SURFACE TRANSPORTATION SYSTEM: CHALLENGES FOR THE FUTURE

(110–3)

HEARING

BEFORE THE

SUBCOMMITTEE ON
HIGHWAYS AND TRANSIT

OF THE

COMMITTEE ON
TRANSPORTATION AND
INFRASTRUCTURE
HOUSE OF REPRESENTATIVES

ONE HUNDRED TENTH CONGRESS

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U.S. House of Representatives
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January 21, 2007

MEMORANDUM

TO: Members of the Subcommittee on Highways and Transit

FROM: Subcommittee on Highways and Transit Staff

RE: **SUMMARY OF SUBJECT MATTER:** Hearing on the Surface Transportation System: Challenges of the Future

PURPOSE OF HEARING

The Subcommittee on Highways and Transit is scheduled to meet on Wednesday, January 24, 2007 at 10:00 a.m., to receive testimony on the capacity of our nation's surface transportation system and the challenges and changes it will face 30 to 50 years into the future. The hearing will be the first of a series of hearings focusing on forward-looking surface transportation infrastructure issues. The Subcommittee will hear from representatives of the U.S. Department of Transportation, the National Surface Transportation Policy and Revenue Study Commission, and the research community on how our surface transportation system will need to adapt to support our changing and expanding economy.

BACKGROUND

Throughout our nation's history, the economy has undergone constant change but one factor has remained the same: economic growth, prosperity, and opportunity have followed increased investments in infrastructure. Today, the U.S. economy is the largest and most efficient economy in the world and our transportation network, comprised of our surface transportation system, aviation system, maritime transportation system, and inland waterway system, is the envy of the world.

Transportation infrastructure provides the backbone of our economy by moving people and goods. In 2002, according to U.S. Department of Transportation statistics, over 19 billion tons of freight, valued at $13 trillion, traveled over 4.4 trillion ton-miles over our transportation network. This means that approximately 53 million tons of goods, valued at about $36 billion, moved 12 billion ton-miles per day. In addition, transportation generates a significant share of our nation's

total economic output. In 2004, transportation-related goods and services contributed $1.232 trillion, or 10.5 percent, to the U.S. Gross Domestic Product (GDP) of $11.7 trillion.

Investment in surface transportation infrastructure has far-reaching effects, not only on our nation's economy and its global competitiveness but also on the quality of life of nearly all Americans. Private individuals traveled almost 3.8 trillion person-miles in 2001, or 40.25 person-miles each day. Transportation expenses represent 18 percent of the average household's total expenditures, the second largest spending category after housing. As our country's population and economy grows, these numbers will continue to increase.

To accommodate this freight and passenger traffic, our nation has constructed an extensive road system and public transportation network. There are 4 million miles of public roads in the United States. Only about 980,000 miles of these roads are part of the Federal-aid Highway System. Among the roads that are part of the federal-aid system, about 162,000 miles are in the National Highway System, which includes the Interstate System. The Interstate highways – totaling 46,873 miles – are the premier highways in our road system; they comprise about 1.2 percent of all public road mileage, yet carry 24.4 percent of the total traffic on all public roads. Transit systems around the U.S. provided 9.6 billion trips in 2004, an average of more than 26 million passenger trips per day. The infrastructure to support these riders is extensive. There are almost 11,000 miles of transit system fixed guideway track, 3,000 transit rail stations, and more than 171,000 transit vehicles (buses, rail cars, and vans) in service.

Despite this investment to date, and the importance of transportation both to the economy and the quality of life in our communities, the expansion of transportation infrastructure has not kept pace with needs. For example, highway infrastructure, as defined by the number of available highway miles, increased only 1.97 percent between 1980 and 2000. Yet between 1980 and 2003, travel in passenger cars, defined by the number of vehicle miles traveled, grew by 50 percent. Over this same timeframe, truck miles traveled increased 95 percent, while highway travel in other two-axle vehicles including light trucks and SUVs grew 238 percent.

These unmet infrastructure needs have resulted in, among other things, an alarming increase in congestion. In February 2004, the number of severe highway bottlenecks had increased by 40 percent in just five years. According to a Texas Transportation Institute study, the severity of congestion has increased and delays affect more people and freight than ever before. In 2003, extreme or severe congestion occurred during 40 percent of peak travel periods, compared to 12 percent just two decades earlier. As congestion increases, costs to travelers increase accordingly. In 2003, traffic congestion cost motorists in the nation's 85 largest urban areas $63.1 billion in terms of wasted time and fuel. This equals an average annual cost of about $794 per person.

The investment needed to repair, maintain, and improve existing infrastructure is significant. According to DOT estimates, $53.6 billion per year is needed to sustain highways, bridges, and transit systems at their current conditions. A far higher level of investment, $74.8 billion, would be required each year to improve these systems. As an example, updated data for 2004 show that there were 593,813 highway bridges in the United States, of which 158,319 were either structurally or functionally deficient.

These aggregate numbers provide an overview of infrastructure needs based on usage and economic trends that are identifiable today. Yet as our society continues to evolve and as our

economy transforms, the types and destinations of freight and the travel patterns of people will also change, as has been the case throughout our nation's history. At the turn of the 20th century, the United States emerged from an agrarian economy to become an industrial society. Through mechanization and two world wars, the U.S. stood at the pinnacle of world industrial power by mid-century. By the end of the century, the U.S. economy had transformed again to one that was information-based, and more service-oriented. Clearly, travel patterns and mobility needs were vastly different at the end of the 20th century than they were at the beginning.

Our surface transportation system also underwent fundamental change. Simple, narrow post or market roads that were mostly unpaved and commonly found throughout the country in 1900 were replaced by modern superhighways in 2000. Such a fundamental transformation was necessary to support a changing economy. In order to set transportation policies now that will be appropriate for the future, we must consider what the U.S. economy look like in 2050, and evaluate what kind of surface transportation system we will need to support that economy and society.

To help arrive at an answer to these questions, Congress established the National Surface Transportation Policy and Revenue Study Commission in the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU), the legislation enacted in 2005 to reauthorize surface transportation programs. Congress provided the Commission a very broad mandate to: (1) project the expected demographics and business uses that impact the surface transportation system 15, 30, and 50 years in the future; (2) determine the expected uses of our surface transportation system in the same timeframes to support a strong and competitive economy, including recommendations regarding design and operational standards, federal policies, and legislative changes; and (3) develop short-term and long-term alternatives to supplement or replace the federal fuel excise taxes as the principal revenue source to support the federal Highway Trust Fund.

Congress expects the Commission to describe and analyze a surface transportation system that can support our economy 50 years in the future. Such an analysis will enable lawmakers to establish long-term goals regarding the transformation of our surface transportation system, and to move beyond simply making changes at the margins to the existing system. It will also help Congress formulate short-, medium-, and long-term strategies necessary to achieve these goals, as well as mechanisms to finance such investments. By proceeding in this manner, we stand a better chance of developing a surface transportation system – conceivably quite different than the one in existence today – that will support the economy of the future and help keep that economy competitive in the global marketplace.

PREVIOUS SUBCOMMITTEE ACTION

The Subcommittee on Highways and Transit last year held hearings on related subjects, including highway capacity, freight mobility, and logistics, long-term lease of existing transportation facilities to private entities, and intermodal approaches to solving transportation problems.

WITNESS LIST

PANEL I **The Honorable Jeffrey N. Shane**
U.S. Department of Transportation
Under Secretary for Policy
Washington, D.C.
*accompanied by Richard Capka, Administrator, Federal Highway Administration

PANEL II **Mr. Jack L. Schenendorf**
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Mr. Steve Heminger
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Oakland, California

PANEL III **Mr. Alan Pisarski**
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Falls Church, Virginia

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Chicago, Illinois

Dr. Michael S. Bronzini
George Mason University
Dewberry Chair Professor
Fairfax, Virginia

Dr. Timothy J. Lomax
Texas Transportation Institute
Program Manager, Mobility Analysis
College Station, Texas

SURFACE TRANSPORTATION SYSTEM: CHALLENGES FOR THE FUTURE

Wednesday, January 24, 2007

HOUSE OF REPRESENTATIVES, SUBCOMMITTEE ON HIGHWAYS AND TRANSIT, COMMITTEE ON TRANSPORTATION AND INFRASTRUCTURE, WASHINGTON, DC.

The subcommittee met, pursuant to call, at 10:03 a.m., in room 2167, Rayburn House Office Building, Hon. Peter A. DeFazio [Chairman of the subcommittee] presiding.

Mr. DEFAZIO. The hearing of the Subcommittee on Highways and Transit will come to order.

This hearing is on the surface transportation system challenges of the future. A couple of preliminaries.

Just to make a point, which I think is in the grand tradition of this committee, I am convening the committee with a gavel which was given to me by Speaker Hastert after the completion of the SAFETEA-LU on the floor. It was autographed by Speaker Hastert and I brought it to make a point that transportation and transportation infrastructure are not partisan issues. They have not been. They should not be. They benefit all of the American people and the economy; and I certainly intend to continue in that tradition.

Beyond that, we are also adopting the Don Young rule—some will recall it—and I do not know that Don ever did it, but he often threatened to confiscate cell phones that rang during the hearing and take them to the men's room where they would disappear. So if everyone would please put their BlackBerrys, cell phones and others on vibrate, that would be helpful for the decorum of the committee.

Then, beyond that, we are going to have a few brief opening statements. I actually did have one here, and I do not know where it has disappeared to, but I did it yesterday.

OK. I certainly want to thank my ranking member—oh—and the full committee ranking member, Mr. Mica. Jimmy Duncan and I have worked together in Water Resources and Aviation before that, so this is not new. I just normally sit to his left, which is probably where I more belong, but I am sitting in the Chair, and we changed sides, so it did not work out quite that way. But he will be a great leader for the Republican side, and I look forward to working with him and, certainly, the full committee ranking member, John Mica. He and I worked together on aviation issues, particularly in the post 9/11 environment, and I have always enjoyed a good rapport and relationship with John.

I am pleased to preside over this first hearing today—20 years in Congress, and I finally get to wield the gavel—but I should put

it in perspective. I had breakfast with a former colleague, Les AuCoin from Oregon, who was on Appropriations. He pointed out that if he was still here after 32 years, he still would not have a subcommittee gavel on Appropriations. So, you know, you need to keep it all in perspective.

I expect the subcommittee to be very active in the next 2 years. We are going to do oversight on the implementation of SAFETEA-LU, and then we are going to begin the work to build the foundations of the next reauthorization. SAFETEA-LU, in my opinion, was essentially the last transportation bill of the last century, very traditional ways of financing, a pretty traditional approach toward what we were funding.

The next bill will be very different. At this point, we do not know exactly how it will all be constructed, but it will be something that needs to look toward the future in terms of the system and what it will support and what we will construct, and we are going to have to look at new ways to pay for those needs.

This past summer, we celebrated the 50th anniversary of the Federal Aid Highway Act; and, you know, that was the foundation for this interstate system and the transportation infrastructure today. It is now time to look toward those next 50 years.

I am particularly looking forward today to hearing from the witnesses who are members of the National Surface Transportation Policy and Revenue Study Commission, which we created in SAFETEA-LU. We created the Commission in the hopes that we would get that kind of analysis, that they would look both at our needs and potential ways of increasing revenues to fund it; and we are looking forward to hearing from them. We will also hear from some administration witnesses.

Thanks for everyone's attendance here today; and, with that, I will turn to my ranking member, Mr. Duncan.

Mr. DUNCAN. Well, thank you, Mr. Chairman, but I want to go first to our ranking member of the full committee, my friend, John Mica, for his statement.

Mr. MICA. Thank you.

I do not have a formal statement prepared today, fortunately, but I want to, first of all, congratulate my friend and colleague, Mr. DeFazio, on the assumption on the chairmanship of this subcommittee. He is a hard worker, a hard charger. He referred to some of the work that was done in post-9/11. The country owes him a great debt of gratitude for his untiring efforts to make certain that in aviation and transportation that we are safe and secure. So he is a delight to work with. We share one thing in common. We both sometimes have a little temper tantrums, but everybody takes us in stride, fortunately, Peter, but————

Mr. DEFAZIO. I think it is the Italian heritage.

Mr. MICA. I think it is. It is something. You know, maybe it is in the pasta genes or something. But we do get a little excited, and people all take us in stride.

But I look forward to working with you. Today, I am glad you are kicking off today's business with looking at the long term; and that is part of our responsibility, is setting that long-term policy.

I was thinking we are a bit, though, addicted to surface transportation in the traditional sense in this country; and one of the things

is, even though it may go beyond the scope of the Commission and some of the highway subcommittee responsibilities, looking at getting us into the era of mass transit, we are woefully inadequate as far as keeping up with the rest of the world and moving people in a cost-effective manner. Maybe some of our urban areas are better, but we have got to look at that.

I will give you just one quick example in closing.

We are going to build about 20 miles of interstate through metropolitan Orlando. It is not even in my district. It is going to give us two lanes more in each direction which have a maximum capacity of 4,000 cars per hour. Most of the cars have one person in the car. The cost is $2.2 billion, and I can build an entire commuter rail system that will handle 12,000 to 15,000 people per hour for about $600 million, a fraction of the cost. We need to be looking at other ways to move people.

Of course, with surface, we have our challenges, and financing these great costs is not part of today's discussion but will eventually be part of it, and I look forward to hearing from Mr. Shane and the other witnesses you have assembled. I look forward to working with you on the challenges that we face in surface transportation, moving people cost-efficiently around our country, and I am pleased to yield back.

Mr. DEFAZIO. I thank the gentleman for that.

Yes, I call that the sort of least-cost transportation planning approach, Mr. Mica; and it is something that—we have really got to begin to break down some of these stovepipes. I mean, that is an excellent example.

Mrs. Tauscher, I believe, has an opening statement.

Mrs. TAUSCHER. Thank you, Mr. Chairman, and congratulations on your assumption of the chairmanship.

I want to thank you again for allowing me to make a brief statement.

Certainly, as you have outlined and as our witnesses will outline, our Nation's transportation infrastructure needs are not unknown. It is true that the last highway bill put a significant down payment on addressing these needs. However, we cannot avoid the fact that infrastructure is aging, our economy is changing, and highway and transit systems built 50 years ago are being used in ways never before contemplated.

Addressing this challenge will certainly require some ingenuity on our part and on the parts of the Department of Transportation, the Policy and Revenue Study Commission, the State DOTs, and certainly the local MPOs. It is with that in mind that I would like to especially welcome to today's hearing Mr. Steve Heminger. Steve will join us today on the second panel.

As many of you already know, Steve serves as the Executive Director of the Metropolitan Transportation Commission in Northern California's Bay Area, where I am from. He also serves on the National Service Transportation Policy Revenue Study Commission and as an appointee of Speaker Pelosi. Steve's experience in the Bay Area will certainly provide the Commission and this committee with important insights as to how to aggressively and smartly manage, as he does with his MPO, the leveraging of Federal, State and local funding sources to address issues of congestion capacity

and development in one of our Nation's most transportation-dependent regions. I am looking forward to Steve's testimony today, and I appreciate his taking time to come before the subcommittee.

Again, Mr. Chairman, I thank you and congratulate you for assuming this great job. I yield back.

Mr. DEFAZIO. I thank the gentlelady. I thank her for being so succinct.

Mr. Duncan.

Mr. DUNCAN. Well, thank you very much, Mr. Chairman; and, first of all, let me also congratulate you on assuming your first chairmanship.

As you mentioned, I had the privilege of chairing the Aviation Subcommittee for 6 years and then the Water Resources and Environment Subcommittee for 6 years. You have worked with me throughout that time, part of the time as ranking member on the Water Resources Subcommittee; and it was always a privilege and pleasure to work with you. You and I have already met, and I have expressed my hope and desire that we have a very active subcommittee for this next 2 years, and I believe we will.

I served in the minority my first 6 years in the Congress, and certainly, my preference is to be in the majority, but your side treated me very fairly during those first 6 years. There was rapid turnover of chairmanships in that time period, and I served under three full committee chairmen in those first 6 years, but this committee, as you previously mentioned, has a history of bipartisanship, and I hope that and believe that we will continue that during this Congress.

I am pleased to begin our subcommittee's work with this first hearing, and I am glad that we are aiming high and tackling such an important subject. In the 110th Congress, the Transportation and Infrastructure Committee will begin to lay the groundwork for the reauthorization of the Federal Highway, Transit and Highway Safety Programs, all of those that we have had in place and those that were last authorized in the 2005 SAFETEA-LU legislation.

It is critically important that we understand the needs of the Nation's surface transportation systems before we begin to write legislation and finding national programs to support that system. Over the last 50 years, transportation in this country has radically changed, and those changes have not appeared in a vacuum. Changes in the national surface transportation system have been driven, in part, by the goals and policies put in place by Federal, State and local governments.

In addition, market forces in our ever-changing economy have played an important role in the development of our surface transportation system. As we try to determine what the national surface transportation system will look like over the next 25 or 50 years, it is clear that the system must respond to the needs of the U.S. economy and a society that continues to rapidly grow and change.

One problem with the national surface transportation system, a major problem, that we must address is congestion. Congestion is choking our economy and degrading our quality of life. Congestion costs motorists more than $60 billion a year by the most conservative estimate, and the most conservative estimates in wasted time

and fuel costs the average person in this country approximately $800 a year by the lowest estimates.

Part of the congestion crisis has been caused by the fact that infrastructure investment has not kept pace with the needs of the transportation system. For example, the total number of highway miles grew by only 2 percent between 1980 and 2000. Yet, during those same years, the number of passenger car miles driven increased by 50 percent, and truck miles increased by 95 percent. The expected population and freight traffic growth over the next few decades will make what is already a terrible problem much worse.

We have to tackle the congestion problem with real solutions. As one of our witnesses will say in his testimony later this morning, transportation projects are not about faster travel; they are about supporting an economy that competes in the global marketplace, supports families, encourages innovation, and creates options that allow citizens to improve their lives. That is what this hearing this morning is about, and that is what the work of this subcommittee is about.

Another national trend for which we must be prepared is the graying of America. As our population grows in size, the average age of our citizens is also increasing. In 50 years, the percentage of the population over 65 will almost double, and that is an important thing that we need to take into consideration.

I look forward to hearing from all of our distinguished witnesses this morning, and I yield back the balance of my time.

Mr. DEFAZIO. I thank the gentleman for his statement.

Mrs. Napolitano.

Mrs. NAPOLITANO. Thank you, Mr. Chair; and I am very, very happy to be on this committee, very honored. After 8 years, I have made it.

I represent the 38th District of California, which is a major surface transit area and has major problems, specifically dealing with one of the major freeways, the Santa Ana freeway, the I–5, which is a major transportation corridor from Mexico to Canada, and it is very heavily congested in Los Angeles County. However, in my area, there is an 18-mile bottleneck of three lanes coming in from six lanes from the Orange County area into my district. You can get on that freeway any time of the day, and you are sitting in traffic. It is used by 25,000 trucks a day—that is not counting cars, just trucks—on a three-lane highway.

The joint powers authority have been working to expand it. Ninety-nine percent of that funding is coming from State, local and regional; and it concerns me that there is very little Federal support or funding to be able to work on this traffic congestion issue in one of the biggest areas of California.

I would like to, as we move along, try to figure out how the Federal Highway Administration and the Department of Transportation can provide support for these major regional congestion relief projects. Also, California just passed a $20 billion transportation bond package, and I would like to be able to ask the Department of Transportation how they plan to supplement that initiative with Federal support to address some of the major issues of transportation in California.

I have also discussed with you separately the grade separations. The Los Angeles and Long Beach harbors, next to each other, handle over 50 percent of the world's goods through train transportation. They come up through Long Beach up into Los Angeles, and then they take an eastern route through my whole district. There are 38 miles, roughly, 40 some odd, of the rail corridor, serving 1.9 million residents in 30 cities; and it distributes $314 billion in annual trade through 54 total grade crossings along what is called the Alameda Corridor East.

The Authority of ACE plans to do 20 grade crossings. Two have been completed, eight more are funded, and ten are proposed. That is not enough, ladies and gentlemen, because most of the transportation problems that we have in my area are caused by traffic accidents at the rail crossings.

We need to look and see how they prioritize, how they can help or how we can work with the railroads; and I am already working with the Subcommittee Chairwoman, Corrine Brown, over the issue of the rail traffic increase in that area, which is going to go 10-fold in the next 20 years, they tell me.

So that is a major issue for me, and I am glad to be here, and I thank you for the ability to be able to address this committee. I yield back.

Mr. DEFAZIO. I thank the gentlelady, and I would now recognize Henry Brown.

Mr. BROWN. I thank you, Mr. Chairman; and I also would like to extend my congratulations to you and to Ranking Member Duncan. I look forward to your leadership as we proceed for the next 2 years. I appreciate your holding this hearing this morning, and I thank the panelists for their thoughtfulness and informative testimony.

I understand that this hearing is focused on taking the long view, perhaps 50 years, into the future, where our surface transportation will be and what steps we will need to take to get it there, but I want to take the opportunity early on to discuss the present.

Just last week, every member of this subcommittee sent a strong message about the challenges facing our current transportation system. We wrote Mr. Obey and Mr. Lewis about the funding levels we passed into law as part of the Highway Bill. As we begin the discussion about the challenges facing us in the future, I am hopeful that the major challenges of the day will not be far from the minds of the folks assembled here today.

My district depends upon transportation. Tourism is the number one economic generator in the 1st District of South Carolina; and the work of our ports, moving goods in and out of the State, is not far behind. To continue to be strong economically in my district, just like the entire Nation, we must figure out better, faster, more efficient ways to move people and products.

Indeed, the population challenge is facing our Nation, especially the 1st District. It is steadily putting us in a situation where we must make these transportation improvements simply to stay on a level playing field. It already is becoming more difficult.

Myrtle Beach, in my district, has been one of the top tourist destinations on the East Coast for decades, with over 14 million visi-

tors coming each year. In recent years, it has evolved into one of the fastest-growing areas on the coast.

Highway projects that were designed to meet a certain level of demand are hitting their capacity level years in advance. The basic two- and four-lane highways are insufficient to meet the needs of the community. With the help of this committee, South Carolina is making great strides towards the construction of Interstate 73, the first interstate access to this growing Grand Strand. This is one example of capacity crunch I see in my district, but more and more individuals and organizations at the national level are recognizing it.

The Federal Highway Administration estimated freight bottlenecks on our Nation's highways has cost upward of $8 billion a year. While the rail carriers are making historic improvements in their infrastructures, studies continue to show they still face challenges meeting the needs out there to ensure efficient goods movement.

As South Carolina has met the future so quickly, the State and the counties on the coast have been innovative in regards to developing innovative ways to meet the financing needs of future highway projects.

We developed the State Infrastructure Bank. In our State, local transportation taxes have all been instrumental in helping South Carolina achieve many of its major transportation goals we have three such counties in my district; two have a 1-cent sales tax which is dedicated to transportation and one has a half-cent sales tax. In addition to there being a new interstate for South Carolina, there will also be the first project of South Carolina to take advantage of a private-public partnership.

That said, the future of our transportation system must be one where there is a commitment from all parties—local, State and Federal Governments, planners, users, and industry. Only then can the future of our transportation system be assured.

Mr. Chairman, thank you for calling this important hearing, and I look forward to hearing from our witnesses.

Mr. DEFAZIO. I thank the gentleman.

Mr. Arcuri.

Mr. ARCURI. Thank you, Mr. Chairman.

I am extremely pleased to serve on this subcommittee under your leadership and in the company of my distinguished colleagues on both sides of the aisle.

There are serious challenges facing our communities with regard to economic development, and it is necessary that we address these challenges by assessing some of the root causes. The state of our Nation's roadways and transportation infrastructure is deplorable in some regions, and it manifests itself quite often in some of the most economically depressed areas of the country. Why is that so? Because time and again throughout our Nation's history we have seen that the key to economic growth is the ability to transport goods and services in a quick and efficient manner.

The logic is simple. The creation of high-quality transportation networks in areas with struggling local economies will spur increased opportunities for private investment and economic development.

I have firsthand knowledge of what some of these budding economies are like. There are many cities in my Upstate New York district that have been plagued by lack of substantial funding to repair aging roadways, in turn, continue to lack economic growth. Even though there are areas of the country that may exert greater demands on the system as a whole, it is of the utmost importance to not let that need overshadow the need for additional investment in other areas.

I look forward to hearing testimony from the witnesses here today, and I thank you.

I yield back the balance of my time.

Mr. DEFAZIO. I thank the gentleman. I thank him for his brevity.

Dr. Boustany.

Mr. BOUSTANY. Thank you, Mr. Chairman. I will be very brief. I am very pleased to be on the subcommittee and to join you in this very important work.

We have critical needs in Louisiana, and I look forward to working with you as we go into the future. Specifically, I–49 South is a project that we have been working on for a number of years, and this is something that needs to be completed because it is a critical hurricane evacuation route. I mean, this is absolutely critical for our State for safety and also for commerce; and we also have some ongoing needs with Interstate 10, which is a very frequently used commercial route. There are some major areas that are in dire need of repair, and so I hope and look forward to working with you as we go forward on these issues.

Thank you.

Mr. DEFAZIO. Thank you.

Anyone else on the Democratic side?

OK. We have one more on the Republican side, and that would be Ms. Fallin from Oklahoma.

Ms. FALLIN. Thank you, Mr. Chairman and Mr. Duncan.

It is a great pleasure as a new freshman to be on this committee. I know it is a great honor, and there are so many members on this committee who have a wealth of knowledge and experience. I am looking forward to learning from them.

I represent the 5th District of Oklahoma, and I have had over the past 16 years the opportunity to work in the legislature and also as Lieutenant Governor of our State with two different governors and with the legislature on various highway issues. Of course, highways are very important to our State.

In my district, in the 5th District, we are in the process right now of realigning I–40. I know that this committee has allocated money in the past to that particular project, which is very important to me and our citizens, and, of course, our highways in general and their condition. I have to say, in some cases, Oklahoma does not rank too well in the condition of our highways and of our bridges, but I hope on this committee I will be able to hear from the experts, listen to the testimony and work with the various members to improve our highway structure in our State and, of course, across America. We have I–35 and I–40, which we consider to be the crossroads of America, coming right through my district.

I will look forward to hearing the testimony today and working with you. Thank you so much for the opportunity to serve with you.

Mr. DEFAZIO. I thank the gentlelady. Welcome.

Now we move to the panel.

The first witness would be—well, I guess you are the witness, accompanied by—so the witness will be the Honorable Jeffrey Shane, Under Secretary for Policy, accompanied by Richard Capka, Administrator of the Federal Highway Administration.

Mr. Shane, we have your testimony. I am sure most members have read it and have digested it, and we would be happy to have you summarize and make the most cogent points you can.

TESTIMONY OF THE HONORABLE JEFFREY N. SHANE, U.S. DEPARTMENT OF TRANSPORTATION, UNDER SECRETARY FOR POLICY, WASHINGTON, D.C.; ACCOMPANIED BY RICHARD CAPKA, ADMINISTRATOR, FEDERAL HIGHWAY ADMINISTRATION

Mr. SHANE. Thanks very much, Mr. Chairman.

It is a delight to be here, and may I just add my voice on behalf of Secretary Peters and everybody else at the Department in congratulating you on this chairmanship. You have come to the head of this very important subcommittee in perhaps one of the most important periods in its history as we look forward to, as you rightfully said, a very different approach to surface transportation as we move into the 21st century.

I am delighted to be accompanied by our extraordinarily capable Federal Highway Administrator, Rick Capka, my friend and my colleague. He is not just a potted plant, and I would encourage members to address questions to him as the need arises. He is here to address your needs.

You have asked us, Mr. Chairman, to look ahead 50 years to examine what kind of economy we will have and what kind of surface transportation we are going to need to serve that economy. We have been analyzing that for a while. I would not call that analysis complete, but I think enough of the work has been done for us to at least see the broad outlines of the task that lies before us, and we can talk about that this morning.

Over the next 50 years, we expect the U.S. population to rise by 60 percent and GDP to quadruple. We expect both freight and passenger transportation to increase by 2 1/2 times over the next 50 years. There are going to be changes in our requirements for transportation. The U.S. manufacturing base is shifting to a high-value, high-tech product kind of economy that will require an expedited transportation system that relies increasingly on overnight truck and air freight.

Globalization will continue, of course; and we will rely increasingly on our key ports of entry like Los Angeles and Long Beach. Landside connections to those ports linked to an efficient domestic intermodal rail and truck freight transportation system will be essential to keeping the costs of those commodities in check and, thus, essential to the very health of our national economy.

On the passenger side, as Ranking Member Duncan explained, an aging population will increasingly challenge our transportation system. The percentage of the population over 65 will almost double so that the percentage of VMT—that is ″vehicle miles traveled″—by older people will grow appreciably. We know that

drivers in their late 70's have triple the fatality rate of drivers of the ages of 30 to 65. That is a statistic that we know. We will therefore see a serious safety challenge, and a demand for urban transit will increase to almost twice the current level by 2050.

Our dynamic economy results in uneven economic growth in different regions. Almost two-thirds of all VMT growth will take place in only six States so that, even if we keep up with the transportation demand in general, it will be difficult to keep up with the demand we experience in these high-growth States where demand is growing most rapidly.

How will we address these transportation requirements? Again, as Ranking Member Duncan pointed out, we have seen the growth and demand increase far more rapidly than we have seen the growth in lanes built and capacity actually added. So we can expect that, similarly, although traffic levels will more than double between now and 2050, it is likely that lane miles will increase by only 10 percent. So it is simply a given that raw transportation capacity is not going to keep up with transportation demand.

Congestion already imposes heavy costs on our economy. The DOT estimates that the total costs of highway congestion are about $170 billion a year. I know that the conventional wisdom is it is somewhere north of $60 billion, but we think that understates the real cost to productivity and a whole host of other factors so that we look at a much larger number. Moreover, the costs of congestion have been growing at more than double the growth rate of the economy at large so that, by 2050, they could be over $6 trillion, more than 14 percent of GDP, if we do not take effective action now.

Let me explain what we mean by ″effective action″.

First, we need to find ways to use our existing transportation system more efficiently. The best approach is a multifaceted, comprehensive approach that takes advantage of a multiplicity of strategies. In planning the Secretary's groundbreaking Congestion Initiative, for example, we have emphasized four complimentary strategies: congestion pricing, expanded transit capacity, greater use of Intelligent Transportation Systems technology, and far more widespread use of telecommuting. All of that is amplified in the prepared remarks that I have presented.

So it is clear we can make considerable progress in addressing congestion even without building new lane miles, but, at the same time, we know that we cannot handle 2–1/2 times the increase in demand without more capacity. A big challenge for us is going to see how we get that capacity built, what tools we find, what financing mechanisms we develop in order to address the actual need for more infrastructure construction as we move forward; and we look forward to working with this subcommittee and starting this process now. The current authorization does not run out, as we know, until the end of 2009, but, by all accounts, we are going to have to start working now if we are going to be prepared to meet the real needs that we see not just in 2050 but the needs by that time.

Thank you very much, again, Mr. Chairman, for the opportunity to appear here today; and we look forward to the questions the members may have.

Mr. DEFAZIO. I thank you. Thank you for your testimony—your prepared testimony and the discussion we had yesterday on these important issues.

I will first recognize myself for questions and then move on to other members of the panel.

You know, on the congestion pricing, obviously, depending on how it is applied and where it is applied, there is more or less controversy surrounding it. I would just ask you about an interesting conundrum which applies here locally. If you move toward congestion pricing—on the highways here, you know, they have the commuter lanes and they have other ways of dealing with that, but Metro has also moved to congestion pricing. This becomes—you are sending all of these great price signals, but the price signals in the end just say you need more. The mass transit is overcapacity at rush hour, as is the rest.

What sort of solutions—and I suspect that, in many areas of the country, you would find the same thing. I mean, when we built our rail system in Portland, we have so far exceeded the projections for usage, it is not yet as crowded as Metro, but, as the city grows, we are headed in that direction.

At some point, I think the question becomes, we have got all of the price signals here in the world. We are using congestion pricing. Employees do not have flexibility, and if their employers do not change their shifts or their commute times, then what?

Mr. SHANE. Well, we know we need congestion pricing to shave those peaks. It is a tried and true technique. It has been used across the transportation system for many years, so it is really—it is nothing new. I agree with you. It is not going to be sufficient.

We are using congestion pricing now in many areas on our highways, and we are also using it in public transportation as a way of encouraging the spreading of the burden. But, as I indicated, we do have to have a suite of strategies if congestion pricing alone cannot be sufficient; if, in fact, employers are not helping to address the issue by staggering work hours. There needs to be, I think, a real dialogue within the country about the importance of doing that.

With technology coming on, the nature of the workplace itself is changing; and I think, as we look forward to the kind of transportation system we are going to have, we need to take into account the nature of that changing workplace and how we can encourage, perhaps, more of those changes such that we do not have everybody coming to work at the same time every day, taking with them 4,000 or 5,000 pounds of steel and trying to find some place to put it.

This is a long-standing issue for the country, and no one strategy is going to be sufficient. Congestion pricing, I would say, is absolutely necessary today, but nobody is suggesting, Mr. Chairman, that it is sufficient.

Mr. DEFAZIO. OK. Now the growth that you point to, the two-thirds of VMT growth, is going to be, as we understand, over the next 25 years in six States, so the problems of the growth is not equitably distributed, so I guess I have a two-part question to that.

If those areas begin to resolve those problems more on their own, whether through various other funding mechanisms or public-pri-

vate, whatever, how do we maintain the integration and the integrity of the national system in light of those pressing local needs? Or, in the alternative, how do we fairly address that disproportionate need in selected regions in a nationally financed system?

Mr. SHANE. Well, we have all lived with a donor-donee issue through the national system for a long time, and there is no doubt that the country is going to need to address that in any system that we develop going forward, but it is important, I think, to recognize again the changing nature of the challenge.

Back in the '50's when we were beginning to talk about having an interstate system, the challenge to the country was what I would characterize as ″connectivity″. We wanted to draw the country together and to make it an efficient national economy for the first time. The interstate system was an extraordinary achievement, and it had to be funded at the national level and driven by the national government in the way we did. It is one of the great accomplishments in public works and humankind. I think none of us challenges that.

Today, it is not connectivity in that way that is our challenge. Today, our challenge is congestion. It is a challenge that is experienced far more at the local and State and even regional levels. It is not just about the movement of people; it is about the movement of goods. We are beginning to see the movers of those goods—the shippers, the companies that drive our economy and really make the world turn on its axis today—coming in to talk to us for the first time in my experience in the Department of Transportation—talk to us about the efficiency of the transportation system.

The efficiency of the transportation system is identified as a fundamental contributor to our economic health. That is an equation that many of us in the transportation sector have understood for a long time. I have never seen it understood so well in the business community at large as it is today. So we do have to recalibrate, I think, in the way we address some of these issues; and perhaps, in looking at national solutions, ″one size fits all″ is not going to be necessarily an ingredient in the system of the future.

Mr. DEFAZIO. I thank the gentleman.

My time has expired. I recognize gentleman from Florida, the full committee ranking member.

Mr. MICA. I will not take too much time.

Mr. Shane, you know, I think one of the problems lately, at least since I have been in Congress, is we suffer sort of from peanut-brain thinking in terms of transportation priorities. We do not really have a strategic national transportation plan, do we?

Mr. SHANE. Well, I like to think that we do. I do not know that we have————

Mr. MICA. Do you have a copy of it?

Mr. SHANE. The last big transportation plan that the Department produced—and I do have a copy of it—was produced in 1991, and an awful lot of what we said in 1991 actually applies today. We have not spent a lot of time writing a big plan————

Mr. MICA. So, basically, our policy, too, has been like we cut off the interstate. When did we really stop expanding the interstate?

Staff? Mr. Oberstar, do you know? When did we stop really expanding the interstate, Dr. Oberstar, Chairman?

Mr. OBERSTAR. Actually, the last 100 miles of construction was under way in 1990 and completed in about 1991–1992.

Mr. MICA. But again, you know, you have got to go back to Dwight David Eisenhower. He sent Richard Nixon to Lake George in the summer of 1953 to propose an interstate system. At that time, I think he got back and checked—the Federal budget was about $78 billion. He proposed a half a trillion dollar system, and this was a national plan.

Basically, our interstate is at a standstill. I mean, if you drive up 95 and I guess up I–5 in California and on some of these other interstates, it is a parking lot. We have not gone beyond—we do not have a strategic plan.

Now I see Mr. Schenendorf, and we have got others here. At least we do have a policy in place to create a commission to come up with a surface transportation policy, but we need a plan, and we need a plan with vision for the future, a strategic transportation plan.

I have been very disappointed in my own administration. Nobody has a vision or a plan for the future to deal with surface transportation. We have cast in stone, in place, our interstate system. Oh, my God, if you talk about alternatives, we are knuckle-draggers in the Dark Ages compared to Europe and other places. We passed ISTEA Intermodal, but, really, that was to stop us from passing in Congress a nonconnecting or a nonintermodal system, but we have no big system plan. So I am hoping that our commission and the administration and others can put together a strategic national plan.

These States, God bless them. California just passed $20 billion, but this is going to take concerted national effort with a national plan to develop—and again, we are drowning in congestion. Anywhere you go, we are drowning in congestion, but we do not have a plan to deal with that, whether it is I–95, I–5, the interstates, rail.

Rail is just beyond belief. We should be moving. We are moving 26 million people on Amtrak for the entire country. Two lanes, north/south high-speed lanes, built by the private sector in England, now carry 34 million people on the high-speed system. They are trying to get from 120 to 160 miles an hour on average. So we have no plan.

Don't you think it is time—final question—that we develop a new plan or update our 1991 plan?

Mr. SHANE. Well, I do not want to pretend I am against having a strategic plan. I guess what I would point out————

Mr. MICA. You are against it?

Mr. SHANE. I said I do not want to give you the impression I am against it. I think we have one in the Congestion Initiative, and that is why I referred to having a suite of different strategies.

No, there is not any argument about the fact that we are going to have to do something very big and very different going forward. The Chairman has said that. The Commission is working on that, and we are all looking forward to the results of that, so this is not really an argument between us about that.

I just do not want the record to reflect an absence of any attention to the problem of congestion. The Secretary of Transportation

is putting the entire Department behind a major, multifaceted initiative to address congestion in all of its forms, not just on the surface but in the air and in every other mode, and what we are looking for is some attention to that.

We, obviously, in the executive branch must work within the authorizations and the appropriations that we have from Congress, but, within that framework, I believe that we are trying to take the ball forward and are doing some interesting things, and we look forward to spending more time with the subcommittee, talking about those things.

Mr. Mica. Thank you.

I yield back, and I look forward to working on ″the″ plan.

Mr. DEFAZIO. Well, I thank the gentleman from Florida.

Again, I think that is why we have the Commission here today, and we will get to them on the next panel. That, in part, was the charge in SAFETEA-LU. It was for them to take a look at that big picture and the next generation, so to speak, of transportation in this country.

With that, I recognize the gentleman, the full committee chairman, Mr. Oberstar.

Mr. OBERSTAR. Thank you, Mr. Chairman.

I want to congratulate you on your first hearing as Chair of the Surface Subcommittee. Goodness knows, you have prepared yourself for many years for this position. And the gavel, the gavel which was distributed after the passage of the conference report on SAFETEA-LU, I keep that on my desk in the office as a reminder. I know that, under your leadership, we are going to do good work and good policy inquiry and lay the basis for our continuing work on the extension of safety in whatever form or whatever name it will have. It will have a very simple name when we do the reauthorization, I assure you.

When I started here 44 years ago as clerk of the Subcommittee on Rivers and Harbors, it was called the ″Highway Bill″. It passed the House on voice vote. No one asked for recorded votes. Now we have recorded votes on the least little hangnail amendment that comes to the House floor or in committee.

In those days, there was great consensus. This was, you know, the rebuilding of America. This was the great post World War II legacy of Eisenhower and the World War II generation of Americans.

Mr. Mica asked a question about the completion of the interstate.

In 1944, when Roosevelt could see the end of the war coming, he asked Congress for an appropriation of about $50,000 to study post World War II transportation needs. That study recommended an interconnected system of highways, divided, access controlled highways, for America, 44,000 miles. But in the rush to rebuild America and to reintegrate the 16 million returning veterans after World War II, the first priority was to pass the GI Bill. Others were to civilianize the wartime economy.

There was a huge buildup of savings, the highest savings rate we have had in the history of this country, all pent-up demand to put America back to work and to reeducate or complete the education of our veterans, to build the housing. But by 1952–1953, our highways were congested, people were buying cars in greater numbers

than ever before, fatalities were rising. The prediction was, if we did not do something about it, we would be killing 100,000 people a year on America's highways; and we needed a new highway system.

The 1944 study was resurrected. General Eisenhower—President Eisenhower, to his great credit, commissioned General Clay to head that commission and make a recommendation; and they updated the study and proposed the National System of Interstate and Defense Highways. You could pass anything in those days in the name of defense. Just add it to education, the National Defense Education Act, the National System of Interstate and Defense Highways, and a whole host of other things. So it was launched with a goal of 42,500 miles at a cost of $22.5 billion.

It has taken 46,000 miles and $114 billion in Federal funds on the 90/10 basis with States contributing the balance, but now we are in the post interstate era, and as Secretary Shane said, our challenge is not just connectivity—we have that. We have the connectivity—our challenge is to maintain the mobility of this system.

I just came from a meeting of the U.S. Conference of Mayors. Every one of them is fired up about reducing congestion, improving mobility, improving the connectivity of America's cities; and I quoted Lewis Mumford, who was, in my mind, a philosopher of urban America, who said, ″The city is the crossroads of civilization. The city is the place where the great issues of society are joined. The city is the great intermodalist.″ And you, Mr. Shane, are our intermodalist at the Department.

As Chairman DeFazio said, this set of hearings is the start on our responsibility to assure that the policies that we have now in place and those that will follow on will maintain America's mobility, improve that mobility, improve our productivity, continue to lower the cost of logistics, which is the cost of moving people and goods.

In 1987, logistics consumed 17 percent of our gross domestic product, but because of the work that this committee has done in our ports, our waterways, our inland navigation system, our airways, our Coast Guard system, and our highways and our bridges and our transit systems, the cost of logistics was down to 9 percent. That is an $800 billion gain in an $11 trillion economy.

Our challenge and the Commission's challenge is to keep that cost going down, mobility going up and keep America the most productive economy and the most mobile society in the world.

Thank you very much. Thank you, Mr. Chairman.

Mr. DEFAZIO. I thank the chairman for his observations.

I do not think, Mr. Shane, it is fairly directive. I think there is room for agreement. I will not ask for a response.

I will turn now to the Republican side and recognize Mr. Duncan.

Mr. DUNCAN. Well, thank you, Mr. Chairman.

You know, when we talk about completion of the interstate highway system, one of the key things about this subcommittee is that the interstate system has never been completed. We always will need to expand and improve what we have, and that is one of the main things this subcommittee is about.

For instance, you know, I mentioned in this subcommittee before that I remember when the first interstates were put into Knoxville in the mid–1960's. They were two lanes, and for several years we did not have any delays or traffic jams. That was primarily because, when I was growing up, most families had one car. Some families had two cars, but almost no families had more than two cars. Now you have the mother, the father and both the teenagers who have cars. Sometimes they have a fifth vehicle. There are just so many more vehicles on the roads today.

So our interstate system in Knoxville went to three lanes and just massive traffic jams, and now we have just added five lanes or we have added two more lanes so we are five lanes now, and we really have seen great improvement from that. But, like Ms. Fallin, I–40 comes through Knoxville, and I–75 runs down through Knoxville and then we have a third interstate that comes just outside of Knoxville, I–81 and we have over 9 million visitors to the Smokies and millions more coming through to and from Florida and other places, and so the traffic—sometimes I have faced worse traffic in Knoxville than I have here in Washington, and many of these other members have seen that. Sometimes our traffic problems far exceed the population of some of the areas.

I have got just two quick questions, and I will get them both out of the way at the same time, Mr. Shane.

First of all, I would like to know—you have got the Secretary's Congestion Initiative, and you have also got another program called the Corridors of the Future. Can you tell me what specific plans or programs have come out of those two initiatives and have they been accepted well by the State Departments of Transportation?

And then a totally unrelated question. You mentioned that the number of deaths of drivers over 65 has tripled in recent years, but just yesterday, in the Washington Post, there were some statistics from NHTSA showing that the 16- to 20-aged drivers had 1,330 crashes per 10,000 drivers and those over 74 had the safest record of any age group. They had 250 crashes per 10,000.

So is there some misunderstanding? Is there some discrimination going on against older drivers, who, by those statistics, are the safest drivers that we have?

Mr. SHANE. Thank you, Mr. Duncan.

Let me address the Congestion Initiative and Corridors for the Future first.

The Congestion Initiative, as we have outlined, actually involves six separate strategies, one of which is the Corridors of the Future Program. So it is a subset, if you would like, of the Congestion Initiative overall.

In addition to the Corridors of the Future thing, we do have a program for relieving urban congestion through the creation of urban partnerships of which we are reaching out to communities all around the country to develop. There is tremendous interest in that. We do want to unleash to a greater extent private sector resources that we know are available for infrastructure now. We are promoting technology as another tool to be used against the scourge of congestion. We want to address major freight bottlenecks. We are also accelerating our focus on aviation capacity. That

is, perhaps, a little far afield from the subject matter that we are discussing this morning.

On the Corridors of the Future Program, what we have done is we have asked for applications from communities or States or regions who wish to be considered as part of a Corridors of the Future Program through a notice; and the Federal Registry has received, as I recall, 38 responses to that. We are now going through a second-phase screening through which we will whittle down the number to a number that we can actually accommodate with the resources that are available.

The idea, really, is to address problems like those which Congresswoman Napolitano was speaking about. We just have a huge challenge in trying to move goods into the country, to move people through major corridors. It is not strictly a local problem any longer. We have to see the transportation challenge in all of its dimensions, and the Corridors of the Future Program is designed to tackle these issues in what we think is a fresh and more appropriate way. It is a toe in the water of a different approach, and we are hoping that we will learn from it and that that experience will inform the reauthorization process as it goes forward.

On the statistics regarding elderly drivers, I do not know what I can say to you about the difference in the statistics that you have and the ones that I have. What I was talking about was the rate of fatalities, that is to say, fatalities per 100,000 or 100 million passenger miles. Our statistics show us that the drivers that are above a certain age—it looks like 85 plus, according to a chart which Rick Capka has just put before me. The number is 12 driver fatalities per million vehicle miles traveled in the age 85 and above category. Well, we will put this chart in the record.

[The information follows:]

Older Drivers Driving Older Cars

A snapshot analysis of the National Household Travel Survey 2001

The aging of the driving population in the US has raised many safety concerns, particularly focused on elderly driver's declining vision and ability. The coming population bubble of drivers entering their golden years is important to understand for both policy and safety considerations.

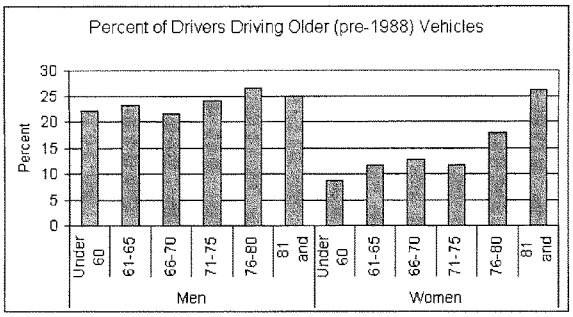
Analysis of the 2001 NHTS shows that older drivers in the U.S. drive older cars than younger drivers. Insurance companies have indicated that the very young and the very old are statistically the populations more at risk in travel—a greater likelihood of being involved in an accident and a greater likelihood of injuries when accidents occur. The introduction of safety equipment into the U.S. fleet may have a time-delay in helping keep older drivers safe.

The analysis of fleet composition and age of the fleet in conjunction with the demographics of the main driver of each household vehicle shows that older drivers may be driving older, less safety-equipped vehicles. First, a quick history of safety equipment:

- 1955 Volvo offers seat belts as standard equipment.
- 1956 Ford offers seat belts as an option (first U.S. manufacturer).
- 1968 NHTSA requires lap or lap and shoulder belts for front and rear seats in passenger cars.
- 1972 NHTSA requires lap or lap and shoulder belts for front and rear seats in multi-purpose passenger vehicles and trucks
- Starting with 1987 model year NHSTA requires either automatic seatbelts or driver-side airbags in passenger vehicles (cars and trucks).
- 1998 model year passenger vehicles are required to have passenger-side airbags.
- Mandatory seatbelt usage laws gained popularity in the 1990's and now every State but New Hampshire has one.

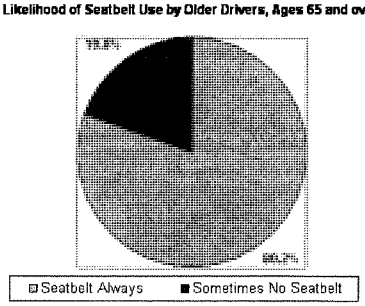
The age of the vehicle may indicate the types of safety features available. For example, pre-1988 vehicles may not have automatic seatbelts, and 26 percent of drivers over the age of 80 are driving pre-1988 vehicles, compared to 16 percent of drivers under 60. Pre-1998 vehicles may not have passenger side airbags, and 85 percent of drivers over 80 are in pre-1998 vehicles. Women are more likely than men to keep aging vehicles as they get older, or to drive newer vehicles when younger.

Figure 1 –



Most of the vehicles driven by older drivers will have at least a seatbelt available for use, but do older drivers use seatbelts? The 1995 NPTS asked a number of scenarios where a seatbelt might not be used ("When forgotten", "When on just a short trip", etc.). The good news is that older drivers are slightly more likely than drivers aged 15 – 65 to wear a seatbelt. The bad news is that nearly one out of five older drivers sometime do not wear a seatbelt. (The 2001 NHTS did not include this question).

Figure 2 –

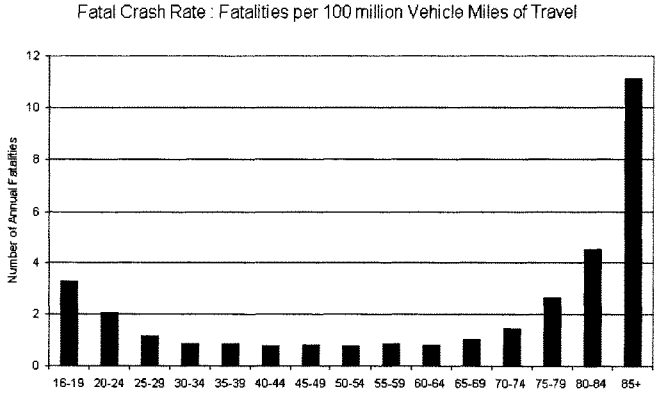


Crash rates are an important tool in targeting safety measures, programs and campaigns. Of course, calculating a crash rate by age requires a survey that collects vehicle miles for all purposes by age group, like the NHTS.

A crash rate is computed to show highway accidents or fatalities per 100 million vehicle miles of travel (VMT). Crash rates are often computed by age of the driver, and based on the number of crashes per 100 million VMT. The importance of calculating the crash rate this way is that it puts accidents and fatalities into the context of the amount of driving done. Thus it shows a

very different picture from the distribution of licensed drivers or of fatal accidents. Once the crash rate is calculated, it is obvious that the risk of fatality increases for the elderly.

Figure 3 -



Mr. SHANE. It is a small fraction of that, and it drops off very dramatically as you move to younger age groups, even groups that are in their 70's and early 80's. So we will try to validate those statutes.

Our information is that it is just a fact of life that, for whatever reason, elderly drivers have a greater fatality record. I am not talking about the number of crashes, mishaps. You have a greater fatality record; and, therefore, as the population ages, it is reasonable to think that we are going to have to address that in a more direct way than we have.

Mr. OBERSTAR. Would the gentleman yield? Would the ranking member yield?

Mr. Shane, those numbers are right, but recent information—that is, just within the last month from the Centers for Disease Control—shows that a higher number of fatalities among older persons—that is 80 and above—is because of the frailty, not because they were at fault as drivers but because of the frailty of the person of an advanced age, and you ought to look at those statistics. You also ought to review the two-volume study on the older driver done by the Center for Transportation, a study by the University of Minnesota, which has some interesting data.

Mr. DEFAZIO. OK. I thank the gentleman. Thanks for that clarification.

Mrs. Tauscher, do you have questions?

Mrs. TAUSCHER. I do, Mr. Chairman. Thank you.

Under Secretary Shane and Administrator Capka, thank you for being here.

My area, the Bay Area, is not only a beautiful place to live, but we have, obviously, fabulous congestion problems that are well-noted, and I am a big fan of Intelligent Transportation Systems, ITS. I actually think that the name should be ″I4TS″ because it not only has to be intelligent, but it has to be intermodal, it has to be invested, and it has to be instinctively put into people's frame of reference. People have to know that it costs a lot of money to invest in these things.

As the chairman so wisely stated, logistics for transportation funds have come down dramatically because we have infused—I do not want to call the highway systems dumb but, basically, brick and mortar systems with the capacity to have these intelligent systems that tell people, ″Do not go on that highway, take this one, this is what time the bus is coming to get to the BART station,″ things that really enable people to make wise decisions so that they are good consumers of transportation, move themselves faster, which is even better.

And obviously, it has a big leap in providing our abilities to move goods in an efficient, cost-effective way. But these systems are expensive, and they do not necessarily penetrate the average driver as something that is aiding their development to move faster and so there is a conundrum that local MPOs, and I think the country and DOT has in really putting it forward, and my question really is, do you think that there is something that we can do, the administration and the Congress, to provide incentives to transportation agencies to implement ITF technologies? And is there more a robust separate pot of funds that we can be using to kind of incent

folks, which is the fourth, incent, incent folks to begin to embrace these technologies and take booklet forms that are a little older and a little dumber and really and move them up the food chain intellectually so that you can then have people get the best bang out of their buck and the most use out of them.

Mr. SHANE. Thank you, Congresswoman Tauscher. It is a great question. We have invested billions of dollars in ITS research at the Federal level, and I suspect there is a lot of other money that has gone into it as well, and I won't pretend that I am not disappointed at the rate which we have deployed the results of that research. It is one of the things that we feel we have really got to focus our attention on. Congress, a couple of years ago, in response to Secretary Mineta's request created research and innovative technology within the Department of Transportation. I think that is a profound change for the Department of Transportation and will be reflected in the profound change in the way DOT attacks some of these issues in the future. The ITS program has been housed in the Federal highway administration, and it moved along subject to governance by ITS management council. I sat on that. Rick sits on that. Again, we weren't seeing the deployment. We weren't seeing really results being exploited for the benefit of the public. Secretary Peters has just moved the ITS program into RITA, the Research and Innovative Technology Administration, where it will be the focus of a culture that is about applying technology solutions to the problems that we experience.

As part of the congestion initiative that we talked about, we are citing ITS in particular. We have found some ICT earmarked money that wasn't obligated, and we have applied $25 million of that money. I hope we won't get into trouble for using unearmarked funds but 25————

Mr. DEFAZIO. The appropriators will know.

Mr. SHANE. To, particularly to ITF. More than that, it is not a glib answer. I guess we are in violent agreement about the importance of applying ITS solutions to these problems. We can increase the flow of traffic in so many areas so effectively to things just like managing the traffic lights, things like that. Managing the flow of emergency traffic when necessary. These are being tried out within the country. I have seen them. It is just astonishing the results you get from a relatively minor investment without having to build an enormous new infrastructure, and why it is not more ubiquitous is something that continues to baffle all of us, and we would love to work with the subcommittee in making that happen.

Mrs. TAUSCHER. I think the integrated piece of this is a good news story that is not really out there. I think people have to be incented to do it, and I think that perhaps a robust pot of money directed towards this kind of investment is really what we need to do. I look forward to working with you.

Thank you.

Mr. DEFAZIO. I thank the gentlewoman.

Mr. Coble.

Mr. COBLE. Thank you. I was at a Judiciary meeting. I missed a good part of your opening statement so it is good to have you here. One of the issues that plagued me is vehicular congestion. I think vehicular congestion, it negatively impacts productivity. It re-

sults in excessive consumption of gasoline, and I think the best way to combat it is sound highway construction, the use of carpooling, public transportation, rail and bus. I gave a dedicatory speech back home when our new depot was dedicated, Mr. Chairman, and I had 275 people there. I urged them, if they did not need their automobiles in their daily work, to carpool, use public transportation. After that meeting adjourned, one man came to me said, ″I never thought about it before. I am going to start using public transportation.″ so I had one convert out of 275. Billy Graham does a lot better than that. But at least I think we are—we Americans are addicted to the use of our automobiles whether we need it or not. So I would like to hear from you about that issue, Mr. Shane. And also and perhaps you might consolidate these. What is the future of the interstate system, and what is the future for financing the transportation system?

Mr. SHANE. Thank you, Congressman Coble.

On the question of transit, I think Congress made a very important change in our transit program as part of SAFETEA-LU in allocating the highway transit—highway trust fund moneys that are allocated to the trust found account to specific activities within the Federal Transit Administration and using General Fund moneys for other specific activities. So we don't have sort of the crossing of the line that we did that ended up spending down the available funds faster than they were available. We also have more money available now as a result of SAFETEA-LU than we did before. Such that worries that we had about highway trust funds, highway accounts don't necessarily spill over into our concerns about the transit account.

We think the transit account is likely to be solved longer than the highway account. What we really need to do is find ways of providing incentives to people to use transit more effectively. The use of congestion pricing on highways, which we think about as a means of calibrating demand on the highway, actually is a way of providing an incentive to use transit. Those people who wish not to pay a congestion charge might be directed to transit as a way of avoiding it. As the chairman pointed out, of course, we also use congestion pricing in transit. So perhaps if there is no escape, if you are living in a congested area, that is just the cost of living in an area where you can be as productive as you can in our major cities. The fact is, though, the congestion pricing on highways is a way of moving people to transit in greater numbers. You have to provide those facilities, naturally, or else there would be nothing to move to.

The larger question about how we fund transportation going forward is of course a big question before the government right now. It is what we are looking forward to working with this subcommittee, working with the commission as it reaches its conclusions. There is no doubt that traditional models for financing our transportation system, literally our surface transportation system, are not sustainable for the future. We know that. We have used taxes as a way of financing our system. When you use taxes as a way of financing the system, it is a given that you are going to have political difficulty expanding that sort of financing. It doesn't have to be about philosophy. It is just a difficult thing for people

to embrace. So we are going to have to find different ways of financing the system.

The private sector has enormous pools of capital available. There is controversy about that. We have other kinds of user fees that we might begin to develop. Technology gives us tools that we never had before in terms of calibrating the use and charging people for what they actually do with the system. All of those issues are going to be before this subcommittee and before the administration as we move into the next authorizing process, and it is time to do that. It is going to be a very interesting conversation.

Mr. COBLE. Thank you, Mr. Shane. I think my time is about to expire. I yield back.

Mr. DEFAZIO. Ms. Napolitano.

Mrs. NAPOLITANO. Thank you, Mr. Chairman. One of the things that I am listening to, and I totally agree with Congressman Mica, on the focus of the areas where we need to be ensuring that we do not have gridlock whether it is New York, Los Angeles, Washington, for the movement of goods and people. Back in the time when Los Angeles had the Olympics, the State Department of Transportation and others came to the business I happened to be working for, Ford Motor Company, and they agreed to do nighttime delivery of trucks. That worked so effectively that to this day Ford still is doing it.

Now, that is one of the many solutions, if I could put it that way, to be able to get some of the trucks off the road, and of course, I live in an area where there are over 11 million people. So it isn't just the transportation grid, the congestion. It is the pollution and the effect on the people that live around the cities where most of the traffic is congested. When you sit on a freeway or you sit in the rail yards or when you sit on the ports, all that emission gets blown into the cities, and it causes a lot of other side costs to the people in terms of health. So that to me would be one of the other things.

I haven't heard anybody begin to talk about other than just appealing to the many factors to the people who utilize a lot of the services in those big areas. And in Los Angeles, as you know, we don't have mass transit. You have it in major cities but nothing in L.A. That moves the masses. MTA went in and started on the bus system. Well, buses also get gridlocked, and it can only carry so many passengers.

So it is somewhere along the line, I think, not only do we need to come to you and require some of your planning, include the possibility of future mass transit in those areas where it is key to be able to handle the future growth, which will come, and of course in The Alameda Quarter, the fact that it is going to grow exponentially by the year 2020, I understand, where there will be a train every 6 minutes going through my district causing another backup of people waiting for those trains to go by, and you have emissions that affect the people's health in those areas.

And then, of course, one of the other things that I haven't heard is how you are going to begin to look at utilizing media to inform and educate the public to get out of the cars and use mass transit or how it affects their children's health or the seniors' health or how we can save time, money, health and all of the other stuff

about how the effect on the general public is. And I can understand some of the smart technology systems that are being talked about, but I can tell you, in my area, MAGLA would be out of their reach. You will not have people going and utilizing those systems.

Thank you, Mr. Chair. I yield back.

Mr. DEFAZIO. Any response.

Mr. SHANE. I didn't hear a question mark.

I think, again, I don't disagree with anything you have said, Congresswoman. I do think we have to—first of all, about the environment. Your area is vital to the economy of the Nation as a whole, and I think people in southern California specifically around the port complexes are paying a huge price for the contribution that they are making to the national economy because of the volume of trade that moves through that complex. It is true of other ports as well, but nobody is experiencing anything like what they are experiencing in that region. I have seen stunning presentations just on the epidemiology of that area. And it is something that—and California on the one hand is on the cutting edge of moving trade but, on the other hand, is on the cutting edge of trying to address these issues. So very strange regulations have been established at the State level and local level for ensuring that ships are not idling their diesel engines while waiting for berth at one of the ports. That they use equipment that is environmentally friendly.

I worry about the truck movements through the area. We have actually shaved the peak through the peer pass process, that is to say again, congestion pricing at the ports of L.A. And Long Beach, which have the effect of using those port facilities 24 hours a day. That is a great thing in terms of using assets more efficiently. Not such a great thing if you happen to be living in a neighborhood that those trucks are going through.

So there are really two sides of this very important coin, and I don't think we get to make any progress in addressing gridlock or bottlenecks or throughputs if we can't address the environmental and health issues that arise at the same time. Those have got to be forefront really and squarely in front of our attention.

Mrs. NAPOLITANO. Thank you.

Mr. DeFazio. I thank the gentlelady.

Mr. Brown.

Mr. BROWN. Thank you, Mr. Chairman.

Mr. Shane, I appreciate this dialogue. I guess we have some concerns and also some questions about what the next step is going to be. I know the chairman of the full committee mentioned about how, in 1954, when he mentioned when he put together the interstate plan, and we stopped it back in 1991 in my district. I was particularly concerned about, you know, the corridors in this study that you are actually dealing with the cities now, who is going to be included in that? I don't know what criteria you are using in this, but I listen to my good friends from California and their concern about the traffic generated by the ports. And you know that, as we speak, the Panama Canal is in the process of expanding. So that is going to cause, I guess, a lot of the traffic that goes through the west coast will be going through the canal and coming to the east coast.

I represent two ports in South Carolina, so they are going to be impacted. And I mentioned in my opening statement, we have got 14 million tourists coming through Myrtle Beach without an interstate connection. We do have I–73 that is part of ending that problem. I would certainly hope that that would be one of those charter legs that you are all talking about dealing with. So if you could kind of give me a little bit of update of exactly how you propose to, I guess, benchmark this new study.

Mr. SHANE. I do not know. I was checking with Administrator Capka as to whether or not, if we actually received the application for the Corridors of the Future program from the ports. We don't know the answer to that. What I would like to do is perhaps get that for the record. The criteria that we apply have been laid out in Federal register notice, and we can supply that for the record, too, but more importantly, we will be delighted to come back and see you, Congressman, and talk about those things and specifically in greater detail than we have here.

Mr. BROWN. I certainly would like to be updated on the progress of that study.

Mr. DEFAZIO. I thank the gentleman.

Mr. Cohen.

Mr. COHEN. Thank you, Mr. Chairman. I was also, like Mr. Coble, at the Judiciary meeting. I know Mr. Oberstar talked to you about the safety challenges that you mentioned in your speech. We will face safety. I know for younger folks we have graduated drivers licenses and the death rates of young folks—do you have any proposals on reducing the fatalities in the aging populations or perhaps a study that you suggest we look into?

Mr. SHANE. I suspect that NHTSA, the National Highway Traffic Administration, has done those studies. I do have—I do not have that information at my fingertips. I would like to provide that after the fact.

Mr. COHEN. I suspect that will be difficult, but testing for folks over age, is that a factor, do you think?

Mr. SHANE. I know that, at the State level, there are a lot of programs that do ratchet up the criteria that are applied to the population as it ages, and let me just say that when I talk about this issue, it is not in any way to cast an aspersion on the aging population. I am not suggesting that they are not more careful. I suspect they are probably better drivers, all things considered. I was talking about the fatality rate. They simply, as statistics and Chairman Oberstar has indicated, there is just a higher fatality rate among that group of people simply because they are as old as they are. That is the nature of the problem. So we do have to address it, and I don't have any very glib answers for how we address it right here this morning. What I was simply pointing out in my testimony as we address these problems in the future, that is going to be a new dimension for us. The number of aged drivers will be much higher.

Mr. COHEN. More mature drivers.

Have you all done these studies on speed limits on interstates? And at one time, I think when we were all 55 or 60 and we got to 70, and it didn't really seem to affect the fatality rate. Is the 75 all right?

Mr. SHANE. I think the geometrics of the interstates are designed to particular speeds, and I will defer to Administrator Capka in terms of what those engineering metrics are. The 55-mile-an-hour limit was not a safety initiative. It was under President Carter, as I recall. And we didn't notice any—I don't think we saw a dramatic change in the safety statistics once we changed to the rated speeds.

Mr. CAPKA. I also can add a little bit to that. Certainly the effect of speed on crashes and fatalities is known.

I can't answer specifically how the rates adjust as we incrementally move from 55 to 65 to 75. What we have seen over the past year, I mean, just looking at some of the fatalities statistics is that there are two areas where the fatalities have been increasing to the point where our national rate as well as the total number of fatalities increased last year. Motorcycles and pedestrian incidents have pushed the numbers up. So it is a rather complicated issue to read through all of the statistics. Certainly as the vehicles become safer and we have additional improvements on the infrastructure, there will be some adjustments in what we see in terms of crashes and speed. But I think no one would argue that as the speed increases, the potential for fatalities and crashes and aggressive driving also increase.

Mr. COHEN. Well, we increased our speed limit in Tennessee to 70. We didn't have any increase in fatalities. The problem is either the slower drivers, the mix of drivers, some going 60 and some people wanting to get to 70 and then getting to what people want to do was 70, you have less fatalities. So sometimes you have to have law follow your human engineering, and you end up with a better result.

Mr. CAPKA. You are correct. When you have a remarkable difference in the driving speeds on the same highway, you are going to get that differential effect, and we have seen the crashes in that kind of situation.

Mr. COHEN. Thank you. I yield the balance of my seconds, Mr. Chairman.

Mr. DEFAZIO. Mr. Poe.

Mr. POE. Thank you, Mr. Chairman.

I represent southeast Texas where Hurricane Rita hit last year. It was the largest evacuation in U.S. history with 2 million people disbursed. Most of them have found their way back to southeast Texas, but most of them have come back. Most of them. One of the things I want to talk to you about, the NAFTA superhighway that goes from Laredo and Canada through the middle of the country taking Highway 35 through this side of it, 10 lanes, 12 lanes, however many it is. And what is the administration's position on the NAFTA super highway? Then I have a follow-up question.

Mr. SHANE. I keep hearing about the NAFTA superhighway, Congressman, but I have never had a meeting about it. I have never had anybody discuss it with me. I am not even sure it exists. I don't even know what is referred to as the NAFTA superhighway.

Mr. POE. Are you familiar with the trans-Texas corridor where the Spanish are going to build a toll road? Texas is not going to stop them against Oklahoma, and it is supposed to keep going north. Is that part of the NAFTA superhighway, or is this a different project completely?

Mr. SHANE. The trans-Texas highway is a project that we are interested in. It is one of the cutting-edge projects that we have seen around the country. We are looking at that as part of the highway system. It is not driven, as far as I am aware, not at the Federal level by any reference, to NAFTA. We do intend to try to integrate North America to the greatest extent. The President has talked about it. We have NAFTA. It is a North American Free Trade Agreement. We expect real economic benefits to flow from that. There is no question there is going to have to be a transportation component to that. But that is not to subject that we have this grand plan for a highway that is going to traverse the United States for that purpose.

Mr. POE. Is there any plan, then, under the NAFTA concept to have some type of road for NAFTA and KAFTA or whatever? I mean, you said you haven't had any needs. Is there any plan at all?

Mr. SHANE. I am not aware of any plan to establish a highway or a highway system expressly in connection with cross-border trade. No, sir.

Mr. POE. I am sure you have heard of this NAFTA highway?

Mr. SHANE. I have heard the term.

Mr. POE. Is it just a myth, or is it something that conspiracy theorists are throwing around, or do you know?

Mr. SHANE. My own experience is it is an urban legend.

Mr. POE. That is all I have.

Mr. DEFAZIO. Just to follow up. There are some substantial plans for a major transportation route which would happen to go to Mexico which would come up through Texas. I understand Indiana's thinking of building a segment now, which I guess would be near the northern terminus of it. It may not be called the NAFTA Highway, but the transportation route is being planned by the States who seem to be somehow coordinating these efforts. I just—Mr. Poe, I thought you raised an interesting point, and I don't think it is exactly an urban myth, but it may be an issue of semantics or independent of who is organizing it.

Mr. CAPKA. I think you are referring to I–69, which is an interstate highway regionally coordinated and state-to-state coordinated, and we are certainly very interested in how that is being worked. And it is run from Texas and up through States through Indiana and eventually link up, of course, in Michigan. And it is designed to move traffic in that corridor more respectively.

It wasn't designed specifically to support NAFTA. And so maybe there is some semantics with respect to that. But there is a coordinated effort on I–99.

Mr. DEFAZIO. The point, on Mexico on one end, so I think that gives some substance to where Mr. Poe was raising the question. And I understand there is also a lot which would be beyond the jurisdiction of your department, but we have heard from Homeland Security how Customs might or might not be conducted on vehicles traveling that route and where they might be conducted. I think it is a bit more than an urban myth. There is some reality here, but there is a question of the actual coordination intent.

Sorry to interrupt.

With that, Mr. Higgins.

Mr. HIGGINS. Thank you, Mr. Chairman.

I represent an area in western New York which includes the City of Buffalo, and Buffalo is an old industrial area, and I think there are some unique surface transportation needs in the northeast because a lot of the problems relative to economic development to places like Buffalo experience is because of old, aging infrastructure. And that poses a unique challenge to the Federal and State governments because often times you have to dismantle before you can rebuild, and the role of the Federal Government is very clear here. It goes back to Lincoln, who talked about modern infrastructure in terms of land improvements. He believed that building bridges and constructing railroads were fundamental to the obligation of the Federal Government. Not as a portion, not as earmarks, but as sound investments in promoting and creating the conditions that make older urban areas like Buffalo attractive places for private sector investment.

Buffalo a hundred years ago was the eighth largest economy in the entire Nation, among the strongest and most diverse economies in the entire world. We were a major port of midshipment. Today it is measured by population loss and job loss. Buffalo is the weakest economy in the entire State of New York and among the weakest economies in the entire Nation. Fundamental to revitalizing these economies, you can't do it unless you address the elemental issue of transportation infrastructure. And I want to emphasize that in standing up for my community but also as a member of this committee, the chairman of the Transportation Committee, chairman Oberstar, was in Buffalo. He understood fundamentally the importance of this, and I would like to hear from you relative to it as well.

Thank you.

Mr. SHANE. Thank you, Congressman.

We agree with you. Nobody is, believe me, suggesting that the government does not have a very important role to play in the provision of basic transportation infrastructure. That is a fundamental implement of our policy, and that will continue well through the next authorization and beyond.

You are correct in citing the very special issues that exist where infrastructure is in fact aging or more mature, I should say. And we have to—we have to ensure as we move into our next authorization that if we have not—if we have not embraced the very special nature of that problem in the programs that we have, if we need some legislative fix that will provide the incentives to address aging infrastructure more directly, that we include that in the legislation. We would be very pleased to work with the subcommittee and work with you personally on ideas that you may have for improving the programs that we have. It is undoubtedly a special need that isn't separately addressed, as far as I am aware.

I don't know, Rick, if you would know of any specific provisions.

Mr. CAPKA. I have no specific provisions. We work through, of course, the New York State DOT, and of course, they are responsible for executing their highway program, and we certainly provide a good number of Federal dollars and along those lines. But they prioritize the work when and where it needs to be done, and we work with them on that.

But I would certainly be more than happy to come by and meet with you individually and discuss the issues there that you have in your district.

Mr. HIGGINS. Thank you very much.

Mr. DEFAZIO. Ms. Miller.

Mrs. MILLER. Thank you, Mr. Chairman, and let me just tell you how delighted I am to be a member of your subcommittee here and certainly to join the full committee with our ranking member or, excuse me, Chairman Oberstar, and I know you are somewhat familiar with my district as we have talked many times in the port hearing area with your family members that have lived there. In my district that I represent, we have some interesting dynamics with aging infrastructure. It actually is the genesis of I–95 as well as I–69 which was mentioned by my colleague, Mr. Poe, and our chairman also about the NAFTA corridor or superhighway, I think is how he characterized it. It is something we talk about as well. It has its genesis in my district in Michigan right at the foot of the Blue Water Bridge, which is the second busiest commercial artery in the northern tier of our Nation as well, all tied in with the fee and rail tunnel. So it is an unbelievable economic impetus for the Nation, and we do look at that as it is completes its way sort of transcontinental there being a superhighway for NAFTA as well.

And as we talk about some of the aging infrastructure, and I know we have had quite a few questions on this, but I wanted to mention this as well about our elderly drivers. Because in your testimony, you were mentioning that population over 65 expected to double in the next 50 years. That is really a huge part of our customer base as far as our highways and transit systems. In a previous life, before I got this job, I was a Michigan Secretary of State, and in Michigan, the Secretary does all of the motor vehicle administrative kind of things. We were responsible for the licensing of the drivers. I was director for the Michigan State drivers association. We did a lot with the younger drivers, graduated drivers licensing system; and like every State, we labored about whether or not we should have mandatory retesting for elderly drivers. But I do think, as a Nation, we need to take a look at some of the real things we can integrate all the time to help our elderly drivers. I am talking about the paint on the road, the lane—what am I trying to say—lane markings. And as well as even the traffic signs that need to be bigger. I hate to admit it. I am now wearing these bifocals. We can't see as well. We can't see at night.

Taking away an elderly drivers license, it is such a critical part of their independence, and they will sometimes think they need to get a drivers license to get a photo ID, when they could have a State ID card and use that as well. I think, whatever we are doing, if we can think about how we could transport our elderly in a way that would not make them think that they are giving up their independence but get them off the road in many ways. That has got to be a critical part in our thinking as we go forward because they are a huge part of our customer base. It is so important.

I think this committee has every opportunity to have a huge impact on that thinking and educating our population as well about how we assist our elderly drivers to go on with their lives without

being on the highway all the time. I don't know if you have any more comments on the elderly drivers.

Mr. SHANE. Well, that puts it so much more articulately, the point I was trying to make about the challenge that our system takes as elderly drivers increase over the years. I am a card-carrying member of AARP myself, and I worry about my ability to drive on the highways. Like most other Members, I have no intention of retiring.

It is a very important part of the challenge that this subcommittee is going to face as we authorize these, perhaps, in the future. We want to maintain everybody's independence and want to maintain everybody's dignity, and we want to maintain safety, particularly for those individuals who are of that age, and our systems have to accommodate what will be a very substantial portion of our population going forward. So it is a very interesting challenge, and I have no doubt that we will find innovative ways of addressing it.

Mrs. MILLER. Mr. Chairman, when you talk about aged infrastructure, I just want to let you know the very first mile of concrete highway was laid in Detroit, Michigan, on Woodward Avenue between Six and Seven Mile Road. So we really do have aging infrastructure.

Mr. DEFAZIO. Is it a historically designated place?

Mrs. MILLER. It is. And every summer, we have the dream cruise which is the most fantastic—we have all of these antique automobiles. They come from all over the world, and they want to drive on that first mile of concrete highway. So it is a very big thing for us.

Mr. DEFAZIO. Mrs. Drake.

Mrs. DRAKE. Thank you, Mr. Chairman, and I would also like to join Mrs. Miller in saying I am delighted to be on the subcommittee. I am the first member from Virginia for a number of years to serve on House Transportation, and I think everyone knows, the big issue in Virginia is transportation, but I represent the southeast corner of the State where we have the largest naval base, the Port of Virginia, the tourist destination of Virginia Beach, and we talk all the time about our huge needs for hurricane evacuation routes. So I am very happy to serve on the subcommittee.

What I was thinking about as we first began the meeting is, how do we manage transportation, and how do we put all of these pieces together? So to hear Mr. Mica talk about a strategic plan I thought was very important. But in a lot of your answers, you have talked about things like traffic lights and things that we can do that aren't quite as expensive. I would like to ask you if there is a way for you to look at more flexibility with our States. In the southeast corner of Virginia, we have HOV lanes. They don't work. Northern Virginia, they work very well, and, in fact, Virginia has even stopped the license plates to allow the hybrids on the HOV lane. We have an absolute problem. So if there is some way if you could look at that and allow States the flexibility within their State to manage their transportation and say, in this region, it just doesn't work at all. We are at our least amount of time, 2 hours morning, 2 hours afternoon, but we have a huge parking lot of cars and six cars on the HOV. It is very difficult.

The other thing I would like to bring to your attention, and I am going to say it exactly the way my brother said this to me when I was a new Member of Congress in 2005. He said, ″I would like for the first bill that you put in,″ and I didn't do this, he said, ″would be a bill to say, you cannot have a highway sign if it isn't true.″ and you know we haven't talked about that. You talked about traffic lights and markings, lines. You talked a lot about seniors. But you can go right out here on 395 where they mark to come into the Capitol and the sign says ″U.S. Senate right lane,″ ″U.S. House extreme far left lane.″ So you have got people that don't know—I tell everyone, get in this lane. Do not move. Do not follow signs.

So somewhere along the way, we need to have your people reporting back or us telling you that that doesn't work. In my region, I was a realtor. I would have out-of-town buyers call me on my cell phone to say, ″I am on 64, this is what the sign says. What do I do?″ So, you know, we can't continue to do that type of signage that puts people in the wrong direction.

So my first question is about, if you would consider some sort of more flexibility with the States; some sort of pilot project maybe using southeast Virginia as an example. And I was also curious about, you mentioned early partnerships, to know what that means. Because I don't know this. That is kind of a more regional approach. But in 2005, for the last highway bill, I really didn't see a regional approach from our State as to what we were asking the Federal Government for, and I thought that was a mistake.

Mr. SHANE. Well, Congresswoman, the first thing I guess to say about the program is, the center of gravity is with each State government. The Federal Government is in effect a conduit for funds that are collected for the most part through the gas tax. And the Federal Highway Administration gives out a large part of that money through a formula grant, and some money, of course, we know, is specifically designated for a particular project, but it is the State in just about every case that is making the fundamental decisions for the distribution of that money within the State. So we place—basically rely upon the State Highway Department, the State Transportation Department, to indicate to the Federal Government what exactly it plans to use money for, and that is simply essentially policed by the Federal Government as the check is written.

If there is a particular way in which Federal rules or Federal law is denying flexibility that you believe the State should enjoy, we would want to know that.

Mrs. DRAKE. On the HOV, we are told we have to reimburse the Federal Government if we open them up full time. We would like to be able to open them up. My friends, they serve within the Virginia legislature. Maybe we can talk more about that. I wanted you to look at that and think about that for other States as well or maybe the other States need to bring it to you that this is what is holding us up. But that is what we have always been told.

Mr. CAPKA. Mrs. Drake, we have had that problem in other areas. We have unused capacity in the HOV lanes. And just to give you an idea of what other States have been doing to try to take advantage of that unused capacity: In Denver, just a few months

ago, they opened up a hot lane program along with the HOV that is a high occupancy, told that would allow single drivers, individual drivers, if they pay a toll, to use the available capacity on the HOV lanes. Of course, the requirement and the use of those hot lanes is that the toll traffic will not consume the capacity to the appointment where it becomes less than freefalling.

There are available plans like that that we can help you with right now.

As far as just doing away with the HOV lanes, we would have to sit down and go through some of that.

Mrs. DRAKE. Thank you, Mr. Chairman.

Mr. DEFAZIO. I think that is a very interesting question because we wanted to utilize capacity that we have, so that merits continued discussion, I believe.

I am going to Ms. Hirono.

Mr. OBERSTAR. A question without comment or response at this point. When is the Federal Highway Administration going to issue a standard on retroflectivity so that we can have a dependable standard? There are technologies available in retroflective material that are a hundred times more luminescent than what exists today. I don't want a comment right now because that will be too long.

The CHAIRMAN. All right. Ms. Hirono.

Ms. HIRONO. Thank you. It has been said that the minute a road or highway is built or expanded, it is obsolete because there is immediate congestion. So it is kind of a vicious cycle. I realize that we have a major responsibility to keep our infrastructure going and to help our communities with the congestion problems. But as we look to the future, you know, for the next 50 years, are there some directions that communities should be going into States and districts regarding moving people from point A to point B that does not require us to continue to build more and more highways?

Mr. SHANE. We encourage public transportation. We have a Federal Transit Administration that has a part of money that is part of the Highway Trust Fund. There is also money in the General Trust Fund for Transit. And public transportation is something that every mass transit organization should be thinking about as a strategy for addressing the problem, recognizing that the communities are constructed in different ways, and it is easy to do transportation in some than in others. But what we hope is that there will be a comprehensive planning process embraced at the local level which thinks those issues through. All of us, I think, are aware that the Federal programs have, in many cases in the past, distorted the amount of flexibility that is available at the local level. And one of the big challenges, I think, as we go forward is to try to remove those distortions to have a Federal transportation program that allows communities, whether locally or regionally or at the State level, to embrace those solutions that make the most sense. Without reference to that will be—would be great if we could do it, but there is no money for that.

Mr. DEFAZIO. I thank the gentlemen, and the committee will stand in recess for—well, we will return immediately after the second vote. There are two votes, so hopefully by noon.

[Recess.]

Mr. DEFAZIO. Please excuse the delay.

TESTIMONY OF JACK SCHENENDORF, COUNSEL, COVINGTON & BURLING LLP, WASHINGTON, D.C.; AND STEVE HEMINGER, EXECUTIVE DIRECTOR, METROPOLITAN TRANSPORTATION COMMISSION, OAKLAND, CALIFORNIA.

Mr. DEFAZIO. Mr. Schenendorf, welcome. And I would be pleased to receive your testimony.

Mr. SHENENDORF. Thank you, Mr. Chairman. It is a great honor, indeed, to be here today to testify before the committee on which I served as a staff member for so many years. I am Jack Shenendorf with the law firm of Covington and Burling. I practice in government affairs and transportation.

Before joining the firm, I served on staff of this committee for over 25 years, and in between leaving the committee and going down to Covington, I was head of the policy transition for the Bush-Cheney transition team.

I am testifying here today in my capacity as the vice chair of the National Transportation Commission. And the commission is made up of 12 members. The Secretary of Transportation is the chair, three other members appointed by the Executive Branch, four members appointed by the House, four members appointed by the Senate, and I was appointed by Speaker Hastert.

The Congress, in putting together the commission, recognized that a perfect storm was gathering. And it starts with and really the elephant in the room, in many cases, of the huge maintenance needs facing the country on just maintaining our existing interstate and our existing Federal aid systems and highway systems. And most of the numbers, the ″needs″ numbers that you see in maintenance, do not include the enormous cost of replacements that we are facing for replacing segments of the interstate. You can see it in this area, $2.4 billion to replace the Woodrow Wilson Bridge that originally cost $14 million; almost $800 million to replace the Springfield interchange that cost $10 million when it was first built. So it—there is a huge cost there.

Secondly, the huge investment needs that are going to be needed to increase capacity on the system to provide for efficiently using the system to maximize the through-put of what we have today and then adding capacity.

And the third piece of this is the funding sources have not been able to keep up with this. Congress recognized this and established the commission, and nothing that we have heard so far in the commission would indicate that this perfect storm is not coming, if not already here.

I was asked to talk today about what the commission is doing, challenges facing the commission and to say a few words about the second commission that is being set up.

The commission's work—the commission's charge is we have a needs—we are looking at the entire picture. We are looking at needs. We are looking at the roles of government, the Federal role, what State and local roles should be private sector and also looking at the financing options in order to meet the investment needs.

We are also looking at this from a short-term, a medium-term and a long-term perspective. So we are looking at all of the different time frames involved. And we are also looking across modes. We are looking at highways. We are looking at transit, intercity

freight rail, intercity passenger rail, bus transportation, intermodal facilities. We are looking across the entire range of transportation. You directed us to come back with a conceptual plan with alternative approaches, including specific recommendations regarding Federal policies and legislative changes and including recommendations for alternative revenue sources to support the trust fund.

The commission is proceeding on a time schedule where we would have our work completed by December 31st, 2007. You had included a provision in the technical bill that would basically adjust the deadline from July 1st to December 31st, but we thank you for also telling us that even if that doesn't pass, that we have until December 31st to get the job done right.

As part of our work, we are doing public outreach. Dallas, Portland, New York, Memphis, are hearings we have already had. We are going to be going to Atlanta, Los Angeles, Chicago, possibly Minnesota, and we are also going to have a hearing here in Washington on March 19th, and I have actually already talked to the committee staff about possibly using this room for the hearing we are going to have in Washington, DC.

The policy backbone of the commission's work are technical analyses that are under way. You can see from this list that we have a huge number of papers in development across a wide range of subjects. Those papers are currently being prepared. Some have already been delivered and are in pretty good shape from consultants and from the DOT staff. Others have been prepared and are now being revised or sent back for more, and then there is another whole view of them that we have yet to receive the initial drafts. And it covers a whole range from current status to baseline needs and to the financing alternatives.

The commission's work also includes a blue ribbon panel consisting of 74 members. The first meeting is going to be in February. They are going to provide peer review, and they are going to do selective projects that the commissioners give them.

The challenges facing the commission. We got off to a slow start. We were 6 months late because of the executive branch appointments being late. And then we have had three successive chairpersons, Secretary Mineta, Deputy Secretary Cino and now Secretary Peters. So that has kind of slowed things down, but we are now up and running under the good leadership of Secretary Peters.

The resources: We had $2.8 million. We have asked for an additional $2 million, which you were kind enough to include in the technical bill which we really do need to make sure we get all of these studies and all of the scenario analysis work that we are going to do to make sure we have sufficient resources to do those properly.

The biggest challenge has been finding the vision, what you were talking about. What should this system look like 50 years from now from a national perspective and trying to define that. It is multimobile. It is not going to be as simple as a map of the interstate and how one defines that and what that is. Almost every witness says we need a bold vision, and we are asking everybody well, what is your idea of what that bold vision should be? And so we are working on that.

Another challenge is going to be to diverse views that the commissioners bring. We have got 12 good hardworking commissioners that come at this from different viewpoints. We are going to have a very, very healthy debate, and if we are able to reach consensus, it is going to be a product that is worth your attention because of the different views that people have had coming into this.

With respect to the second commission, that is something that was set up in the Ways and Means and finance title. It has a much more narrow mandate than hours, and that it is only looking at the financing piece. It is not looking at the levels of government. There was no actual money put in for it. And so that is another factor. We did discuss this at the last commission meeting. I think there was a consensus among the commissioners that the existence of that second commission does not in any way detract from what we are supposed to do. We still need to meet the requirements of the statute, and, secondly, the funding that is made available the resources from DOT are made available for the Section 1909 commission. It cannot and should not be used directly or indirectly for this other commission, that it needs to find its own source of revenues.

Thank you. I look forward to questions.

Mr. DEFAZIO. I want to apologize.

Ranking Member Duncan, he was going to come back before this 15-minute vote, and I said there is another vote because we are in the middle of a procedural tussle here, and I think that he perhaps misunderstood the communication because I don't want to keep all of the witnesses here for—this could go on until this evening some time. So that is why I am trying to squeeze this in now. It is no disrespect on the part of the ranking member. He is trying to get back, and we are probably going to have another vote soon.

So Mr. Heminger.

Mr. HEMINGER. Mr. Chairman, thank you, and good afternoon.

I do appreciate Mrs. Taucher's introduction. So I can dispense with that for me and get right to the meat of my presentation.

Jack, I think, has laid out for you a good sense of our process. I would like to identify for you, and in my testimony, I do have five key issues that we have focused on to date, and I would—they are responsive to the issue that you and Mr. Mica raised about a national vision, a national strategic plan, if you will, that we currently lack for our transportation system.

And I have put this presentation together under the theory that a picture is worth a thousand words. So on page 4 of my testimony, I show the picture about traffic congestion which is two maps of the U.S. The first is from 1982 where in only one city in America did the average commuter spend more than 40 hours annually in congestion. That is now, as of 2003, more than two dozen communities. It is a very significant problem, a real sap on our economic strength and mobility in those areas.

Mr. Shane earlier gave you sort of at the top end of the tree one of the potential solutions, which is congestion pricing. At the lower branches, there are things, very low cost operational strategies that we believe we ought to be considering with much vigor because half of the congestion is related to incidents and accidents. It is not recurring. It is not related to capacity, and we have barely scratched the surface in terms of deploying those solutions.

The next page, on page 5, my second page picture, I don't think ″tsunami″ is too strong a word to describe what is happening to our ports in terms of international trade. And these forecasts from U.S. DOT out to 2020, not to 2050 but at least out to 2020, show very sizable increases throughout the United States at these ports. This is especially true where I live on the west coast because a lot of what we buy these days is made in Asia and makes its way to the United States throughout the country through the port of Los Angeles and Long Beach. The very significant increase you see there, Mr. Chairman, is really not going to occur, in my view, unless we make significant infrastructure improvements at that port. That kind of increase with their current capacity and with the current community concerns that Mrs. Napolitano has mentioned is simply not sustainable. This is an area, in my view, that clearly qualifies as one of national interests because of interstate commerce, international trade, as of yet national leadership is lacking. And it is a main focus of our commission activity.

The third picture I have for you on page 6 has to do with safety, and I am certainly not going to reengage the debate about older versus younger drivers. The fact is there are too many drivers of any age being killed on our highway system today. What this chart shows, it is the latest release of information for NHTSA is that we basically made no progress in reducing fatalities over the last 20 years. In my reading on this, I came up with one really startling comparison. Since the advent of the automobile, 3 million Americans have died on our highways, which is five times the number of U.S. war deaths in the history of the Nation.

If we don't have some better progress on this problem in our work, in your work, in re-authorization, I think we really will have failed ourselves and the rest of the country.

The fourth picture is a bit of an oddball, I will admit, and this is one that the commission has not spent as much time on. It is on page 7, and it comes with a lot of names, whether it is national energy security or energy independence or energy efficiency, and I think it is fair to say that the transportation community, generally speaking, regards this issue more or less as a threat, you know, that if fuel efficiency gets better, our revenue source goes down, and that is how we ought to look at the question. And I think that is not looking at the question correctly. I think we need to look at it also as an opportunity for our sector for our community to contribute to a national goal. The chart I show you shows some of the increasing trends around the world, and in my State, California, although our standards are now under challenge in Federal court by the automakers to improve fuel efficiency, you can see where the U.S. ranks compared to the rest of the world, which is at the bottom.

But the fact is, there are different ways to skin this cat. As you know, the vehicle fleet in Europe is much more fuel-efficient and that has in large part to do with very high fuel taxes, and fuel taxes, as you well know, raise revenue which is one of the things we are desperately lacking in our transportation system. So I do hope that we will, and that you will, examine this question in the context of our transportation system, not just in isolation as an energy strategy.

The last one I will touch on briefly is clearly the revenue question itself. I have included two pictures in my presentation. The next to last has to do with the problem that you are very familiar with which is the short-term issue of the Highway Trust Fund entering into negative balances. I won't spend much time on that because you are well aware of it.

The last picture in my presentation to me is even more worrisome because it shows the very large gap that exists by this account from a U.S. Chamber of Commerce study a couple of years ago on the order of $50 billion to $100 billion per year in the cost to maintain and improve our transportation system.

As Jack indicated, our work plan calls for a thoroughgoing review of this question, and I think one of the things where we will really add value is an objective assessment of where we think the Nation ought to move forward in a national strategy and what the needs that will accompany that strategy might be, and then working our way to the revenue question about how we might raise the money to do so.

One worrisome footnote I will leave you on this last picture is that these numbers are probably, in all likelihood, understated. What you have seen recently, what we have all seen around the country in construction costs, has been a substantial escalation over the last few years because of materials, especially steel and concrete. China is using a lot of those, just as we are, and we will be factoring that and other issues into the estimates that we provide you.

In conclusion, you have clearly given us a tall task, but I know both Jack and I love a challenge, and that is what you have given us, and we look forward to providing you our report later in the year and to consulting with you frequently in between times.

Thank you.

Mr. DEFAZIO. Thank you.

I am going to withhold questions at the moment. The way we are going to do this is, if Ranking Member Duncan shows up, he is recognized for questions. I will run and vote and then come back, and hopefully that way we will sort of overlap here and maximize your time, because I really bemoan the fact that we invite witnesses, and you are sitting around for hours because of something we are doing of no particular consequence in terms of procedural votes.

So, if you could just sort of not go from the room because—do you think he is going to come back on this vote, or is he going to—it was a 15?

OK. So he was on his way back, and then he went back to vote, so he is now on his way back again—we are giving him his exercise—and when he comes in, he is immediately recognized to ask questions. And then I will come back and ask a round after he does, and then we will move on to the next panel. If any member of the committee shows up in the interim, they are recognized to ask questions.

[Recess.]

Mr. DEFAZIO. Thank you.

I just saw Ranking Member Duncan on his way back to vote, so if I talk slowly, perhaps I will just be finishing at about the time

he can turn around and come back. I have a few questions that occurred to me.

As sort of a general question to either or to both of you, do you perceive any barriers or problems in achieving the rather ambitious—I mean, other than the very difficult nature of the subject matter which we have put before you in terms of wanting you to look into the future, analyze future transportation needs, and then also come up with innovative and a different range of options to fund them, other than the difficulty of the charge, are there any barriers? Mr. Schenendorf discussed the extension of the timeline, which is certainly going to happen in the technical corrections; the additional funding, which I do not believe will be a problem even in these new tighter times, because that would be trust-funded, so we should not run into the ″pay as you go″ problem.

Are there any barriers that you care to enlighten us on here that we could deal with? I am just giving you a chance if there is anything that you did not————

Mr. SCHENENDORF. No. As long as we are able to basically look at the full mandate of what we were asked to do, I do not think there are any problems as long as—I mean, it is a big task, and it is going to take the resources and the vision, but as long as we are able to look at all of the options from raising the gas tax, new fuel taxes to congestion pricing—everything is on the table—then I do not see any problem. And if we are looking into defining the vision and saying which of these financing sources can get us there, then I do not see any problem. And right now, everybody has said that everything is on the table, so I have not sensed among the Commissioners that anybody is trying to constrain this in any fashion.

Mr. DEFAZIO. And there would be, as I would understand it, no review authority beyond the Commission. That is, if you come up with a range of financing options, those do not have to go through the Office of Management and Budget? I mean, you are an independent Commission with technical assistance and that from DOT, but if the Commission—you are not aware of any————

Mr. SCHENENDORF. No, I am not aware of that.

In fact, I think when that question came up we were told it does not have to go through OMB. We are an independent entity.

Mr. DEFAZIO. So you are looking at everything from the traditional raising of the gas tax, to innovative ways of assessing the cost of the system and putting them on users, to public-private partnerships? All of that is on the table?

Mr. SCHENENDORF. Yes, sir, that is my understanding of how we will be operating.

Mr. DEFAZIO. Great.

Mr. Heminger, do you want to add to that?

Mr. HEMINGER. I agree with Jack's response, but would add one thing.

I think one of our barriers is to aim too low. You know, I think Mr. Mica mentioned it earlier about bean counting and all the rest of it. You know, we are all used to the system that we are in, and I think our greatest challenge is to think beyond that system and to think big, and that will involve, obviously, political challenges when you think that big. We are going to leave them largely to you

because you are the elected body, but we are going to give you our best advice across the range of the issues that we have got before us.

Mr. DEFAZIO. OK. Now, internally, have you determined how the report will ultimately be written; i.e., are you only going to put in items which reach consensus? Are you going to have majority vote? Are you going to have a minority report on certain issues?

Have you worked through those procedures yet?

Mr. SCHENENDORF. We have not worked through those procedures yet. I think everybody there is hoping that we can reach a consensus. That would be the ideal thing. I think that would be a report that would be most helpful, but you know, I think all of those options are open if it gets to that, but we have not had any discussions. I think everybody is working hard to be able to reach a consensus.

Mr. DEFAZIO. OK. Well, I would hope, if there are items that certain individuals on the Commission feel very important that cannot achieve consensus but would be instructive or informative to this committee and to the Congress, that they would be in either dissenting views or in appendix or annex or something along those lines.

I was involved in formulating a commission on the causes and the magnitude of the trade deficit, and they had hoped to do things by consensus and ultimately could not, so their major findings were done by consensus, but then there were essentially two sets of dissenting views or additional views, should I say, included, which were very, very instructive and informative. So we do not want to forego that knowledge because you cannot reach consensus, and I think most of my colleagues would agree on that.

Now, I am curious about the second Commission. I mean, one of your charges is to look at financing and the full range of options. So I guess my question to you would be: Do you see that there is duplication with that Commission? Do you feel in any way it might dilute your efforts or inhibit your efforts?

Any thoughts on that?

Mr. SCHENENDORF. No. Well, again, aside from the point of deferring to Congress—I mean, Congress did put the two Commissions in, so they are there.

I would say it does seem duplicative of the financing portion that we do, and I guess I have a personal concern as to what the perception of that is, you know, why people—you know, does it make sense having two. And then, you know, at the end of the day, if the recommendations are different, then, you know, what does that do? And then also from a resource perspective, since that Commission does not have any dedicated resources, is it going to somehow at some point dilute our effort even though we are trying to make sure that it does not?

So I do have those concerns, but really I think it is a question for Congress to decide and to decide whether or not to make any adjustments.

Mr. DEFAZIO. Well, I actually intend to have a conversation with my colleagues on the committee and others who are involved on other committees of jurisdiction for the second Commission in the hope that we could assure the members of the Ways and Means

and Finance Committees of the House and Senate that their concerns will be fully addressed by the existing Commission, in fact, better addressed by the existing Commission, if there is not a duplicative effort or any diversion of resources, and I am hopeful—of course, we have to deal with the Senate on that issue, too, but I am hopeful that they may be agreeable to that as part of the technical corrections.

I am certainly going to raise that issue because, you know, one Member who insisted on this is no longer in Congress, and, you know, we do have a new majority in the Senate where one of the originators does still sit, but I would hope we could convince him and others that you can give them the tools or the items for discussion that they need.

I mean, I feel—and contradict me if you think I am wrong—but given the limited resources available and the fact that you need more resources, that this potentially could divert some staff time and/or resources from your vital work and difficult work.

Mr. HEMINGER. Mr. Chairman, I do agree with that, and I think there is another point, and you just referred to it.

We have had many discussions at our Commission about the fact that we need first to proceed to a national vision and the needs to carry out that vision, and then, second, to address the revenue questions. And I personally do not think it does a lot of good to address the revenue question separately from the needs and the vision because very often the revenue mechanism you select could work for or against some of the vision and needs that you are trying to carry out. Some of them are preeminently local, like tolls, where the tolls generated in the United States right now are kept right where they are generated. Unless you want to put in place a national tolling apparatus, you really do not have a revenue source that matches up with the national program, just as an example.

Mr. DEFAZIO. Just one last question. I appreciate the fact that you have been here so long.

You did, Mr. Heminger, mention that there are a lot of low-cost things out there we have not done yet, and in particular when you talked about half of the delays being due, actually, not to capacity issues, but to incidents and accidents. Could you address how we would creatively address that in a low-cost way?

Mr. HEMINGER. Well, you know, one of them Mrs. Tauscher mentioned at the outset of her question, and that is we have got a hodgepodge system out there in terms of the information we collect from the road, and that means we do not have as much for the planners and the builders, and we do not have as much for the travelers, most importantly.

If we had a dedicated fund source which would be a one-off, essentially, to get that system instrumented especially in the major metropolitan areas, that would be a huge advance at a very cost-effective investment.

The second thing, some of this we have been doing a long time in some areas and not in other areas. A lot of this is accidents. If you get the accident off of the road faster, the traffic flows faster. We have got 70 tow trucks in my region in the Bay Area doing that very thing, but not every region has it. To some extent, Mr. Chair-

man, it involves, I think, a culture change in the profession. The profession is an engineering profession, and, you know, when you are a hammer, every problem looks like a nail. Well, they tend to try to solve problems by building something, but these are problems, especially in these incident areas, that you do not need to build something, or at least what you build is antenna wire and the rest—it is not asphalt and pavement—and I think incentives and encouragement from the Federal level, from Congress, as well as some direct assistance to get some of these critical elements put in place could go a long way.

Mr. DEFAZIO. Not to be insensitive here, in the case of a fatal vehicular accident, obviously, we need to both take care of anybody who is injured, and we have to document the incident, but in your region, does that—in my State, it becomes a crime scene, and then it involves the State police, who will often block off the highway for hours. They have no concern over the flow of traffic. That is not their job. Their job is to investigate.

I mean, how does California handle those sorts of things?

Mr. HEMINGER. Probably just as poorly. I have heard, though, of some States that have come to agreement with public safety officials whereby the sort of crime scene, as you described it, can be relocated to the side of the road as best as possible so that the traffic can flow again. You know, no one, as you suggest, wants to be insensitive to what has occurred, but at the same time, I do not think you are doing anything—you are really compounding the injury that has occurred by causing needless backup in the traffic down the road.

Mr. DEFAZIO. Right. The backup often has accidents at the far end of the line because the traffic suddenly stops on the interstate, and then you have another incident back here, hopefully not a fatal one, but another one and another one.

Mr. HEMINGER. And this is something we do not do as readily as we should, working across jurisdictional boundaries. It is not just a transportation issue. It is not just a public safety issue. It is both.

Mr. DEFAZIO. OK. Thank you. Let me just consult with counsel.

I was just trying to be sensitive to the—I am sorry again. What we are going to do is I am going to go over and vote, and that should give us, at least by the time I get back—I am just guessing—but probably as much as a half an hour, who knows, to get into the next panel. But if you could, just stay, if your schedules permit, in case Mr. Duncan arrives back until we convene the next panel, and if he has some questions. I would appreciate it.

Thank you. I appreciate it.

[Recess.]

Mr. DEFAZIO. Gentlemen, Mr. Duncan is recognized for questions.

Mr. DUNCAN. Well, thank you, Mr. Chairman, and I will be very, very brief since we have got another panel that we need to get to. And I did not get to hear the testimony, but I will say this.

I have certainly had the privilege of working with Mr. Schenendorf over the years, and everybody who ever did that has always had a lot of respect for Jack, so—you know, one thing I was trying to remember, though, Jack—you know, we had this big delay in the highway bill this past year. Maybe my memory is just not

really good, but I do not remember having anywhere close to that long of a delay on the original TEA–21 legislation.

What was it? Do you recall if there was much of a delay on that legislation?

Mr. SCHENENDORF. That legislation was supposed to be completed in the first year of the session. It was supposed to have been completed by October 1st, and it actually went over into the spring of the following year.

Mr. DUNCAN. So it was not nearly as much as this time.

Mr. SCHENENDORF. Right.

Mr. DUNCAN. So, October. Around here that is not bad, October to the spring. Hopefully we can beat that this time, but thank you very much for being here and for all that you do, both of you.

Thank you, Mr. Chairman.

Mr. DEFAZIO. I want to thank both of you. I want to thank you for your service on the Commission. We look forward to your product. We will do the best we can to accommodate your budget, your timelines, and then I will also be in discussions with Mr. Duncan and with our full committee Chairman and Ranking Member, seeing if they share the view that we might be able to get the product that finance folks need out of your report and your committee and not have to have a duplicative committee, and hopefully that will expedite things.

So thanks again. Thanks for your thoughtful testimony. I appreciate it.

We now call the next panel to the table: Mr. Pisarski, Professor Schwieterman, Dr. Bronzini, and Dr. Lomax.

Gentlemen, thank you for your time. Thank you for your indulgence. I regret the fact that this has gone on much longer than we had anticipated, and hopefully none of you were unduly inconvenienced, but I appreciate it.

I have read your testimony, and I appreciate any summary that you want to give at this time within the 5-minute limit. In addition to that, if something has come up earlier that you would like to respond to or to contradict or agree with, you can also do that in those 5 minutes, and then we will have a round of questions, and I guess we will just start in the order on the list here.

So the first would be Mr. Pisarski.

TESTIMONY OF ALAN PISARSKI, PRIVATE CONSULTANT, FALLS CHURCH, VIRGINIA; JOSEPH P. SCHWIETERMAN, PROFESSOR, DePAUL UNIVERSITY, DIRECTOR, CHADDICK INSTITUTE FOR METROPOLITAN DEVELOPMENT, CHICAGO, ILLINOIS; MICHAEL S. BRONZINI, GEORGE MASON UNIVERSITY, DEWBERRY CHAIR PROFESSOR, FAIRFAX, VIRGINIA; AND TIMOTHY J. LOMAX, TEXAS TRANSPORTATION INSTITUTE, PROGRAM MANAGER, MOBILITY ANALYSIS, COLLEGE STATION, TEXAS

Mr. PISARSKI. Thank you, Mr. Chairman and Mr. Ranking Member. I am Alan Pisarski, and it is a great pleasure for me to appear before this committee once again to discuss with you the substantial challenges the Nation faces in transportation.

I was struck by the discussion earlier this morning, particularly with Chairman Oberstar, remembering the history of the inter-

state. I Chair the Committee on Transportation History at the Transportation Research Board, and have spent a lot of time over the last 2 years studying that history, and the Chairman, by the way, has it right. It was a 20-year effort, sir, and I think this is useful to this body. It began with a sense of vision in the 1930's with President Roosevelt and was followed by a plan in the 1940's and then was followed by a financing plan in the 1950's.

So I think it is very appropriate to recognize the necessity for vision, but also to recognize that this is a long-term effort. If you look back and see the successes they had, and we measure ourselves against that, we are deficient, and we really need to rediscover the vision and the power of that vision that they were able to accomplish.

In my paper there is a page-long summary statement, of where I think some of the key problems are going to be. I will not go through all of those here with you today. In fact, I want to just pick out three of those to emphasize.

I really do feel that the Nation will be facing what I think is perhaps the most dramatic changes in its demography since the great immigration waves of 100 years ago. I just completed a book for the National Academy of Sciences called Commuting in America III, and I do want you to know that AASHTO is distributing copies of it to each of the Members, that you will be receiving next week. What I talk about there is the fact that we are going into a new phase of commuting where, in fact, the issue may be too few workers rather than too many.

The issue is going to be how do we replace the baby boomers? We are going to need to keep the older workers employed. We are going to need to get more women involved in the workplace. We are going to need to get minorities more involved. Rural populations are going to have to connect better to urban jobs markets. The great issue is going to be using transportation to sustain the workforce.

The second area of great concern is going to be the expanding of metro areas. I expect 15 metro areas over 5 million, probably half the population of the country in those massive areas of 100-miles across by 2020. The dominant pattern is going to be suburb-to-suburb commuting, kind of a ″doughnut metro″, people flowing out to the suburbs from the center cities and people flowing into those suburbs from other metro areas and from rural areas.

Finally, I suggest to you there is an affluent, time-focused society that we are going to be seeing. If I were going to pick a vision for the society, it would be ″Think of a transportation system that will serve people whose value of time is $50 an hour and a freight system that has triple the value of today's average value of goods.″ I will just simply point out here that transportation is going to be critical in responding to each of those areas.

This display is a map of the Nation's counties that are exporting more than 25 percent of their workers to other counties every day—-the red counties. As you can see, everything east of the upper Great Plains—has become a phenomenon in just the last 15 or 20 years. We are talking about half of the new workers are now leaving their home counties to work in adjacent counties and, in

fact, crossing over into other metropolitan areas. So it has really become a critical pattern, I think, for the future.

Mr. DEFAZIO. Is that in your book?

Mr. PISARSKI. Yes, sir.

Mr. DEFAZIO. That was in your testimony.

Mr. PISARSKI. Yes, Mr. Chairman, and there is a discussion of how that trend and pattern are moving.

The attributes of my vision are the seven listed, but I will simply point out that the first has been discussed this morning. There are immense things we can do in operational terms that do not need massive investment and that we need to do first I think the public expects us to do them first before we start talking about massive investments and capacity.

At the same time, and the last point I am making here, is that we do have a tremendous backlog of congestion-related infrastructure, physical-condition-related and capacity-related issues. I think once we get past that backlog, we have a future that, in fact, we can readily address.

I cannot go into all of the elements that I have proposed in my paper, the national system's elements. I will just point out a couple here.

The first is an expanded and enhanced Interstate. I am working on a project on the future of the interstate, at the National Academy, and we have addressed some of those questions.

The second two I will point out is that I think we are at the stage where we are going to have to recognize in the future that we have to separate cars and trucks. I am suggesting here the idea of a national parkway system and the idea of a national truck freight system. On the nationally pervasive units that we are talking about—I will not pursue all of them here—two points that I will make are a lot of it comes down to the need for beltways serving the circumferential pattern that I have just identified.

The final point I want to make is that our data systems are pathetic. The Department of Transportation has not done well in that area, and I think it is something that really needs congressional cognizance and concern. I believe we need a performance-based system for the future, and we cannot do performance measurement without the data, and the Department has not provided it.

But my very long-term view is I see a very positive future, much more operable problems with the resources to address it. We simply need to recognize the central role of mobility in our society, and we must be willing to act to focus those resources.

Thank you, Mr. Chairman.

Mr. DEFAZIO. Thank you.

Professor Schwieterman.

Mr. SCHWIETERMAN. Yes. Thank you, Mr. Chairman and the Ranking Member, for a chance to be here.

My remarks are really shaped by my 24 years of experience in transportation. I spent nearly a decade at a major private transportation company, more recently as a professor. I have written several books. My most recent book looks at the effect of changes to rail service in smaller towns and cities, and I would really like to start— and I have been very pleased with what I heard this morning, which is that, in the next bill, the interdependency between

highway and rail and waterway is going to be at center stage. And we have really missed opportunities in the past to have a lot of lip service to intermodalism. We have had some good progress, but not as much as those of us who celebrated the first IT had hoped. And so I think we are learning, and I think the next bill may be the window of opportunity to really push that onto a new level.

My second proposition really relates to this new bill and changes we make. We need to leverage private capital, and that needs to be at center stage, and, you know, this could take many forms. I think toll highways are the most prominent thing, but there are intermodal, joint partnerships, public-private partnerships for transit facilities, freight railroad systems, and so forth.

So I want to commend the architects of SAFETEA-LU, and many of them are on the committee here, for really pushing us toward that, and there are some things that I am really pleased to see are working.

There are loans for local short-line and regional railroads. There are tax credits for major railroads. That is exciting stuff. We have more grade-crossing money. That is facilitating major freight corridors to become more efficient. We also have the projects of national significance, the CREATE Program in Chicago, to unclog our freight yards. Similar projects around the country, I think, are giving focus to this idea of private-public partnerships, and we also have the $15 billion of allowances for private activity bonds for State governments. We heard some talk here about Texas' plan this morning, one of the first States to actually receive approval for these private activity bonds, and this is big stuff, and it really has the potential to bring an infusion of capital to the table.

So, as we look at the problems of the Highway Trust Fund, and we have heard a lot about that this morning, I think the real temptation here is to avoid the quick fix, to avoid the expedient approach to just look at highway user fees, and to step back and say this is an opportunity, really, to think outside the box a bit. And I would like to share, just very briefly, two bits of research I have done at DePaul University.

The first is we looked at the changing reach of the rail system and how policies that have been very punitive of the railroads have affected the access of a lot of towns to rail service, and we found there are 2,500 towns in the United States with populations of more than 3,000 people who no longer have any sort of rail service, freight or passenger.

We also found a few metropolitan areas now with more than 100,000 people who have not a single mile of active railway track, and we have found that, you know, it is a combination of things. It is highway user fees, cross-subsidies to heavy trucks. It is outdated Federal labor law in some cases. It is also punitive property taxes. Big money for railroad property taxes has never really been addressed in any sort of Federal way, and a lot of cities are struggling to bring the rail service back and to make it more relevant in the freight picture. And there are at least two dozen cities we found that have been successful in restoring our rail links, and some in the districts of committee members here, and I will not go through the list, but I can tell you SAFETEA-LU has been pretty much at the back seat of all of that; that there are a lot of county-

wide efforts to shore up intermodal use and so forth, and SAFETEA-LU, unfortunately, has been pretty much background music as opposed to being there to really facilitate some of this.

Two days ago at the TRB conference, I gave a presentation looking at all of the proposed high-speed railway corridors around the country that have gotten government backing, and there are 15,000 miles proposed of various stages of planning, but it became clear that the States are really looking to the private railroads to form partnerships to try to move some of these things forward. They understand that this cannot be done with a simple Federal allocation, it needs to be done in partnership with the private sector. And there are 21 freight railroads that are affected by routes that are being proposed, 2,000 miles of transit agency track. Several thousand miles of interstate highway has been slated. There is no illusion that these high-speed systems are going to arrive any time soon, but it shows that, at the State level, there is real interest in working with private carriers to develop partnerships, to make capacity improvements that can push us into the next level.

So, in closing, I just offer three recommendations. First, the States are still looking for more flexibility. SAFETEA-LU gave them considerably more flexibility, but they need more. To manage the highway-rail interplay, they need much more freedom to think outside the box with their spending. Kansas, Virginia, Georgia, and Iowa are just four States that are at the forefront of that.

Secondly, I think more incentives for private investments. These private activity bonds should be the foundation for a much larger package. Funding and expedited processes for private tollways, truckways, investment credits for railroads really should be at center stage.

So I bring much good news from the American heartland. I mean, we have got—the Chicago Skyway has been turned over to a lease and so is now on safe financial footing because of the private capital we have enlisted. An Indiana toll road is being leased. The Detroit railroads are investing in a huge way in facilities to unclog the freight system. I am not sure we will be cooperating with Indiana quite so much on Super Bowl Sunday, but I can tell you that there is a lot of synergy going on there.

So, as we move the new transportation bill, avoiding the quick fix and seizing this private capital is really where I see a great opportunity.

Thank you for the time to express my views.

Mr. DEFAZIO. OK. Thank you, Professor.

Dr. Bronzini.

Mr. BRONZINI. Thank you, Mr. Chairman.

It is a pleasure to be here today, and especially to be talking in front of Mr. Duncan, who, for many years, was my Representative in Congress when I lived in Knoxville. So it is nice to see you again. It is a pleasure to be here.

You have heard a lot about the challenges facing the system, the congestion, so I am not going to go over that ground again, and I did not in my testimony, but rather, I want to highlight what I believe are some important principles and issues that need to remain in the forefront or not get lost as we do with some of the details in the long discussion about funding that will certainly ensue.

I think there are some basic principles that we need to remain cognizant of, and I touch on four of these in my testimony, and I will just mention three of them and elaborate on the fourth one.

First, it is basic to our system that it is a partnership. It is being developed as a partnership between the Federal Government, the State government and local government, and this works well. It has served us well over many years and many decades, so whatever we do in the future, we need to maintain that partnership as a central focus of how the program progresses. And it is not just a funding thing, it is a real partnership. There is more than money behind this.

Second, the system is really a system. Even though the Interstate Highway System is largely completed and, of course, will need to be expanded in the future, we cannot lose sight of the fact that there is a system. Where there is a system, we need to focus on how the system works. It does not work well if each piece is off doing its own thing. There has to be some kind of a central organizing principle behind it to guide what we do and how we find the balance between local, State and national needs. So the system aspect is really paramount.

Third, this may not be the best place to bring this up, but I think earmarks have become a problem, and I suspect there are as many views on that as there are people in the Congress, but I think it may have gone over the tipping point this last time around, and I think the level of earmarking is such that it is starting to raise many questions around the country and threatens to have the public lose faith in the credibility of the program.

Now, I also mention in my remarks some of the reasons why earmarks exist besides the critical ones, so a system to try to control the earmarks—and I would commend Congress that has actually started down this path, and I hope it bears some fruit, but that system has to also take care of the root causes of why earmarks exist in the first place. If we just treat the symptom and do not treat the root causes, we may not be able to stave off the bad side of earmarks in the future.

With the rest of my remarks, I want to focus on the issue that Mr. Pisarski raised on information requirements. It is pretty fundamental to most enterprises that good system decision-making has to be founded upon good performance measures and good information and the data to support that, and this is certainly true in transportation. The Transportation Research Board last month, in fact, published a very short, concise document. It is Research Circular E-C109, which, in a few pages, lays out very well why we need data, and it has a lot of good, concrete examples of how good data helps us to make good decisions in transportation.

So I would like to add this to the record, if I could, to make sure you get that.

Mr. DEFAZIO. Without objection.

Mr. BRONZINI. OK. And right now, as has already been mentioned, the Transport Research Board is having its 86th annual meeting across town at Woodley Park. There was a session on Monday focused on information needs and trying to understand what those needs are in a variety of agencies, public and private, and

just a few things that were mentioned there, I think, are relevant to what we are doing here.

The CEO of a State department of transportation, quite large, said that we have the problem of frailty of decision-making based on weak data systems. Data collection and management are cost-effective. They are not cost drivers.

From a division manager for another large State DOT, assisted monitoring and evaluation is the base upon which system development is built. Cutting data programs limits decision-making.

Then from a private sector entity, which I think is maybe even more telling, there was a representative of a large technology company, which they are not in the transport business, but they use transportation, and this is a $65 billion company in annual revenue, and he said their company relies heavily on performance metrics as the basic way that they manage the enterprise. And they spend 1 percent of their revenue on performance metrics, and of that, they spend 10 percent of that just on research, just on how to make their performance metrics better.

I think that standard is much higher than what we see happening in our own transport system where the output of good data is even more important. So the need to measure how the system works and to put in place the mechanisms to make that happen, I think, should be a major concern of the future program development.

Thank you.

Mr. DEFAZIO. OK. Thank you, Dr. Bronzini.

Dr. Lomax.

Dr. LOMAX. Thank you very much, Mr. Chairman, and Mr. Distinguished Member. I appreciate the opportunity to be here to talk about the future of transportation.

Our country's system already faces a number of challenges, and those will undoubtedly grow and evolve, but I am optimistic that our society can overcome them. Please let me know if I can answer any questions today or in the future.

We have studied urban congestion issues for more than two decades, and I think I am safe in saying that congestion is going to get worse, especially in the metropolitan regions. Moving millions of new travelers and freight, that Alan pointed to, to their destinations, and doing that quickly and safely, will mean adapting to some new realities, new technologies and even new travelers.

Consider that the current grade-school and college students will be the decisionmakers of 2040 and 2050. Their experiences, for example, with instant access to information will mean a much different set of expectations than you or I grew up with.

Most of the challenges we face can benefit from a combination of two approaches. Technology or infrastructure is one, and information or policies is another. I think this is a type of niche marketing. There is not any one big program or technology that is going to solve the problem. There will be many different solutions, and those solutions are going to be different in different areas. Larger urban areas may have different solutions than smaller ones, suburbs different than urban areas, and regions of the same size and with generally the same character may choose to make decisions

just because that is what their citizens want to do. I think that is the reality, and I think that is good.

Our Urban Mobility Report has consistently promoted a broad set of strategies to solve congestion problems. These require efforts from many groups, not just the agencies, but the business community, and the public needs to be involved as well. Just broadly, those solutions have been talked about. But I sort of characterize one of them as do the small, simple things. Time traffic signals. We do not do that as well as we can. We do not clear the traffic collisions, or vehicle breakdowns as fast as we can, and there are ways to do vital road maintenance functions more rapidly with less congestion and less time. These are very simple improvements, and they are very cost-effective.

We also need to do more. A solution set of strategies must also emphasize adding highways, public transportation service, bike lanes, ferries, sidewalks, everything to our system because we are going to need that to address the growing populations.

Then information, enforcement and education can play key roles in the solutions. Reliable information, enforcement of traffic laws that improve safety, and education programs all provide elements of improvement and increase the trust between the operators and the public.

There are also substantial benefits to these improvements that should not be ignored. Connecting effective strategies to those citizens' concerns using reliable information should be a key component of any transportation improvement program. Transportation projects, after all, are not ultimately about faster travel. They are about supporting an economy that competes in a global market, supports families and encourages innovation, and creates options that allow citizens to improve their lives.

To wrap up, I have a few suggestions on how to translate the future situation I have outlined and the challenges we face into tangible advice for members of the subcommittee.

With respect to number one, recognize that some problems are regional and interregional, but many of the operating and governance structures are not. How do we make these match or work better?

Congress, I think, must recognize that the current system of decision-making is based on States or metropolitan regions. They examine within their own boundaries for solutions to current or future transportation problems. The current Federal program reinforces this natural inclination to stop solutions at the border, thus resulting in a patchwork of solutions to large interregional problems. We already recognize regional and, in some cases, national consequences flowing from these, and I had an example in my testimony. We should make the solutions match these problems more closely.

Number two, people will react to incentives like price or time savings, but we rarely provide them opportunities to do so. We have heard about incentives here today. At the same time, States and regions have the responsibility to maximize the efficiency of the transportation infrastructure. These two facts can work together to recapture the unused existing capacity through tools that spread demand over longer periods of time. Concentrated travel de-

mands are the single worst congestion problem in big cities. Transit, congestion pricing, carpooling, telecommuting, and many other tools address that concentrated travel demand. I think we should be coordinating those much better.

Number three, no one is really paid for eliminating congestion. Why is that? It is clear that more aggressive congestion reduction approaches exist, combining technology, information, policies, regulatory changes, private sector partners, public sector agencies. Each element doing what it can do best without regard for jurisdictional boundaries or turf issues can be successful. The Federal program could reinforce these aggressive approaches with support for innovation and coordinate the development of monitoring, reporting and performance standards.

Number four, building on what Mike and Alan have said, data-driven and results-oriented approaches to problems have proven their effectiveness in many fields of government. We should expand those in transportation, and this refers to analytical processes, monitoring data, communication strategies. The report for both improving the operation and for improving the ability of the technical folks to communicate with the public, the cycle of planning, testing, deployment, and evaluation of innovative strategies may turn over much more rapidly, not unlike the private sector freight shippers now. Congressional support for data collection and analytical improvements will be returned in the form of better service, improved communication with the public and more reliable operations.

Thank you very much for allowing me to provide some ideas.

Mr. DEFAZIO. Thank you, Dr. Lomax.

I will lead off with a few questions.

I mentioned to Under Secretary Shane, but also, I think it is implied in some of the testimony we have just heard, that we have pretty much a stovepipe system. Remember, we talked about intermodalism, but that is sort of at interstice, I mean, where you are off-loading ships or—you know, we do not really integrate the system in a way where we can get to the point of doing what I call ″least cost transportation planning.″ What is most efficient? What is most effective? How are we going to move the things more quickly, more fuel efficiently and with less expense to shippers or for individuals?

I guess I am interested in any ideas any of you have about how we would approach that. You know, there are a lot of problems. Where does the share come from if you start getting into these kinds of partnerships? How would we thoughtfully begin to break down some of those barriers and, as I think one person said, give more flexibility to the States in these issues? How do we do that while we are still meeting the concerns over here of the maintenance of existing infrastructure, underfunded? Then, you know, we have these other competing modes that could complement that.

Does anybody have any ideas?

Yes. Go ahead, Doctor.

Mr. PISARSKI. Yes, Mr. Chairman.

I have thought a lot about the notion of efficiency and productivity, and I think the thing we have to be guarded about is not to get too excited about the notion of the productivity and the efficiency of the system. We need to focus on the efficiency of people

and on the efficiency of the goods that are in movement, and sometimes the people efficiency is more important than the system efficiency.

The efficiency of the guy delivering pizza to your house would be much greater if everybody in the neighborhood asked for the pizza at exactly the same time, but the fact is he does a lot of work so that people can be more efficient, and I think that is something that we really need to put into place and recognize.

It is not the system. We want the system to respond efficiently, certainly, but it is the efficiency of the public, and that is why I raise this point of the value of time of a society where people's value of time is $50 an hour. The pressures, the willingness to pay a lot of money to save time is, I think, going to be critical in the future, and people's responsiveness to that will be very important. So we have to focus on their efficiency more than simply on, quote/unquote, the efficiency of the system.

Mr. DEFAZIO. I think it is an excellent, very interesting point.

Just one thing that occurred to me when you were testifying earlier, and you were talking about—and I agree with basically the value of time and how it can become more and more valuable in very busy lives, but there is another side to that.

In an aging society there may be a new group of people who do not have those time pressures who are a very large cohort. This is one of my arguments why we maintain a national Amtrak system, because I think you might find people choosing that option over hectic air travel.

Mr. PISARSKI. One of the things that I talk about in my paper is the growth in people with discretionary time and discretionary income, and the boomers, the first of them, are going to hit 65 in 2010. You could very well see for the next 25 years a boom in leisure travel, recreational travel and tourism. I do do a lot of work on the tourism side on the international scene, and there is no question that we are going to be seeing very dramatic increases in those opportunities, and I mention this national parkway system and, in fact, part of that thinking, and the interaction between air travel and ground travel particularly will be significant.

Mr. DEFAZIO. Anyone else?

Yes, go ahead. OK. Go ahead, Dr. Bronzini.

Mr. BRONZINI. Yes. Back on the intermodal system question, there are just two observations I would like to make. One is that—one reason we have all of the stovepipes is because to execute a project in a particular mode, it takes some concentrated efforts, and historically we have had different committees who were the authorizing committees, or who had some jurisdiction over those projects, who had a relic from the past to some extent, and we keep it around because it works until you get projects built.

Now, to make it intermodal, of course, and to make it work better as an interconnective system, there are two things we can do. One is to pay some attention to the interconnection points and to make sure that we have as much of a contingency for that as we do for the pieces themselves, and the other is to try to remove any legislative barriers to cross-modal thinking and cross-modal projects.

Mr. DEFAZIO. In my home State of Oregon, the Governor is partnering with Union Pacific to build more sidings to make the freight more efficient in the hope of keeping the increase in truck traffic on I–5, which has become problematic in terms of capacity, down.

So, are they thinking along the lines of those sorts of things as those kinds of partnerships?

Mr. BRONZINI. That is a great example, and also, it brings to mind the fact that we have sort of ignored the private sector for most of the day, and they are certainly an important player. And so finding ways—and some parts of the private sector work with government better than others, so it is trying to find ways to—so the railroads historically have not been big fans of working with government, so this is something new for them as well. So finding those examples and showing that they can work and removing the impediments to those kinds of projects, I think, would be a great idea.

Mr. DEFAZIO. OK.

Dr. Schwieterman, do you have a comment?

Mr. SCHWIETERMAN. I will add to that.

When the Alameda Corridor was approved, people thought this was the beginning of a golden age of private-public partnerships, and I think, for Federal leadership, there was a window, and there is a window now for Federal leadership to really push that mile all around the country—of course, in Chicago, with CREATE, that is the whole dynamic—and I think the freight railroads are coming around.

I think there is a great deal of reluctance to working with the Federal Government historically because strings are going to be attached, and we are going to be viewed as a public utility, but I think the game is changing now as they have really hit a roadblock with capacity that they can be brought to the table, and the Cascade Corridor you mentioned is a good example of that, where there, I think, is sort of a shared destiny view that is a bit of a breakthrough that we did not see 5 years ago.

Mr. DEFAZIO. Right. OK, go ahead.

Dr. LOMAX. I might suggest that you think about this in a problem-solution mode inasmuch as the solutions in Portland came from a problem, and then a group of folks, agencies, private sector getting together, that might be the same notion for addressing some of the stovepipe issue.

It may be that you need some sort of incentive program here where you require three governors to get together, or five metropolitan regions to get together to talk about a problem that goes through all of their areas which might not be solved by a particular highway or a particular State or a particular solution, but it may be that in requiring some broader set of regions to get together that not only do you reinforce this notion of a national system and regional interconnectedness, but you also address some of the stovepipe issues as well.

Mr. DEFAZIO. Requiring or incenting might be a little gentler way to get there.

Dr. LOMAX. I think that was where I was going.

Mr. PISARSKI. Dr. Lomax and I have worked in a couple of States together, and one of the things that we have done that could go very much to your question, we recommended, in Georgia and Texas particularly, the notion of reduction of hours of delay per million dollars invested as the metric for metropolitan areas to look at. How many hours of delay you have saved with the money you have spent. And what we have suggested is that that solution be open to anyone, whatever proposal they might have, whether it is a highway or a transit proposal; but that is the metric you would base your planning on.

It seems to me that kind of performance metric, kind of opens the door, at least in some sense. In Georgia the State has restructured their planning process around that kind of thinking.

Dr. LOMAX. And you could add the other elements in—your lease cost planning idea, air quality, safety and other elements to talk about the productivity of that improvement.

Mr. DEFAZIO. Thank you.

Mr. Duncan.

Mr. DUNCAN. Thank you, Mr. Chairman.

Mr. Pisarski, you have sort of an optimistic statement about your belief that the money is going to be there to finance the improvements; and we, a lot of times, don't hear that. We have a lot of concerns about decreasing revenues from the gas tax and so forth. But you also, on your last line just before your optimistic statement about the economy being good enough to pay for everything that we need to do, you have the words ″more operable problems.″

Do you think that—do you mean that we are going to have more of the same types of problems that we have had over the last few years, or do you mean that we are going to see newer, different kinds of problems in the future, and if so—in other words, just elaborate a little bit on that.

Mr. PISARSKI. Thank you, sir. It is an excellent question.

By ″more operable problems,″ my point was simply that if you go back and you look in the 1950's when they were addressing America's transportation issues, I would call the interstate system Phase I. They addressed the needs of the next 150 million people that were being added to the 150 million that were already here.

Phase II, today, we need to be thinking about the next 150 million that will be needed. But adding that number today is going to be really a whole lot easier to deal with than it was for that society back in 1956. They were growing at twice the rate as today. Their resources were far more limited than ours. And our technological resources are clearly superior.

The very big forecasts that they made of popultion and travel growth was growing, which scared everybody, were wrong—low, dramatically wrong, low. The system produced much more than they had planned. And I think in the future we have a capacity to address the problems in a somewhat more straightforward way than I think they were able to.

The problems are going to be more of the same in some respects, but I think bigger. The focus of the metro areas is going to be circumferential; 46 percent of the commuting flows today is suburb to suburb. Two-thirds of the growth is suburb to suburb. What you

are seeing now are dramatic flows, live in one suburb and work in another suburb of another metropolitan area.

One of the great descriptions somebody said, I think Fredericksburg south of here is a great example: Work in one metropolitan area, shop in another metropolitan area, and don't live in either one. And I think that is—in effect, where I think we are going to be going.

So we are going to have to recognize that in getting people involved in the workforce and reaching out to them in the transportation system is going to be critical. We are not going to have the labor force that we—I guess I would say, in summary, that commuting in America, if you look at the baby boom, we might have thought of it as, isn't it wonderful that we had the jobs that provided the jobs to those baby boomers when we could have been talking about unemployment instead of congestion.

Mr. DUNCAN. It was a very interesting slide you had about the 28 percent of workers who are crossing county lines and that it is more so among the younger workers because the younger people are having to move further out. That is something that we really—that is important that we take that into consideration in everything that we do.

Mr. PISARSKI. One positive point that hasn't been mentioned here: As people reach over 55, they tend to work at home; they tend to walk to work, they tend to shift away from their past driving habits. Also, because of the lack of skilled workers, I think you are going to see dramatic amounts of flexibility on the part of employers.

You are going to be seeing, Well, when can you work? Yes, Tuesdays and Thursdays.

You want to come at 10 o'clock? That is fine.

We are going to see a lot more flexibility out of employers simply because they can't get at those skilled workers. That will be one of the positive forces that we will see.

Mr. DUNCAN. Let me move to some of the others.

Professor Schwieterman, I was pleased that your testimony was about all of the various intermodal activities; I think the staff and members of this committee were among the first ones to really recognize that and promote and advocate the need for intermodal systems or that type of thinking; and, in fact, Mr. Schenendorf was on the forefront of that.

But you said we need to leverage more private capital. How do you think is the best way we can do that? You mentioned toll roads, but they are extremely unpopular where they don't exist today. You mentioned private activity bonds; and, you know, I like that, private activity bonds, but they are very, very little in use so far. How do we go about that?

Mr. SCHWIETERMAN. To the extent to which we are now embracing the idea, the congestion pricing needs to enter the mix, and the highway system opens up a lot of doors thinking creatively about point partnerships, private ways to use toll financing for major improvements that can support private- public investments in highways. And I don't completely agree with your proposition that toll roads will remain extremely unpopular once the public adequately

sees that the other option is the status quo, which is endless traffic congestion.

In Illinois, we are looking at the privatization of the tollway system. The tri-State tollway has been getting discussion. Controversial, yes, but it is a tidal wave of private capital that we are prepared to tap.

I think the freight railroads—this year alone, CSX has doubled their capital with a little inducement from the Federal Government to help really make mainline corridors equivalent to interstate highways for intercity freight. I think we could see a massive increase in freight investment by the railroads if the government provides a platform to ensure that they are going to do their part to help eliminate some of the bottlenecks as well.

Mr. DUNCAN. You know what has happened over the last many years? We at the Federal, State, and local levels, we have taken so much land off of the tax rolls and that—and we have done that at the same time that the schools and all of the—every department and agency of the government at all levels is demanding more and more money. So we have raised the sales taxes about as high as the public will stand for, and income taxes, too, and so now all of the States are going heavily into gambling—you know, the lotteries and so forth, but that is going to hit its limit at some point.

But I will tell you that in my area, we have never had any toll roads. I can tell you that would be one of the most unpopular things I could ever advocate. I will just tell you, I wouldn't want to do it.

Dr. Bronzini, what years did you live in Knoxville?

Mr. BRONZINI. I lived there between 1978 to 1986 and 1990 to 1999.

Mr. DUNCAN. Why did you move and when are you moving back?

Mr. BRONZINI. In 3–1/2 years.

Mr. DUNCAN. Well, I will tell you Fortune Magazine about 7 years ago said the Knoxville metropolitan area had become the most popular place to move to in the whole country, based on the number moving in in relation to the most fewest moving out. And it said that Las Vegas and a lot of other places had a lot more people moving in, but they had large numbers leaving; and we had large numbers moving in and nobody leaving, hardly. But we will be glad to have you back sometime.

I also noticed that you got your Ph.D. At Penn State. If you move back, you might not want to mention that too often especially after the bowl game.

Mr. BRONZINI. It happened twice, too.

Mr. DUNCAN. Let me ask you this: You mentioned how important the research dollars are, and you say that we are not doing enough at the Federal level. And most of us would agree on that, that we are—they are doing very little at the State levels and zero at the local levels.

Do you think that might be because at the local level, you know, they are not worried about things too far in the future or too much research? We don't see the potholes in Peoria as we sit here, but the local government, people, and their citizens drive over those potholes every day and they want something done right then.

Mr. BRONZINI. That is a large part of it. I think as you go from the local to the Federal level, you see an increasing ability to focus on the longer-term solutions. The States have some ability to do this.

The locals, particularly in transportation where their responsibility tends to be pretty focused, they have a hard time getting beyond today's needs given the limited access to revenue in many cases. In many cases, they are spending this off of sales taxes or local income taxes depending on where they are. So they have a hard time looking to the long term for the program where they often are the recipient of grants and are providing matching funds for longer-term things.

The States have some more ability to do this, and they do have a partnership with the Federal Government on research activities. But I think, for the most part, most States tend to underinvest. I believe they underinvest on research on transportation, and they look to the Federal Government to take care of the research aspect of the program.

Research money has gone down over time and even research money has been earmarked. So it makes it hard to have a coherent research programs. So as long as—the natural order of things, the Federal Government, because of the leadership role, is able to take the longer-term view.

Mr. DUNCAN. You sound a little bit like President Bush last night talking about earmarks.

Let me ask you this: Was it you who said that our system is not really a system? Somebody said that. Or was that one of the—you said that? I just was————

Mr. BRONZINI. I think that might have been you, Alan. I said it is a system.

Mr. DUNCAN. All right.

Well, Dr. Lomax, you talked about incentives, and that is something that I think—that is a direction I would like to head in. And, actually, Mr. Pisarski got into the note I made of that.

I was going to ask you about the possibility of this doubling of the population over 65 and how much opportunity you see there for people who may have more flexibility, you know, in their drive times and not have to drive necessarily in the peak, most congested times.

Do you see a lot of opportunity in that direction, or do you think we should start charging people in some way to drive in the more congested time period? What do you see in that regard?

Dr. LOMAX. I think I agree with almost everything in there, one way or another. There is certainly a role for incentives. I think when—your question about the older workers, I think they are maybe only one of the groups that has an incentive or has a way to adjust their travel time.

Alan talked about the notion of very experienced workers being very desirable. I think when you see tight labor markets, you see employers that are more willing to pay—pay higher salaries—or adjust to some sort of flexible work schedule.

An extreme example would be Roger Clemens with the Houston Astros; show up on the day he pitches and take the rest of the time off. I don't think I would have access to that schedule.

But the notion of being able to create a flexible work environment that works for both the commuter and the employer, when you see what has happened around the country with businesses who have tried this, they find their bottom-line benefits. Their workers are more productive, they get to work on time, they have less stress, there is less turnover. So they have less money going into workforce development.

So there is a whole range of bottom-line benefits to the employers. It is not that we are asking them to do public good just for its own sake. They see a real bottom-line effect.

And then I think when you talk about charging, I think there is a role for that if there is a service component that goes along with it. I think people have been shown to be willing to pay more to drive on some of these high occupancy toll lanes in return for the ability to drive the speed limit to get to where they want to go.

The typical research outcomes of these are that not everybody does this every day. They do this when they have a value of time that exceeds the toll that they are going to pay. So if they are late to get to the airport or a meeting or their son's or daughter's sporting event or cultural event, they are willing to pay that. Other days, when getting home 10 minutes early means you have to start mowing the yard 10 minutes earlier, you are willing to sit in traffic 20 minutes longer.

We haven't created that many options for people. You can sit in traffic or not go in many places. Those are your two options. And I think there are a whole lot more options that we can explore.

Mr. DUNCAN. I can't resist the temptation to tell you that I spent five and a half seasons as batboy for the Knoxville Smokies baseball team, and my freshman year at the University of Tennessee, I was the public address announcer. So I love baseball analogies or examples. The only thing I really can't relate to is, back when I traveled with the baseball team, we got $22 a week in meal money; and now somebody like Roger Clemens probably makes $22,000 a minute, which I think is totally out of whack.

At any rate, thank you very much. All of your testimonies and answers have been very, very good and very informative, and I appreciate your being here very much.

Mr. DEFAZIO. I thank the gentleman for those questions.

Two last questions that hopefully can be answered quickly. I think three of you, perhaps all of you, referred to how pathetic the data is out there. I guess the question is, what can we do about that? And if you can briefly answer that.

Mr. PISARSKI. In the SAFETEA LU legislation, the Department was requested to conduct a study of national transportation date needs and, so far, hasn't done so. The money has not been forthcoming to make that happen, and I think obviously one of the things that somebody has to be asked is, what happened to that. A study was done by my data section at TRB where we volunteered to do it because there was no money forthcoming.

Mr. DEFAZIO. Thank you.

Mr. PISARSKI. That is step one. The department needs to identify the requirements here, and they can be laid out very readily. It is going to take some money, but compared to the cost of ignorance, it is very inexpensive.

Mr. DEFAZIO. OK. We will follow up on that.

Does anybody else want to quickly add to that?

Dr. Lomax.

Dr. LOMAX. I will very quickly say, the important notion is outlines of data as an asset. It is not that we are suggesting that data get collected for its own sake; it is that we have got to improve decisions. In order to do that, it takes time. It is takes effort. It takes somebody paying attention to it, but it also takes somebody going back to the data folks and helping them understand they are creating information for policies and operations.

And so connecting up the data folks with the people who use it I think is a real key in the good data programs that we have seen.

Mr. DEFAZIO. OK. Thank you.

Mr. BRONZINI. I would like to add, this is a near-term issue. Some data sets we have had for a long time are disappearing because of the funding slowdown. So we should either decide that that data is needed and therefore we better save it, or if it is meeting a need, such as one example is large vehicles, vehicle uses, the only data that we have, if we would need data use vehicles, we should pose quickly what is going to take its place.

Mr. DEFAZIO. Then just this last one, which I was going to forgo, but I am easily provoked.

Professor Schwieterman was waxing about the Indiana and the Chicago model and that—I guess I want to get something out again for a quick response, because I don't want to belabor this, and this is the subject of a next hearing.

On private-public partnerships you mentioned the toll road in Illinois. I guess I think we need to—and I will put out for comment, enter very cautiously into privatization agreements because they are not really public-private.

When you cede control for 75 years, you sign noncompete agreements and a whole host of other things, and you don't, unlike the State of Virginia, have the right of recapture, private sharing or anything else. What you are dealing with is existing infrastructure which is low risk, no risk; and you get a certain amount of money up front versus a green field, new construction partnerships as part of the funding for massive projects, those sorts of things, or even what we envisioned in SAFETEA-LU, which is, if you had capacity, you could do tolling and that—and get private investment recapture.

I just wonder, I don't know that Professor Schwieterman would share my concerns. I just note with the State of Indiana, Macquarie puts up 10 percent, great, they put up 10 percent. The State of Indiana could have put up 10 percent in G.O. bonds and then got partners and had revenue flow from year 25, when the whole thing is totally paid for and profit is already gained, to year 75 which it will now forgo. It has foreclosed that option.

And I am also concerned about the noncompete agreements.

There are two ways to meet your congestion standards: you can enhance capacity, or you can charge them enough to drive them off the route. I think those are problematic to enter into with private entities.

Mr. PISARSKI. I would agree. I wrote a paper on the Indiana and the Chicago arrangements, and my first question was, what mayor

50 years from now is going to look back in Chicago and say what a great move that was. I can see it coming in New Jersey; I can see it coming in Pennsylvania. And at least in Indiana, the notion is, you are going to increase the total transportation assets in the State; and the greatest concern on my part is the diversion of that money into other areas—basically paying your operating cost with a capital loan.

Mr. SCHWIETERMAN. All of those trappings are well stated, and you look at British Rail privatization, all of the problems we had there.

But I think moving aggressively to understand how we can make that mechanism work, my fear is while the proceeds won't go towards transportation infrastructure, it will go towards pensions. And that is, I think, where the new transportation bill can show real leadership to sort of lay out how it can set the ground rules of these things. We can tap into that global capital, get some things done while protecting the need for major transportation investment from the hungry hands of other government agencies.

Mr. DEFAZIO. Anybody else?

OK, great.

Well, again, thank you. I really appreciate it. Great testimony. Thank you for your work in the field. Thank you for your patience. Sorry that it took so long.

The committee is now adjourned.

[Whereupon, at 2:35 p.m., the subcommittee was adjourned.]

Subcommittee on Highways and Transit

Hearing on the "Surface Transportation System: Challenges of the Future"
Wednesday, January 24, 2007

Statement – Congressman Jason Altmire (PA-04)

Thank you, Mr. Chairman. It is a privilege and honor to serve on the Subcommittee on Highways and Transit. I look forward to working together to solve many of the challenges we face in the development of a safe, reliable, and efficient surface transportation system.

Thank you as well to the panelists for providing us with their expert testimony. There is clearly tremendous interest in the capacity of our nation's surface transportation system and the challenges and changes it will face over the next 30 to 50 years. I appreciate your time and insight.

I want to take a moment to provide the committee with some insight into my home district and the southwest region of Pennsylvania. The region is defined by its three rivers – the Allegheny, Monongahela and Ohio Rivers – as well as numerous other waterways that provide commercial transport to the business community and recreational enjoyment to residents on a daily basis. But it is not only defined by its rivers, it is also defined by the hundreds of bridges that traverse these waterways.

It may be just a tourism slogan, but I have heard it said that Pittsburgh has the most bridges of any city in the world, including Venice. I leave it to the experts to determine the proper world rankings and correct me if required. Until then, I will continue to say that Pittsburgh is at the top of the world in at least this area. Regardless of our ranking, Allegheny County alone has more than 1,700 bridges. With over 16,000, Pennsylvania has the third highest total number of bridges compared with other states.

Residents of the region traverse these bridges on a daily basis to commute to work and reach hospitals and other essential services. Small businesses, farmers, manufacturers, and retailers rely on them to transport goods within the region, across the state, and around the world. Our transportation system provides the backbone of our economy by moving people and goods.

The geography offers a number of challenges in the development of a surface transportation system that ensures the economic well-being and success of Pennsylvania's businesses and residents. The Southwestern Pennsylvania Commission estimates the total infrastructure needs of the region at over $12 billion for the period through 2030. This includes the need to fix structurally deficient bridges, expand the capacity of heavily used highways and roads, and invest in a fully serviceable public transit system. It is critical that we create a sound transportation system in the region to meet the projected needs which the local economy will require.

Testimony of

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Before the Subcommittee on Highways and Transit
Committee on Transportation and Infrastructure
U.S. House of Representatives

January 24, 2007

Challenges Facing the Future U.S. Surface Transportation System

The U.S. has a surface transportation system that is the envy of the rest of the world. The strength of our economy is, in large measure, due to the advantages wrought by a transportation system that enables resources to be marshaled from nationwide and worldwide sources at almost any location at a reasonable cost. Our citizens enjoy unparalleled mobility. The challenge before us is to build on this legacy and pass it on to future generations.

Growth in transportation demand currently exceeds growth in system capacity by several orders of magnitude, producing congestion in both passenger and freight movement. This severe congestion has the potential to severely erode the economic and social advantages provided by our transportation system. Other current challenges include improving system security in all modes, reducing accidents, increasing energy efficiency, protecting the environment, renewing the workforce, and finding the fiscal resources to pay for all of the needed improvements. This testimony discusses four important factors should be considered as we formulate plans to meet these challenge: the

nature of the federal-state-local partnership; the continuing need for a national system; the effects of project earmarks; and the research that is so vital to the future development of the system.

The Federal-State-Local Partnership

The surface transportation system, particularly the highway and transit system, is planned, built, and operated under the terms of a federal-state-local government partnership that may be unique among government programs. This partnership is much more than a formula for sharing the costs of providing the system. It requires all levels of government to focus attention on the system, and to develop and maintain the expertise to carry out their respective roles. The federal government provides program leadership and oversight, and promulgates policies and technical standards that ensure uniformity where that is a virtue, such as in matters of highway design standards. State and local governments actually build and operate most of the system, which keeps the direct management of the system located closest to its customers, the traveling and shipping public. This "on the scene" aspect of how the system is built and operated ensures that local conditions, which vary greatly across the country, are given due consideration in the decision-making process.

Since their enactment motor vehicle fuel taxes have been the lifeblood of the system funding provided through the Highway Trust Fund (HTF). Recent trends in vehicle and travel choices and fuel use have called into question the long-term viability of this funding source, and alternative system financing mechanisms are under study by the National Surface Transportation Policy and Revenue Study Commission and others. In this quest for alternative funding sources, it is important for any related legislation to

respect the essential features of the federal-state-local partnership. That is, whole or partial abandonment of past funding practices should not be accompanied by abandonment of the partnership that has been so effective.

Why not? This policy choice is related to a second key feature of our present system—that it is, indeed, a system.

National Transportation System

Border-to-border, coast-to-coast travel on the Interstate Highway System is possible only because those system links through the less populous states with smaller state tax revenues are funded by highway users at large, through the HTF mechanism. Left to their own devices and revenues, rural states might not have the wherewithal and foresight to provide and maintain the vital links that essentially serve through traffic and provide benefits to a populace far removed from those links. Similarly, investment in highway and rail access to coastal ports may require federal funding because much of the benefit from the investment accrues to inland states or those on the opposite coast.

A similar phenomenon is at work in the provision of urban transit services. Beginning with the ISTEA legislation, and continuing in TEA-21 and SAFETEA-LU, metropolitan areas were given more power to determine the nature of transit investments. This has helped to redress the problem of rural-urban conflict, and the resulting tendency to underfund transit, that exists in many state legislatures.

The application of HTF revenues to meet national system needs has produced the "donor state-donee state" disagreements that have flared up with each recent surface transportation reauthorization. The arguments over fiscal equity have largely obscured

the basic facts about the need for a national system, which is the true source of the controversy.

In the run up to SAFETEA-LU some parties called into question the continuing need for a federal role in surface transportation, arguing that the completion of the Interstate Highway System made this obsolete. While the system is largely complete and maintenance and operations needs will become the predominant features of the surface transportation program, it is still true that there is a national interest in preserving a viable interconnected and interoperable system. This principle must be firmly ensconced in any future federal legislation.

Legislative Earmarks

Another reason that the need for a continuing federal role has been questioned is that the amount of earmarked funding has increased exponentially over time. This has removed much of the policy context for the spending provisions, or at the very least has made it very difficult to carry out national policy directives. Earmarks have the effect of diverting transportation funds to projects that may not meet local or national needs as effectively as other projects. The degree to which the earmarked projects are effective is not fully known, because often these projects have not been subjected to the same degree of analysis as those in the normal programmatic funding stream. Earmarks also undermine the faith of the public in the integrity of the program.

Earmarking has had an especially deleterious effect on the research, development and technology (RD&T) portion of the program. It is a fundamental principle of scientific research that peer review of competitive proposals is the best tool for ensuring effective application of research funds. Earmarking not only interferes with the peer

review process, but it also threatens the ability of the program to meet national needs. In SAFETEA-LU, for example, the total amount of earmarked Federal Highway Administration (FHWA) RD&T funds exceeded the total FHWA RD&T authorization, thus totally eliminating that agency's ability to follow its strategic technology investment plan. As with other types of earmarks, RD&T earmarking calls into question the scientific merits of the funded projects and agencies.

Eliminating or better controlling earmarks must be a feature of future legislation if the goal of providing an effective national system is to be pursued. It is important to realize that one reason for the increase in earmarking, beyond their obvious political appeal, is the perception that normal funding processes are not meeting state and local high priority needs. In the RD&T program earmarking is partially a response to the difficulty of new institutions or researchers getting their proposals funded, since the more established players tend to control the selection process. Another reason for earmark popularity is the perception that project selection criteria have moved off-center to meet social goals, rather than maintaining emphasis on programmatic goals. Thus any action to control earmarks should also address the potential abuses in project selection that engender the earmark response.

Research as a Priority

Investment in development of new technology has been a driving force for many successful companies, such as IBM, General Electric, and Microsoft, but RD&T funding has always been a relatively small part of federal surface transportation spending. It is even less of a priority for most states, and is virtually nonexistent at the local level. Despite this modest funding, it is true that research advances have been a major factor in

the success of the U.S transportation enterprise. Examples of this payoff include improved pavement materials and methods, safer roadsides, and reduced vehicular emissions. That part of the research that is conducted at universities has the added benefit of contributing to the education of future transportation leaders. Given the multiple benefits, RD&T should receive much more attention and support in future surface transportation programs.

One area of RD&T that has seen diminishing resources in recent years is development and maintenance of effective information resources. This reduced support has threatened several long-term data series, such as the National Household Travel Survey, the Vehicle Inventory and Use Survey, and the Commodity Flow Survey. Most would agree that reliable and timely data provide the foundation for nearly all transportation system decisions, but it is often difficult to build effective constituencies for data programs. One of the reasons is that the actions required to produce the requisite data must occur many years in advance of when the data and resulting information are actually needed for decision support. More attention to and support of transportation data and information programs would have long-term benefits for virtually all other parts of the U.S surface transportation program.

Biography

Dr. Bronzini earned his Ph.D. in civil engineering at the Pennsylvania State University. He has been engaged in transportation research, education, and consulting for 40 years, during which he has worked on every mode of transportation, with significant emphasis on marine and intermodal systems. He has held professional

positions at Oak Ridge National Laboratory, Penn State, the University of Tennessee, CACI, Inc., and Georgia Institute of Technology. He was appointed the first holder of the Dewberry Chair in Civil, Environmental, and Infrastructure Engineering at George Mason University in 1999, and Department Chair in 2006. He is a registered professional engineer and a National Associate of the National Academies.

TRANSPORTATION RESEARCH CIRCULAR E-C109

Transportation Information Assets and Impacts

An Assessment of Needs

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Transportation Information Assets and Impacts

An Assessment of Needs

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Data and the information produced from data are key assets of transportation systems because of the roles they play in support of decision-making: problem identification, design of options, and priority setting. This paper presents an assessment of transportation information needs as viewed by professionals active in the work of the Transportation Research Board (TRB) and by selected policy makers.

The effort began in support of the congressional mandate in the current surface transportation authorization act, the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU), directing the U.S. Department of Transportation (USDOT) to sponsor a comprehensive transportation information needs assessment (TINA). Our intent was to contribute to the identification of information needs, but as the TINA study remained unfunded, our perspective broadened to develop an understanding of the role of data and information in transportation planning and management. The work is based on a survey of TRB committee members to identify data needs and examples of productive applications of data and information in transportation decision making. This was followed by interviews with a small number of decision makers to develop a better understanding of the attributes of information that are most useful in the policy process.

The paper begins with a description of the relationship between data, as the raw material, and information as the processed, useful product supporting decisions. It summarizes data needs as identified by members of TRB technical committees. The value of information in specific decisions is illustrated with a series of real examples and further elucidated through the results of decision maker interviews. Finally, an ongoing process is outlined to help ensure that transportation information needs are met.

The results of this effort emphasize the importance of understanding decision-maker needs in the development of data and analysis programs; underscore the value of national transportation databases; remind us that, like any asset, data require investment of resources to produce a return of value; illustrate the efficiencies of sharing data across regions and agencies; and stress the importance of the timely availability of data to support decisions.

INFORMATION AS AN ASSET FOR TRANSPORTATION DECISION MAKING

The U.S. transportation system is a large, complex, multicomponent, multiplayer collection of interacting elements and subsystems. This system plays a critical role in our society and economy, providing accessibility (and thus value) to places and mobility to people and goods. Decisions about development and operation of the transportation system are of central importance to our leadership at all levels, in both government and the private sector. Among the key values of national concern directly linked to the condition and performance of the transportation system are

- Accessibility to opportunities,
- Efficient movement of people and goods,
- Environment and health,
- Strength and competitiveness of the economy,
- Availability and cost of energy,
- Safety and security, and
- Public and private finance.

Ensuring these values is complicated by the fact that no single individual or entity manages the entire transportation system in the traditional sense; instead, many people manage interacting components. For example, a truck driver manages the progress of her vehicle along the road, at the direction of the trucking company, but her trip will be affected by the operational management of the road network, which is the responsibility of a regional traffic management center. The driver or trucking company may also have the option of paying a toll to save travel time on a free-flowing route. Investments in the road that determine its capacity and condition may be in the hands of the city, county, or state DOT, and in some cases private sector infrastructure operators. The USDOT, through FHWA, sets investment policies, design standards and allocates money to achieve certain national objectives through that roadway. The manager of a parallel railroad may give or take business from the trucking company based on his own operating and marketing decisions, as well as those of any and all of the other managers.

Valid, comprehensive, and timely information is an important resource for planning, implementing, managing, and maintaining an increasingly multimodal transportation system, its operation, and its interrelationships with the economy, our society, and the environment.

Transportation managers across the system need a variety of types of information to guide their decisions, some formally and comprehensively, and others casually and selectively. Information types and applications include

- Information about challenges and problems warranting action: descriptions of condition, performance—now or in the future—important for defining or clarifying problems and setting the agenda for action.
- Information about alternative courses of actions or options: what can be done in response to the challenges? What options are infeasible or unacceptable?
- Information about available resources and restrictions on their use.
- Information about outcomes: what will happen—and to whom—if a particular option is selected?

Information can guide priority setting and resource allocation. It can sharpen the discussion, contribute to conflict resolution, and facilitate stakeholder involvement; and it can help establish accountability for actions. Information derives from data describing system characteristics, condition, operations, and capabilities, as well as characteristics of the economy, environment and society. Data are the raw material which, when appropriately processed—analyzed, organized, modeled, and depicted—is converted to information that is directly useful in system management and decision making.

From this perspective, transportation data are assets of the transportation system, as are bridges, pavements, railroad cars, and runways. An asset is an element of value, and clearly data have value in guiding planning, design, construction, operation, and maintenance of transportation systems.

As Figure 1 suggests, data and information contribute to transportation decisions, but they may not determine the decision; data inform us about problems, options, and outcomes, but transportation decisions are also influenced by values, opinions, and biases, which may or may not be informed by data.

Of course, decisions can and are made with poor information, or even with no information at all, but logic and experience suggest that responsive, accurate, and timely information is important for sustained, effective, and efficient decision making. Providing such information is what transportation planning is about, and its contributions to decision processes are substantially driven by data. Arguably, more useful information (from the perspective of the decision makers), founded on better data, will contribute to informed choice—decisions made with awareness of real problems, relevant options, and the outcomes expected from those options.

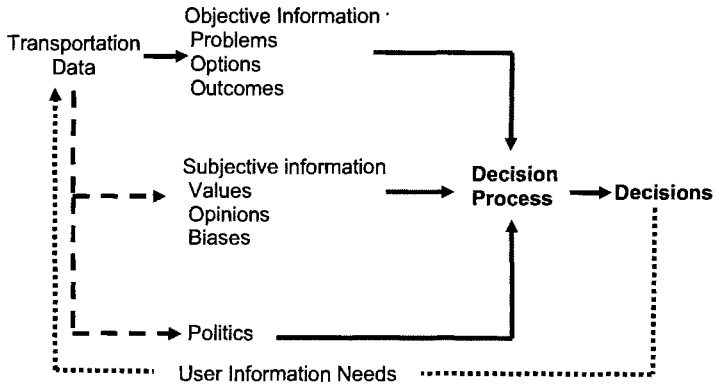


FIGURE 1 Data and decision making.

OBJECTIVES AND APPROACH

Ensuring the availability of the data necessary to support transportation decisions, like every other asset of the system, requires resources—money and time, as well as planning. That planning requires an understanding of information needs and current data resources. The gaps between needs and resources define targets for improving the quality and availability of transportation data.

The U.S. Congress recognized the importance of information for transportation decision making in the current surface transportation authorization act, SAFETEA-LU, which directs USDOT to contract with the National Research Council to conduct a comprehensive TINA. The effort behind this paper was initiated to help define these information needs, but our perspective has expanded to develop an understanding of the role of data and information in transportation planning and management, and to establish and implement an ongoing process to monitor and assess data needs in this field.

Toward that broader end, we designed a process to tap the considerable knowledge and experience of TRB's standing committees. This began at the 85th Annual Meeting of TRB in 2006, where the committees were invited to discuss unmet or poorly met transportation information needs. In the spring of 2006, 144 TRB committees and their members, representing all modes and all 11 Technical Activity Groups, were invited to use a dedicated web site through which they offered over 650 transportation information needs. The information needs cited ranged from very specific data elements or classes of elements to ideas for analyzing, archiving, and communicating information and findings from data analyses.

The set of needs was reviewed separately by the authors and each developed a classification scheme to encompass the responses and convey them in an understandable structure. The taxonomies developed by individual authors were then merged to form a unified framework into which all expressed needs could fit.

An overview of these results, and the data needs framework described below, were presented to a workshop with more than 40 TRB committee chairs at the TRB Summer Conference in July 2006. The discussion at this workshop led to some revisions of the framework, and stronger insights into the value of, and deficiencies in, data assets for transportation decision making. The workshop also motivated the investigation of the perceptions of policy makers of the value and limitations of transportation data.

The TRB source groups (*1*) for the responses, and the number of data needs cited for each group, are shown in Table 1. All TRB groups are represented, with responses coming from 61% of the committees. Responses were more concentrated in some of the nonmodal, cross-cutting groups focused on policy, planning, and operations. These groups may be more oriented toward decision making, in general, and the use of information for decision support.

Data needs as identified by TRB committee members offer an assessment of the current quality and availability of transportation data as defined by key transportation professionals. The framework and the suggested transportation data needs presented in the next section are intended to foster further discussion about these needs and the priorities and means for addressing them. These results may also provide a basis for periodic reviews of transportation data needs to assess progress and to keep data priorities salient.

TABLE 1 TRB Group Sources and Numbers of Cited Data Needs

Technical Activities Division	Number of Committees Responding	Number of Committees in Group	Number of Needs Cited
Policy and Organization Group	24	34	137
Planning and Environment Group	25	31	116
Design and Construction Group	31	70	118
Operations and Maintenance Group	26	27	144
Legal Resources Group	1	7	0
System Users Group	12	19	33
Public Transportation Group	9	17	27
Rail Group	3	7	16
Freight Systems Group	9	12	43
Aviation Group	3	8	13
Marine Group	1	3	3
Total	144	235	650

Framework for Transportation Data Needs

The transportation data needs framework includes data and non-data categories, and further divides the data needs by subject and geographic level, separating needs into local–regional or national data elements about physical or operational aspects of transportation. The structure differs from traditional information groupings in at least one important way—it does not separate the information needs by mode. This approach allows common data elements to be identified regardless of the current transportation patterns.

While this framework is not the only way to organize these needs, it is logical from the perspective of data types and levels, and, because of its source, it connects the information needs with the TRB committee and program structures, and thus it reflects the concerns of key technical data providers and consumers.

The framework for transportation data needs is shown as Table 2. TRB committee respondents emphasized the need to fill in missing data, to ensure availability of timely data, and to have data and analytical techniques that produce information in sufficient detail to understand key patterns and support planning and decision making.

This classification organizes data needs according to these dimensions:

- *National and local or regional:* Although the initial focus of the effort was on national information needs, responses included needs at all levels of analysis. Of course there were clear distinctions between national and local information needs, both in terms of the level of detail and the locus of responsibility for data collection and dissemination. For example, origin–destination (O-D) flows and link volume data needs exist at both levels, but the level of detail, and sometimes the methods for data collection, are different. However, data collected at one level are often useful useful in analysis and decision support at other geographic levels.

TABLE 2 Transportation Data Needs Framework

Type	Information Need Subject	National		Regional or Local	
		Physical	**Operational**	**Physical**	**Operational**
Data Items	System inventory, land use, travel and flows: quantity, type and location	Miles of road, rail, routes	Persons, freight, O-D flows, volumes	Miles of road, rail, routes	Persons, freight, O-D flows, volumes
	Infrastructure and facility condition (status and trends)	Pavement or facility condition		Pavement or facility condition	
	Performance, service quality, cost and safety: how well are systems operating and serving travelers and shippers		Performance of systems; user service quality		Performance of systems; user service quality
	Externalities due to transportation investments and operations			Pollution emissions, land use, social impacts	
Procedures and tools	Data collection tools; analysis, synthesis, estimating, and forecasting techniques, metadata				
Data access	Formatting, archiving, access, and dissemination procedures for data and methods				
Programs and practices	Funding programs, agency activities, and best practices				

Note: Examples of data and information needs are shown in italics; these are not all of the data elements in any category. (O-D = origin–destination.)

Projects that are deployed in relatively few locations, such as managed lanes or high-occupancy toll (HOT) lanes, and archives of real-time travel time data, present the need for regional or local information, but as other cities consider similar programs and projects, data may be borrowed and used for guidance. Data from numerous locations may, in turn, guide the evolution of national policy, and thus even local data may have national value. Traditional large-scale surveys such as the American Community Survey (ACS), the National Household Travel Survey (NHTS) or the Commodity Flow Survey (CFS) were identified by respondents as common elements of the national data resource.

- *Physical or operational:* Data needs can also be characterized as measuring either physical condition or operational characteristics. The needs for pavement and bridge condition information called for more detailed construction and inspection data. Operations elements included more information about the operating strategies, signal timing plans, and resulting performance measures. There are also significant needs for linking the data on physical and operational measures to identify the causes and outcomes of transportation and land use actions.

- *Inventory:* Inventory components include physical assets and measures of operations—miles or ton-miles of travel. Inventory data answers questions about quantity, type, and location of assets and activities.
- *Condition and performance:* The condition information label was tied to physical aspects and the performance label was applied to operational aspects. Most of the suggestions fell in one of these categories, which are more likely to represent results of data analyses rather than primary data items. An important trend, however, is that some advanced programs are collecting condition or performance information directly and automatically.
- *Externalities:* Data on externalities describe the consequential impacts of the construction and operations of transportation systems. These largely occur at the local or regional level, but they are relevant to national programs and policies.
- *Procedures:* Processing primary data to make it useful in planning and management requires a range of analytical tools, collecting, forecasting, or estimating techniques and a variety of data and data quality descriptions. Procedure suggestions went beyond data analysis items to include methods for improving planning and management of transportation systems and services. While these are not primary data needs with a specific audience or use, these techniques can be essential for turning data into useful transportation management information. Identified needs also included more efficient and effective data collection methods that ensure the required data are available at an acceptable cost.
- *Data access:* Several respondents from all areas of TRB mentioned that a significant amount of useful data exists, but it is either not readily available or not properly referenced or documented. Data partnerships, as well as improvements in the access to libraries, databases and geographically referenced information, were suggested as solutions. Respondents also cited the importance of ready access to data—archiving in usable and standard formats, providing easy, web-based data access, sharing of data across jurisdictions and agencies, and maintaining long-term trend data sets. Some of the most creative ideas offered by the respondents for enhancing the usefulness of existing data were included in this need area.

Interpretation of Reported Data Needs

Most of the framework cells shown in Table 2 included between 35 and 80 data needs. The suggested needs were quite rich, for example, encompassing the decision-making needs for inter-regional commodity flows, personal travel by different socioeconomic groups and genders, and characteristics of tribal travel and infrastructure. At the local and regional levels, gaps in timely data about location and land use were noted. Some of the general ideas offered in the survey are summarized below.

- Local and regional data needs were similar in nature but different in scope from national data needs. Local freight movement patterns and volumes, for example, differ from interstate traffic, sometimes in commodity types, modes, quantities, and perhaps in data collection methods. Generally more detail is required to support local and regional decision making. Some respondents concerned with local planning felt that there were many gaps in data availability and/or quality at the local and regional levels.
- Respondents emphasized the importance of data quality to provide valid answers to *if–then* support for decisions about operations management and investments. Important data attributes include

  - Timeliness (recent data),
  - Availability (data that are reliably available; routinely collected as a part of ongoing data programs, not only data from special studies), and
  - Coverage and detail (e.g., broader coverage of commodity types, condition, and performance of lower level roadways).

- Repeated calls were made to continue to collect and improve data on travel patterns and demographics in the NHTS and the ACS, which are important inputs to regional planning in many regions. These surveys provide default values for forecasting model parameters in some regions and baseline trends against which to benchmark current system performance and predictions; they are irreplaceable sources of general relationships between demographic characteristics, individual attributes, and travel patterns.
- Similarly, there is strong interest in expanding coverage and increasing the detail on the CFS, which is a primary data source for much of the freight planning in regions and Interstate corridors.
- The implied demand for programmatic data—regularly collected and disseminated data products that can be accessed off the shelf when a problem arises—is a consistent message conveyed in the data needs cited and some of the examples presented in the next section of this paper. NHTS, CFS, and other national and regional data programs support a variety of decisions and actions, not all of which are foreseen when the data are collected.
- Spatially defined network inventory data were suggested for a variety of applications, ranging from collision patterns to wildlife migration, regional airport access, and network level of service. The uses of these data assets could be at the national, regional, or local levels.
- There was much demand for real-time performance data for many applications, including incident management, traveler information, truck parking availability for freight operations management, network capacity assessment, and roadway and hotel capacity for evacuation management.
- Because transportation system demand and performance are driven by the spatial patterns of activities, some respondents noted the need for timely and comprehensive data on land use, population, and employment, including current characteristics, plans, and forecasts. These data are primarily needed at the local and regional level, but relating demographics, and eventually land use, to national data sources such as the NHTS and CFS may provide a more informed basis for national policy making.
- Data on the physical infrastructure describing material composition, construction conditions, and costs of construction, would be useful not only for system management but also for identifying typical and best practices.
- Better, more detailed data on crash rates and characteristics are important for safety management. This includes more specific information on crashes, and coverage of small crashes on minor roadways, which may foretell larger problems in the future.
- Data describing the outcomes of both infrastructure investment and policy changes (e.g., pricing, demand management) on travel and shipment patterns, location, and the associated social and environmental consequences were desired to support the search for and choice of future transportation actions.
- Data on traveler perceptions of system performance and options, including stated preference survey results, are desired both for responding to citizen (customer) concerns and predicting future behaviors.

- Many respondents called for actions to enhance data access, i.e., where useful data exist but are not made available, or access is difficult, the quality of decisions may be unnecessarily constrained. Access issues involve compatible formats and archiving valuable data, as well as reasonable access to private and first responder data.
- Respondents identified procedures and analysis tools as an important need. These include improved models of personal and freight travel and emissions; and methods for pavement and bridge investment priorities, transportation facility design, environmental justice analyses, and allocation of both human and physical resources.
- Respondents were also interested in descriptions of best practices—what the practice leaders are doing, how problems have been solved by others, and availability and requirements of government programs.
- Many needs statements were focused on data relationships, not raw data items, e.g., safety effects of control devices, true costs of HOT lanes. It is both necessary and common to link data items to support decisions and policy questions. For example, locations, flows, and people or commodity characteristics are often linked to provide information for defining problems and evaluation options. While professionals within TRB can talk about raw data needs in a narrow sense, most users are engaged in supporting decision processes with information—processed data—where the processing normally involves merging and analyzing several different types of data. Integrating data sets in this way requires not only data availability, but also compatibility in terms of aggregation, spatial identification, as well as documentation to support merging and analysis tasks.

EXAMPLES OF DATA AS A TRANSPORTATION ASSET: PROFESSIONAL VIEWS

Ensuring the future of our transportation systems requires that we secure the data assets needed to make good decisions about investments and operations. That data, and access to it, requires resources. While it is tempting for decision makers to direct all available resources into facility investments and operations, without a strong basis in data, doing so may put the quality of transportation decisions at risk. Thus, it is important to convey the value of data to transportation decisions and to show how that data enhances the knowledge base of decision makers—those who allocate resources.

To gain a better understanding of data as an asset for transportation decision making, we asked the TRB committee chairs attending the July 2006 meeting, and others, to provide actual, illustrative cases where data made a difference in a decision by facilitating a better, easier, or more informed choice. A few of the responses are described briefly below.

Local Transit Subsidy Decision

- *Decision or action:* Decision by local jurisdiction to continue and enhance support for a part of the regional bus service.
- *Context:* In the Burlington, Vermont, region, the local transit provider, Chittenden County Transportation Authority (CCTA), had obtained temporary funding from the municipality of Williston, a fast-growing suburban town with significant employment growth and a major retail center, to expand fixed-route bus service to the center of town and provide connections to key activity centers in the region. The town was reluctant to continue this support

because it placed another demand on property tax revenues, and the conventional wisdom was that "no one will ride a bus" in such an auto-oriented environment. Therefore, the funding agreement had a sunset date and continuing support required deliberate action by the town Selectboard. Tracking and informing decision makers and the public about the actual level of transit ridership would be essential for the Selectboard to decide whether to continue support for the service.

- *Data sources:* The data source was CCTA's own ridership information, collected daily onboard its vehicles and compiled into monthly reports.
- *Analysis and presentation tools:* Ridership trend data was presented in both tabular and graphic forms to elected officials on a regular basis, as well as to the public as part of comprehensive transportation studies. CCTA used the data to demonstrate steady increases in bus usage over approximately 2 years.
- *How data made a difference:* When continued funding for bus service support was requested, the town Selectboard voted to maintain the service based largely on the evidence of steady and growing demand as documented in the data collected by CCTA.

Local Traffic Planning Decision

- *Decision or action:* Rerouting evening peak period traffic entering the Lincoln Tunnel in midtown Manhattan.
- *Context:* Merging conflicts along the short expressway accessing the Lincoln Tunnel created significant congestion and delays. In response, the Port Authority of New York and New Jersey, in cooperation with New York City DOT and New York City Police Department, identified a number of strategies to increase the efficiency of the traffic flow, including closing selected entrances to reduce merging conflicts, organizing flows into specific travel lanes, and re-routing buses to the north tube to reserve the center tube for autos. The plan was controversial, it was implemented on an experimental basis, and considerable effort was required to build and maintain support from decision makers and the public.
- *Data sources:* Traffic counts and travel time studies were conducted on both the tunnel access and adjacent streets. Bus access times from the Port Authority Bus Terminal were measured. Data were collected using existing traffic monitoring systems as well as special, manual measurements. Data were collected before the changes to guide planning, and during the first few weeks of implementation to support assessment of, and build support for, the changes in traffic patterns.
- *Analysis and presentation tools:* Despite a comprehensive communication program to announce the new traffic patterns, delays increased at the outset as drivers learned the new routes, and because of rain and downstream traffic incidents. This eroded public and official support for the plan. By providing daily reports of traffic throughput by hour to illustrate how the plan was working and where it broke down, support for the plan was restored. Reports included before and after comparisons of travel times, delays and throughput, as well as photos to illustrate changes in traffic conditions.
- *How data made a difference:* Current data was critical for sustaining the heavily questioned program during its difficult first few days. Without a strong, data-based argument at the outset, the program might have been terminated. Over time, the data provided an objective basis for enforcement changes and minor access refinements. Presentations to elected officials,

community groups, transportation operators and decision makers helped make the program permanent.

Pedestrian Safety Action Program

- *Decision or action:* Reducing pedestrian fatalities and injuries in the Miami–Dade County, Florida, area.
- *Context:* Pedestrian crashes are a serious problem in U.S. cities. The risks in the Miami–Dade area were particularly challenging, not only because of the number of crashes—over 1,700 per year—but also because the racial, ethnic, and age diversity in the region made intervention more problematic. The problem was recognized by local officials, and the NHTSA selected this setting to apply and test an aggressive, data-intensive approach to pedestrian crash reduction based on extensive NHTSA and FHWA research projects. The effort was led by the Highway Safety Research Center at the University of North Carolina at Chapel Hill, and was supported by the Florida DOT (FDOT) and Miami–Dade County, as well as NHTSA.
- *Data sources:* Pedestrian crash records for the area were already available, and the research team geocoded individual records to build a 9-year spatial database to provide support for locally targeted interventions. Crash types were recoded at a highly detailed level (using over 100 categories) and racial and ethnic classifications of pedestrians were extracted from original police crash reports. The existence and availability of the original crash records were essential to the success of this effort, and substantial value was added by enhancing this database by geocoding and refinement of crash and demographic information.
- *Analysis and presentation tools:* Data were used to identify problems and their variations across the study area, particularly the differences in patterns across ethnic and age groups. On the basis of these more detailed problem definitions, a repertoire of interventions was defined and matched to crash types, locations and pedestrian–driver demographics. The interventions included educational programs (e.g., brochures, public service announcements, classroom training); enforcement (especially targeted at night time driving under the influence crashes); and infrastructure enhancements (safety medians, signals, cross walks). Data collection was continued for 2 years after program implementation to support before-and-after assessment of the cost effectiveness of the overall program.
- *How data made a difference:* The development of detailed, spatial data on crashes, crash types, and demographic characteristics of victims, supported a sharply focused pedestrian safety program:
  - Location and demographic-specific crash patterns were identified;
  - The most appropriate interventions were matched to each class of crash problem; and
  - Target markets were defined to permit programs to be tailored by language, content, medium, and distribution channel.

The before-and-after evaluation results are not yet available, but the effort attracted support from participating agencies, the interventions were implemented, and FDOT has extended the approach to other locations in the state. The program illustrates the value of specific, detailed data for targeting problems and finely tuning interventions. It was based on a substantial effort to enhance existing data. Future applications would benefit from the collection of more detailed and precise data at the outset to reduce or eliminate the need for extensive,

after-the-fact database preparation. In particular, detailed crash type and accurate location and demographic coding would add value to existing crash data. Routine collection and archiving of crash data on roads not included in the state road network would provide a more complete picture of crash risks.

Freight Rerouting Decision in Response to Bridge Collapse

- *Decision or action:* Planned rerouting of trucks around collapsed Interstate highway bridge.
- *Context:* In May 2002 the bridge carrying Interstate 40 across the Arkansas River near Webbers Falls, Oklahoma, collapsed when struck by a barge. I-40 is a major east–west route across the central United States, carrying substantial truck volumes.
- *Data sources:* Data from the CFS was analyzed to determine freight O-D patterns in the I-40 corridor. Results indicated that more than two-thirds of the affected truck tonnage had neither origin nor destination within Oklahoma. This suggested the viability of a larger scale diversion scheme.
- *How data made a difference:* Available, objective data on truck freight flows supported rapid development of plans to divert trucks to alternate corridors during the 2-month period while the bridge was being rebuilt.

State Asset Management Budgeting Decision

- *Decision or action:* Budgeting for bridge rehabilitation in Massachusetts. The objectives of the highway department are to reduce the number of structurally deficient bridges in the state and to determine the appropriate allocation of funds between reducing the inventory of deficient bridges and preventing other bridges from becoming deficient.
- *Context:* As a result of the governor's "fix it first" initiative, the highway department needed to develop a bridge rehabilitation budget as part of its programming and budgeting process.
- *Data sources:* The primary data source was the bridge inventory and inspection database supporting the department's bridge condition assessment and FHWA's National Bridge Inventory reporting requirements.
- *Analysis and presentation tool:* The primary analysis tool was the Pontis bridge management system (*2*), supported by comparisons to other approaches used by the department to identify and prioritize bridge rehabilitation or replacement projects.
- *How data made a difference:* The result of the analysis and bridge inventory and condition data was to increase the budget substantially and to balance the replacement or rehabilitation of existing structurally deficient bridges with other preservation projects aimed at preventing additional bridges from deteriorating to a deficient condition.

Statewide Project Programming Process

- *Decision or action:* Identification and prioritization of unscheduled transportation projects.
- *Context:* Ongoing joint effort of state and local agencies (metropolitan planning organizations) across Kentucky.

- *Data sources:* Roadway adequacy ratings, based on the critical crash rate, pavement roughness index, volume–surface flow (mobility); present and projected average daily traffic; existing conditions, including access control, right-of-way width, roadway geometrics and structures; transportation need statement, project description, regional transportation goals addressed; human and natural environmental impacts (water, air, endangered species, historic or archeological sites); economic impacts, multimodal opportunities, cost estimate, project prioritization history (local, regional, and highway district).
- *Analysis and presentation tools:* Data are assembled in project identification forms, which are integral to the biannual project prioritization process conducted across the state at the local, regional, and district highway office levels. Each project is assigned a low, medium, or high priority and the top 10 unscheduled projects are selected for each region and highway district.
- *How data made a difference:* This process provides local and state transportation decision makers a data-driven foundation for transportation planning which feeds into the process for selecting projects to be scheduled and funded in the state 6-year plan.

Statewide Grade-Crossing Protection Programming

- *Decision or action:* Prioritize and allocate resources for improving highway–rail grade crossings.
- *Context:* Statewide in Illinois.
- *Data sources:* FRA inventory of highway–rail crossings, including characteristics of the crossing and the rail and motor vehicle traffic.
- *Analysis and presentation tools:* The primary tool is a resource allocation method based on a regression model that predicts the number of collisions expected to occur annually.
- *How data made a difference:* The model output is a significant factor in guiding annual grade crossing investments. The output is balanced by the need to have a geographically and politically distributed investment program, so the collision prediction value is only one of several factors considered. Availability of the federal crossing inventory, the only national database of crossings and structures, is important to objectivity of the information, although the data quality is inconsistent.

National Policy Decision on Congestion Pricing

- *Decision or action:* Acceptance of HOT lanes by political leaders, specifically, incorporation of congestion pricing as a major component of the USDOT National Strategy to Reduce Congestion.
- *Context:* Decision makers included Congress, during development of SAFETEA-LU, and the Secretary of Transportation, in early 2006. Resistance to promoting a road pricing strategy was based on concerns about equity and the impacts on low-income travelers, and on doubts that pricing would actually reduce congestion.
- *Data sources:* Outcome data from California State Route 91 Value Priced Express Lanes and I-15 HOT lane described use and approval of HOT lanes by low-income individuals, and quantified vehicle throughput and speed on express lanes versus adjacent (free) general purpose lanes. This was supplemented with national data on consumption of gasoline and

purchase of motor vehicles by income class, and household travel data from the NHTS, which tabulated commuting behavior by income group.

- *How data made a difference:* Political leaders were convinced that HOT lanes can reduce congestion, unlike other strategies, which only reduce the rate of growth of congestion, and that low-income individuals would not be adversely affected. In general, peak highway travelers are mainly from middle- and upper-income households, with less than 5% classified as poor. Road pricing, even without compensating transfers, does not appear to be regressive, absolutely or in comparison to alternative methods for funding peak capacity (e.g., fuel excise taxes).

Allocating Motor Carrier Safety Inspection Resources

- *Decision or action:* Identifying and prioritizing high-risk motor carriers for roadside inspections and on-site safety compliance reviews.
- *Context:* The Federal Motor Carrier Safety Administration (FMCSA) promotes truck safety through inspection and regulatory compliance monitoring. Limited inspection resources must be deployed efficiently.
- *Data sources:* SafeStat (Safety Status Measurement System) is an automated analysis system developed at the Volpe National Transportation Systems Center for the FMCSA. It combines current and historical safety performance data to measure the relative safety fitness of interstate commercial motor carriers.

SafeStat measures a motor carrier's safety performance and compliance with safety regulations and evaluates its relative safety with respect to the rest of the motor carrier population in four Safety Evaluation Areas (SEAs): accident, driver, vehicle, and safety management. It uses up to 30 months of motor carrier safety performance, compliance and normalizing data to develop measures in the four SEAs, which are combined into an overall safety status assessment score. SafeStat requires complete and accurate data from state crash reporting, roadside inspections, compliance reviews, and enforcement cases.

- *How data made a difference:* SafeStat has been implemented nationally to enable the FMCSA to quantify and monitor the safety status of motor carriers, guide deployment of resources toward carriers posing the greatest safety risk, select motor carriers for on-site safety compliance reviews, and recommend to roadside inspectors both drivers and vehicles for inspection based on the safety status of the responsible motor carrier.

What the Examples Indicate

These examples suggest the usefulness of data in transportation decision making at the local, state and national levels from the perspective of responding transportation professionals. Several types of data were judged to be of value in these cases:

- Locally collected data assessing specific policy actions is used to inform decisions by showing program effectiveness. In the case of Burlington, Vermont, local data informed a local decision. Near real-time local traffic data collected in support of the Lincoln Tunnel access improvement not only provided a basis for operations planning, but also demonstrated the effectiveness of the plan in the face of opposition due to startup problems. In the case of the national policy on road pricing, outcome data from California field experiments was used to

guide federal strategy. Data borrowing is both a common and relatively invisible indication of the broader value that local data assets may have. The use of borrowed or transferred data relies on

- Original collection of potentially valuable data;
- Archiving and documentation of data; and
- Making data known and available for others to use. It is a form of data partnering that leverages data collected at many levels for broad and economical use.

- Data on local project and program implementation (California road pricing, Vermont transit subsidies) can also be useful to other government entities by illustrating best, or at least feasible, practices.
- The FMCSA SafeStat inspection deployment program relies on locally collected data. Here a federal program depends on data collected at the state level. Such data partnering is efficient, but in this application and the example of the FRA grade crossing database, the usefulness of the national database was limited by the quality and coverage of the local data collection efforts. This implies a role for the federal government in facilitating standard setting and quality control for data collection.
- Local and statewide system condition and utilization data is used to guide budgeting and resource allocation at those levels. This is illustrated in the examples of the Massachusetts bridge management, Kentucky project scheduling, and Illinois grade crossing decisions. Clearly such decisions warrant local inventory and condition data, collected on an ongoing basis, since the decisions are made at regular intervals. Such data can also be useful in guiding national policy on transportation budgets and priorities.
- National data resources used to support decisions at all levels of analysis. In the case of rerouting I-40 truck traffic, the availability of commodity flow data by mode in the CFS provided a unique, objective basis for supporting a short-term, regional operations decision. In the Illinois grade crossing example, the ready availability of the (national) FRA database offered a rational foundation for local resource allocation. In the case of the U.S. road pricing policy, national travel (NHTS) and consumption data helped sort out the equity implications of congestion pricing. Existence of nationally maintained data fills gaps in local and statewide decision support, provides a national perspective on system characteristics, condition, and use, and allows lower-level governments to benchmark against each other.

Not surprisingly, these examples show that data assets are shared across levels of analysis and across the nation. This reflects both gaps in available and responsive data, as well as creative application of data and knowledge gained in one setting to other decision contexts. These shared uses of data suggest that the value of some data assets go beyond, sometimes far beyond, the usefulness to the agency that gathers them. While the taxonomy presented in Table 1 differentiates between local–regional and national data, these examples show that local data can have national value (in addition to the interest that federal policy makers have in ensuring effective local decisions), and national data clearly can bring value to local transportation decisions.

The value of programmatic (regularly collected) data is re-emphasized in these examples. Analysts and decision makers tend to use the most readily available data. New data are sometimes collected for special projects, those that are very large or very small, or projects where no other data source can substitute (e.g., the Vermont transit subsidies and the Lincoln Tunnel). Yet special, project-specific data collection efforts are less common, probably because

of the pressure to make timely decisions. Thus, available data—collected under a national program (NHTS, CFS, Vehicle Inventory and Use Survey, FRA, FMCSA) are commonly utilized. Creative analysts stretch data applications by using old data (e.g., 10-year old Census or NHTS data) or distant data (European applications of road pricing and advanced telematics for traffic flow management) to support decisions about current problems. The key programmatic data sources seem at once critically important and undervalued.

Finally, it is important to guide data collection programs with an understanding of the end use of the information produced, e.g., problem identification and decision making (represented by the dotted line in Figure 1). For example, the use of crash data to guide the pedestrian crash reduction program in Miami–Dade County would have been more efficient—and thus more jurisdictions might adopt this approach—if the content, detail, and coverage of the original crash reports supported this application.

THE VALUE OF DATA TO DECISION MAKERS

To understand the information needs of transportation decision makers, structured interviews were conducted with eight senior transportation managers and former managers. These interviews consistently suggested that knowing what decision makers need to support the choice process is of high value. "Know the customer" is a maxim that was consistently revealed. For data collectors and information producers, that means understanding the needs of elected or appointed decision makers and sometimes those of the system users, as well, for they are also important decision makers. Developing this understanding takes time, effort, observation, and interpretation.

Data do not drive out politics from decision making, but they can be a powerful tool that can level the playing field, sometimes overcoming political pressures, e.g., earmarking. Data make it harder for people to maintain myths. But better data do not guarantee better decisions. Some issues are just too tied up in politics.

Among the kinds of information requested by decision makers, both for defining problems and selecting solutions, were these:

- Infrastructure condition data, sometimes the dominant factor in asset management decision making;
- Demand data (e.g., volumes);
- Performance data (e.g., delay measures);
- Demographic trends; and
- Outcomes of past actions—performance, social and environmental impacts, actual costs. There is considerable interest in results of before-and-after studies (now infrequently done). Decision makers and program planners alike are interested in connecting spending to actual outcomes (e.g., performance or condition improvements), and in ensuring accountability.

Current (recent) data are often more important than forecasts, because they are credible and verifiable sources of information about system condition, performance and problems. Such hard data can have high value because of their certainty, e.g., fresh traffic counts, periodic aerial photographs.

Private sector players have a substantial interest in good data to reduce their risks when partnering with government. They not only scrutinize publicly collected data, but often collect their own data to support high-value decision making. "Owned" data and local data have high value in decision processes. The trend toward more public–private partnerships is creating increased demand for high quality investment grade, data.

Information attributes important to decision makers included these:

- *Timeliness.* Decisions are made at their own pace. If data are available, they may be used. If they are not available, the decision will generally be made anyway.
- *Responsiveness.* Data are processed into information to be provided to decision makers. That processing or analysis must produce information that is meaningful, responding to the problems and issues at hand, to be useful and used. Some decision makers are "data rich and information poor"; data that are not useful are not likely to be used.
- *Clarity (simplicity).* Many decision makers are not technically skilled, and information produced by analysts is commonly used by the general public, as well. Simple information is preferred and more likely to be considered in the decision process. Graphical presentations and "data dashboards" that bring several or many facts together in a single place and support tracking over time have been well-received by decision makers.
- *Perfection or imperfection.* Generally data do not have to be perfect to be useful. In some cases it is not cost effective to improve data quality and, when they are properly informed, decision makers can usually understand and accommodate uncertainty of information.
- *Conciseness.* Decision makers generally want the smallest information package that does the job—informs them about problems (current state of the system), options and likely outcomes. Too much data can confound decision making or cause all data to be ignored.

National databases can be useful for benchmarking and sometimes as a source of parameters for predictive models. However, it is not unusual for decision makers to be unaware that the information they are given has been derived from a national data base such as NHTS, CFS, or Highway Performance Monitoring System. They receive information collected and processed by others and may be unaware, and uninterested in, the link between the original data and the ultimate decision package. Analysts know the progeny of the information they supply, and thus they may be a better source of evidence for the value of data sets, both national and local.

Agencies do invest in data and data quality when it is clear that they have real value in planning and decision making. For example, the Metropolitan Washington Council of Governments Transportation Planning Board assembled its own database on the fleet mix to develop a better forecast of vehicle emissions. Similarly, data that are used tend to get better over time because the value of data investments becomes clearer.

Data can have particularly high asset value when it serves as a warehouse for institutional knowledge that would otherwise be lost when professionals do not spent a lifetime in a single position or agency. Data can be the repository of history and a substitute for experience.

Policy makers use technical data in decision processes—when it is available, responsive, and understandable. They can assess and articulate the quality and value of data and information, and thus their perspectives are both important and useful in the design of data programs.

INTEGRATION AND INTERPRETATION

Data and information are assets that have clear and recognized value in the planning and management of transportation systems. The resources required to maintain data programs at all levels and sectors may be more readily secured based on a recognition of the costs and benefits of data to the transportation system. The data needs identified in this effort, and the organizational structure suggested in Table 2, can be used to communicate unmet needs and their importance to managers and policy makers. The examples of data contributions to decisions, and decision maker perspectives on useful information, begin to clarify the value proposition underlying data programs. As this picture is sharpened through continuing, collaborative efforts within and beyond TRB, it should provide a basis for building the support necessary to ensure that data are available to facilitate informed transportation choices at all levels and sectors of decision making.

The data and information needs derived from all of the sources described in this paper suggest a few overarching principles:

- **Data are a transportation asset.** Like materials, energy, and human resources, data are an important asset for planning, building, and operating transportation systems, public and private. Data cost money and can provide commensurate returns on investment. System managers need to plan for and allocate resources to collecting and maintaining databases sufficient in coverage, quantity, and quality to support transportation decision making.
- **Decisions are the product.** The critical use of data and information is to support and improve transportation decision-making. Data have little value if they cannot be understood and acted upon by the ultimate users, decision makers, and their customers, the public. Understanding user needs should be a key element in any data program.
- **Sharing data extends their value.** It is both common and efficient to share data across users. Data collected in one locale can be useful for understanding problems and anticipating outcomes in other settings. National data support local decisions, and local data sometimes guide national policy. Data sharing can be facilitated by archiving, making it freely available, and documenting sources and formats. Data-sharing programs extend the benefits of data collection resources to a broader range of applications. The value of shared data programs is likely to become clearer when the original source of data is explicitly identified.
- **Sustained data programs ensure timely response to decisions.** Decisions proceed with or without information support. There is no substitute for having data "in the bank" when a decision is imminent. This emphasizes the need for carefully focused, ongoing data collection programs at both national and local levels.
- **Technology is changing the picture.** Advances in data collection technologies, including real-time tracking of vehicles and shipments and monitoring infrastructure components, Internet-based survey methods, remote surveillance, video imaging and interpretation, and cellular phone-based data collection, are making it easier to collect more, and more accurate, data about transportation and travel. These innovations can improve decision support, but care is needed to avoid swamping the decision process with data. Concerns about personal and business privacy will also need to be addressed.
- **There are needs beyond data.** Efficient and effective collection of data, and the analysis tasks necessary to convert data to useful information for decision support and

presentation, require appropriate tools and procedures. There is still considerable need for developing, improving, and implementing the most responsive methods and models.

The federal role in transportation has been evolving, with increased reliance on local and regional choices supported by broad federal policies and grant programs. Under these circumstances, it may be appropriate to re-evaluate the need for data and information collection at the national level. Many are making the case that the federal role should emphasize informed decision-making at all levels, investment in a set of national priorities, dissemination of best practices and lessons learned from past investments and policies, and use of flexible funding arrangements. At the same time, local, regional, as well as private transportation improvement decisions will continue to need consistent national datasets and information sources for bench marking, calibrating travel models, understanding the person and freight flows to and through a region, and learning from experience by evaluating the effect of those improvements.

WHERE DO WE GO NEXT?

There will always be unmet transportation data needs. There will always be competing demands on resources that might be used for data collection and analyses, and as conditions and methods change, new data needs will arise, and new methods for acquiring and disseminating data assets will be developed. To track and support changing data needs and methods, it would be useful for TRB standing committees to devote some attention on an annual basis to the status of data assets within their scope, identifying new data sources, new and unmet data needs, the expected value and costs of meeting those needs, and recommended priorities for enhancing local and national transportation data assets. A similar initiative could be directed to TRB conference organizers. Public agencies, private investors, and professional organizations all have roles to play in reviewing data needs for transportation decision making and supporting appropriate and directed investments in shared transportation data. These actions will keep transportation data asset management in focus at the grass roots level, helping to ensure the availability of the data needed for effective planning and operation of our transportation systems.

NOTES

1. A TRB group consists of committees addressing various related transportation functional components.
2. http://aashtoware.camsys.com/docs/brochure.pdf.

COMMITTEE ON TRANSPORTATION & INFRASTRUCTURE
Subcommittee on Highways & Transit

"The Surface Transportation System: Challenges of the Future"

January 24, 2007
10:00 a.m.
2167 Rayburn House Office Building

Opening Statement of Congressman Elijah E. Cummings

Mr. Chairman:

I thank you for focusing the first hearing of the Subcommittee on Highways and Transit in the 110th Congress on the challenges that our nation's transportation policies will confront 30 to 50 years from the present.

Too often in recent years, Congress' transportation policy focus has been on completing the next federal transportation reauthorization – and our attention has rarely

looked further than the end of the 5 or 6 year period to be covered by the reauthorization.

Unfortunately, I believe this process reached a low point with the development of the SAFETEA-LU bill. The Bush Administration and Republican Congressional leaders were unable or unwilling to resolve the most challenging questions that confront us in the short-term – particularly how we will ensure that the Highway Trust Fund can meet our nation's transportation financing needs – and we punted on these questions.

We hardly gave thought to formulating policies that would support the development of transportation systems that will respond to the

challenges we will face even 10 or 20 years from now.

However, even as our system for responding to transportation needs in the short-term has broken down, the longer term questions are looming larger on the horizon – probably because the incremental adjustments that might have prepared us to meet these challenges have not been made.

Perhaps the central question we confront is determining the role that the federal government will play in crafting a national transportation policy that meets national objectives and that supports the development of the multi-modal

system that will be essential to moving our nation forward in the 21st century.

Of course, whatever role is chosen for the federal government by Congress must in turn be accompanied by the development of a funding mechanism that will support that role.

Unfortunately, at the present time, Mr. Chairman, I feel that federal transportation policies are being shaped and driven in large measure by the constraints of the existing funding system.

Perhaps as a result of this trend – and of the decline in available funding that has resulted from the failure of our policies to address

transportation financing in a meaningful way – the Federal Highway Administration reports that while 30% of all state expenditures on roadways made in 1981 were made on new construction, by 2001, expenditures on new construction had fallen to just 13% of total expenditures.

During that period, total lane miles in our nation increased by approximately 5% while total vehicle miles traveled increased by more than 80%. The result of these colliding trends is clearly evidenced by the increasing congestion we are experiencing throughout our nation – and this congestion demonstrates the terrible results that occur when our transportation policies fail to anticipate and respond to developing trends.

I commend you, Mr. Chairman, for beginning the discussions that will prepare us to craft a forward-looking transportation bill – one that I hope will not only meet the needs of the years covered by that bill but that will truly prepare us to meet the challenges of the decades that lie ahead.

Thank you and I yield back.

House Committee on
Transportation and Infrastructure
Subcommittee on Highways and Transit
Hearing on Challenges of the Future
January 24, 2007
METROPOLITAN TRANSPORTATION COMMISSION
Testimony of
Steve Heminger
Executive Director, MTC

Introduction
• One of Speaker Nancy Pelosi's appointees to the National Surface Transportation Policy and Revenue Study Commission
• Executive Director of the Metropolitan Transportation Commission (MTC), serving the nine-county San Francisco Bay Area and 7 million people
• As the metropolitan planning organization and designated recipient of federal and state transportation funds, MTC distributes over $1 billion annually for highway and transit projects of all types.
1

Introduction (continued)
• MTC also acts as the Bay Area Toll Authority (BATA), which oversees seven of eight toll bridges that cross the Bay.
• BATA administers $525 million annually in toll revenue and manages the electronic toll collection system called FasTrak® that has over 500,000 customers.
• BATA helps oversee a $9 billion construction program that is building new bridges, highway interchanges, public transit extensions, and making the toll bridges seismically safe.
2

Early Commission Focus on
Five Major Issues Areas
• Traffic Congestion
• Freight and Goods Movement
• Highway Safety
• National Energy Security
• Finance/Revenue Requirements

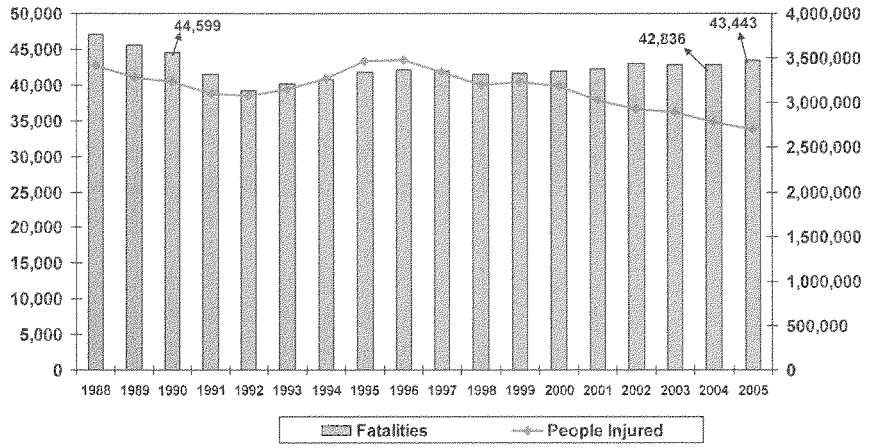
In Congestion for
At Least 40 Hours Annually
1982
2003

Dramatic Increase in U.S. Maritime Trade
Volume of trade: 2004 and 2020

www.nhtsa.gov

NHTSA

People Killed and Injured In Traffic Crashes, by Year



Source: FARS

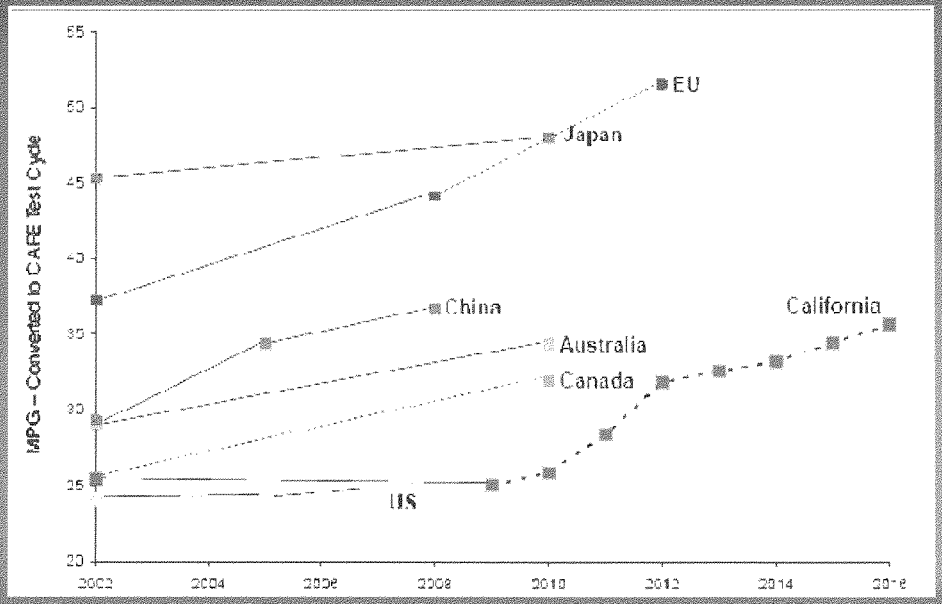
NCSA *2005 Annual Assessment of Motor Vehicle Crashes* *Released August 22, 2006*

NHTSA's National Center for Statistics & Analysis 8

METROPOLITAN TRANSPORTATION COMMISSION

International Fuel Economy Comparison

Comparison of fleet average fuel economy and GHG emission standards for new-sale light-duty vehicles



Source: UC Berkeley

Estimated Highway and Transit Program
Levels and HTF Account Balances*
Assuming Level Funding After 2009
Highway Program
Transit Program
Transit Balance
Highway Balance
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019

National Funding Gap
Gap to Maximum = $150 Billion per Year (Worsening 2019)
Gap to Minimum = $50 Billion per Year (Worsening 2019)
Year of Expenditure Dollars (in Billions)
$0
$100
$200
$300
$400
2000
2005
2010
2015
2020
2025
2030
2035
2040
2045
2050
Current Funding
Minimum Funding
Maximum Funding

OPENING STATEMENT OF
CONGRESSMAN DAN LIPINSKI

SUBCOMMITTEE ON HIGHWAYS AND TRANSIT
HOUSE COMMITTEE ON TRANSPORTATION &
INFRASTRUCTURE

HEARING ON SURFACE TRANSPORTATION SYSTEM:
CHALLENGES OF THE FUTURE

January 24, 2007

Chairman DeFazio and Ranking Member Duncan, thank you for your continued leadership in shaping our nation's transportation policy and for holding today's hearing.

Let me first say that I believe our transportation system is one of the most efficient in the world, and as has been mentioned, is the backbone of our economy by moving people and goods. However, we still can make some improvements.

My home State of Illinois and Chicago in particular has acted as the transportation hub of the United States with its road, rail, water and air connections. Illinois's modern, multifaceted transportation system provides direct routes to every major U.S. market and Illinois lies at the heart of the nation's Interstate system. It is Chicago's reputation as one of the preeminent transportation hubs of the world, which is one of the reasons the United States Olympic Committee has named Chicago as one of the two finalists for as the U.S. entry for the 2016 Olympics.

Let us turn our attention to rail for a moment. More than a century has passed since Illinois connected America's east with the west and became the nation's rail hub. It has remained the center of rail transport, with the largest rail gateway of all in Chicago.

Unfortunately, falling rail rates combined with growing market demand along with inadequate track and rail facility infrastructure have resulted in choke points in key areas of our nation's rail system. And since commuter rail often share rights-of-way with freight rail, inadequate rail infrastructure

means capacity constraints which leads to more congestion and more delays for freight as well as people.

Nowhere is this more evident than in my home city of Chicago.

Chicago is the rail hub of this nation. 22 percent of all rail freight passes through Chicago's 57 rail yards. With nearly 2000 at-grade crossings and 37,500 rail freight cars moving through every day at a snail's pace between 7 to 12 miles per hour, it doesn't take a rocket scientist to figure out that there's a congestion problem. On average, it takes rail shipments two days to move through Chicago.

In today's business economy where just-in-time deliveries are the norm, time is money. The longer freight stays on the railroad tracks instead of in the hands of consumers and manufacturers, the more money it costs. The inefficient flow of freight through Chicago results in real economic losses.

Make no mistake about it. Capacity problems and congestion are not just problems in the Chicago region; they are problems in many other areas of this nation as well.

That is why it is essential that we ensure the solvency of the Highway Trust Fund and continue to invest in the infrastructure of Illinois and the Chicago region. I have been a prominent proponent of the Chicago Region Environmental and Transportation Efficiency program (CREATE), a $1.5 billion public/private partnership designed to modernize Chicago's rail infrastructure, a landmark transportation project that will not only benefit Chicagoland, but the entire Nation as well. It's important projects like these that have significant regional and national support that need to be funded in the future.

I look forward to listening to the testimony of our distinguished witnesses here today and I look forward to working together to come up with a reasonable way in continuing to meet the challenges of our surface transportation system.

THE CHALLENGES OF AMERICA'S FUTURE SURFACE TRANSPORTATION SYSTEM

Testimony of
Tim Lomax
Research Engineer, Texas Transportation Institute
Researcher, University Transportation Center for Mobility
The Texas A&M University System
Mail Stop 3135
College Station, TX 77843
979-845-9960

To The
United States House of Representatives
Committee on Transportation and Infrastructure
Subcommittee on Highways and Transit

Mr. Chairman, distinguished members of the Committee, thank you for the opportunity to discuss the future of transportation. Our country's transportation system already faces a number of challenges and those will undoubtedly grow and evolve. I am optimistic that our society can overcome them. I welcome your questions today, or at other times in the future.

First, a summary of my ideas. We have studied urban congestion issues for more than two decades and I believe I am safe in predicting that congestion problems will continue to challenge our metropolitan regions in the future. But the problem has many aspects and likewise, the solutions will also have many elements. Some of the problems have clear technology or infrastructure 'fixes". Some can only be solved with better information or different policies, programs or incentives. Most of the challenges we face, however, can benefit from a combination of these two approaches. I think of this as a type of niche marketing – there isn't one big program, technology or idea that will solve the congestion problems. There will be many different solutions. And the solutions will look different in almost every region and situation. Larger population centers will have a different mix than smaller areas; suburbs will benefit from a different set of projects, programs and policies than more densely developed urban areas; and regions of the same size will decide to do things differently because their citizens make different decisions.

The Future Situation

I believe I have some ideas of how those problems and solutions will look in the future, but I'd like to start with some idea of what type of land use and travel pattern we might be trying to serve. Many of the current homes, shops and offices will still be in place and other developments to handle the millions of new urban residents will look similar to the current mix. Suburbs will continue to grow, commuters will travel – sometimes long distances – between their home and their job and not everyone will move into high-rise apartments or town homes. But it also appears that there will be more people with short commutes between home and job, whether that is because they move their home and job closer together, or their job involves an electronic connection to their office rather than a physical one. It is clear that people choose to live and work where they do for a variety of reasons and congestion is not at the top of that list in every case. The increase in freight movement will accentuate those concerns and provide unique difficulties at the local, regional and national level.

Today's teenagers will be key constituents, business leaders and decision-makers of 2040 and 2050. They are much more active producers and consumers of information than you or I are. They are more comfortable with text messaging, producing their own videos and using the Internet to acquire what they need. They are not interested in waiting for *anything* – job satisfaction, arrival at work, access to information, etc. They want safe and secure travel, they appear to be ready to trade some job-related income and advancement possibilities for a better lifestyle and, if the high school and college students I know are any indication, they believe they will change the world just as every other generation has.

Desirable cities will have the same elements they currently do – mobility, low housing prices, good schools, a supportive business environment and desirable quality of life. These cities can attract the 21st Century work force—a group of people who will increasingly be able to live where they want and use the Internet to make a nice living. Jobs in the service and information developing and providing sectors are likely to be a much larger part of employment growth than manufacturing sectors. The work force of 2040 will have many more location options for their homes and jobs.

So I do not believe we can "get by" with a less than adequate transportation system. We need to aim for very well operated, cost-efficient systems that serve a wide variety of needs with exceptional reliability. I do not think that is considered an achievable vision in most regions or agencies.

The Solutions

Our Urban Mobility Report has consistently recommended a broad set of strategies to solve congestion problems. This same approach works well for many other transportation challenges as well. Equally important, however, is the question of "who should implement the change?" There is a temptation to put the responsibility for addressing congestion, safety, air quality and other challenges on road and public transportation agencies or private sector road operators. This is a mistake. It ignores the aspects of the problems caused by poor decisions by travelers and eliminates the enormous power of employers and citizens to made choices that reduce congestion and improve safety. I do not think these choices would be made "to" reduce congestion; the objectives would be more relevant – improve profits, operational efficiency or the quality of life. But decisions to drive carefully, travel between home and office during off-peak hours or develop residential, office and commercial areas could have a range of beneficial transportation effects.

The spread of congestion to more routes, more hours of the day, and more neighborhoods and job centers has resulted in longer travel times, less predictable arrival times, traveler frustration and business sector concerns. We've come through a period where no-toll and free-flow travel was a lofty but seemingly realistic goal for all hours of the day. I think those days are passed, but high-speed and reliable service is still an achievable target for most hours even in the largest megapolitan regions and all day for many medium and small cities. Some of the solution, then, might be in modifying the expectations for transportation systems toward achievable goals. These would not represent surrender to economy-strangling congestion, but rather would recognize that there will be traffic congestion during one or two hours in both the morning and the evening peak hours in larger urban regions and near popular rural tourist spots as a product of their desirability. This congestion does not, however, have to result in unpredictable arrival times, broken operating equipment, poor road quality, high collision rates or poor air quality.

The solution strategies must also strongly emphasize the need to expand the traditional transportation systems. We must add highways and public transportation service to our metropolitan areas. America's big cities have a transportation problem now, and most of them face growing population over the next two generations. If there are going to be one to three

million more people in an already congested metropolitan region, there needs to be an expansion of roads, buses, trains, ferries, sidewalks and bike lanes. This expansion is very important.

Current private sector manufacturing and freight movement operations might be a good model for future personal travel systems – freight shippers have schedule expectations that vary by the goods being shipped, their importance and they react to incentives such as time savings and cost. But different than many current commuters, truck, ship and rail operators are also very well informed and are willing to change their trip plans, modes and routes to take advantage of time or cost incentives. Consider the commuting, safety and air quality parallels to these aspects of retailing and service delivery:

- Brick-and-mortar retailers have systems that let them know what item is sold and when, as well as the trends for each item on a daily, weekly and seasonal basis.
- Those companies have suppliers that react to trends in demand with incredible speed, changing the type of product and schedule as customer purchase patterns change.
- Delivery companies can tell where a shipment is at all times and can estimate when it will arrive or if there may be problems along a route be delivered.
- On-line merchandise companies can learn from transactions and search trends to tailor advertisements, discounts and products for each individual.

Expanding the systems, therefore, must be combined with efficient operations that react to events that may not be regular, but certainly occur frequently. The varying amount of extra time that travelers and freight shippers have to allow for crashes, breakdowns, weather problems and special events are a significant part of the congestion problem. Traveler frustration can be reduced if these seemingly simple issues can be dealt with. Of course the solutions are not simple, but if we can clear collisions quickly, tell riders when their bus or train will arrive, time the traffic signals so that groups of cars move through a series of green lights and allow shoppers to get to stores without tying up traffic trying to move on major streets, we have a chance to meet expectations and convince the taxpayers their funds are being spent wisely.

Education can also play a role in attacking congestion. There are many available travel options and information on routes, modes, fares, tolls and travel times will be ubiquitous. The missing element may be properly motivated travelers and employers who understand that their communities and their bottom-line will benefit from a more flexible approach to commuting, working, manufacturing process and delivery processes.

Safety improvements traditionally come from a combination of design changes, education and enforcement of traffic laws. All of those elements can also benefit congestion – the Ohio DOT showed as much when their collision and congestion maps identified most of the same locations. It goes without saying that with traffic crashes being the leading cause of death for people between 4 and 34 years of age, that safety should be a significant priority and innovative strategies deployed.

The Benefits

Please do not make the mistake of thinking this issue is only about what to do and the often discussed topic of how to pay for it. I hope you also ask about the benefits of attacking the congestion problem. The fuel consumption, congestion delay, safety, air quality and other benefits are not only substantial, they are also the way to help citizens and businesses understand the reasons for doing the improvements. Transportation projects, after all, are not ultimately about faster travel, they are about supporting an economy that competes in a global market, supports families, encourages innovation and creates options that allow citizens to improve their lives.

A study for the Texas Governor's Business Council used information developed by the state's metropolitan planning organizations and the Texas DOT to estimate the benefits of improving mobility. To keep the relatively high level of congestion experienced in major Texas cities from getting worse will require an increase in spending from $108 billion to $123 billion between now and 2030. The more desirable outcome of eliminating serious congestion will increase spending to $174 billion. That $66 billion increase generates $540 billion in savings from lower travel delay, reduced fuel consumption and business efficiency, an 8 to 1 return ratio. Reductions in fuel purchases that would result from less stop-and-go driving were estimated at $37 billion alone, more than half of the cost of the program.

I'd like to suggest that benefit estimates like this are an important aspect of the challenge. Connecting projects, programs and plans to attributes that provide information for decision-makers like service quality, travel reliability, potential employee markets and quality of life should be a key component. If we focus our nation's transportation investments on programs, policies and projects that will enhance the quality of life, it will be easier to make a case for transportation investment. If all the discussion is on the cost of the program and funding mechanisms, we may be consigned to irrelevancy.

Possible Guiding Principles for Change

I have a few suggestions on how to translate the future situation I have outlined and the challenges, we face into tangible advice for members of the Subcommittee. Many of the trends I describe exist in part because of the manner in which government at all levels has structured its decision making and how that structure has worked to produce a transportation system that enables these trends.

1. Recognize some problems are regional and interregional but many of the operating and governance structures are not. How do we make them match or work better?

First, Congress must recognize that the current system of decision making for transportation is based on states or metropolitan regions. States and regions examine their own boundaries when attempting to develop solutions to current transportation problems and in planning for their future transportation systems. The current federal highway program reinforces the natural inclination to stop solutions at borders, whether they are the edge of states or metropolitan regions. This results in a patchwork of solutions to large interregional problems with little to no

continuity. The mismatch occurs where the current problem, and more perilously future problems, do not track the decision-making entity boundaries. We already recognize regional and in some cases national consequences flowing from any of a number of transportation problems.

A good example of this is the consequence of rising transportation costs created by the bottlenecks at the ports along the West Coast. As congestion rises at these ports and in the inland infrastructure, costs rise. The costs are born by consumers thousands of miles away, in states other than California, Oregon and Washington. Under the current regime, downstream state transportation decision makers do not have incentives to trace back their consumer's costs to the West Coast and undertake a problem solving exercise with the West Coast states. Congress should consider ways to match the decision making and governing structure to the nature of the problems. Our problems are, and will continue to be, interregional and national.

2. People will react to incentives - price and time as examples - but we rarely provide them opportunities to do so. At the same time, states and regions have the responsibility to maximize the efficiency of their transportation infrastructure.

These two facts can work together to re-capture the unused, existing capacity through the use of tools that spread demand out over larger periods of time. Concentrated travel demand is our single worst problem in highly urbanized cities. Transit, congestion pricing, car pooling, telecommuting etc, are all tools to manage concentrated travel demand. Heretofore however, these different tools were individually urged by Congress.

Congress from one reauthorization to the next would alternatively encourage tele-commuting or car pooling, and most recently congestion pricing and tolling. The problem with this approach is that Congress never collected these tools together in an incentive to commuters. People react to incentives, but they also demand choice. Instead of Congress elevating one choice over another, it should incentivize states to provide to commuters choices from among these tools that make the choices as nearly equal as possible. This empowers a commuter with choice. States and regions can also provide more options to commuters with emerging technologies and better information. If the goal is congestion reduction is there a role for a commodity market in peak period trips? Can people auction off their rights to travel by themselves in a car?

3. No one is really paid for eliminating congestion. Why?

Agencies conduct many studies and evaluate options; many congested states and metro regions are managing roads and transit systems to achieve productivity improvements. But it is clear that more aggressive approaches exist. Operations that target serious problems with aggressive treatments plans usually combine technology, information, policies, regulatory changes, private sector partners and public agency operators – each element doing what it is best at, without regard for jurisdictional boundaries or "turf" issues. The federal program could reinforce these aggressive approaches with support for innovation and coordinate monitoring, reporting and performance standard development. States or regions could be rewarded for achieving and maintaining congestion and safety standards.

This concept could also be extended to other transportation program elements. A move away from budgets for specific programs or treatments and toward an emphasis on congestion, safety, asset value, pavement ride quality and other measurable factors could accentuate a shift from "what gets done" to a more relevant question like "how does it perform?"

The problems in states and metropolitan regions are similar but not the same and there's no reason to think the goals and solutions will be the same. We have much better access to monitoring data now than when the federal transportation program was begun. Emphasis could be placed on the process to develop standards at the state and region level. Many processes and measures will result, but if every program examines the range of concerns, improvements will happen.

4. Data driven and results-oriented approaches to problems have proven their effectiveness in many fields of government and business; we should expand them.

The analytical process, monitoring data and communication strategies are important both for improving operations and planning and for generating the support of the public. The need to be responsive to customer requests for information and the ability to change operations will characterize newer and more aggressive approaches to alleviating transportation problems. The cycle of planning, testing, deployment and evaluation may turn over much more rapidly in the future. Congressional support for data collection and analysis improvements will be returned in better service, improved communication with the public and reliable operations.

Thank you for allowing me to share some ideas on the future we might be facing.

More information on mobility research at the Texas Transportation Institute can be found at: http://mobility.tamu.edu and http://tti.tamu.edu

Statement by Congresswoman Doris O. Matsui
At the Transit and Highway Subcommittee hearing on
Surface Transportation System: Challenges for the Future
January 24, 2007

Thank you Chairman DeFazio. I am looking forward to serving as a Member on this Subcommittee.

In my district and especially within the city of Sacramento, we have centered much of our future growth and economic development on our transportation infrastructure.

We are in the process of redeveloping an old rail yard down town. This project, once it is completed will be an intemodal hub for Amtrak, light rail and bus service.

It will also be central to our city's downtown economic development. Along with its utility as transportation intermodal center, this project will also include housing, business and shopping opportunities for the community.

Part of the reason our rail yard project is moving forward is because Sacramento has a growing and vibrant public transportation system. The Sacramento Regional Transit's light rail had the fifth highest ridership gain in the country over the first nine months of 2006, where it increased by ten percent.

The people of Sacramento want transportation options, whether its bus, rail, bikes or walking, our city is making the investments in the infrastructure.

As our city grows we have made a commitment to our transit system and have embraced Transit Oriented Development as tool to navigate population growth and transportation and housing demands.

I am looking forward to working on these issues during this Congress.

Thank you Mr. Chairman.

1

Statement of Rep. Harry Mitchell
House Transportation and Infrastructure Committee
Subcommittee on Highways and Transit
1/24/07

--Thank you, Mr. Chairman. And thank you for calling today's hearing to examine this critical issue.

--As you know, the future of surface transportation is vitally important to my district and to my state. Arizona is now the fastest growing state in the country, and my district in Maricopa County is at the very heart.

2

--With growth, of course, comes need. And for Arizona, this means highways and light rail.

--The Arizona Department of Transportation estimates that Arizona will need at least $9 billion over the next 20 years for just 12 of its major highway corridors....and these corridors represent just 36% of our state's total highway miles.

3

--The only thing more staggering about future surface transportation needs in Arizona, is how quickly they are growing.

-- I look forward to hearing from today's witnesses, and learning what we can do today, to help surface transportation run smoothly tomorrow.

--Thank you, Mr. Chairman. I yield back the balance of my time.

TESTIMONY BEFORE THE US HOUSE OF REPRESENTATIVES COMMITTEE ON TRANSPORTATION AND INFRASTRUCTURE SUB-COMMITTEE ON HIGHWAYS AND TRANSIT

Surface Transportation System: Challenges for the Future

January 24, 2007

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Mr. Chairman and distinguished members: it is a great pleasure to appear before this Committee once again to discuss with you the substantial challenges the nation faces in transportation. I treasure the past interactions I have had with this great body over the years.

The just past 50th anniversary of the Interstate provided a valuable opportunity for examination of the past triumphs of our transportation system and to engage in much needed introspection about our approaches to transportation issues today and our failure to live up to the kinds of successes – the kinds of vision – exhibited by our predecessors. As Chair of TRB's Transportation History Committee I studied, wrote and spoke extensively about the forming of the Interstate – first the vision; then the plan; then the financial system. Make no mistake it was at least a 20 year development process, with a depression and a World War intervening.

Examining the great work done by the forerunners of the US Federal Highway Administration makes a deep impression; and to read again the words of President Roosevelt and Eisenhower is truly inspirational. (I actually held in my hands the map on which President Roosevelt sketched three blue lines across the nation and three North South and asked for an analysis by the engineers.) They understood what was at stake – nothing less than the nation's future. What does impress even more is that the challenges they faced were so massive, so great, especially given the limited resources they had at their disposal. By comparison today our resources are far greater, and the challenges we face are far more circumscribed. They would be astonished, I think, that we are daunted by the present challenges, but daunted we are. Our surface transportation system has declined continuously in its service to the society and the economy.

Let me sketch out here the nature of the future challenges that will face us over the next 25 years or so and the kinds of solutions that we can envision now, that we can begin to work on now to successfully address those challenges and to produce a vision of future transportation consistent with those of our predecessors.

The Challenges

If one tends to look at the surface systems from the freight perspective then that perspective, to be serious, will be world-wide in its scope – the global economy will dominate domestic freight transactions. A focus on passenger travel would tend to be more domestic in its scope. That is where my emphasis will be today.

The list below, succinctly lays out what I believe is the fundamental background understanding about where we are and where we are going that can guide our actions. What that list tells us is that we will be an affluent but challenged society. Our population increase will be substantial but our growth in economic output will be far greater so that all of us will enjoy greater wealth. Such a society will demand high quality transportation services to meet the high values of people's time and the high values of their goods. We should plan for a society in which the average value of time is

on the order of $50 an hour and the average value of goods shipped is three times its present level.

This will be occurring in a period of the greatest demographic upheaval the nation has faced for a hundred years. Only in the great immigration wave of the 1900's is there a similar wrenching period. In addition to dramatic immigration we will be facing the closing of the working years of the baby boom generation. My work in preparing the Commuting in America series, the first of which began in the mid-eighties, culminating last November in the publication of Commuting in America III, has evolved into the history of the working years of the baby boomers – the same people who challenged our grammar schools and high schools in the fifties and sixties filled our transportation systems in the seventies and eighties. Remember the Commuting in America series could have been about the massive unemployed struggling to find work, rather than the congestion created by the surge in affluent workers all going to work at the same time. It was the great triumph of the American economy that produced the jobs that generated the very positive congestion. After all, *congestion is people with the means to act on their economic and social interests getting in the way of others with the means to act on theirs*!

The first of the baby-boomers will reach 65 around 2010 and the last of them circa 2030. just as their advent challenged us to create the opportunities for that massive surge in working age population in the sixties, their departure from the working scene will lay down dramatic challenges of a kind we have never had to face before.

More significantly, as this major component of our work force goes off stage, our population will not automatically produce the new labor force to fill those jobs. In this decade 2000-2010 we will add about 20 million persons of working age to our population but in the succeeding two decades 2010-2030 we will in total produce about 12 million, according to Census projections. The percentage of the population of working age will drop from approximately 60% to 54%. Where then will the workers come from to produce the affluent society I envision?

Employers will have to work very hard to hold the potential retirees in work a little longer; to attract retired workers to new opportunities; to attract even more women into the workforce; to attract underemployed minorities and rural populations, and of course to use the potential immigrant work force. The problem will be exacerbated by American workers being attracted abroad to work in high-powered economies as nations compete world-wide for skilled workers.

Government will have to play a key role here as well; assuring that laws don't impede older workers from staying in the workforce, or women or the other potential working groups from participating as fully as they wish. Education and retraining will be critical. And transportation will become a central concern providing the reach of job opportunities over vast labor markets spread across the landscape.

FUNDAMENTAL SOCIO-ECONOMIC PREMISES FOR
AN AMERICAN VISION OF THE FUTURE

- ✓ The nation will be facing perhaps the most dramatic changes in demography since the great immigration waves of the late 19th and early 20th centuries.
- ✓ Population will grow at a stable rate according to the census interim projections at about 1% (3 million) per year.
- ✓ Variability in population growth will largely be a function of immigration which can change with a stroke of a pen.
- ✓ The dominant demographic reality will be the aging-out of the baby-boom generation, the first of whom reach 65 in 2010 and the last circa 2030.
- ✓ This will have dramatic impacts on the numbers of people of working age and the ratio of working age population to those above and below that age (the dependence ratio)
- ✓ The decline in the baby boom work force will create a sellers market in work services and force employers to be highly responsive to worker interests yielding greater flexibility in hours, days, weeks of work.
- ✓ Employers will seek to attract workers from the retired, from even more women, from the underemployed minority and rural populations and, of course, immigrants.
- ✓ National GDP will grow at roughly 3% per year based on education levels, technological change, productivity improvement, and population increase.
- ✓ Population growing at 1% and national GDP growing at circa 3% means that GDP per capita will grow as dramatically as in the last 50 years.
- ✓ The affluence of the emerging society and the resulting immense value of time, will drive most decisions, including those related to transportation.
- ✓ Increased value of goods will make similar demands on the freight side of the transportation system.
- ✓ Both passengers and freight will demand and be able to pay for high quality, reliable, amenity-based, personalized transportation.
- ✓ A large segment of society will have the time and resources for extensive recreation and leisure travel.
- ✓ Globalization of everything will increase business and recreational tourism travel within, to and from the United States.
- ✓ The increases in services as a share of GDP will permit more population to act on location preferences as workers and employers are less tied to resources and more attracted by amenities.
- ✓ Multi-job households will complicate job and housing choices.
- ✓ Areas of the country will compete for workers on the basis of life-style, climate, and ease of living reinforcing the shifts of population to the South and West.
- ✓ Transportation and mobility will be one of the more important amenities on which competition is based.

It will be a footloose job structure with employers willing to go wherever skilled workers are and those workers free to seek high amenity attractive living arrangements. Never before will it have been so true that Americans will be able to live where they want and work where they want. Access to housing that people want will be the critical interacting force with commuting and transportation activity in general. Fitting people to the transportation system we choose to provide will be a comic or tragic failure. We will have to accept consumer sovereignty in transportation just as we do everywhere else in our nation. Cities, metropolitan areas and states will compete for workers and the employers they attract with amenities not the least of which will be effective transportation.

Perhaps more important for future surface transportation than the size of the expected population will be where that population locates in the nation. Clearly, the ways in which future population will distribute itself across the national landscape will be critical to transportation demand and the services required to support that demand, with immense implications for national productivity and societal well-being.

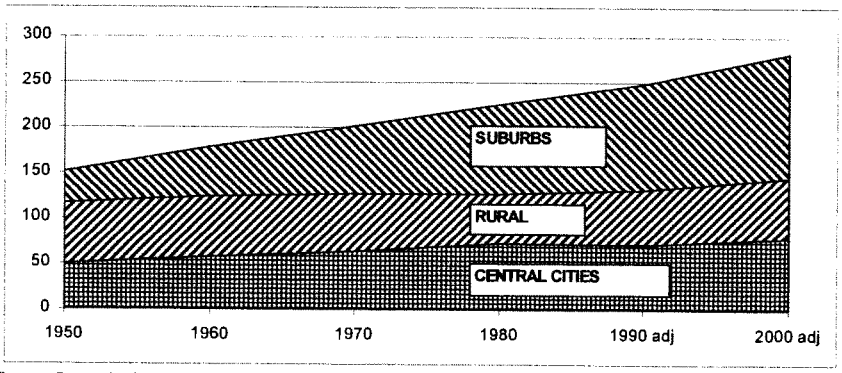
America is truly unique in the world with a large land area, a large population, and a nation that is both technologically advanced and wealthy. No other nation on earth combines these four attributes, although several will approach it over the coming 50 years. These four attributes will define largely how the population will be distributed in the future. It will further define how the nation will serve its people, how it will interact nationally and in the world economy.

At present, the US population can be roughly divided into four main population groups :

- **Metropolitan Areas of more than a Million Population** – In 1960 America had 34 areas with populations over a million. There were 53 such areas in 2005. It can be estimated that there will be at least 60 such areas by 2020. At least 60% of the nation's population can be expected to be in these areas.
- **Metropolitan Areas of more than Five Million Population** – In 1960, of the areas over a million only New York, Philadelphia, Chicago and Los Angeles were over 5 million; in 2005 we reached 12 such areas containing close to one-third of the US population. By 2020 there could be an additional two or three such areas. These great areas will be the economic engines of the nation.
- **Smaller Metropolitan areas under a million** – Many of these areas will grow toward the million mark while many will be absorbed into the expanding orbits of the major metros.
- **Rural Areas:** From a population and transportation standpoint rural areas are separable into those rural counties soon-to-be-metropolitan; and that other group that is more truly rural in nature. The counties on the metropolitan fringes are often the location of rapid growth, housing development, and long commutes. Given the orientation to suburban job opportunities many of these areas have only a limited connection to the metropolitan center. They will be the sites of much of our future congestion.

There is substantial evidence from the last 100 years, and certainly over the last 50, as to the almost inexorable nature of future trends. Figure A below shows the fifty year growth trend of central cities and suburbs, which together constitute metropolitan areas, and non-metro (rural) areas. Effectively all of the nation's growth has occurred in metropolitan suburbs where today more than half the national population resides.

Figure A Long Term Population Trend by Geographic Area



Source: Commuting in America III, NAS, TRB

A large part of the "suburban" growth has in fact been rural growth on the fringes of metropolitan areas which become incorporated into the metropolitan area as they reach certain population and commuting thresholds. More than 40 rural counties became metropolitan in the 2000 Census. Rural growth, focused on the metropolitan fringes has been substantial – As a result metro areas grow together and more square miles of area will be incorporated into these metropolitan agglomerations. This will continue for the foreseeable future as general population migration continues from the metropolitan areas to the rural fringes with households in search of residential amenities and affordable housing. The results will be immense megalapolitan areas with spans of a hundred miles. Importantly these areas will frequently grow together and so the ability to delineate discrete areas will come close to disappearing.

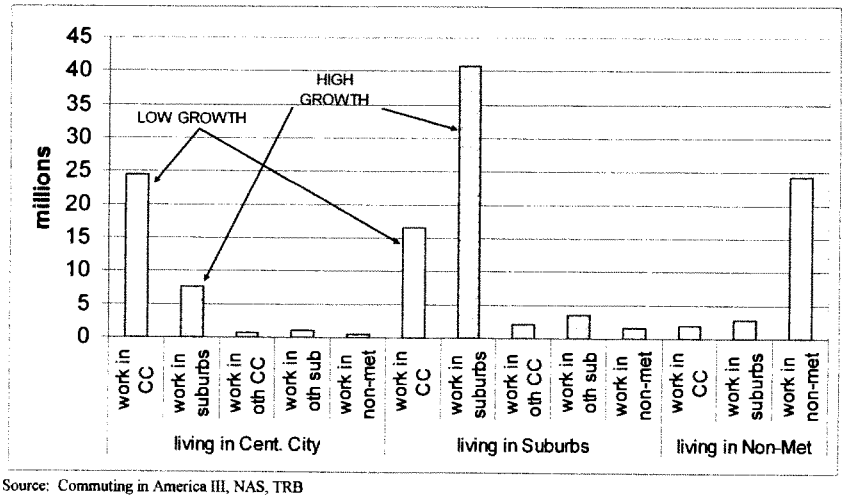
The retirement of the baby boom population and the consequent lack of working age population will sharply affect the character of rural areas. Part of it will be the need to provide access for underutilized rural labor forces to reach suburban job opportunities. Additional important changes will be the expansion and success of new retirement-based communities in attractive areas with good weather; and the expansion of amenity-based communities as work sites. About 800 of our nation's rural counties, those oriented to recreation and retirement, enjoyed levels of growth of 20% or higher in the nineties, more than double the non-metro average rate and above the average metropolitan growth rate.

This trend could become a major factor in national population distribution in the future as more baby boomers reach retirement. As a result, the US rural population which is already better connected to the national economy than ever via modern technologies such as the internet, cellular technology and satellites will be even further integrated into the society. It will be a high mobility rural population with high percentages of income spent on transportation.

The central reality of future metropolitan areas will be the dominance of the suburbs – not merely in population, but in jobs and other measures such as retail sales. The "Donut Metro" will result. Commuting flows already reflect this, as shown in Figure B below, but will increasingly follow this pattern as very different growth rates continue.

- the predominant national work "market" is suburb to suburb commuting – increasing in dominance as metropolitan areas increase in scale;
- the internal flows within central cities and within non-metro areas, are among the other major markets, tend to be among the low growth flows;
- the "traditional commute" from suburbs to central city has exhibited limited growth, whereas;
- the rapidly growing markets are from central cities out to jobs in the suburbs, had a greater share of growth than the traditional inbound commute in the nineties, and;
- the flows from rural areas or from other metro areas into suburbs.

Figure B Metropolitan Commuting Flows 2000
(in millions of commuters)



Source: Commuting in America III, NAS, TRB

The growth markets will continue to be those difficult to serve by carpooling and traditional radially-oriented transit. A major transit emphasis then becomes providing access to jobs within the center city and out to the suburbs for inner city populations particularly those who are vehicle-less. General access to community services in both metropolitan and rural areas will be an important focus. Longer distance oriented commuter-rail-like services will benefit from the dispersed population that continue to travel to those job and other activities oriented to the center.

The worker dynamics operating in the new metropolitan complex will be these:

- It will be a sellers market for workers resulting from decline of persons of working age. Employers will go where skilled employees are or want to be. Much of this will center around universities and research centers. This, coupled with more affluent, amenities-seeking workers will abet the shift to the South and West.
- Employers will be more forthcoming re flexibility regarding hours and days of work in order to retain/obtain workers.
- Employers will shift to suburbs to be near workers, permitting workers to shift even farther out in search of rural amenities and lower cost housing. The attachment of minorities to the center city will be broken especially as their access to private vehicles continues to grow.
- Both center cities and suburbs will move toward balance in jobs and workers (i.e. fewer jobs per worker in cities; more jobs per worker in suburbs) but this will not change the need to commute significantly due to persisting skills mix differences.
- Increases in specialization in the labor force will mean that workers will need to be drawn from larger and larger worker pools over greater distances.
- Multi-worker households, frequent job changes, housing preferences, and the general friction of changes in residence will generate very long work trips.

The extraordinary increases in commuters leaving their residence counties to work will continue to expand with substantial shares of the population crossing both metro and rural areas to reach their job sites. The share of workers leaving their home county rose from less than 24% in 1990 to 28% today. At present more than half of new workers leave their home counties to work. This will not just affect commuting but other travel purposes also, as doctors, restaurants, and recreation activities become more specialized their market sheds will expand and the average trip lengths to these attractions will increase. Particularly the commuting and other interactions between rural and metropolitan fringe areas will expand in importance.

The resulting pattern could be summarized as workers able to live where they want and work where they want but where they will have to accept the penalties associated with longer commutes.

The non-worker related dynamics will also be of great significance, not the least of which will be:

- The decline of the working age segment from approximately 60% of the population to about 54%, will give rise to a large dependent population.

- In the fifties the surge in the dependent population consisted of the early school years baby-boomers, now it will be a product of their reaching 65.
- As the first generation to have grown up with the auto retires, there will be dramatic increases in the numbers of those over 65 with drivers licenses and vehicles, especially women.
- For the first time in history we will have two generations of retired people.
- The result will be a surge in tourism and recreation travel for those with disposable time and income.
- The safety implications will be critical.

In summary the defining characteristics of America in this period will be:

- A highly dispersed, high-value, high-mobility, globally-engaged society is envisioned with sharp growth differences between regions and within metropolitan complexes.
- Long distance travel (i.e. exceeding 100 miles) for both business and personal purposes will grow dramatically.
- The critical interactions will be between skills-seeking employers in search of replacements for the retiring baby-boomer generation; and amenities- seeking workers and their families, taking place in a context of greater logistical freedom for both workers and employers to locate where they choose. Connecting distant workers with jobs will be a critical productivity function of transportation.
- Massive metropolitan regions will result with approximately half the US population living in metropolitan areas of over 5 million; such delineations, however, have already become merely definitional artifacts. These agglomerations will be increasingly critical to national productivity and serving their transportation needs will be a major input to that productivity.
- Continued "suburbanization" of people and jobs; and declines in the densities at which people live should be expected, leading to a blurring or, in some areas, complete eradication of metropolitan and non-metropolitan boundaries.
- Within this metropolitan context it is possible that community nodes will evolve with a greater emphasis on walking for some local trips. A world dominated by the personal vehicle and walking could evolve.
- Rural populations will be more critical to the nation's economy; and rural development will follow functional lines based on retirees and amenities seeking workers: focused around recreation/tourism retirement based areas; or specialized economic development features.
- The transportation result will be high frequency trip-making, of increasing lengths to and from increasingly dispersed origins and destinations. Metropolitan core-oriented transit usage could rise, in an overall trip-making context that will be difficult or impossible for traditional transit or carpooling to serve and in which overall transit and carpooling shares of travel are likely to continue to decline. Greater competition will arise between air and auto travel for intermediate trips between the usual ranges of each, roughly 250 to 500 miles.

The Vision

The tools employed to assess national investment needs for highway and transit capacity tend to produce incremental adjustments based on observed or expected growth in demand, but no roads on new rights-of-way nor new facilities designed to stimulate or channel growth are identified by existing modeling processes. The process fails us in providing sweeping, visionary statements of goals and needs. The Interstate System would not have been produced by a computer model. It took a certain vision – a sense of possibility – a sense of what could be – in the 1930's to produce it. Perhaps it also took a period of hard times to help envision a better world and its makeup. Today such an envisioning process must begin with the Interstate and the rest of the National Highway System as a starting point and then go on from there.

Many of the transportation implications derivable from the trends described here have already been identified as part of the discussion, but several need further delineation.

- Immediate Action Opportunities – there are immense immediate opportunities for improvement in the ways we operate and utilize our existing infrastructure that need to be realized and that can be employed in the very near term to wring the maximum thruput out of our existing systems. These are low cost operations and technological solutions applicable to both highways and transit that can address congestion on a very low cost-per-hours-of-delay-removed basis. In removing obstacles to improved traffic flow they also improve safety and the environment. In the near future the promise of new Vehicle Infrastructure Integration (VII) initiatives can be added to the now more traditional ITS tools. We must deploy these to ease present problems and to demonstrate that everything we can do to serve the public has been done before resorting to immense infrastructure investments.
- Community and Neighborhood Design – There is nothing in the foregoing discussion that indicates that development must take the form of widely dispersed housing. There will be interest in and pressures for more clustered development that create walking opportunities. Given that much work will be addressed by those working at home or working on flexible schedules the opportunities will exist for more responsive patterns of development at the neighborhood level while at the same time the entire metropolitan area is more widely dispersed. Working at home will be the fastest growing "mode" to work, especially among the over 65 worker population.

- Transportation and Productivity – As employers and suppliers reach out farther and farther to obtain the needed skills and supporting goods and services they require, the ability to sustain the mobility of people and goods will be crucial to our economic effectiveness. Social and economic "Communities of Interaction" will grow, encompassing the entire nation that will be served by communications advancements but will further the needs for transportation as well.

- Time and cost of travel – Affluent societies, such as described here, tend to travel more frequently, at longer distances, and on modes more responsive to their needs for

timely, rapid service. The further dispersal of the population will add to those demands. Designing for a society with a value of time of $50 per hour in which households spend roughly 20% of their income on transportation would be a useful starting point from which to examine future needs. The same transportation system next year will be less acceptable to a society whose value of time has increased. The system will be judged more harshly in the future in these terms. The values of products moved in the freight system will also grow and will make similar demands on the system for timeliness and responsiveness. The traditional notion of neatly dividing passenger and freight travel between urban and intercity components will be strained as much of the new travel lies somewhere in between.

- Safety – The safety implications of these changes will be immense. A high mobility society, that is aging and that is increasingly operating over deficient rural roads, will be a major national challenge. There are substantial opportunities for changes that can ameliorate these effects – some technological, some in facility design but also in land use arrangements that will welcome more walking in safe surroundings with limited interactions with vehicles.

- Long Distance Intercity Travel – Only brief reference has been made here to the prospective growth in long distance intercity (and international) travel. Tourism, including both leisure and business travel, has grown dramatically throughout the world and particularly in the US, and will play a substantial future role in defining transportation needs. The pace of international markets and the orientation to visitations of an affluent society with increasing amounts of discretionary time and incomes suggests continued dramatic growth. A large part of this activity will involve family connections and second home travel. The advent of new light, low cost jet aircraft and eventually the Vertical Take-Off and Landing (VTOL) aircraft will make inroads into the land based auto-oriented travel markets in the less than 300 mile ranges. The American Travel Survey of 1995 indicated that about 25% of travel occurred in trips over 100 miles and about half of those trips under 500 miles were in personal vehicles for both work and recreation/leisure activities. It is this market that can be expected to expand dramatically and that will require innovative response.

- Congestion and Capacity Needs – the immense national backlog of needed capacity improvements and reconstruction is the critical factor for the immediate future. Given the relatively benign growth rate levels and the substantial affluence of the society future needs can be met once the present backlogs of capacity, maintenance and reconstruction in highways and transit are overcome. Among the responses to the patterns identified here are the following:

  - An expanded Interstate system reaching more areas;
  - Increased rings of beltways around our metropolitan areas supporting greater circumferential travel, and increased by-pass opportunities;
  - Improved access to the city center including commuter railroad-like facilities;
  - Improved rural two lane roads for safety and mobility;

- Improved local circulation services in urban and rural areas that focus on integrating the lower income populations into the productive society;
- Expanded safety and operations enhancements for more effective and safer use of existing facilities.

A number of kinds of new system constructs could be envisioned. Those discussed below are divided into two parts: Nationally Networked Facilities and Nationally Pervasive Facilities.

NATIONALLY NETWORKED FACILITIES

- The Interstate System is the centerpiece of our national surface transportation capability. it must be preserved and extended.
- Additions to the Interstate/National Highway System are needed whether based on socio-political connectivity criteria or on economic development grounds. Such additions might be subjected to geographic coverage tests, a redundancy test (a key national security concern in the past which has all but been forgotten in recent years), as well as a capacity test. A simple criterion might be that all areas of over 50,000 population should be connected to the national system, or every county seat, or no population center should be more than 20 miles from such a facility. New routes based on NAFTA corridors would be an example.
- A National Parkway System might be envisioned, with simplified, less expensive features, predicated on a light-vehicles-only design criterion. Such facilities developed with scenic and aesthetic values in mind could provide connectivity between areas without threatening local abutting land uses. The Taconic State Parkways in New York and some of the National Park Service Parkways, are examples. Such a system would provide an alternative for those drivers fearful of large trucks and would provide needed capacity with low cost design features. It could be conceived as a toll-based system with travelers willing to pay tolls to avoid truck conflicts and gain a pleasant travel experience.
- A National Truck Freight Network has been suggested on a number of occasions in the past. Such a network would be designed specifically for trucks with all the extra cost features that entails. It could include the option of permitting larger vehicles perhaps especially designed for such a facility. There may be rewards in finally separating cars from trucks in major corridors. We should be happy to build the roads that the truckers need and they should be happy to pay for them.

- NATIONAL PERVASIVE FACILITIES -- Facilities that are extensively distributed around the country but not particularly designed to be connected in any way.

- Metropolitan HOV/HOT lanes have been proposed frequently in different venues. What would be different here would be realization that these should designed as systems throughout a metropolitan area and should be pervasive nationally (in the 60 areas expected to be over a million by 2020, for example). The massive orientation to carpooling of our immigrant populations is noteworthy.

- Similarly, TOT (Truck Only Toll) facilities have been proposed in several areas. Most typically proposed as special solutions to bottleneck situations rather than as a complete TOT network.
- One of the dramatically changing factors in America metropolitan travel is the huge scale of our major metropolitan areas. There are now 12 areas over five million in population with a third of the nation's population. In these and other metropolitan areas the burgeoning suburb to suburb and exurb travel patterns define the need for beltway expansions as a new tool to respond to development needs. Areas may need to consider two and three beltways as part of an effective system based on hub and spoke concepts.
- Heavy focus of rail transit services will be on access to the center in those areas over 5 million. This will not be a rapidly growing market. More low cost options, Bus Rail Transit, and jitney/van type systems (carpool/transit hybrids) keyed to the dispersed demands of the new era, will need to developed.
- The very weak systems of social services transport in both urban and rural areas needs national recognition and attention.
- The pathetic nature of our data collection programs and analytical capabilities demands Congressional focus. We are effectively naked with respect to our ability to understand and interpret national patterns and trends. Our future decision-making must be keyed to performance-based reporting systems. If our future decisions are to be founded on sound understanding of our rapidly changing society and grounded in effective performance-based, economic justification it will have to be supported by far superior data and analytical capabilities than now exist. The costs are trivial contrasted to the cost of ignorance.

Closing

I see a very positive future for America and for American transportation. One in which the problems are more operable than they were in the past and our financial and other tools are better equipped to address the challenges. The major provisos are that the nation must first recognize the immense importance of mobility in realizing its ambitions for the people as individuals, as a society and as a challenged nation in the world; and we must then be willing to act with the abundant political, technological, intellectual and financial resources at our disposal to respond to those challenges.

Alan E. Pisarski

Remarks of U.S. Rep. Nick Rahall
The Surface Transportation System: Challenges for the Future
Snbcommittee on Highways and Transit
2167 Rayburn House Office Building
January 24, 2007

Mister Chairman, thank you for giving me the opportunity to speak and I welcome all the new and returning Members to the Committee on Transportation and Infrastructure.

I want to extend a warm welcome to Dr. Lomax of the Texas Transportation Institute, I work closely with the Rahall Transportation Institute in Huntington, W.V. and I know how important the University Transportation Centers are to our understanding of transportation issues.

Also, Mr. Schenendorf, I would like to extend my personal welcome to testify before the committee for which you spent much of your career working. Your contributions you have made are with us today.

Also Mr.'s Shane and Capka, I would like to thank you for coming to testify before this body, the discussion on the future needs of our nation's surface transportation system must be talked about early and often if we are to develop a fair and just system that serves the needs of all Americans.

I realize projecting 50 years into the future is never easy. I remember President Bush's first budget that was submitted to the Congress in early 2001. Who would have been able to foretell the events that would take place just eight months later that would shatter his 10 year projections?

Which is why discussing often the future of surface transportation is crucial. Addressing issues such as congestion is very important, anyone who lives in this area can testify to that.

There are issues beyond congestion that this Commission needs to be addressing. I truly hope that the Administration has a larger focus than congestion. In West Virginia, we drive some of the longest distances to and from work in the country. Some estimate it at the fifth longest in the Nation. Rural America deserves its seat at the National transportation table.

Also, security continues to play a huge role in the post-9/11 world. My State lies west of this metropolitan area, and if something were to happen to cause a massive evacuation, Interstate 66 would be the highway the entire Washington D.C. metropolitan area would go to first. States like West Virginia need a federal infrastructure commitment to address that circumstance.

In sum, while I appreciate the diligent work that the men and women of the Department of Transportation do.

Thank you again for allowing me to participate in today's hearing, and I ask that my statement be included as a part of the official record Mister Chairman.

Surface Transportation System: Challenges of the Future
Hearing Before Subcommittee on Highways and Transit
Committee on Transportation and Infrastructure
U.S. House of Representatives
January 24, 2007
Testimony of Jack Schenendorf
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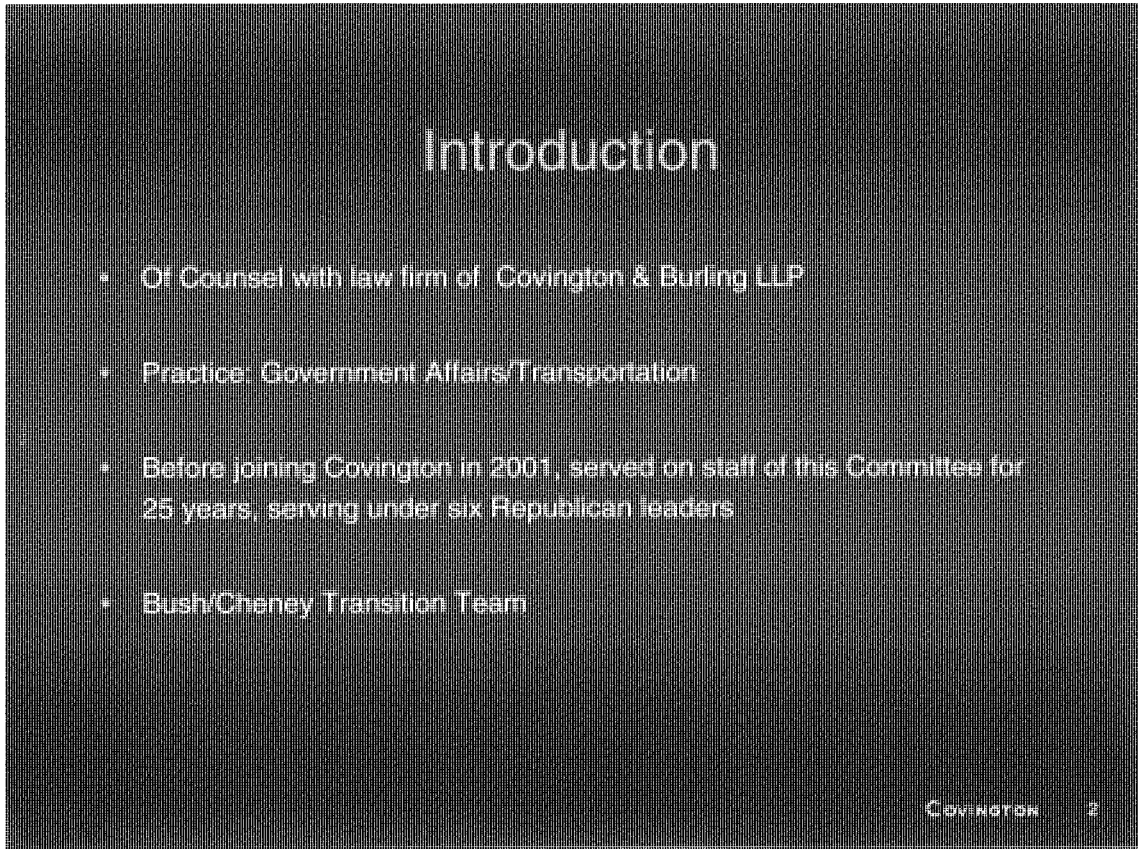
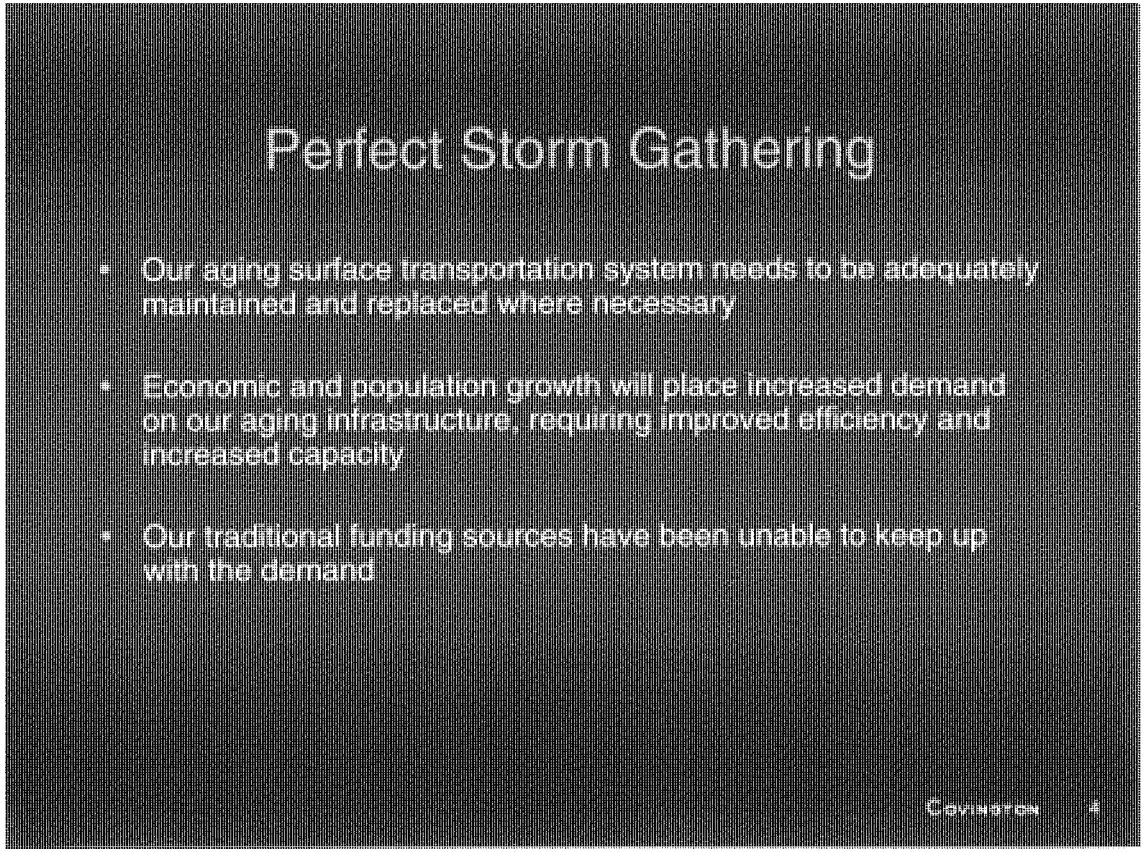
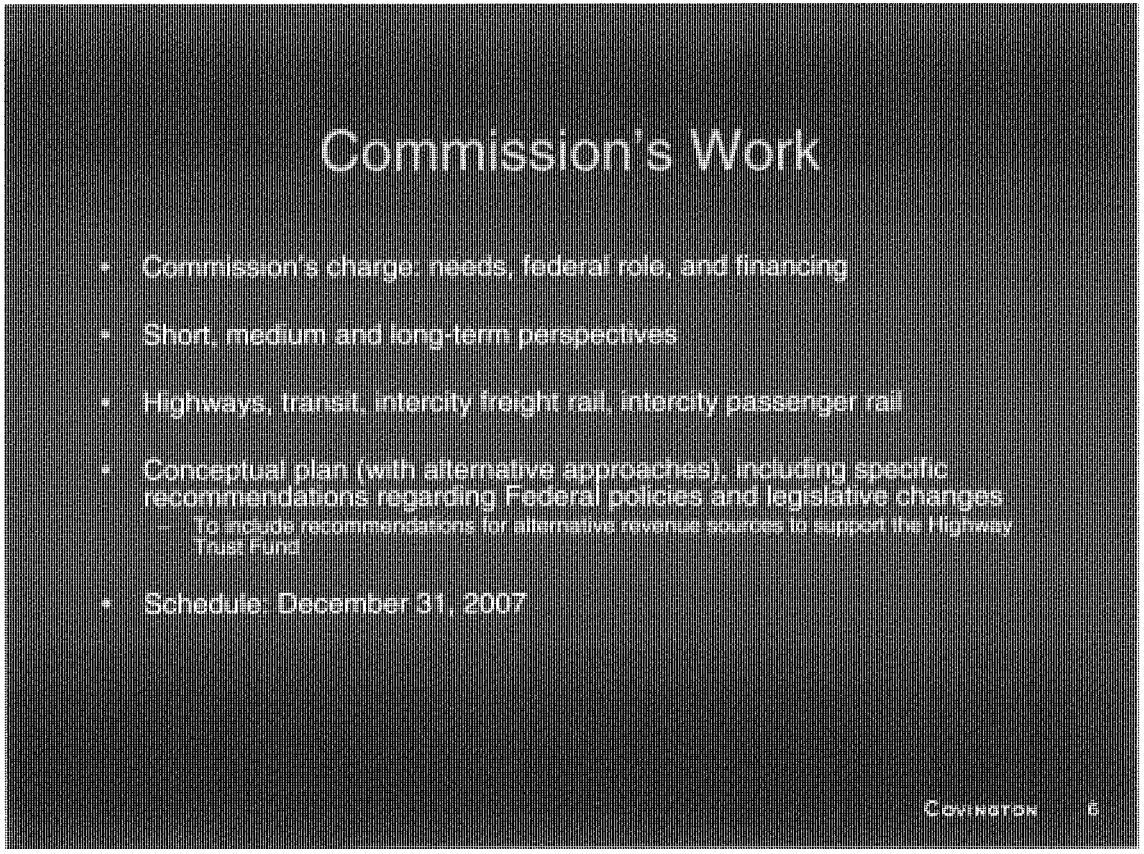

Introduction
• Of Counsel with law firm of Covington & Burling LLP
• Practice: Government Affairs/Transportation
• Before joining Covington in 2001, served on staff of this Committee for 25 years, serving under six Republican leaders
• Bush/Cheney Transition Team
COVINGTON 2

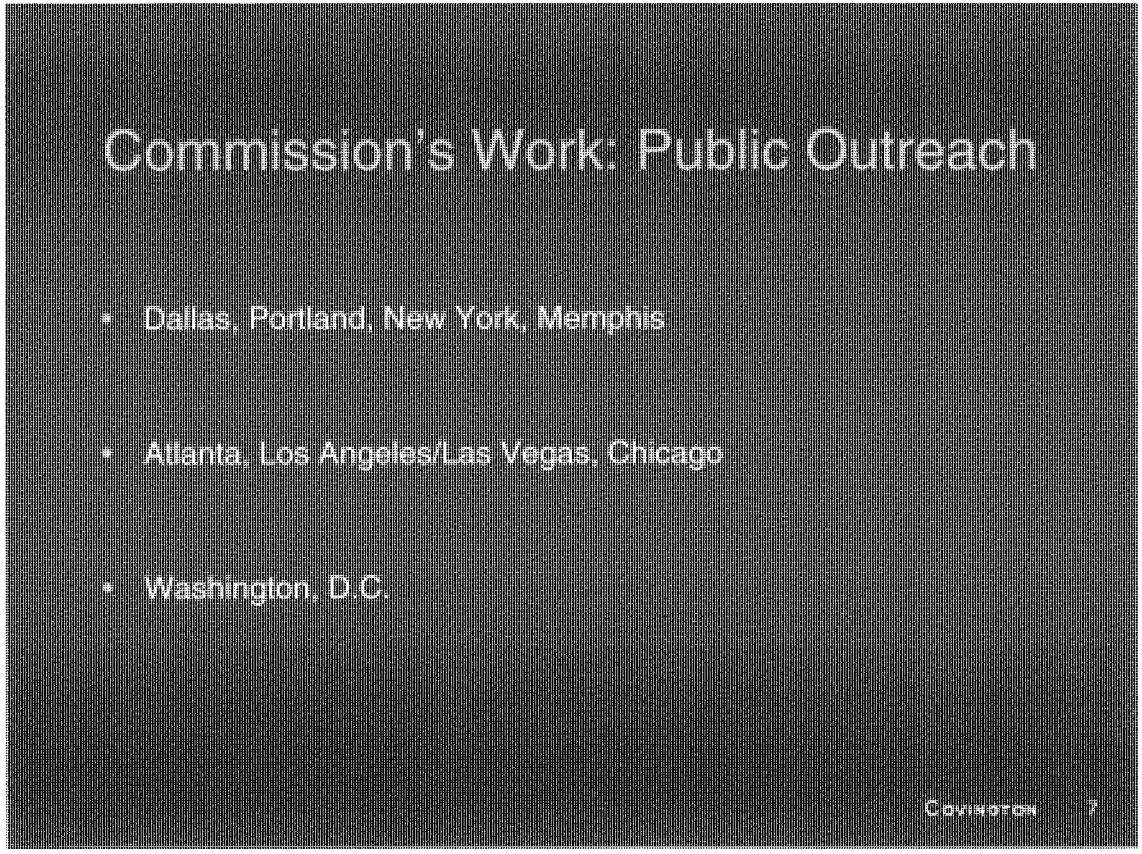
Introduction (cont'd)
Testifying in my capacity as Vice Chairman of the National Surface Transportation Revenue and Policy Study Commission
Established by Congress in Section 1909 of SAFETEA-LU
Commission consists of 12 Members
3 Executive Branch
4 House
4 Senate
I was appointed by Speaker Hastert
3
GAO-08-744T


Perfect Storm Gathering
• Our aging surface transportation system needs to be adequately maintained and replaced where necessary
• Economic and population growth will place increased demand on our aging infrastructure, requiring improved efficiency and increased capacity
• Our traditional funding sources have been unable to keep up with the demand
COVINGTON
4

Testimony

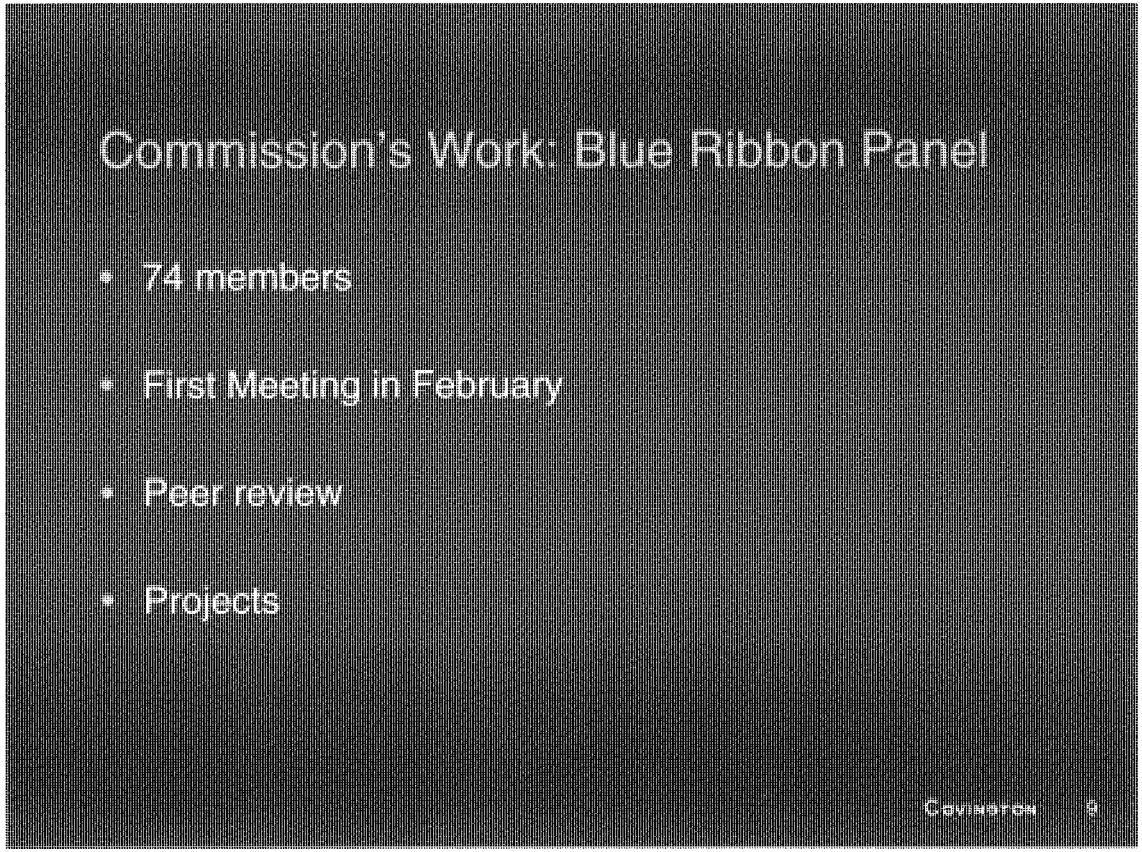
- Commission's work
- Challenges facing Commission
- Second financing commission


Commission's Work
• Commission's charge: needs, federal role, and financing
• Short, medium and long-term perspectives
• Highways, transit, intercity freight rail, intercity passenger rail
• Conceptual plan (with alternative approaches), including specific recommendations regarding Federal policies and legislative changes
– To include recommendations for alternative revenue sources to support the Highway Trust Fund
• Schedule: December 31, 2007
COVINGTON 6

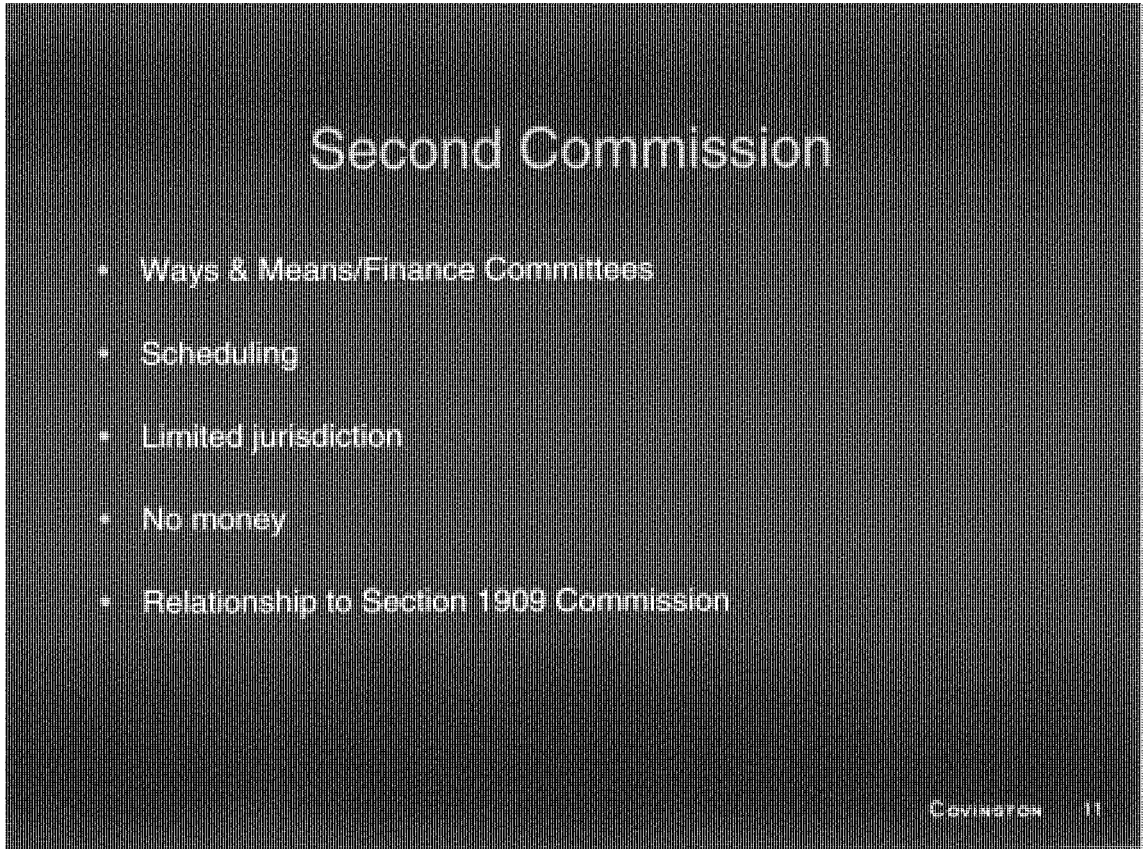

Commission's Work: Public Outreach
• Dallas, Portland, New York, Memphis
• Atlanta, Los Angeles/Las Vegas, Chicago
• Washington, D.C.
COVINGTON
7

Commission's Work: Technical Analyses

- Analysis of current status of system (6 papers)
- Analysis of baseline revenues and system needs (12 papers)
- Analysis of future issues and changing demands on the system
  - Demographic changes (7 papers)
  - Changes in economy (17 papers)
  - Energy issues (7 papers)
  - Environmental concerns (8 papers)
  - Security and emergency management (4 papers)
  - Military deployment (1 paper)
  - Design policies (9 papers)
  - Other (over 30 papers)
- Analysis of financing alternatives
  - Revenue options (19 papers)
  - Transition (5 papers)
  - Alternative federal roles (11 papers)


Commission's Work: Blue Ribbon Panel
• 74 members
• First Meeting in February
• Peer review
• Projects
COVINGTON 9

Challenges
Slow start
Resources
Vision
Diverse views
Copyright


Second Commission
• Ways & Means/Finance Committees
• Scheduling
• Limited jurisdiction
• No money
• Relationship to Section 1909 Commission
Commission 11

Testimony on SAFETEA-LU

to the

Subcommittee on Highways and Transit

of the

House Committee on Transportation and Infrastructure

January 24, 2007

Joseph P. Schwieterman, Ph.D.

Director, Chaddick Institute for Metropolitan Development

Professor, Public Services Graduate Program

DePaul University

Mr. Chairman and members of the committee, I am honored to have this opportunity to share my perspectives on SAFETEA-LU and potential improvements to surface-transportation policy.

My remarks are shaped by 24 years of experience in transportation research and analysis, first as part of the management team of a major transportation company and more recently as a university professor. During that time, I have written several books on the role of transportation systems in American cities, including a recent volume on the abandonment of railroad lines in cities and towns.

I want to begin my testimony by putting forth the simple proposition that financing surface-transportation projects over the next 25 years should be guided by principles that recognize the interdependency of highway, waterway, and rail investments. Our surface-transportation policy has yet to fully account for this interdependency. As a result, we have missed opportunities to relieve pressure on the highway system, to come to grips with the enormous growth in freight tonnage, and to create a more balanced transportation system.

My second proposition is that long-term transportation goals must place greater emphasis on policies that leverage investments of private capital. These investments can take many forms, including toll-based highway financing, privately funded railroad improvements, and joint ventures between public and private entities at ports and transfer facilities.

Success Stories

I want to commend the architects of SAFETEA-LU, some of whom are at this hearing today, for creating legislation that does a far better job than earlier bills in fostering "intermodalism" and encouraging privately financed investment. With that in mind, my message today is one of considerable optimism.

Here are some of the ways that SAFETY-LU encourages private investment:

- It increases the loans available to regional and short-line railroads, encouraging them to improve their corridors, and provides railroads with tax credits for certain types of capital investments.
- It significantly increases funding for grade-crossing improvements, which is of tremendous benefit to railroad companies and citizens alike.
- It provides support for projects of national significance. One such project is the massive CREATE program that is designed to relieve rail congestion in my hometown and in Representative Daniel Lipinski's district.

These policies all encourage large-scale investment from private and locally generated sources.

Another impressive feature of the current legislation is the allowance for $15 billion in private activity bonds that can be issued for certain types of highway and intermodal freight facilities. While such bonds are tax exempt and issued by state and local government, they are used to support critical projects having the backing of private investors. In October, Texas became the first state to receive federal approval to issue these private-activity bonds. The possibilities are truly exciting.

We now face a great challenge: how do we foster greater balance in transportation at a time when the Highway Trust Fund is on precarious financial footing? At this hearing, we will hear a great deal about the need for new dollars to offset a worsening revenue shortfall. With that in mind, I urge members of the committee to avoid the temptation for a quick fix and develop programs that push for policies that can allow us to tap into global equity to make our transportation system more balanced and efficient.

Private Partnerships, Positive Outcomes

To illustrate our need for great balance in transportation, I will briefly describe a research effort I conducted at DePaul University. I compiled a database showing that more than 2,500 communities in the United States with populations exceeding 3,000 residents are without any form of freight or passenger rail transportation. In fact, our study identified entire metropolitan areas with populations of more than 100,000 without active railroad routes within their boundaries. In many of these communities, public policies, including punitive property taxes, outdated labor laws, and cross-subsidies in highway use fees that favored heavy trucks, effectively drove private railroads out of town.

We also found that both private companies and local and state governments are working to revitalize or reclaim rail rights-of-way—often with little or no federal help. Cape May, New Jersey, Ely, Nevada, Saranac Lake, New York, and Myrtle Beach, South Carolina, have already brought rail lines back into service. Dozens of others, including Monterey, Santa Rosa, and Santa Monica in California and Scituate, Massachusetts, are working to do the same to allow for improved transit service.

Highway users should applaud these successful efforts to remove excess traffic from overburdened roads. Unfortunately, SAFETEA-LU often takes a back seat in these endeavors, making it necessary for state and local constituencies to fend for themselves and search for outside-the-box solutions.

Two days ago, at the Transportation Research Board's annual conference, Justin Scheidt of Michigan State University and I presented findings of a study that illustrates why the desire of many states to create high-speed rail systems is inextricably linked to investments by freight railroads, transit providers, and highway agencies.

Our evaluation of government-backed proposals for high-speed rail corridors found that there are 64 corridors now under consideration for high-speed rail. (In our study, we define high-speed rail service as service over a fixed guideway at speeds of 110 m.p.h. or more.) Forty three states and 93 of the largest 100 metropolitan areas in the continental U.S. are along a proposed route.

We found that these corridors encompass 15,552 route-miles, nearly 70 percent of which is owned by private railroads, most of which consists of only a single set of tracks. Eleven hundred miles of routes are owned by transit agencies. Another two thousand miles is slated for construction of corridors along Interstate highways.

We are under no illusion that many of other routes will be built anytime soon—or that we can afford all of them. Rather, I am sharing this perspective with you to illustrate how state governments are moving ahead with efforts to work with private and public corporations in order to improve intercity corridors. The states understand that developing new high-capacity routes will require an integration of the planning efforts of railroads, transit providers and highway planning agencies—and a great deal of private capital.

Recommendations

Based on our research and my experience, I offer three specific recommendations to the members of the subcommittee as well as members of the National Surface Transportation Financing Commission to help resolve problems in federal policy.

First, I encourage you to find ways to provide state governments with greater flexibility in their use of limited transportation funds to manage the interplay between highway and rail investments. There are still too many constraints on how money can be spent. Several state governments, including those in Kansas and Virginia, are looking to "step up" their investments in rail lines for the benefit of the public. Georgia and Iowa are very interested in enhancing investments in rail lines to reduce pressure on the highway system as well. States need more flexibility in their spending options.

Second, the subcommittee should encourage the National Surface Transportation Financing Commission to develop a long-range transportation vision which will build on the incentives that SAFETEA-LU provides for state, regional, or local entities and private transportation companies expand investment. Additional tax credits for freight railroads and additional authority for private-activity bonds—and support for privately financed tollways and "truckways"—would be positive steps. We need programs supporting new ventures in which private and public entities share the risk.

Third, we need to move away from locally designated enhancement projects and earmarks that in some cases produce few transportation benefits. These projects may ease our guilt that we are not doing enough to promote a balanced intermodal system, but they are no substitute for efforts to provide significant increases in transportation capacity.

In closing, I bring from the Midwest Heartland much good news about the benefits of innovative long-range transportation planning. Officials in Indiana tapped into the coffers of a team of private investors when it leased the Indiana Toll Road in June, 2006. In Chicago, the Skyway Bridge, which moves commuter and freight traffic through the city, has a bright future, thanks to a leasing arrangement with the same private conglomerate; and the Class I railroads are cooperating with the city to unclog and upgrade antiquated freight facilities.

We are also seeing growing grass-roots support for new intercity rail-passengers services. One example is the Midwest High Speed Rail Association, which boasts more than a thousand members and a full-time staff. The association has successfully led a push for an expansion of passenger service from Chicago to Milwaukee and St. Louis with cooperation with privately owned rail lines.

Overall, an influx of private capital into transportation projects gives us a tremendous opportunity to do more than find a quick fix for the Highway Trust Fund. We should seize the opportunity.

Mr. Chairman, I thank you for this opportunity to express my views.

Statement of Jeffrey N. Shane
Under Secretary of Transportation for Policy

Before the

Committee on Transportation and Infrastructure
Subcommittee on Highways and Transit
U.S. House of Representatives
January 24, 2007

The Surface Transportation System: Challenges for the Future

Mr. Chairman, Ranking Member Duncan, and Members of the Subcommittee:

Thank you for the opportunity to testify before you today on the Surface Transportation System: Challenges for the Future.

You have asked us, in preparing for this hearing, to take the long view, and to look ahead 50 years to examine what kind of economy we will have in 50 years, and what kind of surface transportation system we will need to serve that economy. Our analysis of this long-term prospect is not yet complete, but enough of the work has been completed for us to see the broad outlines of the task that lies before us.

Over the next 50 years, we expect the U.S. population to rise by over 60 percent, and for the Gross Domestic Product (GDP) to quadruple. As our population grows, and as incomes rise, the demand for transportation will grow accordingly. When people have more money, they want to buy more goods, which need to be transported, and they want to travel more. So we expect the demand for both freight and passenger transportation to increase by about two-and-a-half times over the next 50 years.

There are likely to be shifts in the kinds of transportation demands that we will face. It is no secret that the economy is becoming increasingly dependent upon global sources of supplies, but exports have grown as well. Since 1970, exports as a percentage of GDP have almost doubled, and imports have tripled. Moreover, the U.S. manufacturing base is increasingly shifting to high-value, high-tech products like pharmaceuticals and instruments, in which we retain a comparative advantage. These high-value products require an expedited transportation system that relies increasingly on overnight truck and air freight delivery. Our increasing reliance on imports of lower-value manufactured goods (and parts for domestic manufacturers) places a growing reliance on key ports of entry, such as the San Pedro Bay ports of Los Angeles and Long Beach, and the Puget Sound ports of Seattle and Tacoma. Landside connections to these ports, linked to an efficient domestic intermodal rail and truck freight transportation system, will be important to keeping the delivery costs of these commodities low. Overall, the shift in GDP from goods production to services production will cause freight vehicle-miles traveled (VMT) to grow more slowly than GDP, but the growth will still be large.

On the passenger side, the growing globalization of the world economy will result in increasing demand for international air travel as business people fly abroad to conduct international business relationships, and as international leisure travel increases. That in turn will increase the demand for land-side connections at our key international airport hubs. An aging population will increasingly challenge our transportation system. The percentage of the population over 65 will almost double, from 12 percent to 21 percent of the population. These older people – the people just graduating from college today – will expect a high level of mobility, and we expect the percentage of VMT by older people to grow appreciably. Drivers in their late 70's have triple the fatality rate (per VMT) of drivers aged 30 – 65, and for drivers in their 80's it is even worse. So we will face a serious safety challenge in providing for the safety of an aging population.

Also, our dynamic economy results in uneven economic growth in different regions. Almost two-thirds of all VMT growth over the next 25 years will take place in only six states, so that even if we keep up with transportation demands on the average, it will be difficult to keep up with these demands in the high-growth states where demands are growing most rapidly. Migration among regions in the U.S. is dominated by immigrants and young college graduates, who often move to central cities and increase demands for transit. We expect demand for urban transit (measured in passenger-miles traveled, or PMT) to almost double by 2050. Within metropolitan areas, non-work-related trips will become a larger percentage of all trips, as the population ages and the percentage of population in the workforce declines. Some of this non-work-related travel will take place during peak commuting hours, as workers engage in trip-chaining on their way to and from work. Some will take place outside of traditional peak commuting hours, contributing to the spreading of the peak traffic hours over the entire day.

Overall, we can anticipate an economy in the year 2050 four times as large, with surface transportation demands increasing by perhaps two-and-a-half times. How will our transportation system handle these demands? We certainly do not plan to more than double the number of lanes-miles of highways. Lane-miles of highway have increased by only 5.3 percent over the past 24 years, and an extrapolation to 2050 suggests that highway capacity will only increase by 10 percent by that year. So we can anticipate that transportation capacity will not keep up with transportation demand, and that congestion in our transportation system will grow.

Congestion already imposes heavy costs on our economy. The Texas Transportation Institute has estimated that, in 2003, highway congestion cost $63 billion per year, but this estimate leaves out several important factors. It leaves out productivity losses, costs of delayed freight shipments, costs of unreliable freight and passenger travel trip times, and safety and environmental costs. We estimate that, if all these other costs were included, the total costs of highway congestion would be about $170 billion per year. Moreover, congestion has been growing faster than GDP. Since 1982, the costs of congestion have been growing at 8 percent per year, more than double the growth rate of GDP. In 2003, congestion costs were about 1.5 percent of GDP. If congestion costs

continue to rise at this rate, by 2050 they would be over $6 trillion, more than 14 percent of GDP.

How can we meet these challenges?

First, we need to find ways to use our existing surface transportation system more efficiently.

Intelligent Transportation Systems (ITS) technology holds great promise for reducing congestion. We have invested billions of dollars in ITS technology since ISTEA created the program in 1991, and we have developed a wide range of technologies that can address congestion problems. On toll highways, Electronic Toll Collection can speed the flow of traffic where previously it was stopped for manual toll collection. Automatic Incident Detection can alert highway managers to non-recurring congestion and speed emergency response vehicles to clear problems. Variable Message Signs and other forms of traveler information systems can alert drivers to congestion problems and give them an opportunity to divert to alternative routes. On arterials, adaptive traffic signal controls can adjust traffic signal timing in response to changes in traffic levels, speeding traffic on its way. Signal priority for transit buses can make bus service more like rapid transit, enhancing the attractiveness of transit and reducing congestion.

But deployment has been slower than anticipated. Even in cities where deployment of ITS technology is considered to be high, barely half of freeway miles might be instrumented to detect traffic breakdowns. One major city has installed almost 5,000 traffic signal detectors, but almost half of them are out of service. Many cities do not even manually update the timing of their traffic lights regularly, much less install adaptive traffic signal controls that can adjust traffic signal timing automatically. Moreover, as GAO pointed out in a report last year, even where ITS technology has been deployed, sufficient operating funds have not always been committed to pay for staffing of traffic management centers. So we have quite a challenge in deploying ITS technology everywhere that it is needed.

A second proven approach to using our transportation system more effectively is by using congestion pricing. While congestion pricing may still be controversial to some people, it is not controversial to people who have tried it. In Southern California, where State Route 91 has been using congestion pricing for 10 years, support for congestion pricing is widespread, and the reasons are obvious. Experience with congestion pricing on SR-91 shows that congestion pricing doubles the throughput on the congestion-priced lanes as compared with the unpriced lanes right next to them. With each priced lane handling twice as much traffic as a comparable unpriced lane, there is less traffic on the unpriced lane, and congestion is reduced for all travelers on the road. While lower-income people do not use the congestion-priced lanes as often as higher-income people, even lower-income people value the flexibility of a congestion-priced lane when they absolutely, positively have to get somewhere on time. In fact, about 70 percent of lower-income people in Southern California support congestion pricing. In Minnesota, 64 percent of lower-income people support the MNPass High-Occupancy Toll lanes.

Congestion pricing is something that we can do in the short run to reduce congestion. In the longer run, congestion pricing provides one of the best signals that we have of the need for new capacity. If people are willing to pay a high price to travel on a particular corridor, that gives us a good signal that capacity expansion in that corridor is money well-spent. It clearly is unlikely that we will be able to build enough capacity to keep up with the increases in transportation demands that we have forecasted. That means that we have to be extremely strategic about the capacity expansions that we do undertake – we need to make sure we spend our investment dollars in those places where the demand is the greatest and the impact on congestion reduction is clearest. If people are paying 50 cents or a dollar per mile to drive on an uncongested lane, that is a pretty clear signal that the demand for capacity expansion on that route is high, and that an infrastructure investment on that route will pay substantial returns in congestion reduction.

There are no magic bullets in solving the congestion problem. The approach that will work best is a multi-faceted, comprehensive approach that takes advantage of the complementarities among multiple strategies. That is the approach that we have taken in planning the Secretary's Congestion Initiative. We have emphasized four complementary strategies – congestion pricing, expanded transit capacity, greater use of ITS technology, and more widespread use of telecommuting and other forms of flexible work scheduling.

We have already discussed congestion pricing – it works, and people like it when they get a chance to use it. But congestion pricing cannot do the job all by itself, and it is more difficult to use on arterials that are not limited-access.

For people who find charges on congestion-priced roads too high, we need to provide transportation alternatives, and that is where expansion of transit capacity comes in. Transit and congestion pricing complement each other. Transit provides an alternative for those who choose not to pay the congestion charge, so it improves the effectiveness of congestion pricing by encouraging people to divert to another mode. Likewise, congestion pricing improves the effectiveness of transit. Transit buses get free access to congestion-priced freeway lanes, so transit buses go faster with congestion pricing, providing the "rapid" in Bus Rapid Transit. That rapid service both reduces costs for transit authorities and encourages more people to use transit. The more people use transit, the more schedule frequency can be increased, and the better the quality of service. Congestion pricing sets off a "virtuous circle" with transit, where demand increases, allowing an improvement in service quality, which stimulates even more demand, which allows even more improvements in service quality.

Congestion pricing is more difficult to implement on non-limited access arterials. On these heavily used roads, ITS technology plays a particularly important role. Adaptive traffic signal control technology can make traffic on these arterials flow more smoothly. And again, there are complementarities between ITS technology and transit. ITS technology can include traffic signal priority for transit buses, helping them to go faster. ITS-induced improvements in transit service quality can set off the same "virtuous circle"

as congestion pricing does – increasing transit demand, increasing service frequency, and increasing service quality. Increasing transit use in turn reduces the congestion burden that the ITS technology was deployed to deal with.

Finally, congestion is not a problem that government can solve by itself. We need help from private employers. There are a number of policies that reduce the extent to which vehicles have to use the roadways during peak hours. These include flex-time – allowing people to come in before or after the peak hour -- and cashing out parking subsidies so that people get the same commuting subsidy whether they drive a car or use transit. They also include telecommuting – allowing people to work at home at least part of the time. The Federal Government has increased the number of employees telecommuting by ten-fold between 1995 and 1999, and then by more than three times from 1999 to 2003. Private sector employers can do the same.

Other portions of the Secretary's Congestion Initiative will also help to address the congestion problem. The Corridors for the Future Program, for example, received 38 proposals in response to its Federal Register notice in September, and we are now reviewing these proposals with the intent of ultimately selecting up to five major transportation corridors where substantial infrastructure investment could reduce congestion. This program will leverage public and private resources to accelerate infrastructure development on these corridors. The proposals include strategies to use congestion pricing, truck-only lanes, and accelerated deployment of ITS technologies. The Freight Bottlenecks portion of the Congestion Initiative focuses on Southern California, where we are working to sign a Memorandum of Agreement to accelerate the completion of key capacity projects in the Ports of Los Angeles and Long Beach.

We can make considerable progress on congestion even without building new lane-miles. But we recognize that we will need to build some new highway capacity. We cannot handle a two-and-a-half-fold increase in demand without more capacity.

The question is, how can we get the most bang for the buck?

How can we get the most reduction in congestion, and improvement in transportation services, from each dollar that we invest in transportation infrastructure?

First, DOT believes that we need to move toward an environment in which analysis by professional transportation planners forms the primary basis for our transportation decisions, and politicians get involved only as a last resort. Many of the projects that have been selected by the political process have never been obligated because the projects were not ready to move forward when the money was earmarked, and in some cases the money was never spent because opposition to the project developed.

That's not to say that transportation planners can't do a better job. There is a wide range of analytically sophisticated transportation planning techniques that are just beginning to come into use by transportation planners. Techniques like benefit-cost analysis and economic impact analysis help us to identify all the effects of a project – positive and

negative – so that we can make decisions based on full information. We are also encouraging states and metropolitan planning organizations (MPOs) to make greater use of performance measures that would allow us to measure how well our improvements to the highway and transit systems perform. We need to think about Federal funding programs that reward states and MPOs whose investments are successful in achieving their performance targets. We recognize that there are important political considerations in the decisionmaking process – such as balancing regional needs for transportation infrastructure – but we need to work harder at basing our decisions on sound analytical techniques.

So there are a variety of techniques that we can use to improve the efficiency and performance of our investments in surface transportation infrastructure. We need to make more widespread use of them.

Finally, let me close by saying that I look forward to hearing from the witnesses from the National Surface Transportation Policy and Revenue Study Commission. Speaking for Secretary Peters and Deputy Secretary Cino, I can tell you that the Commission brings a wide variety of viewpoints to the questions of what kind of transportation system we need, and what kind we should have. The Commission has just received a tall stack of issue papers, which its members are now examining. It is making progress on defining surface transportation needs and identifying workable strategies. The Commission still has a way to go before it will reach consensus on these matters, but the members are hard at work, and I know that the Secretary, the Deputy Secretary, and all the members of the Commission are committed to providing a report to Congress that will provide guidance as you move toward reauthorization of the surface transportation system two years from now.

I appreciate your attention, and I welcome your questions.