Appendices

Insignia of the U.S. Army Corps of Engineers

Corps Castle

The traditional Corps turreted castle is a highly stylized and conventionalized form without decoration or embellishment. There is no evidence that it was patterned after an actual structure. The castle was associated with one of the Corps' earliest responsibilities, the construction of coastal defense fortifications. Some of these early fortifications were called castles. U.S. Military Academy cadets wore the castle emblem as early as 1839 when West Point was part of the Corps of Engineers. In 1840 the Chief Engineer recommended that the castle appear on engineer officers' epaulettes and belt plates. Army regulations first prescribed the use of the castle on engineer caps in 1841. Subsequently the castle has appeared on collar ornaments, shoulder knots, saddle cloths, buttons, and now appears as branch insignia on the dress uniforms of engineer officers and enlisted personnel. Although its design has changed over time, the castle has remained since its inception the distinctive symbol of the Corps of Engineers.

Essayons Button

As the U.S. Army Corps of Engineers' oldest and most time-honored insignia, the Essayons button has not changed since its first definitely known use during the War of 1812. It is still the required button for the engineer officers' dress uniforms. It is difficult to determine the early history of the castle and the button because the building containing the earliest West Point and Corps of Engineers records burned in 1838. However, early Army records mention "the button of the Engineers" and its already existing device and motto. When the Army prescribed new uniforms by General Orders 7 on February 18, 1840, it described the button as "an eagle holding in his beak a scroll with the word, 'Essayons,' a bastion with embrasures in the distance surrounded by water and a rising sun." Like the castle, the bastion with embrasures symbolized the coastal fortification responsibilities of the Corps. In 1902 when the Army adopted a standard regulation button, it allowed only the Corps of Engineers to retain its own distinctive Essayons button in recognition of the traditions it represented.

Coat of Arms

In 1867, the U.S. Army Corps of Engineers adopted this Coat of Arms that incorporated the emblems of the Corps of Engineers and the Corps of Topographical Engineers, which had been reunited during the Civil War. This legacy symbol is used primarily for awards, plaques, and honorific presentations related to the military functions of the Corps.

U.S. Army Engineer School Distinctive Unit Insignia

The United States Army Engineer School, part of the Army Training and Doctrine Command, develops, trains, and supports the engineer force to provide maneuver engineering, force support engineering, and geospatial engineering to Army, Joint, Interagency, and Combined Operations. In 1988, the Engineer School moved to Fort Leonard Wood, Missouri. Personnel assigned to the Army Engineer School are authorized to wear this emblem as a dress uniform device.

Regimental Distinctive Insignia

The entire U.S. Army Corps of Engineers, as a branch of the Army, is a regiment in the Army's regimental system. The system is designed to enhance loyalty and commitment, esprit de corps, and combat effectiveness. Established in 1986, the regiment officially includes engineer officers and enlisted personnel and civilian employees throughout the Army. The regiment also is closely connected to retired engineer soldiers and civilians and their families. Engineer officers and enlisted personnel wear the regimental insignia on their dress uniforms.

U.S. Army Corps of Engineers Shoulder Sleeve Insignia

Although associated with the Corps of Engineers becoming a major Army command in 1979, the shoulder sleeve insignia was actually approved for wear by military personnel serving in the Corps' divisions, districts, and other field organizations in 1977 as a way of recognizing those who performed the Corps' military construction, civil works, and other distinctive missions. From 1979 to 2006 the shoulder sleeve insignia was the distinctive component of the Corps' major Army command flag.

U.S. Army Corps of Engineers Distinctive Unit Insignia

Designed to distinguish the U.S. Army Corps of Engineers when it became a major Army command on June 16, 1979, this insignia incorporated the traditional Corps motto, "Essayons," and a stylized castle above a globe symbolizing the Corps' world-wide responsibilities. It was expected that this distinctive unit insignia would remain unchanged when USACE transitioned from a major Army command to a direct reporting unit in 2006.

De Fleury Medal

The de Fleury Medal is an award of the Engineer Regiment given to individuals who have made significant contributions to Army engineering. Awarded at the bronze, silver, and gold levels, the medal honors the heroic actions of Revolutionary War engineer François Louis Tesseidre de Fleury at the Battle of Stony Point in July 1779. A French engineer in the service of the Washington's Continental Army, de Fleury led the American troops after his superiors were wounded in recapturing the important position on the Hudson River from the British. A few months later the Continental Congress ordered a medal to be struck honoring de Fleury and that medal was the inspiration for the Engineer Regiment's de Fleury Medal.

Traditional Castle

Based on the historic Corps castle emblem, this official graphic is authorized for use in special and limited circumstances that call for a sense of the Corps' traditions and history. Since November 30, 1993, it has been a registered trademark of the U.S. Army Corps of Engineers.

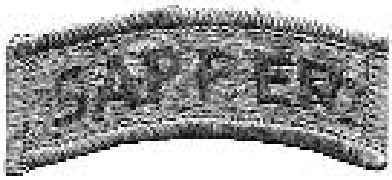
Communications Mark

Adopted after the Corps of Engineers became a major Army command in 1979, this official red and white graphic based on the traditional Corps castle is the standard identifying symbol of the U.S. Army Corps of Engineers. It became a registered trademark of the Corps on November 30, 1993.

US Army Corps of Engineers

Sapper Tab

The term "sapper" is historically associated with soldiers from the seventeenth and eighteenth centuries who performed the extremely dangerous work of digging trenches toward enemy fortifications during sieges. Approved in 2004, the Sapper Tab is worn on the left shoulder of soldiers who have completed a special Sapper Leaders Course at the U.S. Army Engineer School at Fort Leonard Wood, Missouri. The course emphasizes the role of combat engineers fighting in the front lines with other combat troops.



Profiles of the Chiefs of Engineers

Since 1775, more than fifty officers have held the highest position among the U.S. Army's engineers. In addition, three officers headed the Topographical Bureau and the Corps of Topographical Engineers between 1818 and 1863. Their likenesses and biographies are on the following pages. Ranks listed are the highest ranks, excluding brevet rank, attained while in office.

Colonel Richard Gridley

Chief Engineer, Continental Army (July 1775–April 1776)

Born January 3, 1710, in Boston, Massachusetts, Richard Gridley was the outstanding American military engineer during colonial warfare with France and served at important battles such as the siege of Louisburg in 1745 and the fall of Quebec in 1759. For his services, he was awarded a commission in the British Army, a grant of the Magdalen Islands, 3,000 acres of land in New Hampshire, and a life annuity. When the break with the mother country came, he stood with the colonies and was made Chief Engineer in the New England Provincial Army. He laid out the defenses on Breed's Hill and was wounded at the Battle of Bunker Hill. He was appointed Chief Engineer of the Continental Army after Washington took command in July 1775. When Washington moved his Army south, Gridley remained as Chief Engineer of the New England Department. He retired in 1781 at age 70. He died June 21, 1796, in Stoughton, Massachusetts.

Colonel Rufus Putnam

Chief Engineer, Continental Army (April 1776–December 1776)

Rufus Putnam was born April 9, 1738, in Sutton, Massachusetts. A millwright by trade, his three years of Army service during the French and Indian War influenced him to study surveying and the art of war. After the Battle of Lexington, he was commissioned an officer of the line, but General Washington soon discovered his engineering abilities. Putnam planned the fortifications on Dorchester Neck that convinced the British to abandon Boston. Washington then brought Putnam to New York as his Chief Engineer. He returned to infantry service in 1777, taking command of the 5th Massachusetts Regiment. He and his troops helped to fortify West Point, erecting strong defenses atop the steep hill that commanded that garrison. The remains of Fort Putnam, preserved by the Military Academy, still honor his name there. Putnam was named a brigadier general in the Continental Army in 1783. In 1788, he led the first settlers to found the present town of Marietta, Ohio. The fortifications that he built there saved the settlements from annihilation during the disastrous Indian Wars. He became surveyor general of federal public lands and judge of the Supreme Court of Ohio. He died in Marietta on May 1, 1824.

Major General Louis Lebègue Duportail

Chief Engineer, Continental Army (July 22, 1777–October 10, 1783)

One of General Washington's most trusted military advisors, Louis Lebègue Duportail, was born near Orleans, France, in 1743. He graduated from the Royal Engineer School in Mézières, France, as a qualified engineer officer in 1765. Promoted to lieutenant colonel in the Royal Corps of Engineers, Duportail was secretly sent to America in March 1777 to serve in Washington's Army under an agreement between Benjamin Franklin and the government of King Louis XVI of France. He was appointed colonel and commander of all engineers in the Continental Army, July 1777; brigadier general, November 1777; commander, Corps of Engineers, May 1779; and major general (for meritorious service), November 1781. Duportail participated in fortifications planning from Boston to Charleston and helped Washington evolve the primarily defensive military strategy that wore down the British Army. He also directed the construction of siege works at Yorktown, site of the decisive American victory of the Revolutionary War. Returning to France in October 1783, Duportail became an infantry officer and in 1788 a field marshal. He served as France's Minister of War during the revolutionary years 1790 and 1791, promoting military reforms. Forced into hiding by radical Jacobins, he escaped to America and bought a farm near Valley Forge, Pennsylvania. He lived there until 1802, when he died at sea while attempting to return to France.

Lieutenant Colonel Stephen Rochefontaine

Commandant, Corps of Artillerists and Engineers
(February 26, 1795–May 7, 1798)

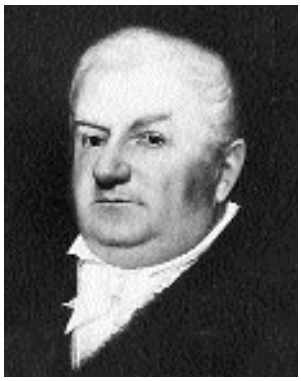
Born near Reims, France, in 1755, Stephen Rochefontaine came to America in 1778 after failing to gain a position in the French Royal Corps of Engineers. He volunteered in General Washington's Army on May 15, 1778, and was appointed captain in the Corps of Engineers on September 18, 1778. For his distinguished services at the siege of Yorktown, Rochefontaine was given the brevet rank of major by Congress on November 16, 1781. He returned to France in 1783 and served as an infantry officer, reaching the rank of colonel in the French Army. He came back to the United States in 1792. President Washington appointed him a civilian engineer to fortify the New England coast in 1794. After the new Corps of Artillerists and Engineers was organized, Washington made Rochefontaine a lieutenant colonel and commandant of the Corps on February 26, 1795. Rochefontaine started a military school at West Point in 1795, but the building and all his equipment were burned the following year. He left the U.S. Army on May 7, 1798, and lived in New York City, where he died January 30, 1814. He is buried in old St. Paul's Cemetery in New York.

Lieutenant Colonel Henry Burbeck

Commandant, 1st Regiment of Artillerists and Engineers
(May 7, 1798–April 1, 1802)

Born June 8, 1754, in Boston, Massachusetts, Henry Burbeck served as lieutenant of artillery under Colonel Richard Gridley, the Army's first Chief Engineer and artillery commander, in 1775. He remained in the Artillery Corps under General Henry Knox and, in 1777, assumed command of a company of the 3d Continental Artillery Regiment. His unit remained in the North to defend the Hudson Highlands and marched into New York when the British evacuated that city at the close of the Revolutionary War. Honorably discharged in January 1784, Burbeck was reappointed captain of artillery in 1786 and commanded the post at West Point, New York, in 1787–1789. He commanded the U.S. Army's Battalion of Artillery and served as General Anthony Wayne's chief of artillery in the Northwest in 1792–1794. He commanded at Fort Mackinac in 1796–1799. From 1798 to 1802, Burbeck was the senior regimental commander of artillerists and engineers. He also commanded the Eastern Department of the U.S. Army in 1800 and in that year endorsed the creation of a corps of engineers separate from the artillerists. He was chief of the new Artillery Corps from 1802 to 1815, first as a colonel and then, during the War of 1812, as a brevet brigadier general. During the Jefferson administration, Burbeck successfully developed and tested domestically produced cast-iron artillery pieces. He left the Army in June 1815 and died on October 2, 1848, in New London, Connecticut.

Colonel Jonathan Williams



Chief Engineer (and first Superintendent of West Point) (April 1, 1802–June 20, 1803, vacated 1803–1805, resumed command April 19, 1805–July 31, 1812)

Jonathan Williams was born May 20, 1750, in Boston, Massachusetts, a grandnephew of Benjamin Franklin. Williams spent most of the period from 1770 to 1785 in England and France, where he assisted Franklin with business affairs and served as a commercial agent in Nantes. He joined the American Philosophical Society in 1788 and published articles on scientific subjects. President Adams appointed Williams a major in the Corps of Artillerists and Engineers in February 1801, and President Jefferson made him the Army's inspector of fortifications and assigned him to lead the new Military Academy at West Point in December 1801. The following year, Jefferson appointed him to command the separate Corps of Engineers established by Congress on March 16, 1802. Williams also became the first officer to hold the title of Superintendent of the U.S. Military Academy. From 1807 to 1812, Williams designed and completed construction of Castle Williams in New York Harbor, the first casemated battery in the United States. He founded the U.S. Military Philosophical Society and gave it its motto, "Science in War is the Guarantee of Peace." He resigned from the U.S. Army in 1812 and was heading a group of volunteer engineers building fortifications around Philadelphia when he was elected to Congress from that city in 1814. He died in Philadelphia on May 16, 1815.

Colonel Joseph Gardner Swift

Chief Engineer (July 31, 1812–November 12, 1818)

Born December 31, 1783, in Nantucket, Massachusetts, Joseph Swift was appointed a cadet by President John Adams and in 1802 became one of the first two graduates of the Military Academy. He constructed Atlantic coast fortifications from 1804 to 1812, and was only 28 years old when he was appointed colonel, Chief Engineer, and Superintendent of the Military Academy in 1812. As Chief Engineer of the Northern Army, he distinguished himself at the Battle of Chrysler's Farm on November 11, 1813. After completing defensive works in New York, Swift was voted "Benefactor to the City" in 1814. He helped to rebuild the burned capitol in Washington, D.C. He also reorganized the academic staff and planned new buildings at the Military Academy. He resigned from the U.S. Army on November 12, 1818, and was appointed surveyor of the Port of New York. He held that customs post until 1827. Swift was also one of the founders of the first New York Philharmonic Society in 1823. As chief engineer for various railroads, he laid the first "T" rail. From 1829 to 1845, Swift worked for the Corps of Engineers as a civilian, improving two harbors on Lake Ontario. He died July 23, 1865, in Geneva, New York.

Colonel Walker Keith Armistead

Chief Engineer (November 12, 1818–June 1, 1821)

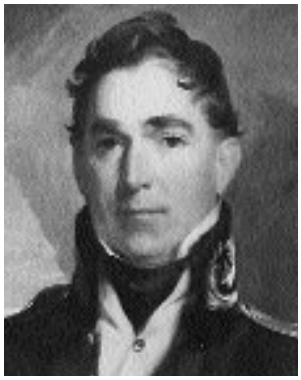
Born in Virginia in 1785, Walker Armistead was named a cadet in the Corps of Artillerists and Engineers by President Jefferson in 1801. On March 5, 1803, he became the third graduate of the new Military Academy and was commissioned in the Corps of Engineers. He served as superintending engineer of the defenses of New Orleans and Norfolk. During the War of 1812, he was successively Chief Engineer of the Niagara frontier army and the forces defending the Chesapeake Bay. He was promoted to colonel and Chief Engineer on November 12, 1818. When the U.S. Army was reorganized on June 1, 1821, he became commander of the 3d Artillery. He was brevetted brigadier general in 1828. He commanded the United States troops that opposed the Seminole Indians in Florida in 1840–1841. He died in Upperville, Virginia, on October 13, 1845.

Colonel Alexander Macomb

Chief Engineer (June 1, 1821–May 24, 1828)

Born April 3, 1782, in Detroit, Alexander Macomb entered the U.S. Army as a cornet of light dragoons in 1799 but was discharged in 1800. He returned to the U.S. Army in 1801 as a second lieutenant of infantry and served as secretary of the commission negotiating treaties with the Indians of the Mississippi Territory. He joined the Corps of Engineers in October 1802 as a first lieutenant and superintended construction of a depot, armory, and fortifications in the Carolinas and Georgia. He also wrote a treatise on military law. After rising to lieutenant colonel in the Corps of Engineers in 1810, he was appointed colonel, 3d Artillery, in 1812 and brigadier general in 1814. In the latter year, he commanded the Lake Champlain frontier force that repulsed a larger veteran British army at Plattsburg. He was voted thanks and granted a gold medal by Congress and brevetted major general. In the reorganized U.S. Army, he was appointed colonel and Chief Engineer in 1821. In that position, he administered the start of federal river and harbor improvements. He was elevated to commanding general of the U.S. Army with the rank of major general in 1828. He died June 25, 1841, in Washington, D.C., and was buried with the highest military honors in Congressional Cemetery. Macomb made the earliest known drawing (1807) to resemble the engineer button.

Colonel Charles Gratiot



Chief Engineer (May 24, 1828–December 6, 1838)

Charles Gratiot was born August 29, 1786, in St. Louis, Missouri. President Jefferson appointed him cadet in 1804. He graduated from the Military Academy in 1806 and was commissioned in the Corps of Engineers. He became a captain in 1808 and assisted Alexander Macomb in constructing fortifications in Charleston, South Carolina. He was post commander of West Point in 1810–1811. He distinguished himself as General William Henry Harrison's Chief Engineer in the War of 1812. He served as Chief Engineer in the Michigan Territory (1817–1818) and superintending engineer for the construction of Hampton Roads defenses (1819–1828). On May 24, 1828, Gratiot was appointed colonel of engineers, brevet brigadier general, and Chief Engineer. For ten years, he administered an expanding program of river, harbor, road, and fortification construction. He also engaged in a lengthy dispute with War Department officials over benefits. In 1838, President Van Buren dismissed him for failing to repay government funds in his custody. Gratiot became a clerk in the General Land Office and died May 18, 1855, in St. Louis.

Brigadier General Joseph Gilbert Totten

Chief Engineer (December 7, 1838–April 22, 1864)

Born August 23, 1788, in New Haven, Connecticut, Joseph Totten graduated from the Military Academy and was commissioned in the Corps of Engineers on July 1, 1805. He resigned in 1806 to assist his uncle, Major Jared Mansfield, who was then serving as surveyor general of federal public lands. Totten reentered the Corps of Engineers in 1808 and assisted in building Castle Williams and other New York Harbor defenses. During the War of 1812, he was Chief Engineer of the Niagara Frontier and Lake Champlain armies. He was brevetted lieutenant colonel for gallant conduct in the Battle of Plattsburg. As a member of the first permanent Board of Engineers in 1816, he laid down durable principles of coastal defense construction. He was appointed Chief Engineer in 1838 and served in that position for 25 years. He was greatly admired by General Winfield Scott, for whom he directed the siege of Veracruz as his Chief Engineer during the Mexican War. He was a regent of the Smithsonian Institution and cofounder of the National Academy of Sciences. He died April 22, 1864, in Washington, D.C.

Major Isaac Roberdeau

Chief, Topographical Bureau (August 1, 1818–January 15, 1829)

Isaac Roberdeau was born in Philadelphia, Pennsylvania, on September 11, 1763. He studied engineering in London, returning to America in 1787 to write, survey, and pursue astronomy. In 1791–1792, he assisted Pierre L'Enfant in planning the new federal capital, the future Washington, D.C. For the next two decades, he practiced engineering in Pennsylvania. His work included assisting William Weston on a canal connecting the Schuykill and Susquehanna rivers. During the War of 1812, he served in the U.S. Army as a major of topographical engineers, employed chiefly on fortifications. After the war, he assisted the Canadian boundary survey. Secretary of War Calhoun appointed Roberdeau in 1818 to head the newly created Topographical Bureau of the War Department. At first, his duties were largely custodial; he prepared returns and maintained books, maps, and scientific equipment. As the nation turned its attention to internal improvement, Roberdeau used his position to promote the civil activities of the topographical engineers. He was brevetted lieutenant colonel in 1823. He died in Georgetown, Washington, D.C., on January 15, 1829.

Colonel John James Abert

Chief, Topographical Bureau (January 31, 1829–April 11, 1861)
Chief, Corps of Topographical Engineers (July 7, 1838–September 9, 1861)

Born September 17, 1788, in Frederick, Maryland, John Abert received an appointment as a Military Academy cadet in January 1808. In 1811, he took a position in the War Department in Washington and resigned as cadet. He joined the District of Columbia Militia as a private during the War of 1812 and fought at the Battle of Bladensburg. In November 1814, he was appointed a topographical engineer with the brevet rank of major. He worked on fortifications, surveys, and river and harbor improvements before being appointed Chief, Topographical Bureau, in 1829. Abert headed the Corps of Topographical Engineers from its creation by Congress in 1838 until he retired in 1861. Under his leadership, the Corps of Topographical Engineers improved the navigability of rivers and harbors, particularly in the basins of the Mississippi River and the Great Lakes; conducted a survey of the hydraulics of the Lower Mississippi River; constructed lighthouses and marine hospitals; explored large portions of the West; and conducted military, border, and railroad surveys. Col. Abert died in Washington, D.C., on January 27, 1863.

Colonel Stephen H. Long

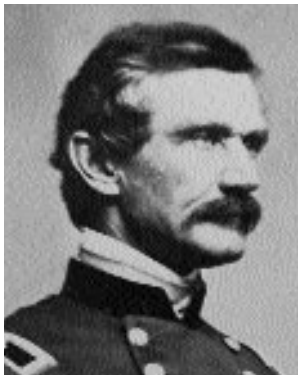
Chief, Topographical Bureau (September 9, 1861–March 3, 1863)
Chief, Corps of Topographical Engineers (December 12, 1861–March 3, 1863)

Born in Hopkinton, New Hampshire, on December 30, 1784, Stephen Long graduated from Dartmouth in 1809 and was commissioned in the Corps of Engineers in 1814. Brevetted major, topographical engineers, in April 1816, he conducted extensive explorations and surveys in the old Northwest and Great Plains. Long's Peak was named in his honor. He fixed the nation's northern boundary at the 49th Parallel at Pembina, North Dakota, in 1823. He conducted surveys in the Appalachians for the Baltimore and Ohio Railroad and, in 1829, published his *Railroad Manual or a Brief Exposition of Principles and Deductions Applicable in Tracing the Route of a Railroad.* He served for years as chief engineer for improvement of the western rivers, with headquarters in Cincinnati, Louisville, and finally St. Louis. He became Chief, Corps of Topographical Engineers, in 1861. Upon consolidation of the two corps on March 3, 1863, Col. Long became senior officer to the Chief Engineer, Corps of Engineers. He retired that year and died in Alton, Illinois, on September 4, 1864.

Brigadier General Richard Delafield

Chief Engineer (April 22, 1864–August 8, 1866)

Born September 1, 1798, in New York City, Richard Delafield was the first graduate of the Military Academy to receive a merit class standing, ranking first in the Class of 1818. Commissioned in the Corps of Engineers, he was a topographical engineer with the American commission to establish the northern boundary under the Treaty of Ghent. He served as assistant engineer in the construction of Hampton Roads defenses (1819–1824) and was in charge of fortifications and surveys in the Mississippi River Delta area (1824–1832). While superintendent of repair work on the Cumberland Road east of the Ohio River, he designed and built the first cast-iron tubular-arch bridge in the United States. Appointed Superintendent of the Military Academy after the fire in 1838, he designed the new buildings and the new cadet uniform that first displayed the castle insignia. He superintended the construction of coastal defenses for New York Harbor (1846–1855), was a military observer at the siege of Sevastopol, and was again Superintendent of the Military Academy (1856–1861). Delafield was in charge of New York Harbor defenses (1861–1864) and Chief Engineer from 1864 until his retirement in 1866. He died November 5, 1873, in Washington, D.C. The Secretary of War ordered that 13 guns be fired in his memory at West Point.



Brigadier General Andrew Atkinson Humphreys

Chief of Engineers (August 8, 1866–June 30, 1879)

Andrew Humphreys, born November 2, 1810, in Philadelphia, Pennsylvania, was the son and grandson of chiefs of naval construction. His grandfather designed the U.S.S. *Constitution ("Old Ironsides").* Young Humphreys graduated from the Military Academy in 1831 and served as an artillery officer in Florida during the Seminole War. He resigned from the U.S. Army in 1836, but he accepted an appointment as first lieutenant in the new Corps of Topographical Engineers in 1838. He led a survey of the Mississippi River Delta and, in 1854–1861, headed the Office of Pacific Railroad Explorations and Surveys. His cowritten *Report Upon the Physics and Hydraulics of the Mississippi River,* translated into several languages, became a classic in hydraulic literature. Gen. Humphreys, a distinguished Army corps commander in the Civil War, became Chief of Engineers in 1866. He established the Engineer School of Application and oversaw a substantial expansion of the Corps' river and harbor work. Humphreys held a Harvard degree, published Civil War histories, and was cofounder of the National Academy of Sciences. He died December 27, 1883, in Washington, D.C.

Brigadier General Horatio Gouverneur Wright

Chief of Engineers (June 30, 1879–March 6, 1884)

Born March 6, 1820, in Clinton, Connecticut, Horatio Wright graduated second in the Military Academy Class of 1841 and was commissioned in the Corps of Engineers. He superintended construction at Fort Jefferson at Dry Tortugas, 70 miles west of Key West, Florida, 1846–1856. While assistant to the Chief Engineer of the Army, 1856–1861, he was a member of boards to study iron carriages for seacoast guns and the adaptability of the 15-inch gun for ordnance. He cowrote *Report on Fabrication of Iron for Defenses.* From Chief Engineer of a division at the first Battle of Bull Run, he advanced to command the famous Sixth Army Corps, which saved Washington, D.C., from capture in 1864 and spearheaded the final assault on Petersburg and the pursuit of Lee to Appomattox in 1865. He commanded the Department of Texas, 1865–1866, and served as a member on the Board of Engineers for Fortifications and on many river and harbor planning boards until he was appointed Chief of Engineers in 1879. While Wright was Chief of Engineers, engineer officers began a reservoir system at the headwaters of the Mississippi River and initiated the first substantial federal effort to control the river's lower reaches. Gen. Wright retired March 6, 1884, and died July 2, 1899, in Washington, D.C.

Brigadier General John Newton

Chief of Engineers (March 6, 1884–August 27, 1886)

Born August 24, 1823, in Norfolk, Virginia, a city his father represented in Congress for 31 years, John Newton ranked second in the Military Academy Class of 1842 and was commissioned in the Corps of Engineers. He taught engineering at the Military Academy (1843–1846) and constructed fortifications along the Atlantic Coast and Great Lakes (1846–1852). He was a member of a special Gulf Coast Defense Board (1856) and Chief Engineer, Utah Expedition (1858). Though a fellow Virginian, he did not follow Robert E. Lee but stood firm for the Union in the Civil War. Newton helped construct Washington defenses and led a brigade at Antietam. As division commander, he stormed Marye's Heights at Fredericksburg and fought at Gettysburg and the siege of Atlanta. He commanded the Florida districts in 1864–1866. Returning to the Corps, he oversaw improvements to the waterways around New York City and to the Hudson River above Albany. He also had charge of New York Harbor defenses until he was appointed Chief of Engineers in 1884. Newton was famous for blowing up New York's Hell Gate Rock with 140 tons of dynamite detonated on October 10, 1885. He retired from the Army in 1886 and served as commissioner of public works in New York City (1886–1888) and as president of the Panama Railroad Company (1888–1895). He died on May 1, 1895, in New York.

Brigadier General James Chatham Duane

Chief of Engineers (October 11, 1886–June 30, 1888)

James Duane was born June 30, 1824, in Schenectady, New York. His grandfather was a member of the Continental Congress and mayor of New York City. Duane graduated from Union College in 1844 and from the Military Academy in 1848, where he ranked third in his class. He taught practical military engineering there (1852–1854) during the superintendency of Robert E. Lee. Serving with the U.S. Army's company of sappers, miners, and pontoniers for nine years before the Civil War, Duane led its celebrated 1,100-mile march to Utah in 1858 and commanded select engineer troops to guard President Lincoln at his inauguration in 1861. Duane built the first military ponton bridge over the Potomac at Harpers Ferry in 1862, served as Chief Engineer of the Army of the Potomac (1863–1865), and in seven hours in 1864, built the longest ponton bridge of the Civil War (2,170 feet) across the James River. He commanded at Willets Point, New York (1866–1868), and for ten years constructed fortifications along the coast of Maine and New Hampshire. He was president of the Board of Engineers in 1884–1886 and Chief of Engineers in 1886–1888, when he retired. He then became commissioner of Croton Aqueduct, New York. He published the paper, "History of the Bridge Equipage in the United States Army." Gen. Duane died December 8, 1897, in New York City.

Brigadier General Thomas Lincoln Casey

Chief of Engineers (July 6, 1888–May 10, 1895)

Thomas Lincoln Casey was born May 10, 1831, in Sackets Harbor, New York, where his father, Lieutenant Silas Casey (later an assault team leader in the Battle of Chapultepec in the Mexican War and a general in the Civil War), was then assigned. Young Casey graduated first in the Military Academy Class of 1852 and taught engineering there (1854–1859). During the Civil War, he oversaw Maine coastal fortifications, completing the massive Fort Knox on the Penobscot River. After that war, he headed the division in the Office of the Chief of Engineers responsible for engineer troops, equipment, and fortifications. The Corps' most distinguished builder of monuments and public buildings, Casey headed the Office of Public Buildings and Grounds, District of Columbia, from 1877 to 1881. He built the State, War and Navy Department Building, which is now the Eisenhower Executive Office Building, and completed the Washington Monument. The placing of a sturdier foundation under the partially completed Washington Monument (already 173 feet high) was Casey's greatest engineering feat, but his crowning accomplishment was construction of the Library of Congress Building—all but completed when he died suddenly on March 25, 1896. Burial was at the Casey farm in Rhode Island. Gen. Casey was a member of the National Academy of Sciences and the Society of the Cincinnati and an officer of the Legion of Honor of France.

Brigadier General William Price Craighill

Chief of Engineers (May 10, 1895–February 1, 1897)

William Craighill was born on July 1, 1833, in Charles Town, Virginia (now West Virginia). A classmate of Sheridan, Hood, and McPherson, Craighill ranked second in the Military Academy Class of 1853 and was commissioned in the Corps of Engineers. After working on several Atlantic Coast forts, he taught engineering at the Military Academy in 1859–1862. Another Virginian who stood for the Union, Craighill was division and department engineer during the Civil War and worked on the defenses of Pittsburgh, Baltimore, San Francisco, and New York. After that war, he superintended construction of defenses at Baltimore Harbor and Hampton Roads. He headed the Engineer Office in Baltimore Harbor and Hampton Roads, from 1870 to 1895, overseeing river and harbor work in Maryland and parts of Virginia and North Carolina. When the Corps began to build locks and dams on the Great Kanawha River in West Virginia in 1875, Craighill assumed charge there as well. He completed the first of the moveable wicket dams built in the United States, after visiting France to study their use. He became the Corps' first Southeast Division Engineer. Craighill established the camp for the Yorktown surrender celebration, the first of the sanitary type later adapted to U.S. Army camps. He was a member of the Board of Engineers in 1886–1889. He was appointed Chief of Engineers by President Cleveland in 1895. He retired two years later and died January 18, 1909, in Charles Town, West Virginia.

Brigadier General John Moulder Wilson

Chief of Engineers (February 1, 1897–April 30, 1901)

John Wilson was born October 8, 1837, in Washington, D.C. He graduated from the Military Academy in 1860 and was commissioned in the Artillery Corps. He transferred to the Corps of Topographical Engineers in July 1862 and was awarded the Medal of Honor for fighting at Malvern Hill, Virginia, on August 6, 1862. He joined the Corps of Engineers in 1863 and received three brevets for gallant service in Alabama. After the Civil War, Wilson worked on Hudson River improvements and drafted plans for the canal around the Cascades of the Columbia River. He improved the Great Lakes harbors of Oswego, Cleveland, and Toledo. Wilson headed the divisions of the Chief's office pertaining to military affairs for four years, was in charge of public buildings and grounds in Washington during both of the Cleveland administrations, and was Superintendent of the Military Academy in 1889–1893. Before his appointment as Chief of Engineers in 1897, he was Northeast Division Engineer. As Chief of Engineers, he directed the Corps' activities during the Spanish-American War. He retired April 30, 1901, but remained a prominent figure in the cultural life of Washington until his death there on February 1, 1919.

Brigadier General Henry M. Robert

Chief of Engineers (April 30, 1901–May 2, 1901)

Born May 2, 1837, in South Carolina, Henry Robert graduated fourth in the Military Academy Class of 1857. After receiving his commission in the Corps of Engineers, he taught at the Military Academy and then explored routes for wagon roads in the West and engaged in fortification work in Puget Sound. During the Civil War, he worked on the defenses of Washington and Philadelphia. Robert served as Engineer of the Army's Division of the Pacific in 1867–1871. He then spent two years improving rivers in Oregon and Washington and six years developing the harbors of Green Bay and other northern Wisconsin and Michigan ports. He subsequently improved the harbors of Oswego, Philadelphia, and Long Island Sound and constructed locks and dams on the Cumberland and Tennessee rivers. As Southwest Division Engineer from 1897 to 1901, Robert studied how to deepen the Southwest Pass of the Mississippi River. He was president of the Board of Engineers from 1895 to 1901. On April 30, 1901, he was made brigadier general and was appointed Chief of Engineers. He served until May 2, 1901, when he retired from the U.S. Army. He became famous for his *Pocket Manual of Rules of Order,* a compendium of parliamentary law first published in 1876 and better known today as *Robert's Rules of Order.* He died May 1, 1923, in Hornell, New York.

Brigadier General John W. Barlow

Chief of Engineers (May 2, 1901–May 3, 1901)

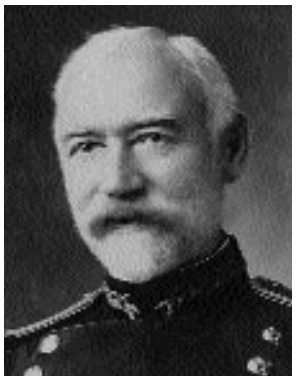
John Barlow was born in New York City on June 26, 1838, and graduated from the Military Academy in May 1861. He was first commissioned in the Artillery Corps, but transferred to the Topographical Engineers in July 1862. He served with the Battalion of Engineers at Gettysburg and as engineer of a U.S. Army corps in the siege of Atlanta. He supervised the defenses of Nashville and was brevetted lieutenant colonel for his gallant service there in December 1864. From 1870 until 1874, he was General Sheridan's Chief Engineer in the Military Division of the Missouri. During this period, he made scientific explorations of the headwaters of the Missouri and Yellowstone. His detailed reports became guides for settlers. Barlow improved the harbors and defenses of Long Island Sound from 1875 to 1883, executed harbor improvements in northern Wisconsin and Michigan, and worked on the construction of a canal around Muscle Shoals on the Tennessee River. He was the senior American member of the international commission that remarked the disputed boundary with Mexico in 1892–1896. He was subsequently Northwest Division Engineer for four years. On May 2, 1901, he was commissioned brigadier general and appointed Chief of Engineers. The next day, May 3, 1901, he retired from the U.S. Army after 40 years of service. He died February 27, 1914, in Jerusalem, Palestine.

Brigadier General George Lewis Gillespie, Jr.

Chief of Engineers (May 3, 1901–January 23, 1904)

George Gillespie, Jr., was born October 7, 1841, in Kingston, Tennessee. He graduated second in the Class of 1862 at the Military Academy and was commissioned in the Corps of Engineers. As a Southerner who remained loyal to the Union, Gillespie joined the Army of the Potomac in September 1862. He commanded two companies of the engineer battalion that built fortifications and ponton bridges throughout the Virginia campaigns until the Appomattox surrender. He received the Medal of Honor for carrying dispatches through enemy lines under withering fire to General Sheridan at Cold Harbor, Virginia. He was later Sheridan's Chief Engineer in the Army of the Shenandoah and the Military Division of the Gulf. After the Civil War, Gillespie successively supervised the improvement of harbors at Cleveland, Chicago, Boston, and New York. He initiated construction of the canal at the Cascades of the Columbia River and built the famous lighthouse on Tillamook Rock off the Oregon Coast. Gillespie also served on the Board of Engineers and for six years as president of the Mississippi River Commission. He commanded the U.S. Army's Department of the East in 1898. While Chief of Engineers, he was acting Secretary of War in August 1901. He had charge of ceremonies at President McKinley's funeral and at the laying of the cornerstone of the War College Building in 1903. He served as Army Assistant Chief of Staff in 1904–1905 with the rank of major general. Gen. Gillespie retired June 15, 1905, and died September 27, 1913, in Saratoga Springs, New York.

Brigadier General Alexander Mackenzie



Chief of Engineers (January 23, 1904–May 25, 1908)

Born May 25, 1844, in Potosi, Wisconsin, Alexander Mackenzie graduated from the Military Academy in 1864. Commissioned in the Corps of Engineers, he served with the Union Army in Arkansas in 1864–1865. Mackenzie spent six years commanding a company of engineer troops at Willets Point, New York, that experimented in the use of torpedoes in coastal defense. In 1879, he began a sixteen-year stint as Rock Island District Engineer. He built 100 miles of wing dams on the Upper Mississippi River and produced a 4.5-foot channel between St. Paul and the mouth of the Missouri River. Called to Washington in 1895, he became assistant to the Chief of Engineers in charge of all matters relating to river and harbor improvements. He was a member of the general staff corps and War College Board when he was appointed Chief of Engineers in 1904. He retired May 25, 1908, as a major general, but was recalled to active duty in 1917 at age 73 as Northwest Division Engineer serving again in Rock Island, Illinois. Gen. Mackenzie died March 21, 1921, in Washington, D.C.

Brigadier General William Louis Marshall

Chief of Engineers (July 2, 1908–June 11, 1910)

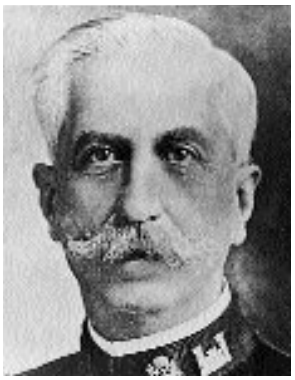
William Marshall was born June 11, 1846, in Washington, Kentucky, a scion of the family of Chief Justice John Marshall. At age 16, he enlisted in the 10th Kentucky Cavalry, Union Army. He graduated from the Military Academy in 1868 and was commissioned in the Corps of Engineers. Accompanying Lieutenant George Wheeler's Expedition (1872–1876), Marshall covered thousands of miles on foot and horseback and discovered Marshall Pass in central Colorado. He oversaw improvements on the Lower Mississippi River near Vicksburg and on the Fox River Canal System in Wisconsin. As Chicago District Engineer from 1888 to 1899, he planned and began to build the Illinois and Mississippi Canal. Marshall made innovative use of concrete masonry and developed original and cost-saving methods of lock canal construction. While he was stationed at New York (1900–1908), his genius further expressed itself on the Ambrose Channel Project and in fortification construction. He then served for two years as Chief of Engineers. He retired June 11, 1910, but his engineering reputation earned him a special appointment from President Taft as consulting engineer to the Secretary of the Interior on hydroelectric power projects. Gen. Marshall died July 2, 1920, in Washington, D.C.

Brigadier General William Herbert Bixby

Chief of Engineers (June 12, 1910–August 11, 1913)

Born December 27, 1849, in Charlestown, Massachusetts, William Bixby graduated first in the Military Academy Class of 1873 and was commissioned in the Corps of Engineers. After serving with the engineer battalion at Willets Point and as assistant professor of engineering at the Military Academy, Bixby graduated with honors from the French *Ecole des ponts et chaussées.* He received the Legion of Honor for assisting French Army maneuvers. Bixby headed the Wilmington, North Carolina, District from 1884 to 1891. He oversaw improvements on the Cape Fear River, modernized the area's coastal forts, and responded to the earthquake that hit Charleston, South Carolina, in 1886. Bixby served next as District Engineer in Newport, Rhode Island. From 1897 to 1902, he oversaw improvements on the Ohio River and its tributaries from Pittsburgh to Cincinnati. After two years in charge of the Detroit District, he became Chicago District Engineer and Northwest Division Engineer. Bixby was president of the Mississippi River Commission in 1908–1910 and 1917–1918. As Chief of Engineers, he oversaw the raising of the battleship *Maine.* He retired August 11, 1913, but was recalled to service in 1917 as Western Division Engineer. He died September 29, 1928, in Washington, D.C.

Brigadier General William Trent Rossell



Chief of Engineers (August 12, 1913–October 11, 1913)

William Rossell was born in Alabama on October 11, 1849, the son and grandson of U.S. Army officers, and he graduated third in the Military Academy Class of 1873. Commissioned in the Corps of Engineers, he served until 1880 at Willets Point and as assistant professor of engineering at the Military Academy. He then engaged in river, harbor, and fortification work in regions around Portland, Maine; Jacksonville, Florida; and Vicksburg, Mississippi. Rossell served in 1891–1893 as the engineer commissioner on the three-member governing board of the District of Columbia. After briefly commanding the Battalion of Engineers, he led Mobile District for six years. He then supervised lighthouse construction and repair in the New York area and, later, Ohio River improvements. He was a member of the Mississippi River Commission from 1906 to 1913, as well as Central Division Engineer in 1908–1909 and Eastern Division Engineer in 1909–1913. After two months serving as Chief of Engineers, Rossell retired October 11, 1913, but was recalled to active service in 1917. He led the Third New York and Puerto Rico Districts and was Northeast Division Engineer. He again retired in 1918. He died October 11, 1919, in Staten Island, New York.

Brigadier General Dan Christie Kingman

Chief of Engineers (October 12, 1913–March 6, 1916)

Born March 6, 1852, in Dover, New Hampshire, Dan Kingman graduated second in the Military Academy Class of 1875 and was commissioned in the Corps of Engineers. He served as an instructor at the Military Academy and as the engineer officer of the U.S. Army's Department of the Platte. In 1883, he also began the construction of roads and bridges in the new Yellowstone National Park. Kingman directed improvements along the Lower Mississippi River in 1886–1890 and received the thanks of the Louisiana legislature for "splendid service rendered" during the 1890 flood. He oversaw harbor and fortification work on Lake Ontario in 1891–1895 and improvements on the Tennessee River in the last half of that decade. In the latter assignment, he initiated planning for federal cost-sharing with private hydroelectric-power investors for a lock and dam built below Chattanooga. Kingman oversaw substantial harbor improvements at Cleveland in 1901–1905 and headed the Corps' Savannah District and Southeast Division in 1906–1913. The Panama Canal was completed while he was Chief of Engineers. He retired March 6, 1916, and died November 14, 1916, in Atlantic City, New Jersey. Gen. Kingman was buried with high military honors in Arlington National Cemetery. Among the pallbearers were Chief of Staff General Hugh L. Scott and two former Chiefs of Engineers, Generals Mackenzie and Bixby.

Major General William Murray Black

Chief of Engineers (March 7, 1916–October 31, 1919)

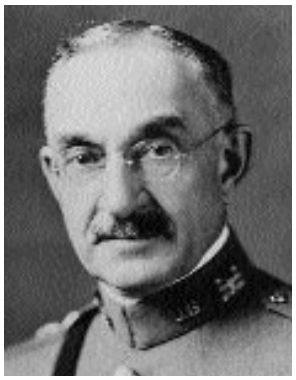
Born December 8, 1855, in Lancaster, Pennsylvania, William Black graduated first in the Military Academy Class of 1877 and was commissioned in the Corps of Engineers. From 1886 to 1891, Black headed the Jacksonville District, and in 1897–1898, he was the engineer commissioner on the governing board of the District of Columbia. In the Spanish-American War, he was Chief Engineer, 3d and 5th Army Corps. As Chief Engineer under Generals William Ludlow and Leonard Wood (1899–1901), and six years later as advisor to the Cuban Department of Public Works, he modernized Havana's sanitary system. As commandant of the Army Engineer School (1901–1903), Black moved it from Willets Point, New York, to Washington Barracks, D.C. After his return from Cuba in 1909, he was Northeast Division Engineer and chairman of a board to raise the battleship *Maine*. Devoted to training young engineer officers in the art of war, Gen. Black's greatest responsibility came as Chief of Engineers during World War I in mobilizing and training some 300,000 engineer troops for a wide range of military engineering tasks. For this work, he was awarded the Distinguished Service Medal. He retired October 31, 1919, and died September 24, 1933, in Washington, D.C.

Major General Lansing Hoskins Beach

Chief of Engineers (February 10, 1920–June 18, 1924)

Born June 18, 1860, in Dubuque, Iowa, Lansing Beach graduated third in the Military Academy Class of 1882 and was commissioned in the Corps of Engineers. He developed plans for the reconstruction of the Muskingum River locks and dams soon after Ohio ceded the state-built improvements to the federal government in 1887. From 1894 to 1901, he worked on public improvements in the District of Columbia, serving as engineer commissioner there in 1898–1901. As Detroit District Engineer in 1901–1905, he oversaw harbor improvements as far west as Duluth. Beach supervised improvements along the Louisiana Gulf Coast in 1908–1912 and in Baltimore in 1912–1915. He also oversaw the entire Gulf Division in six of those seven years and the Central Division in 1915–1920. In the latter capacity and as Chief of Engineers, he oversaw construction of the huge Wilson Locks and Dam on the Tennessee River. Beach also served on the Mississippi River Commission and the Board of Engineers for Rivers and Harbors. After his four-year tour as Chief of Engineers, he retired on June 18, 1924. After retirement, Gen. Beach served as consulting engineer for various business interests in the United States and Mexico. He was president of the American Society of Military Engineers and a member of the International Water Commission from 1924 to 1930. He died April 2, 1945, in Pasadena, California.

Major General Harry Taylor



Chief of Engineers (June 19, 1924–June 26, 1926)

Born June 26, 1862, in Tilton, New Hampshire, Harry Taylor graduated from the Military Academy in 1884 and was commissioned in the Corps of Engineers. After serving in engineer offices in Wilmington, North Carolina, and New York City, Taylor served from 1891 to 1900 on fortifications and river and harbor construction work in Oregon and Washington. Later he pursued similar work in New England and New York. Transferred to the Philippines, he supervised all fortification work there in 1904–1905. Taylor was District Engineer in New London, Connecticut, in 1906–1911. He then headed the River and Harbor Division in the Office of the Chief of Engineers for five years. During World War I, he served as Chief Engineer of the American Expeditionary Forces in France (mid-1917 to mid-1918) and received the Distinguished Service Medal. He then served for six years as Assistant Chief of Engineers before assuming the top office in the Corps for two years. Wilson Dam was completed while he was Chief. He was a member of the French Legion of Honor. Gen. Taylor retired June 26, 1926. He died January 27, 1930, in Washington, D.C.

Major General Edgar Jadwin

Chief of Engineers (June 27, 1926–August 7, 1929)

Born August 7, 1865, in Honesdale, Pennsylvania, Edgar Jadwin graduated first in the Military Academy Class of 1890 and was commissioned in the Corps of Engineers. He served with engineer troops in 1891–1895 and was lieutenant colonel of the 3d U.S. Volunteer Engineers in the Spanish-American War. After serving as District Engineer at the expanding ports of Los Angeles and Galveston, he was selected by General Goethals as an assistant in the construction of the Panama Canal. Jadwin served in 1911–1916 in the Office of the Chief of Engineers, focusing on bridge and road matters. Upon the United States' entry into World War I in 1917, he recruited the 15th Engineers, a railway construction regiment, and led it to France. He directed American construction and forestry work there for a year and received the Distinguished Service Medal. President Wilson appointed Jadwin to investigate conditions in Poland in 1919. In 1922–1924, Jadwin headed the Corps' Charleston District and Southeast Division. He then served two years as Assistant Chief of Engineers. As Chief of Engineers, he sponsored the plan for Mississippi River flood control that was adopted by Congress in May 1928. Jadwin retired from the Army on August 7, 1929, and was advanced to lieutenant general on the retired list. He died in Gorgas Hospital in the Canal Zone on March 2, 1931.

Major General Lytle Brown

Chief of Engineers (October 1, 1929–October 1, 1933)

Born November 22, 1872, in Nashville, Tennessee, Lytle Brown graduated fourth in the Military Academy Class of 1898 and was commissioned in the Corps of Engineers. He served with engineer troops in Cuba in 1898 at the Battle of San Juan Hill and the siege of Santiago, and in 1900–1902 he was Engineer of the Department of Northern Luzon in the Philippine Islands. Brown oversaw river improvement projects in 1908–1912 as Louisville District Engineer. He commanded the 2d Battalion of Engineers and served as Engineer of Pershing's 1916 punitive expedition into Mexico. Brown headed the War Plans Division of the War Department general staff from May 1918 to June 1919, addressing important U.S. Army policy issues during and immediately after World War I. He received a Distinguished Service Medal. Brown oversaw construction work at the Wilson Dam Hydroelectric Project in 1919–1920. He was assistant commandant of the Army War College and a brigade commander in the Canal Zone before becoming Chief of Engineers. He concluded his military career as commander of the Panama Canal Department (1935–1936). Gen. Brown retired November 30, 1936. He died in Nashville, Tennessee, on May 3, 1951.

Major General Edward Murphy Markham

Chief of Engineers (October 1, 1933–October 18, 1937)

Born July 6, 1877, in Troy, New York, Edward Markham graduated fifth in the Military Academy Class of 1899 and was commissioned in the Corps of Engineers. He served five years with the 2d Battalion of Engineers, including two years in the Philippines and eight months in Cuba, engaging in military mapping and road and bridge construction. He was Memphis District Engineer (1912–1916) and professor of practical military engineering at the Military Academy. During World War I, he served in France as deputy director, Division of Light Railways and Roads (1918), and in Germany as Chief Engineer, Third Army (1919). After returning to the United States, he was Detroit District Engineer (1919–1925) and commandant of the Army Engineer School, Fort Humphreys, Virginia. Markham then served as Great Lakes Division Engineer. After serving as Chief of Engineers, he made a special military survey in the Hawaiian Islands. Gen. Markham retired February 28, 1938. He was New York public works commissioner in 1938 and president of the Great Lakes Dredge & Dock Company in Chicago from 1938 to 1945. He died in Albany, N.Y., on September 14, 1950.

Major General Julian Larcombe Schley

Chief of Engineers (October 18, 1937–October 1, 1941)

Born February 23, 1880, in Savannah, Georgia, Julian Schley graduated from the Military Academy in 1903 and was commissioned in the Corps of Engineers. He and classmate Douglas MacArthur had their first service with the 3d Battalion of Engineers in the Philippines (1903–1904). Schley later served with engineer troops in the United States and Cuba; as an instructor at the Military Academy; as Assistant Engineer, Washington, D.C.; and as New Orleans District Engineer. During World War I, he commanded the divisional 307th Engineers in the St. Mihiel and Meuse-Argonne offensives and was Engineer, 5th Army Corps, during the last two weeks of the latter drive. He received a Distinguished Service Medal. He was Director of Purchase, General Staff, and a member of the War Department Claims Board in 1919–1920. Schley later served four-year tours as Galveston District Engineer; Engineer of Maintenance, Panama Canal; and governor of the Canal Zone. In the last post, he was also military advisor to the Republic of Panama. Schley was commandant of the Army Engineer School in 1936–1937, before assuming the post of Chief of Engineers. He retired September 30, 1941, but was recalled to active wartime duty in 1943 as director of Transportation, Office of the Coordinator of Inter-American Affairs. He died March 29, 1965, in Washington, D.C.

Lieutenant General Eugene Reybold

Chief of Engineers (October 1, 1941–September 30, 1945)

Born February 13, 1884, in Delaware City, Delaware, Eugene Reybold was distinguished as the World War II Chief of Engineers who directed the largest Corps of Engineers in the nation's history. He graduated from Delaware College in 1903. Commissioned in the Coast Artillery Corps in 1908, Reybold was assigned to military housing and coastal defense construction work. Stationed at Fort Monroe throughout World War I, he became commandant of the Coast Artillery School. He transferred to the Corps of Engineers in 1926 and served as District Engineer in Buffalo, New York; Wilmington, North Carolina; and Memphis, Tennessee. In the last assignment, he successfully battled record Mississippi River flood crests. He was Southwestern Division Engineer (1937–1940) and War Department assistant chief of staff, G–4 (1940–1941). Appointed Chief of Engineers shortly before the Pearl Harbor attack, Gen. Reybold directed the Corps' tremendous range of activities throughout the war and was the first officer ever to rank as lieutenant general while Chief of Engineers. He was awarded a Distinguished Service Medal with Oak Leaf Cluster. Reybold retired January 31, 1946, and died November 21, 1961, in Washington, D.C.

Lieutenant General Raymond A. Wheeler

Chief of Engineers (October 4, 1945–February 28, 1949)

Born July 31, 1885, in Peoria, Illinois, Raymond Wheeler graduated fifth in the Military Academy Class of 1911 and was commissioned in the Corps of Engineers. He served with the Veracruz expedition in 1914 and went to France with the divisional 4th Engineers in 1918. He was awarded a Silver Star for actions in the Aisne-Marne campaign, and by the end of World War I, he had assumed command of his regiment with the rank of colonel. Between the two world wars, he served as District Engineer in Newport, Rhode Island; Wilmington, North Carolina; and Rock Island, Illinois. In September 1941, he was appointed chief of the U.S. Military Iranian Mission and in February 1942 was transferred to the China-Burma-India Theater as commanding general of the Services of Supply. In October 1943, he was assigned to Lord Mountbatten's Southeast Asia command as principal administrative officer and deputy supreme commander. Before the end of World War II, he became commander of the India-Burma Theater. He represented the United States at the Japanese surrender in Singapore. As Chief of Engineers, Wheeler initiated construction of the Missouri River Dams projected in the Pick-Sloan Plan. After his military retirement, he worked for the United Nations and the International Bank for Reconstruction and Development on Asian and African development projects. He oversaw the clearing of the Suez Canal in 1956–1957. Wheeler's U.S. Army decorations included the Distinguished Service Medal with two Oak Leaf Clusters and the Legion of Merit. He was also made an honorary Knight of the British Empire. He died February 8, 1974, in Washington, D.C.

Lieutenant General Lewis A. Pick

Chief of Engineers (March 1, 1949–January 26, 1953)

Born in Brookneal, Virginia, November 18, 1890, Lewis Pick graduated from Virginia Polytechnic Institute in 1914. During World War I, he served with the 23d Engineers in France. Pick received his Regular Army commission in the Corps of Engineers on July 1, 1920. He served in the Philippines from 1921 until 1923 and helped organize an engineer regiment composed of Filipino soldiers. He was District Engineer at New Orleans during the great 1927 Mississippi River floods, and he helped coordinate federal relief efforts. Pick was named Missouri River Division Engineer in 1942 and, with W. Glenn Sloan of the Bureau of Reclamation, he cowrote the Pick-Sloan Plan for controlling the water resources of the Mississippi River Basin. Pick was assigned to the China–Burma–India Theater of Operations in October 1943, and oversaw the construction of the Ledo Road across northern Burma from India to China. After his return to the United States in 1945, he served again as Missouri River Division Engineer. On March 1, 1949, President Truman appointed him Chief of Engineers. Pick was awarded the Distinguished Service Medal with Oak Leaf Cluster. He died December 2, 1956, in Washington, D.C.

Lieutenant General Samuel D. Sturgis, Jr.

Chief of Engineers (March 17, 1953–September 30, 1956)

Born July 16, 1897, in St. Paul, Minnesota, Samuel Sturgis, Jr., came from an illustrious military family. Both his father and grandfather were Military Academy graduates and major generals. Young Sturgis graduated from the Military Academy in 1918. As a junior engineer officer, he taught mathematics at the Academy for four years. In 1926, he was ordered to the Philippines, where he served as adjutant of the 14th Engineers. His strategic studies of the islands over a three-year period developed knowledge he used later when he returned to the Philippines in 1944 as Chief Engineer of General Walter Krueger's Sixth Army. Sturgis commanded a mounted engineer company at Fort Riley, Kansas, in 1929–1933 and encouraged the adoption of heavy mechanical equipment. He was District Engineer in 1939–1942 in Vicksburg, Mississippi, where he worked on flood control and a large military construction program. In 1943–1945, Sturgis's engineer troops built roads, airfields, ports, and bases from New Guinea to the Philippines. Sturgis was senior engineer for the nation's air forces in 1946–1948 and was Missouri River Division Engineer in 1949–1951. In 1951, he became the commanding general of the 6th Armored Division and Fort Leonard Wood. In 1952, he was appointed commanding general of the Communications Zone, supporting the United States Army in Europe. He became Chief of Engineers on March 17, 1953. His military decorations included the Distinguished Service Medal with Oak Leaf Cluster, Silver Star, Legion of Merit, and Bronze Star. He died July 5, 1964, in Washington, D.C.

Lieutenant General Emerson C. Itschner

Chief of Engineers (October 1, 1956–March 27, 1961)

Born in Chicago, Illinois, July 1, 1903, Emerson Itschner graduated from the Military Academy in 1924 and was commissioned in the Corps of Engineers. He obtained a degree in civil engineering from Cornell University in 1925. Itschner served with the Alaska Road Commission in 1927–1929. He taught at the Missouri School of Mines and served as assistant to the Upper Mississippi Valley Division Engineer and the St. Louis District Engineer. He commanded a topographic survey company in 1940–1941. In 1942–1943, Itschner headed the office in Corps headquarters that supervised U.S. Army airfield construction in the forty-eight states. In 1944–1945, he oversaw the reconstruction of ports and the development of supply routes to U.S. forces in Europe as the engineer for the Advance Section, Communications Zone. Itschner headed the division in Corps headquarters responsible for military construction operations from 1946 to 1949. After a year as Seattle District Engineer, he went to Korea as Engineer of I Corps and oversaw engineer troop operations in western Korea. He was North Pacific Division Engineer in 1952–1953. From 1953 until being appointed Chief of Engineers, he served as Assistant Chief of Engineers for Civil Works. He was awarded the Distinguished Service Medal, Legion of Merit with two Oak Leaf Clusters, Bronze Star, and Purple Heart. Gen. Itschner retired in 1961 and died in Portland, Oregon, on March 15, 1995.

Lieutenant General Walter K. Wilson, Jr.

Chief of Engineers (May 19, 1961–June 30, 1965)

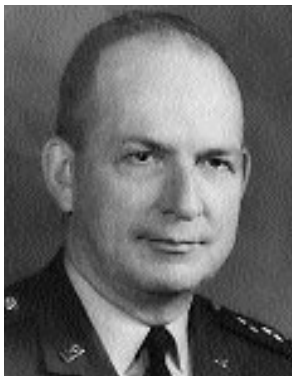
The son of an artillery officer, Walter Wilson, Jr., was born at Fort Barrancas, Florida, on August 26, 1906. He graduated from the Military Academy in 1929 and was commissioned in the Corps of Engineers. Before 1942, he served with troops, continued his military and engineering education, and was an instructor at the Military Academy. During World War II, Wilson served as Deputy Engineer-in-Chief with the Southeast Asia Command at New Delhi, India, and Kandy, Ceylon. He became commanding general, Advance Section, U.S. Forces, India-Burma Theater, and chief of staff of the Chinese Army in India. After the consolidation of Intermediate and Base Sections with Advance Section, Wilson commanded all ground forces remaining in the theater. He was District Engineer in St. Paul, Minnesota (1946–1949), and Mobile, Alabama (1949–1952), and Mediterranean Division Engineer (1953–1955). He assumed command of the 18th Engineer Brigade at Fort Leonard Wood, Missouri, in 1955. He served as Deputy Chief of Engineers for Construction from 1956 to 1960. Wilson was Commanding General, the Army Engineer Center and Fort Belvoir, and Commandant, the Army Engineer School in 1960–1961. He retired as Chief of Engineers on June 30, 1965. Wilson's military honors included the Legion of Merit with Oak Leaf Cluster, the Soldier's Medal, and membership in the French Legion of Honor. He died in Mobile, Alabama, on December 6, 1985.

Lieutenant General William F. Cassidy

Chief of Engineers (July 1, 1965–July 31, 1969)

Born on a U.S. Army post near Nome, Alaska, on August 28, 1908, William Cassidy graduated from the Military Academy in 1931 and was commissioned in the Corps of Engineers. He served as assistant to the District Engineer in Portland, Oregon, commanded an engineer company at Fort Belvoir, Virginia, and oversaw military construction projects in Hawaii. During World War II, Cassidy commanded engineer troops specializing in airfield construction in England, North Africa, and Italy. He was deputy chief, then chief, of the War Plans (later Operations and Training) Division, Office of the Chief of Engineers, in 1944–1947. At the outbreak of the Korean Conflict, he was ordered to Japan, where he was responsible for engineer supply. He served as South Pacific Division Engineer from 1955 to 1958 and was the senior logistics advisor to the Republic of Korea Army in 1958–1959. Cassidy was the Corps' Director of Civil Works from September 1959 to March 1962 and was then appointed Deputy Chief of Engineers. On March 1, 1963, he became the commanding general of the Army Engineer Center and Fort Belvoir, and commandant of the Army Engineer School. Cassidy became Chief of Engineers on July 1, 1965, and held that post for four years. He was awarded the Distinguished Service Medal for his service as Chief of Engineers. His other military decorations included the Legion of Merit with Oak Leaf Cluster, the Bronze Star, and the Republic of Korea Presidential Citation. He died in Longwood, Florida, on March 31, 2002.

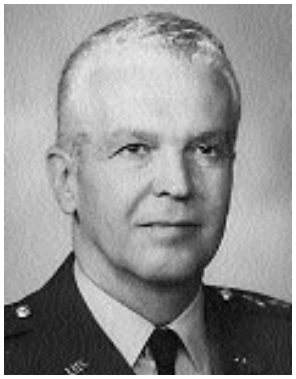
Lieutenant General Frederick J. Clarke



Chief of Engineers (August 1, 1969–July 31, 1973)

Born in Little Falls, New York, on March 1, 1915, Frederick Clarke was commissioned in the Corps of Engineers in 1937 after graduating fourth in his Military Academy class. Clarke received a master's degree in civil engineering from Cornell University in 1940 and later attended the Advanced Management Program of the Graduate School of Business, Harvard University. During World War II, he commanded a battalion that helped construct a military airfield on Ascension Island in the South Atlantic, and he served in Washington, D.C., at Headquarters, Army Service Forces. After the war, Clarke worked in the atomic energy field for the Manhattan District and the Atomic Energy Commission at Hanford, Washington, and at the Armed Forces Special Weapons Project at Sandia Base, Albuquerque, New Mexico. As the District Engineer of the Trans-East District of the Corps in 1957–1959, he was responsible for U.S. military construction in Pakistan and Saudi Arabia, and he initiated transportation surveys in East Pakistan and Burma. In the decade before his appointment as Chief of Engineers, Clarke was Engineer Commissioner of the District of Columbia (1960–1963); Commanding General, the Army Engineer Center and Fort Belvoir, and Commandant, the Army Engineer School (1965–1966); and Deputy Chief of Engineers (1966–1969). As Chief of Engineers, Clarke guided the Corps as it devoted increased attention to the environmental impact of its work. Gen. Clarke was awarded the Distinguished Service Medal and the Legion of Merit. He died at Fort Belvoir, Virginia, on February 4, 2002.

Lieutenant General William C. Gribble, Jr.



Chief of Engineers (August 1, 1973–June 30, 1976)

Born in Ironwood, Michigan, on May 24, 1917, William Gribble, Jr., graduated from the Military Academy in 1941 and was commissioned in the Corps of Engineers. During World War II, he served on the staff of the 340th Engineer General Service Regiment as it first built a section of the Alaska Highway in western Canada and later assisted General MacArthur's drive in New Guinea and the Philippines. At the end of the war, he commanded the 118th Engineer Combat Battalion, 43d Infantry Division. Gribble then worked in the Los Alamos laboratory and in the Reactor Development Division of the Atomic Energy Commission. As Alaska District Engineer, he oversaw construction of a nuclear power plant at Fort Greeley, Alaska. He headed the U.S. Army's nuclear power program in 1960–1961. In 1963, he was the Corps' North Central Division Engineer. Gribble's scientific skills led to his service as director of research and development in the Army Materiel Command in 1964–1966 and as the U.S. Army's Chief of Research and Development, 1971–1973. In 1969–1970, he commanded the Army Engineer Center and Fort Belvoir, and was commandant of the Army Engineer School. He became Chief of Engineers in 1973. Gribble received a master's degree in physical science from the University of Chicago in 1948 and an honorary doctorate in engineering from Michigan Technological University. He was also an honorary member of the United Kingdom's Institute of Royal Engineers. His decorations included the Distinguished Service Medal with Oak Leaf Cluster, the Legion of Merit with Oak Leaf Cluster, and the Brazilian Order of Military Merit. Gen. Gribble died at Fort Belvoir, Virginia, on June 2, 1979.

Lieutenant General John W. Morris

Chief of Engineers (July 1, 1976–September 30, 1980)

John Morris was born in Princess Anne, Maryland, on September 10, 1921. He graduated from the Military Academy in June 1943 and was commissioned in the Corps of Engineers. During World War II, he commanded an airfield construction company in the Western Pacific. After the war, he served in the Philippines and Japan, in the Corps' Savannah District, and as area engineer at Goose Bay, Labrador. In 1960–1962, he commanded the divisional 8th Engineer Battalion in Korea. Morris headed the Corps' Tulsa District in 1962–1965 as it improved navigation on the Arkansas River. During the peak years of the Vietnam War, he was the U.S. Army's Deputy Chief of Legislative Liaison (1967–1969), and he commanded the 18th Engineer Brigade in Vietnam (1969–1970). He was then Missouri River Division Engineer for three years and Deputy Chief of Engineers in 1975–1976. As Chief of Engineers, Morris convinced the U.S. Army to include the Corps of Engineers among the major commands. Morris obtained a master's degree in civil engineering from the University of Iowa. His military awards include the Distinguished Service Medal, the Legion of Merit with three Oak Leaf Clusters, the Bronze Star, and the Defense Meritorious Service Medal. Gen. Morris was selected Construction's Man of the Year for 1977 by the *Engineering-News Record*.

Lieutenant General Joseph K. Bratton

Chief of Engineers (October 1, 1980–September 14, 1984)

Joseph Bratton was born on April 4, 1926, in St. Paul, Minnesota. He graduated third in the Class of 1948 at the Military Academy and was commissioned in the Corps of Engineers. He served with an engineer battalion in Austria in 1949–1952 and with the divisional 13th Engineer Combat Battalion in Korea in 1953–1954, both before and after the armistice. He later commanded the 24th Engineer Battalion, 4th Armored Division, in Germany (1964–1965) and the 159th Engineer Group in Vietnam (1969–1970). Bratton also held numerous staff assignments. He was a military assistant to Secretary of the Army Stanley Resor in 1967–1969 and secretary to the Joint Chiefs of Staff in 1970–1972. Having received a master's degree in nuclear engineering from the Massachusetts Institute of Technology in 1959, Bratton served as chief of Nuclear Activities at Supreme Headquarters, Allied Powers, Europe (SHAPE), in 1972–1975 and Director of Military Applications at the U.S. Department of Energy in 1975–1979. His last assignments before becoming Chief of Engineers in October 1980, were as Division Engineer of the Corps' South Atlantic Division (1979–1980) and then briefly as Deputy Chief of Engineers. His military awards include the Defense Distinguished Service Medal, the Army Distinguished Service Medal, the Legion of Merit with two Oak Leaf Clusters, and the Bronze Star with Oak Leaf Cluster.

Lieutenant General Elvin R. Heiberg III

Chief of Engineers (September 14, 1984–May 5, 1988)

Elvin Heiberg III was born at Schofield Barracks, Honolulu, Hawaii, on March 2, 1932. He became a third-generation West Pointer when he graduated fifth in the Military Academy Class of 1953. He later obtained three masters' degrees (civil engineering from the Massachusetts Institute of Technology, and government and administration from George Washington University). Early in his military career, Heiberg served as operations officer of the 3d Brigade, 3d Infantry Division in Germany and taught in the Social Sciences Department at the Military Academy. In 1968–1969, he commanded the divisional 4th Engineer Battalion in Vietnam and was awarded a Silver Star. He then served as special assistant and executive assistant to the director of the Office of Emergency Preparedness. Heiberg served for a year as executive to Secretary of the Army Howard Callaway. He then headed the Corps' New Orleans District and, in 1975–1978, the Ohio River Division. He served as senior engineer on the staff of U.S. Army, Europe, in 1978–1979. Heiberg was the Corps' Director of Civil Works in 1979–1982 and then Deputy Chief of Engineers. After managing the U.S. Army's Ballistic Missile Defense Program for a year, he became Chief of Engineers in 1984. Heiberg graduated from the Industrial College of the Armed Forces. His military awards include the Distinguished Service Medal, the Legion of Merit with two Oak Leaf Clusters, the Distinguished Flying Cross, and the Bronze Star.

Lieutenant General Henry J. Hatch

Chief of Engineers (June 17, 1988–June 4, 1992)

The son of an artillery officer, Henry J. Hatch was born on August 31, 1935, in Pensacola, Florida. After graduating from the U.S. Military Academy in 1957, he completed airborne and ranger training at Fort Benning, Georgia, and earned a master's degree in geodetic science at Ohio State University. Hatch held several leadership positions in U.S. Army airborne and airmobile units early in his career. He commanded a company of the 82d Airborne Division's 307th Engineer Battalion at Fort Bragg, North Carolina; served on the staff of the 2d Airborne Battle Group, 503d Infantry in Okinawa; and commanded the 326th Engineer Battalion of the 101st Airborne Division in Vietnam in 1968–1969. Hatch subsequently oversaw West Point construction work for the Corps' New York District and in 1974 began a three-year tenure as Nashville District Engineer. He then returned to the Far East to lead the 2d Infantry Division Support Command in Korea and later directed U.S. Army and U.S. Air Force construction in Korea, Japan, and the Pacific as Division Engineer of the Corps' Pacific Ocean Division. Hatch was Deputy Chief of Staff, Engineer, for U.S. Army, Europe, in 1981–1984. He next returned to the Corps of Engineers, serving briefly as Assistant Chief of Engineers and then for nearly four years as director of Civil Works. President Reagan nominated him as Chief of Engineers in May 1988. Lt. Gen. Hatch has been awarded the Legion of Merit, two Meritorious Service Medals, two Bronze Stars, three Air Medals, and two Army Commendation Medals.

Lieutenant General Arthur E. Williams

Chief of Engineers (August 24, 1992–June 30, 1996)

Born in Watertown, New York, on March 28, 1938, Arthur Williams obtained a commission as a U.S. Army engineer officer upon his graduation in 1960 from Saint Lawrence University, where he majored in mathematics. He later obtained a bachelor's degree in civil engineering from Rensselaer Polytechnic Institute and a master's degree in civil engineering and economic planning from Stanford University. Williams commanded an armored engineer company in Germany and an engineer construction company in Vietnam. During a second tour in Vietnam, he served as operations officer of the 577th Engineer Battalion. He later commanded the 44th Engineer Battalion in Korea and was an assignment officer at the U.S. Army Military Personnel Center. Williams headed the Corps' Sacramento District in 1982–1985 and then served as Chief of Staff, Corps headquarters. He subsequently headed the Pacific Ocean Division and then the Lower Mississippi Valley Division. He was also president of the Mississippi River Commission. He returned to Corps headquarters in July 1991 as Director of Civil Works. Williams was nominated as Chief of Engineers by President Bush in 1992. His military awards include two Bronze Stars, three Legion of Merit Awards, the Defense Meritorious Service Medal, and the Army Commendation Medal.

Lieutenant General Joe N. Ballard

Chief of Engineers (October 1, 1996–August 2, 2000)

A native of Oakdale, Louisiana, Joe N. Ballard was born on March 27, 1942, and graduated from Southern University and A&M College, Baton Rouge, Louisiana, with a degree in electrical engineering. After graduation in 1965, he received a commission in the U.S. Army Corps of Engineers. He served as a platoon leader in the 84th Engineer Battalion during his first tour of duty in South Vietnam, as a company commander in the 864th Engineer Battalion, and as the chief, Lines of Communication Section, in the 18th Engineer Brigade during his second tour. Following assignments with the Fifth U.S. Army and the Recruiting Command, he was operations officer and executive officer of the 326th Engineer Battalion, 101st Airborne Division. In 1978, Ballard went to South Korea, where he served as operations officer and later as the executive officer on the staff of the U.S. Forces, Korea, Engineer. Following Korea, he returned to the Pentagon for duty on the Army staff as the principal engineer in the Army Energy Office, Office of the Deputy Chief of Staff, Logistics. In 1982, he moved to another overseas theater as commander of the 82d Engineer Battalion, 7th Engineer Brigade, in West Germany. Later he became the commander of the 18th Engineer Brigade and Assistant Deputy Chief of Staff, Engineer, Headquarters, U.S. Army, Europe. Returning to the United States in 1991, Ballard began his association with the U.S. Army Engineer School as assistant commandant of the school and deputy commanding general of the Engineer Center and Fort Leonard Wood, Missouri. After an assignment as Chief, Total Army Basing Study, Office of the Chief of Staff of the Army, Ballard returned to Missouri as Commanding General, the Engineer Center and Fort Leonard Wood. When he was nominated by

President William Clinton to be the Chief of Engineers and commander, U.S. Army Corps of Engineers, he was serving as chief of staff, U.S. Army Training and Doctrine Command in Fort Monroe, Virginia. During his career, Gen. Ballard earned a master's degree in engineering management from the University of Missouri and graduated from the Engineer Officer Basic and Advanced Courses, the Command and General Staff College, and the Army War College. His military awards include the Distinguished Service Medal, three Legion of Merit Awards, two Bronze Stars, the Defense Meritorious Service Medal, four Meritorious Service Medals, and two Army Commendation Medals.

Lieutenant General Robert B. Flowers

Chief of Engineers (October 23, 2000–July 1, 2004)

Robert B. Flowers was born July 9, 1947, in Kane, Pennsylvania. The son of a military officer, he grew up at various military posts around the world. Following graduation from the Virginia Military Institute and commissioning as a second lieutenant in 1969, Flowers completed airborne and ranger training. He earned a master's degree in civil engineering from the University of Virginia in 1976. His first troop assignment was with the 94th Engineer Battalion in Germany, where he served as a platoon leader, company commander, and battalion operations officer from 1970 to 72. He was Facilities Engineer of the Udorn Detachment, Army Support Command, in Thailand from 1973 to 74 and then a field engineer and project manager for the Portland District. From 1980 to 84, he was on the staff of the 20th Engineer Brigade and the 307th Engineer Battalion, 82nd Airborne Division, and in 1985 he took command of the 307th Engineer Battalion. Flowers served on the Joint Staff in Washington before commanding the 20th Engineer Brigade, XVIII Airborne Corps, during Operations Desert Shield and Desert Storm. Colonel Flowers served as Unified Task Force Engineer, United Nations Task Force, during Operation Restore Hope in Somalia. He returned to America as Deputy Assistant Commandant and later as Assistant Commandant of the U.S. Army Engineer School at Fort Leonard Wood before leaving for South Korea in 1994 as Assistant Division Commander of the 2nd Infantry Division. Brig. Gen. Flowers returned to the United States in 1995 and became the Commanding General of the Lower Mississippi Valley Division (LMVD), U.S. Army Corps of Engineers. While serving as LMVD commander, Flowers deployed to Bosnia briefly in 1996 as the Deputy Chief of Staff for Engineering (Forward). Prior to his selection as Chief of Engineers and Commanding General of the U.S. Army Corps of Engineers, Flowers served as the Commanding General of the Maneuver Support Center and Commandant of the U.S. Army Engineer School at Fort Leonard Wood, Missouri, from 1997 to 2000. During his career, LTG Flowers earned two Distinguished Service Medals, four Legion of Merit awards, a Bronze Star, a Defense Meritorious Service Medal, two Meritorious Service Medals, and four Army Commendation Medals.