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Eisenhower and the Interstate

Abstract

By passing the Federal Highway Act of 1956, 34th U.S. President Dwight D. Eisenhower would go down in history as the father of the American Interstate Highway System. It was Ike's determination to execute his 'Grand Plan' for a modernized road network that initiated the monumental effort to produce the roads we as Americans use every day. However, today's highway network is a far cry from what Ike had in mind when he first envisioned the plan. Congressional dissent and special interests did much to undermine the success of Ike's 'Grand Plan,' forcing him to compromise significantly on the issue. Through an analysis of Ike's motivations, actions, and rhetoric surrounding the Interstate Highway effort as president of the United States from 1953-1960, I will demonstrate what Ike thought of the road network he initiated, and why it fell short of his greatest expectations.

Keywords

Dwight Eisenhower, Federal-aid Highway Act of 1956, Traffic safety, Interstate Highway System

Disciplines

Policy History, Theory, and Methods | Political History | Transportation | United States History

Comments

Written for HIST 412: Eisenhower & His Times

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Eisenhower and the Interstate

HIST 412: Eisenhower & His Times

3 December, 2021

Senior Thesis

Brian Berry

Honor Code: I affirm that I have upheld the highest principles of honesty and integrity in my academic work and have not witnessed a violation of the honor code.

Signature:	X
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ABSTRACT:

By passing the Federal Highway Act of 1956, 34th U.S. President Dwight D. Eisenhower would go down in history as the father of the American Interstate Highway System. It was Ike's determination to push his 'Grand Plan' for a modernized road network that set in motion the monumental effort to produce the roads we as Americans use every day. However, today's highway network is a far cry from what Ike had in mind when he first envisioned the plan. Congressional dissent and special interests did much to undermine the success of Ike's 'Grand Plan,' which forced him to compromise significantly on the issue. Through an analysis of Ike's motivations, actions, and rhetoric surrounding the Interstate Highway effort as president of the United States from 1953-1960, I will demonstrate what Ike thought of the road network he initiated, and why it fell short of his greatest expectations.

If you live in America, it is close to impossible to envision a life without easy access to a network of interstate highways. No matter who you are or where you live, you have probably driven on at least one stretch of the 46,876 mile Interstate Highway System that covers the nation. Some roads span nearly the entire stretch of the country, like Interstate 90, which runs from Boston to Seattle. Others can barely be seen on a map of the continental U.S., like the 12 mile stretch from Greensboro to Emery, North Carolina, called Interstate 73. Big and small, each road taps into a gargantuan system that binds our nation together, figuratively and literally.

For better or for worse, the Interstate Highway System has profound impacts on our way of life. Millions of Americans use these roads every day to commute to work, visit relatives, access vacation destinations, run errands, or even simply take their kids to school. Today's consumer culture that has grown accustomed to lightning fast shipping times of a week or less would be a complete impossibility without this infrastructure. Because almost every aspect of our life--from what we do, to who we see, to where we are, and where we are going to be--is affected by these roads, it is easy for the average American to grasp their significance. What is not as apparent to the average American, however, is how this system--formally known as The Dwight D. Eisenhower National System of Interstate and Defense Highways--came to be, and what the story of its creation tells about the man who's name it bears.

The Interstate Highway System, set in motion by the Federal-aid Highway Act of 1956, was the culmination of President Dwight D. Eisenhower's sustained effort to construct, "a properly articulated system that solves the problems of speedy, safe, transcontinental travel - intercity communication - access highways - and farm-to-market movement - metropolitan area

¹ D. A. Pfeiffer, "Ike's Interstates at 50: Anniversary of the Highway System Recalls Eisenhower's Role as Catalyst," *Prologue Magazine* 38, No. 2 (2006), n.p.
² Ibid.

congestion - bottlenecks - and parking."³ The act authorized \$25 billion for twelve years to accelerate construction of a National System of Interstate and Defense Highways that had been set in motion years earlier, and required that the interstate highways be built with the capability of handling traffic projected for 1972--the date by which construction of the system was to be completed.⁴

Scholarly opinion has been largely positive towards the Interstate Highway System.

Some have gone as far as to say that the U.S. Interstate Highways System was, "the best investment a nation ever made." And, while that contention is not widely accepted, most would agree with historian Tom Lewis, who believes that the Federal-aid Highway Act of 1956 takes its place, "beside the Civil Rights Act of 1964 as two of the most important domestic federal measures of the second half of the twentieth century."

The Interstate Highway System was popular from the start.⁷ However, when comparing both Ike's initial goals for the project and his broader principles of governance with the outcomes produced by the legislative action, one wonders if he would assess his principal domestic legacy so flatteringly. For a man with conservative leanings on issues like states rights and fiscal policy, it is surprising that a series of Federal-aid Highway Acts issued, amended, and ultimately approved under the Eisenhower administration between 1954 and 1960 produced "the most massive public works project in American history," almost entirely paid for and coordinated by

³ Address of Vice President Richard Nixon to the Governors Conference Lake George, New York July 12, 1954, Federal Highway Administration (2017), https://www.fhwa.dot.gov/infrastructure/rw96m.cfm.

⁴ Tom Lewis, *Divided Highways: Building the Interstate Highways, Transforming American Life*, (Ithaca: Cornell University Press, 1997), p. 121.

⁵ Wendell Cox and Jean Love, "40 Years of the US Interstate Highway System: An Analysis The Best Investment A Nation Ever Made," American Highway Users Alliance (June 1996): Executive Summary.

⁶ Tom Lewis, *Divided Highways*, p. ix.

⁷ Richard F. Weingroff, "Chapter 2: A Crusade for Safety," in *President Dwight D. Eisenhower and the Federal Role in Highway Safety* (United States Federal Highway Administration, 2017): n.p; Tom Lewis, *Divided Highways*, p. 144.

the Federal Government.⁸ In order to understand how and why events developed in this way, one must understand the motivations behind Ike's decision to construct a better highway system, and the factors at play before and during his effort to do so. Ultimately the legislation that produced the highway system can be attributed to his proclivity to delegate important decisions to trusted members of his administration, his willingness to compromise for the sake of the country, and his unwavering conviction that America needed better roads, and needed them fast.

When Dwight Eisenhower first announced his decision to construct a more complete and connected network of roads, it probably did not come as a surprise to many. Ever since the first Federal-aid Highway Act was enacted on July 11, 1916, a coordinated federal-state effort had been underway to improve the nation's roads. The popularity of the automobile at the start of the 20th century, particularly after Henry Ford introduced the low-priced Model T in 1908, had created a transportation boom that necessitated better driving conditions. At the time, the majority of the roadways in America were governed by "terrain, existing indian trails, cattle trails, (and) arbitrary section lines" that were "designed largely for local movement at low speeds of one or two horsepower. The 1916 Act was the first of its kind aimed at improving these conditions, and did so by allocating federal funds to subsidize road-building efforts undertaken by the state governments. The states, aware of the demand--and indeed desperate need--for safer, more robust roads, quickly got on board with this action. By the following year, every state

⁸ Jean Edward Smith, "Chapter 28: Electing a President" in *Lucius D. Clay: an American Life* (New York City: Henry Holt, 1990), n.p.

⁹ Richard F. Weingroff, "From 1916 to 1939: The Federal-State Partnership at Work," Public Roads 60, no. 1, Federal Highway Administration (1996), n.p.

¹⁰ Address of Vice President Richard Nixon to the Governors Conference Lake George.

¹¹ Richard Weingroff, "From 1916 to 1939," n.p.

in the U.S. had a highway agency dedicated to acquiring, apportioning, and directing federal funds.¹²

For the next three decades, the federal government, state governments, private industries, and citizens of the United States increasingly perceived the need for a more interconnected and streamlined system of roads. The outbreak of World War I, along with the legislation's small appropriation and its limit on federal funding to \$10,000 per mile, hampered the proper implementation of the 1916 Act. 13 It soon became clear that the federal government would have to implement more robust measures to accommodate the exponentially increasing demand for more roads of better quality. Such was the climate from which the Federal-Aid Highway Act of 1921 emerged. The act doubled the limit of federal participation in road costs per mile from the 1916 measure. 14 But not even this was enough to keep up with the blinding increase in the number of drivers on American roads. In 1921, there were 10.5 million motor vehicles registered in the United States. By the end of the decade, this number more than doubled, with 26.5 million drivers actively using the roads. 15 This boom coincided with, and essentially necessitated, "the great highway boom." This term describes an explosion in the production of new road networks "that began in 1921, continued unabated through the Great Depression, (and) came to an end amidst the mobilization for the Second World War."16

The 1921 Act had successfully accomplished its purpose to get portions of the federal-aid system in the greatest disrepair up to par with the rest of the system. ¹⁷ By 1929 contractors had improved 90 percent of the federal-aid system, or about 170k miles of roads. ¹⁸ Soon however,

¹² Ibid.

¹³ Ibid.

¹⁴ D. A. Pfeiffer, "Ike's Interstates at 50," n.p; United States Federal Highway Administration, *America's highways*, 1776-1976. U.S. Dept. of Transportation (Washington D.C: U.S. GPO, 1977), p. 113.

¹⁵ Ibid

¹⁶ U.S. Highway Administration, *America's Highways*, p. 147.

¹⁷ D. A. Pfeiffer, "Ike's Interstates at 50."

¹⁸ U.S. Highway Administration, *America's Highways*, p. 113.

deficiencies in the level of funds, construction methods, and restrictions on road construction of all but rural roads rendered the 1921 Act obsolete. As motor vehicle manufacturers continued to increase production year after year, the driving public demanded more roads with greater capabilities and connectivity. Congress understood this. It responded with the Hayden-Cartwright Act of 1934, which eliminated the restriction of federal fund application for all roads other than rural. 19 Thereafter, the states enlarged their federal-aid systems to earmark funds for both extension of federal-aid routes into and through their major cities, and for construction of entirely new routes within suburban areas. More importantly, the Hayden-Cartwright Act allowed the states to divert funds to an area of increasing interest -- highway systems connecting rural populations.²⁰ Whereas previously the main efforts of federal road legislation was focused on improving previously existing roads, the 1934 Act acknowledged that this was not enough. Existing roads were all too often narrow and crooked, making them unsafe for high speed travel. The Hayden-Cartwright Act shifted federal and state focus away from these existing roads and onto the construction of new roads that were specifically designated for high speed travel over long distances.²¹ The highway effort was underway.²²

¹⁹ America's Highways, p. 156.

²⁰ Ibid.

²¹ U.S. Highway Administration, *America's Highways*, p. *126*; Bruce Edsall Seely, *Building the American Highway System: Engineers as Policy Makers* (Philadelphia: Temple University Press, 1987), p. 235.

²² The Hayden-Cartwright Act is rarely recognized as a significant development in the creation of the Federal Highway system. It is not mentioned anywhere by name in either Mark Rose's *Interstate: Express Highway Politics* or Tom Lewis' *Divided Highways* - both considered foundational works on the scholarship of the Interstate Highway System. Indeed, it did not focus on highway traffic into and out of major cities, and did not promote construction of any highways spanning across multiple states. However, under the act, states received a major increase in federal funds directly dedicated to the highway effort, and Section 12 of the bill penalized states that diverted highway user tax revenues to non-highway purposes by withholding up to one-third of their annual highway apportionment - a stipulation that would have major effects on highway construction effort for years to come. To learn more about the Hayden Cartwright Act and its effects, see United States Highway Administration, *America's Highways*, p. 128; "1934 Hayden-Cartwright Act," *Eno Center for Transportation* (11 September, 2015), n.p; Bruce Edsall Seely, *Building the American Highway System*, p. 235.

Although the Hayden-Cartwright Act made great strides in the emergence of a comprehensive American highway network, the Federal-Aid Highway Act of 1944 is more commonly cited as the foundational legislation for the Interstate Highway System.²³ The Act was formed when federal road planners proposed the construction of a single integrated Interstate Highway System, with "common design standards and limited access, bypassing congested small-town America and allowing cars and trucks to move faster and farther."²⁴ The resulting legislation specifically earmarked \$125 million annually for each year from 1945 to 1948 for the construction of urban roads and highways. It also authorized a limited 40,000-mile network of roads spanning across multiple states--thereby establishing the National System of Interstate Highways.²⁵ Indeed, the 1944 Act was a significant step toward the eventual construction of the Interstate Highway System. However, the act was passed without any provision for construction funds, resulting in a bill that was conceptually ground-breaking but practically ineffectual. It would not be until The Federal-Aid Highway Act of 1952 that funds would actually be dedicated to the system. Even then, the allotted amount was not nearly enough to support the massive undertaking. The federal government only put up \$25 million for the system on a 50-50 matching basis with the states.²⁶

The ever growing number of affordable, fast moving automobiles that began in the 1910s and continued through the following four decades necessitated a more comprehensive network of roads. The federal and state governments in the United States attempted to meet this demand with multiple pieces of road and highway legislation, each of which called for more funds and

²³ D. A. Pfeiffer, "Ike's Interstates at 50," n.p.

²⁴ William I. Hitchcock, *The Age of Eisenhower: America and the World in the 1950s*, (New York: Simon & Schuster, 2018), p. 257.

²⁵ U.S. Highway Administration, *America's Highways*, p. 156.

²⁶ Richard F. Weingroff, "Federal-Aid Highway Act of 1956: Creating the Interstate System," Public Roads 60, No. 1 (1996),

https://highways.dot.gov/public-roads/summer-1996/federal-aid-highway-act-1956-creating-interstate-system

greater connectivity than the last. Yet all had ultimately proved insufficient. Now, the responsibility for interstate highway production that began under Franklin D. Roosevelt and passed on to Harry Truman now made its way to Dwight Eisenhower's feet. But although Ike's demand for a "modern, efficient highway system" was just the latest in a long line of similar pleas, few had the intimate knowledge Ike possessed of why they were so important, and few possessed the particular motivations for their production that made his argument so effective. Ike's experiences prior to assuming the presidency in 1953 had shaped his understanding of why our country needed better roads, and how an interstate highway system should be constructed and operated.

Some writers have suggested that Ike's understanding of the need to improve automobile transportation first developed as the result of growing up in the railroad town of Abilene, Kansas.²⁸ However, most historians, and Eisenhower himself, would say that it actually began on July 7th, 1919.²⁹ It was on that day that Second Lieutenant Dwight Eisenhower embarked on the transcontinental military convoy. The convoy's official purpose was to road-test various Army vehicles in a way that would "prove that the gas engine had displaced the mule,"³⁰ as well as to assess how difficult it would be to move an entire army across the North American continent.³¹ At the time, Eisenhower tagged along, "partly for a lark and partly to learn."³² Little did he know at the time that this excursion would irrevocably alter his views on the U.S. transportation network, and thus the course of history. It was not long after the 81-vehicle convoy departed

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Dwight D. Eisenhower, Annual Message to the Congress on the State of the Union, January 6, 1955,
 Eisenhower Library online, https://www.eisenhowerlibrary.gov/sites/default/files/file/1955_state_of_the_union.pdf
 Tom Lewis, *Divided Highways*, p. x.

²⁹ William I. Hitchcock, *The Age of Eisenhower*, p. 257; D. A. Pfeiffer, "Ike's Interstates at 50," n.p; Dwight D. Eisenhower, *At Ease: Stories I Tell to Friends* (1st ed), (Garden City, N.Y: Doubleday, 1967): p. 157.

³⁰ Address of the Vice President. n.p.

³¹ D. A. Pfeiffer, "Ike's Interstates at 50," n.p.

³² Dwight D. Eisenhower, At Ease, p. 160.

from Washington, D.C. and headed across the country for San Francisco that the inadequacies of the American road network became fully apparent. Breakdowns occurred constantly; frequent stops had to be made to clear debris off the poorly maintained roads of the Lincoln Highway; at



Men inspect a truck that has been capsized during the Transcontinental Motor Convoy in Wyoming, August 1919. (Edward J. Mantel Collection/Dwight D. Eisenhower Presidential Library Online.)

one point, the convoy came across roads so narrow, steep, and dilapidated that multiple trucks fell off the road and rolled to the foot of a mountain.³³ During one three day stretch, the convoy "spent 29 hours on the road and moved 165 miles...at an average speed of about five and two-thirds miles an hour"³⁴ due to

the exceedingly poor conditions of the roads. 62 days, 3,251 miles, and 6000 breakdowns later, the convoy arrived in San Francisco.³⁵ After such a long and arduous journey, as Eisenhower himself recalled, "I think that every officer on the convoy had recommended in his report that efforts should be made to get our people interested in producing better roads."³⁶ Central to Eisenhower's convoy experience was the contact he had with the people in the towns they visited along the way. At many points, Ike would stop and chat with the locals, and try his best to retain some of the advice, concern, and information they imparted.³⁷ At the time, all-weather roads in the United States totaled 300 thousand miles, driven on by 7.6 million registered motor

³⁴ Dwight Eisenhower, At Ease, p. 159.

³³ Ibid.

³⁵ Address of Vice President Richard Nixon to the Governors Conference Lake George; Dwight Eisenhower, *At Ease*, pp. 160-166.

³⁶ Dwight Eisenhower, At Ease, p. 166.

³⁷ Dwight Eisenhower, At Ease, pp. 159-68.

vehicles.³⁸ On the convoy, as Ike met with some of these drivers in distant villages and shared their perilous experiences driving on the surrounding roads, he began to understand that every American needed and deserved "better main highways."³⁹

For the years following the 1919 transcontinental convoy, Ike would be consumed by events that would make him into a man that could be trusted by the American people. It is not likely that the failings and needs of the American road network loomed large in Ike's mind while studying under the tutelage of Fox Conner at Camp Gaillard, advising General Douglas Macarthur in the Philippines, or conducting the Louisiana Maneuvers. However, it would not be long after Ike became Supreme Allied Commander in Europe that roads would once again pique the interest of the future president. After the successful invasion of the European continent in the Summer of 1944, the Allies quickly went on to the next stage of of their plan--the liberation of Western European countries under Nazi control, and the eventual invasion of the German homeland. Once victory was at hand, Ike went to visit and congratulate the U.S. troops that had broken through the German lines. To do so, he used the German Autobahn, a federal system of highways in Germany which had begun construction in the 1930s. 40 Despite the massive craters peppering the road system (courtesy of the Allied bombing campaign), Ike was able to travel with relative ease across the German homeland. Ike instantly saw the value of such a system. Surely, Ike had marveled at the speed at which the Nazi army was able to move throughout Germany. Now, he understood. Ike also understood something else--the U.S. could benefit tremendously from a highway system of such quality and scale. "After seeing the autobahns of

³⁸ Address of Vice President Richard Nixon to the Governors Conference Lake George.

³⁹ Dwight Eisenhower, *At Ease*, p. 159.

⁴⁰ Tom Lewis, *Divided Highways*, p. 90.

modern Germany and knowing the asset those highways were to the Germans," he said, "I decided, as president, to put an emphasis on this kind of road building."

The unique experiences Ike underwent both as a part of the 1919 convoy and in Germany as Supreme Allied Commander in the aftermath of WWII had a profound impact on his understanding of roads and highways. The convoy demonstrated the deficiencies of the American road system, Ike's observation of the Autobahn suggested the potential value of an excellent network of roads. Reflecting on these experiences, Ike himself noted, "the old convoy had started me thinking about good, two-lane highways, but Germany had made me see the wisdom of broader ribbons across the land." Ike would cite the 1919 convoy and his World War II experiences to persuade Congress to enact legislation to create the Interstate Highway System. However, neither event adequately explains why, as president, Eisenhower placed highway construction programs "at the top of (his) legislative list." Ike actually had several practical, political, and economic reasons to propose an interstate highway construction effort during his presidency. In order to evaluate the extent to which Ike was satisfied with the Interstate Highway System produced under his administration, it is important to identify his priorities.

A number of historians have claimed that Ike's primary motivation to construct the Interstate Highway System emerged from the Cold War belief that roads were needed to mobilize the country in the event of a third World War, and to evacuate major metropolitan areas in the event of an impending nuclear strike. Historian Evan Thomas has claimed that the urgency with which Ike professed the need for better roads, "was a sign of the times: he wanted more

⁴¹ Dwight D. Eisenhower, At Ease, p.166

⁴² Ibid.

⁴³ Dwight D. Eisenhower, *Mandate for Change, 1953-1956: The White House Years*, (Garden City, N.Y: Doubleday, 1963), p. 547.

multilane highways to evacuate American cities in case of nuclear war."⁴⁴ William Hitchcock has made similar claims in his seminal work *The Age of Eisenhower*, stating how Ike "used the specter of a nuclear attack to justify highway building, pointing out that evacuation of cities in wartime required better roads."⁴⁵ Although there is some merit to this contention, there is little surviving evidence in the form of Ike's words or actions that supports it.

First, Cold War concern had already made its way into the federal highway discussion before Ike mentioned it while serving as president. In the late 1940s, as relations between the United States and the Soviet Union first began to deteriorate, Congress became more conscious of the inability of the country's interstate system to sustain a possible remobilization. Anxiety turned into action when Congress added a provision to the federal aid Highway Act of 1948 that required the commissioner of public roads to join with the state highway departments and the Secretary of Defense to produce a report on the potential needs of the interstate system for purposes of national defense. It ultimately concluded that achieving such purposes would require a "substantially more rapid improvement." The fact that the highway construction effort had been motivated by national defense needs far before Ike's Presidency does not lend itself well to the claim that Ike's use of the angle was a clear "sign of the times" as Thomas and others have suggested.

Additionally, there is little evidence to suggest that national defense was as central to Ike's effort to construct the Interstate Highway System. When Ike first expressed his vision to expand the Federal roadway system as president of the United States in a Business Advisory

⁴⁴ Evan Thomas, *Ike's Bluff: President Eisenhower's Secret Battle to Save the World*, (New York: Little, Brown and Co., 2013), p. 97.

⁴⁵ William I. Hitchcock, *The Age of Eisenhower*, p. 259.

⁴⁶ U.S. Highway Administration, *America's Highways*, p. 165-166.

⁴⁷ "Highway Needs of the National Defense," Doc. H. 81st Congress, 1st Session: pp. 10-23, as quoted in United States Federal Highway Administration. *America's highways*, 1776-1976, p. 170.

meeting in July 1953, not once did Ike invoke national defense to support his claim. 48 Nor does Ike mention national defense motivations in either of his personal accounts on his administration--Mandate for Change and At Ease--in areas that discuss his effort for interstate highways. 49 Even publicly, Ike often chose to leave out the national defense argument from his discussions of the need for highway construction, like on July 14, 1954, when multiple reporters asked about it. 50 Even when Ike did touch on national defense, he consistently incorporated it last --and least, when they were ranked--in his arguments for better roads. In his State of the Union speech to Congress on January 6, 1955, national defense was the last issue to be included in Ikes plea for approval of an Interstate Highway Act. 51 About a month later, in a formalized message to Congress, Ike identified the fundamental reasons behind the need for better roads. Written in order from most to least pressing, national defense stood at the bottom of the list. Of the twelve sentences dedicated specifically to explaining the need for better roads in Ikes 1956 State of the Union address, only one sentence mentions national defense--again, at the end of a list of reasons. National defense was certainly in mind when constructing the Interstate Highway System, and Ike did invoke the argument in certain instances, particularly when trying to cajole Congress for support of his bill. However, based on Ike's rhetoric both public and private, it is not clear that national defense was central to Ike's understanding of the need for an Interstate Highway System.

What is far more likely based on such evidence, is that Dwight Eisenhower's belief in the federal government's responsibility to construct and improve roads for the American people derived from a genuine concern for their safety and well being. Chief among the reasons for

⁴⁸ Richard Weingroff, "Chapter 2: A Crusade for Safety," n.p.

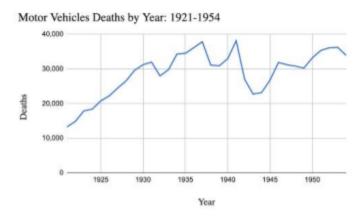
⁴⁹ Dwight D. Eisenhower, *Mandate for Change*, pp. 547-59; Dwight D. Eisenhower, *At Ease*, pp. 157-168.

⁵⁰ Correspondence between Dwight Eisenhower and multiple reporters on the cost of the Interstate Highway System from the President's News Conference, July 14, 1954, Federal Highway Administration (2017).

⁵¹ Dwight D. Eisenhower, Annual Message to the Congress on the State of the Union, January 6, 1955, Eisenhower Library Online, https://www.eisenhowerlibrary.gov/sites/default/files/file/1955 state of the union.pdf

highway construction in the previously mentioned lists was almost always the "personal safety" of the American people. ⁵² With this, Ike was referring to the enormous number of deadly traffic accidents that resulted from improper construction, maintenance, and regulation of America's

roads every year. Accident data from the Federal Highway Administration shows the startling trend in motor vehicle deaths, which had essentially been on a constant rise through the 1920s and 30s before plummeting during WWII. Since then however, traffic deaths had been on



Graph made by author. Information gathered from "Motor Vehicle Traffic Fatalities, 1900-2007. National Summary. Table FI-200" (PDF). U.S. Department of Transportation.

the rise once again; in the year Ike took office, traffic deaths hit their highest point since 1941, at 38,300.⁵³

More than anything else, this trend forced Ike to act on the issue of road and highway improvement. Even before his administration put forth any legislation on the subject of roads, Ike had expressed his concern for the safety of the American people. In the same meeting in which he left out the issue of national defense, Ike is quoted as saying he was, "tired of having three to four times as many persons killed a year on the highways as were killed in Korea," and expressed that "when something is done on a coordinated basis the accident trend drops sharply." This effort did not stop once legislative deliberations began. On April 13th, 1954, Ike formed the President's Committee for Traffic Safety, which continued to operate in order to ameliorate the dangers of driving long after the campaign to push through highway legislation

⁵² Dwight D. Eisenhower, Annual Message to the Congress on the State of the Union, January 5, 1956, online by Gerhard Peters and John T. Woolley, The American Presidency Project, https://www.presidency.ucsb.edu/node/233132.

⁵³ Richard Weingroff, "Chapter 2: A Crusade for Safety," n.p.

⁵⁴ Weingroff, "Chapter 2: A Crusade for Safety," n.p.

had passed, notably participating in the "Back the Attack on Traffic Accidents!" campaign in 1957.⁵⁵ Ike also enthusiastically threw his support behind the first ever S-D (Safe Driving) Day on December 15, 1954.⁵⁶ His concern was reflected in his words to Congress when pushing for the Interstate System. In his State of the Union Addresses in 1955 and 1956, improvement of driver safety and reduction of accidents resulting in injury or death were the first issues he cited when emphasizing the need for better roads.⁵⁷ It was also given the highest priority in his written message to Congress outlining the primary reasons for the necessity of the highway system.⁵⁸ In his later writings on his pursuit of Interstate Highways during his Presidency, Ike would recall, "this was one of the things I felt deeply about, and I made a personal and absolute decision to see that the nation would benefit by it."⁵⁹

Clearly, safety was chief among the reasons Ike thought the nation needed an improved system of highways. But it was not the only one. Ike believed a massive federal undertaking would be beneficial to the nation for economic reasons as well. He had specific ideas on how he believed the Interstate Highway System ought to be funded, and how it was to be carried out. These beliefs were integral to explaining the urgency and vigor with which Dwight Eisenhower pursued highway legislation during his presidency.

Concerning Ike's overall fiscal and state-rights policy Historian William Hitchcock has this to say:

⁵⁵ Weingroff, "Chapter 3: Maintaining The Focus," n.p.

⁵⁶ Weingroff, "Chapter 2: A Crusade for Safety," n.p.

⁵⁷ Dwight D. Eisenhower, State of the Union Address 1955, Eisenhower Library Online, https://www.eisenhowerlibrary.gov/sites/default/files/file/1955_state_of_the_union.pdf; Dwight D. Eisenhower, State of the Union Address 1956, The American Presidency Project, https://www.presidency.ucsb.edu/node/233132.

⁵⁸ Message from the President to the Congress regarding highways, February 22, 1955, Dwight D. Eisenhower Presidential Library, Interstate Highway System Online Documents, https://www.eisenhowerlibrary.gov/sites/default/files/research/online-documents/interstate-highway-system/1955-0

https://www.eisenhowerlibrary.gov/sites/default/files/research/online-documents/interstate-highway-system/1955-02-22-message-to-congress.pdf

⁵⁹ Dwight D. Eisenhower, At Ease, p. 166.

In truth, Eisenhower was not a small-government conservative, although he successfully sold himself as one to the public. He believed government should create the conditions in which Americans could pursue their own ambitions. This implied not a small or diminished government but an effective one. Good government should deliver meaningful enhancements to citizens within the limits of fiscal restraint.⁶⁰

Hitchcock and others have termed this set of beliefs Ikes "Middle Way"⁶¹ between small-government conservatism and Rooseveltian New Dealism. Yet, it would be hard to refute the statement that President Eisenhower was more right than left of center on the political spectrum. Stephen Ambrose, an authority on the Eisenhower Presidency, has noted how Ike "liked to describe himself as a conservative on fiscal matters,"⁶² and Hitchcock himself concedes that, "Eisenhower deeply believed in the conservative, small-government, balanced-budget positions."⁶³ Thus, even historians have difficulty characterizing the political persuasions of our nation's 34th president. Ike's actions while working on Interstate Highway legislation do nothing to clear up that confusion.

Ike was outspoken in his belief that a complete overhaul of the existing road system, including the addition of a brand-new 40,000 mile interstate system was necessary. Such a massive public works project, "the biggest peacetime construction project of any description ever undertaken by the United States or any other country," according to Ike himself, would never have been recommended by a true conservative. Eisenhower was perfectly comfortable with the projected Federal cost of approximately 25 billion dollars to finance this construction, and even when others warned him that the federal burden could be closer to twice that amount, he did not

⁶⁰ William I. Hitchcock, Age of Eisenhower, p. 255.

⁶¹ Ibid.

⁶² Stephen E. Ambrose, *Eisenhower: Soldier and President*, (New York: Simon and Schuster, 1991), p. 550

⁶³ William I. Hitchcock, Age of Eisenhower, p. 69.

⁶⁴ Dwight D. Eisenhower, State of the Union Address 1956.

⁶⁵ Dwight D. Eisenhower, Mandate for Change, p. 548.

oppose the new numbers strongly enough to reassess his plans in any way. On July 14, 1954, when a reporter wondered if \$50 billion was necessary, Ike responded by saying, "I believe we are at least \$50 billion behind in our road networks... (and) we are ready to do our part in going forward with this."

Fiscal conservatism certainly textured elements of Ike's actions and ideology on the road issue, however. Regarding financing for the Highway system, Ike observed that, "a sound Federal Highway program can and should stand on its own feet with Highway users providing the total dollars necessary for improvement in new construction."67 Eisenhower worried about uncontrolled federal spending and was reluctant to entrust initial planning for the program to government bureaucrats. 68 Thus, one of the reasons Ike took up the personal cause for highway construction was precisely because of his fear that it would bloat the federal budget if anyone else were to manage it. To finance the system, Ike also flashed his conservative side. Throughout his presidency, Eisenhower remained adamant that whatever concessions he did make, whichever highway program the nation adopted, it could not increase the national debt. ⁶⁹ The debt was certainly of paramount importance to Eisenhower whenever funding was discussed. This corresponded to his wider fiscal views. The President and his administration rejected funding the project on a pay-as-you-go basis, and instead called for a self-financing system, "based on the planned use of income from gas and diesel oil taxes, augmented in certain instances by toll revenues."70

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⁶⁶ Correspondence between Dwight Eisenhower and multiple reporters on the cost of the Interstate Highway System from the President's News Conference, July 14, 1954, Federal Highway Administration (2017), https://www.fhwa.dot.gov/interstate/audiotext.cfm.

⁶⁷ John Stewart Bragdon, Report on conference held on the message to Congress concerning legislation for roads, February 1, 1955, Eno Center for Transportation,

https://www.enotrans.org/wp-content/uploads/2020/09/1955-Jan-Feb-WH-discussions-on-Clay-report.pdf.

⁶⁸ Jean Edward Smith, "Chapter 28: Electing a President," n.p.

⁶⁹ Tom Lewis, *Divided Highways*, p. 102.

⁷⁰ John Stewart Bragdon, Report on conference held on the message to Congress concerning legislation for roads.

Ike wanted to be at the helm of the highway construction effort for fear of government bureaucrats bloating the budget. He also believed the improvement of America's roads was a cost-saving construction project. Ike noted the "measurable economic cost of the highway accident toll to the nation are more than 4.3 billion a year" in his official message to Congress in February 1955 and how road improvement would not only save the American people from losing their lives, but also their hard earned cash. Another side of this was the tremendous benefit to the economy that would flow from a faster rate of modern modernization, and the need to "keep our economy vigorous and expanding." ⁷¹

Ike also believed an improved highway measure would boost business for corporate America. American industry had boomed in the immediate post-war years, and a substantial increase in the number of Americans with disposable income allowed new markets to emerge for a seemingly endless supply of consumer goods. Because of the rapid production required by the Second World War, supply could meet demand. However, transportation efficiency was lagging far behind production efficiency, largely due to the outdated and uncoordinated system of roads and highways. Vice President Richard Nixon captured this idea in his speech to the Governor's Committee in 1954 when he said, "Nullification of efficiency in the production of goods by inefficiency in the transport of goods, is another result of this obsolete net that we have today." With a modern network of interstate highways, however, it was theorized markets in rural areas would open up and the time and cost associated with transportation would plummet. Clearly, addressing this crisis was central to the Eisenhower Administration's economic motivations for better roads.

⁷¹ Dwight D. Eisenhower, State of the Union Address 1955, Eisenhower Library Online, https://www.eisenhowerlibrary.gov/sites/default/files/file/1955 state of the union.pdf

Address of Vice President Richard Nixon to the Governors Conference Lake George, New York July 12, 1954.

Despite this, there were many elements of Ike's road effort that would leave anyone trying to cast him as a fiscal conservative scratching their heads. About a year after taking a hard line against "the statism of the New Deal and its expensive federal programs" on the campaign trail, Eisenhower and his economists endorsed a big jump and road spending. In doing this, they hoped to "hitch the economy, in part, to a gigantic Public Works project." They emphasized the impact that job creation for engineers, planners, and construction workers would have on the economy over the next ten years. Lucius Clay, a close personal friend and deputy of Ike during the Interstate Highway effort, said as much in a letter to the President, expressing his hope that state officials would "spend more money," thus "pump priming" the economy. Amidst the economic downturn that the nation was experiencing in the mid-1950s, Ike conceded in his 1956 State of the Union Address that, "public works activities are closely interrelated and have a substantial influence on the growth of the country. Moreover, in times of threatening economic contraction, they may become a valuable sustaining force." In effect, Eisenhower and his staff were devising a public works project not dissimilar in structure to those of the New Deal.

Ike's Interstate Highway effort is an interesting case study to assess another element of his wider policy on governance--delineation between state and federal rights and responsibility. And in this case, the disparity between Ike's actions and rhetoric blur his political leanings even further than the fiscal issue.

⁷³ William Hitchcock, *Age of Eisenhower*, p. 13.

⁷⁴ Mark H. Rose, *Interstate: Express Highway Politics, 1941-1956*, (Lawrence: Regents Press of Kansas, 1979.), p. 97.

⁷⁵ Lucius D. Clay to Dwight D. Eisenhower, January 26, 1955, Administrative File, Eisenhower Library, as quoted in Mark H. Rose, *Interstate: Express Highway Politics*, p. 76.

⁷⁶ Dwight D. Eisenhower, Annual Message to the Congress on the State of the Union, January 5, 1956.

It has been said that, by the time Dwight Eisenhower assumed office, the issue between state and federal responsibility on highway construction had been more or less agreed upon.⁷⁷ While public support for federal control of the construction of transcontinental highways had been growing since the late 1930s, there was still considerable difference of opinion over the extent of federal-state matching of funds for all road projects, how driving related tax revenue should be distributed, and the extent of involvement the federal government should have in the planning and construction of interstate and non-interstate highways. Most of the history of road construction in the United States had been the result of cooperative arrangements between the federal and state governments concerning financing and construction responsibility and oversight. The states had welcomed the creation of the Federal Bureau of Public Roads (BPR) in 1893 as a helpful tool to ensure the proper flow of traffic from one jurisdiction to another, in exchange for a loss of power to plan routes and assign construction to particular firms. Between 1916 and 1940, most State governments had more or less accepted the cooperative arrangements between the federal and state governments that BPR chief Thomas MacDonald had nurtured throughout his tenure. 78 Under MacDonald, this alliance allowed the states a large amount of freedom to choose the location and construction of their roads--whether they be rural, municipal, or highways. In MacDonald's retirement speech in 1953, he noted that the acts carried out by the BPR since "the original Federal Highway Act of 1916...recognize the sovereignty of the states in the authority retained by the states to initiate projects." And while MacDonald "appreciated the need for a connected system of interstate highways," he did not believe that "a separate national system under a federal commission was the way to achieve it."79

⁷⁷ Bruce Edsall Seely, Building the American Highway System, p. 208; D. A. Pfeiffer, "Ike's Interstates at 50."

⁷⁸ Tom Lewis, *Divided Highways*, pp. 3-24.

⁷⁹ "MacDonald Retires as Commissioner of Public Roads, F. V. duPont Takes Over," *Engineering News-Record* 150, No. 14, (Apr. 2 1953): p. 52-54, as quoted in United States Federal Highway Administration, *America's highways*, 1776-1976, p. 170.

What seemed like an acceptable state-federal power sharing arrangement to many soon turned sour however. Beginning in the 1940s, many states began to question the need for federal involvement in any public roads--especially after some realized there was money to be made. On October 1st, 1940 the 160-mile Pennsylvania Turnpike was opened to traffic. For its time the highway was the best of its kind, and would later be seen as the prototype of the modern high-speed heavy-duty Interstate highway. 80 Designed and constructed by the specifications of the Pennsylvania legislature, the Turnpike was designed to be self-sufficient--covering the cost of initial construction, maintenance, and improvements by charging a toll for drivers who used the road. The scheme was a resounding success. After operating at a deficit for the interwar years, the PA Turnpike began to turn a profit; by 1948 the Turnpike's net operating revenue was \$5.6 million per year. The success of the PA Turnpike--as well as other Turnpike initiatives in New Jersey and New Hampshire completed around the same time--would have consequences for the federal-state relationship on the subject of roads. These Turnpikes operated at the discretion of the State Toll road Authorities which did not receive federal funds and thus did not have to secede any planning power or profit to the BPR or the Federal government. Learning from this example, fifteen additional states created Toll road Authorities by 1952; by 1954, they had collectively constructed 1382 miles of toll roads, and had plans to make more. 81 Thus, at the time of Ike's first term, there was far from a clear consensus on the federal role in highway planning, finance, and construction. In fact, there was rising sentiment against the principle of Federal Aid, voiced by various speakers at the 1953 Governor's Conference who recommended that there be no further increases in aid, and that the federal government withdraw from the taxation of motor fuel. The strong indication from a number of states that they were well on their way to removing

⁸⁰ United States Federal Highway Administration, *America's Highways*, 1776-1976, p. 137.

⁸¹ America's Highways, p. 166-169.

their worst traffic bottlenecks by building roads without federal assistance only furthered this belief.⁸²

In some respects Ike shared the concerns of these governors. Ike certainly seemed to be on the same page as Governor Daniel Thorton and Governor Walter Kohler at their lunch on January 21, 1953, the day after the President's inauguration. During their lunch, they discussed the conflicts between federal and state taxes on the same products, such as gasoline, incomes, and automobiles. Governor Thornton suggested that the federal government get out of these fields of taxation, which he said traditionally belonged to the states. At the very least, it seems that Ike did not outright reject the proposition. He was again conciliatory when speaking through Vice President Nixon at the 1954 Governor's Conference on July 12, when he asked the Governors to form a committee that would work closely with the Administration to plan the finance and construction of the Interstate System. 83 Two days later, Ike continued along these lines, explaining to a group of reporters that, "everybody to whom I have talked believes that we should put the maximum authority and responsibility in the states that they are capable of taking."84 Ike continued to urge state sovereignty on the roads issue even after the monumental 1956 Act was passed, stating in a letter to Harlow H. Curtice, Chairman of The President's Committee for Traffic Safety, that "the big and complex task of acquiring the necessary rights-of-way, of designing, building and operating the highways" were "responsibilities that belong primarily to the states themselves and their local communities."85 Ike's rhetoric on this issue had a significant effect on persuading the nation's governors to go along with his plan.

⁸² Ibid.

⁸³ Richard Weingroff, "Chapter 2: A Crusade for Safety," n.p.

⁸⁴ Correspondence between Dwight Eisenhower and multiple reporters on the financing for the Interstate Highway System from the President's News Conference, February 10, 1954, Federal Highway Administration (2017), https://www.fhwa.dot.gov/interstate/audiotext.cfm

⁸⁵ Letter From Dwight D. Eisenhower to Harlow H. Curtice, Chairman, The President's Committee for Traffic Safety, on the Highway Modernization Program - November 20, 1956, Federal Highway Administration, Highway History, https://www.fhwa.dot.gov/infrastructure/quoteike.cfm

Particularly significant was his speech at the 1954 Governors Conference which, according to a contemporary observer, had an "electrifying effect" on the conference.⁸⁶

It is evident that Ike's words reassured the governors that he was on their side. However, a careful analysis of Ike's movements at this time should have hinted to states-rights conservatives that this was an uneasy and imperfect agreement. In practice, President Eisenhower actively restricted states' access to road user taxes and their involvement in the planning of road networks.

The first hint should have come when, in 1953, the Eisenhower Administration decided to restructure the Federal Highway Authority, effectively forcing Thomas MacDonald out of his tenured position as the Chief of the BPR. His farewell address, delivered in March 1953, outlined his beliefs. In it, he emphasized the importance of continuing the traditional federal-state partnership, and went on to state that the federal gasoline tax revenue should be returned to the states as federal aid. By forcing MacDonald out of his position, the Eisenhower Administration was subtly suggesting that they disagreed with these tenets, and that federal involvement in the nation's highway system would grow.⁸⁷

Within the contents of the Clay report lies more evidence that calls into question Ike's states-rights credentials. In order to draw up legislation to execute his 'Grand Plan,' Dwight Eisenhower turned to able engineer, adept administrator, and close personal friend Lucius D. Clay. Clay formed a committee that drew up legislation that would address the concerns of the President on the mission for interstate highways. While the group's report represented the interests of Eisenhower, it did not necessarily represent those of the states, which was given only

⁸⁶ Weingroff, "Chapter 2: A Crusade for Safety," n.p.

⁸⁷ United States Federal Highway Administration, *America's Highways*, p. 170; Bruce Edsall Seely, *Building the American Highway System*, p. 208.

⁸⁸ Jean Edward Smith, "Chapter 28: Electing a President," n.p; Tom Lewis, *Divided Highways*, p. 105.

token representation in the group. Although the Committee was advised by a small Governor's Committee while making the plan, they included a provision that enabled the federal government to receive a "share of the toll, even to the extent of an excess of what was necessary to cover amortisation, from the toll roads built in the future."89 The plan thus actively undermined the goal of many states to eliminate the need for federal government funds through the use of toll roads. State governors were also dismayed that the Clay Plan called for little change to the distribution of funds to the gas tax while calling for a half-cent hike in the amount per gallon. The President defended this proposal by stating that, "In the past, not all of this money had been put out on road construction in matching funds with the states."90 The new plan would eliminate the federal government's ability to divert road user funds to other projects. It would also reject the right of states to have direct access and control over the revenue resulting from motor taxes. The plan also sought to undermine state power in appropriating and directing federal funds to highways by proposing the creation of the Federal Highway Corporation. The Corporation was set up under the chairmanship of the Department of Commerce with the Secretary of the Treasury, the commissioner of public roads, and another member of the Treasury department the states were given only token participation. The federal entity would design routes and projects where it saw fit, and would have broad powers over the allocation and direction of funds.91

⁸⁹ John Stewart Bragdon, Report on various meetings discussing financing for the National Highway Program and personal views of Gen. Bragdon on financing, January 27, 1955, Eno Center for Transportation, https://www.enotrans.org/wp-content/uploads/2020/09/1955-Jan-Feb-WH-discussions-on-Clay-report.pdf

⁹⁰ Correspondence between Dwight Eisenhower and multiple reporters on the financing for the Interstate Highway System from the President's News Conference, https://www.fhwa.dot.gov/interstate/audiotext.cfm

⁹¹ D. A. Pfeiffer, "Ike's Interstates at 50," n.p; John Stewart Bragdon, Report on a meeting held to go over a draft of the legislation for the Administration's bill on roads, February 8, 1955, Eno Center for Transportation, https://www.enotrans.org/wp-content/uploads/2020/09/1955-Jan-Feb-WH-discussions-on-Clay-report.pdf; Bruce Edsall Seely, *Building the American Highway System*, p. 215.

Concern over the direction the Interstate Highway System was going in the second half of his presidency would show that Ike did want to preserve the rights and responsibilities of state governments on the subject of roads in some capacity. However, the drastic disparity between Ike's rhetoric when reassuring states-rights advocates, and his actions behind the scenes while trying to push through road legislation reveals Ikes belief that the Interstate System was to be "authorized as one project" that should be primarily overseen by the federal government.

It was with those motivations and principles that Dwight Eisenhower embarked on a daring mission to develop a cohesive national highway network. While his life experiences and motivations suggest that the President would have liked to pursue highway legislation immediately after gaining office, his first year was necessarily occupied by the Korean War. Highways didn't show up on his agenda until the following year. For the next two years, however, the President would campaign fervently to get his 'Grand Plan' for 50 billion dollars worth of self-liquidating highways through Congress and under construction. Eisenhower had started with lofty goals, but he soon found that, in order to get even a shell of his original plan passed, he would need to rely on teamwork and an immense amount of compromise. Between April 1954 and July 1956, Dwight Eisenhower would have to solve the puzzle of how to fashion a compromise between his interests, the interests of powerful members of Congress, and those of a collection of people representing automobile, trucking, and other industries.

The first legislation passed under Eisenhower was a clear result of this compromise. Six separate bills were proposed in the early months of 1954, all ranging between \$800 to \$900 million split between primary, secondary, urban, and interstate roads, to be financed on some

⁹² Dwight D. Eisenhower, State of the Union Address 1956.

⁹³ D. A. Pfeiffer, "Ike's Interstates at 50," n.p.

level of federal-state matching basis. In the end, The Federal Aid Highway Act of 1954 passed on June 26, 1954, providing \$875 million in federal aid to primary, secondary, urban, and interstate roadway systems, with the latter receiving \$175 million to be used on a 60-40 matching ratio. 94 The act was a success--it had effectively codified the basic outline of the Federal Interstate Highway System in the way Ike and many others had wanted it. 95 Aided by a team of cabinet members and experts including White House Chief of Staff Sherman Adams, Public Works Advisor and former General John Stewart Bragdon, and the new Chief of the BPR Francis DuPont, Ike had woken Congress up to the need for a renewed highway effort. However, this success was only partial. Indeed, the Eisenhower Administration had to make significant compromises in order to pass the bill, which did not come close to fully addressing its interests. For one, the \$875 million would not even account for one-twentieth of the total funds needed for his original road plan. As for the financing mechanism, Congress avoided the President's recommendation to use toll roads on interstate highways, which Ike believed was the best way to eliminate the risk of deficit spending on the project. In order to secure the approval of the states, the bill also relinquished control over the spending of Federal-aid funds for secondary-road projects, to which Ike was not entirely opposed but certainly did not anticipate. For these reasons and more, the 1954 Federal Aid Highway act was to Ike's merely "one effective forward step." 96 The most effective piece of this step was the Congressional request for a comprehensive study on toll roads and the cost of completing the Interstate Highway System in the manner recommended by the Administration. These studies were to be conducted by the BPR and other organizations appointed and overseen by the Executive, giving Ike and his team a great deal of control over the process.

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⁹⁴ Bruce Edsall Seely, Building the American Highway System, p. 211.

⁹⁵ Seely, Building the American Highway System, p. 214.

⁹⁶ D. A. Pfeiffer, "Ike's Interstates at 50," n.p.

With the findings of the studies ordered by the 83nd Congress emerging in the final months of 1954, Ike would have to develop a new team that could interpret the discoveries and translate them into recommendations for legislative action on the Interstate Highway System.

This role was filled by the Clay Committee. Composed of Clay and four connected businessmen, the committee received advice on a number of matters from multiple federal departments,

including the Department of Defense, the
Department of the Treasury, and the Bureau
of Public Roads, the Governor's
Committee, and a small group representing
the concerns of the public.⁹⁷ The group was
formed in August 1954, and completed
their report and submitted it to the
President by January, 1955. Clay's
Committee called for an expenditure of
\$101 billion over ten years, and forty-one



The Clay Committee presents its report with recommendations concerning the financing of a national interstate highway network to President Eisenhower on Jan. 11, 1955. (Dwight D. Eisenhower Presidential Library Online)

thousand miles of divided highways linking all U.S. cities with a population of more than fifty thousand on a 70-25 matching basis with the states. After much debate within the Clay Committee, the final plan chose not to use a system of toll highways to finance the project, although it did specify that the Federal Government would receive a share of the toll from any other toll roads built in the future as a small finance mechanism. Mostly however, the Clay Plan suggested that the Federal Government issue bonds to pay for construction over a 10-year period

⁹⁷ Jean Edward Smith, "Chapter 28: Electing a President," n.p; Tom Lewis, *Divided Highways*, p. 105.

and use revenue from the Federal excise tax on gasoline to retire the bonds. President Eisenhower submitted the plan to Congress on February 22, 1955 expecting wide support - at least from the Republican-controlled House of Representatives. However, the plan received only token support in the House, and was decisively defeated in the Senate on May 25, 1955, by a vote of 60 to 31.99

Prior to this, the President made several appeals to Congress as part of an overall effort to win additional endorsements for the Clay program. On February 16, he invited Clay to the White House to brief Senators William F. Knowland, H. Styles Bridges, and Eugene D. Millikan, and Congressmen Charles A Halleck, Joseph W Martin, and Leslie C. Arends on the Plan in order to highlight for senior Republicans the urgency of constructing the road network. ¹⁰⁰ A week later he asked Clay, Adams, and other administration leaders to meet with the Senate and House public works committees to do the same. Never, remarked Senator Chavez -- a ranking member of the committee -- had the president called all members of the committee to the White House to discuss domestic legislation. On Feb 21 he did just that for the sake of winning them over on the Clay Plan. ¹⁰¹ Since the summer of 1953, the President had also been working closely with state Governors to ensure their support of the bill. By way of the address to the Governor's committee in 1954 and several private meetings with Governors going back to 1953, Ike had successfully convinced most of them to support the Clay Plan, despite the measures contained within it that seemingly went against their interests. The President had done this with such success that some

⁹⁸ John Stewart Bragdon, Report on various meetings discussing financing for the National Highway Program and personal views of Gen. Bragdon on financing, January 27, 1955, Eno Center for Transportation, https://www.enotrans.org/wp-content/uploads/2020/09/1955-Jan-Feb-WH-discussions-on-Clay-report.pdf

⁹⁹ Richard Weingroff, "Federal-Aid Highway Act of 1956," n.p.

¹⁰⁰ Mark Rose, *Interstate*, p. 78.

¹⁰¹ Ibid.

of his aides reasoned that, with such strong support from State Governors, Congressmen who are playing politics would succumb to political pressure.¹⁰²

That assumption was incorrect. Disagreement emerged along party lines, as Democrats vocalized their disapproval of the payment method by claiming that the bond proposal created a hidden debt. Democratic Senator Harry Byrd, an influential member of the Finance Committee, condemned Clay's plan as "pork-barrel" politics, claiming that the Administration's proposal had been devised by members of the motor and construction industry for their own benefit. 103 Other's disliked the idea of giving broad powers to the Highway Corporation, which was proposed by the Clay Plan to oversee the further planning and construction of the Interstate Highway System and had veto power over the BPR. At Congressional hearings, DuPont, Commerce Secretary Sinclair Weeks, and Clay faced a "barrage of critical questions." 104

Many of the issues raised by Congressman mirrored those of special interest groups like the American Highway Trucking Association, the Education Commission, and the Farmer's Union. The American Highway Trucking Association was not happy with the increase of the gas tax and the introduction of a new tax on rubber which would finance some of the operation. As early as January 1955, letters from the American Highway Trucking Association and the National Association for motor bus operators made their way to the White House detailing their disapproval of the Clay Plan and their demands for significant revisions. While these letters insisted that Federal Highway Aid continue and that the federal government finance the interstate system, it also demanded that there be no toll roads and no increase in federal excise on gas. ¹⁰⁵ The Farmer's Union was less supportive of the effort as a whole, particularly disliking the

¹⁰² Bruce Edsall Seely, *Building the American Highway System*, p. 215.

¹⁰³ Seely, Building the American Highway System, p. 216.

¹⁰⁴ Ibid

¹⁰⁵ John Stewart Bragdon, Report on a meeting with reference to the President's Advisory Committee report, January 20, 1955, Eno Center for Transportation, https://www.enotrans.org/wp-content/uploads/2020/09/1955-Jan-Feb-WH-discussions-on-Clay-report.pdf.

emphasis placed on larger interstate roads and the lack of attention to farm roads, the funding for which was frozen by the Clay Plan in order to divert funds to matters deemed more important. ¹⁰⁶ The Commissioner of Education was even less enthusiastic about the operation. Reports from public works advisor John Bragdon reveal that the Education Commission "meant to oppose the program vigorously," on the grounds that, "the road program was going to take 70 billion of funds from the states in the next 10 years and that this would use up all the money they had for Education as well as roads." ¹⁰⁷ Bragdon tried to assure the commissioner that this was incorrect—the same level of funding had been reserved for education as years prior—yet he still deemed the issue "of high importance," and believed that "this entire matter (should) be brought to the attention of the President." ¹⁰⁸ All these special interest groups found outlets to voice their concerns by lobbying Congressmen on both sides of the aisle, essentially dooming the bill upon arrival.

Although the Clay Plan had failed, it laid the groundwork for what would become the 1956 Federal-Aid Highway Act. Representative George Fallon introduced a bill on April 19, 1956, which borrowed significantly from the Clay Plan. This bill was approved by the House just one week after it was submitted. The Senate had completed its own version of the highway legislation, introduced by Senator Albert Gore a year earlier, which it used to supplement the Fallon bill along with modifications by Democratic Senator Byrd of Virginia. On June 26, 1956, both the Senate and the House gave final approval to the compromise version and sent it to

¹⁰⁶ Mark Rose, *Interstate*, p. 78.

Bragdon, John Stewart Bragdon, Report on various meetings discussing financing for the National Highway
 Program and personal views of Gen. Bragdon on financing, January 27, 1955, Eno Center for Transportation,
 https://www.enotrans.org/wp-content/uploads/2020/09/1955-Jan-Feb-WH-discussions-on-Clay-report.pdf
 Ibid

Eisenhower, who signed the legislation while recovering from an intestinal ailment at Walter Reed Army Hospital three days later, June 29, 1956.¹⁰⁹

The bill President Eisenhower signed on that day was far larger than any road legislation that had come before it. It had authorized \$25 billion for the next twelve years to accelerate construction for the project that had officially been named the National System of Interstate and Defense Highways. To construct the highways, it would rely on private firms, who were required by the Secretary of Labor to pay their workers the prevailing wage rates in the industry. To finance the project, the legislation created the Highway Trust Fund, to be supported entriely with highway user taxes which would be diverted directly and exclusively to highway spending.

These highway user taxes included an increase on gas and diesel fuel from 2 to 3 cents, a new tax on rubber, and a newly imposed surcharge of \$1.50 per thousand pounds on the total weight of trucks heavier than 26k pounds. It gave the federal government more financing responsibility, increasing the ratio of federal-state matching from 60-40 to 90-10. It also required that the more than 40,000 miles of the Interstate Highway System be complete by 1962, built to the standard capable of handling traffic projected for that year. By creating a fixed time for completion, Congress had ensured that the Interstate System be complete as a single massive project.

The 1956 legislation was a mixed bag for President Eisenhower. On one hand, Ike had successfully accomplished his goal to initiate the construction of a comprehensive network of Interstate Highways under the primary oversight of the federal government. By requiring that contractors working on the highway system be paid (at a minimum) the prevailing wage in the industry, he had also achieved in incorporating pump-priming economic mechanisms into the

¹⁰⁹ Richard Weingroff, "Chapter 2: A Crusade for Safety," n.p; D. A. Pfeiffer, "Ike's Interstates at 50," n.p.

¹¹⁰ United States Federal Highway Administration. America's highways, 1776-1976, p. 173

¹¹¹ Mark Rose, *Interstate*, p. 90.

¹¹² Tom Lewis, *Divided Highways*, p. 121; Richard Weingroff, "Chapter 2: A Crusade for Safety," n.p; Richard Weingroff, "Federal-Aid Highway Act of 1956," n.p.

public works project. Additionally, amidst the frenzy of the Act's construction, Ike came across to the American public as the great man in the middle. After the original failure of the Clay Plan, an editorial in the New York Herald Tribune complained, "one suspects that the proposal's really fatal flaw was that it was too good, that the opposition couldn't bear to help the President solve the problem so cleanly and get the credit for it." At the end of the 1955 Congressional session, another paper praised the Eisenhower Administration for the "masterful job it has done on getting across to the nation the demand for a first-class highway system. There is no longer any serious argument, even in Congress, about the need." At the end of the 1956 session, the feeling was the same. Mark Rose notes that, "in speeches on the floor, Congressional leaders ascribed their success to a sense of compromise and moderation." Both among members of Congress and those in the road transport and construction industries. A reporter writing on the resulting compromise noted how "The unsavory political aura that hung over the bill since it was first introduced by Congressman Fallon...cleared away amazingly fast as good roads advocates on both sides of the aisle came to their feet in praise of the measure."

Eisenhower had indeed impressively orchestrated a compromise on the issue, for which he deserves much credit. The distribution of funds between farm, urban, and truck roads, and for interstate routes, was a fair compromise that eased some of the worries of those interest groups. By easing up on the insistence to finance the project primarily through toll roads and issued bonds, Ike was able to ease the worries of the Trucking Association enough to get them to accept the increase in automotive tax, and even the surcharge of \$1.50 surcharge per thousand pounds

¹¹³ "Nation's Press Voiced Its Feelings on Highway Bill," Roads and Streets 98 (September 1955), p. 43, as quoted in Bruce Edsall Seely, *Building the American Highway System*, p. 216.

¹¹⁴ "Pressure for Big Road Program Will Mount," *Engineering News Record* 155 (August 14, 1955): 21–24, as quoted in Bruce Edsall Seely, *Building the American Highway System*, p. 216.

¹¹⁵ Mark Rose, *Interstate*, p. 88.

¹¹⁶ Duane L. Cronk, "Washington Newsletter," *Roads and Streets 99* (June 1956), p. 19-20, as quoted in Bruce Edsall Seely, *Building the American Highway System*, p. 217.

on trucks exceeding a weight limit. By establishing a Highway Trust Fund for all driver-related taxes, the Act allowed for funds to be easily accessed as needed, and at the time seemed as if it could feasibly finance the project on a 'pay-as-you-go' basis, which Ike also compromised on. Although Eisenhower certainly did not orchestrate all of these compromises, he played a more central role in the process than he is given credit for. For instance, following a January 31 meeting with congressional leaders, Eisenhower's aides were told to "yield to Democratic insistence on financing" and "cooperate in the development of an appropriate tax proposal." He also told his staff that Senator Byrd, the most staunch critic of the Clay Plan, was to "be consulted as to the most desirable procedures for expediting the bill." Clearly, Ike was personally invested in getting his plan into action, and to do so, he made a great deal of compromises.

That being said, there is evidence to suggest that the President compromised too much in certain areas, jeopardizing his goals for a streamlined highway system that wouldn't break the budget. Not long after construction got underway did people begin to realize that the effort would cost far more than expected. The original estimate produced by the Clay Committee of \$27.5 billion to complete the system, which had been referenced for the 1956 legislation, actually had little basis in fact. By the end of the following year, Eisenhower's Secretary of Commerce Sinclair Weeks had found that a more accurate estimate was closer to \$40 billion to complete the system. By the end of the decade, the number had risen even further, to the point where the Highway Trust Fund established by the 1956 Act would not provide the funds necessary to finish construction close to the 1972 deadline. Even for the debt decrying President,

¹¹⁷ Telephone calls, January 16 and 31, 1956, Eisenhower diary, as quoted in Mark Rose, *Interstate*, p. 89.

¹¹⁸ L. A. Minnich to Rowland L Hughes, January 31, 1956, Eisenhower diary, as quoted in Mark Rose, *Interstate*, p. 89.

¹¹⁹ Mark H. Rose, *Interstate*, p. 97.

this could not happen; the Trust Fund would need to be supplemented. In 1958, at the behest of Senator Gore, the administration agreed to supplement the Trust Fund with money from the general revenues by an additional \$2.2 billion for three years with the Federal-Aid Highway Act of 1958. 120 Ike was not happy with this. If highway construction had been provided for by the sale of bonds and toll revenue like he had initially ordered, all the money he needed would have been available. 121 But ultimately, this was the result of compromise, since Ike had to agree to a "pay-as-you-go" policy in order to get any program in 1956. Ike signed the bill half-heartedly, saying, "I approve this bill with serious misgivings because of certain of its provisions which I regard as grave defects. Some of them could even create unfortunate precedents that may be difficult to disregard in the future." 122 Ike had fought hard to uphold the policy of fiscal responsibility that he believed in so dearly, but the 1956 bill had forced him to make concessions for the sake of the American people's wellbeing. Years later, Ike reflected how, "though I originally preferred a system of self-financing toll highways...I grew restless with the quibbling over methods of financing. I just wanted the job done." 123

Other issues with the 1956 legislation were not so excusable, and indeed stemmed from Ike's hands-off style of leadership. On how this tendency permeated Ike's highway effort and policy, Historian Tom Lewis has noted that:

While the president believed in teamwork, he cared little for details. Dwight David Eisenhower would leave subordinates with this task. Others would have to determine the relationship between a federal highway building program and the states and how the country could afford new road construction and avoid a budget deficit. Eisenhower would let others worry about the relationship between the

¹²⁰ Statement by the President regarding the 1958 Federal Aid Highway Act, April 16, 1958, Dwight D. Eisenhower Presidential Library, Interstate Highway System Online Documents, https://www.eisenhowerlibrary.gov/sites/default/files/research/online-documents/interstate-highway-system/1958-04-16-statement.pdf.

¹²¹ John Stewart Bragdon, Report on a meeting with reference to the President's Advisory Committee report, January 20, 1955.

¹²² Statement by the President regarding the 1958 Federal Aid Highway Act, April 16, 1958.

¹²³ Dwight D. Eisenhower, *Mandate for Change*, p. 548.

proposed new highways and older cities, and how to compensate those whose land was taken for construction. These were details and questions the president never appeared to have considered even casually¹²⁴

This examination has found this to be true. By ceding control over the Administration's highway legislation goals, Ike had written the Clay Committee a blank check of endorsement for any plans they devised. The Clay Plan had laid the foundation for the 1956 Highway Act, including the elements that took power away from the states. At the 1957 Governor's Conference, Ike condemned the fact that the federal government had "siphoned away state authority," which he believed could not have happened "without the neglect, acquiescence, or unthinking cooperation of the states themselves." He recalled that one of his earliest actions after taking office had been to establish a Commission on Intergovernmental Relations, which had "pointed the way to improvements in areas of mutual concern to the states and the federal government." In fact, Ike had undermined the authority of this entity by flatly endorsing the Clay report.

Ike also stumbled by not carefully reading -- or at least not fully understanding -- the proposed routes for the Interstate Highway System in the 'Yellow Book' produced by the BPR and included in the Clay Plan. This book, which had "sold the program to Congress" in practice had catastrophic effects on major cities, the ecological and quality of life effects of which have been central to the dissatisfaction with the Interstate System ever since. In cities like Boston and Washington D.C., where the book had shown highways cutting circular paths through the center and outskirts of the cities, became "a concrete noose that promised to strangle

¹²⁴ Tom Lewis, *Divided Highways*, p. 123.

¹²⁵ Dwight D. Eisenhower, Address to the 1957 Governors' Conference, Williamsburg, Virginia, Online by Gerhard Peters and John T. Woolley, The American Presidency Project, https://www.presidency.ucsb.edu/node/233279.

¹²⁶ Ibid.

¹²⁷ Memorandum on a Meeting of April 6, 1960 regarding the interstate highway program, April 8, 1960, Dwight D. Eisenhower Presidential Library, Interstate Highways System Online Documents, https://www.eisenhowerlibrary.gov/sites/default/files/research/online-documents/interstate-highway-system/1960-04-08-meeting.pdf.

the life from people and neighborhoods" when put in place. ¹²⁸ In San Francisco, the methodical and efficiency-focused Yellow Book plan placing a large highway along the San Francisco coastline failed to recognize that the project would cut off citizen's access to the waterfront. ¹²⁹ Even worse, in cities like Chicago and Atlanta, plans for national highways cutting through these cities created, "physical barriers for integration or to physically entrench racial inequality," much of which was by design. ¹³⁰

In a meeting with his Cabinet in the Spring of 1960, the President lambasted those who proposed this measure, stating how "the matter of running Interstate routes through the congested parts of the cities was entirely against his original concept and wishes." However, Ike really only had himself to blame. If he had "studied the Clay Committee report" as carefully as he claimed he did, he probably would have seen the large pictures specifically outlining the road routes, and could have made any adjustments he wanted. Even the extent of his endorsement for the plan was not decided by himself. In a report by John Bragdon of a meeting on the Clay Plan, it is described how the committee deliberated "whether (the plan) should be forwarded as representing the President's views, forwarded merely as informative, (or) not forwarded at all," before ultimately deciding that "the President should endorse the Clay report and forward it to

¹²⁸ Tom Lewis, *Divided Highways*, p. 123.

¹²⁹ Ibid

¹³⁰ Deborah Archer, interview by Noel King, "A Brief History Of How Racism Shaped Interstate Highways" (transcript), National Public Radio (April 7, 2021), https://www.npr.org/transcripts/984784455

¹³¹ Ibid.

¹³² Ibid.

¹³³ U.S. Department of Commerce & Bureau of Public Roads, *General Location of National System of Interstate Highways Including All Additional Routes at Urban Areas Designated in September 1955* (Washington D.C: GPO, 1955),

https://www.google.com/books/edition/General_Location_of_National_System_of_I/K8v8j10XXAUC?hl=en&gbpv =1&printsec=frontcover

Congress."¹³⁴ Eisenhower had not even been present at the meeting, and it was this sort of off-hand leadership that resulted in a miscarrying of his wishes.

Despite the financial, social, and ecological consequences of the Federal-aid Highway Act of 1956, and the missteps by the President's that contributed to them, no one can deny the drastic changes the highway system made on the nation. As a result of the more than 40,000 miles of road that came from the legislation, Americans have an ease of transportation that would have never been possible without it. The intangible value of our ability to freely travel across the country to visit loved ones and explore the world cannot be lost in the discussion of the highway system. The profound impact the highway system has on the economy, from the transportation of consumer and industrial goods to one's ability to commute to work safely and swiftly, are far more tangible yet equally undeniable. And although an argument could be made that highway construction actually decreased overall driver safety by increasing the speed of travel and number of drivers on the road, it is not clear that there are any advocates of a return to the uncoordinated, dilapidated system of roads that existed prior to the Interstate Highway System on account of safety. Ike was ultimately unsatisfied with the way the highway system was financed, and the way it was constructed in some areas. However, for these reasons and more, historians have generally reached a consensus that the United States is better off with them than without them.

¹³⁴ Bragdon, John Stewart Bragdon, Report on a meeting held to go over a draft of the legislation for the Administration's bill on roads, February 8, 1955, Eno Center for Transportation, https://www.enotrans.org/wp-content/uploads/2020/09/1955-Jan-Feb-WH-discussions-on-Clay-report.pdf

Images Used

- Page 8: Mantel, Edward J. "Liberty turned over." Edward J. Mantel Collection, Dwight D. Eisenhower Presidential Library Online. https://www.eisenhowerlibrary.gov/media/2914
- Page 13: Graph made by author using Microsoft Excel. Information gathered from "Motor Vehicle Traffic Fatalities, 1900-2007. National Summary. Table FI-200" (PDF). U.S. Department of Transportation, Federal Highway Administration (January 2009.) https://www.fhwa.dot.gov/policyinformation/statistics/2007/pdf/fi200.pdf
- Page 26: The Clay Committee presents its report with recommendations concerning the financing of a national interstate highway network to President Eisenhower on Jan. 11, 1955. Dwight D. Eisenhower Presidential Library Online. https://www.eisenhowerlibrary.gov/research/online-documents/interstate-highway-system

Bibliography

- Address of Vice President Richard Nixon to the Governors Conference Lake George, New York July 12, 1954. Federal Highway Administration (2017). https://www.fhwa.dot.gov/infrastructure/rw96m.cfm
- Ambrose, Stephen E. Eisenhower: Soldier and President. New York: Simon and Schuster, 1991.
- Archer, Deborah. Interview by Noel King. "A Brief History Of How Racism Shaped Interstate Highways" (transcript). National Public Radio (April 7, 2021). https://www.npr.org/transcripts/984784455
- Bragdon, John Stewart. Report on conference held on the message to Congress concerning legislation for roads, February 1, 1955. Eno Center for Transportation. https://www.enotrans.org/wp-content/uploads/2020/09/1955-Jan-Feb-WH-discussions-on-Clay-report.pdf
- Bragdon, John Stewart. Report on a meeting held to go over a draft of the legislation for the Administration's bill on roads, February 8, 1955. Eno Center for Transportation. https://www.enotrans.org/wp-content/uploads/2020/09/1955-Jan-Feb-WH-discussions-on-Clay-report.pdf
- Bragdon, John Stewart. Report on a meeting with reference to the President's Advisory Committee report, January 20, 1955. Eno Center for Transportation. https://www.enotrans.org/wp-content/uploads/2020/09/1955-Jan-Feb-WH-discussions-on-Clay-report.pdf

- Bragdon, John Stewart. Report on various meetings discussing financing for the National Highway Program and personal views of Gen. Bragdon on financing, January 27, 1955. Eno Center for Transportation. https://www.enotrans.org/wp-content/uploads/2020/09/1955-Jan-Feb-WH-discussions-on-Clay-report.pdf
- Bragdon, John Stewart. Report on a meeting held to go over a draft of the legislation for the Administration's bill on roads, February 8, 1955. Eno Center for Transportation. https://www.enotrans.org/wp-content/uploads/2020/09/1955-Jan-Feb-WH-discussions-on-Clay-report.pdf
- Correspondence between Dwight Eisenhower and multiple reporters on the cost of the Interstate Highway System from the President's News Conference, July 14, 1954. Federal Highway Administration (2017). https://www.fhwa.dot.gov/interstate/audiotext.cfm
- Correspondence between Dwight Eisenhower and multiple reporters on the financing for the Interstate Highway System from the President's News Conference, February 10, 1954. Federal Highway Administration (2017). https://www.fhwa.dot.gov/interstate/audiotext.cfm
- Cox, Wendell & Love, Jean. "40 Years of the US Interstate Highway System: An Analysis of The Best Investment A Nation Ever Made." American Highway Users Alliance (June 1996): Executive Summary. http://www.publicpurpose.com/freeway1.htm
- Cronk, Duane L. "Washington Newsletter," *Roads and Streets 99* (June 1956). p. 19-20. As quoted in Bruce Edsall Seely. *Building the American Highway System: Engineers as Policy Makers*. Philadelphia: Temple University Press, 1987. p. 217.
- Dwight D. Eisenhower, Address to the 1957 Governors' Conference, Williamsburg, Virginia.
 Online by Gerhard Peters and John T. Woolley, The American Presidency Project
 https://www.presidency.ucsb.edu/node/233279
- Dwight D. Eisenhower, Annual Message to the Congress on the State of the Union, January 6, 1955. Eisenhower Library https://www.eisenhowerlibrary.gov/sites/default/files/file/1955_state_of_the_union.pdf
- Dwight D. Eisenhower, Annual Message to the Congress on the State of the Union, January 5, 1956. Online by Gerhard Peters and John T. Woolley, The American Presidency Project https://www.presidency.ucsb.edu/node/233132
- Eisenhower, Dwight D. At Ease: Stories I Tell to Friends. Garden City, N.Y: Doubleday, 1967.
- Eisenhower, Dwight D. *Mandate for Change, 1953-1956: The White House Years.* Garden City, N.Y: Doubleday, 1963.

- Hitchcock, William I. *The Age of Eisenhower: America and the World in the 1950s*. New York City: Simon & Schuster, 2018.
- "Highway Needs of the National Defense." Doc. H. 81st Congress, 1st Session: pp. 10-23. As quoted in United States Federal Highway Administration. *America's Highways*, 1776-1976. U.S. Dept. of Transportation, Federal Highway Administration. Washington D.C: U.S. GPO, 1977. p. 170.
- L. A. Minnich to Rowland L Hughes, January 31, 1956. Eisenhower diary. As quoted in Mark Rose, *Interstate: Express Highway Politics, 1941-1956*. Lawrence: University Press of Kansas, 1979. p. 89.
- Lewis, Tom. *Divided Highways: Building the Interstate Highways, Transforming American Life*. Ithaca, NY: Cornell University Press, 1997.
- Lucius D. Clay to Dwight D. Eisenhower, January 26, 1955. Administrative File, Eisenhower Library. As quoted in Mark H. Rose. *Interstate: Express Highway Politics, 1941-1956*. Lawrence: Regents Press of Kansas, 1979. p. 76.
- "MacDonald Retires as Commissioner of Public Roads, F. V. duPont Takes Over." *Engineering News-Record* 150, No. 14, (Apr. 2 1953):. 52-54. As quoted in United States Federal Highway Administration, *America's highways*, 1776-1976. U.S. Dept. of Transportation, Federal Highway Administration. Washington D.C: U.S. GPO, 1977. p. 170.
- Memorandum on a Meeting of April 6, 1960 regarding the interstate highway program, April 8, 1960. Dwight D. Eisenhower Presidential Library, Interstate Highways System Online Documents. https://www.eisenhowerlibrary.gov/sites/default/files/research/online-documents/interstat e-highway-system/1960-04-08-meeting.pdf
- Message from the President to the Congress regarding highways, February 22, 1955. Dwight D. Eisenhower Presidential Library, Interstate Highway System Online Documents. https://www.eisenhowerlibrary.gov/sites/default/files/research/online-documents/interstat e-highway-system/1955-02-22-message-to-congress.pdf
- Pfeiffer, D. A. "Ike's Interstates at 50: Anniversary of the Highway System Recalls Eisenhower's Role as Catalyst." *Prologue Magazine* 38, No. 2 (2006) https://www.archives.gov/publications/prologue/2006/summer/interstates.html
- "Pressure for Big Road Program Will Mount." Engineering News Record 155 (August 14, 1955): 21–24. As quoted in Bruce Edsall Seely, *Building the American Highway System:* Engineers as Policy Makers. Philadelphia: Temple University Press, 1987. p. 216.
- Rose, Mark H. *Interstate: Express Highway Politics, 1941-1956.* Lawrence: University Press of Kansas, 1979.

- Seely, Bruce Edsall. *Building the American Highway System: Engineers as Policy Makers*. Philadelphia: Temple University Press, 1987.
- Smith, Jean Edward. "Chapter 28: Electing a President" in *Lucius D. Clay : An American Life*. New York City: Henry Holt, 1990.
- Statement by the President regarding the 1958 Federal Aid Highway Act, April 16, 1958. Dwight D. Eisenhower Presidential Library, Interstate Highway System Online Documents. https://www.eisenhowerlibrary.gov/sites/default/files/research/online-documents/interstat e-highway-system/1958-04-16-statement.pdf
- Telephone calls, January 16 and 31, 1956. Eisenhower diary. As quoted in Mark Rose, *Interstate: Express Highway Politics, 1941-1956.* Lawrence: University Press of Kansas, 1979. p. 89.
- Thomas, Evan. *Ike's bluff: President Eisenhower's secret battle to save the world.* New York: Little, Brown and Co., 2013.
- United States Federal Highway Administration. *America's highways*, 1776-1976. U.S. Dept. of Transportation, Federal Highway Administration. Washington D.C: U.S. GPO, 1977. https://library.si.edu/digital-library/book/americashighways00unit
- U.S. Department of Commerce & Bureau of Public Roads. *General Location of National System of Interstate Highways Including All Additional Routes at Urban Areas Designated in September 1955*. Washington D.C: GPO, 1955. https://www.google.com/books/edition/General_Location_of_National_System_of_I/K8v8j10XXAUC?hl=en&gbpv=1&printsec=frontcover
- Weingroff, Richard F. "Federal-Aid Highway Act of 1956: Creating the Interstate System." Public Roads 60, No. 1 (1996). https://highways.dot.gov/public-roads/summer-1996/federal-aid-highway-act-1956-creating-interstate-system
- Weingroff, Richard F. "From 1916 to 1939: The Federal-State Partnership at Work." *Public Roads* 60, No. 1. Federal Highway Administration (1996). https://highways.dot.gov/public-roads/summer-1996/1916-1939-federal-state-partnership -work
- Weingroff, Richard F. *President Dwight D. Eisenhower and the Federal Role in Highway Safety*. United States Federal Highway Administration (2017). https://www.fhwa.dot.gov/infrastructure/safety.cfm
- "1934 Hayden-Cartwright Act." *Eno Center for Transportation* (11 September, 2015). https://www.enotrans.org/eno-resources/1934-hayden-cartwright-act/