

A U.S. Tradition: Military Work on Infrastructure

by Pam Lowry

From the earliest days of the young American Republic, the engineering capabilities of the military were viewed as crucial for developing the nation. The officers of the Continental Army, such as George Washington, Alexander Hamilton, and Henry Knox, envisioned a military school for citizen-soldiers which would teach both military and civil engineering. West Point Military Academy and the Corps of Engineers were founded in 1802, led by Jonathan Williams, a skilled scientist and grandnephew of Benjamin Franklin.

The crucial turning point for American civil and military engineering came in 1815, when West Point graduate Sylvanus Thayer was sent to France to obtain books and models for the Academy. Thayer studied the methods of France's great military and scientific École Polytechnique, and persuaded one of its engineering professors, Claudius Crozet, to come to West Point. There, under Thayer's superintendency, the curriculum was expanded to provide a heavy emphasis on spherical projections in descriptive geometry, and topographical drawing.

Until the 1820s in America, the policy of those who

claimed that the Federal government had no right to engage in internal improvements had predominated. But in 1824, under President James Monroe, the advocates of the American System of Political Economy began to take charge. That year, the Supreme Court ruled in *Gibbons v. Ogden* that the Federal government had authority over interstate commerce, including river navigation.

Consequently, Congress passed the General Survey Act, authorizing the President to conduct surveys of routes for roads and canals "of national importance, in a commercial or military point of view, or necessary for the transportation of public mail." A second act appropriated funds for improving navigation on the Ohio and Mississippi rivers, and both tasks were given to the Army Corps of Engineers.

Under President John Quincy Adams, the basis was laid for much of the infrastructure that transformed America into a developed nation. Military engineers supervised the National Road, the construction of canals and lighthouses, the surveying of the American West, river improvements, and the spread of railroads throughout the nation. In 1838, when the anti-infrastructure forces gained the upper hand and Congress forbade the Corps of Engineers from loaning their officers to private development firms, many West Pointers resigned their commissions and used their talents to continue building infrastructure.

In addition to improving transportation, the army engineers also supervised projects such as the Washington Monument, the Library of Congress, the wings and dome of the U.S. Capitol, and New York's Central Park.

ity to recruit and retain the best and brightest program managers, and the opportunity for those managers to keep an active hand in research. Why would anyone want to uproot these highly productive personal and institutional connections?"

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search organization; and research is the lifeblood of the modern military.

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