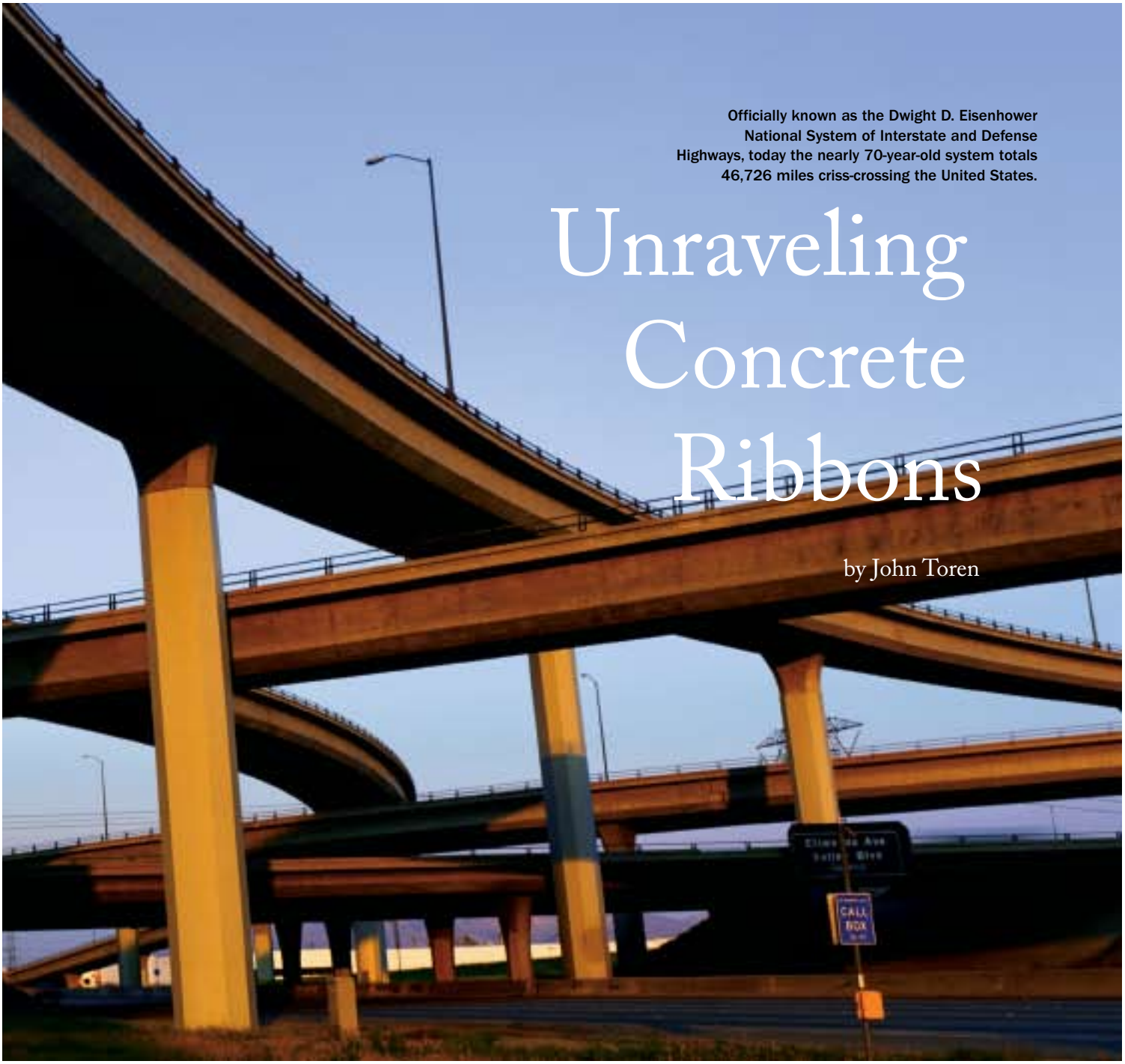


Officially known as the Dwight D. Eisenhower National System of Interstate and Defense Highways, today the nearly 70-year-old system totals 46,726 miles criss-crossing the United States.

JOSEPH SOHM/VISIONS OF AMERICA/CORBIS

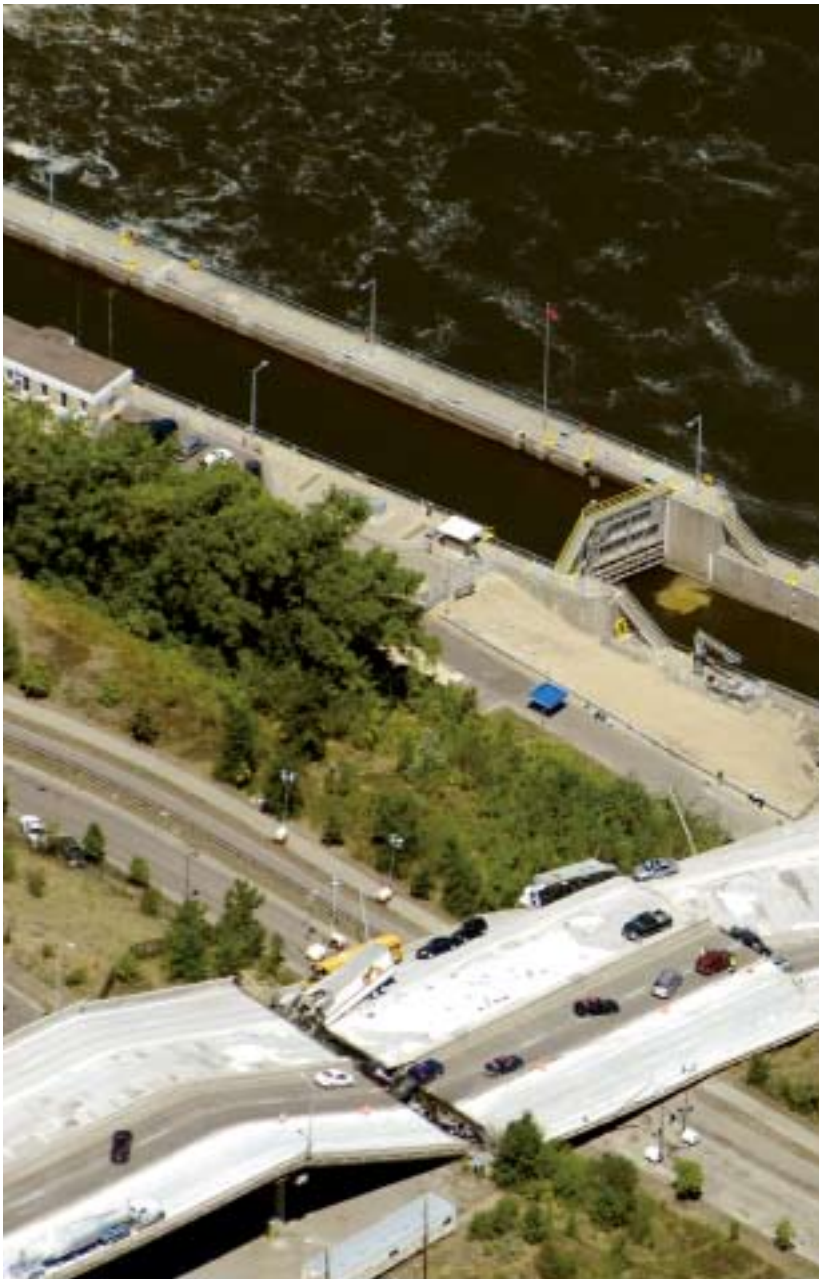
Unraveling Concrete Ribbons

by John Toren

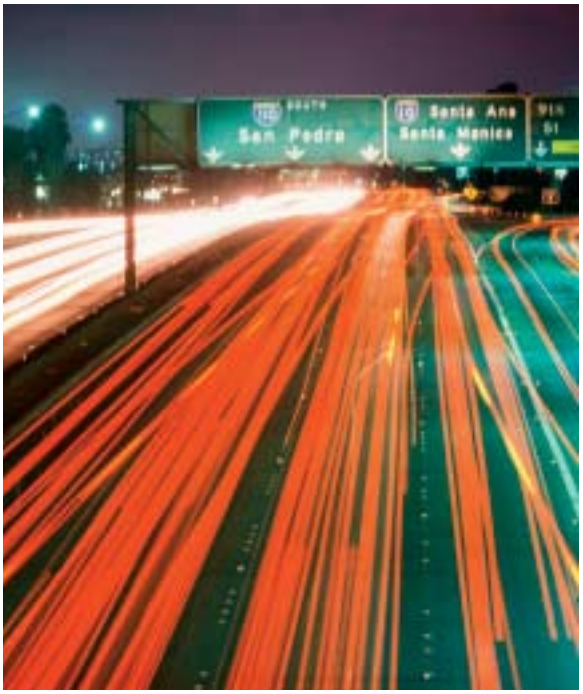
An influential survey recently identified the 1956 Interstate Highway Act as having a more profound impact on the American city than any other piece of legislation in the past 50 years. Yet America's love affair with the automobile long predates the passage of that act, and so do the problems we associate with the internal combustion engine.

In the early years of the 20th century, cars served largely as recreational vehicles for the well-to-do. At the time most cross-country transport of both passengers and freight was handled by rail, and the roads these motorists used had been built by local governments to move farm produce to market. Very few were paved. By 1910, however, almost 500,000 cars were traveling the streets and highways of the United States and the clamor was rising for a federally funded system.

In 1916 Congress passed the Federal-Aid Highway Act endorsing such a system and authorizing $75 million—to be matched dollar for dollar by the individual states—to be directed yearly to that purpose. In 1921 the Federal Aid Highway System was established, through which all federal funds for highway construction were to be funneled. In the course of the following decade 17 million new vehicles hit the road and annual expenditure on roads doubled. Yet the focus remained on rural highways. It was not until 1928 that Congress authorized highway funds for use by municipalities exceeding 2,500 inhabitants.



Right: In August 2007 the Interstate 35W bridge crossing the Mississippi River in downtown Minneapolis collapsed during rush hour, leaving 13 dead and more than 100 injured, including students in a school bus.



Following the stock market crash of 1929, politicians and bureaucrats set aside all thoughts of arterial systems of travel and turned to the more immediate task of keeping people employed. The federal government dropped many restrictions on the use of its highway funds, including the 50-50 matching requirement. Yet many engineers and politicians, some of them influenced by Germany's Autobahn, remained entranced by the idea of long-distance, high-speed automobile travel, and by 1940 the Pennsylvania Turnpike, the Merritt Parkway in Connecticut, and other "superhighways" had been completed. On Dec. 30, 1940, the nation's first limited-access *urban* superhighway, the Pasadena Freeway, was opened in California amid much fanfare.

Cars and woes multiply

But with more cars and more roads came more—and new—problems. In 1939 Thomas H. MacDonald (then chief of the Bureau of Public Roads) and his top aide, Herbert S. Fairbank, submitted a landmark report to Congress, "Toll Roads and Free Roads," in which they described what was taking place. The automobile, they wrote, had facilitated "the outward transfer of homes of citizens with adequate income from the inner city to the suburbs." As a result, "the former homes of the transferred population have descended by stages to lower and lower income groups ... occupied by the humblest citizens, they fringe the business district and form the city's slums—a blight near its very core." Meanwhile, the commuter traffic into and out of the city generated interminable snarls on roads that had been designed to handle much lighter loads.

HIROYUKI MATSUMOTO/GETTY IMAGES; CRAIG LASSIG/EPA/CORBIS; LAKE COUNTY MUSEUM/CORBIS

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In their report Fairbank and MacDonald proposed that a network of inter-regional limited-access highways be developed. They rejected the idea of tolls as financially dicey and politically unworkable, especially in western states. Their enthusiasm for limited-access freeways was echoed by city planners. "Superhighways," wrote the head of the Chicago Regional Planning Association in 1939, with unintended irony, "offer the opportunity to protect the regional value of the central business area." They would also, he suggested, "enhance the values of decadent areas and help restore them to a tax paying condition."

President Franklin D. Roosevelt had no interest in spending federal funds for inner-city highways, however. With war looming, he appointed a commission to study highways in their relation to national defense, and in the succeeding years several toothless federal highway bills were passed by Congress. Following the war Congress did implement a new highway program, but the 50-50 federal-state cost-sharing plan was not popular. Road repair had been neglected during the war and many states weren't interested in devoting precious funds to a new building program. As one member of the Louisiana Highway Department put it, "The urgent need is not for new roads but merely for funds with which to surface and maintain the existing network of farm to market roads."

Eisenhower takes command

By 1950 more than 49 million vehicles were traveling U.S. roads, most of which had been designed and built decades earlier. The GI Bill had made it easy for returning soldiers to buy or build a home, and many of them chose to settle in the suburbs that were blossoming to meet the need. President Harry S. Truman was still reluctant to increase highway spending, however. And his successor, Dwight D. Eisenhower, didn't fare much better. And after three years in office, Eisenhower's appointees were still haggling over such basic questions as whether the system should be toll or free, whether

Increasing traffic is accelerating the wear on an aging highway system.

DAVID BUTOW/CORBIS

state or federal officials should determine the routes, whether the cities should be responsible for the urban sections, and whether it was advisable to link gasoline taxes to the repayment of the bonds associated with the project. When the proposal that Eisenhower's aides finally submitted to Congress in 1955 failed, the president decided not to call a special session, because, as he put it, "it could be at the cost of the sanity of one man named Eisenhower."

In the spring of 1956 a bill was finally devised that incorporated long-established goals, required few significant sacrifices from any particular special-interest group, and set the most contentious issues aside "for further Congressional study." The bill's proponents had shrewdly produced a document highlighting the many extensive segments of the system that would run near or through urban areas—more than 50 percent of the system's total cost (a fact of which Eisenhower himself was blithely unaware). Suddenly congressmen from heavily populated areas could see the immediate benefits their districts would receive at little cost to the localities themselves. Two other attractive features were that the federal government would pick up 90 percent of the tab, rather than the traditional 50 percent, and that the program's funding would be linked to gasoline taxes, thus remaining outside the normal management of the federal budget.

The Federal-Aid Highway Act of 1956 authorized the expenditure of $25 billion from a dedicated highway trust for the construction of a 41,000-mile system of freeways. The program was to be completed in 16 years, with an estimated cost of $38 billion. In fact it took more than 40 years to complete, and cost $130,000 billion. An amount of land equal to the state of Delaware was purchased to accommodate the network. Grandiose in conception and marvelous in execution, the Interstate highway system soon became the largest public works project in the history of the world.

Engineers plan cities

The goals that the program set for the engineers were simple—alleviate congestion and improve traffic flow and safety. Such pragmatism had drawbacks, however. Long-established secondary roads were often abruptly cut off, and hitherto pristine river valleys became echoing traffic corridors. Because the criteria used for choosing a route were largely economic, urban freeways were often routed through lower-class neighborhoods where property was cheap. "We didn't realize that poor people might not want to move," one engineer later admitted, "even if we thought it was for their own good." The process of "urban renewal" had been initiated a decade earlier by the Housing Act of 1949, and exemplified by New York City urban planner Robert Moses, who defended his expressway through the Bronx in the following

terms: "When you operate in an overbuilt metropolis, you have to hack your way with a meat ax."

The routes selected were often through predominantly black neighborhoods (though at the time ten years earlier when most of the decisions hade been made, many of them were still predominantly white.) In any case, blacks often lacked the political wherewithal to challenge the sudden invasion of highway construction crews.

In New Orleans, for example, Interstate 10 was routed through the heart of a vibrant black neighborhood centered on Claiborne Avenue, which also happened to be lined with one of the finest stands of mature oaks in America. The trees were summarily felled and a 25-foot elevated concrete freeway corridor was built where the oaks had once stood. The street life in the vicinity of the freeway declined immediately, businesses moved away, and the neighborhood never recovered. On the other hand, a proposal to "upgrade" the Vieux Carré elevated expressway, situated in a more fashionable and historic part of the same city, into an Interstate, was opposed by citizens groups, and the project was eventually scraped.

Similar disputes arose in Boston, Memphis, Portland, and other cities throughout the United States. The San Francisco city council simply refused to allow the completion of the Embarcadero Freeway, and eventually built its own rapid transit system using local funds.

The Return of Mass Transit?

Opposition to urban freeway expansion reached a new level of sophistication when activists shifted their attention from halting specific projects to challenging the financing of the system itself. The Freeway legislation has created a sacrosanct Highway Trust which was fuelled by a gasoline tax, in effect providing a steady stream of federal funds for freeway construction while leaving urban mass transit authorities to fend for themselves. Defenders of the Trust's inviolability argued that it would be unfair to require motorists throughout the US who paid gas taxes to subsidize urban transit for a few major cities. Proponents of opening the Highway Trust Fund pointed out that further development of mass transit would alleviate traffic congestion on the freeways and keep the air cleaner, which would be of benefit to everyone.

Finally, in 1976, legislation was passed allowing cities to use a portion of federally allocated highway funds for mass transit projects. But such diversions could only be made of funds dedicated to future projects, not to the freeway segments that were already underway.

Completing the System

In 1986, when a five-mile section of Interstate 80 was opened in Salt Lake City, making it the first of the trans-continental freeways to be completed, the event had none of the fanfare that had accompanied the completion of the trans-continental railroad more than a century earlier. Many Americans had become blasé about the system, if not openly resentful of its intrusions. Yet they had also embraced it wholeheartedly, and if success is to be measured by usage, the freeways had proven themselves to be a resounding success. Ninety-seven percent of the system had been completed by 1986, and although it amounted to only 1% of America's highway system, it carried 20% of its traffic, and 50% of the miles logged by trucks.

The Interstate freeway system did not solve the urban ills for which it was designed, but it did facilitate the development of an entirely new concept of the city, with rings of suburban neighborhoods and clusters of businesses, shops, and services to tend to the needs of their inhabitants. These sprawling and sometimes ugly concretions are frequently lambasted by city planners and critics of America's untiring infatuation with grassy yards and convenient parking. But an *untiring* infatuation may eventually be described as a true love. And one thing that many Americans truly love is open space and the personal mobility and freedom provided by their cars. As Joseph Coughlin, director of the MIT Center for Transportation Studies, puts it, "Transportation policies are made every day as people put their keys in the ignition. The independent variable is not technology but lifestyle. For transportation to change, the nature of home, work, and family has to change."

As the trees mature, the store-fronts shed their garish advertisements, and the municipalities themselves build new pedestrian-friendly, low-rise communities for their aging and retired citizens, America is slowly learning to come to terms with its rising population and its ever-expanding fleet of automobiles. As the freeway system turns 50, there

is even a glimmer of recognition that the massive federal subsidies and high engineering standards that made that system such a success, might also be prudently directed toward new systems designed to beautify and sustain our environment and make our urban spaces more livable.

The Open Road

In the nineteenth century Walt Whitman could write, "Strong and content I travel the open road," but he was traveling on foot, and he probably didn't get very far. That same urge to travel, to be off into open spaces, to be *on the move*, remains engrained in the American character, and the Interstate Freeway system—matters of ecology and urban planning aside—stands as a monument to that perhaps distinctly American urge. Charles Kuralt once remarked that with the arrival of the Interstate, "You can drive from coast to coast without seeing anything at all," but freeway driving can, in fact, be a glorious experience. Europe has its high speed freeways too, but as foreign observers have often noted, the effect just isn't the same. "In Europe during one day's travel," says a British observer, "you can pass through six countries and as many languages. This is not bigness, this is a number of little-nesses bunched together."

America's bigness is certainly one of its most notable features, and the freeway system has made that bigness more accessible that ever. The novelist Larry McMurtry compares the freeways to the great rivers of early American exploration—The Hudson, the Mississippi, The Rio Grande, etc—in that they traverse remarkable distances, while hardly touching the lives of people living only a few miles away. Drive up the valley of the Virgin River on the Nevada-Arizona border on I-10, or down the mountains in Colorado from the Eisenhower tunnel on I-70 toward Glenwood Springs, and the beauty and grace of the engineering falls into harmony with the spectacle of the rugged landscape. And even along the dullest stretches of I-90 as it passes through South Dakota, one looks forward to the appearance of the Missouri from the midst of the grasslands, or the distant profile of a butte made famous during the Indian Wars.

The Freeway Myths

Defense considerations often play a part in policy decisions about transportation, and the Department of Defense had a hand in choosing the routes which Thomas H. McDonald and Peter B. Fleming announced in 1947. Eisenhower was well aware of the weaknesses of railroads for troop transport in time of war, and of the importance of the speedy evacuation of citizens during nuclear attack. But such considerations played little role in the debate about freeway construction and funding. The primary purpose identified by congressmen in defending the vast expenditure required for the system was simply to alleviate urban traffic congestion. Underpasses for the Interstate system were specified to be 14 feet—even though the movement of military equipment requires 17-foot underpasses. A smaller and entirely different system, the Strategic Highway Corridor Network, was build concommitantly with the Interstate system, to connect defense facilities to the freeway network.

The Freeways Killed the Railroads?

The American railroad industry is alive and well. It hauls more than double the freight that it did fifty years ago, and 50% more freight than trucks (though when measured by value rather than weight, only 14 % of all freight travels by rail). On the other hand, rail *passenger* service last turned a peace-time profit in 1936, tweny years before the freeway system became a reality.

Interstate Trivia

Longest Interstate: I-90 Seattle to Boston (3,020.54 miles)
Shortest (2-digit) Interstate: I-73 Emery to Greensboro, NC (12.27)
State with most interstate mileage Texas (3,233.45 miles)
State with most interstate routes New York (29)
Most Costly Route I-95 Miami FL to Houlton, ME