

RAINBOW POOL

National Mall & Memorial Parks

East and West Potomac Parks

Eastern portion of West Potomac Park; bounded by Elm Walks to the north and south, Seventeenth Street to the east and the Reflecting Pool to the west

Washington

District of Columbia

HABS DC-838

*HABS DC-838*

PHOTOGRAPHS

WRITTEN HISTORICAL AND DESCRIPTIVE DATA

FIELD RECORDS

HISTORIC AMERICAN BUILDINGS SURVEY

National Park Service

U.S. Department of the Interior

1849 C Street NW

Washington, DC 20240-0001

# HISTORIC AMERICAN BUILDINGS SURVEY

## RAINBOW POOL

HABS No. DC-838

Location

The 7.4-acre site containing the Rainbow Pool and associated elm walks is located within the Lincoln Memorial grounds in the monumental core of Washington, D.C. It is situated in the eastern portion of West Potomac Park, bounded to the north and south by elm walks, to the east by Seventeenth Street, and the Reflecting Pool to the west.

USGS Quadrangle: Washington West, D.C.-MD-VA  
Universal Transverse Mercator Coordinates:  
Zone 18, E: 323009.7933; N: 4306258.7248

Present Owner:

The site is currently maintained by the U.S. Department of the Interior (DOI), National Park Service (NPS), National Capital Parks - Central, Washington, D.C.

Present Use:

The Rainbow Pool is a 300'-0" x 160'-0" fountain within the Lincoln Memorial grounds. The pool is flanked by 15'-0"-wide elm walks to the north and south. These east/west oriented, asphalt-paved walks, shaded by double rows of elm trees, lead pedestrians between Seventeenth Street and the Lincoln Memorial.

Significance:

The Rainbow Pool and elm walks are significant because they form an integral part of the designed landscape of the Lincoln Memorial grounds. The concept for the Rainbow Pool and elm walks was first conceived by architect Charles McKim in the McMillan Plan of 1902. The plan sought to restore Major Pierre Charles L'Enfant's 1791 plan for Washington, D.C. by extending the monumental core of the Mall westward through the creation of the Lincoln Memorial in the newly reclaimed marshlands of West Potomac Park. The grounds for the proposed memorial, which would form the western terminus of the Mall, consisted of a greensward with large and small pools equipped with fountains. The McMillan Plan symbolized the principles of the City Beautiful movement which promoted order, formality, and Classical architecture for grand, civic spaces.

The Rainbow Pool and elm walks were constructed from 1915-24, and prominent designers, including Henry Bacon, architect of the Lincoln Memorial, and landscape architects Frederick Law Olmsted, Jr. and Clarence E. Howard, collaborated with the Army Corps of Engineers, Office of Public Buildings and Grounds (OPB&G) on their final design. The Rainbow Pool and surrounding landscape are contributing features to the National Register-listed East and West Potomac Parks Historic District.

## **PART I. HISTORICAL INFORMATION**

### **A. HISTORICAL CONTEXT**

- 1. Historical Development:** The focus of this report is the 7.4-acre site in West Potomac Park with the Rainbow Pool, elm walks, and other associated landscape features. However, in order to fully understand the history of the site in context, it is necessary to briefly describe the creation of East and West Potomac Parks.

East and West Potomac Parks were created during the last two decades of the nineteenth century by the War Department, Army Corps of Engineers, Office of Public Buildings and Grounds (OPB&G). Both parks were formed on land reclaimed from the Potomac River when it was dredged to create navigable channels.

The concept for both parks originated in 1867 when the U.S. Department of the Interior transferred control of federal lands within Washington, D.C. to the Army Corps of Engineers' newly formed OPB&G. Shortly after receiving control of the lands, OPB&G recommended dredging a deep channel near the Washington shore and depositing dredged material from the river's bottom on the marshy flats west and south of the yet-to-be-completed Washington Monument, begun in 1848. The proposed dredging would accomplish three purposes: clear a channel for ships, eliminate the malarial flats, and enhance the beauty of the Washington Monument grounds. During the 1870s, no definitive reclamation strategy was adopted and dredging occurred on a piecemeal basis, with dredged material deposited between the Washington and Potomac channels (future site of East Potomac Park) and the Potomac flats, south of the city. The soil from these efforts eventually slipped back into the river because there were no retaining walls to keep the material in place (Barthold 1993).

During the 1880s, however, formal plans were adopted by Congress to improve the Potomac River. In 1881, a major flood in Washington, D.C. submerged 254 acres of the city, including most of the area south of Pennsylvania Avenue, reaching the foot of Capitol Hill (Barthold 1993). In response, Congress passed the Rivers and Harbors Act (1881) to provide a survey of the Potomac River with the goal of improving navigation and establishing a harbor line through dredging and filling the river flats.

To carry out this survey, the Army Corps of Engineers devised a plan for the reclamation process based on prior surveys of the river. In 1882, Congress allocated \$400,000 to implement the plan and dredging continued between 1882-1891. Between 1885-87, the Tidal Basin was created. The basin was equipped with an inlet gate on the river and an outlet gate on the Washington Channel. The inlet gate would open inward, allowing the basin to fill in high tide; the outlet gate would open with the falling tide and flush the channel of debris. By

1891, the groundwork for East and West Potomac Parks was in place, and by 1896, the Tidal Basin was surrounded by a seawall except at the inlet gates (Chappell 1973).

During the 1890s, debate ensued concerning future use of the reclaimed land, and government officials and individuals proposed a variety of schemes including private development and a large public park. In 1897, Congress passed a bill establishing the entire area “now being reclaimed together with tidal reservoirs... [as] a public park, under the name Potomac Park, and to be forever held and used as a park for the recreation and pleasure of the people.” The Congressional legislation authorized the designation of 621 acres of reclaimed land, and 118 acres of tidal reservoirs, totaling 739 acres, as the site for the park (Chappell 1973). Situated between the Washington Monument and the Potomac River, the site, divided into two sections by the Tidal Basin, was designated East Potomac Park (approximately 330 acres) and West Potomac Park (approximately 400 acres) (Robinson & Associates 1998; Streatfield 1991). By 1909, the ambitious project was largely completed and included bridle paths, footpaths, and roads within both parks, including a route around the Tidal Basin.

During this era, many improvements were made in West Potomac Park. B Street North (later renamed Constitution Avenue) was established between Seventeenth and Twenty-sixth streets. The interior of the park was also drained and graded, and the area that would become the site of Lincoln Memorial was filled to a grade of approximately 13' above sea level, with its outline and shape closely reflecting the natural and historic pattern of river siltation (Robinson & Associates 1998).

2. **Trends in American History:** As West Potomac Park was being created during the late nineteenth and early twentieth century, the field of city planning was undergoing a transformation that would impact future development in Washington, D.C. and the nation as a whole. These events are described below.

#### World's Columbian Exposition of 1893 and the City Beautiful Movement

In 1893, the World's Columbian Exposition was mounted in Chicago to commemorate the 400th anniversary of Christopher Columbus' discovery of America. The nation's most prominent designers collaborated on the temporary fairground design, including architects Daniel Burnham and Charles McKim, landscape architect Frederick Law Olmsted, Sr., assisted by son Frederick Law Olmsted, Jr. (henceforth referred to as Olmsted) and sculptor Augustus St. Gaudens.

The planners mandated a classical theme, resulting in a setting dominated by colonnaded buildings set around a central landscaped court with fountains and lagoons. The exposition was widely publicized, and gave rise to Neoclassical-style architecture that remained a popular building mode in the United States until the middle of the twentieth century (McAlester and McAlester 1991, 346). In addition, the exposition inspired the City Beautiful

movement in urban design, a movement dedicated to planning and construction of monumental Neoclassical buildings in formal, landscaped settings throughout the United States.

By 1900, the influence of the Chicago exposition was evident in Washington, D.C. In December of that year, the city hosted a national celebration to honor the removal of the seat of government from Philadelphia to Washington. The focus of the celebration was the improvement of the city in a manner commensurate with the nation's capital (U.S. Senate 1902). Over the course of the nineteenth century, L'Enfant's 1791 plan, characterized by intersecting boulevards, axial vistas, and public buildings set within parks, had been eroded. For example, the axial alignment of the Mall (which extended east/west between the Capitol and the Washington Monument) had been destroyed by the construction of the Smithsonian Institution (1847-55) and railroad tracks (1872) on the Mall. Furthermore, the Washington Monument (1848-85) had been erected off-alignment from L'Enfant's intended cross-axial location for a memorial, thereby destroying the original intent of the plan (Reps 1991).

Concomitant with these activities, the American Institute of Architects (AIA) convened its Thirty-fourth Annual Convention in Washington, D.C. to discuss the subject of improving the capital. The conference was attended by prominent architects, designers, and sculptors, including Chicago exposition collaborators Burnham, McKim, Olmsted, and St. Gaudens. Papers suggesting the development of parks and placement of public buildings were put forward for discussion. Conference participants expressed interest in restoring L'Enfant's vision of the city by designing the newly reclaimed parkland. As a result, the AIA appointed a committee on legislation to lobby Congress for the creation of a Senate Committee to oversee park planning and design for the District of Columbia (Olszewski 1970).

#### Formation of the McMillan Commission, 1901

In 1901, consultations were held between the AIA and Senate committees, and a Park Commission was appointed to prepare and submit a general plan for the development of the Washington, D.C. park system. The Park Commission became known as the McMillan Commission in honor of Michigan Senator James McMillan, the group's chief Senate sponsor. The McMillan Commission was headed by Chicago exposition planners Burnham and Frederick Law Olmsted, Jr. who invited former Chicago colleagues McKim and St. Gaudens to join them, assisted by Commission Secretary Charles Moore (U.S. Senate 1902).

To fulfill its mission to develop a plan for the city's parks, the McMillan Commission committed itself to multiple tasks. These included a thorough study of L'Enfant's plan and its implementation in Washington, D.C., and a tour of major cities in the United States and Europe to gather ideas on planning, architecture, and landscape architecture for the capital city. The purpose of the tours was also to explore known American and European sources that might have guided L'Enfant in his formulation of the Washington, D.C. plan. In the

United States, cities visited included Williamsburg, Virginia; Annapolis, Maryland; and Boston, Massachusetts, among others. London, England; Paris, France; Rome and Venice, Italy; Vienna, Austria; Budapest, Hungary; and Frankfurt and Berlin, Germany were visited abroad (U.S. Senate 1902).

### McMillan Commission Plan of 1902

In 1902, the results of the McMillan Commission's studies were published in a report entitled *The Improvement of the Park System of the District Of Columbia*, edited by Charles Moore. The report included a plan that affirmed L'Enfant's concepts should be reasserted as the guide for future planning efforts in Washington, D.C. According to the commission:

*“the more [they] studied the first plans of the Federal City, the more they became convinced that the greatest service they could perform would be done by carrying to a legitimate conclusion the comprehensive, intelligent, and yet simple and straightforward scheme devised by L'Enfant under the direction of Washington and Jefferson”* (U.S. Senate 1902, 25) .

The commission's plan echoed the distress expressed at the AIA conference in 1900 concerning the erosion of L'Enfant's plan through construction on the Mall, and the overall lack of appropriate landscape settings for public buildings throughout the central portion of the city. Thus, the commission sought to restore the unity of L'Enfant's design and formulate definite principles for the placement of future structures, which were to be enhanced by an orderly, landscaped setting (U.S. Senate 1902).

The primary focus of the plan was the placement of public buildings and the development of a public park system. The plan discussed large parks and their connections, playgrounds, parkways, roads, quays, buildings, and bridges in detail. It also discussed the importance of water displays in grand public spaces, as exemplified by the Trevi and St. Peter's fountains in Rome and the cascades, canals, and fountains of landscape architect Andre LeNôtre at Versailles and Vaux-le-Vicomte near Paris. The plan also advocated the use of fountains throughout Washington, D.C., as these bodies of water would help combat the summer heat and would reflect the spirit of L'Enfant, who “had an appreciation for all forms of water decoration” (U.S. Senate 1902, 28).

A large portion of the plan was devoted to restoring the Mall and associated parks according to L'Enfant's vision. Specifically, the commission viewed OPB&G's ongoing creation of East and West Potomac Parks as a fortunate opportunity for:

*“enlarging the scope of the earlier [L'Enfant's] plans in a manner corresponding to the growth of the country... and also may furnish sites for those memorials which history has shown to be worthy a place in vital*

*relation to the great buildings and monuments erected under the personal supervision of the founders of the Republic” (U.S. Senate 1902, 24).*

Along these lines, the plan recommended designing West Potomac Park as the logical westward extension of the Mall’s monumental core, and discussed the treatment of the Capitol, Union Square, the Mall (between Third and Fourteenth streets), the Washington Monument (between Fourteenth and Seventeenth streets), and the newly proposed Lincoln Memorial (in West Potomac Park between Seventeenth Street and the Potomac River) as divisions of the “Mall system” (U.S. Senate 1902). Following this proposed treatment would be consistent with the north/south and east/west axes envisioned by L’Enfant for the city’s core. Multiple figures were included to illustrate the commission members’ points.

According to the plan, restoration of the Mall system would hinge upon removal of the railroad tracks from the Mall, and re-establishment of the axial relationship between the Capitol, the Washington Monument, and the White House. This would be achieved through road extensions and landscaping schemes conceived by McKim and Olmsted (Joseph *et al.* 1998). In particular, the 1,600'-0"-wide east/west axis of the Capitol and Washington Monument would be defined by a *tapis-vert*, or greensward, 1-1/2 miles long and 300'-0" wide, flanked by elms planted four abreast to the north and south. Elms were selected because of their columnar trunks, wide-spreading branches, and adaptability to the climate. At the Washington Monument, the point of intersection of the north/south and east/west axes, elms planted in a rectilinear pattern of terraces, complemented by fountains and pathways, would surround the obelisk to emphasize the centrality of the structure and its axial relation to the White House and Capitol (U.S. Senate 1902).

West of the Washington Monument grounds, the plan suggested a Lincoln Memorial for West Potomac Park. Conceived primarily by McKim, the plan recommended a 3,600'-0" x 200'-0" canal, or pool, with cross-arms and bordered by trees (this pool later became known as the Reflecting Pool). The pool, inspired by those at Versailles and Fontainebleau in France, and Hampton Court in England, would “introduce... an element of repose and great beauty” into the landscape (U.S. Senate 1902).

The eastern end of pool would be emphasized by a rectangular-shaped pool with rounded edges (later known as the Rainbow Pool). According to the plan, both pools would be equipped with fountains and flanked by large groves of deciduous trees. The western end of the pool would be emphasized by a *rond point* placed on axis with the Washington Monument and the Capitol and functioning as a gate of approach to the city’s park system. According to McKim, the *rond point* would be crowned with a Neoclassical-style memorial to President Abraham Lincoln, designed as a Doric temple and housing a statue of the President. Roads would radiate outward from the *rond point*, linking to the city’s axial road system. In addition, a bridge was proposed that would extend southwest over the Potomac, connecting West Potomac Park and the Mall with Arlington Cemetery. A ceremonial

watergate would unite the bridge and park system, making it a gateway to the river (Joseph *et al.* 1998).

#### Implementation of the McMillan Plan

Following publication of *The Improvement of the Park System of the District Of Columbia* (Moore 1902), McMillan Commission members successfully lobbied Congress to enact regulations that would prohibit development within the central portion of the Mall. In 1904, Congress passed a law that prohibited construction on the Mall within 400'-0" of a central line stretching from the Capitol dome to the center of the Washington Monument (Olszewski 1970).

During the late 1900s, McMillan Commission members won further success for the 1902 plan. In 1909, the AIA appealed to President Theodore Roosevelt for the establishment of a Bureau of Fine Arts to advise on plans for future public buildings, bridges, parks, sculpture, painting, and other work in which design played an integral part. That same year, the President passed an Executive Order approving the creation of a Council on Fine Arts. When William Taft became President in March 1909, the newly formed Council, which had no legal standing, was abolished, through Congressional legislation, in favor of the creation of the Commission of Fine Arts (CFA). The legislation was approved in 1910 and provided for a commission of seven Presidential appointees qualified in the field of fine arts "to advise upon the location of statues, fountains, and monuments in the public squares, streets and parks in the District of Columbia... and upon the selection of artists for the execution of the same...". The inaugural members of the CFA included three members of the McMillan Commission, including Burnham, Olmsted, and Moore (Kohler 1996).

One of the first undertakings of the CFA was to oversee the creation of the Lincoln Memorial as conceived in the McMillan Plan. In 1911, Congress passed a bill establishing the Lincoln Memorial Commission "to secure plans and designs for a monument or memorial to Abraham Lincoln" (Kohler 1996). Upon formation, the Lincoln Memorial Commission requested the assistance of the CFA to oversee the selection of the memorial's location, plans, and designs, and advice on selecting artists, sculptors, and architects to execute the designs (Kohler 1996). Although the CFA favored the West Potomac Park location featured in the McMillan Plan, the Lincoln commission opted to explore several sites and designs around the city in addition to West Potomac Park, and announced a design competition. Designs were formulated by John Russell Pope, Daniel Burnham, and Henry Bacon at a variety of sites, including the Soldiers and Sailors Home, the as-yet undeveloped Meridian Hill Park and Union Station sites, and the CFA's preferred West Potomac Park site (Kohler 1996).

In 1912, the Lincoln Memorial Commission concurred with the CFA that the West Potomac Park site was the most favorable location for the memorial, and selected Henry Bacon, a

protégé of Charles McKim, as its architect (Kohler 1996). The proposed design emulated McKim's McMillan Plan renderings, including a Greek temple-style memorial. Other elements of the design reaffirmed the McMillan Plan, including tree-lined walks flanking a cruciform pool and rectangular-shaped pool with rounded edges located east of the memorial building. In 1913, Congress approved the preliminary plans and the first step toward erecting the Lincoln Memorial in West Potomac Park was realized. Over the course of the next thirteen years, the CFA would play an instrumental role in refining and overseeing the execution of plans for the Lincoln Memorial grounds (Kohler 1996).

## **B. SPECIFIC HISTORY OF THE SITE:**

1. **Initial Planning and Development:** Although this report concerns the 7.4-acre site containing the Rainbow Pool and associated landscape features, it is difficult to discuss without addressing the development of the Reflecting Pool. The pools were erected simultaneously and considering the Rainbow Pool in isolation would detract from an understanding of its context within the development of the overall Lincoln Memorial grounds. Therefore, the following section discusses the development of both pools.

Prior to construction of the Lincoln Memorial and associated pools, the grounds, landscaped with scattered trees and shrubs, stretched for nearly a mile westward from the Washington Monument. A narrow section of B Street North and the eastern border of Seventeenth Street were lined with trees. Tennis courts and drives were located on the north side of the site (Joseph *et al.* 1998).

On February 12, 1914, Lincoln's birthday, the ground breaking ceremony for the Lincoln Memorial building was held, and construction of the concrete-and-steel foundation commenced under the auspices of the OPB&G. The following February, the cornerstone was laid and construction of the superstructure began (Chappell 1973).

### Landscape Scheme Developed For Lincoln Memorial Grounds, 1915-16

During this period, Bacon, the OPB&G, and the Lincoln Memorial Commission, guided by the CFA, began to conceive guidelines for the tree-lined walks and pools. Frederick Law Olmsted, Jr., member of the CFA and McMillan Commission, worked closely with the designer and government entities on the planting of the trees and establishment of grades in the pool area. Olmsted recommended English elms (known then as *Ulmus campestris*) and suggested that the inner row of trees flanking the pools be planted 320'-0" apart with the 160'-0"-wide pools occupying half the distance between the trees. The tree rows were set at 40'-0" apart, with individual trees placed 25'-0" apart. Placement of trees flanking the rounded portion of the smaller pool would be adjusted according to the pool's curvature. Along the main axis, Olmsted recommended a 14'-0" grade for the pools, while the cross-

arms of the larger pool were assigned a range between 14'-0" and 16'-0". The proposal did not provide for excavation of the cross-arms (Joseph *et al.* 1998).

OPB&G worked closely with Olmsted on locating English elms because he strongly believed these to be the most suitable species of tree for the memorial grounds. According to Olmsted, the English elms' "habits were exactly right for the purpose, and its foliage harmonizing with that of the American elm which is designed for use around Washington" (Joseph *et al.* 1998). In 1915, Olmsted and OPB&G ordered 500 English elms from Dicksons nursery in Chester, and between 1915-16, 398 of the trees were planted in four parallel rows flanking the east/west axis between the Lincoln Memorial and Washington Monument. The remaining 104 trees were planted south of the parallel rows. Although Olmsted specified English elms, documentation suggest that a number of Dutch elms (*Ulmus hollandica*) were planted as well (Joseph *et al.* 1998).

The CFA sought to hire a landscape architect to implement Olmsted's recommendations. At Olmsted's suggestion, landscape architect Clarence E. Howard of Syracuse, New York was hired by OPB&G in 1916, with approval of the CFA (Joseph *et al.* 1998). Howard's tasks included assisting in the design of the east-west pool axis and a planting plan for the development of a circular area around the memorial itself (Joseph *et al.* 1998).

In 1916, Howard developed detailed plans for improvements to the Lincoln Memorial grounds bounded by B Street North, B Street South (later realigned and renamed Independence Avenue), Seventeenth Street on the east, and the Potomac River on the west. The plans depicted the 15'-0"-wide elm walks along the north and south sides of the two pools, as expressed in the McMillan Plan and reaffirmed by Bacon, Olmsted, and the OPB&G in their subsequent concepts.

The elm walks were designed as parallel walkways atop two terraced slopes flanking the north and south sides of the pools and extending west from Seventeenth Street to the steps of the Lincoln Memorial. Located 4'-0" above the pools, the walkways echoed the shape of the pools, curving along the edges of the smaller pool, and following the cruciform shape of the longer pool at the proposed location of the cross-arms. In addition to the elm walks, Howard also depicted six sidewalks, three to the north and three to the south, radiating outward from the north and south sides of the smaller pool and cross-arms of the larger pool, respectively. These sidewalks extended from the pools to the road network surrounding the Lincoln Memorial grounds (Howard 1916).

Before construction according to the CFA-approved Howard plans could begin, the United States entered World War I and the military desperately needed to expand its office space in Washington, D.C. As a result, in 1918, the War Department erected temporary government office buildings and a parking lot in the undeveloped portion of the Lincoln Memorial grounds between the proposed pools and B Street North. Placement of the buildings, which

became known as the Navy and Munitions buildings, encroached upon the proposed location of the cross-arms for the longer pool (Joseph *et al.* 1998).

#### Pool Designs and Landscape Scheme of Lincoln Memorial Grounds Finalized, 1919-21

Despite the unforeseen development within the Lincoln Memorial grounds, the CFA began to work with the architects and landscape architects to finalize the designs for the pools and landscape features. In 1919, the OPB&G recommended to the CFA that the pools be constructed with a center depth of 2'-3", and in November of that year, excavation began, under the direction of OPB&G (CFA April 13, 1919) with the Charles H. Tompkins Company as the general contractor (Furbee 1955). As constructed, the pools were excavated to an approximately 3' depth. The excavated earth was used to create the *rond point* surrounding the Lincoln Memorial (Peters 1923).

Other issues discussed between 1919-20 included pool length and elimination of the cross-arms of the larger pool. While OPB&G advocated removal of the cross-arms, CFA members did not approve their removal. In 1920, the CFA decided, at the urging of Olmsted, to lengthen the longer pool and not excavate the cross-arms, although trees would still be planted at the unexcavated cross-arms according to the 1916 Howard plan (Joseph *et al.* 1998). Without excavated cross-arms, the longer pool would measure 2,000'-0" long, and extend from the western end of the smaller pool to a point located 55'-0" east of the bottom steps of the Lincoln Memorial. The smaller pool would measure 300'-0" long and be equipped with an electric fountain display (Joseph *et al.* 1998).

In 1921, the CFA determined the coping design for the edges of both pools. The coping was designed to be flush with the adjacent sidewalk and grass areas to achieve the appearance of continuous surface (CFA, May 12, 1921). In November 1921, the CFA inspected several granite samples. Since the CFA agreed that the coping should be of the same color and texture as the Milford Pink Granite used in the retaining wall and steps of the Lincoln Memorial, a coarse-pointed variety of this granite was originally selected (CFA, November 11, 1921). However, Col. C. O. Sherrill, Officer in Charge of OPB&G, believed "that we would not be justified in the selection of this more expensive stone, unless the appearance of the cheaper stone is so entirely out of harmony with the surrounding construction as to jar upon those visiting the Lincoln Memorial" (Sherrill 1921). Furthermore, the visual distance from the pink granite of the memorial, as well as the possibility of discoloration from the weather, strengthened Sherrill's position (Sherrill 1921). As a result, members of the Commission reconsidered the other samples and voted unanimously on granite from Mt. Airy, North Carolina (CFA, November 11, 1921).

Between 1921-23, work continued on excavation, foundation construction, coping assembly, laying of conduit, and waterproofing of the pool surfaces. Since both pools were located on reclaimed marshland, their design had to account for settlement of the fill, as well as

effective waterproofing of a level foundation. In order to support the granite coping that would form the edge of the pools, the Raymond Concrete Pile Company was hired to construct a foundation of wood-and-concrete piles, supporting a network of reinforced concrete beams (Peters 1923; Furbee 1955). Rose Brothers Company, Inc., of Washington, D.C., constructed waterproof floors with layers of cinder, asphalt and cloth, topped by slate tiles. Dark-colored materials were chosen to enhance the reflective qualities of the pools (Furbee 1955; Peters 1923). In 1923, when the waterproofing of the pools was completed, the granite coping stones, laid by the Corson and Gruman Company, were set in both pools (U.S. Army, Chief of Engineers 1923; Furbee 1955).

During this period, the water supply and drainage systems were also constructed. City-owned water lines provided the water supply for both pools, thus eliminating the need for an underground electrical pumping unit. For an additional supply, rainwater and surface drainage from the Lincoln Memorial were relied on to fill the pools (Peters 1923).

In 1923, OPB&G requested permission from CFA to install electric lights within the Lincoln Memorial grounds. OPB&G proposed to place lights between trees along the outer sides of elm walks and CFA agreed to review various designs, although no permanent schemes were ever approved (CFA, September 27, 1923).

#### Lincoln Memorial and Associated Grounds Completed, 1922-25

In May 1922, the Lincoln Memorial, with its statue of Lincoln by Daniel Chester French and interior murals by Jules Guerin, was dedicated. At the time of its dedication, the pools and landscaping features east of the memorial were still under construction. In late 1922, the larger pool was filled with water, and came to be known as the Reflecting Pool. By 1924, the concrete sidewalks were laid for the elm walks. In addition, the OPB&G-designed fountains were completed in the smaller pool, which was surrounded by a concrete plaza from which to view the fountain display. The fountain system consisted of two center jets with nine brass nozzles, surrounded by 124 brass nozzles situated upon an elliptical-shaped concrete base located between the tiled apron and actual pool floor (Joseph *et al.* 1998).

As early as 1913, the OPB&G supported the goal of creating additional fountains in Washington, D.C., and allocated \$3,000 for fountain construction. Echoing the McMillan Plan, the OPB&G stated:

*“Fountains are one of the most necessary and attractive adjuncts of parks in a city with the intensely hot summer climate of Washington. There are far too few now, and the number has barely increased at all in recent years, in spite of the growth in population”* (Cosby 1913).

With the completion of the fountain in Lincoln Memorial grounds, one of the McMillan Plan goals for creating more fountains in the nation's capital was met.

In October 1924, the smaller pool was dedicated and designated the Rainbow Pool and will hereafter be referred to as such in this report. The name derived from a trial run, which took place just prior to the pool dedication, during which a rainbow formed in the fountain's spray. With the eighteen central nozzles spraying water 40'-0" upward and 124 nozzles spraying water toward the center of the pool, the fountain formed a "hazy vista through which to view the Washington Monument and Lincoln Memorial" (Joseph *et al.* 1998). At the time of its dedication, provision had been made for electric connections to install a colored light display. Although National Park Service records indicate that no color display was installed at that time, accounts of the fountain from the mid-1920s indicate that it was occasionally illuminated at night (Joseph *et al.* 1998).

The Rainbow Pool fountains did not operate continuously since they required a substantial amount of fresh filtered water. The press was often notified in advance of the displays, which typically occurred on Sunday afternoons during the summer months (Grimes n.d.).

In 1925, CFA members visited the Rainbow Pool and were displeased with the fountain display. CFA minutes indicate that the "Commission felt there were too many spouts, and objected to the idea of the fountain obstructing the view from Seventeenth Street to the Lincoln Memorial" (CFA, September 3, 1925). As a result, the fountain display may have been changed to improve sight lines within the Lincoln Memorial grounds.

By mid-1925, several major projects within the Lincoln Memorial grounds had been completed. These consisted of filling and grading in the vicinity of the memorial; construction of a circular road with radial roadways; planting of two double rows of elm trees along the north and south sides of the Reflecting and Rainbow pools; installation of two concrete walkways between the parallel rows of trees; and excavation and completion of the two pools, including installation of the fountains in the Rainbow Pool.

During the same year when the majority of the Lincoln Memorial projects had been completed, OPB&G merged with the newly created Office of Public Buildings and Public Parks of the National Capital in 1925 (OPB&PP) (Schultz 1995, 13). Henceforth, maintenance of federally owned lands and buildings within the National Capital region would fall under the auspices of OPB&PP.

2. **Evolution of the Site:** The following section describes the evolution of the Lincoln Memorial grounds from the late 1920s to present, with special emphasis on the 7.4-acre site with the Rainbow Pool and associated landscape features.

Lincoln Memorial Grounds, 1928-1938

A new planning agency, known as the National Capital Parks and Planning Commission (NCPPC), was created in 1928 to oversee comprehensive and project planning for the city, although proposed changes to the buildings and landscapes would continue to be reviewed by the CFA. Over the course of the next several decades, the NCPPC would propose plans for the Mall and Lincoln Memorial grounds that would, for the most part, stay true to the spirit of the L'Enfant and McMillan Commission plans for the Lincoln Memorial grounds. The first plans, developed between 1928-29 under the auspices of former McMillan Commission and CFA member Olmsted, reaffirmed the earlier plans. The plans retained the elm-planting scheme at the location of the proposed cross-arms of the Reflecting Pool, despite the existence of the temporary military buildings on the north side of the pool that prevented its construction (Joseph *et al.* 1998).

Beginning in the late 1920s, the Rainbow and Reflecting pools were used for recreational purposes. Historic photographs and accounts from this era indicate that both pools were used for wading. In addition, the Reflecting Pool was used for model-yacht races and fly-casting in the summer, and ice skating in the winter (Works Progress Administration [WPA] 1942; Lincoln Memorial Photo CDS 1 and 3).

In 1929, OPB&PP undertook an extensive maintenance project within the Lincoln Memorial grounds. Because the pools had been constructed on fill, they had settled unequally and were in need of new floors (Joseph *et al.* 1998). As a result, Rose Brothers of Washington, D.C., original contractors responsible for waterproofing the pools, was hired to repair the pools. While the Reflecting Pool bottom was re-waterproofed with another seal coat of asphalt, the surface of the Rainbow Pool required more extensive repairs. This included the installation of a reinforced concrete bottom, covered with a seal coat of asphalt (OPB&PP 1929). Physical evidence suggests that this seal coat of asphalt has worn off over time since the Rainbow Pool currently has a grayish concrete surface.

The 1929 repairs also included a provision for a colored light installation around the Rainbow Pool but this task was eliminated “due to lack of funds and doubt as to the legality of authorizing such a change” (OPB&PP, December 5, 1929). In fact, in 1927, the Pittsburgh Reflector Company had devised plans to install colored lights (red, white, blue, amber, and green) around the nine-nozzle fountainheads (Pittsburgh Reflector Company 1927). Evidently, the CFA had not approved this alteration at that time.

During the late 1920s, concern was also expressed over the state of root development of the elms along the elm walks, which were initially planted in 1916, prior to excavation of the pool. (Joseph *et al.* 1998). In 1929, OPB&PP commenced feeding the elms to increase root development and overcome the moist, soggy conditions in which they were planted.

However, by the mid-1930s, it was noted that many of the original elms would require replacement (CFA 1939).

In 1931, the road network within the Lincoln Memorial grounds was improved. In September, B Street North was widened, realigned, and extended between Capitol Hill and the Potomac River. The new route was renamed Constitution Avenue. Completion of this project increased traffic through the Mall and West Potomac Park, slightly altering its contemplative nature (Joseph *et al.* 1998).

In 1933, management and maintenance of monuments in the Washington, D.C. region was transferred to the newly created National Capital Parks office of the National Park Service (NPS). This action transferred control of the Lincoln Memorial grounds and other monuments and parks to the NPS. From this point onward, the NPS would work in tandem with the CFA, NCPPC, and other agencies in reviewing proposed changes to the Lincoln Memorial grounds (Schultz 1995).

Shortly after the transfer, NPS began attempting to preserve or replace elms along the elm walks which had suffered because of poor root development (Joseph *et al.* 1998). To help improve growing conditions for the trees, drainage trenches were installed north and south of the elms. By this period, elms at the unexcavated cross-arm locations of the Reflecting Pool were no longer extant. The Potomac River flooded in 1936, forcing the construction of a temporary levee north of the Reflecting and Rainbow pools, between the elm walks and the temporary military office buildings. A permanent flood-control berm was erected in 1938, halfway between the Reflecting Pool and Constitution Avenue (Joseph *et al.* 1998).

Documentation indicates that during this period, the Rainbow Pool operated at full force on a regular schedule. The 1937 Works Progress Administration (WPA) guide to Washington, D.C. indicates that the “fountain was turned on about twice a week, [and] the display was announced in advance” (WPA 1942). In addition, the WPA passage indicates that “an electric apparatus has been installed to throw colored lights on the spray,” inferring that colored lights may have been approved by the CFA by that time (Forgey 1988, C1; WPA 1942).

#### NCPPC Plans of 1937, 1939 and 1941

In 1937, 1939, and 1941, NCPPC unveiled plans for the Mall, including the Lincoln Memorial grounds. The three plans eliminated the cross-arms from the Reflecting Pool but retained the overall spatial organization, vehicular and pedestrian circulation, and vegetation arrangement around the pools as suggested in the McMillan Plan. However, the plans also called for the extension of Independence Avenue from Fourteenth to Twenty-third streets, along the route of B Street South, linking to the Arlington Memorial Bridge. The plans included this proposal because the Department of Defense (DoD) had just completed the

Pentagon in Virginia, and required an easy access route from Washington, D.C. to Virginia via the Arlington Memorial Bridge (Schultz 1995).

In 1942, the CFA approved NCPPC's proposal to extend Independence Avenue westward from Fourteenth to Twenty-third streets. To relieve congestion and make driving more "pleasant and safer," a plan was developed to separate the avenue within the Mall and Lincoln Memorial grounds to two one-way routes. Numerous elm trees planted under the direction of Olmsted and others during the early twentieth century were preserved to the maximum extent possible (Schultz 1995). As designed, the eastbound lane passed over the Tidal Basin on a Paul Cret-designed crossing, named the Kutz Bridge in 1954 to honor Washington D.C. Commissioner Engineer Charles Kutz (Joseph *et al.* 1998). The westbound lane traced the north side of the Tidal Basin. The road project was completed in mid-1943 and succeeded in conveying increased traffic through the Mall and Lincoln Memorial grounds.

#### Lincoln Memorial Grounds During World War II

As the United States entered World War II in 1941, the landscape of the Lincoln Memorial grounds was altered. In 1942, the federal government erected temporary office and dormitory buildings south of the pools and west of Washington Monument to house the influx of government workers hired for the war effort. A chain-link fence was erected south of the elm walks to separate the buildings from the pool area. In addition, elevated pedestrian bridges were erected over the Reflecting Pool at Nineteenth Street and above the concrete and grass plaza between the Reflecting and Rainbow pools, respectively. Temporary buildings and bridges were also erected within the Washington Monument grounds east of Seventeenth Street (Joseph *et al.* 1998). Historic photographs from the 1940s indicate that aquatic plants, such as waterlilies, were cultivated in the Rainbow Pool (Lincoln Memorial Photo CD 2).

Toward the close of World War II, the CFA urged the government to remove the temporary buildings and bridges from the Lincoln Memorial and Mall areas. The McMillan Plan had envisioned the area north and south of the elm walks within the Lincoln Memorial grounds as a tree-filled area subdivided by intersecting walkways, and this general concept was reinforced by the NCPPC plans of the 1930s and 1940s (CFA, May 4, 1945). Although the bridges were removed in the immediate post-World War II-era, the temporary buildings remained until the 1970s, inhibiting further development of these grounds (Joseph *et al.* 1998).

#### Lincoln Memorial Grounds During Post-World War II Era

During the 1960s, the Lincoln Memorial grounds become a significant setting for high-profile public events. As early as 1939, Marian Anderson, noted African-American singer, performed an Easter Sunday concert on the steps of the Lincoln Memorial. The

concert was at the request of Secretary of the Interior Harold Ickes, who had offered Anderson the spot after the Daughters of the American Revolution (DAR) had prohibited her from performing on their property for racial reasons. Approximately 50,000 concert goers witnessed the performance within the memorial grounds, surrounding the Reflecting Pool and Lincoln Memorial steps (Joseph *et al.* 1998)

In 1963, the March on Washington, organized by various factions of the Civil Rights movement, took place within the Lincoln Memorial grounds. Dr. Martin Luther King, Jr. delivered his “I Have a Dream” speech from the steps of the memorial to those gathered along the Reflecting and Rainbow pools. During the 1960s and 1970s, the Lincoln Memorial grounds were also used for anti-Vietnam War protests and other events such as the Smithsonian Folklife Festivals of 1975 and 1976 (Joseph *et al.* 1998).

During this period, the NPS developed official recommendations to use the Reflecting and Rainbow pools for ice skating. While the Reflecting Pool had, in fact, been used for skating since the 1920s, it was not until 1963 that the NPS responded to citizen requests and developed plans to install artificial ice-making apparatus at both pools (NPS 1963). In 1965, the CFA commented that “a commercial skating rink was inappropriate for this area” and the plans were never realized. However, unsanctioned skating continued to take place at the Reflecting Pool until it was prohibited altogether in the mid-1960s (Joseph *et al.* 1998). Other improvements to the Lincoln Memorial grounds during the 1960s included removal of the temporary government buildings. In 1964, the World War II-era buildings were removed from the south sides of the pools and elm walks. World War I-era buildings and structures on the north side of the pools and walks would not be removed until 1970. However, the building removals initiated in the 1960s sparked a new series of plans for the Lincoln Memorial grounds that were developed in the 1960s (Joseph *et al.* 1998).

#### Innocenti/Webel Plan of 1960

In 1960, NPS hired a team of landscape architects and engineers to develop a plan to improve traffic conditions within the Lincoln Memorial grounds. The landscape design, developed by Umberto Innocenti and Richard Webel, called for complete redevelopment of the grounds around the memorial and pools, and recommended a new road around the west side of the memorial and along the full length of the Reflecting Pool. Although the recommendations were never implemented, certain elements of the 1960 plan reaffirmed the McMillan Plan, including the sanctity of the east/west axis, shape and form of both pools, double rows of elms flanking the pools, and landscaping and approach to the Lincoln Memorial (Joseph *et al.* 1998).

### Skidmore, Owings and Merrill (SOM) Plan of 1965

In 1965, NPS hired the architecture firm Skidmore, Owings and Merrill (SOM) to create a master plan for the Mall, including East and West Potomac Parks. Within the Lincoln Memorial grounds, recommendations included that surface roads be removed or placed underground and visitor circulation routes developed; temporary buildings north of the pools be replaced by a visitor center and formal gardens; the traffic circle around Lincoln Memorial be eliminated and replaced by a pedestrian terrace; and a tunnel be constructed beneath the Lincoln Memorial (SOM n.d.). In addition to these suggestions, the plan called for reshaping of the Rainbow Pool into a square, with pedestrian access from the north and south elm walks. A new planting plan was also recommended for trees north and south of the elm walks. However, like the Innocenti/Webel plan, the SOM plan reaffirmed the McMillan Plan principles including the east/west axis, double rows of elms, and shrubs around the Lincoln Memorial (Joseph *et al.* 1998).

Throughout the mid-1960s and early 1970s, the SOM plan was debated and refined. Ultimately, the original design of the Rainbow Pool and area around the Lincoln Memorial was left intact. However, the newly vacated areas north and south of the elm walks were developed with naturalistic landscapes. By the 1976 Bicentennial celebration, Constitution Gardens was developed between Constitution Avenue and the north elm walk. A broad lawn and landscaped area with roads was developed between Independence Avenue and the south elm walk (Reps 1991).

### Lincoln Memorial Grounds, 1970s-1990s

In preparation for the nation's Bicentennial in 1976, various improvements were made to the Reflecting and Rainbow pools and associated walks. In 1971, the north and south elm walks were paved with a bituminous asphalt surface (Wheelock 1998). Soil borings taken along the elm walks in the late 1990s show no evidence of the original concrete paving, and indicate that the original surface may have been removed when the asphalt was laid in 1971 (Porter, February 4, 2000). During this period, the flagstone pavers on the west end of the Reflecting Pool were covered over with cobblestone, granite, and concrete panels, representing a departure in materials and arrangement from the original McMillan Plan (Joseph *et al.* 1998).

By the late 1970s, cleaning of the Reflecting and Rainbow pools was required twice a year. For a period of three weeks, large trucks would remove debris from the fountains, including trash from unsanctioned wading, algae, and excess aquatic plants (Joseph *et al.* 1998). In 1981, the Reflecting Pool floor and intake and drainage system were repaired. To prevent future algae growth, NPS introduced a collection of underwater plants and microscopic animals known to combat it (Graf 1981, B1).

No documentation exists concerning whether the Rainbow Pool was also repaired in 1981. However, by 1988, the fountains at the Rainbow Pool were no longer fully operational and, as a result, failed to produce a rainbow effect. During this period, a report recommending restoration of the pool and its plumbing and mechanical systems was prepared by the NPS. The report recommended replacement of these systems and installation of a wind speed-indicator control system to regulate water flow and prevent pedestrians from getting showered, which was a frequent complaint by visitors. The repairs, estimated at \$500,000, were never undertaken by the NPS, who hoped to solicit funding from a corporate sponsor (Forgey 1988, C1).

Beginning in 1990, the Rainbow Pool's 124 nozzles on the elliptical concrete base were replaced with curved copper pipes (Wheelock 1998). By 1994, all 124 nozzles had been replaced and capped, preventing water flow (Lorenzetti, November 2, 1999). The two nine-nozzle fountainheads at the north and south ends of the pool have remained intact since their 1924 installation, but no longer produce a dramatic water display.

Recently, the Rainbow Pool and surrounding grounds have been used for national celebrations, helicopter landings, and recreational purposes. On the Fourth of July, the Rainbow Pool is drained for the Congressionally mandated fireworks display over the Washington Monument. Diplomatic arrival and departure ceremonies by helicopter occasionally occur in the area of the Rainbow Pool and Seventeenth Street. During these activities, this area is cordoned off for safety and security reasons (U.S. DOI 1998). Since the 1970s or 1980s, the NPS has maintained the area south of the south elm walk and Reflecting Pool for field hockey, soccer and ultimate frisbee. A small area south of the Rainbow Pool and southwest of the Independence Avenue/Seventeenth Street intersection is set aside for softball, and is equipped with a chain-link fence backstop (Lorenzetti, March 30, 2000).

Throughout the 1990s, the Lincoln Memorial grounds have been maintained and preserved. Along the elm walks, ongoing landscape maintenance includes preservation of the variety of elms that now exist in this area, including Dutch, American (*Ulmus americana*), English (*Ulmus procera*), and Scotch elms (*Ulmus glabra*) planted between 1916 and the present (Wheelock 1998). Over time, many elms along the walks had fallen victim to Dutch elm disease, which first surfaced in elms surrounding the Lincoln Memorial in 1947. Replacement elms are cultivated by NPS at its central nursery on Dangerfield Island, south of Ronald Reagan National Airport in Virginia (Joseph *et al.* 1998).

Replanting of elms along the elm walks has created a corridor of trees of varying heights, crowns and circumferences. The southern elm walks currently consist of a smaller number of mature elms, possibly due to compacted soil from high pedestrian usage and proximity to flood prone areas. The northern elm walks are subject to less drainage problems and pedestrian activity, resulting in a more mature appearance (Wheelock 1998)

Although the area surrounding the Reflecting and Rainbow pools and elm walks has changed over time, the principal features first proposed in the McMillan Plan of 1902 remain intact. These features include preservation and extension of L'Enfant's east/west axis aligning the Capitol, Washington Monument, and Lincoln Memorial; overall spatial organization of the Lincoln Memorial grounds; pedestrian circulation along the elm walks; arrangement of vegetation along the elm walks; and design and layout of the Reflecting and Rainbow pools.

- Individuals Associated With The Site:** Many prominent American architects and landscape architects are associated with the development and construction of the Rainbow Pool and associated elm walks. These include architects Charles McKim and Henry Bacon, and landscape architect Frederick Law Olmsted, Jr.

#### Charles McKim

McMillan Commission member Charles McKim (1847-1909) was responsible for developing the design concept for the Lincoln Memorial and associated pools and landscape features as presented in the McMillan Plan of 1902. McKim is best known for his partnership in the New York architecture firm McKim, Mead and White. Established in 1879, the firm brought a new freedom of plan to home design and led the return to classicism in architecture generally (Placzek 1982). During the late nineteenth and early twentieth century, the firm popularized the Neoclassical style through its designs for Bowery Savings Bank (1893-98) and Pennsylvania Station (1902-10) in New York City, among other buildings. During the 1890s, McKim helped plan the layout and design for the Chicago World's Fair of 1893, which spurred the creation of the City Beautiful movement. Toward the end of his career, McKim joined the McMillan Commission where he helped formulate the concept for Lincoln Memorial grounds.

#### Henry Bacon

Henry Bacon (1866-1942), architect of the Lincoln Memorial, was Charles McKim's protégé. During the 1890s, Bacon worked for McKim, Mead and White in New York and, in 1897, left the firm to open a partnership. In 1903, Bacon opened his own office where he worked on commissions ranging from residential designs to commemorative buildings. Throughout his career, he also designed a number of settings and bases for sculpture in collaboration with Augustus St. Gaudens and Daniel Chester French (Wilkes and Packard 1988). In 1912, Bacon was selected as the architect of the Lincoln Memorial, having developed a design for the building similar to what his mentor McKim proposed in the McMillan Plan of 1902. Bacon's design included a Neoclassical-style building housing a statue by Daniel Chester French. The building was fronted by long and small pools and tree-lined walks, and reaffirmed the concepts of the McMillan Plan. In 1923, Bacon was awarded the AIA Gold Medal by President Warren G. Harding in a night ceremony on the steps of the Lincoln Memorial (Wilkes and Packard 1988).

Frederick Law Olmsted, Jr.

Using the designs of McKim and Bacon as a point of departure, landscape architect Frederick Law Olmsted, Jr. (1870-1957) helped refine the design for the Lincoln Memorial grounds, including the Rainbow Pool and elm walks (Whiting and Phillips 1958). Olmsted was the son of celebrated landscape architect Frederick Law Olmsted, who guided the design of Central Park in New York City and the Capitol grounds in Washington, D.C. during the nineteenth century. Like his father, the younger Olmsted was involved in creating some of the most important civic landscapes of the twentieth century, including the metropolitan park system in Boston, Massachusetts; Forest Hills Gardens in Queens, New York; Palos Verdes Estates in California, and municipal improvements, subdivisions, and institutional grounds in cities throughout the United States and abroad (Carson-Ruff Associates 1949).

At the beginning of his career, Olmsted worked alongside Charles McKim and others in planning the grounds for the Chicago World's Fair of 1893, which gave rise to the City Beautiful movement. In 1901, Olmsted was appointed to the McMillan Commission and helped formulate the concepts that guided the design of Washington, D.C.'s park system during the twentieth century. In addition, Olmsted served as a member of the CFA and was instrumental in developing the planting scheme for the elm walks within the Lincoln Memorial grounds. Through Olmsted's influence, landscape architect Clarence E. Howard was hired by OPB&G and CFA to implement those concepts for the Lincoln Memorial grounds.

**PART II. DESCRIPTIVE INFORMATION**

**A. PHYSICAL CHARACTER OF THE SITE AND ITS RELATIONSHIP TO THE SURROUNDING ENVIRONMENT**

The 7.4-acre site containing the Rainbow Pool and associated elm walks is located in West Potomac Park at the eastern end of the Reflecting Pool, west of Seventeenth Street and the Washington Monument. The Rainbow Pool is a rectangular-shaped basin with rounded north and south ends, and measures 300'-0 x 160'-0", and is about 3' deep.

The Rainbow Pool is surrounded by a series of radiating concrete walkways to the north and south. The walkways measure 6'-0" wide, and are bisected by concrete stairs and terminate at the asphalt paved elm walks. The elm walks are shaded by double rows of elm trees, (photos HABS Nos. DC-838-1, DC-838-2, DC-838-11, DC-838-12, DC-838-27, DC-838-28, DC-838-17, and DC-838-18). A total of sixty-two elm trees flank the Rainbow Pool within the 7.4-acre site, thirty along the northern axis and thirty-two along the southern axis. In addition to the elm trees, fifty-five other trees are scattered throughout the 7.4-acre site, north and south of the elm walks (Leo A. Daly, Inc. 1999).

To the east, the Rainbow Pool is flanked a 16,559 square foot, flat, rectangular grass panel, bordered by two paneled-concrete sidewalks, connecting the Rainbow Pool plaza with the Seventeenth Street sidewalk (photos HABS Nos. DC-838-15 and DC-838-16). The sidewalks measure approximately 24' x 149'. To the west, the Rainbow Pool is flanked by a 6,685 square foot, flat, rectangular grass panel, bordered by two paneled-concrete sidewalks connecting the Rainbow Pool plaza with the Reflecting Pool plaza (photos HABS Nos. DC-838-13 and DC-838-14). The sidewalks measure approximately 24' x 58'.

Approximately 8,800' of concrete walks surround both pools (Grimes n.d.). The walkways of each axis of the Rainbow Pool are described in detail below.

#### North Axis

The northwest walkway is comprised of two rows of fifteen concrete squares, measuring 3'-0" x 3'-0" each. The 5'-10" x 1'-6" x 5 3/8" stairs consist of four concrete steps flanked by rounded concrete rails. There are two rows of ten 3'-0" x 3'-0" concrete squares leading from the top step to the edge of the asphalt elm walk (photos HABS Nos. DC-838-9 and DC-838-10) [Note: this configuration from the stairs to the edge of the elm walk is typical for all walkways on the north and south axes]. The north walkway, which is aligned with the center of the Rainbow Pool and its northern fountain, is comprised of two rows of fourteen 3'-0" x 3'-0" concrete squares, followed by the typical stair configuration (photos HABS Nos. DC-838-5 and DC-838-6). The northeast walkway is comprised of two rows of fifteen 3'-0" x 3'-0" concrete squares leading to the typical stair configuration. A dirt volunteer path extends eastward from this walkway and connects to the elm walk (photos HABS Nos. DC-838-3 and DC-838-4).

#### South Axis

The south axis has a layout similar to that of the north axis. The southwest walkway is comprised of two rows of fifteen concrete squares, followed by the typical stair configuration (photos HABS Nos. DC-838-19 and DC-838-20). A dirt volunteer path extends westward from this walkway and connects to the elm walk. The south walkway, which is aligned with the center of the Rainbow Pool and its southern fountain, is comprised of two rows of fourteen concrete squares, followed by the typical stair configuration (photos HABS Nos. DC-838-21 and DC-838-22). The southeast walkway is comprised of two rows of concrete squares, followed by the typical stair configuration described for the north axis (photos HABS Nos. DC-838-25 and DC-838-26). A dirt volunteer path extends southeastward from this walkway and connects to the elm walk.

### East Axis

The upper east walkway, which is aligned with the northeastern edge of the Reflecting Pool, is comprised of thirty-seven rows of 4'-0" x 4'-0" concrete squares extending six squares across. The walkway connects the Rainbow Pool plaza with Seventeenth Street. The ten rows closest to Seventeenth Street have been replaced by modern smooth-faced concrete squares. The lower east walkway, which is aligned with the southeastern edge of the Reflecting Pool, is comprised of thirty-six rows of concrete squares extending six rows across. The walkway also connects the Rainbow Pool plaza with Seventeenth Street. The nine rows closest to Seventeenth Street have been replaced by modern smooth-faced concrete squares.

### West Axis

The upper west and lower west walkways are aligned with the upper east and lower east walkways on the east axis. The two walkways on the west axis are comprised of fifteen rows of 4'-0" x 4'-0" concrete squares extending six squares across.

### Other Features

For the convenience of visitors, benches, water fountains, and trash/recycling receptacles are located along the elm walks throughout the 7.4-acre site. Three benches are situated along the north edge of the northern elm walk, and two benches are located along the south edge of the southern elm walk. The benches face the elm walks and have ornamental cast-iron frames on concrete foundations. Wood slats are attached to the seat and back of the benches. Two wood-slat, tulip-shaped trash/recycling receptacles and two modern water fountains are located on the northern axis and five of the above-described trash/recycling receptacles are located in the southern axis.

Street lights, traffic lights and fifty-five additional trees are located along the west side of Seventeenth Street. Forty-four trees are scattered northeast of the northern elm walk. Two trees are located between the southern elm walk and lower east walkway, east of the Seventeenth Street sidewalk. Nine trees are south of the southern elm walk; four are located east of the Seventeenth Street sidewalk and five are located west of the sidewalk.

Four street lights are located at regular intervals along the west side of Seventeenth Street within the 7.4 acres. The street lights are Washington Globe twenties, initially designed by Henry Bacon and others in 1923 (Kohler 1996). The metal lampposts consist of tapered, fluted columns which have octagonal footings with bases embellished with floral designs. The lights have acorn-shaped globes set in decorative sockets that are embellished with vegetative ornament.

The two traffic lights flanking the southern elm walk consist of metal fluted columns on a scrolled base. The finial-topped columns support two three-light units and pedestrian controls. The traffic light located on the south side of the northern elm walk is identical to the traffic lights flanking the southern elm walk, except that is topped by an octagonal cap.

A dedication plaque set within a red marble base commemorates the 7.4-acre site of the Rainbow Pool for a planned World War II memorial. The plaque, which is centered in the lawn between the upper and lower east walkways on the east axis, bears the following inscription:

AT THIS SITE  
WILL BE ERECTED  
THE WORLD WAR II MEMORIAL

A MONUMENT TO THE SPIRIT AND SACRIFICE OF THE AMERICAN PEOPLE  
AND  
A REMINDER OF THE HIGH MORAL PURPOSES AND IDEALISM THAT  
MOTIVATED THE NATION'S CALL TO ARMS AS IT SOUGHT VICTORY IN  
CONCERT WITH ITS ALLIES OVER THE FORCES OF TOTALITARIANISM

DEDICATED  
BY  
PRESIDENT WILLIAM J. CLINTON  
NOVEMBER 11, 1995

AMERICAN BATTLEFIELDS MONUMENTS COMMISSION MEMORIAL ADVISORY BOARD  
FRED F. WOERNER, GEN, USA (RET)  
PETER WHEELER, CHAIRMAN

## **B. PHYSICAL DESCRIPTION OF THE RAINBOW POOL**

1. **According to the Original Plan:** Original plans for the Rainbow Pool and surrounding landscape were prepared by OPB&G between 1919-23. The plans are on file at the National Park Service, National Capital Regional Office in Washington, D.C. These plans and corresponding historical documents provide information about the original appearance of the pool and landscape.

The following section describes physical features of the Rainbow Pool and surrounding landscape within the 7.4-acre site as it was developed according to original plans and documents. In cases where historic documentation was not located, the feature is described as it appears today.

### **Foundation and Flooring**

The foundation consists of 350 wood-and-concrete piles supporting reinforced-concrete T-beams that were driven nearly 40'-0" to bedrock. To provide a flexible connection between

the edges and bottom of the pools, a hinged 7'-0" apron was constructed of reinforced concrete and set "on a slope of 18"-0"" (Peters 1923; Furbee 1955). OPB&G plans dating from 1920 provide detailed construction information for the apron and coping foundation. The coping foundation and apron remain intact today.

The original waterproof floor of the Rainbow Pool consisted of three layers: the membrane foundation, the membrane, and protective covering. The membrane foundation consisted of a 4" cinder base saturated with asphalt road oil. The membrane covered the cinder foundation, coping foundation, and apron. The membrane was comprised of two layers of saturated wool felt and two plies of cotton fabric. The protective covering originally consisted of three heavy moppings of waterproofing asphalt. Because initial application of the waterproofing asphalt caused blistering of the membrane, another protective covering was developed. This consisted of commercial roofing slate laid in waterproofing asphalt, topped with a softer coat of asphalt (Peters 1923). The original floor has been replaced and is described in the subsequent section of this report.

Slate tiles were also laid along the apron. These tiles are extant and are arranged in fifty segments lining the sloped apron of the pool directly below the stone coping (photo HABS No. DC-838-31). Each segment is separated by mortared seams and contains eleven horizontal rows of tiles. While those segments along the east and west axes of the pool are rectangular in shape, those along the north and south axes contain angled sides and cut tile pieces at the corners. A typical square tile measures 7 3/4" x 7 3/4" x 1" and a typical corner tile measures 7 3/4" x 7 3/4" x 1". Throughout the apron, tiles are cracked, pushed up from the surface, or missing.

### Coping

A total of 116 coping stones were supplied by the North Carolina Granite Company of Mount Airy, North Carolina. A 1921 plan indicates that the coping stones were assigned a duplicative numbering system according to their location around the pool. The north and south sides would have stones one to thirty, and east and west sides would have stones one to twenty-eight (North Carolina Granite Corp. December 21, 1921).

As built, however, the pool is comprised of twenty-eight coping stones along the rounded northern side; thirty-one stones along the straight western edge; twenty-seven stones along the rounded southern side; and thirty stones along the straight eastern edge of the pool. The stones measure 3'-0" wide and 9" thick, with a wash of 1/8" per foot toward the interior of the pool, as well as a quarter round molding along the coping's top front edge. The stones are surfaced with a four-cut axed finish and attached to the foundation by 3/4" bronze dowels. End-dowels between the stones prevent transverse movement (CFA, June 9, 1921). OPB&G plan 801/80794 provides information on setting the granite coping around the pool. All stones remain intact from the 1920s.

### Nozzles and Fountains

Original plans indicate that the Rainbow Pool was initially equipped with 124 brass nozzles and two nine-brass-nozzle fountainheads. The 124 nozzles, or jets, are situated upon an elliptical-shaped concrete base that measures 275'-6" long and 127'-4" wide. The structure has a 3'-6" base, 1'-8" chamfered edge, and is 6'-11/16" high. The base is pierced by regularly-spaced, rectangular-shaped drains.

OPB&G plan 76-4-38 indicates that the funnel-shaped nozzles were originally approximately 1' long. The nozzle had a wide-circumference threaded base that attached to water pipes. The tip was tapered and accented with rounded lips around the opening. The nozzles directed water inward toward the center and were spaced at 5'-0" intervals, flanked by screws that supported a metal brace. Evidence of the brace remains on only one nozzle along the western side of the pool. All 124 nozzles have been replaced over time, and their replacements are described in the following section of this report.

Two main fountains, each equipped with nine brass nozzles that spray water in vertical columns, are centered in the northern and southern ends of the pool, and are 75'-0" apart. These fountains are original to the Rainbow Pool. The bases of the fountains are anchored to the floor by four metal braces. A circular cast concrete drum with a 71" circumference and measuring 21 5/8" in height sits atop the each base and supports the nozzles, which are arranged in a circular pattern of eight nozzles surrounding one central nozzle. The nozzles are cylindrical in shape and typically measure 1 5/8" wide at their base and taper to 3/4" at their tip. While the central nozzles measure about 15" from the base of the drum to their tip, the outer nozzles measure 18 5/8".

The northern fountain is fitted with pivoting nozzles (photo HABS No. DC-838-29). According to the inscription at their base, the nozzles were manufactured at the Powhatan B & I [Brass & Iron] Works in Ranson, West Virginia. The nozzles are attached to ball joints bearing the inscription "BARCO FLEXIBLE JOINT," as well as United States patent information. The use of such a joint allowed the direction or angle of the spray to be adjusted. The ball joints rest upon copper pipe shafts situated atop the supporting drum. The southern fountain is fitted with fixed nozzles resting directly on top of the pipe shafts. The drum of the southern fountain bears an inscription that identifies its manufacturer, "*Levering Brothers, Baltimore.*"

The nozzles and nozzle bases in the northern fountain are in much better condition than those in the southern fountain. Due to the severely deteriorated condition of the southern fountain nozzles, no identifying marks could be discerned. Thus, it is assumed that these nozzles likewise were manufactured at the Powhatan B & I Works. A modern metal brace is attached to the upper half of all of the nozzles on the southern fountain (photo HABS No. DC-838-30).

### Water Supply System

The capacity of the Rainbow Pool is approximately 750,000 gallons of water, or about ten percent of the total capacity of both the Reflecting and Rainbow pools (Grimes n.d.). Water is supplied to the fountain display by city water mains, rainwater and surface drainage from the Lincoln Memorial.

OPB&G plans from the 1920s provide details about pipe installation around the Rainbow Pool (OPB&G n.d.). According to the original plan, the water supply for the 124 brass nozzles consisted of eight 4" wide cast-iron pipes extending from the Rainbow Pool to an underground network of cast iron and terra-cotta pipes arranged around the pool. A 16" city water pipe located northeast of the pool, near Seventeenth Street, supplied the nozzles with water. The eight 4" pipes, which are arranged with two pipes each on the north, south, east, and west, are still extant and visible between the apron and concrete ellipse. The pipes pierce the concrete ellipse to supply the 124 nozzles with water.

A 1923 plan appears to indicate that additional nozzles may also have been intended to emerge from the apron of the Rainbow Pool. Research could not confirm whether this scheme was carried forward (OPB&G February 12, 1923).

According to original plans, it appears that inlets linked to the water supply system provided water to the nine-nozzle fountainheads. The underground pipe system consisted of two 8" cast iron pipes and 2" galvanized pipes entering the two fountainheads from a 12" water supply that extended from a 16" pipe located northeast of the site, near Seventeenth Street (OPB&G February 12, 1923; NPS 1939). Research could not confirm whether this supply system is still intact.

### Drainage System

The construction of the drainage system needed to satisfy three specific conditions. First, the system required a conduit from the Rainbow Pool to the Tidal Basin (a distance of approximately 600') in order to supply water for, and drain, the pools. Second, the system needed to allow for the complete drainage of the Rainbow Pool within twenty-four hours, the drainage of the subgrade underneath, as well as outlets to wash out the pools. Third, it was necessary to provide drainage for the groundwater and surface drainage of the area adjacent to the Rainbow Pool (Peters 1923).

The drainage system was constructed with a 36" concrete conduit with a flow line 3'-0" below mean low tide in the Tidal Basin. This conduit measured about 450' long and extended from the Tidal Basin to a pump sump located south of the Rainbow Pool. The remaining part of the conduit, which extended from the pump sump to a manhole between the Rainbow and Reflecting pools, was designed for drainage purposes. This portion of the conduit contained

a 30" pipe on a reinforced-concrete mat encased in concrete. The drainage system was constructed with a drainage sewer along the axis of the Reflecting Pool, as well as drainage features within the Rainbow Pool itself (Peters 1923).

The drainage system is evident on the Rainbow Pool floor. A convex metal rectangular drain opening is located in the center of the pool, set within a horizontal concrete rim. While the corroded northern section contains a metal valve head, the southern portion is fitted with a metal storm drain. Flanking this central drain opening are two additional convex metal rectangular drain openings. One is situated just south of the northern fountain and the other is located immediately north of the southern fountain. Both drains are set within a vertical concrete rim and contain a metal valve wheel in the top portion and a metal storm drain in the bottom section. A convex metal equalizer and two pump intakes, which are covered with cages, are located along the west axis of the pool, located roughly 4' apart.

#### Pumphouse and Ventilation System

Original plans for the pumphouse and ventilation system could not be located. The pumphouse is situated in the grassy area beyond the northwest corner of the pool. A modern, rectangular 5'-4" x 3'-4" metal manhole cover with a raised teardrop surface provides access to the pumphouse. This cover was manufactured by BILCO of New Haven, Connecticut. An open steel-grid staircase leads to the underground pumphouse.

The pumphouse contains a series of three connected pumps between the north and south walls: a modern Marathon Electric sump pump to the north, a Bell & Gossett sump pump in the middle, and a Fairbanks pump to the south. Due to its corroded exterior condition, the Fairbanks pump appears to be the oldest of the three. Along the north wall of the pumphouse is a series of modern electric meter-readers and circuit breakers.

Immediately east of the manhole cover is a sheet-metal vent attached to a raised rectangular concrete slab. On the east side of the slab is a vent opening. Abutting this opening is an industrial-type red light covered by a metal casing. A round metal alarm bell abuts the light.

#### Radiating Sidewalks and Elm Walks

OPB&G prepared construction plans for the sidewalks and elm walks flanking the Rainbow Pool. The plans, which appear to have been prepared in 1923, called for paneled-concrete surrounding the circumference of the Rainbow Pool. Six 6'-0" wide paneled-concrete sidewalks, three on the north and three on the south, extend to the elm walks, which are also constructed of concrete panels. Additional plans from 1923 indicate that each of the elm walks were to be connected to the sidewalks by three flights of five concrete stairs, although four-step flights were actually built (OPB&G May 23, 1923). Four 24'-0" wide paneled-concrete sidewalks were to be constructed east and west of the Rainbow Pool. Two of these

sidewalks were to be located between the Rainbow and Reflecting pools, and two between the Rainbow Pool and Seventeenth Street. These sidewalks appear to have been built but have changed over time, as described in the following section.

2. **Changes to Plan Over Time:** The Rainbow Pool and associated landscape within the 7.4-acre site has been slightly altered over time. Major changes to the Rainbow Pool and surrounding landscape are summarized below.

In 1929, the deteriorating floor of the Rainbow Pool was repaired. At that time, the original slate and asphalt bottom was replaced by a reinforced concrete floor with a sealant coat of asphalt. The pool floor is currently sheathed in 89 reinforced concrete blocks. Forty-four blocks measure 18'-9" square, and the remaining 45 range in size between approximately 15' square to 5' square with rounded edges along the circumference of the pool (photos HABS Nos. DC-838-29 and DC-838-30).

Over time, the water supply system for the fountains deteriorated and by the 1980s, the 124 nozzles were no longer operational and the nine-nozzle fountainheads operated at low capacity. By 1994, the 124 nozzles were replaced with capped copper pipes (Joseph *et al.* 1998; Lorenzetti, November 2, 1999) (photo HABS No. DC-838-31). The pipes measure 1'-7/8" tall with a 3/4" diameter. While many of these pipes are exposed at their junction with the base, others show evidence of being patched with poured concrete. As of July 1999, 105 of these pipes are intact (either upright or bent), while nineteen others are broken or missing. The intact pipes bear the inscription "WARD" on their caps.

Vehicular circulation has changed as well; during the 1940s, Independence Avenue was extended from Fourteenth to Twenty-third streets through West Potomac Park and altered traffic patterns within the park.

Landscaping features have also been altered over time. Original sidewalk surfaces remain on the plaza surrounding the Rainbow Pool and the six radiating sidewalk/stairway combinations to the north and south of the pool (Wheelock and Joseph, July 7, 1999). The surface of the elm walks was paved in asphalt during the 1970s. In addition, portions of the two original concrete paneled-sidewalks between the Rainbow and Reflecting pools, and two original concrete sidewalks between the Rainbow Pool and Seventeenth Street have been replaced with modern concrete panels.

In addition to these changes, the elm walks have also changed over time. Many of the original English and Dutch elms planted in the early 1900s failed and required replacement over time. Within the 7.4-acre site, thirty elms are currently located along the northern elm walk and thirty-two along the southern elm walk. These trees are a variety of Dutch, American, English, and Scotch elms. An additional fifty-five trees are scattered throughout

the 7.4- acre site. Eleven of these trees are located west of Seventeenth Street; forty-four of the trees are scattered north of the northern elm walk (Leo A. Daly, Inc. 1999).

### **PART III. SOURCES OF INFORMATION**

#### **A. ARCHITECTURAL DRAWINGS:**

Original plans for construction of the Rainbow Pool and associated landscape features within the 7.4-acre site are located at the National Park Service, National Capital Region office in Washington, D.C. A selection of these plans have been used in the preparation of this report and include the following:

Howard, Clarence E. "Lincoln Memorial, Potomac Park Improvements, B Street N. To B Street S. and 17th Street to the Potomac River". September 1916. Plan No. 801/80095.

National Park Service (NPS). "Rainbow Fountain, West Potomac Park, Reservation No. 32". March 16, 1939. Plan No. 801/80809.

NPS. "Sketch for Rainbow Pool Ice Rink Estimate, West Potomac Park, Reservation No. 332". October 1963. Plan No. 801/80810.

North Carolina Granite Corporation. Plan for Mount Airy Granite Coping, Reflecting Pool, West Potomac Park, Washington, D.C. December 21, 1921. Mt. Airy, NC.

Office of Public Buildings and Grounds (OPB&G). "Reflecting Pool - West Potomac Park, Setting Granite Coping, General Plan and Details". Date not legible. Plan No. 801/80794.

OPB&G. "Reflecting Pool - West Potomac Park. Fountain Nozzles. Sections and End-Views". Date not legible. Plan No. 76-4-38.

OPB&G. "Reflecting Pool - West Potomac Park. Fountain Water Supply. Lines, Details, Connections". Date not legible. Plan No. not legible.

OPB&G. "Reflecting Pool - West Potomac Park. Fountain Water Supply. Lines - Details - Connections". February 12, 1923. Plan No. not legible.

OPB&G. "Reflecting Pool - West Potomac Park. Detailed Plan - Section 'A'. Steps - Sections & Plans". May 23, 1923. Plan No. 801/80796.

Pittsburgh Reflector Company. "Lighting of Rainbow Fountain, Washington, D.C.". Prepared for W.B. Mosland Company, Baltimore, MD. March 23, 1927.

Contemporary plans of the Rainbow Pool and associated landscape features within the 7.4-acre site have also been used in the preparation of this report, including the following:

Leo A. Daly, Inc. "National World War II Memorial. Elm Tree Protection and Removals Plan". Drawing No. L06-01. April 24, 1999.

**B. HISTORIC VIEWS:**

Three hundred and fifty-eight historic photographs of the Lincoln Memorial grounds documenting its construction and use from the 1920s-70s have been compiled onto three Photo CDS by the NPS. These three Photo CDS are on file at the NPS National Capital Region office in Washington, D.C.

**C. INTERVIEWS:**

Lorenzetti, Stephen C. Chief, Division of Resource Management. NPS National Capital Parks - Central Office, Washington, D.C. July 8, 1999; November 2, 1999; March 30, 2000.

Wheelock, Perry Carpenter, Landscape Historian, and Maureen Joseph, Historical Landscape Architect. NPS National Capital Region Office, Cultural Landscape Program, Washington, D.C. July 7, 1999.

Wheelock, Perry Carpenter, Landscape Historian. NPS National Capital Region Office, Cultural Landscape Program, Washington, D.C. Telephone interview, October 26, 1999.

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**a. Unpublished Reports**

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Chappell, Gordon. "East and West Potomac Parks: A History". Denver: National Park Service, 1973.

Joseph, Maureen DeLay, Perry Carpenter Wheelock, Alice McLarty, Glenn Caldaro, and Tony Donald. "Draft Cultural Landscape Report, West Potomac Park, Lincoln Memorial Grounds". Washington, DC.: National Park Services, National Capital Parks – Central Office. May 1998.

Olszewski, George J. "History of the Mall, Washington, D.C.". Washington, D.C.: National Park Service. March 1970.

Robinson & Associates. "East and West Potomac Parks, Washington, D.C.". Draft National Register Nomination. 99% Draft, July 31, 1998. On file at Robinson & Associates, Washington, D.C.

Schultz, Scott G. "The Development of the Historic Landscape of the Washington Monument Grounds and West Potomac Park". Washington, D.C.: National Park Service, National Capital Field Office, Land Use Division. 1995.

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**b. Annual Reports and Meeting Minutes**

Commission of Fine Arts (CFA). Meeting Minutes. April 13, 1919; May 12, June 9, and November 11, 1921; September 27, 1923; September 3, 1925; May 4, 1945. On file at CFA, Washington, D.C.

CFA. "The Commission of Fine Arts. Thirteenth Report. January 1, 1935 to December 31, 1939". On file at CFA, Washington, D.C.

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Office of Public Buildings and Public Parks (OPB&PP). "Annual Report of 1929". On file at Robinson & Associates, Inc., Washington, D.C.

U.S. Army, Chief of Engineers. "Annual Report of the Chief of Engineers and of the Director of Public Buildings and Grounds". 1923. On file at Robinson & Associates, Inc., Washington, D.C.

U.S. Army, Chief of Engineers. "Annual Report of the Chief of Engineers and of the Director of Public Buildings and Grounds". 1916. On file at Robinson & Associates, Inc., Washington, D.C.

**c. Manuscripts**

Carson-Ruff Associates. Press Release on National Institute of Arts and Letters 1949 Gold Medal Winner, Frederick Law Olmsted, Jr.. On file at Robinson & Associates, Washington, D.C.

Furbee, Leonard J. "The Reflecting and Rainbow Pools". 1955 (Revised 1964). Typescript on file at NPS, National Capital Region office, Reservation No. 332 file.

Grimes, Curtis. "Lincoln Memorial Reflecting Pool (for use in *The American Guide*)". On file at NPS, National Capital Region office, Reservation No. 332 file.

Wheelock, Perry Carpenter. "Landscape History and Physical Setting of the Rainbow Pool". January 9, 1998. On file at TAMS Consultants, Inc., New York, NY.

**d. Correspondence**

Sherrill, Col. C. O., Army Corps of Engineers. Letter to Charles Moore, Chairman, CFA, November 18, 1921. On file at CFA, Washington, D.C.

OPB&PP. Correspondence describing contract with Rose Brothers Company, Inc., to perform certain “paving, waterproofing, repair work, cleaning, and experimental protection in the large and small reflecting pools in West Potomac Park, Washington, D.C.”. December 5, 1929. On file at NPS, National Capital Region office, Reservation No. 332 file.

Porter, Gary. General Services Administration, National Capital Region, Historic Preservation Office. Memo to TAMS Consultants, Inc. concerning Draft HABS Report on Rainbow Pool. February 4, 2000. On file at TAMS Consultants, Inc. New York, NY.

## 2. Secondary and Published Sources

### a. Books

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U.S. Senate Committee on the District of Columbia. *The Improvement of the Park System of the District of Columbia*. Edited by Charles Moore. Washington, D.C.: GPO, 1902.

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### b. Articles

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Whiting, Edward Clark and William Lyman Phillips. "Frederick Law Olmsted - 1870-1957: An Appreciation of the Man and His Achievements". *Landscape Architecture*. April 1, 1958. Pp 145-157.

**E. LIKELY SOURCES NOT YET INVESTIGATED:**

This HABS Report provides a comprehensive record of the historical development of the Rainbow Pool and associated landscape features from 1900s-1990s. However, for those researchers requiring further information about the development of the Mall, additional repositories in the northeastern United States could be consulted.

Various Record Groups (RG) at the National Archives and Record Administration (NARA) in Washington, D.C. may have contextual information supplemental to this report. These records include RG 42, Office of Public Buildings and Public Parks, RG 77, Office of the Chief of Engineers and RG 79, National Park Service records. In addition, the Manuscript Division of the Library of Congress in Washington, D.C. has files on Frederick Law Olmsted, Jr. and his involvement with the Mall, as does the Olmsted archive in Brookline, Massachusetts. Another possible repository to consult is the Henry Bacon Collection at Wesleyan University in Middletown, Connecticut.

**PART IV. PROJECT INFORMATION**

The 7.4-acre site in West Potomac Park, characterized by the Rainbow Pool, elm walks, and associated landscape features, is slated to become the site of the National World War II Memorial. In 1993, Congress authorized the American Battle Monuments Commission (ABMC) to establish a memorial on Federal land in Washington, D.C. to honor members of the Armed Forces who served in World War II, and to commemorate the participation of the United States in the war. In 1994, Congress authorized the area comprising the central monumental core of Washington, D.C. as site for the memorial, in particular the area between the Washington Monument and the Lincoln Memorial at the east end of the Reflecting Pool on Seventeenth Street. In 1995, the NPS, National Capital Planning Commission (NCPC), and the CFA approved the site, having determined that World War II was the single most defining event of the twentieth century and merited a site of major axial importance in Washington, D.C. That same year, President William J. Clinton ceremonially dedicated the site, which is commemorated by the plaque on the west side of Seventeenth Street (U.S. DOI 1998).

In 1997, NPS and ABMC jointly submitted a design concept for the memorial for review and approval by CFA, NCPC, the District of Columbia Historic Preservation Office (DCHPO), and the Advisory Council on Historic Preservation (ACHP). Between 1997-99, the concept has been refined according to comments of the reviewing agencies and the general public. The proposed concept, conceived by a design team led by architect Friedrich St. Florian, would result in lowering the Rainbow Pool plaza 7'-0", and reduce the size of the Rainbow Pool itself by 15 to 25 percent. The fountains, including the 124 capped copper pipes, would be uncapped and reconstructed to create the rainbow effect from which the pool derives its name. The bottom of the pool would be re-clad in dark-colored material. New elms would be added to the elm walks to restore Olmsted's original concept. The reconstructed Rainbow Pool would be surrounded by parapet walls surmounted by screen-like stone-and-metal arms and two monumental memorial arches.

In addition, two bus and taxi drop-off sites would be established north and south of the Rainbow Pool. The northern drop-off would be located on the south side of Constitution Avenue near Eighteenth Street, and would eliminate a service road and introduce curb-cuts where none existed before. The southern drop-off would be located between Independence Avenue and the southern elm walk, and would impact landscaped open space and a softball field located at the southwest corner of Independence Avenue and Seventeenth Street (U.S. DOI 1998).

The NPS reviewed the proposed National World War II Memorial concept under Section 106 of the National Historic Preservation Act and determined that it constitutes an adverse effect on the 7.4-acre site and the two areas along Independence and Constitution avenues slated for bus drop-offs. This HABS report has been prepared in advance of a Memorandum of Agreement (MOA) to mitigate the adverse impact of this project on the 7.4-acre site and two bus drop-off areas.

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