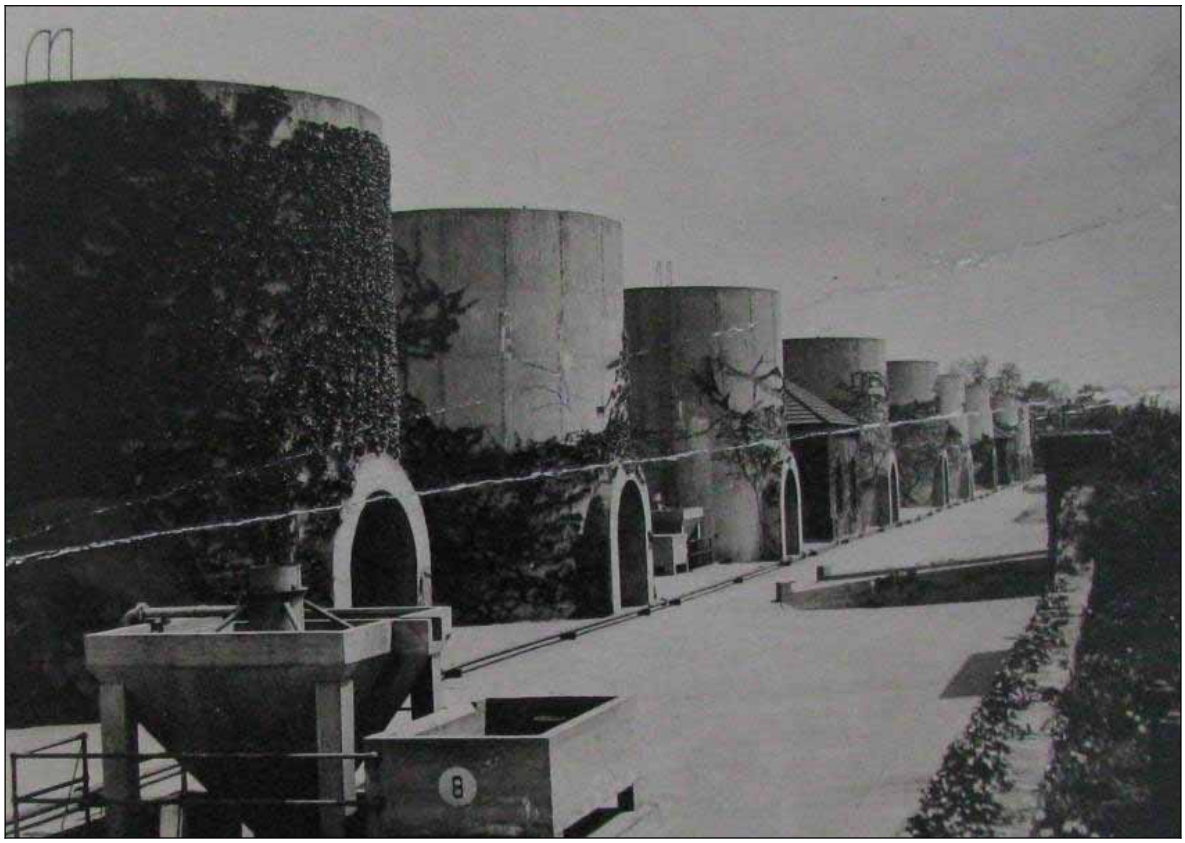
MCMILLAN SLOW SAND FILTRATION PLANT

Historic Preservation Report for the Proposed Redevelopment of the McMillan Slow Sand Filtration Plant

FINAL DRAFT
JULY 28, 2010



Prepared by: EHT Traceries, Inc.
Prepared for: Vision McMillan Partners

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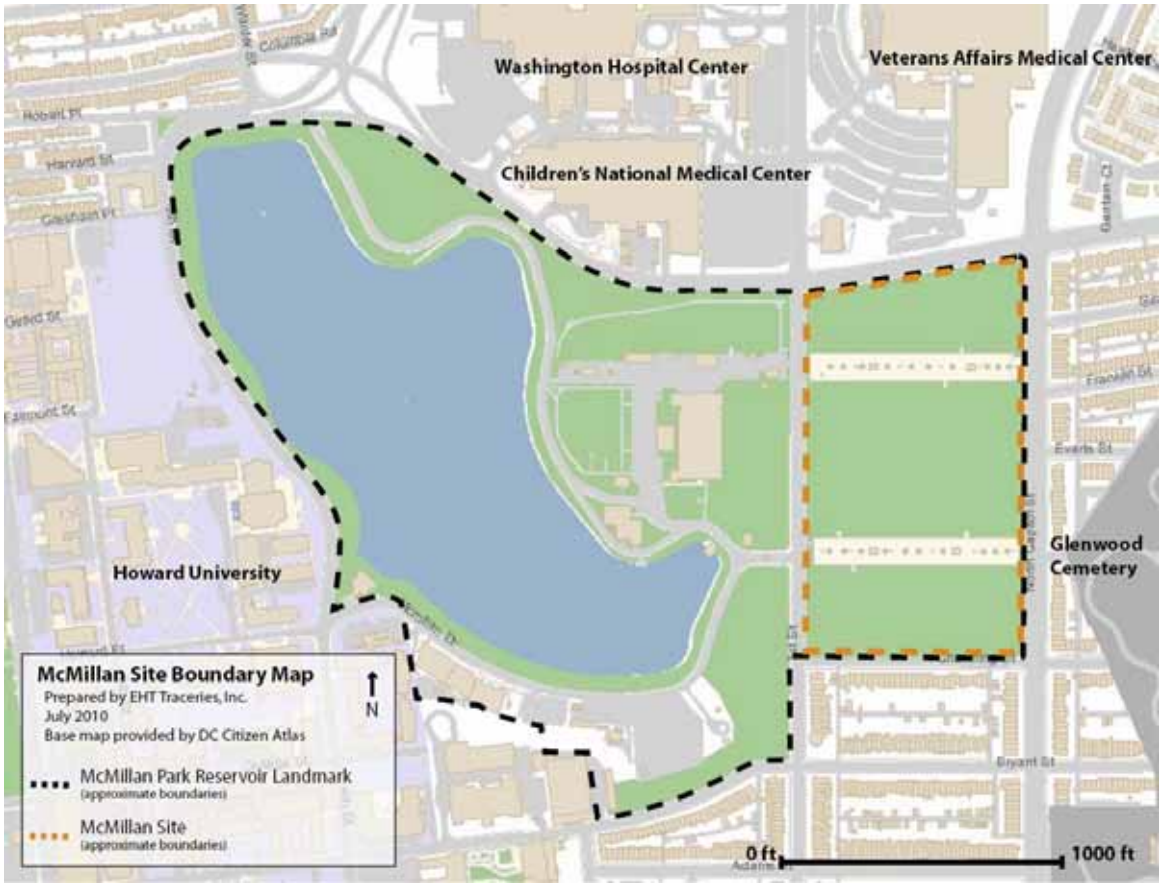
INTRODUCTION

I. INTRODUCTION TO THE MCMILLAN SITE

The site for the proposed redevelopment of the McMillan Slow Sand Filtration Plant (McMillan Site) is a 24.69-acre parcel located on the eastern edge of the northwest quadrant of the city. The McMillan Site was once part of the larger 92-acre McMillan Reservoir and Filtration Plant, owned and operated by the United States government. The larger site was comprised of the McMillan Slow Sand Filtration Plant, the McMillan Reservoir, and the McMillan Pumping Station. The McMillan Site is the section of the McMillan Slow Sand Filtration Plant located east of First Street, NW and is defined by First Street to the west, Michigan Avenue to the north, North Capitol Street to the east, and Channing Street to the south. The McMillan Site was divided off from the original property and sold to the District of Columbia in 1987. The federal government retains ownership of the McMillan Reservoir and a small section of the original filtration plant site located west of First Street, which is operated by the Washington Aqueduct Division of the Baltimore District of the U.S. Army Corps of Engineers.



The McMillan Site is within the McMillan Park Reservoir Historic Landmark (Landmark), which was listed in the District of Columbia Inventory of Historic Sites in 1991.[1] As such, the McMillan Site is protected under the District of Columbia's preservation law (Historic Landmark and Historic District Protection Act of 1978, DC Law 2-144 as amended). The Landmark includes the 92 acres that were originally associated with the federal property. The property is not currently listed in the National Register of Historic Places but was recommended for listing by the District of Columbia Historic Preservation Review Board (HPRB) as part of the landmark decision in 1991.

II. DESCRIPTION OF THE MCMILLAN REDEVELOPMENT PROJECT

The section of the slow sand filtration plant located on the McMillan Site has been non-operational since the 1980s. The District of Columbia (DC) government has targeted this property for redevelopment since its acquisition of the property from the federal government in 1987. After several previous attempts to come to an agreement about plans for the site, the DC Deputy Mayor for Planning and Economic Development (DMPED) issued a Request for Proposals in 2006 with the goal of attracting a developer to partner with the DC government in the development of the site. In 2007, DMPED selected Vision McMillan Partners (VMP) as the Master Developer for the McMillan Redevelopment Project. VMP is composed of several parties, including: Trammell Crow Company; Eakin Youngentob Associates (EYA); Jair Lynch Development Partners; MacFarlane Partners; Smoot Construction; the Alexander Company; and Street Sense.[2]

According to their commitment letter with the District of Columbia and community, VMP seeks to balance the equities of economics with public benefit, preservation, and community amenities on the McMillan Site.[3] As such, the McMillan Redevelopment Project will focus on mixed-use development to include a combination of retail, office, and townhouse-style and/or multi-family residential. It is VMP's intention that a series of passive and active open spaces will be located throughout the site to provide a diversity of recreational programming. Institutional, cultural, and hospitality uses are also contemplated and will be incorporated based on demand and feasibility. VMP has estimated that approximately 1.8-2.3 million square feet of development will be needed to pay for the required infrastructure and to support new retail uses.

III. PURPOSE OF HISTORIC PRESERVATION REPORT

VMP retained EHT Traceries, Inc. to provide research and historic preservation consulting services in the pursuit of approval for a Planned Unit Development (PUD) for the McMillan Site. This historic preservation report is a record of the information and guidance provided to VMP during this consultation period and is intends to achieve the following:

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[1] The DC Inventory of Historic Sites lists McMillan Park Reservoir as a Historic District; however, the "Decision of the Historic Preservation Review Board of the District of Columbia for McMillan Park Reservoir (Case No. 90-20)" (August 21, 1991) designates the site a Historic Landmark, not a Historic District.

[2] Trammell Crow Company joined Vision McMillan Partners in 2010.

[3] Letter of Commitment among VMP, DC, and MAG, December 10, 2007.

- **PROVIDE A GUIDE** to the extensive primary and secondary documentation that exists for the site through an extensive bibliography and appendices.
- **EVALUATE THE HISTORIC SIGNIFICANCE** of the McMillan Site. This report seeks to summarize and expand upon the evaluation of significance provided in 1989 landmark nomination form that was completed for the McMillan Park Reservoir Historic Landmark. This evaluation provides a framework for the evaluation of the historic integrity of the McMillan Site and the development of preservation recommendations for the McMillan Redevelopment Project.
- **EVALUATE THE HISTORIC INTEGRITY** of the McMillan Site. The historic integrity of the Landmark was evaluated as part of its local landmark nomination in 1989. An updated evaluation of the integrity of the McMillan Site, as a distinct component of the Landmark, is necessary for the development of preservation recommendations for the McMillan Redevelopment Project.
- **PROVIDE RECOMMENDATIONS FOR PRESERVATION** of the McMillan Site within the context of the proposed redevelopment. The recommendations are specific to the McMillan Site and are intended to inform a successful preservation strategy for the proposed McMillan Redevelopment Project within the general parameters set by the city and VMP. The recommendations take into consideration the site's significance and integrity and are based on the *Secretary of the Interior's Standards for the Treatment of Historic Properties*. General recommendations and resource-specific recommendations are included and will be incorporated into the site plan for the redevelopment as appropriate.
- **PROVIDE RECOMMENDATIONS FOR PRESERVATION MITIGATION** for the McMillan Redevelopment Project. EHT Traceries, Inc. is conscious of the various interests of the numerous stakeholders in the McMillan Redevelopment Project. To facilitate the future discussion of preservation within the context of other stakeholder interests, this report provides additional recommendations for the mitigation of the loss of historic fabric and integrity that is possible at the McMillan Site. These recommendations are intended to be taken into consideration by VMP and DCHPO and can be directly incorporated into the amenities package for the PUD as appropriate.
- **GUIDE THE PRESERVATION-RELATED APPROVAL PROCESSES** for the McMillan Redevelopment Project. Because the McMillan Site is part of the lager McMillan Park Reservoir Historic Landmark, any construction or demolition on the site is subject to a variety of preservation-related reviews on the federal and local level. This report seeks to outline these reviews to clarify the approval process for the project.

This report identifies, summarizes, and supplements previous documentation efforts. It is designed to be used as a resource and a tool for VMP in its discussions with the city and community about the appropriate treatment of historic resources, as well as the design of new construction on the site. This report does not attempt to replace or correct the numerous documentation efforts and reports that have addressed the McMillan Site or the Landmark over the last twenty years.

IV. CONTENTS OF THE HISTORIC PRESERVATION REPORT

This report includes the following:

- **Chapter 1:** A description of the McMillan Site and updated inventory of resource types located within the site. The inventory includes a brief description of each type, a site key, historic images, and current images [A more comprehensive and detailed inventory was conducted by Engineering Science, Inc., in 1990 as required by Section 106. The 1990 inventory provides thorough documentation of all historic resources on the site and is maintained as a public record at the District of Columbia Historic Preservation Office];
- **Chapter 2:** A summary and expansion of the history and significance of the Landmark and an evaluation of the historic significance of the McMillan Site.
- **Chapter 3:** An evaluation of the historic integrity of the McMillan Site.
- **Chapter 4:** Preservation recommendations for the treatment of the McMillan Site to inform the preservation strategy for the proposed redevelopment efforts;
- **Chapter 5:** A summary of historic preservation compliance requirements applicable to the redevelopment of the McMillan Site;
- **Bibliography:** An extensive bibliography of all resources and repositories consulted for this report; and
- **Appendices:** Appendices that provide selected plans, photographs, and other documentation collected as part of the research effort for this report.

V. DEFINITIONS

For the purposes of this report, the following terms are defined:

- **McMillan Park Reservoir Historic Landmark:** (also Landmark, Historic Landmark) The 92-acre local landmark in the District of Columbia Inventory of Historic Sites that includes the McMillan Reservoir, the McMillan Slow Sand Filtration Plant, and associated open space.
- **McMillan Park:** (also Park) The area designated by Secretary of War Taft in 1906 as "McMillan Park," which consists of the McMillan Reservoir, the McMillan Slow Sand Filtration Plant, and associated open space. McMillan Park roughly corresponds to the area designated as McMillan Park Reservoir Historic Landmark.
- **McMillan Site:** (also Site, property) The 25-acre section of the McMillan Park Reservoir Historic Landmark that is located east of First Street, NW, was transferred from the United States government to the District of Columbia government in 1989, and is slated for redevelopment by the District of Columbia.
- **McMillan Redevelopment Project:** (also Redevelopment Project, Project) The proposed redevelopment of the McMillan Site by VMP as prescribed by the District of Columbia.
- **Planned Unit Development:** (also PUD) A planning tool established by the District of Columbia Zoning Regulations with the intention to "encourage high quality developments that provide public benefits" by permitting "flexibility of development

and other incentives, such as increased building height and density; provided that the project offers a commendable number of quality of public benefits and that it protects and advances public health safety, welfare, and convenience."[4]

- **PUD Stage 1 Submission:** The first phase of materials submitted to the District of Columbia Zoning Commission to illustrate a site's suitability for use as a PUD, the appropriateness, character, scale, mixture of uses, and design of the uses proposed for the site; and the compatibility of the proposed development with citywide, ward, and area plans of the District of Columbia, and other goals of the PUD process.
- **PUD Stage 2 Submission:** The second phase of materials submitted to the District of Columbia Zoning Commission consisting of a detailed site plan that is reviewed for its compliance with the intent and purposes of the PUD process, the PUD Stage 1 approval, and the PUD regulations.

[4] Planned Unit Development Procedures, District of Columbia Municipal Regulations, Title 11, Chapter 24, Section 2400.

CHAPTER 1: SITE DESCRIPTION AND RESOURCE INVENTORY

II. SITE DESCRIPTION

The McMillan Park Reservoir Historic Landmark consists of the complex of buildings and structures that were historically used for the purposes of water purification, as well as the designed landscape that transformed the complex into McMillan Park.

BUILT RESOURCES

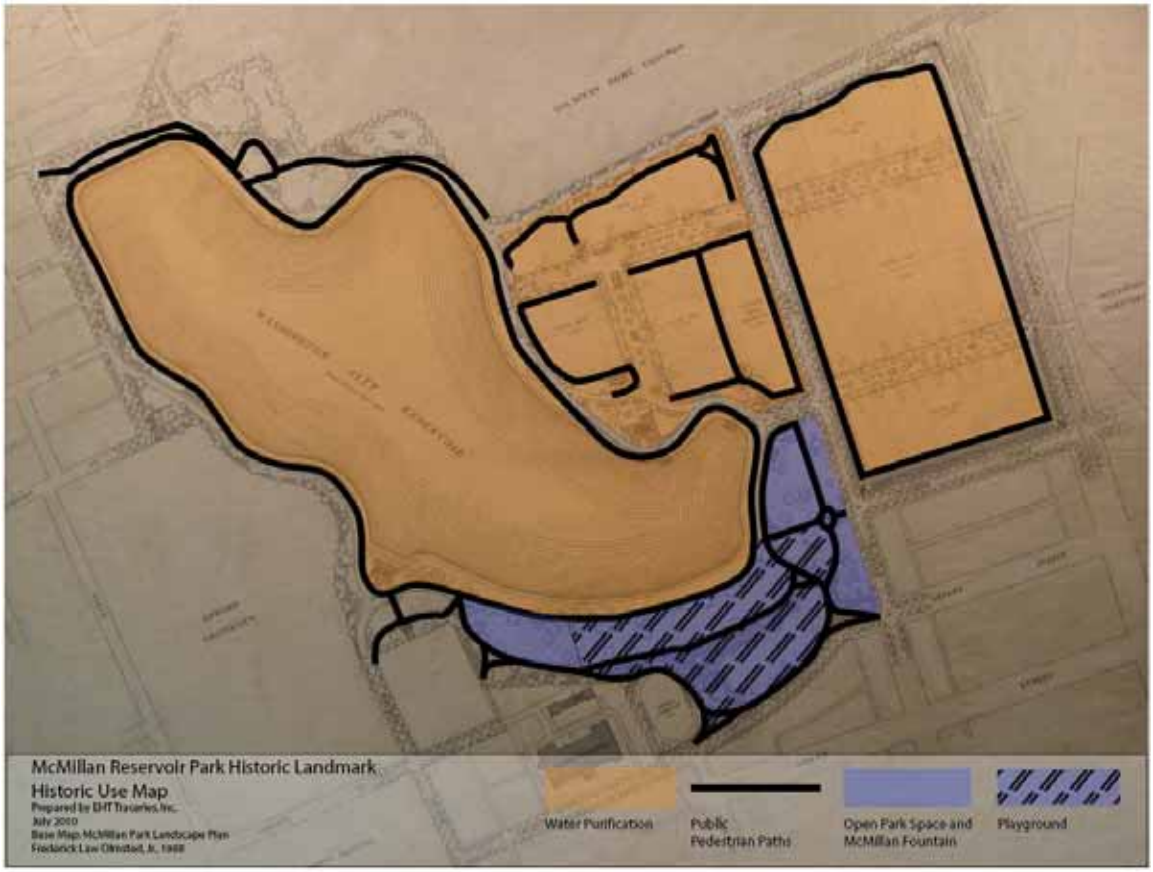
As listed in the landmark nomination for McMillan Park Reservoir Historic Landmark, those resources that historically contributed to the water purification facility included: the open reservoir (also known as the basin), the circulating conduit, the east shaft gate house, the pumping station, several gate houses, the control house, the laboratory (also known as the office building), several shelter houses, the storehouse (also known as the machine shop), the regulator houses, the engine house, the filtration beds, the sand washers, the sand bins, the clear water reservoir, the chemical tower, the flume building, and several gatehouses.[5] Other types of built resources are also found within the landmark, including service courts, service court walls, filter bed portals, ramps, and stairs. A majority of these resources were built between 1901 and 1905 and were part of the slow sand filtration plant. Plans and specifications for the slow sand filtration plant were completed by the Army Corps of Engineers and a team of consulting engineers. The open reservoir was constructed between 1883 and 1888, and some of the secondary structures were added as late as the 1930s. A chemical filtration plant was built west of First Street between 1981 and 1985 and introduced modern construction on the site.

The McMillan Site itself has a trapezoidal footprint defined by First Street, NW, to the west, Michigan Avenue, NW, to the north, North Capitol Street to the east, and Channing Street, NW, to the south. The McMillan Site features two paved service courts that divide the site into a tripartite configuration of expansive open spaces. These grassy open spaces correspond to the roofs of the twenty filter beds that have been covered by a layer of fill. To construct these filter beds, the site's topography was re-graded, and an extensive campaign of cut and fill created an artificial topography that rises approximately sixteen feet above the level of Channing Street to the south and is depressed approximately ten feet from the level of Michigan Avenue to the north. The paved service courts are depressed approximately five feet into this plateau and are bounded to the north and south by the parapet walls of the subterranean filter beds. These walls function as retaining walls for the fill that covers the roofs of the filter beds. Each filter bed is accessed from the service courts by an arched portal, and a mound in the fill behind each portal corresponds to the subterranean path of a ramp that leads from the portal to the floor of its corresponding filter bed. Within each service court, the sand bins, sand washers, and regulator houses are arranged in a single east-west line. There it a total of twenty sand bins (one for each filter bed), four regulator houses, and twelve sand washers. The tops of the filter beds are accessed from the service courts by several ramps and stairs. Ramps and stairs also connect the tops of the filter beds and the service courts to the adjacent roads at five locations. The expansive open spaces contain

[5] As listed in the DC Landmark nomination for McMillan Park Reservoir Historic Landmark, 1989.

approximately 2,100 circular manholes that lead to the filter beds below. A tunnel, similar in style to the filter bed portals, runs under First Street to connect the northern service court of the McMillan Site to the west side of the sand filtration plant.

Most of the built resources are constructed of concrete with varying types of treatments. The regulator houses are constructed of red brick coursed in Flemish bond and feature arched fenestration and hipped roofs covered in terra cotta tiles. Doors and windows, including those of the regulator houses and filter bed portals, are constructed of wood with iron hardware. All of the resources on the McMillan Site reflect the original design and construction of the slow sand filtration plant.[6]



DESIGNED LANDSCAPE

From 1907 to 1911, Frederick Law Olmsted, Jr. developed the landscape design for the various components of the 92-acre reservoir and filtration plant complex. This landscape plan was substantially implemented between 1907 and 1919. His "General Plan for the Landscape Treatment of McMillan Park," (March 27, 1908), provides a narrative of his design intentions for the Park. The plan starts by dividing the entire site into three distinct parts -- Part A, Part B, and Part C—which Olmsted described as follows:

[6] The existing sand washers were installed circa 1910.

- **Part A:** "The area including the covered reservoirs, filter beds, sand-washers and their appurtences [sic], consisting of a series of engineering constructions of a strikingly artificial and formal appearance."
- **Part B:** "The spacious and impressive open reservoir with its enclosing banks and hillsides, including the curvilinear banks of the filter beds which face toward it."
- **Part C:** "The southerly part, lying in the main below the dam of the reservoir but sweeping up gradually to the hill top in the southeast corner of part B."[7]

The 25-acre McMillan Site comprises the majority of Part A, which is described by Olmsted as having a"

> "strikingly artificial and formal appearance which…would be impossible to obscure by any decoration or planting, which even if not beautiful is certainly very interesting and full of individual character appropriate to the purposes subserved, and which therefore should be recognized and emphasized in such slight and subordinate decoration as may be undertaken in connection with this area."

Olmsted's design for Part A was based on the primary physical structures of the site: the "straight banks" bordering the site; the "formal plain" created by the roofs of the filter beds; and the architectural elements found in the two service courts. From the 1908 general plan, it is apparent that one of Olmsted's primary design intentions was to emphasize and reinforce the border of the formal plain, through the introduction of a perimeter path and multiple layers of perimeter plantings. Olmsted started the design with a "low formal hedge bordering the formal plain and marking the top edge of the bank."[8] Olmsted specified the "low" hedge because of his concern that a high, solid hedge would obscure visibility to the site from the street and would be ill-proportioned to the "straight banks" at certain points. As a result, he limited the perimeter hedge to three feet in height. Olmsted did not think the small hedge would "in itself provide as strong an emphasis of the border as the scale of the plain demands." Therefore, he also recommended planting a double row of small- scale trees inside the hedge, "beneath the foliage of which the view could pass and between which a border path could be provided whence the plain could be overlooked."[9] This idea of overlooking the formal plain from a perimeter path, rather than allowing public access on the plain, was based on Olmsted's recognition of the dangerous condition created by the hundreds of open manholes across the plains. (Records indicate that between three and four acres of manholes would be open at any given time to provide light and air to the workers that were cleaning the sand in the filter beds below.) Olmsted was so concerned about this condition that he thought it was "perhaps inexpedient to admit the public to the use of the plain even upon a fenced path." In addition to safety issues, Olmsted was also aware of the detrimental effects the roots of the trees could have on the concrete substructure. Olmsted's concept for the hedge and double row of trees was implemented, and he addressed his various concerns through the species and placement of plantings.[10] To avoid having a fenced condition, Olmsted, Jr.

[7] Frederick Law Olmsted, Jr., "An Outline of the General Plan for the Landscape Treatment of McMillan Park," March 27, 1908, Olmsted Papers, Manuscript Division, Library of Congress.
[8] Frederick Law Olmsted, Jr.
[9] Frederick Law Olmsted, Jr.
[10] Implementation of the general concept of the 1908 plan is evidenced by Olmsted's final general plan for the site (1911), as well as several historic photographs of the site.

created natural barrier around the perimeter path with closely spaced thorny plantings. The 1908 and 1910 planting plans for the site show that Olmsted, Jr. specified Japanese Barberry with one-foot spacing for the hedge and Cockspur Thorns for the double row of trees. Other thorny species (Japanese Climbing Rose, Double-flowering Scarlet Thorne, Dwarf Wild Rose, Early Wild Rose, etc.) were used to frame entry stairs at the four corners of the site. The trees and hedges were planted in straight lines around the perimeter, except at the north side of the site, where the spacing and configuration of the trees were more appropriate for the curvilinear character of the north leg of the perimeter path. Larger species (Yellowwood, American Elm, Pagoda Tree, Catulpa Tree, etc.) were used to mark and frame entrances located at the east and west ends of the two service courts, but in general, Olmsted used smaller plantings to avoid blocking views into the site. Olmsted also designed plantings in the two east-west service courts to emphasize the rhythms created by the arrangement of the sand storage bins. Olmsted, Jr. specified rows of widely spaced Chinese Cork Trees and suggested replacing the Boston Ivy that was already planted along the surfaces of the sand bins, regulator houses, and court walls with "creepers of a…more picturesque and less flatly enveloping habit."

Olmsted's planting and grading plans for all areas around the reservoir (Part B) reflected the "informal and irregular" character of the reservoir through a more picturesque treatment than was used for Part A. Olmsted intended that all landscape improvements of Part B "should be governed before everything else by the purpose of presenting this expanse of water agreeably to those who use the park—of securing for it an agreeable backgrounds [sic] of foliage and pleasing foregrounds as seen from the roads and paths frequented by the public."[11] While a majority of Olmsted's landscape design focused on the enhancement of the water purification complex [Parts A and B], he briefly addressed the land south and southeast of the reservoir [Part C], which he identified as having "no practical functions in the operation of the water works and presenting a distinct landscape unit." Olmsted sought to shape this area into "an agreeable and consistent piece of informal park landscape with provision at the westerly end for a children's playground."[12] As such, this area of McMillan Park was set aside for public recreation and for the installation of a public memorial to Senator James McMillan. Olmsted's 1908 plan for McMillan Park specifies the provision of a wading pool and a track south of the reservoir. It is not known whether Olmsted's design for these recreational areas was implemented as planned; however, historic documentation indicates that the Bloomingdale Playground was located in the area south of the reservoir. The playground accommodated numerous community activities, including soccer games, basketball games, baseball games, folk festivals, marble tournaments, Halloween parties, track events, children's exhibits, kite contests, pet shows, and club meetings.[13] In 1934, the Bloomingdale Playground was officially renamed the "McMillan Playground."[14] Plans for the renovation of the playground from that same year indicate the provision of tennis courts, volleyball courts, horseshoe courts, and a new field house. McMillan Park was also the venue for military band concerts, which most likely took place in the proximity of the McMillan Memorial Fountain where visitors could find benches on which to sit.

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[11] Olmsted, Jr., "An Outline of the General Plan for the Landscape Treatment of McMillan Park," 1908.
[12] Olmsted, Jr., "An Outline of the General Plan for the Landscape Treatment of McMillan Park," 1908.
[13] *Washington Post* articles, 1912-1948.
[14] Baker, Sibyl, letter to H.P. Caemmerer, November 17, 1934, Fine Arts Commission, RG 66, National Archives Records Administration.

II. INVENTORY OF HISTORIC RESOURCES AT THE MCMILLAN SITE

The following inventory provides a catalogue of types of historic resources found at the McMillan Site. This inventory is intended to provide a general background for the recommendations section of this report.[15] The resource types are grouped into the following categories:

- Built Resources
- Landscape Resources
- Site Resources

Each resource type is provided with a description, a site key showing the locations of the individual resources, and historic and current drawings and photographs. The following resource types were identified at the McMillan Site:

BUILT RESOURCES

- Service Courts
- Service Court Walls
- Regulator Houses
- Sand Storage Bins
- Stationary Sand Washers
- Filter Beds
- Filter Bed Portals
- Filter Bed Ramps
- Filter Bed Sand
- Manholes and Manhole Covers
- Perimeter Pedestrian Path
- Corner Stairs
- Service Ramps and Stairs
- Tunnel

LANDSCAPE RESOURCES

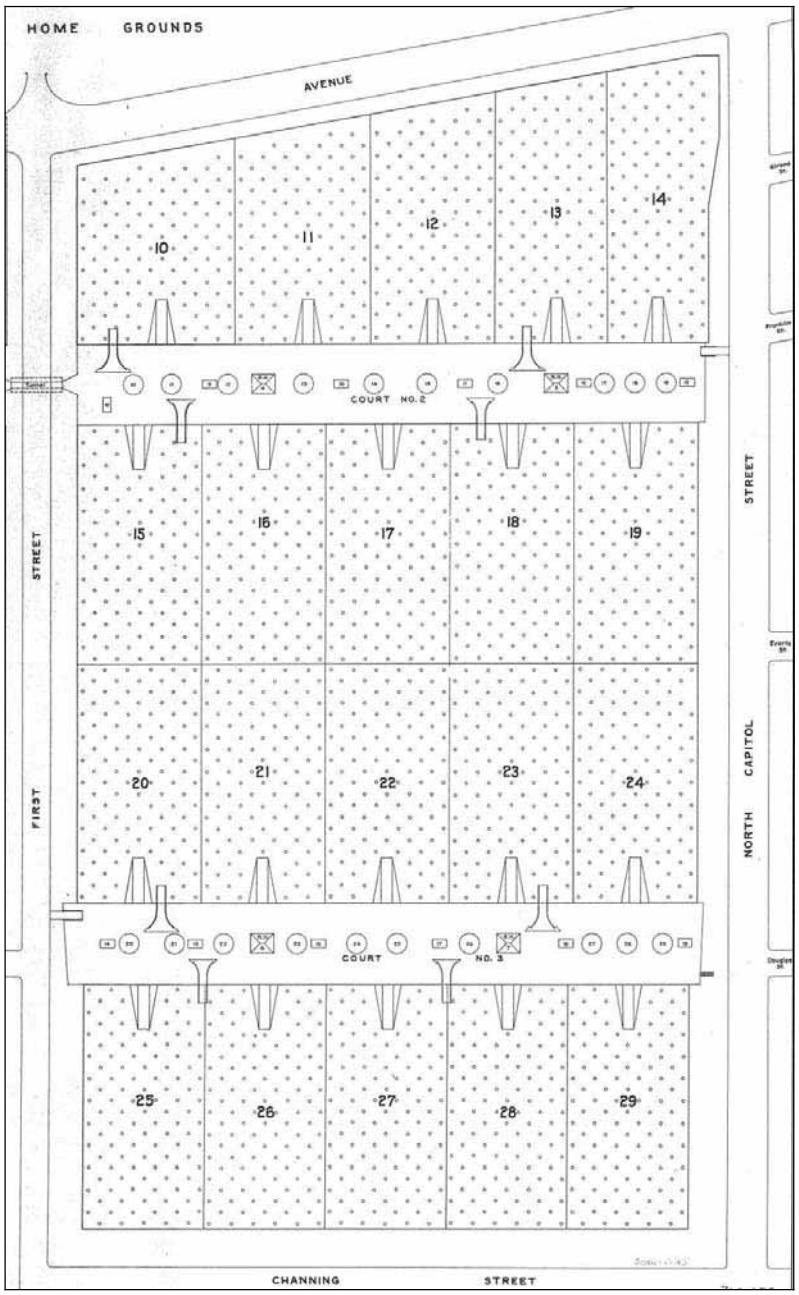
- Perimeter Plantings
- Service Court Plantings

SITE RESOURCES

- Site Boundaries
- Site Plan and Spatial Organization
- Topography
- Internal Views
- External Views

[15] The "Architectural and Archaeological Survey of the Easter Portion of McMillan Water Treatment Plant," completed by Engineering Science, Inc. in 1990 to comply with Section 106 of the NHPA, provides a detailed record of each of 56 historic resources identified on the property referred to in this report as the McMillan Site. The data is recorded on standard survey forms specifically adapted for DCHPO and the McMillan property, and the full inventory of resources is kept as a public record at DCHPO.

Source information for all historic images used in this inventory is found in the appendices to this report.



Original site plan, c. 1910

BUILT RESOURCES

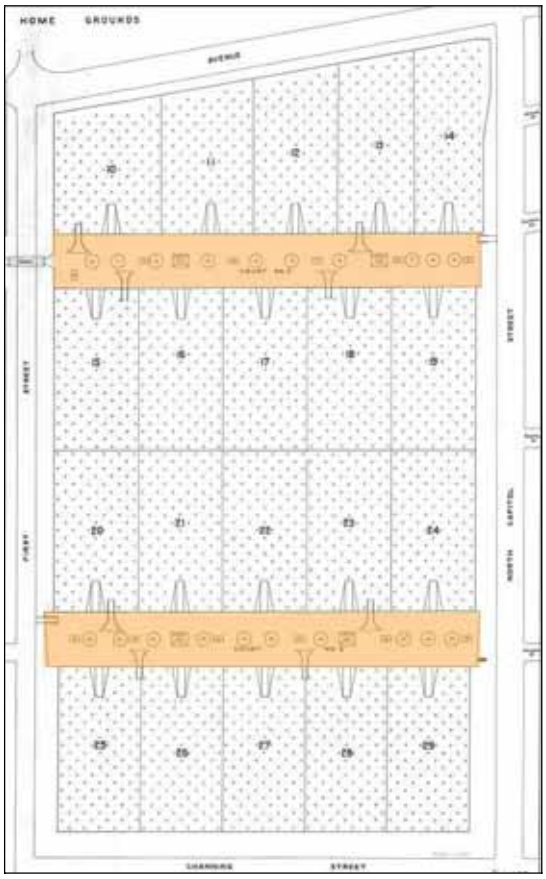
SERVICE COURTS

Material: Concrete

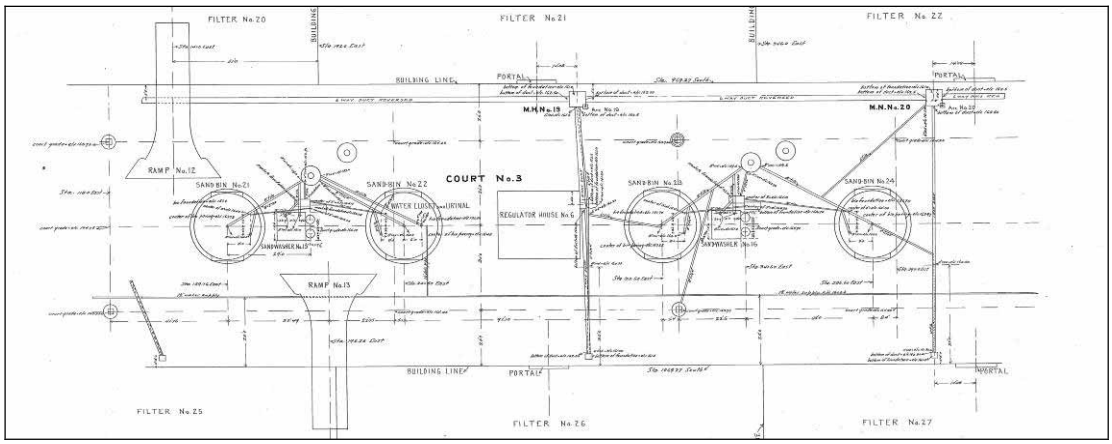
Quantity: 2

Date: 1903-1905 (original)

The Site features two paved service courts that traverse the Site in an east-west direction. A majority of the above-ground built resources on the Site are located within these courts. The courts sit five feet below the grade of the adjacent plains and are bordered to the north and south by concrete parapet walls that are integrated into the structure of the subterranean filter beds. The courts are accessed by stairs and ramps that lead to the streets and to the tops of the filter cells. Today, the service courts remain paved and in their original locations. The paved surfaces are overgrown with weeds and show previous concrete patches and repairs.



Service Court #3, looking east, 1944



Original Plan of Court No. 3, 1902


Existing conditions of Service Court No. 3 looking west (spring), EHT Traceries, Inc., 2008


Existing Conditions of Service Court No. 2 looking east (winter), EHT Traceries, Inc., 2008

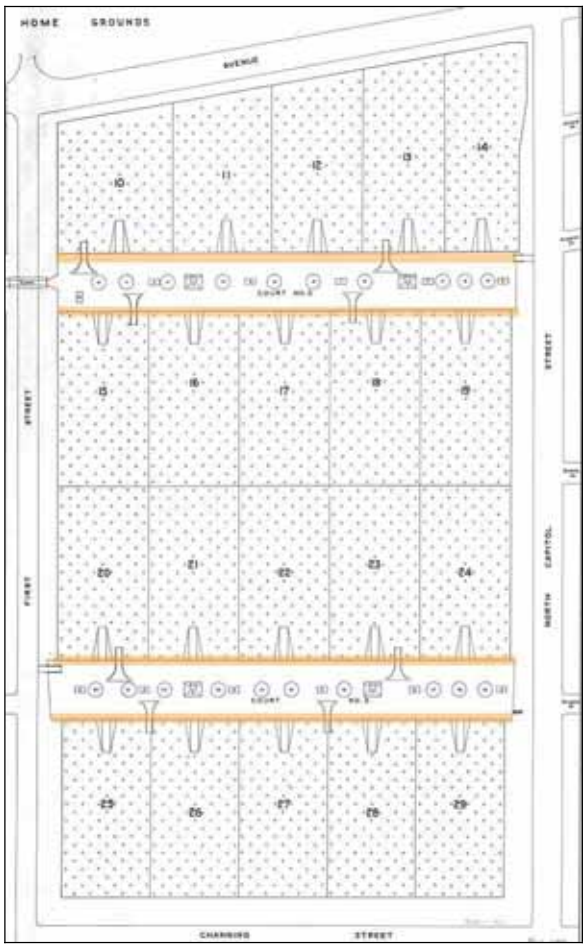
SERVICE COURT WALLS

Material: Concrete

Quantity: 4

Date: 1903-1905 (original)

Concrete walls bound the north and south sides of both service courts. These walls are the parapet walls of the subterranean filter bed structures and also function as retaining walls to the fill that was placed on top of the filter beds. The walls have a simple, unadorned concrete cornice but feature no other architectural detailing. Ramps and stairs pierce the wall at several locations in both service courts to provide access from the courts to the tops of the filter beds. Today, the service walls are extant in their original locations, with various degrees of material deterioration in the form of cracking and spalled concrete. Three areas of concrete in-fill are located where original ramps were previously demolished.



Service Court #3, looking east, 1944

Service Court Walls – Existing Conditions (EHT Traceries, Inc., 2008)

Typical crack in wall of service court

Typical crack in wall of service court

Typical wall of service court

Infill of wall of service court where ramp was demolished

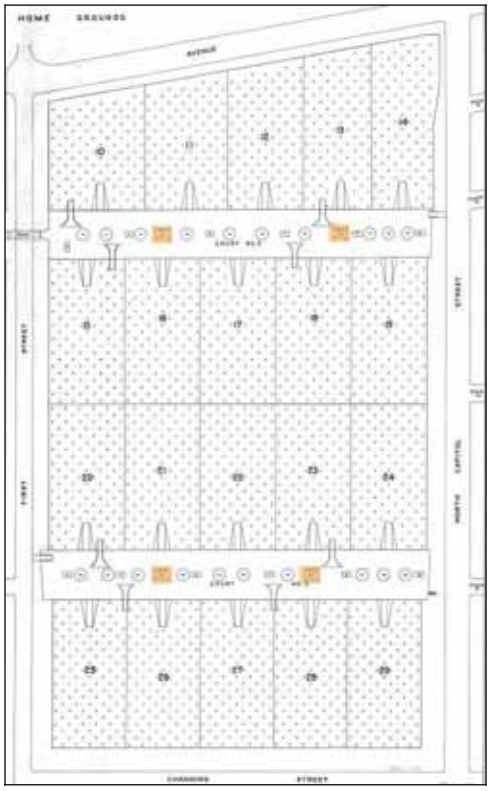
REGULATOR HOUSES

Material: Brick, clay tile, wood, concrete

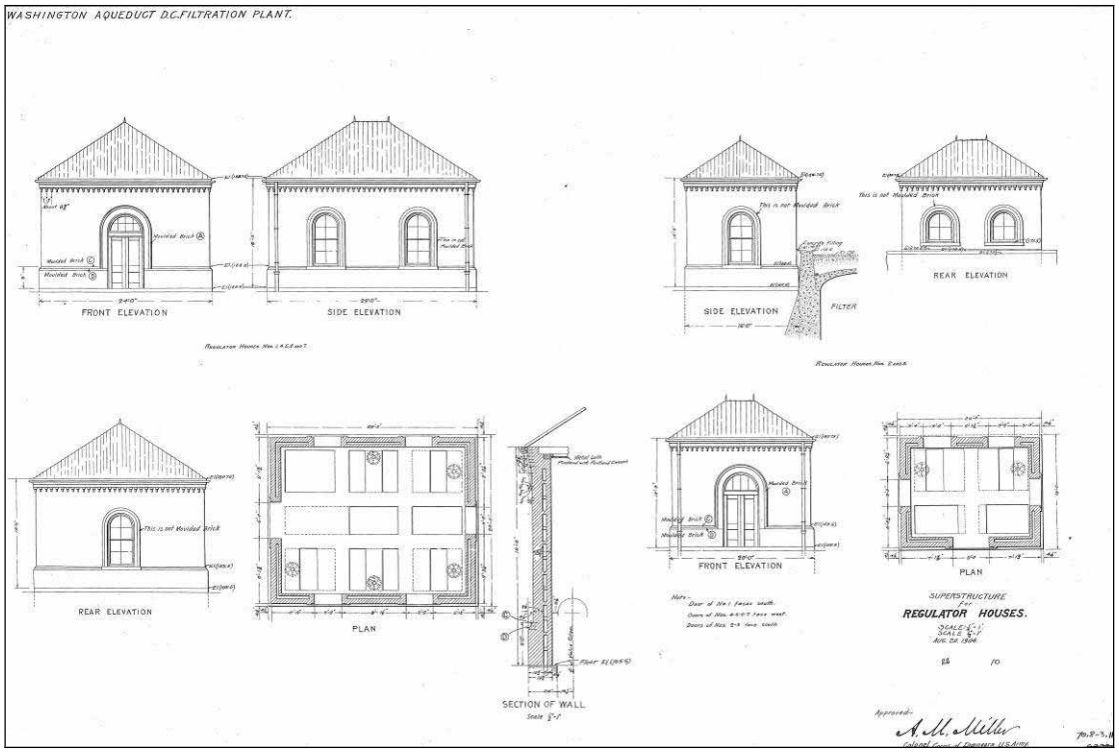
Quantity: 4

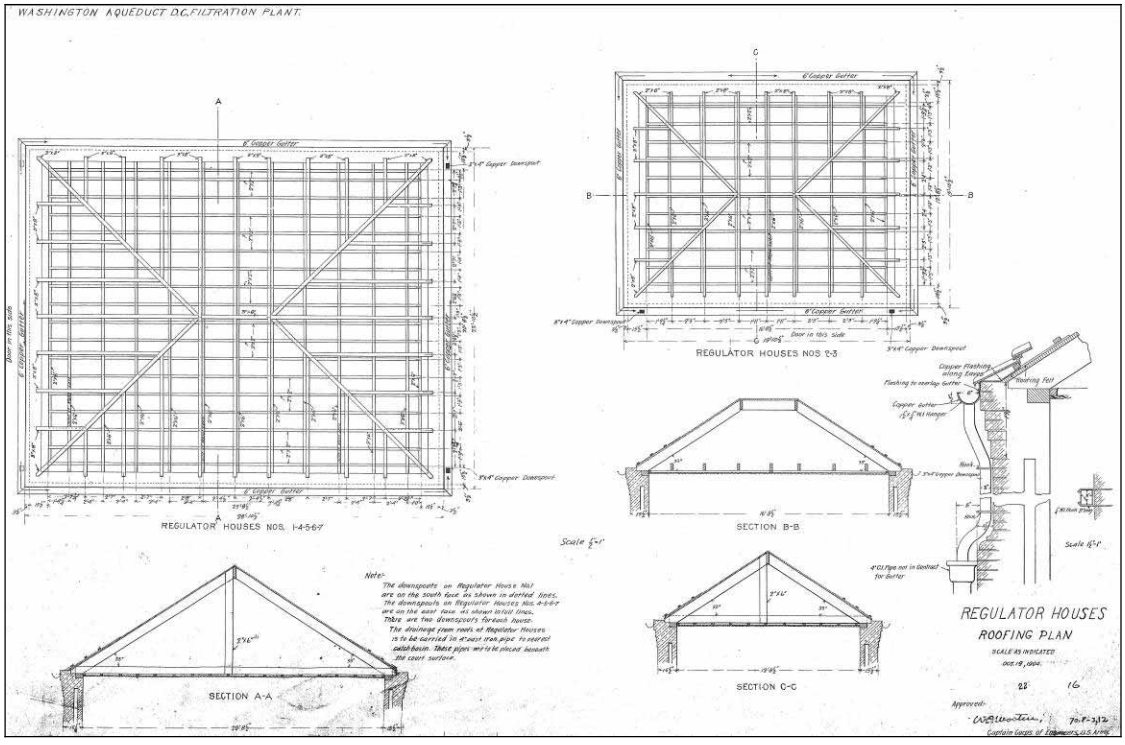
Date: 1903-1905 (original)

The Site features four regulator houses, with two located in each service court. These one-story masonry buildings are constructed of red brick coursed in Flemish bond and feature terra cotta tile roofs. The houses are detailed with arched entrances and window openings featuring wood doors and windows. The structures of the regulator houses extend below grade with concrete pits and original mechanical systems. These systems were originally used to regulate the speed of pumps and to maintain the desired water level within the adjacent filter beds. Today, all four brick structures are extant in their original locations, and some original wood elements are extant but in various states of deterioration.



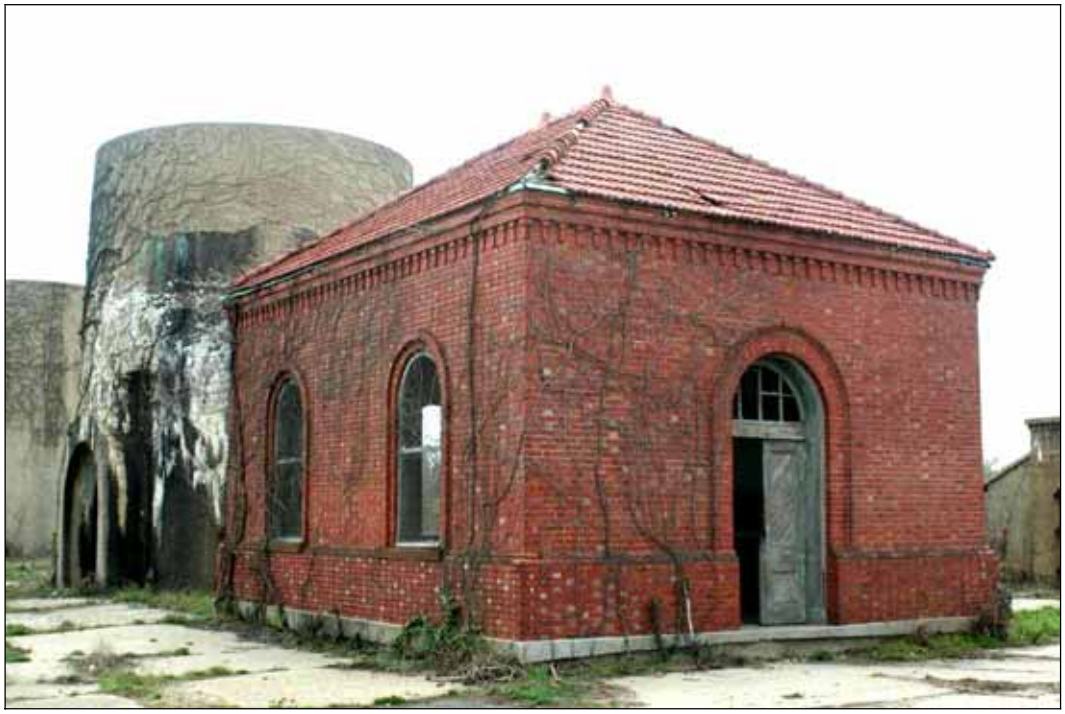
View of Regulator House, 1944





Original plans for regulator houses, 1904

Regulator Houses – Existing Conditions (EHT Traceries, Inc., 2008)



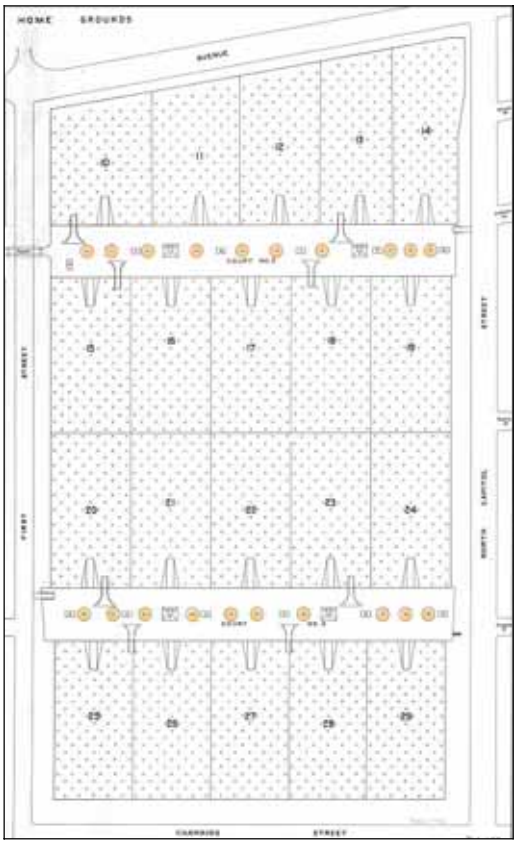
SAND STORAGE BINS

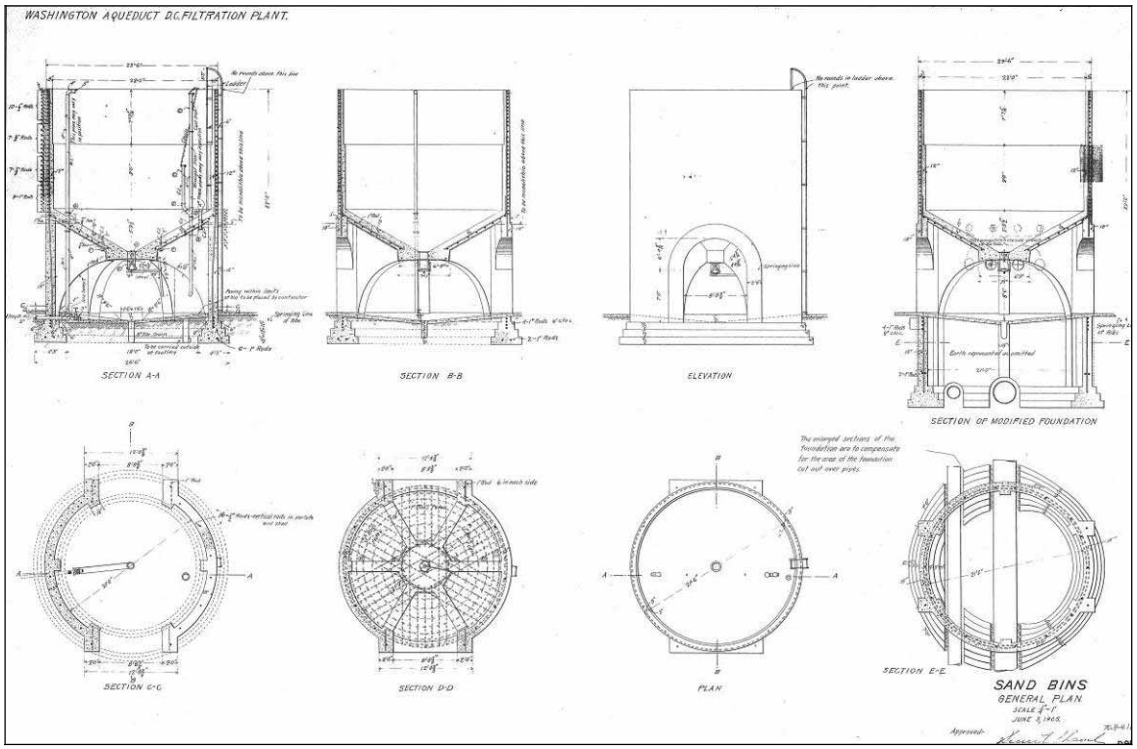
Material: Concrete (reinforced)

Quantity: 20

Date: 1903-1905 (original)

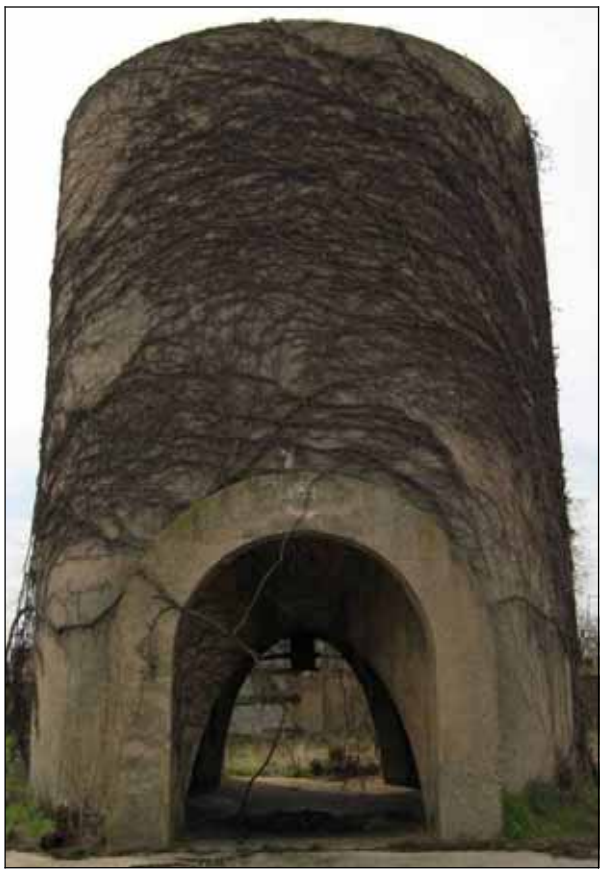
The site features twenty cylindrical sand bins that were originally used to store clean sand. There is one sand bin for each filter bed. The bins are constructed of reinforced concrete, and the base of each bin is pierced by an arched opening through which clean sand was collected. The foundations of the sand bins extend approximately ten feet below grade. Each bin features original appurtenances that aided in the collection and ejection of clean sand. Each sand bin also has a ladder leading to the top of the structure. Today, all original sand bins are extant and in their original locations. Some of the ladders and other appurtenances have been removed or have deteriorated.





Original sections, elevation, and plan of sand bins, 1902

Sand Bins – Existing Conditions (EHT Traceries, Inc., 2008)



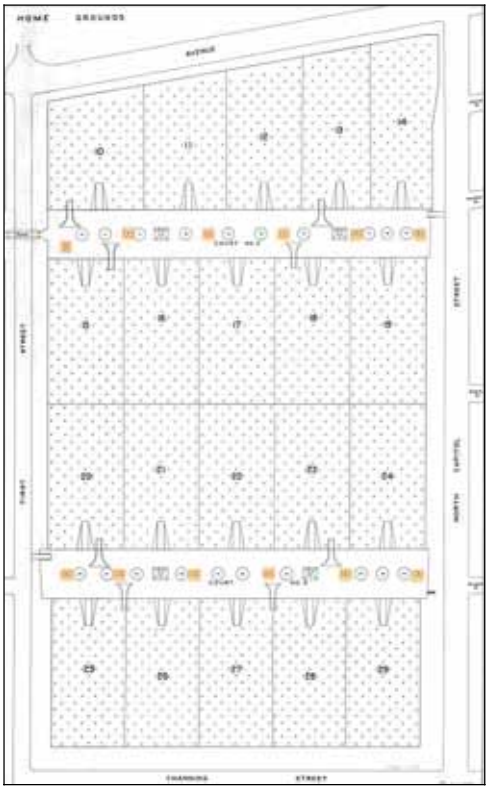
STATIONARY SAND WASHERS

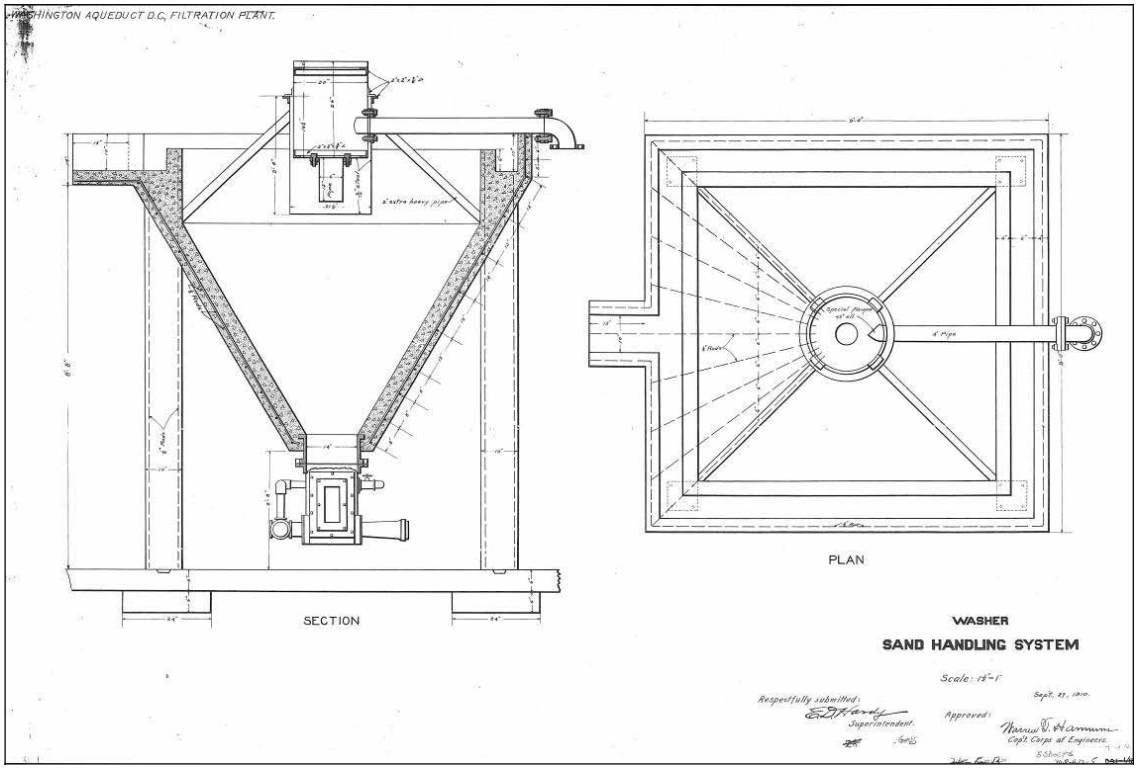
Material: Concrete

Quantity: 12

Date: c. 1910

The site features twelve stationary sand washers located in the two service courts. The sand washers are generally aligned with the sand bins and regulator houses except for the westernmost washer in the north court, which is not in line with the other resources. These concrete structures have a unique shape that is generally defined by an upside-down pyramid set within an open concrete box frame. These sand washers were installed in 1910, at which time the original sand washers were removed. Today, all of the 1910 sand washers are extant in their original locations. Some of their appurtenances have been removed or have deteriorated.





Original plan and section of modified sand washer, 1910

Sand Washers – Existing Conditions (EHT Traceries, Inc., 2008)

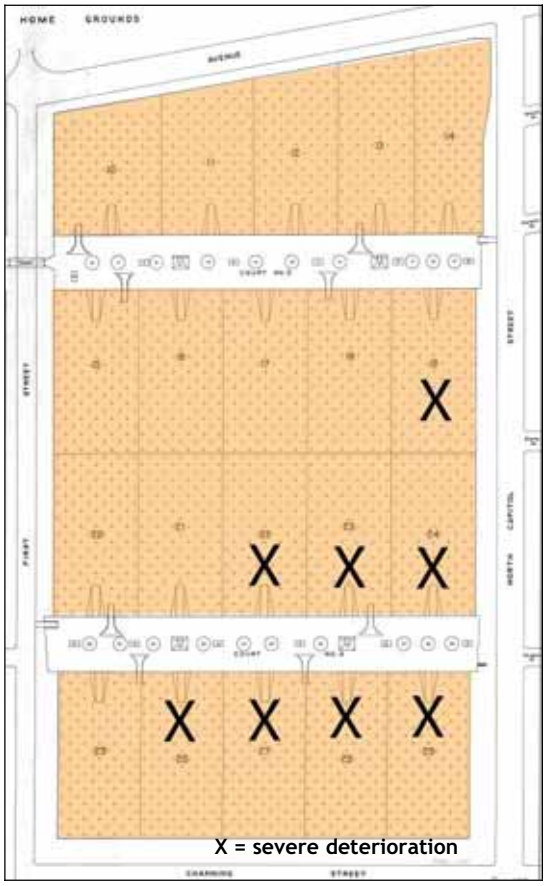
FILTER BEDS

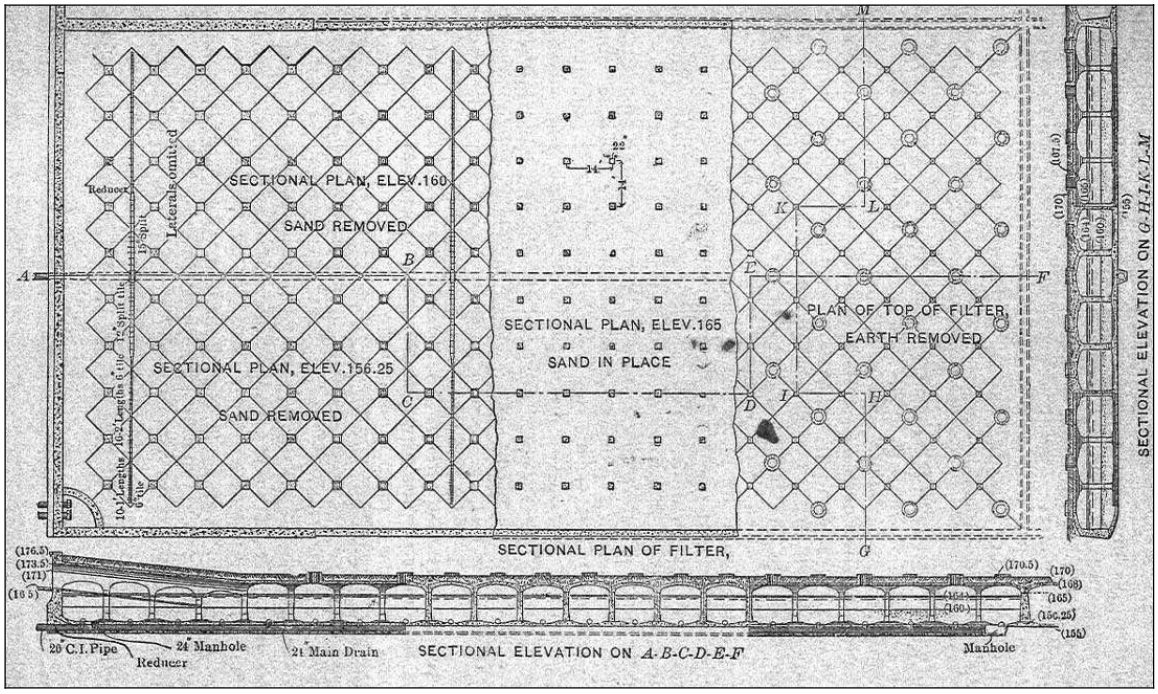
Material: Concrete (un-reinforced)

Quantity: 20

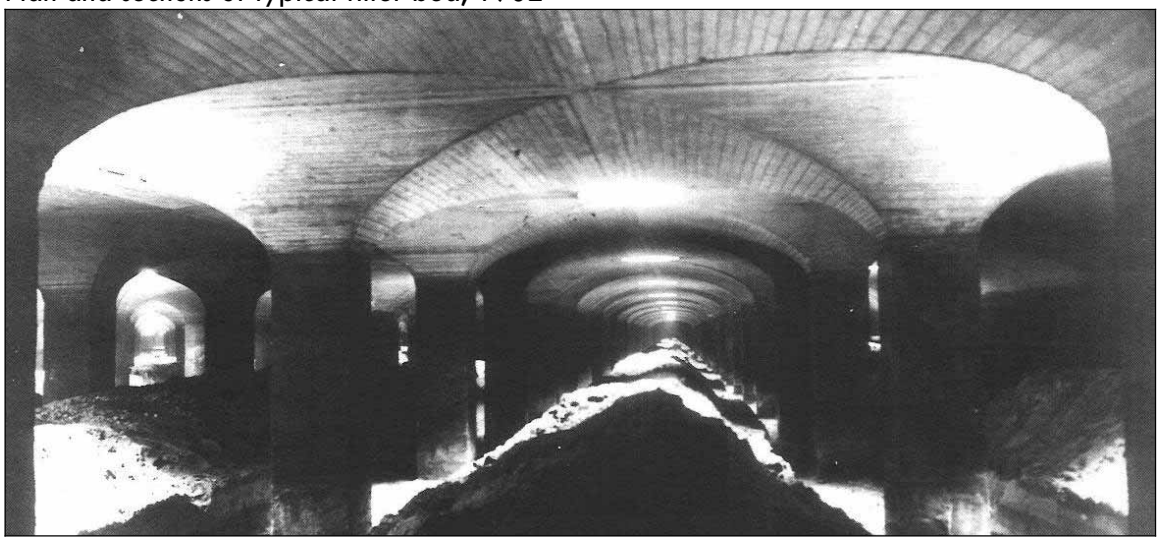
Date: 1903-1905 (original)

The site features twenty un-reinforced concrete filter beds, each of which is approximately one acre in area. All of the filter beds are concealed beneath a layer of fill and appear from above-grade as flat plains of grass. Each filter bed is independent of the other filter beds and has its own entrance that opens into the service courts. The floors of the filter beds are inverted, groined arches that carry piers with a slight batter near the bottom. The roof consists of elliptical groined arches that are pierced with manholes. The walls of the beds are built in sections not exceeding 30 feet in length, the joints being tongued and grooved. The filter beds have substantial parapet walls along the perimeter that act as retaining walls along the north and south sides of the service courts. For the facility to operate properly, substantial re-grading of the site was completed to make the filter beds level, resulting in a maximum depth of cut of 35 feet and a maximum height of fill of 30 feet. Several of the filter beds that were constructed on fill settled substantially within the first few years of the facility's operation. This rapid settlement led to chronic structural issues that have resulted in partial collapse of some of the filter bed roofs. According to a 2001 structural assessment, approximately eight of the twenty filter beds exhibit severe structural deterioration. Other filter beds show varying degrees of cracking and material deterioration but were said to be stable at the time of the assessment. Several types of previous structural reinforcements are visible within some of the filter beds.





Plan and sections of typical filter bed, 1902



Interior of filter bed, 1944 (see Appendix C for source information)

Filter Beds – Existing Conditions (EHT Traceries, Inc., 2008)

Typical interior of filter bed

Interior filter bed No. 24

Interior of filter bed No. 24, collapse of eastern cells.

Cracking and efflorescence of concrete structure

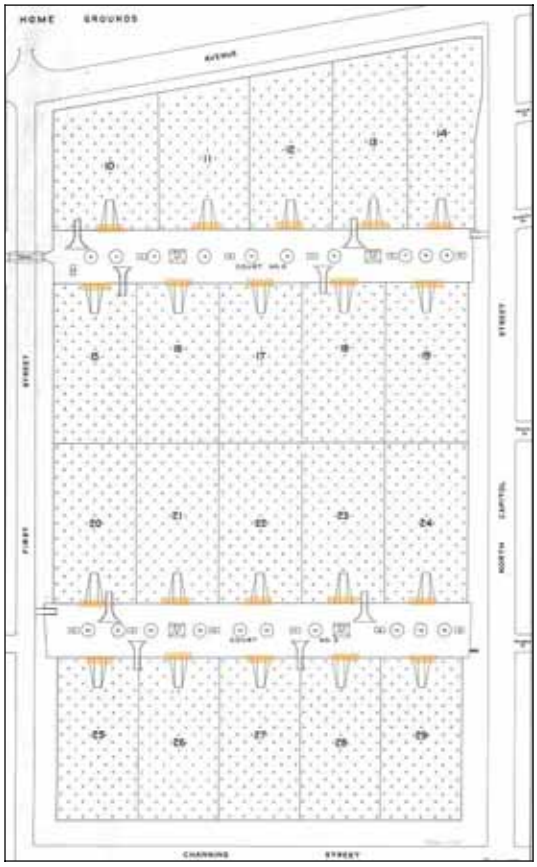
FILTER BED PORTALS

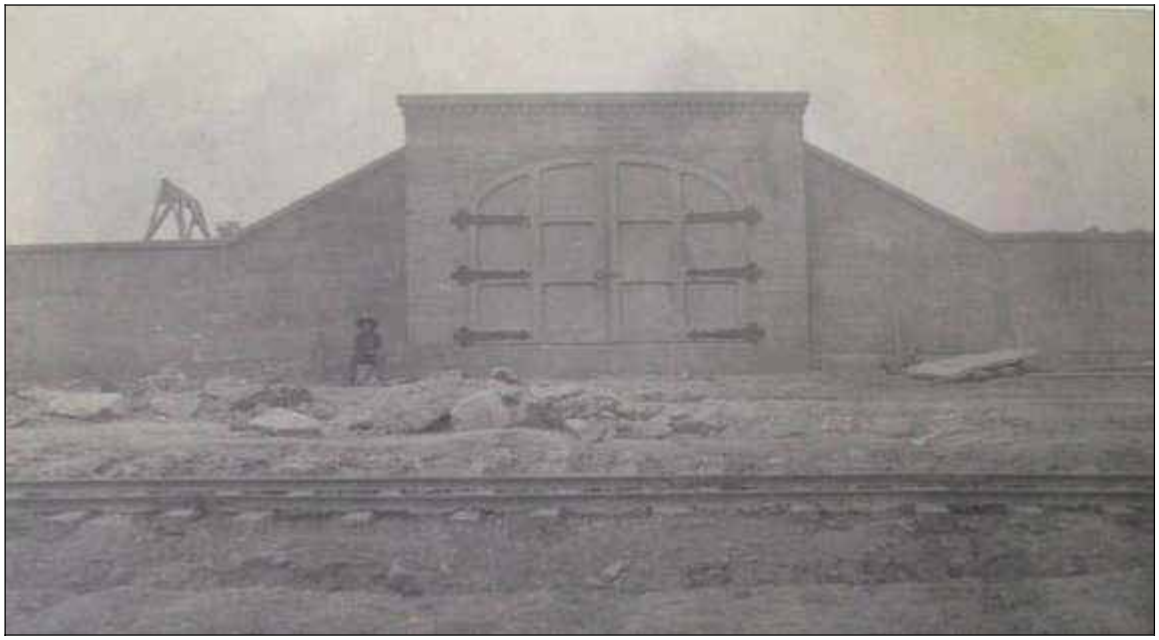
Material: Concrete, wood, and metal

Quantity: 20

Date: 1903-1905 (original)

The site features twenty portals that lead to each of the twenty subterranean filter beds. The portals are integrated into the parapet walls of the filter beds that line the north and south sides of the service courts. The portals are constructed of brick and parged in concrete, featuring a denticulated concrete cornice. Each portal has an arched opening fitted with a double-leaf wood door with iron hardware. Many of the original wood doors are extant and intact, with other doors missing or showing various degrees of deterioration.





Construction of filter bed portal, c. 1904

Portals and Ramps to Filter Beds – Existing Conditions (EHT Traceries, Inc., 2008)

Typical iron hardware on filter bed portal

Typical filter bed portal with wood door

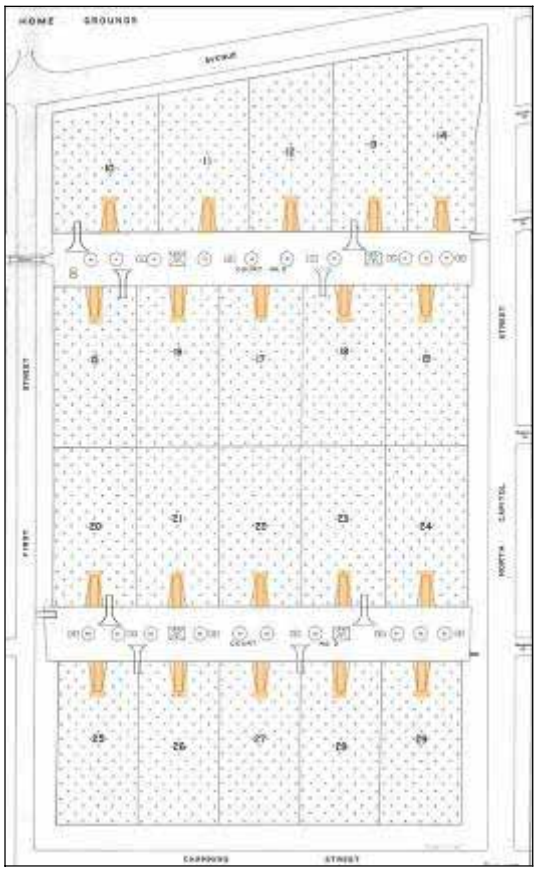
FILTER BED RAMPS

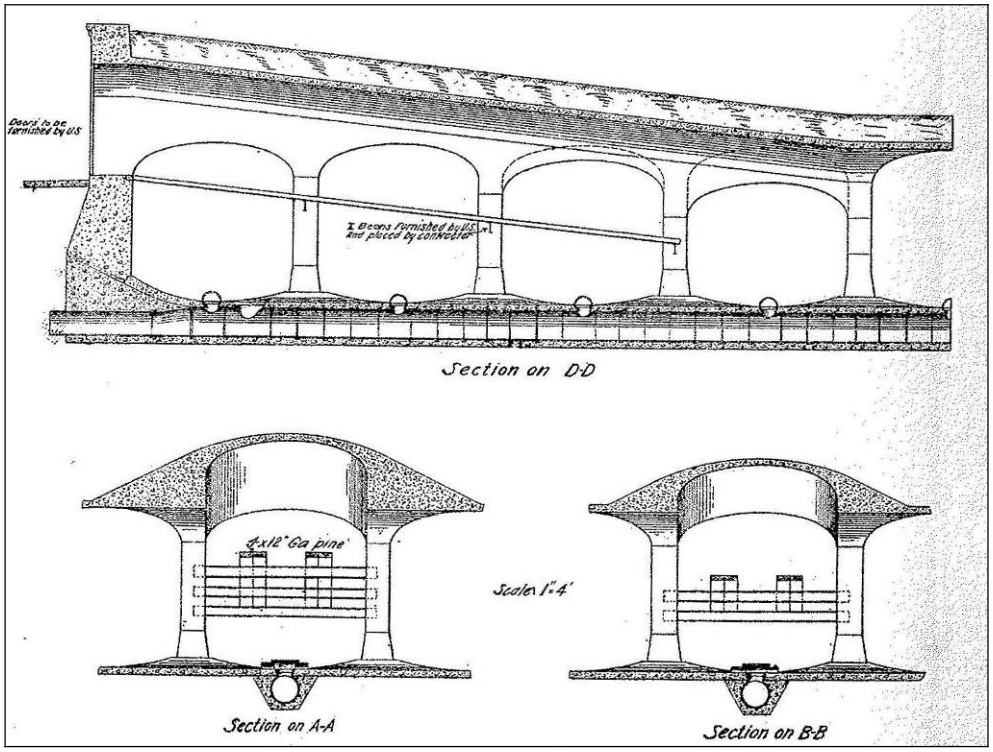
Material: Concrete

Quantity: 20

Date: 1903-1905 (original)

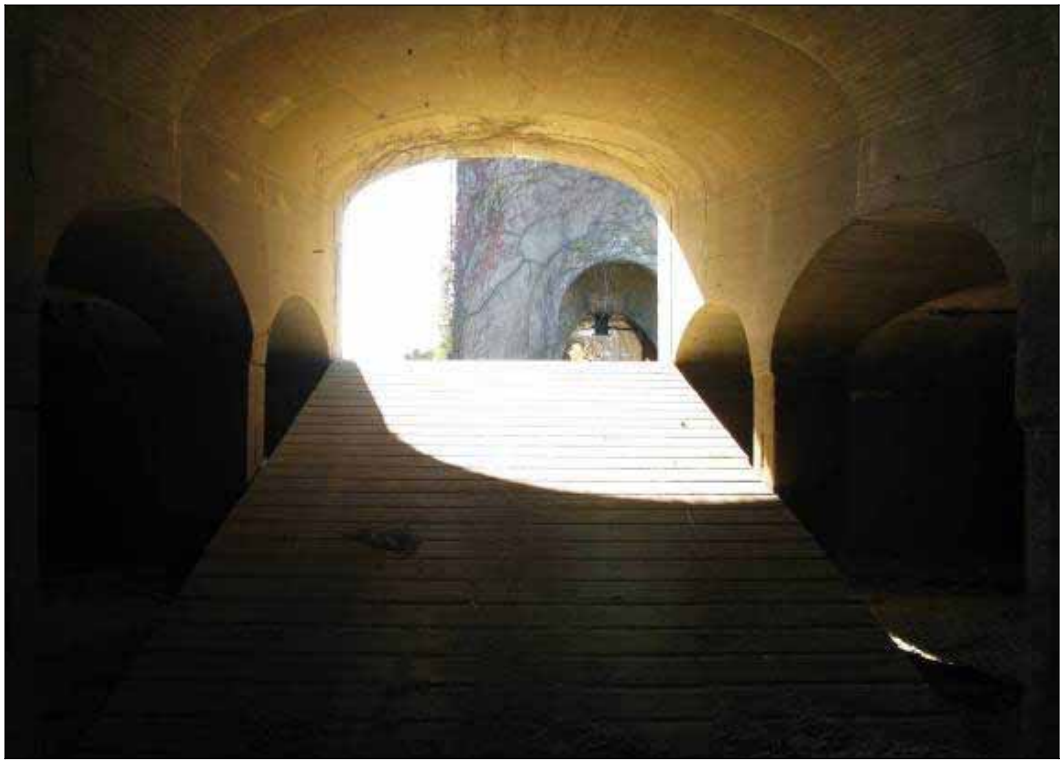
The site features twenty ramps that lead from each of the portals to their respective subterranean filter beds. These ramps were typical for this type of facility for facilitating the movement of sand in and out of the filter beds. However, at McMillan, a different system of moving sand was developed, and the ramps were constructed primarily as an alternate access point in the case that the sand-handling apparatus failed to perform. T he ramp were designed at an include that accommodates horses, which would have been used to bring wagons into the filter beds to move the sand. Later, these ramps were used to provide access for mechanized sand raking tractors. Today, all twenty filter bed ramps are extant in their original locations with some signs of structural deterioration, primarily in those filter beds that have also deteriorated.





Original plan and sections of ramp from service court to top of filter beds, 1902

Filter Bed Ramps – Existing Conditions (EHT Traceries, Inc., 2008)



Ramp from filter bed to service court

Ramp from service court to filter bed

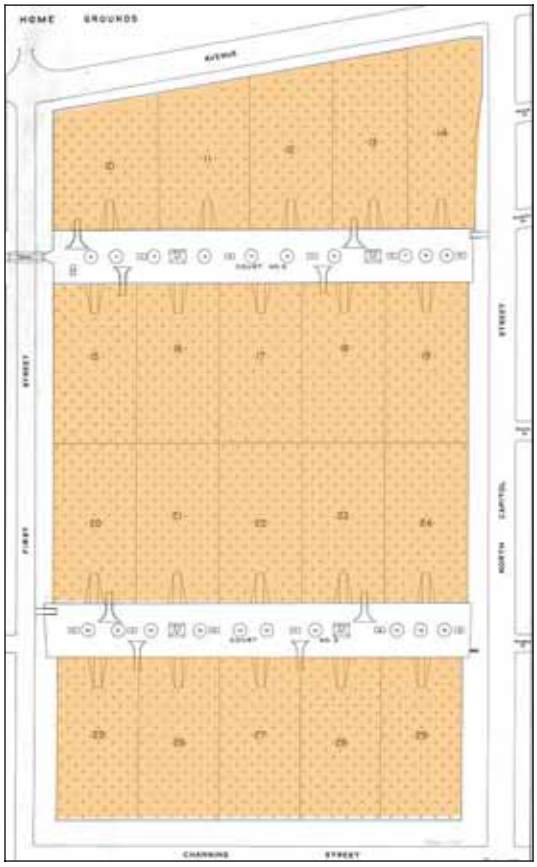
FILTER BED SAND

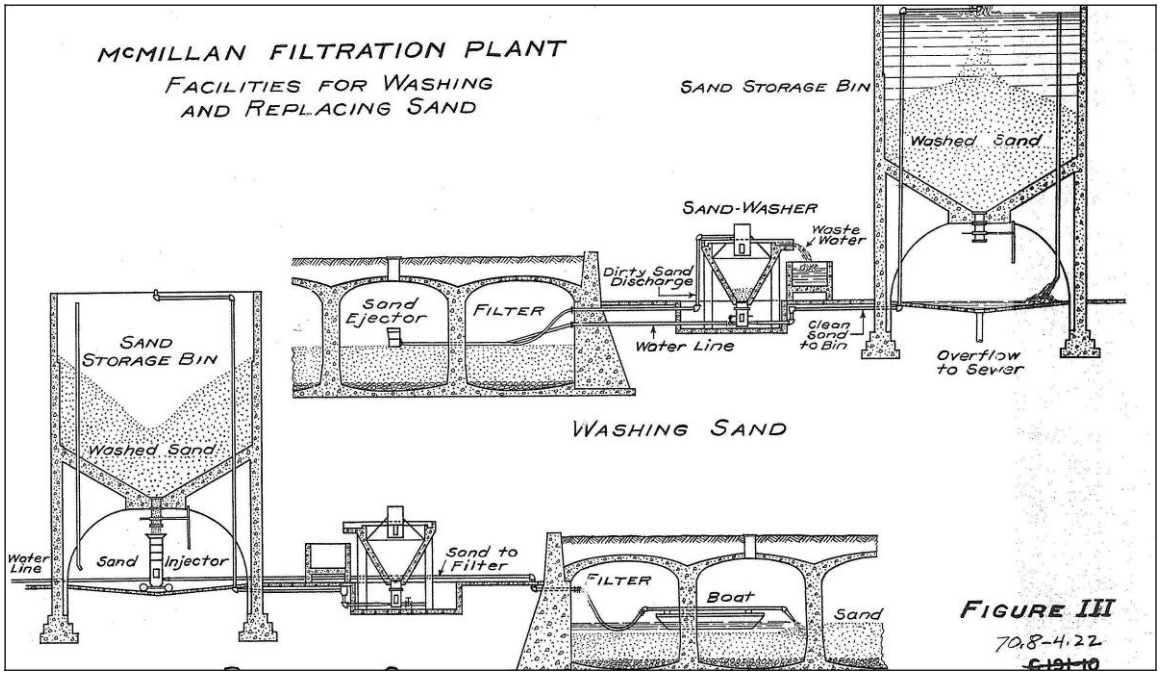
Material: Sand

Quantity: Approximately 2,100

Date: 1903-1905 (original)

The site features a deep layer of sand at the floor o each of the filter beds. An early description of the construction and operation of the sand filtration plant stated that "the sand is, in a way, the most important part of the filters." The sand in the filter beds was furnished from a bank at Laurel Maryland on the main line of the Baltimore and Ohio Railroad and went through an extensive preparation process to meet specifications for cleanliness, removing all traces of clay and other undesired particles. The average depth of sand in the filter beds was kept at approximately 38 inches. The resources that are located within the service courts of the facility were used for the sole purpose of cleaning and storing this sand throughout the operation of the plant. Today, all of the filter beds retain a substantial layer of sand. Debris is found scattered across the top of the sand in most filter beds.





The sand washing process

Raking the sand, c. 1940

Typical existing condition of sand, EHT Traceries, Inc., 2008

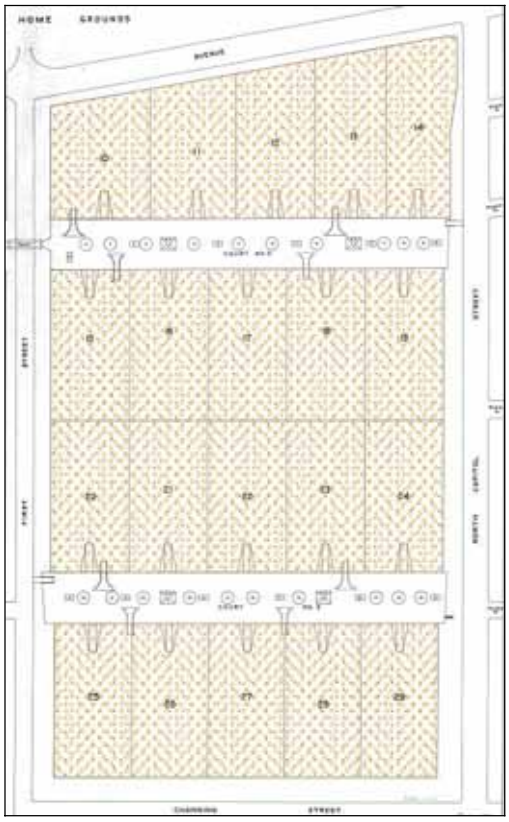
MANHOLES AND COVERS

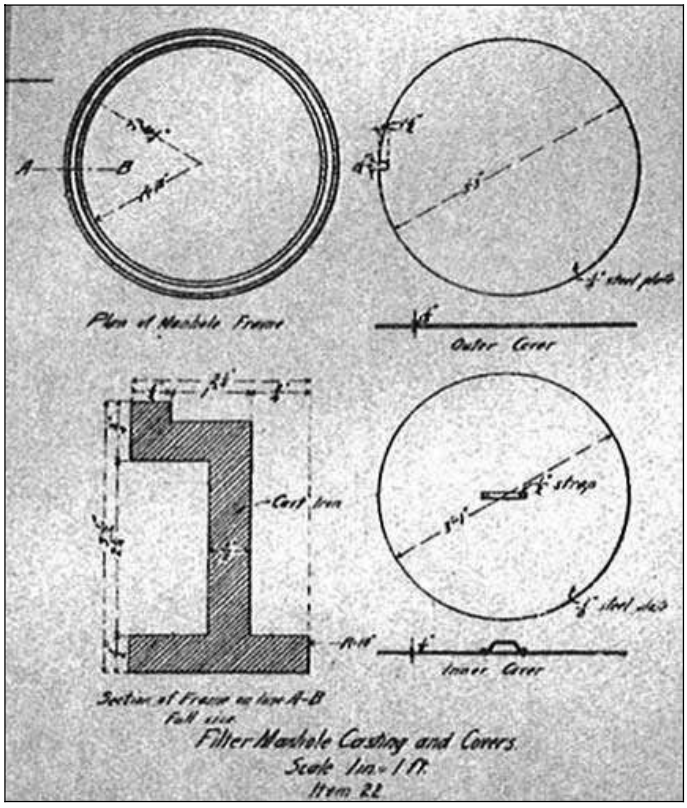
Material (manholes): Concrete
Material (covers): Metal

Quantity: Approximately 2,100

Date: 1903-1905 (original)

The site features approximately 2,100 manholes spaced evenly across the three sections of open space. These manholes lead to the subterranean filter beds and were used for two purposes: (1) to drop clean sand back into the filter beds; and (2) to provide natural light and fresh air to workers in the filter beds. During operation of the facility, between three and four acres of manholes would be open at any given time during cleaning of the sand in the filter beds below. The concrete manholes are an integral part of the subterranean filter bed structures and are marked above grade by iron covers, most of which are severely deteriorated or no longer extant. Today, all of the original manhole structures are intact in their original locations, except those in the area of the collapsed filter bed in the southwest section of the Site.





Original sections ands plan of typical manhole cover and frame (see Appendix A for source information)

Manholes – Existing Conditions (EHT Traceries, Inc., 2008)

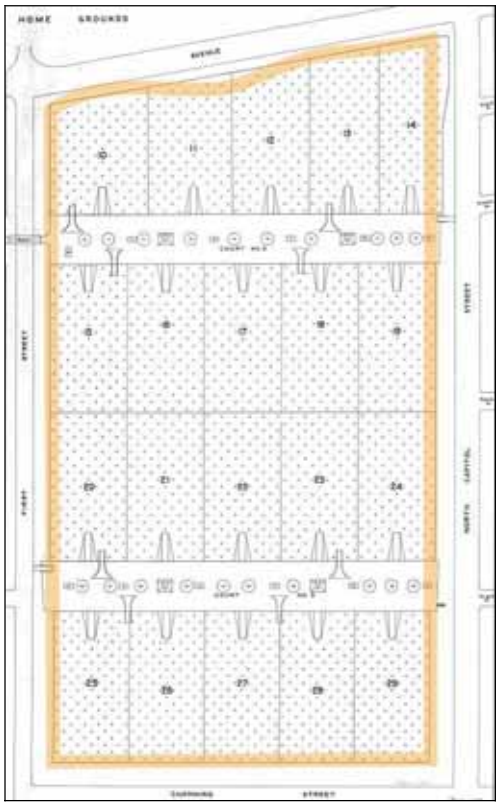
View of rows of manholes on top of filter beds.

View of inner and outer covers of deteriorated manhole

Corrosion of manhole cover

View of manhole from interior of filter bed

PERIMETER PEDESTRIAN PATH



Material: Concrete

Quantity: 1

Date: c. 1910

The Site features a narrow pedestrian path around the perimeter of the top of the filter beds. When complex was dedicated as McMillan Park in 1906 and Olmsted was retained to design its landscape, Olmsted activated the perimeter of this section of the complex with this pedestrian path, providing a place for visitors to stroll and admire the views across the plans of open space above the filter beds. The east, west, and south legs of the path run in straight lines parallel to the adjacent streets. The north leg is curvilinear to reflect the more picturesque qualities that once defined the character of the land on the other side of Michigan Avenue. Olmsted focused on the enhancement of the pedestrian path in his planting plan, which further emphasized the perimeter of the site. Today, the route of the pedestrian path is still legible, but only remnants of the original materials of the path are extant.

Man walking on pedestrian path, c. 1910

Pedestrian Path – Existing Conditions (EHT Traceries, Inc., 2008)

Southern leg of path, looking east at Howard University

Western leg of path, looking north at Soldiers' Home

View of curvilinear northern leg of path, looking southeast from northwest corner stairs

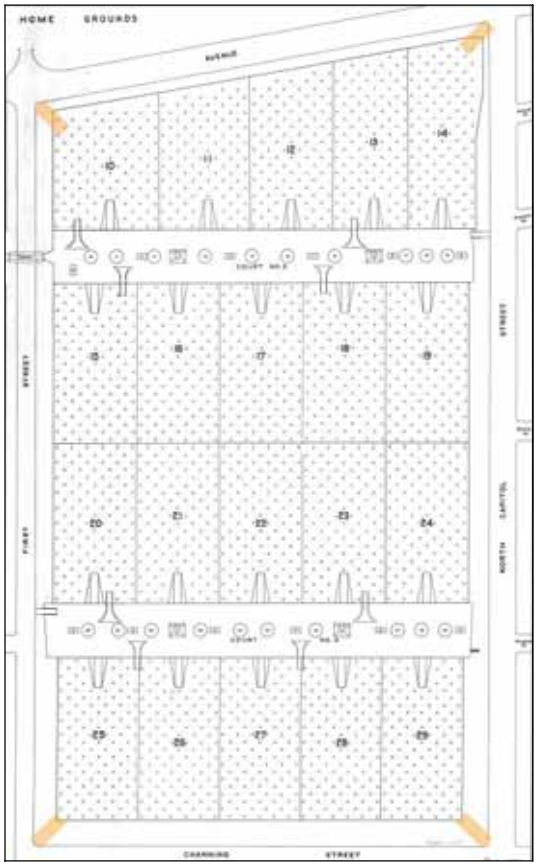
CORNER STAIRS

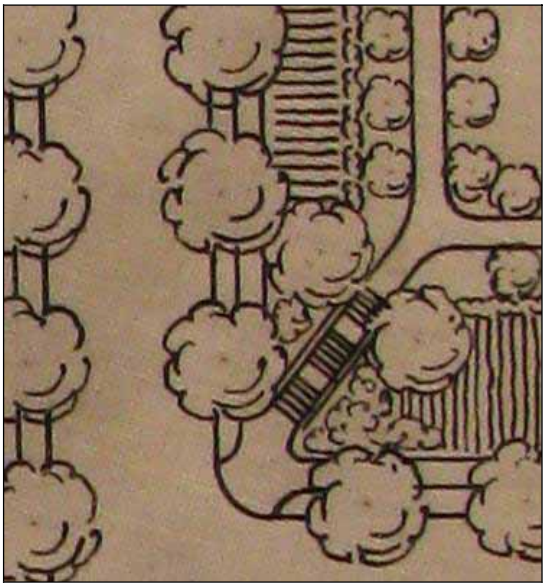
Material: Concrete

Quantity: 1

Date: 1903-1905 (original)

The Site originally featured four sets of stairs at each of its four corners. These stairs were designed by Olmsted to be the primary access points for the public use of the Site, directly connecting to the perimeter pedestrian path. The stairs at the southwest and southeast corners led up from the public sidewalk to the pedestrian path at the top of the filter beds, approximately 16 feet above First Street. The stairs at the northeast and northwest corners led down from the public sidewalk to the pedestrian path at the tops of the filter beds, which was approximately 12 feet below Michigan Avenue. These stairs were intended solely for the purpose of providing access to the perimeter pedestrian park and were not part of the operation of the slow sand filtration plant. Today, only one of the four corner stairs is extant. The locations of the other three stairs are indicated by slight depressions in the topography at the corners of the site, as well as scattered remnants of concrete.





Plan of stairs at southwest corner of site

View of stairs at southwest corner of site, c. 1910

Corner Stairs – Existing Conditions (EHT Traceries, Inc., 2008)

Former location of stairs at southeast corner of site

Former location of stairs at northeast corner of site

Stair remnants at northwest corner of site

Former location of stairs at southwest corner of site

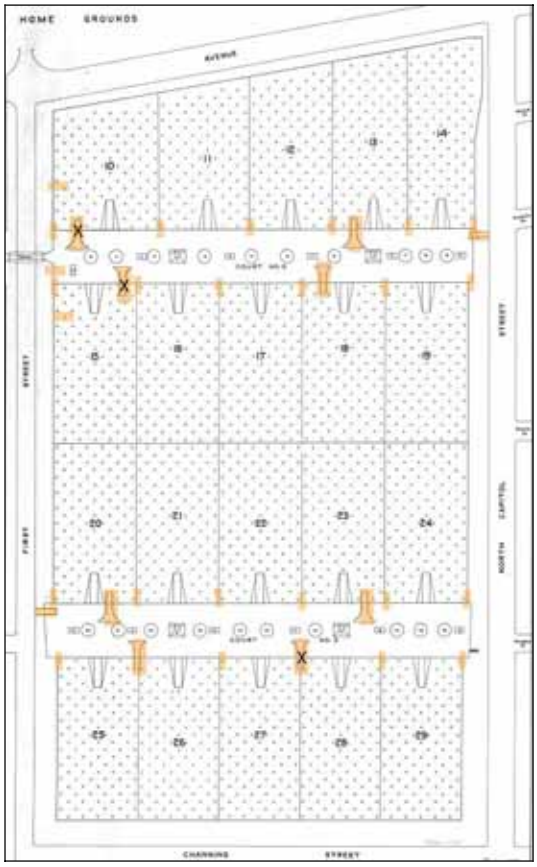
SERVICE RAMPS AND STAIRS

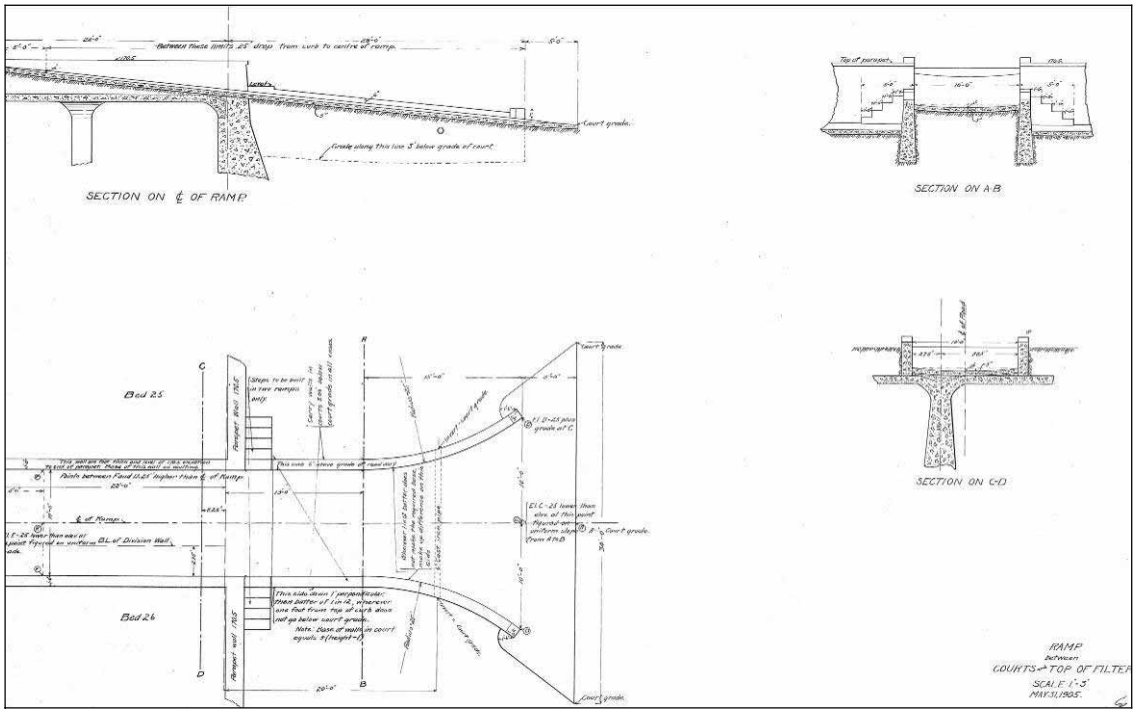
Material: Concrete

Quantity (ramps): 7
Quantity (stairs): 24

Date: 1903-1905 (original), and c. 1910

The site features several concrete ramps and concrete stairs along the service courts. These ramps and stairs provide access from the courts to the tops of the filter beds (19), from the courts to the adjacent streets (3), and from the courts to the perimter path (4). Two sets of concrete stairs lead from First Street to the tops of the filter beds adjacent to the north service court. These stairs and ramps were used as part of the operation of the facility as workers moved throughout the Site, and many of these stairs and ramps are integral to the structure of the service court walls. Three original concrete ramps leading from the service courts to the tops of the filter beds were previously demolished and their locations in the service court wall were in-filled. The remaining ramps and stairs are mostly intact, with varying degrees of concrete deterioration and possible structural deteriration.



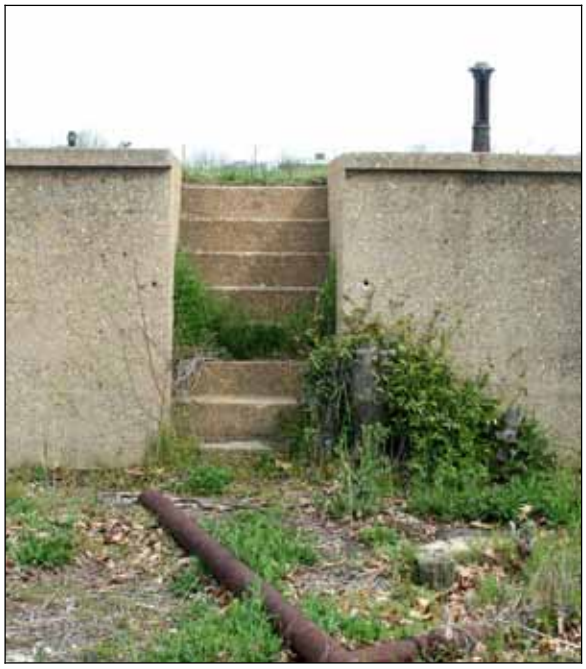


Original plan and sections of ramp from service court to top of filter beds, 1902

Service Stairs and Ramps – Existing Conditions (EHT Traceries, Inc., 2008)

Ramp showing grid pattern in concrete

Stair from service court to pedestrian path



Stair from service court to top of filter bed

In-fill concrete where ramp was removed

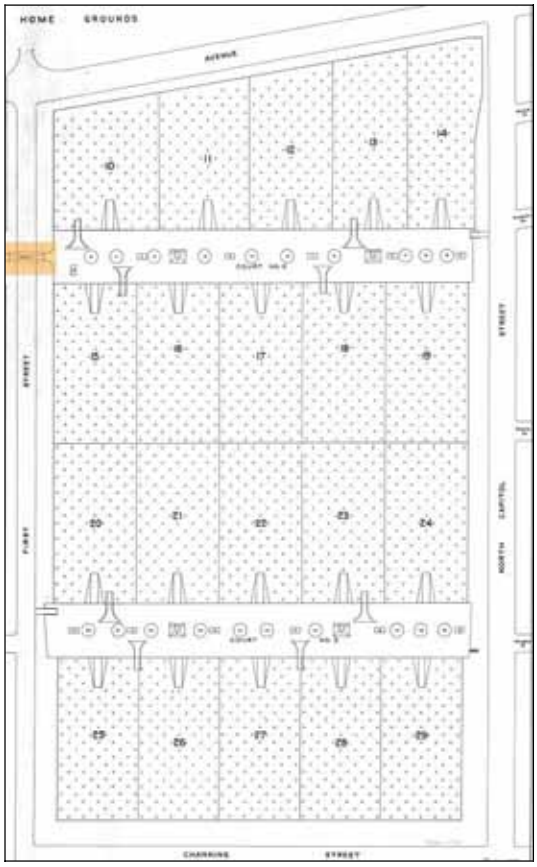
TUNNEL

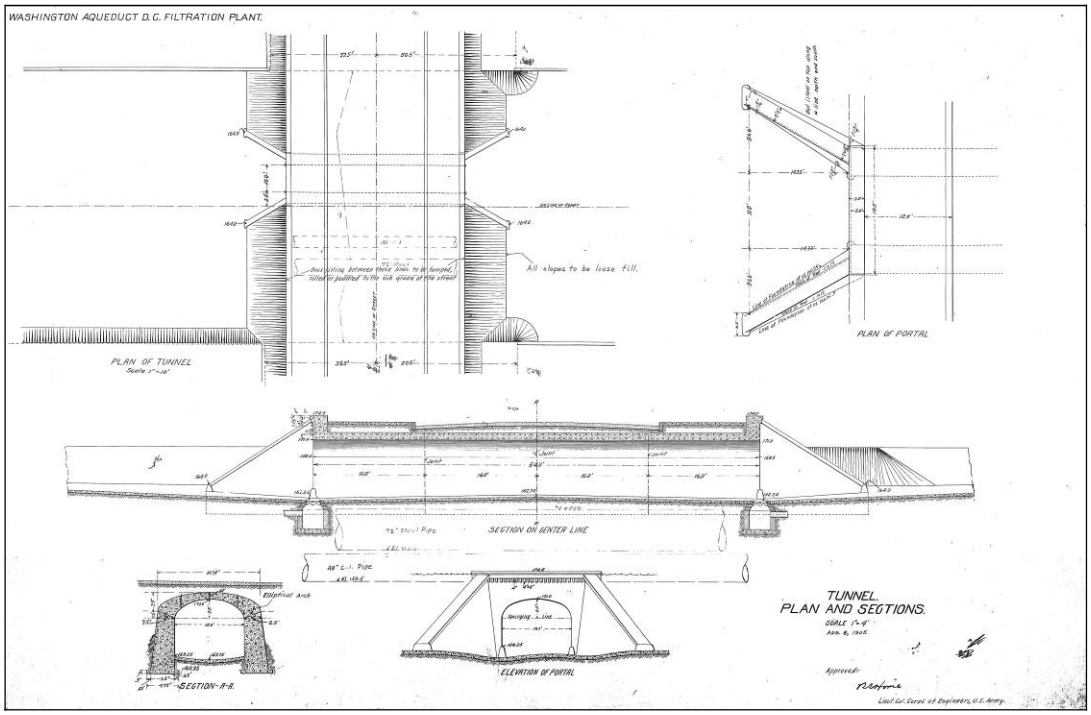
Material: Concrete

Quantity: 1

Date: 1903-1905 (original)

A single tunnel connects the northern service court of the McMillan Site to the service court of the section of the filtration plant located west of First Street. The design of the tunnel is consistent with the architectural detailing of the filter bed portals, with denticulated cornice and flat-arched opening. Although there are most likely pipes and other subterranean connections between the west and east sides of the filtration plant, this tunnel is the only visible connection. Today, the tunnel is intact but is overgrown with vegetation.





Original plan, sections, and elevation of the tunnel under First Street, 1902

Tunnel – Existing Conditions (EHT Traceries, Inc., 2008)

LANDSCAPE RESOURCES

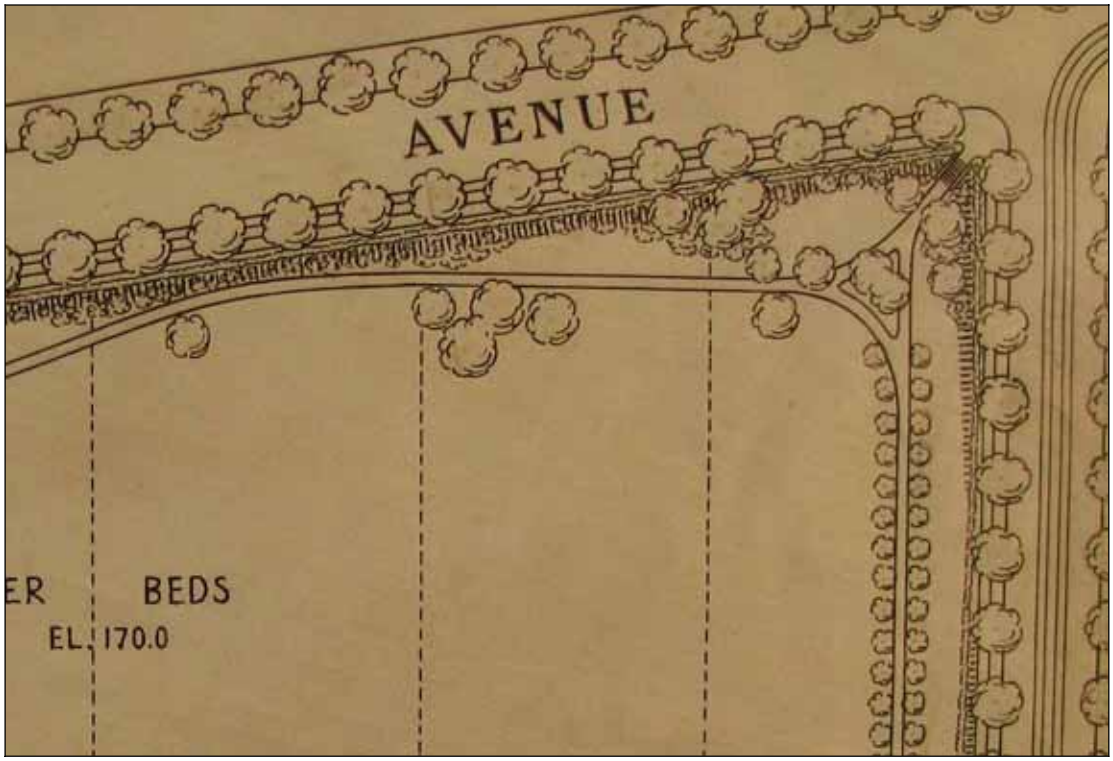
PERIMETER PLANTINGS

Material: Japanese Barberry, Cockspur Thorns, Japanese Climbing Rose, Double-flowering Scarlet Thorne, Dwarf Wild Rose, Early Wild Rose, Yellowwood, American Elm, Pagoda Tree, Catulpa Tree, etc.

Quantity: n/a

Date: 1907-1919 (not extant)

The site historically featured rows of plantings that flanked the perimeter pedestrian path in tightly spaced rows. Olmsted specified the cockspur thorn (Hawthorne trees0 and small thorny hedges for these perimeter plantings to create a passive barrier and confine pedestrians to the path. Although scattered remnants of some of these plantings still exist, Olmsted's original plan for the perimeter plantings is no longer legible.



Olmsted's plan for perimeter plantings, 1911

Aerial view of perimeter plantings, c. 1930

Image of perimeter plantings during trench work, July 1946

Existing remnants of perimeter plantings, EHT Traceries, Inc., 2008

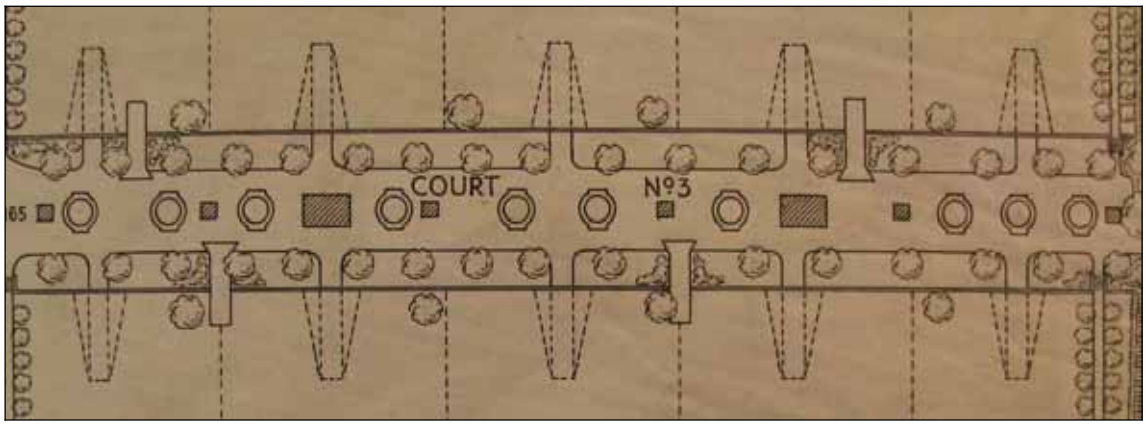
SERVICE COURT PLANTINGS

Material: Cork Trees, Boston Ivy, etc.

Quantity: n/a

Date: 1907-1919 (not extant)

The site historically featured plantings within and bordering the service courts. Olmsted specified two east-west rows of evenly spaced cork trees to be planted within each of the service courts, ivy along the tops of the sand bins, and small groupings of shrubs to be planted along the upper part of the parapet wall marking the locations of each of the ramps, stairs, and portals. For the parapet plantings, Olmsted chose species that were to be low to the ground and planted closely together. Olmsted also specified a few instances of taller tree species, but it appears from historic photographs that these species were not planted. Today, the service courts are overgrown, and Olmsted's original planting plan for the service courts is no longer legible.



Olmsted's plan for service court plantings, 1911

Service court plantings, c. 1928

Existing conditions of service court plantings, EHT Traceries, Inc., 2008

SITE RESOURCES

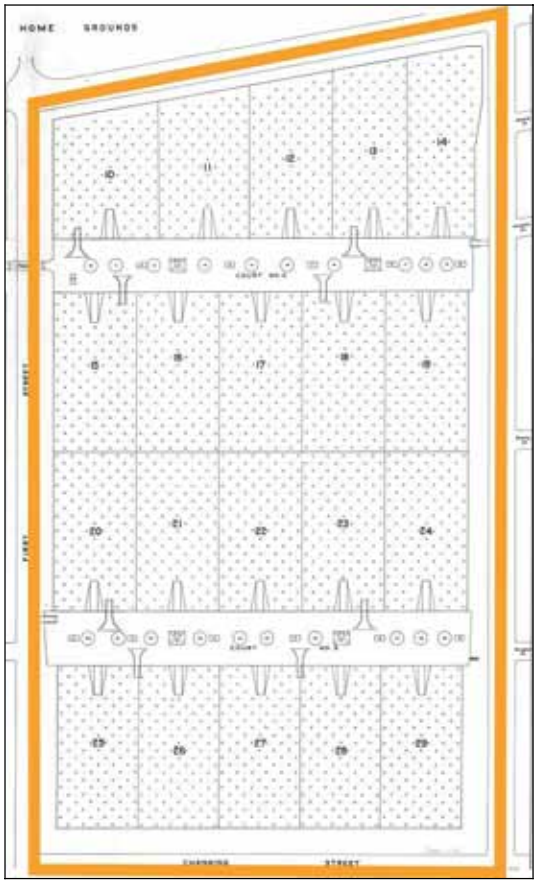
SITE BOUNDARIES

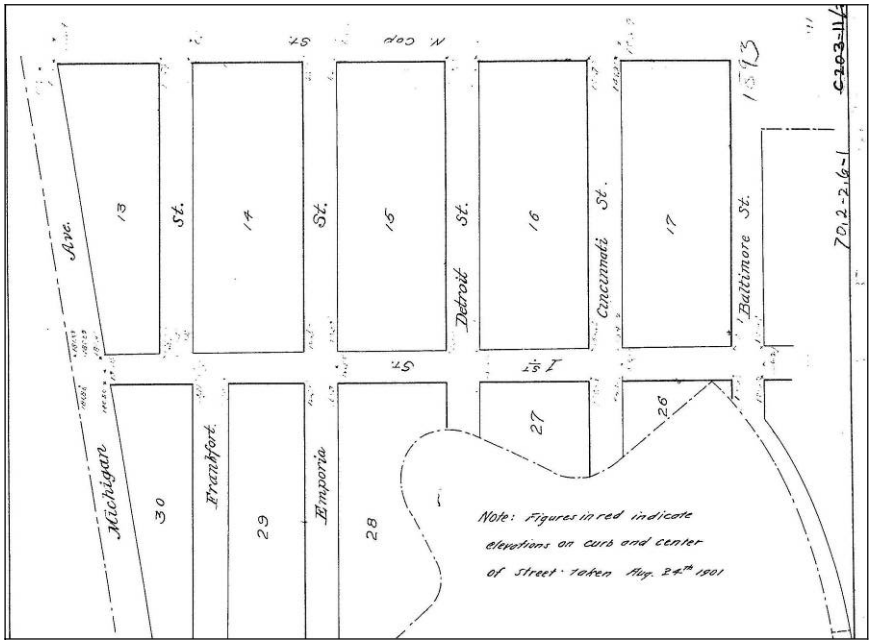
Material: n/a

Quantity: n/a

Date: 1903-1905 (original)

The boundaries of the McMillan Site are defined by: First Street to the west, North Capitol Street to the east, Channing Street to the south, and Michigan Avenue to the north. These streets existed before the facility's construction, and the arrangement of the filter beds within the Site was dictated by the trapezoidal footprint created by these boundaries. Although bounded by city streets, the Site spans approximately five blocks north-to-south and does not continue the adjacent city street grid within its footprint.





Streets existing or proposed prior to construction of the sand filtration plant, 1902

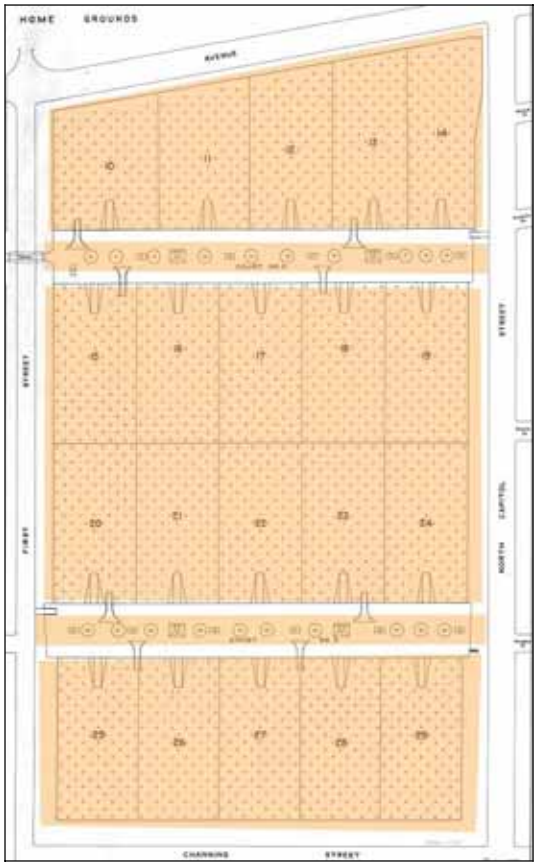
SPATIAL ORGANIZATION AND SITE PLAN

Material: n/a

Quantity: n/a

Date: 1903-1905 (original)

In aerial views, the Site has a tripartite organization created by two paved service courts that run east-to-west and divide the Site into three horizontal sections of open space. From the ground level, this tripartite organization is expressed through the linear arrangement of built resources within the service courts that rise above the horizontal plane of the adjacent open spaces. Olmsted's landscape plan reinforced this tripartite organization by focusing new plantings around the Site's perimeter and within the service courts. The spatial organization of built resources and open space on the McMillan Site is distinct from that of adjacent areas, with dense urban residential development to the south and east, the city reservoir to the west, and the complex of large hospital buildings to the north.



Aerial photograph of site, c. 1930

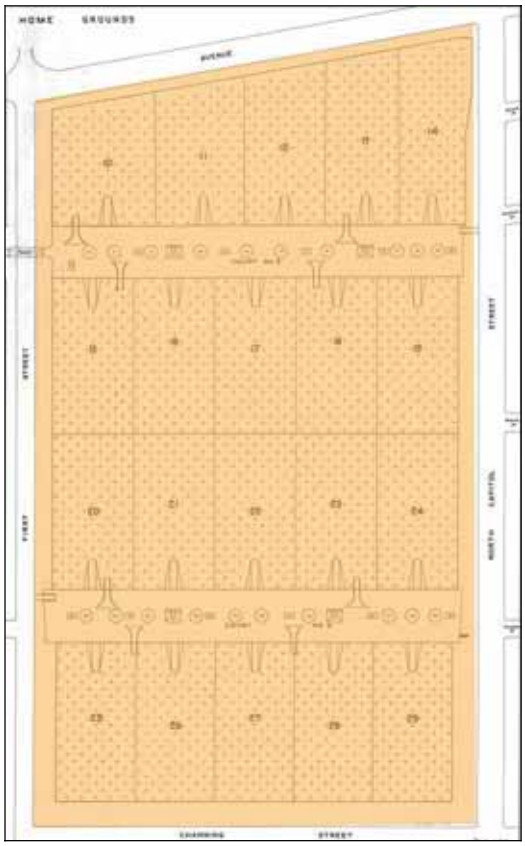
TOPOGRAPHY

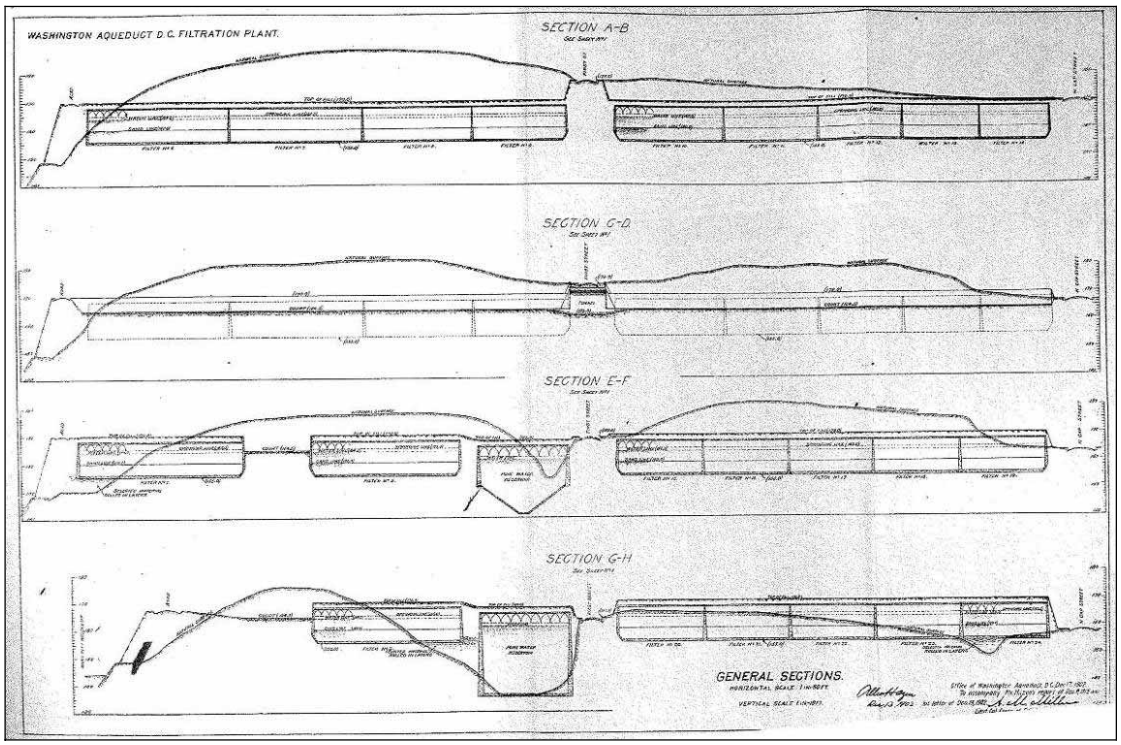
Material: Concrete and earth

Quantity: 1

Date: 1903-1905 (original)

The Site's topography was changed by a major cut and fill operation during the original construction of the facility to create a level grade for the concrete filter beds. Once the filter beds were constructed, approximately two feet of additional fill was placed on their roofs, allowing the flat surface of the filter beds to read as a topographical feature rather than a built structure. The re-grading was confined within the boundaries of the Site, resulting in a flat plateau that is raised approximately 16 feet from Channing Street to the south and depressed approximately 12 feet from Michigan Avenue to the north. There is also a drop in grade at each of the two service courts, which are depressed by approximately 5 feet into the plateau. Further, at the location of each of the filter bed portals, mounds in the plateau correspond to the subterranean path of the ramps that lead from the service courts. Today, the Site retains its artificial topography.





Sections of original topography and proposed topography, 1902

Topography – Existing Conditions (EHT Traceries, Inc., 2008)

View of west side of site, looking north from southwest corner

View of south side of site, looking east from southwest corner

View of west side of site, looking south from northwest corner

View of east side of site, looking south from eastern end of Court 2

View of north side of site, looking east from northwest corner

View of east side of site, looking south from northeast corner

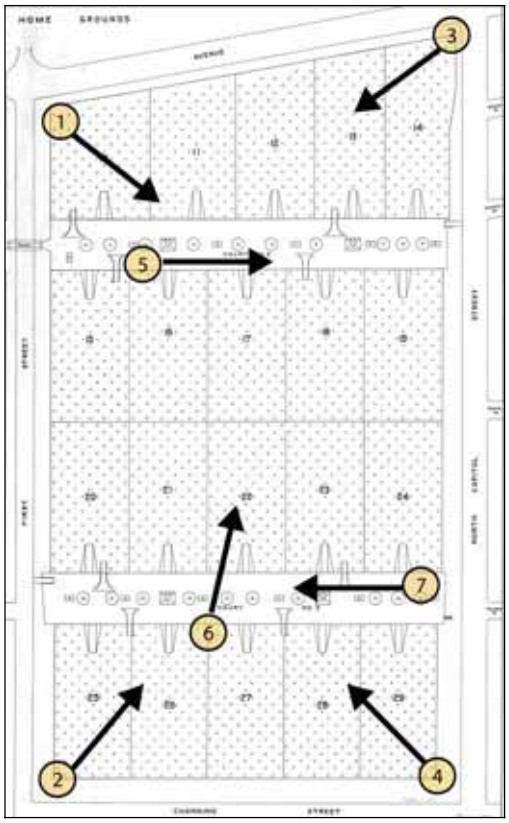
View of northeast corner of site, looking west from northeast corner

View of east side of site, looking north into site from corner of Channing and First streets, NW

INTERNAL VIEWS

Views within the McMillan Site are both afforded and defined by the concentration of built resources in the service courts and the open spaces of the plains above the belowground filter beds. When the facility was first constructed, expansive view sheds existed within the Site, from one side of the filtration plant to the other. Olmsted's landscape design specifically mentions these view sheds and his intention not to "cut off…the interesting and remarkable effect of the filter bed plain." To feature these views as part of the park experience, Olmsted designed a "double row of small growing trees…beneath the foliage of which the view could pass and between which a border path could be provided when the plain could be overlooked. Today, the internal views are intact, and the lack of perimeter plantings has re-opened the expansive views across the site.

(This site plan is keyed to the following photographs of existing conditions of views. All photographs were taken by EHT Traceries, Inc., in 2008.



1. View looking southeast from northwest corner of site (intersection of Michigan Avenue and First Street),

2. View looking northeast from southwest corner of site (intersection of Channing Street and First Street)

3. View looking southwest from northeast corner of site (intersection of Michigan Avenue and North Capitol Street.

4. View looking northwest from southeast corner of site (intersection of Channing Street and North Capitol Street.

5. View looking east from west side of northern service court

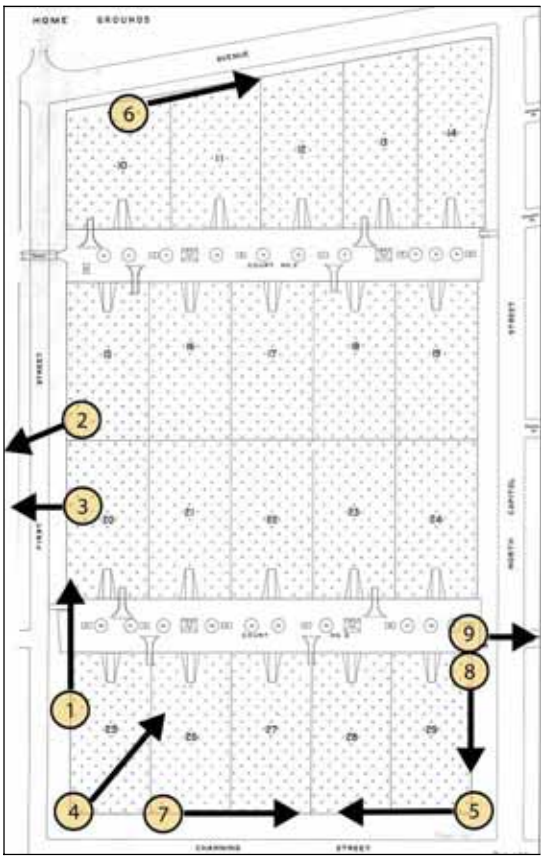
6. View from southern service court looking north to the northern service court

7. View looking west from east side of southern service court

EXTERNAL VIEWS

The McMillan Site has several significant views to landmarks outside its boundaries. The location for the slow sand filtration plant was chosen because of its adjacency to the Washington City Reservoir and because of its central location in the city. Because of this centrality, the Site is surrounded by several landmarks, which are visible outside its boundaries. Some of these view unintended benefits of the site's artificial topography and the raised elevation at the site's southern end. Today, most of the historic external views are still intact. The original northward view to the United States Soldiers' Home (now AFRH-W) has been partially obscured by the development of the hospital complex to the north, but the tower of the Forwood Building at AFRH-W is still visible in an axial view form the pedestrian path.

(This site plan is keyed to the following photographs of existing conditions of views. All photographs were taken by EHT Traceries, Inc., in 2008.



1. View looking north from the western leg of the path, views north point to the tower of the historic Forwood Building. (1906), which contributes to the Armed Forces Retirement Home-Washington Historic District, which is listed in the National Register of Historic Places and in the DC Inventory of Historic Sites.

2. View looking southwest from the western leg of the site to the Washington Monument and the western side of the sand filtration plant and reservoir.

3. View looking west from the western leg of the path to the McMillan Reservoir.

4. View from the western leg of the path, views northeast point to the tower and dome of the Basilica of the Shrine of the Immaculate Conception (completed in the 1950s) on the campus of The Catholic University of America.

5. View looking west from the southern leg of the path to the tower of the Main Building (also known as the Founders Library, 1939) of Howard University, which is a National Historic Landmark.

7. View looking east from the northern leg of the path, to the dome of the Main Hall of Trinity University (c. 1897) and to the rowhouses on North Capitol Street.

8. View looking east from the southern and western legs of the path to the rowhouses on North Capitol Street.

9. View looking east from the eastern leg of the path to the Glenwood Cemetery (chartered 1854).

CHAPTER 2: HISTORIC SIGNIFICANCE

This chapter summarizes and expands upon the DC Inventory of Historic Places nomination for the McMillan Park Reservoir Historic Landmark by providing a summary chronology of the history of the Landmark and an outline of its historic significance. This information is then used to evaluate the historic significance of the McMillan Site within the context of the significance of the Landmark as whole.

I. SUMMARY CHRONOLOGY FOR THE MCMILLAN PARK RESERVOIR HISTORIC LANDMARK

The timeline provides a brief chronology for the McMillan Site. The information provided in the timeline is based on numerous previous documentation efforts and does not present new or corrected information about the history of the property.

1898:

Appropriations are made to investigate experimentally the filtration of the Potomac River and to report upon its advantages and cost.

1898:

A feasibility study is completed for water purification system the City of Washington.

1900, July:

The American Society of Civil Engineers (ASCE) holds meeting in London to discuss benefits of rapid sand filtration versus slow sand filtration.

1900, December:

The Medical Society of the District of Columbia submits a report to the Senate District Committee denouncing the rapid sand filtration process and the use of chemical to purify the water supply for the City of Washington.

1901, January:

The Senate Committee on the District of Columbia holds a hearing in New York City to discuss filtration for the City of Washington; the Senate Committee forms an engineering committee to conduct a new feasibility study for slow sand filtration, which recommends the use of rapid sand filtration.

1901, March:

Despite the engineering committee's recommendation for rapid sand filtration, Congress appropriates funds to construct a slow sand filtration plant in Washington.

1901-1902:

A site is selected and plans prepared for a slow sand filtration plant by the Army Corps of Engineers.

1902-1905:

The Army Corps of Engineers constructs a slow sand filtration plant adjacent to the existing Washington City Reservoir.

1905, August:

Limited operation of the slow sand filtration plant begins.

1905, October:

Full operation of the slow sand filtration plant begins.

1906:

Secretary of War Taft renames the Washington City Reservoir and slow sand filtration plant as "McMillan Park" following the death of James McMillan, senator from Michigan and chair of the Senate District Committee.

1906:

Charles Moore, staff of the Senate District Committee, contacts F.L. Olmsted, Jr., to discuss the possibility of a landscape design for "McMillan Park."

1907:

Olmsted begins plans for a landscape design of "McMillan Park."

1907-1919:

Olmsted's landscape design is developed and implemented at "McMillan Park."

1911:

McMillan Memorial Fountain is installed west of the intersection of Channing and 1st streets, NW.

1914:

"McMillan Park" is added to the schedule of concerts for the Engineer Band and United States Cavalry Band.

1941:

"McMillan Park" is closed to public access for security reasons.

1986:

A rapid sand filtration plant is constructed West of First Street, functionally replacing the slow sand filtration plant.

1987:

The District of Columbia takes control of the eastern section of the slow sand filtration plant.

1988:

All operation of the slow sand filtration plant is abandoned.

1990:

The DC Preservation League submits a landmark nomination for the McMillan Park Reservoir for listing in the DC Inventory of Historic Sites.

1991:

The McMillan Park Reservoir is listed as an individual landmark in the DC Inventory of Historic Sites, and HPRB recommends the property for listing in the National Register of Historic Places.

II. HISTORIC SIGNIFICANCE OF THE MCMILLAN PARK RESERVOIR HISTORIC LANDMARK

The following text summarizes and expands upon the evaluation of historic significance of the 92-acre McMillan Park Reservoir Historic Landmark as stated in the DC landmark nomination application. This text is organized based on the evaluation criteria for which the property would be listed in the National Register of Historic Places (NRHP), as presented in the HPRB

designation decision for the Landmark (Case No. 90-20, August 21, 1991).[16] To provide further context, each evaluation criterion is supported with one or more of the statements provided in the HPRB landmark decision that explain the reasons for which the McMillan Park Reservoir is designated as an individual landmark.

CRITERION A: ASSOCIATION WITH THE HISTORY OF WATER PURIFICATION

- *[The McMillan Park Reservoir] was the first water treatment facility in the City of Washington, and its operation resulted in the elimination of typhoid epidemics and reduced incidence of other diseases.*
- *Construction of its slow sand water filtration system represented a triumph of the pure water advocates over those who advocated chemical treatment of water.*[17]

During the last half of the nineteenth century, the Potomac River, which was the primary water supply for the City of Washington, was becoming increasingly polluted by household and industrial waste, as well as runoff from the fast developing areas within the watershed. Instances of typhoid fever were high and increasing, and sedimentation of water in the city's reservoirs was not sufficient to address the types of intestinal bacteria that contaminated the water supply. By the end of the century, the issue of water purification had become imperative. In 1898, Congress appropriated funds for the investigation of filtration options for the Potomac River water, as well as for the completion of a report on its advantages and cost. From 1898 to 1901, a heated debate took place about the method by which water would be purified for use in the District of Columbia. Although several reports commissioned by the Senate District Committee concluded that the use of coagulants was the optimal filtration method, the Medical Society of the District of Columbia adamantly opposed the use of chemical treatments and persistently promoted the use of the slow sand filtration method. The debate over the benefits and drawbacks of the two filtration methods prompted meetings by the American Society of Civil Engineers (ASCE) and the Senate District Committee, which was chaired by Senator James McMillan from Michigan. In March 1901, despite a strong recommendation for the rapid sand filtration method by its own committee, Congress appropriated money to construct a slow sand filtration plant with an understanding that the appliances needed for use of a coagulant could be installed subsequently if needed.[18] The description of the completed site is provided in the 1906 Annual Report of the Chief of Engineers:

> The Washington filtration plant consists of a pumping station for raising the water from the Washington City reservoir to the filters; of 29 filter beds of the slow-sand type, having an effective filter area of 1 acre each; of the filtered water reservoir, having a capacity of about 15,000,000 gallons; of the necessary piping and valves for carrying the water controlling the rates of filtration, etc.; of a sand washing and storage system, and of a laboratory for testing the water.[19]

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[16] Definitions for evaluation criteria taken directly from *National Register Bulletin: How to Complete the National Register Registration Form*

[17] Designation decision for McMillan Park Reservoir (Case No. 90-20, August 21, 1991).

[18] Allen Hazy and E.D. Hardy, "Works for the Purification of the Water Supply of Washington, D.C.", Transactions of the American Society of Civil Engineers, Vol. LVII, 1907.

[19] Annual Report of the Chief of Engineers, U.S. Army, Part 1, 1906, p. 818. The 24.69-acre McMillan Site comprises the eastern section of the original slow sand filtration plant (east of First Street, NW), containing 20 of the original 29 filter beds. The pumping station, filtered water reservoir, and the Washington City Reservoir (now known as the McMillan Reservoir) are on the western section of the

The McMillan Slow Sand Filtration Plant was one of the last slow sand filtration facilities constructed in the United States and represented the success of advocates for the traditional filtration system at a time when new technologies were being introduced into water purification processes.

CRITERION B: ASSOCIATION WITH SENATOR JAMES MCMILLAN

> *[The McMillan Park Reservoir] is a memorial to Senator James McMillan who spearheaded development and implementation of the monumental McMillan Park Plan, completing and refining the 1794 Plan of the Federal City in the context of the 1893 City Beautiful aesthetic.* [20]

In 1906, Secretary of War William Howard Taft officially renamed the Washington City Reservoir and the Slow Sand Filtration Plant as "McMillan Park" in honor of Michigan Senator James McMillan. McMillan is credited as the drive behind the creation of the 1901 Senate Committee report titled "The Improvement of the Park System of the District of Columbia," which established a comprehensive plan based on the completion, expansion, and enhancement of the 1792 L'Enfant plan for the city. Now widely known as "The McMillan Plan," the 1901 report was one of the first attempts to implement the City Beautiful Movement, which was born out of the 1893 World's Columbian Exposition in Chicago. The McMillan Plan called for the completion of the National Mall, the articulation of ceremonial boulevards throughout the city, the establishment of a comprehensive park and recreation system, and the overall beautification of the city. McMillan's sudden death in 1901, before the implementation of his plan, was a shock to many in Washington and in his home state of Michigan. As such, James McMillan's name was given to the reservoir and filtration plant complex in honor of his integral role in the introduction of water purification. The designation of the reservoir and sand filtration site as a publicly accessible park was a testament to his efforts to beautify the nation's capital by enlarging and enhancing its system of public open spaces as part of the City Beautiful Movement at the turn of the century. A Frederick Law Olmsted, Jr. was retained to design a landscape plan that transformed the public works facility into a designed landscape

CRITERION C: DISTINCTIVE DESIGN AND CONSTRUCTION AS A PUBLIC WORKS FACILITY AND PUBLIC PARK

- *The McMillan Park Reservoir is a major element of the water system of the District of Columbia, an urban American engineering resource of great historic, cultural, landscape, planning, engineering, and architectural significance.*[21]

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site (west of First Street, NW) and are still owned and operated by the United States Government. Very few changes took place on the eastern section of the slow sand filtration plant, and most changes to the infrastructure of the plant took place on the western section, including the addition and demolition of various structures and buildings. The eastern section of the site continued in full operation until 1986, when a new rapid sand filtration plant was constructed on the western section of the site. The eastern section was operated or maintained in some capacity until January 1988 and has since been abandoned.

[20] Designation decision for McMillan Park Reservoir (Case No. 90-20, August 21, 1991).

[21] Designation decision for McMillan Park Reservoir (Case No. 90-20, August 21, 1991).

- *[The McMillan Park Reservoir] is a major element of the McMillan Park System which envisioned a linkage of green open spaces from Rock Creek to Anacostia through the developing suburbs north of the Federal City.*
- *The McMillan Park Reservoir] is the result of the collaboration of major figures in the City Beautiful movement who later contributed to the aesthetic and architectural development of Washington.* [22]

In the nineteenth and the first half of the twentieth century, public utilities were often integrated into a city's built fabric or park system and prominently displayed as evidence of urban progress and accomplishments of design and technology. Today, public utilities are hidden from view, either by burying them underground or locating them outside of the city. These two approaches for the treatment of civic structures strongly relate to the discussion of "infrastructure" versus "public works" as presented by Elissa Rosenberg's article "Public Works and Public Space: Rethinking the Urban Park." According to Rosenberg, "infrastructure" is a socially neutral term that is narrowly defined by engineering works that serve public functions; "public works," however, is more strongly associated with an architectural character capable of contributing to civic imagery and identity to that infrastructure. The McMillan Park Reservoir Historic Landmark stands as a prominent example of Rosenberg's characterization of "public works." Both the incorporation of fashionable academic architectural vocabularies and the commissioning of prominent landscape architect Frederick Law Olmsted, Jr., are testaments to the effort to contribute to the aesthetic qualities of the growing City of Washington at the turn of the twentieth century. The philosophy of "public works" is presently not embraced in Washington, D.C., (nor, generally, in the United States) and the design and construction methods featured within the McMillan Park Reservoir Historic Landmark make the Landmark and important reminders of the prominence that was given to civic architecture in Washington during the City Beautiful Movement.

The landscape plan of McMillan Park was in itself a symbol of the importance given to the design and aesthetic of the filtration plant and reservoir. In 1906, the Army Corps of Engineers commissioned Frederick Law Olmsted, Jr., as the landscape architect for the design of McMillan Park. Olmsted, Jr. was the son of renowned landscape architect Frederick Law Olmsted and was himself one of the preeminent landscape designers in the United States in the early twentieth century. Olmsted, Jr. had worked on the 1901 "McMillan Plan," and was a major advocate of the City Beautiful Movement at the turn of the twentieth century. Olmsted is well known for his extensive work in planning metropolitan park systems and greenways across the country, as well as for his establishment of the first formal training program in landscape architecture at Harvard in 1900.[23] The application of landscape design by a prominent landscape architect as a means to enhance utilitarian infrastructure of the District of Columbia's water system represents the critical understanding of the importance of public works as a part of the City Beautiful Movement. Through the abilities of Frederick Law Olmsted, Jr., the slow sand filtration plant and reservoir were transformed into McMillan Park, a place intended to honor Senator McMillan's extraordinary role in the transformation of Washington, DC.

[22] Designation decision for McMillan Park Reservoir (Case No. 90-20, August 21, 1991).
[23] Rolf Diamont, "Biographical Vignette of Frederick Law Olmsted, Jr.," National Park Service: The First 75 Years, 1990.

III. HISTORIC SIGNIFICANCE OF THE MCMILLAN SITE

The following text provides an evaluation of the significance of the McMillan Site as part of the larger McMillan Park Reservoir Historic Landmark using the evaluation criteria and information regarding the significance of the Landmark.

CRITERION A: ASSOCIATION WITH THE HISTORY OF WATER PURIFICATION

The McMillan Site contains a majority of the infrastructure associated with the filtration capabilities of the slow sand filtration plant. Therefore, the McMillan Site is crucial to understanding how the slow sand filtration plant operated, as well as to conveying the scale of the slow sand filtration plant as a facility for the water purification for the entire City of Washington.

CRITERION B: ASSOCIATION WITH SENATOR JAMES MCMILLAN

The McMillan Site was planned as a distinct component of McMillan Park, which was a memorial to Senator James McMillan. Within McMillan Park, the McMillan Site was designed to have a unique function as a perimeter pedestrian park through which the public could stroll and visually experience the unusual landscape of the Site's open plains and structures.

CRITERION C: DISTINCTIVE DESIGN AND CONSTRUCTION AS A PUBLIC WORKS FACILITY AND PUBLIC PARK

The architectural design and construction methods used within the McMillan Site embody the aesthetics that associate this public works facility with the principles of the City Beautiful Movement. Further, Olmsted recognized and acknowledged that the McMillan Site had a unique character and designed the landscape for the McMillan Site as a distinct component of his overall landscape plan for McMillan Park.

In conclusion, the McMillan Site is significant as a distinct component of the McMillan Park Reservoir Historic Landmark and contributes to the significance of the Landmark under each of the criteria for which it was designated.

IV: RELATIVE LEVEL OF SIGNIFICANCE OF INDIVIDUAL RESOURCE TYPES

Relative Level of Significance (RLS) of individual resources has been developed as a preservation-planning tool to assess the relative importance of resource types, as recommended by the *Secretary of the Interior's Standards*. The RLS ranks each resource based on its contribution to the historic significance of the landmark as a whole. **The detailed findings of the evaluation of the relative level of significance of each resource type is included in Appendix I of this report.**

The first step in evaluating the RLS of the resources within the McMillan Site is an understanding of the significance of the McMillan Site within the context of the entire McMillan Park Reservoir Landmark. Based on the evaluation provided in this chapter, the following principles are accepted:

- The McMillan Site is understood as a distinct component of the McMillan Park Reservoir Landmark and the relative level of significance of the individual resources within the McMillan Site should be evaluated for the resource's role in conveying this distinction;
- The McMillan Site is significant for the same reasons that the Landmark was judged to be significant; thus the relative level of significance of the individual resources within the McMillan Site should be evaluated based on the same criteria.

Using these principles, each of the resource types identified in the Resource Inventory in Chapter 3 was evaluated for its contribution to the significance of the McMillan Site based on the following criteria:

- **CRITERION A:** Association with the History of Water Purification
- **CRITERION B:** Association with Senator James McMillan
- **CRITERION C:** Distinctive Design and Construction as a Public Works Facility and Public Park

The following considerations were then made to determine the RLS of each resource type under each of the above criterion:

- **CRITERION A:**
  - How does/did the resource convey the operations of a slow sand filtration plant?
  - How does/did the resource convey the role of a slow sand filtration plant within the water purification system of the City of Washington?
  - How does/did the resource convey the original operational scale of this slow sand filtration plant?
  - How does/did the resource convey the story of the Site's construction as a distinct component of the first water treatment facility for the City of Washington?
  - How does/did the resource convey the importance of water purification to the City of Washington?
- **CRITERION B:**
  - How does/did the resource convey the Site's association as a distinct component of the first water treatment facility within the larger District of Columbia park system that is associated with the leadership of Senator James McMillan?
  - How does/did the resource convey the experience of the Site as a distinct component of McMillan Park and as a memorial to Senator James McMillan.
- **CRITERION C:**
  - How does/did the resource convey the original construction methods of this slow sand filtration plant?
  - How does/did the resource contribute to the Site's distinctive architectural character and aesthetic and its role as a distinct component of the first water treatment facility for the City of Washington?
  - How does/did the resource convey Olmsted's design intentions for the Site's original landscape plan as a distinct component of McMillan Park?

Using these considerations, each resource was then ranked on a scale of 0 to 3 for its contribution to the significance of the McMillan Site under each of the evaluation criterion, with 3 corresponding to the greatest level of contribution. Based on the sum of the rankings for each criterion, the resource type was then assigned an RLS as follows:

RELATIVE LEVEL OF SIGNIFICANCE	SUM OF RANKINGS	DESCRIPTION
KEY	8-9	The resource is of the highest level of contribution to the historic significance of the McMillan Site and is essential to understanding the most significant aspects of the McMillan's Site's history and historic character.
SUPPORTING	4-7	The resource is moderately important to conveying the significant aspects of the McMillan's Site 's history and historic character.
MINOR	1-3	The resource is minimally important to conveying the significant aspects of the McMillan's Site's history and historic character.
NON-CONTRIBUTING	0	The resource does not contribute to the historic significance or historic character of the McMillan Site.