The Adobe Tower

by Jerry Hall and Loretta Hall

The Fed's Big Stick

The Federal Aid Road Act of 1916, which authorized $75 million in federal-state matching funds over five years, was an important milestone in the evolution of federal funding of highway construction. It was the product of two decades of effort, spearheaded to a significant extent by the Good Roads Movement. Those two decades encompassed the presidency of Theodore Roosevelt, whose motto was "Speak softly and carry a big stick; you will go far." In that spirit, the 1916 Act included a hefty federal stick. Rather than taking the form of a war club, however, the long, slender stick was fitted with a carrot dangling from its end. That enticement, held out before state governments, was $75 million of federal matching funds for road construction over a five-year period.

What kept the carrot out of reach for most of the states was the Act's stipulation that funds would be provided only to states that had an acceptable office to interface with the federal Office of Public Roads (OPR, forerunner to today's Federal Highway Administration) and to administer the state's program. Although they were formally known by various names, these state offices could generically be called highway departments. Of the 37 states that had a highway department in 1916, all but California had to revise their organizations to meet the requirements of the Act.

Having an "acceptable" highway department basically meant meeting the vision of Logan Waller Page, the engineer who headed the OPR from 1905 until his death in 1918. Among the characteristics Page considered essential was to minimize political whims and favoritism for road building by placing an engineer in a responsible position in each state highway department. This would also equip the highway department to develop standards and specifications for road building that counties or road districts would be expected to follow.

Like the previous OPR director, General Roy Stone, Page worked closely with states to develop appropriate structures for their highway departments. Often, this assistance involved helping write state legislation defining the departments and state highway commissions. One example of changes made by states following passage of the 1916 Act was the reorganization of Oregon's highway commission. Formed in 1913, it originally consisted of the governor, the secretary of state, and the state treasurer; in 1917 the membership was changed to citizens who volunteered or were appointed to the commission. A few states emphasized the role of professional engineers. For example, Iowa's highway commission, formed in 1904, consisted of the deans of engineering and agriculture at Iowa State College, and Montana's highway commission, formed in 1913, consisted of the professor of civil engineering at Montana State College, the state engineer, and a governor-appointed engineer who served as chairman.

Working with the states to create state-level highway programs was a challenging task. Not only did states vary widely in their visions for such programs, but some were leery of the entire concept. Michigan, for instance, was one of several states whose constitutions prohibited their participation in works of internal improvement. Such prohibitions were enacted after the Panic of 1837 caused nine states to default on loans they had incurred to finance construction of canals

and railroads. In 1917, Michigan's legislature passed a constitutional amendment allowing the state government to participate in highway construction, making it eligible for federal matching funds. As a result of the Federal Aid Road Act of 1916, "Three states passed constitutional amendments to allow state funding of internal improvements, eighteen others had to strengthen or reorganize, and fifteen had to make less extensive changes," according to historian Bruce E. Seely's article in the July-August 2006 issue of *TR News*. "OPR directly assisted twenty-three states in bringing their highway departments to minimum standards."

Some of the state highway departments had existed for more than twenty years. Massachusetts had formed the first one in 1893. Although it was called the Massachusetts Highway Commission, it functioned as a modern highway department, even to the extent of having its own materials testing laboratory. Foreshadowing the strategy of the 1916 Act, the commission adopted its own version of carrot-on-a-stick: counties could qualify for state road funds by adhering to technical standards and specifications promulgated by the state commissioners. One of the original members of the Massachusetts Highway Commission was Nathaniel Shaler, a Harvard engineering professor who Seely credits with starting "the first university curriculum in highway engineering." In fact, Logan Page, who lobbied Congress for passage of the 1916 Act and became a founding member of the American Association of State Highway Officials (AAHSO), was one of the first students in that program.

The threat of financial sanctions has become a standard technique for promoting federal objectives. Another carrot-and-stick aspect of the Federal Aid Road Act of 1916 was the requirement that the states maintain roads built with federal funds. Inadequate maintenance could result in withholding of future federal highway money. Some more recent applications have been directly related to the construction and operation of safe highways. These include enticing states to pass legislation to reduce impaired driving caused by alcohol or drugs, and to require the use of automotive seatbelts and motorcycle helmets. Others have been somewhat more tangential, such as limiting billboards along Interstate highways, attaining air quality standards, and prohibiting the use of convict labor for highway construction.

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This is the third in a series of articles tracing the development of the Interstate Highway System.