The Corps of Engineers

By Dr. Larry Roberts

On 16 June 1775, the Continental Congress resolved "That there be one Chief Engineer at the Grand Army…. That two assistants be employed under him ...." This marked the beginning of the Corps of Engineers. In the following year, a number of individuals were given appointments as engineers or assistant engineers in the Continental Army. Three years later, the Congress authorized the recruitment of three companies of engineers, generally referred to as miners and sappers. The organization of these companies—and the officers having engineer responsibilities—into a "Corps of Engineers" came on 11 March 1779. During the Revolution, these miners and sappers worked on field fortifications and roads. At the Battle of Yorktown, they joined in the assault of Redoubt No. 10 in their secondary capacity as infantrymen. At the close of the Revolution, the Corps was mustered out of service.

Because of a recognized need for a regular military establishment, Congress took a number of steps in the early 1790s to reconstitute the American Army. One of these was the establishment of the Corps of Artillerists and Engineers in 1794. During the crisis with France four years later, an additional regiment of artillerists and engineers was formed. However, it was soon recognized that the duties and functions of the artillerists and engineers, while connected, were distinct. In 1800, a movement began to separate the two branches. On 16 March 1802, Congress authorized President Thomas Jefferson to establish a separate Corps of Engineers. The law also stated "That the said corps when so organized shall be stationed at West Point, in the State of New York, and shall constitute a military academy …." By this action, the Congress recognized that military engineering was a science and therefore required formal education and training.

Initially, the Corps consisted primarily of officers and cadets. However, in 1803, the commanding officer of the Corps was authorized to enlist 18 men and 1 artificer to help conduct experiments at West Point and for other purposes. This constituted the first enlisted personnel in the Corps since its separation from the artillery several months before. During the War of 1812, a company of bombardiers, sappers, and miners served on the Northwest Frontiers. For the next 40 years, the Corps's responsibilities centered around the construction of coastal fortifications and the exploration of the American West.

In 1838, Congress authorized the creation of a separate Corps of Topographical Engineers. Individual topographical engineers had been serving under the Chief of Engineers since 1816, and the topographical-engineering mission dated from the appointment of Mr. Robert Erskine to be geographer and surveyor of the roads. Much of the effort on the nation's internal development, such as roads and waterways, was done by the "topogs."

During the Mexican War, engineer and topographical-engineer officers performed valuable services to the nation. Captain Robert E. Lee, Corps of Engineers, received several brevets for heroism and gallantry as General Winfield Scott's staff engineer. Significantly, Congress authorized the creation of a company of miners, sappers, and pontoneers for the Regular Army. Interestingly, these enlisted men were to be called engineer soldiers. Before this, the term engineer had generally been confined to officers. Following the Mexican War, the engineers returned to their civil works, fortifications, and exploration projects. In the 1850s, engineers surveyed several routes for the proposed transcontinental railroad.

In the first days of the American Civil War, Congress added three additional companies of engineers and one of topographical engineers. Formed into a battalion of engineers, they worked on field fortifications, conducted terrain reconnaissance, and built numerous fixed and floating bridges (see article, page 42). In 1864, the battalion built a floating bridge over the James River that exceeded 2,000 feet in length—a record that stood until 1945. The efforts of the regular battalion of engineers were supported by numerous volunteer engineer regiments, such as the 15th and 50th New York Volunteer Engineer Regiments.

Following the Civil War, the Corps returned to its peacetime missions. All of the work of the Topographical Engineers went to the Corps when the topogs merged with the Corps in 1863. Waterways, coastal fortifications, and lighthouses were the most important peacetime responsibilities. The structure of the Corps remained relatively constant until 1901, when the companies were enlarged and reorganized into three battalions of regular engineers. The Corps's experience with waterways was of great value when the Panama Canal Commission appointed engineer officers to direct the construction of the canal (see *Engineer*, February 2000, page 28).

In the years immediately preceding our entry into World War I, the Army and the Corps underwent expansion and reorganization. The Army adopted the divisional system, which constituted the combined-arms structure used today. Key to this was the creation of divisional engineer regiments that numbered almost 1,500 officers and men. When the country entered the war, additional engineer regiments appeared. Many of these worked on specific missions, such as railway construction, forestry, and harbor development.

The Corps's record of accomplishment during World War I established the general pattern of engineer operations during World War II. General service and combat regiments built every conceivable structure or facility in the various theaters of operation. Combat regiments

and battalions supported the maneuver forces with roads, bridges, and mine warfare. At home, the Corps supervised the $15.2 billion defense-construction program. Included was the $2 billion Manhattan Project, which began the era of atomic warfare.

The end of the war against the Axis powers ushered in the Cold War between the free world and the communist states. The Corps responded with an intensive program of military construction that consisted of distant early-warning sites, military bases overseas, and missile installations. The Cold War turned hot in Korea between 1950 and 1954 and in Southeast Asia a decade later. For both of these conflicts, engineers not only fought alongside maneuver forces but also constructed countless support facilities. In the seesaw battles in Korea, combat engineers demolished, rebuilt, and destroyed the same bridges as the tide of war moved across the Korean landscape. Vietnam posed an even greater problem due to the nature of that insurgent conflict and the lack of support facilities for troops in the field. Firebases, airfields, heliports, harbor facilities, and major highways were among the tasks of builders and fighters. All of this occurred while the civil works side of the Corps continued with navigation, flood-control, hydroelectric, and military-construction projects in the United States.

The end of the Cold War did not bring the dividends of peace that so many Americans desired. Contingency operations in Granada, Panama, and Kuwait brought combat engineers into action. Humanitarian efforts such as Provide Comfort and Restore Hope constituted yet another mission for the Corps. Rebuilding Kuwait, providing for relief of displaced refugees, and supporting United Nations efforts in Somalia and the Balkans called for both combat and construction skills. Disaster assistance for victims of hurricanes, floods, and earthquakes continues to be a peacetime challenge of the Corps.

For more than 200 years, miners, sappers, pontoneers, and topogs-engineers have contributed to the development of this nation and of developing nations. In war, engineers have been fighters and builders of those things needed to sustain the battle. If the past is simply a prologue of the future, engineers must continue to hone their ability to build and, if necessary, to fight.



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Photo by C.J. Allen

Colonel Brian E. Osterndorf, commander of the Corps of Engineers' New England District, salutes Colonel Richard Gridley, the first Chief Engineer, during a wreath-laying ceremony at the Canton Corner Cemetery, Canton, Massachusetts, to mark the Corps's 225th birthday. The New England District's Ranger Color Guard accompanied Colonel Osterndorf to Colonel Gridley's grave site.

Chiefs of Engineers

COL Richard Gridley ..... 07 June 1775 - 05 April 1776
COL Rufus Putnam ..... 05 April 1776 - 01 December 1776
MG L.L. Duportail ..... 22 July 1777 - 10 October 1783
LTC Stephen Rochefontaine ..... 26 February 1795 - 07 May 1798
LTC Henry Burbeck ..... 07 May 1798 - 01 April 1802
COL Jonathan Williams ..... 01 April 1802 - 20 June 1803
19 April 1805 - 31 July 1812
COL J.G. Swift ..... 31 July 1812 - 12 November 1818
COL W.K. Armistead ..... 12 November 1818 - 01 June 1821
COL Alexander Macomb ..... 01 June 1821 - 24 May 1828
COL Charles Gratiot ..... 24 May 1828 - 06 December 1838
BG J.G. Totten ..... 07 December 1838 - 22 April 1864
BG Richard Delafield ..... 22 April 1864 - 08 August 1866
BG A.A. Humphreys .....08 August 1866 - 30 June 1879
BG H.G. Wright ..... 30 June 1879 - 06 March 1884
BG John Newton ..... 06 March 1884 - 27 August 1886
BG J.C. Duane .....11 October 1886 - 30 June 1888
BG T.L. Casey ..... 06 July 1888 - 10 May 1895
LTG Raymond A. Wheeler ..... 04 October 1945 - 28 February 1949
LTG Lewis A. Pick ..... 01 March 1949 - 26 January 1953
LTG Samuel D. Sturgis Jr. ..... 17 March 1953 - 30 September 1956
LTG Emerson C. Itschner ..... 01 October 1956 - 27 March 1961
LTG Walter K. Wilson Jr. ..... 19 May 1961 - 30 June 1965
LTG William F. Cassidy ..... 01 July 1965 - 31 July 1969
LTG Frederick J. Clarke ..... 01 August 1969 - 31 July 1973
LTG William C. Gribble Jr. ..... 01 August 1973 - 30 June 1976
LTG John W. Morris ..... 01 July 1976 - 30 September 1980
LTG Joseph K. Bratton ..... 01 October 1980 - 14 September 1984
LTG Elvin R. Heiberg III .....14 September 1984 - 05 May 1988
LTG Henry J. Hatch .....17 June 1988 - 04 June 1992
LTG Arthur E. Williams ..... 24 August 1992 - 30 June 1996
LTG Joe N. Ballard ..... 01 October 1996 - 2 August 2000
LTG Robert B. Flowers ..... 23 October 2000 - Present