



Highway Boondoggles 4

Big Projects. Bigger Price Tags. Limited Benefits.

WISPIRG
Foundation

FRONTIER GROUP

HIGHWAY BOONDOGGLES 4

Big Projects.
Bigger Price Tags.
Limited Benefits.



FRONTIER GROUP

Gideon Weissman, Frontier Group

Matt Casale, U.S. PIRG Education Fund

June 2018

Acknowledgments

The authors wish to thank Dru Schmidt-Perkins, Kim Mitchell of the Purdue Agile Strategy Lab, Chris Lepe of TransForm, Kevin DeGood of the Center for American Progress, Brian Grist of the Southern Environmental Law Center, Bay Scoggin of TexPIRG Education Fund, and Peter Skopec of WISPIRG Education Fund, for providing review or insights for this report. Thanks also to Tony Dutzik and Alana Miller of Frontier Group for editorial support. And special thanks to Frontier Group intern and Dartmouth College student Emily Schneider for her assistance with research and data collection.

The authors bear responsibility for any factual errors. Policy recommendations are those of WISPIRG Foundation. The views expressed in this report are those of the authors and do not necessarily reflect the views of our funders or those who provided review. Project maps included in this report should be considered approximations based on publicly available information and not used for planning purposes.

© 2018 WISPIRG Foundation. Some Rights Reserved. This work is licensed under a Creative Commons Attribution Non-Commercial No Derivatives 3.0 Unported License. To view the terms of this license, visit creativecommons.org/licenses/by-nc-nd/3.0.



With public debate around important issues often dominated by special interests pursuing their own narrow agendas, the WISPIRG Foundation offers an independent voice that works on behalf of the public interest.

The WISPIRG Foundation works to protect consumers and promote good government. We investigate problems, craft solutions, educate the public, and offer citizens meaningful opportunities for civic participation. For more information about WISPIRG Foundation, please visit wispirgfoundation.org.

FRONTIER GROUP

Frontier Group provides information and ideas to help citizens build a cleaner, healthier, and more democratic America. We address issues that will define our nation's course in the 21st century – from fracking to solar energy, global warming to transportation, clean water to clean elections. Our experts and writers deliver timely research and analysis that is accessible to the public, applying insights gleaned from a variety of disciplines to arrive at new ideas for solving pressing problems. For more information about Frontier Group, please visit www.frontiergroup.org.

Layout: To the Point Collaborative, www.tothepointcollaborative.com

Cover: TxDOT rendering of LBJ East expansion

Table of Contents

| | |
|--|-----------|
| Executive Summary | 4 |
| Introduction | 8 |
| The Problem with Highway Boondoggles | 9 |
| Highway Expansion Takes Money from Other Transportation Priorities | 9 |
| Highway Expansion Saddles States with Costly Debt | 10 |
| Highway Expansion Doesn't Solve Congestion | 11 |
| Highway Expansion Damages the Environment and Our Communities | 12 |
| Highway Boondoggles 2018 | 13 |
| "Traffic Relief Plan," Maryland | 14 |
| I-49 Inner City Connection, Shreveport, Louisiana | 16 |
| U.S. Highway 101 Expansion, San Mateo, California | 17 |
| Interstate 35 Expansion, Austin, Texas | 19 |
| LBJ East Expansion, Dallas, Texas | 20 |
| Pennsylvania Turnpike Expansion | 21 |
| I-94 North South Expansion, Wisconsin | 22 |
| I-285 & SR 400 Interchange Rebuilding, Atlanta, Georgia | 23 |
| North Spokane Corridor, Spokane, Washington | 24 |
| Catching up on Old Boondoggles | 25 |
| 2017 Projects | 25 |
| 2016 Projects | 27 |
| 2014 Projects | 30 |
| Conclusion and Recommendations | 34 |
| Notes | 35 |

Executive Summary

America's infrastructure is in rough shape. Many of our roads, bridges and transit systems are aging and in need of repair.

Yet, year after year, state and local governments propose billions of dollars' worth of new and expanded highways that often do little to reduce congestion or address real transportation challenges, while diverting scarce funding from infrastructure repairs and 21st century transportation priorities.

Nine proposed highway expansion projects across the country – slated to cost \$30 billion – exemplify the need for a fresh approach to transportation planning and spending. As America considers how to meet its infrastructure needs in a fiscally responsible way, the nation cannot afford expensive “boondoggle” projects that don't meet our most important transportation needs.

Highway expansion costs transportation agencies billions of dollars, driving them further into debt, while failing to address our long-term transportation challenges.

- **Highway expansion absorbs money that can be used for more pressing needs.**
 - In 2012 (the last year for which data is available), federal, state and local governments spent \$27.2 billion on expanding the highway system – consuming more than one out of

every four capital dollars spent on the nation's road network.¹

- Continued spending on highway expansion diverts funds that could be used to address the nation's roughly half trillion-dollar backlog of road and bridge repair needs and its \$90 billion backlog of transit repair needs, as well as to expand transportation choices for Americans through investments in public transportation.²
- **Highway expansion saddles states with debt.**
 - Amid stagnating gas tax revenue, states have increasingly paid for highway expansions with borrowed money.
 - From 2008 to 2015, the highway debt held by state transportation agencies more than doubled, from \$111 billion to \$217 billion, while state fuel tax revenue increased by only 20 percent.³ As a result, retiring and making payments on old debt – debt service – has become increasingly expensive. In 2014, states spent \$28 billion on debt service, representing 29 percent of all state highway spending.⁴
- **Highway expansion doesn't solve congestion.**
 - Expanding highways draws new drivers to the roads, often resulting in a rapid return to the congested conditions the expansion project was originally supposed to solve. The return

to congestion after a road expansion is so predictable it has been called the “Fundamental Law of Road Congestion.”⁵

- ° For example, recent billion-dollar expansions of I-35W in Fort Worth, the Katy Freeway in Texas and Interstate 405 in California failed to significantly improve congestion, with commute times on the Katy Freeway actually increasing following expansion.⁶

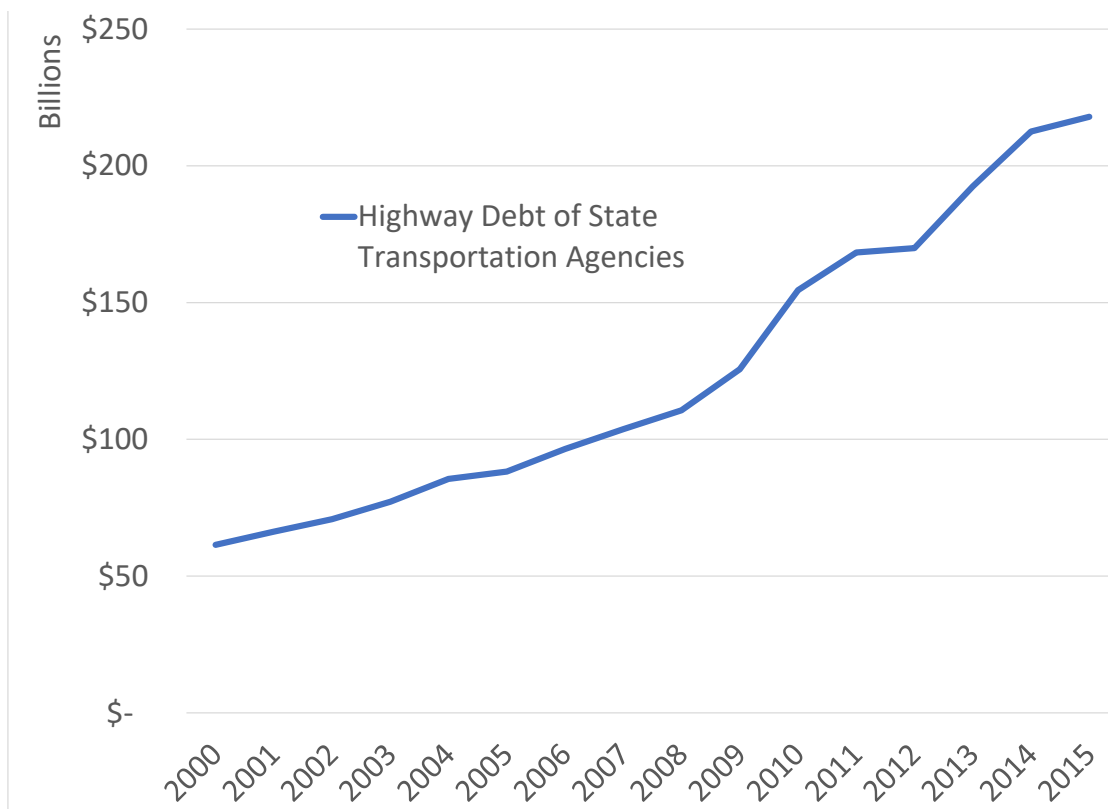
States continue to spend billions of dollars on new or expanded highways that fail to address real problems with our transportation system, while adding new long-term fiscal and maintenance obligations. In some cases, officials are proposing to tack expensive highway expansions onto necessary repair and reconstruction projects, while

other projects represent entirely new construction. Many of these projects began or were first proposed years or decades ago, or are based on highly questionable assumptions about economic impacts.

Questionable projects poised to absorb billions of scarce transportation dollars include:

- **“Traffic Relief Plan;” Maryland; \$9 billion** – A plan to spend \$9 billion on new highways comes as Maryland struggles to fix the Baltimore Metro, which was forced to close for urgent repairs in February 2018.
- **I-49 Inner City Connection; Shreveport, Louisiana; \$547 million to \$640 million** – A proposed new highway would slice through the heart of a neighborhood.

Figures ES-1. The Highway Debt of State Transportation Agencies Has More Than Doubled Since 2008⁷



- **U.S. Highway 101 Expansion; San Mateo, California; \$534 million** – Widening U.S. Highway 101 in the San Mateo area will bring more cars into an already congested area, while directly conflicting with California’s global warming goals.
- **Interstate 35 Expansion; Austin, Texas; \$8.1 billion** – Despite enormous state highway debt, and the growing need for transit and complete streets to create more compact and connected neighborhoods, policymakers have proposed spending \$8 billion to expand I-35 through the middle of Austin.
- **LBJ East Expansion; Dallas, Texas; \$1.6 billion** – The costly expansion of an already enormous highway will create 14 lanes (plus two frontage roads) of roadway.
- **Pennsylvania Turnpike Expansion; \$6.9 billion** – Despite a precarious financial situation that threatens transit systems across the state, the Pennsylvania Turnpike Commission is undertaking an expensive highway widening project on 470 miles of highway.
- **I-94 North South Expansion; Wisconsin; \$1.7 billion to \$1.9 billion** – A highway expansion that would drain resources from other state projects is moving forward as part of an economic incentive package for electronics manufacturing company Foxconn.
- **I-285 & SR 400 Interchange Rebuilding; Atlanta, Georgia; \$596 million** – An expensive interchange project is moving forward even as Atlanta residents clamor for more and better transit.
- **North Spokane Corridor; Spokane, Washington; \$1.5 billion** – A proposed highway will slice through a historic Spokane neighborhood and take money from other transportation priorities, in order to take just minutes off the drive to low-density suburbs north of the city.

Previous *Highway Boondoggles* reports identified 32 dubious highway expansion projects costing an estimated \$47 billion that merited additional scrutiny. Of those projects, nine have been canceled, are on hold, or are under significant revision. Those projects include the following:

- The Florida Department of Transportation cancelled plans to build new lanes along I-275 in Tampa between I-4 and Bearss Avenue, citing community opposition to the plan. Other elements of the **Tampa Bay Next** project are still moving forward.
- The **Dallas Trinity Parkway** was canceled after community-led opposition to the proposed toll road led to new questions over the project’s funding and its impact on the community.
- The **Illiana Expressway tollway in Indiana and Illinois** was suspended amid budget concerns and has been the subject of court challenges that leave its future in severe doubt.
- Wisconsin abandoned a proposal to **widen I-94 East West in Milwaukee** after the project was denied funding due to the state budget crunch and strong opposition from community groups.
- After receiving feedback that the plan to **widen I-94 through Detroit** would harm the city, transportation officials are considering modifications to the plan that would keep the highway’s existing footprint, create “complete streets” overpasses with improved pedestrian and bicycle infrastructure, and make better use of existing city streets for neighborhood connections.
- An **extension to the Tesoro toll road in southern California** was put on hold on the grounds that it, and a future additional extension, would threaten local water resources.

Federal, state and local governments should stop or downsize unnecessary or low-priority highway projects to free up resources for pressing transportation priorities.

Specifically, policy-makers should:

- **Invest in transportation solutions that reduce the need for costly and disruptive highway expansion projects.** Investments in public transportation, changes in land-use policy, road pricing measures, and technological measures that help drivers avoid peak-time traffic, for example, can often address congestion more cheaply and effectively than highway expansion.
- **Adopt fix-it-first policies** that reorient transportation funding away from newer and wider highways and toward repair of existing roads, bridges and transit systems.
- **Use the latest transportation data and require full cost-benefit comparisons, including future maintenance needs,** to evaluate all proposed new and expanded highways. This includes projects proposed as public-private partnerships.
- **Give priority funding to transportation projects that reduce growth in vehicle-miles traveled,** to account for the public health, environmental and climate benefits resulting from reduced driving.
- **Invest in research and data collection** to better track and react to ongoing shifts in how people travel.

Expanding highways does little to reduce congestion or address real transportation challenges, and diverts scarce funding from infrastructure repairs and 21st century transportation priorities.

Introduction

Since work began on the Interstate Highway System in 1956, American transportation planners have made a simple promise: New and bigger highways will end congestion and bring relief to frustrated commuters.

You can find such a promise in *Road to Prosperity*, a 14-minute promotional film released in 1961 that proclaimed:

*Soon, traffic will flow smoothly in, around, and between every major city and town in America. There will be no traffic tie-ups where the interstate goes.*⁸

Yet as thousands of miles of new highway stretched across the country in the following years – including all 41,000 miles of the originally conceived Interstate Highway System – the promised improvements in congestion seemed to disappear quickly. No matter how many lanes of highway were built, new cars always seemed ready to fill the new empty space. Once the new freeways filled up, they were expanded even further – and yet more cars materialized to fill the empty lanes.

Expanding highways to relieve congestion has not worked. Decades of study from around the world suggests that it cannot work.⁹ And the pursuit of smoother travel through ever-wider highways has come with terrible costs – the loss of forests and wetlands, the destruction of urban neighborhoods, vast and rising emissions of pollutants that harm our health and contribute to global warming. And, last

but not least, the expenditure of trillions of dollars of public resources that could have been spent elsewhere.

Billions of dollars of spending on new highways – often done without corresponding increases in revenue – has had consequences for state finances and for the rest of our transportation system. State transportation agencies around the country have been plunged into debt, forcing increasingly expensive payments on old debt. And states have put off necessary repairs for existing road and bridge infrastructure, creating safety hazards for users and likely leading to vastly higher costs in the future.¹⁰

Despite decades of evidence that the broken policy of highway expansion is ineffective and even harmful, a look at transportation plans across the country reveals that today, officials are planning more of the same. Sixty years ago, transportation planners may not have been able to foresee the failure of highway construction to alleviate congestion or envision the tremendous fiscal burden that highway maintenance would impose on governments. Today, they have no excuse.

The projects highlighted here, as well as more than two dozen projects included in previous *Highway Boondoggles* reports, are examples of transportation officials' refusal to move away from the failed approaches of the past. The costs of continuing that failed approach are borne by all of us.

The Problem with Highway Boondoggles

The United States continues to spend tens of billions of dollars each year to expand our highway network, even as existing roads and bridges crumble and other pressing transportation needs go unmet.

Highway Expansion Takes Money from Other Transportation Priorities

Highway expansion costs the United States tens of billions of dollars each year. In 2012, federal, state and local governments spent \$27.2 billion expanding the highway system – including new roads, new bridges and widenings of existing highways.¹¹ Those expansion projects absorbed more than one out of every four capital dollars spent on highways in 2012, a lower share than previous years, but still a massive investment.

At the same time, the traditional sources of funding for highway programs – gas taxes and other so-called “user fees” – are increasingly failing to keep up. The real value of fuel and vehicle tax revenue actually declined between 2000 and 2015, the result of slower growth in driving, more fuel-efficient cars, inflation, and the unwillingness of the federal government and many states to increase gasoline taxes.¹² The result has been increased borrowing for highway expenses and

a growing dependence on revenue from general funds supplied by taxpayers, regardless of how much or how little they drive.

Continued highway expansion amid stagnating gas tax revenues mean that limited funding is available for other transportation needs – including needs that are increasingly urgent in the 21st century.

- **Road repairs** – As many of the roads and bridges the nation built in the mid-20th century near the end of their useful lives, local governments are struggling to meet day-to-day infrastructure maintenance needs and often defer action to a later date. This has caused a roughly half trillion-dollar backlog of highway and bridge repair and rehabilitation.¹³ As streets, roads and bridges continue to age, the cost and urgency of maintenance and repairs can only be expected to grow.
- **Transit repair and expansion** – Similarly, the nation faces a nearly \$90 billion repair and rehabilitation backlog for its public transportation systems.¹⁴ Americans also are increasingly demanding expanded access to public transportation. According to a 2014 ABC News poll, Americans favor transit improvements over road expansion as a solution to congestion by a margin of 54 to 41 percent.¹⁵ In November 2016, voters across the country approved \$170 billion in new investment in transit on local ballots.¹⁶

- **Local needs** – Local governments also clamor for funding to expand bike lanes, improve conditions for pedestrians, fix potholes, and engage in “complete streets” transformations and other improvements to local streetscapes. Often, these improvements cost just a tiny fraction of the cost of a major highway project, but deliver significant improvements in quality of life and expand the mobility options available to local residents.

Highway Expansion Saddles States with Costly Debt

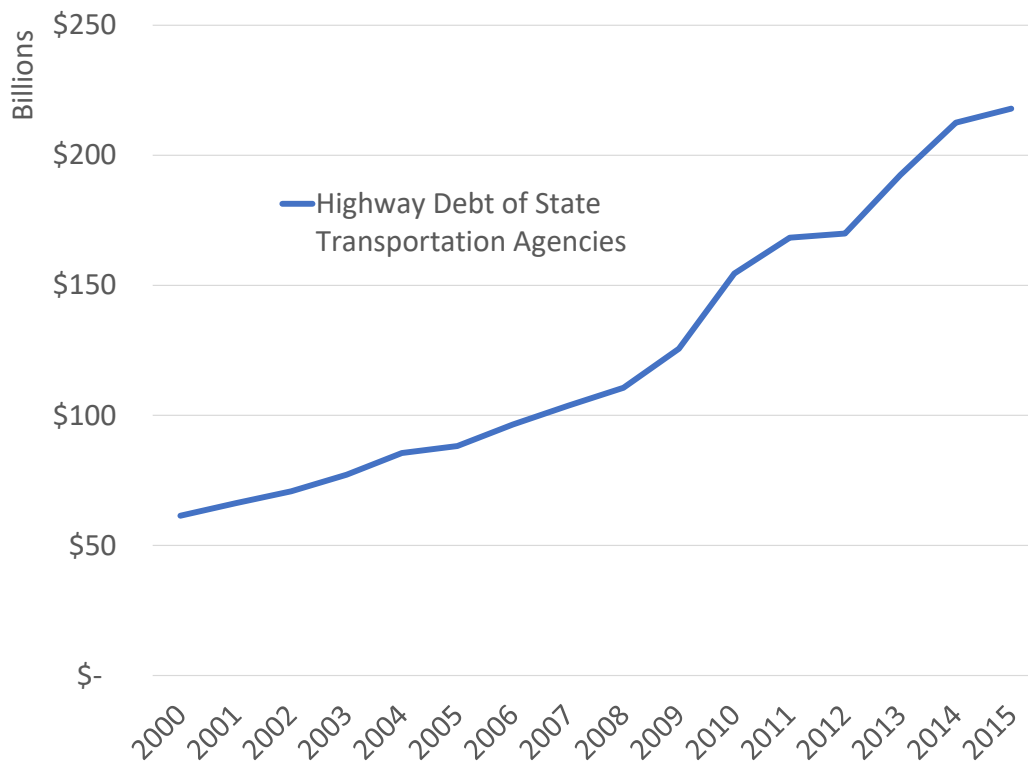
High spending for road expansions and other projects combined with stagnant revenue from gas taxes and other sources has led to ballooning state highway debt. From 2008 to 2015, the highway debt of state transportation agencies more than doubled, from \$111 billion to \$217 billion.¹⁷ As a result, the cost to retire and make payments on old debt (debt ser-

vice) has become increasingly steep. In 2014, states spent \$28 billion on debt service, or 29 percent of all state highway spending, compared to just 11 percent in 2000.¹⁸

Some states have borrowed for highways more aggressively than others. In Texas, three constitutional amendments allowed the Texas Department of Transportation to borrow approximately \$18 billion over the course of a decade for highway building, while also diverting additional state money to transportation.¹⁹ By the end of 2015 Texas had \$29 billion in total highway debt, 30 times more than at the end of 2000 – and is now paying nearly \$5 billion each year to service that debt, 90 times more than in 2000.²⁰ In 2014, Texas voters approved Proposition 1, which diverts more than \$1 billion per year from elsewhere in the state budget to spending on roads.²¹

Highways built using public-private partnerships (PPPs), in which private companies build roads in ex-

Figure 1. The Highway Debt of State Transportation Agencies Has More Than Doubled Since 2008²⁶



change for the right to raise and collect toll revenue, are sometimes presented to the public as a way to build new highways without public costs.²² Yet while some privatized toll roads do cover their own costs, in some cases toll revenue fails to cover the cost of toll roads and result in more public spending and public debt. For example, in Maryland – which is currently considering major new PPP roads (see page 14) – the Intercounty Connector toll road was subsidized with \$445 million in funds from the state Transportation Trust Fund and state general funds.²³ PPP projects can require new spending when they must be propped up or rescued in cases where tolls do not generate enough revenue to pay off investors or cover costs, as has been the case with State Highway 130 and the Camino Colombia toll road in Texas.²⁴ In deals where the public does not receive fair value for future toll revenues, PPP highways can also result in decreased long-term revenue for the state – resulting in either increased debt, or the need to raise new revenue.²⁵

Highway Expansion Doesn't Solve Congestion

Building a new highway or widening an existing one is often billed as a way to reduce traffic congestion. Nearly a century of highway construction in the United States, however, suggests that it does not work. Since 1980, the nation has added more than 800,000 lane-miles of highway – paving more than 1,500 square miles, an area larger than the state of Rhode Island – and yet congestion today is worse than it was in the early 1980s.²⁷

For decades, transportation researchers have understood why building and widening highways does not eliminate congestion.²⁸ Expanding a highway sets off a chain reaction of societal decisions that ultimately lead the highway to become congested again – often in only a short time. Businesses may choose to move or establish new locations on the outskirts of the city in order to take advantage of the new highway.

People may choose to move farther away in pursuit of cheaper housing. Commuters who had left early for work in order to avoid traffic might travel at rush hour once again. People who had taken transit might get back into their cars.

The ability of these changes – collectively termed “induced demand” – to take up additional space on highways, ultimately resulting in the return of congestion, is so predictable that it has been called the “Fundamental Law of Road Congestion.”²⁹ Examples of recent highway expansion projects that failed to relieve congestion include the following:

I-35W in Fort Worth

Fort Worth commuters are still sitting in heavy traffic, even after a \$1.6 billion project to add express lanes and make other road improvements. A Fort Worth Star-Telegram report following the opening of new lanes in April 2018 described lines of traffic up to four miles long, with heavy congestion even at non-peak hours.²⁵¹

Katy Freeway

In Texas, the Katy Freeway was known as far back as 2002 to be a very congested highway.³⁰ A \$2.8 billion highway widening project was promoted as a fix for the congestion.³¹ The highway became one of the world's widest – with 26 lanes in parts.³²

And yet, travel times worsened considerably. By 2014, 85 percent of commutes along that highway took longer than they had in 2011.³³ Morning commutes took more than 30 percent longer, and afternoon commutes took more than 50 percent longer.³⁴

I-405 in Los Angeles

The \$1.6 billion widening of I-405 that disrupted commutes for five years – including two complete shutdowns of a 10-mile stretch of one of the nation's busiest highways – had no success in reducing rush hour congestion (though it did shorten the duration of rush hour somewhat).³⁵

Just five months after the widened road reopened, the rush-hour trip took longer than it had while construction was still ongoing.³⁶

Highway Expansion Damages the Environment and Our Communities

Highway expansion fuels additional driving that contributes to climate change. Americans drive more per-capita – and produce more carbon pollution from transportation per-capita – than residents of any other nation in the world.³⁷ In 2016, transportation was the nation’s number one source of global warming pollution.³⁸

By nudging more people to take to the roads, highway expansion makes it more difficult for the nation to meet its national clean air goals and greenhouse gas emission reduction goals. In order to achieve the dramatic reductions in carbon pollution needed to prevent the worst impacts of global warming, the United States and the world must promote low-carbon forms of transportation wherever possible. Highway expansion does just the opposite.

Highway expansion can also cause irreparable harm to communities – forcing the relocation of homes and businesses, widening “dead zones” alongside highways, severing street connections for pedestrians and cars, reducing the city’s base of taxable property, and creating noise, pollution and disruption that degrade quality of life.

According to former U.S. Transportation Secretary Anthony Foxx, roughly 1 million Americans were displaced by highway construction during the first 20 years of the Interstate Highway System.³⁹ Many of those who were not displaced found their community life disrupted. A 2006 study found that U.S. cities would have added 8 percent to their population between 1950 and 1990 if urban freeways had not been built, compared to the 17 percent decline that occurred amidst the urban highway boom.⁴⁰

Such displacement and disruption continues. In Shreveport, the I-49 Connector project threatens to displace churches and dozens of homes.⁴¹ (See page 16.) In Spokane, a project to build a highway through the east side of the city would cut through the heart of the historic community of Hillyard.⁴² (See page 24.)

Highway Boondoggles 2018

Boondoggle (n): Work or activity that is wasteful or pointless but gives the appearance of having value.

Google Dictionary⁴³

America's continued construction of ever-wider highways costs tens of billions of dollars each year – money that is diverted from more pressing needs such as highway repair, transit repair and expansion, and local street improvements. Those highway expansion projects often fail to do the job they are intended to perform: reducing congestion. And they are often funded with reckless borrowing that creates a debt burden for future generations.

In this report, we identify nine highway “boondoggles” slated to cost \$30 billion – projects with large price tags that are unnecessary and/or threaten to damage the communities surrounding them.

Some of these projects were originally proposed decades ago, at a time when concepts such as induced demand and the impact of driving on the global climate were unknown. Others represent more recent trends, such as the use of tolled “express lanes” to expand highway capacity in areas where widening would otherwise be politically or financially impossible.

In this report, we address three types of projects:

- New highways or relocations of existing highways.
- Projects that add new lanes to existing roads.
- Highway expansions that are unnecessarily tacked onto needed highway reconstruction and repair projects. Many highways are currently reaching the end of their useful lives and require major reconstruction. In many cases, however, highway agencies have added expansion onto these reconstruction projects, making them more expensive and disruptive than they should be.

While not every state or region is included in the list of misguided highway projects below, nearly every state has one or more highway expansion projects whose wisdom is questionable. The projects highlighted in this report are not necessarily the worst highway boondoggles in the nation, but they are representative of the costs of proceeding with disruptive projects that do not have a compelling transportation rationale.

“Traffic Relief Plan,” Maryland

Estimated Cost: \$9 Billion

A plan to spend \$9 billion on new highways comes as Maryland struggles to fix the Baltimore Metro, which was forced to close for urgent repairs in February 2018.

In February 2018, Maryland had a transit emergency. That month, Baltimore’s entire Metro SubwayLink system was shut down for a month after inspections revealed that the subway was becoming dangerous and needed emergency repairs. The closure immediately threw into disarray the commutes of 34,000 daily riders and shined a light on years of neglect of the system.⁴⁴ Meanwhile, in the Washington, D.C., area, much of which is in Maryland, the Metrorail

system has seen reliability suffer and experienced several high-profile safety incidents following years of deferred maintenance.

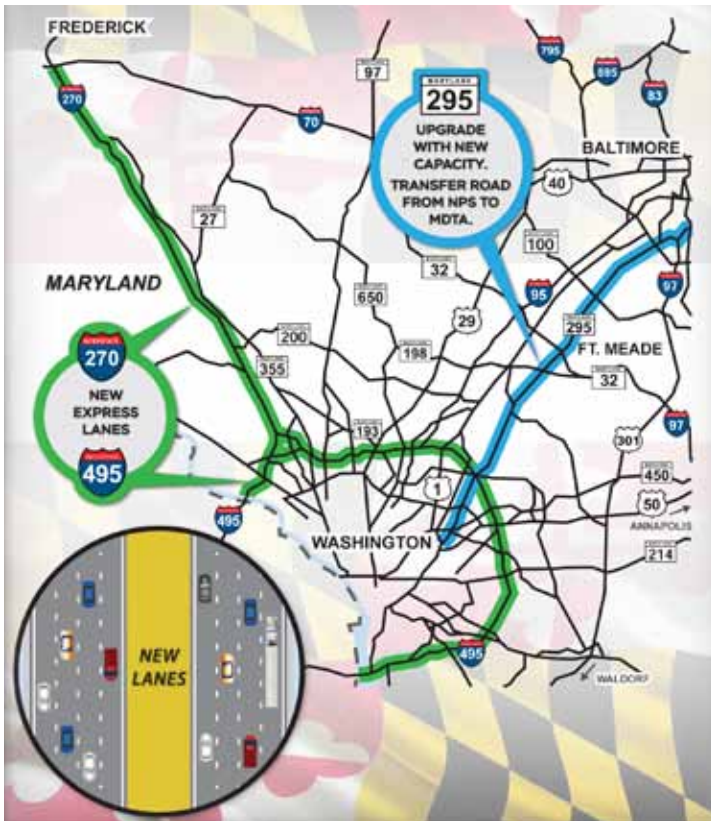
Maryland recently agreed to cover its share of a \$500 million annual funding plan for Metro with Virginia and the District of Columbia, a first step in restoring the system to health. But the investment in Metro pales in comparison to a massive highway expansion project that would likely put more Marylanders on the road.

The proposed projects would be some of the biggest and most expensive highway expansion projects in the country. In total, the proposed “Traffic Relief Plan” would cost \$9 billion: \$7.6 billion to add four new lanes to I-495 and I-270, and \$1.4 billion to add four lanes to MD-295, the Baltimore-Washington Parkway.

The three highways planned for expansion all cover important transportation routes in the Baltimore-D.C. area: I-495 encircles Washington, D.C., I-270 connects D.C. with Frederick, a major suburb northwest of the city, and MD-295 connects D.C. with Baltimore. Each route suffers from hours of congestion each weekday and is a source of pain for area commuters.⁴⁶

However, expanding Maryland’s already substantial highway capacity would likely bring minimal relief for those commuters. I-270 and I-495 are already eight lanes across, with miles of additional auxiliary lanes; for much of its route, MD-295 runs parallel to Interstate 95, which is also eight lanes across. As described above (“Highway Expansion Doesn’t Solve Congestion,” page 11), highway expansions rarely reduce congestion because they result in more overall driving. Meanwhile, the plan would have large costs for the state of Maryland – for neighborhoods along the route, for Maryland taxpayers, and for Maryland’s transportation future.

Highway expansions along the proposed routes would likely require damaging existing neighbor-



Maryland’s “Traffic Relief Plan” would entail adding new lanes along more than 100 miles of highway.⁴⁵



I-270, MD-95, and I-495 (shown above) travel through dense residential and commercial areas, and their widening will likely require relocating homes and businesses.

hoods. The Traffic Relief Plan *Request for Information* notes that along I-495, “[r]esidential and commercial development is located close to the right-of-way line,” and indicates that the project will require right-of-way property acquisitions.⁴⁷ One response from an infrastructure investment company notes that “[m]ost of the corridor is built along dense residential, commercial and office areas.”⁴⁸ I-270 and MD-295 also travel through stretches of dense development in the areas closest to Frederick, Baltimore, and Washington, D.C. Widening MD-295, which is a historic parkway currently maintained by the National Park Service, would also likely require diminishing that road’s scenic value.

The project also would cost Marylanders money – for new tolls, but also likely from state funds. The plan envisions that I-495 and I-270 would be built through a public-private partnership (PPP), under which a private company or companies would

build the highways and then collect tolls for access to new express lanes, in a contract lasting a to-be-determined number of years.⁴⁹ The MD-295 lane additions would be toll roads built by the Maryland Transportation Authority (MDTA).⁵⁰

Governor Larry Hogan has promoted the potential PPPs as a good deal for taxpayers, saying “[i]t won’t cost us tax dollars.”⁵¹ Yet this is misleading. The state’s own documents confirm that federal funds and loans will be sought for the project.⁵² And similar projects around the country have sometimes not been able to raise enough toll revenue to cover their costs. For example, tolls have not come close to covering the construction costs of additional lanes built for I-95 north of Baltimore.⁵³

One response to the project’s *Request for Information* notes that “toll revenues may not be sufficient to cover the entire costs of the Project,” and suggests that “MDOT might consider a ‘hybrid’ toll

revenue and availability payment approach, or may choose to supplement toll revenue by contributing some amount of public subsidy as milestone or completion payments during/at the end of construction.”⁵⁴ (For more on how PPP projects can affect state finances, see page 11.)

Governor Hogan has also demonstrated his willingness to reduce tolls, regardless of the cost to the state, as when he reduced tolls at roads and bridges across Maryland in 2016.⁵⁵ Future politicians may do the same, and the result may be the need for state payments to support the new highways.

Any new debt created by the project would add to Maryland’s already quickly-growing highway debt. At the end of 2015, Maryland owed \$5.2 billion in state highway bonds, 5 times more than it did at the end of 2000, not adjusted for inflation. And in 2014, the state spent \$492 million servicing highway debt, three times as much as it did in 2000.

New costs to Marylanders for building highways will make it more difficult to pay for other pressing transportation needs, including:

- Fixing and improving the Baltimore Metro.
- Funding the MARC commuter rail, which has had to rely on stopgap funding measures to remain in service.⁵⁶
- Building more and better urban transit. This includes the proposed Red Line light rail extension, which would have connected Baltimore neighborhoods, improving transportation options in the city while helping Maryland residents live in the city and avoiding sprawl. In 2015, Governor Hogan cancelled the extension.⁵⁷
- Repairing roads and bridges. More than half of Maryland roads are in poor or mediocre condition, and 27 percent of bridges are structurally deficient or functionally obsolete.⁵⁸

I-49 Inner City Connection, Shreveport, Louisiana

Estimated Cost: \$547 million to \$640 million⁵⁹

A proposed new highway would slice through the heart of a neighborhood.

Louisiana officials are making plans to build an expensive highway that will harm a community, reminiscent of highway projects that devastated urban areas in the middle of the 20th century. The plan is to spend \$547 million to \$640 million building a new 3.5-mile cut-through section of Interstate 49 that will divide the northern section of Shreveport. A loop interstate already exists around Shreveport and is the “no build option”.

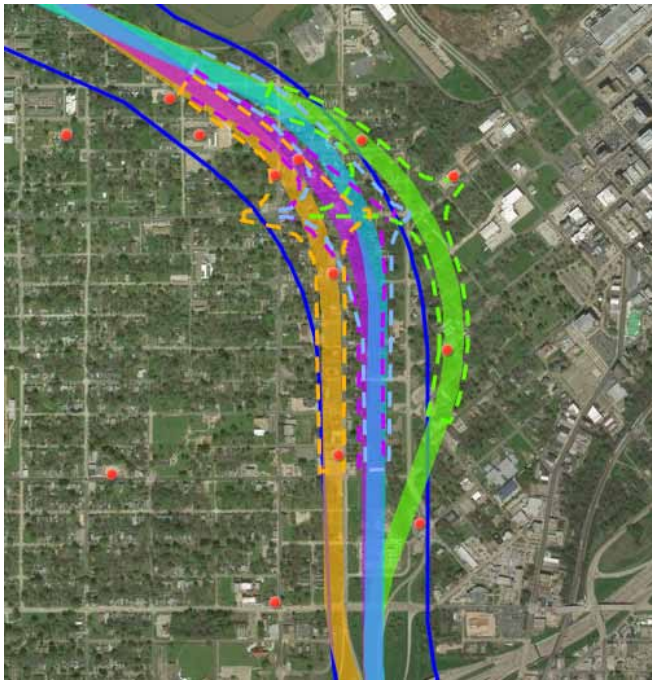
The new section of highway would cut through the middle of the neighborhood of Allendale.⁶¹ All of the cut-through routes proposed so far would require demolishing at least one church and at least 50 homes.⁶² Unsurprisingly, many residents have expressed outrage over the plan, for which state officials were drafting an environmental impact statement as of November 2017.⁶³

The proposed highway could have costs beyond the damage to a community. Research has shown that road-centric development tends to be less valuable from a tax-base standpoint than the older, denser development that gets replaced.⁶⁴ And a number of studies have found that building highways does not generate new economic growth – it merely redistributes economic activity from city centers to new-build suburbs or from one town to another.⁶⁵ In fact, some studies on sprawl have found evidence of enormous harm to the economy – a 2015 study by the Victoria Transport Policy Institute estimated that urban sprawl costs the U.S. economy \$1 trillion each year as a result of costs including greater spending on infrastructure, public service delivery, and transportation.⁶⁶

Residents of Allendale have proposed an alternative project: Upgrading Route 71, which is already used by drivers to connect to I-49, into a multiuse “business boulevard.”⁶⁷ According to the community group #AllendaleStrong, such a project would cost just a fraction of the cost of the I-49 cut-through, while strengthening existing communities and bolstering local businesses.

Meanwhile, funding is needed for other important transportation projects in both Shreveport and around the state, including:

- Repairing aging roads and bridges. More than 60 percent of Louisiana roads are in poor or mediocre condition.⁶⁸ And Louisiana ranks second in the country in structurally deficient bridges, based on square footage of bridge deck.⁶⁹



Each of the proposed I-49 expansion routes run through the heart of the Shreveport community of Allendale. Red dots represent churches.⁶⁰

- Creating a smarter transportation network. In 2016, Shreveport applied for grant funding from the U.S. Department of Transportation’s Smart City Challenge.⁷⁰ Among the improvements envisioned for the city are new electric vehicle charging stations, a new “electric taxi circulator station” that would be a hub for electric, shared transportation, and new systems to make the bus system more efficient and more responsive to riders’ needs.

Not only would the I-49 project likely fail to achieve its economic promises, it would also add to Louisiana’s already-growing highway debt. As of the end of 2015, Louisiana had \$3.4 billion in highway debt, nearly 11 times more than at the end of 2000, not adjusted for inflation. And in 2014, Louisiana spent \$310 million on highway debt service, six times more than in 2000. Further debt could complicate Louisiana’s already-difficult budget situation, as the state is facing the prospect of credit rating downgrades in the face of a nearly \$1 billion budget shortfall in the 2019 fiscal year.⁷¹

U.S. Highway 101 Expansion, San Mateo, California

Estimated Cost: \$534 million⁷²

Widening U.S. Highway 101 in the San Mateo area will bring more cars into an already congested area, while conflicting with California’s global warming goals.

Highway 101 in the San Mateo area has suffered from congestion for decades and has undergone many projects to add road capacity – including seven projects to add auxiliary lanes since 1997.⁷³ Yet today, congestion is as bad as ever, often slowing to a crawl at rush hour.⁷⁴

Years of widening projects with little impact signal that a new approach is necessary. Once again, however, the California Department of Transportation

(Caltrans) is planning to address congestion with a highway expansion. The plan is to add an express lane – in which single- and double-occupancy vehicles pay a demand-based toll – on both sides of the existing highway. In total, the project would add more than 22 miles of new lanes, at a total cost of \$534 million.⁷⁵

The project is at direct odds with California’s goal to reduce global warming pollution 80 percent below 1990 levels by 2050.⁷⁶ Achieving that goal will almost certainly require dramatic reductions in transportation emissions, which account for 39 percent of state global warming emissions, far more than any other sector of the economy.⁷⁷

Demand pricing can be an effective way to reduce congestion and pollution – yet because the Highway 101 project also increases total vehicle

capacity, it will also result in more driving and more emissions. According to Caltrans’ estimates, the expanded highway will see 70 million additional vehicle miles traveled and an additional 40,000 metric tons of global warming emissions per year compared to the “no build” scenario.⁷⁸

Meanwhile, funding is needed for projects that could actually help California achieve its climate goals by giving commuters options beyond driving. Such projects include much-needed transit improvements in San Mateo country, including an increase in SamTrans bus service, and upgrades to CalTrain’s facilities.⁷⁹ Such projects would also align with the priorities of local residents: San Mateo residents who responded to a recent survey indicated that they would prefer congestion solutions that take cars off the road, rather than add road capacity.⁸⁰

Image: Caltrans



The proposed Highway 101 express lanes project would add more than 22 miles of new lanes, at a total cost of \$534 million.

The project will also take money away from road and bridge repairs. Nearly 70 percent of California roads are in poor or mediocre condition, seventh-worst in the country.⁸¹ And nearly 30 percent of bridges are structurally deficient or functionally obsolete.⁸²

California has many options for building a more sustainable transportation system. But building new lanes on Highway 101 will only further entrench driving as the region's dominant mode of transportation, bringing more driving and more cars – and likely more proposals for new lanes in the years to come.

Interstate 35 Expansion, Austin, Texas

Estimated cost: \$8.1 billion⁸³

Despite enormous state highway debt, and the growing need for transit and complete streets to create more compact and connected neighborhoods, policymakers have proposed spending \$8 billion to expand I-35 through the middle of Austin.

Interstate 35 on its route through the heart of Austin is notoriously congested, and its traffic is a constant topic of complaints and news coverage.⁸⁴ Commuters are desperate for a fix. But a proposal to add miles of new lanes will likely only exacerbate the problems that led to congestion in the first place.

The proposal being put forth by Texas officials would add four new lanes (two in each direction) along approximately 33 miles of I-35 traveling north-south through Austin.⁸⁵ The project is the largest piece of a massive \$8.1 billion collection of projects up and down I-35 in the Austin area.⁸⁶

Just as road expansions elsewhere in Texas have failed at reducing congestion – like Houston's Katy Freeway expansion – any congestion benefits from

widening I-35 will likely be short-lived. Austin's suburbs of Georgetown, north of the city, and San Marcos, south of it, both saw population grow by more than 35 percent from 2010 to 2016.⁸⁷ If those cities continue to see population growth as in recent years – which seems likely if encouraged by a wider highway connecting them to Austin – I-35 will quickly fill up with cars once again.

An I-35 expansion would also drain money from other pressing transportation needs. In 2012 Austin adopted a city vision for limiting sprawl, expanding transportation choices, and creating more compact, connected communities. Achieving that vision will require a variety of projects. These include building better bike and pedestrian infrastructure downtown, like the improvements proposed for the Guadalupe Street Corridor that would cost \$33.7 million.⁸⁸ Various proposals have called for creating new light rail routes through the heart of Austin, at a cost of \$400 million to \$1.4 billion.⁸⁹

Texas' enormous appetite for new roads – including the addition of 12,000 new lane-miles from 2000 to 2016 – have already drained money from the budget and forced the state to make difficult financial decisions.⁹⁰ Texas has shifted billions of dollars to pay for roads and road debt from elsewhere in its budget, as the result of both Proposition 1 in 2014 and Proposition 7 in 2015.⁹¹ As of 2015, Texas owed \$29.1 billion in highway debt, second-most in the country, and 30 times more than it owed in 2000. In 2014, Texas paid \$4.8 billion just to service its debt, 90 times more than in 2000.

As of February 2018, the I-35 highway plan is on hold, because the Texas Transportation Commission decided not to support any roads with tolled elements. However, local officials are still pushing to move the project forward.⁹²

LBJ East Expansion, Dallas, Texas

Estimated Cost: \$1.6 billion⁹³

The costly expansion of an already enormous highway will create 14 lanes (plus two frontage roads) of roadway.

Texas officials have proposed a \$1.6 billion road expansion of the LBJ East, a highway that partially circles northeast Dallas about 10 miles from the city center.⁹⁴ The project would add two lanes to the 10-lane highway, as well as two lanes of frontage road on either side of much of the highway, creating 16 lanes of roadway in total.⁹⁵

The new lanes will result in more driving and more pollution.⁹⁶ According to one project document, building the lanes will result in more emissions of toxic air pollutants like benzene, formaldehyde, and diesel particulate matter compared to the “no build” scenario.⁹⁷

Meanwhile, Texas and the Dallas area have other urgent transportation needs, including the improvement of local rail and transit service. Because of limited funds, Dallas Area Rapid Transit, or DART, is being forced to decide between a number of transit improvements, including new rail lines and improved bus service.⁹⁸ DART is also looking into building a subway, for which cost estimates range from \$950 million to \$1.3 billion.⁹⁹

Building the LBJ East expansion would also add to Texas’ already massive debt, described above (see page 19). As of February 2018, the project is in limbo following the Texas Transportation Commission’s decision to not include toll roads in the state’s plans, following extensive political backlash to the proliferation of toll roads in the state.¹⁰⁰ However, officials are still working to move the project forward.¹⁰¹

Image: Texas Department of Transportation



The proposed LBJ East expansion would create an enormous 12 lane highway with two frontage roads in both directions.



Pennsylvania Turnpike Expansion

Estimated Cost: \$6.9 billion

Despite a precarious financial situation that threatens transit systems across the state, the Pennsylvania Turnpike Commission is undertaking an expensive highway widening project on 470 miles of highway.

The Pennsylvania Turnpike Commission (PTC) is struggling financially, with \$11 billion in debt as of 2016. To reduce its debt, some state officials are seeking to end the PTC's legally mandated annual payment of \$450 million to support state public transit – a move that would constitute a major blow to state transit needs.¹⁰² Despite its tight finances, the PTC is undertaking an expensive and unnecessary highway widening across most of the state.

For decades now, the Turnpike has been undergoing a “Total Reconstruction” project with the aim of replacing 470 miles of road – both the 360-mile east-west route across the state, and the Turnpike's 110-mile northeast extension.¹⁰³ The turnpike is America's oldest superhighway, it requires frequent maintenance, and it has an outdated design.¹⁰⁴ However, the Turnpike reconstruction project is not merely updating road design. Rather, most of the project also entails widening the highway – one new lane in each direction, along with a lane-width shoulder.¹⁰⁵

Adding new lanes adds cost to the project. Widening the roadway means more asphalt, more right-of-way access, and new infrastructure. For example, overpasses generally need to be replaced to fit over the new highway. One two-mile section of road in

western Pennsylvania requires four new overpasses, including two rail bridges.¹⁰⁶

The spending decisions made by the PTC have serious ramifications for Pennsylvanians. In particular, the PTC's increasing debt threatens a number of transit services in Pennsylvania. After years of struggling to fund transit systems, lawmakers passed Act 44 in 2007, later updated with Act 89 in 2013, which require the PTC to provide \$450 million in annual funding for the Pennsylvania Department of Transportation to spend on public transit.¹⁰⁷

In the face of increasing debt, some Pennsylvania officials have called to end Act 89 transit payments. Ending those payments, which account for about 12 percent of PennDOT's financing, could be devastating for transit.¹⁰⁸ For example, the Port Authority of Allegheny County relies on Act 89 money for half of its annual revenue, and has used the money to expand the number of buses and bus routes that it operates.¹⁰⁹ Act 89 funds have also been important to help the Southeastern Pennsylvania Transportation Authority (SEPTA) keep its trains in service in the Philadelphia area.¹¹⁰

I-94 North South Expansion, Wisconsin

Estimated Cost: \$1.7 billion to \$1.9 billion

A highway expansion that would drain resources from other state projects is moving forward as part of a costly incentive package for an electronics manufacturer.

In Wisconsin, which is groaning under the weight of billions of dollars of highway debt, a major highway construction project is moving forward largely to serve a single business.

Wisconsin is spending \$1.7 billion to \$1.9 billion (in 2009 dollars) to widen the I-94 freeway from Milwaukee to near the Illinois state line from six to eight lanes.¹¹¹ The project will involve the replacement of

seven interchanges along the route, along with the total rebuilding of many stretches of highway.¹¹²

Small amounts of construction have already taken place.¹¹³ Yet plans to undertake the largest pieces of construction are only moving forward thanks to a \$4 billion incentive package to lure Foxconn, a tech manufacturer, to Wisconsin.¹¹⁴ Alongside tax breaks and other various incentives, the package includes up to \$252 million to help complete the widening project.¹¹⁵ Most of the rest of the money will also come from state sources, although Wisconsin is applying for federal grant money.¹¹⁶ Wisconsin is also planning to spend another \$134 million on other road projects in the area around the new factory site, money that is being drawn from other transportation projects in the state.¹¹⁷

The I-94 expansion will use up already-scarce transportation dollars. After years of borrowing to build expensive highways, as of 2015 Wisconsin had \$3.8 billion in highway debt, five times more than in 2000. And in 2014, Wisconsin spent \$670 million on debt servicing, eight times more than 2000. With transportation funds depleted, lawmakers have had to turn to general taxpayer funds to cover transportation costs.¹¹⁸ And Wisconsin has already abandoned other highway expansion projects, including a separate section of I-94, after failing to come up with funding.¹¹⁹

With so much existing debt, the I-94 expansion will leave little money left for transit needs. One critical need is for the creation of transit service between the new plant site and Milwaukee. Local officials have proposed new bus routes and a new commuter rail route – but they lack the funding support that the I-94 expansion has received.¹²⁰ Officials are also working to improve train service between Milwaukee and Chicago, which is currently served by an Amtrak line that makes only seven trips per day.¹²¹ Although plans for a \$200 million service expansion are developing, the *Milwaukee Journal-Sentinel* reports that the project is moving far more slowly than the I-94 expansion, with no set completion date.¹²²

Wisconsin also needs funding for road repairs. More than 70 percent of Wisconsin's roads are in poor or mediocre condition, tied for second worst in the country.¹²³

I-285 & SR 400 Interchange Rebuilding, Atlanta, Georgia

Estimated Cost: \$596 million¹²⁴

An expensive interchange project is moving forward even as Atlanta residents clamor for more and better transit.

Aging interchanges can be dangerous and updating their design can be necessary to keep drivers safe. Yet in Georgia, the need for an interchange design update has led to something far larger.

Georgia has begun preparing for construction on a \$596 million project to rebuild and expand the interchange of Interstate 285 and State Route 400, and has begun construction on related projects along

stretches of road near the interchange.¹²⁵ According to a report by the *Atlanta Journal-Constitution*, after the project's conception it "morphed far beyond its original scope" after state leaders "latched on to a truly mammoth version of the concept, one that would add miles of lanes adjacent to both major highways and consume an amount almost equal to the state's entire annual road construction budget."¹²⁶ The project is similar in scope to Georgia's famous "Spaghetti Junction," the I-85/I-285 interchange that consists of miles of twisting and turning roads and ramps, and multiple levels of flyovers. As the *Journal-Constitution* notes, that project provides a preview of what motorists can expect: temporary relief from traffic jams, followed by a return to "gridlock purgatory."

Meanwhile, the Atlanta region is working to make urgent transportation improvements to support the city's revitalization and growth. Nearly twice as many Atlanta residents say they would prefer transit upgrades to new roads.¹²⁷ In 2016, Atlanta voters ap-

Image: Georgia Department of Transportation



The massive new I-285 interchange project will be one of the most expensive road projects in Georgia history.

proved a half-cent sales tax to support \$2.5 billion in transit improvements over the next 40 years.¹²⁸ The money will be used to help expand Atlanta transit, which today is simply too scarce to fill the city's needs.¹²⁹ And in 2018, Governor Nathan Deal signed legislation that will unify Atlanta-area transit under a single service, put in place a funding framework for future improvements, and provide \$100 million for future projects.¹³⁰ But Atlanta has significant work ahead of it to create a system that serves its residents transit needs and will need substantial new funding to approach the level of per capita transit spending made by many other major cities.¹³¹

North Spokane Corridor, Spokane, Washington

Estimated Cost: \$1.5 billion

A proposed highway will slice through a historic Spokane neighborhood and take money from other transportation priorities in order to take just minutes off the drive to low-density suburbs north of the city.

The North Spokane Corridor (NSC) is a proposed highway that will connect Interstate 90, which runs East-West through the center of Spokane, to U.S. Route 395 north of the city. The cost of the project is \$1.5 billion, the vast majority of which will come from state funding sources.¹³²

The NSC has been in the works for decades – and has been a source of controversy the entire time, because it will slice through neighborhoods, including the historic community of Hillyard, and result in more than 500 homes being displaced.¹³³ Hillyard business owners worry that the new highway will damage the district that they have worked to improve in recent years.¹³⁴

The project could also bring unwelcome changes to areas outside of Spokane. The *Spokesman-Review* newspaper estimates that the project will result in “quiet, rural areas in northeastern Washington

[becoming] more crowded.”¹³⁵ If that prediction plays out, and the new highway creates new demand for car travel north of Spokane, the highway would likely only provide a brief respite from congestion.

Even under current conditions, the congestion benefits of the highway are small. The top listed benefit on the project homepage is that it will shave around 10 minutes off the trip from I-90 to Wandermere, a suburban neighborhood in the northern section of Spokane.¹³⁶ Critics of the project have suggested that the current amount of traffic could be carried by a much smaller boulevard, which unlike a highway could be walkable and bikeable.¹³⁷

Meanwhile, Washington and Spokane have other important transportation needs, including:

- Repairing roads and bridges. 67 percent of Washington roads are in poor or mediocre condition, eighth most in the country, and 26 percent of bridges are structurally deficient or functionally obsolete.¹³⁸
- Better transit in Spokane, which residents have supported at the ballot box. In November 2016 voters approved Proposition 1, “authorizing an increase in local sales and use tax of up to 0.2% to help maintain, improve and expand public transit in Spokane Transit’s service area.”¹³⁹ Despite the new revenue, Spokane’s transit system will need to compete for future grants to complete planned projects.¹⁴⁰

The NSC also constitutes a major expense that will add to Washington’s already growing and costly debt. In 2015, Washington had \$8.5 billion in highway debt, nine times more than in 2000. And in 2014, Washington spent \$457 million on debt servicing in 2014, three times more than in 2000. This debt has created difficult questions for state officials. In February 2018, Washington’s treasurer warned lawmakers against putting a \$1.3 billion revenue windfall toward a property tax cut, arguing it should instead be used to pay down state debt.¹⁴¹

Catching up on Old Boondoggles

Previous *Highway Boondoggles* reports in 2014, 2016 and 2017 identified 32 dubious highway expansion projects costing an estimated \$47 billion that merited additional scrutiny. Of those projects, as of February 2018, three had been canceled, three were on hold with significant potential for cancellation, three were under revision, 13 were in the midst of further study and review in advance of construction, and 10 were under construction. A review of those projects follows.

2017 Projects

Interstate 405 Improvement, Orange County CA

Status: Under Construction

The Interstate 405 Expansion is a \$1.9 billion project that plans to add express toll lanes to 16 miles of “the 405,” one of the most congested highways in the United States.¹⁴² The project is based on estimates of dramatic traffic increases that are both unrealistic, and that far exceed real use trends.¹⁴³ Expanding the highway, however, could very well bring many of those who currently avoid the 405 due to congestion back to the highway – generating new traffic that causes congestion to return.¹⁴⁴

Construction on the project began in spring 2018.¹⁴⁵

Interstate 4 “Beyond the Ultimate,” Florida

Status: Study and Review

The widening of I-4 in Orlando, known as the “I-4 Ultimate,” is a massive, six-year reconstruction and expansion project that will transform 21 miles of highway – adding two tolled “express lanes” in both directions and rebuilding bridges and interchanges along the highway’s length. Yet all the new traffic the “Ultimate” is expected to attract threatens to create new bottlenecks at either end of the project. That fear has lent momentum to the proposed “Beyond the Ultimate” project, which would widen a further 40 miles of highway north and south of the project, costing \$2.2 billion.¹⁴⁶

As of March 2018, sections of the project were still undergoing various stages of planning and funding, but at least one section of the project is tentatively set to begin construction in late 2019.¹⁴⁷

Interstate 75 North Truck Lanes, Georgia

Status: Study and Review

The Georgia Department of Transportation (GDOT) is in the early stages of considering a \$2 billion plan

to build the nation's first long-haul, truck-only lanes along a nearly 40-mile stretch of I-75 from just north of Macon until just south of Atlanta. The project would represent a major giveaway to the trucking industry at the expense of Georgia taxpayers, while largely duplicating rail-based solutions for moving freight from the Port of Savannah that are already being implemented in the state.

In August 2017 the plan was incorporated into Governor Nathan Deal's 10-year mobility plan as an amendment, approved by the Atlanta Regional Commission.¹⁴⁸ This represents a small but meaningful step forward in the process of approving the project. As of February 2018, the project was still in planning stages.¹⁴⁹

Interstate 84 Expansion, Connecticut

Status: Study and Review

In December 2016, the state of Connecticut took the first steps toward widening I-84 in Danbury, hiring consultants to begin planning for a project that is estimated to cost more than \$700 million, a cost that does not include the potentially substantial costs of acquiring additional right-of-way for the road.¹⁵⁰ Although congestion on I-84 is a problem, Connecticut has more pressing transportation priorities. The State Transportation Fund has fallen to such low levels that local transit agencies have started to plan for painful service reductions.¹⁵¹ State commuter rail needs investment.¹⁵² Connecticut also badly needs to invest in road repairs: 73 percent of its roads are in poor or mediocre condition, worst in the nation.¹⁵³ Connecticut also has limited transportation resources, with lawmakers struggling to keep the state's special transportation fund from falling into a deficit in the fiscal year starting July 2018.¹⁵⁴

This project is part of the Let's Go CT program, which aims to revitalize Connecticut's infrastructure. As of March 2018, the project was undergoing design, and the state had committed \$640 million to the project. Construction is scheduled to begin in 2022.¹⁵⁵

Illinois State Route 53/120

Status: Study and Review

An extension of Route 53 in Lake County has been under consideration since 1993 and has recently been revived. The proposed 25-mile extension is estimated to cost between \$2.3 billion and \$2.6 billion, and officials have suggested paying for it with a suite of funding options, including tolling, congestion pricing, and a 4-cent county-wide gas tax. However, even with those funding options, a funding gap of \$1.3 billion to \$1.9 billion has been predicted. Meanwhile, local opponents of the project have argued that the road would accelerate suburban sprawl and result in more traffic on local roads.

Despite widespread opposition to the project, the Illinois State Toll Highway Authority has continued momentum toward building the project. In May 2017, the Illinois Toll Highway Authority Board approved \$25 million for an environmental impact study (EIS), which will be completed in the next three to five years.¹⁵⁶

Interstate 66 Expansion "Within the Beltway," Virginia

Status: Study and Review

Virginia officials are planning to widen Interstate 66, which travels from Washington, D.C., to Virginia suburbs. Originally, the road expansion was set to take place only after thorough research of other elements of the project, including addressing traffic through demand management, and providing resources to expand the range of transportation choices available to people along the corridor. Yet that plan was derailed in the state legislature, resulting in a new plan that would widen the road immediately. According to the project's environmental assessment, the widening will lead to increased driving. Arlington County has also expressed concern about the potential for increased noise, the impact on local streets, and other issues.

As of February 2018, road crews had begun work surveying the construction area, and construction was set to begin within the year.¹⁵⁷ Congestion pricing has already taken effect on I-66's existing lanes. Although high rush hour toll prices have generated controversy, early reports also indicate that the prices have reduced congestion.¹⁵⁸

Interstate 30, Arkansas

Status: Study and Review

The Arkansas Highway and Transportation Department has proposed widening Interstate 30 through Little Rock and North Little Rock from six to 10 lanes. By increasing traffic and encouraging auto-oriented development, the project threatens to conflict with the revitalization of downtown Little Rock that has taken place in recent years.

In November 2017, the Arkansas Department of Transportation settled on a 10-lane plan for the project.¹⁵⁹ As of February 2018, transportation officials were in the process of drafting an environmental assessment and were planning to hold a public hearing on the plans in mid-2018.¹⁶⁰

Madison Beltline, Wisconsin

Status: Study and Review

State officials are currently investigating a possible \$1 billion project to widen the Madison Beltline in Wisconsin. This project would entail both widening and rebuilding the road, and could last years. Meanwhile, the state of Wisconsin is in the midst of a funding crisis, with other major projects and renovations being delayed due to lack of funds. Wisconsin has also underfunded public transportation – an especially attractive alternative in the Madison area, where transit ridership increased by 24 percent between 2005 and 2015.¹⁶¹

A study of possible long-term solutions to congestion and traffic issues on the Madison Beltline was commissioned in late 2011, and a Planning and

Environmental Linkages study began in 2013 in order to evaluate the impact of the proposed expansion. When this study is completed, a National Environmental Policy Act study will begin, the final step before possible project approval and construction.¹⁶²

Interstate 73, South Carolina

Status: Study and Review

Interstate 73 is a planned highway originally authorized in 1991, intended to run from Charleston, South Carolina, to Detroit, Michigan. With the exception of 82 miles in North Carolina, grand plans for the highway have so far come to naught. Now, South Carolina is planning to spend more than \$1 billion to construct another segment of the new interstate. It would replace a road without heavy traffic, and which has only seen small increases in congestion since 2009. The project would also negatively impact 325 acres of wetlands and divide existing ecosystems, and it represents the most extensive proposal to affect the state's wetlands in recent years.¹⁶³

In June 2017, the Army Corps of Engineers approved a permit for the project, allowing its construction to begin.¹⁶⁴ However, as of February 2018 lawmakers are still however seeking funding to begin construction.¹⁶⁵

2016 Projects

710 Tunnel, California

Status: Cancelled

In May 2017, the Metropolitan Transportation Authority unanimously withdrew its support and funding for the 710 Tunnel.¹⁶⁶ The proposal to drill a highway tunnel to link I-210 and I-710 had been the most expensive, most polluting and least effective option to address the San Gabriel Valley's transportation issues.¹⁶⁷ Studies showed that the tunnel would add 40,000 cars and trucks to the area, leading South Pasadena to adopt a resolution opposing the tunnel and instead endorsing multi-modal alternatives such

as “Beyond the 710” and “Connecting Pasadena,” which would alleviate congestion without inducing more driving.¹⁶⁸ The project was cancelled in the face of this and other opposition, including a five-city coalition of Glendale, Pasadena, Sierra Madre, South Pasadena and La Cañada Flintridge, which joined together with local organizations to oppose the tunnel.¹⁶⁹

Widening I-70 in Denver, Colorado

Status: Study and Review

In January 2017, the Federal Highway Administration gave its final approval to the Colorado Department of Transportation’s (CDOT) I-70 reconstruction and expansion project.¹⁷⁰ The approval clears the way for CDOT to use federal funds to widen I-70 between Brighton Boulevard and Tower Road, a 12-mile stretch of road estimated to cost \$1.2 billion, with one new, tolled express lane in each direction.¹⁷¹

Construction of the project is expected to start in 2018 and will require the destruction of 56 homes and 17 businesses in the surrounding neighborhood.¹⁷² But the highway still faces considerable local opposition.¹⁷³

Residents claim the expanded highway will worsen air quality in an area already affected by poor health outcomes closely linked to air pollution from transportation. A recent study showed that the 80216 zip code, which is home to two neighborhoods around the I-70 project area, had elevated levels of pollution compared even to parts of Los Angeles.¹⁷⁴ CDOT argued that moving part of the currently elevated portion of the roadway below street level with a park over it compensates for the negative impacts of the road. However, the park only covers a small portion of the expansion near Swansea Elementary School and concerns remain regarding highway pollution rising on either side of the park.¹⁷⁵

Widening I-95 Across the State, Connecticut

Status: Under Revision

The \$11.2 plan to add an additional lane on both sides of I-95 along the length of the entire 110-mile corridor through Connecticut is currently being revised and scaled down – although it remains a multibillion dollar project.¹⁷⁶

The state appears to be backing away from plans for a full-length widening because of its prohibitive expense. In its place, Governor Daniel Malloy is proposing an only somewhat more modest plan to expand select sections of I-95, at a cost of \$4.3 billion.¹⁷⁷ Still, state lawmakers question how to pay for even that reduced project and are struggling to keep the state’s special transportation fund from falling into a deficit in the fiscal year starting July 2018.¹⁷⁸

Tampa Bay Express Lanes, Florida

Status: Study and Review

The Tampa Bay Express project, estimated to cost at least \$3.3 billion, is a plan to expand I-275, building tolled express lanes on the highway (including on the Howard Frankland Bridge), as well as I-75 and I-4. The highway would have significant negative impacts on urban neighborhoods adjacent to I-275, which already tore a hole through the historic Central Avenue business district, Seminole Heights and West Tampa when it was first built.¹⁷⁹

When project was rebranded in 2017 as Tampa Bay Next, it still contained most of the same project elements, including new lanes for all three interstate highways.¹⁸⁰ However, in May 2018 the Florida Department of Transportation (FDOT) announced that it would no longer seek to build new lanes along I-275 in Tampa between I-4 and Bearss Avenue. FDOT cited “community feedback” in announcing the change in plans.¹⁸¹

Work is still moving forward on the plans for I-4 and I-75.¹⁸² Construction will not begin until a federal study reevaluating the use of toll lanes for the project is completed in early 2020.¹⁸³

Route 20 Widening, Iowa

Status: Under Construction

The state of Iowa is currently spending \$286 million in scarce transportation funding to widen another 40 miles of U.S. Route 20, with construction expected to be completed in 2018. Based on traffic forecasts, only a small portion of U.S. 20 might have enough traffic in 2039 to justify widening.¹⁸⁴ Construction on the highway is currently underway, expected to be completed in October 2018.¹⁸⁵

Paseo del Volcan Extension

Status: On Hold

Lawmakers in the Rio Rancho area are struggling to locate funding for a \$96 million, 30-mile road that would start near the Santa Ana Star Center on Unser Boulevard in Rio Rancho and connect with I-40 beyond the Petroglyph National Monument.¹⁸⁶ One of the central purposes of the new highway would be to connect new sprawling development to Albuquerque. This development, however, would consume precious water resources and was shown to be unpopular during the Albuquerque and Bernalillo Comprehensive Plan meetings. The meetings instead highlighted a general preference for urban revitalization over suburban sprawl.¹⁸⁷ Following difficulties procuring funding for the project, the project has stalled, with no official action since 2014.¹⁸⁸

I-77 Express Lanes, North Carolina

Status: Under Construction

The \$650 million, 26-mile I-77 Express Lanes project is moving forward after a lawsuit, a tense gubernatorial

race, and organized opposition. The project includes the conversion of existing carpool lanes into tolled express lanes as well as the construction of an additional toll lane in each direction between Charlotte and Cornelius.¹⁸⁹ Opposition to the express lanes has come in multiple forms, including attempts by North Carolina legislators to cancel the contract with I-77 Mobility Partners, the private entity charged with building the express lanes.¹⁹⁰ The I-77 Express Lanes' design and construction phase is expected to take over three years, with all lanes opening to traffic by late 2018.¹⁹¹ Project construction has created controversy, as it has led to an increase in crashes on I-77, some caused by construction debris striking vehicles.¹⁹²

Portsmouth Bypass, Ohio

Status: Under Construction

The 16-mile, four-lane highway to bypass Portsmouth, Ohio, is currently being built for \$429 million in an area where driving has declined and existing roads desperately need funding for repairs.¹⁹³ The Portsmouth Bypass, now renamed the Southern Ohio Veterans Memorial Highway, will be Ohio's first public-private partnership and one of the most expensive road projects undertaken in the state.¹⁹⁴ It is projected that the bypass will be completed by December 2018.¹⁹⁵

Mon-Fayette Expressway: Route 51 to I-376, Pennsylvania

Status: Study and Review

The Mon-Fayette Expressway is a proposed \$2 billion highway that would run 14 miles southeast of Pittsburgh.¹⁹⁶ Building the highway will require moving families from their homes, along with "moving millions of cubic yards of earth to flatten hills and fill in valleys to level out the terrain through the Monongahela Valley" according to the *Pittsburgh Post-Gazette*.¹⁹⁷

Despite the harm to communities and the environment, a precarious financial situation at the Pennsylvania Turnpike Commission (PTC), and more pressing transportation needs in Pennsylvania, state officials are moving forward with the plan.¹⁹⁸ In November 2017, the PTC authorized \$34 million in final design contracts for the new highway. If final designs are approved, construction could begin in 2022.¹⁹⁹

State Highway 249 Extension, Texas

Status: Under Construction

Following the 2015 opening of the six-mile portion of the 249 Tomball Tollway, the Texas Department of Transportation is still looking to further extend State Highway 249 all the way to College Station, home to Texas A&M University.²⁰⁰ The expansion would mean a two-phased approach to the approximately \$350 million, 30-mile, six-lane highway from Pinehurst in Montgomery County through Todd Mission in Grimes to College Station.

During a June 2016 public hearing, nearby residents expressed opposition to the road and showed preference for the no-build alternative. Construction of the road requires the acquisition of over 600 acres of right-of-way, much of which is currently owned by ranchers and farmers, and would result in divisions of existing grazing areas.²⁰¹

Construction of the highway began in December 2017.²⁰²

Texas: State Highway 45 Southwest

Status: Under Construction

Construction of the 3.6-mile, \$109 million State Highway 45 Southwest project started on November 8, 2016.²⁰³ The Central Texas Regional Mobility Authority contracted with McCarthy Building Companies for the construction portion of the project. Construction is expected to last three years, with the new expressway slated to open in late 2019.²⁰⁴

Models suggest the new road will cause increased traffic on Austin's MoPac Expressway, a road already suffering from heavy congestion. Future plans to further expand State Highway 45 Southwest across Farm-to-Market Route 1626 and connecting directly to I-35 would draw even more traffic to the road and consequently to the MoPac expressway.²⁰⁵

Puget Sound Gateway, Washington

Status: Under Revision

The Puget Sound Gateway is a \$2.8 billion to \$3.1 billion project between Seattle and Tacoma, expanding State Route 167 between Tacoma and Puyallup by two lanes and State Route 509 from Kent to Burien by two lanes as well as converting the existing HOV lane to an express lane on Interstate 5 between the ports of Tacoma and Seattle.²⁰⁶ Evaluations of toll revenue potential for the project estimate that tolls would only contribute about \$330 million toward the total project cost between 2021 and 2060.²⁰⁷ Even after passage of a \$16 billion statewide transportation package in 2015, which included funds for the project, additional funds are still needed to build portions of the project.²⁰⁸

As of February 2018, the Washington Department of Transportation was reevaluating the project through its "Practical Solutions Process," which includes reengaging stakeholders, in order to make sure the resulting design addresses real needs.²⁰⁹

2014 Projects

I-11, Arizona and Nevada

Status: Arizona – Study and Review, Nevada – Under Construction

The first phase of the Interstate 11 project between Phoenix and Las Vegas – a 15-mile, \$318 million segment in Nevada – has been under construction since April 2015, and sections began opening to the public in early 2018.²¹⁰ The second phase will be

built in Arizona, where as of February 2018 the Arizona Department of Transportation was still working to select a project route.²¹¹ Funding for the Arizona section has still not been identified, although just one piece of the route – the Phoenix bypass – would likely cost more than \$1 billion.²¹² In January 2017, the Arizona Department of Transportation opened a 45-day public comment period and collected hundreds of comments from residents, tribal nations and agency representatives in accordance with the National Environmental Policy Act process for Tier 1 of the Environmental Impact Statement.²¹³ No funding had been identified as of December 2017 for the Arizona portion of the road.²¹⁴

Tesoro Extension, California

Status: On Hold

In 2016, the Orange County Transportation Corridor Agency (TCA), the California Attorney General and a coalition of national and local environmental groups reached an agreement settling multiple lawsuits to protect the San Onofre State Beach and cancel prior approval of the Tesoro Extension project.²¹⁵ The lawsuits claimed the environmental impact statement was inaccurate and that the project would damage the surrounding environment – specifically, a highly popular park that is home to 11 endangered and threatened species.²¹⁶ Now, however, the TCA is looking at new routes for the highway that would cut through the city of San Clemente – and the city of San Clemente is suing to overturn the previous agreement keeping the highway out of San Onofre State Beach.²¹⁷

C-470 Express Lanes, Colorado

Status: Under construction

Construction on the new C-470 Express toll lanes started in November 2016 and is expected to last until spring 2019. The \$230 million project will add new tolled express lanes along 12 miles of the existing highway southwest of Denver.²¹⁸ In 2015,

residents filed a lawsuit in which they expressed concerns with CDOT that the additional lanes would increase noise pollution in the area. In December 2016, a federal judge ruled that the residents had failed to show that noise barriers were needed and did not approve the injunction to halt construction of the express lanes.²¹⁹

Effingham Parkway, Georgia

Status: Study and Review

Proposed as a parallel road to the existing Route 1, the 6.36-mile parkway is intended to connect U.S. Route 30 to Bluejay Road.²²⁰ In 2016, the state officially pledged \$44 million for the parkway project following a gas tax increase passed by the legislature.²²¹ The project had previously been stalled by local opposition to the displacement of homes and because the Chatham County Commission Chairman hadn't wanted to make the parkway a priority.²²²

Final plans for the project are in the process of being reviewed by the Georgia DOT, and right of way negotiations have begun. Construction is expected to begin in 2019.²²³

Illiana Expressway, Illinois and Indiana

Status: On Hold

The Illiana Toll Road project – a \$1.3 billion highway intended to stretch from I-55 in Illinois to I-65 in Indiana.²²⁴ The project was put on hold by Illinois governor Bruce Rauner in 2015 after the project faced harsh public criticism, though concerns remained that it could be resurrected. The organizations Openlands, Midewin Heritage Association and Sierra Club Illinois also won a major lawsuit in October 2016 against the project, following an earlier case in which a court ruled the environmental review of one portion of the project violated U.S. environmental law, calling it “arbitrary and capricious.”²²⁵ Because the environmental review for

another portion of the project relied on that initial review, the judge declared it to be invalid.

Widening I-94 Through Detroit, Michigan

Status: Under Revision

Original plans for the “I-94 Modernization” project were to spend \$2.7 billion to widen a 6.7-mile stretch of highway through the heart of Detroit.²²⁶ The project was reanimated by the Michigan Department of Transportation after it was abandoned in the 1990s and was set to add a lane in each direction, while demolishing buildings along the way in an area struggling to recover from economic recession.²²⁷ Two neighborhoods that had been making significant headway in economic recovery – Midtown and New Center – would have been further separated by the highway, creating large losses in land development potential.²²⁸

Following public outreach, the Michigan DOT has begun to rethink its plans. Public comments widely objected to widening the highway, and called for better neighborhood connectivity and better pedestrian and bicycle infrastructure.²²⁹ MDOT is currently studying whether additional lanes are actually appropriate for the highway, and is considering alternatives to managing congestion, including an active traffic management system that could open and close auxiliary lanes.²³⁰ Proposed modifications would no longer include widening the highway footprint.²³¹ Construction is expected to begin in 2019, although as of early 2018 environmental review is ongoing.²³²

I-26 Connector, North Carolina

Status: Study and Review

The I-26 Connector project is a 7-mile, \$750 million proposed freeway that would connect I-26 in southwest Asheville to U.S. 19/23/70 in northwest Asheville.²³³ In January 2017, the North Carolina Department of Transportation (NCDOT) proposed

changes that would accelerate the project completion date to 2024. The state now plans to use bonds to finance the connector, with anticipated federal highway fund receipts expected to repay the bonds. NCDOT is also changing the project to a “design-build” project, meaning that the construction company that wins the contract will draw up final project designs as well as build the connector.²³⁴ Previous plans to widen I-240 as part of the I-26 Connector project were dropped after better congestion measures and data were used to rank proposed projects, though the potential for widening remains on the table for the future.²³⁵

North Carolina DOT began final revisions to the project plan in early 2017, and the final environmental impact statement is set to be submitted in 2018. Construction and right of way acquisitions are scheduled to begin in 2020.²³⁶

Cleveland Opportunity Corridor, Ohio

Status: Under Construction

The Cleveland Opportunity Corridor is a \$331 million, five-lane, three-mile planned boulevard that would connect I-490’s south end to the northeastern University Circle neighborhood.²³⁷ Critics had previously pointed out that the road is unnecessary since there are several routes in the area that connect the two points already. Work on the road is underway, although construction on the largest phase of the project was delayed by a lawsuit.²³⁸

Dallas Trinity Parkway, Texas

Status: Cancelled

The proposal for a \$1.5 billion, nine-mile toll-road along the Trinity River between I-35 and U.S. 75 was swept into a larger conversation about the future of toll roads in Texas and the future of urban development in Dallas. In August 2015, the Dallas City Council voted unanimously to revise and downscale the road to a four-lane version, instead of the previously

proposed six-lane toll road.²³⁹ And in August 2017, the Dallas City Council voted 13-2 to pull its support for the parkway, likely ending the project for good.²⁴⁰

Alaskan Way Viaduct, Washington

Status: Under Construction

The Alaskan Way Viaduct replacement project includes the construction of a two-mile tunnel to bypass downtown Seattle, a mile-long stretch of new highway to connect to the tunnel, a new overpass to bypass train blockages near Seattle's busiest port terminal, demolition of the viaduct's downtown waterfront section, and a new Alaskan Way boulevard along the waterfront.²⁴¹ The purpose of this massive project is to replace the existing Alaskan Way Viaduct, an elevated section of State Route 99 that is aging and vulnerable to damage from earthquakes.

The project, a \$3.1 billion undertaking, was mired in controversy and delays from the start.²⁴² "Bertha," the boring machine being used for the project, was stuck underground for two years after only advancing one-ninth of the way to its final destination, costing the project at least \$60 million.²⁴³ Bertha was eventually fixed and completed tunneling for

the project in April 2017. The tunnel is set to open to the public in late 2018.²⁴⁴

I-94 East-West Expansion in Milwaukee, Wisconsin

Status: Cancelled

The Wisconsin Department of Transportation proposed the addition of two lanes along a 3.5-mile corridor of I-94 west of downtown Milwaukee.²⁴⁵ The project was expected to cost between \$825 million and \$1.15 billion but no funding sources had been identified.²⁴⁶ Previous estimates of a possible completion date for the project were as late as 2028.²⁴⁷

The Wisconsin Department of Transportation withdrew its support from the project in early October 2017, after Governor Scott Walker signed a new state budget that did not include funding for the project.²⁴⁸ Later that month, the U.S. Federal Highway Administration and U.S. Department of Transportation formally rescinded their record of decision approving the expansion.²⁴⁹ Reports in February 2018, however, indicated that some Wisconsin lawmakers are hoping to revive the project.²⁵⁰

Conclusion and Recommendations

America spends tens of billions of dollars each year on highway expansion projects that do little to address congestion, create other problems for our communities, and absorb scarce resources that could be used to meet other, more pressing transportation needs.

Officials at all levels of government – local, state and federal – should reexamine proposed highway expansion projects in light of changing transportation needs and adopt a series of other policy changes to prioritize real transportation improvements. Specifically, they should:

- **Invest in transportation solutions that reduce the need for costly and disruptive highway expansion projects.** Investments in public transportation, changes in land use policy, road pricing measures, and technological measures that help drivers avoid peak-time traffic, for instance, can often address congestion more cheaply and effectively than highway expansion.
- **Adopt fix-it-first policies** that reorient transportation funding away from highway expansion and toward repair of existing roads and investment in other transportation options.
- **Use the latest transportation data and require full cost-benefit comparisons for all projects, including future maintenance needs.** This includes projects proposed to be completed via public-private partnerships.
- **Give priority funding to transportation projects that reduce growth in vehicle-miles traveled,** to account for the public health, environmental and climate benefits resulting from reduced driving.
- **Invest in research and data collection** to better track and react to ongoing shifts in how people travel.
- **Revise transportation forecasting models** to ensure that all evaluations of proposed projects use up-to-date travel information, reflect a range of potential future trends for housing and transportation, and incorporate the impact of all transportation options, from public transit, biking and walking, to newer options such as carsharing, bikesharing and ridesharing.

Notes

1. U.S. Department of Transportation, *2015 Status of the Nation's Highways, Bridges and Transit: Conditions and Performance Report to Congress*, December 2016.

2. Ibid.

3. Debt: U.S. Department of Transportation, Federal Highway Administration, *Highway Statistics 2008*, Table SB2 and U.S. Department of Transportation, Federal Highway Administration, *Highway Statistics 2015*, Table SB2; fuel tax revenue: U.S. Department of Transportation, Federal Highway Administration, *Highway Statistics 2016*, Table MF-201.

4. U.S. Department of Transportation, Federal Highway Administration, *Highway Statistics 2008*, Table SB3.

5. See note 9.

6. Jay Blazek Crossley, "It Took 51% More Time to Drive Out Katy Freeway in 2014 than in 2011," *Houston Tomorrow*, 26 May 2015, archived at web.archive.org/web/20151221162251/http://www.houstontomorrow.org/livability/story/it-took-51-more-time-to-drive-out-katyfreeway-in-2014-than-2011/; Joe Cortright, "Reducing Congestion: Katy Didn't," *City Observatory*, 16 December 2015, archived at web.archive.org/web/20151221162414/http://cityobservatory.org/reducing-congestion-katydidnt/.

7. U.S. Federal Highway Administration, *Highway Statistics Series Table SB-2* (for years 2000-2015), available at <https://www.fhwa.dot.gov/policyinformation/statistics.cfm>.

8. U.S. Bureau of Public Roads, *Road to Prosperity*, 1961, available at <https://www.fhwa.dot.gov/interstate/videogallery.cfm>.

9. See, for example, Gilles Duranton and Matthew A. Turner, "The Fundamental Law of Road Congestion: Evidence from US Cities," *American Economic Review*, DOI: 10.1257/aer.101.6.2616, 2011.

10. Matthew E. Kahn and David M. Levinson, The Hamilton Project, *Fix It First, Expand It Second, Reward It Third: A New Strategy for America's Highways*, February 2011.

11. See note 1.

12. U.S. Department of Transportation, Highway Statistics, Table HF-10, versions 2000 and 2015; real value measured using *CPI Inflation Calculator* available at <https://data.bls.gov/cgi-bin/cpicalc.pl>.

13. See note 1.

14. See note 1.

15. ABC News/Washington Post poll conducted September 4-7, 2014, archived at web.archive.org/web/20170314141558/http://www.langerresearch.com/wp-content/uploads/1162a4Transportation.pdf.

16. Aarian Marshall, "U.S. Cities, Spurned by Washington, Fund Transit Themselves," *Wired*, 10 November 2016.

17. U.S. Department of Transportation, Highway Statistics (2008 and 2015), available at <https://www.fhwa.dot.gov/policyinformation/statistics/2008/sb2.cfm> and <https://www.fhwa.dot.gov/policyinformation/statistics/2015/sb2.cfm>.

18. U.S. Department of Transportation, *Highway Statistics 2014*, Table SB3, December 2015.

19. American-Statesman Staff, "As Federal Road Money Ebbed, Texas Filled Gap with Borrowing," *American-Statesman*, 22 February 2015.

20. U.S. Department of Transportation, *Highway Statistics* (tables SB2 and SB3, from years 2000 and 2015), available at <https://www.fhwa.dot.gov/policyinformation/statistics/2008/sb2.cfm> and <https://www.fhwa.dot.gov/policyinformation/statistics/2015/sb2.cfm>.

21. Gordon Dickson, "Texas Road Debt: \$23 billion," *Star Telegram*, 14 September 2014.

22. Robert McCartney, Faiz Siddiqui and Ovetta Wiggins, "Maryland Gov. Larry Hogan Proposes Widening the Beltway and I-270 to Include 4 Toll Lanes," *The Washington Post*, 21 September 2017.

23. Federal Highway Administration, Innovative Program Delivery Project Profiles: Intercounty Connector, archived at http://web.archive.org/web/20170218081940/https://www.fhwa.dot.gov/ipd/project_profiles/md_icc.aspx.

24. SH 130: Aman Batheja, "Report: SH 130 Toll Road Company in Danger of Default," *Texas Tribune*, 19 June 2014, accessed at www.texastribune.org/2014/06/19/report-sh-130-toll-road-danger-default/, 8 March 2015; Camino Colombia: Texas State Auditor's Office, *Audit Report: The Texas Department of Transportation's Purchase of the Camino Colombia Toll Road*, 2 June 2006.

25. Phineas Baxandall, U.S. PIRG Education Fund, Kari Wohlschlegel and Tony Dutzik, Frontier Group, *Private Roads, Public Costs*, Spring 2009.

26. U.S. Federal Highway Administration, *Highway Statistics Series Table SB-2* (for years 2000-2015), available at <https://www.fhwa.dot.gov/policyinformation/statistics.cfm>.

27. 1,500 square miles based on expansion of public road lane miles from :U.S. Department of Transportation, *Highway Statistics 2015*, Table HM-260, December 2016, and a conservative assumption of 10-foot wide traffic lanes.

28. See note 9.

29. See note 9.

30. "No. 2 Bottleneck in U.S.: Katy Freeway at Loop," *Houston Chronicle*, 19 February 2004, archived at web.archive.org/web/20151221155504/http://www.chron.com/news/nation-world/article/No-2-bottleneck-in-U-S-Katy-Freeway-at-Loop-1567498.php.

31. Tony Freemantle, "Expanded Katy Freeway Shaves Minutes from Commute," *Houston Chronicle*, 12 October 2012, archived at web.archive.org/web/20151221160102/http://www.chron.com/news/houston-texas/article/Expanded-Katy-Freeway-shaves-minutes-from-commute-3941203.php.

32. Carol Christian, "Bragging Rights or Embarrassment? Katy Freeway at Beltway 8 Is World's Widest," *Houston Chronicle*, 13 May 2015, archived at web.archive.org/web/20151221160214/http://www.chron.com/neighborhood/katy/news/article/Bragging-rights-or-embarrassment-Katy-Freeway-at-6261429.php.

33. Jennifer Reyna, "Houston Commute Times Quickly Increasing," *Click2Houston*, 4 February 2014, archived at web.archive.org/web/20151221161745/http://www.click2houston.com/news/houston-commute-times-quickly-increasing_20151123154243235.

34. Jay Blazek Crossley, "It Took 51% More Time to Drive Out Katy Freeway in 2014 than in 2011," *Houston Tomorrow*, 26 May 2015, archived at web.archive.org/web/20151221162251/http://www.houstontomorrow.org/livability/story/it-took-51-more-time-to-drive-out-katyfreeway-in-2014-than-2011/; Joe Cortright, "Reducing Congestion: Katy Didn't," *City Observatory*, 16 December 2015, archived at web.archive.org/web/20151221162414/http://cityobservatory.org/reducing-congestion-katydidnt/.

35. Adam Nagourney, "Los Angeles Drivers on the 405 Ask: Was \$1.6 Billion Worth It?" *New York Times*, 20 December 2016.

36. Zev Yaroslavsky, Los Angeles County Supervisor, "405 Speeds Little Changed" (blog post), *Zev.LACounty.gov*, 8 October 2014, archived at web.archive.org/web/20141101133339/http://zev.lacounty.gov/news/405-speeds-little-changed.

37. Tony Dutzik and Alana Miller, Frontier Group, *A New Way Forward: Envisioning a Transportation System without Carbon Pollution*, May 2016.

38. U.S. Environmental Protection Agency, *Inventory of U.S. Greenhouse Gas Emissions and Sinks, 1990 – 2016*, 12 April 2018.

39. Alan Pyke, “Top Infrastructure Official Explains How America Used Highways to Destroy Black Neighborhoods,” *Think Progress*, 31 March 2016, archived at web.archive.org/web/20170314142030/https://thinkprogress.org/top-infrastructure-official-explains-how-america-used-highways-to-destroy-black-neighborhoods-96c1460d1962?gi=2ff8b3982a42.

40. Nathaniel Baum-Snow, “Did Highways Cause Suburbanization?” *Quarterly Journal of Economics*, 122 (2): 775-805, May 2007, DOI: 10.1162/qjec.122.2.775.

41. Jeff Inglis, Frontier Group, and John Olivieri, U.S. PIRG Education Fund, *Highway Boondoggles 2: More Wasted Money and America’s Transportation Future*, January 2016.

42. Eric D. Lawrence, “MDOT Says it Would Move Historic Studio to Widen I-94,” *Detroit Free Press*, 8 April 2015.

43. Based on Google search conducted 4 April 2017.

44. Colin Campbell and Michael Dresser, “Baltimore Metro Shutdown Frustrates Riders, Politicians,” *The Baltimore Sun*, 12 February 2018.

45. Image: Maryland Department of Transportation, *Traffic Relief Plan*, archived at https://web.archive.org/web/20180525192848/http://www.roads.maryland.gov/OC/Congestion_Relief_Board_1.2.PDF; mileage for MD-295 based on Google Maps direction search; mileage for I-495 and I-270 based on: Maryland Department of Transportation, *Request for Information (RFI) I-495/I-95 (Capital Beltway) Congestion Relief Improvements from the American Legion Bridge to the Woodrow Wilson Bridge I-270 Congestion Relief Improvements from I-495 to I-70*, 21 September 2017, archived at https://web.archive.org/web/20180411031307/http://roads.maryland.gov/OC/I495_I270_RFI_P3.pdf.

46. Office of Governor Larry Hogan, Traffic Relief Plan Factsheet, archived at <https://web.archive.org/web/20180417233202/http://www.roads.maryland.gov/OC/Traffic-Relief-Plan-FactSheet.pdf>.

47. Maryland Department of Transportation, *Request for Information (RFI) I-495/I-95 (Capital Beltway) Congestion Relief Improvements from the American Legion Bridge to the Woodrow Wilson Bridge I-270 Congestion Relief Improvements from I-495 to I-70*, 21 September 2017, archived at https://web.archive.org/web/20180411031307/http://roads.maryland.gov/OC/I495_I270_RFI_P3.pdf.

48. Globalvia, *Information Requested* (response to MDOT Request for Information), 20 December 2017, archived at

49. See note 47.

50. Office of Governor Larry Hogan, *Governor Hogan Announces Widening of I-270, Capital Beltway (I-495), and Baltimore-Washington Parkway (MD 295)*, archived at <http://web.archive.org/web/20180407101216/http://governor.maryland.gov/2017/09/21/governor-hogan-announces-widening-of-i-270-capital-beltway-i-495-and-baltimore-washington-parkway-md-295/>; MDTA and toll roads: Maryland Transportation Authority, *About the Maryland Transportation Authority (MDTA)*, archived at http://web.archive.org/web/20171003135240/http://www.mdtamaryland.gov:80/About/About_the_MDTA.html.

51. Robert McCartney, Faiz Siddiqui and Ovetta Wiggins, “Maryland Gov. Larry Hogan Proposes Widening the Beltway and I-270 to Include 4 Toll Lanes,” *The Washington Post*, 21 September 2017.

52. See note 47.

53. Andrew Zaleski, “A \$9 Billion Highway That Promises to Pay for Itself,” *CityLab*, 26 September 2017, archived at <https://web.archive.org/web/20180411031417/https://www.citylab.com/transportation/2017/09/a-9-billion-highway-that-promises-to-pay-for-itself/541119/>.

54. ACS Infrastructure Development, Inc., *Response To Request For Information For The I-495/I-95 (Capital Beltway) Congestion Relief Improvements From The American*

Legion Bridge To The Woodrow Wilson Bridge I-270 Congestion Relief Improvements From I-495 To I-70, 2017, archived at https://web.archive.org/web/20180418202228/http://www.roads.maryland.gov/OC/ACS_Infrastructure_Development.pdf.

55. Kevin Rector, "MdTA Approves Maryland Toll Reductions," *The Baltimore Sun*, 7 May 2015.

56. Colin Campbell, "West Virginia Will Pay Maryland \$1.5 Million to Keep MARC Service for a Year. Then What?," *The Baltimore Sun*, 28 April 2018.

57. Michael Dresser and Luke Broadwater, "Hogan Says No to Red Line, Yes to Purple," *The Baltimore Sun*, 25 June 2015.

58. U.S. Department of Transportation, *Road and Bridge Data by State*, archived at <http://web.archive.org/web/20180228030725/https://www.transportation.gov/policy-initiatives/grow-america/road-and-bridge-data-state>.

59. Lex Talamo, "I-49 Connector in Shreveport Still Seven Years Off, Executive Says," *Shreveport Times*, 24 November 2017.

60. Image screenshot of I49 Inner City Connector taken from <https://www.arcgis.com/home/webmap/viewer.html?webmap=cc22e9d8561e4fb884b931e919560817&extent=-93.8379,32.4896,-93.7152,32.5467>.

61. Lex Talamo, "Committee Endorses Allendale Route for I-49 Connector," *Shreveport Times*, 21 August 2017.

62. I-49 Inner City Connector, *Build Alternatives Comparison Matrix*, archived at <https://web.archive.org/web/20180411033614/http://www.i49shreveport.com/site/Assets/67/132/Build%20Alternatives%20Comparison%20Matrix.pdf>.

63. See note 59.

64. Charles Marohn, Strongtowns, *The Cost of Auto Orientation*, 1 November 2017, archived at <http://web.archive.org/web/20171114092710/https://www.strongtowns.org/journal/2017/11/1/the-cost-of-auto-orientation>.

65. Marlon Boarnet, "New Highways and Economic Growth: Rethinking the Link," *Access Magazine*, Fall 1995, available at <https://escholarship.org/uc/item/566030j8>.

66. Todd Litman, Victoria Transport Policy Institute, written for The New Climate Economy, *Analysis of Public Policies That Unintentionally Encourage and Subsidize Urban Sprawl*, March 2015, archived at <https://web.archive.org/web/20180411034345/http://static.newclimateeconomy.report/wp-content/uploads/2015/03/public-policies-encourage-sprawl-nce-report.pdf>.

67. Jennifer Hill, Strong Towns, *Shreveport's Highways at a Crossroads*, 20 February 2017, archived at <http://web.archive.org/web/20171114111723/https://www.strongtowns.org/journal/2017/2/17/shreveports-highways-at-a-crossroads>.

68. See note 58.

69. Louisiana Section of the American Society of Civil Engineers, *Report Card for Louisiana Infrastructure 2017*, available at https://www.infrastructurereportcard.org/wp-content/uploads/2016/10/Louisiana-FullReport-LA_2017.pdf.

70. City of Shreveport, *Beyond Traffic: The Smart City Challenge*, 4 February 2016, archived at <http://web.archive.org/web/20161228170618/https://cms.dot.gov/sites/dot.gov/files/docs/LA%20Shreveport.pdf>.

71. Julia O'Donoghue, "Louisiana Legislature Special Session Meltdown: How We Got Here," *The Times-Picayune*, 5 March 2018.

72. California Department of Transportation U.S. Highway 101 Managed Lanes Project, *SM 101 Factsheet*, archived at http://web.archive.org/web/20171221112925/http://www.dot.ca.gov/d4/101managedlanes/docs/factsheet_page-1.pdf.

73. California Department of Transportation U.S. Highway 101 Managed Lanes Project, *Draft Environmental Impact Report/ Environmental Assessment*, November 2017, archived at [http://web.archive.org/web/20171221112937/http://www.dot.ca.gov/d4/101managedlanes/docs/ea-041j560_101-ml_aded3_111717\(signed\).pdf](http://web.archive.org/web/20171221112937/http://www.dot.ca.gov/d4/101managedlanes/docs/ea-041j560_101-ml_aded3_111717(signed).pdf).

74. Ibid.

75. See note 72.

76. California Air Resources Board, *Climate Change Programs*, archived at <http://web.archive.org/web/20180407130108/https://www.arb.ca.gov/cc/cc.htm>.

77. California Air Resources Board, *California Greenhouse Gas Emission Inventory - 2017 Edition*, archived at <http://web.archive.org/web/20180326034509/https://www.arb.ca.gov/cc/inventory/data/data.htm>.

78. This is even though the “no build” alternative used for comparison assumes no traffic management features that could potentially reduce driving and emissions, features that are included in the “build” option. See note 73 (table 3.2-2, page 269).

79. Andrew Boone, “Ten Lane Widening Planned for Highway 101 in San Mateo County,” *Streetsblog*, 2 June 2017.

80. Chris Lepe, TransForm, Transportation Justice In San Mateo County’s Next Funding Measure (blog post), 9 May 2018, archived at <https://web.archive.org/web/20180523202845/http://www.transformca.org/transform-blog-post/transportation-justice-san-mateo-county-proposal-countys-next-transportation>.

81. See note 58.

82. Ibid.

83. Amy Denney, “TxDOT goes big with \$8.1 billion I-35 plan; official says reconstruction ‘will be messy,’” *Community Impact Newspaper*, 7 December 2017.

84. For example: Nicole Raney, “This Infamous Austin Highway Is the Worst for Traffic, Says New Study,” *Austin Culture Map*, 22 February 2017, available at <http://austin.culturemap.com/news/city-life/02-22-17-inrix-global-traffic-scorecard-austin-i-35-ranking/>.

85. Ben Wear, “Austin Vision for I-35 Makeover Now Includes Two Toll Lanes Per Side,” *Austin Statesman*, 30 October 2017.

86. Amy Denney, “TxDOT Goes Big With \$8.1 Billion I-35 Plan; Official Says Reconstruction ‘Will Be Messy,’” *Community Impact Newspaper*, 7 December 2017.

87. Google presentation of U.S. Census population data, available at https://www.google.com/publicdata/expire?ds=kf7tgg1uo9ude_&ctype=l&strail=false&bcs=d&nseIm=h&met_y=population&scale_y=lin&ind_y=false&rdim=place&idim=place:4829336:4865600&ifdim=place:state:48000&hl=en&dl=en&ind=false.

88. City of Austin Transportation Department, Austin Mobility, *Guadalupe Street Corridor and West Campus Development Report*, November 2017, archived at http://web.archive.org/web/20180213200641/http://austintexas.gov/sites/default/files/files/Transportation/20171121_Guadalupe_Street_Corridor_FINAL_Report.pdf. http://austintexas.gov/sites/default/files/files/Transportation/20171121_Guadalupe_Street_Corridor_FINAL_Report.pdf.

89. Central Austin Community Development Corporation, *Austin Light Rail: A New Proposal for 2016*, archived at http://web.archive.org/web/20170311164536/http://www.centralaustincdc.org/transportation/austin_light_rail.htm; Ben Wear, *Austin’s \$1 Billion Rail-Roads Proposal Behind in Early Voting*, *Austin Statesman*, 4 November 2014.

90. Lane mileage: U.S. Department of Transportation, *Highway Statistics 2000 Table HM-10* and U.S. Department of Transportation, *Highway Statistics 2016 Table HM-10*.

91. Texas Department of Transportation, *Proposition 7 Funds*, archived at <http://web.archive.org/web/20180304043658/http://www.txdot.gov/government/legislative/state-affairs/ballot-proposition-7.html>.

92. Amy Denney, “I-35 Toll Lanes Removed From TXDOT Plan After State Transportation Commission Sides With Top Leadership,” *Community Impact Newspaper*, 14 December 2017.

93. Texas Department of Transportation, *I-635 East Project Presentation*, 25 January 2018, available at <https://www.documentcloud.org/documents/4360082-lbjeast.html#document/p1>.

94. Texas Department of Transportation, *I-635 LBJ East Project*, 24 May 2018, archived at <https://web.archive.org/web/20180525193933/http://ftp.dot.state.tx.us/pub/txdot/commission/2018/0524/6a-presentation.pdf>.
95. Ibid.
96. VMT projection: Texas Department of Transportation, *Interstate Highway (IH) 635 LBJ East Ultimate Project - Quantitative Mobile Source Air Toxics Analysis Technical Report*, December 2016, page 12, available at http://www.keepitmovingdallas.com/sites/default/files/docs/2374-01-137%20Technical%20Reports%202017_0130%20%28Part%202%29.pdf.
97. Ibid.
98. Brandon Formby, "As Dallas Debates How To Expand Buses And Trains, Council Reshapes Transit Board," *The Texas Tribune*, 28 June 2017.
99. Dart Daily, A Refresher on Funding the D2 Subway, 21 August 2017, archived at <https://web.archive.org/web/20180411171833/http://dartdallas.dart.org/2017/08/21/d2-refresher/>.
100. Ray Leszcynski, "State Scraps Plans to Partially Toll I-635 East, Leaving Expansion in Limbo," *Dallas Morning News*, 14 December 2017.; toll backlash: Miguel Bustillo and Nathan Koppel, "In Texas, Toll Roads Proliferate—and a Backlash Builds," *The Wall Street Journal*, 20 October 2014.
101. Ken Kalthoff, "LBJ East Expansion Project Hits Another Delay," NBCDFW, 25 January 2018.
102. Ed Blazina, "Auditor General Agrees Pennsylvania Turnpike Debt Is Unsustainable," *Pittsburgh Post-Gazette*, 20 July 2016.
103. Pennsylvania Turnpike Commission, LONG RANGE PLAN 2035, November 2016, archived at https://web.archive.org/web/20180411172952/https://www.paturnpike.com/pdfs/about/PTC_LRP_ES_11_9_16_FINAL.pdf.
104. Nick Malawskey, "The Never-Ending Construction Project: Rebuilding the Pa. Turnpike," *PennLive*, 12 April 2017.
105. Ibid.
106. Pennsylvania Turnpike Commission, *Project Overview (As of April 2016)*, archived at <http://web.archive.org/web/20180213193415/https://www.patpconstruction.com/mp12to14/overview.asp>.
107. Pennsylvania Turnpike Commission, *Act 44 Plan*, archived at http://web.archive.org/web/20170803154302/https://www.paturnpike.com/business/act44_plan.aspx.
108. "Pennsylvania Turnpike is Billions of Dollars in Debt," *Associated Press*, 27 August 2012, available at http://www.pennlive.com/midstate/index.ssf/2012/08/pennsylvania_turnpike_is_bill.html.
109. J. Dale Shoemaker, "To anyone who rides the bus in Pittsburgh: PA turnpike debt is threatening your commute," *Pittsburgh Courier*, 15 September 2016,
110. Joel Mathis, "Act 89 Kept SEPTA Trains in Service. Now Funding Is Falling Short.," *Philadelphia Magazine*, 2 February 2016.
111. Wisconsin Department of Transportation and U.S. Department of Transportation, *I-94 North South Final Environmental Impact Statement*, 25 March 2008, archived at <http://web.archive.org/web/20170220002910/http://projects.511wi.gov/i94northsouth/wp-content/uploads/sites/105/feis.pdf>.
112. Seven interchanges: See map at <https://projects.511wi.gov/i94northsouth/overview/>; total rebuilding: Rick Romell, "Spurred by Foxconn, Widening I-94 to Eight Lanes Through Racine County Will Begin in 2019," *Journal Sentinel*, 12 October 2017.
113. Rick Romell, "Spurred by Foxconn, Widening I-94 to Eight Lanes Through Racine County Will Begin in 2019," *Journal Sentinel*, 12 October 2017.
114. Chris Isidore and Julia Horowitz, "Foxconn Got A Really Good Deal From Wisconsin. And It's Getting Better," *CNN Money*, 28 December 2017.
115. See note 113.

116. Road Traffic Technology, *I-94 North South Freeway Expansion, Wisconsin*, archived at <http://web.archive.org/web/20170615235608/http://www.roadtraffic-technology.com/projects/i-94-north-south-freeway-expansion-wisconsin/>.

117. Matthew DeFour, "Fiscal Bureau: Foxconn Roads Could Draw \$134 Million From Other State Highway Projects," *Wisconsin State Journal*, 16 December 2017.

118. Mark Sommerhauser, "Wisconsin's transportation-funding problem: Possible solutions, and how we got here," *Wisconsin State Journal*, 22 January 2017.

119. Patrick Marley, Bill Glauber and Don Behm, "Wisconsin Abandons I-94 East-West Project In Milwaukee County For Lack Of Funds," *Milwaukee Journal Sentinel*, 4 October 2017.

120. Bus routes: Don Behm, "New Bus Routes Would Link Milwaukee And Racine Workers To Foxconn Plant," *Journal Sentinel*, 6 March 2018; commuter rail route: Jeramey Jannene, "Commuter Rail to Foxconn Proposed," *Urban Milwaukee*, 28 March 2018.

121. Lee Bergquist, "Transportation Projects to Accommodate Foxconn Moving on Different Tracks," *Milwaukee Journal Sentinel*, 8 February 2018.

122. Ibid.

123. U.S. Department of Transportation, *Road and Bridge Data by State*, archived at <http://web.archive.org/web/20180228030725/https://www.transportation.gov/policy-initiatives/grow-america/road-and-bridge-data-state>.

124. The Atlanta Region's Plan, *Regional Transportation Plan*, May 2018, available at <http://documents.atlantar-regional.com/The-Atlanta-Region-s-Plan/rtp/rtp-complete-document.pdf>.

125. Georgia Department of Transportation, *Environmental Assessment And Finding Of No Significant Impact I-285/Sr 400 Interchange Reconstruction*, May 2015,

available at <http://www.dot.ga.gov/BuildSmart/Projects/Documents/I285SR400/Environmental/EnvironmentalAssessment-Pg1-401.pdf>.

126. Andria Simmons, "Big Plans for Ga. 400/I-285 Interchange Just Got Bigger," *Atlanta Journal-Constitution*, 14 June 2014.

127. David Wickert, "Poll: Metro Atlanta Residents Embrace Mass Transit," *Atlanta Journal-Constitution*, 3 November 2017; Angie Schmitt, "If Not for Trump, Last Night Would Have Been Great for Transit," *Streetsblog*, 9 November 2016.

128. Yonah Freemark, "Atlanta's Raising \$2.5 Billion to Invest in Transit. Will It Be Money Well-Spent?," *Streetsblog*, 2 June 2017.

129. Ibid.

130. Josh Green, "Georgia Passes Landmark Legislation for Regional Transit; Prepare for 'The ATL'," *Curbed Atlanta*, 30 March 2018.

131. See note 128.

132. Washington State Department of Transportation, *US 395 - North Spokane Corridor*, archived at <http://web.archive.org/web/20180106175926/https://www.wsdot.wa.gov/Projects/US395/NorthSpokaneCorridor/>.

133. The two build alternatives being considered would result in the displacement of 503 or 559 housing units: U.S. Department of Transportation and Washington State Department of Transportation, *Final Environmental Impact Statement and Section 4(F) Evaluation*, 3 April 1997, archived at <https://web.archive.org/web/20180411231925/https://www.wsdot.wa.gov/sites/default/files/2005/07/05/ERNSC1997FEIS.pdf>.

134. Mike Mclean, "North Spokane Corridor: Will It Bridge or Divide?," *Spokane Journal of Business*, 11 August 2016.

135. Dan Hansen, "North-south Freeway to Exact Quite a Toll," *The Spokesman-Review*, 1 June 1997.

136. Based on current google maps directions indicating current route takes 24 minutes from Wandermere Golf Course to I90. Project website says it will make the whole trip take 12 minutes: Washington State Department of Transportation, *US 395 - North Spokane Corridor*, archived at <http://web.archive.org/web/20180106175926/https://www.wsdot.wa.gov/Projects/US395/NorthSpokaneCorridor/>.
137. Robert Steuteville, "Design Solutions Suggested for Reconnected Spokane Neighborhoods," *Public Square - a CNU Journal*, 11 August 2016, archived at <http://web.archive.org/web/20170818065920/https://www.cnu.org/publicsquare/design-solutions-suggested-reconnected-spokane-neighborhoods>.
138. See note 58.
139. STA Moving Forward, *Spokane Transit Proposition 1*, archived at <http://web.archive.org/web/20180411100131/http://stamovingforward.com/proposition-1>.
140. STA Moving Forward, *Spokane Transit Proposition 1*, archived at <http://web.archive.org/web/20180411100131/http://stamovingforward.com/proposition-1>.
141. Ahmed Namatalla, "Treasurer: Washington Should Put Income Boost Toward Debt," *Associated Press*, 22 February 2018, available at <https://www.usnews.com/news/best-states/washington/articles/2018-02-22/treasurer-washington-should-put-income-boost-toward-debt>.
142. OCTA, *I-405 Improvement Project (SR-73 to I-605)*, archived at <http://web.archive.org/web/20180407145244/http://www.octa.net/Projects-and-Programs/Under-Construction/I-405-Improvement-Project/?frm=7135>.
143. California Department of Transportation, *Traffic Study: San Diego Freeway (I-405) Improvement Project, SR-73 to I-605*, May 2011; California Department of Transportation, *2015 Traffic Volumes on California State Highways*, undated, accessed at www.dot.ca.gov/trafficops/census/, 28 March 2015, and comparable reports for previous years.
144. Erika Aguilar, "Legal Fight Over the 405 Expansion In Orange County Moves to San Diego," *KPCC*, 6 April 2016.
145. Sean Emery, "Construction to begin on a \$1.9 billion widening of the I-405 freeway in Orange County," *Orange County Register*, 23 January 2018.
146. Florida Department of Transportation, *I-4 Beyond the Ultimate PD&E Reevaluation Study*, accessed 14 March 2017, archived at web.archive.org/web/20170314152638/http://www.i4express.com/.
147. I-4 Ultimate Improvement Project, *Looking Beyond I-4 Ultimate*, archived at <http://web.archive.org/web/20180302155909/http://i4ultimate.com/looking-beyond-i-4-ultimate/>.
148. David Wickert, "I-75 truck lanes get a boost from Atlanta Regional Commission," <http://commuting.blog.ajc.com/2017/08/10/i-75-truck-lanes-get-a-boost-from-atlanta-regional-commission/>
149. Georgia Department of Transportation, *I-75 Commercial Vehicle Lanes Factsheet*, 8 February 2018, archived at <https://web.archive.org/web/20180302161331/http://www.dot.ga.gov/BuildSmart/Projects/Documents/MMIP/Projects/I-75%20Commercial%20Vehicle%20Lanes.pdf>.
150. Connecticut Department of Transportation, *Let's Go CT: Transportation Ramp Up Dashboard*, accessed 14 March 2017, archived at web.archive.org/web/20170314162920/http://www.transformct.info/RampUpDashboard.html.
151. John Burgeson, "GBT Cuts Loom, Hearings Planned," *CTPost*, 7 April 2018.
152. Gregory Hladky, "Hartford Rail Line Set To Open In May, But Fiscal Troubles Loom," *Hartford Courant*, 22 January 2018.
153. See note 58.
154. Joseph De Avila, "Connecticut Gov. Dannel Malloy Pitches \$4 Billion I-95 Expansion," *Wall Street Journal*, 22 February 2018.

155. Let's Go CT, *Transportation Ramp Up Dashboard*, accessed at <http://transformct.info/RampUpDashboard.html> on 15 March 2018.

156. Illinois Route 53, *Facts & Figures*, archived at <http://web.archive.org/web/20170811012451/http://www.ilroute53.org:80/>; Mary Wisniewski, "Tollway Committee Advances \$25 Million Study of Illinois 53 Extension," *Chicago Tribune*, 22 May 2017.

157. Surveying: Virginia Department of Transportation, *Nighttime Lane Closures Planned on I-66 Inside the Beltway (press release)*, archived at https://web.archive.org/web/20180412012141/http://inside.transform66.org/documents/nighttime_lane_closures.pdf.

158. Maggie Astor, "A \$40 Toll to Drive 10 Miles? It Happened on Virginia's I-66," *New York Times*, 5 December 2017.

159. Noel Oman, "Agency picks 10-lane plan for I-30 through downtown Little Rock, North Little Rock," *Arkansas Online*, 30 November 2017.

160. Arkansas Department of Transportation, *I-30: Pulaski County*, archived at <https://web.archive.org/web/20180302170915/https://connectingarkansasprogram.com/corridors/9/i-30-pulaski-county/#.WpmFUejwbIU>.

161. U.S. Department of Transportation, Federal Transit Administration, National Transit Database, Table TS2.2 (Excel file), accessed at www.transit.dot.gov/ntd/data-product/ts22-service-data-and-operating-expense-time-series-system-0, 5 April 2017.

162. Wisconsin Department of Transportation, *Madison Beltline Study*, archived at <http://web.archive.org/web/20180130171735/http://wisconsin.dot.gov/Pages/projects/by-region/sw/madisonbeltline/default.aspx>.

163. Sean McBride, U.S. Army Corps of Engineers, *Proposed I-73 Project Under Review*, 9 September 2016, archived at <http://web.archive.org/web/20170118220632/http://www.sac.usace.army.mil/Media/News-Stories/Article/939346/proposed-i-73-project-under-review/>.

164. Seanna Adcox, "Army Corps Approves Permit for New S Carolina Interstate," *US News & World Report*, 20 June 2017.

165. Brian Carlton, Mickey Powell and Paul Collins, "A Costly Question: What's the Future Look Like for I-73?," *Martinsville Bulletin*, 17 February 2018.

166. Dan Weikel, "Metro Board Drops Support for Controversial 710 Freeway Tunnel," *Los Angeles Times*, 25 May 2017.

167. City of South Pasadena, *State Route 710*, 2015, accessed at www.ci.south-pasadena.ca.us/index.aspx?page=57.

168. South Pasadena Review Online, "It's Finally Time to End 710 Tunnel Talk," *South Pasadena Review*, 12 January 2017, archived at web.archive.org/web/20170222164705/http://southpasadenareview.com/its-finally-time-to-end-710-tunnel-talk/.

169. South Pasadena Review Online, "710 Tunnel Serves No Useful Transportation Function," *South Pasadena Review*, 8 February 2017, archived at web.archive.org/web/20170221172037/http://southpasadenareview.com/710-tunnel-serves-no-useful-transportation-function/.

170. "Federal Highway Administration Approves I-70 Project," *CBS Local*, 19 January 2017, archived at web.archive.org/web/20170221184810/http://denver.cbslocal.com/2017/01/19/federal-highway-administration-approves-i-70-project/.

171. Colorado Department of Transportation, *Information about the I-70 East (Central 70) Project*, undated, archived at web.archive.org/web/20170406180050/https://www.codot.gov/projects/i70east/fact-sheets-8-2-16/Central%2070%20Will%20and%20Will%20Not.pdf.

172. Jon Murray, "Shouting and Anger Over I-70 Project Greet CDOT Officials at Denver Community Meeting," *The Denver Post*, 16 February 2017, archived at web.archive.org/web/20170221171720/http://www.denverpost.com/2017/02/16/i-70-project-meeting-shouting-anger/.

173. Sierra Club, *A Highway, Systemic Injustice, and Why We Can't Stay Silent*, archived at <http://web.archive.org/web/20170904211141/http://www.sierraclub.org:80/colorado/blog/2017/07/highway-systemic-injustice-and-why-we-can-t-stay-silent>.

174. Aldo Svaldi, "Northeast Denver Neighborhood is Nation's Most Polluted," *The Denver Post*, 16 February 2017, archived at <http://web.archive.org/web/20170221171938/http://www.denverpost.com/2017/02/16/denver-most-polluted-zip-code/>.

175. David Sachs, "Feds Approve CDOT Plan to Shove Wider I-70 Through Mostly Latino Neighborhoods," *Streetsblog Denver*, 19 January 2017, archived at <http://web.archive.org/web/20170221190040/http://denver.streetsblog.org/2017/01/19/feds-approve-cdot-plan-to-shove-wider-i-70-through-mostly-latino-neighborhoods/>.

176. Joseph De Avila, "Connecticut Gov. Dannel Malloy Pitches \$4 Billion I-95 Expansion," *Wall Street Journal*, 22 February 2018.

177. Ibid.

178. Ibid.

179. Sherri Day, "Wider Roads Are Not the Answer for Traffic-Clogged Tampa," *Tampa Bay Times*, 26 June 2015, archived at web.archive.org/web/20150831183206/http://www.tampabay.com/opinion/columns/day-wider-roads-arent-the-answer-for-traffic-clogged-tampa/2235247.

180. Caitlin Johnston, "Goodbye Tampa Bay Express, Hello Tampa Bay Next; but Toll Lanes Aren't Going Anywhere," *Tampa Bay Times*, 22 May 2017.

181. Adam Winer, "FDOT: No Toll Lanes Coming to I-275 in Tampa, but I-75 Toll Lanes Now on the Table," *ABC News Tampa Bay*, 3 May 2018, archived at <http://web.archive.org/web/20180503163101/https://www.abcactionnews.com/news/local-news/fdot-no-toll-lanes-coming-to-i-275-in-tampa-but-i-75-toll-lanes-now-on-the-table>; Tampa Bay Next, I-275 Innovation Corridor, archived at <https://web.archive.org/web/20180619150521/http://www.tampabaynext.com/projects/i-275-innovation-corridor/>.

182. Ibid.

183. Caitlin Johnston, "What's Next: Tampa Bay's Transportation Future," *Tampa Bay Times*, 2 January 2018.

184. Iowa Department of Transportation, Office of Design, *Rural Two-Lane Highways (Rural Arterials)* (design criteria worksheet), Design Manual, 6 June 2014, archived at web.archive.org/web/20151022155402/http://www.iowa-adot.gov/design/dmanual/01C-01/Two_laneRural.pdf

185. http://siouxcityjournal.com/news/local/govt-and-politics/u-s-project-one-step-closer-to-completion/article_676d16c3-4952-5fdb-b22b-7bdd6695fe9d.html.

186. Damon Scott, "\$96M Paseo del Volcan Project Could Open Access to Thousands of Acres," *Albuquerque Business Journal*, 29 January 2015, archived at web.archive.org/web/20170221193514/http://www.bizjournals.com/albuquerque/news/2015/01/29/96m-paseodel-volcan-project-could-open-access-to.html.

187. Contra Santolina Working Group, "Top Five Reasons Santolino Doesn't Make Sense," *The NM Political Report*, 11 May 2016, archived at web.archive.org/web/20170221194002/http://nmpoliticalreport.com/43248/top-five-reasons-santolina-doesnt-make-sense/.

188. City of Albuquerque, Paseo del Volcan, archived at <http://web.archive.org/web/20171206155232/http://www.cabq.gov/council/projects/current-projects/paseo-del-volcan>.

189. North Carolina Department of Transportation, *I-77 Express Lanes*, undated, archived at web.archive.org/web/20151002150627/http://www.ncdot.gov/projects/i-77expresslanes/.

190. Jim Morrill, "Lawmakers Try Again to Kill I-77 Toll Contract," *The Charlotte Observer*, 15 December 2016, archived at web.archive.org/web/20170221190649/http://www.charlotteobserver.com/news/politics-government/article121033393.html.

191. Ibid.

192. Crash increase: Bruce Henderson, "You may be more likely to crash on I-77 north of Charlotte. Here's why," *Charlotte Observer*, 13 April 2017; debris: Scott Jensen, "Cars Are Being Impaled By I-77 Construction Debris," *Charlotte Stories*, 15 April 2017.

193. Ohio Department of Transportation, *Southern Ohio Veterans Memorial Highway DBFOM Procurement*, undated, archived at web.archive.org/web/20151002155005/http://www.dot.state.oh.us/Divisions/InnovativeDelivery/Pages/PortsmouthDBFOM.aspx; population.

194. Rick Rouan, "State's Share of Portsmouth Bypass Rises to \$1.2B over 35 Years," *Columbus Dispatch*, 25 May 2015, archived at web.archive.org/web/20151002174011/http://www.dispatch.com/content/stories/local/2015/05/25/states-share-rises-to-1-2b-over-35-years.html.

195. Wayne Allen, "ODOT Releases Construction Schedule," *Portsmouth Daily Times*, 10 February 2017, archived at web.archive.org/web/20170406180624/http://portsmouth-dailytimes.com/news/13722/odot-releases-construction-schedule.

196. Ed Blazina, "Turnpike Moves Ahead With Final Design of Mon-Fayette Expressway," *Pittsburgh Post-Gazette*, 7 November 2017.

197. Ibid.

198. Ibid.

199. Ibid.

200. Texas Department of Transportation, *SH 249 Extension*, undated, archived at web.archive.org/web/20170222165447/http://www.txdot.gov/insidetxdot/projects/studies/houston/sh249-extension.html.

201. Ibid.

202. Anna Dembowski, "Work Begins on Hwy. 249 Extension Into Montgomery County," *Community Impact Newspaper*, 15 December 2017.

203. Central Texas Regional Mobility Authority, *What's Happening Now*, undated, archived at web.archive.org/web/201702221170750/http://www.sh45sw.com/about/.

204. Ibid.

205. Texas Department of Transportation, *State Highway 45 Southwest Final Environmental Impact Statement*, January 2015, 45, accessed from www.sh45sw.com/about/environment.php.

206. Washington State Department of Transportation, *SR 167, SR 509 and I-5 Puget Sound Gateway Project*, September 2015, archived at web.archive.org/web/20151002171427/https://www.wsdot.wa.gov/Projects/Gateway/default.htm.

207. Ibid.

208. Steve Hunter, "State Needs More Funds for SR 509 Extension to Kent," *Kent Reporter*, 9 February 2017, archived at web.archive.org/web/20170221192258/http://www.kentreporter.com/news/state-needs-more-funds-for-sr-509-extension-to-kent/.

209. Washington State Department of Transportation, *SR 167, SR 509 and I-5 Puget Sound Gateway Project*, September 2015, archived at web.archive.org/web/20151002171427/http://www.wsdot.wa.gov/Projects/Gateway/.

210. Opening to the public: <https://www.reviewjournal.com/traffic/section-of-i-11-to-open-tuesday-at-railroad-pass/>; I-11 Study, *I-11 & Intermountain West*, undated, archived at web.archive.org/web/20170222170905/http://i11study.com/.

211. Sean Holstege, "Signs That Interstate 11 Is More Than a Pipe Dream: ADOT Study, Bill Gates' 'Smart City'," *Phoenix New Times*, 22 December 2017.

212. Ibid.

213. "Public Comments on I-11 Plan Available to Read," *Green Valley News*, 130 January 2017, archived at web.archive.org/web/201702221200216/http://www.gvnews.com/news/public-comments-on-i-11-plan-available-to-read/article_7668a9e0-e712-11e6-98ae-9786e4112d04.html.

214. See note 211.

215. Save San Onofre Coalition, *Landmark Agreement Ends 15-Year Dispute Over SR 241 Toll Road Extension (press release)*, 16 November 2016, archived at web.archive.org/web/20170221200720/http://voiceofoc.org/2016/11/landmark-agreement-ends-15-year-dispute-over-sr-241-toll-road-extension/.

216. Dan Weikel, "Settlement Ends the Threat of a Toll Road Through San Onofre State Beach," *Los Angeles Times*, 10 November 2016, archived at web.archive.org/web/20170221201202/http://www.latimes.com/local/lanow/la-me-ln-tollway-lawsuits-20161109-story.html.

217. Fred Swegles, "2 San Clemente lawsuits challenge efforts to extend 241 Toll Road," *The Orange County Register*, 1 August 2017.

218. Jeff Inglis, Frontier Group, and John C. Olivieri, U.S. PIRG Education Fund, *Highway Boondoggles 2: More Wasted Money and America's Transportation Future*, January 2016.

219. "New Toll Lanes Coming Soon to C-470," *The Villager*, 14 December 2016, archived at web.archive.org/web/20170221201851/http://www.villagerpublishing.com/84670/news/government/new-toll-lanes-coming-soon-to-c-470/.

220. G.G. Rigsby, "First Effingham Parkway Open House Held," *Savannah Morning News*, 30 March 2015, archived at web.archive.org/web/20151002175107/http://savannahnow.com/effingham-now/2015-03-20/first-effingham-parkwayopen-house-held.

221. Andrew Davis, "Effingham Parkway a Key to Easing Traffic on Highway 21/I-95," *WSAV 3*, 27 January 2016, archived at web.archive.org/web/20170221202429/http://wsav.com/2016/01/27/effingham-parkway-a-key-to-easing-traffic-on-highway-21i-95/.

222. Walter Jones, "Effingham Parkway Gets \$44 Million in State Funds," *Savannah Morning News*, 25 January 2016, archived at web.archive.org/web/20170221202653/http://savannahnow.com/news-latest-news/2016-01-25/effingham-parkway-gets-44-million-state-funds#.

223. <http://savannahnow.com/effingham-now/news/2017-07-26/engineers-identify-46-parcels-effingham-parkway>.

224. Zak Koeske, "Environmental Groups Happy with Judge's Ruling on Illiana Project," *Daily Southtown*, 4 November 2016, archived at <https://web.archive.org/web/20170406181150/http://www.chicagotribune.com/suburbs/daily-southtown/news/ct-sta-illiana-tollway-decision-st-1106-20161104-story.html>.

225. Ibid.

226. Tommy O'Flynn, "I-94 Detroit Widening Would Threaten Midtown Development, Waste Funds," *The Huffington Post*, 19 June 2013, archived at https://web.archive.org/web/20170406181129/http://www.huffingtonpost.com/2013/06/19/i-94-detroit-widening-midtown-development_n_3466887.html.

227. Michael Jackman, "MDOT to Hold Open Houses on 20-Year, \$3 Billion Plan to Widen I-94," *Detroit Metro Times*, 4 November 2016.

228. Ibid.

229. Michigan Department of Transportation, I-94 Modernization Project Summer 2017 Newsletter, 2017, archived at https://web.archive.org/web/20180303160745/http://www.michigan.gov/documents/mdot/I-94_Modernization_Newsletter_summer_17_599808_7.pdf.

230. Michigan Department of Transportation, I-94 Modernization Project Summer 2015 Newsletter, 2015, archived at http://web.archive.org/web/20170304083904/http://www.michigan.gov/documents/mdot/MDOT_I-94NewsletterSummer2015_493928_7.pdf.

231. See note 229.

232. Michigan Department of Transportation, *MDOT publishes Notice of Intent to prepare Supplemental EIS for I-94 modernization in Detroit*, 13 June 2017, archived at <http://web.archive.org/web/20170619203841/http://www.michigan.gov:80/mdot/0,4616,7-151-9620-423745--,00.html>.

233. North Carolina Department of Transportation *Asheville I-26 Connector*, undated, accessed at www.ncdot.gov/projects/I26Connector/.

234. Mark Barrett, "NCDOT Trying to Speed Work on I-26 Connector," *Citizen-Times*, 16 January 2017, accessed at www.citizen-times.com/story/news/local/2017/01/16/ncdot-trying-speed-work--26-connector/96553882/.

235. Ibid.

236. N.C. Department of Transportation, *Asheville I-26 Connector*, archived at <http://web.archive.org/web/20171231193242/https://www.ncdot.gov/projects/I26Connector/>.

237. Steven Litt, "Is There Still Time to Get Design and Planning Right for the Opportunity Corridor?," *Plain Dealer*, 29 May 2015.

238. Steven Litt, "Opportunity Corridor Is Back On Track For 2021 Completion After Delay Caused By Taxpayer Lawsuit," *The Plain Dealer*, 14 February 2018.

239. Elizabeth Findall, "Dallas Council Agrees on Trinity Parkway Compromise Limiting Funds to 4-lane Road," *Dallas Morning Times*, August 2015.

240. Robert Wilonsky, "The Trinity River toll road is dead, and Dallas has Angela Hunt to thank for it," *Dallas Morning News*, 9 August 2017.

241. Washington State Department of Transportation, *Viaduct: Program Overview*, undated, accessed at www.wsdot.wa.gov/Projects/Viaduct/About.

242. Ibid.

243. Mike Lindblom, "Highway 99 tunnel in Seattle will open to traffic this fall, the state and contractors say," *Seattle Times*, 11 January 2018.

244. Ibid.

245. Justin Williams, "What's next for the I-94 East-West Corridor? WisDOT Unveils Preferred Alternative,"

Fox6Now, 17 February 2015, archived at web.archive.org/web/20151002184546/http://fox6now.com/2015/02/17/i-94-east-west-preferred-alternative/.

246. Sean Ryan, "Stadium Interchange, I-94 Rebuild to Cost \$825 million to \$1.2 billion," *Milwaukee Business Journal*, 14 November 2014, accessed at www.bizjournals.com/milwaukee/news/2014/11/14/stadium-interchange-i-94-rebuild-to-cost-825.html.

247. Rich Kirchen and Sean Ryan, "Gov. Walker Drops Funding for I-94 East-West Project; MMAC Preps Fight," *Milwaukee Business Journal*, 8 February 2017, archived at web.archive.org/web/20170221212254/http://www.bizjournals.com/milwaukee/news/2017/02/08/gov-walker-expected-to-drop-funding-for-i-94-east.html.

248. Patrick Marley, Bill Glauber and Don Behm, "Wisconsin Abandons I-94 East-West Project in Milwaukee County for Lack of Funds," *Milwaukee Journal-Sentinel*, 4 October 2017.

249. Federal Highway Administration, *Notice of Rescission of the Record of Decision (ROD) for the I-94 East-West Corridor Project in the City of Milwaukee, Milwaukee County, Wisconsin*, 11 October 2017, archived at <http://web.archive.org/web/20180223031410/https://www.federalregister.gov/documents/2017/10/11/2017-21917/notice-of-rescission-of-the-record-of-decision-rod-for-the-i-94-east-west-corridor-project-in-the>.

250. Patrick Marley, "Lawmakers Hope to Revive I-94 Project, but Walker Says Drivers Need a Construction Break," *Milwaukee Journal Sentinel*, 1 February 2018.

251. Gordon Dickson, "After \$1.6 Billion Worth of Work, Why Is I-35W Still Clogged with Traffic?," *Fort Worth Star-Telegram*, 25 May 2018.