site's wetlands. These wetlands also provide habitat for amphibians such as the Grey treefrog (*Hyla versicolor*) and Southern leopard frog (*Lithobates utricularia*). Finally, several invertebrates have also been documented on the site like the Black saddlebags (*Tramea lacerate*), Eastern amberwing (*Perithemis tenera*), Great blue skimmer (*Libellula vebrans*), and Monarch Butterfly (*Danaus plexippus*) and can be found within the various habitats found on site.

Birds

A diverse array of birdlife occur within the Project Area due to the ample hunting and living area that is present. Close to the shore of the Anacostia River, several species of marine and shore birds such as the Great blue heron (*Ardea herodias*), Double-crested cormorant (*Phalacrocorax auritus*), Herring gull (*Larus smithsonianus*), and the Pied-billed grebe (*Podilymbus*) have been documented. This proximity to the River has also led to an abundance of water fowl on or around the Project Area. Several species of water fowl documented at the Project Area include the Canada goose (*Branta canadensis*), the Mallard duck (*Anas platyrhynchos*), and the Wood duck (*Aix sponsa*).

Various raptors use the larger trees found within the Project Area as perch points while hunting. Species documented in the Project Area include the Cooper's hawk (*Accipiter cooperii*), the Red-tailed hawk (*Buteo jamaicensis*), and the Peregrine falcon (*Falco peregrines*). Furthermore, the bald eagle (*Haliaeetus leucocephalus*) has been known to nest, feed, or migrate on the Anacostia River. Finally, the site is home to several species of songbirds that can be found throughout the region. Species of songbirds documented in the Project Area include the American goldfinch (*Spinus tristis*), the Yellow warbler (*Dendroica petechia*), the Barn Swallow (*Hirundo rustica*) and the Carolina wren (*Thryothorus ludovicianus*).

3.3.3.3 Rare, Threatened and Endangered Species

There are no plant species identified as threatened or endangered by the U.S. Fish and Wildlife Service in the vicinity of Project Area. One species, the Arctic peregrine falcon (*Falco peregrines tundrius*), is known to occur within the District of Columbia, however, no sightings have been documented within the Project Area. This species has been given a designation of recovery status by the U.S. Fish and Wildlife Service. Another species, the Hay's Spring amphipod (*Stygobromus hayi*), is also known to occur within the District of Columbia. No sightings within the Project Area have been documented due to the lack of surface water; however, it is possible that the species may live in the Anacostia River. This species has been given the designation of endangered by the U.S. Fish and Wildlife Service. During the Scoping Period comments over the loss of Willow Flycatcher (*Empidonax traillii*) habitat were expressed. The Willow Flycatcher has been documented on the site and according to NPS documentation, the most likely habitat is within Wetland D. This species has been given a designation of Species of Concern by the U.S. Fish and Wildlife Service.

In addition to the endangered species list monitored by the U.S. Fish and Wildlife Service, the District of Columbia's Department of Environment also keeps a list of Species of Greatest Concern. This list was included in the DC Wildlife Action Plan which was prepared in 2006 by the DC Fisheries and Wildlife Division. The goal of the plan is to identify Species of Greatest Concern and develop actions to help protect these species. Several of the species on this list have been documented on the site and include: the Northern spring peeper (*Pseudacris crucifer*), the Red-shouldered hawk (*Buteo lineatus*), the Eastern cottontail (*Sylvilagus floridanus*), the Virginia opossum (*Didelphis virginiana*), the Eastern garter snake (*Thamnophis sirtalis sirtalis*), the Five-lined skink, the Northern brown snake (*Storeria dekayi dekayi*), the Brown thrasher (*Toxostoma rufum*), the Prothonotary warbler (*Protonotaria citrea*). Similarly, there are no unique conservation areas or wildlife refuges within the Project Area.

3.4

URBAN SYSTEMS

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3.4.1 Water Supply

The District of Columbia Water and Sewer Authority (DC WASA) is responsible for providing water to District users. DC WASA operates and maintains the pumping and distribution system located within the District. Water consumption is metered and users pay according to the quantity used.

Water supply in the District of Columbia comes from the Dalecarlia Water Treatment Plant (WTP) and the McMillan WTP. Both plants are supplied with water from the Great Falls intake on the Potomac River. Water is withdrawn at the Great Falls Intake and flows by gravity through two pipelines to the Dalecarlia Reservoir forebay, where it is pumped to the Dalecarlia Reservoir via a booster pumping station. The Dalecarlia Reservoir acts as a presedimentation basin for water drawn into the Dalecarlia WTP and for water diverted to the Georgetown Reservoir for subsequent treatment (DC WASA, 2010)

The original Dalecarlia WTP was completed in 1928. The plant capacity was increased in the 1950s by the addition of two more sedimentation basins, a 30-million gallon clearwell, and a 577-million gallon per day (mgd) finished water pumping station and additional filters. According to WASA, the plant currently has a capacity of 164 mgd based on filtration rates of 2 gallons per minute per square foot (gpm/sf) and a maximum capacity of 264 mgd.

The original McMillan WTP was constructed in 1905 as a slow sand filter plant. It was replaced in 1985 with a new rapid sand filtration plant at the same site with an average design capacity of 120 mgd based on a filter design rate of 4 gpm/sf and a maximum capacity of 180 mgd. According to DC WASA, the treatment capacity of the Dalecarlia and McMillan WTPs exceeds the day-to-day demands and peak requirements of the customers (DC WASA, 2010).

All of the existing water mains in the Project Area are part of WASA's low service pressure zone. The low pressure service area is supplied from the Washington Aqueduct's Dalecarlia Pumping Station and DC WASA's Bryant Street Pumping Station. Treated water storage in the low pressure service area is provided by DC WASA's Brentwood Reservoir (25 mg at overflow elevation 172 feet) (DC WASA, 2010).

DC WASA's water distribution system includes almost 1,300 miles of pipes and mains ranging from 4 to 78 inches in diameter. According to DC WASA, its water transmission and distribution system includes about 87% cast iron pipe, 8% ductile iron pipe, 2.5% steel pipe, and 2.5% reinforced and prestressed concrete pipe (DC WASA, 2010). Several of DC WASA's major water transmission mains traverse the northeastern corner of the Poplar Point site. These range in size from 30 inches to 42 inches in diameter and were installed between the 1930s and 1960s. Some of these pipes are made of steel and the others of cast/ductile iron. One of the 30-inch pipes crosses under the I-295 through a larger concrete sleeve pipe located generally between U and V Streets, SE. Two 30-inch pipes in this area cross the Anacostia River connecting the two parts of the District of Columbia on either side of the Anacostia River. No individual buildings are served directly off of these mains. There are also several short segments of abandoned 30-inch mains near the southbound ramp of the 11th Street Bridges (DeLon Hampton, 2009).

Water service in the central part of Poplar Point is provided by an 8-inch cast/ductile iron line dating from approximately 1953, which crosses under I-295 at Chicago Street SE, to serve the complex of NPS buildings located in that section of the site. Most of this line is owned by NPS and not WASA (DeLon Hampton, 2009).

The westernmost part of Poplar Point is served by a single 8-inch cast iron main installed around 1914 in Howard Road SE. This main runs from under I-295 along Howard Road and then under the northbound lanes of South Capitol Street; it serves DC WASA's Poplar Point Pumping Station. There are several small 4-inch and 6-inch mains that branch on the north side of the 8-inch main in Howard Road SE to serve various facilities in this section of the Poplar Point site (DeLon Hampton, 2009).

3.4.2 Sanitary Sewer and Stormwater Infrastructure

3.4.2.1 Sanitary Sewer

The sanitary sewer system in the District of Columbia is operated by DC WASA. DC WASA's wastewater collection system consists of approximately 1,800 miles of sanitary and combined sewers, 125,000 building sewers, 22 flowmetering stations, and 9 wastewater pumping stations. The sewers range from 8-inch pipelines to 27-foot arches. Historically, the sewers were generally constructed of vitrified clay, brick, and concrete. However, current and new sewer construction materials typically consist of PVC, ductile iron, and concrete (DC WASA, 2010).

In general, wastewater is collected within the District, as well as from some Maryland and Virginia suburbs, and delivered to the Blue Plains Advanced Wastewater Treatment Plant (AWTP). According to DC WASA, the Blue Plains AWTP is the largest advanced wastewater treatment facility of its type in the United States with a rated annual average day capacity of 370 mgd and a peak wet weather capacity of 1.076 billion gallons per day. The existing wastewater treatment processes at the Blue Plains AWTP consists of preliminary and primary treatment, secondary treatment, nitrification/denitrification, effluent filtration, chlorination/dechlorination, and post aeration (DC WASA, 2010).

DC WASA's sanitary sewer system consists primarily of separate sanitary and storm sewers; however, combined sewers serving both sanitary flow and stormwater drainage are prevalent in the downtown area and in older portions of the service area, including in the vicinity of the Project Area. Combined sewer overflows (CSOs) occur during certain storm events when the capacity of the combined sewer system is unable to convey the mixture of wastewater and stormwater to the treatment plant and this excess water must be discharged directly. According to DC WASA, there are approximately 60 CSO outfalls within its system. These are all permitted under the District's NPDES Permit issued by the EPA to DC WASA (DC WASA, 2010).

At Poplar Point, there is a complex system of combined and separate sanitary and storm sewers. Some of these are major sewers serving a large part of the Anacostia section of the District that traverse the Poplar Point. Others connect this section of the District to the center of the city west of the Anacostia River. There is also a major wastewater pumping station located within Poplar Point.

Sewers located within Poplar Point were installed mainly during the first half of the 20th century. In addition, a major force main was completed and put into service in 1995. The 4-foot by 4-foot combined Anacostia Trunk Sewer crosses the northwest corner of the Poplar Point, roughly paralleling the southbound lanes of the 11th Street Bridges, and discharges through Outfall No. 006 to the Anacostia River. This sewer serves as an overflow for a combined sewershed in a section of Anacostia on the east side of I-295. The sewers in this combined sewershed are currently being separated into sanitary and stormwater sewers. Once the sewer separation project is completed, the Anacostia Trunk Sewer will be converted exclusively to function as a stormwater conduit (DeLon Hampton, 2009).

The 6-foot by 5-foot and 3-inch combined Chicago Street Trunk Sewer crosses Poplar Point opposite Chicago Street and discharges through Outfall No. 005 to the Anacostia River. This serves as an overflow for another combined sewershed in Anacostia on the east side of I-295. There are currently no plans to separate sanitary flows from stormwater flows in this sewershed, and therefore, no change to the Chicago Street Trunk Sewer is anticipated. Also to the west of the Chicago Street Trunk Sewer is a network of sanitary sewers ranging in size from 6 inches to 12-inches in diameter. These discharge to the 4-foot and 6-inch by 5-foot Anacostia Main Interceptor, a combined sewer in this reach, which runs along the south side of Poplar Point approximately from Chicago Street to the Poplar Point Pumping Station to which it discharges (DeLon Hampton, 2009).

The 96-inch diameter sanitary Anacostia Force Main and Gravity Sewer runs along the southern edge of Poplar Point between the southbound 11th Street Bridges approach and Talbert Street SE, where it crosses to the south side of I-295. This sewer is currently out-of-service; however, DC WASA may rehabilitate and reactivate it in the future (DeLon Hampton, 2009).

The 108-inch diameter sanitary Anacostia Force Main traverses Poplar Point along its northern and western sides parallel to the shoreline from the southbound 11th Street Bridges approximately to the point where Howard Road would intersect South Capitol Street. This main is constructed mainly of pre-cast concrete cylinder pipe (PCCP) and was installed in stages from 1979 to 1995 (DeLon Hampton, 2009).

Two parallel combined outfall sewers, one of which is 9-foot and 4-inches by 8-foot and 4-inches, and one of which is 9-foot and 8-inches by 8-foot and 4-inches, cross the western edge of Poplar Point from north to south between the on- and off-ramps of the Frederick Douglass Bridge (South Capitol Street). The outfall sewers are essentially discharge pipes from the Main and O Street Pumping Stations. These sewers carry a large share of the combined wastewater flow from the portion of the District on the west side of the Anacostia River. The Poplar Point Pumping Station, which is located in a traffic island between the on- and off-ramps of the Frederick Douglass Bridge, receives inflow from the Anacostia Main Interceptor and pumps into these outfall sewers. There is also an emergency bypass from the Pumping Station connecting it to the adjacent 5-foot by 5-foot and 5-inch stormwater sewer. DC WASA plans to eliminate this Pumping Station by 2018, replacing it with a new station associated with the future Anacostia CSO Tunnel system. The new station is planned to be located in proximity to the present station within Poplar Point (DeLon Hampton, 2009).

Two sanitary sewers are found within Southern Anacostia Park, both constructed in the mid-20th century. The first sewer, constructed in 1979, is a 108" in diameter and runs along an east/west orientation along Anacostia Park Drive. As the sewer approaches the Anacostia Park Fieldhouse, it turns south to provide service to that facility and then continues along its original path along Anacostia Drive. Finally, after passing the Pennsylvania Avenue Bridge and entering the North Field, this sewer travels south around the skating pavilion and then continues out of the Project Area northwest of the pavilion. The second sewer, constructed in 1963, found in Southern Anacostia Park also runs on an east/west orientation and follows the southern boundary of the Project Area along I-295.

One large sanitary sewer is found in the North Field portion of the Project Area. The 4'6" x 5' pipe, installed in 1916, enters the site from the south at approximately M Street, SE. Upon entering the Project Area, the pipe turns northeast and exits the North Field at approximately the same location as the previously discussed pipes. One combined sewer, constructed in 1865, also exists in the Project Area with two outfall branches, the East Branch and the West Branch. Prior to splitting off into the two branches, the sewer enters the site at approximately 13th Street, SE and runs north towards the Anacostia River between the two 11th Street Bridges. The main combined sewer line is 5' x 12' and connects to a diversion structure at approximately Anacostia Drive, SE. After the split, the East Branch is 4' x 10' and the West Branch is 3' x 7'.

3.4.2.2 Stormwater Infrastructure

Stormwater management in the District is regulated by the Stormwater Management Section of the DC Department of Consumer and Regulatory Affairs (DCRA), Soils Resources Branch. DC WASA's role in stormwater infrastructure presently is primarily directed toward cleaning of surface drains and inlets, and operation and maintenance of a number of stormwater pump stations. District of Columbia Law 5-188, Section 509-519 requires all new development to control non-point source pollution transferred by urban runoff using Best Management Practices (BMPs). This is discussed further in Section 3.3.2 above.

The Project Area currently contains stormwater infrastructure that serves the site itself and the surrounding area. The central part of the Project Area is crossed by numerous stormwater pipes ranging in size from 6-inches to 42-inches in diameter. These stormwater pipes ultimately discharge through an outfall to the Anacostia River located just to the west of the Chicago Street Trunk Sewer (Source: DeLon Hampton October 28, 2009).

An 11-foot diameter stormwater sewer (changing to 10-foot by 8-foot and 5-inches just north of Howard Road), known as the Stickfoot Branch Trunk Sewer, crosses the central part of Project Area from south to north and discharges to the Anacostia River. The northeastern corner of Poplar Point is served by an extensive system of separate stormwater sewers, consisting of pipes from 4 inches to 42 inches in diameter that terminate in an outfall to the Anacostia River opposite Good Hope Road, SE. In addition, 90-inch diameter and 5-foot by 5-foot and 5-inch stormwater sewers cross the southwestern edge of the Poplar Point site between South Capitol Street and the Anacostia River where they discharge through outfall structures. As discussed above, the Poplar Point Pumping Station emergency bypass is connected to the 5-foot by 5-foot and 5-inch storm sewer (DeLon Hampton, 2009).

The western section of Poplar Point is served by numerous storm drains that generally collect runoff from the various roads and highways in this section and discharge directly into the Anacostia River or into the larger stormwater sewers in this area. These drains range in size from 12-inches to 30-inches in diameter (DeLon Hampton, 2009).

Southern Anacostia Park is serviced by two stormwater sewer lines. The first is west of the Anacostia Park Fieldhouse, which enters the Project Area north of Anacostia Senior Highschool and perpendicular to the Anacostia River. Just after entering the Project Area, the sewer splits into the West Outfall and the East Outfall. The older of the two outfalls, the East Outfall, was constructed in 1914 and is approximately 6' x 6'. This branch ends before discharging into the Anacostia River. The other outfall, the West Outfall, was constructed in 1970 and is approximately 83" x 53" and continues further than the East Outfall, discharging into the Anacostia River. The second stormwater sewer enters the Project Area near 18th Street, SE and extends to the Anacostia River. This sewer is approximately 8' x 6' and was constructed in 1913.

A network of stormwater sewers also service the Project Area near the Pennsylvania Avenue Bridge. The first sewer enters the Project Area from Young Street, SE and extends north towards the Anacostia River. This sewer is approximately 3'-6" and was constructed in 1940. The second sewer enters the Project Area from the south near L'Enfant Square and travels to the Anacostia River. This sewer is approximately 6'-6" and was constructed in 1915. Both of these sewers are connected by smaller pipes that extend from Pennsylvania Avenue Bridge and associated infrastructure to provide adequate drainage.

Three other stormwater sewers service the North Field area of the Project Area. The first sewer enters the Project Area from the south at Burns Street and extends to the Anacostia River. It is approximately 42" and was constructed in 1960. The next sewer enters the Project Area from the south at N Street, SE and also extends to the Anacostia River. This sewer was built in 1915 and is approximately 6'-9" x 6'. The final storm sewer enters the Project Area near M Street, SE and, similar to the other pipes, extends to the Anacostia River. This sewer is 7' x 6' and was constructed in 1915.

In addition to the aforementioned facilities, the sewer and stormwater infrastructure in the Project Area includes numerous related manholes, catch basins, and junction, overflow and outfall structures (DeLon Hampton, 2009).

3.4.3 Solid Waste Disposal

Solid waste disposal is operated by the District of Columbia Department of Public Works. Residential refuse from single family homes and multi-family uses with less than three units is collected by the DC Department of Public Works. Multi-family residential uses with three or more units and all commercial uses within the District are required to arrange for collection of solid waste through a private service provider (DC DPW, 2010). The District requires that residential and commercial facilities separate out all recyclable materials and that these recyclable materials be delivered to proper recycling facilities by the solid waste hauler (DC DPW, 2010). Because there are no residential uses currently located at the Project Area, the existing government uses are served by private waste haulers.

Between 200,000 and 250,000 tons of solid waste is generated in the District every year. There are no active landfills within the District; solid waste is trucked to approximately six waste transfer services sites within the District for transfer to landfills in the region or farther away. The King George County landfill in Virginia, Prince George's County landfill in Maryland, and the I-95 Lorton incinerator in Virginia are three of the primary landfill sites for solid and construction waste in the metropolitan area (CH2MHill, 2007).

3.4.4 Energy Systems

3.4.4.1 Electricity

Electricity to the Poplar Point site is provided by Potomac Electric Power Company (PEPCO). PEPCO provides electricity service throughout Washington, DC and Maryland. They deliver electricity to more than 767,000 homes and businesses. The electrical power supplied by PEPCO is primarily generated by power plants located in Virginia and Maryland (PEPCO, 2010).

Within the District, PEPCO operates two types of underground electrical distribution service. Service from the low voltage network is supplied by the existing underground utility system. High voltage electric power is supplied directly from local power substations. The election of either of systems is determined by PEPCO and its customer; the decision is based on the electrical supply requirements, size, and cost of the proposed uses (PEPCO, 2010).

Electric service is currently provided to the NPS and USPP facilities located in the southern portion of the Project Area from lines originating on Howard Road SE. No electrical service is currently provided to a large portion of the Project Area.

3.4.4.2 Natural Gas

Washington Gas supplies natural gas to the Project Area, as well as all of the District of Columbia. Washington Gas distributes gas supply through an underground network of conduits that are integrated into large, high-pressure transmission pipes (Washington Gas, 2010). The pipes and conduits are typically located in the rights-of-way of streets throughout the District. This includes a gas service line in Howard Road SE that serves the NPS facility and Howard Road Academy located adjacent to the site. There is a gas service line that runs through the eastern portion of the Poplar Point site along the Anacostia Drive SE and Good Hope Road SE. This line serves the adjacent community located to the south and east (CH2MHill, 2007).

3.5

TRANSPORTATION

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3.5.1 Traffic System

3.5.1.1 Existing Roadway Network

The existing traffic and transportation data was gathered from recently completed traffic studies and reports for the vicinity of the Project Area. A description of the area roadways is provided below. Figure 3.5.1 illustrates the existing roadway network in the vicinity of the Project Area, including the roadway classifications and Average Daily Traffic (ADT) volumes.

- The *Anacostia Freeway (I-295)* parallels the Anacostia River along its east side. It is a four-lane, divided freeway with a posted speed limit of 50 mph. The freeway is designated I-295 south of the 11th Street Bridges, whereas the Anacostia Freeway is no longer part of the interstate system north of the 11th Street Bridges and is designated DC-295. The highway is known as Kenilworth Avenue north of Benning Road. The highway connects to the Capital Beltway (I-495) at its southern terminus near the Woodrow Wilson Bridge in Prince George's County, Maryland. Currently, there is no access from local streets within the Project Area to southbound I-295.
- The *11th Street Bridges* cross the Anacostia River in the Southeast quadrant of Washington, DC. They connect with the Southeast and Anacostia Freeways and also to local streets on both sides of the River. The 11th Street Bridge and Officer Kevin J. Welsh Memorial Bridge together operate as a one-way pair. The four-lane 11th Street Bridge carries westbound traffic from I-295 and 13th Street in historic Anacostia to the Southeast/Southwest Freeway and points west of the River. The four-lane Officer Welsh Memorial Bridge connects eastbound traffic from the Southeast/Southwest Freeway and 11th Street to southbound I-295 and Martin Luther King, Jr. Avenue in historic Anacostia. Combined, these two bridges are called the 11th Street Bridges.
- *Martin Luther King, Jr. Avenue* is classified as a minor arterial. It runs north/south within the study area and connects with the Officer Welsh Memorial Bridge to the north. The speed limit is 25 mph within the limits of study along this road. Martin Luther King, Jr. Avenue is approximately 40-foot wide and was previously operated with two lanes one-way southbound with parking on each side from Good Hope Road to W Street. However, this has now changed to allow for additional movement of traffic in the form of a northbound travel lane from W Street to Good Hope Road. The ½-mile segment between Good Hope Road and Howard Road has four signalized intersections at W Street, Chicago Street, Morris Avenue and Talbert Street, respectively. These traffic signals, combined with narrow travel lanes, high rush hour traffic volumes, and pedestrian and parking activity result in congested traffic conditions during the evening peak period. South of W Street, it continues to operate as a two-way roadway with one travel lane in each direction and parking on each side. Granite curbing is present along Martin Luther King, Jr. Avenue from Good Hope Road to Howard Road. Concrete curbing is present along the roadway approach from the Officer Welsh Memorial Bridge to Good Hope Road. Martin Luther King, Jr. Avenue contains aesthetic treatments including brick crosswalks, brick sidewalks, and brick ADA ramps from Good Hope Road to Howard Road. Parking is restricted during peak traffic periods and limited to one to two-hour parking during off-peak hours.



Figure 3.5.1 Existing Roadway Network
Source: Gorove/Slade, 2010

- *13th Street* is a one-way northbound minor arterial with a speed limit of 25 mph. It is a three-lane undivided roadway providing the return direction of travel from Martin Luther King, Jr. Avenue at Good Hope Road to connect with the 11th Street Bridge. Parking is permitted on both sides of the roadway.
- *Good Hope Road* is an undivided minor arterial running east-west and has a posted speed limit of 25 mph. It is a 38-foot wide undivided roadway with granite curbing from Martin Luther King, Jr. Avenue to just beyond 19th Street. Concrete curbing is present along Good Hope Road, west of the Martin Luther King, Jr. Avenue intersection.
- *Minnesota Avenue* is a north-south roadway that intersects with Good Hope Road toward the east side of the study area. Classified as a minor arterial, it operates with one lane in each direction and a parking lane on both sides. The posted speed limit is 25 mph. The nearly one-mile length of Minnesota Avenue from Good Hope Road to Pennsylvania Avenue has three signalized intersections and two stop signs. Similar to other streets east of the river, the signalized intersections, high peak-hour traffic volumes, and pedestrian and parking activity along Minnesota Avenue result in moderately congested traffic conditions during both the morning and evening peak periods. The facility operates with low levels of congestion during off-peak periods.
- *Howard Road SE* is a two lane collector, running from South Capitol Street SE to Bowen Road SE, traveling under I-295. Although there is no direct link between southbound South Capitol Street and Howard Road SE, this road connects to many others in the vicinity. At the northwestern terminus of this road, westbound vehicles either exit onto Anacostia Drive SE or northbound South Capitol Street, controlled by a traffic signal. Vehicles can access Howard Road SE either by the southbound I-295 ramp, the Suitland Parkway via Firth Sterling Avenue SE, or the northbound South Capitol Street connection near the eastern approach to the Frederick Douglass Memorial Bridge. Traveling westbound on Howard Road SE is the most direct route from southbound I-295 to northbound South Capitol Street. Vehicles traveling on the southbound I-295 ramp to Howard Road SE can either turn left or right at the traffic signal at the end of the ramp. The Anacostia Metrorail station can be accessed via Howard Road SE, immediately north of the I-295 Ramp.
- *Firth Sterling Avenue SE* is an east-west roadway connection that runs between Defense Boulevard at its west end to Howard Road SE on its east end, after which it becomes on-ramp to I-295 (Anacostia Freeway). This is a major route for motorists and pedestrians traveling between the Anacostia Naval Annex, the Anacostia Metrorail station, and historic Anacostia. The road is classified as a collector road and carries two lanes of traffic in each direction.
- *Suitland Parkway* is a six-lane, limited-access highway that generally runs east-west between South Capitol Street and Andrews Air Force Base in Prince Georges County, Maryland. It is classified as an expressway through the Project Area and carries mostly commuter traffic. The grade-separated interchange of I-295 with Suitland Parkway is a partial cloverleaf with loops and ramps in three quadrants.
- DDOT classifies *South Capitol Street* as a freeway from M Street to Firth Sterling Avenue SE. South Capitol Street is a multilane divided roadway with three lanes in the northbound direction, and two lanes in the southbound direction between the Southeast-Southwest (SE-SW) Freeway and Suitland Parkway. Whereas South Capitol Street is a four-lane divided freeway with two lanes in each direction south of the Suitland Parkway junction. The posted speed limit on most of South Capitol

Street west of the Anacostia River is 25 mph. The posted speed limit changes to 40 mph east of the Anacostia River.

- *W Street* is a four lane section with parking lanes on each side of the roadway, traveling east/west. The portion between Martin Luther King, Jr. Avenue and 13th Street is classified as a minor arterial (approximately 30-foot wide) and travels one-way eastbound. The portion between 13th and 14th Streets is classified as a collector road, whereas *W Street* east of 14th Street is classified as a local street, traveling east/west from 13th Street to 16th Street. The posted speed limit is 25 mph. Parking is prohibited along the north side of *W Street* from Martin Luther King, Jr. Avenue to 13th Street; however, parking is permitted along both sides of *W Street* from 13th Street to 16th Street.

In addition to these roadways, there is an intricate network of ramps that dominate a large area generally bound by Howard Road SE, Firth Sterling Avenue SE, and the southbound lanes of South Capitol Street that define the interchange of South Capitol Street, Suitland Parkway, and I-295. The interchange is functionally deficient, confusing to use, and unattractive. Farther south, Firth Sterling Avenue SE intersects with South Capitol Street at the southern end of the Project Area and links to Howard Road SE, the Anacostia Metro station, and other local streets.

3.5.1.2 Existing Traffic Volumes

The existing traffic volumes in the study area were obtained from the 11th Street Bridges – Final EIS (CH2MHill, 2007), the South Capitol Street – Traffic and Transportation Technical Report (PB Americas, 2007), and the Curtis Properties PUD Traffic Impact Study (Curtis Properties, 2008).

Traffic counts used in the 11th Street Bridges Final EIS (CH2MHill, 2007) were based on 13-hour turning movement counts (6:00 a.m. to 7:00 p.m.) conducted for the Middle Anacostia (MAC) Study in March and June 2004. The data included vehicle movements, pedestrian crossings, and in some instances, bicycle activity. Traffic volumes on freeway segments were based on Automatic Traffic Recorder data that were also summarized in the MAC Study. ADT and intersection turning movement count data were collected at several locations in the South Capitol Street EIS project area in September 2002 and September 2003 (PB Americas, 2007). These data were supplemented with additional traffic counts taken in 2005. ADT and peak-hour volume counts were collected on the ramps to and from I-395 and the SE-SW Freeway and to and from Suitland Parkway, South Capitol Street, and Howard Road immediately south of the Frederick Douglass Memorial Bridge.

Travel patterns for the South Capitol Street Corridor were determined using traffic data collected in 2002, 2003, and 2005 and the Metropolitan Washington Council of Governments (MWCOC) regional travel demand model. The majority of commuter traffic travels between the SE-SW Freeway, I-395, over the Frederick Douglass Memorial Bridge, Suitland Parkway, and I-295. The predominant direction of travel during the local morning peak period (7:00 a.m. to 8:00 a.m.) is northbound with traffic traveling from Suitland Parkway and South Capitol Street northbound across the Frederick Douglass Memorial Bridge and into the core District of Columbia areas. During the local evening peak hour (5:00 p.m. to 6:00 p.m.), the predominant direction of travel is southbound with traffic traveling from the District of Columbia core areas south across the Frederick Douglass Memorial Bridge into southeast District of Columbia and points further south.

Traffic counts for the Curtis Properties Planned Unit Development were conducted at the key study intersections between the hours of 6:00 a.m. to 9:00 a.m. and 4:00 p.m. to 7:00 p.m. on Tuesday, September 8, 2007 and Wednesday, October 10, 2007. The counts show that the morning and evening peak hours for entire study area network, occurred between 7:30 a.m. and 8:30 a.m. and between 4:45 p.m. and 5:45 p.m., respectively (Curtis Properties, 2008).

3.5.1.3 Existing Roadway Capacity

The existing roadway capacity results are assembled from other studies performed in the vicinity of the Project Area, as outlined in the Existing Traffic Volumes section. Capacity analyses were collected to determine the existing Level of Service (LOS) for the morning and afternoon peak hours for the study intersections. The existing LOS capacity analyses were based on: (1) the existing lane use and traffic controls; (2) the system peak hour traffic volumes of the study intersections; and (3) the Highway Capacity Manual 2000 (HCM) methodologies (using *Synchro, Version 6* software).

LOS is a measure of the traffic conditions through a given roadway segment or intersection. The LOS “grades” are based on the delay experienced by vehicles traveling through a roadway segment during the peak or rush hour because this is usually the worst case scenario and most conservative estimate. The LOS for a given intersection is affected by factors such as existing traffic volumes and the presence of traffic signals or stop signs. The peak hour level of service is a measure of the adequacy of the existing lanes and/or signalization at an intersection or roadway segment for the particular peak hour. Level of service is measured on a scale of A through F, with LOS A representing the best operating conditions with little or no delay and LOS F representing the worst with unacceptable delay.

Table 3.5.1 shows the existing capacity analysis results assembled from the South Capitol Street and Curtis Properties studies. The results shown are delay measured in seconds per vehicle and LOS. Overall LOS is shown for the signalized intersections. The stop-controlled approach LOS is shown for unsignalized intersections. Intersections with unacceptable results (LOS F) are shown in bold.

Table 3.5.1 Existing Capacity Analysis Results

Intersection	Overall/ Approach	Existing Capacity Analysis Results			
		AM Peak		PM Peak	
		Delay	LOS	Delay	LOS
~Martin Luther King, Jr. Ave & Good Hope Rd	Overall	34.4	C	42.2	D
~Martin Luther King, Jr. Ave & U St	Eastbound	9.8	A	10.3	B
~Martin Luther King, Jr. Ave & V St North	Westbound	11.3	B	18.2	C
~Martin Luther King, Jr. Ave & V St South	Eastbound	10.6	B	13.5	B
~Martin Luther King, Jr. Ave & W St	Overall	13.8	B	17.3	B
~Martin Luther King, Jr. Ave & Maple View Pl	Westbound	20.1	C	40.9	E
~Martin Luther King, Jr. Ave & Chicago St	Overall	7.6	A	7.7	A
~Martin Luther King, Jr. Ave & Morris Rd	Overall	27.5	C	6.2	A
^Martin Luther King, Jr. Ave & Howard Rd	Overall	40.7	D	80.6	F
^Firth Sterling Ave & Suitland Pkwy	Overall	30.4	C	55.2	E
^Firth Sterling Ave & Howard Rd	Overall	30.9	C	73.6	E

^ Source: PB Americas, 2007

~ Source: Curtis Properties, 2008

As shown in Table 3.5-1, during the morning peak hour all of the intersections in the study area operate at acceptable levels for traffic conditions, where drivers experience delays of less than 80 seconds per vehicle. However, many of the intersections are operating at or above capacity. These intersections include Firth Sterling Avenue at Howard Road and Suitland Parkway at South Capitol Street.

During the evening peak hour, the only intersection that operates at failing conditions is Martin Luther King, Jr. Avenue and Howard Road. Intersections that operate above capacity, where the amount of vehicles exceeds the roadway capacity, include: Firth Sterling at Suitland Parkway and Firth Sterling at Howard Road. As a result of delays at the intersections, vehicle queues form.

Queue lengths greater than 300 feet occur on several approaches during both morning and evening peak hours. Locations where long queue lengths impact traffic operations include northbound Firth Sterling at Suitland Parkway (a.m.), eastbound Firth Sterling at Howard Road (p.m.); and westbound Suitland Parkway at South Capitol Street (a.m.).

Intersections along Martin Luther King, Jr. Avenue, while operating at an overall acceptable LOS, experience longer than accepted wait time at the side street approaches while trying to merge into traffic along Martin Luther King, Jr. Avenue. For example, at the intersection of Martin Luther King, Jr. Avenue at Good Hope Road, the eastbound movement experiences LOS E and LOS F in the morning and afternoon peak periods, respectively. This is due to the delay these vehicles experience while other heavier traffic movements (southbound traffic) are allowed a longer green time. The intersection of Howard Road at Martin Luther King, Jr. Avenue experiences LOS D and LOS C in the a.m. and p.m. peak, respectively, with the westbound movement operating at LOS F and LOS E. The westbound movements of the un-signalized intersections of Maple View Place at Martin Luther King, Jr. Avenue and Martin Luther King, Jr. Avenue at Pleasant Street experience LOS E for the morning and afternoon peaks respectively. This is primarily due to commuting peak-

hour traffic utilizing various local roads, including Martin Luther King, Jr. Avenue on their way to major routes such as I-295 or I-395 due to lack of certain ramp connections.

It is also observed that the unsignalized intersections along Shannon Place (i.e. Shannon Place with U Street, V Streets and Chicago Street) all operate at a better LOS than intersections along Martin Luther King, Jr. Avenue. This is mainly due to the low volume of traffic using Shannon Place, which parallels Martin Luther King, Jr. Avenue in the vicinity of the Project Area and serves the limited development (including the Curtis Property site).

During the evening peak period, congestion is widespread along the eastbound Officer Welsh Bridge, caused by outbound traffic from the core of the city combining with traffic exiting other employment centers within the study area (i.e., the Navy Yard). The Officer Welsh Bridge is one of the major routes across the river, serving District residents living east of the Anacostia River and traffic traveling from the District to Maryland. This directional trend is reversed for the morning rush as motorists travel from home to work. Congestion on the freeways and surface street systems is widespread and common in dense urban settings and is generally expected and to some degree accepted by motorists.

Within the study area, several segments of the freeway (Southeast/Southwest, I-295) system operate at poor levels of service during both the morning and evening peak periods. In addition, longer-distance regional traffic must exit the freeway system using the local roadways to complete the trip because of missing ramp movements. This shift of freeway traffic to local streets and back to the freeway system increases congestion on the surface street system near the I-295 interchanges at the 11th Street Bridges crossing and at Suitland Parkway.

3.5.1.4 Existing Roadway Safety Conditions

DDOT maintains accident records for most intersections throughout the city, along with rankings of the most frequent accident and fatality sites. The police accident reports record the number of accidents and whether there was an injury. Also 12 categories are maintained within the database, 11 specific types of collisions, and an “other” category to capture all other types of accidents if it does not meet the classification of the first 11 types. The existing accident data for the study area was obtained from the 11th Street Bridges – Final EIS (CH2MHill, 2007) and the South Capitol Street – Traffic and Transportation Technical Report (PB Americas, 2007).

During 2000–2002, the eastern interchange (Anacostia Freeway at 11th Street Bridges interchange) and the western interchange (Southeast/Southwest Freeway at 11th Street Bridges interchange) had the most crashes. Roadway design plays a role in such crashes because drivers are forced to maneuver quickly in short distances. For example, traffic crossing the bridge from the western side of the river at 11th Street and trying to reach the left exit on the eastern side to Martin Luther King, Jr. Avenue must weave through two lanes of regional traffic that is exiting to the Anacostia Freeway. Westbound traffic crossing the bridge from 13th Street traveling toward downtown must weave through traffic from the Anacostia Freeway that is exiting to locations on the western side of the river. These forced lane-change maneuvers increase traffic turbulence and frequently result in vehicle crashes.

The Good Hope Road/13th Street/northbound 11th Street on-ramp had the most accidents during the 3-year period from January 2000 to December 2002 (34) and highest accident severity rate (48) of any intersection within the study area. Within the study area, four accidents resulted in fatalities during the study period. Three fatal accidents were reported along the Anacostia Freeway between Howard Road and Pennsylvania Avenue. One fatal accident was reported at the intersection of Martin Luther King, Jr. Avenue and Good Hope Road. The intersections of Good Hope Road/13th Street/northbound 11th Street on-ramp, and Martin Luther King, Jr. Avenue/Good Hope Road/southbound 11th Street off-ramps had reported pedestrian and bicycle accidents that resulted in injuries in the study area. Traffic safety is a concern along the 11th Street Bridges corridor. As volumes there continue to increase, lack of capacity will increase the number of traffic accidents along the corridor. The accident data did not provide specific ramp locations or conflict points to further evaluate the location.

Rear-end collisions are the most frequent type of accident that occur in the South Capitol Street Corridor, accounting for 175 of the 594 accidents, approximately 30%. Rear-end collisions are prevalent in areas of congestion, descriptive of the South Capitol Street Corridor, during the peak periods. Left-turn accidents are the second most frequent type of accidents, with 111 accidents. Sideswipe accidents are third most common accounting for 16% of accidents. The three most frequent types of accidents account for 65% of all the accidents reported.

Accident severity takes into account the following types of accidents: property-damage only (PDO), injury-related, or fatality. By evaluating the accident severity, more insight may be gathered into the perceived safety or deficiency in safety conditions at a particular location. A rating scale is then applied to the different accident types to produce a value at each location that will account for the occurrence of injuries and deaths. The accident severity rate is calculated using the following formula:

$$\text{Accident Severity Rate} = (\text{number of PDO accidents}) + (3 \times \text{number of Injury accidents}) + (8 \times \text{number of Fatality accidents})$$

Also included is the estimated accident rate, which is measured in accidents per million-entering vehicles (MEV). The following formula was used to calculate the accident rate:

$$\text{Estimated Accident Rate} = (3\text{-year accident total} \times 106) / (3 \times 2004 \text{ Estimated ADT} \times 365)$$

A summary of the accident data gathered is shown in Table 3.5.2. An accident rate of 1.0 or higher (as shown in **bold**) is an indication that further study of the intersection is required.

Table 3.5.2 Existing Accident Data Summary

Intersection	Total Accidents	Estimated Accident Severity Rate	Estimated Accident Rate (per MEV)
*Martin Luther King Jr. Ave & Good Hope Rd	22	41	1.25
*Martin Luther King Jr. Ave & U St	5	5	0.28
*Martin Luther King Jr. Ave & V St North	5	5	0.28
*Martin Luther King Jr. Ave & V St South	5	5	0.28
*Martin Luther King Jr. Ave & W St	12	18	0.68
^Martin Luther King Jr. Ave & Talbert St	42	100	(Not Given)
^Martin Luther King Jr. Ave & Howard Rd	79	207	(Not Given)
^Firth Sterling Ave & Suitland Pkwy	185	553	(Not Given)
^Firth Sterling Ave & Howard Rd	31	63	(Not Given)
*Good Hope Road & 13th St	34	48	3.57
*Good Hope Road & 14th St	16	30	1.68
*Good Hope Road & Minnesota Ave	14	20	1.13

* Source: CH2MHill, 2007

^ Source: PB Americas, 2008

3.5.2 Public Transportation System

WMATA operates the second largest rail transit system (Metrorail) and the fifth largest bus network (Metrobus) in the United States. There are Metrorail and Metrobus services that connect the Project Area with the neighborhood and region. The center of transit activity is the multimodal transportation hub located at the southern Metrorail Station. The station has heavy rail service and a bus turnaround and transfer hub. The station has good bike and pedestrian connectivity, though improvements are possible. The northern portal has good auto access and ample parking to accommodate those arriving from the freeway. There are also short term plans to add a streetcar line within walking distance of the station. The level of transit service provided in the study area has resulted in high transit usage; however, the transit network does not directly serve the Project Area and pedestrian links between transit stations and stops are inadequate, which results in few transit users traveling to the Project Area.

3.5.2.1 Metrorail Service and Facilities

The study area is directly served by Metrorail's Green Line, which stops at the Anacostia Station. The Green Line operates between Branch Avenue and Greenbelt via downtown Washington DC. Figure 3.5.2 identifies the station location and alignment of the Green Line. The Project Area is linked with both Metrorail portals by the existing pedestrian and bicycle network; however, there are gaps and barriers between the portals and Project Area. On a typical day, 15,000 passengers board the Green Line at the Anacostia Station. Some passengers walk to the station from nearby residential neighborhoods, and many arrive by bus or car.

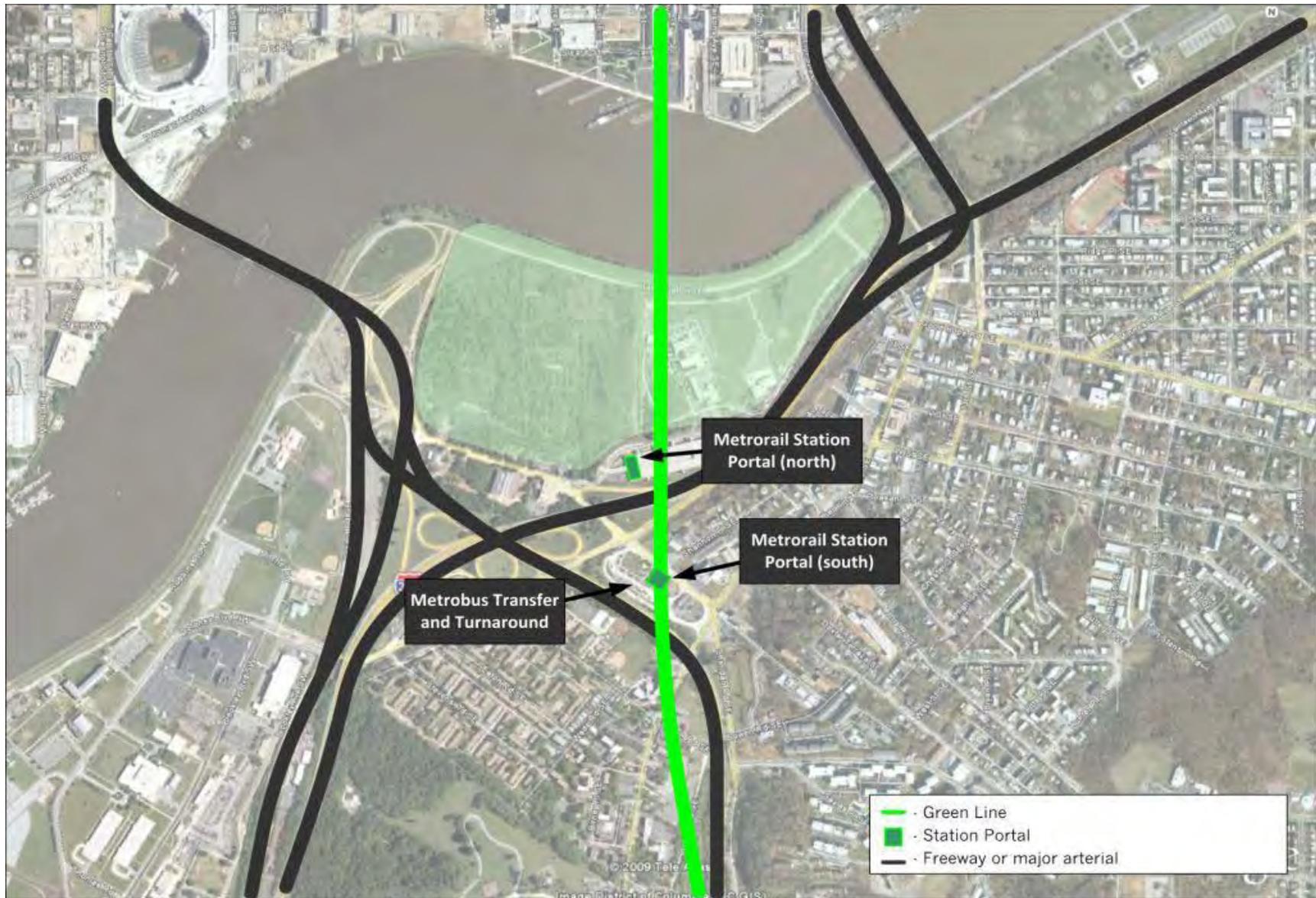


Figure 3.5.2 Existing Metrorail Service
Source: Gorove/Slade, 2010

There is a large and active WMATA bus turnaround and transfer hub located at the southern portal, and there is a park and ride lot adjacent to the northern portal. Bus routes serving the Metrorail Station have an average weekday ridership of 39,000, and average Saturday ridership of 22,000, and an average Sunday ridership of 15,000.

There are two Metrorail portals within the study area. The portal nearest to the Project Area is located north of the Anacostia Freeway and east of Howard Road. The northern portal is primarily used by park-and-ride passengers and, to a lesser extent, NPS employees, who can walk between the northern portal and the NPS buildings. Originally, the Anacostia station was the last station on the line. The northern portal was designed as a park-and-ride location and access between that station and the Project Area is constrained by its original design to primarily accommodate vehicle access.

The dominant feature of the northern portal is the parking garage, which has three levels. The type of parking spaces varies, including metered spaces, permit spaces and others that accommodate vehicles for up to 12 hours, which is typical of park-and-ride lots. There is a direct, covered pedestrian connection between the garage and the station. The station has good vehicle access, but limited access and amenities for pedestrians or cyclists. The interior of the station is typical for a Metrorail station with the exception that the fare gates are located at ground level.

The southern portal is located north of Martin Luther King, Jr. Avenue along Howard Road. The station has a large bus turnaround facility that has 11 bus bays and is directly linked with the surrounding neighborhood by a pedestrian network and on-street bike route. There are also shelters at each bus bay that can accommodate most transit users as they wait for buses. There is no public parking located at the southern portal. Bike parking is provided at outdoor racks and there is a bank of secure bike storage containers. Similar to the northern portal, the southern portal fare gates are located at ground level; otherwise the portal is similar to a typical Metrorail station.

The Anacostia Metrorail station has above average commuter volumes, but below average total daily usage. High commuter rates are likely due to high number of park-and-ride passengers and passengers transferring between Metrorail and Metrobus. Below average overall usage is likely due to limited destinations within walking distance of station and low population density of the adjacent neighborhoods. Table 3.5.3 shows the WMATA ridership data for the Anacostia Metrorail station between July 2008 and February 2009, in comparison with the average, minimum, and maximum ridership for the Metrorail system.

Table 3.5.3 WMATA Metrorail Ridership Data

	Daily Entries					Daily Exits					Total Monthly Station Entries
	AM	Mid-Day	PM	Evening	Total	AM	Mid-Day	PM	Evening	Total	
Anacostia	3,460	1,892	1,492	562	7,406	1,186	1,533	3,333	1,543	7,594	153,660
System Average	2,003	2,110	4,633	1,549	10,294	4,089	2,416	2,601	1,153	10,259	213,733
System Max	10,609	7,397	18,356	10,283	36,936	16,307	9,715	12,615	4,659	36,812	812,592
System Min	190	390	249	109	1,707	107	270	496	106	1,574	33,624

Source: WMATA, 2009

3.5.2.2 Metrobus Service and Facilities

WMATA operates 13 Metrobus lines in the study area that have a total of 29 distinct routes. The lines provided approximately 1.25 million passengers trips during February 2009, which was the most current monthly data that was available at the time of review. Metrobus activity is concentrated at the bus turnaround and transfer hub at the southern Metrorail portal and along Martin Luther King, Jr. Avenue, Suitland Parkway, and South Capitol Street. No bus lines or routes directly serve the Project Area. The south portal is a major transfer point for bus passengers between routes serving southwest and southeast DC and for those transferring to the Green Line. Table 3.5.4 lists the bus lines, route, and service information. There is comprehensive coverage during commuter periods and some coverage during off-peak hours and on weekends.

Table 3.5.4 WMATA Metrobus Routes

Lines	Routes	Weekday		Weekends	
		Service Hours	Peak Headways	Service Hours	Peak Headways
DC Based Lines					
<i>Routes Serving Anacostia Metrorail Station</i>					
581 - Anacostia -Congress Heights	A2, 6, 7, 8, 42, 46, 48	4am – 2am	10 min	4am – 2am	13 min
582 - Anacostia - Fort Drum	A4, 5	5am – 12am	10 min	5am – 12am	30 min
150 Bladensburg Rod - Anacostia	B2	5am – 12am	10 min	5am – 2am	20 min
134 - Minnesota Avenue - Anacostia	U2	6am – 10pm	25 min	None	N/A
158 - Southeast Community Hospital - Anacostia	W2, 3	6am – 12am	18 min	6am – 3am	30 min
095 - Deanwood - Alabama Avenue	W4	5am – 1am	10 min	6am – 1am	35 min
015 - Garfield - Anacostia Loop	W6, 8	6am – 1am	12 min	6am – 4am	30 min
<i>Routes Serving Study Area</i>					
130 - U Street - Garfield	90, 92, 93	5am – 12am	10 min	8am – 12am	25 min
111 - South Capitol Street	A9	6am – 7pm	15 min	None	N/A
057 - Fox Hill Village - L'Enfant Plaza	V5	6am – 8am/ 4 pm – 9pm	18 min	None	N/A
Maryland-DC Lines					
<i>Routes Serving Anacostia Metrorail Station</i>					
088 - Oxon Hill - Fort Washington	P18	10am – 3pm	1 hour	None	N/A
580 - Bock Road	W14	9am – 3pm	1 hour	None	N/A
<i>Routes Serving Study Area</i>					
088 - Oxon Hill - Fort Washington	P17, 19	5am – 6pm	18 min	None	N/A
580 - Bock Road	W13	5am – 7pm	18 min	None	N/A

Source: WMATA, 2009; Gorove/Slade, 2010

Within the study area there is a wide range of bus facilities and rider amenities. Bus infrastructure and amenities are concentrated at the bus turnaround and transfer hub located at the southern Metrorail portal. There are multiple bus shelters with lighting and benches, route maps and service information, bicycle parking, and pedestrian facilities. During peak periods passenger volumes are high and can tax the capacity of bus shelters, benches, and pedestrian facilities. Other than the facilities at the bus turnaround and transfer hub, there are limited facilities along bus routes and at bus stops in the study area. All bus lines operate in mixed traffic on-street; few bus stops have rider amenities or route information or quality bicycle and pedestrian access routes.

Study area Metrobus routes have average ridership volumes well above the system average for DC based routes. The high rates are likely due the number and coverage of routes and high transit usage rates in southeast and southwest DC. Table 3.5.5 shows monthly Metrobus ridership rates.

Table 3.5.5 WMATA Metrobus Ridership Data

	Total Monthly Ridership	Weekday		Saturday		Sunday	
		Total Ridership	Average Ridership	Total Ridership	Average Ridership	Total Ridership	Average Ridership
All Anacostia Station Routes	897,932	748,872	39,414	89,149	22,287	59,911	14,978
All Study Area Routes	1,249,354	1,042,580	54,873	125,618	31,405	81,156	20,289
All District Based Routes	5,383,643	4,549,446	239,445	503,708	125,927	330,489	82,622
All Anacostia Station Routes Average	112,242	93,609	4,927	12,736	3,184	8,559	2,140
System Route Average	89,727	75,824	3,991	11,993	2,998	7,869	1,967
System Route Max	333,343	275,629	14,507	43,837	10,959	27,229	6,807
System Route Min	2,871	2,871	151	779	195	740	185

Source: WMATA, 2009 (DC based routes only)

3.5.2.3 Other Public Transit Facilities in Study Area

There are many other transportation options that provide access and mobility in the District. Some of these pass through the study area without making stops, such as Maryland commuter buses and the DC-Virginia water taxi, other transportation options are within biking distance or accessible by transit, including regional commuter rail service, national rail service and the national and internal airports.

3.5.3 Pedestrian and Bicycle Circulation

3.5.3.1 Current Pedestrian Access Conditions

Pedestrian access to the Project Area is limited due to natural and man-made barriers and incomplete or missing pedestrian infrastructure. The Project Area is bounded by the Anacostia River to the north and by freeways, bridges, railroad tracks, and major arterials to the east, south, and west. The River and roadways act as physical barriers to the Project Area, limiting pedestrian access to underpasses and multi-use trails and increasing the distance pedestrians must walk to access the Project Area. The only access point within reasonable walking distance (a quarter mile) to commercial activities along Martin Luther King, Jr. Avenue and residential neighborhoods is located east and south of Martin Luther King, Jr. Avenue. A second access point is located within walking distance of the Metrorail station, but it provides access primarily to the NPS facilities. The Metro station is not within walking distance of southern Anacostia Park or the River.

In addition to limited access, there are no continuous sidewalks or pathways that link the Project Area with adjacent neighborhoods or transit hubs. Most pedestrian access routes are interrupted by roadway infrastructure, such as freeway ramps, interchanges, right turn slip lanes, and frequent curb cuts and driveways. The lack of continuous facilities and the poor condition of access routes reduces pedestrian access to the Project Area. Further, the Project Area is not universally accessible. Pedestrians with mobility disabilities have an extremely difficult time accessing it, if they are able to do so at all. Figure 3.5.3 shows the Project Area, major site access barriers, the location of access points, and walking route distances.

There are good pedestrian facilities and amenities within the study area located along Martin Luther King, Jr. Avenue and some residential streets. There are brick sidewalks and curb ramps, crosswalks, and pedestrian countdown clocks at major intersections along Martin Luther King, Jr. Avenue between Good Hope Road and Howard Road. The brick sidewalks give the area a distinct sense of place and create a good walking environment. Many of the local residential streets also have good pedestrian facilities, but these are not replicated within the Project Area or along access routes.

As shown in Figure 3.5.3 above, there are five distinct pedestrian site access points created by the location of the river and existing transportation infrastructure. These access points have well defined access routes. The condition and connectivity of existing Project Area access points varies considerably. In general, no access point or route has continuous sidewalks or pathways that link the Project Area and adjacent neighborhoods or transit hubs.

- Access point one links the Poplar Point with southern Anacostia Park to the northeast along Anacostia Drive. There is a sidewalk on the south side of Anacostia Drive that begins beneath the 11th Street Bridges and continues to the south until the NPS driveway. Several sections of this sidewalk are in poor condition or missing. The north side of Anacostia Drive does not have a sidewalk, but many people walk along the wide, grassy area between the river and the roadway.



Figure 3.5.3 Pedestrian Access and Barriers
Source: Grove/Slade Associates, 2010

- Access point two connects the Project Area with a pedestrian pathway on the 11th Street Bridges, which connects the north and south sides of the Anacostia River. The condition of the pathway, stairs and bridge crossing is adequate for pedestrians, but conditions are well below DDOT standards contained in the Pedestrian Master Plan and at comparable river crossings. The 11th Street Bridges crossing does not have a direct link between the north side of the River and Martin Luther King, Jr. Avenue. To make this connection, pedestrians must walk through the Project Area between access points two and three.
- Access point three links the Project Area with commercial activities along Martin Luther King, Jr. Avenue and residential neighborhoods located to the east, south, and west of Martin Luther King, Jr. Avenue. Access point three provides the most direct link between the Project Area and adjacent neighborhoods and is one of two access points within a quarter mile walking distance of major activity centers. Although pedestrians can access the Project Area at this location, the quality of the pedestrian network is substandard. The north side of Good Hope Road does not have a continuous sidewalk. The south side does have a continuous sidewalk, but it terminates immediately within the Project Area prior to a driveway. Curb cuts, driveways, freeway on-and off-ramps, and traffic signage reduce the quality of the sidewalks and street crossings along this access route.
- Access point four connects the Project Area with both Metrorail Anacostia station portals, the WMATA bus turnaround and transfer hub, Martin Luther King, Jr. Avenue, and the neighborhoods located east, south, and west of Martin Luther King, Jr. Avenue. There are adequate sidewalks and pathways for pedestrians to access the Project Area from these locations, but conditions along the route and at several intersections and crossings are substandard. The north side of Howard Road has sidewalks, curb ramps, and crosswalks that provide for pedestrian movements between Martin Luther King, Jr. Avenue and Firth Sterling Road. The sidewalk continues along the south side of Howard Road to the west to the Metrorail station access road and beyond. Pedestrian countdown heads, curb ramps, and crosswalks are provided along the south side as well, allowing access to the Project Area. The sidewalk along the north side of Howard Road is not continuous and there are no pedestrian accommodations for crossing Firth Sterling Road. West of Firth Sterling, there are continuous sidewalks along both sides of Good Hope Road. There are two locations along this access route that lack adequate pedestrian facilities and impede walking and limit accessibility. The main issue is located at the Project Area access point, where there is a fence with a gate. In the past the gate has been locked blocking access, but on a recent site visit the gate was open. There are several barriers and conditions are poor along the access route. Pedestrians must climb a small retaining wall to directly access the pathway, walk around the wall or walk in the street. There are no accommodations for pedestrian crossings to access the gate. The pathway through the gate is a mix of gravel, broken asphalt and concrete, and dirt.
- Access point five links the Project Area with the Fredrick Douglass Bridge, South Capitol Street, and points to the south. There are no pedestrian accommodations at access point five, but pedestrians walk on mowed lawns that line both sides of the road. The easiest route to this access point is from the north side of the Fredrick Douglass Bridge. The bridge has pedestrian pathways along both sides of the bridge that link to multi-use trails on the south side of the River. The multi-use trails do not directly link to the Project Area, but pedestrians can walk between the trails and the Project Area adjacent to most roadways on the lawn. Access to the Project Area is possible from the south on

South Capitol Street from the residential neighborhood located south of Defense Boulevard, but the route does not have continuous sidewalks or accommodations at crossings. Sidewalks and crosswalks are missing between the neighborhood and the South Capitol Street sidewalk and multi-use trail.

Pedestrian activity is minimal within the Project Area, at access points, along access routes, and throughout the study area due to the condition and limited availability of sidewalks, crosswalks, and other pedestrian amenities. Walking distances between activity centers and Project Area access points further reduce the attractiveness of walking. Low pedestrian volumes within the Project Area and along access routes were observed during various site visits.

There are pockets of moderate pedestrian activity within the study area. Pedestrian activity is highest along Martin Luther King, Jr. Avenue and at the south Metrorail portal. Martin Luther King, Jr. Avenue has a complete pedestrian network and contains many amenities that facilitate and encourage walking. Pedestrian volumes are also high at the Metrorail portal located on Howard Road. Frequent pedestrian traffic was observed walking between the Metrorail station, Martin Luther King, Jr. Avenue and Shannon Place. There are sidewalks, crosswalks, and other pedestrian features between Martin Luther King, Jr. Avenue and the Metrorail station.

DDOT, however, has identified the Martin Luther King, Jr. Avenue and Howard Road intersection as a high crash intersection. There are pedestrian facilities at this crossing, including curb ramps, brick crosswalks, and pedestrian countdown signals. Despite these facilities, some pedestrians were observed jaywalking in the vicinity of the intersection, primarily between the north corner and Metrorail station located to the northwest. There are also high vehicle volumes and right turn slip lanes at all corners, which may contribute to the high crash rate. Figure 3.5.4 shows pedestrian accident data in the study area between 2000 and 2006. There is steady pedestrian traffic at this intersection and high vehicle volumes.

Shannon Place, which parallels Martin Luther King, Jr. Avenue, terminates in a cul-de-sac adjacent to Howard Road. The cul-de-sac is used to pick-up and drop-off transit users, which generates frequent crossings between Shannon Place and the Metrorail station. To accommodate pedestrian crossings at this location, there are motion activated flashing yellow lights that alert vehicles to stop for pedestrians crossing the street.

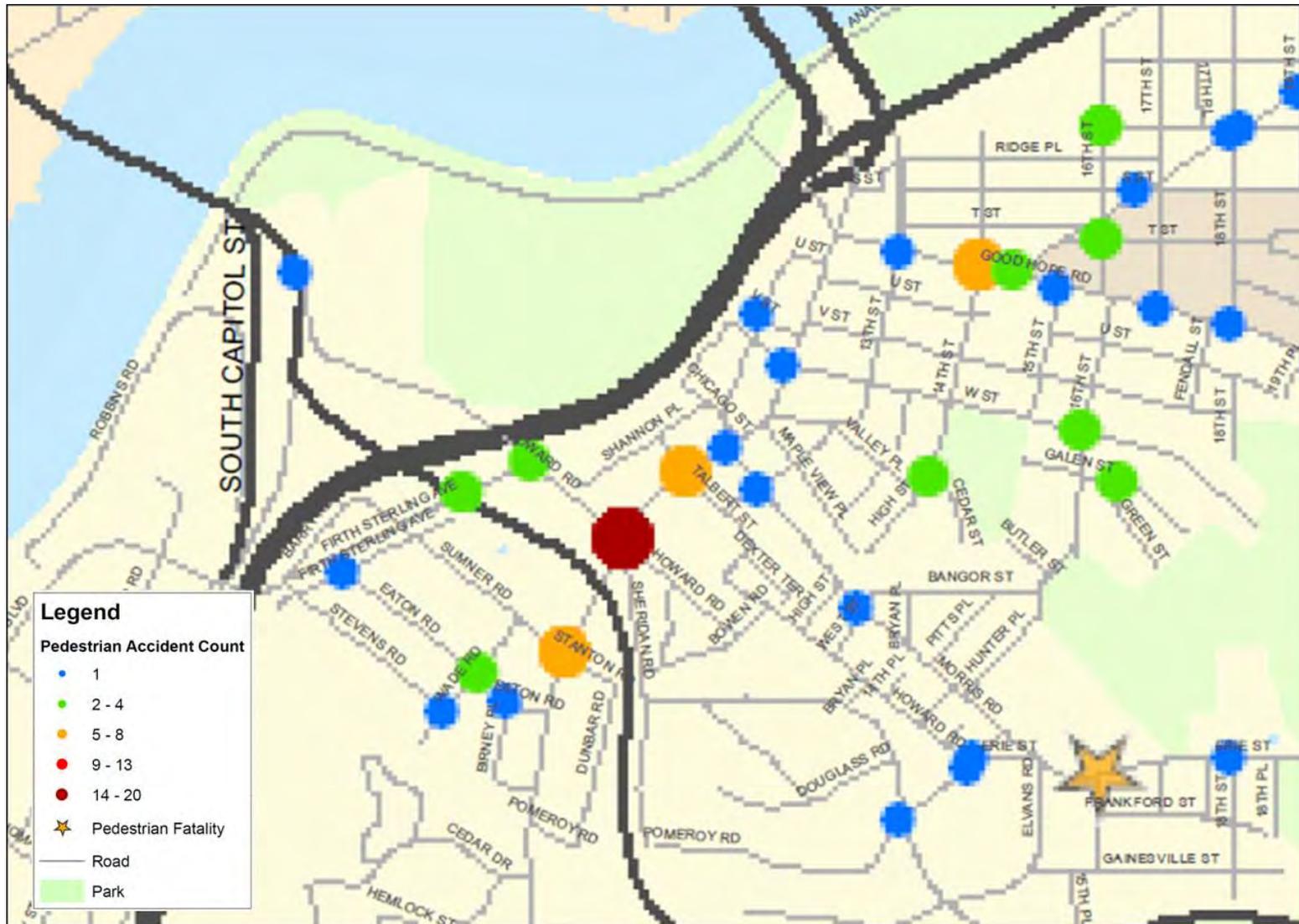


Figure 3.5.4 Pedestrian Accident Data 2000-2006

Source: *Grove/Slade, 2010*

3.5.3.2 Planned Pedestrian Facility Improvements

DDOT Pedestrian Master Plan

The *District of Columbia Pedestrian Master Plan* was prepared by the DDOT with guidance and support provided by a Technical Advisory Committee (DDOT, 2009). The *Pedestrian Master Plan* established two primary goals: 1) to reduce the number of pedestrians killed and injured in crashes with motor vehicles; and 2) to increase pedestrian activity by making walking a comfortable and accessible mode of travel. A survey found that the most commonly cited reasons for walking were to access transit (Metro station or bus stop), go to work, and go shopping/run errands. According to the *Pedestrian Master Plan*, the most common reasons cited for feeling unsafe or uncomfortably crossing specific roadways were the need for traffic lights to stop cars so pedestrians can cross, not enough time to cross the street, no crosswalks, crossing distance is too long, missing or poorly maintained sidewalks, traffic volume and congestion. Some of the reason for feeling unsafe or uncomfortable walking may explain why pedestrian activity is low in the study area.

The *Pedestrian Master Plan* also states that pedestrian safety is a major issue in the District. The plan found that there has been an increasing trend in pedestrian-related crashes in recent years prior to the study. On average, more than 670 pedestrian injuries occurred annually between 2000 and 2006 in the District of Columbia. Pedestrian fatality rates in the District have also increased. In 2002, pedestrians accounted for 8% of fatalities, but by 2004 pedestrian fatalities accounted for 22% of all traffic fatalities in the District. The *Pedestrian Master Plan* noted that the District has a higher rate of pedestrian traffic fatalities (adjusted by population) than many cities nationwide including Chicago, New York, and Los Angeles. The *Pedestrian Master Plan* establishes three objectives for increasing walking and improving safety:

- Objective 1: Provide accessible, safe and well-maintained pedestrian facilities along and across all streets.
- Objective 2: Institute policies and practices to ensure that every street in the District meets the needs of pedestrians of all abilities.
- Objective 3: Establish education, enforcement and encouragement programs that support pedestrian travel.

Anacostia River Trail

The Anacostia River Trail includes widespread improvements to the sidewalk facilities on both sides of the Anacostia River (DDOT, 2005b). On the east side of the River, the East Bank Anacostia River Trail will create a dedicated, paved path for bicycles and pedestrians. The trail will be located within southern Anacostia Park and will parallel the River between Poplar Point and the Maryland border. The trail will also provide a paved connection to the bicycle and pedestrian bridge over the Anacostia Freeway that connects to Anacostia Senior High School

3.5.3.3 Current Bicycle Access Conditions

Bicyclists have access to multi-use trails, signed bike routes and local and residential streets within the study area and Project Area, although the quality of these facilities varies considerably. There are gaps and barriers

in the network that make it difficult to access the Project Area or cycle through the study area. Novice riders would be unlikely to bike in this area given existing conditions. There is also limited bicycle parking. Within the Project Area there are no official bicycle parking locations and limited locations or objects where bicycles can be securely locked.

Within the study area there are two multi-use trails that provide good cycling conditions, but neither is directly linked with the Project Area, with each other, or with major activity centers, such as the Metrorail station or Martin Luther King, Jr. Avenue. Figure 3.5.5 illustrates the location of current and proposed bicycle access points. Information on each access point is listed below:

- Access point one links the Poplar Point with southern Anacostia Park to the northeast along Anacostia Drive. Anacostia Drive is an on-street signed bike route that links the Project Area with destinations to north, such as Pennsylvania Avenue and Minnesota Avenue, and to the south and east, such as the Anacostia Metrorail station, Martin Luther King, Jr. Avenue, and the Suitland Parkway multi-use trail. Conditions along Anacostia Drive are adequate, but there are several issues that may discourage cycling, including narrow travel lanes, poor roadway conditions that further reduce the travel lane, and limited signage.

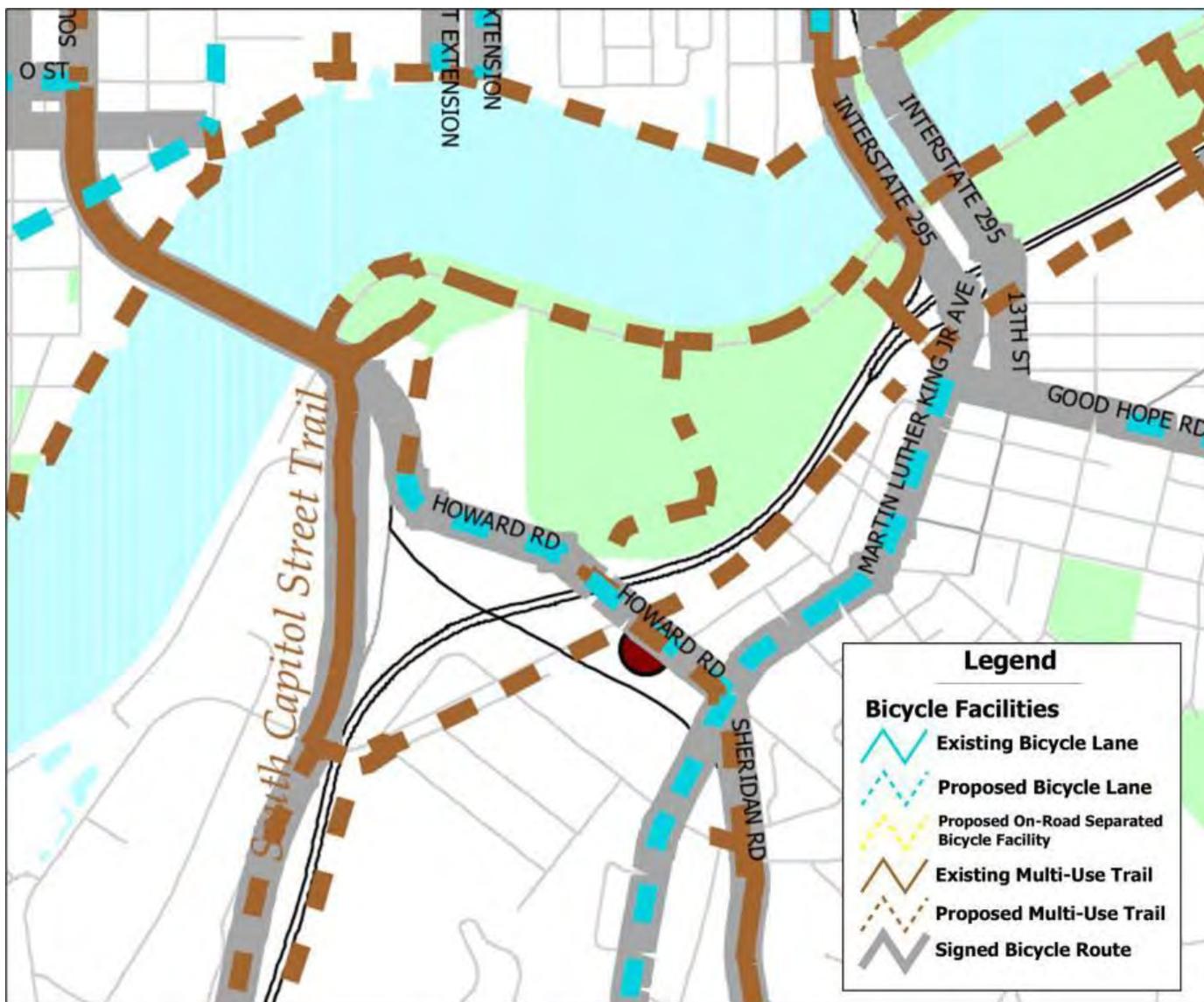


Figure 3.5.5 Planned and Existing Bicycle Facilities
Source: DDOT, 2005a

- Access point two links the Project Area with a bicycle pathway on the 11th Street Bridges, which connects on-street bike lanes on the north side of the River with the on-street signed bike route on Anacostia Drive. The condition of the pathway and bridge crossing are adequate for bicycling, but would not accommodate high volumes. The bridge crossing is narrow and cyclists cannot pass one another without one cyclist stopping and leaning out of the way as the other slowly passes.
- Access point three connects the Project Area with Martin Luther King, Jr. Avenue and residential neighborhoods located to the east, south, and west of Martin Luther King, Jr. Avenue. Good Hope Road is not a designated bike route, but a confident cyclist could access the site on-street via Good Hope Road. This access point is the closest link between the 11th Street Bridges crossing and the adjacent neighborhood.
- Access point four is located along the designated on-street bike route that links the Project Area with both Metrorail portals, the WMATA bus turnaround and transfer hub, Martin Luther King, Jr. Avenue and neighborhoods east, south, and west of Martin Luther King, Jr. Avenue. Conditions are adequate for cycling, but there are barriers and gaps along the signed bike route, including poor roadway conditions, poor path conditions, and conflicting signage along the route. Bicycling conditions are also negatively impacted by roadway conditions and traffic volumes and speed. Between the Metro parking facility access road and Firth Sterling Road there are several freeway on- and off-ramp and right-turn slip lanes that conflict with the bike route and reduce the ease and safety of cycling in this area.
- Access point five links the Project Area with the Frederick Douglass Bridge, South Capitol Street, and points to the south. The access is provided along the multi-use trail on the west side of South Capitol Street and the bicycle paths on both sides of the Frederick Douglass Bridge that directly link to the multi-use trail. The multi-use trail does not continue into the Project Area so cyclists must use Anacostia River Drive to pass through Southern Anacostia Park and access the on-street bicycle route and points beyond. Access point five cannot be reached via Suitland Parkway, which has high traffic volumes, high traffic speeds and limited shoulder or curb width to accommodate cyclists. It is possible to reach access point five via Howard Road; however, the narrowness of the roadway and roadway condition make this area difficult to navigate by bicycle.

Bicycle volumes within the Project Area, at access points, and along access routes are low due to the condition and limited connectivity of existing bicycle facilities. In general, the study area is designed for vehicular mobility and access, which reduces the attractiveness and ability to bicycle in the area. A few locations within the study area have good cycling conditions and moderate bicycle traffic. Bicycle activity is concentrated at the southern end of the Frederick Douglass Bridge at South Capitol Street. The bicycle traffic at this location is a mix of commuters and recreational cyclists. The bridge crossing and multi-use trail link the north and south sides of the Anacostia River, the site and destinations to the south. There is also occasional bicycle traffic within the Project Area along Anacostia Drive, which is a signed bike route. The bicyclists along Anacostia Drive mainly consist of recreational traffic. Martin Luther King, Jr. Avenue is also a signed bike route, but the narrowness of the travel lanes and high traffic volumes reduce the attractiveness of cycling along this corridor.

3.5.3.4 Planned Bicycle Facilities Improvement

The *District of Columbia Bicycle Master Plan* was completed in 2005 by the DDOT with guidance and support provided by the District of Columbia Bicycle Advisory Council (DDOT, 2005a). The *Bicycle Master Plan* states that the use of bicycles for transportation and recreation is increasing within the District and that the high-density land use development pattern in the District can support higher levels of bicycle transportation. Several barriers to increased cycling in the District were identified, including busy arterial roadways with high-speed traffic, no visible bike facilities on most roadways, complex intersections with vehicles turning, in many directions, freeway ramp crossings, poor access to bridge sidewalks, and limited awareness of potential bicycle opportunities among residents and visitors. Many of these barriers are issues that exist today within the study area. To improve facilities the plan recommended that DDOT improve and expand the bike route system, provide bike facilities on roadways, complete ongoing trail development and improvement projects, improve bridge access for bicyclists, and provide bicycle parking in public space. Figure 3.5.5 shows the existing and planned facilities contained in the *Bicycle Master Plan*.

3.6

ENVIRONMENTAL HEALTH

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3.6.1 Noise

Noise is generally defined as unwanted or objectionable sound that alters or disturbs quality of life, communication, or may affect physical health. Most environmental noise, particularly in urban areas, consists of a variety of frequencies of common, distant noises that create relatively steady background noise levels. Periodic loud noises such as horns honking or trucks passing by are easily perceived above background noise levels. Noise levels are usually measured and expressed in decibels (dB) that are weighted to frequencies perceivable by the human ear, known as A-weighted sound levels and expressed as dBA. Noise levels are typically measured over a set period of time (1 hour, 8 hours, or 24 hours) and commonly expressed as dBA L_{eq} , representing the equivalent or average noise level for a given time period.

Noise sensitive receptors are generally considered to be human activities or land uses that may be subject to the stress of significant interference from noise. Land uses associated with sensitive receptors include residential dwellings, hotels, motels, hospitals, nursing homes, education facilities, and libraries. Sensitive receptors may also include threatened or endangered noise sensitive biological species.

3.6.1.1 Noise Regulations

Noise levels within the District of Columbia are regulated by the District's Noise Control Act of 1977 and the noise control regulations found in Chapters 27 and 28 of the District of Columbia Municipal Regulations. Chapter 27 of the noise regulations establishes maximum allowable sound levels for daytime and nighttime periods for commercial, industrial, residential, and waterfront zones and identifies certain exemptions and variance procedures. The maximum allowable noise levels are shown in Table 3.6.1.

Table 3.6.1 Maximum Allowable Noise Levels

Zone	Maximum Noise Level	
	Daytime	Nighttime
Commercial/Light Manufacturing Zone	65 dB(A)	60 dB(A)
Industrial Zone	70 dB(A)	65 dB(A)
Residential, special purpose, or waterfront zone	60 dB(A)	55 dB(A)

Source: DC Municipal Regulations Title 20 Chapter 27, Section 2701.1

Individual pieces of construction equipment are exempt from the Chapter 27 noise control regulation; however, the equipment must be operated so as to comply with the noise limits established in Chapter 28, Section 2802 for construction. As stated in Section 2802.1, allowable noise levels resulting from construction and demolition activities (excluding pile driving) are limited to 80 dB(A) averaged over one hour between 7:00 a.m. to 7:00 p.m. on weekdays (Sec. 2802.1). If construction activities occur between the hours of 7:00 p.m. and 7:00 a.m., a noise limit of 55 dB(A) applies to construction activities within the waterfront zone.

3.6.1.2 Existing Noise Levels

Noise experienced by an individual is a function of the noise source and the physical conditions between the source and receptors (e.g., topography/structures, weather, background noise, time of day). Due to the

location of the Project Area near the urban area of Washington, DC, ambient noise levels are generally higher during the daytime and evening hours and lower during the night. Table 3.6.2 illustrates typical noise levels resulting from common noise generators.

Table 3.6.2 Relative Loudness of Common Noise Generators

dB	Overall Level	Noise Generator
118 dB	Uncomfortably Loud	Turbo-fan aircraft at takeoff power at 200 feet
96 dB	Very Loud	Power Mower
84 dB	Very Loud	Diesel truck, 40 mph at 50 feet
80 dB	Moderately Loud	High urban ambient sound
76 dB	Moderately Loud	Freeway at 50 feet from pavement edge, 10 a.m.
44 dB	Quiet	Bird Calls
0 dB	Quiet	Threshold of Hearing

Source: Federal Highway Administration, 1979

Several of the current land uses present in the Project Area generate noise at varying levels. The first and most pronounced noise source is the USPP Aviation Facility, which includes a heliport and helicopter hanger. Noise associated with this use includes the take-offs and landings of USPP helicopters, along with any maintenance activities that occur within the hanger (use of tools, jacks, etc.). Vehicular ingress and egress at the WMATA garage, located in the south end of the Poplar Point area, also generates noise on-site. Another source of noise generated by the site comes from the park visitor's, themselves. The Project Area provides playground and recreational amenities, specifically in the Southern Anacostia Park and the North Field, which would generate noise from children playing or people cheering.

In the vicinity of the Project Area, several current land uses also generate noise. I-295 runs directly adjacent to the Project Area, forming its southern border. As with any major freeway, noise is generated by vehicular traffic. These levels are most noticeable during peak traffic volumes, generally during morning and evening commuting hours. The Frederick Douglass Bridge and 11th Street Bridges generate similar levels and types of noise. Adjacent to the Frederick Douglass Bridge on the east side is the Naval Support Facility Anacostia and Bolling Air Force Base, both of which produce noise. Noise comes in the form of vehicular and training activities, along with aircraft. Occasional noise generation would result from trains passing on the CSX Railroad, which comprises the northern boundary of the Project Area. Finally, because the Project Area is adjacent to the Anacostia River, motor boats passing by would generate some noise pollution.

Across the Anacostia River to the north are the Washington National's Ballpark, Florida Rock Property, and the Washington Navy Yard. The frequency and distance of the facilities minimize the amount of noise experienced in the Project Area. Similarly, Ronald Reagan Washington National Airport is located west of the site and across the Potomac River. The potential for noise generation comes from aircraft flyovers during take-off and landing procedures.

3.6.2 Air Quality

The Clean Air Act (CAA), 42 USC 7401 et seq. as amended in 1977 and 1990, is the principal federal statute governing air pollution. The CAA empowered EPA to promulgate National Ambient Air Quality Standards (NAAQS) for the criteria air pollutants including carbon monoxide (CO), ozone (O₃), nitrogen dioxide (NO₂), sulfur dioxide (SO₂), lead (Pb), particulate matter equal to or less than 10 microns in size (PM₁₀), and fine particulate matter equal to or less than 2.5 microns in size (PM_{2.5}). The NAAQS include primary standards designed to protect human health and secondary standards to protect public welfare, such as visibility. The NAAQS are summarized in Table 3.6.3.

Table 3-38: National Ambient Air Quality Standards

Pollutant	Averaging Time	National Standards	
		Primary	Secondary
Carbon Monoxide	1 hour ⁽¹⁾	35 ppm	—
	8 hour ⁽¹⁾	9 ppm	—
Lead	Calendar Quarter	1.5 µg/m ³	Same as primary
Nitrogen Dioxide (NO ₂)	Annual (Arithmetic Mean)	100 µg/m ³	Same as primary
Particulate (PM ₁₀)	24 hour ⁽²⁾	150 µg/m ³	Same as primary
Particulate (PM _{2.5})	Annual (Arithmetic Mean) ⁽³⁾	15 µg/m ³	Same as primary
	24 hour ⁽⁴⁾	35 µg/m ³	Same as primary
Ozone	8 hour ⁽⁵⁾	0.075 ppm (2008 std)	Same as primary
	8 hour ⁽⁶⁾	0.08 ppm (1997 std)	Same as primary
	1 hour ⁽⁷⁾	0.12 ppm (applies only in limited areas)	Same as primary
Sulfur Dioxide	Annual (Arithmetic Mean)	0.03 ppm (80 µg/m ³)	—
	24 hour ⁽¹⁾	0.14 ppm (365 µg/m ³)	—
	3 hour ⁽¹⁾	—	0.5 ppm (1,300 µg/m ³)

Source: <http://www.epa.gov/air/criteria.html> Notes:

- (1) Not to be exceeded more than once per calendar year.
- (2) Final rule signed October 15, 2008
- (3) To attain this standard, the 3-year average of the 98th percentile of the daily maximum 1-hour average at each monitor within an area must not exceed 0.100 ppm (effective January 22, 2010).
- (4) Not to be exceeded more than once per year on average over 3 years.
- (5) To attain this standard, the 3-year average of the weighed annual mean PM_{2.5} concentrations from single or multiple community-oriented monitors must not exceed 15.0 µg/m³.
- (6) To attain this standard, the 3-year average of the 98th percentile of 24-hour concentrations at each population-oriented monitor within an area must not exceed 35 µg/m³ (effective December 17, 2006).
- (7) To attain this standard, the 3-year average of the fourth-highest daily maximum 8-hour average ozone concentrations measured at each monitor within an area over each year must not exceed 0.075 ppm (75 ppb) (effective May 27, 2008).
- (8)(a) To attain this standard, the 3-year average of the fourth-highest daily maximum 8-hour average ozone concentrations measured at each monitor within an area over each year must not exceed 0.08 ppm (84 ppb - rounded).
- (b) The 1997 standard – and the implementation rules for that standard – will remain in place for implementation purposes as EPA undertakes rulemaking to address the transition from the 1997 ozone standard to the 2008 ozone standard.
- (9)(a) EPA revoked the 1-hour ozone standard in all areas, although some areas have continuing obligations under that standard ("anti-backsliding").
- (b) The standard is attained when the expected number of days per calendar year with maximum hourly average ozone concentrations above 0.12 ppm (120 ppb) is less than one.

Regions of the country that do not meet the NAAQS are designated as “nonattainment” areas. States (or air quality regions) are required to demonstrate attainment of the NAAQS by preparing State Implementation Plans (SIPs) to be approved by the EPA. Generally, SIPs are comprised of air quality rules and attainment strategies applicable to both stationary and mobile sources of air pollutants in the region. Nonattainment areas must prepare SIPs that show how and when the region will comply with the NAAQS.

3.6.2.1 Air Pollutants of Concern

Ozone and fine particulate matter (PM_{2.5}) are the principal air pollutants of concern in the Washington DC metropolitan area. The region is currently designated as moderate non-attainment for the federal 8-hour ozone standard and nonattainment for the fine particulate (PM_{2.5}) standard. The Washington DC metropolitan area is also located within an ozone transport region. As a result of these nonattainment designations, the Metropolitan Washington Air Quality Committee (MWAQC), as the region’s lead air quality planning agency, has undertaken regional planning efforts to bring the region into compliance with the NAAQS. Additional information on the sources of ozone and PM_{2.5}, and the regional efforts to reduce ambient concentrations of these air pollutants are presented in the following sections.

Federal agencies responsible for an action in a nonattainment area are required to determine that the action either conforms with the region’s attainment plan or is exempt from determining conformity. Federal actions are exempt from conformity determinations where the total of all reasonably foreseeable direct and indirect emissions of nonattainment pollutants would either be: (1) less than their specified emission rate thresholds, known as *de minimis* limits, or (2) less than 10% of the area’s annual emissions budget. The general conformity *de minimis* limits for ozone nonattainment areas inside an ozone transport region are 50 tons per year for VOC and 100 tons per year for nitrogen oxides (NO_x). The *de minimis* limit for direct emissions of PM_{2.5} is 100 tons per year.

Ozone

Ozone is a principal component of smog and is formed in the atmosphere through a complex series of photochemical reactions between the precursor compounds nitrogen oxides (NO_x) and Volatile Organic Compounds (VOC). VOCs and NO_x are emitted from a variety of sources including motor vehicles, industry, lawn and garden equipment, paints, and other commercial chemical compounds. Ozone levels are typically highest on hot summer afternoons.

Recent trends are showing steady improvement toward meeting the 8-hour ozone standard. In 2009, the Washington, DC metropolitan area experienced less pollution than at any time in the last decade (MWAQC, 2009). During the summer months, the region only experienced four days when pollution reached Code Orange, a level that is unhealthy for sensitive groups, and experienced no Code Red days. The previous year, 17 days reached at least Code Orange, 3 of which were Code Red (MWAQC, 2009). The ozone State Implementation Plan (ozone SIP) indicates that the Washington metropolitan area was on track to meet the federal requirements for reducing ground-level ozone by 2009 (MWCOG, 2007). This, however, was not attained due to new, more stringent, regulations approved by EPA on ozone pollution.

Fine Particulate Matter (PM_{2.5})

As a result of the nonattainment status, the MWAQC approved a new air quality plan on March 7, 2008 to reduce fine particle (PM_{2.5}) pollution in the region. This plan has been submitted to EPA for approval. Based on this plan, the Washington metropolitan area is planning to continue to meet federal requirements for reducing PM_{2.5} in future years (MWCOG 2008b).

The three major sources of PM_{2.5} are direct emissions of PM_{2.5}, and the precursor chemicals NO_x and sulfur dioxide (SO₂). Most PM_{2.5} is generated from burning various fossil fuels in motor vehicles, off-road equipment, and power plants. According to the PM_{2.5} SIP, reductions of direct PM_{2.5} emissions will be achieved through implementation of several federal air quality rules including the Nonroad Gasoline Engines Rule, the Nonroad Diesel Engines Rule, Emissions Standards for Spark Ignition Marine Engines, Emissions Standards for Large Spark Ignition Engines, and Standards for Locomotives. NO_x emission reductions will be achieved from the Transport Rule (formerly called the Clean Air Interstate Rule), the Maryland Healthy Air Act, state NO_x Reasonably Available Control Technology (RACT) requirements and other federal rules. Sulfur dioxide emission reductions will be achieved from the Transport Rule, the Maryland Healthy Air Act, EPA Nonroad Gasoline and Diesel Engine Rules, low-sulfur fuel requirements, and a suite of other federal measures for controlling emissions from on-road motor vehicles (MWCOG, 2008b).

3.6.2.2 Greenhouse Gas Emissions and Climate Change

Various gases in the Earth's atmosphere, classified as atmospheric greenhouse gases (GHGs), play a critical role in determining the Earth's surface temperature. Solar radiation enters the Earth's atmosphere from space, and a portion of the radiation is absorbed by the Earth's surface. The Earth emits this radiation back to space, but the properties of the radiation change from high-frequency solar radiation, to lower-frequency infrared radiation. GHGs, which are transparent to solar radiation, are effective in absorbing infrared radiation. This radiation that would have otherwise escaped back to space is now "trapped," resulting in a warming of the atmosphere. This phenomenon, known as the greenhouse effect, is responsible for maintaining a habitable climate. Without the greenhouse effect, Earth would not be able to support life.

Prominent GHGs contributing to the greenhouse effect include carbon dioxide (CO₂), methane (CH₄), ozone (O₃), water vapor, nitrous oxide (N₂O), and chlorofluorocarbons (CFCs). Human-caused emissions of these GHGs in excess of natural ambient concentrations are considered to be responsible for an increase in the greenhouse effect, which has led to a trend of unnatural warming of the Earth's climate, known as global warming or global climate change.

Emissions of GHGs contributing to global climate change have been attributed in large part to human activities associated with industrial/manufacturing, utility, transportation, residential, and agricultural sectors. Emissions of CO₂ are byproducts of fossil fuel combustion. Processes that absorb CO₂, often referred to as sinks, include uptake by vegetation and dissolution into the ocean.

Climate change is a global problem, and GHGs are global pollutants, unlike criteria air pollutants, which are pollutants of regional and local concern, respectively. The scientific community generally agrees that global

warming will lead to adverse climate change effects around the globe and that the phenomenon is anthropogenic, i.e., caused by humans. Thus, it is the increased accumulation of GHGs in the atmosphere that may result in global climate change that causes adverse environmental impacts, and would constitute an indirect impact under NEPA.

Various local and federal initiatives to reduce contributions to GHG emissions have raised awareness that, even though the various contributors to and consequences of global climate change are not yet fully understood, global climate change is under way and there is a real potential for severe adverse environmental, social, and economic impacts over the long term. Because every nation is an emitter of GHGs, and therefore makes an incremental cumulative contribution to global climate change, cooperation on a global scale will be required to reduce emissions of GHGs.

On February 18, 2010, CEQ issued a memo containing draft NEPA guidance on the consideration of the effects of climate change and GHG emissions resulting from federal actions (CEQ, 2010). The memo encouraged federal agencies to determine whether or not analysis of the direct and indirect GHG emissions from the proposed action may provide meaningful information to decision makers and the public, and the CEQ proposed use of an indicator level of 25,000 metric tons per year of direct emissions of GHG. For those federal actions that would result in direct GHG emissions of more than 25,000 metric tons per year or more, the CEQ memo encouraged federal agencies to include a description of GHG emissions and emission sources in the NEPA analysis. The CEQ did not propose to use the 25,000 metric tons per year emission level as a threshold of significant effects.

3.6.2.3 Current Conditions

Poplar Point and Anacostia Park are located within the Washington D.C. metropolitan area and air quality on the site would be generally comparable to air quality at other locations within the metro area. However, due to the site's location immediately adjacent to I-295, the site may experience locally elevated pollutant concentrations resulting from motor vehicles on I-295 and the other major transportation corridors surrounding the site including the Frederick Douglass Bridge and the 11th Street Bridges.

Existing sources of air pollution on the site include emissions generated by helicopters using the US Park Police aviation facility, helicopter maintenance activities, general park maintenance activities, and water heaters and space heaters in the existing buildings on the project site. Additional emission sources on the site include motor vehicle trips from park visitors, NPS staff, and USPP staff.

3.6.3 Solid and Hazardous Waste

3.6.3.1 Project Site Conditions

The Project Area was undeveloped mudflats prior to 1900. Between 1910 and 1920, the Project Area was filled with dredge material from the Anacostia River as a result of navigational improvements made to the River. Anacostia Park was officially established in 1919 and construction began in 1923. The Anacostia Field House and community swimming pool were constructed in 1923. In 1953, Anacostia Park became part of the National Park System and transferred to the jurisdiction of the NPS.

Beginning in 1927, the Architect of the Capitol used a portion of Poplar Point for growing tropical and subtropical plants. This activity continued until 1993. At the same time, the western portion of Poplar Point was used as a nursery by DC Lanham Nursery. The U.S. Navy used the eastern portion of Poplar Point from the 1940s through the 1960s as a naval receiving station. The Metro Green Line was constructed through Poplar Point in the late 1980s and early 1990s (Ridolfi, 2003a).

The western portion of Poplar Point was the location of the former DC Lanham Tree Nursery and currently contains trees and other vegetation. A tract within the central portion of the Poplar Point was operated by the DC Architect of the Capitol and contains abandoned greenhouses, a garage building, a boiler room, offices, and other vacant buildings. The eastern portion of Poplar Point is undeveloped with the exception of an underground Metro tunnel. This tract was formerly operated by the US Navy. Due to these former uses within the Poplar Portion of the Project Area, its location is known to contain hazardous materials in the soil and groundwater. Because Southern Anacostia Park and the North Field have operated as parkland since the early 1900's, these areas are not known or suspected to contain hazardous materials. Thus, the analysis in this section focuses on the Poplar Point portion of the Project Area.

3.6.3.2 Phase I Environmental Site Assessment

In January 2003, a Phase I Environmental Site Assessment was conducted of Poplar Point by Ridolfi, Inc. (Ridolfi, 2003). The Phase I Environmental Site Assessment included an environmental database search, review of previous investigations, and interviews with cooperating property owners and tenants, as well as contact with representatives of the DC Environmental Health Administration and the DC Fire Department. Site reconnaissance was conducted where property access was permitted. The Phase I Environmental Site Assessment revealed the following environmental conditions:

- Petroleum in the groundwater and soil associated with releases from Underground Storage Tanks (USTs) near the former maintenance building;
- Petroleum in groundwater and soil associated with releases from a former 300-gallon Above-Ground Storage Tank (AST) in the southeastern corner of the project site;
- Petroleum in ground water and soil associated with releases from the nearby Green Oil Company and potentially from a former fuel pad within the area occupied by DC Lanham Tree Nursery;
- Elevated concentrations of arsenic in soil potentially associated with the placement of fill onsite in the early 1900s;

- Elevated concentrations of pesticides in surface soil that may be associated with former nursery activities onsite, or insect control activities; and
- Elevated concentrations of polynuclear aromatic hydrocarbons (Ridolphi, 2003a).

In addition, due to their age, the existing buildings within Poplar Point have the potential to contain hazardous materials, such as lead-based paint, polychlorinated biphenyls (PCBs)-containing fluorescent lighting, and asbestos-containing materials.

3.6.3.3 Soil and Groundwater Investigations

In October 2003, a Site Characterization was completed by Ridolphi, Inc. for further investigation of Poplar Point (Ridolphi, 2003). As part of the Site Characterization, soil borings were taken and monitoring wells were installed within Poplar Point to determine if subsurface contamination is present near the USTs, ASTs, former disposal sites, possible points of discharge, and where previous studies were conducted.

The results of the soil sampling show that portions of Poplar Point contain elevated levels of four chemicals in onsite soils: benzopyrene, 4,4'-DDT, arsenic, and petroleum products (diesel and motor oils). Benzopyrene was detected primarily in and around Wetland D near the fence line of the former Architect of the Capitol property and north of Anacostia Drive. Concentrations of 4,4'-DDT was detected in the southern greenhouses and storm drains in the former Architect of the Capitol property, in the north-central portion of Wetland D, in the southern portion of the former DC Lanham Tree Nursery property. Arsenic was detected in soil samples near the southern end of Wetland D, near the Green Fuel Oil property, and in the south-central portion of the former DC Lanham Tree Nursery property. Diesel-range hydrocarbons were detected in soil samples near a 275-gallon AST on the former Architect of the Capitol property and in the dog training area. Petroleum products were detected near the former burn pit on the former DC Lanham Tree Nursery property and near the Green Fuel Oil property (Ridolphi, 2003).

The results of the groundwater monitoring wells show that diesel-range hydrocarbons, motor-oil range hydrocarbons, and other fuel constituents were detected in concentrations exceeding screening levels in wells near the former USTs and ASTs within Poplar Point. Concentrations of diesel-range organics were found at levels above the DC cleanup standard in the north-central portion of the former Architect of the Capitol property. A gasoline addition, methyl tert-butyl ether (MBTE), was detected at concentrations exceeding the DC cleanup standard in four wells located near the garage on the former Architect of the Capitol property. Vinyl chloride was also detected at high concentrations at a monitoring well north of the garage. High concentrations of benzene were also detected in monitoring wells near the garage (Ridolphi, 2003).

Other chemicals detected in the groundwater wells include inorganics, VOCs, and semi-volatile organic compounds (SVOCs). These chemicals were not widespread and are not considered to indicate a pervasive problem in the groundwater (Ridolphi, 2003).

Based on the pollutants found, and their concentrations in soil and groundwater, the contaminated material within Poplar Point qualified as hazardous waste. If disturbed, hazardous waste can be a health hazard and

would require appropriate handling, storage, transport, treatment, and disposal in accordance with local and federal laws and regulations.

3.6.3.4 Human Health Risk Assessment

Human Health Risk Assessments were prepared for Poplar Point to determine potential risks to human health, including cancer, from the site specific contaminants and conditions. In 2002, Environ conducted a Human Health Risk Assessment and determined that surface soil arsenic and benzopyrene values exceed the EPA screening levels (Environ, 2002).

A second Health Risk Assessment was prepared by EVS Environmental Consultants in February 2004 because additional site data was collected by Ridolphi in 2003 and the intended future use of the Poplar Point was modified since Environ completed its original assessment (EVS, 2004). During the site assessments, metals, pesticides, organics, and polycyclic aromatic hydrocarbons (PAHs) were found at concentrations in excess of applicable hazardous materials thresholds within Poplar Point as detailed above. Accordingly, they were identified as the Chemicals of Concern (COCs).

The assessment of health risks is based on ways in which receptors are exposed to COCs, or exposure pathways. Based on the current and proposed future land use at Poplar Point, the Health Risk Assessment determined that potential human exposure pathways exist related to: metals and pesticides in surface soils and subsurface soils through inhalation of dust, incidental ingestion, and dermal contact; and dermal exposure to surface from PAHs, organics, and pesticides. Existing receptors include NPS workers because this portion of Poplar Point is fenced off from public access, it does not currently pose a hazard to visitors of Southern Anacostia Park. Future receptors would include construction workers, park users and workers, and residents.

Exposure to groundwater was not considered a complete exposure pathway for Poplar Point because: groundwater is not currently used for drinking water; and future drinking water supplies would originate from the District of Columbia's treated water system.

Exposure to surface water was not considered a complete exposure pathway for this site because surface water is only present onsite in wetlands based on seasonal conditions. Potential exposure to surface water contaminants could occur if wading takes place within a wetland. However, this activity is not permitted because it would disturb the ecological environment and wildlife within the wetland. Also, they are currently fenced off from public access.

The COCs that would be greater than the recognized acceptable level of 1×10^{-6} include the following:

- Metals – aluminum, arsenic, beryllium, cadmium, chromium, cobalt, manganese, and vanadium;
- PAHs included benz(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(g,h,i)perylene, benzo(k)fluoranthene, dibenz(a)anthracene, and indeno(1,2,3-cd)pyrene;
- Pesticides included 4,4'-DDT, 4,4'-DDD, Aroclor 1248, and Aroclor 1260; and
- Organics included benzene, bis(2-ethylhexyl)phthalate, and vinyl chloride.

Metals and pesticides pose a risk to all receptors. PAHs and organics pose a risk to NPS employees and would pose a risk to future construction workers and park workers. The risk to future park visitors and off-site residents for PAHs and organics would not exceed acceptable levels. Off-site residents are the least likely to be impacted, with NPS employees and future park and construction workers generally demonstrating the highest level of carcinogenic risk. The largest calculated risk for metals is the risk associated with the direct contact (ingestion, inhalation, and dermal contact) of chromium (7.3×10^{-6}) to current NPS workers and future construction workers and park workers. The largest calculated risk for PAHs is the risk associated with dermal contact to surface water of indeno(1,2,3-cd)pyrene (4.4×10^{-5}) for current NPS employees and future construction workers. The largest calculated risk for pesticides is the risk associated with surface soil ingestion and sediment ingestion/dermal contact of 4,4'-DDT (5.9×10^{-6}) for current NPS employees and park staff. The largest calculated risk for organics is the risk associated with dermal contact from groundwater of benzene (1.4×10^{-5}) for current NPS employees and future construction workers.

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