

**Federal Reserve Bank of Chicago**  
**Fourth Annual Summit on Regional Competitiveness**  
**November 17, 2016**

**The Region's Infrastructure Condition**  
**and Economic Impact**

MALE SPEAKER: As I'm sure you'll agree, we are fortunate to live in North America's premier transportation hub as a major component of our regional economy.

Before I introduce this panel's moderator, I'd like to remind the audience of one of the key points stated in the Chicago Tri-State Metropolitan Area Territorial Review. It said, "Much of the existing public infrastructure in the region is in need of maintenance, refurbishment, and upgrading. The challenge facing the transportation hub in particular is that the lack of interstate planning and the need for significant ongoing investments to address passenger and freight infrastructure bottlenecks demand that attention be paid to these issues. No one is better placed than the tri-state region's stakeholders themselves to take on this responsibility."

The Alliance Transportation team leader is Steve Schlickman. He recently retired from his executive directorship from the University of Illinois at Chicago's

Urban Transportation Center. Prior to that, Steve served as executive director of the Chicago Area Regional Transportation Authority from 2005 to 2010.

During his career, Steve has been in all of the major surface transportation initiatives in Illinois and on the federal level since 1980 and participated in obtaining billions of dollars for funding for Illinois and the Chicago region.

President-elect Trump campaigned for dramatic increases in federal transportation funding. The U.S. may be at the cusp of the biggest investment in American infrastructure in decades. I'm very interested to hear this panel.

Ladies and gentlemen, the Region's Infrastructure Condition and Economic Impact, Mr. Steve Schlickman, your moderator.

STEVE SCHLICKMAN: Thank you very much for that introduction.

I was kind of overwhelmed this morning listening to all of the infrastructure talk and how sexy it is, so hopefully we're going to make it even sexier as we go through this panel of discussion.

Today I'm joined by a number of experts in infrastructure. First, Ben Carnahan. He's the Indiana

unit business leader of AECOM in Indianapolis.

Darren Olson, who's the senior water resources project manager for Christopher Burke Engineering. He's also the regional governor in Illinois for the American Society of Civil Engineers.

Carl Sutter is the regional governor for Wisconsin from the American Society of Civil Engineers. You'll understand in a second why we're emphasizing ASCE. He is the senior vice president for McMahon Engineers and Architects in Wisconsin.

And then we have Paula Worthington, who is an economist from the Harris School Public Policy at the University of Chicago.

Darren will be speaking to Illinois' infrastructure interests, Ben will be talking about Indiana, and Carl will be talking about Wisconsin. Paula will be giving us the basis, the economic basis, as to why we have to invest in infrastructure and various economic issues related to the infrastructure.

We have President-elect's \$1 trillion infrastructure plan. I really hope it comes true because it is desperately needed. We need to be prepared for this if it does happen, and that's the purpose of this panel is to start that dialogue, to expand the agenda that we've

already identified to get the most out of a trillion dollars.

I'm a Cubs fan, and I never thought I would see the Cubs finally win the World Series. I never thought the presidential candidates would ever debate infrastructure as they did. I want to thank both of them, and I want to support President-elect Trump in this effort. I think we all should.

We should I think emphasize that it's not just public-private partnerships. It's not just infrastructure trust funds where you loan money. We need to bring real new money to the table like we've never seen before.

This year the Alliance has spent a good part of this year developing a specific transportation agenda. We worked with the MPOs from southeast Wisconsin, northeastern Illinois, and northwest Indiana looking at their long-range plans and seeing where they matched, where they overlapped, and there were two categories that we identified that we should drill in on. One was passenger rail and the other one was freight movement.

In passenger rail, fortunately a lot of work has already been done on this by the nine states of the Midwest through the Midwest Regional Rail Initiative. So we're basically adopting their agenda for the most part, and

we're going to encourage all levels of government to fund better passenger rail service for our region.

With respect to the freight movement, we have some very sexy topics such as coordinating size and weight regulations between the states. This actually is a very important issue to the truckers. We had a conference in June. The trucking representative pointed out what a maze of regulations they have to go through to move goods in their mode of operation.

We're going to support the CREATE program, particularly the 75th Street Corridor Improvement Project, and we've got some good news I think the other day on that project about it's going forward.

We're going to support the completion of the Elgin O'Hare Western Access Project. I'm not sure how we're going to resolve conflicts with railroads, but we know that's an issue and hopefully we can be of some help there too.

There's the Touhy Avenue Connector. You probably have not heard of this, but this is really important to O'Hare, in fact. When we talked to the cargo expert from O'Hare he said, "Don't worry about air cargo on airport. We have to get this stuff out of the airport. We have to get the trucks in to receive that cargo, and like everyone else,

we're burdened by congestion." Touhy Avenue Connector is very important in that regard.

And then, as we are today, we want to continue to educate people on the importance of the funding needs to fund gaps in our infrastructure program, particularly those that will help the movement of not only goods but also people.

So what else do we need? We thought a good starting point would be to talk about the America's Infrastructure Report Card, and to do that I'm going to throw it over to Darren, who will speak to the next few slides explaining that report card.

DARREN OLSON: Thank you very much, Steve.

And thank you to the Alliance for having me here today. It's an honor. It's a very unique summit in that I've heard the word sexy and infrastructure many, many times used in the same sentence, and as an engineer, I thank you for that.

Infrastructure has been ASCE National's, one of their top priority objectives for many, many years. We put out a report card every, on a national level, four years. The grade is not sexy. This past year, this past report card in 2013 we received, the infrastructure received a grade of D+, which is actually an improvement. It was a D in 2009.

That grade was increased due to some of our categories going up. Rail was one. Solid waste was one. There were a handful of categories as you can see in the slides here where the infrastructure was improved due to investments that were made.

The lack of infrastructure and our underinvestment of infrastructure costs us all real dollars. It costs money to the economy; \$3.9 trillion. It costs more than that to business. The cost to workers and jobs, 2.5 million jobs is what this will cost us if we continue down this route, and the cost to the average family is \$3,400 a year if we continue to underinvest in our infrastructure.

So what does this underinvestment look like? We have a funding need and looking at the top section of numbers -- us engineers we really like numbers. That is the investment funding gap from 2016 through 2025. We have an overall need of nearly \$3.3 trillion over this 10-year period.

Of that, we have a portion of it funded; \$1.9 trillion, which leaves us with a gap of nearly \$1.4 trillion over the next 10 years in order to get that grade from a D+ up to a B.

So how do we go about raising the grade? This is, again, we're looking at a national level here. It's going

to require bold leadership. We have new leadership coming in in January, and that leader's going to have to have a compelling vision for what our infrastructure's going to look like over the next to 10, 20, 50 years.

We're going to have to work on building a sustainable and resilient infrastructure. We have to make sure that this infrastructure is designed to withstand climate change, to withstand all sorts of natural and man-made hazards, and we're also going to have to prioritize, plan, and fund -- the key word being fund there -- that infrastructure for the future.

We need to take a long-term look at where we need to be, 10, 20, 50 years down the road and really make a commitment to fund that investment and infrastructure.

Before I get into Illinois, I just want to say that we are putting out a new report card at the national level that will come out in March 2017, so please keep your eye out for that. Again, that's something that every four years ASCE on a national level does, and what I'll get into right now is talking about our state report card.

I think as a Chicagoan and as a civil engineer, I can safely say that none of us would be here today if it weren't for Chicago's transportation infrastructure. I'm sure a lot of us drove in a car on the road, took public



transportation, but really what I'm getting at is that Chicago wouldn't be what it is today if it wasn't for the transportation infrastructure that we have.

Chicago was, when it started back in the early history, based on water transportation, proximity to Lake Michigan, the Chicago River, a Continental Divide that was soon breached which allowed flow of goods to new markets, and a century later the rail came along and really exploded the economic hub that Chicago became.

Infrastructure is so critically important in Chicago, and how are we investing in that infrastructure? Looking at Illinois' report card we're doing a little bit better than the nation but not much. A C- is still nothing to brag about. This grade has actually increased from what it was in our previous report card, which was 2010, when we looked at Illinois' infrastructure, and that was really driven by some improvements in the road system, rails, and drinking water. There was a lot of that done here locally in Chicago.

Moving on to the next slide, we see that Chicago and Illinois have an awful lot of infrastructure, and that infrastructure needs maintenance, it needs investments, and it needs upgrades. Our rail network is the second largest in the nation, yet it can take longer for a train to get

through Chicago, a freight train to get through Chicago, than it takes that freight train to get from California to Chicago.

We have an enormous inland waterway system that is the eighth largest in the nation. Our port system ranks sixth in the nation, yet they are so underfunded they actually got the lowest score in our report card both at the state level and also at the national level of a D-.

Our transit system supports 648 million rides a year, yet over the past 20 years our transit budget has been cut by 25 percent, and 15 percent of our roads and 8 percent of our bridges are structurally deficient or in poor condition.

It is not all doom and gloom. There are smart investment programs that we have done here locally. We've seen that when we make those smart investment choices in infrastructure the grades improve. One example of that is the CREATE Program, which is a congestion relief program between the railway system and the roads, and it's a partnership -- again, the partnership here is key between U.S. Department of Transportation, State of Illinois, City of Chicago, Amtrak, and Metra.

It's in the process of completing 70 infrastructure projects throughout the Chicagoland area to free up

congestion between those two modes of transportation. The total cost of the CREATE Program is \$4.4 billion, but the total net benefit of those investments is \$26 billion. So it's smart investments like that within the Chicagoland area that are going to keep our city and our region on the economic map for decades to come.

With that, I'll pass it on to Ben.

BENJAMIN CARNAHAN: Thank you, Darren.

I'll talk about the report card for Indiana. First of all, we haven't updated ours since 2010, so we're going back to those grades.

We're performing just about on the national average; poorer than Illinois obviously, and for some of the same reasons. A lot of the post-World War II infrastructure that we constructed, the interstates, et cetera, they're all reaching the end of their design life, and so Indiana has transitioned in the last few years to -- their budget is more geared towards preservation projects; rehabilitating what we have, as opposed to any kind of congestion expansion projects.

Very little expansion projects are going on right now throughout the state, and that's true within the northwest Indiana area. I'm cautiously optimistic that we will get some additional funding for transportation. In that last

year the legislature proposed additional funding, and it didn't make it through. Both houses proposed it, but this year we have an incoming governor who has supported what the House and Senate proposed last year in Indiana, and we're hopeful that we will see a large increase in funding this year during the budget session.

Specifically to northwest Indiana, as I said, there's only a few expansion projects going on right now in the area. Mostly they're from INDOT with expansion of the interstate to add travel lanes. One of those projects is getting ready to go under way and a couple are in the works right now in the next three-year period of time.

The Gary airport was lucky enough to be able to extend their runway. That project is nearing completion. It was a major project that also called for moving Class I railroads, so that was quite an achievement.

As far as transit goes, NICTD and the Regional Development Authority have been able to get the West Lake Extension funded and underway, and they're also moving forward on the double tracking project between the state line and Michigan City, which will really help serve more transit customers as well as improve the experience on the double tracking so that there's less delay and more redundancy in the line in the event of problems.

In the future, there's very little planned in the future because of the funding problems. In the NIRPC Comprehensive Plan in this area there's only five INDOT and 13 local public agency projects that will address congestion or expansion problems. Everything else is preservation projects.

Conexus Indiana is a think tank regarding logistics and transportation that some of you are probably aware of or even have participated in. They have a plan that they published for northwest Indiana that involves a wish list of the industries that are involved in that think tank, and it's obviously much larger than the funding capabilities, but it involves a lot of improvements to the roads by the Indiana Department of Transportation, including the Illiana Project, which is on life support right now.

It also involves a lot of rail and freight projects. A lot of them are railroad grade separation projects so that it can help the movement of the trucking freight out of the railroad facilities where they're going through crossings right now. It also has some improvements to the rail access to Burns Harbor proposed as part of that plan.

Freight growth is an item that has been identified in Indiana that's going to become prominent in the next few years. We've converted a lot of rail lines to trails or

the land reverted back to the original owners because the rail line wasn't operating anymore. So that's going to be a challenge in the next few years.

Just to throw a wildcard out there that a lot of us are talking about in our industry, it's really unclear right now what self-driving vehicles, what impact they are going to have on the surface transportation industry. There's a lot of people talking about that right now.

With that, I'll pass it along to Carl.

CARL SUTTER: Okay. Thank you, Ben.

As Steve alluded to when he started this discussion here, basically what we're talking about is transportation facilities and the transportation facilities are to move people and product. That is their major purpose.

Up on the screen you should be able to see basically some facts about Wisconsin's infrastructure. It shows a few items. I won't go through each one of these individually, but it addresses rail and you'll see it does say freight rail. Most of Wisconsin rail is freight rail. We have very little passenger rail, just Amtrak going through. Roads, transit, bridges, inland waterways, and ports.

One thing I did want to bring up is we have a great asset here being adjacent to the Great Lakes: our port

system. Most people don't realize how much freight is moved through our ports. To put it in perspective -- now this is through the entire Great Lakes region -- if you were to take the freight that is moved through the port systems on the Great Lakes and put it into semis, that would be one semi every second. So it's an incredible amount of freight that gets moved through these, and people don't see it.

I was telling Darren before, I live up in northeast Wisconsin. I fly over Lake Michigan quite a bit, and I almost always see some big cargo tanker going through that area. So there is freight moving all the time there.

The last time that Wisconsin did a report card we didn't cover all of the areas in here, but I just wanted to tell you what we gave for the grades on some of the different areas. Our bridges, we graded out at a C. Overall they're in okay shape, but 8.2 percent of Wisconsin bridges are considered structurally deficient for the type of traffic they carry, which is much higher than it should be, and 5.5 percent of them are considered functionally obsolete for the volume of traffic they carry.

For the roads themselves, our roads are a D+. Now since the last report card was done, a lot of work has been done. For any of you that have been up in the corridor

between Milwaukee and Chicago here, you can see that a lot of work has been done on I-94 going up through that area, which kind of fits right in with basically Wisconsin -- there's only two seasons, winter and road construction.

A lot of you have seen that. They're getting near the end of those projects to increase the capacity and enhance the safety through there. Right now, the biggest project going on right there is the zoo interchange on the west side of Milwaukee, and I'll have to drive through that tonight, and that'll be a major nightmare. But it's all part of the progress of it.

Transit, mass transit, we gave a C+. Obviously, southeast Wisconsin does not have the mass transit system that you have right in the Chicago area here. As you can see, there's 70 million annual passenger trips even in southeast Wisconsin. It comes nowhere near comparing to what Chicago has, but we still have quite a bit of mass transit.

So with that again, this is more the southeast Wisconsin look. I did want to kind of put on my ASCE hat and go through a couple of items that ASCE National is promoting as far as infrastructure improvement that we can apply to transportation.

Basically what they're saying, in the short term, we



need a national commitment to bring existing infrastructure into a state of good repair, what we call a B on our report card. In the long-term, we must modernize and build in a targeted and strategic manner.

So what is a well-designed infrastructure plan? What should that encompass? To be an effective plan it should choose and prioritize the correct projects. We need to deliver measurable improvements in public health, safety, and quality-of-life. We need to provide long-term economic benefits to the public, and we need to include projects with sustainable future, including funding for maintenance.

We need to invest the funds strategically. That also many times means slowly. The project should be designed and built, and you've heard these terms before, in a sustainable, resilient, and cost-effective manner, and proper consideration should be given to life cycle costs.

The project should incorporate resiliency. For those of you who don't know what resiliency is, it's how fast does a project bounce back from a disaster. As an example, when Superstorm Sandy went through the New York City area and shut down the subway system, how long did it take for that come back online? That's resiliency.

Anyway, we should have significant environmental benefit such as area restoration, improved air quality

through reduced congestion, and better watershed management through eliminating vulnerabilities in the system. We need to ensure existing and new investment continues. Part of this, Steve has already alluded to. I believe Paula will also be talking about this.

This needs to be a supplement rather than a replacement for long-term investments. We need to leverage state, local, and private funding and existing federal funding. This plan cannot replace what is already happening. And we have to have the metrics reporting requirements to demonstrate success for these projects that will enhance buy-in from the users of the projects.

So in summary, we believe that an infrastructure program and projects supported by infrastructure investment must meet the following criteria. They should provide substantial, long-term benefits to the public and the economy. The cost of the project over its entire life including designing, building, operation, maintenance should be taken into account. Projects again should be built sustainably and resiliently, and investment should leverage the different types of investment whether it be governmental or private investment and not replace those critical sources of infrastructure funding.

With that, I'll turn it over to Paula. Thank you.

PAULA WORTHINGTON: Thanks so much for putting me on the program. I think this is a key challenge facing our region. I'm glad to be a part of this panel discussing it.

I just wanted to make a few key points here in these few minutes. I think you've already heard a lot of speakers this morning and early afternoon making the case that what we're doing isn't enough, so it's really important to -- basically public sector capital investment is something we need more of.

I'd add significantly to business output and business activity, it drives productivity growth, and I hope to convince you that we shouldn't be afraid to fund additional public sector investment by some judicious combination of user fees and taxes. Those are not bad words.

Just a couple of quick pictures. This is just at the national level making the point that public sector spending on transportation and also in the water infrastructure in this particular study as a share of GDP has fallen over a sustained period of time, so this is not a new problem but it is one that's pervasive.

This is a picture that gets at this at the regional level, and although some of the print is very small, what I hope you can see are the red bars in there. This is showing the share of GDP that is devoted to capital

spending by the state. What you can see is that Illinois is at the lowest level. Wisconsin is in the middle roughly of our regional states, but none of us are doing a great job. This is just intended to be a measure of commitment at the state level to funding public sector investments. So it's not just transportation but other categories of assets as well. Our three states, Illinois, Indiana, and Wisconsin, are not among the nation's leaders in this regard.

Very important point, public sector, capital investments, the availability of public sector assets, it drives GDP growth, it drives business activity. There are different estimates depending on the nature of the investment, transportation, water, other things like that. Certainly in terms of the transportation it's pretty straightforward to identify the key types of impacts you're looking at. You have issues related to saving time and reducing congestion.

You have issues related to cost savings of the users of your system and improved reliability of your public sector assets, so we think it's really important. This is just a picture that I kind of liked because it highlights the difference between the short run and long-run way of thinking about the impact of public sector capital

investment.

The red line there that you can see that pops up right away and then goes south and then comes back a bit, that's what happens if you essentially do a fiscal stimulus approach and you borrow a lot of money and you spend it on public sector capital investment. You get a boost to the economy in the short run. That's what people sometimes focus on because they like the idea of adding spending power to your economy. They like the idea of hiring a lot of people, boosting employment, and so on, but then as that stimulus is removed, there's a little bit of a snapback.

The key thing in my view is really the slow but steady path that you see under Policy One, which is picking up the productivity growth impacts of public sector spending on these kinds of investment goods.

Really that's the key message. This is looking at state level data, again trying to figure out where do Illinois, Indiana, and Wisconsin fall compared to other states in the U.S. There's a positive relationship basically between the commitment to public sector capital investments, that's the horizontal axis, and then the vertical axis is a measure of productivity growth.

So more capital investment, more commitments to capital spending in the public sector, higher rates of

total factor productivity growth. Obviously a lot of things go into this, so it's not just a one for one sure thing, but I think the evidence is pretty clear on that point.

I was very happy to hear several speakers already make a comment about the importance of maintaining the capital stock we already have. This particular graph comes from some work from people who are actually very interested in that type of capital spending, and they argue that in fact it's the spending we do on rehabbing and maintaining our existing stock can actually be even more powerful than the expansions and extensions of the stock itself. So that's, I think, an idea worth exploring.

How do we pay for all this stuff? This is a picture of the status quo. Basically states and localities rely on federal money for a good chunk of the funding, but they also raise a lot of the money on their own, and they do that through the form of a variety of user fees and taxes.

The thing I don't like about this picture is that it has this little slice called state bond proceeds and the reason I don't like it is that, well, it's great to borrow that money, but you have to pay it back, so where does that money come from? So really, you just have to keep your focus on the money coming directly from users or from

general tax revenues. That's what it's about.

My guess is you've talked about this already this morning and into the early afternoon, but this is just one way to think about how we currently fund some of our highway projects through the reliance on gas taxes, excise taxes, and as you know at the federal level and then in the state of Illinois and our state level, we haven't changed the excise tax for a very, very long time.

So this is a graph showing that if you scale those excise taxes to be at 100 in 1993 and then ask what were they in 2016, you can see that Indiana and Wisconsin have moved to theirs up a little bit, but a particular measure of construction costs -- I just chose the Washington state one because I can easily get the information I needed on it -- construction costs have risen threefold over this time period. So any given dollar you're raising from the source buys a lot less than it used to.

CMAP has done a lot of work in the Chicago area about how we might supplement our current menu of funding options. And in particular, I would draw your attention to the first column there, mileage-based user fees. This is a vehicle miles traveled tax, a road usage charge. It goes under a lot of different names. We don't have anything like that around here yet, but I think we are starting to

think maybe you we should experiment with that. Some states have started to move in that direction; Oregon, Colorado, I'm not sure who else right now, has a lot to recommend it.

Just a couple of last points. State infrastructure banks and perhaps even thinking about a national infrastructure bank in some cases; it's kind of a neat idea but again, some of these assets are not going to be assets that directly provide user fee revenue to pay back the loans. So all of the bridges in a given state that have been deemed to be structurally deficient or functionally obsolete or something like that, those are not all good candidates for tolling. We're not going to toll all the bridges. We're going to toll may be some.

You really have to be cautious when you think about these ideas around various PPPs or infrastructure banks that are trying to gauge and leverage private sectors. It's important to do that, but at the end of the day you have to recognize there's got to be some public funding behind all of this.

So in my view, what we have an obligation to do here is we need to make the case that public sector capital, public sector capital investment really matters. It drives the economy. It makes it possible for us to live the lives



we do. We need to make sure that the funding that we do have goes to the projects with the greatest returns.

That is easier said than done. People don't always agree on what measures should be used, and there are certainly other considerations, but I think the more that we can do that, the greater impact we'll have on the quality of life in our region and level of economic activity. And I think it makes it more compelling to people that we're doing wise things with the money, and we'll be more effective in advocating for additional funding.

So with that, I will turn it over to Steve.

MR. SCHLICKMAN: Thank you.

Excellent set of presentations.

Now, I'd like to get a little more specific, though. I think Ben did a really good job as did Carl, as did Darren in talking about the type of investments we need for our tristate region, but if you were to apply Carl's charge that we should choose and prioritize projects that have long-term economic benefits, which Paula again underscored, what one project -- thinking big, if you had all the money you needed to do this, what one project would you do for Illinois, for Indiana, and Wisconsin in our region?

Darren?

MR. OLSON: Well, I'm kind of a water guy, and those water presentations that we heard earlier were great, and when I look at where Chicago is on the map and how we got here, our waterways are so critically important.

If you've been down the Illinois River, you'll know that it's really the only one of the rivers with a series of locks and dams and those locks and dams were built around the 1930s with a 50-year design life. Where are we at now? We're approaching getting close to 90 years on those that were designed for 50.

I think that's the amount of commerce that moves through all of Illinois' waterway systems, 116 million tons of commodities are shipped through all of our waterways. I think we really need to double down and invest in maintaining what we have there and also then upgrading those series of locks and dams down the Illinois River.

MR. SCHLICKMAN: Ben, Indiana?

MR. CARNAHAN: I would say that probably the freight, rail freight projects that I mentioned that are desired up in that area around the Burns Harbor, and then to help with the trucking out of those facilities would be the best investments.

To tag on to something that was said earlier about the delays in Chicago to the freight, those delays are so great

that a suburb of Indianapolis worked out a deal with the railroad there to build a multimodal facility so that these railroads could bypass Chicago. If they weren't dropping cargo there, they could bypass Chicago and avoid all of that delay.

That was a significant investment that they felt was worth it, and it has paid off. There's a large amount of distribution facilities around that multimodal facility now.

MR. SCKLICKMAN: Good.

Carl, Wisconsin?

MR. SUTTER: In southeast Wisconsin, overall we have a pretty robust transportation program right now. Like I alluded to previously, what we refer to as the major projects that have been going on for several years, increasing the capacity of the highway system through there.

But we had to increase the capacity through there partly because our mass transit in the area -- although we have decent mass transit -- it's not all tied together in a regional package. Everything is separated. If we could allocate funds and make it into a regional system and take those people off the highways we would then have increased capacity on our existing highways to move freight more

easily, although I don't believe that moving freight is a big problem now.

Most of the highway between here and Milwaukee right now is at least six lanes. Some of it is eight lanes, and again, with the remainder of the megaprojects going on in that area, we're increasing the traffic capacity in that area and enhancing the safety. But I would probably put it into mass transit at this point just for the southeast Wisconsin area.

MR. SCHLICKMAN: Great, thank you.

Paula, you were giving us a lot of big picture numbers, and maybe this is for the whole panel, but Paula, can you talk about the importance of state and local funding to match the federal program?

MS. WORTHINGTON: Sure. Federal money is often used to underpin these big capital-intensive projects, but for the rehab, the maintenance, and taking care of what we have already, that has typically fallen much more on the shoulders of state and local governments themselves. Yet again, I am sort of convinced by research suggesting that the payoff to that is really quite significant. So I think that when we're thinking about where to advocate for what kinds of funding, I think it's not a crazy thing to put on the table that the federal government should be

enthusiastic about funding some of that as well because I think it has spillover effects, because when you actually do something in Wisconsin that has positive effects throughout the region.

I think the other comment I would make is that depending on whether you're talking about road transportation and you have freight and passenger and then you have transit, we think about those things very differently in terms of the right role for user fees to contribute to covering the costs of those things.

Historically, we don't expect transit users to typically cover much of the capital costs. We're really not even able to extract enough to cover fully the operating costs. So that is a concern.

MR. SCHLICKMAN: If each of you could speak to your state as to what is needed at the state and/or local level in terms of an infrastructure initiative, could you do that?

Darren?

MR. OLSON: Sure. For the state of Illinois, I think that I would model it after the CREATE Program. That was a program where you have the City of Chicago, the State of Illinois, U.S. Department of Transportation, and then you had Amtrak and Metra coming together to realize that there

was a problem with how freight and roadways were interacting both from a safety perspective and from a logistics perspective, and they worked together to prioritize projects, and they're now essentially going through and tackling those projects one at a time, and they've done a great job with the 70 projects they had.

These are all projects that make a huge investment from a benefits perspective. It costs some money, but you get a big benefit going forward. I think that as they look at whether it be roads or navigable waterways, I think they need to be able to identify those partnerships and work whether it's the waterways with the Corps of Engineers or the roads with of the Department of Transportation. Form those partnerships so they can identify these projects that are so economically important and have these big benefits and really use that CREATE Program as a model.

MR. SCHLICKMAN: Good.

Ben?

MR. CARNAHAN: We've been limping along with Band-Aid funding bills for quite some time in Indiana, and I really hope that they would come up with a long-term funding bill that addresses our needs and increases funding beyond just preservation and implement that. It would be the best thing that they could do for transportation as a whole.

MR. SCHLICKMAN: Carl, I've actually been following Wisconsin's travails in terms of increasing their funding for highways. Can you tell us what's on the forefront or not?

MR. SUTTER: Well, if I expand the discussion to the entire state of Wisconsin, the state is, depending upon how much money becomes available, stagnating right now with the projects, with the exception of the southeast area. That money has been dedicated and is being spent.

There's also some work being completed up in northeast Wisconsin for, again, highway safety improvements and increased capacity. But throughout the system it's kind of now falling back to, as we said, more of the maintenance type of thing, and we still have areas within the state that need increased capacity. So it'll be interesting to see how the next few budgets work out, but right now it's more along the lines of just maintaining rather than expanding as far as projects that aren't already being undertaken.

MR. SCHLICKMAN: Paula?

MS. WORTHINGTON: Steve, another voice in this locally has been one from the Metropolitan Planning Council, and the MPC estimated that if the state were to commit on the order of \$43 billion over a 10-year period of time it could

make an appreciable impact on the state of repair, if you will, of our transportation and infrastructure assets.

To put that into perspective, if you think about that as between \$4-5 billion a year, that's on a budget of -- assuming we would have a budget here in Illinois -- you're talking about an operating budget of between \$35-40 billion.

So it's a significant amount of money, and certainly policymakers have a lot of things competing for their attention and competing priorities are there, but it's not a crazy amount of money.

MR. SCHLICKMAN: The federal government has had the practice of requiring a match to its money, so hopefully if we do see a trillion dollars come out of Washington that will induce our states to step up and do more and also at the local level as well.

I would like to open this up for questions from the audience, and we really would like your input into this conversation as to what we need to do for our megaregion to improve infrastructure.

The first-hand I saw was right there.

MALE SPEAKER: Thank you.

There hasn't been much discussion this panel of infrastructure needs and challenges beyond the



transportation sectors, yet if you looked at the report cards, we showed the infrastructure scores for wastewater, drinking water, and a number of things we've been talking about this morning are some of the lowest on the report cards.

I wonder if anybody on the panel could speak to some of the challenges for some of the other infrastructure sectors and some of the strategies for funding.

MR. SCHLICKMAN: That's an excellent question, and I must admit, we've had somewhat of a bias on transportation at the Alliance, so I asked the panelists to kind of emphasize that, but we certainly need to address everything else too.

So if you could, anyone, speak to that question, thank you.

Darren?

MR. OLSON: The grades, if I recall for Illinois, our grade for drinking water went up slightly in the last report card due really to what the City of Chicago is doing here. They embarked on a 10-year plan to replace a lot of the drinking water mains throughout the city of Chicago.

There certainly still continues to be a need there. I live in Chicago. I have a lead service line as well. That's an issue that certainly has come to the forefront

now since what happened at Flint.

There is a need, I believe, on a national level to continue to put money into the State Revolving Loan Fund programs both on the drinking water and the clean water as well. I think that's something when we talk about the state's leveraging federal funding. I hope that some of that first federal funding goes into those programs so that our states can leverage that to upgrade our systems.

MR. SCHLICKMAN: Anybody else like to respond?

MALE SPEAKER: I'll let the water guy respond.

MR. SCHLICKMAN: Let's go to another speaker.

MALE SPEAKER: I don't mean to interrupt, but I am going to help to answer a little bit of Roger's (phonetic) question and ask you to think about this as well.

One of the things that we do if you're looking at an actual infrastructure plan of that magnitude -- Steve, you're absolutely right about the idea of cooperating, coordinating efforts, one of the things that we do in Racine is when we're doing a long-term cap on a road, in other words, it's a 20-year cap, we actually coordinate all of the efforts for all of the infrastructure below it, water, sewer, electrical, cable, so that everybody comes in at once. Because you're digging it up, it's cheaper, because everything's dug up, and then you do it all at

once, and then you can actually plan a 20-year proposal around the entire infrastructure. By doing that you not only save money, but once you put the cap down nobody's digging back into it.

So it's something to think about that I think we need to talk with the federal government about finding these efficiencies which we all know about that we can do. It makes their money go longer, it allows for the blending of the money to happen a little easier, but it gets us a longer-term solution to these bigger problems regarding water and highway infrastructure.

So something to think about that maybe we talk to the Feds about so that it's a win-win for everybody.

MR. SCHLICKMAN: Excellent. Good.

Steve.

MALE SPEAKER: Certainly not a panacea, but for certain kinds of projects, we have opportunities to do some form of what's generally called value capture. You mentioned the Gary Airport runway extension, which was a form of value capture using TIF that actually was the Midwest bond deal of the year last year for the bond buyer. They were investment-grade bonds.

Can you comment on the kinds of infrastructure where you think some form of value capture or tapping

developments, surrounding development as a way to help pay for it might be relevant?

MR. SCHLICKMAN: Paula.

MS. WORTHINGTON: I guess from what I know, transit projects are the ones that lend themselves most directly to that kind of idea. And for the most part we think that proximity to high-performing, convenient transit, high quality transit services boosts the value of properties near those nodes, and being able to capture some of that value and use it to fund the expansion or service enhancements seems like a sensible idea.

I'm not sure if there are other situations where that might be the case. Certainly if you were thinking about, for example, storm water management and developing more green infrastructure ways of managing that in sustainable, environmentally sensitive ways, you can imagine that there could be amenities provided alongside that as part of the green infrastructure that would be valuable to nearby homeowners, but I don't know if that's really a big dollar number.

MR SCHLICKMAN: Any other thoughts on that?

MR. CARNAHAN: I'm from Indiana too, so I've done many, many projects, mainly local public agency projects where they got their federal match from tax incremental

financing, TIF districts like you talked about. It's fairly common, but it's usually only used by local agencies.

MR. SCHLICKMAN: It's more than just transit I would think from Indiana's point of view.

MR. CARNAHAN: Yeah. We're often building new roadways into industrial parks, et cetera, and at the same time we're also constructing water mains and sanitary servers, and it's all part of the project.

MR. SCHLICKMAN: Thank you.

Back here.

MALE SPEAKER: Hi there. My name is Clint.

Infrastructure has never been very exciting, but in the past election, both presidential candidates talked about infrastructure and had plans about infrastructure. Does that mean we've finally turned the tide of public opinion and this topic is now something people are thinking about, and if so, does that mean we can start looking forward to our governments doing more about infrastructure?

MR. SCHLICKMAN: Personally I think, again I want to compliment the candidates for raising infrastructure for the first time in my life to the presidential debate level. I think that's going to be very helpful in giving cover to politicians hopefully not only at the national level but at

the state and local level for doing what they have to do to raise revenues to invest in infrastructure.

So I'm hopeful in that regard. I hope President Trump (sic) does go out and campaign seriously to get the votes that are needed to do something major in Congress like we haven't seen in a long time. But it also has to happen in each of our states.

As Paula pointed out, our states are behind. Not because of the federal government, because not enough investment from the state and local level. Another observation, transportation referendums across the country did very well. Why is that? Because that allowed the proponents to go out and say, "Yes, we need to increase taxes, but this is specifically what we are going to spend it on." So that's got to be part of our message.

We can't just say, "We're going to get a trillion and we're going to throw it out there and see where it sticks." No. We have to prioritize things. We have to tell people how it's going to improve our transportation or our infrastructure network throughout the country and be very specific about it so people will support their congressmen and senators to take the action they need to do. Hopefully that answers your question.

Yes, right here.

Ed (phonetic)?

MALE SPEAKER: Thank you. I have a real wildcard I'd like to throw in specifically on highway and on freight. The idea of autonomous vehicles, which I personally think is a ways down the line -- on the other hand, I never even heard of the word until six months ago.

So maybe some of this is coming more quickly than we realize. At least as I read some of the research on that in the area of congestion, not wear and tear on the highways -- that would remain the same, presumably -- but in the area of congestion, if that were to happen, basically we would not have a capacity issue. I would just like a comment on that.

MR. SCHLICKMAN: Anybody want to grab that one?

MR. CARNAHAN: It's true that most congestion is created by driver behavior. The prime example of that is when you are on a two-lane highway and you get cut down to one lane, as soon as you get in the cone zone to one lane, you speed up. That's because of the behavior of the drivers as they're merging causes the backups.

So self-driving vehicles would make that more efficient, and it definitely would help with congestion. I don't think anybody knows to what degree yet, and the big wild- -- I mentioned that of my presentation is a wildcard

-- the big wildcard is, will it be legislated? What's going to govern it?

Because there are several companies that are experimenting with it right now, and they're very serious about it. Especially in what they called the Last Mile earlier today. That's an area where a lot of those companies are investing because they can have that delivery service done by a self-driving vehicle.

I think nobody really knows the answer right now, but yeah, I do believe that if it came to be we would have a lot of overbuilt highways.

MALE SPEAKER: I had a question or specifically for Carl. You had talked about in Wisconsin, southeast Wisconsin at least, regional transit initiatives to make better use of the highways among other things. We kind of perked up here. We've got a couple of transit buffs. What would that look like? Where would you start? Do you have any thoughts along those lines?

MR. SUTTER: I think you start by getting the existing systems to work together on a comprehensive plan for the entire area. The transit systems are good, but they're kind of disconnected, and if we can make that connection, we can be so much more efficient in moving people through that whole southeastern region.



Like I said, we could free up a lot of capacity on our roads just by doing that. So probably something like -- it would almost be like a regional planning commission just for the mass transit portion of it. I guess that's where I would start.

MR. SCHLICKMAN: Well, we've just started our conversation. Unfortunately we're at the end of our time and have to cut off the conversation right here, but we certainly encourage anyone who didn't get to ask a question to approach us later this afternoon if you would like to continue this discussion. We definitely will continue it in one way or another.

I want to thank the panel very much for your very astute comments, and we will move on to the next event.

-End-