The Lincoln Highway—Part 2

"The world runs on individuals pursuing their self-interests. The great achievements of civilization have not come from government bureaus. Einstein didn't construct his theory under order from a bureaucrat. Henry Ford didn't revolutionize the automobile industry that way." — Milton Friedman

When Dwight Eisenhower was a young Army Lt. Colonel he was a participant in the U.S. Army's first Transcontinental Motor Convoy across the United States on the historic Lincoln Highway, which was the first road across America. The highly publicized 1919 convoy was intended, in part, to dramatize the need for better main highways and continued federal aid. The convoy left the Ellipse south of the White House in Washington D.C. on July 7, 1919, and headed for Gettysburg, Pennsylvania. From there, it followed the Lincoln Highway to San Francisco. Bridges cracked and were rebuilt, vehicles became stuck in mud, and equipment broke, but the convoy was greeted warmly by communities across the country. The convoy reached San Francisco on September 6, 1919.

Dwight D. Eisenhower's experience as a member of the first 1919 Transcontinental Convoy on the Lincoln Highway and his appreciation for the German Autobahn system he gained during World War II led him to initiate support for the Federal Aid Highway Act of 1956 and the establishment of the Interstate Highway System.

The Federal Aid Highway Act of 1956, popularly known as the National Interstate and Defense Highways Act (Public Law 84-627), was enacted on June 29, 1956, when Dwight D. Eisenhower signed the bill into law. With an original authorization of 25 billion dollars for the construction of 41,000 miles of the Interstate Highway System supposedly over a 20-year period, it was the largest public works project in American history through that time.
The money for the Interstate Highway and Defense Highways was handled in a Highway Trust Fund that paid for 90 percent of highway construction costs with the states required to pay the remaining 10 percent. It was expected that the money would be generated through new taxes on fuel, automobiles, trucks, and tires. As a matter of practice, the Federal portion of the cost of the Interstate Highway System has been paid for by taxes on gasoline and diesel fuel.

Eisenhower argued for the highways for the purpose of national defense. In the event of an ground invasion by a foreign power, the U.S. Army would need good highways to be able to transport troops across the country efficiently. Following completion of the highways the cross-country journey took the convoy two months in 1919 was cut down to two weeks. For this reason all Interstate Highways were built to a strict set of federal standards developed by the Bureau of Public Roads and the American Association of State Highway and Transportation Officials (AASHTO). Bridge clearances were set to a minimum of 16 feet to allow for military vehicles to pass freely. A note of interest is that the copyright and trade mark for common interstate highway shield is held by AASHTO. In some states these standards were exceeded, but never reduced if federal funding was to be gained. I know this because I assisted in the design, surveying and construction two sections of Interstates in California (I-10 and I 405) during my tenure with the California Division of Highways. I can still remember the signs at the beginning and end of each project stating that the project was funded with 90% federal funding.

I present this brief history of our Interstate Highway System to contrast the state of automobile travel in 1912. There was no thought of a connected system of roads across the United States. There were no federal or state highway agencies. There were no means or financing highways outside of local communities that would use their property taxes to build and maintain their city streets.

This was the condition when Carl Fisher and Henry Bourne Joy conceived of America’s first transcontinental highway and established the Lincoln Highway Association for the promotion, financing, planning, and construction of the Lincoln Highway, America’s Main Street.

When Cyrus Avery conceived of Route 66 in 1912 he was not envisioning a transcontinental highway but a diagonal corridor of connecting roads that would have one route designation and bring economic benefit to his home state of Oklahoma. (Click here to see Avery’s original plan and history of Route 66).

On the other hand Fisher and Joy envisioned a true transcontinental highway carrying one designation and well-marked connecting New York with San Francisco tying the cities and small towns of Middle-America together.

Once Fisher established the Lincoln Highway Association and began to raise the money for the construction of this transcontinental highway serious planning and route selection came into play.
On July 1, 1913, the association decided to call the coast-to-coast highway the Lincoln Highway, and it was officially incorporated as the Lincoln Highway Association. Henry Joy was elected as president. Carl Fisher, who was elected vice-president, was not present. He had departed with the Indiana Automobile Manufacturers association on a trip to the West Coast. The "Hoosier Tour" was intended, in part, to explore possible routes for the Lincoln Highway. The tour route included Colorado and Kansas. While Fisher tried to distinguish the Hoosier Tour route from the eventual route of the Lincoln Highway, he all but promised the governors of Colorado and Kansas that the highway would pass through their states. They were set up for a big disappointment.

Fisher kept the route of the Lincoln Highway a secret as long as he could because 1) he wanted the nation as a whole to support the highway, not just the states through which it would pass, and 2) he didn't know what the route was. No decision had been made. After Hoosier Tour, the association decided they needed to pick a route.

As far as Joy was concerned, directness was the most important factor. By bypassing many scenic attractions and larger cities along the way, narrow winding roadways and congestion could be avoided.

After weeks of deliberation, Henry Joy presented the route before the annual Conference of Governors in Colorado Springs.
The highway started in Times Square in New York City. It passed through New Jersey, Pennsylvania, Ohio, Indiana, Illinois, Iowa, Nebraska, Wyoming, Utah, Nevada, and California, ending in Lincoln Park in San Francisco. The route did not deviate from a straight path in order to go through larger cities or national parks. It did not touch Kansas or Colorado. Joy's influence was clear.

The governors of Colorado and Kansas were embarrassed for having heartily supported the Hoosier Tour, only to find themselves bypassed. After forceful appeals from Colorado's governor, the association agreed to a dogleg from Big Springs, Nebraska southwest to Denver, and then back to the main highway at Cheyenne. After the route was announced to the public one month later, the decision to include the dogleg would come back to haunt them.

Almost immediately, the Lincoln Highway Association received letters trying to change the route; it politely declined every request. The association learned its lesson. Two years later, it dropped the Denver dogleg from its maps and guides and warned drivers not to be misled by signs in Big Springs pointing them to Denver.

On Friday, October 31, 1913 the San Francisco Examiner ran a report on the dedication of the Lincoln Highway that began:

"The Lincoln Highway, which promises to be a lasting monument to the automobile industry, and one of the greatest developments ever made in this country, will be officially dedicated tonight by every city, town and hamlet between New York and San Francisco. The widespread enthusiasm with which the highway project has been received throughout the country is the best indication of its ultimate success and the dedication celebrations held throughout the United States to-day will officially start the campaign for construction of the highway."

The construction of the Lincoln Highway involved no large public works program as did the paving of Route 66. There was no Federal Highway Administration. There was no Public Works Authority (PWA) or Works Projects Administration (WPA). The original Lincoln Highway was not paved with concrete or asphalt. It was a graded gravel road. In some places the gravel was covered with oil to make it more resistant to the effects of the weather.

One of the greater contributions to highway development was the well-publicized and promoted U.S. Army Transcontinental Motor Convoy in 1919.

The 1919 Motor Transport Corps convoy was a "Truck Train" (convoy) of the US Army Motor Transport Corps that drove over 3,000 miles from Washington, D.C., to Oakland, California, and then ferried to San Francisco. In addition to 230 road incidents (stops for adjustments, extrications, breakdowns, & accidents) resulting in 9 vehicles retiring, the convoy of 24 expeditionary officers, 15 War Department staff observation officers, and 258 enlisted men of which 21 were injured en route and did not complete the trip.
Although some were really competent drivers by the end, the majority of soldiers were raw recruits with little or no military training; and except for the Motor Supply Company E commander (1st Lt Daniel H. Martin), troop officers had meager knowledge of handling men in the field.

One of the participants in the convoy was the young Lt. Col. Dwight Eisenhower and it was so memorable that he devoted a chapter to it ("Through Darkest America With Truck and Tank") in his 1967 book "At Ease: Stories I Tell to Friends". That 1919 experience and his exposure to the autobahn network in Germany in the 1940s, found expression in 1954 when he announced his "Grand Plan" for highways. The resulting 1956 legislation created the Highway Trust Fund that accelerated construction of the Interstate Highway System.

The convoy broke and repaired 88 wooden bridges (14 in Wyoming alone) and practically all of the roadways were unpaved from Illinois through Nevada. The convoy logged 3,250 miles in 574 hours (24 days) and 6 "rest days” without convoy travel were used. Convoy delays required extra encampments and, at Oakland, California, the convoy was 7 days behind schedule so they ferried to San Francisco the next morning on the last travel day.

Fisher's idea that the auto industry and private contributions could pay for the highway was abandoned early, and while the LHA did help finance a few short sections or roadway, the contributions of LHA founders and members were used primarily for publicity and promotion to encourage travel on the Highway, and for lobbying of officials at all levels for support construction by governments.

It seems Henry Ford’s refusal to join the LHA due his belief that the government should finance highways such as the Lincoln Highway was ringing true.

Today the construction and maintenance of our highways are financed by taxes. These taxes are usually in the form of federal, state and local taxes on fuel, license fees and in some cases tolls on bridges and toll roads. The first federal gas tax was imposed in 1956 after the enactment of the Federal Aid Highway Act of 1956.
This tax began at three cents per gallon and over the years has risen to eighteen cents. There are those who believe this is an unconstitutional tax as the federal government did not have the constitutional authority to levy a national tax on fuel for the construction of highways. However, Article 1, Section 8 provides Congress the authority to levy taxes for post office and post roads. This authority has been deemed to include the construction of the Interstate Highway System and has been upheld by the United States Supreme Court.

While the Lincoln Highway Association did not have sufficient funds to sponsor large sections of the road, starting in 1914 it did sponsor "Seedling Mile" projects. According to the 1924 LHA Guide the Seedling Miles were intended "to demonstrate the desirability of this permanent type of road construction" to rally public support for government-backed construction. The LHA convinced industry of their self-interest and was able to arrange donations of materials from the Portland Cement Association.

The first Seedling Mile was built in 1914 west of Malta, Illinois, but after years of experience the LHA began a design effort for a road section that could handle traffic 20 years into the future. Seventeen highway experts met between December 1920 and February 1921, and specified:

- A right-of-way 110 feet in width
- A concrete road bed 40 feet wide and 10 inches thick to support loads of 8,000 pounds per wheel
- Curves with a minimum radius of 1,000 feet, banked for 35 mph with guard rails at embankments
- No grade crossings or advertising signs
- A footpath for pedestrians

The most famous Seedling Mile built to these specifications was the 1.3-mile "Ideal Section" between Dyer and Schererville in Lake County, Indiana (Near the Illinois State Line) with federal, state, and county funds, and a $130,000 contribution by the United States Rubber Company president and LHA founder C.B. Seger. The Ideal Section was built during 1922 and 1923. Magazines and newspapers called the Ideal Section a vision of the future, and highway officials from across the country visited and wrote technical papers that circulated both in the United States and overseas. The Ideal Section is still in use to this day, and has worn so well that a driver would not notice it unless the marker near the road brought it to their attention.
While this “Ideal Section” was never incorporated in the construction of the Lincoln Highway or Route 66 it did set the groundwork for future highway construction standards in the United States by AASHTO, the federal government and numerous state highway departments.

In ten years, between 1915 and 1925, the United States went from having one named highway to having an unorganized and confusing system of named highways. They were primarily marked by painted colored bands on telephone poles. Sometimes, where several named highways shared a route, almost an entire pole would be striped in various colors. It was time for an organized national system of highways to be formed. This would be a system of numbered highways.

The Lincoln Highway Association was all for a numbered highway system, as long as one number corresponded to the Lincoln Highway and the names stayed with the roads. It didn't want to see its highway chopped up into little numbered bits. In March 1925, AASHTO started planning a federal highway system. All named roads were ignored in their planning. That November, the secretary of agriculture approved AASHTO's plan, which set up the now-familiar U.S. highway system.

Major east-west routes would be numbered in multiples of ten, from U.S. 10 across the north to U.S. 90 across the south. Major north-south routes would end in 1 or 5, from U.S. 1 between Maine and Florida to U.S. 101 between Washington and California. The Lincoln Highway was broken up into U.S. 1, U.S. 30 (including U.S. 30N and U.S. 30S), U.S. 530, U.S. 40, and U.S. 50. Nearly two-thirds of the Lincoln's length was designated U.S. 30, which began in Atlantic City, New Jersey and ended in Astoria, Oregon. The AASHO also adopted a standard set of road signs and markers, and to avoid confusion, all markers of all named roads would have to be taken down.

While the other named highways were quickly forgotten, the Lincoln Highway was not. A whole generation of Americans, exposed to the well-organized publicity of the Lincoln Highway Association, kept the Lincoln Highway alive long after its official significance was gone. It was even the backdrop for an NBC radio show on Saturday mornings.

On March 23, 1940, NBC Radio introduced a Saturday morning dramatic show called Lincoln Highway sponsored by Shinola Polish, which featured stories of life along the route. The show's introduction contained an error in noting the Lincoln Highway was identical to U.S. 30 and ended in Portland. Many of the era's stars including Ethel Barrymore, Joe E. Brown, Claude Rains, Burgess Meredith, and Joan Bennett made appearances on the show, which had an audience of more than 8 million before it left the air in 1942. A rare surviving recording of the show's theme song, "When You Travel the Great Lincoln Highway", survives online.
By the late 1940s the Lincoln Highway started to fade away as a new generation of Americans was born, one which had grown up with paved roads and a numbered highway system. Most Baby Boomers, and even more of their children, have never heard of the Lincoln Highway.

On October 29, 2008, PBS premiered the new documentary film, *A Ride Along the Lincoln Highway*, produced by Rick Sebak with WQED in Pittsburgh, Pennsylvania. The Lincoln Highway Association awarded Sebak its first "Gregory M. Franzwa Award" at the 2009 LHA conference. The Franzwa Award is given to individuals who have made a significant contribution to the promotion of the Lincoln Highway, and is named in honor of Franzwa who was a founding member and the first president of the revitalized Lincoln Highway Association, in 1992.

Interest in the Lincoln Highway dropped considerably. The association ceased activity at the end of 1927. Its last major activity was to mark the highway not as a route from one destination to another, but as a memorial to Abraham Lincoln. This last promotional activity of the LHA took place on September 1, 1928, when at 1:00 p.m. groups of Boy Scouts placed approximately 3,000 concrete markers, at an average of about one per mile, at sites along the route to officially mark and dedicate it to the memory of Abraham Lincoln. Less commonly known is that 4,000 metal signs for urban areas were also erected then.

The markers were placed on the outer edge of the right of way at major and minor crossroads, and at reassuring intervals along uninterrupted segments. Each concrete post carried the Lincoln Highway insignia, directional arrow, and a bronze medallion with Lincoln's bust and stating "This Highway Dedicated to Abraham Lincoln".

The Lincoln Highway was not yet the imagined "rock highway" from coast to coast when the LHA ceased operating, as there were many segments that had still not been paved. Some parts were because of reroutings, such as a dispute in the early 1920s with Utah officials that forced the LHA to change routes in western Utah and eastern Nevada. Construction was underway on the final unpaved 42-mile segment by the 25th anniversary of the Lincoln Highway in 1938.

However, not everyone has forgotten. The *Lincoln Highway Association* was reactivated in 1992, dedicated to preserving the highway. With the help of the association, the Lincoln Highway will always stay alive.

Carl Fisher and Henry Bourne Joy had a vision for a coast to coast highway. While their schemes for the private financing such a project fell far short their vision was realized.
The Lincoln Highway was built and still exists today. It along with Route 66 brought the freedom of travel to American families, the freedom to see the spectacular scenery of this nation along with the ability to transport produce from farm to market creating the greatest food producing nation in the world. The next time you take a trip to grandma’s house for Thanksgiving dinner or visit the Grand Canyon or Yellowstone Park think of the men of vision like Carl Fisher, Henry Bourne Joy, and Cyrus Avery along with the engineers, surveyors, and construction workers who turned these visions into reality.

In my next edition of the newsletter I will cover my personal experiences while traveling the Lincoln Highway from York Pennsylvania to Sacramento, California.

You can view a complete gallery of all the photos I took while traveling the Lincoln Highway by clicking here. When you view one of the photos and it has a hyperlink (shown in red) under the caption you can click on it to open a Google Map showing the exact location where the photo was taken. When traveling, I always use a GPS attachment on my Nikon cameras so I can document the position of each photo.

I have added an archive of all past editions of the Aperture. You can access this archive by clicking here.

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