

CAPITOL BUILDINGS AND GROUNDS

UNITED STATES CAPITOL

OVERVIEW OF THE BUILDING AND ITS FUNCTION

The United States Capitol is among the most architecturally impressive and symbolically important buildings in the world. It has housed the chambers of the Senate and the House of Representatives for more than two centuries. Begun in 1793, the Capitol has been built, burnt, rebuilt, extended, and restored; today, it stands as a monument not only to its builders but also to the American people and their government.

As the focal point of the government's legislative branch, the Capitol is the centerpiece of the Capitol complex, which includes the six principal congressional office buildings and three Library of Congress buildings constructed on Capitol Hill in the 19th and 20th centuries.

In addition to its active use by Congress, the Capitol is a museum of American art and history. Each year, it is visited by millions of people from around the world.

A fine example of 19th-century neoclassical architecture, the Capitol combines function with aesthetics. Its design was derived from ancient Greece and Rome and evokes the ideals that guided the nation's founders as they framed their new republic. As the building was expanded from its original design, harmony with the existing portions was carefully maintained.

Today, the Capitol covers a ground area of 175,170 square feet, or about 4 acres, and has a floor area of approximately 16½ acres. Its length, from north to south, is 751 feet 4 inches; its greatest width, including approaches, is 350 feet. Its height above the base line on the east front to the top of the Statue of Freedom is 288 feet; from the basement floor to the top of the dome is an ascent of 365 steps.

The building is divided into five levels. The first, or ground, floor is occupied chiefly by committee rooms and the spaces allocated to various congressional officers. The areas accessible to visitors on this level include the Hall of Columns, the restored Old Supreme Court Chamber, and the Crypt beneath the Rotunda.

The second floor holds the chambers of the House of Representatives (in the south wing) and the Senate (in the north wing). This floor also contains three major public areas. In the center under the dome is the Rotunda, a circular ceremonial space that also serves as a gallery of paintings and sculpture depicting significant people and events in the nation's history. The Rotunda is 96 feet in diameter and rises 180 feet 3 inches to the canopy. The semicircular chamber south of the Rotunda served as the Hall of the House until 1857; now designated National Statuary Hall, it houses part of the Capitol's collection of statues donated by the states in commemoration of notable citizens. The Old Senate Chamber northeast of the Rotunda, which was used by the Senate until 1859, has been returned to its mid-19th-century appearance.

The third floor allows access to the galleries from which visitors to the Capitol may watch the proceedings of the House and the Senate when Congress is in session. The rest of this floor is occupied by offices, committee rooms, and press galleries.

The fourth floor and the basement/terrace level of the Capitol are occupied by offices, machinery rooms, workshops, and other support areas.

Located beneath the East Front plaza, the newest addition to the Capitol is the Capitol Visitor Center (CVC). Preparatory construction activities began in 2002, and the CVC was opened to the public on December 2, 2008. This date was chosen for its significance in the Capitol's history: it was on December 2, 1863, that the Statue of Freedom was placed atop the Capitol. The CVC occupies 580,000 square feet of space on three levels and includes an Exhibition Hall, a restaurant, orientation theaters, gift shops, and other visitor amenities as well as meeting space for the House and Senate.

LOCATION OF THE CAPITOL

The Capitol is located at the eastern end of the Mall on a plateau 88 feet above the level of the Potomac River, commanding a westward view across the Capitol Reflecting

Pool to the Washington Monument 1.4 miles away and the Lincoln Memorial 2.2 miles away.

Before 1791, the Federal Government had no permanent site. The early Congresses met in eight different cities: Philadelphia, Baltimore, Lancaster, York, Princeton, Annapolis, Trenton, and New York City. The subject of a permanent capital for the Government of the United States was first raised by Congress in 1783; it was ultimately addressed in Article I, Section 8 of the Constitution (1787), which gave the Congress legislative authority over "such District (not exceeding ten Miles square) as may, by Cession of Particular States, and the Acceptance of Congress, become the Seat of the Government of the United States. . . ."

In 1788, the State of Maryland ceded to Congress "any district in this State, not exceeding ten miles square," and in 1789 the State of Virginia ceded an equivalent amount of land. In accordance with the "Residence Act" passed by Congress in 1790, President Washington in 1791 selected the area that is now the District of Columbia from the land ceded by Maryland (private landowners whose property fell within this area were compensated by a payment of £25 per acre); that ceded by Virginia was not used for the capital and was returned to Virginia in 1846. Also under the provisions of that Act, he selected three commissioners to survey the site and oversee the design and construction of the capital city and its government buildings. The commissioners, in turn, selected the French-American engineer Pierre Charles L'Enfant to plan the new city of Washington. L'Enfant's plan, which was influenced by the gardens at Versailles, arranged the city's streets and avenues in a grid overlaid with baroque diagonals; the result is a functional and aesthetic whole in which government buildings are balanced against public lawns, gardens, squares, and paths. The Capitol itself was located at the elevated east end of the Mall, on the brow of what was then called Jenkins' Hill. The site was, in L'Enfant's words, "a pedestal waiting for a monument."

SELECTION OF A PLAN

L'Enfant was expected to design the Capitol and to supervise its construction. However, he refused to produce any drawings for the building, claiming that he carried the design "in his head"; this fact and his refusal to consider himself subject to the commissioners' authority led to his dismissal in 1792. In March of that year, the commissioners announced a competition, suggested by Secretary of State Thomas Jefferson, that would award \$500 and a city lot to whoever produced "the most approved plan" for the Capitol by mid-July. None of the 17 plans submitted, however, was wholly satisfactory. In October, a letter arrived from Dr. William Thornton, a Scottish-trained physician living in Tortola, British West Indies, requesting an opportunity to present a plan even though the competition had closed. The commissioners granted this request.

Thornton's plan depicted a building composed of three sections. The central section, which was topped by a low dome, was to be flanked on the north and south by two rectangular wings (one for the Senate and one for the House of Representatives). President Washington commended the plan for its "grandeur, simplicity and convenience," and on April 5, 1793, it was accepted by the commissioners; Washington gave his formal approval on July 25.

BRIEF CONSTRUCTION HISTORY

1793–1829

The cornerstone was laid by President Washington in the building's southeast corner on September 18, 1793, with Masonic ceremonies. Work progressed under the direction of three architects in succession. Stephen H. Hallet (an entrant in the earlier competition) and George Hadfield were eventually dismissed by the commissioners because of inappropriate design changes that they tried to impose; James Hoban, the architect of the White House, saw the first phase of the project through to completion.

Construction was a laborious and time-consuming process: the sandstone used for the building had to be ferried on boats from the quarries at Aquia, Virginia; workers had to be induced to leave their homes to come to the relative wilderness of Capitol Hill; and funding was inadequate. By August 1796, the commissioners were forced to focus the entire work effort on the building's north wing so that it at least could be ready for government occupancy as scheduled. Even so, some third-floor rooms were still unfinished when the Congress, the Supreme Court, the Library of Congress, and the courts of the District of Columbia occupied the Capitol in late 1800.

In 1803, Congress allocated funds to resume construction. A year earlier, the office of the Commissioners had been abolished and replaced by a superintendent of the city of Wash-

ington. To oversee the renewed construction effort, Benjamin Henry Latrobe was appointed surveyor of public buildings. The first professional architect and engineer to work in America, Latrobe modified Thornton's plan for the south wing to include space for offices and committee rooms; he also introduced alterations to simplify the construction work. Latrobe began work by removing a squat, oval, temporary building known as "the Oven," which had been erected in 1801 as a meeting place for the House of Representatives. By 1807, construction on the south wing was sufficiently advanced that the House was able to occupy its new legislative chamber, and the wing was completed in 1811.

In 1808, as work on the south wing progressed, Latrobe began the rebuilding of the north wing, which had fallen into disrepair. Rather than simply repair the wing, he redesigned the interior of the building to increase its usefulness and durability; among his changes was the addition of a chamber for the Supreme Court. By 1811, he had completed the eastern half of this wing, but funding was being increasingly diverted to preparations for a second war with Great Britain. By 1813, Latrobe had no further work in Washington and so he departed, leaving the north and south wings of the Capitol connected only by a temporary wooden passageway.

The War of 1812 left the Capitol, in Latrobe's later words, "a most magnificent ruin": on August 24, 1814, British troops set fire to the building, and only a sudden rainstorm prevented its complete destruction. Immediately after the fire, Congress met for one session in Blodget's Hotel, which was at Seventh and E Streets, NW. From 1815 to 1819, Congress occupied a building erected for it on First Street, NE., on part of the site now occupied by the Supreme Court Building. This building later came to be known as the Old Brick Capitol.

Latrobe returned to Washington in 1815, when he was rehired to restore the Capitol. In addition to making repairs, he took advantage of this opportunity to make further changes in the building's interior design (for example, an enlargement of the Senate Chamber) and introduce new materials (for example, marble discovered along the upper Potomac). However, he came under increasing pressure because of construction delays (most of which were beyond his control) and cost overruns; finally, he resigned his post in November 1817.

On January 8, 1818, Charles Bulfinch, a prominent Boston architect, was hired to succeed Latrobe. Continuing the restoration of the north and south wings, he was able to make the chambers for the Supreme Court, the House, and the Senate ready for use by 1819. Bulfinch also redesigned and supervised the construction of the Capitol's central section. The copper-covered wooden dome that topped this section was made higher than Bulfinch considered appropriate to the building's size (at the direction of President James Monroe and Secretary of State John Quincy Adams). After completing the last part of the building in 1826, Bulfinch spent the next few years on the Capitol's decoration and landscaping. In 1829, his work was done and his position with the government was terminated. In the 38 years following Bulfinch's tenure, the Capitol was entrusted to the care of the commissioner of public buildings.

1830–1868

The Capitol was by this point already an impressive structure. At ground level, its length was 351 feet 7½ inches and its width was 282 feet 10½ inches. Up to the year 1827—records from later years being incomplete—the project cost was \$2,432,851.34. Improvements to the building continued in the years to come (running water in 1832, gas lighting in the 1840s), but by 1850 its size could no longer accommodate the increasing numbers of Senators and Representatives from newly admitted states. The Senate therefore voted to hold another competition, offering a prize of \$500 for the best plan to extend the Capitol. Several suitable plans were submitted, some proposing an eastward extension of the building and others proposing the addition of large north and south wings. However, Congress was unable to decide between these two approaches, and the prize money was divided among five architects. Thus, the tasks of selecting a plan and appointing an architect fell to President Millard Fillmore.

Fillmore's choice was Thomas U. Walter, a Philadelphia architect who had entered the competition. On July 4, 1851, in a ceremony whose principal oration was delivered by Secretary of State Daniel Webster, the president laid the cornerstone in the northeast corner of the House wing. Over the next 14 years, Walter supervised the construction of the extension, ensuring their compatibility with the architectural style of the existing building. However, because the Aquia Creek sandstone used earlier had deteriorated noticeably, he chose to use marble for the exterior. For the veneer, Walter selected marble quarried at Lee, Massachusetts, and for the columns he used marble from Cockeysville, Maryland.

Walter faced several significant challenges during the course of construction. Chief among these was the steady imposition by the government of additional tasks without additional pay. Aside from his work on the Capitol extension, Walter designed the wings of the Patent

Office building, extensions to the Treasury and Post Office buildings, and the Marine barracks in Pensacola and Brooklyn. When the Library of Congress in the Capitol's west central section was gutted by a fire in 1851, Walter was commissioned to restore it. He also encountered obstacles in his work on the Capitol extensions. His location of the legislative chambers was changed in 1853 at the direction of President Franklin Pierce, based on the suggestions of the newly appointed supervising engineer, Captain Montgomery C. Meigs. In general, however, the project progressed rapidly: the House of Representatives was able to meet in its new chamber on December 16, 1857, and the Senate first met in its present chamber on January 4, 1859. The old House chamber was later designated National Statuary Hall. In 1861 most construction was suspended because of the Civil War, and the Capitol was used briefly as a military barracks, hospital, and bakery. In 1862 work on the entire building was resumed.

As the new wings were constructed, more than doubling the length of the Capitol, it became apparent that the dome erected by Bulfinch no longer suited the building's proportions. In 1855, Congress voted for its replacement based on Walter's design for a new, fireproof cast-iron dome. The old dome was removed in 1856, and 5,000,000 pounds of new masonry was placed on the existing rotunda walls. Iron used in the dome construction had an aggregate weight of 8,909,200 pounds and was lifted into place by steam-powered derricks.

In 1859, Thomas Crawford's plaster model for the Statue of Freedom, designed for the top of the dome, arrived from the sculptor's studio in Rome. With a height of 19 feet 6 inches, the statue was almost 3 feet taller than specified, and Walter was compelled to make revisions to his design for the dome. When cast in bronze by Clark Mills at his foundry on the outskirts of Washington, it weighed 14,985 pounds. The statue was lifted into place atop the dome in 1863, its final section being installed on December 2 to the accompaniment of gun salutes from the forts around the city.

The work on the dome and the extension was completed under the direction of Edward Clark, who had served as Walter's assistant and was appointed Architect of the Capitol in 1865 after Walter's resignation. In 1866, the Italian-born artist Constantino Brumidi finished the canopy fresco, a monumental painting entitled *The Apotheosis of George Washington*. The Capitol extension was completed in 1868.

1869–1902

Clark continued to hold the post of Architect of the Capitol until his death in 1902. During his tenure, the Capitol underwent considerable modernization. Steam heat was gradually installed in the old Capitol. In 1874, the first elevator was installed, and in the 1880s electric lighting began to replace gas lights.

Between 1884 and 1891, the marble terraces on the north, west, and south sides of the Capitol were constructed. As part of the landscape plan devised by Frederick Law Olmsted, these terraces not only added over 100 rooms to the Capitol but also provided a broader, more substantial visual base for the building.

On November 6, 1898, a gas explosion and fire in the original north wing dramatically illustrated the need for fireproofing. The roofs over the Statuary Hall wing and the original north wing were reconstructed and fireproofed, the work being completed in 1902 by Clark's successor, Elliott Woods. In 1901, the space in the west central front vacated by the Library of Congress was converted to committee rooms.

1903–1970

During the remainder of Woods's service, which ended with his death in 1923, no major structural work was required on the Capitol. The activities performed in the building were limited chiefly to cleaning and refurbishing the interior. David Lynn, the Architect of the Capitol from 1923 until his retirement in 1954, continued these tasks. Between July 1949 and January 1951, the corroded roofs and skylights of both wings and the connecting corridors were replaced with new roofs of concrete and steel, covered with copper. The cast-iron and glass ceilings of the House and Senate chambers were replaced with ceilings of stainless steel and plaster, with a laylight of carved glass and bronze in the middle of each. The House and Senate chambers were completely redecorated, modern lighting was added, and acoustical problems were solved. During this renovation program, the House and Senate vacated their chambers on several occasions so that the work could progress.

The next significant modification made to the Capitol was the east front extension. This project was carried out under the supervision of Architect of the Capitol J. George Stewart, who served from 1954 until his death in 1970. Begun in 1958, it involved the construction

of a new east front 32 feet 6 inches east of the old front, faithfully reproducing the sandstone structure in marble. The old sandstone walls were not destroyed; rather, they were left in place to become a part of the interior wall and are now buttressed by the addition. The marble columns of the connecting corridors were also moved and reused. Other elements of this project included repairing the dome, constructing a subway terminal under the Senate steps, reconstructing those steps, cleaning both wings, birdproofing the building, providing furniture and furnishings for 90 new rooms created by the extension, and improving the lighting throughout the building. The project was completed in 1962.

1971–PRESENT

During the nearly 25-year tenure (1971–1995) of Architect of the Capitol George M. White, FAIA, the building was both modernized and restored. Electronic voting equipment was installed in the House chamber in 1973; facilities were added to allow television coverage of the House and Senate debates in 1979 and 1986, respectively; and improved climate control, electronic surveillance systems, and new computer and communications facilities have been added to bring the Capitol up-to-date. The Old Senate Chamber, National Statuary Hall, and the Old Supreme Court Chamber, on the other hand, were restored to their mid-19th-century appearance in the 1970s.

In 1983, work began on the strengthening, renovation, and preservation of the west front of the Capitol. Structural problems had developed over the years because of defects in the original foundations, deterioration of the sandstone facing material, alterations to the basic building fabric (a fourth-floor addition and channeling of the walls to install interior utilities), and damage from the fires of 1814 and 1851 and the 1898 gas explosion.

To strengthen the structure, over 1,000 stainless steel tie rods were set into the building's masonry. More than 30 layers of paint were removed, and damaged stonework was repaired or replicated. Ultimately, 40 percent of the sandstone blocks were replaced with limestone. The walls were treated with a special consolidant and then painted to match the marble wings. The entire project was completed in 1987.

A related project, completed in January 1993, effected the repair of the Olmsted terraces, which had been subject to damage from settling, and converted the terrace courtyards into several thousand square feet of meeting space.

As the Capitol enters its third century, restoration and modernization work continues. Alan M. Hantman, FAIA, was appointed in February 1997 to a 10-year term as Architect of the Capitol. Projects under his direction included rehabilitation of the Capitol dome; conservation of murals; improvement of speech-reinforcement, electrical, and fire-protection systems in the Capitol and the Congressional office buildings; work on security improvements within the Capitol complex; restoration of the U.S. Botanic Garden Conservatory; the design and construction of the National Garden adjacent to the Botanic Garden Conservatory; renovation of the building systems in the Dirksen Senate Office Building; publication of the first comprehensive history of the Capitol to appear in a century; and construction of the Capitol Visitor Center. At the end of Mr. Hantman's term in February 2007, Stephen T. Ayers, FAIA, LEED AP, assumed the position of Acting Architect of the Capitol. On February 24, 2010, President Barack Obama nominated Mr. Ayers to serve as the 11th Architect of the Capitol. On May 12, 2010, the United States Senate, by unanimous consent, confirmed Mr. Ayers, and on May 13, 2010, the President officially appointed Mr. Ayers to a 10-year term as Architect of the Capitol. On December 9, 2019, President Donald J. Trump nominated J. Brett Blanton to serve as the 12th Architect of the Capitol. On December 20, 2019, the United States Senate confirmed Mr. Blanton, and on January 16, 2020, he was sworn in as Architect of the Capitol by Supreme Court Chief Justice John Roberts, Jr.

HOUSE OFFICE BUILDINGS

CANNON HOUSE OFFICE BUILDING

An increased membership of the Senate and House resulted in a demand for additional rooms for the accommodations of the Senators and Representatives. On March 3, 1903, the Congress authorized the erection of a fireproofed office building for the use of the House. It was designed by the firm of Carrere & Hastings of New York City in the Beaux Arts style. The first brick was laid July 5, 1905, in square No. 690, and formal exercises were held at the laying of the cornerstone on April 14, 1906, in which President Theodore

Roosevelt participated. The building was completed and occupied January 10, 1908. A subsequent change in the basis of congressional representation made necessary the building of an additional story in 1913–14. The total cost of the building, including site, furnishings, equipment, and the subway connecting it with the U.S. Capitol, amounted to \$4,860,155. This office building contains about 500 rooms, and was considered at the time of its completion fully equipped for all the needs of a modern building for office purposes. A garage was added in the building's courtyard in the 1960s.

Pursuant to authority in the Second Supplemental Appropriations Act, 1955, and subsequent action of the House Office Building Commission, remodeling of the Cannon Building began in 1966. The estimated cost of this work was \$5,200,000. Pursuant to the provisions of Public Law 87–453, approved May 21, 1962, the building was named in honor of Joseph G. Cannon of Illinois, who was Speaker at the time the building was constructed.

LONGWORTH HOUSE OFFICE BUILDING

Under legislation contained in the Authorization Act of January 10, 1929, and in the urgent deficiency bill of March 4, 1929, provisions were made for an additional House office building, to be located on the west side of New Jersey Avenue (opposite the first House office building). The building was designed by the Allied Architects of Washington in the Neoclassical Revival style.

The cornerstone was laid June 24, 1932, and the building was completed on April 20, 1933. It contains 251 two-room suites and 16 committee rooms. Each suite and committee room is provided with a storeroom. Eight floors are occupied by members. The basement and subbasement contain shops and mechanical areas needed for the maintenance of the building. A cafeteria was added in the building's courtyard in the 1960s. The cost of this building, including site, furnishings, and equipment, was \$7,805,705. Pursuant to the provisions of Public Law 87–453, approved May 21, 1962, the building was named in honor of Nicholas Longworth of Ohio, who was Speaker when the second House office building was constructed.

RAYBURN HOUSE OFFICE BUILDING AND OTHER RELATED CHANGES AND IMPROVEMENTS

Under legislation contained in the Second Supplemental Appropriations Act, 1955, provision was made for construction of a fireproof office building for the House of Representatives.

All work was carried forward by the Architect of the Capitol under the direction of the House Office Building Commission at a cost totaling \$135,279,000.

The Rayburn Building is connected to the Capitol by a subway. Designs for the building were prepared by the firm of Harbeson, Hough, Livingston & Larson of Philadelphia, Associate Architects. The building contains 169 congressional suites; full-committee hearing rooms for 9 standing committees, 16 subcommittee hearing rooms, committee staff rooms, and other committee facilities; a large cafeteria and other restaurant facilities; an underground garage; and a variety of liaison offices, press and television facilities, maintenance and equipment shops or rooms, and storage areas. This building has nine stories and a penthouse for machinery.

The cornerstone was laid May 24, 1962, by John W. McCormack, Speaker of the House of Representatives. President John F. Kennedy participated in the cornerstone laying and delivered the address.

A portion of the basement floor was occupied beginning March 12, 1964, by House of Representatives personnel moved from the George Washington Inn property. Full occupancy of the Rayburn Building, under the room-filing regulations, was begun February 23, 1965, and completed April 2, 1965. Pursuant to the provisions of Public Law 87–453, approved May 21, 1962, the building was named in honor of Sam Rayburn of Texas.

House Office Building Annex No. 2, named the "Gerald R. Ford House of Representatives Office Building," was acquired in 1975 from the General Services Administration. The structure, located at Second and D Streets, SW., was built in 1939 for the Federal Bureau of Investigation as a fingerprint file archives. This building has approximately 432,000 square feet of space.

SENATE OFFICE BUILDINGS**RICHARD BREVARD RUSSELL SENATE OFFICE BUILDING**

In 1891, the Senate provided itself with office space by the purchase of the Maltby Building, then located on the northwest corner of B Street (now Constitution Avenue) and New Jersey Avenue, NW. When it was condemned as an unsafe structure, Senators needed safer and more commodious office space. Under authorization of the Act of April 28, 1904, square 686 on the northeast corner of Delaware Avenue and B Street, NE., was purchased as a site for the Senate Office Building. The plans for the House Office Building were adapted for the Senate Office Building by the firm of Carrere & Hastings, with the exception that the side of the building fronting on First Street, NE., was temporarily omitted. The cornerstone was laid without special exercises on July 31, 1906, and the building was occupied March 5, 1909. In 1931, the completion of the fourth side of the building was commenced. In 1933, it was completed, together with alterations to the C Street facade and the construction of terraces, balustrades, and approaches. The cost of the completed building, including the site, furnishings, equipment, and the subway connecting it with the United States Capitol, was \$8,390,892.

The building was named the "Richard Brevard Russell Senate Office Building" by Senate Resolution 296, 92nd Congress, agreed to October 11, 1972, as amended by Senate Resolution 295, 96th Congress, agreed to December 3, 1979.

EVERETT MCKINLEY DIRKSEN SENATE OFFICE BUILDING

Under legislation contained in the Second Deficiency Appropriations Act, 1948, Public Law 80-785, provision was made for an additional office building for the United States Senate with limits of cost of \$1,100,000 for acquisition of the site and \$20,600,000 for constructing and equipping the building.

The construction cost limit was subsequently increased to \$24,196,000. All work was carried forward by the Architect of the Capitol under the direction of the Senate Office Building Commission. The New York firm of Eggers & Higgins served as the consulting architect.

The site was acquired and cleared in 1948-49 at a total cost of \$1,011,492.

A contract for excavation, concrete footings, and mats for the new building was awarded in January 1955, in the amount of \$747,200. Groundbreaking ceremonies were held January 26, 1955.

A contract for the superstructure of the new building was awarded September 9, 1955, in the amount of \$17,200,000. The cornerstone was laid July 13, 1956.

As a part of this project, a new underground subway system was installed from the Capitol to both the Old and New Senate Office Buildings.

An appropriation of \$1,000,000 for furniture and furnishings for the new building was provided in 1958. The building was accepted for beneficial occupancy on October 15, 1958.

The building was named the "Everett McKinley Dirksen Senate Office Building" by Senate Resolution 296, 92nd Congress, agreed to October 11, 1972, and Senate Resolution 295, 96th Congress, agreed to December 3, 1979.

PHILIP A. HART SENATE OFFICE BUILDING

Construction as an extension to the Dirksen Senate Office Building was authorized on October 31, 1972; legislation enacted in subsequent years increased the scope of the project and established a total cost ceiling of \$137,700,400. The firm of John Carl Warnecke & Associates served as Associate Architect for the project.

Senate Resolution 525, passed August 30, 1976, amended by Senate Resolution 295, 96th Congress, agreed to December 3, 1979, provided that upon completion of the extension it would be named the "Philip A. Hart Senate Office Building" to honor the Senator from Michigan.

The contract for clearing of the site, piping for utilities, excavation, and construction of foundation was awarded in December 1975. Groundbreaking took place January 5, 1976. The contract for furnishing and delivery of the exterior stone was awarded in February 1977, and the contract for the superstructure, which included wall and roof systems and the erection of all exterior stonework, was awarded in October 1977. The contract for the first portion of the interior and related work was awarded in December 1978. A contract for interior finishing was awarded in July 1980. The first suite was occupied on November

22, 1982. Alexander Calder's mobile/stabile *Mountains and Clouds* was installed in the building's atrium in November 1986.

CAPITOL POWER PLANT

During the development of the plans for the Cannon and Russell Buildings, the question of heat, light, and power was considered. The Senate and House wings of the Capitol were heated by separate heating plants. The Library of Congress also had a heating plant for that building. It was determined that needs for heating and lighting and electrical power could be met by a central power plant.

A site was selected in Garfield Park. Since this park was a Government reservation, an appropriation was not required to secure title. The determining factors leading to the selection of this site were its proximity to the tracks of what is now the Penn Central Railroad and to the buildings to be served.

The dimensions of the Capitol Power Plant, which was authorized on April 28, 1904, and completed in 1910, were 244 feet 8 inches by 117 feet.

The buildings originally served by the Capitol Power Plant were connected to it by a reinforced-concrete steam tunnel.

In September 1951, when the demand for electrical energy was reaching the maximum capacity of the Capitol Power Plant, arrangements were made to purchase electrical service from the local public utility company and to discontinue electrical generation. The heating and cooling functions of the Capitol Power Plant were expanded in 1935, 1939, 1958, 1973, and 1980. A new refrigeration plant modernization and expansion project was completed in 2007.

U.S. CAPITOL GROUNDS

A DESCRIPTION OF THE GROUNDS

Originally a wooded wilderness, the U.S. Capitol Grounds today provide a park-like setting for the Nation's Capitol, offering a picturesque counterpoint to the building's formal architecture. The grounds immediately surrounding the Capitol are bordered by a stone wall and cover an area of 58.8 acres. Their boundaries are Independence Avenue on the south, Constitution Avenue on the north, First Street, NE./SE., on the east, and First Street, NW./SW., on the west. Over 100 varieties of trees and bushes are planted around the Capitol, and thousands of flowers are used in seasonal displays. In contrast to the building's straight, neoclassical lines, most of the walkways in the grounds are curved. Benches along the paths offer pleasant spots for visitors to appreciate the building, its landscape, and the surrounding areas, most notably the Mall to the west.

The grounds were designed by Frederick Law Olmsted (1822–1903), who planned the landscaping of the area that was performed from 1874 to 1892. Olmsted, who also designed New York's Central Park, is considered the greatest American landscape architect of his day. He was a pioneer in the development of public parks in America, and many of his designs were influenced by his studies of European parks, gardens, and estates. In describing his plan for the Capitol Grounds, Olmsted noted that, "The ground is in design part of the Capitol, but in all respects subsidiary to the central structure." Therefore, he was careful not to group trees or other landscape features in any way that would distract the viewer from the Capitol. The use of sculpture and other ornamentation has also been kept to a minimum.

Many of the trees on the Capitol Grounds have historic or memorial associations. Over 30 states have made symbolic gifts of their state trees to the Capitol Grounds. Many of the trees on the grounds bear plaques that identify their species and their historic significance.

At the East Capitol Street entrance to the Capitol plaza are two large rectangular stone fountains. Six massive red granite lamp piers topped with light fixtures in wrought-iron cages, and 16 smaller bronze light fixtures, line the paved plaza. Three sets of benches are enclosed with wrought-iron railings and grilles; the roofed bench was originally a shelter for streetcar passengers.

The northern part of the grounds offers a shaded walk among trees, flowers, and shrubbery. A small, hexagonal brick structure, named the Summer House, may be found in the northwest corner of the grounds. This structure contains shaded benches, a central ornamental fountain, and three public drinking fountains. In a small grotto on the eastern side of the Summer House, a stream of water flows and splashes over rocks to create a pleasing sound and cool the summer breezes.

A BRIEF HISTORY OF THE GROUNDS BEFORE OLMSTED

The land on which the Capitol stands was first occupied by the Manahoacs and the Monacans, who were subtribes of the Algonquin Indians. Early settlers reported that these tribes occasionally held councils not far from the foot of the hill. This land eventually became a part of Cerne Abbey Manor, and at the time of its acquisition by the Federal Government it was owned by Daniel Carroll of Duddington.

The "Residence Act" of 1790 provided that the Federal Government should be established in a permanent location by the year 1800. In early March 1791, the commissioners of the city of Washington, who had been appointed by President George Washington, selected the French engineer Pierre Charles L'Enfant to plan the new federal city. L'Enfant decided to locate the Capitol at the elevated east end of the Mall (on what was then called Jenkins' Hill); he described the site as "a pedestal waiting for a monument."

At this time, the site of the Capitol was a relative wilderness partly overgrown with scrub oak. Oliver Wolcott, a signer of the Declaration of Independence, described the soil as an "exceedingly stiff clay, becoming dust in dry and mortar in rainy weather."

In 1825, a plan was devised for imposing order on the Capitol Grounds, and it was carried out for almost 15 years. The plan divided the area into flat, rectangular grassy areas bordered by trees, flower beds, and gravel walks. The growth of the trees, however, soon deprived the other plantings of nourishment, and the design became increasingly difficult to maintain in light of sporadic and small appropriations. John Foy, who had charge of the grounds during most of this period, was "superseded for political reasons," and the area was then maintained with little care or forethought. Many rapidly growing but short-lived trees were introduced and soon depleted the soil; a lack of proper pruning and thinning left the majority of the area's vegetation ill-grown, feeble, or dead. Virtually all was removed by the early 1870s, either to make way for building operations during Thomas U. Walter's enlargement of the Capitol or as required by changes in grading to accommodate the new work on the building or the alterations to surrounding streets.

THE OLMSTED PLAN

The mid-19th-century extension of the Capitol, in which the House and Senate wings and the new dome were added, also required that the Capitol Grounds be enlarged, and in 1874 Frederick Law Olmsted was commissioned to plan and oversee the project. As noted above, Olmsted was determined that the grounds should complement the building. In addition, he addressed an architectural problem that had persisted for some years: from the west (the growth of the city had nothing to do with the terraces)—the earthen terraces at the building's base made it seem inadequately supported at the top of the hill. The solution, Olmsted believed, was to construct marble terraces on the north, west, and south sides of the building, thereby causing it to "gain greatly in the supreme qualities of stability, endurance, and repose." He submitted his design for these features in 1875, and after extensive study, it was approved.

Work on the grounds began in 1874, concentrating first on the east side and then progressing to the west, north, and south sides. First, the ground was reduced in elevation. Almost 300,000 cubic yards of earth and other material were eventually removed, and over 200 trees were removed. New sewer, gas, and water lines were installed. The soil was then enriched with fertilizers to provide a suitable growth medium for new plantings. Paths and roadways were graded and laid.

By 1876, gas and water service was completed for the entire grounds, and electrical lamp-lighting apparatuses had been installed. Stables and workshops had been removed from the northwest and southwest corners. A streetcar system north and south of the west grounds had been relocated farther from the Capitol, and ornamental shelters were in place at the north and south car-track termini. The granite and bronze lamp piers and ornamental bronze lamps for the east plaza area were completed.

Work accelerated in 1877. By this time, according to Olmsted's report, "altogether 7,837 plants and trees [had] been set out." However, not all had survived: hundreds were stolen or destroyed by vandals, and, as Olmsted explained, "a large number of cattle [had] been caught trespassing." Other work met with less difficulty. Foot-walks were laid with artificial stone, a mixture of cement and sand, and approaches were paved with concrete. An ornamental iron trellis had been installed on the northern east-side walk, and another was under way on the southern walk.

The 1878 appointment of watchmen to patrol the grounds was quite effective in preventing further vandalism, allowing the lawns to be completed and much shrubbery to be added. Also in that year, the roads throughout the grounds were paved.

Most of the work required on the east side of the grounds was completed by 1879, and effort thus shifted largely to the west side. The Pennsylvania Avenue approach was virtually finished, and work on the Maryland Avenue approach had begun. The stone walls on the west side of the grounds were almost finished, and the red granite lamp piers were placed at the eastward entrance from Pennsylvania Avenue.

In the years 1880–1882, many features of the grounds were completed. These included the walls and coping around the entire perimeter, the approaches and entrances, and the Summer House. Work on the terraces began in 1882, and most work from this point until 1892 was concentrated on these structures.

In 1885, Olmsted retired from superintendency of the terrace project; he continued to direct the work on the grounds until 1889. Landscaping work was performed to adapt the surrounding areas to the new construction, grading the ground and planting shrubs at the bases of the walls, as the progress of the masonry work allowed. Some trees and other types of vegetation were removed, either because they had decayed or as part of a careful thinning-out process.

In 1888, the wrought-iron lamp frames and railings were placed at the Maryland Avenue entrance, making it the last to be completed. In 1892, the streetcar track that had extended into grounds from Independence Avenue was removed.

THE GROUNDS AFTER OLMSTED

In the last years of the 19th century, work on the grounds consisted chiefly of maintenance and repairs as needed. Trees, lawns, and plantings were tended, pruned, and thinned to allow their best growth. This work was quite successful: by 1894, the grounds were so deeply shaded by trees and shrubs that Architect of the Capitol Edward Clark recommended an all-night patrol by watchmen to ensure public safety. A hurricane in September 1896 damaged or destroyed a number of trees, requiring extensive removals in the following year. Also in 1897, electric lighting replaced gas lighting in the grounds.

Between 1910 and 1935, 61.4 acres north of Constitution Avenue were added to the grounds. Approximately 100 acres was added in subsequent years, bringing the total area to 274 acres. Late in 2011, care for the Grant Memorial and the reflecting pool at the eastern end of the National Mall was transferred from the National Park Service to the Architect of the Capitol.

Since 1983, increased security measures have been put into effect; however, the area still functions in many ways as a public park, and visitors are welcome to use the walks to tour the grounds. Demonstrations and ceremonies are often held on the grounds. In the summer, a series of evening concerts by the bands of the Armed Forces is offered free of charge on the west front plaza. On various holidays, concerts by the National Symphony Orchestra are held on the west front lawn.