Divided by Design

ABOUT THIS REPORT

This project was conducted under the leadership of Calvin Gladney, president and CEO of Smart Growth America, and Beth Osborne, vice president of transportation. Abigail Grimminger, communications manager, was the primary author, with additional contributions from Stephen Kenny, policy associate. Atlanta and DC data analyses performed by Megan Wright, economic development associate. Research, editing, and additional writing by Steve Davis, AVP of transportation strategy. Editing and strategic direction from Eric Cova, communications director. Graphic design by KarBel Multimedia. This report was produced through the generous support of the Barr Foundation.

This report was released in July 2023.
View supplemental maps and animations at
smartgrowthamerica.org/divided-by-design

Smart Growth America advocates for people who want to live and work in great neighborhoods. We envision a country where no matter where you live, or who you are, you can enjoy living in a place that is healthy, prosperous, and resilient. Learn more at www.smartgrowthamerica.org

Transportation for America, a program of Smart Growth America, is an advocacy organization made up of local, regional and state leaders who envision a transportation system that safely, affordably, and conveniently connects people of all means and ability to jobs, services, and opportunity through multiple modes of travel. Learn more at t4america.org

In a scene repeated all across the country, this 1968 photo shows historic southeast District of Columbia neighborhoods soon to be demolished as construction on Interstate 395/695 continues eastward. The historic Marine Barracks is visible in the middle right.

CREDIT: DISTRICT OF COLUMBIA. DEPARTMENT OF HIGHWAYS AND TRAFFIC AND DISTRICT DEPARTMENT OF TRANSPORTATION, "SOUTHEAST/SOUTHWEST FREEWAY," DDOT HISTORIC COLLECTIONS, ACCESSED JUNE 13, 2023.

SUMMARY

Low-income communities and communities of color have been and continue to be disproportionately harmed by our approach to transportation in the United States. This damage has come in many forms, but most egregiously through the manner in which the U.S. constructed of the Interstate Highway System. A growing understanding of this reality helped lead to the creation of new provisions and programs aimed at undoing some of this damage in the November 2021 infrastructure bill. But these steps were modest and policy interventions continue to focus largely on past harms or small, insufficient reforms, ultimately failing to grapple with the reality that **the fundamental approach of our current transportation program creates and exacerbates inequities.**

Past decisions, including routing the Interstate Highway System through communities of color, dividing and often demolishing them in the process, still shape our built environment. And most importantly, the foundation of the modern transportation program was built on models, measures and standards that have their roots in this era. Without a fundamental change to the overall approach to transportation, **today's leaders and transportation professionals, no matter their intent, will perpetuate and exacerbate the damage.**

THE DIVISIONS AREN'T FELT EQUALLY

Because it is difficult and unsafe to reach daily needs without a vehicle in much of the United States, **transportation has long acted as an economic barrier** in the United States. Owning a car has become a prerequisite for accessing jobs, food, health care, and other necessities. Homes are located far from major job centers, services, and stores, requiring multiple car trips daily to reach essential needs.

This spread-out, sprawling form of development makes public

With no sidewalk, people walking along Buford Highway in Atlanta, GA have worn a path through the grass. CREDIT: OPEN HAND ATLANTA.

transportation inefficient to operate, producing infrequent, inconvenient, and unreliable service. Fewer than 10 percent of Americans currently live within walking distance of frequent transit, like buses or metro trains. Even in areas where homes, stores, and medical care are geographically close, car-oriented infrastructure and development can make it difficult, and even deadly, to travel between destinations without a vehicle. Wide, heavily trafficked roads with subpar or non-existent sidewalks and few places to cross safely make walking or biking unpleasant at best and deadly at worst. For people with impaired vision, mobility, or cognitive ability, navigating these communities can be impossible.

These two systems reinforce each other: sprawling development requires wider roads to move people, almost all of whom have to drive between spread-out destinations; and wide, fast roads require so much space to move and store the cars that development is forced to sprawl even further apart. The result is both predictable and expensive: necessities move further away and reaching them costs more in terms of money and time.

Approximately 28 million Americans (about nine percent of the population) do not have access to a car, and lower-income people and people of color are more likely to not have access to a car. **This is not just an urban issue.** In fact, the majority of counties in the U.S. with high rates of zero-car households are rural. And too often policymakers dismiss the transportation needs of rural Americans by assuming that everyone has cars and is happy to spend vast amounts of their time and money on driving.

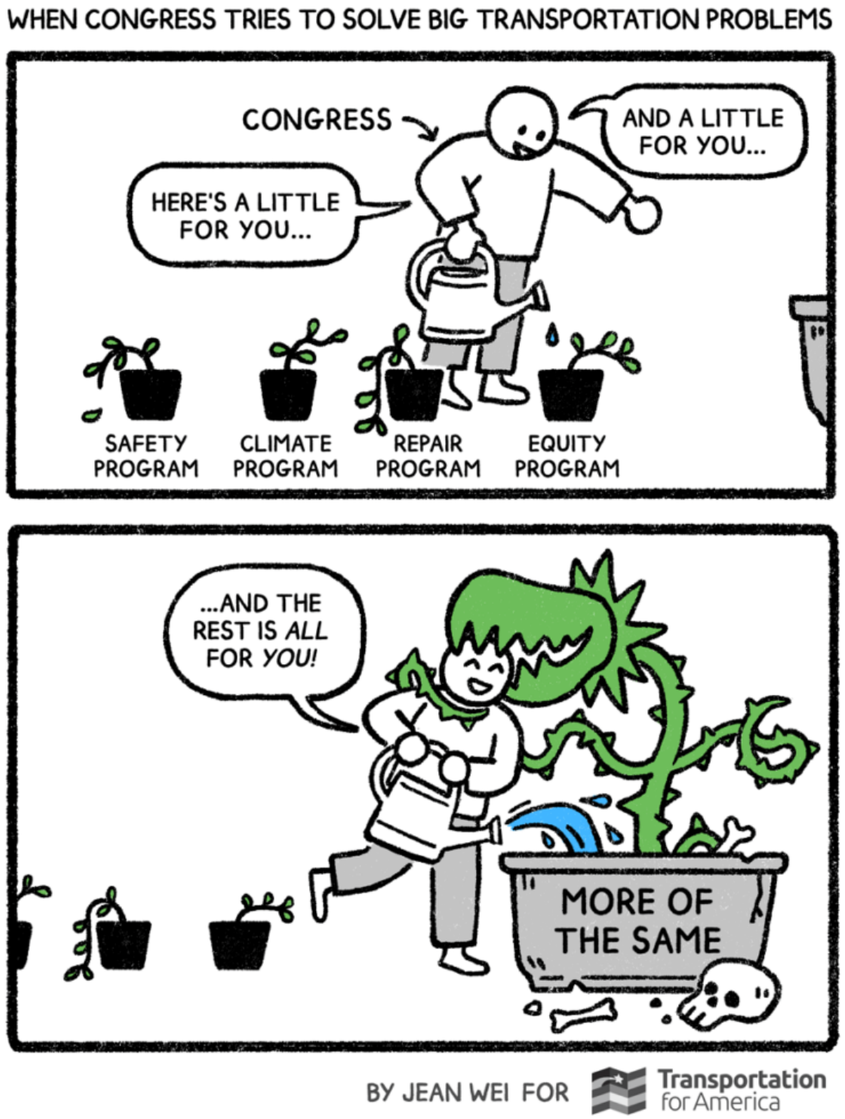
MERELY MAKING TWEAKS TO OUR APPROACH WILL FAIL TO CORRECT FUNDAMENTAL PROBLEMS

We can and must do better. **Our approach to transportation needs a massive shift: from primarily focusing on the movement of vehicles, to instead focusing on connecting people to the things they need, no matter who they are, where they live, or how they travel.**

The widely accepted approach to addressing the destructive flaws in our transportation system has been the same for years now: make small, additive reforms, while failing to change the underlying program, standards, or practices. On the project level, this is akin to adding a bike lane and sidewalk along a dangerous road that is never changed.

On the program level, it's done by routinely creating small new programs to improve problems that are being actively reinforced by the billions contained in the conventional federal transportation program.[1]

For example, the Reconnecting Communities Program, a competitive grant program funded at $1 billion over five years in the 2021 infrastructure law, was explicitly touted as a source of funding



Congress and states love to create small, discrete programs to solve big transportation problems. They don't like to change what's causing those problems.

VIEW THIS CARTOON

for projects that aim to remove or address divisive infrastructure. However, the full infrastructure law allows a great deal of flexibility for state DOTs and localities to advance projects that would further existing divisions or create new divides entirely.

Small, niche, siloed efforts cannot repair past damage or keep up with the new barriers being created by new projects. To create a system that serves everyone and halts the practice of benefiting certain people at the expense of others, we need a new set of governing principles, standards, models, and measures, embedded in every single project and program.

While the **federal government** has direct control over only a small amount of discretionary funding, they do control roadway design standards, models and tools, and performance targets that states rely on every single day.

States, which control the lion's share of all transportation dollars, have immense flexibility to try something new that might get better results. Will elected leaders at the state and federal level settle for more of the same or will they demand that USDOT and state DOTs reorient the transportation program to provide all people the means to access to jobs and services no matter their location, financial means, or physical ability?

If our elected, appointed, and civil transportation decision-makers fail to understand how current USDOT guidance and state DOT actions are still actively harming low-income people, people of color, older people, and people with disabilities, they cannot begin to truly rectify these injustices. **Their intent to do things differently or better than their publicly racist forebears in the 1950s and 1960s is irrelevant when many of those practices are still embedded in the transportation policies and standards of today.** Today's leaders must understand how the past is still shaping current practices. They must reevaluate how their decisions are made and who their decisions serve.

Congress and the federal government are right in part: **it *is* time to fix the harms of our transportation system, but creating tiny new programs will fail to address the damage. We need a new approach.**

Wide, divisive roadways continue to separate people from their daily needs, particularly people of color.
CREDIT: FLICKR/CLTPATHMAKER

What we examine in this report

We will detail what a new approach might look like at the end of Part II, but to understand the problems we see in the present, we must understand where and how they began.

Part I takes a look back in time to examine the damage and inequities that were deliberately created by and in the federal transportation program from ~1950 onward. To help quantify and visualize that damage, Part I concludes by studying an unbuilt and built highway segment each within two cities (Atlanta and DC) to quantify what was lost, who bore the brunt of the damage, and what could have been lost today with the highways that were never built.

Part II examines our current circumstances, demonstrating how the programs, standards, models, and measures that constitute our current transportation program exacerbate inequities—whether intentional or not. And **Part III** outlines concrete steps we can take to fundamentally reorient the program around unwinding those inequities.

PART I:

Historic inequities in U.S. transportation, created by design

The Interstate age: Damaging divisions, created by design

As the story goes, after being shaped in his youth by a long and delay-filled trip in a military convoy across the United States on the country's limited network of small highways and backroads in 1919, President Dwight Eisenhower advanced plans to create a national network of interstate highways. The Federal-Aid Highway Act, passed during his administration in 1956, established the program for funding and building the new system. The primary intent of the interstate was to connect cities (busy, multimodal, economic hubs) and states with a new high-speed form of travel with limited access to minimize delays. While history is unclear on this point, there's some evidence that President Eisenhower (or some in his administration at least) never intended these new highways to cut through the heart of cities.

Most outspoken critics of putting highways through the center of cities and urban areas, whether planners or writers like Lewis Mumford, were marginalized, and the prevailing attitude amongst those responsible for implementing the plans was one of inevitability. During the 1950s, the makeup of cities was changing. After World War II, the federal government responded to a postwar housing crisis by creating programs that encouraged suburban development, like the GI Bill and the National Housing Act, which established the Federal Housing Administration.

White Americans saw several advantages to moving to the suburbs: brand new everything, lower taxes, lower upfront living costs, better resources like schools, and more distance from Black Americans, who had started moving to cities after the Civil War in search of economic opportunity and better social conditions.

It's worth noting that before the passage of the Federal-Aid Highway Act and as early as the late 1930s, scores of cities were already planning and/or building new highways, some of which were later incorporated into the Interstate Highway System. While there was federal money available to cities and states to support highway construction, the match rates were far lower than the 90 percent share enshrined in the 1956 law, one of the primary factors that accelerated the expansion of the Interstate Highway System.[2]

By the time planning for the country's interstate systems was underway, white, wealthy Americans were already leaving cities in droves. Their move to the suburbs placed pressure on city governments concerned that local businesses would suffer from a shrinking consumer base. Many city and business leaders responded to this pressure by trying to make traveling from the suburbs to jobs and retail in cities more attractive. They saw federally funded highways (called "freeways," which gave the impression that this expensive, heavily subsidized resource was a low-cost travel option) as the perfect tool.

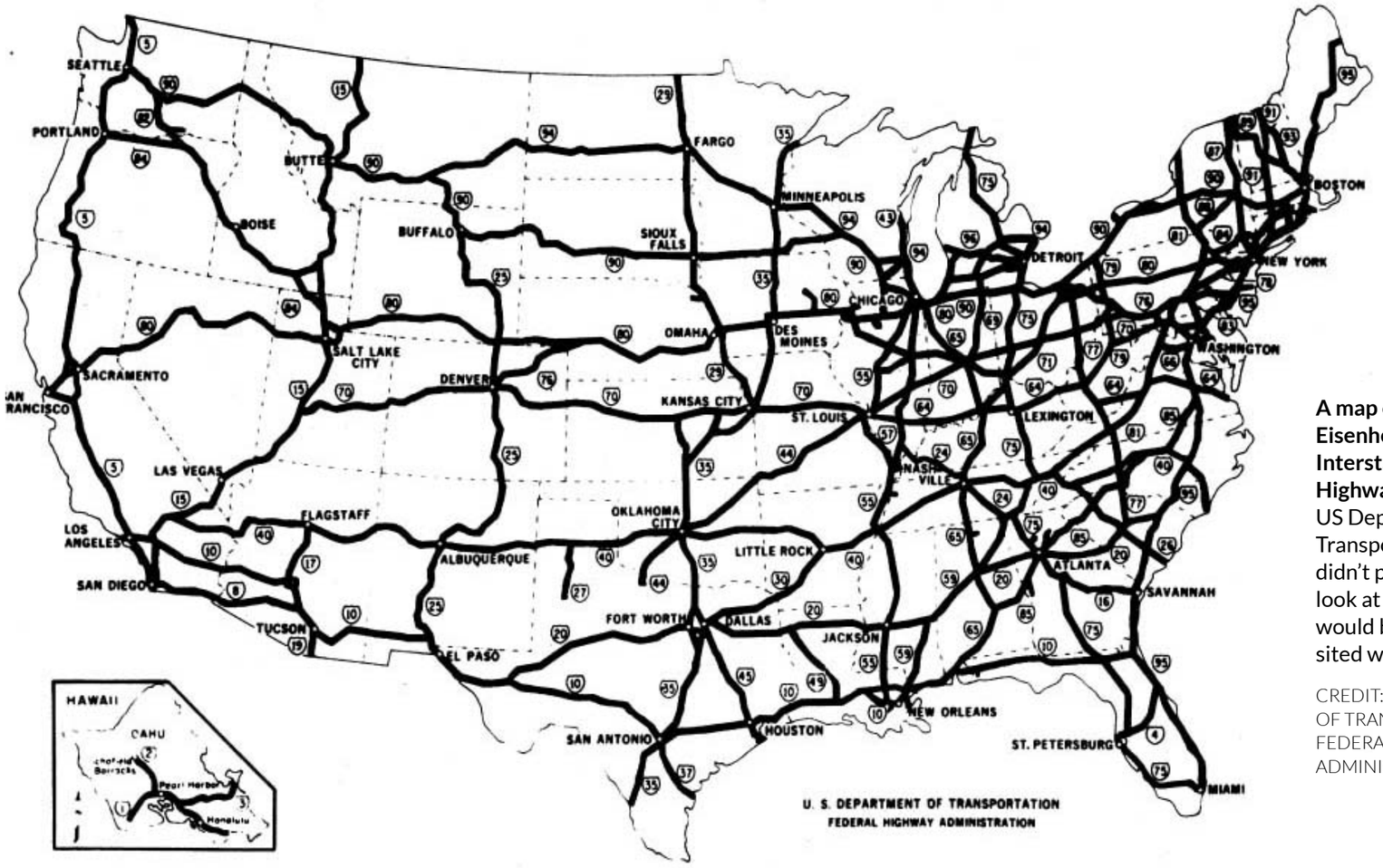
Constructing highways through cities served two purposes for city leaders. As an option for high-speed travel, the highways gave white, wealthy suburbanites convenient access to urban centers and allowed them to drive past or through segregated communities of color. At the same time, highways were an excellent new tool for so-called "urban renewal" efforts. Targeting communities of color for highway construction allowed urban leaders to displace certain residents and remove "blighted" areas and pave the way for their vision of economic revitalization, which certainly wasn't inclusive of everyone.

"He went on to say that the matter of running Interstate routes through the congested parts of the cities was entirely against his original concept and wishes; that he never anticipated that the program would turn out this way. He pointed out that when the Clay Committee Report was rendered, he had studied it carefully, and that he was certainly not aware of any concept of using the program to build up an extensive intra-city route network as part of the program he sponsored. He added that those who had not advised him that such was being done, and those who had steered the program in such a direction, had not followed his wishes."

—Recollection of General Bragdon,
Secretary of Commerce and head of the Bureau of Public Roads, of an April 1960 meeting with Eisenhower.

The urban renewal movement sought to enhance cities' economic vitality by targeting and systematically removing housing and businesses deemed substandard. These practices disproportionately targeted communities of color because these areas had been neglected and denied investment for so long. Rather than finding ways to invest in them and build them up, those with the power used the new renewal programs to raze entire neighborhoods and displace hundreds of thousands of residents. The USDOT estimates that construction of the interstates displaced 475,000 households and over a million people in less than two decades.

Communities of color were often deliberately and intentionally targeted and razed by avowed racists who selected the routes. In the South especially, it was not uncommon for openly racist leaders to control those decisions. In Alabama, Sam Englehart, who was also the leader of a hate group known as the Alabama White Citizens Council, became the Director of the Alabama Highway Department. In one of the most egregious but far from atypical examples, Englehart personally intervened to reroute I-65



A map of the Dwight D. Eisenhower System of Interstate and Defense Highways from the US Department of Transportation, which didn't provide a detailed look at how highways would be routed and sited within cities.

CREDIT: THE U.S. DEPT. OF TRANSPORTATION'S FEDERAL HIGHWAY ADMINISTRATION.

"During the Senate confirmation hearing before the Committee on Commerce on January 15, 1969, several Senators asked about the nominee's (John Volpe) views on highways and his actions as Governor. Senator Philip A. Hart (D-Mi.) told Governor Volpe that 'in the eyes of minority groups,' the Federal highway program 'is an enemy, because they do not generally run the highway through my house or yours; it is the fellow whose property is cheaper, quicker to get, but who when he is moved has less opportunity to relocate successfully than you and I have.'"

— **The D.C. Freeway Revolt and the Coming of Metro**, Part Six. Richard Weingroff, Federal Highway Administration (FHWA).

through prosperous Black neighborhoods in West Montgomery, even intentionally targeting the home of civil rights leader Ralph David Abernathy for destruction.

Residents of these communities lacked the political power needed to halt such projects.[3] While highways became an essential tool for "urban renewal," all manner of resources were employed to segregate or demolish communities of color. Robert Moses intentionally built bridges too low for transit vehicles to pass under, effectively keeping the lower-income and people of color who rode transit in higher shares from accessing certain neighborhoods, parks, airports, and job centers.[4]

New highways—fast, easy routes between work and home—succeeded in bringing suburbanites into cities for work, but they also systematically hollowed out the urban core of cities, harmed communities of color, and failed to preserve the local economy or otherwise make the urban areas more enticing to the white suburbanites.

Of course, highways were just one part of a larger system of exclusionary practices put into place with the help of federal investment and policies. However, once highways were in place, they created a new set of unforeseen problems and costs, which federal, state, and local governments would be forced to grapple with for years to come, even to the present day.

This more openly racist past may be behind us, but that history still shapes the present. And the fact that our federal transportation program and most state transportation agencies were chartered or tasked with building new highways as their primary role for decades is the reason why a **deeply held system of assumptions, measures, models, and other hidden factors continue to produce the same inequitable outcomes, regardless of the motives of those in charge.** This is what **Part II** explores in detail.

But first, we will look at two case studies (Atlanta and Washington, DC) to examine the damage of highways that were built, who was affected and what was lost, and the potential for what could have been lost if other highway projects had succeeded.

The interstate system has carved up cities small and large, rendering it either impossible or extremely dangerous to get around with a vehicle. Two people attempt to navigate an interstate frontage road without sidewalks in Jackson, MS.

CREDIT: SCOTT CRAWFORD.

History quantified: Examining the damage in Atlanta and Washington, DC

The devastation, disconnection, and displacement that resulted from plowing highways through cities and neighborhoods is easy to see, but rarely do we quantify the costs in terms of lost wealth, land, residents, and businesses.

Despite the destruction caused by the number of completed highway projects that cut through cities, the damage could have been much worse, with many planned highways never built or completed.

We examined current and historical data on the impact of one built and one unbuilt highway in two different cities—Atlanta, Georgia and Washington, DC—in an attempt to quantify what was lost and illustrate what *could have been* lost.

These photos from Cincinnati show how much destruction was wrought between 1958 (left photo) and 1966 (right photo) to build the interchange of Interstates 71 and 75 just west of downtown. SOURCE UNKNOWN

Important notes about our methodology for these analyses

For the detailed methodology used in these corridor comparisons, please see the methodology appendix at the end of the report which explains in more detail how the routes were chosen, where the data comes from for the analysis of the impact in each corridor, and why these calculations are extremely conservative. In addition, note that the analysis is limited strictly to the portion of highway within the city limits in each city.

HISTORY QUANTIFIED

Washington, DC

The highway plans in the 1950s and 60s for the national capital region—and the planners responsible for them—both predicted and facilitated suburban sprawl and white flight into existing and new suburbs in Maryland and Virginia, failing to serve the needs of the District of Columbia's 750,000-plus residents. Documents produced at the time treated the city merely as a destination for far-flung commuters and interstate travelers to pass through via new interstates to provide "connection to principal arteries serving the Central Business District for convenient collection and delivery of traffic to and from exterior points." Though there were scores of highway plans for the region, various iterations would have resulted in plowing new interstates through dozens of historic neighborhoods, including the iconic U Street corridor, Capitol Hill, Brookland, Georgetown, Shaw, Takoma Park, and others.

While the coalitions that emerged in DC were more successful than other cities in preventing the comprehensive destruction of the city for the full suite of planned highways, predominantly Black and blue-collar neighborhoods across the city were still devastated. In the Southwest quadrant more than 400 acres were cleared and 23,500 people removed from their homes for the construction of I-395/695 analyzed below and the accompanying broader "urban renewal" effort. Though many historic Black and white neighborhoods were spared that are responsible for billions of dollars of annual tax revenue and economic growth for the city today, the displacement, destruction, and resulting barriers entrenched many disparities and inequalities seen in the city today

It's important to note that the District was not self-governed by its residents during the heyday of the interstate-building period and was still several years away from the limited "home rule" that came into effect in December 1973. Until 1967, the District's Department of Highways and Traffic reported not to an elected mayor or a council, but to three DC commissioners who were appointed by the President and confirmed by Congress and the committees with oversight of DC. This cleared the way for powerful members of Congress and their appointed transportation representatives to realize their plans. As an activist from the time

In an aerial photo looking to the east, land has already been cleared for the next few blocks of the Southeast/Southwest Freeway (I-395/695).

CREDIT: DISTRICT OF COLUMBIA. DEPARTMENT OF HIGHWAYS AND TRAFFIC AND DISTRICT DEPARTMENT OF TRANSPORTATION , "SOUTHEAST/SOUTHWEST FREEWAY," DDOT HISTORIC COLLECTIONS, ACCESSED JUNE 13, 2023.

said, "in the eyes of these congressmen, the city was expendable." Congressional appropriators even threatened to withhold funding for the new Metrorail transit system in an attempt to force the opponents of highway expansion to relent.

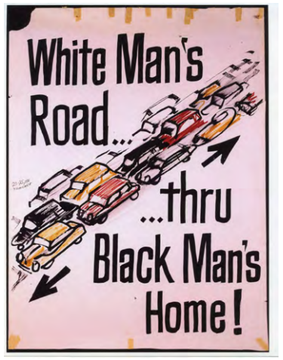
One factor shaping highway opposition in DC was that wealthier and politically influential white neighborhoods were also targeted in addition to the lower-income or Black neighborhoods typically targeted, which led to a diverse coalition of those opposed to the highway. An interracial and interclass group of organizers, calling themselves the Emergency Committee on the Transportation Crisis (ECTC), led by Sammie Abbott, who was white, and Reginald H. Booker, who was Black, organized against the destruction through direct, nonviolent action at every turn. ECTC popularized the slogan "White Men's Road through Black Men's Homes."

When the first Brookland homes were condemned for the construction of the (never built) North Central Freeway, Abbott and Booker cleaned up and repaired the homes and moved families into them (and were arrested as a result). When Rep. William Natcher (D-KY), the chief appropriator in Congress, focused on advancing a new bridge (the Three Sisters Bridge) over the Potomac to carry today's Interstate 66 from Virginia east directly through core DC neighborhoods, ECTC organized nearby (and primarily white) Georgetown University students to occupy construction equipment and the islets in the middle of the river. The bridge was ultimately never built and I-66 today ends at the Potomac River.

So what could have been in the place of the highways that were built? What was lost, and by whom? And how does the city benefit today from the highways that were not constructed? In Washington, DC, we analyzed two corridors, one built and one unbuilt, to answer these questions.

The caption on this historic photo (right) shows how planners at the time thought of the 1,500 businesses they displaced and the 23,000 people they removed from their homes in the Southwest quadrant of the city: "A good example of coordination of freeway and urban renewal planning is seen in the Southwest Freeway…"

CREDIT: DISTRICT OF COLUMBIA. DEPARTMENT OF HIGHWAYS AND TRAFFIC AND DISTRICT DEPARTMENT OF TRANSPORTATION, "SOUTHEAST/SOUTHWEST FREEWAY," DDOT HISTORIC COLLECTIONS, ACCESSED JUNE 13, 2023.



This sign (left) created by Sammie Abbott and the Emergency Committee on the Transportation Crisis (ECTC) became a vital and memorable part of the DC freeway revolts. "White Man's Road thru Black Man's Home!"

CREDIT: DC PUBLIC LIBRARY, WASHINGTONIANA COLLECTION.

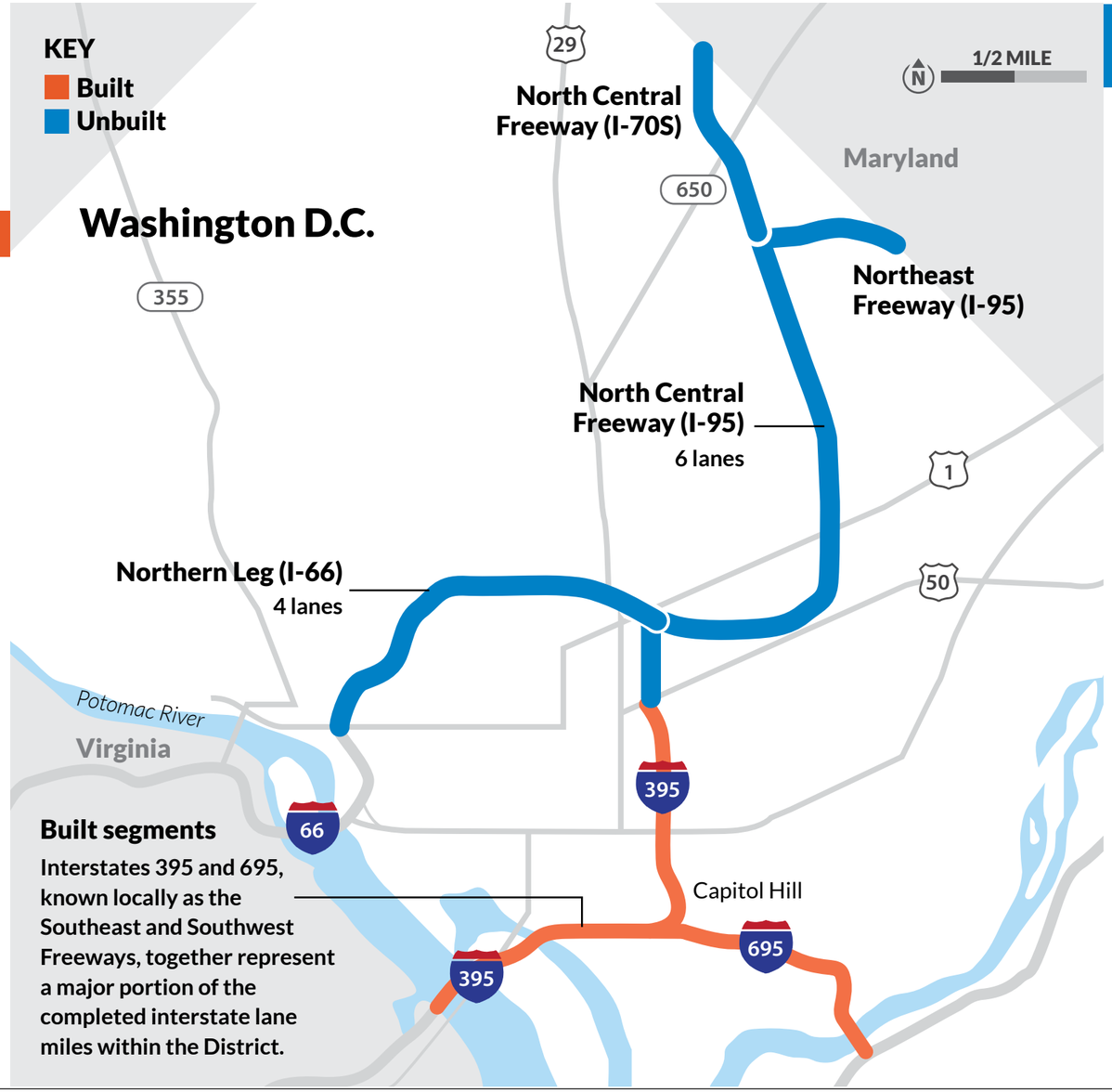
Corridors examined

In Washington, DC, we analyzed two corridors, one built and one unbuilt, to answer these questions.

BUILT: INTERSTATES 395 AND 695

- **Length analyzed:** Approximately 5 miles
- **Eight lanes** with an estimated minimum 308-foot-wide impact zone

Interstates 395 and 695, known locally as the Southwest and Southeast Freeways, together represent a major portion of the completed interstate lane miles within the District.[5] 395 carries traffic across a set of massive bridges from Virginia into the District and then (on 695) across the Anacostia River to Interstate 295 (and DC Highway 295). A short segment of 395 splits off and continues north under the National Mall, terminating at New York Avenue/4th Street NW. As originally conceived, it would have connected to both the North Central Freeway and the Northern Leg freeway—both analyzed here.



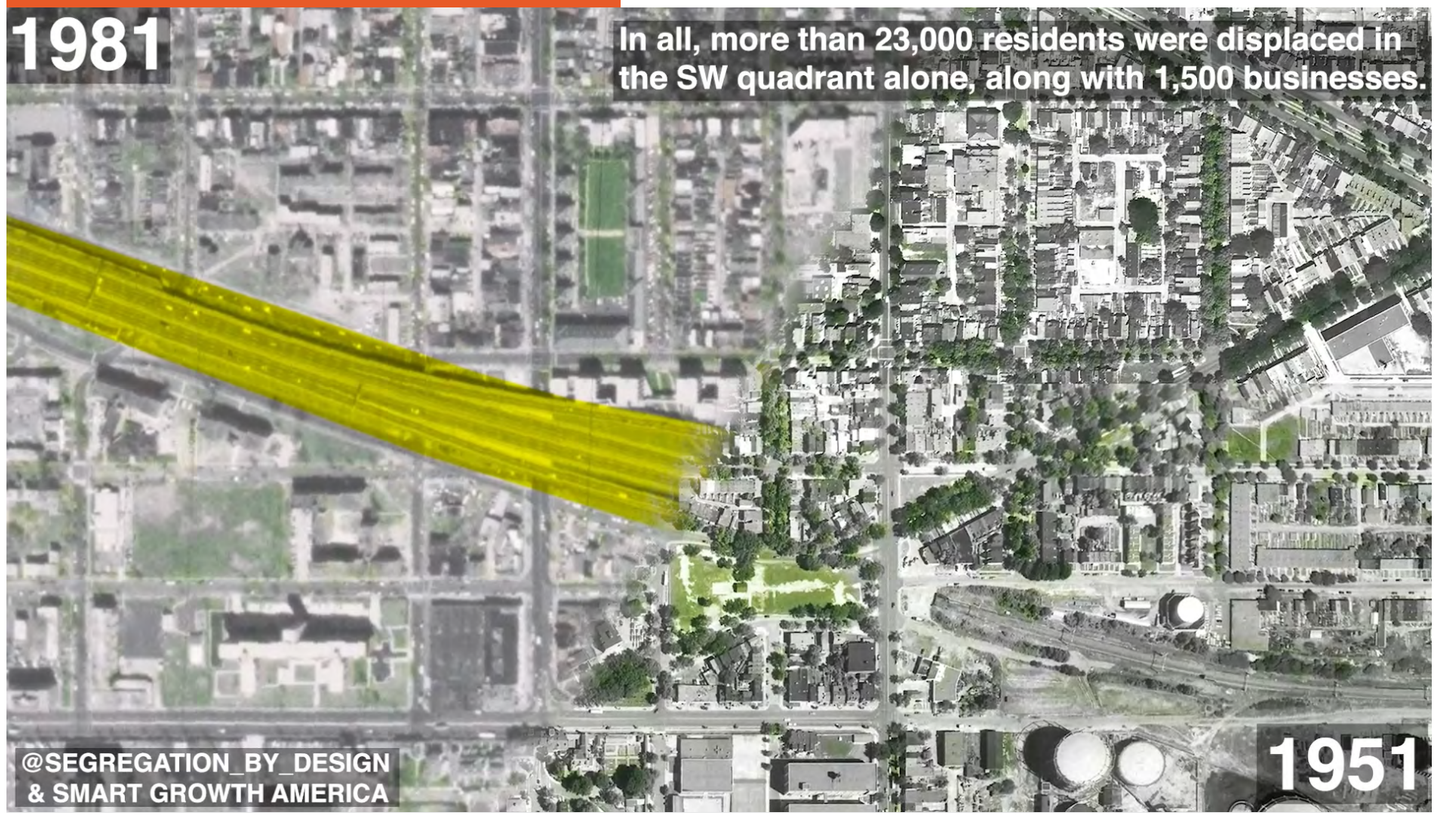
UNBUILT: PORTIONS OF INTERSTATES 95, 70, AND 66

- **Length analyzed:** Approximately 10 miles
- **4-6 lanes** with an estimated minimum 260-284-foot-wide impact zone

If completed as envisioned, what is Interstate 395 today would have actually carried Interstate 95 directly north through the heart of the city. Instead, I-95 is today signed to follow the existing path of the I-495 Beltway east around the city. Original plans for I-95 would have continued a wide swath of destruction northward from today's current terminus at New York Avenue before connecting to both the **Northern Leg (I-66)** running east-west through the city, and the **North Central Freeway (I-95/I-70)** running north, most likely adjacent to today's CSX rail right-of-way, though scores of other routes were proposed from 1955-1966. This combined freeway would have split in two further north, with I-70 running northwest through Takoma Park to the Beltway (I-495), and I-95 (the Northeast Freeway) eastward to today's terminus of I-95 at the Beltway.

This analysis examines these unbuilt segments within the borders of the District, as shown in the map at left.

BUILT: INTERSTATE 395 AND 695



This screenshot is from a longer animation showing before and after construction of the highway, produced in partnership with @Segregation_By_Design. View the full version at smartgrowthamerica.org/divided-by-design

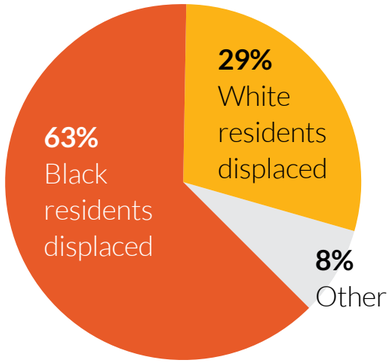
WHAT WAS LOST WITH THE CONSTRUCTION OF THESE HIGHWAY SEGMENTS:

I-395/695 consumes at least **311 acres** and **$3.3 billion** in taxable land, according to 2021 DC land assessments.[6]

Without the homes that previously existed within the I-395/695 corridor, the city lost the ability to tax approximately **$1.4 billion** in home value, costing the city at least **$7.6 million** in property taxes per year (at the 2023 residential property tax rate of 0.54%).

During the urban renewal process, 99 percent of buildings in the Southwest quadrant, including **1,500** commercial buildings, were destroyed.

I-395/695 displaced at least **4,700 people** in 1960.



At least **1,400** occupied housing units were destroyed, wiping out **$483,000** in average home equity, if those homes existed today.[7]

Roads are liabilities, not assets, and maintaining or rehabilitating them require significant costs. Highways are the most expensive kind of road to maintain due to their width, material (often concrete), and traffic volumes. Figures vary, but according to a Strong Towns analysis of 2014 FHWA numbers, it can cost upwards of **$7.7 million** per mile to reconstruct an existing lane of a freeway like this one.

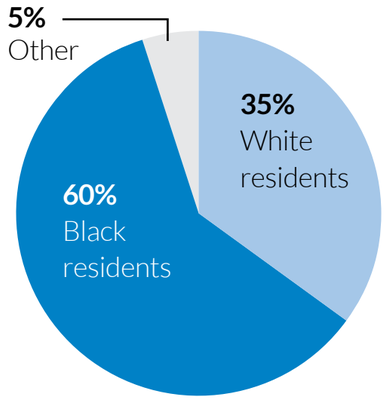
UNBUILT: INTERSTATE 95 EXTENSION

This comes from a longer animation of the unbuilt highway's route and impact.
View the full version at smartgrowthamerica.org/divided-by-design

WHAT WOULD HAVE BEEN LOST WITH THE CONSTRUCTION OF THIS HIGHWAY

The District of Columbia would have lost at least **$6.8 billion** in taxable land value.[8]

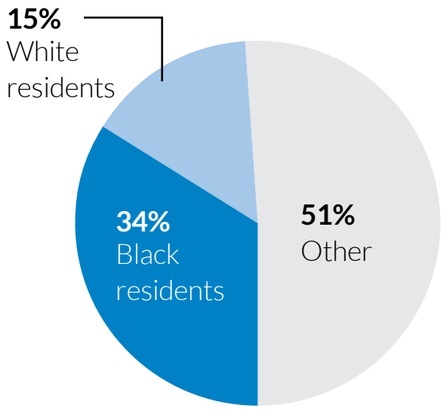
At least **18,000 residents** would have been displaced.



At least **6,300 homes** would have been destroyed, wiping out at least **$601,000** in average home equity for homeowners.

Without the homes in this corridor, the city would have would have lost the ability to tax at least **$6.6 billion** in home value, costing the city at least **$35 million** in property taxes each year (at a 2023 property tax rate of 0.54%).

In 2020, within just the 360-foot-wide impact zone of the proposed route, there were over **17,500** residents and over **9,300 homes**.



According to 2023 CoStar data, within this unbuilt corridor, there are:

224 active businesses **37 multifamily buildings** **42 office buildings**

HISTORY QUANTIFIED

Atlanta, GA

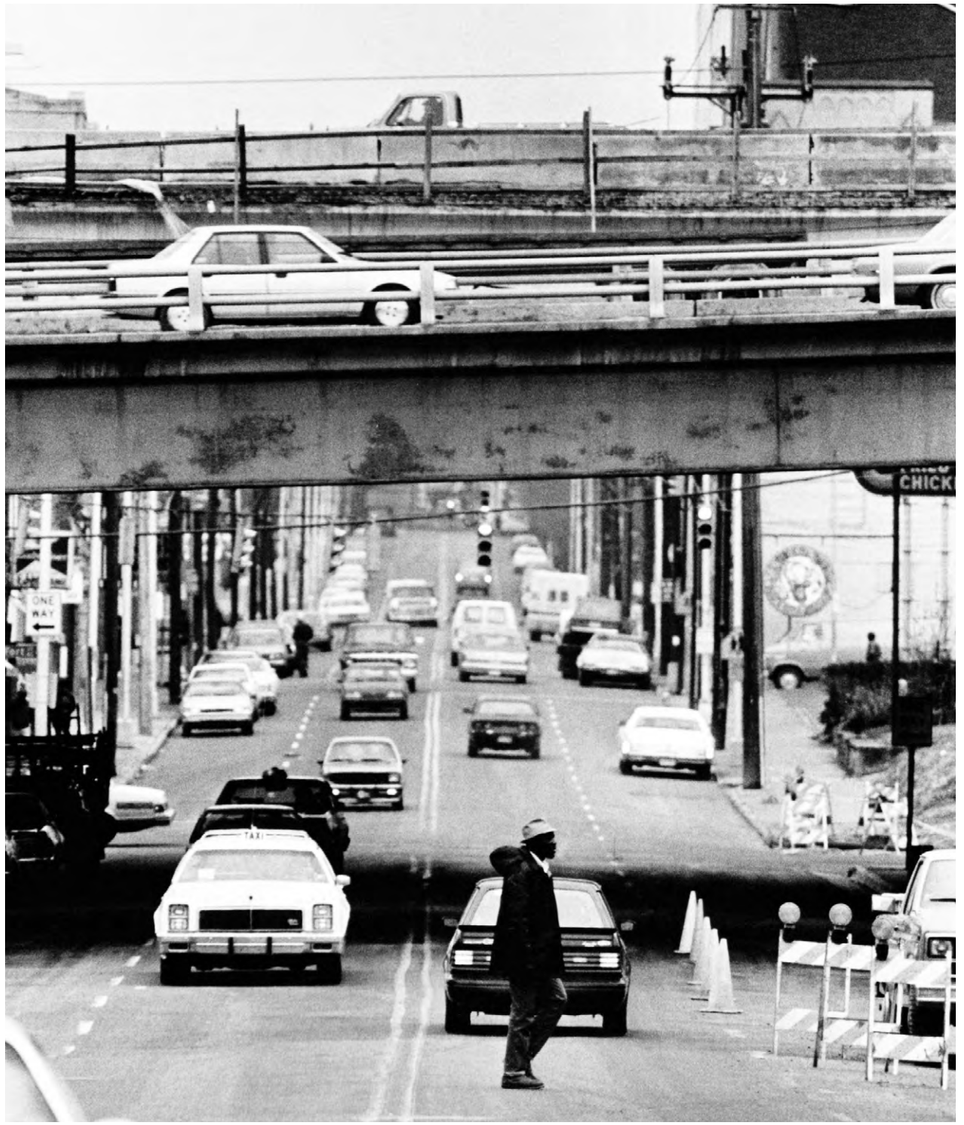
Mayor Ivan Allen is widely credited with popularizing "The City Too Busy to Hate" as a slogan for Atlanta. But in reality, that was as much about marketing the city to the rest of the country and the world as the aviation industry exploded and Atlanta's economy was on the rise.

The city was a nexus of the civil rights movement in the 1950s and 60s and progressed ahead of other southern cities through what could charitably be called a more pragmatic approach to integration, but Atlanta was also not radically different from the rest of the South. Black Americans, including GIs returning from WWII, were moving to the city in search of economic opportunity, and white Atlantans were making every effort to segregate a city in which the KKK was still very active.

Street names were routinely changed so that white residents would not have to share similar addresses with Black residents and streets were built around Black neighborhoods to create physical barriers. Even Mayor Ivan Allen, who defeated a staunch racist segregationist for his first term as mayor and is rightfully celebrated for his support of the civil rights movement, was central to an effort to put a physical wall across a southwest neighborhood to keep Black people from moving northward. Progress was more mixed and uneven than the popular slogan suggested.

With the creation of the Interstate Highway System, Atlanta's leaders (and perhaps more so the state) now had a powerful tool for removing certain people and building even more walls. The east-west Interstate 20 was used deliberately to create a boundary between white Atlantans on the north and Black Atlantans to the south. Even in the city "too busy to hate," Black neighborhoods were targeted to make way for new interstates, primarily designed to carry white suburban commuters into the city, fueling the next several decades of incredible suburban expansion in nearly all directions.

As just one example, Sweet Auburn (Avenue) was one of the centers of Black culture and life in Atlanta, full of residents, businesses, culture, and nightlife, once called the richest African American street in the country. Even before the creation of the interstate system, a north-south expressway



Life on Sweet Auburn after Interstates 75/85 were deliberately routed through this historically Black neighborhood in Atlanta, visible at the top of the photograph.

CREDIT: AJCP145-014BH, ATLANTA JOURNAL-CONSTITUTION PHOTOGRAPHIC ARCHIVE. SPECIAL COLLECTIONS AND ARCHIVES, GEORGIA STATE UNIVERSITY LIBRARY.

through downtown was proposed to curve east and slice directly through Sweet Auburn to avoid cutting through the central business district just to the west.

While advocates were able to successfully convince planners to shift what ultimately became the downtown connector (I-75/85) several blocks to the east to save some notable buildings in the commercial core of Sweet Auburn, the neighborhood was still sliced in half and pierced with a massive interstate viaduct (and accompanying ramps) that weakened the neighborhood, impoverishing it over the intervening decades. Sweet Auburn has never been the same.

The many interstates (and massive interchanges) that followed separated white and Black communities in Atlanta and accelerated the flow of white Atlantans to the suburbs. (And in later years, many Black Atlantans as well.) Over the course of the 1960s, 60,000 whites left the city, and many interstates later, in the 1970s, they were joined by 100,000 more. Locals quipped that Atlanta was "The City Too Busy Moving to Hate."

Today, crisscrossed by interstates that dispersed the metro area's population and jobs, Atlanta is home to some of the worst traffic in the nation. The Tom Moreland Interchange—the complicated intersection of Interstates 285 and 85 and other roads on the north side, often called "Spaghetti Junction"—is consistently ranked as one of the top three worst truck bottlenecks in the nation. The state has created massive traffic problems by spending billions to disperse people, homes, and jobs. And today, they continue to try and solve the traffic congestion they've created by turning to the same "solution"—expanding highways—that created the problems in the first place.

This aerial view looking to the west shows the 75/85 Connector under construction from left to right, with a massive chunk of land being cleared and prepared for the east-west segment of I-485 segment which was then never built, lying fallow until repurposed for today's John Lewis Freedom Parkway.

CREDIT: THE ATLANTA HISTORY CENTER.

While some of the proposed highways were never built, the two examples we study in Atlanta are instructive for what does and doesn't get built, and why.

Interstate 20 largely followed an eastwest line between predominantly white neighborhoods on the north and Black neighborhoods to the south. As Kevin Kruse wrote in the *New York Times Magazine*, "In Atlanta, the intent to segregate was crystal clear. Interstate 20…was deliberately plotted along a winding route in the late 1950s to serve, in the words of Mayor [William] Hartsfield, as 'the boundary between the white and Negro communities' on the west side of town. Black neighborhoods, he hoped, would be hemmed in on one side of the new expressway, while white neighborhoods on the other side of it would be protected."

And then consider I-485, the unbuilt north-south highway we examine in the below analysis, proposed to be built directly through some of the most prosperous and politically powerful white neighborhoods in the eastern side of the city near Piedmont Park, which was ultimately defeated and never built.

So what could have been? What was lost, and by whom? And how does the city reap the benefits today from what was not built?

Corridors examined

BUILT: INTERSTATE 20

- **Length analyzed:** Approximately 11 miles
- **Six lanes** with an estimated minimum 284-foot wide impact zone

While Interstate 20 runs from West Texas to South Carolina, we examined the approximately 11 miles within the Atlanta city limits, including the massive intersection with the Interstate 75/85 downtown connector.[10] I-20's route was chosen deliberately, as previously noted, to divide white and Black neighborhoods at the time. Its meandering route was designed to protect certain neighborhoods and devastate others, as well as to provide a barrier that would last for decades to come.

UNBUILT: INTERSTATE 485

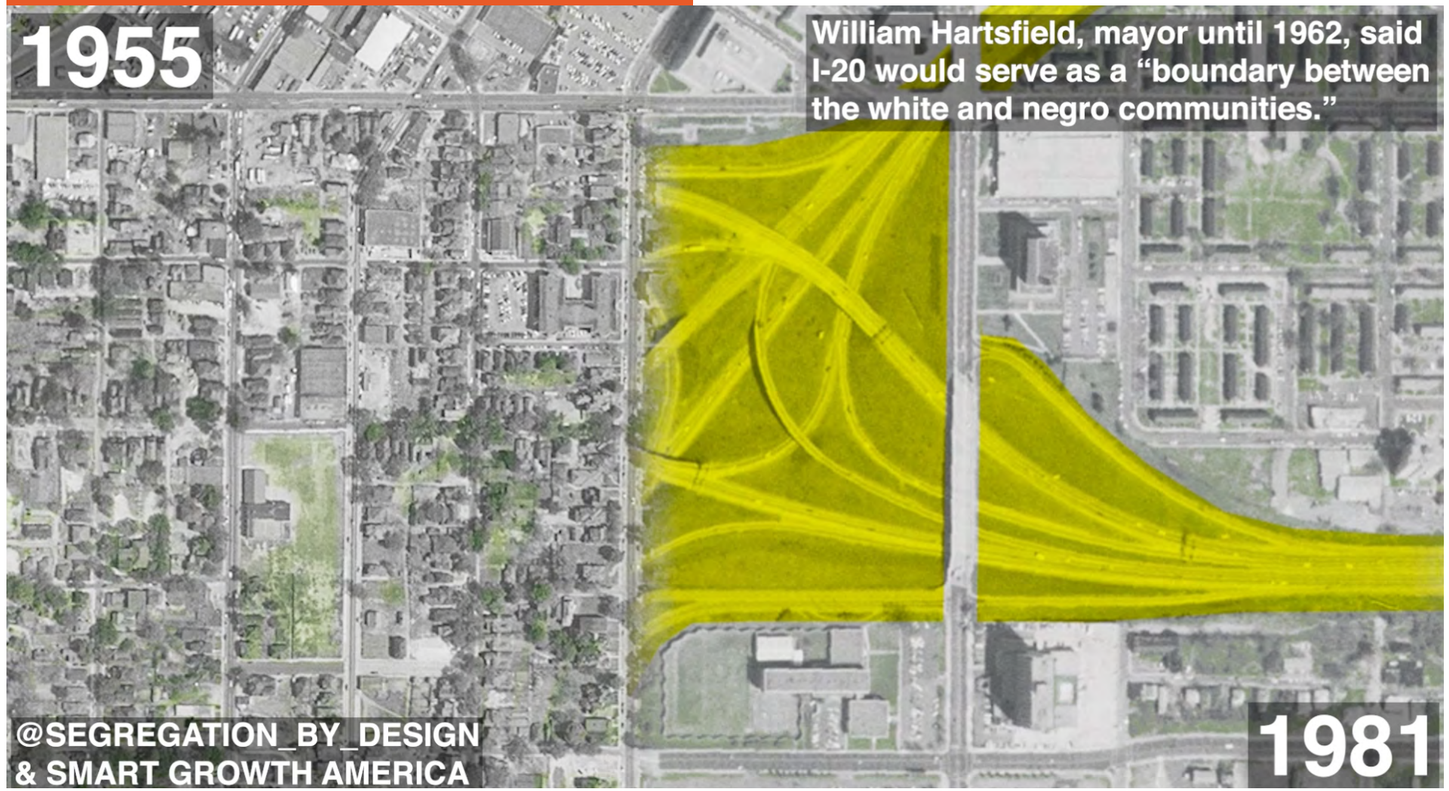
- **Length analyzed:** Approximately 11 miles
- **Four lanes** with an estimated minimum 260-foot-wide impact zone

Interstate 485 would have created a second north/south interstate parallel to and east of today's massive I-75/85, running (roughly) all the way from today's SR 400 on the north to I-675 on the south.

Only the segment within the city limits was studied here, leaving off the southern portion connecting to I-675. The interstate would have traveled through or near some of the wealthiest white neighborhoods in the city north of I-20, including Morningside-Lenox Park, Virginia-Highland, and Inman Park, where massive opposition helped defeat the project, though it remained active on the books until 1975.[12] GDOT razed numerous homes and seized land for its construction, much of which sat fallow for years before becoming part of the Jimmy Carter Presidential Library and Museum, new parkland, and a short parkway built in the 1990s.

(There was also a plan to continue the short east-west segment through today's Carter Center all the way to a connection with today's US 78/Stone Mountain Freeway at the I-285 Perimeter.)

BUILT: INTERSTATE 20



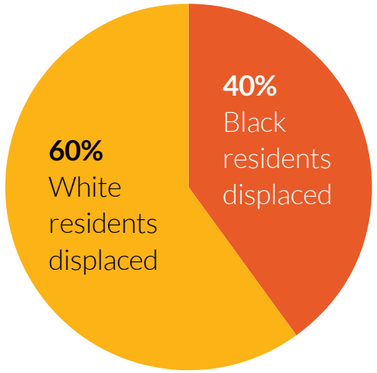
This screenshot is from a longer animation showing before and after construction of the highway, produced in partnership with @Segregation_By_Design. View the full version at smartgrowthamerica.org/divided-by-design

WHAT WAS LOST WITH THE CONSTRUCTION OF THIS SEGMENT (WITHIN CITY LIMITS)

I-20 consumes at least **572 acres** and **$150 million** in taxable land, according to 2021 Atlanta land assessments.[11]

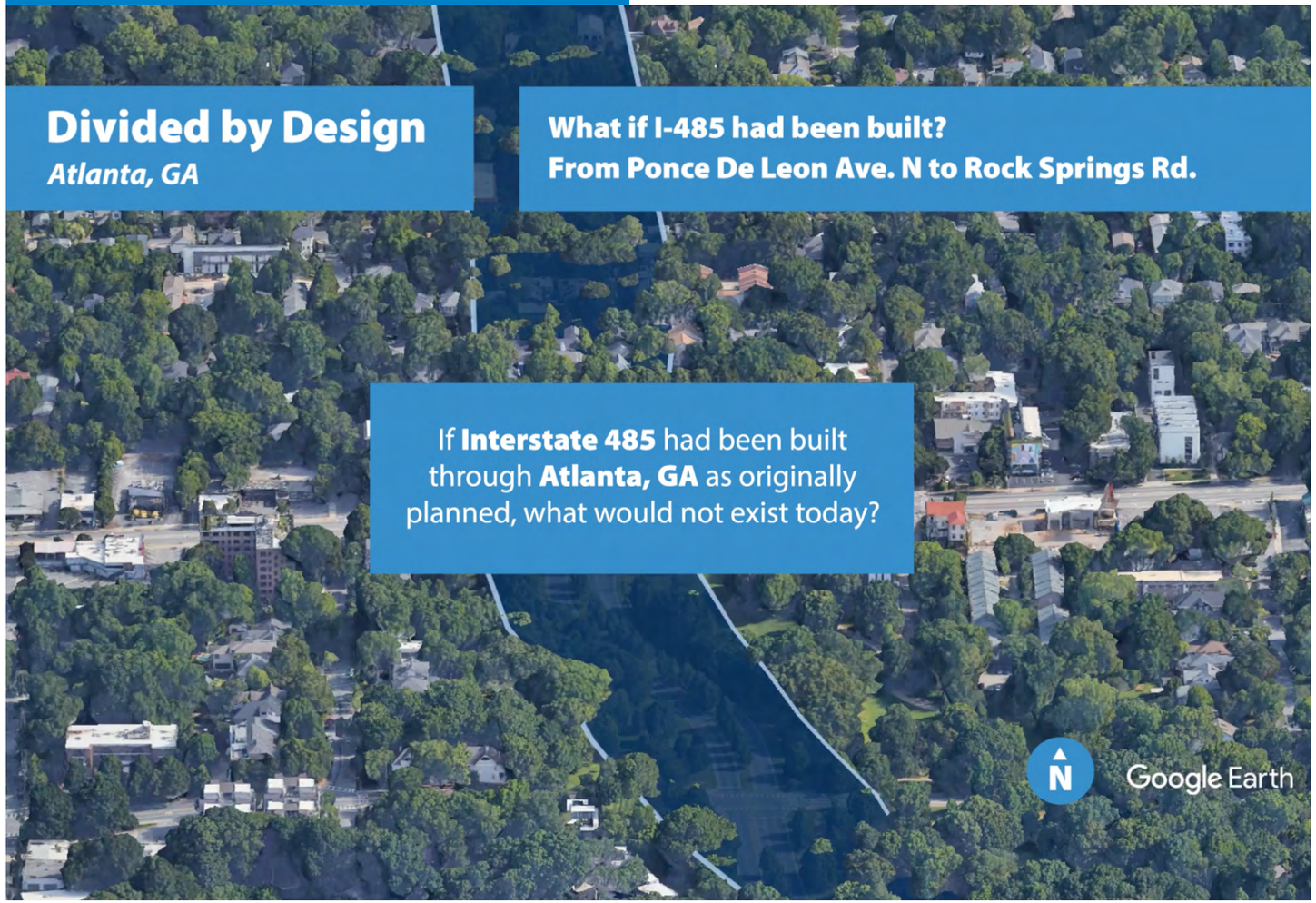
Without the homes that previously existed within the I-20 corridor, the city lost the ability to tax at least **$676 million** in home value, costing the city at least **$6.4 million** in property taxes each year.

I-20 displaced at least **7,500 people** in 1960 and destroyed an estimated **2,200 homes**, wiping out **$596,000** in average home equity, if those homes existed today.



Roads are liabilities, not assets, and maintaining or rehabilitating them require significant costs. Highways are the most expensive kind of road to maintain due to their width, material (often concrete), and traffic volumes. Figures vary, but according to a Strong Towns analysis of 2014 FHWA numbers, it can cost upwards of **$7.7 million** per mile to reconstruct an existing lane of a freeway like this one.

UNBUILT: INTERSTATE 485

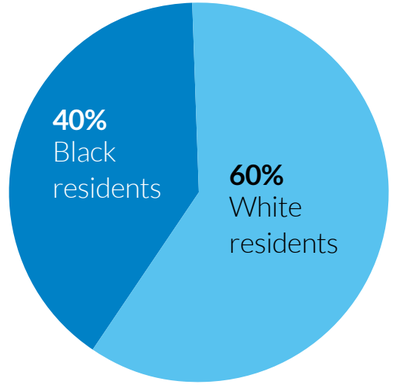


This comes from a longer animation of the unbuilt highway's route and impact.
View the full version at smartgrowthamerica.org/divided-by-design

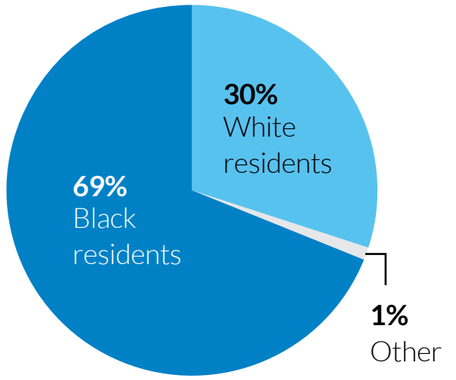
WHAT WOULD HAVE BEEN LOST WITH THE CONSTRUCTION OF THIS HIGHWAY

The city would have lost at least **$473 million** in taxable land value.

At least **5,300 people** would have been displaced.



In 2021, within the 260-foot-wide impact zone of the proposed route, there were **3,300 residents** and just over **1,700** homes.



At least **1,400 homes** would have been destroyed, wiping out at least **$371,000** in average home equity for homeowners.

Without the homes in this corridor, the city would have lost the ability to tax approximately **$1.3 billion** in home value, costing the city about **$12 million** in property taxes per year. (At a 2023 property tax rate of 0.94%).

According to 2023 CoStar data, within this entire unbuilt corridor, there are:

199 active businesses **95 multifamily buildings** **62 office buildings**

CONCLUSION

Highway construction forever changed the landscape of these two cities and hundreds more, pushing out people and demolishing property, and turning vibrant neighborhoods into places that are easy to drive through but inconvenient, unpleasant, or impossible to live in or travel within. This shift had the strongest impact on the people who were most often targeted: Black Americans and communities of color.

Highways changed the landscape, but they brought with them a new way of thinking about transportation that prioritized private car travel and vehicle speed over people and homes.

In Part II, we take a closer look at the many ways that the system we created in the 1950s and 1960s shaped and still shapes our transportation practices today in ways that continue to do harm to people of color.

In this October 17, 1968 aerial photo looking west in D.C., construction of the Southeast Freeway (I-695) continues a swath of destruction. CREDIT: DISTRICT DEPARTMENT OF TRANSPORTATION / FLICKR, https://flickr.com/photos/ddotphotos/4950949137

PART II:

How today's transportation program exacerbates inequities and damages communities

How today's policies and decisions inflict damage and perpetuate past harms

The transportation or land-use professionals and policymakers practicing today are not the ones responsible for the mistakes made decades ago, nor for the racial inequities that were literally built into our communities. But two other things are true: **First,** the problems created by the kinds of decisions outlined in Part I—like neighborhoods with poor transit access, divided by a highway, or lacking basics like sidewalks—do need to be solved by today's professionals. **Second,** the current approach at all levels consists of ingrained, decades-old transportation policies, funding systems, models, and measures which have their roots in that same history.

Absent major changes, today's professionals will be using an approach that cannot adequately address these issues. This is why it's vital that today's professionals and policymakers understand how the current transportation program continues to repeat these past mistakes, in addition to perpetuating and exacerbating their consequences. **Part II** shows specifically how today's current approach inflicts similar damage and fails to address the damage of the past. **Part III** concludes with specific and detailed recommendations for creating more equitable outcomes.

The result of today's standards and regulations for street design: The modern street/road hybrid that both fails to move vehicles quickly or provide safe places for people to walk. Typically owned by the state and designed like a highway with wide lanes, it also has numerous curb cuts, turns, and a high degree of complexity, making this the most dangerous street type in the country.

CREDIT: FOREVER READY PRODUCTIONS.

TRANSPORTATION MODELS, MEASURES, AND POLICIES THAT FURTHER INEQUITIES

Our current approach to transportation in the US—modeled by our national surface transportation program and mirrored in state departments of transportation and other transportation agencies—prioritizes fast, freeflow vehicle travel above all else and treats the people walking, biking, and riding transit as afterthoughts. This focus on freeflow car travel is embedded in our transportation policies, funding structures, design and operational standards, and performance measures. It contributes to a feedback loop that results in disconnected, sprawling land uses, displaces economic development in favor of car movement and storage, creates significant congestion completely by design, and causes Americans to drive more and further every year.

The same standards and regulations first adopted during the construction of the national interstate system are still in use today and are applied on many types of roads. Intended for limited access highways, these woefully out-of-date policies are now applied in some form to all types of roads, including in contexts where an emphasis on free-flow traffic simply doesn't fit: commercial corridors with lots of development on either side of the road, local main streets,

Much of the information in this section has been covered elsewhere, including a project Transportation for America contributed to from the Well Being Trust called "Thriving Together: A Springboard for Equitable Recovery and Resilience in Communities Across America."

and residential neighborhood roads. Designing all roads primarily to keep cars moving as fast as possible creates unsafe and unpleasant conditions for people walking and further propels our national reliance on car travel, privileging certain people over others. And our current standards and designs do not make it easy for transportation engineers and planners to take the experience of nondrivers into account.

The practices of the 1950s aren't truly behind us either, with new or expanded highways still being planned through or near low-income neighborhoods and communities of color, including I-49 in Shreveport, LA and the Southport Connector in Poinciana, FL. But this section aims to explain the current rules, guidelines, and practices that continue to create the same kinds of inequities. The damage these measures and rules inflict may not be as intentional as that of building highways directly through Black and Brown communities, but it can be just as profound. Here are specific ways that existing, widely accepted transportation measures and processes are exacerbating the same inequities.

VALUE OF TIME, DELAY, AND CONGESTION

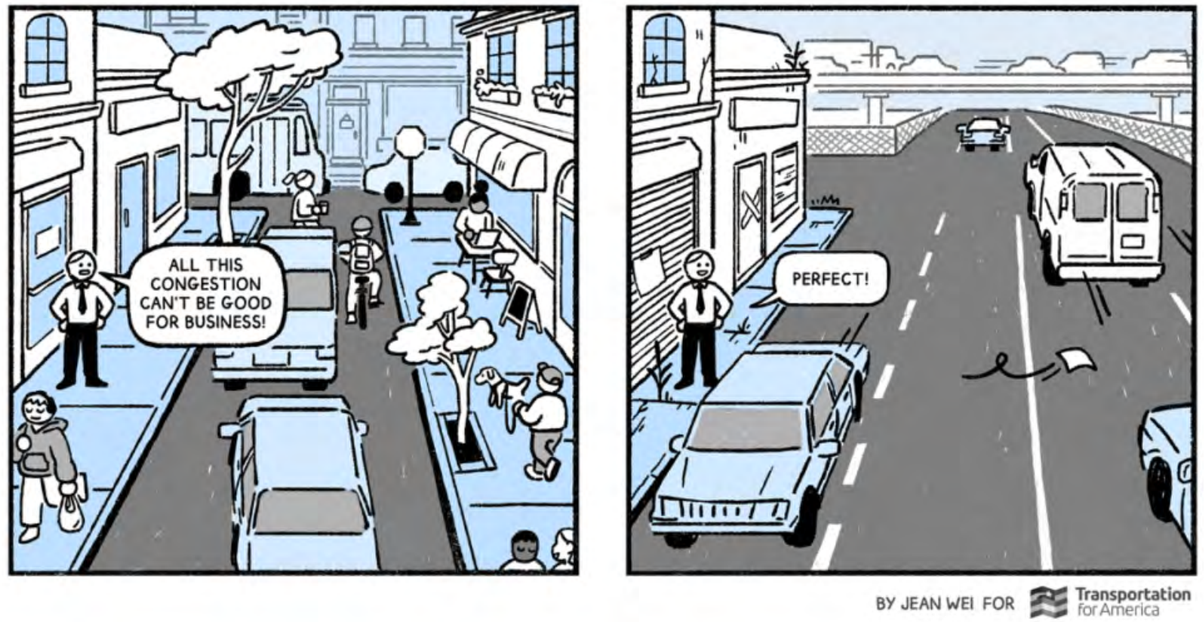
When moving vehicles quickly on all roads is the number one goal for transportation agencies, congestion relief becomes paramount and agencies focus on time savings to drivers at the expense of nearly every other type of user or activity. One widely used federal measure that creates more damage and inequity is known as value of time guidance from the U.S. Secretary of Transportation, enthusiastically supported by the Office of Management and Budget.

When modeling for time savings, agencies focus on only one thing: getting and keeping vehicles moving. As long as vehicles are moving faster, agencies predict that their new project will save time, which is **nearly always assumed to be a net positive with economic value.**

The USDOT specifies a percentage of hourly income that should be used to determine the hourly rate of time savings, down to the imaginary dollar, and then they multiply this by the number of commuters, resulting in huge but ridiculous numbers. But these are not "real" dollars, and do not result in commuters seeing actual cash returned to their pockets. After all, if you save a handful of seconds a month or a year, you do not receive actual cash in your pocket—it's just theoretical money. And it doesn't matter if, to speed up vehicles, everyday trips end up being longer and taking more time overall.

Whether or not the value of time guidance succeeds at saving commuters time (it often does not), there are also very specific inequities baked in. It places an explicit bias on saving richer households time, allowing the benefits of time savings to be scaled to household income, putting additional barriers in the way of those in poverty and with lower incomes. It puts more value on a business trip taken at rush hour, which is more likely to be white collar, than off-peak work travel or other trips, like picking up a child from daycare or a doctor's appointment, claiming that the costs of being late to those destinations are hard to calculate. However, the costs of these delays are very real. Parents may be charged per minute when late to pick up a child from daycare, and doctors' offices often have policies that charge patients for missed appointments.

This value of time is part of the overall performance management process that transportation agencies use.



Our solutions for congestion are worse than the problem. Transportation agencies routinely try to "solve" congestion by increasing road capacity, even when doing so can obliterate or divide communities, harm local businesses, and make streets more dangerous. View this cartoon here.

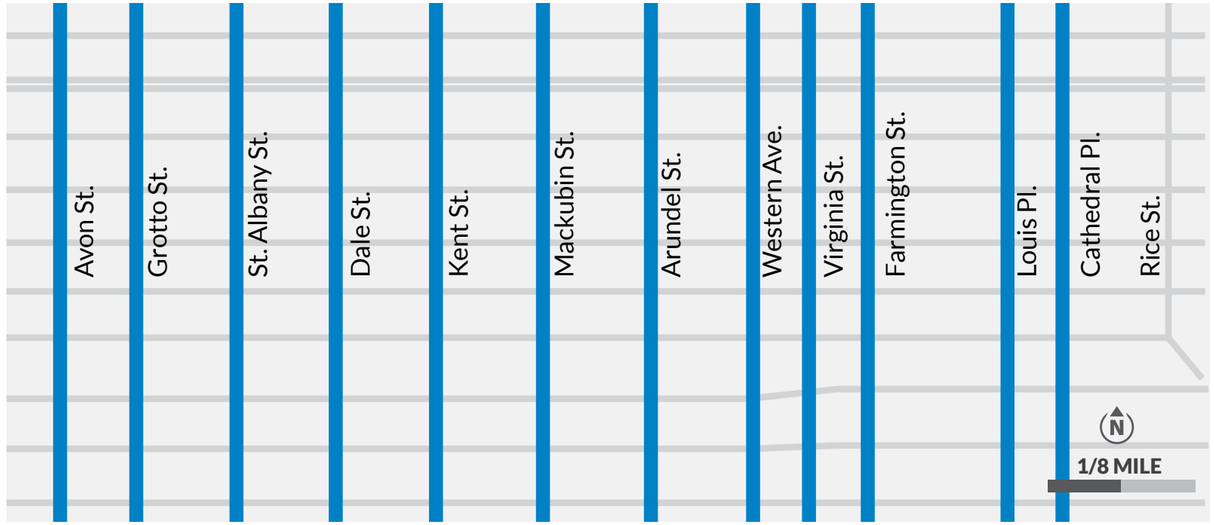
How the value of time is used to decimate communities

This example from St. Paul, MN shows one way that DOTs use the **value of time** to justify incredibly costly highway projects to save potential thru-commuters seconds per trip, while completely ignoring the impact of disconnected these streets and making all other trips significantly longer. Learn more about how value of time continues to create inequities and see other visuals at smartgrowthamerica.org/divided-by-design

KEY **Thru-street** **Disconnected street** **Built highway**

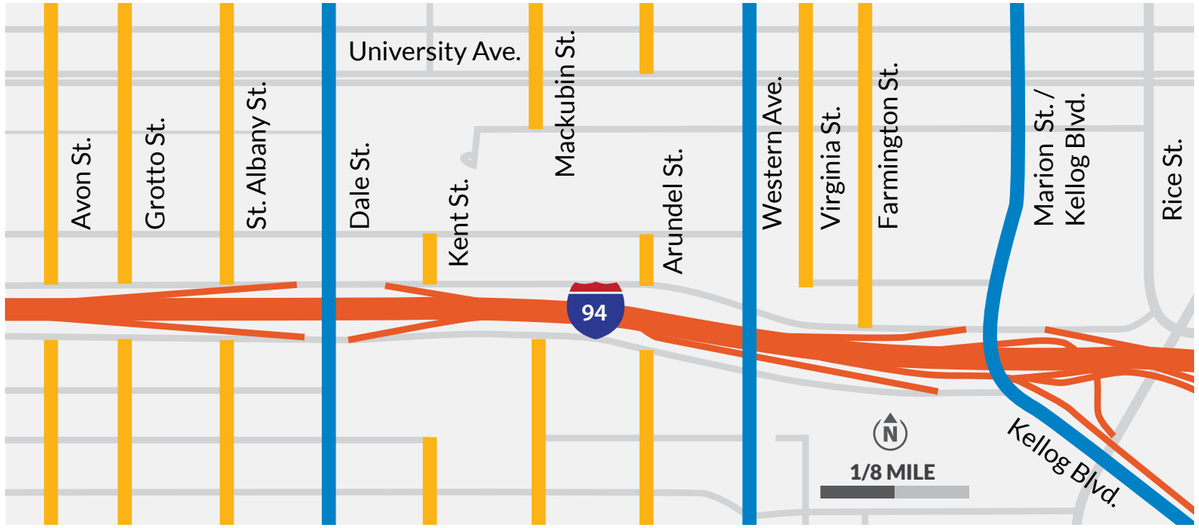
BEFORE INTERSTATE 94

The interconnected 1950's street grid west of downtown **St. Paul, MN** provided people in these neighborhoods with many convenient potential routes and options—walking, driving, transit—for all of their trips. This graphic shows just a sampling of the many north-south streets through that area.



AFTER INTERSTATE 94

In the 1960s I-94 severed at least eight of those north-south routes, making all other trips longer. In similar projects today, when attempting to measure time savings, agencies only measure vehicle speeds in the orange highway corridor. The disruptive impacts to the people who live on either side of the new road, and the trips they take, are literally not considered at all.



Another key measure in this system is delay, which is separate from the value of time but closely related. Under current federal law, all state departments of transportation and metropolitan planning organizations are to set targets for reducing delay on roadways—but only for vehicles. Delay is the difference between how quickly vehicles move on a corridor in free-flowing traffic conditions (e.g., the middle of the night) versus rush hour. Value of time is how we quantify and measure the economic impact of the time lost to delay.

This rudimentary, outdated approach ignores the fact that travel time is a function of speed ***and*** distance. Put another way, this delay measure only considers the delta between your speed of travel and free-flow speeds. It never considers how long or far you are traveling, which is why, for example, a short 20-minute commute in heavy congestion would rate "worse" than a 45-minute trip at the speed limit or above.

Any benefit-cost analysis for competitive federal funding (grant programs, etc.) will include the value of time for drivers while neglecting the impact on the value of time for all other people, like people walking, biking, or using transit. **The value of their time is never even considered.** These estimates are related solely to vehicle speed of travel along a particular stretch of a corridor.[13]

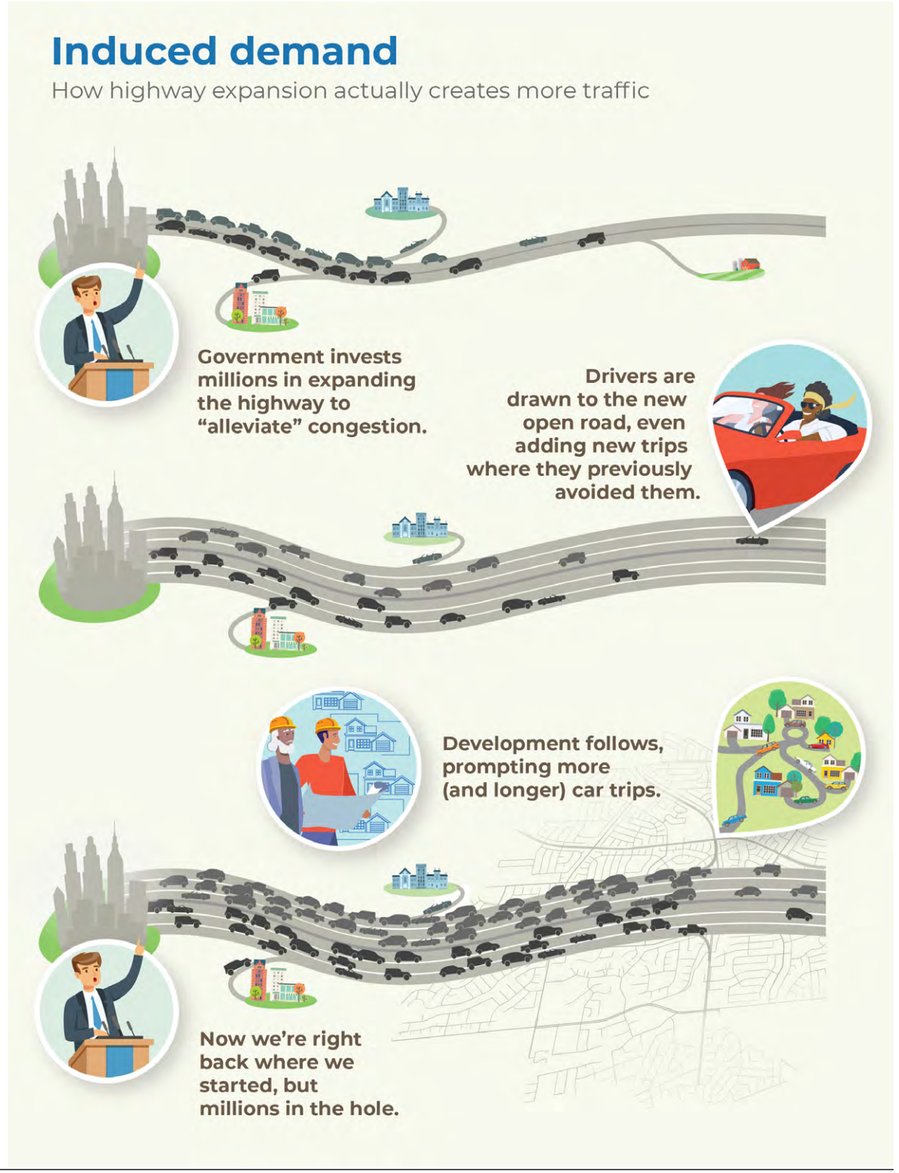
In looking at only speed in this way, the federal government allows a project sponsor to take credit for saving travelers' time even if the project:

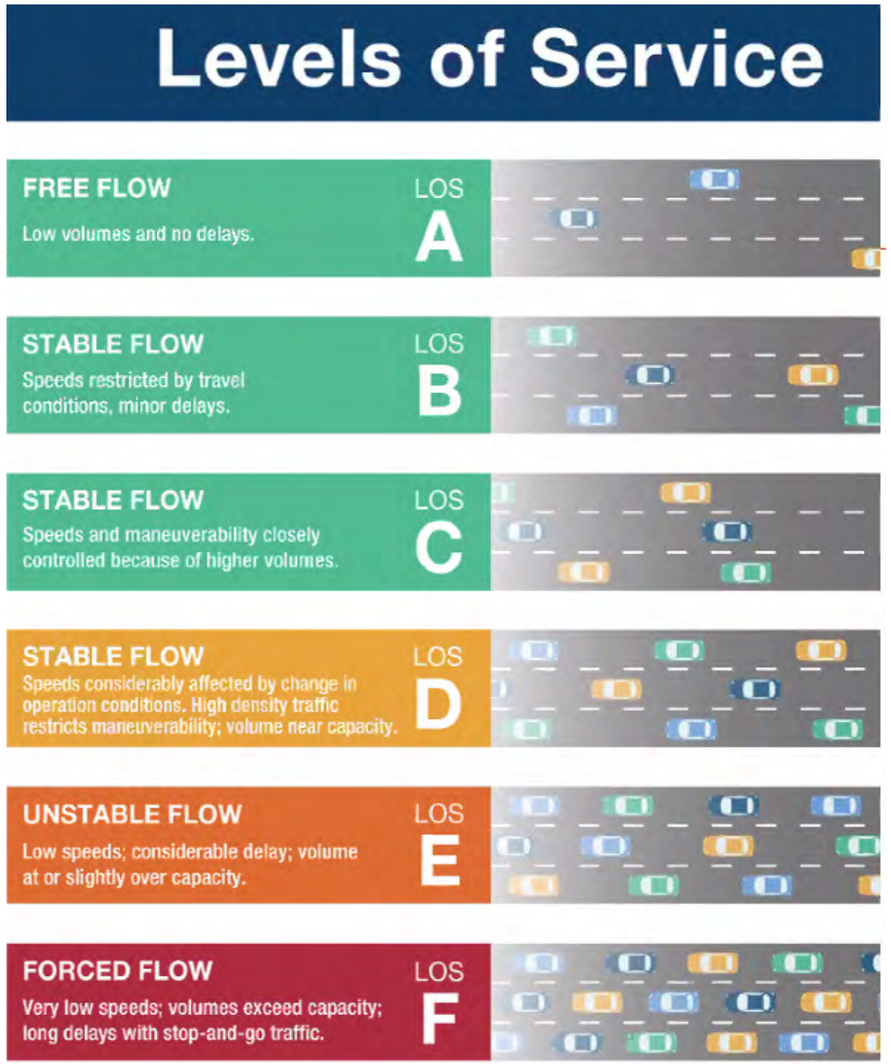
- Lengthens the distance of travel for drivers on the corridor and adds to travel time (e.g. disallowing left-hand turns, requiring a roundabout trip);
- Creates delay for people traveling across the corridor (e.g. creating gaps or disconnections in the adjacent street network);
- Creates delay for people crossing the corridor on foot or bike (e.g. removing crosswalks or intersections producing longer trips on foot, increasing the road width).

Considering that in most urban areas, a greater share of people walking or taking transit are more likely to be lower-income or people of color, it's easy to see how this value of time measure prioritizes certain people over others.

THE FAILURE TO MEASURE OR ACCOUNT FOR INDUCED TRAVEL DEMAND

The transportation modeling used to predict higher travel speeds after an expansion or widening is often unreliable or inaccurate and fails to account for a well-known rebound effect called induced demand. This is where people drive more (or more at peak times) when extra capacity is added to a roadway. USDOT recognized the idea in its rulemaking on CAFE fuel efficiency standards, assuming people will drive more if they are buying less gas, but does not acknowledge or provide guidance on how to measure induced demand for roadway widening. In fact, USDOT allows for the increased driving and congestion to be disregarded so that project sponsors can make the time savings benefits (again, largely for drivers coming from distant suburbs) look better while ignoring the increased traffic, congestion, and pollution that will be generated by the project.





Level of service graphic from the Utah Department of Transportation.

There is ample evidence indicating that expanding highways induces more driving and ultimately more congestion and emissions, but the current modeling fails to account for this truism. This is why after decades of highway building, congestion has only gotten worse. It has gotten worse in areas with growing populations and shrinking populations. It has gotten worse even as homes, often owned by Black and Brown people, are demolished to make room for new lanes.

LEVEL OF SERVICE

The assumptions contained in the value of time and delay can also be found in a basic design measure that is used to assess the performance of most roadway projects called level of service, or LOS. LOS is the most important way of measuring transportation that everyday people are unaware of. It is a qualitative measure of the operating conditions for motor vehicles on a roadway based on quantitative factors like speed, maneuverability, and delay. A roadway is given an LOS score ranging from LOS-A, which means fully free-flowing open traffic, to LOS-F, meaning stop and go. Every agency or jurisdiction has a target LOS level, often a C. But some areas have lowered it, recognizing that a fully utilized road will, at times, have traffic.

Like the value of time, LOS considers only vehicles and the speed at which they are moving, rather than the number of people moved or the distance of the trip and completely ignores the context or purpose of the street or road. For example, a downtown street through a busy area has a completely different purpose than a highway on the edge of town, yet LOS treats both the same way, with the goal being free-flow traffic. Level of service has been used (and still is) to justify costly widenings that make local travel more difficult in order to speed thru traffic through the same area.

These slippery economics that place a tangible dollar value on every second of time savings allow transportation agencies to claim increased speeds from improved level of service as an unqualified economic benefit, even though a person saving two or three minutes in a year doesn't receive any actual, tangible money back in their pocket. Increasing speeds on a local main street or commercial area can also harm local businesses, especially small businesses that more heavily rely on customers walking and biking—impacts which are not measured or considered.

Projected harm to LOS is used as an argument against so many of the features that make streets safer for everyone who needs to use them, including more pedestrian crossings (because drivers will have to stop more frequently), narrower lanes (because it will slow down overall vehicle speeds), and sidewalks or bike lanes (because these will take space from drivers).

Improving LOS (i.e, faster travel through a corridor) is also consistently claimed by transportation agencies as a safety intervention, even though higher vehicle speeds lead to less response time, more driver error, and more deadly crashes.

They overlook that traffic also decreases speeds, and crashes that occur at lower speeds are less likely to be deadly, especially when they involve a pedestrian. (Some of the increase in fatalities during the first half of 2020 when congestion disappeared can be attributed to this fact.) Low-income, Black, and Native Americans have lower rates of access to vehicles, are

more likely to live near higher-speed roadways, and as speeds increase they are more likely to be killed.

FORGIVING STREET DESIGN, BUT ONLY FOR DRIVERS AND PASSENGERS

The focus on providing the driver the ability to move faster, many jurisdictions and transportation agencies require a buffer area on the side of the road called a clear zone so that when a driver loses control and runs off the road there is space to accommodate them.

But engineers will make deliberate decisions to put people walking in this so-called clear zone. In the exact same area where (an often substandard) sidewalk exists for people to walk, road design standards emphasize setting buildings back from the road and designing utility poles and stop signs that shear off or give way in a crash so that people in vehicles will be less likely to be harmed. Instead of slowing vehicle traffic to eliminate the need for this clear zone, jurisdictions and agencies redirect the risk away from drivers and toward all of the people outside of a car.

SETTING SPEED LIMITS TO PRIORITIZE THOSE WHO WOULD SPEED

The nonsensical way we set speed limits also favors the perceived convenience of those inside a vehicle and leads to hostility for travelers outside of a vehicle. Agencies design roads to

A group of neighbors, transportation officials and activists conduct a walk audit along Aurora Avenue, one of the most dangerous streets in Seattle, where 20 people have died in traffic collisions since 2015.

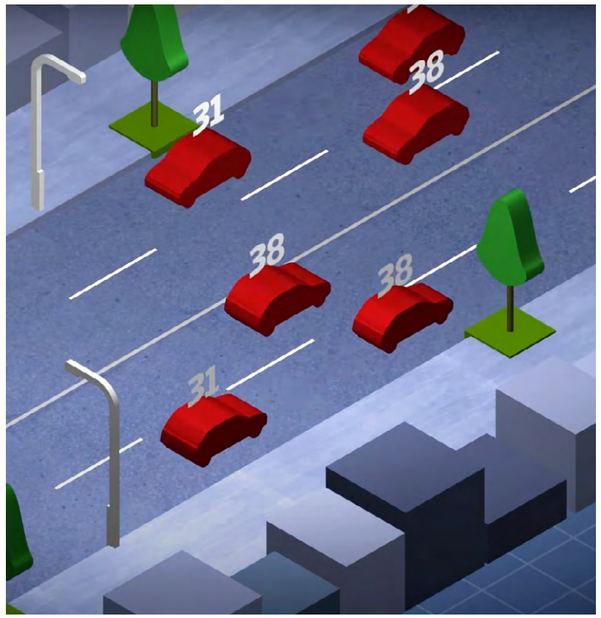
CREDIT: LIZZ GIORDANO AND CROSSCUT

accommodate driver error (eg, wider lanes so that a driver can go fast comfortably), which usually sends the message to drivers that they are supposed to drive faster. Then agencies observe the speed that drivers choose and set the speed limit at the 85th percentile, the point at which most people would drive at or below the limit. The faster people go, the higher the speed limit.

Transportation agencies are primed by existing policies as well as political pressures to respond to congestion primarily by widening and building new roads. These pressures also create disincentives to put anything in place for non-drivers, especially if that infrastructure creates a perception of problems for drivers.

The approach turns city, town, and village roadways into highways. And in doing so, those streets do a poor job of serving local homes and businesses, supporting people moving outside of a car, or reducing fatalities. We are left with a system that favors people traveling through a community over the needs of the people who are living, moving, and working in that community.

This cycle comes with heavy costs. It leads to unsustainable increases in infrastructure spending from all levels of government, and it raises household expenses through increased transportation costs. It also forces communities already disadvantaged by past highway projects to once again face the social and economic burden of highway expansions in their neighborhoods. All of this means that, by design, many of the accepted transportation policies, standards, manuals, and procedures help create new inequities and perpetuate existing ones.



Beth Osborne of Smart Growth America explains the dangerous way that speed limits are typically set using the "85th percentile rule" in this video created by the Wall Street Journal.

View the full video at https://www.youtube.com/watch?v=TBvvCWOE7WY

Land use and housing policy

While this report focuses most heavily on transportation, it's worth briefly describing the policies that govern local land development decisions, and how they contribute to this feedback loop, thus producing more spread-out, car-oriented development. Most local zoning ordinances follow the same basic formula, separately designating residential areas, commercial areas, and industrial areas, and keeping them apart.

This formula is based on an early 20th-century model from the last time the federal government provided significant zoning guidance: the Standard Zoning Enabling Act of 1925. By separating these different types of development, traditional zoning codes increase the distance between daily needs.

Combined with the transportation policies that prioritize vehicle movement above all else, zoning standards result in more driving and effectively ensure that new development will prioritize the movement of vehicles.

Today, government-mandated zoning requirements prevent the market from adding to the supply of walkable, transit-served communities to meet growing demand, driving up property values in these areas dramatically, making them unaffordable to those who could benefit the most. Despite the market and consumer demand for more housing (and housing types) in built-up areas and in walkable, connected neighborhoods, it is illegal to build anything except single-family detached houses on roughly 75 percent of land in most cities.

These laws have profound negative impacts. Artificially limiting the supply of housing in walkable, transit-served areas directly leads to a lack of access to and displacement of lower-income residents, exacerbates inequality in the process, and redirects growth into sprawling areas.

As with the zoning codes noted above, these results force people to drive further for everything, cut off people without a car from necessities too far away or too dangerous to walk to, generate traffic congestion, and create the counterproductive call to expand roads to accommodate the additional traffic.

The inequities produced by these policies and practices

The previous section described the current policies and practices that ensure our communities and roadways are designed to move cars as quickly as possible.

Many of these practices have been inherited from the early interstate age, crafted in many cases by intentionally racist leaders who controlled the decisions about new highways and whose needs would be prioritized by the system overall.

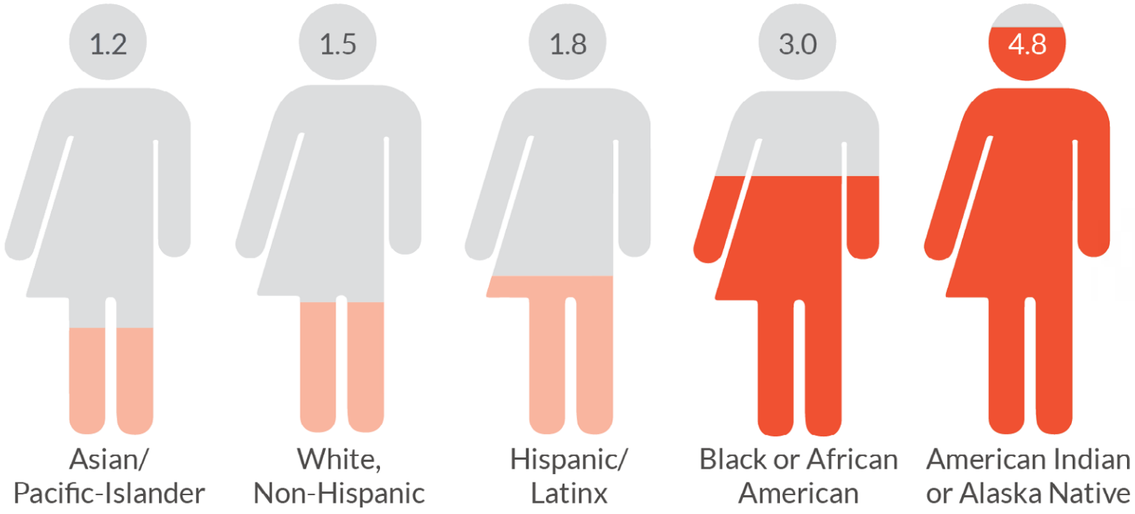
Today's approach, shaped by the past, leads to many inequitable and harmful outcomes, including less opportunity for physical activity, increased traffic crashes, increased exposure to air pollution, increased greenhouse gas emissions, and higher household transportation costs. These negative impacts are particularly severe for the most vulnerable populations.

To end this cycle, transportation agencies and elected leaders—at all levels of government—must start by understanding and acknowledging how the current policies and standards that guide their decisions are still damaging communities.

They need to understand how their current approach prioritizes certain people and harms others in order to transform that approach.

People of color, particularly Native and Black Americans, are more likely to die while walking than any other race or ethnic group

Pedestrian deaths per 100,000 by race & ethnicity (2016-2020)



Graphic showing the disparities in those struck and killed while walking from "Dangerous by Design 2022," also by Smart Growth America.

CAR-ORIENTED COMMUNITIES LEAVE MILLIONS OF AMERICANS VULNERABLE

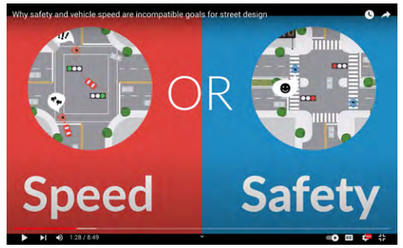
The characteristics of our transportation infrastructure and development in many areas across the country create conditions where driving is the only viable option for anyone able to do so—yet this leaves a substantial portion of our population vulnerable. Approximately 28 million Americans (about 9 percent of the population) do not have access to a car, and lower-income people and people of color are more likely to be carless.

Households with an annual income of less than $25,000 are almost nine times as likely not to have a car than households with incomes greater than $25,000. In fact, some 20 percent of households in poverty don't have a car. Just 6.5 percent of white households did not have access to a car in 2015 according to the National Equity Atlas, compared to 19.7 percent of Black households, 13.6 percent of Native American households, and 12 percent of Latinx households.

People without access to a car do not just live in urban areas; more than one million households—or 6.2 percent of all households—in primarily rural counties do not have a vehicle.[14] In fact, the majority of counties in the U.S. with high rates of zero-car households are rural. Carless residents in rural areas also face other unique challenges—for example, while many rural communities have created transit programs that play a critical role in helping people reach healthcare and other needs, fewer communities have the type of scheduled, fixed-route transit that residents can use to get to work every day, making it especially hard for people

without access to a car to access employment.

The design of our communities can also negatively impact other residents who cannot drive, including older adults and some people with disabilities. A 2018 survey from the National Aging and Disability Transportation Center found 40 percent of adults over age 65 cannot do the activities they need to do or enjoy doing because they cannot drive. 40 percent of the survey respondents cited access and availability of affordable transportation as a barrier, and respondents regularly described feeling dependent on others, frustrated, isolated, and trapped after giving up driving. An estimated 25.5 million Americans have disabilities that make traveling outside the home difficult, according to the Bureau of Transportation Statistics, and people with travel-limiting disabilities are less likely to have jobs.



Watch this full video at https://smartgrowthamerica.org/safety-vs-speed

OUR ROADS ARE DEADLY FOR PEOPLE WALKING, ESPECIALLY FOR ALREADY-DISADVANTAGED POPULATIONS

In many communities, traveling outside a car can be a matter of life and death. Our policies and practices have created a system that prioritizes high-speed car trips over all other modes, and people of color and low-income communities pay the price.

Pedestrian fatalities began steadily rising in 2009 and the trend has not slowed down. 7,341 people—more than 20 per day—were struck and killed while walking in 2021, a massive 12.4 percent increase over 2020. Comparing 2021 to 2019, when travel behavior was more similar than the shutdown-laden year of 2020, that increase goes up to an astonishing 17 percent. This record high also marks an astonishing 79 percent increase since 2009.

The design of our roads produces these dangerous conditions for people walking: wide lanes, large distances between traffic signals, and long unobstructed lines of sight make it feel safe to drive fast—often significantly faster than the posted speed limit—and drivers unconsciously follow these visual cues. For people on foot, the likelihood of surviving a crash decreases rapidly as speeds increase past 30 mph.

Because highways were and continue to be intentionally placed through communities of color, and because this placement often results

(Top) A family walks along a substandard sidewalk next to Martin Luther King. Jr. Highway near Landover, MD.
CREDIT: STEVE DAVIS, SGA.

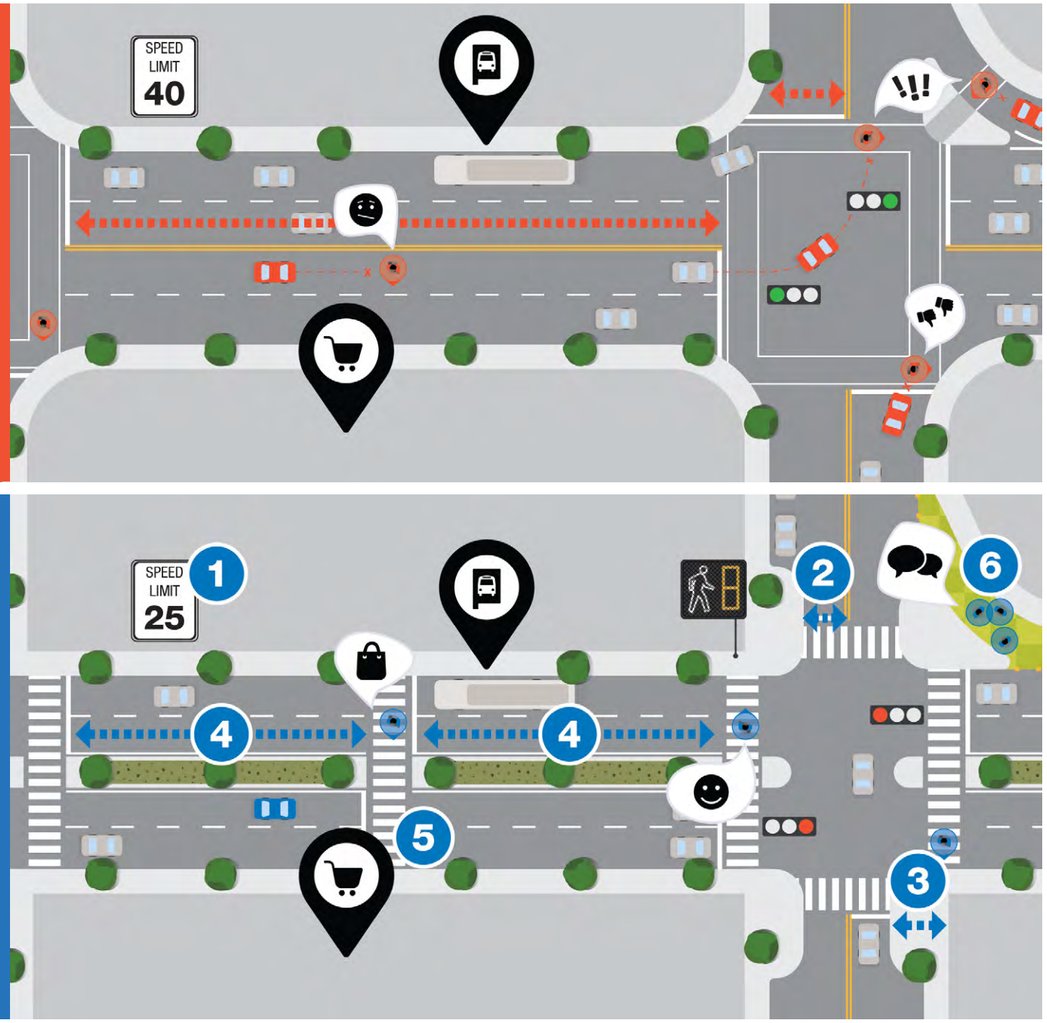
(Left) A woman in a powered wheelchair tries to safely travel around Jackson, MS.
CREDIT: SCOTT CRAWFORD.

Dangerous by design

Streets that have wide lanes that allow room for mistakes, lack high-visibility crosswalks, have wide intersections that encourage drivers to make turns without slowing, and have long distances between intersections, encourage higher speeds—regardless of how low speed limits are set. Yet people will cross even in dangerous conditions when the nearest safe crosswalk requires a long detour, especially when there are destinations or transit stops along the road.

Safer by design

1 While important to lower speed limits, safe design gives drivers other visual cues to slow down. 2 Narrower travel lanes naturally slow traffic, 3 high-visibility, signalized crosswalks make drivers more aware of pedestrians, and extended curbs shorten the distance required to cross the street. 4 Decreasing the distance between intersections also helps reduce speeds. 5 Adding signalized crosswalks in the middle of long blocks slows traffic and provides valuable new connections where people already want to walk. 6 Eliminating right turn "slip" lanes in favor of right-angle turns produces slower, safer turns and shorter crossing distances for pedestrians. (See p.16)



This graphic showing the practical ways that streets can be designed for safety comes from "Dangerous by Design 2021." The most recent version of that report can be viewed here.

in less economic opportunity in these areas, the burden of dangerous street design is not shared equally. People of color and people walking in low-income communities are disproportionately represented in pedestrian traffic deaths. Even after controlling for differences in population size and walking rates, drivers strike and kill older people, people of color, people over age 50, and people walking in communities with lower median household incomes at much higher rates.

Too often we rely primarily or exclusively on enforcement to manage speeding instead of addressing the causes of speeding like roadway design to change driving behavior. This overreliance on police enforcement disproportionately imperils Black motorists and other demographics subject to profiling and violence. Automated enforcement mechanisms, disproportionately placed near communities of color and often enforced through fines, also disproportionately impact drivers of color.

GROWING TRAFFIC, MORE POLLUTION, AND POOR HEALTH OUTCOMES

Car-oriented development, embedded in our status quo approach, has had other negative consequences for American communities: more driving means more transportation emissions, more traffic, and often poor health outcomes. People of color and low-income communities experience these impacts at disproportionate rates.

Transportation can both positively and negatively impact our health, as research continues to show. Active transportation, for example, can lead to positive health outcomes. However, as destinations spread further apart and communities of color are divided, these modes of transportation become less convenient and safe, leading to more car travel, which is going up by nearly every available measure. From

1980-2017, annual per capita vehicle miles traveled (VMT), a measure of how many miles each person drives every year, increased by 46 percent. In absolute terms, VMT increased by 57 percent in the top 100 urbanized areas between 1993-2017, significantly faster than the 32 percent population growth in those areas. Driving, which requires travelers to sit idly, does not have a positive impact on health.

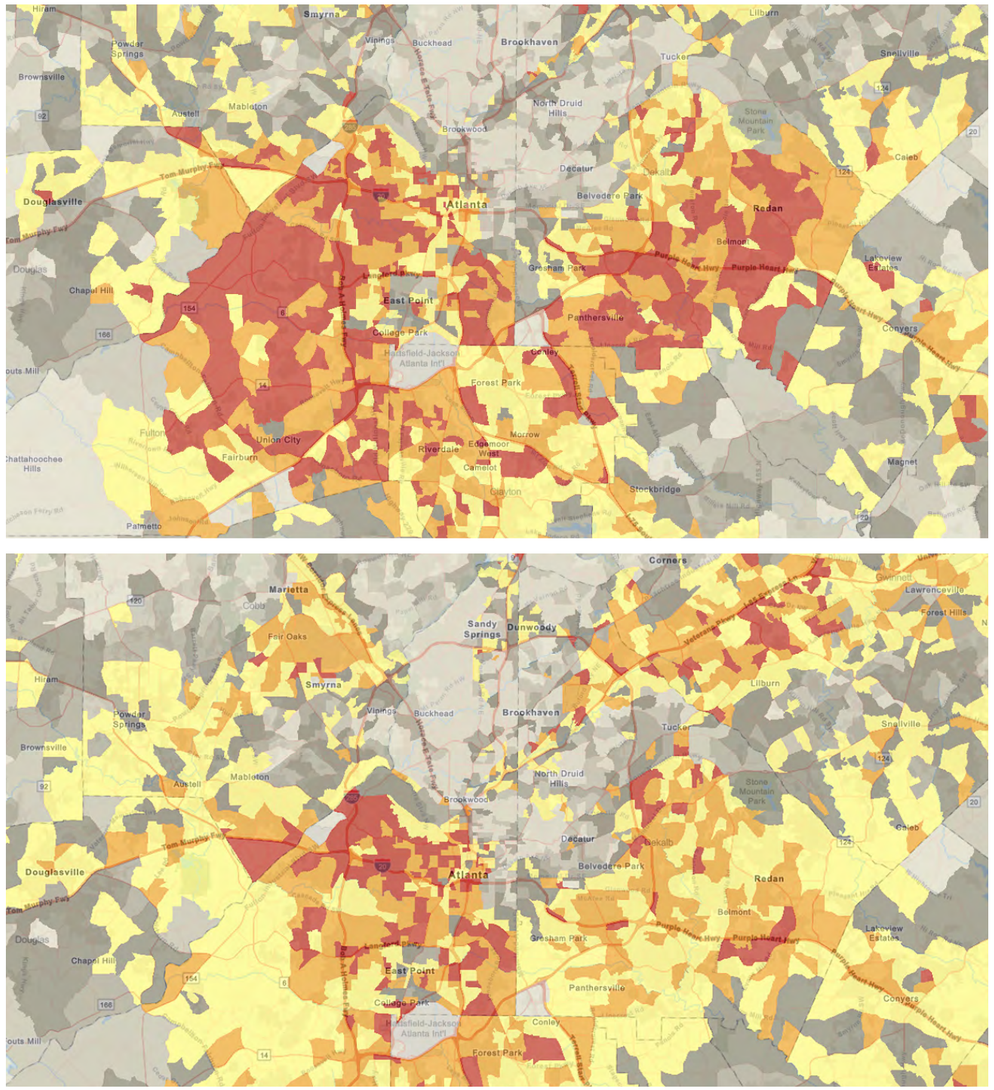
All of that driving also results in higher emissions. Transportation accounts for the largest share of carbon emissions in the U.S., and those emissions are rising, even as emissions have decreased in other sectors. Emissions have risen despite increases in fuel economy standards and the beginning of electric vehicle deployment.

The vast majority of those emissions—83 percent—come from the cars and trucks that people drive to the grocery store or school or that deliver our Amazon orders. Between 1990-2017, we saw an 18 percent increase in overall fleet fuel efficiency brought on by the implementation of CAFE standards. But even as the fleet overall got far more efficient, emissions still rose 22 percent over the same time period. Our increased driving overwhelmed all of those improvements in fuel efficiency.

Combustion in vehicle engines causes other forms of pollution as well, including fine particles (particulate matter) 2.5 microns in diameter or smaller, known as PM2.5. These particles are small enough to get deep inside the lungs and cause cardiovascular disease, asthma, diabetes, and other health problems.

Pollution from PM2.5 is responsible for approximately 3.15 million annual premature deaths worldwide. In a recent study that mapped PM2.5 exposure from vehicles, the Union of Concerned Scientists found that people of color, more likely to live near highways and other busy roadways, are exposed to significantly higher levels of PM2.5 than white Americans.

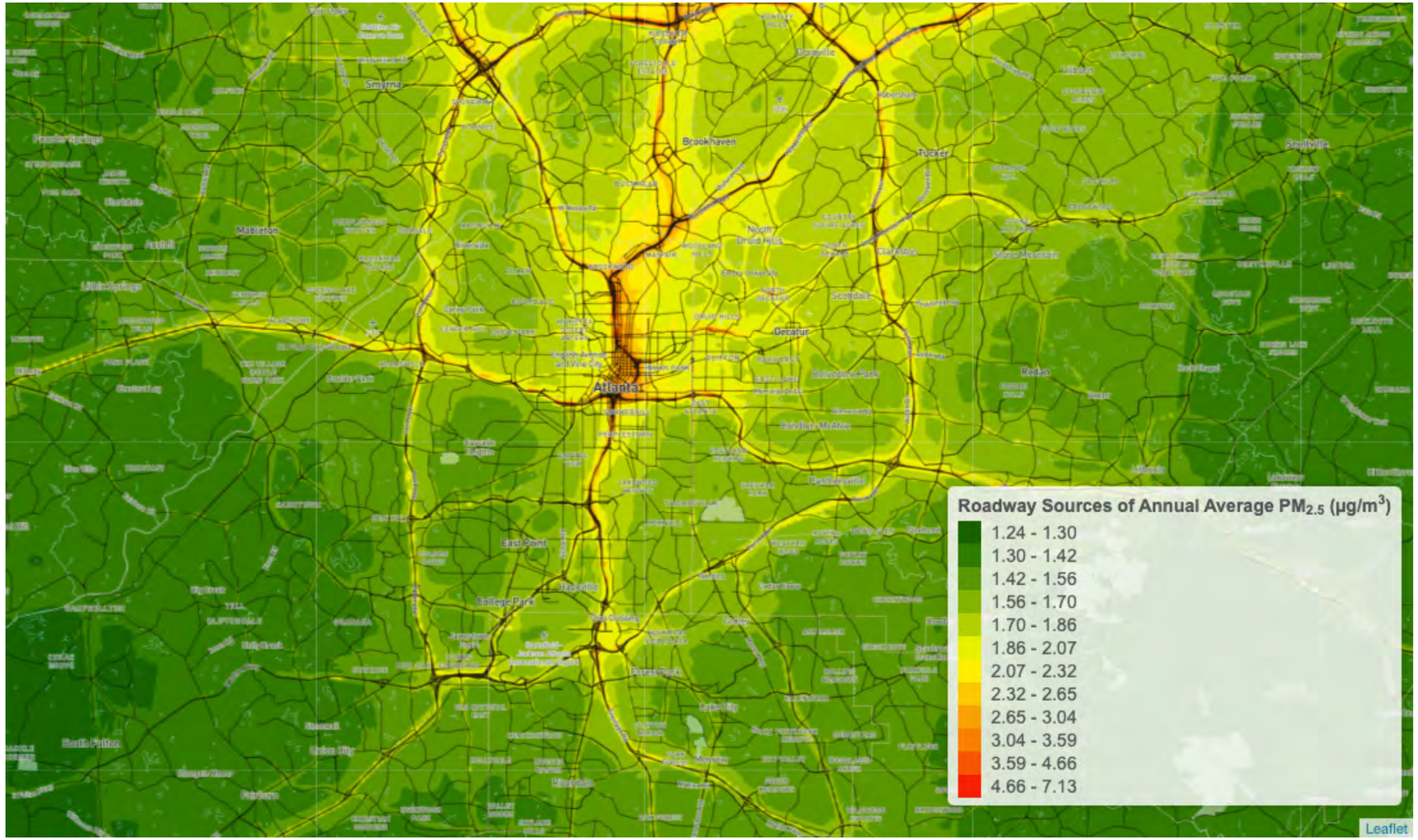
Our current approach to transportation is not only causing health issues—it presents a major barrier to accessing health care. Before the pandemic, approximately 3.6 million people living in the U.S. missed or delayed essential, non-emergency medical care because of transportation barriers. A number of studies have shown chronically ill residents, non-white residents, women, the elderly, and low-income individuals face the largest transportation burden.



PEOPLE OF COLOR (TOP) VS. PARTICULATE MATTER 2.5 POLLUTION LEVELS (BOTTOM) IN ATLANTA BY CENSUS TRACT

This data from the US EPA's EJScreen tool shows how census tracts where people of color are disproportionately located overlap strongly with those that also have high levels of PM2.5 pollution. Those people not displaced by construction of the interstates and other highways now suffer with the health effects of higher pollution levels.

CREDIT: U.S. ENVIRONMENTAL PROTECTION AGENCY



This screencap showing PM2.5 levels comes from the Atlanta Regional Commission's AREES tool which "depicts air quality throughout the 20-county Atlanta region, focusing on particulate matter concentrations resulting from the transportation system."

More: https://atlregional.github.io/DASH/arees.html.

FAILURE TO SUPPLY THE GROWING DEMAND FOR WALKABLE, TRANSIT-RICH COMMUNITIES PRICES OUT THOSE WHO MOST NEED AFFORDABLE TRANSPORTATION OPTIONS

While most communities across the U.S. are primarily car-oriented, demand has clearly pivoted. Six out of 10 people said they drive because of a lack of other options in a 2017 survey, 62 percent of Americans reported that nearby transit would be important in choosing where to live and 54 percent cited nearby bike lanes and paths. Companies of all sizes are also relocating to or deciding to start up in walkable downtowns and communities with transit to ensure access to a high-quality workforce, as younger talent flocks to transit-connected, walkable communities.

In spite of this demand, zoning laws and transportation agency policies often do not allow for this type of dense, walkable environment. As a result, the market has not been able to respond to the demand for walkable communities, making them more expensive. Americans today are forced to pay a premium for housing in walkable communities and accessible transit.

Due to the growing deficit of affordable housing in cities and walkable communities, low-income families and individuals have been pushed to the suburbs, further away from jobs and services and with fewer options for traveling without a vehicle. A study by the Brookings Institution found that residents in low-income suburban neighborhoods with access to transit can reach just four percent of metro area jobs with a 45-minute commute. In other words, many people without access to a car are also unable to get to work without a car, creating a cycle of poverty.

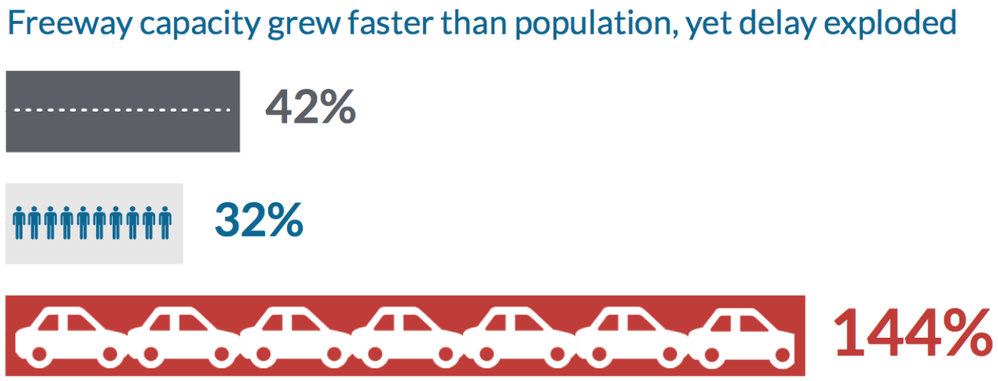
PEOPLE DISLOCATED BY PAST HIGHWAY PROJECTS ARE DISLOCATED AGAIN

To reduce delays and increase speeds, decision-makers are willing to spend billions of dollars on new roadway lane-miles in an effort to solve congestion. This effort has failed repeatedly, and communities of color are paying the price. In the 100 largest urbanized areas in the U.S. the number of freeway lane-miles grew by 30,511 between 1993 and 2017, an increase of 42 percent.

That rate of expansion significantly outstripped the 32 percent growth in population in those regions over the same time period, yet annual hours of delay (a standard measure of congestion) grew by a staggering 144 percent. In fact, congestion increased in every single area, including those with stagnant or declining populations.

This has not stopped urban areas from continuing to expand highways. In the last three decades, more than 200,000 people nationwide have lost their homes to federal road projects. The overwhelming majority of people forced from their homes are people of color.

It is likely true that, as transportation planners maintain, highway expansions are less destructive than building new highways through cities. However, because highways were historically placed in communities of color, expanding these same roadways can only result in displacing members of these communities again.



Change in freeway lane-miles, population growth, and annual hours of delay in the largest 100 urbanized areas from 1993-2017.

CREDIT: THE CONGESTION CON BY T4AMERICA, 2020.

A FOCUS ON EXPANSION DRAWS ATTENTION (AND MONEY) FROM REPAIR NEEDS IN DISADVANTAGED AREAS

Transportation for America has exhaustively covered how road and bridge repair needs are routinely neglected in favor of costly new road expansions, with no requirement that states prove they can care for the new assets long term. But these repair needs are also not uniformly neglected.

Poor road conditions are more likely to occur in communities of color than in affluent, white areas. A 2022 study by the U.S. Government Accountability Office found that even when controlling for conditions that impact pavement wear (like climate and traffic density), interstates and highways are more likely to be in a poor state of repair in census tracts with higher percentages of people of color, higher family poverty rates, and in urban areas. For example, a road in a community of color has a 7 percent chance of being in good condition. A road in a community that is almost entirely white has a 22 percent chance of being in good condition.

A 2021 study by the National Bureau of Economic Research found that worn, rough pavement can decrease traffic safety and potentially lead to increased vehicle operations costs (such as increased fuel expenses and increased vehicle maintenance due to damage from crashes and collisions). However, as outlined above, the models that guide road spending heavily incentivize building new lane miles, which happens at the expense of basic roadway maintenance.

Each additional lane-mile also adds to the nation's ever-growing repair needs. In 2017, the backlog of existing roadways in need of maintenance was slated to cost the country $63 billion per year over the course of a 6-year long federal transportation bill.

That estimate didn't include the cost of upkeep for roads in good and fair condition at the time—$169 billion per year. Between 2009 and 2017, 223,494 lane miles were added to the full public road network, and maintenance needs for just these miles amounted to $5 billion per year. Despite all the rhetoric about the 2021 infrastructure law being primarily about "fixing roads and bridges," even if all of its funds were devoted to repair and maintenance—which is absolutely not the case—there would still be an enormous backlog.

PART III:

How to create a more equitable system

As **Part I** shows, intentional decisions were made to divide and harm communities of color. And as **Part II** shows, the overt racism of the early interstate age may no longer exist in the same form, but our standards and measures and models are failing to fix that damage, and often make it worse. This requires those in control to be intentional about undoing the damage and unwinding an approach that is still leading to the same, inequitable outcomes.

Leaders at the federal, state, and local levels have an opportunity and a responsibility to put an end to these injustices, but they will need to intentionally prioritize improving equity with every investment, and examine how the current system fails to do so.

To repair the damage of existing transportation investment and prevent future harm, first and foremost, impacted communities must be centered in the decision making around investment in their community and the vision for their future. We cannot truly rebuild the fabric of these communities without prioritizing those who have been marginalized or disenfranchised by past decisions. Some agencies and practitioners are moving from a public engagement to a co-creation model, which is exactly what is needed.

But to ensure that the co-created vision is realized, there are a lot of barriers to knock down. The following recommendations focus on those barriers to improving access to jobs and essential services and ensuring that locals benefit from and are not displaced by investment. To advance these goals, we propose four broad recommendations, with several specifics under each.

1. Measure what matters most

2. Repair the damage and stop repeating past mistakes

3. Prioritize the safety of everyone over the speed of a few

4. Always consider land use and transportation together

CREDIT: EHPIEN

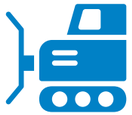
1 MEASURE WHAT MATTERS MOST

As the previous two sections show, data measures that focus exclusively on vehicle travel, particularly vehicle speed, come at the expense of people traveling outside of a car—often children, the mobility impaired, and those that can't afford a car. This contributes to a system where almost all Americans must own a car to travel, which has acute economic and public health impacts for everyone, but particularly people in communities of color. There are several specific ways that our data collection and application could more equitably service all communities:

First, state DOTs should measure access to everyday needs. We know that there are a range of destinations people need regular access to, like grocery stores and daycare; but because federal and state decision-makers focus so exclusively on the work trip (as traveled by car), these other connections have been to a great extent ignored. Non-work trips are often shorter trips (the kinds that can be taken more easily outside of a car), and therefore some transportation agencies have found them hard to measure and others have even viewed them as less significant, even though they in fact make up the majority of trips taken.

While measuring access to everyday needs by all modes of travel was nearly impossible decades ago, it is no longer expensive or difficult thanks to GIS, the availability of transit and congestion data, and cloud computing. It can be used with measures like level of service or even in place of it. It is past time for transportation agencies to modernize and measure how well their transportation system gets people to the places they need to go by all travel options (beyond private vehicles) like walking, biking, or taking public transportation—modes of transportation Black and Brown Americans are statistically more likely to use.

If USDOT wishes to measure the value of time saved by transportation investments, they should update their guidance to connect it to this far superior approach of measuring access. This approach means measuring actual trips, not just segments of trips, which can more accurately be translated to time saved. Further, any value of time guidance should provide a way to place value on time savings for all trips, not just trips during peak times or work trips, and make clear how land-use changes can be considered as alternatives to transportation investments. Most importantly, there should be greater consideration for the time saved by people in more vulnerable communities, including those that do not have access to a car.



Second, quantify all of the negative impacts of transportation investments. As shown in the report, when transportation investments are made, they often replace housing and businesses. While the benefit of faster travel through the region is quantified, the loss of housing, jobs, tax dollars and economic activity is not. Some economists will argue that this activity will just move around, but this is a dangerous concept, as we have seen. Smaller businesses do not have the capacity to pick up and move anywhere. And in the cases cited in Washington, DC and Atlanta, that economic value did move around—from Black to white communities.

If we are serious about fully evaluating potential investments, we will name and quantify all negative impacts and subtract them from any benefits. USDOT should provide guidance on how to do this, particularly in terms of safety and time savings benefits, and such an analysis should be required in all environmental and civil rights analyses.

Third, we need a fuller and more current picture of traffic deaths in America. As we wrote in Dangerous by Design 2022, the current approach to local reporting on crashes, guided by federal forms, is woefully incomplete and outdated. It often fails to record the race or ethnicity of victims, lumps skateboard users in with wheelchair users, and fails to gather usable data about street design factors—all of which veil the equity impacts of dangerous roadways. Data collection must change at the state and federal level as well. The only national dataset on traffic fatalities (the Fatality Analysis Reporting System, or FARS, which is made up of state-reported data), is currently being released ~15 months after the data is collected, making it difficult to get a clear picture of current road conditions. This is unacceptable and indicates that inequitable traffic deaths (and traffic deaths period) are not a priority. It's time for USDOT to be transparent about what is causing this delay so their partners in Congress can help them address it.

Fourth, these measures must be used to design our transportation projects and determine funding priorities. Safety and access are often discussed in long-range plans, but then get discarded or downplayed when specific criteria are put in place to choose projects within four-year regional or state Transportation Improvement Plans. And they are not fundamental priorities in the design manuals in the same way that vehicle movement and throughput are. Good intentions do not matter if they are not reflected in what is actually chosen for funding and built.

Fifth, transportation agencies should measure the difference between their system's overall performance and the performance for vulnerable communities specifically. Too often a statewide or regional view of transportation performance masks the real failures that fall disproportionately on marginalized communities, including low-income neighborhoods and communities of color. Looking at this difference will bring sharp focus on the moments when considerable investments are being made that bring marginal benefits to those with more means while creating huge, often life-threatening, burdens for those with far less. A system that works for the most vulnerable works better for everyone.

2 REPAIR THE DAMAGE AND STOP REPEATING PAST MISTAKES

The first step to solving any problem is to stop making it worse. And yet, even as state and local decision makers make plans to utilize federal funding to reconnect communities, they also continue to plan costly highway expansion or construction projects that will further harm and divide communities. This must change. In addition, leaders and practitioners must making solving this problem a priority, using every opportunity at their disposal to enhance public health and safety, particularly for the most vulnerable road users.

First, state and local decision-makers must stop perpetuating past harms. State DOTs currently operate under the mistaken assumption that addressing congestion will solve every other problem. This approach continues to decimate and displace communities of color and create substantial monetary, health, and social costs while generally inducing more traffic. Yet the cycle continues as states build new highways and expand existing ones no matter the damage. It is not enough to reconnect communities (see next recommendation) if we are disconnecting them at the same time. To rectify past mistakes, decision makers must first stop repeating them.

Second, state and local decision makers need to prioritize spending to reconnect communities. Federal decision makers have provided a total of $4 billion over five years to repair this damage and reconnect communities (through the Reconnecting Communities Program in the Infrastructure Investment and Jobs Act and Neighborhood Access and Equity grants in the Inflation Reduction Act). These are valuable sources of dedicated funding that can help make a difference, but they are not enough. States are free to use their other, more plentiful federal funding sources to advance these projects. They do not need to wait for a specialized federal program to reconnect communities.

Third, state and local decision makers should also recognize that every repair project is an opportunity to reimagine a roadway. Small changes, like implementing Complete Streets on arterial roadways—the most dangerous roads in the country—can go a long way in knitting communities back together, serving local businesses, improving public health, and allowing all road users to safely access their needs.

3 PRIORITIZE THE SAFETY OF EVERYONE OVER THE SPEED OF A FEW

State DOTs are often pressured to solve the wrong problem, and it will take leadership at every level to allow them to change course. As we said in Building a Better State DOT in 2019, state DOTs were tasked in the 1950s with the primary job of building highways to move vehicles quickly, a mission that made more sense when their primary job was to build a network of Interstate highways from scratch. But their mission never changed, even as the network was completed. And by applying that approach to the entire transportation system, on and off the highways, we have created a deadly, inconvenient system that is weighted by income, and Black and Brown communities suffer the worst impacts of this approach. It's time for that to change and to give our agencies new goals, standards, and tools. USDOT should lead the way on all of the recommendations, but state DOTs that prioritize equity do not have to wait for USDOT.

First, USDOT must make clear when high-speed vehicle travel is appropriate and when it is not. There is a proven method for supporting safe, higher-speed vehicular traffic, one that we employ when designing interstates. We simplify the roadway by separating oncoming traffic, managing traffic entering and exiting the roadway, prohibiting development access (driveways and parking lots), and fully separating vulnerable travelers (i.e., people walking, biking, and rolling). This gives a driver moving at a higher speed the chance to take in and process a reasonable amount of information, and react accordingly. This is how our Interstates are designed.

But for roads or streets that have businesses and homes along them, driveways and parking lots, cross streets and crosswalks, street parking, and people walking, biking, and rolling, this complexity requires everyone to process an immense amount of information and react quickly. Conflicts arise too quickly to respond at high speed and then drivers are blamed for not being able to do the impossible. Speeds need to come way down in these places to keep these roads and streets safe. A choice must be made between these two approaches on every road. Doing a little of both leads to roadways that are both dangerous and inconvenient. This choice should be clear in all of USDOT's design and safety guidance.

Second, USDOT must update its models and measures to prioritize people over speed. Black and Brown communities are paying the heaviest price for design guidance and standards that prioritize the speed of private vehicles over the safety of everyone, even when that roadway goes through their communities. This must change, and USDOT needs to provide real leadership in making that change.

Specifically, USDOT should update its **value of time guidance** so that vehicle speed is no longer conflated with time savings benefits, especially when pedestrian travel time and safety suffers as a result. In addition, FHWA should **update their guidance on traffic control devices**—like signage, pedestrian crossings and bus-only lanes—as well as **road and street design standards** to support more pedestrian crossings and encourage slower vehicle speeds in areas with many conflict points and vulnerable road users.[15]

Third, transportation agencies at all levels must make safety the top priority in all street redesign projects. Many transportation agencies have a mindset that walking and biking are leisure activities, ignoring that these modes are statistically more likely to be necessary for everyday travel in Black and Brown communities as well as for low-income and younger people. As a result, our streets have become more dangerous for all, and traffic fatalities have reached all-time highs. The default approach should include protected sidewalks and paths and designs that slow down vehicles overall so that all road users, particularly the most vulnerable, are protected.

The problem is worse than safety being the third or fourth priority in many places. Some states are prohibiting cities and towns from taking steps to improve safety, as Indiana is considering for Indianapolis, or canceling projects that slow traffic, as Texas did in San Antonio. States should at least get out of the way of these local safety efforts. Preferably, they should be full partners and establish more modern standards themselves. But where state agencies are the obstacle, the Infrastructure Investment and Jobs Act allows cities to adopt and use safer street design guidelines approved by FHWA, even if their state has prohibited localities from doing so. Cities and towns should adopt and implement their own Complete Streets policies and adopt newer safe streets guidance (such as updated guidelines from NACTO or AASHTO), and they can improve equity and reconcile past wrongs by prioritizing investment in communities of color—where people are more likely to be struck and killed.

4 ALWAYS CONSIDER LAND USE AND TRANSPORTATION TOGETHER

Things that get labeled as transportation problems are often land-use problems. Because of restrictive zoning, housing gets built on the fringes of a city or town far from jobs, groceries, banks, and other necessities.[16] This results in traffic snarls, makes walking and biking difficult, and drives up transportation costs, especially for lower-income households. The state or local DOT and transit agency is then called on to attempt the impossible task of fixing a problem created by land-use choices. Or new infill development is stopped for fear of traffic at the closest intersection or increased parking demand, considering the needs of only those with the money and ability to drive. Then such development is forced to the fringes where it will cause the problems listed in the previous example.

The transportation implications of these development decisions are predictable but rarely considered, while transportation agencies do not admit that they can't fix a problem that is caused by the spatial mismatch of this development pattern. Both land-use and transportation agencies need access to tools that allow them to consider the impacts of both decisions on the other and determine which produces the most effective, efficient, and equitable results.

First, federal agencies should develop and provide tools that allow infrastructure agencies to consider the impact of land use on transportation and vice versa. A huge problem with our national approach to transportation is that the models fail to consider the distance of a trip when estimating travel time, even though distance is required to know how much time travel will take. Land use agencies, on the other hand, either don't know how to or aren't directed to consider system-wide transportation challenges created by their land-use decisions. Both agencies should use access to everyday destinations (as discussed in recommendation #1 above) in their standards and codes in order to fully understand how transportation and development decisions will impact the other and what the final outcome will do for the public.

Specifically, this means that transportation agencies will review whether a transportation project can fix a travel problem as well as land-use solutions that might more effectively solve it. It also means that local land-use authorities would use multimodal access to destinations instead of localized level of service to consider the impact of proposed development decisions on all people in the community, not just the drivers in front of the facility.

Second, all agencies should consider access to facilities and the transportation cost implications of all siting decisions. The decisions about where to place schools, businesses, and retail centers are too often considered separately from transportation needs, costs, and impacts. For example, a new school building is placed on the outskirts of town on donated land to save the district money. Only when it opens do they realize their students without access to a car or parental chauffeur can't reach them and they don't have money for bus service. Transportation agencies (and appropriators) are charged with trying to solve this land-use problem with a limited suite of incredibly costly transportation solutions, like new roads or wider lanes, when the fundamental problem is one of location. These problems can be prevented by considering how well everyone, particularly low-income and communities of color, can access the facility by all modes of travel, during the process of evaluating potential land-use decisions

Third, housing agencies should label housing as affordable only when transportation costs are factored in. Too often we save money on housing by placing it on less expensive land far from the things people need. As a result, these households, who are disproportionately Black and Brown, are saddled with high transportation costs, especially as the average cost of a new vehicle has skyrocketed to nearly $50,000. These are costs that are more subject to unexpected spikes, like in 2008, that people cannot plan for or absorb. People must then choose between spending more or walking long distances on roads not built for them, making vulnerable communities more vulnerable. That is too high a price for affordability and should not be labeled as such. The Center for Neighborhood Technology has created a wonderful tool for calculating housing plus transportation costs, and housing agencies at all levels should use it or create a similar methodology for the implementation of their programs.

Fourth, update land-use and zoning rules to make it easier to access jobs and essential services no matter how much money you have or how you travel. Pushing development to the fringe because of traffic instead only makes trips longer and requires more driving overall. Requirements like parking minimums, building setbacks, height restrictions, and strict separation of each type of use (e.g., housing separate from retail which is separate from schools and jobs) leads to longer trips, more driving, higher transportation costs, and mandatory auto-dependent lifestyles. These agencies should prioritize forms of development that make it possible for more people to live closer to their everyday needs and support the development of infill and missing middle housing, reducing both transportation and housing costs for more people, but especially within the communities that have been so often left out of transportation, housing, and land use decision-making to date.

The final word

Simply putting new people with better intentions at the helm of our transportation apparatus has failed to repair past mistakes or stop producing the same old inequalities. While they often use more enlightened language, little in the program has fundamentally changed so the outcomes haven't changed much either.

It's sobering to read about our sordid history of transportation planning and investment in America in Part I. Learning that history is vital, and should be required reading for anyone involved in transportation today. But we can't stop there. We must also understand how our actions today still cause harm, especially to low income and Black and Brown communities.

We're sympathetic to the many well-intentioned policymakers, transportation planners, and engineers working today who find that history just as appalling and strive to depart from the practices of the past. We understand that many who have their hands on the levers of control today are not intending the same results as their forebears, many of whom intentionally sought to harm, divide, and displace people solely because of the color of their skin or size of their wallets. But ***good intent*** is not powerful enough to override a system that has institutionalized and internalized values that still prioritize certain people over others and personal car travel over everything else. Using the same tools as decades past and hoping for different results is a losing battle, and the end result is the same old outcomes of yesterday. At some point, tolerating the same results gives rise to culpability.

If we're ever going to truly move past the disgraceful history of our highway program, **we have to discard the systems of the past**. Systems created to separate and segregate cannot help us restore and renew. Models and measures designed to move vehicles above all else cannot be used to prioritize people and places. Our scales don't need rebalancing, they need replacing.

The recommendations in this report, while substantial, are not exhaustive. Countless other organizations and advocates have important ideas about what's necessary to truly do away with our historic approach to transportation and build a new system from the ground up. But these four broad recommendations are a good place to start. And we hope that those on the inside, from members of Congress down to local transportation planners, will work together to create new tools and approaches to reconnect what has been **divided by design**.

Safer infrastructure, like protected bike lanes, is one way to improve health outcomes and provide more access in disenfranchised communities. CREDIT: PAUL KRUEGER

METHODOLOGY

DATA SOURCES AND METHODOLOGY

Socioeconomic data to evaluate the impacts of each highway segment, built or unbuilt, was compiled via the U.S. Census Bureau's 1960 Census and 2022 American Community Survey Census (ACS) Census Tract data. The land impact of each highway segment was defined as the amount of land that would be unsuitable for any use other than a highway. Each highway segment's total impact was quantified based on the federal standard for highway lane width (12 feet), and standard shoulder width (six feet). Depending on the intended or constructed number of lanes, the direct land impact of the highway was calculated with an additional 200-foot buffer of the physical highway. Our analyses of unbuilt segments use the planned number of lanes, though those figures are conservative. (E.g, numerous plans for 95/70 in DC suggest eight or and as many as 10 lanes—we use six to stay conservative.) History also suggests that highways could have become larger during planning or certainly later expanded. **Our estimates overall are extremely conservative, and if anything they undercount the full likely impacts of these highways.**

Census data was pulled at the Tract level given that this was the most localized level of data collected in the 1960 Census. The data analyzed was only from Tracts that were within each city's limits and bisected by the intended highway path. For example, though I-95 and I-70 continue into Maryland; the segment in this analysis only includes the bisected Census Tracts in the District of Columbia. Atlanta analysis stops at the city limits. For each highway segment, the total feet of impact was used to measure the impact of the segment on land value, displacement, and current business conditions. It is important to note that these values are estimates, and extremely conservative ones at that. **It is difficult to fully quantify the impact of highway construction on neighborhoods and surrounding areas, so we were conservative in our calculations.**

The number of people estimated to have been *displaced* by highway construction is also different from the number of people who were or are *impacted* by highway construction. It is nearly impossible to measure the number of people who were negatively impacted by the construction of highways that bisected established urban areas. Similarly, the estimated number of housing units that were *destroyed* due to highway construction is different from the number of housing units *affected* by highway construction. It can be assumed that the radial impact of a highway is much larger than what's included in the 200-foot buffer, and that homes with any proximity to a highway lost a portion of their value.

HIGHWAY ROUTES

Existing/built segments were mapped in GIS using precise shapefiles from the FHWA.

Unbuilt highway segments were drawn in ArcGIS, derived from proposed plans from either city/state/regional governments or various federal entities. (The USDOT was not created until 1967 and the US Department of Commerce managed the highway program until then.) For these unbuilt routes, it's impossible to say where a road *that was never built* would have been with much precision, especially when those highways were canceled or defeated before precise routes were selected and full, final engineering plans completed, or construction begun. There were numerous proposed highway plans from the 1940s through the 70s in each city, but detailed engineering was not always completed nor precise routes finalized. In both cities, we have created the best representation of the routing for unbuilt highway segments, which may differ slightly from one or many versions of planning documents. In each case, they represent a reasonable synthesis of the many options proposed and/or studied. This is one reason that we also use extremely conservative estimates for our assessment of the damage, which likely underestimates both scale and scope.

Atlanta

The Georgia State University Library maintains a terrific resource of highway maps and planning documents from the state, many of which are also geocoded to be overlaid with an existing map. For **Interstate 485** from the junction with I-75/85 in the center of the city north to I-85 and SR 400, we used these two maps. (One, two) An Environmental Impact Statement was submitted in 1973 for this segment which studied several alternative routes for that segment. The southern segment of 485 from today's Carter Center and Presidential Library to the south was less advanced in the planning

METHODOLOGY CONT'D

process before it was canceled. Several GSU maps and other 1969 highway maps from GDOT show an approximate route for this proposed southern segment which were used for this analysis. I-485 as proposed would have connected near where I-675 was later built at a junction with I-285, though this analysis stops at the Atlanta city limits at Moreland Avenue.

Washington, DC

There were several primary sources used to identify the routes for DC's potential highways, all of which were at various stages of planning when ultimately canceled. DC's plans have their roots in an October 1955 study by De Leuw, Cather & Company which first proposed the "Inner Loop" around the core with roughly a figure eight looping around the core of the city. Plans from 1960-1962, including the Kennedy administration's 1962 "Recommendations for Transportation in the National Capital Region" included the route analyzed here for the Northern Leg (I-66) along U Street and Florida Ave. Another study was released in 1963-1964 which studied numerous alignments for the North Central Freeway, including the northerly turn from the B&O railroad right-of-way (ROW) directly through Takoma Park, Maryland. That route was refined in a 1966 Supplemental Study to more closely follow the railroad and take less land in both DC and Maryland, though that plan was never finalized or approved. We also cited maps included in correspondence between the District Department of Highways and FHWA from 1975-1983 to officially "de-map" these planned highway segments after they were canceled, and have them officially removed from federal interstate maps. Those maps were primarily to serve the purpose of broadly identifying the corridors rather than showing them with great precision, but they do show routes derived from earlier plans.

The North Central Freeway (I-95/70) was the closest to construction when it was finally shelved in 1973, with right-of-way purchased, at least one obstacle (The Taylor Street bridge in Brookland) torn down, and many homes already seized. This route included separate paths for I-70S and I-95 (known as the Northeast Freeway) after the freeway was to split near Fort Totten in DC. The route analyzed here is a synthesis of the routes presented in the 1962 study, an alternative from the 1963-64 study, and the 1966 supplementary study. **The Northern Leg (I-66)** was less advanced when it was finally defeated. The earliest proposals show the routing we analyzed along Florida Avenue and just south of U Street. From 1963-1965, an alternate route for the Northern Leg of running a complex tunnel under K Street NW to connect with the North Central Freeway at New York Avenue was frequently proposed. But this tunnel route was never finalized, sent through the engineering process, or approved, though it enjoyed more local popularity than the more disruptive Florida Ave/U Street proposal. The idea of a Northern Leg was essentially dead once the Three Sisters Bridge (to carry I-66 over the Potomac River) was halted by the courts in 1969 (upheld by the Supreme Court in 1972.)

One last plan worth mentioning is the *District of Columbia Interstate System 1971*, prepared for the District Department of Highways and Traffic (and FHWA) by DeLeuw, Cather Associates and Harry Weese & Associates. We referred to this plan but largely treated this as useful historical information. This plan was one of the first to propose a less disruptive path for the North Central Freeway by suggesting a fairly unproven and complex underground interchange and tunnel running along New York Avenue and then hewing closely to the railroad right-of-way further north. This is in contrast to nearly all earlier plans which have I-95/70 continuing further north *past* New York Avenue to near Rhode Island Ave/Florida Avenue and then following Florida Avenue or R Street east to the northward turn along the railroad ROW. While some point to this 1971 document as the "final" plan for DC highways, considering that 1) the National Capital Planning Commission had already deleted the North Central Freeway from their plans in 1968, 2) the U.S. District Court stopped all freeway construction in late 1969 (upheld by the Supreme Court in 1972), and 3) the freeway was ultimately canceled entirely just two years later in 1973, there's little evidence that this plan from the 11th hour of DC's freeway battles carried much weight.

REFERENCES

[1]The March 2023 voluntary agreement between FHWA and the Texas Department of Transportation to allow the Interstate 45 expansion to continue is one example of this overall approach, adding on things like new bike connections and beautifying underpasses while continuing a project to construct a massive expansion of the interstate through neighborhoods, seizing homes, and displacing hundreds of people. https://www.txdot.gov/content/dam/docs/news/houston/nhhip-vra-signed.pdf

[2]As one example of these early highway plans, the 1947 Lochner Plan mentioned in the Atlanta case study later in this report laid out one of the earliest plans for radial highways across the city and guided the construction of some pre-1956 segments and served as the starting point for planning on the Interstate Highways built under subsequent plans with 90 percent federal dollars after 1956. Read the Lochner Plan here: https://smartech.gatech.edu/handle/1853/36611

[3]See the next section of Part I which looks at unbuilt and built interstate segments in Atlanta and Washington, DC. In both cases, the unbuilt sections were the result of them being targeted for neighborhoods with non-Black residents who had greater political power and were able to successfully prevent them from being built.

[4]Robert Caro detailed the life of Robert Moses, and the many ways he shaped the urban environment, in The Power Broker: Robert Moses and the Fall of New York.

[5]Interstates 395 and 695 have been officially renumbered by FHWA, though the changes in official signage have yet to take place. When completed, the northern segment in the tunnel will be signed as I-195, and the entire east-west 395/695 corridor will be I-395. Read more here.

[6]These very conservative estimates for land consumption are limited to the road corridor shapefiles from FHWA. They do not include the massive amounts of land required for the larger interchanges (on- and off-ramps which are significant.

[7]The estimated loss in equity also doesn't account for the value of a home's location; owning a home in the downtown area of any city, no matter the owner's race, will have appreciated in value faster than a house outside the downtown core.

[8]DC has no open and available data on tax revenue by product type, making it impossible to estimate the actual loss to the city's tax revenues based on specific property values and millage rates by type. This estimate is drawn from the average tax value per parcel of $200,456,

[9]Learn more about Sweet Auburn and the impact of the interstates in this piece by Danielle Wiggins for The Metropole, which is itself part of a longer series on the racist history of the interstate system, and from which this report was heavily influenced. Read: Remembering Sweet Auburn Before The Expressway: What Nostalgia Reveals About The Limits Of Postwar Liberalism. Danielle Wiggins. 2021.

[10]Note that while I-20 also had significant impacts to other core neighborhoods to the east inside of I-285, the analyzed highway segment was clipped to the current Atlanta city boundaries to keep measurements between 1960 and 2021 consistent.

[11]These very conservative estimates for land consumption are limited to the road corridor shapefiles from FHWA. They do not include (for example) the massive land involved in I-20's interchange with I-75/85 that wiped out and consumed at least 32 city blocks just south of downtown.

[12]The way this highway stayed on the books for decades is a good demonstration of how many highways or expansion projects being built today were first proposed years ago in different times and conditions, and how plans are rarely comprehensively revised or reconsidered once official lines get drawn on a map in an official state DOT plan.

[13]Transit is considered in value of time, but the measure is misleading, as it considers only the full length of a route from one end to the other, an unnecessarily lengthy distance that does not represent how most people ride transit within a portion of a corridor.

[14]Calculated using data for all counties in the US from the American Community Survey five-year estimates for 2014-2018. Accessed at: https://data.census.gov/cedsci/table?q=dp&tid=ACSDP1Y2018.DP02

REFERENCES CONT'D

[15]There are several helpful explainers on the 85th percentile rule and why using it to set speed limits is a dangerous and counterproductive practice. Read and watch an explainer from Strong Towns: https://www.strongtowns.org/journal/2020/7/24/understanding-the-85th-percentile-speed
This video, produced by the Wall Street Journal, features T4America experts explaining the rule: https://t4america.org/2022/03/14/video-osborne-explains-setting-speed-limits-wsj/

[16]Transportation for America detailed this phenomenon in some detail in The Congestion Con, released in March 2020. See page 19 for graphics showing how new suburban development generates an immense number of trips on a limited number of roadways, guaranteeing traffic. https://t4america.org/maps-tools/congestion-con/

[17]The Center for Neighborhood Technology's Housing + Transportation Affordability Index can be found at https://htaindex.cnt.org/

Divided by Design

Smart Growth America
Improving lives by improving communities

smartgrowthamerica.org

@smartgrowthusa

Transportation for America

t4america.org

@t4america