

# New Principles for Our Transportation Program

MAY 11, 2016 – BETH OSBORNE

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## Executive Summary

We are a can-do nation. But the U.S. surface transportation program, which was created as a way of building new highways, is hopelessly outdated. Its “highways only” focus is not leading to the transportation infrastructure that America needs, and its reliance on a flat gas tax for revenue is not generating enough funding to support the roadway it does build. Furthermore, the program is unfocused, poorly understood, and often self-defeating.

The next president will need to create a true and comprehensive vision of America’s transportation infrastructure, a program to pursue that vision, and honest mechanisms to fund it. This report addresses the new principles that should serve as a foundation for a future transportation program that will enable America to meet its potential.

In sum, there are four interlocking issues that have resulted in the crisis. The first is a lack of national vision that has resulted in a program still focused on the challenge of the 1950s—building an interstate highway system. The second is a political system that has made identifying such a broad vision unlikely. The third is President Obama’s Fixing

America’s Surface Transportation (FAST) legislation, which is inadequate and does not answer our major needs or point us in a constructive direction. The last is the funding limitations of a gasoline tax stuck at the level Congress set over twenty years ago.

These, in summary, are the principles that should guide a future transportation program:

**Change #1:** Repair the current system first. The bulk of federal funds should go to states and transit agencies for maintenance and replacement projects. Only after repair needs are addressed should money go to new projects.

**Change #2:** Replace a program that moves cars, trucks, and buses to one that has as its core principle moving people and goods. Thus, land development and all modes of transportation should be given an equal place beside roads in the nation’s planning and funding.

**Change #3:** Reward innovation through competition and performance management. We already have a small minority of programs that require projects to be submitted for analysis. A smart and rapid scaling of competitive funding would spur

This report can be found online at: <https://tcf.org/content/report/new-principles-transportation-program/>.

innovation and should consider the impact of transportation investments on the environment, the economy, and broad access to jobs and opportunity.

**Change #4:** Meet transportation needs with transportation funds. Funding would most easily come from an increased gas tax in the short run, but over the long-run could include strategies such as a vehicle miles traveled (VMT) tax, congestion pricing, and value capture (to be explained below). Transportation agencies that need help with a large project that overwhelms its immediate means could utilize competitive funding, federal loan programs, or self-fund. Transportation funding must get away from the gimmicks and gap fills of recent years.

## Introduction

Like everything we build, transportation can be designed well, or it can be designed poorly. When designed well, transportation infrastructure creates strong connections between communities and vibrant destinations—from the Brooklyn Bridge in New York City to the bustling main street in Burlington, Iowa. When designed poorly, as U.S. Transportation Secretary Anthony Foxx has spoken so eloquently about recently, the transportation system can isolate communities, make it harder for people to reach work or school, and separate small businesses from customers.<sup>1</sup>

You can see the results of past transportation mistakes across the country. Our current transportation program is designed to build highways—which it often does at a community’s expense, rather than benefit. To address a bottleneck, a bypass is built that takes customers around the community instead of to it, and businesses close down. Highways are built through residential areas, separating children from schools—so that districts must run buses to bring students to school from just a few blocks away. The way we have built our transportation system has made cars essential for even some short, local trips—and has led to transportation being the second highest household cost, after housing.<sup>2</sup>

Another problem with the current program is that it has no clear purpose. In the past, politicians often got their favored projects funded by earmarks; and as long as each politician

got their priority project funded, they did not concern themselves with the substance of the overall program. Now, earmarks are gone, and what remains is bipartisan confusion about the purpose of the nation’s transportation program—and the outcomes that we should expect—making it hard to effectively criticize the current system.

Nor is this program sensibly funded. There is currently a breakdown in the legislative process: Congress now delivers an ever-larger percentage of funding from often-gimmicky sources, without a serious debate about what that funding should accomplish. There have been calls for more transportation funding from politicians in both parties, but there should be an accompanying call for better results and smarter spending.<sup>3</sup>

President Obama has recently proposed a \$10 tax on every barrel of oil produced for his fiscal year 2017 budget, and pledged to dedicate that revenue to programs that will provide travel options, benefit the environment, and deploy new transportation technologies. This would be a good start, but increased funding will not improve the program adequately if its priorities are not revised. The next president should lead the fight for a surface transportation program focused on moving people and freight by all effective means, instead of always favoring cars and trucks; ensure our system is safe, efficient, and maximized, before adding to it; and implement funding that rewards innovation and high performance.

Coupling increased funds with programmatic reforms and improvements may seem simple enough. But this debate has been absent from the campaigns of presidential candidates of both parties. The leaders of this country should assure the American people that they will get more from the program in exchange for additional investment.

## The Surface Transportation Program’s Legacy Problem

Our surface transportation program—often referred to simply as “the highway program”—was conceived at a time when most people lived walking distance from their grocery

store, bank, and school. Mass transit was readily available, and many streetcars were privately run. However, a drive between two cities was challenging, because the driver would need to travel on local roads and highways, slowed by signals and local traffic. The Federal-Aid Highway Act of 1956 led to the building of an interstate highway system that made it possible to travel longer distances at high speed.

State-level departments of transportation (DOTs) ably led the designing and building of the interstate system and developed expertise building these expressways. Since then, private streetcars have gone extinct, the majority of cities have only modest transit systems at best, and most new communities have been built lacking sidewalks or crosswalks. While Congress has made attempts to support multimodal transportation networks, it has continued setting priorities according to state DOTs, whose expertise is primarily highway construction.

Not surprisingly, the result is a program in which state DOTs apply the rules of highway solutions to all transportation problems. Rural development needs, traffic bottlenecks, downtown redevelopments—whatever the problem, a highway is usually the proposed solution. Even when local governments seek a traditional main street, they often find themselves in conflict with their state DOT, which is concerned that a main street’s narrow lanes are unsafe (which is not accurate<sup>4</sup>), or that it does not move traffic fast enough (which is not the point), or that federal funding cannot be used for this purpose (which it can).

And even though most state DOTs and local transportation agencies claim their biggest challenge is repairing the extensive and aging system of roads we have built over the last half-century, the pressure to add on to that system is also strong. The nation spent over \$200 billion on highways and bridges at all levels of government in 2013<sup>5</sup>, and still has a \$76 billion backlog just to replace deficient bridges.

### *The Funding Crisis*

On the issue of funding, the current method of generating revenue is through a road user fee, intended to make drivers

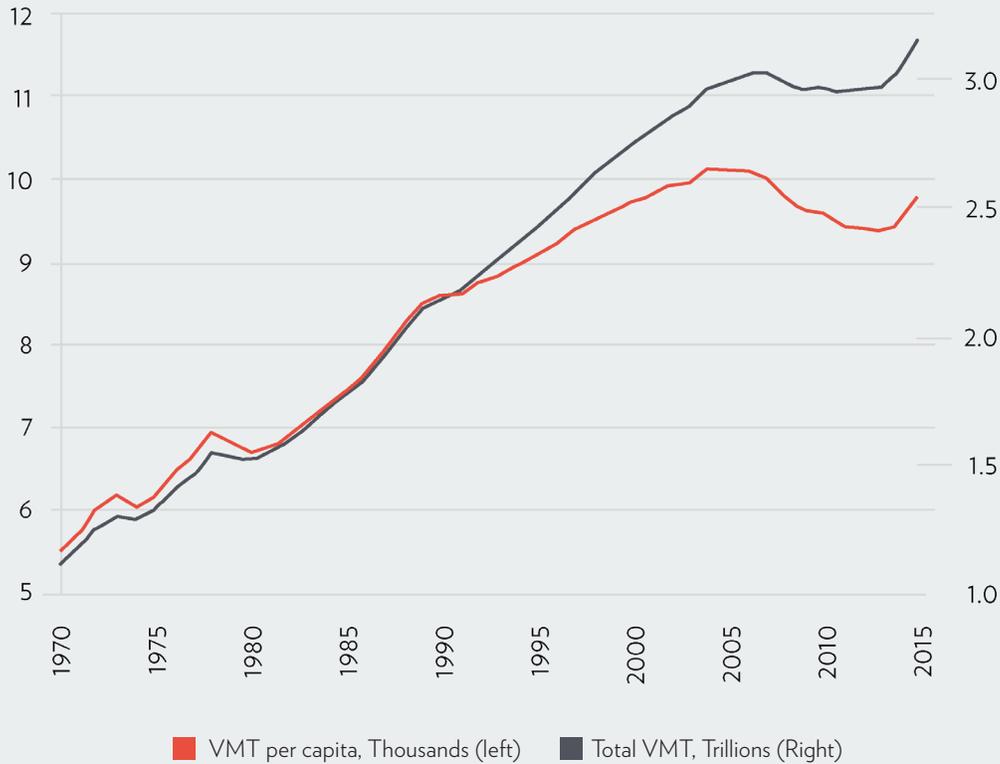
who use roads pay for their construction and maintenance via taxes on gasoline (currently 18.4 cents per gallon at the federal level) and diesel (24.4 cents per gallon). That system worked, as long as Americans were driving at least 1–2 percent more every year, and driving cars with a fuel economy that improved slowly (or not at all). The gas tax may not have been indexed for inflation, but with people driving considerably more each year—thus paying more gas tax—Congress could act like it was. From Congress’ perspective, each time it reauthorized the transportation program back then, more money was available than before, and it appeared that the biggest challenge was how to divvy up the funding—a fun task that made working on a bipartisan basis easy and drew little scrutiny over whether spending was smart or sustainable.

Only after our roads got older and required reconstruction did we realize that the gas tax did not provide enough funding to cover essential maintenance and also address improvements and additions. At the same time as this became clear to policymakers, the public stopped cooperating: it stopped driving more. Compounding the revenue problem, the federal government also required automakers to build cars that were more fuel-efficient, which further eroded falling gas tax revenue.<sup>6</sup>

In response to this budgetary crunch, Congress and the president have found gimmicks to keep the program running. Between 2008 and 2015, Congress transferred \$65 billion from non-transportation revenue (some of which was highly questionable<sup>7</sup>) to the Highway Trust Fund to keep the program afloat. Then in late 2015, Congress passed and the president signed the Fixing America’s Surface Transportation Act, or FAST Act, with an additional \$70 billion in funding from non-transportation related sources.<sup>8</sup>

With its inflated funding levels and flat revenue from the gas tax, the program will exhaust its reserves by 2021 and will require an additional \$17.3 billion a year to support the current authorization.<sup>9</sup> That gap equals almost 30 percent of the total program.<sup>10</sup> While this forecast of a staggering deficit is troubling, such a funding crisis creates a good opportunity to rethink and improve the program—but first, there needs

FIGURE 1. VEHICLE MILES TRAVELED (VMT),  
TOTAL AND PER CAPITA, 1970-2015



Source: State Smart Transportation Initiative.

to be a greater understanding of what the program currently does.

### *The Opacity Problem*

Most Americans, including even some in government, do not understand how the federal transportation program works. For example, many people do not realize transportation is paid for with a gas tax. Even fewer people understand how much of the gas tax is assessed by the federal government, and how much by states and localities. And fewer still know where these taxes go, and what they pay for.

The structure of the program fosters this confusion. The federal government raises money from the taxpayer and hands it out to state DOTs, Metropolitan Planning

Organizations (MPOs) that plan for regional transportation issues, and transit agencies, all according to a complicated and politicized regimen. The states, MPOs, and transit agencies then spend those funds according to their priorities. As a result, the entities spending the money (mostly the states) do not have to account to the federal taxpayer for how federal money is spent, while the entity raising the money (the federal government) struggles to account for it because it has little control over the spending.<sup>11</sup>

In sum, our current legacy transportation program—which does little more than support plans for building highways—is ill-suited to meet America’s needs, has an insufficient revenue stream, and lacks accountability. The time is ripe for planning and funding a transportation program for the future—but, in order to set out on this path, we must first set our national priorities, identifying the changes we need.

FIGURE 2. ROCHESTER'S INNER LOOP



Source: City of Rochester

Below are proposals for reforms to the transportation program, based on the principles cited above, and with examples to support our them.

## Change #1: Repair the Current System First

### *Prioritize road and infrastructure repair over new highway construction*

Every time a political leader talks about transportation, they talk about fixing “crumbling infrastructure.” However, when federal funding goes to state DOTs<sup>12</sup> for transportation projects, there is no requirement that the funding be spent on repair. It is one of several eligible uses.

Some states do focus on repair. But many do not. For example, between 2004 and 2008, the State of Texas spent 62 percent of its highway capital funds to add 2,962 lane-miles to the Texas road network. A report by Smart Growth America found that Texas would need to spend \$4.5 billion annually for the next twenty years to get the current backlog of poor-condition major roads into a state of good repair and maintain all state-owned roads in good condition. Recently, Texas took out an \$840 million loan<sup>13</sup> from the federal government to build the Grand Parkway—a third beltway, thirty miles outside of Houston. At the same time, the state

is letting eighty-three miles of asphalt roads in West and South Texas go to gravel due to a “funding shortfall.”<sup>14</sup> In Alabama, the state DOT plans to spend \$5.4 billion over the next two decades to build the Northern Beltline in Birmingham.<sup>15</sup> The purpose of the project is to reduce traffic in Birmingham by 1–3 percent. This is a city that ranks eighty-first in the nation for congestion, according to the Texas Transportation Institute.<sup>16</sup> At the same time, Alabama would need to spend \$630 million annually for the next twenty years to get the current backlog of poor-condition major roads into a state of good repair and maintain all state-owned roads in good condition. Furthermore, area planners rank no less than thirty-five projects as more important than the Northern Beltline, and all of them together could be built for less \$1 billion. It sounds ridiculous, but this is the decision-making that the current federal program supports.

The next president should demand a better approach. The bulk of federal funds can and should go to states and transit agencies on a guaranteed basis but restricted to maintenance and replacement projects. The needs and priorities would be established through coordination between the state DOT, MPOs, and transit agencies. The predictability of formula funding is important for transportation agencies to plan for the maintenance of current infrastructure. Only after repair needs are reasonably addressed should money go to new wants and needs.

FIGURE 3. DENHAM SPRINGS, WHERE EVEN A SHORT TRIP REQUIRES A CAR



Repair should be more than a one-for-one replacement. Needs and communities change, new problems arise. A roadway may have a high rate of crashes and need to be redesigned. Roadways that were once highways may have been bypassed and no longer require wide right-of-ways and high speeds. Bridges that once carried high volumes of traffic may not carry as many vehicles anymore. And as Secretary Foxx has pointed out in recent speeches, many of our legacy highways have isolated communities and their residents.<sup>17</sup>

As transportation agencies replace aging infrastructure, they should analyze the context and see if the size of the infrastructure and the design is still appropriate. If less is needed, they can reduce the program to save money. If the design is harmful to the surrounding community or dangerous, it should be improved. If the existing infrastructure is not being maximized, design and operational

improvements should be employed to ensure we move as many people as we can and get the most out of each investment. Inexpensive techniques, such as timing traffic lights, better incident management, and encouraging ride sharing, can increase the roadway capacity without adding expensive new lanes. But our existing program is so focused on building new infrastructure that these less-expensive techniques are often not considered.

A wonderful example of breaking this cycle comes from Rochester, New York. Rochester's Inner Loop—a beltway that circled the city's downtown area—was constructed in 1965, when Rochester's population was a third larger than it is today. When the Inner Loop needed rebuilding, the city decided to convert an underutilized section of the twelve-lane sunken expressway to an at-grade boulevard, including space for bicycle lanes and walking paths. In doing so, city planners sought to knit the once-divided neighborhoods

back together.<sup>18</sup> Not only will the city now have less roadway to maintain, it also will be able to bring in tax dollars from converting expensive empty lanes to areas for economic development.

## Change #2: Replace a Program that Moves Cars, Trains, and Buses with One That Has as Its Core Principle Moving People and Goods

### *Pursue transportation funding, not highway building*

While most everyone agrees that transportation should connect people to their daily needs and businesses to the economy, it is not what our current transportation program always delivers, because it grew out of an effort to build highways and move cars quickly. While getting drivers to their destinations quickly is one element to consider, the emphasis on speed has often led to expensive, large highways that divide communities, force residents into cars for even short trips, push destinations further away, and create congestion—that is often addressed with wider highways. This approach is misguided, as it does not consider the totality of transportation, including people moving by transit, bike, or foot, or freight moving by train, ship, or plane.

Because much of the transportation program grew up around building highways, even the portions of the program that are meant to support all modes of travel often fail at their task. This is primarily because funding is distributed primarily to state DOTs, whose expertise is in building highways. So even when DOTs have flexibility to spend federal dollars on something other than highways, they tend to stay in their comfort zone. Furthermore, many states constitutionally limit their own gas tax revenues to funding the building of highways, so those DOTs struggle to provide the required matching funds to non-highway projects.<sup>19</sup>

If regional planners seeks to build an intercity rail connection, there would be no funding available at all from the federal government. For example, if a transportation agency wants

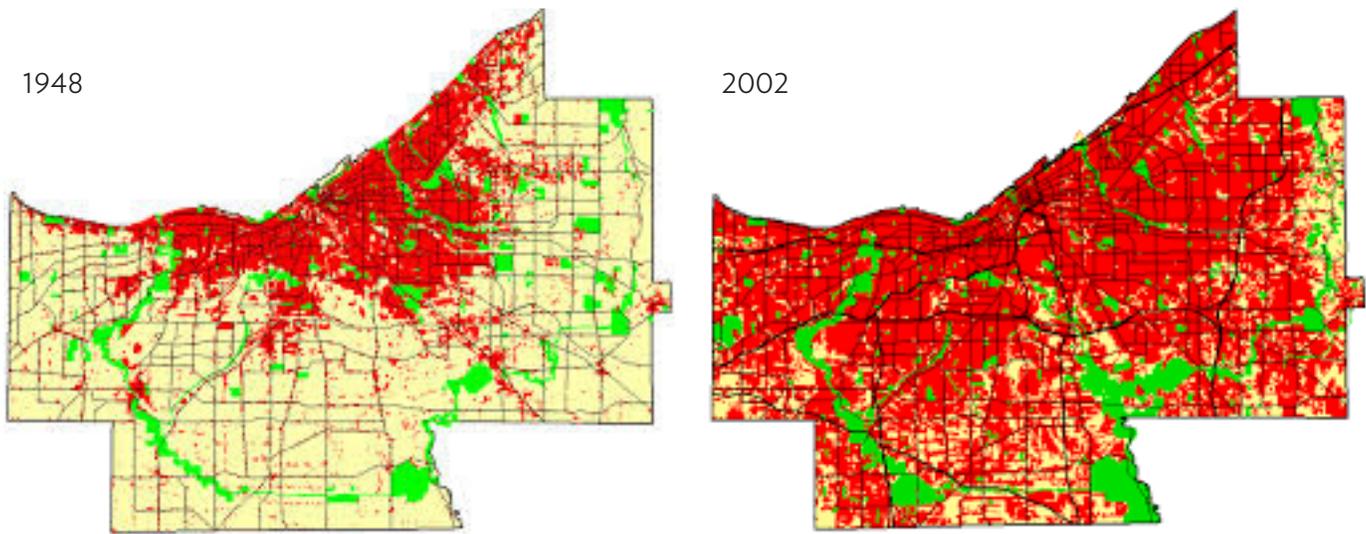
to address a congested stretch of highway by adding highway lanes, the federal program could pay up to 80 percent of those costs—and approximately 80 percent of the federal surface transportation program is available for highway spending. If the agency also seeks to add a transit line, the federal government will pay only 50 percent of the costs of the project.

If regional planners sought to build an intercity rail connection, there was no funding available at all from the federal government. Under the FAST Act, Congress authorized \$98 million in fiscal year 2016, increasing to \$330 million in fiscal 2020, for new intercity rail projects, as well as rail safety improvements. But none of the rail funding or the funding for new transit projects are protected from budget cuts year to year. Only highway funds and transit maintenance funds are. So if a region sets off on a new rail or transit project, there might not be money available to fund the project when it is ready. If planners instead choose a highway project, there would be guaranteed annual formula funds to use.

While adding new highway capacity is the default method for addressing congestion, it does not have the impact that many expect. In Houston, for example, transportation infrastructure has been focused on highways for decades. Very few neighborhoods in Houston are walkable, and transit service is not robust (though the city is working on it). Not surprisingly, almost all travelers drive, and they usually do so alone—and Texas DOT (TxDOT) uses this fact as a reason to build highways. This circuitous logic has led to the Katy Freeway, which TxDOT spent \$2.8 billion to expand to a staggering twenty-three lanes in 2008. It is now one of the widest highways in the world. But this expansion did little to curb congestion and, according to some analysis, it even made it worse.<sup>20</sup> TxDOT now has a plan to spend \$242 million more expanding another portion of the highway.<sup>21</sup>

After sixty years of the highway-centric approach, it is time to try something new. The next president should focus the federal transportation program on federal priority outcomes, regardless of mode.

FIGURE 4. METROPOLITAN AREA OF CLEVELAND, OHIO, 1948 AND 2002



Source: Cuyahoga Planning Commission

Some say that revenues from gas taxes should be used only to build roadways that directly benefit the drivers paying the tax. In other words, building transit, rail, bus rapid transit, sidewalks, and so on, should not be paid for, because they do not benefit drivers.

In response to that argument, consider the Washington, D.C., metro area, where 27 percent of commuters use transit to get to work (or Seattle where it is 19.5 percent, Los Angeles where it is 11.5 percent, or Denver where it is 7.8 percent). How many auto commuters would be excited to drive to work if these transit systems closed for the day? Even in Houston, where only 3.9 percent of commuters use transit, drivers would notice it if overnight the nearly 300,000 daily transit trips turned into additional car trips.

These same road-only advocates often claim that building roads that are safe to pedestrians does not benefit drivers. To counter that, consider an example from Denham Springs, Louisiana. There is nothing atypical about the community of Denham Springs. (In fact, it is pretty much near the countrywide norm.) As Figure 3 shows, a three-block walk to the grocery store in Denham Springs requires residents to walk along Route 64, which is a two-lane highway with a

45 mph speed limit, no sidewalks, and no shoulders. With no true option for pedestrians, what should be a short walk to the store becomes a drive, and the sum of many unnecessary car trips slows other cars and trucks traveling on Route 64.

It is not a benefit to drivers to force every trip to every destination, no matter how short the distance, to be taken in a car. In fact, that is the single best way to create major traffic congestion within a neighborhood. In the end, people who have to drive, or even those who just wish to drive, would benefit by getting the people that do not want to drive, or cannot drive, out of their way. Our transportation program should make this goal easier.

And of course, it is not just “auto-only” advocates who would have concerns about this funding approach. Supporters of transportation alternatives, such as transit and bike/pedestrian infrastructure, might also worry if their projects had to compete with highways, and they currently can rely on a programs dedicated to their favored modes of travel. But while these programs were meant to create a floor for funding transportation options, they have, in many cases, become ceilings. Further, some of these programs are constantly a target and have been cut back substantially

during the Obama administration (a supporter of alternative transportation).

The next president should move the transportation program from one that prescribes discrete modal solutions (highways, transit, rail, and so on) to one that finds the best, most cost-effective projects to support federal priorities, regardless of mode. Doing so would also allow the program to grow with the ever-changing transportation sector, as new technology and options, such as car-sharing and self-driving cars, become more available.

### *Work more closely with local governments*

Many transportation problems emanate from land use, or development, mistakes or poor coordination between land use and transportation decisions. When communities build housing far away from jobs, or spread development out without creating town centers, they create a need for large, expensive roadways. A good example is the metropolitan area around Cleveland, Ohio. Figure 4 shows the region in 1948 and in 2002, in which over time, urban development spread across the county, yet the population actually stayed about the same.

This pattern of urban sprawl means that the same number of people now have to pay to maintain almost double the amount freeway and arterial roadway miles. And for their increased investment, they now get significantly deteriorated transportation performance. While the population actually decreased from 1982 to 2007, the amount of travel time spent in congestion in Cleveland went from 10 percent to 23 percent, and rush “hour” has increased from three hours to five hours.<sup>22</sup> This is often identified as a transportation problem, but the reality is that our current transportation program actually enabled this situation, and looking to current policy for solutions will only make things worse.

Clearly, land use and transportation impact one another, and should be coordinated. However, land use decisions are made at the local level, and most transportation decisions are made by the state. When the local municipality and

state government do not work together, development of our transportation system goes down the wrong path, like it did in Cleveland. And when things reach the crisis stage, both the municipality and the state expect the federal government to pay for a solution. By that time, however, the solutions are quite expensive.

There are two ways to address the poor coordination between land use and transportation policy. The best way is for the federal program to bring local officials into transportation decision-making. Currently, only about 10 percent of federal highway funds are designated to address local needs. Urbanized areas with a population of over 200,000 make their own programming decisions through MPOs, which were created to set regional transportation priorities. Some MPOs consider land use issues in the prioritization of their funding, but this is not common. And while MPOs work with localities that have land use authority, MPOs themselves do not. For areas under 200,000 in population, transportation priorities are set by the state.<sup>23</sup>

Local governments are closer to the taxpayer and more familiar with their transportation priorities. They are more sensitive to accommodating short-distance travel and moving those short trips off of the roadways. States, on the other hand, often consider those trips to be too small to worry about.

Another way to coordinate federal transportation investments with land use decisions is to require the states to consider it in their decision-making. Some states are starting to do this on their own. In Virginia, the state DOT rates new capacity projects on several issues: safety, job accessibility, economic development, environmental protection, congestion reduction, and, in large metropolitan areas, coordination with land use decisions.<sup>24</sup>

In Florida, as part of their effort to improve bicycle and pedestrian safety across the state, the Florida DOT is building more “Complete Streets,” or roads that are built to be safe for those traveling in and out of a vehicle.<sup>25</sup> Part of their approach is to invest their funds where the locality agrees to development patterns that support the Complete

Street approach—moving storefronts close to the sidewalk, increasing density, and allowing a mix of development (housing, restaurants, businesses, and so on).

The next president should encourage coordination between transportation and land use through reforms to the planning or project selection process or through the use of competitive programs to support it. Regardless of how it is done, failure to coordinate land use and transportation is too expensive for the federal government to support. Areas that want a more expensive development pattern should foot the bill for the accompanying high transportation needs themselves.

### *Restructure transportation governance around responsibilities and outcomes*

The current transportation program is organized around modes of travel, including the U.S. Department of Transportation (USDOT) itself, which is divided into nine “modal administrations” that each focus on a kind of travel, as broad as aviation and as specific as truck and motor coach safety. As a result, the actual surface transportation responsibilities of the department—safety, research, performance maintenance, and system enhancement—overlap in many of the agencies and can be difficult to coordinate. Currently, USDOT has safety responsibilities for surface transportation spread across six agencies, resulting in separate regulations on individual issues, such as “distracted driving” initiatives for drivers of cars, trucks, buses, and trains.

Measuring the performance of the system, which Congress required in the Moving Ahead for Progress in the 21st Century Act (MAP-21) that passed in 2012, is also divided among three agencies. Congress created overlapping systems that sometimes support each other and sometimes conflict. Research is also divided, many times with similar research being done by multiple agencies.

Even the congressional side is siloed by mode of transportation. In the Senate, the committee with jurisdiction over highways and waterways is the Environment and Public Works Committee. Transit is in the Banking, Housing, and Urban Affairs Committee. Rail, aviation, and shipping are

in the Commerce, Science, and Transportation Committee. Financing the program is in yet another committee. The House of Representatives is better coordinated but still hampered by the divided Senate. As a result, where Congress should be setting out clear goals for the transportation program, there is more focus on committee jurisdiction.

To reach greater outcomes and efficiency, not only should USDOT be organized based on its responsibilities (such as safety and performance), so should Congress.

## **Change #3: Reward Innovation through Competition and Performance Management**

### *Use competition to ensure that new transportation infrastructure supports federal goals*

Where the existing system has been maximized and new infrastructure is still needed, transportation agencies should be able to come to the federal government for support. However, that support should be through a competitive process that allows the federal government to analyze the benefits and costs of the various proposals and see which ones best address federal priorities.<sup>26</sup> Such competition would also encourage project sponsors to make limited dollars go further and try more thoughtful approaches to solve their transportation challenges in an attempt to outshine their competitors.

Such an analysis would also require the federal government to ascertain whether the transportation agency seeking an expansion could afford to maintain the asset along with the rest of their system. This requirement is similar to the current approach used in the federal transit program: formula funds are used for maintenance and equipment replacements, while major new construction has to compete for new funding. If a community is unable to maintain the rest of its transit system, it is not given funding for a new line. (Contrast this with the current highway program, where a state may build new highways while other parts of its system crumbles.)

USDOT’s TIGER program is an example of a program that

funds projects based on the impacts on federal priorities, regardless of transportation mode. TIGER selects projects based on the extent to which they improve safety, economic competitiveness, quality of life, environmental sustainability, and state of repair—the five priorities in USDOT’s strategic plan. The TIGER program is open to any governmental entity and is the most flexible, multimodal program in the department. It is also the most oversubscribed.<sup>27</sup>

When competing for TIGER funding, transportation agencies that previously may have dismissed building projects employing innovative project delivery techniques, green infrastructure, or new safety features almost never fail to propose such elements in their applications for TIGER funding. As a matter of their regular program (funded with reliable formula dollars), designing a project in a new way is challenging and difficult to justify. It might raise the cost or slow the delivery of the project. But in a competitive grant program such as TIGER, the innovation is necessary to beat their competitors. Once these techniques are successfully used on a TIGER project, they are also more easily incorporated into the regular program.

The competition under TIGER is so oversubscribed at the moment that it creates immense pressure on the USDOT to provide support for as many projects as possible. USDOT currently funds only 5 percent of applicants for TIGER funding, but even at that level, the grants max out at around \$25 million to ensure there is enough funding to support even that small percentage of applicants. Knowing the competition is fierce likewise encourages applicants to find the lowest cost solution or to find as much local, state and/or private funds to match TIGER funds. Both help to get the federal taxpayer strong results from their investment.

Through TIGER, USDOT has funded projects that are too multimodal for the federal formula program. It has funded nationally significant undertakings, such as CREATE in Chicago, a group of seventy-one projects that will relieve the nation’s biggest freight rail bottleneck. TIGER also has funded projects that are necessary for local economic development but are not a state priority, such as the rebuilding of the main street in Whitefish, Montana—

the gateway to Glacier National Park. The program has also funded projects that run counter to a culture used to building highways, such as the reconstruction of Route 34 in New Haven, Connecticut (an underutilized downtown highway that dead ends into a parking lot), into an urban boulevard that supports new development and stitches the community back together.

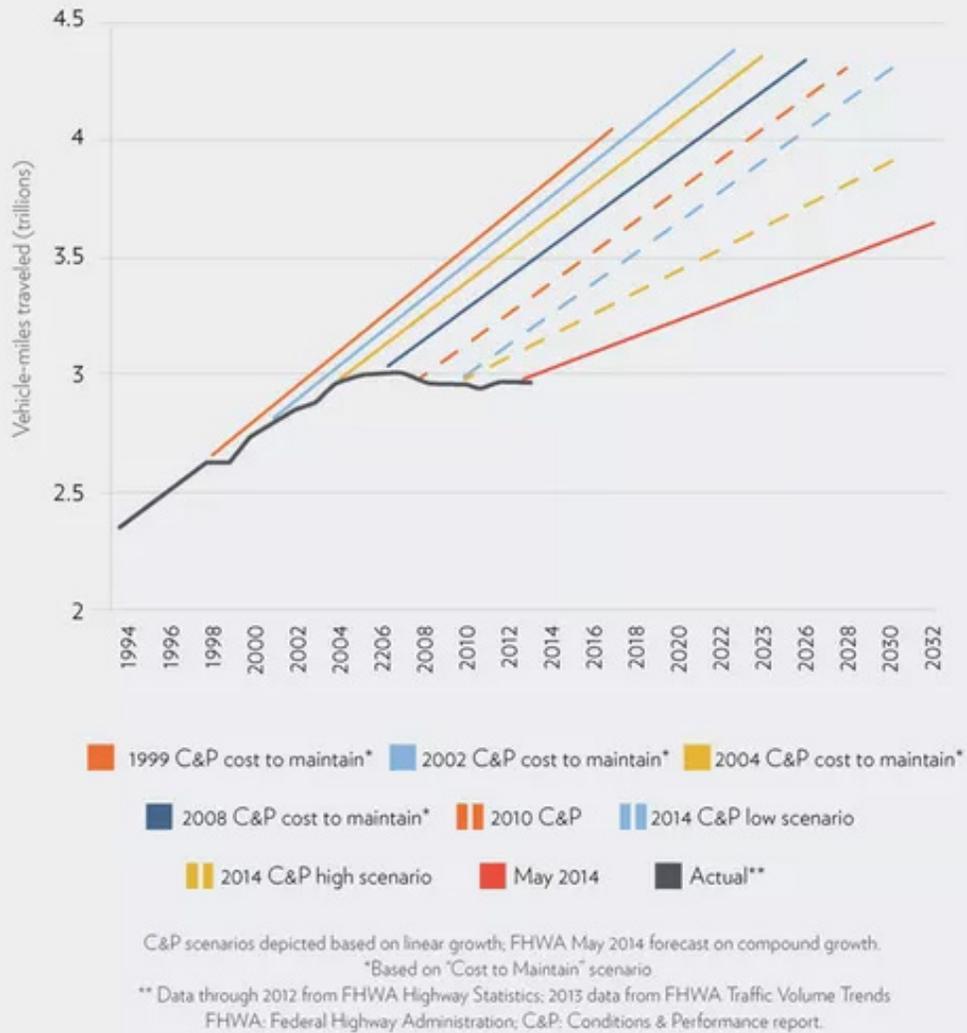
In spite of its incredible accomplishments, TIGER remains less than 1 percent of the federal transportation program, funded at \$500 million for fiscal 2016. And while most of the highway program has guaranteed funding until fiscal 2020, TIGER does not. Congress could end it as early as 2017.

The next president should make TIGER the model for funding new capacity projects.

In the FAST Act, Congress did recognize the importance of competitive programs, creating the Nationally Significant Freight and Highway Projects program, which will receive \$800 million in fiscal 2016, rising to \$1 billion in fiscal 2020. While this is an important step forward, it has two deficiencies. First, all but 10 percent of the program is reserved for projects that cost over \$100 million, or over 30 percent of a state’s annual highway apportionment. As a result, it is focused more on high cost than on outcomes. In TIGER, the competition favors those who innovate to find less expensive solutions with big outcomes. Under Nationally Significant Freight and Highway Projects, a \$95 million project in Arkansas would not even be eligible to compete, unless it adds \$6 million more in cost.

Second, the Nationally Significant Freight and Highway Projects for the most part can only fund highway or bridge projects on the National Highway System, intermodal projects on the National Multimodal Freight Network, or rail-highway grade projects. TIGER can build highways, bridges, main streets, bus rapid transit, streetcars, commuter rail, intercity rail, freight rail, intermodal, and port projects, as well as bicycle and pedestrian infrastructure. Under the FAST Act, Congress funded a program that favors a narrow type of (high-priced) project over a program that rewards good outcomes, however they are achieved.

FIGURE 5. U.S. DEPARTMENT OF TRANSPORTATION FORECASTS OF FUTURE DRIVING, VERSUS REALITY



Source: State Smart Transportation Initiative.

The next president should seek to reorganize the transportation program to use competition to fund new transportation infrastructure and expansions, reserving formula funds for maintenance and repair. The competition should be used to fund surface transportation projects of all modes that support national priorities, encourage innovation and efficiency, and the sponsoring agency can maintain along with the rest of their system.

### *Use better data to monitor performance*

Transportation agencies consistently measure three areas of

performance: system condition, in order to schedule regular maintenance; traffic collisions and fatalities, along with their causes;<sup>28</sup> and traffic flow. In fact, maintaining free-flowing traffic conditions at all times of day (including rush hour) is frequently a concern regarding roadways. Even a few minutes of slow-down in a day is sometimes identified as "traffic congestion" that requires attention.

The way traffic flow is projected, however, is based on very shaky traffic demand projections. For decades, the amount of travel (referred to as vehicle miles traveled, or VMT) increased consistently every year. Then, as the number of

households with kids shrunk, as some people have moved back to the city, as suburbs have retrofitted to be more walkable and create town centers, and as many businesses left far-flung office parks,<sup>29</sup> VMT flattened out. But in spite of the change, the Federal Highway Administration (FHWA) continued to project that VMT would rise at the traditional pace in its biennial Conditions and Performance report (see Figure 5).

FHWA's projections were the same no matter whether the economy was strong (as it was in 2002) or weak (as it was in 2010), whether the price of gas was low (as it was in 2002) or high (as it was in 2008). This is not entirely FHWA's fault, as they simply relied on state projections to put their national projection together. After over a decade of being consistently wrong, FHWA is developing its own projections for VMT that look at economic conditions and other factors that impact it.

These poor projections not only contribute to inaccurate federal reports, they also impact the spending of taxpayer dollars. For example, in Milwaukee, Wisconsin, the state DOT wants to spend \$800 million to double-deck I-94 based on questionable projections of future traffic increases. This is despite the DOT's own data showing projected traffic increases are not materializing, and objections from local officials and citizen groups. Unfortunately, the DOT has justified several highway expansion projects using similarly dubious data. Research done in 2013 by a local interest group in Wisconsin found that traffic counts on seven recently completed highways were well below the projected amounts that were used to justify the expansions.<sup>30</sup> Yet the state DOT continues to project future transportation demand using the same faulty method.

In Southern California, the Transportation Corridor Agency (TCA) that manages Route 241 wants to build the \$200 million "Tesoro Extension" to extend the road 5.5 miles for the first phase of an eventual 16-mile extension of the highway. This is in spite of the fact that Route 241—a tolled facility—has failed to meet traffic projections, and that the TCA has struggled to avoid default on its debts. In fact, demand for travel on California 241 has not met official projections for

a decade, with fewer transactions in fiscal year 2014 than in fiscal 2004. But the TCA still argues for an expansion based on more projections of eventual traffic, and there is nothing in the federal highway program to say that federal dollars might be better spent elsewhere in California where current traffic problems exist.<sup>31</sup>

A big part of the problem is that the traffic projections used to justify projects through the planning process and environmental reviews are always and only forward-looking. Nothing in the federal program requires transportation agencies to look back to see if their traffic projections—statistics used in the design of every single project—have been accurate.

The next president should require transportation agencies to report on the accuracy of their modeling based on past performance. He or she should ask that this information be included in agency planning and environmental review documents so that stakeholders and the public can fully understand the quality of these proposals.

### *Measure what matters*

Under the MAP-21, states, MPOs, and transit agencies will measure some areas of performance of their transportation systems. It is an exciting step forward but a limited one. USDOT is still writing the rules that will govern this process, which will involve three USDOT agencies.

The National Highway Traffic Safety Administration has already released a rule that requires state highway safety officials to set targets for safety improvements. The Federal Transit Administration (FTA) is developing a rule to set transit safety performance measures and to define "state of repair" for transit measured by the condition of equipment, rolling stock, infrastructure, and facilities.<sup>32</sup> FTA funding recipients (state DOTs and transit agencies) will set targets under each of these measures and report their progress regularly.

FHWA is also working on rules to establish twelve measures covering a wider range of goal areas, including safety,

infrastructure condition, congestion reduction, system reliability, and air quality.<sup>33</sup> Then state DOTs and MPOs will set targets under each of these measures and explain to the public how they plan to reach those targets. Progress will be reported to the public and, where a state DOT or MPO misses their target under safety or infrastructure condition, they will lose flexibility over a small portion of funds earmarked for these areas. For the other measures, failure to reach a target will be reported to the public.

How these performance areas are defined will have a major impact on how states, MPOs, and transit agencies invest their transportation dollars. For example, the Obama administration could require states and MPOs to set targets to reduce carbon emissions under the mobile source emissions performance measure. It could also choose to measure congestion more precisely than any slowdown in traffic speeds at any time (which is current practice) and, instead, focus on the bottlenecks that interfere economic growth.

The Obama administration could also choose a congestion exposure measure that considers more than just drivers. There is certainly traffic in New York City, but 65 percent of commuters do not enter the congestion due to the availability of transit, biking, and walking. This is certainly a better story than the one in San Jose, where 85 percent of commuters are subjected to serious congestion.<sup>34</sup> The way we measure congestion should account for this difference.

If the Obama administration fails to manage this process in a way that addresses greenhouse gases, focuses on heavy congestion and considers all travelers, the next president should take the time to fix it.

Beyond MAP-21, the next president should push the country to measure the things that politicians brag about when transportation bills are passed. We should measure the extent to which federal investment leads to permanent jobs and a strong economy, not just how traffic is moving. Traffic can, and often does, move better when economic activity is weak.

Secretary Foxx has also pointed out that Congress failed to require states and MPOs to measure whether people have good, multimodal transportation access to jobs. An uncongested trip by roadway, for example, does not get a non-driver to work or to school. And that very highway that cars are cruising down may actually be a barrier to the pedestrian trying to cross it on the way to work or school.

### *Reward good performance*

In the world of transportation, and in many things, there should be rewards for doing well, and consequences for doing poorly. Under the current program, states and agencies that miss all of their self-selected targets typically get more federal funds to try again. Sometimes, the target might even be to do worse—that is, slow the descent of a certain performance measure, such as going from 500 fatalities one year to 525 the next—and, even if that target is missed, there is little consequence. Hopefully, the fear of public embarrassment and reproach is enough to force some improvements to the existing system. However, this lack of accountability should not stand, and the next president should demand more.

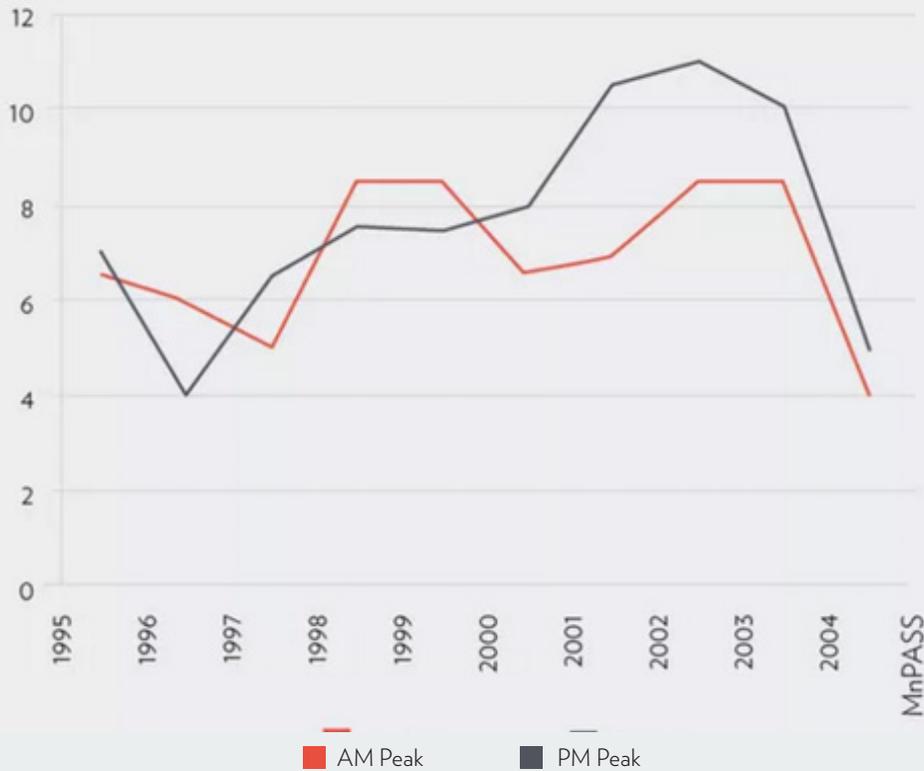
The next president should use the bully pulpit to magnify the results of the first round of performance measurement, praising those that were ambitious and did well, and criticizing those that tried little and accomplished less. Additionally, future programs should tie money to results. There could be bonus funds for those that set and meet ambitious targets. And the extent to which a future program moves toward competition, those programs could give weight to transportation agencies that are performing well.

## **Change #4: Meet Transportation Needs with Transportation Funds**

### *Commit a permanent stream of transportation income for multi-modal transportation needs*

Funding problems create the opportunity to talk about reforms, but even with reforms, there will be a funding

FIGURE 6. MILES OF CONGESTION ON I-394



Source: Hubert H. Humphrey Institute of Public Affairs, University of Minnesota.

gap. Simply put, the program either needs to be cut, to be supplied with additional funds to address the growing gap between gas tax receipts and the size of the transportation program, or a combination of the two. The reforms proposed in this report can help to keep costs down, but in the end, more funding will be needed.

President Obama offered several proposals over the past seven years to improve the current surface transportation system by rewarding innovation, removing silos, and increasing accountability. Most recently, his fiscal 2017 budget proposal<sup>35</sup> included a \$10 tax on every oil barrel produced to fund an ambitious set of green transportation initiatives. This new tax on oil would generate \$30 billion a

year that the president would dedicate to new programs to reduce traffic, provide transportation alternatives, and lower carbon emissions.

Specifically, President Obama proposes:

- \$6 billion a year to encourage regional transportation and land-use strategies that reduce greenhouse gas emissions and vehicle miles traveled, and improve climate resilience;
- \$1.5 billion a year for a competitive grant program to support transit-oriented development and complete streets policies;

- \$1.7 billion a year for Climate-Smart Performance Formula Funds to incentivize state action to cut greenhouse gas emissions; and
- \$200 million per year for an autonomous vehicle deployment pilot.

These are exciting and innovative ideas that could have been an important part of the FAST Act in terms of a viable funding source for the program and better outcomes for the country. Unfortunately, these proposals essentially became moot with the signing of the FAST Act. And while President Obama had shared exciting transportation reform ideas before this year,<sup>36</sup> the administration did not fight hard for their consideration, and Congress included very little of them in their reauthorization bills.

With the signing of the FAST Act, Congress and President Obama have actually created a transportation funding headache for the next president. While the bill keeps existing program levels (even with a bump for inflation), these were not paid for honestly. Instead, they used gimmicks and took non-transportation funds to close the gaps, while still protecting the program's funding from annual budget cuts as if it were still fully user-funded. The inflated funding levels and the flat revenue from the gas tax mean that the program will exhaust its reserves by 2021, and will require an additional \$17.3 billion a year to support the current authorization. That gap equals almost 30 percent of the total program.

The next president should insist that this program be funded honestly. By the simple math of politics, if transportation is a priority, then Americans will fund it. If they are unwilling to fund it, then it is not a priority.

There has been bipartisan fear of saying this, but raising the gas tax is the easiest way to fix the funding crisis in the near term. The U.S. gas tax is low by international standards and can certainly be raised if transportation is the priority that everyone claims it is. The effectiveness of the gas tax in raising funds will erode as vehicles continue to become

more fuel-efficient. But there is plenty of time to get some use out of it.

To address the impact of fuel-efficient vehicles on raising funds, the next president could push the program toward a VMT tax, so that every vehicle pays for its use of the system, rather than how much gas it burns. Oregon currently is piloting this approach under a program called OReGO.<sup>37</sup> The Oregon DOT charges volunteers 1.5 cents per mile, and then gives a tax credit for gas tax paid. Volunteers track their mileage through a mileage reporting device selected from a couple options by the participant and managed by a private vendor.

Other ways to raise funds include a more widespread use of tolling and congestion pricing. Tolling is not permitted on existing Interstates, but the Obama administration proposed to remove the ban. Tolls might not come to the federal government for dispersal but they do lessen the need for additional federal funds. The next president should revisit the ban on tolls.

The next president should also join the Bush and Obama administrations in elevating congestion pricing as an option. Under congestion pricing, tolls increase as congestion increases. Drivers pay not only for the use of the highway, but the use of the highway during high-demand times. This kind of system incentivizes people to move discretionary trips to lower-demand times of day and to use modes of travel that increase capacity and throughput, like carpooling, vanpooling, and transit. Such a plan could not only raise funds but also result in more efficient roadway use by distributing traffic away from rush hour peaks.

In Minnesota, the DOT established congestion pricing on I-394 in Minneapolis in 2004, and they use the revenues to improve the highway and transit in the corridor. Ever since, congestion levels on this highway have consistently dropped, while congestion on other similar Interstates in the area continues to grow.<sup>38</sup>

Another funding option that has been a best practice for decades and, yet, continues to be under-utilized is

value capture. This refers to any tax, assessment, or fee structure collected on land that increases in value due to a transportation investment. The tax is then used to fund the building, operation or maintenance of the project itself. Value capture strategies tie project funding to the benefits created by the project.

For example, Kansas City's new downtown streetcar is being financed by special property and sales taxes within a Transportation Development District, a defined area within approximately one-quarter mile of the new rail line.<sup>39</sup> In 2012, a special mail-in vote approved an extra 1 cent in sales taxes within the district for twenty-five years, along with special increased property tax rates. The city has issued bonds against this new revenue in order to finance the construction of the transit line.

The next president could require projects that generate land value increases to capture at least part of that increase to pay for the system. Or project sponsors could be required to at least consider value capture as an option in order to qualify for federal funding.

These are not the only ways to raise more money for the transportation system. But most other options raise smaller increments of funding. Some propose bonds or other methods of borrowing money, but this would just spread out payments, not create more funding.

In the end, we are all going to have to pay more than we currently do for what we use, reduce the overall program, or pay on credit.

### *Put the risk of projects on the project sponsor*

If a project does not address repair needs, or accommodation of federal priorities, then the cost of that project should fall on the sponsor. Transportation agencies that need help with a large project that overwhelms their immediate resources could utilize one of the federal loan programs, such as the Transportation Infrastructure Finance and Innovation Act (TIFIA). This program provides favorable repayment terms and lends at the Treasury rate (which was 2.61 percent as

of April 17, 2016).<sup>40</sup> Because the state or locality that takes out the loan would bear the responsibility for paying it back, this program would not, and should not, require the level of scrutiny of a grant program.

However, even in the case of a loan, the federal government should consider whether the project sponsor can afford to maintain the project once it is built, and whether the agency can maintain the rest of its transportation system while it repays the loan. Currently, the law only allows USDOT to consider the agency's ability to repay the loan, allowing states to run up credit card debt for projects they cannot afford.

For example, USDOT provided a \$209 million loan to Ohio in 2015 for a \$634 million bypass of Portsmouth, praising it as an "important project"<sup>41</sup> for the region. This loan will be paid back out of future Ohio budgets for a project that will reduce trip times through the region by sixteen minutes, but that will also take traffic away from a small, struggling town that has lost half of its population over the past eighty years. While the importance of this project was rated as "significantly below average"<sup>42</sup> by Ohio's own Transportation Review Advisory Council, the state still made the project possible through USDOT's loan. At a time when the state has 2,200 deficient bridges in need of repair,<sup>43</sup> this might not have been the wisest decision.

The federal government cannot stop state and local governments from making questionable choices with state and local funds. But the federal program should not support such decisions. Loan applicants should be required to demonstrate that they can maintain the assets being built and their other assets before getting favorable federally backed loans.

## Conclusion

Transportation continues to be a bipartisan issue, in an era during which there are few of them left. But this bipartisanship has supported an increasingly aimless program, one that is funded with gimmicks, and, in the end, is unsustainable. The next president should look with a critical eye at this program and propose ways to get the taxpayer a higher return on

their substantial investment.

The next president should focus on the four main changes detailed in this report, setting the tone for transportation policy within DOT and driving systematic reforms. These are big changes, but changes that will improve the system, and thus increase faith in the program.

With leadership from the top and a call for greater accountability, we can make sure our funding goes farther and accomplishes more. We can deliver to the American people the results that we continually promise them—a safe, reliable, well-maintained transportation system that connects them to jobs and opportunity.

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