

**INNOVATIVE FINANCING:
BEYOND THE HIGHWAY TRUST FUND**

JOINT HEARING
BEFORE THE
**COMMITTEE ON
ENVIRONMENT AND PUBLIC WORKS
UNITED STATES SENATE**

AND

**COMMITTEE ON FINANCE
UNITED STATES SENATE
ONE HUNDRED SEVENTH CONGRESS**

SECOND SESSION

ON

OPTIONS FOR FINANCING FEDERAL TRANSPORTATION PROGRAMS

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SEPTEMBER 25, 2002
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and the Senate Committee on Finance



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SECOND SESSION

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INNOVATIVE FINANCING: BEYOND THE HIGHWAY TRUST FUND

WEDNESDAY, SEPTEMBER 25, 2002

U.S. SENATE,
COMMITTEE ON ENVIRONMENT AND PUBLIC WORKS,
COMMITTEE ON FINANCE,
Washington, DC.

The hearing was convened, pursuant to notice, at 9:36 a.m., Hon. Max Baucus (chairman of the Committee on Finance) and Hon. James M. Jeffords (chairman of the Committee on Environment and Public Works) presiding.

Present for the Committee on Environment and Public Works: Senators Jeffords, Reid, Inhofe and Crapo.

Present for the Committee on Finance: Senator Baucus.

OPENING STATEMENT OF HON. MAX BAUCUS, U.S. SENATOR FROM THE STATE OF MONTANA

Senator BAUCUS. The joint hearing of the Finance Committee and the Environment and Public Works Committee will come to hearing.

This is a unique and quite possibly historic occasion because the Environment and Public Works Committee and the Finance Committee are holding a joint hearing in the Finance Committee hearing room, chaired by the chairman of the Environment and Public Works Committee. I am sure that all historians will note this. It surely will be recorded as a major moment in history.

Senator JEFFORDS. If you hear a rumbling up there, let me know.

Senator BAUCUS. But at the very least, I welcome everyone. I will make an opening statement, then turn the hearing over to Chairman Jeffords, who will chair the joint hearing.

First, as a member of this committee and also Environment and Public Works Committee, I have spent a lot of time working on highway issues and financing highway programs because highways are just so important to the State of Montana.

This joint hearing, clearly, is one that recognizes the joint interests between the two committees: providing the funds to the Finance Committee for a highway program—the trust fund; and second, the authorization of programs by Environment and Public Works Committee, deciding which projects will be built and maintained over the life of the authorization law.

I was also privileged to be a co-author of TEA-21, with Senators Warner, Chafee, Byrd, and Graham. There are many others, also, who helped to make it a successful bill.

It was a time, frankly, where we all worked very well together. I expect the same camaraderie and relationship to prevail among the principal members of the Environment and Public Works Committee again this year.

I am especially pleased that Senator Grassley, the Ranking Member of the Finance Committee, has also shown such a great interest in these issues. He, too, will play a very important role during TEA-21 reauthorization.

The Finance Committee recently held a hearing that explained how the Highway Trust Fund is structured to provide funding for our highway system. We heard testimony that was quite interesting. The testimony focused on the projections for trust fund income over the next 10 years.

As successful as the trust fund has been, unfortunately our transportation needs far outweigh the resources. In fact, I remember the Department of Transportation mentioning—this has been the case over many years—how the needs of our country in developing our highway program provide only about half of the funds that are available about 50 percent. My guess is, that figure is not going to get any better in the future.

Today's hearing is intended to discover how we can get additional financing beyond the trust fund for our highway program. We are looking at additional means to finance the ordinary way—that is, the gasoline tax and fuel taxes that the users pay to the trust fund—in order to meet our Nation's needs.

In recent years, there has been increased recognition of the greater importance of our highways to our country. As we prepare to reauthorize the highway program next year, the big question for Congress will be how to increase the level of investment for the benefit of us all.

Earlier this year, Senator Crapo and I introduced bipartisan legislation with 12 co-sponsors, S. 2678, the MEGA-TRUST Act, for Maximum Economic Growth for America through the Highway Trust Fund.

This bill laid out some ways to increase investment in the highway program without raising taxes. That legislation would allow the trust fund to be properly credited with taxes either paid or foregone with respect to gasohol consumption.

We would also reinstate the principal that the highway and mass transit accounts of the Highway Trust Fund should be credited with the interest on their respective balances.

As we all know now, the general fund does not go back to the respective balances of those two programs. I think that change is very important.

But we must also continue to work out additional ways to enable a stronger level of highway investment. Next week, I will introduce the MEGA-INNOVATE, Maximum Economic Growth for America through Innovative Financing. I do not know where in the world we got that name.

Under this legislation, the Secretary of the Treasury would sell bonds, with the proceeds being placed in the highway account of the Highway Trust Fund. The Treasury would be responsible for the principal and the interest. The bond proceeds would enable the

basic highway program to grow. It would help the citizens of every State.

The administration of this initiative would be simple. No new structure is required. It is a new idea that does not raise taxes, but would advance our national interest in a strong highway program.

As this is a new idea for highways, the bill introduces this concept at a very modest level, in the range of \$3 billion annually in bond sales.

However, when combined with the provisions of the Trust Act and the continuation of current resources of revenue, this legislation should enable the highway program to achieve an obligation level of approximately \$41 to \$42 billion by fiscal 2009.

Many other elected officials and organizations have shown interest in both of these acts, and I would like to enter their statements into the record.

Senator JEFFORDS. Without objection.

[The prepared statement of Senator Grassley follows:]

STATEMENT OF HON. CHARLES GRASSLEY, U.S. SENATOR FROM THE STATE OF IOWA

I would like to thank Chairmen Baucus and Jeffords for scheduling this joint hearing between the Senate Finance Committee and the Senate Environment and Public Works Committee. We are here to examine issues of highway finance in anticipation, of the reauthorization of TEA-21. As Senator Baucus indicated, both Committees have an interest in providing adequate funding for our nation's transportation system whether it be through the traditional fuel tax regime or through other tax-based financing mechanisms. As I noted in our first hearing on the highway trust fund reauthorization in May, transportation issues are very important to Iowa. Accordingly, I look forward to working with Senators Baucus, Jeffords, and Smith in reauthorizing TEA-21 during the next Congress.

On May 9, the Finance Committee held its first hearing to begin evaluating the future health of the Highway Trust Fund. In that hearing, we focused largely on the flow of taxes into the trust fund and the continued ability of the highway trust fund to support transportation needs under reauthorized TEA-21.

We also began talking about the impact that alternative vehicles and alternative fuel sources will have on the trust fund in the years ahead. Finally, we began to consider how we would maintain the existing levels of trust revenue for transportation demands without raising taxes.

Today, we will not focus on trust fund revenue. Instead, we will shift our attention to various financing mechanisms that will supplement transportation needs beyond the dedicated revenues in the trust fund.

Historically, issuing State and local bonds (which are exempt from Federal taxation) was the principal way States raised capital for transportation needs in excess of those currently available with highway trust fund resources. While this works well in some States, some including Iowa have decided against using bonds to finance infrastructure projects while others are constitutionally prohibited from doing so.

During the reauthorization of TEA-21, a concerted effort was made to begin using Federal resources to encourage private investment in transportation projects. During the reauthorization, the drafters also attempted to expand and make more flexible the resources available to State transportation departments. A number of pilot programs were established to achieve those goals including (i) TIFIA Funding (named for the Transportation Infrastructure Finance and Innovation Act), (ii) SIBs (State Infrastructure Banks), (iii) GARVEES (Grant Anticipation Revenue Vehicles), and GANS (Transit Grant Anticipation Notes). Because many of these programs rely on State borrowing, they are not viable solutions for all States. In other circumstances, the programs may not have worked as intended.

Iowa, for example, is in the process of closing out its State infrastructure bank. Without the ability to use State and local bonds to increase SIB funding, it was difficult for Iowa to effectively use the concept. In addition, several shortline and regional railroads in my State have tried to use the railroad infrastructure fund administered by the Federal railroad administration. The application process is extremely cumbersome and prevents many railroads from even considering the option. Those who have applied have had difficulty coming up with the required credit risk

premium to access funds. The role of the State DOT in these projects has been limited to moral support—a problem that should clearly be fixed.

Evaluating the successes and failures of previously authorized programs is an important first step in the reauthorization process. I look forward to hearing from the witnesses today on how we may improve and further refine existing programs. We should particularly examine programs that involve public-private partnerships such as TIFIA. Many of the witnesses have commented on the operation of these programs in their testimony, and at least one of our witnesses has suggested program modifications. These types of comments are highly instructive, and I look forward to hearing additional witness views on these issues.

As we move into reauthorization, I know we will want to maintain the important goals of stretching available resources and inducing private investment into the transportation sector. This hearing should help us evaluate alternative financing mechanisms for achieving those goals. Specifically, I look forward to learning more about the bond proposals offered by the American Association of Highway and Transportation Officials (AASHTO) and Senator Baucus. Because these ideas are new to the transportation sector, we will want to consider carefully the details of those proposals. With respect to each new proposal, I would like to further consider whether additional funds should be raised for State apportionment (program finance) or, for the benefit of specific projects (project-finance). In addition, I would like to further consider whether leveraged funds should be retired using tax-arbitraged escrow funds, repayments from the general fund, or project-specific revenue sources.

In closing, I would like to reiterate that I look forward to working with my colleagues on the reauthorization of TEA-21. I am anxious to hear from the witnesses on how to most effectively finance the important needs of our highway transportation system. Thank you, Mr. Chairmen.

Senator BAUCUS. Concerning other statements for the record, the first, is from the Departments of Transportation from the following five States: Montana, Idaho, Wyoming, North Dakota, and South Dakota, endorsing both the MEGA-TRUST and my forthcoming bond proposal. Second, a statement from the American Highway Users Alliance, also indicating support for both measures.

I very much appreciate the support of these groups, as well as the support of others, for these two important initiatives. A well-funded highway program is certainly essential to the economic future of each of our States. I look forward to working with my colleagues on these measures, and on other ways to help our citizens benefit from increased levels of highway investment.

I also look forward to hearing additional proposals on alternative means to finance the Nation's surface transportation program. The more we can get the private sector involved and the more we can leverage funds, the better we will be able to meet our transportation needs.

[Additional statements submitted for the record appear at the end of the hearing record.]

Senator BAUCUS. I would now like to turn the hearing over to my good friend, Jim Jeffords from Vermont, who will chair the joint hearing.

**OPENING STATEMENT OF HON. JAMES M. JEFFORDS,
U.S. SENATOR FROM THE STATE OF VERMONT**

Senator JEFFORDS. Thank you, Senator Baucus. I appreciate the opportunity to sit in your seat here. We work very closely together on both committees, and you are doing an excellent job on the Finance Committee. It is appreciated, your hard work that brings us here today.

I am pleased this morning to join in this hearing on a very, very important subject. Today, we will focus on money, a key to the future of America's transportation system.

By some accounts, the annual level of investment needed to just maintain our transportation system is nearly \$110 billion per year. Our current national program falls well short of that figure.

Over the last 50 years in our successful campaign to develop the Eisenhower Interstate Highway system, we have used Federal grants to States in a pay-as-you-go program to build our national system. Today, that system is essentially complete.

We are in a post-interstate era. Our Federal aid programs now focus, appropriately, on maintaining, operating, and enhancing the highway asset that we have built. But this Federal/State partnership is now being overwhelmed by just its asset management responsibility. Unless we adapt, I foresee a continuing deterioration of our transportation system.

We are a Nation with unlimited potential and boundless possibility. That spirit has propelled a range of achievement unparalleled anywhere else in this world. Our renewal of America's transportation program must reflect this national heritage in meeting the needs of the next generation.

It should be as bold as President Eisenhower's vision was in its time. Our vision should not be hobbled by artificial constraints or narrow thinking which would permit other nations to gain competitive advantages over us. To fully compete in the world markets and to offer all American families and businesses the full range of products in international commerce, we need strategic investment in key new facilities, while reinvesting in those already built.

We have explored options to increase revenues to the highway fund in previous hearings. I will consider all options for growing the trust fund. But today we will look beyond the Highway Trust Fund, beyond the grant and aid programs, and beyond the Federal/State partnership.

We will hear today from two distinguished panels on a topic that has been referred to in the last 10 years as innovative financing. We will look at the role of revenue streams, private capital, special-purpose entities, and intermodal facilities in meeting the needs of the next generation. But this is not innovative, radical, or even new. In fact, what we will explore today is really the pre-interstate approach to financing roads and bridges. It is the standard way that our free enterprise system creates our means of production through private capital and return on investment.

I am pleased that Councilwoman Hahn from Los Angeles is here to discuss a pioneering effort in modern transportation finance, the Alameda Corridor. This prototype project is intermodal in its nature, provides both freight and passenger benefits, draws on new revenues to retire debt, and is sponsored by a special-purpose district.

In my home State of Vermont, we have utilized a finance program called a State Infrastructure Bank, or a SIB. A SIB is a revolving fund mechanism for financing a wide variety of highway and transit projects through loans and credit enhancement. Vermont has taken hundreds of fuel delivery trucks off our roads by financing bulk storage facilities in key rail yards.

Other States have used this mechanism, and others, to provide early project financing. In the State of South Carolina, a variety of finance techniques, coupled with public/private partnerships, has resulted in the construction of 27 years' worth of projects in a 7-year timeframe.

On a smaller scale, the State of Delaware has joined with the Norfolk Southern Railroad to renovate historic Shellpot Bridge, with the railroad retiring the project's cost over time through fees on its rail cars.

What we will discuss today is a complement to our traditional programs, not a replacement. Private capital represents a realistic means to expand our buying capacity. The key is revenue streams.

When a project is supported by dedicated revenues, whether it is tied directly to the use of the facility as in the case of Alameda or Shellpot Bridge, or simply earmarked from more general sources such as property rentals or operating revenues, then the project can retire debt.

The freight community particularly will benefit from expanded use of financing. Today's freight interests are frustrated by their inability to compete when projects are ranked at the State and NPO level.

Through its capacity to generate revenue, the freight sector can essentially create its own program. This will also reduce demand on the traditional Federal aid grant program.

Let me close by suggesting a vision for transportation finance. In the future, every responsible fund manager, both here and globally, will have a fraction of his or her portfolio invested in U.S. transportation infrastructure. They will do so with confidence in the investment and the bold Nation it supports. Over the next few hours, I will listen for ways to make this vision a reality. Thank you.

Now we turn to the hearing, the best parts of it. I would turn, also, to the Senator from Nevada for any statement.

STATEMENT OF HON. HARRY REID, U.S. SENATOR FROM THE STATE NEVADA

Senator REID. I thank you and Chairman Baucus. I commend both of you for holding this joint hearing. It is so important. I am thankful also, of course, that Ranking Members Smith and Grassley have agreed to do this.

We are authorizing TEA-21 the legislation to address our Nation's infrastructure needs is a big job, an important job, and one that will take the cooperation of more than one committee.

Early this month, the Subcommittee on Transportation, Infrastructure, and Nuclear Safety conducted a joint hearing on freight issues with Senator Breaux's Commerce Subcommittee. We need more cooperation between committees involved in reauthorizing TEA-21.

We have to work together to ensure that our significant diverse transportation needs are addressed. Our highways, transit system, and railways are too important to our economic well-being and quality of life to ignore.

I look forward to working with the Finance Committee and other committees to see if we can adequately address our transportation needs. We are nearing the completion of the Environment and Pub-

lic Works Committee's year-long series of 14 hearings and symposia addressing the critical issues related to reauthorization. It is appropriate that our final two scheduled hearings focus on funding issues.

As we have been told today, we will review opportunities for innovative financing. On Monday, the Transportation Subcommittee will examine the state of the infrastructure and the funding necessary to maintain and improve our Nation's highway system.

The State of Nevada has been a leader in the field of innovative financing and has aggressively sought to leverage private investment through existing Federal financing programs.

For example, the project that should have taken place 100 years ago, the Reno Transportation Rail Access Corridor, RTRAC, is seeking to use \$70 million in loans under TIFIA to leverage \$200 million in State, local, and private funding to build a below-grade rail transportation corridor. This project will increase safety and reduce traffic congestion by eliminating 10 at-grade rail crossings. That is important, of course.

The Las Vegas monorail project is seeking a \$120 million TIFIA loan to bridge the gap between Federal, State, local, and private financing to build Phase II of what will eventually be an 18-mile regional rail transit system.

Finally, the State is expediting the critical Hoover Dam Bypass—and we are working with the State of Arizona on this—by using a bonding mechanism similar to the GARVEE bonds to allow construction to proceed before Federal funding is completed.

Each of these vital highway transit rail projects were made possible by innovative financing opportunities provided by the Federal Government. In the future, we hope to creatively use new, innovative financing tools to bridge the gap between public and private investment to build a high-speed magnetic levitation train between Southern California and Las Vegas.

There is no question that innovative financing must be a critical component of next year's transportation bill. We should encourage new public/private partnerships and focus on where Federal resources can creatively be used to leverage State, local, and private investment for critical highway transit and rail projects.

Let me say publicly what I have said privately. I think it is tremendous that the chairman of the Finance Committee, the all-power Finance Committee as we know here, and the former chairman of this committee is working so closely with us.

I think that we are going to benefit so greatly in the year to come from Senator Baucus' experience as chairman of this committee, and his experience as chairman of the Finance Committee, to help come up with some of these innovative ways to finance these projects. We need this very, very badly.

I applaud and commend the chairman of the Environment and Public Works committee, Senator Jeffords, for his agreeing to do these kinds of joint hearings. This is something we do not do here very often. We were so protective of our turf here. I think we should Senator Baucus for all we can because of his experience.

[Laughter.]

I think that we need to understand that we, as the Transportation and Infrastructure Committee, cannot do it alone. We need

to do things differently than we have done in the past. I think this is great to have this hearing. I think this is an indication of what is to come next year, and coming up with a highway bill. It is going to be different than any highway bill we have ever done before.

I want to apologize to the committee. Senator Inouye is not here today, and I have got to help him on a committee beginning at 10 o'clock.

Senator JEFFORDS. Well, thank you very much for your excellent statement.

Senator BAUCUS. If I might, Mr. Chairman, also thank Senator Reid for his very strong endorsement of the joint hearing. I think that we get better legislation here with more joint hearings, as a general rule. The legislation is good as it is, but I think joint hearings are very, very helpful. I compliment the Senator for making that observation.

Senator JEFFORDS. There is no subject that a joint hearing is more appropriate for than this one right now.

Senator Crapo?

**STATEMENT OF HON. MICHAEL D. CRAPO, U.S. SENATOR
FROM THE STATE OF IDAHO**

Senator CRAPO. Thank you very much. I would like to thank both of our joint chairmen today and associate myself with the remarks of Senator Reid about the importance of the fact that we are working together and having these joint hearings.

As we work together to put together the next highway bill, it is going to be critical that we do a good job, and a prompt job. But, even more importantly, we have got to work together to make sure that we build the kind of support for the good bill that we will need to build. I appreciate the efforts of both of our joint chairmen for holding this hearing. Clearly, innovative financing and the funding aspects of this are going to be critical.

In terms of talking about working together, I want to especially thank Senator Baucus. He and I, both coming from neighboring States out in the Northwest, have similar concerns with regard to our States' issues with regard to transportation.

We have found an opportunity to work together across party lines to put together some innovative approaches of our own to try to address the question of how to increase the pot of funding for our highway needs in this country. With the two approaches that we have come together on, we have done it without raising taxes, and I think that that is a very important first step: the MEGA-TRUST Act, which Senator Baucus already mentioned, and then the MEGA-INNOVATE Act that will be introduced soon.

We have two ideas on the table that are very important. As has been indicated by Senator Baucus and Senator Jeffords today, I look forward to hearing from people around the country who have had a lot of experience with this and who have a lot of ideas about how we can accomplish it, to giving us more ideas and more proposals for how we can address the needs for funding our next highway bill.

So, again, to both of our chairmen, I thank you for this opportunity. I look forward to the information we are going to receive today, and working with you as we put together the next bill.

Senator JEFFORDS. Thank you. A very helpful statement. Senator Inhofe?

STATEMENT OF HON. JAMES M. INHOFE, U.S. SENATOR FROM THE STATE OF OKLAHOMA

Senator INHOFE. Thank you, Mr. Chairman.

As we work together in drafting the reauthorization of TEA-21, it is safe to say that all members here recognize that this is a time of extraordinary challenge and opportunity for the transportation sector.

The world of surface transportation is changing. It is now our job to work together to ensure adequate funding for investment in the Nation's transportation system and preserve State and local government flexibility to allow the broadest application of funds for transportation solutions.

TEA-21 dramatically altered the transportation funding mechanisms, provided greater equity among States in the Federal funding, and record levels of transportation investment. For most Federal aid projects, the law requires that 20 percent of the costs be derived from a non-Federal source.

In order to maximize the use of all available resources, States now have a range of options for matching the Federal share of highway projects. By providing flexibility in a form that the non-Federal match might take, Federal dollars can be leveraged more effectively.

What we have been taking advantage of in Oklahoma is the toll credit match. We apply certain toll revenues/expenditures to build and improve our public highway facilities as a credit toward the non-Federal matching share of particular projects.

However, transportation officials at all levels of government still face a significant challenge when considering the ways to pay for improvements to transportation infrastructure. It is apparent that traditional funding sources are insufficient to meet the increasing complex needs.

I remember when I was mayor of Tulsa, we worked diligently trying to focus on the public/private partnerships. I recognize that the implementation process is a complex undertaking with a wide range of organizational and financial options. But it is important for public agencies to evaluate all of their alternatives.

Despite the record levels of investment, funding is not keeping pace with the demands for improvement and to maintain the vitality of the Nation's transportation system.

I am in a unique position to appreciate this because I spent 8 years in the House of Representatives on the Transportation Committee and I was really into it.

When I came to the Senate, I was more on some of the problems we were having in the EPA and clean air problems. Until I became chairman of the Subcommittee on Transportation and Infrastructure, I was more involved with those issues.

In that 4-year period, the congestion and other severe problems that we are facing are brought home to me in such a way that I see that we are going to have to try something new and different.

That is what we did with TEA-21; that is what we are going to continue to do. I am looking forward to working with you. I ask

unanimous consent that my entire statement be made a part of the record at this point.

Senator JEFFORDS. It certainly will.

[The prepared statement of Senator Inhofe follows:]

STATEMENT OF HON. JAMES M. INHOFE, U.S. SENATOR FROM THE STATE OF OKLAHOMA

Thank you Mr. Chairman. As we work on the drafting of this reauthorization, I think it is safe to say that all the members here recognize that this is a time of extraordinary challenge and opportunity in the transportation sector. The world of surface transportation is changing. It is now our job to work together to ensure adequate funding for investment in the nations transportation system and preserve State and local government flexibility to allow the broadest application of funds to transportation solutions.

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Despite the record levels of investment, funding is not keeping pace with demands for improvements to maintain the vitality of the nation's transportation system.

Some transportation projects are so large that their costs exceed available current grant funding or would consume so much of these current funding sources that they would delay many other planned projects.

ARTBA proposed a number of options for enhancing the Highway Account revenues. Some included indexing the motor fuels excise taxes for inflation, crediting the Highway Account with gasohol tax revenues that currently go into the General Fund, and expanding innovative financing programs. I might also mention that since the enactment of TEA-21, interest accrued on any obligation held by the fund does not get credited to the Highway Trust Fund, the interest earned goes to the General Fund. This is obviously something that we need to rethink during reauthorization. These are all revenue enhancements that would increase the fund substantially.

With the Energy bill pending in Conference, the Trust Fund will recoup an additional 2.5 cents per gallon of ethanol currently being deposited into the general revenue. The Senator from Montana has been very aggressive at trying to make the Trust Fund whole with respect to the current 5.3 cent per gallon ethanol subsidy. Although he and I do not agree on how to best address this issue, we are in agreement that the Highway Trust Fund should not pay to subsidize any fuel source. Our surface transportation infrastructure needs are such that we cannot afford to forego any revenue source.

Certainly one of the key factors in the economic engine that drives our economy is a safe, efficient transportation system. If our economic recovery is going to continue to expand, we cannot ignore the immediate and critical infrastructure needs of highways, bridges, and State/local roadway systems.

Finally, I would encourage our witnesses to address the current issues with funding dilemmas and how the use of innovative finance can generate real economic returns by expediting project construction.

Thank you Mr. Chairman. I look forward to today's hearing and want to welcome all of our witnesses.

Senator INHOFE. I also want to say, Mr. Chairman, that at the same time in the next room we have the Senate Armed Services

Committee that is meeting, so we have required attendance at both places and I will be going back and forth.

Senator JEFFORDS. Thank you very much.

Now we turn to the important part of the hearing, and that is listening to our witnesses.

Our first witness is David Seltzer, Distinguished Practitioner at the National Center for Innovations in Public Finance, University of Southern California, Los Angeles. Please proceed.

STATEMENT OF DAVID SELTZER, PRINCIPAL, MERCATOR ADVISORS, PHILADELPHIA, PA, ON BEHALF OF THE UNIVERSITY OF SOUTHERN CALIFORNIA, LOS ANGELES, NATIONAL CENTER FOR INNOVATIONS IN PUBLIC FINANCE

Mr. SELTZER. Thank you very much, Mr. Chairman and members. I am affiliated with the National Center at USC. It is a professional education and research center in the field of infrastructure finance. As part of the record, I have furnished this copy of a report that USC published last year concerning public/private partnerships in California. I feel compelled to tell you, this will be covered on the final exam.

[Laughter.]

Senator JEFFORDS. It will be made a part of the record. Thank you.

Mr. SELTZER. I, too, would like to commend you for holding this joint hearing on innovative finance. Because the Nation's transportation needs require a wide array of tools, it is very valuable that both the tax writing and authorizing committees are jointly deliberating this important issue.

This morning you will be hearing from a distinguished panel of individuals from the Federal, State, local, and private sectors on various innovative finance tools, including New Mexico's GARVEE bonds, the Alameda Corridor, TIFIA credit instruments, private activity bonds, and tax credit bonds.

What I would like to do, briefly, is provide a table-setter, giving you a framework for evaluating these and other innovative finance tools. This may help your committees determine which tools would be most effective in filling the funding gap and, in essence, provide a context for considering innovative finance.

To my mind, the central problem in Federal transportation policy is that, on the one hand, transportation projects are lumpy investments. They are capital-intensive, long-lived, and very heterogeneous.

On the other hand, Federal budgetary policy is very short-term oriented. It is cash-based and it is focused on costs rather than benefits. This treatment is really reflected in Federal budgetary scoring, where current outlays are treated the same way as long-term capital investments in transportation infrastructure. That mismatch between the period of when costs and benefits are recognized can distort project investment decisions.

Where innovative finance comes in, is that it can help redress some of that imbalance, in my view. Innovative finance tools are generally less intrusive than direct Federal grants. They, as you pointed out, Mr. Chairman, allow market forces to work by draw-

ing on private capital, and can better match the periods of the costs and the benefits.

Your two committees have at their disposal, really, three approaches that may be used to advance infrastructure projects: regulatory incentives, Tax Code incentives, and credit incentives.

Regulatory incentives are best demonstrated perhaps by New Mexico. You will be hearing in the next panel about not just innovative financing using GARVEE bonds, but also innovative procurement using design build procurement and innovative asset management, employing long-term warranties. Those three regulatory reforms were put together to advance an important project.

The second incentive, the Tax Code, includes things like tax-oriented leasing of capital assets, private activity bonds, and tax credit bonds. These tax measures have the benefit of using the pay-go scoring methodology, where the tax expenditures are recognized on an annual basis, not all up front. That approach represents something more akin to a commercial practice of amortizing costs.

The third of the three general approaches, Mr. Chairman, is credit incentives, as evidenced by Federal loan and loan guarantee programs like TIFIA and the Railroad Rehabilitation and Improvement Financing Program.

For Federal credit instruments, the budget scoring uses a present value concept, again akin to commercial practices where the time value of money is taken into account.

Now, for any of these various innovative finance tools to be successful, they must satisfy three groups of stakeholders simultaneously. First is the project sponsor, the public or private entity that is developing, advancing, and managing the capital investment.

The second of the three stakeholders is the investor. You have to provide a competitive, risk-adjusted rate of return that an investor can compare to options to invest capital elsewhere.

The third of the three stakeholders is, of course, Federal policymakers who have to look at both policy objectives and budgetary costs.

Senator Jeffords, you indicated an interest in identifying new products for portfolio managers. One interesting example would be a way to attract pension funds into infrastructure finance.

Public, corporate, and union funds represent some \$3.6 trillion of investment assets, yet today there are virtually no U.S. transportation projects in their portfolios.

The principal reason for that is that the primary financing vehicle of tax-exempt bonds does not appeal to tax-exempt entities such as pension funds. However, something like tax credit bonds, which you will be hearing about later, where the principal could be sold to, say, a pension fund and the tax credits decoupled and sold to other investors, might address some of your objectives.

In summary, different innovative finance tools are suited to different products and projects. I have submitted also as part of the record a methodology for looking at how one can systematically compare tools such as GARVEE bonds, tax credit bonds, private activity bonds, and TIFIA instruments in considering reauthorization.

So, thank you very much for your time. I appreciate it.

Senator JEFFORDS. Thank you for a very helpful statement.

Our next witness is Phyllis Scheinberg, Deputy Assistant Secretary for Budget and Programs at the U.S. Department of Transportation, right here in Washington, DC.

Ms. Scheinberg, please proceed.

STATEMENT OF PHYLLIS SCHEINBERG, DEPUTY ASSISTANT SECRETARY FOR BUDGET AND PROGRAMS, U.S. DEPARTMENT OF TRANSPORTATION

Ms. SCHEINBERG. Thank you, Chairman Jeffords. I want to send my appreciation to Chairman Baucus and members of the committees.

Thank you for holding this hearing today and inviting me to testify on Federal innovative finance initiatives for surface transportation projects.

These financing techniques, in combination with our traditional grant programs, have become important resources for meeting the transportation challenges facing our Nation.

Last January, Secretary Mineta indicated to you his desire to “expand and improve innovative finance programs in order to encourage greater private sector investment in the transportation system.”

He stated that innovative financing will be one of the Department’s core principles in working with Congress, State, local officials, tribal governments, and stakeholders to shape the surface transportation reauthorization legislation. Secretary Mineta remains steadfast in his support for these programs, so we want to tell you that we are here to work with you.

But, first, let us talk about, what is innovative finance? We at the Department apply the term to a collection of financial management techniques and debt finance tools that supplement and expand the flexibility of the Federal Government’s transportation grant programs.

We see the primary objectives of innovative finance as leveraging Federal resources, improving utilization of existing funds, accelerating construction timetables, and attracting non-Federal investment in major projects.

There are three major innovative finance programs that I would like to talk about today: the Transportation Infrastructure Finance and Innovation Program, or TIFIA, Grant Anticipation Revenue Vehicles, or GARVEE bonds, and State Infrastructure Banks, or SIBs.

First, the TIFIA credit program. Through the leadership of the Senate, and this committee in particular, TIFIA was established to provide a direct role for the Department of Transportation to assist nationally or regionally significant transportation projects through direct loans, loan guarantees, and stand-by lines of credit.

TIFIA allows the Federal Government to supplement, but not supplant, existing capital finance markets for large transportation infrastructure projects. We seek to take prudent risks in order to leverage Federal resources through attracting private and other non-Federal capital projects.

We have selected 11 projects, representing \$15.7 billion in transportation investment, to receive TIFIA credit assistance. The TIFIA

commitments themselves total \$3.7 billion in credit assistance, with a budgetary impact of only a little bit more than \$200 million. Highway, transit, passenger rail, and multimodal projects have all sought, and received, TIFIA credit assistance.

We are pleased with the results that we are seeing. The overall leveraging effect of the Federal assistance for the TIFIA projects has been 5 to 1. Private co-investment has totaled \$3.1 billion, or about 20 percent of the total project costs.

We believe that a limited number of large surface transportation projects each year will continue to need the types of credit instruments offered under TIFIA. Project sponsors and DOT staff are still exploring how best to utilize this credit assistance, and we welcome congressional guidance and dialog during this evolutionary program period.

A second financing tool used by States has been the issuance of Grant Anticipation Revenue Vehicles, or GARVEEs. These bonds enable States to pay debt service and other bond-related expenses with future Federal-aid highway apportionments.

A GARVEE generates up-front capital for major highway projects and enables a State to accelerate project construction, and spread the cost of a facility over its useful life. With projects in place sooner, costs are lower and safety and economic benefits are realized earlier. In total, six States have issued 14 GARVEE bonds totaling more than \$2.5 billion to be repaid using a portion of their future Federal-aid highway funds.

A third significant project finance tool is the State Infrastructure Bank, or SIB, which is a revolving fund administered by a State. Federally capitalized SIBs were first authorized under the provisions of the National Highway System Designation Act of 1995. SIBs provide various forms of credit assistance. As loans are repaid, a SIB's capital is replenished and can be used to support new projects.

As of June 2002, SIBs had entered into almost 300 loan agreements, for a total of \$4 billion of loans. This level of activity indicates that the SIB program is ready to move beyond its pilot phase to become a permanent program.

Looking ahead, the use of TIFIA, GARVEEs and SIBs are moving from innovative to mainstream. This reflects significant success, but it does not indicate that the needs of project finance have been completely met.

Secretary Mineta has issued a clear challenge to those of us in the Department in our development of a reauthorization proposal for TEA-21, asking us to expand innovative finance programs to encourage private sector investment.

We are considering options for further leveraging Federal resources for surface transportation. Among these options are enhancing the use of innovative finance in intermodal freight projects and adapting the financing techniques used in other public work sectors. The challenge is to build on our successes to date, but not set unrealistic expectations for the future.

We look forward to working with our partners in the State DOTs, metropolitan planning organizations, and private industry to apply innovative funding strategies that extend the financial means of our individual stakeholders.

Senator Jeffords, we look forward to working with you and the Congress to craft the next surface transportation legislation.

Thank you for the opportunity to testify today. I will be happy to answer any questions.

Senator JEFFORDS. Well, thank you very much for your excellent testimony. I extend my good thoughts to your Secretary. We have been friends for over 20 years, and I now have the opportunity to work closely with him on this. I am looking forward to it.

Ms. SCHEINBERG. Thank you.

Senator JEFFORDS. Next, we have JayEtta Hecker, Director of Physical Infrastructure Issues at the GAO. Please proceed.

STATEMENT OF JAYETTA HECKER, DIRECTOR OF PHYSICAL INFRASTRUCTURE ISSUES, GENERAL ACCOUNTING OFFICE, WASHINGTON, DC

Ms. HECKER. Thank you, Mr. Chairman. I am very pleased to be here, and appreciate the historic occasion of the two committees working together. As you and others have said, there could be no topic that more justifies that kind of collaboration.

First, the use and performance of innovative financing mechanisms; second, the cost involved in alternative approaches; and finally, selected issues for reauthorization.

I will skip over the use of the existing programs. I think Phyllis clearly described 6 States with GARVEEs, 32 States with SIBs, and 9 States with having agreements in TIFIA.

What I will do, is summarize the key advantages and limitations that have been identified in some of the studies and some of our own interviews with different States.

There is no doubt that one of the most significant advantages of these new financing and grant management tools is that they accelerate project construction. That is unequivocally a real result for many of these projects.

It is also very clear that they increase the tools in the State, local, or regional toolbox. They are financing multi-billion dollar long-term investments and you need tools that do that wisely and well.

The third advantage, is they have the potential to leverage Federal investment. Some of our work on the costs will discuss what we mean by leveraging and what we are really measuring with some of the different approaches.

The limitations on the use of these tools are real. The biggest one, of course, is States' willingness and authority. You have a lot of States that are very cautious about debt financing and financing projects in a manner other than on a pay-as-you-go basis.

There is also a skill issue. At a hearing last week, we talked about the skill capability in the DOTs. This is a brand-new kind of skill, financing and bond market specialists. It is very different than highway engineering.

Also, it is mostly affected by legislators at the State level or the local level and their willingness to look at these different tools.

There are also limitations in Federal and State law. The application of TIFIA is limited to projects costing over \$100 million. Only 5 States are allowed to use TEA-21 funds to capitalize their SIBs.

Then there are State laws that restrict public/private partnerships and, of course, there are Federal tax policies on private activity bonds. So, there are a whole range of factors that are really behind some of the limitations in the extensive application of these new tools.

Our real contribution today is, in part, to examine options for financing \$10 billion through four different approaches. Basically, we compare the Federal grants, similar to the current highway program, with an 80/20 match; a TIFIA-like Federal loan; State tax credit bonds that are basically similar to the AASHTO proposal. Of course, the credit is from Federal taxes. State-issued tax-exempt bonds are again, exempt from Federal taxes.

I have two charts that I present. One, is about the short-versus the long-term costs of the different tools, and they vary quite dramatically. The other chart compares the State versus Federal costs, as well as other parties.

Depending on how the programs are structured and who ends up paying can vary considerably not only across the alternatives, but even within them. Then the risks vary.

Looking at the tax credit bond, for example, the total cost of that, in present value terms, is nearly \$13 billion compared to \$10 billion that it would cost in direct appropriations in the grant program. The tax credit bond also varies quite a bit in its distribution of costs between the Federal Government and State and other parties.

The tax credit bonds, because of the costs of borrowing and are paying investors, cost \$12.7 billion, but most of that is borne by the Federal Government in a tax credit bond. Compare that with the TIFIA direct loan, where most of the costs, with the 33 percent limitation, are borne by the State and other parties.

The broad overview here is that there is, in fact, only modest success in leveraging private investment. We are getting debt financing, new debt to the table, which is significant and has benefits.

But these approaches have limits in how much they are really bringing private equity capital and real investors to the table who are absorbing a substantial amount of the risk.

That goes back to some of the limitations that I cited earlier. There are limited projects that really can generate their own revenue. That is in part a reflection of how we finance highways and that users tend to view highways as free. There are conflicts with the Federal tax-exempt finance rules and the cap on the private activity bonds, and the State laws.

So, you have got some restrictions inherent in the current system that are limiting how much private investment in highways and other intermodal facilities you can bring to the table.

These financing tools are a critical part of reauthorization. They decide on whether current users or future users pay, they decide on the extent to which we continue to rely on user financing or switch toward the use of general revenues, and they have very different results in the use of State and Federal funds.

We have ongoing work for your committee and are looking forward to being able to provide more detail on this. I think, as you and others have said, some of the real opportunities are to provide

new structures or to get broader applicability of these to projects of national concern, intermodal needs, and to focus on the effect on promoting the efficiency in the transportation sector.

That concludes my statement, Mr. Chairman.

Senator JEFFORDS. Thank you very much.

I think I will ask you the first question. While many States have embraced transportation financing techniques, several States seem resistant to these tools.

What precludes some States from the use of innovative financing?

Ms. HECKER. There is a concern among many States about moving further from pay-as-you-go to debt financing, as well as State DOTs unfamiliar with these approaches.

There are also a range of State laws that could apply, restrictions on public/private partnerships that are written into State laws. There are State laws that prohibit committing their future apportionment to debt repayment and thus prohibit the use of GARVEEs.

We've talked with several of the States who are applying these tools and are very excited about it. So it seems once folks get involved, they are pretty enthusiastic.

Senator JEFFORDS. I want to bring sort of a current situation and ask you what difference makes now, when we have had this huge downturn in the economy and the threats to various means of financing. How does that impact what may or may not be a better way to borrow, or what kind of financing instruments you have put on the rockets?

Ms. HECKER. Well, certainly there is more interest in looking for alternative sources with the revenue conditions and budget pressures at both the Federal and State level. So, the impetus of the economic downturn actually increases interest in these tools.

The ultimate financing question, though, is really not the tool itself. It is how the debt is going to be paid for. That is really what we are looking at, and we encourage the committee to keep very transparent.

If you look at the TIFIA loans where you get over 70 percent at the private and State level, most of it is different State taxes that get dedicated. In only a few instances do you really have private equity. So, there is borrowing going on and new taxes being raised.

As the instruments are broadened and extended, the issue is the extent to which costs are borne by current versus future users, and the extent to which costs are borne by general taxpayers versus users.

Senator JEFFORDS. Thank you.

Mr. Seltzer, in your testimony you state that "capital is notoriously unsentimental, and finance techniques used for transportation projects must compete for investor demand against other investment products in the marketplace."

What conditions need to be in place to make transportation projects more attractive when competing for private investment?

Mr. SELTZER. Well, Senator, you yourself in your statement indicated that the first ingredient or prerequisite is identifying the revenue stream. It has to be stable and reliable enough to attract investors. If it is debt financing, typically there is a watershed invest-

ment-grade rating category that indicates it is not a speculative type of investment.

Some of the innovative finance tools that your committee will be considering could help advance debt financing through providing various forms of credit enhancements such as the TIFIA program that Ms. Scheinberg mentioned.

Senator JEFFORDS. Ms. Scheinberg, currently the threshold for projects to be eligible for TIFIA programs is \$100 million. How would lowering the threshold for projects to \$50 million affect the program?

Ms. SCHEINBERG. Senator Jeffords, we are not sure. We have no experience with anyone coming in and saying they could not meet the \$100 million threshold. So, we cannot tell you that that is a barrier to this program.

The program, as you probably know, is new to the users and there is a fair amount of learning that goes on regarding how to engage in the TIFIA program. So its original purpose was for large projects that could not find funding in the traditional categories of funding that the Federal Government provides—large, intermodal, complicated, lumpy projects, as David said.

I think we still have not tapped out those projects. We are still working with folks. We have six letters of interest that have come in that are seriously looking at asking for a TIFIA loan.

We have not seen people who have come in and said, we wish it was a lower threshold, so I cannot really tell you what the difference would make. We have a lower threshold for ITS projects of \$30 million and we have not seen any takers on that. That does not seem to have made a difference.

Senator JEFFORDS. Our next generation effort will place greater emphasis on intermodal projects and on project financing. I am concerned that U.S. DOT is not adequately staffed or structured to accommodate this shift in focus.

Do you share my concern? I imagine you will say yes.

Ms. SCHEINBERG. Well, first I would say, yes, we are also very focused on intermodal in general, and freight in particular, which we believe needs much more attention than it has received in the past.

As far as our staffing, we are looking at this. I can tell you that it is a topic of discussion in the Department, organizationally, financially, and with resource attention.

We are looking at this issue of freight very seriously, both how to help the freight sector and how to deal with it internally in DOT.

Senator JEFFORDS. Well, I want to thank you, all three of you, for very helpful testimony. I assure you, we will be taking advantage of your expertise as time goes by to assist us as we move forward to try and improve the ability to finance these projects.

Thank you very much.

Mr. SELTZER. Thank you, Mr. Chairman.

Ms. SCHEINBERG. Thank you.

Ms. HECKER. Thank you, Mr. Chairman.

Senator JEFFORDS. I want to let everyone know that we are going to have votes starting, two votes, in the next few minutes. So we will postpone the testimony on the next panel. You can relax and

await my return. Since it takes about 20 minutes for the first vote and I have to wait for the second vote, it will probably be about 25 minutes before we resume.

So if anybody wants to take a break, take a break.

[Whereupon, at 10:29 a.m. the hearing was recessed.]

[At 11:16 a.m. the hearing was reconvened.]

Senator JEFFORDS. The hearing will come to order. I am sorry for the delay, but we are in the process of saving the Nation, so it took a little bit longer than we anticipated.

[Laughter.]

Welcome, panel No. 2. Our first witness is the Honorable Janice Hahn, Councilwoman for the city of Los Angeles, California, on behalf of the Alameda Corridor Transportation Authority. We have been waiting anxiously for your testimony because of all the exciting work that you have been involved in. Please proceed.

STATEMENT OF HON. JANICE HAHN, COUNCILWOMAN, CITY OF LOS ANGELES, LOS ANGELES, CA, ON BEHALF OF THE ALAMEDA CORRIDOR TRANSPORTATION AUTHORITY; ACCOMPANIED BY DEAN MARTIN, ALAMEDA CORRIDOR'S CHIEF FINANCIAL OFFICER, AND JOSEPH BURTON, GENERAL COUNSEL.

Ms. HAHN. Thank you, Mr. Chairman. Good morning. Thank you for this opportunity to be here today. Besides being a city councilwoman in Los Angeles, I serve as the chairwoman of the Governing Board of the Alameda Corridor Transportation Authority.

So, on behalf of the city of Los Angeles, the mayor, Jim Hahn, my brother, the city of Long Beach, Mayor Beverly O'Neill, and the Corridor Authority's Governing Board and our CEO Jim Hankla, I am honored to be here today.

Accompanying me today are Dean Martin, the Corridor Authority's chief financial officer, and Joseph Burton, our general counsel.

The Alameda Corridor Transportation Authority, or ACTA, is a joint powers authority created by the Cities of Long Beach and Los Angeles in 1989 to oversee the financing, design, and construction of the Alameda Corridor.

The project was monumentally complex, running through eight different government jurisdictions in urban Los Angeles County, requiring multiple detailed partnerships between public and private entities, and presenting extensive engineering challenges.

One of the key partnerships that has been vital over the years has been with the U.S. Congress. We greatly appreciated the strong support you and your colleagues provided to ACTA in developing the innovative loan from the Department of Transportation.

Indeed, the Federal Government, by its \$400 million Department of Transportation loan, became the first financial partner in this magnificently successful project. We are particularly thankful for the strong leadership demonstrated by many of you in Congress, including our two distinguished Senators, Dianne Feinstein and Barbara Boxer, along with Congressman Steve Horn and Congresswoman Juanita Millender-McDonald. Without their vision and support, it is unlikely the Alameda Corridor would be in operation today, strengthening the Nation's global economic competitiveness.

The \$2.4 billion Alameda Corridor, one of the Nation's public works projects, opened on time and on budget on April 15th of this year.

A container train from the ports of Los Angeles and Long Beach to the transcontinental rail yards near downtown Los Angeles used to take more than 2 hours and wreak havoc to L.A. traffic at dozens of crossings. It now takes about 45 minutes, avoiding traffic conflicts.

As cargo volumes increase, this enhanced speed and efficiency is critical. More than 100 trains per day are expected on the Alameda Corridor by the year 2020.

We have demonstrated that governments can work together, and they can work with the private sector, putting aside competition for the benefit of greater economic and societal good.

We have proven that communities do not have to sacrifice quality of life to benefit from international trade and port and economic activity. The volume of containers doubled in the 1990's, and last year reached more than \$10 million 20-foot containers. Last year, our ports handled more than \$200 billion in cargo, or about one-quarter to one-third of the Nation's waterborne commerce.

ACTA consolidated four branch lines serving the ports into a 20-mile freight rail expressway that is completely grade separated, including a 10-mile long 30-foot trench that runs through older, economically disadvantaged industrial neighborhoods south of downtown Los Angeles.

The linchpin of ACTA's funding plan was designation of the Alameda Corridor as a high-priority corridor in the 1995 National Highway System's Designation Act. That designation cleared the way for Congress to appropriate \$59 million needed to back the \$400 million loan to the project from the U.S. Department of Transportation.

That was the leverage, if you will, for the biggest piece of our financing package, more than \$1.1 billion in proceeds from revenue bonds sold by ACTA. The bond and the Federal loan are being retired by corridor use fees and paid by the railroads.

The funding breaks down roughly like this: 46 percent from ACTA revenue bonds, 16 percent from the U.S. DOT loan, 16 percent from the ports, 16 percent from California's State and local grants, much of it administered by the L.A. County Metropolitan Transportation Authority, and 6 percent from other sources.

There are many reasons why our project stayed on schedule, but at the top of the list are permit-facilitating agreements with corridor cities, relocating agreements with utility companies, and our decision to use a design-build contract with the Mid-Corridor Trench.

Among the direct community benefits, the Alameda Corridor is projected to reduce emissions from idling trucks and automobiles by 54 percent, slash delays at railroad crossings by 90 percent, and cut noise pollution by 90 percent.

Disadvantaged firms have earned contracts worth more than \$285 million, meeting our goal of 22 percent DBE participation. The goal of our Alameda Corridor job training and development program was to provide job training and placement services to 1,000 residents of the corridor communities.

We exceeded that goal. Almost 1,300 residents received construction industry-specific job training, and of those, 600 were placed in construction trade union apprenticeships. The Alameda Corridor Conservation Corps provided the life skill training to 447 young people from that community.

In the future, ACTA and the California DOT are working at an innovative, cooperative agreement to develop plans for a truck expressway that would provide a “life-line” link between Terminal Island at the ports and the Pacific Coast Highway at Alameda Street.

The Alameda Corridor truck expressway is intended to speed the flow of containers into the Southern California marketplace. This project could be ready for approval as early as March, 2003.

At ACTA, we believe that by restructuring our Federal loan we can undertake this critical truck expressway project without any additional Federal financial support. But we need this committee—

Senator JEFFORDS. Would you repeat that, please?

[Laughter.]

Ms. HAHN. I am glad you asked for that. Hold my time, Mr. Chairman. At ACTA, we believe that by restructuring our Federal loan we can undertake this critical truck expressway project without any additional Federal financial support, but we need this committee to help us get Congress to give the approval to DOT to allow us to do this.

Let me just give you a few recommendations for your committee as you are looking at reauthorization of TEA-21. We think the planning and funding of intermodal projects of national significance directly benefiting international trade should be sponsored at the highest levels within the Office of the Secretary of Transportation.

There should be a national policy establishing the linkage between the promotion of free trade and the support for critical intermodal infrastructure, moving goods to every corner of the United States. Public-private partnerships do, in fact, work and should be promoted and encouraged by Federal transportation legislation.

We think a specific funding category is needed to support intermodal infrastructure projects and trade connector projects. Consideration should be given to new and innovative funding strategies for the maritime intermodal systems, infrastructure improvements enhancing good movements.

The Corridor benefited from the DOT being willing to undertake some risks and provide loan terms that were not available on a commercial basis. The Federal participation gave private investors confidence in the project and made our bond financing possible.

Most important in my mind is this. The success of the Alameda Corridor has shown that Federal investment in trade-related infrastructure can benefit the economy without sacrificing the quality of life issues.

Thank you for inviting me. I am happy to answer any questions.

Senator JEFFORDS. Thank you very much.

The Honorable Peter Rahn. Please proceed.

**STATEMENT OF HON. PETER RAHN, SECRETARY, NEW MEXICO
DEPARTMENT OF TRANSPORTATION, SANTA FE, NM**

Mr. RAHN. Good morning, Mr. Chairman. I am Pete Rahn. I am the Secretary of the New Mexico State Highway and Transportation Department and I am very pleased to be here today to testify before this very unique joint hearing.

It seems so important that the two committees work smoothly together in the reauthorization of the National Highway Funding bill, which is absolutely critical to the States and their transportation systems.

Mr. Chairman, I am here to not only urge, but plead, that Congress not only allow, but actually encourage, innovative public-private partnerships. Public-private partnerships draw on the experiences and expertise of both sides to perfect just tremendous success in projects like New Mexico 44, which is now called U.S. 550.

New Mexico traditionally has been a pay-as-you-go State, which meant we paid as we went downhill and lost more and more of our system.

New Mexico 44 is, I believe, a national example of a successful project that brought together the Federal Government, State government, and private concerns to open up a corridor into northwest New Mexico that is providing economic opportunity and greatly improved safety for those people traveling on that roadway.

New Mexico 44 stretches 141 miles from just north of Albuquerque into northwest New Mexico. Northwest New Mexico did not have a four-lane highway for the entire corridor of the State.

This corridor has opened up economic opportunity in the region of Farmington and Bloomfield in which they are now experiencing growth at twice the rate of the average of the State of New Mexico.

The project itself brought together innovative financing, innovative procurement, innovative contracting, and innovative construction. I need to give credit to the Federal Highway Administration as a very critical partner in developing this project.

The project itself was a 118-mile corridor that utilized innovative financing in the form of GARVEE bonds. I understand it is not very flattering to Jane Garvey that our particular bonds were named "naked" GARVEE bonds because they did not have the guarantee of the State government, but only the revenue stream of future Federal programs to back up the issuance of those bonds. The bonds were issued for 15 years. We also utilized the soft match provisions of TEA-21.

Our procurement was unique in that we were able to utilize, not design-build, but the traditional low-bid process in a very unique way in which we secured a developer, and the developer designed the project, provided the designs back to the department, we utilized low bid, selected the contractor, presented the contractor back to the developer which managed the construction of it, and then warranted the project for 20 years. Twenty years, to our belief, is the longest period of time that a highway has ever been warranted in the United States.

From concept to contract, the project took us 15 months. From contract to construction of a 118-mile long four-lane road was 28 months. Using traditional methods, we estimate it would have taken us 27 years to have built that roadway utilizing the tradi-

tional 3-and 5-mile increments that most DOTs undertake in constructing long corridors.

The warranty is a \$114 million guarantee for performance of the roadway for 20 years. It is a no-fault guarantee that we estimate will save the State \$89 million over the life of the warrantee.

Coke Industries, which was the developer, has \$50 million of their own assets at risk within the warranty and have produced a roadway from their design and management of the contractors that is smoother and will last longer than any road built in New Mexico today.

Utilizing the leveraging of Federal revenue streams at very competitive interest rates, our overall bonding program, of which the GARVEE bonds are only once piece, has an average interest rate of 4.47 percent, when the Federal Highway Administration estimates inflation in the construction industry at 4.5 percent. So the value of a road in place today is greater than the value of a road in place tomorrow.

I will close by just saying that I believe it is very important that Congress, as it is looking at reauthorization, not only allow the DOTs the flexibility to use Federal revenues in the ways best suited for their particular States, but the importance of a stable revenue stream that the States can depend upon is critical to our ability to leverage those dollars through using innovative financing, whether it is bonding or any of the other ways.

The last point I would make, Mr. Chairman, is just simply that if Congress wants to encourage private investment in our transportation system, I believe there is going to have to be a mechanism for the private sector to invest on par with government tax-free bonds in order for that investment to occur.

Thank you, Mr. Chairman.

Senator JEFFORDS. Thank you. Excellent presentation.

Our next witness is John Horsley, executive director of the American Association of State Highway and Transportation Officials right here in Washington, DC. Please proceed.

**STATEMENT OF JOHN HORSLEY, EXECUTIVE DIRECTOR,
AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, WASHINGTON, DC**

Mr. HORSLEY. Thank you, Mr. Chairman.

First, we want to commend you and Senator Baucus for convening this joint hearing, and commend you, Senator Reid, and your colleagues in the Senate for fully restoring highway funding for fiscal year 2003 to the \$31.8 billion level that Governors, States, and many others have been pushing for. It is vital that you succeed, and we want to commend you and the Senate for your leadership.

We also hope you will convey our thanks to Senator Baucus for his leadership in moving the 2.5 cents of gasohol revenues that now go to the general fund over to the Highway Trust Fund, and some of the other work that he is doing, including pushing for use of the interest in the Highway Trust Fund in order to put that into our cash-flow and be able to put it to work.

So, I want to thank you both for holding this hearing today. I heard a lot of good things so far, and look forward to Jeff's testimony.

Pete is one of my bosses, so I will try to represent you well, Pete.

Mr. Chairman, we believe that the central issue on reauthorization will be how to grow the program. Huge safety, preservation and capacity needs exist in every region of the country.

To fund them, AASHTO believes Congress must find a way to increase highway funding from \$34 billion in fiscal year 2004 to at least \$41 billion in 2009, and annual transit funding over the next 6 years from \$7.5 billion to \$10 billion.

The challenge, is how to fashion a funding solution that can achieve these goals and garner the bipartisan support needed for enactment next year.

AASHTO has explored a menu of options for generating additional program revenues, including tapping Highway Trust Fund reserves, gasohol transfers, indexing, and raising fuel taxes. While the program could grow somewhat without raising taxes, it would fall short of meeting national needs.

We also directed our staff to explore the feasibility of leveraging new revenues through a federally chartered transportation finance corporation which could achieve AASHTO's goals for highway and transit funding in coordination with all of the other proposals, such as those proposed by Chairman Baucus.

They have developed a creative proposal which appears feasible and has been well received. Let me describe it for you in brief.

Under this concept, Congress would be asked to charter a non-profit transportation finance corporation, authorized to issue \$60 billion in tax credit bonds over 6 years. We describe this as program finance rather than project finance.

Thirty-four billion dollars would go to highways and be apportioned to States through Federal highways, and \$8.5 billion, 20 percent, would be apportioned to transit agencies; \$17 billion of the bond proceeds would be invested in government securities which, over 25 years, would generate a return sufficient to pay off the bond principal.

The Department of Treasury would be reimbursed for the annual cost of the tax credits from the Highway Trust Fund. There would be no impact on the Federal deficit. The TFC would leverage approximately \$18 billion in new revenues into an increase of nearly \$43 billion in program funding.

When we tested this concept with seven Wall Street investment banks and two rating agencies, this is what we heard. No. 1, tax credit bonds are marketable. Capital markets can absorb the amount of bonds being discussed.

Second, bond marketability and liquidity are enhanced by a central issuer, and there is a broad potential investor base, especially if the tax credits could be decoupled from the bond principal.

Our analysis shows that AASHTO's funding targets through fiscal year 2009 could be achieved through the Transportation Finance Corporation without indexing or raising taxes. Over the longer term, however, the program for the following 4 years would slip slightly before it resumed positive growth again in fiscal year 2013.

When the TFC is combined with indexing, not only does the program continue with healthy growth from fiscal year 2010 on, even higher funding levels in the \$41 billion for highways and the \$10 billion for transit would be possible.

We believe this idea has potential, and stand ready to work with Congress to find a way to grow the program using this technique, or other techniques.

In addition to this concept for program financing, we also believe reauthorization needs to make improvements in several project financing tools such as extending State Infrastructure Bank to all 50 States, lowering the threshold for TIFIA loans from \$100 million down to \$50 million, and working with you to change the terms of the RRIF program.

I will be glad to submit the balance of my testimony for the record.

Senator JEFFORDS. Thank you. Excellent testimony.

Our last witness is Jeff Carey, Managing Director of Merrill Lynch & Co., New York, NY.

STATEMENT OF JEFF CAREY, MANAGING DIRECTOR, MERRILL LYNCH & CO., INC., NEW YORK, NY

Mr. CAREY. Mr. Chairman, ladies and gentlemen, I am a managing director in public finance at Merrill Lynch. I have had the privilege to work with U.S. DOT, Federal Highway officials, as well as our clients, State transportation officials, and other project sponsors during the last decade on the development and implementation of innovative finance mechanisms.

Thank you for inviting me to provide a wrap-up commentary from a capital markets perspective at today's joint hearings and for encouraging private sector participation during your on-ramp to reauthorization.

Public finance industry professionals are pleased to have played a role in creating a strong market reception for the new transportation funding tools and expanded flexibility for public-private partnerships.

We commend these panel participants, the leadership from DOT and Federal Highway, other State transportation officials, and private sponsors for the dramatic evolution from Federal aid funding to the wide array of financing vehicles and programs introduced and utilized over the last 8 years.

To briefly reflect on the prior testimony, ISTEA, post-ISTEA initiatives, and TEA-21 implementation have produced many market-related accomplishments, dramatically increased bondholder investment in transportation projects and State programs; new and/or specially dedicated revenue sources, particularly for the purpose of paying off debt obligations; broad market acceptance in the use of Federal aid funding for debt instrument financing; more coordination with other funding partners beyond just the States, and lower financing costs and increased project flexibility and feasibility through Federal credit enhancement.

Addressing characteristics sought by capital markets and private sector project sponsors provides efficient market access and innovative transportation finance opportunities.

Coining an earlier term, the “unsentimental characteristics” sought by capital markets participants include: sound, understandable credits; evidence of government support at the Federal and State level; strong debt service payment coverage; predictability in Federal programs and a consistency with an evolution of new funding instruments, something that the MEGA-Fund and Trust Acts would enhance; market rate investment returns for bonds, development costs, and equity investment; reasonable and reliable timing in terms of the receipt of grants and revenues; acronyms that capture Federal programs’ spirit and promote investor familiarity; and volume market profile, and liquidity.

For example, the track record and predictability of Federal aid highway programs enabled GARVEE bonds to be structured without the double-barreled credit of other State credit-backed stops, as described earlier in New Mexico. It was the strong issuance history of municipal bond banks in States like Vermont that served as the model for the development of State Infrastructure Banks or SIBs in the mid-1990’s.

Mr. Chairman, I agree that SIBs such as Vermont’s can provide an extremely flexible and responsive financing tool. How various innovative financing components have been used by public agencies and received by the markets provides a strong road map for reauthorization.

When SIBs were created as part of the 1995 Act, the pilot program for 10 State transportation revolving funds became very popular in 1996, in part because supplemental Federal funding was available for seed capitalization.

Thirty-two States have active SIBs and have made different levels of highway or other project assistance primarily through loans, despite widespread under-capitalization and the curtailment of the program in TEA-21.

Limited capitalization has resulted from the inability to use Federal aid funds outside of five States and the application of Federal requirements and rules to all moneys deposited in the SIB revolving fund, regardless of whether the source was a State, a public contribution, or repaid loan proceeds. In addition, only two States have leveraged their SIBs with bonds.

As a flexible, State-directed tool, SIBs have a greater potential to provide loans and credit enhancement that can be realized through further modifications as part of Reauthorization.

Reauthorization should provide incentives for public-private market-based partnerships that finance, develop, operate, and maintain highways, mass transit facilities, high-speed rail and freight rail, and intermodal facilities. This could be accomplished by permitting the targeted use of a new class of private activity bonds, or by modifying certain restrictions in the Internal Revenue Code on tax-exempt bond financing of transportation modes. We commend the Senate and this committee’s earlier consideration of HICSA, HIPA, and, most recently, the Multimodal Transportation Financing Act.

Mr. Chairman, my office is across the street from the World Trade Center site. As workers in downtown Manhattan, we greatly appreciated your passage of Federal legislation creating a Liberty Zone for the redevelopment of lower Manhattan and for the cre-

ation of a new type of tax-exempt private activity bonds, Liberty Bonds, for the rebuilding and economic revitalization of New York City. Transportation infrastructure financing deserves a bond mechanism similar to Liberty Bonds under Reauthorization to attract more private investment, as well as to increase the use of new construction techniques, cost controls, performance guarantees, and technologies, as also described by the New Mexico Secretary.

Past “innovative finance” should become mainstream transportation finance under TEA-21 Reauthorization, and the Federal Government should provide additional, new financing tools and initiatives, at least on a pilot basis.

The market’s perception of the integrity of the Federal Highway Trust Fund would be greatly enhanced by the MEGA-TRUST Act and the MEGA-INNOVATE Act, providing tax-credit bond proceeds to augment gas tax revenues.

The success of innovative finance places a higher level of responsibility on the Federal reauthorization process to maintain the characteristics that attract strong capital markets and private sector participation.

We want to meet your vision, Mr. Chairman, and your challenge to structure and sell U.S. transportation credits to investor portfolios in U.S. municipal markets and in other appropriate markets.

Thank you.

Senator JEFFORDS. Well, thank you. Excellent testimony, all of you. I am very appreciative, as I think we are going to make some good progress this year.

The first question is for Janice Hahn. Design-build was utilized on the Mid-Corridor Trench portion of the Alameda Corridor. How important was this approach to project the development in your efforts to finance and build the Alameda Corridor?

Ms. HAHN. Well, I think design-build was really one of the reasons that this project came in on time and on budget. It was so important, that actually we had to get an ordinance passed by the City Council of Los Angeles, because previously that was not allowed under the normal building of projects and the RFP proposals. So we estimate that that concept saved the project 18 months in terms of streamlining the majority of that project.

Senator JEFFORDS. Thank you.

I note that the Alameda project was sponsored by ACTA, a special-purpose entity. Does this institutional arrangement provide any advantages?

Ms. HAHN. Well, certainly the whole structure and the cooperative agreements that we came to, joining together two cities, Los Angeles and Long Beach, both rival ports and competing railroads, and then with the public entity of ACTA, provided really a very unique partnership and agreement. I must say, as chairwoman of this Governing Board of ACTA, it is a very small, focused governing board. I think that really is the reason this is so successful.

Senator JEFFORDS. David Seltzer, in an answer to my earlier question, said that one of the keys to attracting private investors is a reliable revenue stream. Janice, can you tell us more about your project’s revenue stream?

Ms. HAHN. Well, that really was another huge piece of success, is we locked in a great revenue stream, which was the containers

themselves. The containers have been there. They are there now, and more are coming every year.

As a matter of fact, as I mentioned, we have 10 million containers using the Corridor on an annual basis. The charge is about \$15 per 20-foot container, so you can see that that is an incredible revenue stream that we have locked in for a very long time.

Senator JEFFORDS. Peter, as a member of the AASHTO Board of Directors, what are your thoughts on that organization's funding proposal?

Mr. RAHN. Mr. Chairman, I support their proposal because I believe it is a way for us to get more money into infrastructure today. I hope that that was one of the things that was made clear by my testimony, was the belief that transportation infrastructure is more valuable in place today than it is tomorrow.

The proposal from AASHTO is a vehicle by which this country can invest in more infrastructure, thereby supporting our economic activity, as well as quality of life and safety of its citizens. I believe it is a very innovative approach. I believe it is workable, and I am hopeful that Congress will approve it.

Senator JEFFORDS. John, in your testimony you state that "finance tools are useful, but only fill a niche in program and project funding."

What changes are needed in reauthorization to allow for more financing of transportation projects?

Mr. HORSLEY. Mr. Chairman, there is need for change at both levels. At the Federal legislative level, we think the authority to extend State Infrastructure Banks to all 50 States, for example, should be included in your bill. There is, I think, a great interest in the success of the five States that are currently authorized.

We would seek your authority to extend it to all 50 States, but with the understanding that all Title 23 requirements come with the extension of that authority, including Davis-Bacon, for example. We are willing to continue to advance the program in partnership with a broad base of interests, including labor, that wants the Davis-Bacon provision to apply to future funding cycles.

Many of our smaller States have told us that the \$100 million restriction in TIFIA is too tight, and they have smaller projects that would benefit from either the additional loan security or other finance enhancements of TIFIA. So, we'd like to have you take a look at dropping that threshold.

The terms and conditions of RRIF includes restrictions that Treasury has put on that are too tight, and we think, if you could take a look at flexing the terms of finance for railroad finance, that would be helpful.

Now, let me tell you, at the State level we have a long way to go. For example, New Mexico represented by Pete here, California and Florida. But we have some very sophisticated States that have long track records of innovative finance and are using those tools well.

We have 17 States that we understand are statutorily barred from using debt finance. So when it comes to enhancing project finance, we have some change that also needs to take place at the State level so they can put to work GARVEEs and some of the

other excellent techniques that you have approved over the last 6 years.

Senator JEFFORDS. A major piece of your testimony centers on the creation of a Transportation Finance Corporation. Under your proposal, the TFC would issue tax credit bonds. We have heard testimony from GAO that these instruments are the most costly long-term to the Federal Government. Why does AASHTO consider this to be the most appropriate bonding mechanism for the Federal aid program?

Mr. HORSLEY. Well, Mr. Chairman, we are looking for the art of the possible. When we tried to put together a vehicle that, as Pete was describing, could leverage revenues that are currently available to achieve the funding targets that we are seeking for fiscal years 2004 to 2009, we looked at several options.

We looked at whether municipal bonds issued at the State level would work, and concluded they would not because so many States have obstacles, either statutory or constitutional, to the issuance of debt and the utilization of GARVEEs in some of the current techniques, so we figured that that would not extend universal help to all 50 States.

We looked at the utilization of municipal bonds at the Federal level and figured that would compete directly with Treasury's, so that was not as good a vehicle. We then looked at the appeal of the tax credit bonds. It was currently pending in RAIL-21 as a vehicle for funding high-speed rail and had been used previously to fund schools through so-called QSABs.

But our conclusion was that the TFC was the most efficient, most viable method that would also score well under Federal scoring rules and just in practical terms, would get us, with current revenues or revenues enhanced with indexing, to the funding targets that States feel are essential, which is over \$40 billion for highways and over \$10 billion for transit.

Senator JEFFORDS. Does it make sense to issue bonds to support the mainline work of State DOTs, namely system preservation? Would it not be more appropriate to reserve debt financing for capital improvements, and particularly for those projects with associated revenue streams?

Mr. HORSLEY. Mr. Chairman, the Transportation Finance Corporation funding, that we are talking about, we classify as program finance, which would then be available to States to use for all of those purposes.

But we are looking for a near-term practical solution that gives you a measure you can pass with bipartisan support to boost funding for the next cycle to the funding levels we are after.

When it comes to the use of the issuance of municipal bond debt at the State level, I think each State has to make a judgment whether they issue long-term debt, for long-term purposes, such as schools, water and sewer plants, and most hospitals.

Almost every other area of public infrastructure is financed through debt. We think that transportation has been slower than those other entities to come to the table and use debt finance for long-term infrastructure. But we think the time has come.

As you have from both of these panels, the market is there and the transportation agencies are there and are utilizing debt finance

on an increasing basis. But the one differentiation I wanted to make was between the program finance, which would flow out to States for utilization as if it were cash over the next 6 years, and then Pete could leverage it as he saw fit through further leverage through GARVEEs and other means, as opposed to project finance, which we also support.

Senator JEFFORDS. Mr. Carey, as I mentioned in my opening remarks, I have a vision that investment in U.S. transportation infrastructure would become a component of every fund manager's portfolio. Based on your experience, what measures should Congress consider to expand private sector investment to assist in making transportation a solid investment choice?

Mr. CAREY. I think it is a focus on the previously stated "unsentimental characteristics" in terms of maintaining predictability and Federal program consistency in the introduction of new instruments. Also, to provide an opportunity for market rate investment returns on transportation project finance.

Also, as has been described in some of the proposals today, an opportunity to look at new taxable instruments, as well as variations on existing tax-exempt instruments, to broaden the existing capital markets participation in transportation finance.

I have to stress, however, that the municipal markets in the United States are unique in the world. These markets are incredibly deep, conservative, and provide guidance for Federal credit assistance and other initiatives on the part of the Federal Government under TIFIA.

Also, these markets provide a lot of examples that have been adopted for transportation "innovative finance" over the last 8 years. They are incredibly easy for States and local governments to access, which is not the case in the taxable markets or in foreign government markets.

Senator JEFFORDS. Well, thank you very much, all of you. I find that you have done such a wonderful job, I am not even going to ask you the final question I had because you have already answered it with all of your testimony. So, you have a grade A+ for your participation today.

[Laughter.]

I would like you to know that.

But we will also reserve the right to continue to hound you until such time as we come through with a perfect solution. Thank you very much. That goes for both panels. This has been a very excellent hearing. I look forward to working with you as we continue forward to give our people the best advantages we can to make this the best transportation bill that ever occurred. Thank you very much.

[Whereupon, at 11:58 a.m. the hearing was concluded.]

[Additional statements submitted for the record follow:]

STATEMENT OF SENATOR JON S. CORZINE, U.S. SENATOR FROM THE STATE OF NEW JERSEY

Thank you, Chairman Jeffords and Chairman Baucus, for holding this joint hearing on the success we have had on expanding the reach of the highway trust fund through innovative financing and how we can continue that success in the reauthorization of TEA-21. I look forward to hearing from our witnesses.

Chairman Jeffords and Baucus, it is clear that we need to consider alternative means to finance our important highway and mass transit projects. AASHTO estimates that the annual level of investment needed to maintain current conditions and performance of our highway systems is \$92 billion. For mass transit, the amount is \$19 billion. We are falling far short of this under the authorized amounts of TEA-21. To get even close, we need to look at all sources of funding, including financing.

Congress enacted financing provisions in TEA-21. Under the "Transportation Infrastructure Finance and Innovation Act" (TIFEA), the Department of Transportation may provide secured loans, lines of credit and loan guarantees to public and private sponsors of eligible surface transportation projects. \$530 million was authorized for this program.

Chairman Jeffords and Baucus, we need to look at what good has been done under TIFEA, what needs to be changed, and what can be done in addition to TIFEA. I look forward to working with you both to explore ways to do this.

STATEMENT OF DAVID SELTZER, DISTINGUISHED PRACTITIONER, THE NATIONAL CENTER FOR INNOVATIONS IN PUBLIC FINANCE, UNIVERSITY OF SOUTHERN CALIFORNIA

A FEDERAL POLICY COMPARATOR FOR PUTTING "INNOVATIVE FINANCE" IN CONTEXT

Good morning, ladies and gentlemen. My name is David Seltzer, and I am a principal at Mercator Advisors, LLC, a consulting firm that advises public, private and nonprofit organizations on infrastructure financing issues. I also am affiliated with The University of Southern California's National Center for Innovations in Public Finance. The National Center, established 2 years ago, undertakes research and helps provide mid-career professional training in the field of infrastructure finance, including the growing use of public-private partnerships for project delivery. I would like to submit for the record a copy of a report USC published last year on California's 10-year experience with Innovations in Public Finance, which may prove informative to your Committees.

Previously, I had the privilege of serving as Capital Markets Advisor for 3 years at the U.S. Department of Transportation during TEA-21's authorization, and before I that spent over 20 years assembling bond issues for transportation and other public agencies as an investment banker. So having worked in the public and private sectors, I have clearly violated both ends of the timeless dictum of "neither a borrower nor a lender be."

You will be hearing testimony this morning from a distinguished array of Federal, State, local and private sector experts in connection with new financing initiatives for reauthorization. Since many of the new ideas draw upon tax incentives as well as other Federal policy tools, I commend you on making this is a joint hearing of both the tax writing and surface transportation authorizing committees.

I found when in Federal service that the wide array of financial tools, techniques and even terminology can be bewildering. If I may, I'd like to put on my academic hat for a couple of minutes and try to present an analytic framework that may be helpful in comparing so-called "Innovative Finance" options.

The term "innovative finance" in Federal transportation parlance encompasses not only new financing techniques such as State Infrastructure Banks and TIFIA credit support, but also new approaches in the areas of project delivery, asset management, and service operations. In many cases, the techniques involve some form of public and private sector partnering. Private participation is seen as offering the potential to transfer risks, achieve production or operating efficiencies, and attract additional capital.

In order to systematically analyze the cost-and policy-effectiveness of an innovative finance proposal, I believe it would be useful to employ a "Federal Policy Comparator." A comparator is a scientific instrument used for measuring the features of different objects. In much the same way, it should be possible to compare various innovative finance proposals within an analytic framework to determine which proposals would be most effective.

The Federal Policy Comparator would seek answers to three central questions:

1. *Which Federal Policy Incentives are most suitable to attaining the proposal's objectives?*

2. *Does the proposal achieve balance among Sponsors, Investors and Policymakers?*

And

3. *What is the Budgetary Treatment of the proposal?*

1. Which Federal Policy Incentives are Most Suitable? Aside from conventional grants, the Federal Government has available to it three major types of incentives it can use to stimulate capital investment:

- Regulatory Incentives make existing programs and tools more flexible, in order to expand project resources or accelerate project delivery. (GARVEE Bonds are one such example, in that they broadened allowable uses for grants to include paying debt service on bond issues that fund eligible projects. Other regulatory reforms include design-build contracting, in-kind match and environmental streamlining.)

- Tax Incentives involve modifying the Internal Revenue Code to attract investors into transportation projects. (Examples include private activity bonds, tax credit bonds, and tax-oriented leasing.)

- Credit Incentives provide Federal assistance in the form of Federal loans or loan guarantees to reduce the cost of financing and fill capital gaps. (Examples include Federal credit instruments provided through TIFIA and the Railroad Rehabilitation and Improvement Financing (RRIF) program.)

Generally, there is a tradeoff between the budgetary cost of the incentive and its degree of effectiveness in making the desired capital investment feasible. For instance, many regulatory reforms have little or no budgetary cost, but they also generally provide only very incremental assistance in advancing projects. Tax measures typically are a “helpful but not sufficient” pre-condition for investment; the project must be on the margin of viability to benefit from them. Credit assistance can fill funding gaps and attract co-investment, but its uncertain cost depends on risk factors and interest rate subsidies. For instance, a complex and capital-intensive initiative such as Maglev may confer significant mobility, environmental and technology benefits. However, it also may well require deeper tax and/or credit subsidies in order to bring projects to fruition than that afforded by an incentive such as private activity bond eligibility.

2. Does the Proposal Achieve Balance Among Sponsors, Investors and Policymakers? To be successful, each innovative financing initiative should be designed to meet the requirements of three distinct groups of stakeholders. First, the proposal must be attractive to project sponsors—the public or private entity responsible for delivering the project. Attractiveness to the project sponsor can be measured in terms of its cost-effectiveness, flexibility, and ease of implementation. Second, the proposal must make sense to investors—offering them a competitive risk-adjusted rate of return. Capital is notoriously unsentimental, and the innovative finance tool must compete for investor demand against other investment products in the marketplace. And finally, the concept must make sense to Federal policymakers. This entails not only achieving public policy objectives but also being affordable in terms of budgetary cost. These three groups—project sponsors, investors and policymakers—can be thought of as the legs of a three-legged stool. If any one leg of the stool has shortcomings, the proposal will wobble, and probably not be supportable.

For example, dating back to the 1993 Federal Infrastructure Investment Commission, there has been a wide-stated interest in trying to voluntarily attract pension fund capital into the infrastructure sector. Public, union and corporate plans represent over \$3.6 trillion of assets, yet they have virtually no U.S. transportation projects in their portfolios. Why? Because the dominant financing vehicle to date has been tax-exempt municipal bonds. While the tax-exempt market will continue to be an absolutely critical component of infrastructure financing, pension funds, as tax-exempt entities, place no value on the tax-exemption. Pension funds gladly would purchase infrastructure debt if it were offered at higher taxable yields, but that has limited appeal for the project sponsors who can access the municipal market. Consequently, the three-legged stool is uneven. (I note that various proposals have been introduced recently to create a “win-win” security that is both cost-effective for borrowers and competitively priced for pension fund lenders—while at the same time satisfying Federal policy drivers.)

3. Finally, what is the Budgetary Treatment of the proposal? Efficient markets rely upon transparent pricing signals to function properly. However, oftentimes when Federal proposals are being developed, the key pricing information—budget scoring—is at best translucent, if not completely opaque. It seems it is the mysterious scoring of a proposal, and not its policy effectiveness, that too frequently drives the ultimate policy decision—perhaps a case of the “tail wagging the dog.” Better information on budgetary costs earlier on in the process would benefit the development and evaluation of alternative policy options.

Unlike corporate and State and local entities, the Federal Government makes no budgetary distinction between current period operating outlays and long-term capital investments. Nor does it distinguish between full faith and credit general obligations and limited special revenue pledges. From the perspective of infrastructure

advocates, this is both inequitable and inefficient: Inequitable in that costs are not shared by future beneficiaries, and inefficient in that there is a bias toward considering those proposals that have the lowest front-end costs, rather than looking at cost-effectiveness over the long-term.

Some Federal innovative finance concepts attempt to overcome this problem by drawing upon either credit reform budgetary rules (a rare case where Federal accounting is on an accrual basis and conforms to best commercial practices) or by utilizing the tax code (where the PAYGO rules recognize tax expenditures on an annual basis).

While some may consider these tools to be unnecessarily complicated attempts to circumnavigate cash-based accounting, I believe they offer the benefit of rationalizing the budgetary treatment of capital spending and facilitating sound decisionmaking on Federal infrastructure policy.

In conclusion, I submit that by using this three-part Federal Policy Comparator as an analytic framework, policymakers can more systematically compare the budgetary cost with the policy effectiveness of proposals. It would allow comparisons of initiatives as varied as private activity bonds for intermodal facilities, shadow tolling for highways, national or regional loan revolving funds for freight rail, tax credit bonds for high-speed rail, and reinsurance for long-term vendor warranties. By way of illustration, I am including as an attachment a pro-forma Federal Policy Comparator analysis of four current or proposed Federal innovative finance tools for surface transportation—GARVEE Bonds, TIFIA Instruments, Private Activity Bonds and Tax Credit Bonds.

Thank you very much for your time. I would be happy to answer any questions you might have.

ATTACHMENTS

APPENDIX A. FEDERAL POLICY COMPARATOR POWERPOINT SLIDES



Using a Federal Policy Comparator to put "Innovative Finance" in Context

Joint Committee Hearing on Innovative Finance

Senate Committee on Environment and Public Works
Senate Committee on Finance

September 25, 2002

*David Seltzer, Distinguished Practitioner
National Center for Innovations in Public Finance
University of Southern California*

Four Features of "Innovative Finance" Tools



USC / National Center for Innovations in Public Finance

Balancing the Interests of Three Key Stakeholder Perspectives when Designing Innovative Finance Tools



USC / National Center for Innovations in Public Finance



Project Sponsor Drivers



- What is the effective financing cost (IRR)?
- How high is the annual payment factor?
- Is there a direct or contingent financial liability to the sponsor's balance sheet?
- What is the book and legal accounting treatment (e.g. approval requirements, debt ceilings)?
- How difficult is it to implement?

USC / National Center for Innovations in Public Finance



Investor Decision Drivers



- Is the risk-adjusted rate of return competitive?
- Is there a secondary market (liquidity)?
- Are there other investment risks (tax compliance, call risk, etc.)?
- Will it help diversify portfolio exposure?
- Are there any other strategic reasons for investing?

USC / National Center for Innovations in Public Finance



Federal Policy Drivers

- † What is the budgetary cost?
- † Is the finance tool cost-effective (how much leveraging)?
- † What is the overall economic return (benefit/cost ratio)?
- † Does it support federal policy objectives (e.g. access, mobility, safety through better management, private participation, project acceleration)?



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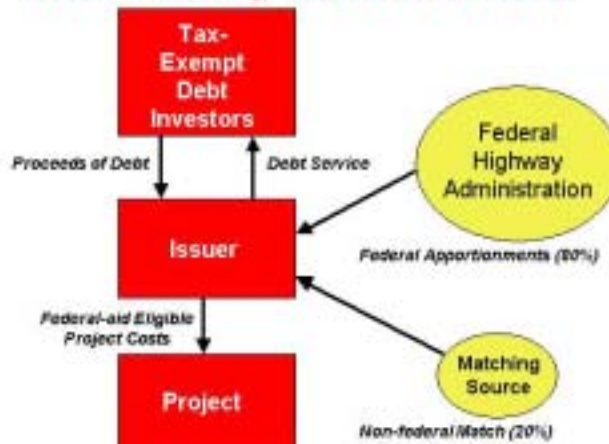


1. New Sources of Debt Repayment: GARVEE Bonds (23 U.S.C. 122)

- † State issues tax-exempt bonds to fund federal share (e.g. 80%) of Federal-aid eligible project costs.
- † Principal and interest are repayable from future years' anticipated FHWA apportionments.
- † Bonds may stand alone or be backed by the state.
- † State must meet match on a present-value basis.

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Flow Chart of GARVEE Bonds



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Project Sponsor Pros and Cons of GARVEE Bonds

Advantages


- + Accelerates non-revenue projects (avoided costs and accelerated benefits).
- + Avoids having one large "pay-as-you-go" project displace numerous small ones.
- + Promotes efficient resource allocation by matching term of payments with life of asset.
- + Protects the state's general credit rating (if stand-alone).



Disadvantages

- + Reduces out-year capacity / flexibility by consuming future years' grants.
- + If stand-alone, may entail slightly higher interest cost than G.O. or State Highway Fund backed debt.
- + State may need to obtain legislative authority or voter approval.
- + State must demonstrate that acceleration benefits outweigh financing costs.

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Investor Pros and Cons of GARVEE Bonds

Advantages



Disadvantages

- | | |
|---|---|
| <ul style="list-style-type: none"> + Mid-investment grade ratings reflect adequate security. + Growing number of states issuing GARVEEs builds political constituency for continuing the Federal-aid program. + Direct assignment of grants to trustee reduces risk. | <ul style="list-style-type: none"> + No assurance that the Federal-aid program will be reauthorized over the life of the bonds (no federal guarantee of payment). + Bonds may be non-recourse to the issuer (no state back-stop or security interest in the facility being financed). |
|---|---|

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Federal Policy Pros and Cons of GARVEE Bonds

Advantages



Disadvantages

- | | |
|--|---|
| <ul style="list-style-type: none"> + Simple "program" with little additional federal administration. + As a regulatory / eligibility initiative, avoids explicit budget scoring. + Consistent with efficient / equitable pay-as-you-use funding strategy that accelerates project benefits. | <ul style="list-style-type: none"> + Some policymakers see tax-exempt bonds as an inefficient subsidy, since the federal revenue loss exceeds the interest savings benefit to the borrower/issuer. + GARVEE projects are still funded mostly (e.g. 80%) by the federal government (limited leveraging with non-federal funds). + Use of GARVEEs slightly increases the Federal-aid program spend-out rate. |
|--|---|

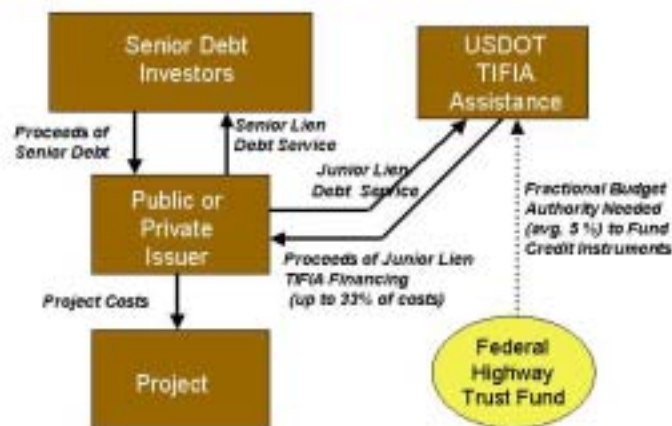
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2. New Sources of Investment Capital: TIFIA Instruments (23 U.S.C. 181-189)

- + Direct federal credit assistance in the form of loans, loan guarantees and lines of credit.
- + Designed to provide supplemental and subordinate capital for large project financings.
- + Twin-test volume cap of the lesser of \$10.6 billion in credit authority or \$530 million in budget authority.
- + Limited to 33% of eligible project costs.
- + Project must cost \$100 million (or 50% of state's apportionments).
- + Project's senior debt must be investment grade ("BBB-" or higher).

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Flow Chart of TIFIA Assistance



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Project Sponsor Pros and Cons of TIFIA

Advantages



Disadvantages

- + Source of "patient capital" for large projects.
- + Flexible payment structures, including deferrals and prepayments.
- + TIFIA lending rate (U.S. Treasuries) is competitive with tax-exempt borrowing rates for weaker (low-rated) credits.
- + Reduced transaction fees and no credit facility fees.
- + Limited to 33% of project costs.
- + Direct loans may not be attractive for stronger (high-rated) projects with access to the tax-exempt market.
- + TIFIA makes the entire project subject to federal rules, including NEPA.

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Investor Pros and Cons of TIFIA

Advantages



Disadvantages

- + Direct loan strengthens senior bondholders' security by shifting up to 33% of borrowings to a junior position.
- + Loan guarantee secures bondholders with pledge of the U.S. government.
- + Line of credit provides supplemental capital to mitigate revenue "ramp-up" risk.
- + Co-investment by federal government indicates public sector commitment to and due diligence on the project.
- + For weaker (low-rated) projects, the "springing lien" may erode the functional subordination of TIFIA assistance.
- + Co-investment by the federal government does not imply any U.S. backing of the non-TIFIA debt (TIFIA assistance mitigates but does not eliminate project financing risks).

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Federal Policy Pros and Cons of TIFIA


Advantages



Disadvantages

- | | |
|---|--|
| <ul style="list-style-type: none"> + Substantial leverage both internally (fractional risk-scoring) and externally (federal share 33% or less). + Costs only 5 cents per dollar lent, on average. + Substantial co-investment by private sector helps ensure fiscal discipline. + Investment grade requirement for senior debt limits federal exposure. + Facilitates large project financings with significant public benefits. | <ul style="list-style-type: none"> + Federal government generally is opposed to taking a subordinate lien position. + TIFIA assistance for non-project financings may displace rather than induce capital markets participation. + "Procrustes' Bed" syndrome: credit applicants are either too risky or too well off, meaning program assistance is either inadvisable or unnecessary! |
|---|--|

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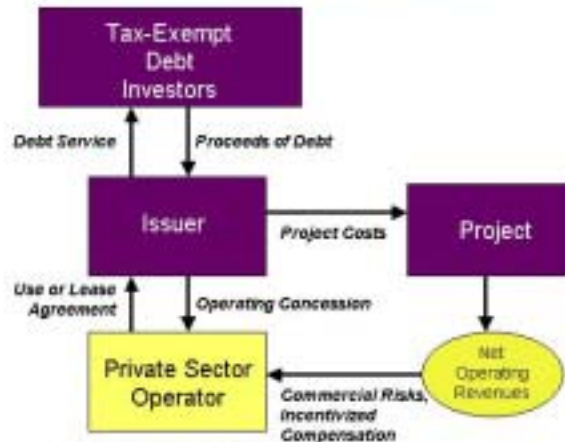


3. New Methods of Project Delivery: Private Activity Bonds

- + Proposed tax code change (S. 870 – The Multimodal Transportation Financing Act, or "Multitrans").
- + Authorizes certain highway, transit, rail and intermodal projects with ongoing private participation to issue tax-exempt private activity bonds (exempt from volume caps).
- + Allows for-profit companies to share in commercial risks and rewards of projects through long-term management contracts.
- + Permits 2 advance refundings for revenue bond-financed projects (vs. one or none under current law).

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Flow Chart of Private Activity Bonds



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Project Sponsor Pros and Cons of Private Activity Bonds

Advantages




- + Tax-exempt debt is cheaper (20-25% interest savings in p.v. terms).
- + Broader universe of investors in the tax-exempt market who understand infrastructure projects.
- + Familiar funding mechanism to most state and local governments.
- + Private participation in development and/or operation aligns motives and reduces costs and risks.

Disadvantages

- + Must adhere to IRS requirements concerning investment yields, permitted uses, etc.
- + May not be a deep enough subsidy in and of itself to advance larger, more complex projects.

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Investor Pros and Cons of Private Activity Bonds

Advantages




- + Slightly higher yield (approx. 0.10%) due to the Alternative Minimum Tax.
- + Reassuring participation of the government in the project approval process through issuer conduit, franchise award, etc.
- + Alignment of interests between private developer / operator and investors.
- + Potential co-investment by vendors and other project participants.

Disadvantages

- + Bonds likely to be non-recourse to the issuer (no "deep pocket").
- + Perception of riskier tax status than for governmental purpose bonds.

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Federal Policy Pros and Cons of Private Activity Bonds

Advantages



- + Encourages private investment (and associated benefits / efficiencies) in public infrastructure with little administrative cost.
- + Levels the playing field by providing the same tax incentives for all modes of transportation.
- + Budget scoring *should* be minimal, since much of the financing activity should be a substitution for governmental purpose bonds.

Disadvantages

- + Some policymakers see tax-exempt bonds as an inefficient subsidy, since the federal revenue loss exceeds the interest savings benefit to the borrower/issuer.
- + Despite the likely "substitution effect," significant tax expenditures are scored against such proposals (up to \$18m per \$100m of bonds over 10 years).

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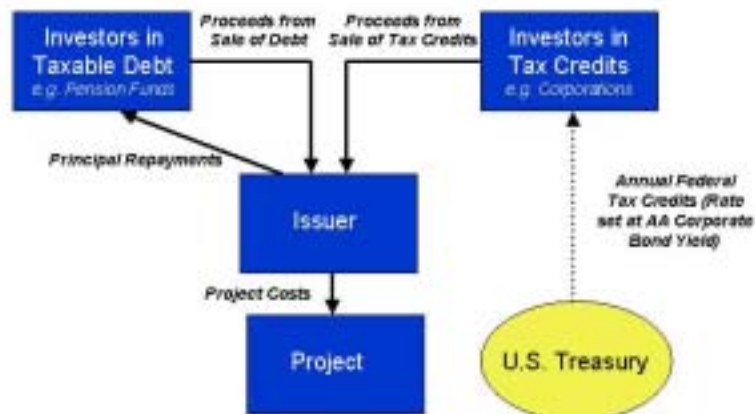
4. New Types of Financial Return: Tax Credit Bonds

- † Proposed tax code change (S. 250 – The High-Speed Rail Investment Act of 2001) to provide annual federal tax credits to bond purchasers.
- † Investors would receive annual tax credits in lieu of cash interest payments from the issuer.
- † Tax credit would be set at mid investment grade corporate bond yield (e.g. 6.50%) and would be taxable.

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Flow Chart of Tax Credit Bonds

(assuming interest is split from principal)



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Project Sponsor Pros and Cons of Tax Credit Bonds

Advantages



Disadvantages

- | | |
|--|--|
| <ul style="list-style-type: none"> + 0% effective cost of borrowing represents approximate 50% total savings in p.v. terms. + Potential for accessing new category of institutional investors for infrastructure projects – Pension Funds. + Doesn't compete with issuer's traditional investor base. | <ul style="list-style-type: none"> + Limited investor familiarity may hinder marketability of bonds. + Program volume is controlled by Congress, rather than issuers (as with tax-exempt bonds). |
|--|--|

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Investor Pros and Cons of Tax Credit Bonds

Advantages



Disadvantages

- | | |
|--|---|
| <ul style="list-style-type: none"> + Should be of reasonably high credit quality, since there is no risk of payment default on the "interest" portion (the tax credit). + If principal de-coupled from tax credits, opportunity for pension funds to diversify into the infrastructure sector. | <ul style="list-style-type: none"> + Non-cash nature of the interest component limits marketability. + New instrument with limited volume lacks an active secondary market, if investor needs to sell due to change in its tax position. + May face tax risk, if issuer fails to meet federal requirements of the program. |
|--|---|

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Federal Policy Pros and Cons of Tax Credit Bonds

Advantages



Disadvantages

- + Little administrative cost compared to grant and credit programs.
 - + Some policymakers believe tax credit bonds are a more efficient subsidy than tax-exempt bonds – borrower gets 100% of tax benefit.
 - + May reduce muni bond tax expenditures, to the extent it substitutes for issuance of tax-exempt bonds.
 - + New form of public-private partnership, new source of capital for public infrastructure.
- + Compared to tax-exempt bonds, much deeper subsidy (50% vs. 10% debt service savings to borrower) with higher tax expenditures.
 - + Tax expenditures scored at up to \$46m per \$100m of bonds over 10 years.

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Innovative Finance Comparator

Finance Mechanism (Policy Tool)	Type of Federal Policy Incentive	Key Benefit of IF Tool to Project Sponsor	Cost of Funds to Project Sponsor	Federal Budgetary Cost (per \$100m borrowed)
GARVEE Bonds (20-yr, "A" credit)	Regulatory Reform	Enables States to monetize future Federal grant receivables	4.00%	10 Yr Cash: \$79m 20 Yr PV: \$100m
TIFIA Instruments (25-yr, "BB+" credit)	Federal Credit	Provides supplemental & subordinate capital for large projects	5.00%	10 Yr Cash: \$5m 25 Yr PV: \$5m
Private Activity Bonds (20-yr, "A" credit)	Tax Code Change	Allows projects with private participation to access lower interest rates	4.50%	10 Yr Cash: \$10m 20 Yr PV: \$19m
Tax Credit Bonds (20-yr, "AA" 6.5% (real))	Tax Code Change	Cuts effective financing cost in half by eliminating interest expense	0.00%	10 Yr Cash: \$46m 20 Yr PV: \$57m

APPENDIX B: FINDINGS & RECOMMENDATIONS: A ROUNDTABLE DISCUSSION OF CALIFORNIA'S EXPERIENCE WITH INNOVATIONS IN PUBLIC FINANCE, THE NATIONAL CENTER FOR INNOVATIONS IN PUBLIC FINANCE, UNIVERSITY OF SOUTHERN CALIFORNIA, APRIL, 2001.

[December 13, 2000]

FINDINGS AND RECOMMENDATIONS, REPORT PREPARED BY THE UNIVERSITY OF SOUTHERN CALIFORNIA, NATIONAL CENTER FOR INNOVATIONS IN PUBLIC FINANCE

A ROUNDTABLE DISCUSSION OF CALIFORNIA'S EXPERIENCE WITH INNOVATIONS IN PUBLIC FINANCE: FINDINGS, RECOMMENDATIONS AND PROCEEDINGS: IMPLICATIONS FOR FINANCING OUR NATION'S INFRASTRUCTURE

(Edited by Daniel V. Flanagan, Jr.; Director, David Seltzer, Distinguished Practitioner, USC; Sarah Layton, President, Advancing Infrastructure, LLC)

UNIVERSITY OF SOUTHERN CALIFORNIA,
NATIONAL CENTER FOR INNOVATIONS IN PUBLIC FINANCE,
Los Angeles, CA April 2, 2001.

DEAR FRIENDS: On December 13, 2000, the University of Southern California hosted a Roundtable policy discussion at USC's Sacramento Center entitled "California's Experience with Innovations in Public Finance." The program was sponsored by a grant received from the United States Department of Transportation. The National Center for Innovations in Public Finance, located within USC's School of Policy, Planning & Development, served as the host coordinator.

As the Director of the National Center, it is my pleasure to enclose a summary of Findings, Recommendations and Proceedings elicited from the participants at the Roundtable. Approximately 75 experts, drawn from governmental, academic and business organizations within California and throughout the country, were in attendance.

The National Center for Innovations in Public Finance is dedicated to exploring how new development and financing techniques involving public-private partnerships could contribute to addressing the nation's infrastructure challenges at the national, State and local levels. We believe that many of the ideas and recommendations generated at the Roundtable could serve as important references in future public policy decisions.

For those interested in a more complete record of proceedings, a videotape of the conference as well as a summary of each speaker's remarks may be obtained through the National Center. We would welcome any comments you might have on the Roundtable. I would like to thank the entire faculty and staff at the USC Sacramento Center for their support of this valuable effort.

Sincerely,

DANIEL V. FLANAGAN, JR., *Director*
National Center for Innovations in Public Finance

UNIVERSITY OF SOUTHERN CALIFORNIA

The USC School of Policy, Planning, and Development (SPPD) builds on the strengths of two premier professional schools to address the dynamic intersects of the public, private and nonprofit sectors. Launched on July 1, 1998, the new School combined the former nationally ranked schools of Public Administration and Urban Planning and Development and offers degrees in five core areas—public policy, planning, public administration, health administration and real estate development.

The School's primary mission is to cultivate leaders—the ethical men and women who will design and build our communities, reshape our governmental structures and processes and rethink the relationship between government, citizens and business. We accomplish this in three important ways: teaching that prepares students to lead, shape and manage in the evolving new 21st century world order; research that takes advantage of and contributes to Southern California, the State, the Nation and the world; and action that yields insights and offers solutions to pressing societal problems.

The USC Sacramento Center, located at 1800 I Street, Sacramento, offers Master programs in Public Administration, Health Administration, and Planning and Development. The Center also offers leadership training programs. For more information about the Center and additional programs, please visit www.usc.edu/sacto.

The National Center for Innovations in Public Finance was established in 1999 to promote research and instruction in the field of infrastructure finance. Housed within USC's School of Policy, Planning and Development, the National Center draws upon USC academic faculty and distinguished practitioners from the public and private sectors to teach courses, conduct research projects and provide advice on key public policy issues. The Founder and Executive Director of the National Center is Daniel V. Flanagan, Jr. who has been centrally involved in framing national policy in the areas of deregulation of utilities and in transportation finance.

This report was prepared as part of a project sponsored by the University of Southern California with funding from the Federal Highway Administration, under the terms of a cooperative agreement. The views expressed herein are those of the conference speakers, participants and authors of this report and do not necessarily represent the views of the University of Southern California or the Federal Highway Administration.

INTRODUCTION

Ten years have passed since the first toll road franchises were awarded by the California Department of Transportation in December 1990, under Assembly Bill No. 680 (A.B. 680). To date, only one of the four projects selected through that process—the SR 91 Express toll lanes—actually has been built and is operational. Yet this landmark legislation and other initiatives across the State for highways, seaports, transit, intercity rail, and airports have made California the nation's leading incubator for using public-private partnerships to develop, finance and manage transportation facilities and services.

The California experiment with public-private partnerships has seen a number of new approaches used to deliver and manage transportation projects. In the highway sector, in addition to the SR 91 project, three major new toll roads have combined design-build development teams, a project-finance approach, and Federal credit assistance: a second AB 680 franchise—the SR 125 toll road south of San Diego, which is scheduled to come to market during 2001—as well as two new toll roads developed in the mid-1990's by the Orange County Transportation Corridor Agencies.

In the transit sector, major new capital investments such as the BART Airport Extension and the recently awarded Los Angeles-Pasadena light rail line have drawn upon novel design-build procurement techniques. The Alameda Corridor freight rail project represents a unique joint venture between two major rail carriers, the Ports of Long Beach and Los Angeles, and numerous other local, State and Federal stakeholders. Several new private sector initiatives are being pursued across the State in the aviation sector.

Outside of California, one sees unmistakable evidence both in other States and at the Federal level of greater willingness to experiment with innovative public-private approaches to address infrastructure investment needs. Taken together, these developments indicate that the evolution—if not the revolution—is well underway in how large infrastructure investments are being developed and financed.

With a decade's experience in California, it is timely to look back and candidly assess the strengths and weaknesses of using public-private partnerships for major transportation projects.

Among the questions that need to be explored are:

- What kinds of projects are most suitable for public-private partnerships?
- Are public policy objectives adequately being served through these public-private approaches?
- Have there been demonstrable advantages in terms of expedited project completion, greater cost-effectiveness, or reduced public sector risk?
- What are the appropriate roles for the public and private sectors at various stages of each project's development?
- Does the current development process properly balance social objectives such as environmental considerations and fair labor practices with capital investment needs?
- Which institutional models and capital structures appear to work best in terms of both economic efficiency and social equity?

The lessons learned from California's experience—as well as that of other States and from recent Federal activities—could provide valuable insights into what new policies to consider for the upcoming State of California budget considerations and for the Federal reauthorization of the TEA-21 transportation bill in 2003.

The State Economy

California's economy—really a series of major regional sub-economies—has changed dramatically in recent years. The State domestic product is now of similar magnitude to the gross national products of major Western European trading partners such as Italy, the United Kingdom, and France. Moreover, California has been the epicenter of the e-economy. And yet, as profound as the emergence of e-commerce has been, the “new” economy is very much dependent on the infrastructure of the “old”; businesses are increasingly reliant upon timely delivery of goods and services. At the same time, the mobility of e-business, which allows employers to locate their places of employment “virtually” anywhere, makes good transportation links critical if the State is to remain an attractive venue for these high value enterprises. The State's population is expected to grow by another 10 million residents by 2020, placing further burdens on aging transport infrastructure systems to move people and goods safely, quickly and cost-effectively.

Past State Investment Policy

Investment in transportation infrastructure within the State has not kept pace with either the growth of population or the increase in travel demand. California's per capita investment in transport has declined by two-thirds in real terms since the 1960's. Forty years ago, transportation spending represented 23 percent of the State budget; today, it comprises about 6 percent. One of the major reasons for underinvestment has been the fiscal constraints of the tax limitation measures enacted in the 1960's and 1970's. The current electricity crisis has also added a new uncertainty as to budgeting for transportation.

Presently, there is no exclusive dedicated State funding source for transportation, so it has had to compete with other governmental and social service programs for annual funding through the political process. Because of the lengthy lead-time required to develop major infrastructure projects, such investments are dependent upon stable and reliable long-term funding commitments. And, as with the electricity sector, new capital formation has been curtailed because of increased concerns about environmental issues. As a result, transportation services have deteriorated dramatically. For example, the time lost by the average motorist due to freeway delays has doubled over the last decade. Prospects for the future are problematic: Many of the county local option sales taxes adopted in the 1980's for transportation funding expire over the next several years, yet their extension by voters is uncertain.

Recent Initiatives

The State has taken several positive steps in recent months to address these concerns. The Governor's Commission on Building for the 21st Century will soon publish the results of its 18month survey of California's infrastructure investment needs. The final report is expected to cite that California today has over \$100 billion in unmet transportation investment needs.

Even prior to the completion of the Commission's report, the State had started leveraging its available funding through mechanisms such as the California Infrastructure and Economic Development Bank and Grant Anticipation Revenue Vehicles (GARVEEs). The Bank is a new \$475 million State loan revolving fund designed to make loans to small and mid-sized transportation and other infrastructure projects. GARVEE Bonds, which were authorized by the State legislature last year, are a form of non-tax backed borrowing in anticipation of future year's grant assistance from the Federal Department of Transportation. Another important advance is the enactment of bill A.B. 1473, under which the State would begin preparing annual Five-year Capital Facilities Plans to better integrate capital planning and financial policy decisions.

Yet these measures by themselves will not be sufficient to overcome past years' underinvestment. Simply stated, more resources must be identified, collected and committed. And the State needs to consider how best to leverage these finite resources most effectively. California's recent electricity crisis has underscored the importance of a comprehensive State strategy that responds to market signals as conveyed through the pricing mechanism, to ensure a proper balance between supply and demand. Public-private partnerships (PPP's) can play a key role in helping solve the problem—especially for the larger, more complicated projects.

Issues to be Addressed

Conferees identified the following issues currently confronting State policymakers:

- There is a clear need for better planning of capital investments—specifically, more closely relating State transportation spending policy to State land use and housing policy. The State should integrate its planning and funding strategies for water systems, drainage, waste management and public buildings with its transportation investment decisions.

- The current allocation formula under S.B. 45 distributes 75 percent of State transportation funding to the metropolitan planning organizations and retains 25 percent to be administered at the State level. This regional emphasis, while valuable in vesting investment decision authority with metropolitan organizations, makes it difficult to address statewide transportation issues on a comprehensive and systematic basis. For example, it is difficult to coordinate actions for inter-regional investments such as intercity high-speed rail or regional airport systems to relieve congestion at heavily used facilities.

As zoning is a local matter, the MPO's cannot control land use policy decisions at the municipal level. Fractionalized zoning policy at the local level often leads to a disconnect between infrastructure planning efforts and actual development activities.

- The plan of finance for new capital projects should explicitly identify not only how to finance upfront acquisition costs but also how to pay yearly operating and maintenance costs over the projects' useful lives. The financial interdependence between asset acquisition and asset maintenance must be firmly established at the outset. The initial capital investment decision should be based upon Life-Cycle Costing, taking into account the best value for money over the long-term economic life of the asset.

- To the extent tax sources fall short, the State should explore user fees, since they send a clear market signal about consumer demand for goods and services. To the extent there are "free" transportation alternatives (such as a freeway with tolled express lanes), the user charge allows individuals to make an economic decision as to whether the timesavings and convenience of the tolled facility are worth the cost. User charges also free up limited grant funds for those projects that are important for reasons of social equity or public policy, but are not financially self-sustaining. By freeing up capacity on non-tolled facilities, user charges actually may benefit those who are not in a position to pay. Ideally, these charges would reflect the user's actual consumption of transportation services, such as fees based on weight-distance or vehicle miles traveled. The challenge in establishing user charges is discerning the benefits that accrue to society as a whole from the benefits accruing to the individual user or some narrower group of beneficiaries.

- In addition to direct user charges, indirect user charges such as supplemental gas taxes, capacity charges on Alternative Fuel Vehicles, and the extension of expiring local option sales taxes also deserve consideration. Once the underlying funding sources are in place, policymakers can select which tactical financing techniques would be most effective.

POLICY DRIVER II: DEFINING ROLES AND RESPONSIBILITIES IN A PUBLIC-PRIVATE PARTNERSHIP (PPP)

For the overwhelming majority of transportation projects and services, traditional governmental ownership, operation and financing will continue to be the most appropriate approach. However for some types of projects—especially those that are large or complex—a joint venture between the public and private sectors may prove advantageous. The non-profit sector may also play a significant role in the institutional structure.

Reasons to Consider PPP's

State and local governments around the country are turning to joint ventures with private sector organizations to meet their capital needs. They are doing so for a variety of reasons, including:

- **Production Efficiency.** Oftentimes, private firms can build projects faster (if not cheaper), using design-build and other innovative procurement techniques.

- **Operating Efficiency.** Complex projects may be managed more efficiently, due to greater expertise with innovation and technology, the presence of commercial competition, and the incentive of performance-based compensation.

- **Risk Transfer.** Private firms may be willing to assume certain risks from the governmental project sponsor as concerns construction, performance, or demand for the facility. However, the private sector should not be viewed as the ultimate repository for all project risks—only for those exposures which are of a business (as opposed to regulatory or political) nature.

- Access to New Sources of Capital. Private firms may be able to help identify new sources of project revenues that can be monetized. In addition, the private sector partners may be willing to invest directly in projects or draw upon other funding sources not typically employed in conventional municipal financing of projects.
- Simplified Project Management. Out-sourcing responsibilities to third party providers should reduce the governmental unit's need for staffing up during construction and allow the organization to maintain its institutional focus on current operations.

Features that make a Project a Good PPP Candidate The following project characteristics lend themselves to a PPP:

- Size and/or complexity issues, which neither the public nor the private sector could resolve adequately on their own.
- Widely acknowledged need for the project (public acceptance).
- Equilibrium and trust among the various public and private stakeholders in the project. Central to achieving this goal is obtaining financial commitments from both public and private participants, to align their interests (i.e., ensure that both public and private participants are "sitting on the same side of the table").
- A governmental sponsor with the policy and legal infrastructure to see the process through.
- Clear demarcation of responsibilities of different parties for securing public approvals, environmental clearances, etc.
- A dependable and bankable revenue stream.
- The "tummy test"—an intangible sense that the project "feels right," being structured as a PPP.

Key Issues Confronting PPP's

While joint ventures can confer substantial benefits, several sensitive public policy issues need to be addressed early on in the project development process:

- Labor Policy. At least for larger capital projects in California, the issue in construction is not labor wage levels, (Davis-Bacon) but labor availability. There is a dearth of qualified workers to build and manage complex projects. Concerns about displacement of governmental workers in PPP's generally can be resolved.
- Unsolicited Proposals. The A.B. 680 program of 1990 has seen one of the four projects built and become operational (SR91 in Orange County). The second project (SR 125 near San Diego) is expected to be financed in spring of 2001. A third (Santa Ana Freeway) is still in the planning stages, and the fourth has been tabled. Each of these projects was identified and advanced by private development teams, not by metropolitan planning organizations (MPO's) or the State. Yet private sector identification and sponsorship of projects is not a problem per se. What is imperative, however, is that the projects be placed on State transportation plans and supported by the host governmental jurisdiction.
- Procurement Rules. In California (as in most States), prevailing law generally does not permit design-build procurement. For the handful of major projects done thus far in California using design-build, either special legislation was required or special legal authority was available. A.B. 680, for example, expressly authorized design-build for its four pilot highway projects. Two measures enacted by the legislature last year, A.B. 958 and A.B. 2296, allow design-build to be used by transit agencies and certain counties for larger projects.

Another approach is to establish a Joint Powers Authority, which can draw upon the inherent powers of one of its sponsoring local governmental units to use design-build, as was the case with the Alameda Corridor freight rail project.

At the Federal level, although TEA-21 has liberalized the procurement rules for federally assisted projects, contractors under the National Environmental Protection Act still are prohibited from having an interest in the ultimate development of a project. This rule generally prevents construction firms that assist projects in their environmental review process from continuing to be involved in design and construction. It results in a loss of continuity and discourages entrepreneurial efforts in the critical developmental phase of potential projects.

- Environmental Risk. Environmental permitting and governmental approvals are inherently political processes. Although private developers can play a valuable role in synthesizing the project design with the environmental review process, they are ill equipped to absorb what fundamentally are non-business risks. Moreover, in contrast to other environmental statutes such as the Clean Air and Clean Water Acts, there is no statute of limitations governing challenges to transportation projects under the National Environmental Protection Act. Unlike a decade ago, developers are now unwilling to assume the financial risk of public approvals in these early stages (as in SR 125).

- **Exit Strategy.** Most of policymakers' efforts thus far on PPP have been focused on developing projects and negotiating entrance strategies for private sector participation. Yet a fundamental requirement for attracting investment capital is liquidity. Insufficient attention has been given to the investor's exit strategy during the life of a franchise, including valuation of the asset or concession. Although there were a number of political issues surrounding the proposed sale of the SR91 franchise, at least part of the controversy was attributable to insufficient local input into evaluating the concession operator's desired exit strategy.

POLICY DRIVER III: SELECTING TOOLS TO GUIDE CAPITAL INVESTMENT

Benefits of Design-Build Procurement

As demonstrated by the two Transportation Corridor Agency toll roads built thus far (total investment of \$3 billion) design-build (vs. traditional design-bid-build) can provide substantial benefits for larger projects:

- Simplified Project Management for the governmental project sponsors;
- Better Cost controls (reduced exposure to cost overruns);
- Faster Completion (a recent university study surveying major capital projects determined on average that design-build leads to 33 percent faster construction completion); and
- Base price of hard costs may be comparable or even slightly higher, but savings on soft costs and the other benefits described above often justify it.

Linkage between Investment and Ongoing Asset Management

The relationship between the initial project investment decision and periodic capital maintenance and renewal must be strengthened to preserve the value of the investment over time. On toll roads with a net revenue pledge, the rate covenant covers both capital recovery and operations and maintenance requirements.

For non-tolled facilities, this full-cost recovery can be achieved through synthetic mechanisms. For example, long-term performance warranties from the constructor can require that assets be maintained at a specified service level in exchange for an up-front or ongoing warranty fee.

Another approach, used in the United Kingdom and elsewhere overseas, involves shadow tolling. Under shadow tolls, an operator is paid a per vehicle fee by the governmental sponsor based on throughput, to build and maintain an asset at a defined level.

GASB Statement 34, going into effect for governmental units July 1, 2001, mandates more complete disclosure of governmental infrastructure assets, including recognition of depreciation expense if asset quality deteriorates. Warranties or shadow tolls would link capital investment with capital renewal, and help ensure that infrastructure assets are adequately maintained—both for accounting and transportation purposes.

Special Purpose Entities

California popularized the concept of creating new Special Purpose Public Agencies (like the Orange County Transportation Corridor Agencies, Alameda Corridor Transportation Authority, and LA-Pasadena Rail Construction Authority) to carry out infrastructure development on a project-finance basis. An alternative approach involves the formation of a special purpose not-for-profit corporation under Internal Revenue Service revenue procedure 63–20. For example, two recently opened several hundred million-dollar toll roads, the Pocahontas Parkway in Virginia and the Southern Connector in South Carolina, utilized 63–20 corporations to develop and finance the facilities. Having a singular mission, these entities bring a special focus to completing the projects.

POLICY DRIVER IV: COMPARING DIFFERENT TRANSACTION TEMPLATES

Institutional Models

There are a variety of organizational forms that can be used to advance infrastructure projects. They can be viewed as stretching along a continuum, ranging at one end as conventional public projects to the other end as fully commercialized facilities. The accompanying diagram illustrates four distinct positions along the spectrum from purely public to purely private. Projects can be categorized in terms of whether public or private parties share in the risks and rewards of development, operation and ownership.

INCREASINGLY PUBLIC—INCREASINGLY PRIVATE

The financing component is a discrete element but also may be classified as being either public or private. Financing is considered to be public if either:

a. the capital funding source for the loan or investment is public tax dollars (e.g. a governmental infrastructure bank, revolving fund or public pension fund capitalized with public funds); or

b. if the loan repayment source is derived from or guaranteed by public tax dollars (sales taxes, State Highway Fund moneys, Federal-aid supported, etc.).

On this basis, a loan funded by a State infrastructure bank, even if the borrower is a corporate entity, would be deemed “public financing.” Likewise, a privately funded loan for a transit project developed and operated by a private consortium but payable from or guaranteed by the State transportation fund, would be considered public financing. On the other hand, a taxable or tax-exempt revenue bond sold into the capital markets and backed by user charges would be deemed “private,” even though the obligations were issued by a public conduit (e.g. Transportation Corridor Agencies, Alameda Corridor). The ultimate determinant is whether public capital is at-risk, either in terms of the initial funding or the ultimate repayment of the obligation.

Matrix of Public-Private Transaction Templates

	Governmental Model	Turnkey Development Model	Warranty/Concession Model	Profit-Sharing Model
Examples of Projects.	LACMTA; Caltrans.	TCA; ACTA; BART Airport; Extn.	Hudson-Bergen; NM44.	Las Vegas Monorail; SR 91, Dulles Greenway
Development	Public	Private	Private	Private
Operation ...	Public	Public	Private	Private
Ownership ...	Public	Public	Public	Private
Financing ...	Public	Public or Private	Public or Private	Private

Models on the left of the table are increasingly public and models on the right are increasingly private.

The four principal financing templates are:

Governmental Model

Starting on the left side of the chart would be governmentally developed, owned and operated projects, using public tax dollars. Examples include Caltrans highway projects or other normal public works spending, either pay-as-you-go or debt financed, with the governmental unit responsible for funding operating and maintenance costs. The vast majority of transportation projects are developed in this fashion.

Turnkey Development Model

Of greater “private” character are turnkey financings, where the projects are developed under a guaranteed maximum price and guaranteed completion date by a private design-build team and then turned over to the governmental sponsor. Because of construction risk transfer, there are financial rewards and penalties to the constructors based upon performance. In some cases, the facilities are financed principally with project-generated revenues (project-financing) such as the San Joaquin Hills and Foothill-Eastern Toll Road projects developed by the Transportation Corridor Agencies in Orange County. In other cases, such as the BART airport extension, the projects are funded conventionally with public grants and local tax dollars.

Warranty/Concession Model

Farther along the spectrum to the right would be projects that are publicly owned, but use private parties not only for development but also for operation/maintenance of the facility. Generally, the compensation is based on a flat fee or a cost-plus basis, rather than a profit-sharing formula based upon the net revenues or patronage volume. The new Hudson-Bergen light rail line in New Jersey falls into this category. Under current tax law, the term and compensation for private management contracts associated with facilities financed with tax-exempt debt is severely constrained, diluting any incentives for superior performance.

Another way to get ongoing private participation without running afoul of the IRS management contract rules is through long-term performance warranties on the physical condition of the infrastructure assets themselves. For example, the New Mexico Corridor 44 road-widening project has entered into a long-term warranty with a private firm for the pavement and bridge structures extending up to 20

years. In both the Hudson-Bergen and the New Mexico 44 projects, the pledged repayment source for debt service is public moneys, not project revenues.

Profit-Sharing Model

Finally, at the far right end are fully commercial projects, involving private development, operation, and even ownership of the facility. Financing sources are largely or entirely project-based revenue streams, rather than public or tax-backed sources. Compensation to the operator is based upon utilization of the facility and/or net income, resulting in performance-based rewards. Major examples of this are the SR91 Express Lanes in Orange County, the Dulles Greenway in Virginia, and the Las Vegas monorail, currently under construction.

No single model or structure can be said to be “the best”; rather, the most suitable model will depend on facts and circumstances surrounding each particular project. Among the factors that will determine which approach is most appropriate are:

- political support for an alternative project delivery method;
- need for project cost and completion date certainty (which is particularly applicable to project financings);
- State law considerations (especially procurement regulations);
- Federal tax code implications (as concerns eligible financing instruments);
- commercial potential of the project, as reflected in capital markets acceptance; and
- degree of risk transfer to the private sector.

As noted above, projects need not be self-liquidating to benefit from a PPP approach. Concession arrangements for subsidized services such as public transport have proven successful overseas because incentivized performance for private operators can produce better service, lower public subsidy, and greater cost transparency. For instance, Melbourne, Australia achieved these enhancements in out-sourcing operations of its commuter rail network.

Nor is a commercial or “privatized” approach incompatible with a cooperative working arrangement with organized labor. In fact, both the management team and the union work force can benefit from entering into a project labor agreement at the outset of the project that squarely addresses prevailing wages, non-disruption of work schedule, and other features that will facilitate the timely, on-budget completion of a high-quality project.

Historically, most transportation projects have been funded either through governmental grants (public equity) or tax-supported municipal bonds (public debt), since these have represented the lowest cost sources of capital. However, there are alternative sources of private sector equity and debt capital that may be drawn upon for infrastructure projects with steady cash-flows linked to economic growth. Low tax bracket institutional investors such as life insurance companies and non-taxable pension funds would benefit from being able to diversify into a new economic sector that presently is absent from their portfolios. Because the major financial vehicle for infrastructure has been tax-exempt bonds, it has not been appropriate for pension funds as tax-exempt entities to purchase such paper when higher-yielding corporate bonds of equal quality are available.

However, several recent developments have lowered the relative funding cost of taxable debt and equity:

- The Federal budget surplus has reduced the supply of Treasury bonds, lowering the benchmark against which taxable paper is priced, relative to municipal bonds.
- Pension funds and insurance companies have gained greater familiarity with project financings, through investing in debt and equity in overseas infrastructure projects and domestic power generation facilities. They are now willing to accept longer term debt obligations with minimal amortization in the early years, cushioning the cash-flow impact on project revenues.
- New Federal programs such as TIFIA (the Transportation Infrastructure Finance and Innovation Act of 1998) provide debt capital on terms which in some cases are even more favorable than those in the municipal bond market. Other proposed legislation such as tax credit bonds would allow de-coupling of the principal from the interest portion, creating a stand-alone taxable debt instrument suitable for retirement funds.
- Finally, even though infrastructure projects are highly capital intensive, cost savings on the operating side from private participation may partially offset the higher capital costs of taxable rate financing.

Taxable Investment Funds. Together, these factors are combining to reduce the disparity in funding cost between the taxable and tax-exempt markets. As a result, project sponsors may now find that it is cost-effective to seek out pension funds and

other taxable market investors to invest equity and debt capital in project financings. As corporate, union and public retirement systems represent \$5 trillion in investment assets, even allocating a small portion of their portfolios to invest in U.S. transportation infrastructure could have significant ramifications. They could invest either directly or through pooled investment accounts similar to mutual funds.

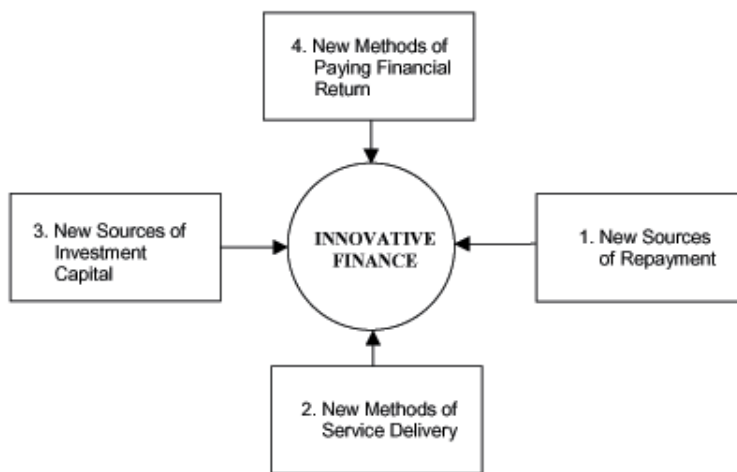
"Innovative Finance" Techniques

Innovative approaches that involve PPP's to develop, operate or own transportation assets will lend themselves toward using innovative financing techniques. "Innovative Finance," while not a panacea, can help address these capital investment needs once the underlying payment source for the project has been identified.

Innovative Finance can be defined as the use of external financing approaches that draw upon at least one of the four following elements:

1. New Sources of Repayment that haven't previously been used to secure external financing.
2. New Methods of Service Delivery that offer development, production or operational efficiencies.
3. New Sources of Investment Capital that broaden the funding alternatives for transportation projects beyond conventional tools.
4. New Methods of Paying Financial Return to investors, that either reduce effective financing cost for the project sponsor or shift risks (such as interest rate and financial risk) to third party investors, or do both.

Diagram of Elements Comprising Innovative Finance



Participants at the Roundtable suggested a number of innovative finance ideas relating to repayment streams, service delivery, funding sources, and investment return:

NEW SOURCES OF REPAYMENT

State & Local Taxes

- Extension of Local Option Sales Tax
- New Tax on Alternative Fuel Vehicles
- Inflation adjusted Gas Tax
- Other User-related fees (e.g. weight-distance)
- Non-user related Taxes (internet/mail order sales tax, property transfer tax, etc.)
- A defined percentage of State General Fund Revenues

Other

- Shared revenue from fiber optics, etc. along State rights-of-way

- Tobacco Funds
- State version of GARVEE Bonds (using counties' share of State Gas tax allocation)
- State-aid Intercept mechanism to credit enhance local bonds
- Development Risk Insurance

New Methods of Service Delivery

- Broaden application of innovative procurement techniques such as design-build.
- Modify transit requirement 13(c) [consent required of DOL and local unions to proposed project labor agreements] to make it easier for transit agencies to outsource existing operations/capital improvements via tendering routes to concessionaires.
- Liberalize the management contract rules or seek tax code change (private activity bonds for highways) to allow performance-based compensation to private operators of toll facilities financed with tax-exempt debt.
- Permit outsourcing of highway maintenance activities or enter into long-term warranties to guarantee defined service standard levels of State highways under GASB Statement 34.
- Change statute of limitations under NEPA for challenges, so that it is consistent with other environmental statutes (e.g. within 60 days from the Record of Decision).

New Sources of Investment Capital

- Public (State and local) Pension Funds and Taft-Hartley (union) Pension Funds, investing either directly or through pooled accounts.
- Leveraged Leasing (domestic and cross-border tax-oriented equity).
- Extend TIFIA beyond 2003.
- Reduce threshold project size below \$100 million for TIFIA assistance, to make it consistent with the lower thresholds in TEA-21 for using design-build (e.g. \$50 million).

New Methods of Paying Financial Return

- Tax Credit bonds (interest paid by U.S. Treasury in the form of a tax credit to the investor).
- Shadow Tolls (per vehicle compensation to private concessionaire).
- Variable Rate bonds for State transportation borrowings to hedge interest rates.

Government Policy Tools

Historically, the public sector has used direct governmental spending to expand transportation capital investment. However, where innovative finance and public-private ventures are involved, it may be possible to generate additional investment through less costly means. To encourage the foregoing innovative finance techniques, the government sector may use these policy tools:

1. Regulatory Incentives-streamlining procedures, removing program restrictions, etc.;
2. Tax Incentives-using the tax code to encourage the free flow of capital into certain desired investment and operational activities; and
3. Credit Incentives-using fractional credit assistance (direct loans or loan guarantees) to leverage a larger multiple of private financing.

Each of the suggestions under the four innovative financing tools may be addressed through regulatory, tax, or credit policy initiatives.

CONCLUSION: ENCOURAGING CONTINUED INNOVATION

The following policy recommendations emerged from the Roundtable discussion:—
Process Streamlining. Process reform was recommended in three areas:

- State procurement practices should be simplified for public-private partnerships;
- Regional financing protocols with Federal agencies need to be supported; and
- Environmental review processes should be consolidated with public agency responsibility.

Environmental Risk. Project-based financings must have time-certainty and cost-discipline to attract private debt and equity capital. Because securing environmental and public permitting approvals is fundamentally a governmental rather than a commercial process, the private sector is not equipped to assume the financial re-

sponsibility for obtaining the environmental record of decision. The time period for challenges to projects' environmental impact statements under NEPA should be made consistent with other environmental statutes.

Co-Investment by Public & Private Sector. User fees can be both an effective and equitable way of generating project-funding streams. However, in most cases, project-generated revenues alone will not be sufficient to fully finance the projects. Some level of public investment will be required, and it needn't take the form of contributed capital. For instance, the Alameda Corridor has four distinct layers of debt investment—first tier capital markets, second tier TIFIA loan, third tier capital markets, and fourth tier port loans—as well as lesser amounts of Federal, State and local grant funding. In addition to reducing the burden on project revenues to cash-flow the private investment, public co-investment is useful in that it gives all parties a financial stake in the commercial success of the enterprise.

Subsidy Level. Even where an external operating subsidy is required (e.g. public transit or freeway maintenance), the public sector doesn't have to provide that service. As has been demonstrated overseas, there may be substantial reductions in public subsidy required and/or enhancement of service levels through selective outsourcing of operations to private parties.

Special Purpose Agencies. Major capital projects can benefit by establishing a special purpose entity to undertake development and operations, whose sole responsibility is the project. The organization, which could be a legislatively established new authority, a joint powers authority formed by several jurisdictions, or a private non-profit corporation formed by the principal public and private stakeholders, helps bring a singular institutional focus to completing the project on-time and within budget.

Design-Build. Larger or more complex projects often can accelerate completion and reduce construction and performance risk through design-build procurement. Yet State law may make it difficult to proceed on any other basis than design-bid-build, with its attendant delays and lack of accountability. Also, State and Federal law should allow a contractor to participate in both the environmental analysis of a project and its subsequent construction, to gain the benefit of their continued involvement from project inception to project completion.

Linking Investment & Maintenance. Reliable funding of ongoing project operations and maintenance costs must be identified at the outset, to ensure the best capital investment decision is made. Among the institutional arrangements that can foster this Life-Cycle Costing perspective are long-term franchise agreements (for toll facilities) or shadow toll agreements (for free facilities); or long-term warranties stipulating that specific asset quality levels be maintained over the life of the project.

Role of Innovative Finance. Once a project's revenue stream has been identified, innovative finance techniques can assist in capitalizing the value of the future project revenues to fund the investment today. Federal, State and local policymakers can use regulatory, tax and credit incentives to encourage the use of new financial instruments. The financial tools themselves may draw upon one or more of the following mechanisms: new repayment streams, new procurement methods, new sources of investment capital, and new methods of a paying financial return. Given that many of these financing approaches already are in use in the private sector, a more apt name for "innovative finance" might be "project-based finance."

Continuing Education. Presently, there is very little offered in the way of organized educational programs on the use of PPP's for infrastructure development. The dearth of relevant training extends both to entry-level candidates for public or private positions (Masters programs) and to mid-career corporate and governmental practitioners. An ongoing university-sponsored program on new project development and financing techniques could prove highly useful in further developing both public and private sector management skills in this growing and dynamic discipline.

Table 1: Key Drivers on Innovative Finance Proposals for Project Sponsors, Investors and Federal Policymakers

PERSPECTIVE KEY QUESTIONS PROJECT SPONSOR/BORROWER

- What is the effective financing cost (IRR)?
- How high is the Annual Payment Factor?
- Is the transaction reported as a direct or contingent liability on the Sponsor's balance sheet?
- What legal steps (State legislation, etc.) must be taken to utilize it?
- How difficult is it for Management to implement it?

Investor

- Is the risk-adjusted rate of return competitive?
- Is there a secondary market for the product (liquidity)?
- Are there other investment risks (tax compliance, call risk, etc.)?
- Will it help diversify the investor's portfolio exposure?
- Are there any other strategic reasons for investing aside from its return?

Federal Policymaker

- What is the proposal's budgetary cost?
- Is the finance tool cost-effective (how much leveraging of Federal resources)?
- What is the overall economic return (benefit/cost ratio)?
- How well does it achieve multiple Federal policy objectives?
- Improve Access
- Enhance Mobility
- Shift Risks away from the Government
- Attract Non-Federal Resources / Private Participation
- Accelerate Projects

 RESPONSE OF DAVID SELTZER TO ADDITIONAL QUESTION FROM SENATOR BAUCUS

Question. Many of us are concerned about the continued viability of the Highway Trust Fund. That is, with increased fuel economy and incentives for alternative fuels, can the Trust Fund continue to meet our ever-increasing highway needs? In fact, in the MEGA-TRUST Act, I create a commission to look at the Trust Fund and its continued sustainability. When we talk about innovative financing for highways are we talking about a way to supplement the Highway Trust Fund or replacing the Trust Fund with this "new way of doing business?"

Response. Perhaps the most accurate answer is "a new way of doing certain types of business."

The vast majority of highway projects are not capable of generating their own revenue streams, and will continue to be reliant upon grant funding from Federal and State sources. That is why the findings of the National Surface Transportation Infrastructure Financing Commission proposed in S. 2678 will be so vital to policymakers in identifying ways to sustain the Highway Trust Fund in coming years.

However, the term "Innovative Finance" really encompasses a number of different initiatives that can help promote investment in the Nation's surface transportation system.

First, it references grant management techniques that give States greater flexibility in using existing Highway Trust Fund resources. GARVEE Bonds are a good example of this; the total resources committed to highways are not increased, but projects can be greatly accelerated, through monetizing future streams of Federal receivables. Another example is State Infrastructure Banks and section 129 loans, where States may use Federal-aid apportionments to fund loans and provide other types of financial assistance.

Second, Innovative Finance connotes innovative procurement methods, such as design-build contracting, which can expedite projects, transfer risks to private parties, and/or save the project sponsor money. The pilot provisions for design-build contracting in TEA-21 provide an excellent vehicle for evaluating such alternative approaches. Further refinements, especially as concerns streamlining Federal approvals, would be beneficial.

Third, the term includes innovative asset management techniques that provide superior value-for-money over the long-term. Initiatives that encourage States to make project investment decisions with regard to the life cycle costing over the economic life of the project should be encouraged. For example, long-term warranties such as those New Mexico has used on its Corridor 44 project, or other long-term performance-based private management contracts, help ensure that the initial capital investment is maintained adequately to optimize its value.

Finally, Innovative Finance includes new financial instruments that either lower the cost of capital obtained from existing sources, identify new sources of capital, or do both. For instance, Federal credit programs such as TIFIA establish the Federal Government as a new source of debt capital on favorable terms for certain types of projects. This can make it easier for projects with their own revenue streams, such as toll roads, to access the capital markets for the balance of their needs. To the extent a project sponsor can more readily borrow against non-Federal revenue streams, the number of claimants on a State's apportionments is reduced.

Other new financial instruments, based on tax code incentives, can reduce the required cash outlays from traditional funding sources by providing a return to inves-

tors in the form of a non-cash tax benefit. Techniques such as tax credit bonds or tax-oriented leasing serve to attract debt and equity capital from private sources, again freeing up traditional revenue sources for other projects.

In summary, the combination of grants management, procurement, asset maintenance and financing techniques comprising “Innovative Finance” should be viewed as an important element of any national transportation policy. But it will never replace the need for a long-term strategy for augmenting Highway Trust Fund resources that are used to fund grants required by most surface transportation investments. Ultimately, the political process will determine the types and amounts of resources directed to the HTF, based on the desired level of investment activity and the perceived role of the Federal Government relative to State, local and other funding partners.

STATEMENT OF PHYLLIS F. SCHEINBERG, DEPUTY ASSISTANT SECRETARY FOR BUDGET AND PROGRAMS UNITED STATES DEPARTMENT OF TRANSPORTATION

Chairman Jeffords, Chairman Baucus, Ranking Members Smith and Grassley, and Members of the Committees: Thank you for holding this hearing today and inviting me to testify on Federal innovative finance initiatives for surface transportation projects. These financing techniques, in combination with our traditional grant programs, have become important resources for meeting the transportation challenges facing our Nation. Secretary Mineta, in his testimony last January before the Environment and Public Works Committee, indicated his desire to increase their application.

The Secretary stated that “Expanding and improving innovative financing programs in order to encourage greater private sector investment in the transportation system . . .” will be one of the Department of Transportation’s core principles in working with Congress, State and local officials, tribal governments and stakeholders to shape the surface transportation reauthorization legislation. He remains steadfast in his support for these programs.

Defining “Innovative Finance”

Perhaps the first issue to address today is “What is innovative finance?” We increasingly hear the term used in the context of transportation projects, but what does it really mean? We at the Department apply the term to a collection of management techniques and debt finance tools available to supplement and expand the flexibility of the Federal Government’s transportation grant programs. We see the primary objectives of innovative finance as leveraging Federal resources, improving utilization of existing funds, accelerating construction timetables, and attracting non-Federal investment in major projects. The quantifiable successes of such innovative finance are beginning to mount.

The July 2002 report entitled “Performance Review of U.S. DOT Innovative Finance Initiatives” states that Federal investments of \$8.6 billion have helped to finance projects worth a total of \$29 billion, a ratio of \$3.40 invested for each Federal dollar. Of this \$29 billion, more than 27 percent, or \$8 billion, consists of debt that will be repaid from new revenue sources. Sponsors report that more than 50 projects were accelerated from 6 months to 24 years as a result of innovative financing compared to transportation grants. The total economic impacts of \$91 billion nationwide represent benefits that have accrued more rapidly than ever possible using a pay-as-you-go method.

While these achievements demonstrate the value of innovative finance techniques and tools, they also deserve a realistic assessment in the context of the grant system, financed by the Highway Trust Fund, that provides the foundation of Federal financial assistance for surface transportation projects.

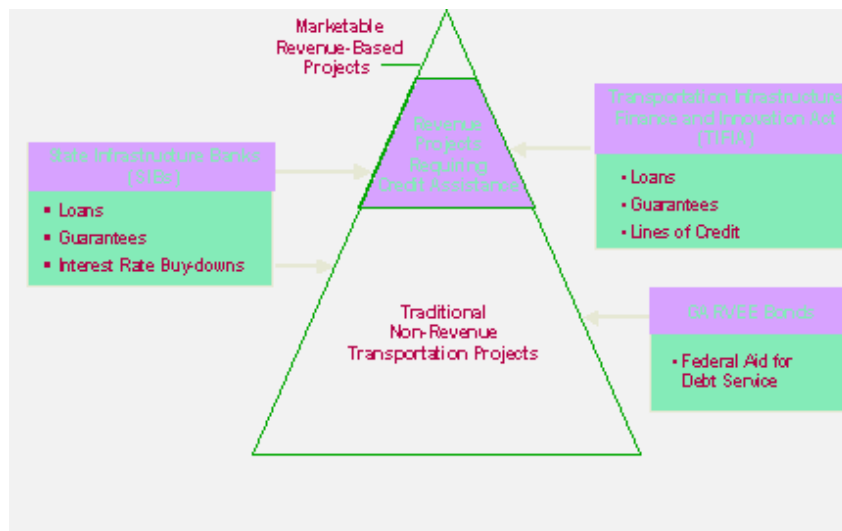
The first assessment in realism is to examine the “innovative” nature of the financial tools. Improving the flexibility of fund administration and creating opportunities to borrow and lend Federal money have been vitally important initiatives, and we can thank numerous role models outside the transportation sector for developing these tools long ago. The “new” or “innovative” feature of these tools, then, derives from their application to the Federal transportation program. Further, these financing techniques have now become better known and accepted by many State and local transportation partners. Because the demand for transportation investment throughout the country consistently exceeds the supply of resources, those regions facing the greatest challenges to mobility have readily embraced—and in many cases paved the way for—the opportunities provided by innovative finance.

The second assessment concerns the potential for innovative finance to ease demands on the current grant funding distributed each year to States and local agen-

cies. That doesn't seem likely. The focus of innovative finance (and perhaps a more appropriate term to designate these tools) is project finance. The techniques supplement existing programs on an as-needed, project-by-project basis. Transportation officials must evaluate each project individually to determine the best financing approach. The grant programs remain the bulk of Federal transportation assistance, supplemented by the extra muscle and flexibility of innovative finance.

The diagram below depicts a pyramid that illustrates the range of surface transportation projects and the innovative tools available for financing them. The base represents the majority of projects: those that rely on grant-based funding, but may benefit from measures that enhance flexibility and resources. Various Federal funds management techniques, such as advance construction, tapered match, and grant-supported debt through Grant Anticipation Revenue Vehicles, or GARVEEs, can help move these projects to construction more quickly. The mid-section represents those projects that can be partially financed with project-related revenues, but may also require some form of public credit assistance. State Infrastructure Banks (SIBs) can assist State, regional, and local projects through low-interest loans, loan guarantees, and other credit enhancements. State loans of Federal grant funds known as Section 129 loans represent another credit assistance technique. The Transportation Infrastructure Finance and Innovation Act (TIFIA) program provides credit assistance to a small number of large-scale projects of regional or national significance that might otherwise be delayed or not constructed at all because of risk, complexity, or cost. The peak of the pyramid reflects the very small number of projects able to secure private capital financing without any governmental assistance.

FEDERAL PROJECT FINANCE TOOLS FOR SURFACE TRANSPORTATION



The TIFIA Credit Program

Let me begin with the program that, through the leadership of the Senate during enactment of the Transportation Equity Act for the 21st Century (TEA-21), provides a direct role for the Federal Government to assist large transportation projects. In June 2002, the Department delivered its Report to Congress on the Transportation Infrastructure Finance and Innovation Act of 1998 (TIFIA), which authorizes the Department of Transportation (DOT) to provide three forms of credit assistance—secured (direct) loans, loan guarantees and standby lines of credit—to surface transportation projects of national or regional significance.

The public policy underlying the TIFIA credit program asserts that the Federal Government can perform a constructive role in supplementing, but not supplanting, existing capital finance markets for large transportation infrastructure projects. As identified by Congress in TEA-21, “. . . a Federal credit program for projects of national significance can complement existing funding resources by filling market gaps, thereby leveraging substantial private co-investment.” Because the TIFIA pro-

gram offers credit assistance, rather than grant funding, its potential users are infrastructure projects capable of generating their own revenue streams through user charges or other dedicated funding sources.

Identifying a constructive role for Federal credit assistance begins with the acknowledgement that, compared to private investors, the Federal Government's naturally long-term investment horizon means that it can more readily absorb the relatively short-term risks of project financings. Absent typical capital market investor concerns regarding timing of payments and financial liquidity, the Federal Government can become the "patient investor" whose long-term view of asset returns enables the project's non-Federal financial partners to meet their investment goals, allowing the project's sponsors to complete a favorable financing package.

The TIFIA program's pragmatic challenge is to balance the objective of advancing transportation projects with the equally important need to lend prudently and protect the Federal interest. The DOT must apply rigorous credit standards as it fashions assistance to improve the financial prospects of participating projects. The Federal objective is not to minimize its exposure but to optimize its exposure—that is, to take prudent risks in order to leverage Federal resources through attracting private and other non-Federal capital to projects.

The TIFIA program assistance is meant to support expensive, complex and significant transportation investments. In general, a project's eligible costs must be reasonably anticipated to total at least \$100 million. Credit assistance is available to highway, transit, passenger rail and multi-modal projects. Other types of eligible projects include intercity passenger rail or bus projects, publicly owned intermodal facilities on or adjacent to the National Highway System, projects that provide ground access to airports or seaports, and surface transportation projects principally involving the installation of Intelligent Transportation Systems (ITS), for which the cost threshold is \$30 million. The TIFIA credit assistance is limited to 33 percent of eligible project costs.

Congress has authorized the DOT to provide up to \$10.6 billion of TIFIA credit assistance through the TEA-21 authorization period of 1998–2003. From the Highway Trust Fund, Congress authorized \$530 million, subject to the annual obligation limitation on Federal-aid appropriations, to pay the subsidy cost of TIFIA credit assistance and related administrative costs. The subsidy cost calculations establish the capital reserves which the DOT must set aside in advance to cover the expected long-term cost to the Government of providing credit assistance, pursuant to the Federal Credit Reform Act of 1990 (FCRA).

To date, the DOT has selected 11 projects, representing \$15.7 billion in transportation investment, to receive TIFIA credit assistance. The TIFIA commitments total \$3.7 billion in credit assistance at a subsidy cost of about \$202 million. The DOT has received 38 letters of interest and 15 applications from project sponsors. All major categories of eligible projects—highway, transit, passenger rail and multi-modal—have sought and received credit assistance. The TIFIA credit assistance ranges in size for each project, from \$73.5 million to \$800 million, mostly in the form of direct Federal loans from the DOT to the project sponsors. These projects are summarized in the table below.

TIFIA Commitments as of September 2002

Project	Project Type	Project Cost	Instrument Type	Credit Amount
Miami Intermodal Center.	Intermodal	\$1,349 million	Direct Loan	\$269 million
			Direct Loan	\$163 million
SR 125 Toll Road	Hwy/Bridge	\$450 million	Direct Loan	\$94 million
			Line of Credit	\$33 million
Farley Penn Station	Passenger Rail	\$800 million	Direct Loan	\$140 million
			Line of Credit	\$20 million
Washington Metro CIP ..	Transit	\$2,324 million	Guarantee	\$600 million
Tren Urbano (PR)	Transit	\$1,676 million	Direct Loan	\$300 million
Tacoma Narrows Bridge	Hwy/Bridge	\$835 million	Direct Loan	\$240 million
			Line of Credit	\$30 million
Cooper River Bridge	Hwy/Bridge	\$668 million	Direct Loan	\$215 million
Staten Island Ferries	Transit	\$482 million	Direct Loan	\$159 million
Central Texas Turnpike	Hwy/Bridge	\$3,580 million	Direct Loan	\$917 million
Reno Rail Corridor	Intermodal	\$242 million	Direct Loan	\$51 million
			Direct Loan	\$5 million
			Direct Loan	\$18 million
SF-Oakland Bay Bridge	Hwy/Bridge	\$3,305 million	Direct Loan	\$450 million

TIFIA Commitments as of September 2002—Continued

Project	Project Type	Project Cost	Instrument Type	Credit Amount
Total		\$15,711 million		\$3,704 million

Already limited by statute to 33 percent of total project costs, actual TIFIA assistance has averaged 23 percent of project costs. Including grant assistance, total Federal investment in TIFIA projects amounts to 43 percent of total costs. Investments from other government and private sources comprise the remaining 57 percent.

Because credit assistance requires a small fraction of the contract authority needed to provide a similar amount of grant assistance, TIFIA promotes a cost-effective use of Federal resources to encourage co-investment in transportation infrastructure. Federal grant funds that otherwise might be required to support these large projects can then be redirected toward smaller but critical infrastructure investments.

An explicit goal of the TIFIA program is to induce private investment in transportation infrastructure. Private co-investment in the TIFIA project selections totals about \$3.1 billion, comprised of more than \$3 billion in debt (including State and local debt held by private investors) and nearly \$100 million in equity. This co-investment totals approximately 20 percent of the nearly \$15.7 billion in total costs.

The DOT believes that a limited number of large surface transportation projects each year will continue to need the types of credit instruments offered under TIFIA. Project sponsors and DOT staff are still exploring how best to utilize this credit assistance, and we welcome congressional guidance and dialog during this evolutionary program period.

As stated in the Conference Report accompanying TEA-21 and TIFIA, “[a]n objective of the program is to help the financial markets develop the capability ultimately to supplant the role of the Federal Government in helping finance the costs of large projects of national significance.” The current form of TIFIA administration—within a Federal agency subject to regular budget oversight—enables policymakers to monitor program performance as staff, sponsors and the financial markets gain experience. As current TIFIA projects move into their construction, operation and repayment phases, and as additional projects obtain TIFIA assistance, policymakers will acquire better information with which to determine whether TIFIA should remain within the DOT, “spin off” into a Government corporation or Government sponsored enterprise, or phaseout entirely and rely on the capital markets to meet the program’s objectives.

The Department also administers a credit assistance program specifically for the railroad industry: the Railroad Rehabilitation and Improvement Financing Program (RRIF). Also authorized in TEA-21, the RRIF program provides direct loans and loan guarantees to railroads and other public and private ventures in partnership with railroads. The aggregate unpaid principal amount under the program cannot exceed \$3.5 billion, and the subsidy cost is covered by a “credit risk premium” paid by or on behalf of the borrower from a non-Federal source. To date, the Federal Railroad Administration (FRA) has approved four RRIF loans for a total of more than \$200 million, and six more applications are currently being evaluated.

GARVEE Bonds

Another financing tool among States has been the issuance of Grant Anticipation Revenue Vehicles (GARVEEs): bonds that enable States to pay debt service and other bond-related expenses with future Federal-aid highway apportionments. States are finding GARVEEs to be an attractive financing mechanism to bridge funding gaps and accelerate construction of major corridor projects. The GARVEE generates up-front capital for major highway projects at tax-exempt rates and enables a State to construct a project earlier than using traditional pay-as-you-go grant resources. With projects in place sooner, costs are lower due to inflation savings and the public realizes safety and economic benefits. Paying via future Federal highway reimbursements spreads the cost of the facility over its useful life, rather than just the construction period. GARVEEs expand access to capital markets, supplementing general obligation or revenue bonds.

A GARVEE is a debt-financing instrument authorized to receive Federal reimbursement of debt service and related financing costs. In general, projects funded with the proceeds of a GARVEE debt instrument are subject to the same requirements as other Federal-aid projects with the exception of the reimbursement process. Instead of reimbursements as construction costs are incurred, the reimbursement of GARVEE projects occurs when debt service is due.

Candidates for GARVEE financing are typically large projects, or a program of projects, where the costs of delay outweigh the costs of financing and other borrowing approaches may not be available. In total, six States have issued 14 GARVEE Bonds, totaling more than \$2.5 billion, to be repaid using a portion of their future Federal-aid highway funds. The table below summarizes this activity.

GARVEE Transactions as of July 2002

State	Date of Issue	Face Amount of Issue	Projects Financed
Ohio	May-98	\$70 million	Various projects including: Spring-Sandusky and Maumee river improvements
	Aug-99	\$20 million	
	Sep-01	\$100 million	
New Mexico	Sep-98	\$100 million	New Mexico SR 44
	Feb-01	\$19 million	
Arkansas	Mar-00	\$175 million	Interstate Highways
	Jul-01	\$185 million	
	Jul-02	\$215 million	
Colorado	May-00	\$537 million	Any project financed wholly or in part by Federal funds
	Apr-01	\$506 million	
	Jun-02	\$208 million	
Arizona	Jun-00	\$39 million	Maricopa freeway projects
	May-01	\$143 million	
Alabama	Apr-02	\$200 million	County Bridge Program
Total		\$2,517 million.	

State Infrastructure Banks

Another significant project finance tool is the State Infrastructure Bank (SIB), a revolving transportation investment fund administered by a State. A SIB functions as a revolving fund that, much like a bank, can offer loans and other credit products to public and private sponsors of Title 23 highway construction projects or Title 49 transit capital projects. Federally capitalized SIBs were first authorized under the provisions of the National Highway System Designation Act of 1995. The initial infusion of Federal and State matching funds was critical to the startup of a SIB, but States have the opportunity to contribute additional State or local funds to enhance capitalization. SIB assistance may include loans (at or below market rates), loan guarantees, standby lines of credit, letters of credit, certificates of participation, debt service reserve funds, bond insurance, and other forms of non-grant assistance. As loans are repaid, a SIB's capital is replenished and can be used to support a new cycle of projects. And, as has been accomplished in Minnesota and South Carolina, SIBs can also be structured to issue bonds against their capitalization, increasing the amount of funds available for loans.

SIBs complement traditional funding techniques and serve as a useful tool to stretch both Federal and State dollars. The primary benefits of SIBs to transportation investment include:

- Flexible project financing, such as low interest loans and credit assistance that can be tailored to the individual projects;
- Accelerated completion of projects;
- Incentive for increased State and/or local investment;
- Enhanced opportunities for private investment by lowering the financial risk and creating a stronger market condition; and
- Recycling of funds to provide financing for future transportation projects.

The pilot program was originally available to only 10 States, and was later expanded to include 38 States and Puerto Rico. TEA-21 established a new pilot program for the States of California, Florida, Missouri, and Rhode Island. Texas was later authorized to participate in the TEA-21 program. To date, however, only Florida and Missouri have elected to revise their agreements in accordance with TEA-21.

The authorizing Federal legislation allows States to customize the structure and focus of their SIB programs to meet specific requirements. While a SIB can offer many types of financing assistance, loans have been the most popular tool. As of June 2002, 32 States had entered into 294 loan agreements totaling more than \$4 billion. This activity has been largely concentrated within six States. The largest SIB, the South Carolina Transportation Infrastructure Bank, has approved financing and begun development of almost \$2.4 billion in projects, helping to condense into 7 years a transportation program that would have taken 27 years under a pay-

as-you-go approach. The Florida SIB had executed 32 loan agreements through the end of fiscal year 2001, at a value of \$465 million. The Florida SIB has been augmented with a State appropriation of \$150 million, and both Ohio and Arizona have also contributed additional State funds to their SIBs. The table below demonstrates the concentration of activity in the six largest SIBs.

State Infrastructure Banks Transactions as of June 2002

State	Number of Agreements	Loan Agreement Amount
South Carolina	6	\$2,382 million
Florida	32	\$465 million
Arizona	37	\$424 million
Texas	37	\$252 million
Ohio	39	\$141 million
Missouri	11	\$73 million
Subtotal	162	\$3,738 million
Other States	132	\$318 million
Total	294	\$4,056 million

Looking Ahead

Although States and local partners have not adopted them evenly, the tools of TIFIA, GARVEEs and SIBs have clearly moved from the innovative to the mainstream. This reflects significant success, but it doesn't indicate that the needs of project finance have been completely met. Secretary Mineta has issued a clear challenge to the Department in our development of a reauthorization proposal for TEA-21, asking us to expand innovative finance programs to encourage private sector investment and examine other means to augment existing revenue streams. As part of our internal reauthorization deliberations, we are considering options for further leveraging Federal resources for surface transportation. Enhancing the use of innovative finance in intermodal projects and examining the financing techniques used in other major public infrastructure investments are among the areas we are looking at. The challenge is to build on our successes to date, but not set unrealistic expectations for the future.

A particular focus is on the issue of private investment, an at-risk contribution to a project with the expectation of repayment from project revenues—and a return on investment—over time. Unlike much of the world, the provision of roads and transit systems in the U.S. is almost completely a public sector responsibility. As has been often pointed out, our system of tax-exempt financing means that the public cost of capital is significantly less expensive than for a private entity. Many public works sectors in the U.S. permit private firms to gain access to tax-exempt capital for the construction of public infrastructure. Legislation has been introduced previously to confer this opportunity to a limited number of highway projects. Before the Department would consider any proposed amendment to the Internal Revenue Code, it would first consult with the Department of the Treasury.

One transportation sector with a high degree of private participation, which deserves a higher profile among public transportation planners and policymakers, concerns the movement of freight. Supporting the efficiency of commercial freight transportation continues to be a cornerstone of the Department's vision for America's transportation system. ISTEA and TEA-21 legislation gave us many tools to bring this vision to reality, and our experience has given us new ideas for programs that will get us even closer to our goal of a seamless transportation network. Greater investments in transportation infrastructure and wider use of information technology will certainly be required to achieve this goal.

The activity of SIBs in many States indicates that this program is ready to move beyond its pilot phase to become a permanent feature of the innovative finance landscape.

The Department looks forward to working with our partners in State DOTs, metropolitan planning organizations, and private industry to apply innovative funding strategies that extend the financial means of our individual stakeholders. And we look forward to working with the Congress to craft the next surface transportation legislation. Working together, the Administration, the Congress, States and localities and the private sector can preserve, enhance, and establish surface transportation programs that will result in increased mobility, safety and prosperity for all Americans.

Thank you for the opportunity to testify before you today. I would be happy to answer any questions you may have.

RESPONSES OF PHYLLIS SCHEINBERG TO ADDITIONAL QUESTIONS FROM SENATOR JEFFORDS

Question 1. State Infrastructure Banks (SIBs) are currently limited to only a few States. What is the track record of SIBs? Are they performing as anticipated? Are SIBs a viable option that should be available to all States? Do you have suggestions which this Committee should consider to improve the effectiveness of SIBs?

Response. Thirty-nine States, including the Commonwealth of Puerto Rico, were authorized by the Department of Transportation to establish a SIB under the National Highway System Designation Act of 1995 (NHS Act). In addition, the Transportation Equity Act for the 21st Century (TEA-21) established a SIB pilot program that was limited to only a few States that already had authorized SIBs under the NHS Act. Specifically, five States (Florida, Missouri, California, Rhode Island, and Texas) were authorized to use TEA-21 funds to capitalize their SIBs. However, only Florida and Missouri have modified their SIB agreements to comply with the TEA-21 requirements and are currently eligible to use TEA-21 funds for SIB capitalization. To date, States have transferred \$456 million of Federal funds apportioned in FYs 1996 and 1997 into SIBs and \$52.1 million of TEA-21 funds have been transferred to SIBs.

We believe that SIBs have been a viable tool for States that have established them. Of the 39 authorized SIBs, 32 remain active even though only two (Florida and Missouri) are using the additional TEA-21 funds for capitalization. As of June 2002, these States have entered into 294 SIB loan agreements for a total of \$4 billion dollars for surface transportation projects. Some benefits of SIBs assistance are flexible project financing, accelerated completion of projects, recycling of funds, increased State and/or local investment, and enhanced private investment and economic development opportunities.

There is an important distinction between the SIB provisions in the NHS Act and TEA-21. For SIBs operating under the provisions of the NHS Act, all "first generation" SIB assisted projects are subject to Federal requirements. Federal requirements, however, do not apply to SIB projects funded with "second and subsequent generation" SIB funds—i.e., funds derived from repayment proceeds of the first generation projects. All SIB projects assisted with TEA-21 funds are subject to Federal requirements regardless of whether they are first generation projects or financed from repayment proceeds of previously assisted projects. Most States seem to prefer the NHS Act provision that does not expand the application of Federal requirements.

Question 2. In my statement I mentioned that the State of South Carolina is undertaking what would be 27 years worth of projects using traditional Federal-aid funding in a span of 7 years. They are able to accomplish this through various transportation financing mechanisms. What challenges does a State face if they use this approach to "jump start" project construction? Are programs like those helping or harming the State's future ability to invest in infrastructure?

Response. One significant challenge involves a State's ability to manage a sudden increase in the number of projects. Another challenge relates to the availability of contractors to perform the work. South Carolina has addressed the first challenge by supplementing its own staff with consultants. In addition, the State has not, to date, reported problems with the availability of contractors.

Accelerating the start of transportation infrastructure projects can result in the twin benefits of (1) cost savings from reduced cost escalation due to inflation and increases in right-of-way costs and (2) earlier returns on economic and safety benefits provided by the new facility.

At this point, we are not aware of instances in which the use of financing mechanisms to "jump start" projects has jeopardized a State's future ability to invest in infrastructure. For example, States that have issued GARVEE bonds thus far have judiciously imposed coverage tests and dollar limits that they believe are appropriate and marketable. GARVEE bonds are State-issued bonds whose repayment source is future Federal-aid highway apportionments.

Question 3. AASHTO is proposing a Transportation Finance Corporation (TFC) be created in the next reauthorization to increase the size of the Federal program. The TFC would be involved in various financing mechanisms such as bonding. Has DOT investigated or researched similar ideas? What are your thoughts on the viability of such an approach?

Response. DOT is currently formulating its highway reauthorization policies, but has not finalized its proposals. DOT has considered a variety of alternative financing approaches and has solicited input from all relevant stakeholders.

Question 4. In your statement you mention that DOT is pursuing more avenues for transportation financing. We are very interested in this matter including looking at Federal loan guarantees, bonding, tax incentives to purchasing bonds, and a range of other options. One concept I heard was “adapting the financing techniques using other public works sectors”. Could you give us examples of other public works techniques? How applicable would they be to transportation investment? What other innovative financing approaches should we work with you on? Are there other models which have worked well in other areas which could be helpful here—for example, the Farm Credit System sells securities to raise funds to make loans. What existing financing ideas regarding other Departments, Government Sponsored Enterprises, Federal or State agencies, or private entities should we at least consider in terms of the reauthorization?

Response. One mechanism that is currently available for certain major public infrastructure projects—but not highways—is private activity bonds. Private activity bonds are tax-exempt financings issued for certain privately developed and operated public infrastructure. Examples of projects that are currently eligible for private activity bonds are airport facilities; docks and wharves; water, wastewater and solid waste disposal facilities; mass commuting facilities; and high speed intercity rail facilities. Whether private activity bonds would be a useful tool for highway financing could be worth investigation.

STATEMENT OF JAYETTA Z. HECKER DIRECTOR, PHYSICAL INFRASTRUCTURE ISSUES,
GENERAL ACCOUNTING OFFICE

Mr. Chairman and members of the committees: We are pleased to be here today to discuss alternative financing for surface transportation infrastructure projects. As Congress considers reauthorizing the Transportation Equity Act for the 21st Century (TEA-21) in 2003, it does so in the face of a continuing need for the Nation to invest in its surface transportation infrastructure and at a time when both the Federal and State governments are experiencing severe financial constraints.¹ Many observers are concerned that a significant gap exists between the availability of funds and immediate needs. In the longer term, questions have been raised about the financial capacity of the Highway Trust Fund to sustain current and future levels of highway and transit spending. This is of particular concern since Congress has by law established a direct link between Highway Trust Fund revenues and surface transportation spending levels.

In recent years, as transportation needs have grown, Congress provided States—in the National Highway System Designation Act of 1995 (NHS) and TEA-21—additional means to make highway investments through alternative financing mechanisms. These alternative mechanisms included State Infrastructure Banks (SIBs)—revolving funds to make or guarantee loans to approved projects; Grant Anticipation Revenue Vehicles (GARVEEs)—which are State issued bonds or notes repayable with future Federal-aid; and credit assistance under the Transportation Infrastructure Finance and Innovation Act (TIFIA)—including loans, loan guarantees, and lines of credit. All are part of the Federal Highway Administration’s (FHWA’s) Innovative Finance Program. As the time draws nearer to reauthorizing TEA-21, information is needed about the performance of these tools and the potential for these and other proposed tools to help meet the nation’s surface transportation infrastructure investment needs.

At the request of your Committees, we are examining a range of surface transportation financing issues, including FHWA’s Innovative Finance Program and proposed alternative financing approaches. My testimony today is based on the preliminary results of our work and discusses (1) the use and performance of existing innovative financing tools and the factors limiting their use, and (2) the prospective costs of current and newly proposed alternative financing techniques for meeting surface transportation infrastructure investment needs. I will also discuss issues concerning the potential costs and benefits of expanding alternative financing mechanisms to meet our nation’s surface transportation needs. My testimony is based on our review of applicable laws, FHWA’s evaluation studies and other reports concerning its Innovative Financing Program, and interviews with FHWA officials, transportation officials in eight States, and bond rating companies. It is also based on a cost comparison we conducted of four current and newly proposed financing techniques.

¹Performance Budgeting: Opportunities and Challenges. (GAO-02-1106T, Sept.19, 2002).

In summary:

- A number of States are using existing alternative financing tools such as State Infrastructure Banks, GARVEE bonds, and TIFIA loans. These tools can provide States with additional options to accelerate projects and leverage Federal assistance—they can also provide greater flexibility and more funding techniques. However, a number of factors can limit the use of these tools, including some States' preference not to use the tools, restrictions in State law on using them, and restrictions in Federal law on the number of States and types of projects that can use them.
- Federal funding of surface transportation investments includes Federal-aid highway program grant funding appropriated by Congress out of the Highway Trust Fund, loans and loan guarantees, and bonds that are issued by States and that are exempt from Federal taxation. In addition, the use of tax credit bonds—where investors receive a tax credit against their Federal income taxes instead of interest payments from the bond issuers—have been proposed for helping to finance surface transportation investments. Because each of these financing mechanisms is structured differently, we determined that the total cost of providing \$10 billion in infrastructure investment using each of these existing or proposed mechanisms ranges from \$10 billion to over \$13 billion (in present value terms). The mechanisms that involve greater borrowing from the private sector, such as tax-exempt bonds and tax credit bonds, require the least amount of public outlays up front. However, those same mechanisms have the highest long-term costs to the public sector participants in the investments because the latter must compensate the private investors for the risks that they assume. With respect to the Federal Government's contribution, tax credit bonds are the most costly mechanism, while TIFIA loans and tax exempt bonds are the least costly.
- Expanding the use of alternative financing mechanisms has the potential to stimulate additional investment and private participation. But expanding investment in our nation's highways and transit systems raises basic questions of who pays, how much, and when. How alternative financing mechanisms are structured determines how much of the needs are met through Federal funding and how much are met by the States and others. The structure of these mechanisms also determines how much of the cost of meeting our current needs are met by current users and taxpayers versus future users and taxpayers.

Background

The Federal-aid highway program is financed through motor fuel taxes and other levies on highway users. Federal aid for highways is provided largely on a cash basis from the Highway Trust Fund. States have financed roads primarily through a combination of State revenues and Federal aid. Typically, States raise their share of the funds by taxing motor fuels and charging user fees. In addition, debt financing—issuing bonds to pay for highway development and construction—represents about 10 percent of total State funding for highways, although some States make greater use of borrowing than others.

Federal-aid highway funding to States is typically in the form of grants. These grants are distributed from the Highway Trust Fund and apportioned to States based on a series of funding formulas. Funding is subject to grant-matching rules—for most federally funded highway projects, an 80-percent Federal and 20-percent State funding ratio. States are subject to pay-as-you-go rules where they obligate all of the funds needed for a project up front and are reimbursed for project costs as they are incurred.

In the mid-1990's, FHWA and the States tested and evaluated a variety of innovative financing techniques and strategies.² Many financing innovations were approved for use through administrative action or legislative changes under NHS and TEA-21. Three of the techniques approved were SIBs, GARVEEs, and TIFIA loans.³ SIBs are State revolving loan funds that make loans or loan guarantees to approved projects; the loans are subsequently repaid, and recycled back into the revolving fund for additional loans. GARVEEs are any State issued bond or note repayable with future Federal-aid highway funds. Through the issuance of GARVEE bonds, projects are able to meet the need for up-front capital as well as use future Federal

²FHWA uses the term "innovative finance" to refer to any funding measure other than grants to States appropriated from the Highway Trust Fund. Most of the innovative measures entail debt financing. The term is used to contrast that approach with traditional methods of funding highway projects.

³FHWA's test and evaluation research initiative (TE-045) evaluated a number of other innovations, including flexible match, toll credits, advance construction, partial conversion of advance construction, and tapered match. Many of these techniques were subsequently approved for use.

highway dollars for debt service. TIFIA allows FHWA to provide credit assistance, up to 33 percent of eligible project costs, to sponsors of major transportation projects. Credit assistance can take the form of a loan, loan guarantee, or line of credit. See appendix II for additional information about these financing techniques.

According to FHWA, the goals of its Innovative Finance Program are to accelerate projects by reducing inefficient and unnecessary constraints on States' management of Federal highway funds; expand investment by removing barriers to private investment; encourage the introduction of new revenue streams, particularly for the purpose of retiring debt obligations; and reduce financing and related costs, thus freeing up the savings for investments into the transportation system itself. When Congress established the TIFIA program in TEA-21, it set out goals for the program to offer sponsors of large transportation projects a new tool to leverage limited Federal resources, stimulate additional investment in our nation's infrastructure, and encourage greater private sector participation in meeting our transportation needs.

Alternative Financing Mechanisms Offer States Options, But Factors Limit Their Use

Over the last 8 years, many States have used one or more of the FHWA-sponsored alternative financing tools to fund their highway and transit infrastructure projects. As of June 2002:

- 32 States (including the Commonwealth of Puerto Rico) have established SIBs and have entered into 294 loan agreements with a dollar value of about \$4.06 billion;
- 9 States (including the District of Columbia and Commonwealth of Puerto Rico) have entered into TIFIA credit assistance agreements for 11 projects, representing \$15.4 billion in transportation investment; and
- 6 States have issued GARVEE bonds with face amounts totaling \$2.3 billion.

These mechanisms have given States additional options to accelerate the construction of projects and leverage Federal assistance. It has also provided them with greater flexibility and more funding techniques.

Accelerate Project Construction

States' use of innovative financing techniques has resulted in projects being constructed more quickly than they would be under traditional pay-as-you-go financing. This is because techniques such as SIBs can provide loans to fill a funding gap, which allows the project to move ahead. For example, using a \$25 million SIB loan for land acquisition in the initial phase of the Miami Intermodal Center, Florida accelerated the project by 2 years, according to FHWA. Similarly, South Carolina used an array of innovative finance tools when it undertook its "27 in 7 program"—a plan to accomplish infrastructure investment projects that were expected to take 27 years and reduce that to just 7 years. Officials in the States that we contacted that were using FHWA innovative finance tools noted that project acceleration was one of the main reasons for using them.

Leverage Federal Investments

Innovative finance—in particular the TIFIA program—can leverage Federal funds by attracting additional non-Federal investments in infrastructure projects. For example, the TIFIA program funds a lower share of eligible project costs than traditional Federal-aid programs, thus requiring a larger investment by other, non-Federal funding sources. It also attracts private creditors by assuming a lower priority on revenues pledged to repay debt. Bond rating companies told us they view TIFIA as "quasi-equity" because the Federal loan is subordinate to all other debt in terms of repayments and offers debt service grace periods, low interest costs, and flexible repayment terms.

It is often difficult to measure precisely the leveraging effect of the Federal investment. As a recent FHWA evaluation report noted, just comparing the cost of the Federal subsidy with the size of the overall investment can overstate the Federal influence—the key issue being whether the projects assisted were sufficiently credit-worthy even without Federal assistance and the Federal impact was to primarily lower the cost of the capital for the project sponsor.

However, TIFIA's features, taken together, can enhance senior project debt ratings and thus make the project more attractive to investors. For example, the \$3.2 billion Central Texas Turnpike project—a toll road to serve the Austin-San Antonio corridor—received a \$917 million TIFIA loan and will use future toll revenues to repay debt on the project, including revenue bonds issued by the Texas Transportation Commission and the TIFIA loan. According to public finance analysts from two ratings firms, the project leaders were able to offset potential concerns about the uncertain toll road revenue stream by bringing the TIFIA loan to the project's financing.

Provide Greater Flexibility And Additional Financing Techniques

FHWA's innovative finance techniques provide States with greater flexibility when deciding how to put together project financing. By having access to various alternatives, States can finance large transportation projects that they may not have been able to build with pay-as-you-go financing. For example, faced with the challenge of Interstate highway needs of over \$1.0 billion, the State of Arkansas determined that GARVEE bonds would make up for the lack of available funding. In June 1999, Arkansas voters approved the issuance of \$575 million in GARVEE bonds to help finance this reconstruction on an accelerated schedule. The State will use future Federal funds, together with the required State matching funds and the proceeds from a diesel fuel tax increase, to retire the bonds. The GARVEE bonds allow Arkansas to rebuild approximately 380 miles, or 60 percent of its total Interstate miles, within 5 years.

Factors Can Limit the Use Finance Tools

Although FHWA's innovative financing tools have provided States with of additional options for meeting their needs, a number of factors can limit the use of these tools.

- State DOTs are not always willing to use Federal innovative financing tools, nor do they always see advantages to using them. For example, officials in two States indicated that they had a philosophy against committing their Federal aid funding to debt service. Moreover, not all States see advantages to using FHWA innovative financing tools. For example, one official indicated that his State did not have a need to accelerate projects because the State has only a few relatively small urban areas and thus does not face the congestion problems that would warrant using innovative financing tools more often. Officials in another State noted that because their DOT has the authority to issue tax-exempt bonds as long as the State has a revenue stream to repay the debt, they could obtain financing on their own and at lower cost.

- Not all State DOTs have the authority to use certain financing mechanisms, and others have limitations on the extent to which they can issue debt. For example, California requires voter approval in order to use its allocations from the Highway Trust Fund to pay for debt servicing costs. In Texas, the State constitution prohibits using highway funds to pay the State's debt service. Other States limit the amount of debt that can be incurred. For example, Montana has a debt ceiling of \$150 million and is now paying off bonds issued in the late 1970's and early 1980's and plans to issue a GARVEE bond in the next few years.

- Some financing tools have limitations set in law. For example, five States are currently authorized to use TEA-21 Federal-aid funding to capitalize their SIBs. Although other States have created SIBs and use them, they could not use their TEA-21 Federal-aid funding to capitalize them. Similarly, TIFIA credit assistance can be used only for certain projects. TIFIA's requirement that, in general, projects cost at least \$100 million restricts its use to large projects.

Costs and Risks of Alternative Financing Mechanisms Vary

We assessed the costs that Federal, State and local governments (or special purpose entities they create) would incur to finance \$10 billion in infrastructure investment using four current and newly proposed financing mechanisms for meeting infrastructure investment needs.⁴ To date, most Federal funding for highways and transit projects has come through the Federal-aid highway grants—appropriated by Congress from the Highway Trust Fund. Through the TIFIA program, the Federal Government also provides subsidized loans for State highway and transit projects. In addition, the Federal Government also subsidizes State and local bond financing of highways by exempting the interest paid on those bonds from Federal income tax. Another type of tax preference—tax credit bonds—has been used, to a very limited extent, to finance certain school investments. Investors in tax credit bonds receive a tax credit against their Federal income taxes instead of interest payments from

⁴In deriving our comparisons we use current rules and practices relating to State matching expenditures. Specifically, when computing the costs associated with grants we assume that States pay for 20 percent of the investment expenditures; we assume a similar matching rate would be applied if a tax credit bond program were introduced. Our tax-exempt bond example represents independent investments by the State or local governments (or special purpose entities) with no Federal support other than the tax subsidy. In the case of the direct loan program, we assume that the \$10 billion of expenditures is financed by approximately the same combination of Federal loans, Federal grants, State, local or special purpose entity bonds, State appropriations, and private investment as the average project currently financed by TIFIA loans. (See app. I for further details of our methodology). However, it is important to note that the current rules and practices could be revised so that any desired cost sharing between the Federal and State governments could be achieved through any of the mechanisms.

the bond issuer.⁵ Proposals have been made to extend the use of this relatively new financing mechanism to other public investments, including transportation projects.

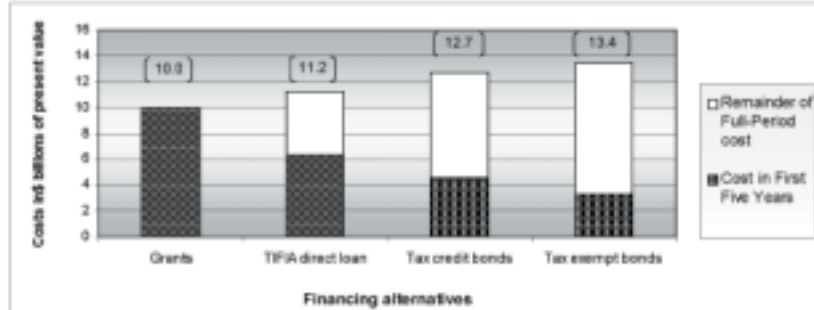
The use of these four mechanisms to finance \$10 billion in infrastructure investment result in differences in (1) total costs—and how much of the cost is incurred within the short term 5-year period and how much of it is postponed to the future; (2) sharing costs—or the extent to which States must spend their own money, or obtain private investment, in order to receive the Federal subsidy; and (3) risks—which level of government bears the risk associated with an investment (or compensates others for taking the risk). As a result of these differences, for any given amount of highway investment, combined and Federal Government budget costs will vary, depending on which financing mechanism is used.

Total Costs—And Short-and Long-Term Costs—Differ

Total costs—and how much of the cost is incurred within the short term 5-year period and how much of it is postponed to the future—differ under each of the four mechanisms. As figure 1 shows, grant funds are the lowest-cost method to finance a given amount of investment expenditure, \$10 billion.⁶ The reason for this result is that it is the only alternative that does not involve borrowing from the private sector through the issuance of bonds. Bonds are more expensive than grants because the governments have to compensate private investors for the risks that they assume (in addition to paying them back the present value of the bond principal). However, because the grants alternative does not involve borrowing, all of the public spending on the project must be made up front. The TIFIA direct loan, tax credit bond, and tax-exempt loan alternatives involve increased amounts of borrowing from the private sector and, therefore, increased overall costs.

Grants entail the highest short term costs as these costs, in our example, are all incurred on a pay-as-you-go basis. The tax-exempt bond alternative, which involves the most borrowing and has the highest combined costs, also requires the least amount of public money up front.⁷

Figure 1: Present Value Costs of Financing \$10 Billion of Spending on Transportation, Using Alternative Approaches



Source: GAO analysis.

Alternatives Result in Different Shares of the Cost

There are significant differences across the four alternatives in the cost sharing between Federal and State governments. (See fig. 2). Federal costs would be highest under the tax credit bond alternative, under which the Federal Government pays the equivalent of 30 years of interest on the bonds. Grants are the next most costly alternative for the Federal Government. Federal costs for the tax-exempt bond and

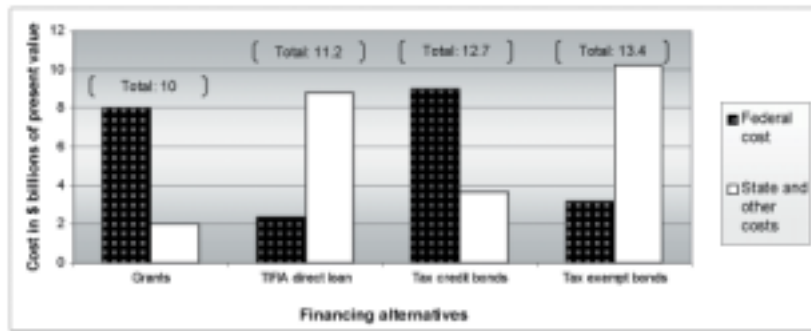
⁵The only tax credit bonds currently in existence are Qualified Zone Academy bonds. State or local governments may issue these bonds to finance improvements in public schools in disadvantaged areas. The issuance limit for these bonds is set at \$400 million for 2002 and is allocated to the States on the basis of their portion of the population below the poverty level.

⁶We present our results in present value terms so that the value of dollars spent in the future are adjusted to make them comparable to dollars spent today.

⁷The results presented in figure 1 were computed using current interest rates, which are relatively low by historical standards. At higher interest rates, the combined costs of the alternatives that involve bond financing would be higher, while the costs of grants would remain the same. If we had used bonds with 20-year terms, instead of 30-year terms, in our examples, the costs of the three alternatives that involve bond financing would be lower, but they all would still be greater than the costs of grants.

TIFIA loan alternatives are significantly lower than for tax credit bonds and grants.⁸

Figure 2: Present Value of Federal, State, and Other Costs of Financing \$10 Billion of Spending on Transportation, Using Alternative Approaches



Source: GAO analysis.

In some past and current proposals for using tax credit bonds to finance transportation investments, the issuers of the bonds would be allowed to place the proceeds from the sales of some bonds into a “sinking fund” and, thereby, earn investment income that could be used to redeem bond principal. This added feature would reduce (or eliminate) the costs of the bond financing to the issuers, but this would come at a significant additional cost to the Federal Government. For example, in our example where States issue \$8 billion of tax credit bonds to finance highway projects, if the States were allowed to issue an additional \$ 2.4 billion of bonds to start a sinking fund, they would be able to earn enough investment income to pay back all of the bonds without raising any of their own money. However, this added benefit for the States could increase costs to the Federal Government by about 30 percent—an additional \$2.7 billion (in present value), raising the total Federal cost to \$11.7 billion.

The Federal Role in Bearing Investment Risk Varies

In some cases private investors participate in highway projects, either by purchasing “nonrecourse” State bonds that will be repaid out of project revenues (such as tolls) or by making equity investments in exchange for a share of future toll revenues.⁹ By making these investments the investors are taking the risk that project revenues will be sufficient to pay back their principal, plus an adequate return on their investment. In the case where the nonrecourse bond is a tax-exempt bond, the State must pay an interest rate that provides an adequate after-tax rate of return, including compensation for the risk assumed by the investors. By exempting this interest payment from income tax, the Federal Government is effectively sharing the cost of compensating investors for risk. Nevertheless, the State still bears some of the risk-related cost and, therefore has an incentive to either select investment projects that have lower risks, or select riskier projects only if the expected benefits from those projects are large enough to warrant taking on the additional risk.

In the case of a tax credit bond where project revenues would be the only source of financing to redeem the bonds and the Federal Government would be committed to paying whatever rate of credit investors would demand to purchase bonds at par value, the Federal Government would bear all of the cost of compensating the investors for risk.¹⁰ States would no longer have a financial incentive to balance higher

⁸Using different assumptions could produce different results. For example, Congress could reduce the Federal cost differences across the four alternatives by establishing higher State matching requirements for those programs. In the case of tax credit bonds, setting the rate of credit to substitute for only a fraction of the interest that bond investors would demand would require States to pay the difference.

⁹A nonrecourse bond is not backed by the full faith and credit of the State or local government issuer. Purchasers of such bonds do not have recourse to the issuer’s taxing authority for bond repayment.

¹⁰In the case of Qualified Zone Academy Bonds the statute calls for the credit rate to be set so that the bonds sell at par. Selling at par means that the issuer can sell a bond with a face value of \$1,000 to an investor for \$1,000. If, alternatively, the credit rate were set at an average interest rate, bonds for riskier projects would have to be sold below par (e.g., a bond with a

Continued

project risks with higher expected project benefits. Alternatively, the credit rate could be set equal to the interest rate that would be required to sell the average State bonds (issued within the same timeframe) at par value. In that case, States would bear the additional cost of selling bonds for projects with above-average risks.

In the case of a TIFIA loan for a project that has private sector participation, the Federal loan does not compensate the private investors for their risk; instead, the Federal Government assumes some of the risk and, thereby, lowers the risk to the private investors and lowers the amount that States have to pay to compensate for that risk.

In summary, Mr. Chairman, alternative financing mechanisms have accelerated the pace of some surface transportation infrastructure improvement projects and provided States additional tools and flexibility to meet their needs—goals of FHWA's Innovative Finance Program. FHWA and the States have made progress to attain the goal Congress set for the TIFIA program—to stimulate additional investment and encourage greater private sector participation—but measuring success involves measuring the leverage effect of the Federal investment, which is often difficult. Our work raises a number of issues concerning the potential costs and benefits of expanding alternative financing mechanisms to meet our nation's surface transportation needs. Congress likely will weigh these potential costs and benefits as it considers reauthorizing TEA-21.

Expanding the use of alternative financing mechanisms has the potential to stimulate additional investment and private participation. But expanding investment in our nation's highways and transit systems raises basic questions of who pays, how much, and when. How alternative financing mechanisms are structured determines how much of the needs are met through Federal funding and how much are met by the States and others. The structure of these mechanisms also determines how much of the cost of meeting our current needs are met by current users and taxpayers versus future users and taxpayers.

While alternative finance mechanisms can leverage Federal investments, they are, in the final analysis, different forms of debt financing. This debt ultimately must be repaid, with interest, either by highway users—through tolls, fuel taxes, or licensing and vehicle fees—or by the general population through increases in general fund taxes or reductions in other government services. Proposals for tax credit bonds would shift the costs of highway investments away from the traditional user-financed sources, unless revenues from the Highway Trust Fund are specifically earmarked to pay for these tax credits.

Mr. Chairman this concludes my prepared statement. I would be pleased to answer any questions you or other members of the Committees have.

APPENDIX I: METHODOLOGY FOR ESTIMATING THE COSTS OF TRANSPORTATION FINANCING ALTERNATIVES

We estimated the costs that the Federal, State or local governments (or special purpose entities they create) would incur if they financed \$10 billion in infrastructure investment using each of four alternative financing mechanisms: grants, tax credit bonds, tax-exempt bonds, and direct Federal loans. The following subsections explain our cost computations for each alternative. We converted all of our results into present value terms, so that the value of the dollars spent in the future are adjusted to make them comparable to dollars spent today.¹ This adjustment is particularly important when comparing the costs of bond repayment that occur 30 years from now with the costs of grants that occur immediately.

The Cost of Grants

We estimated the cost to the Federal and State governments of traditional grants with a State match. We assume the State was responsible for 20 percent of the investment expenditures. We then found the percentage of Federal grants such that the Federal grant plus the State match totaled \$10 billion. This form of matching resulted in the State being responsible for \$2 billion of the spending and the Federal Government being responsible for \$8 billion.

\$1,000 face value might sell for only \$950), meaning that the issuer receives less money to spend for a given amount of bonds issued. Conversely, bonds sold for less risky projects could be sold above par, so that issuers receive more funds than the face value of the bonds issued.

¹For example, current interest rates on long-term bonds indicate that, to the government and investors, the present value of a dollar to be spent 30 years from now is less than 25 cents.

The Cost of Tax Credit Bonds

We estimated the cost to the Federal and State governments of issuing \$8 billion in tax credit bonds with a State match of \$2 billion. The cost to the Federal Government equals the amount of tax credits that would be paid out over a given loan term.² We estimated the amount of credit payment in a given year by multiplying the amount of outstanding bonds in a given year by the credit rate. We assumed that the credit rate would be approximately equal to the interest rates on municipal bonds of comparable maturity, grossed up by the marginal tax rate of bond purchasers.³ For the results presented in figures 1 and 2 we assumed that the bonds would have a 30-year term and would have a credit rating between Aaa and Baa. The cost to the issuing States would consist of the repayment of bond principal in future years, plus the upfront cost of \$2 billion in State appropriations for the matching contribution.

The Cost of Tax-Exempt Bonds

The cost of tax-exempt bonds to the State or local government (or special purpose entity) issuers would consist of the interest payments on the bonds and the repayment of bond principal. The cost to the Federal Government would equal the taxes forgone on the income that bond purchasers would have earned from the investments they would have made if the tax-exempt bonds were not available for purchase. For the results presented in figures 1 and 2 we made the same assumptions regarding the terms and credit rating of the bonds as we did for the tax credit bond alternative. We computed the cost of interest payments by the State by multiplying the amount of outstanding bonds by the current interest rate for municipal bonds with the same term and credit rating. We assumed that the pretax rate of return that bond purchasers would have earned on alternative investments would have been equal to the municipal bond rate divided by one minus the investors' average marginal tax rate. Consequently, the Federal revenue loss was equal to that pretax rate of return, multiplied by the amount of tax-exempt bonds outstanding each year (in this example), and then multiplied by the investors' average marginal tax rate.

Direct Federal Loans

In order to have our direct loan example reflect the financing packages typical of current TIFIA projects, we used data from FHWA's June 2002 Report to Congress⁴ to determine what shares of total project expenditures were financed by TIFIA direct loans, Federal grants, bonds issued by State or local governments or by special purpose entities, private investment, and other sources. We assumed that the \$10 billion of expenditures in our example was financed by these various sources in roughly the same proportions as they are used, on average, in current TIFIA projects. We estimated the Federal and nonFederal costs of the grants and bond financing components in the same manner as we did for the grants and tax-exempt bond examples above. To compute the Federal cost of the direct loan component, we multiplied the dollar amount of the direct loan in our example by the average amount of Federal subsidy per dollar of TIFIA loans, as reported in the TIFIA report. In the results presented in figure 1, this portion of the Federal cost amounted to \$130 million. The nonFederal costs of the loan component consist of the loan repayments and interest payments to the Federal Government. We assumed that the term of the loan was 30 years and that the interest rate was set equal to the Federal cost of funds, which is TIFIA's policy. The private investment (other than through bonds), which accounted for less than 1 percent of the spending, and the "other" sources, which accounted for about 3 percent of the spending, were treated as money spend immediately on the project.

Sensitivity Analysis

A number of factors—including general interest rate levels, the terms of the bonds or loans, the individual risks of the projects being financed—affect the relative costs of the various alternatives. For this reason, we examined multiple scenarios for each alternative. In particular, current interest rates are relatively low by historical standards. In our alternative scenarios we used higher interest rates, typical of those in the early 1990's. At higher interest rates, the combined costs of the alternatives that involve bond financing would be higher, while the costs of grants would

²Although the credits that investors earn on tax credit bonds are taxable, we assume that any tax the Federal Government would gain from this source would be offset by the tax that investors would have paid on income from the investments they would have made if the tax credit bonds were not available for purchase.

³For the tax credit and tax-exempt bond computations we based our rates on municipal bond interest rates reported in the August 22, 2002 issue of the Bond Buyer.

⁴U.S. Department of Transportation, TIFIA Report to Congress, June 2002.

remain the same. If we had used bonds with 20-year terms, instead of 30-year terms in the examples, the costs of the three alternatives that involve bond financing would be lower, but they would still be greater than the costs of grants.

APPENDIX II: STATES' USE OF INNOVATIVE FINANCING TOOLS

State Infrastructure Banks

One of the earliest techniques tested to fund transportation infrastructure was revolving loan funds. Prior to 1995, Federal law did not permit States to allocate Federal highway funds to capitalize revolving loan funds. However, in the early 1990's, transportation officials began to explore the possibility of adding revolving loan fund capitalization to the list of eligible uses for certain Federal transportation funds. Under such a proposal, Federal funding is used to "capitalize" or provide seed money for the revolving fund. Then money from the revolving fund would be loaned out to projects, repaid, and recycled back into the revolving fund, and subsequently reinvested in the transportation system through additional loans. In 1995, the federally capitalized transportation revolving loan fund concept took shape as the State Infrastructure Bank (SIB) pilot program, authorized under Section 350 of the NHS Act. This pilot program was originally available only to a maximum of 10 States, but then was expanded under the 1997 U.S. DOT Appropriations Act, which appropriated \$150 million in Federal general funds for SIB capitalization. TEA-21 established a new SIB pilot program, but limited participation to four States—California, Florida, Missouri, and Rhode Island. Texas subsequently obtained authorization under TEA-21. These States may enter into cooperative agreements with the U.S. DOT to capitalize their banks with Federal-aid funds authorized in TEA-21 for fiscal years 1998 through 2003. Of the States currently authorized, only Florida and Missouri have capitalized their SIBs with TEA-21 funds.

Table 1: State's use of SIBs

State	Number of agreements	Loan agreement amount (\$ 000)	Disbursements to date (\$ 000)
Alabama.			
Alaska	1	\$2,737	\$2,737
Arizona	37	\$424,287	\$216,104
Arkansas	1	\$31	\$31
California.			
Colorado	2	\$400	\$400
Connecticut.			
Delaware	1	\$6,000	\$6,000
D.C..			
Florida	32	\$465,000	\$98,600
Georgia.			
Hawaii.			
Idaho.			
Illinois.			
Indiana	1	\$3,000	\$1,122
Iowa	2	\$2,874	\$2,874
Kansas.			
Kentucky.			
Louisiana.			
Maine	23	\$1,758	\$1,478
Maryland.			
Massachusetts.			
Michigan	23	\$17,034	\$13,033
Minnesota	15	\$95,719	\$41,000
Mississippi.			
Missouri	11	\$73,251	\$67,801
Montana.			
Nebraska	1	\$3,360	\$3,360
Nevada.			
New Hampshire.			
New Jersey.			
New Mexico	1	\$541	\$541
New York	2	\$12,000	\$12,000
North Carolina	1	\$1,575	\$1,575

Table 1: State's use of SIBs—Continued

State	Number of agreements	Loan agreement amount (\$ 000)	Disbursements to date (\$ 000)
North Dakota	2	\$3,565	\$1,565
Ohio	39	\$141,231	\$116,422
Oklahoma.			
Oregon	12	\$17,471	\$17,471
Pennsylvania	23	\$17,403	\$17,403
Puerto Rico	1	\$15,000	\$15,000
Rhode Island	1	\$1,311	\$1,311
South Carolina	6	\$2,382,000	\$1,124,000
South Dakota	1	\$11,740	\$11,740
Tennessee	1	\$1,875	\$1,875
Texas	37	\$252,013	\$225,461
Utah	1	\$2,888	\$2,888
Vermont	3	\$1,023	\$1,000
Virginia	1	\$18,000	\$18,000
Washington	1	\$700	\$385
West Virginia.			
Wisconsin	3	\$1,814	\$1,814
Wyoming	8	\$77,977	\$42,441
Total	294	\$4,055,578	\$2,067,432

Source: FHWA, June 2002

Transportation Infrastructure Finance and Innovation Act (TIFIA) credit assistance

As part of TEA-21, Congress authorized the Transportation Infrastructure Finance and Innovation Act of 1998 (TIFIA) to provide credit assistance, in the form of direct loans, loan guarantees, and standby lines of credit to projects of national significance. The TIFIA legislation authorized \$10.6 billion in credit assistance and \$530 million in subsidy cost to cover the expected long-term cost to the government for providing credit assistance. TIFIA credit assistance is available to highway, transit, passenger rail and multi-modal project, as well as projects involving installation of intelligent transportation systems (ITS).

The TIFIA statute sets forth a number of prerequisites for participation in the TIFIA program. The project costs must be reasonably expected to total at least \$100 million, or alternatively, at least 50 percent of the State's annual apportionment of Federal-aid highway funds, whichever is less. For projects involving ITS, eligible project costs must be expected to total at least \$30 million. Projects must be listed on the State's transportation improvement program, have a dedicated revenue source for repayment, and must receive an investment grade rating for their senior debt. Finally, TIFIA assistance cannot exceed 33 percent of the project costs and the final maturity date of any TIFIA credit assistance cannot exceed 35 years after the project's substantial completion date.

Table 2: State's use of TIFIA credit assistance

State	Project name	Project description	Project cost (\$ millions)	Instrument type	Credit amount (\$ millions)	Primary revenue pledge
California	SR 125 Toll—1999	Road Highway/ Bridge Construction of 11 mi 4-lane toll road in San Diego.	\$455	Direct loan Line of credit	\$94,000 User. \$33,000 Charges	
	San Francisco-Oakland Bay Bridge—2002.	Replacement of SF-Oakland Bay Bridge east span.	\$3,305 Di- rect loan.	\$450,000 Toll sur- charge.		
D.C.	Washington Metro— 1999.	Transit capital im- provement pro- gram.	\$2,324 Guar- antee.	\$600,000 Other.		

Table 2: State's use of TIFIA credit assistance—Continued

State	Project name	Project description	Project cost (\$ millions)	Instrument type	Credit amount (\$ millions)	Primary revenue pledge
Florida	Miami Intermodal Center—1999.	Multi-modal center for Miami Intern'l Airport, including car rental garage, intermodal center, people mover, and roadways.	\$1,349	Direct loan.	\$269.076	Tax revenue.
				Direct loan.	\$163.676	User charges
Nevada	Reno Rail Corridor	Intermodal	\$280	Direct loan.	\$73.500	Other.
New York	Farley Penn Station—1999.	Intermodal	\$800	Direct loan.		
Line of credit	\$140.000 Other					
	\$20.000 Other					
	Staten Island Ferries—2000.	Transit	\$482	Direct loan.	\$159.068	Other.
Puerto Rico	Tren Urbano—1999	Transit rail line	\$1,676	Direct loan.	\$300.000	Tax revenues.
South Carolina	Cooper River Bridge	Replace double bridges over the Cooper River, connecting Charleston and Mt. Pleasant.	\$668	Direct loan.	\$215.000	Other.
Texas	Central Texas Turnpike—2001.	Construct 120+ mi. toll facilities to ease I-35 congestion.	\$3,220	Direct loan.	\$917.000	User charges.
Washington	Tacoma Narrows Bridge—2000.	Construct new parallel bridge, toll plaza, and approach roadways.	\$835	Direct loan.	\$240.000	User.
				Line of credit	\$30.000	charges (both)
Total			\$15,393.			

Source: FHWA, June 2002.

Grant Anticipation Revenue Vehicles (GARVEEs)

Grant anticipation revenue vehicles (GARVEEs) are another tool States can use to finance highway infrastructure projects. GARVEE bonds are any bond or note repayable with future Federal-aid highway funds. The NHS Act and TEA-21 brought about changes that enabled States to use Federal-aid highway apportionments to pay debt service and other bondrelated expenses and strengthened the predictability of States' Federal-aid allocation. While GARVEEs do not generate new revenue, the new eligibility of bond-related costs for Federal-aid reimbursement provides States with one more option for repaying debt service. Candidate projects are typically large enough to merit borrowing rather than pay-as-you-go grant funding; do not have access to a revenue stream (such as local taxes or tolls) or other forms of repayment (State appropriations); and have support from the State's DOT to reserve a portion of future year Federal-aid highway funds to fund debt service. In some cases, States may elect to pledge other sources of revenue, such as State fuel tax revenue, as a backstop in the event that future Federal-aid highway funds are not available.

Table 3: State's use of GARVEE bonds

State	Date of issuance	Face amount of issue	Projects	Backstop financing
Alabama	Apr-02	\$200 million	County Bridge Program	All Federal construction reimbursements. Also insured
Arizona	Jun-00 May-01	\$39.4 million \$142.9 million	Maricopa freeway projects	Certain sub-account transfers
Arkansas	Mar-00 Jul-01	\$175 million \$185 million	Interstate highways	Full faith and credit of State, plus State motor fuel taxes
Colorado	May 00 Apr-01 Jun-02	\$537 million \$506.4 million \$208.3 million	Any project financed wholly or in part by Federal funds.	Federal highway funds as allocated annually by CDOT; other State funds
New Mexico	Sep-98 Feb-01	\$100.2 million \$18.5 million	New Mexico SR 44	No backstop; bond insurance obtained
Ohio	May-98 Aug-99 Sep-01	\$70 million \$20 million \$100 million	Spring-Sandusky project and Maumee River Bridge Improvements.	Moral obligation pledge to use State gas tax funds and seek general fund appropriations in the event of Federal shortfall
Total		\$2,301.7 million.		

Source: FHWA, June 2002

RESPONSES BY JAYETTA HECKER TO ADDITIONAL QUESTIONS FROM SENATOR BAUCUS

Question 1. One way of organizing some of these ideas are selling bonds for project specific financing versus using bond proceeds to supplement the Highway Trust Fund. Will you comment on the advantages and disadvantages of each?

Response. Mr. Chairman, in the competition for finite transportation resources, selling bonds to help finance a specific project can help advance a project that might otherwise go unfunded or be delayed. In addition, project-specific financing can be useful for large-dollar projects that would otherwise take up a large portion of a State's Federal highway apportioned funds in any given year. However, as we indicated in our statement, given the restrictions in some State laws and the views of some State officials, project-specific financing currently has limited applicability. As a result, not all States can use project specific financing, nor can it be used for all projects. In addition, State officials will weigh the risks associated with project-based bonds against the expected benefits from those projects to determine whether the added risk is justified.

In the short term, using bond proceeds to supplement the Highway Trust Fund would increase the available funding, and this additional funding would then be apportioned to all the States. This approach could enable a wider range of projects to be advanced. If the Federal Government sold these bonds, they would be less risky than project-specific bonds. Consequently, investors would not demand as high an interest rate as they would for the project-specific bonds. However, this debt would ultimately have to be repaid—either by the general population through increases in general fund taxes or reductions in other government services, or by earmarking funds from the Highway Trust Fund. If funds were earmarked from the Highway Trust Fund to repay the bonds in the future, highway funding would not be increased. Rather, costs would be shifted to future users.

Raising new sources of funding presents Congress with the option of devising alternatives to the existing formula-based grant program for delivering funds, in either a project-or program-based fashion. This could open the possibility of engaging new approaches to deal with seemingly intractable transportation problems and national priorities. For example, DOT and FHWA have concluded that the reliability and effectiveness of the freight transportation system is being constrained because of increasing demand and capacity limitations. Many observers have questioned the ability of our surface transportation systems to keep pace with the growing demands being placed upon them as pressure continues to build on already congested road and rail connections to major U.S. seaports and at border crossings. Either a project-based or a program-based financing approach could target funds to these or other major national priorities.

RESPONSES BY JAYETTA HECKER TO ADDITIONAL QUESTIONS FROM SENATOR
JEFFORDS

Question 1. In your statement you make reference to the lack of qualified personnel at the Department of Transportation in regard to financing. How many positions (FTE) does the DOT currently have invested in finance personnel? What is your best guess as to the percentage of those FTEs having the necessary skill sets to advance a more aggressive transportation financing program?

Response. Mr. Chairman, FHWA requested 2,412 FTEs for fiscal year 2003. Of these, 99 were for financial manager and financial specialist positions. The degree to which staff in these positions are involved in innovative finance activities varies. They include staff located in each of FHWA's division offices in every State who have some involvement with innovative finance, staff located in headquarters and other locations who specialize in innovative finance, and other staff who are not directly involved with innovative finance but need some knowledge of it.

We have not reviewed DOT's staffing profile in sufficient detail to determine whether the right number of personnel are performing these functions or to assess their skills. But the department—and indeed all Federal agencies—face a growing human capital crisis that threatens their ability to effectively, efficiently, and economically perform their missions and to ensure maximum government performance and accountability for the benefit of the American public. For that reason, as you know, we have designated strategic human capital management as a high-risk concern governmentwide. As I mentioned in my statement, this challenge ripples throughout the State and local transportation agencies that build, maintain, and operate the vast preponderance of the nation's transportation system. About 50 percent of the people who plan, develop, and manage the nation's transportation system will become eligible to retire in the next 5 years. A survey of State departments of transportation conducted by the New Mexico State Highway and Transportation Department in 1999 identified the need to attract, hire, and retain skilled personnel as the greatest human resource issues facing these departments. In addition, the Transportation Research Board has cited the impending shortage of skilled personnel as among our nation's most critical transportation issues.

In our view, addressing human capital challenges requires comprehensive workforce planning strategies to identify the mix of skills needed to accomplish an agency's mission, the skill mix the agency has on hand, whether those employees are expected to retire and when, and a recruiting and hiring strategy to fill the gaps where needs exist. For example, any examination of the transportation finance arena would necessarily reflect the changing nature of the surface transportation program—from a federally funded formula grant program to one involving a multiplicity of funding sources and delivery mechanisms. This change requires people with new skills—for example, persons skilled in public finance who can navigate the private capital markets. DOT has made progress addressing its human capital concerns by publishing its Human Resources Strategic Action Plan for 2001–2003 with goals that call for increased human capital investments and workforce planning. In addition, FHWA is actively working with major national and State transportation organizations and independent experts to identify human capital needs and innovative ways to meet them. Clearly, it is important that the needs of financing the nation's transportation system be part of this assessment. In January 2003, we will be reporting further on human capital challenges faced by DOT and other Federal agencies in our biannual high risk and performance and accountability assessment.

Question 2. One of the outcomes of reauthorization should be the ability to allow for more meaningful investment by the private sector into transportation. Current transportation bonding techniques do not seem to provide the income that the private sector is seeking since we primarily use tax-exempt mechanism. Can you provide more insights on how we can “decouple” the bonding process to make it more attractive to these types of investors? Are there examples where such activity is occurring?

Response. Mr. Chairman, proponents of tax credit bonds have advocated “decoupling” as you suggested. These proponents contend that if the bonds are sold as two separate components—the right to receive the tax credits and the right to receive the principal repayment when the bond comes due—then the bond issuer could receive larger proceeds for selling a bond with a given face value. This practice is known as “stripping.” The reason this result is expected is that each component of the bond would be better tailored to suit the requirements of different types of investors. For example, some investors may prefer to receive the periodic benefit of the tax credit and may be less interested in receiving a principal repayment in the distant future. Other investors, such as pension funds or taxpayers setting up individual retirement accounts, have no need for current income or tax benefits and may simply prefer

to receive a certain amount of money at a specified future date. Therefore, the sum that the two different types of investors would be willing to pay for the two components is likely to be larger than the sum that either type of investor would be willing to pay for an "unstripped" bond.

The practice of "stripping" is prevalent in the sale of interest-bearing securities. For example, Treasury bonds with maturities of 10 years or longer generally can be sold as two separate components. However, under current law, no existing tax credit bonds can be stripped. A Treasury department official told us that the monitoring of tax compliance would be more complicated if tax credit bonds were allowed to be stripped. For example, if the tax credits ever had to be recaptured because of noncompliance on the part of issuers, it might be difficult to track down the recipients of the credits if those credits had been resold separately in the secondary market.

Question 3. It seems that our current transportation financing mechanisms work well for large-scale projects. What avenues are available for smaller scale projects? Are there other models which have worked well in other areas which could be helpful here—for example the Farm Credit system sells securities to raise funds to make loans. What existing financing ideas regarding other Departments, Government Sponsored Enterprises, Federal or State agencies, or private entities should we at least consider in terms of the reauthorizations?

While our current transportation financing mechanisms are—for the most part—geared toward larger scale projects, Mr. Chairman, at least one mechanism, SIBs, have effectively supported smaller projects. TIFIA, as you know, is limited by statute to projects with an estimated cost of \$100 million or more, and States that have used GARVEEs have generally done so to support the financing needs of large projects. Although SIBs have also been used to fund some large projects—such as the projects in South Carolina's "27 in 7" program—they also support smaller projects in those States that have SIBs. For example, loans in Missouri have averaged \$7 million per project, while loans from Maine's SIB have averaged \$76,000 per project. FHWA officials told us that SIBs have been effectively used for smaller projects that might otherwise have received a lower priority for funding. However, these projects have required some type of revenue stream in order for the borrower—often a municipality—to repay the loan.

I agree with you, Mr. Chairman, that a variety of financing mechanisms exist in different sectors to bring private participation and investment to the table in support of public goals and purposes. For example, as you pointed out, the Congress has created government-sponsored enterprises (GSE) such as the Farm Credit System—as well as Fannie Mae, Freddie Mac, and the Federal Home Loan Bank System—to provide support for agricultural and home lending beyond what the financial markets would provide in their absence. These GSEs are sophisticated financial institutions with Federal charters that grant them benefits so that they can help achieve their public missions. Among these benefits, GSEs can issue debt in the capital markets at favorable interest rates to help finance a wide range of lending to farmers and homeowners. Our work has shown that these institutions often have unique flexibilities and play a key role in providing services and options that are beyond the capacity of public agencies or financial markets to provide.

However, the Congress did not decide to create these entities lightly. Because of the sophistication of their financial operations, the risks they face, and the requirements of their missions, GSEs require public oversight mechanisms to ensure their safety and soundness, and to ensure that the public purposes for which they were created are being carried out. As such, a decision to create a GSE might best follow a conclusion that one was uniquely positioned to fulfill unmet national needs and priorities and that the benefit of government sponsorship and the role of such an institution in fulfilling those needs and priorities exceeded the costs of creating and operating it. To date, GSEs have not been used for financing public facilities, such as highways. We have completed an extensive body of work on this subject and would be pleased to work with you and the committee staff to examine more specifically the potential application of these and other financing mechanisms to meeting our surface transportation needs.

Question 4. I am interested in attracting private capital to supplement the Highway Trust Fund in meeting the nation's transportation needs. The key consideration for private investors is the availability of a reliable revenue stream to retire debt. Where might we turn to secure such revenue streams?

Response. Mr. Chairman, probably the most prevalent and reliable revenue stream is the user fee. User fees can be in the form of tolls, fuel taxes, or license and vehicle fees—and States have turned to a variety of user fees to finance transportation projects. For example, Arkansas imposed a diesel fuel tax to partially pay

for the GARVEE bonds issued to reconstruct the State's interstate highways, while Illinois increased its vehicle registration fees to finance bonds for its "Illinois First" project—which included a number of significant highway renovations. User fees are increasingly taking less conventional forms—Florida intends to repay part of its TIFIA loan for the Miami Intermodal Center from fees levied on rental cars while New York's Farley Penn Station TIFIA loan is to be repaid from lease payments from the Port Authority of New York and New Jersey, revenues from Amtrak, and rents paid from planned station retail facilities. In addition to highway user fees, many States and localities have tapped property-based sources of financing, including general property taxes, real estate transfer taxes, and developer impact fees to finance surface transportation projects.

As we discussed in our March 2000 report (Port Infrastructure: Financing of Navigation Projects at Small and Medium-Sized Ports), some States allow local sponsors of Corps of Engineers' navigation projects to levy property taxes or issue general obligation or revenue bonds. General obligation bonds issued to support projects are generally paid for through taxes implemented by State or local governments. Revenue bonds issued to support a particular project are typically paid for out of the revenues generated by that project.

STATEMENT OF JANICE HAHN, MEMBER, LOS ANGELES CITY COUNCIL CHAIRWOMAN,
ALAMEDA CORRIDOR TRANSPORTATION AUTHORITY

Mr. Chairmen, and members of the joint Committees, good morning, and thank you for inviting me here today. My name is Janice Hahn. I am a Los Angeles City Councilwoman and serve as Chairwoman of the Governing Board of the Alameda Corridor Transportation Authority. The Alameda Corridor Transportation Authority is a joint-powers authority created by the Cities of Long Beach and Los Angeles in 1989 to oversee the financing, design and construction of the Alameda Corridor. The Governing Board of the Alameda Corridor Transportation Authority is a seven-member board representing the cities of Los Angeles and Long Beach, the ports of Los Angeles and Long Beach and the Los Angeles County Metropolitan Transportation Authority (MTA).

On behalf of city of Los Angeles Mayor James Hahn, city of Long Beach Mayor Beverly O'Neill, the Corridor Authority's Governing Board, and our CEO Jim Hankla, I am honored to be here.

INTRODUCTION

We are commonly called ACTA. ACTA is the public agency that built the Alameda Corridor, a 20-mile-long freight rail expressway linking the Ports of Los Angeles and Long Beach to the rail yards near downtown Los Angeles. The project was monumentally complex, running through eight different government jurisdictions in urban Los Angeles County, requiring multiple detailed partnerships between public and private entities, and presenting extensive engineering challenges.

One of the key partnerships that has been vital over the years has been with the U.S. Congress. We greatly appreciate the strong support you and your colleagues provided to ACTA in developing the innovative loan from the Department of Transportation. We are particularly thankful for the strong leadership demonstrated by many of you in Congress including our two distinguished Senators, Dianne Feinstein and Barbara Boxer along with California Congressman Stephen Horn and Congresswoman Juanita Millender-McDonald. Without their vision and support it is unlikely the Alameda Corridor would be in operation today, strengthening the nation's global economic competitiveness.

Over the years there were many who doubted the Corridor project could be built, let alone on time and on budget. But after more than 15 years of planning and 5 years of constructing the \$2.4 billion Alameda Corridor, one of the nation's largest public works projects opened on time and on budget on April 15. Today, more than 35 freight trains per day use the Alameda Corridor, handling containers loaded with shoes, clothing, furniture and other products bound for store shelves throughout the United States. They also deliver to the ports U.S. goods such as petroleum products, machine parts, and agricultural products for shipment to worldwide markets.

A trip from the Ports of Los Angeles and Long Beach to the transcontinental rail yards near downtown Los Angeles used to take more than 2 hours. It now takes about 45 minutes. As cargo volumes increase, this enhanced speed and efficiency will be critical; more than 100 trains per day are expected on the Alameda Corridor by the year 2020. It is important to note that ACTA is collecting revenue from these rail shipments in amounts sufficient to meet its current and future financial obligations.

MODEL FOR SUCCESS

Because of our success, the Alameda Corridor is considered a model for how major public works projects should be constructed. The Corridor illustrates the significance of intermodalism to the future of our economic and transportation systems. Among those praising the Alameda Corridor have been Transportation Secretary Norman Mineta—a long time supporter and friend of the Corridor project—and three of his predecessors, one from the first Bush Administration and two from the Clinton Administration.

At our grand opening ceremony last April, Secretary Mineta said this about the Alameda Corridor: “Its successful completion demonstrates what we can accomplish with innovative financing and public-private cooperation, and it provides a powerful paradigm for the kinds of intermodal infrastructure investment we want to encourage as we begin working with the Congress to develop legislation reauthorizing America’s surface transportation programs.” We were also pleased to see that just this month in testimony before a joint hearing of the Environment and Public Works and Commerce Committees, Associate Deputy Secretary of Transportation Jeff Shane praised the Corridor project as a national model. The project, he said, “will have far-reaching economic benefits that extend well beyond Southern California.” Similarly, in an article written for *TrafficWorld*, former U.S. Department of Transportation Secretaries Federico Pena and Samuel Skinner said: “The Alameda Corridor is of national significance not only because of its direct economic impact on jobs, taxes and commodity prices but because the corridor serves as a model of how our country can and must expand and modernize our freight transportation system if we are to remain a world-class trading partner.” In addition, former U.S. Department of Transportation Secretary Rodney Slater has also been a supporter of the Alameda Corridor project.

We are flattered by the accolades and pleased and proud to share our experience with those who hope to benefit from it. In fact, one of the goals of the ACTA Governing Board is to support other projects that promote international trade and the efficient movement of cargo.

The key to our success can be attributed to two major themes that guided us throughout the planning, financing and construction of the project: First is multi-jurisdictional cooperation. The Alameda Corridor is built on the partnerships forged between competitive public agencies and between those agencies and the private sector. We have demonstrated that governments can work together, and they can work with the private sector, putting aside competition for the benefit of greater economic and societal good. Second is direct and tangible community benefits. The Alameda Corridor provided direct community benefits in the form of significant traffic congestion relief, job training and other programs. We have proven that communities don’t have to sacrifice quality of life to benefit from international trade and port and economic activity.

PROJECT NEED AND PLANNING

The roots of our multi-jurisdictional cooperation began to take hold in the early 1980’s, when a committee was formed by the Southern California Association of Governments to study ways to accommodate burgeoning trade at the Ports of Los Angeles and Long Beach. The panel included representatives of the ports, the railroad and trucking industries, the Army Corps of Engineers as well as local elected officials and others. The ports had projected—accurately, it turns out—massive cargo increases driven by the growing use of intermodal containers transferred directly from ships to rail cars and trucks. The volume of containers crossing the wharves doubled in the 1990’s and last year reached more than 10 million 20-foot containers per year. That figure is expected to exceed 36 million by the year 2020. Last year, the ports handled more than \$200 billion in cargo, or about one-quarter to one-third of the nation’s waterborne commerce. This has had huge ripple effects in Southern California and across the country in the form of jobs, tax revenues and general economic activity.

In the early 1980’s, there was growing concern about the ability of the ground transportation system to accommodate increasing levels of trade-related rail and truck traffic in the port area. By 1989, the cities and ports of Los Angeles and Long Beach had joined forces to form a joint powers authority that later became the Alameda Corridor Transportation Authority. The agency then selected a preferred project: consolidating four branch lines serving the ports into a 20-mile freight rail expressway that is completely grade-separated, including a 10-mile-long 30-foot-deep trench that runs through older, economically disadvantaged industrial neighborhoods south of downtown Los Angeles. The project would eliminate traffic conflicts at more than 200 street-level railroad crossings.

PROJECT FINANCING AND FUNDING

Our broad base of cooperation is also evident in the project's unique finance plan, which draws revenue from a range of both public and private sources.

The linchpin of this funding plan was designation of the Alameda Corridor as a "high-priority corridor" in the 1995 National Highway System Designation Act. That designation cleared the way for Congress to appropriate \$59 million needed to back a \$400 million loan to the project from the U.S. Department of Transportation. As mentioned previously, Senators Boxer and Feinstein, along with California Congressman Stephen Horn and Congresswoman Juanita Millender-McDonald and other members of our congressional delegation, were instrumental in helping to form a bipartisan congressional coalition to support this effort. It is important to point out that this financing arrangement preceded the passage of TEA-21, and the associated provisions known as TIFIA. ACTA was pleased to work cooperatively with Department of Transportation officials and congressional staff, to be a "trail-blazer" with the Office of Management and Budget and forge an innovative arrangement to finance an intermodal project of national significance.

Similarly, at the State level, ACTA worked closely with both Republican and Democrat members of the Legislature, Governor Pete Wilson along with the California Business, Transportation and Housing Agency, the California Transportation Commission and the Department of Transportation to include the project in short- and long-range plans and to expedite State funding. At the local level, ACTA coordinated closely with Mayor Beverly O'Neill of Long Beach and then-Mayor Richard Riordan of Los Angeles for support of the project, and ACTA worked closely with the Los Angeles County Metropolitan Transportation Authority to set aside State and Federal grant funds and local transportation sales tax revenues for use on the Alameda Corridor. And, of course, the ports provided almost \$500 million in startup funding and for the purchase of rights-of-way.

The collective assistance offered by Federal, State and local agencies and elected officials provided the base funding—the leverage, if you will—for the biggest piece of our financing package—more than \$1.1 billion in proceeds from revenue bonds sold by ACTA. The bonds and the Federal loan are being retired by use fees paid by the railroads. The Use and Operating Agreement between ACTA and Burlington Northern and Santa Fe Railway and Union Pacific Railroad, approved in October 1998, is truly unprecedented. Never before had the competitive railroads cooperated on a project to the extent that they did on the Alameda Corridor. Like the ports, the BNSF and the UP put aside their rivalry to cooperate on a project with positive economic implications at the national, regional and local levels.

In the end, funding for the Alameda Corridor came from multiple public and private sources and resulted from bipartisan support. The funding breaks down roughly like this: 46 percent from ACTA revenue bonds; 16 percent from the U.S. Department of Transportation loan; 16 percent from the ports; 16 percent from California State and local grants, much of it administered by the Los Angeles County Metropolitan Transportation Authority, and 6 percent from other sources.

PROJECT CONSTRUCTION

As with project planning and funding, construction also required extensive cooperation and coordination among multiple entities.

The Alameda Corridor included, among other elements, construction of 51 separate bridge structures, relocation of 1,700 utilities, pouring of 27,000 concrete pilings and removal of 4 million cubic yards of dirt excavated to make way for the Mid-Corridor Trench. More than 1,000 professionals from 124 engineering and construction management firms, as well as more than 8,000 construction workers, contributed to the project. Moreover, construction occurred in eight different government jurisdictions. Any project of the Alameda Corridor's size and scope inevitably encounters hurdles in the construction process that can lead to delays. There are many reasons why our project stayed on schedule, but at the top of the list are our permit facilitating agreements with corridor communities and utility providers, and our decision to use a design-build contract for the Mid-Corridor Trench.

ACTA saved an estimated 18 months on project delivery by utilizing the design-build approach for our largest contract, the Mid-Corridor Trench. The design-build approach allows for the overlapping of some design and construction work and provides greater control over cost and scheduling. Design-build authority was obtained through an ordinance approved by the Los Angeles City Council. This enabled ACTA to subject the contractor to significant liquidated damages if the contract was not completed by a fixed date at a fixed price.

Before construction began, ACTA negotiated separate Memoranda of Understanding with each city along the route, detailing expedited permitting processes,

haul routes for construction traffic and the protocol for lane closures and temporary detours. By agreeing in advance on these and other issues, we streamlined a complex construction process and saved time and money.

DIRECT COMMUNITY BENEFITS

One key to securing the MOUs and additional community cooperation and support was to deliver on our promises of direct community benefits.

By eliminating more than 200 at-grade railroad crossings, the Alameda Corridor is projected to reduce emissions from idling trucks and automobiles by 54 percent, slash delays at railroad crossings by 90 percent and cut noise pollution by 90 percent. The project also reduces traffic congestion through improvements to Alameda Street. But from the start, the ACTA Governing Board wanted to leave a lasting legacy beyond construction of a public works project. This was accomplished by creating several community-based programs.

Through its contractors and various community partnerships, ACTA administered several programs designed to provide local residents and businesses with direct benefits that would long outlive construction. For example:

- The Alameda Corridor Business Outreach Program offered technical assistance, networking workshops and aggressive outreach to provide disadvantaged business enterprises with the tools they need to compete for work on the project. Disadvantaged firms—known as DBEs—have earned contracts worth more than \$285 million, meeting our goal for 22 percent DBE participation.

- The goal of our Alameda Corridor Job Training and Development Program was to provide job training and placement services to 1,000 residents of corridor communities. We exceeded that goal—almost 1,300 residents received construction industry-specific job training, and of those 637 were placed in construction-trade union apprenticeships.

- The Alameda Corridor Conservation Corps provided life skills training to 447 young adults from corridor communities, exceeding the goal of 385. While studying for high school class credits, these young adults completed dozens of community beautification projects in corridor communities, including graffiti eradication, tree-planting and debris pickup. After completing the 3-month program, recruits had the option to join the Los Angeles or Long Beach conservation corps chapters full time, phase into a city college program or enroll in a business, vocational, trade school or apprenticeship program.

- And finally, in partnership with the World Trade Center Association Los Angeles–Long Beach, the Alameda Corridor Transportation Authority International Trade Development Program has provided technical training and international trade-specific job skills to 30 entry-level job seekers in local communities. In addition, some 600 local companies seeking inroads into the import or export business have been identified for one-on-one technical assistance. That assistance is being provided throughout this year. This unique program is helping local residents and businesses capitalize on international trade.

These community-based programs ensured that local residents and businesses did not get left behind, that they would receive direct and long-lasting benefits from the project.

THE FUTURE

The efficient movement of cargo through our nation's ports and on our rail lines and highways is a critical issue not only in Southern California—which has the nation's two busiest ports—but the Nation as a whole. The Alameda Corridor is truly the backbone of an emerging trade corridor program in Southern California. Already, others are following our lead, including governmental agencies in Los Angeles, Orange, San Bernardino, and Riverside Counties who are building grade-separation projects.

In addition, ACTA and the California Department of Transportation are working under an innovative cooperative agreement to develop plans for a Truck Expressway that would provide a "life-line" link between Terminal Island at the Ports and the Pacific Coast Highway at Alameda Street. The Alameda Corridor Truck Expressway is intended to speed the flow of containers into the Southern California marketplace. Environmental reports are being prepared, and the project could be ready for approval as early as March 2003. At ACTA, we believe that by restructuring our Federal loan we can undertake this critical Truck Expressway project without any additional Federal financial support.

IMPLICATIONS AND RECOMMENDATIONS

The Alameda Corridor not only creates a more efficient way to distribute cargo, but it also boosts the regional and national economies by keeping the ports competitive and capable of generating additional economic growth. Moreover, it provides direct, long-lasting benefits to local residents and companies, benefiting the entire region with a legacy well beyond actual construction. In short, the Alameda Corridor has demonstrated the benefit of investment in well-planned and well-executed intermodal transportation infrastructure.

As your committees, the full Congress, and the U.S. Department of Transportation begin the TEA-21 reauthorization process, including the formulation of policies to address growing freight rail and truck traffic congestion and other challenges posed by international trade, we respectfully offer these policy recommendations, based on our experience with the Alameda Corridor:

- The planning and funding of intermodal projects of national significance, directly benefiting international trade, should be sponsored at the highest levels within the Office of the Secretary of Transportation. There should be a national policy establishing the linkage between the promotion of free trade and support for the critical intermodal infrastructure moving goods to every corner of the United States. Public-private partnerships do in fact work and should be promoted and encouraged by Federal transportation legislation.

- A specific funding category is needed to support intermodal infrastructure projects, and trade connector projects. Consideration should be given to new and innovative funding strategies for the maritime inter-modal systems, infrastructure improvements enhancing goods movement.

- The Alameda Corridor project benefited from a Department of Transportation willing to undertake risk and provide loan terms that were not available on a commercial basis. This Federal participation gave private investors confidence in the project and made bond financing possible.

Most important, in my mind, is this: The success of the Alameda Corridor has shown that Federal investment in trade-related infrastructure can benefit the economy without sacrificing quality-of-life issues.

Mr. Chairmen, once again, thank you for inviting me here today. That concludes my remarks. I would be happy to address any questions.

STATEMENT OF PETER RAHN, CABINET SECRETARY, NEW MEXICO STATE HIGHWAY AND TRANSPORTATION DEPARTMENT

INNOVATIVE FINANCE: LEVERAGING ORDINARY RESOURCES INTO EXTRAORDINARY SUCCESSES

Mr. Chairman and Members of the committee, I appreciate this opportunity to submit testimony concerning the positive benefits that the State of New Mexico has received through innovative financing for transportation, and how our State has leveraged ordinary resources into extraordinary successes.

Flexible and stable revenue from Congress has enabled the New Mexico State Highway and Transportation Department the ability to deliver dramatic results for our citizens through improvement and enhancement of our transportation system. We have developed and implemented new ways to finance and contract highway construction projects.

Since 1998 we have used innovative financing techniques to bond \$1.2 billion that advance highway construction projects by as much as 27 years. We are building quality projects that provide enormous returns on investment for the taxpayers and deliver economic benefits today.

New Mexico's strategy is to connect our communities to regional and national economic opportunities by building four-lane corridors. This access has historically been limited to our Interstate system, serving less than 70 percent of our population. Today we have added 653 miles of new four-lane highways that link 96.7 percent of our citizens to these vital economic opportunities.

As well as adding 653 miles of four-lane highways, we have built 4 urban relief routes, 15 interstate interchanges and the Big I, which is the intersection of the Interstates 25 and Interstate 40-that serves as a bridge for regional, national and global commerce. Our efficiency, combined with stable and flexible Federal funding, provides a seamless regional transportation system to serve this commerce and continue the movement of products to market. Our urban citizens are moving more quickly and safely to work, school and medical care.

Innovative finance enabled us to use Grant Anticipation Revenue Vehicle Bonds (GARVEE Bonds) to construct four-lanes on NM 44 from central to northeast New

Mexico. Because of Federal revenue stability, both Standard and Poor's and Moody's rated our bonding proposals at "A" level investment grade. We were able to construct a 118-mile four-lane highway corridor in 28 months with a 20-year warranty that will save the taxpayer \$89 million in maintenance costs. This 118-mile corridor would have taken 27 years to construct under traditional methods.

We have also improved the road quality of our Interstate and State Highway system through our innovative financing program. We have reversed a 20 5-year trend in our deteriorating State and interstate highways. Since 1998, we have improved 3,035 miles highways—a 51 percent decrease in our deficient status highway miles. In 1999 only 81.8 percent of our Interstate highway system was rated in good condition—today 98.7 percent of this system is in good condition.

In addition to major improvements to our system, our citizens have benefited through economies of scale. In 1995 New Mexico's cost per mile of four-lane construction was \$1.3 million. In 2002, through our large bonding program, we reduced that cost to \$740 million per mile. This economy of scale construction saves our State over \$182 million in four-lane corridor construction.

Investment in the nation's transportation infrastructure yields high returns. Based on information generated by the National Highway Users Alliance, the Big I will save personal and commercial users \$8.1 billion in time; \$870 million in fuel; \$460 million in safety; and another \$670 million in environmental impacts. This \$286 million investment by Congress will realize a \$10.1 billion return on investment. This \$10.1 billion return on investment for one project is 34 times greater than the interest paid on our entire bonding program.

It is critically important that we understand and acknowledge our innovative financing program would not be the success that it is without the provision for flexible, stable and reliable funding. States across the country have invested in the national infrastructure based on the guaranteed funding levels. These guarantees have enabled us to program and deliver projects in a predictable financial climate. In fact-based on the FHWA highway construction inflation rate of 4.5 percent—our entire bonding program, with an interest rate of 4.47 percent, delivers \$1.2 billion of transportation improvements to New Mexico at a lower cost and the benefit of being used today rather than years in the future.

We can assure our citizen's that all user fees directed to the Highway Trust Fund are being spent for its designated purposes, and we can speak with confidence about the Federal transportation-financing picture over a multi-year period. Strong budgetary mechanisms, balanced planning and streamlining program delivery have made innovative finance work for New Mexico.

RESPONSES OF PETER RAHN TO ADDITIONAL QUESTIONS FROM SEN. BAUCUS

Question 1. I have some concerns about Garvee bonds. I understand the advantage using future apportionments to guarantee bonds, so you can enjoy the additional capital today. But what is going to happen tomorrow when you need to use your future apportionments to build and maintain highways, but the money already been spoken for as repayment for the project you did today?

Response. States have to be adept at what they utilize GARVEE bonds for. Critical projects that produce major returns on investment in the areas of economic development opportunities, safety and congestion relief are most suitable for bonding, especially when the cost of the project is outside the bounds of what can be accommodated within the normal STIP process. By this I mean, that a single project would take an inordinate percentage of the annual construction program to construct. Three of our bonded projects would have each exceeded the total annual construction dollars available to New Mexico and three more would have each exceeded 50 percent.

To utilize GARVEE bonds, or any bonds for that matter, to pay for maintenance activities would be a mistake. Maintenance should be accommodated within existing budgets, as we have provided for in our future plans. However, the notion that new construction projects will be on hold until the issued bonds are retired—and therefore bonds should not be used at all—is flawed. If bonds had not been issued in New Mexico, not only would those other projects be waiting, so would the projects now in place.

The economic benefits of bonding must also be factored into the decision. Building large projects at one time can produce many millions of dollars in savings from economies of scale. Additionally, current low interest rates are attractive when compared to nearly identical inflation costs within the highway construction sector. The true costs are practically the same, but the benefits of use are available today.

Question 2. Why didn't the State just issue State general obligation bonds or private activity bonds? Why chose Garvees?

Response. New Mexico chose to issue GARVEE bonds rather than general obligation bonds due to the ease and speed with which GARVEES could be taken to market versus the lengthy process required by the State constitution to utilize GO bonds. Private activity bonds do not enjoy the same tax advantages as GARVEE bonds.

STATEMENT OF JOHN HORSLEY, EXECUTIVE DIRECTOR, THE AMERICAN ASSOCIATION
OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS

Mr. Chairmen and members of the Committees, my name is John Horsley. I am the Executive Director of The American Association of State Highway and Transportation Officials (AASHTO). I am here today to testify on innovative and other financing issues as the Congress begins consideration of legislation to reauthorize the Federal-aid highway and transit programs.

First, I want to thank you both for your leadership in fully restoring highway funding for fiscal year 2003 to \$31.8 billion as AASHTO, the National Governors' Association and many others have urged. As I will discuss today, RABA needs to be fixed next year to avoid radical swings in funding levels, but without your help, we would still be facing a disastrous cutback this year.

Senator Baucus, AASHTO would like to commend you for your leadership in transferring the 2.5 cents per gallon of gasohol tax revenues from the General Fund to the Highway Trust Fund and for your efforts to credit interest to the Highway Trust Fund where it belongs and will help greatly.

In addition, I want to thank both Chairmen for demonstrating their leadership by scheduling this very important hearing. I am honored to be invited to testify on these important issues and to offer the views of AASHTO on a variety of financing issues. Mr. Chairmen, I would like to begin by recognizing the contribution that TEA-21 has made to address the nation's need to invest in our highway and transit systems. We have seen record level investment made possible by that legislation and we at AASHTO commend the Congress and these two Committees for your contributions to achieving that result. However, as much as that investment has contributed (\$208 billion), the national needs continue to far outstrip the available resources. Your holding this hearing gives us the opportunity to recognize those needs and to suggest ways that working together we can increase investment in surface transportation as part of the reauthorization bill while maintaining fiscal discipline.

HIGHWAY AND TRANSIT FINANCING HISTORY

Mr. Chairmen, the Federal-aid highway program since 1956, and since 1982 the mass transit program, have financed critical national transportation investments primarily from the dedicated depository of revenue the Highway Trust Fund. There are a variety of fees deposited in the Trust Fund, but the largest source of income by far has been fees levied on motor fuels (gasoline and diesel). Although the needs for highway and transit investment have dramatically increased, fuel-related user fees have been adjusted only on a sporadic basis. The following chart provides a history of changes in rates since the creation of the Trust Fund in 1956.

Changes in Gasoline Tax: 1956–Present

Year	Total Tax	Highway Account	Mass Transit Account	Deficit Reduction	Leaking Under-ground Storage Tank
1956	3	3			
1959	4	4			
1983	9	8	1		
1987	9.1	8	1		0.1
1990	14.1	10	1.5	2.5	0.1
1993	18.4	10	1.5	6.8	0.1
1995	18.4	12	2	4.3	0.1
1997	18.4	15.44	2.86	0.1	

Source: FHWA, "Financing Federal Aid Highways," 1999

In concert with increases in user fees there was growth in funding for both the highway and transit programs. The most dramatic growth occurred since 1991 starting with the enactment of ISTEA and reinforced by TEA-21. However, in spite of

this growth, needs continue—by anyone’s measures—to far outstrip available Federal, State and local resources. At its completion, TEA-21 will have provided \$208 billion for highways, transit and safety, but the needs as measured by the U.S. Department of Transportation are far greater than even this record level investment.

In the 1990’s, various innovative financing techniques were piloted and then enacted into law through the National Highway System Designation Act and TEA-21. Among the tools that now are part of many State DOT financing approaches are: eligibility of Federal-funding to pay debt service for project financings; grant anticipation notes also known as GARVEE Bonds; tapered match, which allows States to manage matching shares over the life of a project; and the Transportation Infrastructure Finance and Innovation Act of 1998 (TIFIA) program introduced in TEA-21 that provides secured loans, loan guarantees and standby lines of credit to surface transportation projects of national or regional significance. These tools are useful but only fill a niche in the program and project financing toolkit. We clearly need to do more with innovative financing in the future to enhance the mechanisms, and apply innovative financing to more areas of surface transportation. I will provide ideas for the Committees’ consideration later in my testimony.

AASHTO’S PROPOSED FUNDING LEVELS FOR REAUTHORIZATION AND FINANCING OPTIONS

Mr. Chairmen, we believe the central issue in reauthorization will be how to grow the program. Huge safety, preservation and capacity needs exist in every region of the country. AASHTO will release shortly its Bottom Line Report, which projects needed highway investment to assure American mobility and to advance our economy.

The report will show that the annual level of investment needed to maintain current conditions and performance of our highway systems is \$92 billion. The estimated annual level of investment needed to maintain the current conditions and performance of the nation’s transit systems is \$19 billion. These investment levels far exceed current investment and we recognize that the magnitude of increase needed is not likely to be made available through the Federal-aid highway program.

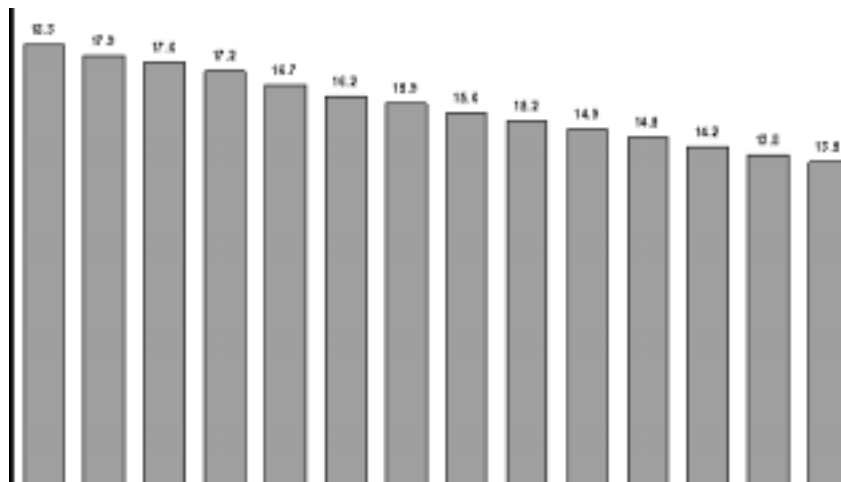
However, to begin to address these needs, AASHTO is seeking a substantial increase in funding over TEA-21 for both the highway and transit programs. Overall, as compared to TEA-21¹ obligation levels for highways and funding for transit, we seek to grow the program from at least \$34 billion in fiscal year 2004 to at least \$41 billion in fiscal year 2009 for highways and, likewise, from at least \$7.5 billion in fiscal year 2004 to at least \$10 billion in fiscal year 2009 for transit. These minimum figures represent 35 percent and 45 percent program increases, respectively.

The challenge is how to fashion a funding solution that can achieve these goals and garner the bipartisan support needed for enactment next year.

New sources of funding are needed to significantly grow the program. Without the introduction of new sources of funding, growth in the highway and transit programs will rely on additional revenues from increased travel and truck sales. Based on the latest data available to AASHTO, these revenues would translate to about a 10 percent program increase for highways over the life of a 6-year reauthorization bill.

This increase would not even come close to keeping up with the loss of purchasing power due to inflation. From 1996 projecting through 2009, inflation as measured by the Consumer Price Index results in a 26 percent decline in purchasing power. If reauthorization of TEA-21 includes only “status quo” options for achieving a larger program, we will soon find that the status quo is actually a rather a dramatic decline in investment due to the erosion of purchasing power. The following graph illustrates the impact of inflation on the current user fee rates.

¹Growth calculations: Highway baseline of \$168.7 billion includes TEA-21 obligation limitation, exempt and RABA. Transit baseline includes guaranteed funding of \$36.35 billion.



Put another way, based on the Bureau of Labor Statistics inflation calculator, merely to have maintained the purchasing power of the three cent gasoline tax as was instituted in 1956, the gasoline tax today would need to be 20 cents.

Maintaining the status quo is not an option; however, as I said, the challenge is to develop a solution that attains at least \$41 billion for highways and \$10 billion for transit by 2009 that garners bipartisan support. The AASHTO Board of Directors is considering a menu of funding options to create additional revenues that includes drawing down the Highway Trust Fund reserves; capturing 2.5 cents per gallon gasohol revenues currently going to the General Fund for the Highway Trust Fund; transferring the equivalent of 5.3 cents per gallon of gasohol tax from the General Fund to the Highway Trust Fund to make up for the rate differential between gasohol and gasoline; capturing interest on Highway Trust Fund reserves; increasing General Fund support for transit; selling financial instruments; and indexing and raising Federal fuels taxes.

Although the program could grow somewhat without raising taxes, it would fall short of meeting national needs. AASHTO recognizes that the Congress needs funding and financing options beyond the traditional user fee increase approach. The Board also directed the AASHTO staff to explore the feasibility of leveraging new revenues through a Transportation Finance Corporation. While most of AASHTO's funding options are very straightforward, I would like to take a few minutes to describe the proposal to create a Transportation Finance Corporation, which could achieve AASHTO's goals for highway and transit funding without indexing or a tax increase, in more detail.

TRANSPORTATION FINANCE CORPORATION

In order to help close the sizable funding gap between surface transportation investment needs and projected resources available in the Highway Trust Fund, AASHTO is exploring including among its menu of funding options the concept of establishing a new tax credit bond program to raise revenue in the capital markets. We describe this concept as program finance, rather than project finance.

AASHTO proposes that Congress consider chartering a private, non-profit organization-the Transportation Finance Corporation-to serve as the centralized issuer of tax credit bonds. Approximately \$60 billion in bonds would be issued between 2004 and 2009. From the bond proceeds, approximately \$34 billion would be distributed to the highway program through FHWA according to an apportionment formula determined by Congress (perhaps similar to the current Federal-aid highway funding formula). About \$8.5 billion would be made available to transit agencies on a basis to be determined. From a State (or transit agency) perspective, these funds would essentially be indistinguishable from regular Federal-aid apportionments: States would be required to comply with all Title 23 requirements to use the funds. In summary, the TFC would leverage approximately \$18 billion in new revenues into an increase of nearly \$43 billion in program funding for fiscal year 2004-2009.

The States would not in any way be liable for the repayment of the bonds. A portion of the bond proceeds (approximately \$17 billion) would be set aside at issuance

and deposited in a sinking fund, which would be invested in Federal agency or other high-grade instruments. At maturity, the sinking fund will have grown to be sufficient to repay the bond principal. These taxable bonds would have a term of 20–25 years.

In lieu of interest, the bond holders would receive taxable tax credits that could be applied against the holder's Federal income tax liability. There is a cost to the U.S. Treasury for this type of tax credit program. The Treasury would be reimbursed for the budgetary cost of the program (arising from tax expenditures) by additional Highway Trust Fund receipts derived from a new net source of revenue. Thus, there would be no impact on the Federal deficit.

This summer, AASHTO met with seven major bond underwriting firms (investment banks), two ratings agencies, and a bond insurer to assess the viability of the Transportation Finance Corporation proposal from the perspective of the financial community. In our due diligence we investigated the ability of the capital markets to absorb an additional \$60 billion in investment; overall marketability of the bonds, including necessary and preferred characteristics of the financial instruments; potential investors; and credit assessment.

In addition, the TFC proposal contemplates up to \$5 billion of Federal funding being used to fund a Capital Revolving Fund, which would make available direct loans, loan guarantees and standby lines of credit to a variety of surface transportation projects not readily fundable under existing Federal programs. This fund would be a catalyst to leverage capital for an expanded list of transportation to include, highways, transit, freight rail, passenger rail and security infrastructure. This funding would assist in promoting public private partnerships and attract new private capital to transportation projects.

Overall, we found a high level of interest in the program due to the equity and efficiency advantages of using debt proceeds to finance long-term infrastructure investments. Our key findings:

Tax credit bonds are marketable. The Corporation should be authorized to decouple the principal from the stream of tax credits, and market each portion of the financing instrument to different groups of buyers on a discounted basis. For example, the principal component is likely to appeal to pension funds, and tax credits should be attractive to financial institutions & corporations. Major individual investors anticipating Federal income tax liability in future years are also potential purchasers of the tax credits, as are individual investors interested in safe, long-term investments. Securities firms would maintain an active and continuous secondary market in both the principal and tax credit portions to assure their liquidity.

Capital markets can absorb TFC paper. The proposed size of the program (an average of \$10 billion per year over 6 years) equals 0.2 percent (two tenths of 1 percent) of the U.S. bond markets' \$4.6 trillion debt issuance volume in 2001.

Marketability and liquidity are enhanced by a central issuer. Larger, more homogeneous issues than the fragmented Qualified Zone Academy Bond (QZAB) school construction program should result in a more efficient secondary market and reduced transactions fees as well as centralized investor information leading to price transparency. A centralized issuer also mitigates tax compliance risk and ensures that all States benefit from the program rather than only States using debt financing.

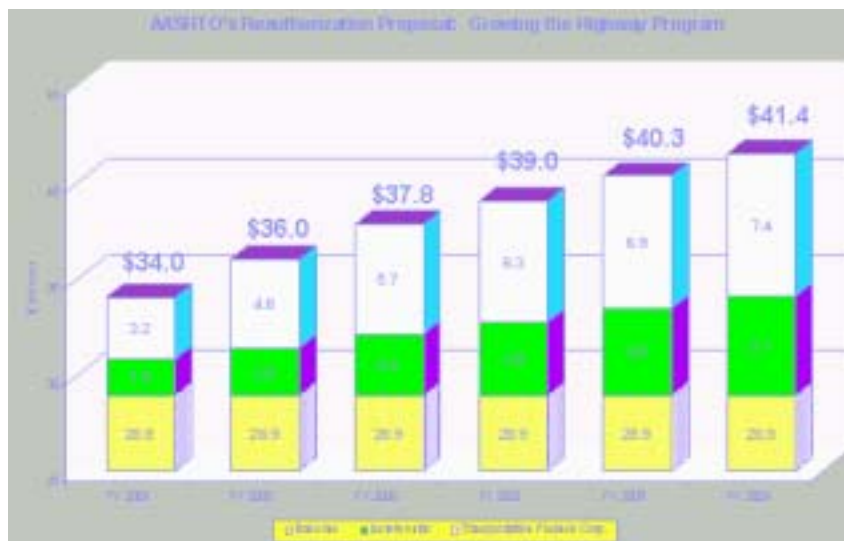
There is a broad potential investor base. Decoupling tax credits from principal will be more efficient and result in a broader investor base. The principal component should appeal to pension funds; tax credits are likely to be attractive to financial institutions and corporations; and allowing individuals to buy credits will broaden the market. The TFC will need to mount an investor education program to develop an efficient market.

Other aspects of the due diligence show that tax credit bonds are likely to be investment grade and, of course, that specific terms of the legislation will be critical to the success of the program.

Our analysis shows that AASHTO's funding targets through fiscal year 2009 could be achieved through the Transportation Finance Corporation without indexing or raising fuel taxes. However, the program level would drop below fiscal year 2009 slightly for the following 3 years before it resumes positive growth in 2013. In our modeling, when the TFC concept was combined with indexing, the program continues healthy growth from fiscal year 2010 on. As you can see, the AASHTO staff and our Financial Issues Work Team have developed a creative proposal that appears feasible and has been well received. We commend it to you for your consideration.

Potential Program Growth Summary

The following charts illustrate potential sources of growth in highway and transit program funding.



“Incremental” represents revenues from travel growth, 2.5 cent per gallon gasohol transfer, and drawing down the Highway Trust Fund.



Innovative Financing Options

In addition to the menu of funding options, AASHTO wants to work with the Congress to enhance and strengthen current Innovative Financing tools. These changes include enacting legislation to extend the legislative authority in TEA-21 for State Infrastructure Banks to all States, assuring the continuance of the current innovative financing provisions and making improvements to the TIFIA program. Specifically, regarding TIFIA we recommend that the current \$100 million threshold be reduced to \$50 million which will serve to expand the universe of projects that can take advantage of this financing tool. In addition we urge the Congress to make clear the intent of the program is to be a minority investor and thus to demonstrate more flexibility in taking credit actions under TIFIA. This is not to suggest that care should not be taken in transactions involving taxpayer money but rather to meet

the program goals which are to round out financing of projects with Federal assistance.

The Board of Directors will be making final decisions on AASHTO's reauthorization financing recommendations in the late fall and I note that Chairman Baucus has included a number of items similar to those on the menu of options in legislation he recently introduced.

OTHER FINANCING ISSUES

Guaranteed Spending

One of the key features of TEA-21 is guaranteed spending. The assurance of stable, predictable funding has made it much easier for States to plan and carry out programs. AASHTO has adopted as a top priority ensuring the continuation of funding guarantees. Funding guarantees are essential to meeting our commitment to the traveling public, which pays the dedicated user fees for highways and transit programs, that they are receiving the benefits of their fees. The return on this investment in transportation programs is ensuring a competitive economy with hundreds of thousands of high-paying American jobs.

RABA Calculations

Another key feature of TEA-21 is the budgetary mechanism known as Revenue Aligned Budget Authority (RABA). This mechanism was designed to ensure that the receipts coming into the Highway Trust Fund Highway Account are fully utilized by the program. This mechanism added over \$9 billion to the program through fiscal year 2002. However, due to the downturn in the economy, the look-ahead provision of RABA substantially overestimated fiscal year 2001 revenues; thus the RABA adjustment for fiscal year 2003 would have reduced the obligation levels for the highway program by \$8.6 billion or 26 percent. AASHTO is pleased that the Congress is moving to restore this much needed investment funding.

AASHTO believes that it is necessary to preserve a RABA mechanism. However, action is necessary to ensure a more stable and predictable outcome. Therefore, we offer an option that would eliminate the look-ahead provision of current law and replace it with a provision that retains the look-back part of the calculation. This likely will make the program funding more stable but also will cause a buildup of revenue in the Highway account. Therefore to ensure full use of the revenue we also recommend including a provision that would reduce the cash balance in the Highway Account to a fixed minimum by raising the program level in the last year of the authorization bill to a level sufficient to reduce the balance.

Long-term Financing

Given the advent of more fuel efficient vehicles and the increasing use of alternative fuels, income to the Highway Trust Fund may be significantly reduced. In order to prepare for future reauthorizations AASHTO recommends that Congress create a Blue Ribbon Commission to study financing options and report its findings prior to the next reauthorization cycle.

CONCLUSIONS

The Federal-aid highway and transit programs have a long history of strong partnership with the States and have made major contributions to creating surface transportation systems that are among the best and safest in the world. However, by all measures surface transportation needs far outstrip investment resources.

AASHTO recognizes the need for additional investment and has proposed program increases of 35 and 45 percent for highways and transit. This increased investment is vital to the nation's economy and assures the continuance of high paying jobs in the transportation sector.

Recognizing the need to offer creative solutions for revenue generation, AASHTO is considering including a proposal for the creation of a Transportation Finance Corporation in its menu of funding options. This federally chartered non-profit corporation would leverage funds for the program and take advantage of the private capital markets for bringing revenue into the program. In addition, the TFC would include a Capital Revolving Fund that could leverage as much as \$30 billion in credit support for a variety of transportation programs including, highways, transit, freight, and passenger rail and security infrastructure. This fund will likely serve as a catalyst for generating public/private partnerships and thus further expand investment in transportation programs.

Guaranteed spending is a key feature of TEA-21. It provides predictable funding so that States can plan with a greater degree of certainty. It assures that dedicated

user fees are spent on the programs for which they were collected in a timely manner. One of AASHTO's reauthorization goals is to preserve guaranteed spending.

RABA has served to ensure that increased revenue is utilized for programs without having to wait until the next reauthorization cycle to increase program levels in highways. There needs to be adjustments to the RABA mechanism to make the results more predictable and AASHTO has offered a solution that could accomplish that end.

In the long-term, consideration needs to be given to possible new sources of income and way to collect income to ensure that there is sufficient income to make the investments in transportation necessary to meet the nation's needs in the future.

We look forward to working with the Congress to enact legislation that will ensure continuing maximum possible investment in our transportation system. 1 Growth calculations: Highways baseline of \$168.7 billion includes TEA-21 obligation limitation, exempt and RABA. Transit baseline includes guaranteed funding of \$36.35 billion.

RESPONSES OF JOHN HORSLEY TO ADDITIONAL QUESTIONS FROM SENATOR JEFFORDS

Question 1. A major piece of your testimony centers on the creation of a Transportation Finance Corporation. Under your proposal, the TFC would issue tax credit bonds. We have heard testimony from GAO that these instruments are the most costly long-term to the Federal Government. Why does AASHTO consider this to be the most appropriate bonding mechanism for the Federal-aid program?

Response. I think GAO's testimony points out how difficult it is to compare these disparate financing tools on an "apples-to-apples" basis.

On the one hand, it shows that financing transportation improvements by issuing debt—whether through TIFIA credit instruments, tax credit bonds or tax exempt bonds—entails a cost (interest expense) that could be avoided if sufficient grant funds were on hand in the first place. But the problem, of course, is that grant monies often are not available up front. And obtaining the benefits of accelerating infrastructure investment through debt financing techniques, while perhaps not the least costly method, may in fact be the most cost effective approach taking into account the benefits as well as the costs.

On the other hand, GAO's testimony reveals the different ways in which certain financing tools are used and the different levels of Federal subsidy conferred by those techniques. GAO's cost assumptions attempt to capture the various financial profiles of "typical" transportation projects that might benefit from the different financing tools. For example, under the normal Federal-aid grant reimbursement scenario, the Federal share is 80 percent. Compared to that traditional pay-as-you-go approach, the various debt financing techniques tend to leverage Federal resources and induce greater non-Federal investment. The average Federal share ranges from about 20 percent for projects funded with tax-exempt bonds to about 25 percent for TIFIA-funded projects to somewhere between 50 and 70 percent for projects funded with tax credit bonds (depending on several underlying assumptions). In all cases, however, the relative Federal share is less than that of the base case of grant reimbursements.

The important point, I think, is that these different tools may be most cost-effective for different types of projects that require different levels of Federal assistance. If critical infrastructure investments need to be made, and up-front grant funding is not available, then project sponsors simply must look at other financing options. And depending on a particular project's costs, benefits and access to revenues, the use of one or more of the financing tools examined by GAO may prove cost effective.

Mr. Chairman, we are looking for the art of the possible. When we tried to put together a vehicle that, as Pete Rahn was describing, could leverage revenues that are potentially available to achieve the overall funding targets we are seeking for fiscal years 2004–2009, we looked at several options.

We looked at whether simply relying on tax-exempt municipal bonds issued at the State level would work, and concluded it would not—because so many States have obstacles, either statutory or constitutional, to the issuance of debt and the utilization of GARVEEs and some of the other financing techniques. So we figured that simply proposing what is currently allowed would not extend universal help to all 50 States with regard to raising overall transportation funding levels.

We looked at the possible utilization of tax-exempt bonds at the Federal level and figured that would compete directly with Treasury securities, so that was not a good vehicle. We then looked at the appeal of the tax credit bond concept. It was currently pending in RIDE-21 (the Rail Infrastructure Development and Expansion Act

for the 21st Century) as a vehicle for funding high-speed rail, and has been used to help fund schools through the so-called QZAB (Qualified Zone Academy Bond) program.

Our conclusion was that the TFC (Transportation Finance Corporation) was the most efficient, most viable method for boosting surface transportation funding. It would score well under the Federal budgetary scoring rules and, just in practical terms, would get us with current or likely revenues—or revenues enhanced with indexing—to the overall funding targets that the States feel are essential: more than \$40 billion annually for highways and more than \$10 billion annually for transit.

Question 2. Does it make sense to issue bonds to support the mainline work of State DOTs, namely system preservation? Would it not be more appropriate to reserve debt financing for capital improvements, and particularly for those projects with associated revenue streams?

Response. Mr. Chairman, the Transportation Finance Corporation we are talking about we classify as program financing, which would be available to all States to use for those purposes. TFC proceeds, in our proposal, would be available for the same types of capital outlays eligible under title 23 and title 49 as are Federal-aid grants and GARVEE bonds today. Maintenance and system preservation would still be the responsibility of the States.

We are looking for a near-term practical solution that gives you a measure you can pass with bipartisan support to boost funding for the next cycle to the levels we are after.

When it comes to the issuance of municipal bonds at the State level, I think each State has to make a judgment about whether they should issue long-term debt for long-term purposes, such as schools, water and sewer plants, and hospitals.

Almost every other area of public infrastructure is financed significantly through debt. We think that transportation has been slower than those other sectors to come to the table and use debt financing for long-term infrastructure. But we think the time has come.

As you have heard from both of these panels, the market is there and the transportation agencies are there and are utilizing debt financing on an increasing basis. But the one differentiation I wanted to make was between program finance, which would generate grants from bond proceeds that flow out to all the States as cash over the 6-year reauthorization period—and then State DOTs could leverage it further by issuing GARVEEs or through other means—as opposed to project finance (bonds earmarked for a particular project), which States can do today and which we also support.

STATEMENT OF JEFFREY CAREY, MANAGING DIRECTOR, MUNICIPAL MARKETS,
MERRILL LYNCH & CO.

MAINSTREAMING INNOVATIVE FINANCE: A CAPITAL MARKETS PERSPECTIVE

Chairmen, Ranking Members, members of the Committees, ladies and gentlemen, I am Jeff Carey, a Managing Director in Municipal Markets at Merrill Lynch. As a 24-year veteran in public, transportation, and infrastructure finance, I have had the privilege to work with U.S. Department of Transportation and Federal Highway Administration officials, as well as our clients, State transportation officials and other project sponsors, during the last decade on the development and implementation of “Innovative Finance” mechanisms for Federal-aid transportation programs. Thank you for inviting me to provide a wrap-up commentary from a Capital Markets perspective at today’s Joint Hearing.

You have heard testimony this morning from two very experienced panels of U.S. DOT and State transportation officials, a city councilwoman, the GAO, and Professor Seltzer on the very significant accomplishments of the DOT Innovative Finance Initiatives. Public finance industry professionals are pleased to have played a role in creating the strong market reception for the new transportation funding tools and expanded flexibility for public/private partnerships. We commend these panel participants, and the leadership from DOT and FHWA, other State transportation officials, and private sponsors for the dramatic evolution from the Eisenhower-era, Federal-aid funding to the wide array of financing instruments and programs introduced and utilized over the last 8 years.

To briefly reflect on the prior testimony involving program and project finance and case studies, ISTEAs, post-ISTEA initiatives and TEA-21 implementation have produced the following market-related accomplishments: 1) dramatically increasing bondholder investment in transportation projects and State programs; 2) new and/or specially dedicated revenue streams, particularly for the purpose of retiring debt

obligations; 3) broad market acceptance of the use of Federal-aid funding for debt instrument financing; 4) more coordination with other funding partners beyond States, and; 5) lower financing costs and increased project feasibility through Federal credit enhancement.

1. Addressing characteristics sought by the Capital Markets and private sector project sponsors provides efficient market access and innovative transportation finance opportunities. What do market intermediaries underwriters, rating agencies, bond issuers, project sponsors and institutional and individual investors want?

Characteristics

- Sound, understandable credits
- Evidence of government support
- Strong debt service payment coverage
- Predictability and Federal program consistency with evolution of new instruments
- Market rate investment returns for bonds, development costs, and equity
- Reasonable and reliable timing of issuer's revenue/grant receipts
- Acronyms that capture the Federal programs' spirit and promote investor familiarity
- Diversified range of investment opportunities
- Volume, market profile, and liquidity

For example, the track record and predictability of the Federal-aid highway program since the Eisenhower-era has enabled Grant Anticipation Revenue Vehicles (GARVEE) bonds to be structured without the double-barrel credit of other State credit backstops, as first used in New Mexico.

It was the strong issuance history of municipal bond banks in States such as Vermont, as well as the successful use of State wastewater and clean water revolving funds, that served as the model for the development of State Infrastructure Banks (SIBs) in the mid-1990's.

And it was the broad market acceptance of municipal bond insurance and bank letters of credit that provided a model for the development of TIFIA credit assistance and pre-TIFIA successes such as the Alameda Corridor multi-modal project.

As David Seltzer commented in the first panel, are the Federal policy incentives in Innovative Finance initiatives suitable to attract and expand capital markets investment? And are the programmatic tools and requirements balanced to provide the characteristics sought by debt investors and private sponsors, as well as public entities?

2. How various Innovative Financing components have been used by public agencies and, in some cases, private sponsors, and received by the markets provides a roadmap for surface transportation reauthorization.

When State Infrastructure Banks (SIBs) were created as part of the NHS Act in 1995, the pilot program for 10 State transportation revolving funds became very popular in 1996, in part, because of supplemental Federal funding for "seed" capitalization matched with non-Federal funds. As highlighted in FHWA's State Infrastructure Bank Review from earlier this year, 32 States have active SIBs and have made different levels of highway and transit project assistance primarily through loans, despite widespread under-capitalization and the curtailment of the program in TEA-21. Limited capitalization has resulted from the inability to use Federal-aid funds, outside of four States, and the application of Federal requirements to all moneys deposited in the SIB, regardless of whether the source was State or private contributions, or repaid loans. In addition, only two States have leveraged their SIB programs through the issuance of bonds.

As a flexible, State-directed tool, SIBs have greater potential to provide loans and credit enhancement that can be realized through further modification as part of Reauthorization:

- Extend the program to included all States;
- Expand capitalization to meet demands with supplemental Federal appropriations and by permitting the use of future Federal-aid funds to capitalize SIBs;
- Rollback the imposition of Federal requirements on SIB-funded projects, or, at least, exempt "recycled" loan repayments and State contributions, as permitted under the 1995 NHS Act Pilot Program;
- Encourage States to expand capitalization by leveraging their SIB program through the issuance of bonds; and
- Remove "pilot" moniker from the SIB Pilot Program to send strong signal of on-going Federal support.

Reauthorization should provide incentives for public/private, market-based partnerships that finance, develop, operate, and maintain highways, mass transit facili-

ties, high-speed rail and freight rail, and inter-modal facilities. This could be accomplished by permitting the targeted use of \$15–20 billion of a new class of private activity bonds, and/or by modifying certain restrictions in the Internal Revenue Code on tax-exempt bond financing of transportation modes. We commend the members of the Senate and the Finance Committee for your prior consideration of the Highway Innovation and Cost Savings Act (HICSA, 1999), the Highway Infrastructure Privatization Act (HIPA, 1997), and, most recently, the Multi-Modal Transportation Financing Act (Multitrans).

My office is across West Street from the World Trade Center site. As workers in downtown Manhattan, we greatly appreciated your passage of Federal legislation creating a “Liberty Zone” for the redevelopment of lower Manhattan and for the creation of a new type of tax-exempt private activity bonds, Liberty Bonds, for the rebuilding and economic revitalization of New York City.

Existing tax law discourages private investment in transportation projects, prohibiting lower cost tax-exempt financing for projects involving private equity investment and incentive-based, private sector operating contracts. Transportation infrastructure financing deserves a bond mechanism similar to Liberty Bonds under Reauthorization to attract more private investment, as well as increase the use of new construction techniques, cost controls, performance guarantees and technologies. A new class of private activity bonds for qualified highway infrastructure, mass commuting vehicles, and other transportation projects would expand the application of the tax-exempt financing and lower the cost of capital, making public-private partnerships more attractive to public sector sponsors than conventional approaches.

3. Past “Innovative Finance” should become mainstream transportation finance under TEA-21 reauthorization and the Federal Government should provide new financing tools and initiatives, at least on a pilot basis. From a financial markets perspective, Congress should use this opportunity to make refinements to more clearly articulate transportation financial assistance goals and send a consistent message as to how the Federal Government is going to act toward investors, project sponsors and all program participants.

- TEA-21’s funding guarantees and firewalls that permit the flexible use of GARVEE Bonds beyond multiple reauthorization periods should be maintained, and radical swings in budgetary funding from RABA (Revenue Aligned Budgetary Authority) should be avoided. Similarly, transit funding guarantees should also be preserved.

- Examine the creation of a government corporation, perhaps in a form discussed by AASHTO, to provide a focus on transportation infrastructure finance, possibly administer a portion of DOT’s financing programs, and provide a basis for new financing tools, such as tax credit bonds. Federal Government corporations have helped the capital markets create strong and liquid markets to fulfill other policy and programmatic objectives.

The creation and implementation of U.S. DOT Innovative Financing Initiatives over the last 8 years has prompted an even more vigorous debate about transportation financing issues, challenges, and future innovation with the coming year’s surface transportation reauthorization. This ongoing debate, coupled with past and current Program successes, will encourage a further willingness to look beyond Federal-aid grant reimbursement, introduce additional players in transportation finance and enlarge the spectrum of instruments and programs to attract additional private and capital markets investment. The success of Innovative Finance places a higher level of responsibility on the Federal reauthorization process to maintain the characteristics attracting strong capital markets participation. Municipal Markets participants will continue to work with Congress, DOT, States, local governments, and private sector sponsors to maximize leverage and investment levels in transportation infrastructure over the coming authorization period and beyond.

I am pleased to have the opportunity to participate in today’s Joint Hearing with such knowledgeable witnesses. Thank you, again, for the opportunity to testify. I look forward to responding to any questions you may have.

RESPONSES OF JEFFREY CAREY TO ADDITIONAL QUESTIONS FROM SENATOR BAUCUS

Question 1. The Capital Markets would positively view and receive a Tax Credit bond proposal where the proceeds of the bonds are deposited directly into the Trust Fund. First, raising and depositing additional funds to the Trust Fund will supplement and diversify the sources of Trust funding, adding to the proposed sources from the MEGA-TRUST Act, and further address characteristics sought by the capital markets, as noted in my testimony. This additional, predictable funding will fur-

ther strength GARVEE credits and other Federal aid highway derived project financing.

Response. In your question, you correctly acknowledge that QZABs, as the only existing tax credit bonds, provide little guidance for the market's receptivity due to relatively small issuance volume, disparate issuers, and credit considerations. The proposed year sale of \$3 billion, Qualified Highway Bonds by Treasury under the MEGA-INNOVATE Act responds to some tax credit bond marketability concerns by providing larger issuance volume over the Reauthorization period by a centralized issuer. Market participants continue to believe that the centralized issuance of tax credit bonds where the tax credit can be decoupled, or stripped, from the principal repayment stream could attract major buyer interest, as well as active trading by securities dealers. Decoupling would broaden the market for the bonds since tax credit bonds are hybrids, with a tax-advantaged non-cash piece (the credits) and a cash-on-cash piece (the principal), attracting different types of investors. This follows the Senate Finance Committee Chairman's goal to attract new and different taxable bond and tax credit investors to supplement the current, dominant buyers of tax-exempt transportation bonding.

Question 2. The advantages and disadvantages of using some of the proposed Tax Credit bond proceeds to go into a sinking fund to repayment bond principal closely relate to using a centralized issuer, either Treasury or dedicated national transportation issuer.

Response.

Advantages of a Sinking Fund:

- Should result in very low risk of default of principal, if sinking fund investments are limited to highly rated instruments;
- Homogenizes the creditworthiness of different series of bonds, enhancing marketability/liquidity (no local issuer variances); and
- Overcomes disparities among States in terms of their legal ability to incur debt or their political willingness to do so.

Disadvantages of a Sinking Fund:

- Somewhat inefficient from a tax viewpoint, in that 30 percent (plus or minus) of the tax expenditures are for bonds that are funding the retirement of principal rather than funding new transportation projects.
- At some point, it may be difficult to find attractively priced, highly rated, long-term defeasance investments in sufficient volume.

RESPONSES OF JEFFREY CAREY TO ADDITIONAL QUESTIONS FROM SENATOR JEFFORDS

Question 1. As many in the Senate will recall, Private Activity Bond (PABs) rules were historically an outgrowth of the perceived overuse of industrial development bonds, where purely corporate investments were nominally financed through a State or local industrial development authority to gain tax exemption without adequately serving governmentally perceived, economic development or service objectives. As a result of successive Federal tax acts and IRS regulations, we now have a patchwork of inconsistent tax rules—i.e., seaports and airports can issue PABs not subject to volume cap; transit systems can finance infrastructure with PABs, but subject to volume cap. Neither transit rolling stock nor highways can be financed with tax-exempt bonds at all if there is what is termed “private use” and a so-called “private security interest.” Within TEA-21 Reauthorization, the Senate should consider providing a new concept centered on whether the transportation project is of “public benefit.” If a highway (or transit line) is publicly available to any user, what difference should it make if there is incidental private management of the asset? The State or local political subdivision would already have determined that the public (and taxpayers) would benefit from private sector participation

Response. Private participation is not just applicable to the development of toll roads. Even greater potential application is outsourcing the asset maintenance of expressways and freeways to private firms which agree to maintain roads to publicly required standards, in compliance with GASB 34. Current IRS “Qualified Management Contract” provisions do not permit incentive, performance-based compensation. Allowing the financial interests of the private sector developer/manager (in combination with private equity) to be aligned with the tax-exempt bond investors (i.e., maximize net revenues) should facilitate the financing for additional transportation projects. Tolls and private sponsor or participant returns can be regulated using a rate covenant (governmental utility model) or regulated return on capital (investor-owned utility model) mechanics. The Multimodal Transportation Financing

Act (“MultiTRANS”, S. 870) would achieve most of the aforementioned, desired tax law or regulatory reforms.

Question 2. One of the outcomes of reauthorization should be the ability to allow for more meaningful investment by the private sector into transportation. There seems to be barriers for participation for numerous large investment sectors. One example is pension plans or retirement investment sector. Current transportation bonding techniques do not provide the income this sector is seeking since we primarily use tax-exempt mechanisms. Can you provide more insights on how we can “decouple” the bonding process to make it more attractive to these types of investors? Are there examples where such activity is occurring? Are there changes that need to be made to statute to assist this type of activity?

Response. As your question correctly recognizes, pension funds represent one of the largest sources of capital in the economy—for the 1,000 largest plans in the U.S., the total assets are \$3.6 trillion in defined benefit plans and \$1.2 trillion in defined contribution plans (2001). Pension funds are invested in multiple asset classes (including overseas infrastructure) with the exception of domestic infrastructure. Yet, as tax-exempt entities they have no demand for lower returns on tax-exempt securities. An objective going back to the 1993 Infrastructure Investment Commission—develop an investment product that is cost-effective to the transportation project sponsor (overwhelmingly, a public sector entity eligible to issue tax-exempt bonds), while at the same time providing competitive, pre-tax returns to the pension funds. One possibility, highlighted above, is decoupled tax credit bonds. The tax credits could be sold to taxable investors, leaving a zero coupon, taxable bond with a sufficient credit rating to be marketed to pension funds—providing a secure long-term asset to offset long-term liabilities (retirement benefits). It is important to note that decoupling routinely occurs with other market instruments, including U.S. Treasury bonds (since 1985) and the mortgage-backed securities market.

[From The Bond Buyer, Wednesday, June 12, 2002, Vol. 340]

SENATE PANEL LEADERS LOBBY DOT TO USE INNOVATION IN ITS FUNDING

(By Humberto Sanchez)

WASHINGTON—Leaders of the Senate Finance and Environment and Public Works committees urged the Department of Transportation yesterday to investigate new ways to leverage Federal funds to finance the construction of needed infrastructure, including using a centralized entity to fund loans and issue taxable tax-credit bonds.

In a letter sent to Transportation Secretary Norman Y. Mineta, Sens. James M. Jeffords, I-Vt., chairman of the public works panel, Max Baucus, D-Mont., chairman of the finance committee, and 11 other senators said they want the DOT to look closer at “ways to leverage limited Federal resources through so-called ‘innovative finance’ techniques.”

The senators also said they believe that additional research into the matter “would benefit the administration and the Congress as we develop” reauthorization proposals for the Transportation Equity Act for the 21st Century, which expires Sept. 30, 2003.

The senators—including public works ranking member Robert C. Smith, R-N.H., and finance ranking member Charles E. Grassley, R-Iowa—said they are interested in exploring the possibility of “using a centralized entity to fund loans and provide credit enhancement, and the use of tax credit bonds as a financing vehicle for transportation infrastructure,” according to the letter.

The letter comes as the American Association of State Highway and Transportation Officials is floating a similar proposal in which a federally chartered corporation would be authorized to sell taxable tax-credit bonds in order to provide funds to States for construction of roads, mass transit, and rail.

Under the AASHTO plan, the transportation finance corporation would use new or increased Federal funds to back a \$60 billion tax-credit bond issue that, over 6 years, would increase funding for highways by \$34 billion, \$8.5 billion for transit, and \$5 billion for other needs, including rail.

The senators wrote that “a detailed examination of some of these fairly complex financial tools and vehicles is warranted.” They also said that they look forward to “close coordination regarding the continuation of” State infrastructure banks—which provide low-interest loans to local governments to build transportation infrastructure—and the TIFIA program, which provides direct loans, loan guarantees, and

lines of credit for up to 33 percent of the construction cost of transportation projects costing at least \$100 million.

A joint public works and finance committee hearing on innovative finance is being planned for late September.

[From the Bond Buyer, Thursday, August 1, 2002, Vol. 341, No. 31440]

SENATE PANEL TELLS TIFIA PROGRAM TO MAKE DO WITH 2002 LEFTOVERS

(By Humberto Sanchez)

Because the TIFIA program has only awarded funds to 11 transportation projects since it was launched in 1998, the Senate Appropriations Committee has decided not to provide any more funds to the slow-starting financing program in fiscal 2003.

Under the \$64.6 billion fiscal 2003 transportation funding bill that was approved by the committee last week, the \$130 million that was authorized under the Transportation Infrastructure Finance and Innovation Act to provide credit assistance to large transportation projects would be shifted to three other programs in the fiscal year that starts Oct. 1. Those are the transportation and community and system preservation pilot program, the national corridor planning and development program, and the coordinated border infrastructure and safety program.

The proposed diversion of funds means that any transportation projects selected for TIFIA loans, loan guarantees, or lines of credit in fiscal 2003 would have to make do with the \$96 million that program administrators estimate is left over from the \$120 million authorized in the current fiscal year.

So far, in fiscal 2002—which ends Sept. 30—the Department of Transportation has designated just one project for TIFIA assistance—a subsidy to back a \$450 million loan for a \$3.3 billion plan to fortify and rebuild parts of the San Francisco-Oakland Bay Bridge that was severely damaged by an earthquake 12 years ago. Although the Texas Turnpike Authority closed on a \$916.76 million TIFIA loan Monday, that aid was actually approved in 2001.

“We think we’ll have enough to finance any projects that we anticipate,” said Max Inman, acting head of the DOT office that oversees the TIFIA program. “Hopefully it won’t have an impact. But you never know what might happen later in the year. Currently, we are not seeing anything that would be beyond the anticipated need.”

Documents accompanying the transportation appropriations bill—which was approved last Thursday and is currently awaiting consideration by the full Senate—explain that the committee diverted the funds because it believes that demand for credit assistance has not kept pace with the amount of subsidy available under the program. Meanwhile, the House Appropriations Committee has not started work on its bill and has not decided whether to follow the Senate panel and transfer TIFIA funds to other projects.

While TIFIA program administrators agree that the program has more funds than it will likely use, they contend that the program could assist more projects after project sponsors and TIFIA administrators get used to the subtleties of the program.

Despite the diversion of funds, the program has strong support. “The committee believes that TIFIA is an important part of the Federal Government’s overall infrastructure investment effort—one that is likely to grow in importance and size in the future,” the Senate Appropriations Committee said in the report accompanying the 2003 transportation bill.

Last month Transportation Secretary Norman Y. Mineta lauded the program and noted that it will be included in the Bush Administration’s plan to reauthorize the Transportation Equity Act for the 21st Century, or TEA-21, which expires on Sept. 31, 2003. Mineta will unveil the proposal in the fiscal 2004 budget, which is due to be sent to Congress in February.

The Senate Environmental and Public Works Committee and the Finance Committee plan to hold a hearing in September on innovative finance where ways of making the program more efficient will be explored.

To date, the DOT has selected 11 projects in eight States, the District of Columbia, and Puerto Rico to receive TIFIA assistance. At a budgetary cost of slightly more than \$200 million to the Federal Government, the projects have provided \$3.7 billion in credit assistance that has backed transportation investments worth more than \$15 billion. The program provides direct loans, loan guarantees, and lines of credit—in lieu of traditional grants—and can cover up to 33 percent of the cost of major surface transportation projects that cost at least \$100 million.

[From The Bond Buyer, Tuesday, September 3, 2002, Vol. 341, No. 31462]

ROAD REVOLUTION COMING?

(By Humberto Sanchez)

WASHINGTON—First of a two-part series.

FANNIE MAE AND FREDDIE MAC REVOLUTIONIZED THE MORTGAGE BUSINESS.

Now a plan being floated by the American Association of State Highway and Transportation Officials wants to copy that success by establishing the Transportation Finance Corporation, a centralized, federally chartered entity that would issue taxable tax-credit bonds to finance transportation infrastructure projects.

Fannie Mae and Freddie Mac are publicly held corporations that were established by the Federal Government to increase the availability of home mortgages by establishing a liquid, well-functioning home loan secondary market. The corporations, known as government-sponsored enterprises, or GSEs, purchase mortgages from banks and financial firms and package them into securities that are sold to investors. The banks' financial firms use the money from the sale of the home loans to make more loans.

But the TFC, whose name some believe will be shortened by lobbyists and congressional staffers to Trannie Mae or Trans Mac, would be designed to increase Federal investment in transportation infrastructure by establishing an active market for tax-credit bonds.

The plan, calls for Congress to charter the TFC as a new, private, nonprofit organization that would be authorized to sell about \$60 billion in tax-credit bonds over 6 years. The bond proceeds would be given as grants to States primarily to help finance highway and transit projects, and the Treasury would provide a tax credit to investors in lieu of interest payments.

AASHTO—the lobbying group representing State departments of transportation—is currently shopping the proposal around to Congress, investment bankers, and rating agencies to assess its viability. Depending upon the level of interest in the plan, the association will vote later this fall on whether to adopt the proposal as part of its lobbying campaign to reauthorize the 1998 Transportation Equity Act for the 21st Century, which expires Sept. 30, 2003.

But while AASHTO maintains that preliminary responses to the proposal have been positive, the success of the plan rests on its ability to balance Congress' cost concerns with the transportation finance interests of States and the interest of investors.

HOW THE TFC WOULD WORK

Under AASHTO's plan, the TFC would issue the \$60 billion in tax-credit bonds over 6 years, starting the year TEA-21 is reauthorized and extending through the transportation act's proposed 6-year life span.

"The bonds would have a 20-to 25-year life," said Jack Basso, AASHTO's director of management and business development. "We would cycle them out so that we have a 25-year level of activity because of the way the bonds are issued over time."

Of the \$60 billion in bond proceeds, about \$17 billion would be set aside in a sinking fund that would be used to pay back the principal. The sinking fund would invest in Treasuries or other similarly safe instruments that, over time, should yield enough to pay back the principal.

"We are assuming that we will get about a 6 percent return on our investment, and our market research says that that is perfectly reasonable," Basso said. "At the end of that 25-year cycle, that \$17 billion will have grown sufficient to pay off the principal of the bonds—the \$60 billion."

The plan also calls for repaying the Federal Government for the income tax credits—which go to bondholders in lieu of debt service payments—through one or more strategies that are currently being explored by the association.

States would be required to provide a 20 percent match to receive their share of the bond proceeds, which would be distributed to States through apportionment formulas similar to the ones currently used to redistribute gas tax receipts collected into the highway trust fund. States would not be liable for repayment of the bonds because a portion about 30 percent of the bond proceeds would be invested in a sinking fund that would raise the money to pay back the bond principal, and the tax credits would be paid by the Treasury.

However, the plan calls for the tax credits—which AASHTO estimates will cost the Federal Government roughly \$19 billion—to be repaid by one or more methods

from a list of possible strategies. The list includes drawing down reserves in the highway trust fund, collecting the interest on fund reserves, a gas tax increase, or indexing the gas tax.

Other possibilities AASHTO is exploring to generate funds to pay for the tax credits include capturing the 2.5 cents for each gallon of ethanol sold that now goes into the general fund rather than the highway trust fund, and the 5.3 cents per gallon subsidy that encourages the use of ethanol and ethanol blended fuels, such as gasohol.

The highway trust fund—a pool of money created by gasoline and highway user taxes and tapped to finance the nation's highway and transit projects—is the primary funding source for highway and transit construction. Transportation infrastructure advocates are concerned that increased use of ethanol would deplete the trust fund.

Ethanol is currently taxed at 13.1 cents per gallon—5.3 cents a gallon less than gasoline. However, 2.5 cents of the 13.1 cents goes into the Treasury's general fund, rather than the highway trust fund. AASHTO believes that the trust fund could gain an additional \$3 billion to \$4 billion over 6 years by capturing that 2.5 cents.

AASHTO would also like to have an amount equal to the 5.3 cents per gallon ethanol subsidy paid into the trust fund, a move the group estimates would add \$6 billion to \$7 billion to the trust fund over 6 years.

Diverting the 2.5 cents per gallon in ethanol taxes into the trust fund has a good chance of becoming law, the group believes, because it has support in the House and Senate and is included in the energy bill that is currently being negotiated by the two chambers. If the energy bill fails to become law, which many observers expect, Sen. Max Baucus, D-Mont., who heads the Senate Finance Committee, is expected to push legislation he introduced in June to get both the 2.5 cents and the equivalent of the 5.3 cents in reduced taxes per gallon of ethanol paid into the trust fund.

In addition to the ethanol-related funds, the group anticipates that the highway trust fund will grow by an additional \$17 billion over 6 years due to an estimated 3 percent increase in travel.

"There is this menu of several possible options," said Bryan Grote, a principal with Mercator Advisors, which is working on the plan with the group. "AASHTO is not advocating any particular option at the moment, they are just saying that from one or more of those menu items, you could possibly raise additional revenues that would offset the budget costs of the tax credits of this proposal."

POLITICS

The inclusion of a device to repay the \$19 billion in tax credits gives the measure a significant advantage in gaining approval from Congress, the plan's proponents believe.

"In order for this to have any kind of realistic consideration, they have to propose some budgetary offset to the cost of those tax credits," said Grote, a former official with the Department of Transportation.

There are currently two tax-credit bond measures pending in Congress, and AASHTO believes that the TFC proposal has an advantage over both. The pending measures include a bill in the House that would authorize States to issue \$12 billion in taxable tax-credit bonds and \$12 billion in tax-exempt bonds over 10 years for high-speed rail projects and legislation in the Senate that would authorize Amtrak to issue \$12 billion in tax-credit bonds over 10 years for high-speed rail projects.

"What makes this proposal unique, as opposed to other proposals of this nature, like the high-speed rail bill or the Amtrak bill, is that we propose a way to raise revenue to pay the tax-credit costs," said AASHTO's Basso. "Our strategies will allow us to raise the money and reimburse the Treasury for the cost of those tax credits. That's a very significant and distinguishing feature in this matter," he said.

Despite any advantages the plan may have, Members of Congress still need to be convinced.

One objection Congress may have to the plan, according to a staffer, is that the proposal would, in effect, take the funds out of Congress' control and put it in the hands of the board that would run the TFC.

However, AASHTO maintains that the TFC board would just administer the operation of the entity and the issuing of the bonds. The bond proceeds would be distributed to the States according to a congressionally approved formula.

"The board's purpose would be to administer the bonds; do the fiduciary work that's necessary from an investor's standpoint," Basso said. "But principally the decisions on money would work exactly as they do now because the bulk of the highway and transit funding, almost all of it, would go out under congressionally mandated formulas. The program, from the State's perspective, would look and feel and

work pretty much as it does today; the difference is where the money's coming from," he said.

The principal committees that would need convincing are the two tax-writing committees—the Senate Finance Committee and the House Ways and Means Committee.

The transportation authorizing committees—the House Transportation and Infrastructure Committee and the Senate Environment and Public Works Committee—would also have jurisdiction. The Senate Banking Committee, in addition, would have a say in the legislation because it oversees the nation's transit program.

While it's early in the process of selling the plan to Congress, AASHTO officials maintain the reception to it so far has been favorable.

"It's important that we work with the Congress to help find some way to increase transportation funding," said Pennsylvania Transportation Secretary Bradley L. Mallory, who is also AASHTO's president. And "the political reception to the plan has been good."

But that does not surprise AASHTO officials, since some of the chairmen of these committees are very amenable to innovative finance ideas for transportation projects.

For example, Sens. James M. Jeffords, I-Vt., chairman of the public works panel, and Baucus plan to hold a joint Environment and Public Works and Finance committee hearing on innovative finance as soon as this month.

The two, along with 11 other senators, sent a letter on June 11 to Transportation Secretary Norman Y. Mineta, asking him to investigate new ways to leverage Federal funds to finance the construction of needed infrastructure, including using a centralized entity to fund loans and issue taxable tax-credit bonds.

The senators—including Robert C. Smith, R-N.H., and Charles E. Grassley, R-Iowa, the top Republicans on the public works and finance committees—said they are interested in exploring the possibility of "using a centralized entity to fund loans and provide credit enhancement, and the use of tax credit bonds as a financing vehicle for transportation infrastructure," according to the letter.

In the House, Rep. Thomas E. Petri, R-Wis., chairman of the Transportation and Infrastructure Committee's highways and transit subcommittee, has shown interest in the plan, noting at a hearing in May that AASHTO had "stepped up to bat."

Officials in the Bush Administration are also exploring the plan, but have not endorsed it.

At a hearing in May, Federal Highway Administration chief Mary E. Peters told a congressional panel that she had met with AASHTO representatives and is reviewing their initiatives.

"We are actively working at a number of the options but have not yet taken an administration position on any," Peters said.

STATES' NEEDS

States have long argued that increasing traffic congestion around the Nation has resulted in a pressing need to build additional roads and highways, as well as to maintain and improve aging ones. According to the DOT, an annual investment of \$56.6 billion is needed over the next 20 years just to maintain the physical condition of existing highways and bridges.

To meet these needs, AASHTO wants to increase funding each year to \$41.4 billion for highways and to \$10 billion for transit by the end of the 6-year life span of the successor to TEA-21. By comparison, the Federal Government in fiscal 2002 provided \$31.8 billion for highway programs and \$6.8 billion for transit.

The TFC, the proceeds of which would work in conjunction with the highway trust fund, would play a crucial role in achieving those funding levels and would increase funding by \$34 billion over 6 years for highways and \$8.5 billion for transit, AASHTO officials maintain. The plan also would provide \$5 billion for a capital revolving fund that would help finance other needs, such as freight rail, intermodal projects, passenger rail, and transportation security infrastructure. The \$5 billion could be generated, over 6-years, from the menu of revenue-generating options, but the association has not specified where the funds would come from. The revolving fund would provide direct loans, lines of credit, and loan guarantees.

"The dollars that we have in the system just don't come anywhere near meeting the needs at the State, city, and county level," said John Horsley, AASHTO executive director. "When we look at what is needed out there and where we stand in the current program, it is clear that we need to substantially grow the program."

Previously, it was a gas tax increase that provided additional funding for road construction. During the administrations of Presidents George Bush and Bill Clin-

ton, highway trust fund revenues—which are made up of gas-tax receipts—were doubled.

But, “this time we are not seeing a willingness, or an openness, or an appetite, in Congress or the administration to enact a substantial fuel-tax increase,” Horsley said.

The TFC would allow all States to benefit from debt leveraging and innovative finance and meet the funding goals, AASHTO contends.

Horsley noted that bonding and innovative finance “have enabled many States to do substantially more than they could with just current cash-flows or current Federal allocations,” and he cited the issuance of Garvees, the use of State infrastructure banks, and the Transportation Infrastructure Finance and Innovation Act in particular.

Grant anticipation revenue vehicles, or Garvees, are backed by annual Federal transportation grants, while State infrastructure banks provide low-interest loans to local governments to build transportation infrastructure. The TIFIA program provides direct loans, loan guarantees, and lines of credit for up to 33 percent of the construction cost of transportation projects costing at least \$100 million.

“But we’ve also seen some States that are restricted by constitution, restricted by statute, or simply haven’t, as a matter of practice, gone to debt financing to extend what they could do,” Horsley said.

In addition, the primary funding mechanism for highway and transit financing, the highway trust fund, is under fire because gas tax receipts have been down and subsidies for alternative fuels have reduced the fund.

Under TEA-21, receipts going into the highway trust fund were tied to Federal highway and transit funding levels so that the funds could only be used to finance highway and transit projects.

As a result, TEA-21 provided specified funding amounts for highway and transit programs for fiscal 1999 through 2003 and included a provision that the funding levels would be recalculated annually to reflect actual and projected increases and decreases in tax receipts over the 6-year life of the law.

States were initially pleased with this arrangement, and the adjustment, referred to as the revenue aligned budget authority, has added over \$9 billion to the nation’s highway programs, due primarily to the booming economy of the late 1990’s.

But as the economy stalled and estimates of gas-tax receipts turned out to be too optimistic, funding for highways in fiscal 2003 under TEA-21 was set at \$23.3 billion—\$8.5 billion below the fiscal 2002 funding amount. The cut was included in the president’s fiscal 2003 budget, which sought \$23.3 billion for highway programs.

But highways will get at least \$27.7 billion in 2003 after \$4.4 billion was included in the emergency supplemental spending measure approved this summer. In addition, the Senate Appropriations Committee recently approved a \$64.6 billion transportation-spending package for fiscal 2003, which included \$31.8 billion for highway construction. Most observers believe that fiscal 2003 highway funding will fall somewhere in this range.

State departments of transportation are anxiously watching to see how much highway funding they’ll get, because a cut from the \$31.8 billion could adversely affect the ability of States to use bonds to finance transportation projects.

“I think what we are doing with the TFC proposal is expanding substantially on the concept of innovative finance,” Basso said.

While programs such as TIFIA and State infrastructure banks boosted the number of transportation projects, AASHTO maintains that they are niche programs and don’t help finance the most projects in the most States.

Under TIFIA, a project has to cost at least \$100 million, a threshold that AASHTO contends is too high to help many States. Also, due to the manner in which TIFIA was authorized, State infrastructure banks finance projects in only a limited number of States. Thirty-nine States are authorized to operate State infrastructure banks, but under TEA-21, only four States—California, Florida, Missouri, and Rhode Island—are permitted to augment their funds with new Federal transportation grants. As a result, most State programs have failed to take off to the extent many observers had expected. The TFC proposal, AASHTO maintains, is a broader form of innovative finance and will help more States and finance more projects.

“They work for certain types of projects, but they aren’t universal,” Basso said. “What we are proposing here is a very centralized, universal attempt to raise money.”

Next: How a market for tax credit transportation bonds can be created.

[From Transportation Watch, Thursday, September 26, 2002]

FOR UPCOMING REAUTHORIZATION OF TEA-21 SENATORS EYE EXPANDING INNOVATIVE FINANCE

Senators interested in alternative financing methods for highway and transit projects learned Sept. 25 that while existing programs have accelerated project construction, limitations cause States to continue to look for traditional pay-as-you-go financing.

As Congress prepares for the 2003 reauthorization of the Transportation Equity Act for the 21st Century (TEA-21), lawmakers are looking for ways to boost revenues to the Highway Trust Fund and to develop project financing mechanisms beyond the trust fund that would encourage greater private sector investment.

"As successful as the trust fund has been, our transportation needs far outweigh our resources," Senate Finance Committee Chairman Max Baucus (D-Mont.) said at a rare joint hearing of his committee and the Senate Environment and Public Works Committee.

The three main innovative financing methods currently in use to make highway investments are State Infrastructure Banks (SIBs), Grant Anticipation Revenue Vehicles (GARVEEs) and the Transportation Infrastructure Finance and Innovation Act (TIFIA).

Innovative financing techniques give States additional options to accelerate projects, leverage Federal investments, and increase the "tools in the toolbox" of States and local or regional governments, according to JayEtta Z. Hecker, the General Accounting Office's director of physical infrastructure issues.

According to the Federal Highway Administration, as of June 2002, six States have issued GARVEE bonds that are repayable with future Federal aid totaling \$2.3 billion; 32 States have SIBs including 294 loan agreements worth \$4.06 billion, that once the loans are repaid, the money will recycle back to the revolving fund; and 9 States have TIFIA credit assistance agreements for 11 projects representing \$15.4 billion in investment.

Downsides Noted

With the advantages, however, come a wide array of disadvantages, Hecker said. State DOTs that are comfortable and used to traditional funding methods are not always willing to use innovative financing nor do they always see the advantage.

"States are very cautious about debt financing," Hecker said. In her written testimony, she said two States said they have a philosophy against committing their Federal dollars to debt service, rendering themselves unable to partake in new funding methods.

There also are a number of limitations in State and Federal law that do not give States the authority to use these funding methods. For example, California requires voter approval to use its trust fund allocations to pay for debt servicing costs, Hecker said. Other States have laws that restrict public-private partnerships.

The TIFIA program has a requirement that projects cost at least \$100 million, which limits it to large projects.

In response to a question by Senate environment committee Chairman James M. Jeffords (I-Vt.), Phyllis F. Scheinberg, DOT's deputy assistant secretary for budget and programs, said it was unclear if lowering the TIFIA threshold to \$50 million would make a difference.

"No one has come in and said they can't meet the \$100 million threshold," Scheinberg said. "We have a \$30 million threshold for ITS and don't have takers on that."

Looking to Reauthorization

States also need to determine the short and long-term costs associated with various financing mechanisms to determine which best fits their needs and abilities. They also must decide which form of debt financing is best, with it being repaid by highway users or by the general population, Hecker said.

One public finance industry professional told senators that TEA-21's successor should provide incentives for public/private, market-based partnerships that finance, develop, operate, and maintain highways, mass transit facilities, high-speed and freight rail and inter-modal facilities.

"This could be accomplished by permitting the targeted use of \$15-\$20 billion of a new class of private activity bonds, and/or by modifying certain restrictions in the Internal Revenue Code on tax-exempt bond financing of transportation modes," said Jeffrey Carey, managing director in Municipal Markets at Merrill Lynch.

Carey also supported a proposal by the American Association of State Highway and Transportation Officials to create the Transportation Finance Corporation, a

federally chartered, nonprofit corporation that would provide increased investment resources through the leveraging of existing resources.

“Federal Government corporations have helped the capital markets create strong and liquid markets to fulfill other policy and programmatic objectives,” Carey said.

Even if lawmakers refine some of these innovative finance tools to make them more mainstream, they will not supplant existing funding methods.

“What we discuss today is a complement to our traditional programs, not a replacement,” Jeffords said.

Upcoming Highway Hearings

The House Highways and Transit Subcommittee will hold a hearing Sept. 26 on capital and maintenance needs of the highway and transit system. The Senate Transportation, Infrastructure, and Nuclear Safety Subcommittee will hold a hearing Sept. 30 to examine the conditions and performance of the Federal-aid highway system.

The Federal Highway Administration’s long-awaited Conditions and Performance Report remains tied up at the Office of Management and Budget and DOT’s Office of the Secretary and will not be available until October, a spokesman said. However, it will be discussed at both hearings.

AMERICAN HIGHWAY USERS ALLIANCE

September 24, 2002.

The Honorable MAX BAUCUS,
Chairman, Committee on Finance,

The Honorable JAMES JEFFORDS,
Chairman, Committee on Environment and Public Works,
U.S. Senate,
Washington, D. 20510.

RE: Joint Hearing of September 25, 2002

DEAR CHAIRMEN BAUCUS AND JEFFORDS: The Highway Users Alliance (AHUA) takes this opportunity to briefly address issues regarding the Federal highway program and asks that this letter be included in the record of the hearing of the Finance and Environment and Public Works Committees on this subject.

Your committees are to be commended for holding this hearing on how the Federal Government can finance an increases level of Federal investment in highways—an investment that will provide important benefits country.

As the nation’s broadest-based highway advocacy organization and the organization that represents the motorists, truckers, and businesses that pay the taxes that fully fund and rely on our nation’s highway and bridge investments, The Highway Users is particularly interested in your joint efforts to improve revenue collection and increase investments.

America’s roads have serious and documented funding needs—too many Americans are dying or being injured on roads suffering from outmoded design—traffic congestion is worsening, threatening safety, slowing air quality progress, increasing tailpipe greenhouse gas emissions, wasting fuel, slowing product deliveries, and taking commuters away from their families and other productive exercises.

Some have called for increasing Federal fuel taxes. If there are demonstrated needs and current funding is being invested appropriately, highway users will seriously consider that option. But we believe that your committees must first improve where today’s taxes are going, prevent further erosion of available resources, and examine all means available to boost highway revenues without raising taxes.

Thus, we take this opportunity to support S. 2678, the “Maximum Economic Growth for America Through the Highway Trust Fund Act,” bi-partisan legislation introduced earlier this year by Chairman Baucus. The 12 co-sponsors of that bill include the following members of the Finance or Environment and Public Works Committees: Senators Daschle, Reid, Graham, Warner, Bond, Thomas, and Crapo. We thank all the supporters of that legislation for their leadership in advancing the provisions of that bill.

Among other provisions, S. 2678 would provide that the 2.5 cents per gallon of tax on gasohol that currently is directed to the General Fund of the Treasury would be deposited in the Highway Account.

In addition, S. 2678 would deposit into the Highway Account an amount equal to the fuel taxes not imposed on gasohol due to the gasohol tax preference. This is in keeping with historical precedence of funding agricultural programs, like ethanol, from the general fund. The bill would not raise the tax imposed on gasohol. This

means that the Highway Account would receive treatment on gasohol comparable to the treatment currently given to the Mass Transit Account. That account, unlike the Highway Account, already receives the same amount of funding for a gallon of gasohol as it does for a gallon of regular gas.

S. 2678 would also resume the practice of crediting the Highway and Mass Transit Accounts of the Highway Trust Fund with interest on their respective balances. While we would prefer that Congress invest those surpluses, the trust fund should receive interest on highway use taxes collected, but not invested.

Increased revenues for the highway program can also come from improved collections. We ask that the two committees work to achieve greater compliance with our tax laws that support the Highway Trust Fund. We have heard, for example, that changing the point of collection of aviation fuel taxes could add billions to the Trust Fund over the life of a reauthorization. Other enforcement steps could be beneficial as well. We urge the Congress to take appropriate steps to achieve the highest possible rate of collection of the taxes due to the Highway Trust Fund.

In addition, we understand that Senator Baucus is exploring additional legislation that would allow the Secretary of the Treasury to sell tax credit bonds. The proceeds would go into the Highway Trust Fund and the General Treasury would be responsible for the principal and interest. We are eager to see this approach advance as an additional means of increasing highway investment.

Mssrs. Chairmen, the American Highway Users Alliance commends the Committees for holding this hearing and urges enactment of legislation, in accord with the points outlined above, to finance increased Federal highway investment. Thank you for your consideration of our views on this important matter.

Respectfully submitted,

WILLIAM D. FAY, *President and CEO,*
American Highway Users Alliance.

STATEMENT OF THE TRANSPORTATION DEPARTMENTS OF MONTANA, IDAHO, NORTH DAKOTA, SOUTH DAKOTA, AND WYOMING

The transportation departments of Montana, Idaho, North Dakota, South Dakota, and Wyoming submit this brief statement for the record of the joint hearing held on this date by the Committee on Finance and the Committee on Environment and Public Works.

We are extremely pleased that, today, there is a consensus in the country that a well funded highway program makes an important and positive contribution to our nation's economic prosperity and quality of life. But we urge the Congress not to rest on that consensus, but to build upon it and increase today's level of Federal investment. As the Congress receives testimony and prepares to shape legislation to reauthorize federally assisted surface transportation programs, it is important to keep foremost in mind that increased transportation investments will truly advance the public interest and help all citizens and all States.

The two Committees are to be commended for holding this hearing. The nation's ability to achieve increased transportation investment requires increased funding. It requires an answer to the question of how the Federal Government will finance its contribution to such an increase.

A very important part of the answer is already before you. Earlier this year, Chairman Baucus, with the co-sponsorship of Senators Crapo, Daschle, Thomas, Craig, Enzi, Johnson, Warner, Reid, Graham, Bond, Harkin, and Carnahan, introduced bi-partisan legislation, S. 2678, that would increase receipts into the Highway Trust Fund without raising taxes.

We support every provision of that legislation.

That legislation would allow the Highway Account of the Highway Trust Fund, which has foregone very significant revenue due to increased gasohol consumption, to be properly credited. The bill would ensure that the 2.5 cents per gallon of tax on gasohol that currently is directed to the General Fund of the Treasury would be deposited in the Highway Account. In addition, the bill would credit the Highway Account with funds equal to the amount of fuel taxes not imposed on gasohol due to the gasohol tax preference (currently 5.3 cents per gallon). The bill would not raise the tax imposed on gasohol. This approach would make the Highway Account whole with respect to taxes either paid or foregone with respect to gasohol consumption. It would allow the Highway Account to finally receive treatment on this issue comparable to the treatment on this issue currently given to the Mass Transit Account which, unlike the Highway Account, already receives the same funding for a gallon of gasohol as it does for a gallon of regular gas.

S. 2678 also properly would reinstate the principle that the Highway and Mass Transit Accounts of the Highway Trust Fund should each be credited with interest on their respective balances. The bill also includes a thoughtful provision requiring a commission to look at long-term issues in financing the surface transportation program.

So, while witnesses today may be emphasizing various innovative ways of financing increased Federal surface transportation investment, we wanted to emphasize our support for the important and straightforward provisions included in S. 2678, the “Maximum Economic Growth for America Through the Highway Trust Fund Act.”

As to additional financing mechanisms, at this time we will limit ourselves to a brief positive comment on a concept that we understand to be under development by Senator Baucus. The approach would be for the Secretary of the Treasury to sell bonds with the proceeds being deposited in the Highway Trust Fund. The General Treasury would be responsible for the principal and interest. We welcome the development of this additional approach as a means of serving our national interest in increased investment in highways and transportation.

In closing, we commend Chairman Baucus and Ranking Member Grassley of the Finance Committee and Chairman Jeffords and Ranking Member Smith of the Environment and Public Works Committee for holding this hearing on the important issues of finding ways to finance increased Federal transportation investment. That investment is certainly essential to the economic future of our States and we appreciate this opportunity to offer views on how that might be achieved.

STATEMENT OF THE AMERICAN SOCIETY OF CIVIL ENGINEERS

The American Society of Civil Engineers (ASCE) is pleased to provide this statement for the record on financing alternatives for the nation’s surface transportation programs.

ASCE, founded in 1852, is the country’s oldest national civil engineering organization representing more than 125,000 civil engineers in private practice, government, industry and academia who are dedicated to the advancement of the science and profession of civil engineering. ASCE is a 501(c)(3) non-profit educational and professional society.

ASCE believes the reauthorization of the nation’s surface transportation programs should focus on three goals:

- Expanding infrastructure investment
- Enhancing infrastructure delivery
- Maximizing infrastructure effectiveness

ASCE’s 2001 Report Card for America’s Infrastructure graded the nation’s infrastructure a “D+” based on 12 categories, including roads with a grade of “D,” bridges with a grade of “C,” and transit with a grade of “C-.” Roads, bridges and transit have benefited from an increase in Federal and local funding currently allocated to ease road congestion, to repair decaying bridges, and to add transit miles. However, with 29 percent of bridges still ranked as structurally deficient or obsolete and nearly a third of major roads considered to be in poor or mediocre condition, engineers warn that Congress cannot afford to allow promised funding for transportation to lapse. Transit ridership has increased 15 percent since 1995, adding a strain despite unprecedented growth in transit systems and increased funding.

Establishing a sound financial foundation for future surface transportation improvements is an essential part of reauthorization. TEA-21 provided record funding levels to the States and significant improvements have been made to our nation’s infrastructure. In spite of these notable efforts, the nation’s surface transportation system will require an even more substantial investment. United States Department of Transportation (DOT) data reflect the fact that an investment of \$50 billion per year would be needed just to preserve the system in its current condition. With funding as the cornerstone of any attempt to reauthorize TEA-21 it is imperative that a variety of funding issues be advanced as part of ASCE’s overall strategy.

Sustaining Infrastructure Investment

ASCE supports the following goals for infrastructure investment.

- A 6-cent increase in the user fee with one cent dedicated to infrastructure safety and security. These new funds should be distributed between highways and transit using the formula approved in TEA-21.
- The user fee on gasoline should be indexed to the Consumer Price Index (CPI) to preserve the purchasing power of the fee.

- The Transportation Trust Fund balances should be managed to maximize investment in the nation's infrastructure.
- Congress should preserve the current firewalls to allow for full use of trust fund revenues for investment in the nation's surface transportation system.
- The reauthorization should maintain the current funding guarantees.
- Congress should stop diverting 2.5 cents of the user fee on ethanol to the General Fund, and put it back into the Highway Trust Fund.
- Make the necessary changes to alter the Revenue Aligned Budget Authority (RABA) to decrease the volatility in the estimates from year to year and ensure a stable user fee based source of funding.
- The current flexibility provisions found in TEA-21 should be maintained. The goal of the flexibility should be to establish a truly multi-modal transportation system for the Nation.

ASCE supports a reliable sustained user fee approach to building and maintaining the nation's highways and transit systems. While ASCE supports a wide variety of innovative approaches to finance surface transportation projects, ASCE feels strongly that the current user fee arrangement is the most equitable and efficient means of ensuring stable transportation funding.

First to be addressed is the issue of raising the user fee on motor fuels. While the gas tax is an important element of the current revenue stream feeding the Federal Highway Trust Fund, it continues to erode in value due to its inherent inelastic nature. Two strategies must be advanced to remedy this condition. First, raise the gasoline user fee by six cents. This would provide a much needed infusion of funding toward the \$50 billion per year need. In tandem with raising the motor fuel tax, ASCE believes that it is important to shore up the weakness of the motor fuel tax and its inability to retain value over the long term by adding a provision to the law that would index it based on the Consumer Price Index (CPI). This would allow the rate to adjust and reflect the current economic conditions of the Nation.

Innovative Financing

ASCE supports the innovative financing programs and advocates making programs available to all States where appropriate. Additionally, the Federal Government should make every effort to develop new programs.

ASCE supports the following changes to enhance the existing programs:

Transportation Infrastructure Finance and Innovation Act (TIFIA)

- The TIFIA process for review, approval and negotiation is regarded as burdensome, and could be streamlined.
- TIFIA projects have a minimum eligibility threshold of \$100 million and consideration could be given to lowering this to \$50 million to expand the pool of projects.
- TIFIA loans could be "fully subordinated". Current TIFIA legislation is written to subordinate TIFIA loans to other creditors. However, in the event of liquidation/default, the TIFIA loan advances to parity status with other creditors. This is known as the "springing lien" provision. It is thought by some that this has limited the availability of other credit. The issue is controversial, with pros and cons on both sides, but reform should be seriously considered.

State Infrastructure Banks (SIBs)

- With the exception of five States (Texas, Rhode Island, Florida, Missouri, and California), TEA-21 did not permit further capitalization of SIBs with Federal funds. It is felt that this has suppressed SIB activity.
- Federal regulations still apply to loan funds that are repaid to the bank, encumbering SIB funded projects with Federal regulatory requirements.

Grant Anticipation Revenue Vehicles (GARVEEs)

- Increase the flexibility of GARVEE bond repayment methods. For example, utilize the total apportionment amount as a source of repayment (i.e., all funding categories), so that no particular funding category is overburdened.

New programs for consideration as part of the next reauthorization are:

- Increased use of user fees, tolls, value pricing, and HOT lanes.
- Possible indexing of highway trust fund motor fuels tax to inflation.
- Establishing a true multimodal funding program (i.e., funds can be used interchangeably for rail, highway, freight, intermodal facilities, etc.).
- Tax credit bonds, private activity bonds, and tax-exempt bonds for privately developed projects.

Tax-based revenues are not sufficient to keep pace with the nation's transportation needs.

There is a compelling need for enhanced funding, to a large extent through user-oriented fees that have been demonstrated to be a well-accepted and equitable source of infrastructure financing. In the case of surface transportation, federally sponsored studies demonstrate the need for higher levels of investment. An additional challenge is to convince our citizens and our elected leaders that we must either “pay now” or “pay later”, and that paying now is much more cost-effective and prudent in the long run.

Innovative financing techniques can greatly accelerate infrastructure development and can have a powerful economic stimulus effect compared to conventional methods. This is the current approach in South Carolina, Georgia, Louisiana, Florida, and Texas, where expanded and accelerated transportation investment programs have been announced. Innovative financing techniques, including toll road-based funding, figure heavily in several of these State programs.

The innovative programs in TEA-21 have been a good start, but more needs to be done to expand their scope, and new programs or approaches must be introduced. We must find new and innovative ways to finance the critical transportation infrastructure needs of the Nation.

Life Cycle Cost & Surface Transportation Design

The use of Life-Cycle Cost Analysis (LCCA) principles will raise the awareness of clients of the total cost of projects and promote quality engineering. Short-term design cost savings which lead to high future costs will be exposed as a result of the analysis. In the short-term the cost of projects will increase; however, the useful life of a project will increase, and there may be cost savings in operations and maintenance over the long term.

When the cost of a project is estimated only for design and construction, the long-term costs associated with maintenance, operation, and retiring a project, as well as the cost to the public due to delays, inconvenience and lost commerce are overlooked. The increasing use of bidding to select the design team has resulted in a pattern of reducing engineering effort to remain competitive, with the result of higher construction and life cycle costs.

ASCE encourages the use of Life-Cycle Cost Analysis (LCCA) principles in the design process to evaluate the total cost of projects. The analysis should include initial construction, operation, maintenance, environmental, safety and all other costs reasonably anticipated during the life of the project, whether borne by the project owner or those otherwise affected.

Long-term Viability of Fuel Taxes for Transportation Finance

ASCE supports the need to address impacts on future surface transportation funding and believes that provision should be made in the next surface transportation authorizing legislation to explore the viability of the most promising options to strengthen this funding. In particular, the impacts of fuel cell technology should be studied as well as how to create a mileage based system for funding our nation's surface transportation system as this technology comes to market and lessens the nation's dependence on gasoline as a fuel source for automobiles.

Fuel taxes have long been the mainstay for transportation infrastructure finance, but their future is now uncertain. In many States, there is a strong reluctance to raise fuel taxes, and some State legislatures have even reduced taxes to compensate for the sharp increase in average gasoline prices over the last 2 years. Many localities and States are supplementing or replacing fuel taxes with other sources, such as sales taxes and other general revenue sources. There is also a growing trend to use additives to gasoline for environmental reasons, and the most prominent additive, ethanol, enjoys a Federal exemption from fuel taxes that reduces Federal and State trust fund revenues by some several billion dollars annually. Looking ahead, a slow but steady increase in fleet efficiency—perhaps due to increased market penetration by electric, fuel cell, or hybrid technologies—would reduce the revenue per mile of use generated by users. Whereas cleaner-burning fuels and increased fuel efficiency are desirable policy goals in their own right, particularly in regard to global warming, they may reduce the ability to rely on fuel taxes in the future.

A helpful first step in this process will be the Transportation Research Board's recently initiated Study on Future Funding of the National Highway System, which will describe the current policy framework of transportation finance and evaluate options for a long-term transition to sources other than fuel taxes. The goals of the study are to: (1) determine the extent to which alternatives to fuel taxes will be needed in the next two decades or so; (2) analyze the pros and cons of different alternatives in terms of political feasibility, fairness, and cost; (3) suggest ways in which barriers to these alternatives might be overcome; (4) recommend ways in which the efficiency and fairness of the fuel tax could be enhanced, and (5) rec-

ommend, as necessary, a transition strategy to other revenue sources. The study's first task, to be summarized in an interim report, will provide one or more scenarios to illustrate the time span during which petroleum-based gasoline availability and cost might reduce fuel tax revenues. The interim report has been requested to provide insight to those parties involved in the development of the surface transportation reauthorization legislation, particularly with regard to projections of fuel tax revenues during the next reauthorization cycle. The study will also provide estimates of trends in expenditures for transportation infrastructure from sources other than the fuel tax.

STATEMENT OF ROSS B. CAPON, EXECUTIVE DIRECTOR, NATIONAL ASSOCIATION OF RAILROAD PASSENGERS

Thank you for the opportunity to present this information. Our non-partisan organization has worked since 1967 in support of more and better passenger trains of all types in the U.S. Our vision of the future includes an intercity rail passenger network that connects all regions and metropolitan areas of the country and serves all important transportation routes. Such a vision would be similar to the one adopted with the authorization of the Eisenhower Interstate Highway system in 1956.

It is critical that TEA-3 Reauthorization finally resolve the chronic under-funding of passenger and freight rail transportation by establishing a Federal program that encourages States to invest in both passenger and freight rail development.

At a time of unprecedented highway congestion, the freight railroads are reducing infrastructure improvement projects due to decreasing rates of return on capital investments. Meanwhile, for 31 years, we have subjected Amtrak to unpredictable funding levels that have left our national passenger rail system with a \$5 billion backlog in needed capital investments. In California alone, over \$100 million in intercity passenger rail investment plans that also would benefit freight operations have been shelved until more Federal funding becomes available. A strong rail system serving both passengers and freight is a national necessity.

Individual States will never fulfill rail funding needs on their own, nor will they sustain the national vision for an efficient freight and intercity passenger rail network beyond their own borders. To realize the national vision, the Federal Government must lead. The traveling public wants intercity passenger rail. The rules for success are simple: Give people half decent service, and they will ride; give them great service, and they will come in droves. Very modest investments in service have brought substantial returns in patronage. To name just a few:

- Downeaster (Portland, Maine to Boston): Inaugurated in December 2001, this new route exceeded all revenue projections for the entire year in only 6 months. Through the summer, the trains often had standees even though third and fourth coaches were added to the original consists (which had one combined cafe/coach/Coastal Club Service car and two coaches). Although driving is an hour faster (without traffic), New Englanders are choosing the train for its convenience and comfort. August ridership was 30,700. With four daily round-trips, that is an average of about 124 passengers per trip.

- Long Distance Sleepers: In the January-March, 2002, quarter, sleeping-car revenues increased 18 percent and travel (measured in passenger-miles) 11 percent above year-earlier levels. Airline revenues were still down about 20 percent.

- Amtrak carries more passengers between New York and Washington than all airlines, and Acela Express/Metroliner service is a big factor in that. When all city-pair combinations between New York and Washington are included, Amtrak's market share of the air-rail segment surpasses 70 percent. Premium Acela Express and Metroliner service has experienced a ridership surge of 35 percent since 2001.

- Amtrak's share of the Boston-Philadelphia air-rail market was 8 percent before Acela and Boston-New Haven electrification, but that rose to 26 percent in the January-March, 2002, quarter (most recent available). This means that, in spite of Amtrak running-times of almost five or 6 hours (Acela Express and Acela Regional, respectively), there is more than one Amtrak customer for every three airline passengers. * In the Pacific Northwest, new Talgo trains helped boost ridership from 226,000 in 1993 to 658,000 in 2001. (Passenger-miles rose 2 percent during the first 11 months of fiscal 2002 in spite of the travel recession.) The overall growth from 1993 was based on marginal increases in frequency and speed (with the best Seattle-Portland schedules now taking 3 1/2 hours, a 53 mph average).

- Capitol Corridor: Since 1998, ridership on this bustling Sacramento-San Jose route has climbed 132 percent, surpassing one million annual passengers.

On the freight side, the Alameda Corridor in the Los Angeles area has improved over 200 grade crossings, reduced truck traffic, and tremendously enhanced the flow

of freight trains between Los Angeles and Long Beach. Not long before, freight-passenger interference was reduced with construction of a rail-over-rail flyover in Los Angeles.

To make similar success stories possible elsewhere in California and the rest of the Nation, the Federal Government must create a partnership with States that supports and encourages investment in passenger and freight rail. Several bills in the House and Senate, such as RIDE-21 and S. 1991, laudably set the framework for a Federal rail infrastructure program, where money should be spent, and how tax-exempt bonds, tax-credit bonds, and expanding the Rail Rehabilitation and Infrastructure (RRIF) program will provide the needed capital. However, none of these bills outline where the cash needed to support these Federal programs will come from.

Thus, the National Association of Railroad Passengers strongly supports the creation of a Rail Trust Fund, similar to those used so effectively for the highway and aviation modes.

While the Rail Trust Fund might eventually derive significant revenue from user fees, user-based revenue sources would not generate much revenue initially. In order for a rail trust fund to reach critical mass, the Federal Government must first "prime the pump" by earmarking revenue from other sources. Highways and aviation systems were already relatively mature before creation of their trust funds.

Some possible Rail Trust Fund sources already exist in the form of taxes levied on the railroads, which, unlike highway and aviation taxes, do not benefit further investment in their respective mode.

This counter-productive precedent has hindered development of both passenger and freight rail for decades. Between 1941 and 1962, the Railroad Ticket Tax raised billions in revenue, none of which went toward enhancing development of the freight or passenger rail service; some revenues actually went toward highway development. Today, through taxes levied on railroads on infrastructure and fuel, we continue to discourage investments in rail by funneling these revenues into the general treasury.

We believe rail should receive a portion of any future increase in gasoline or aviation taxes. We support many State DOTs in the view that they should be allowed to spend flexible gasoline-tax dollars on intercity passenger rail. We do not believe the Nation or the cause of balanced transportation benefits from an 'ironclad' mode-specific approach to trust funds, but in the present context we certainly agree that taxes levied on railroads (including Amtrak) should benefit railroads—passenger and freight.

We know that freight railroads are very sensitive to the possibility that creation of a trust fund would alter the competitive balance among the railroads, or result in rail tax payments cross-subsidizing passenger projects. We believe these challenges can be addressed. General guidelines about overall project balance between competing freight railroads and how improvements must benefit both freight and passenger service could establish a fair process of disbursement for all parties. Other stipulations about the share of allowable projects whose benefits are judged to be "passenger only" could be negotiated. If Congress does not repeal the 4.3 cent diesel tax which Amtrak and the freight railroads currently pay toward general deficit reduction, then the \$170 million raised annually from this tax should be directed into a Rail Trust Fund, and no longer be set aside for deficit reduction. This precedent has already been set, as similar airline and highway taxes were redirected into their respective trust funds in 1997. Since 1997, the railroads have paid approximately \$1 billion in diesel taxes to general revenue; this money should be retroactively rebated at its present value to the Rail Trust Fund and set aside for rail infrastructure development.

Other revenue sources being considered for the Rail Trust Fund include taxes on equipment sales, and passenger ticket taxes on commuter and Amtrak trains. Any new taxes levied on the freight railroad industry and passengers must not be viewed as a panacea, and be implemented with restraint. Raising taxes on equipment will increase startup costs for new services as well as decrease an already diminished rate of return for capital investments. An equipment tax will be pointless if railroads simply reduce their capital investments further because they are now paying a tax on new equipment. A net gain for capital investments infrastructure must accompany any tax levied on new equipment purchases.

With respect to passenger tickets, again, NARP believes these taxes must not be seen as a panacea, and be implemented cautiously (perhaps not at all, or only after the results of meaningful capital projects have become apparent in service improvements). Unfortunately, the vast reservoir of patronage that made the railroad ticket tax so successful (at raising general revenues!) between 1941 and 1962, is much smaller, and cannot generate nearly as much revenue as before. A passenger ticket

tax must not try to make up this difference by imposing a much higher tax rate; taxing passengers too much would stifle ridership to the point that nobody rides the train. Amtrak already tries to set fares to maximize revenues, and many fares already are very expensive. Also, Amtrak, as noted above, already pays the 4.3 cent fuel tax.

Polls over the years have consistently shown public support for faster, more frequent, and reliable passenger trains, including two national polls this summer. A poll conducted by CNN/Gallup/USA Today near the height of Amtrak's June cash crisis (June 21–23) found that 70 percent of the public support continued Federal funding for Amtrak. Similarly, The Washington Post found that 71 percent of Americans support continued or increased Federal funding for Amtrak (August 5 article reporting on July 26–30 poll).

If we provide quality service, the public will ride the trains. If the Federal Government provides States a meaningful match, the States will drive the needed investments. At the same time, the public also will realize a tremendous benefit from an improved freight rail network. Again, the key to realizing these benefits will be a long term Federal partnership with States, and an adequately supported Rail Trust Fund that would bring balance into national transportation policy, and ultimately benefit the users of every mode of transportation.

The web site of the National Association of Railroad Passengers is <www.narprail.org>.

STATEMENT OF STATE SENATOR BETTY KARNETTE, CALIFORNIA STATE CAPITOL,
SACRAMENTO, CA

Thank you for having this important hearing to discuss the security and infrastructure needs of trade-based transportation throughout this great country of ours.

Clearly, America's long-term economic growth depends on our ability to move goods safely and efficiently. Throughout the Nation, we see how freight movement brings our trade economy to life. We can be proud of how we work as a nation to stay competitive in the global economy.

However, there are serious obstacles to our nation's freight security and mobility that could significantly reduce the safe and efficient movement of goods in the immediate future. Unless we address these problems in an innovative, systematic fashion—without delay—we risk America's ability to provide the type of transportation infrastructure on which the goods movement industry has come to rely.

Before 9/11/01, our freight mobility issues were already challenging enough. But today, we must also ensure that our nation's freight movement system is as secure as it is efficient. Clearly, our present challenge is to insure the security, efficiency and sustainability of the nation's freight movement system.

It is awe-inspiring to see how the various regions of this nation collaborate in manufacturing, selling and moving goods to each other and to our trading partners throughout the world. For example, nearly \$650 billion in domestic and international trade flows between California and other regions of the United States.

What would happen if the goods movement between the east coast, west coast and points in between were to collapse? Clearly, our economy—and those who rely on it—would be in serious trouble, and that day may not be far away. Rail lines and rail yards in California are expected to reach maximum capacity within five to 7 years. Moving a freight container from one side of Chicago to the other can often take up to 4 days.

There are countless examples of problems just like these that demonstrate the importance of developing a systematic strategy to meet the challenges that confront us. If we fail to act, our competitors in the global economy will be the only beneficiaries.

I would like to focus my testimony on how we can ensure that our nation's freight transportation network can keep pace with the demands of economic growth.

First, we need a comprehensive strategy for increasing capacity and improving the efficiency of goods movement in the United States. The strategy must be complete and it must include private sector participation.

As I have indicated in my attached report, National Freight Security and Infrastructure Bank, we can simultaneously meet the needs of both government and industry by creating an organization that focuses on public/private finance and project selection. A public/private partnership is the only sensible approach we can take. We must make sure that the two major stakeholders of the nation's freight system—government and industry—have a forum to collaborate and to solve national goods movement problems.

Second, as Congress rightfully confronts the issue of freight security, it is essential that any such effort include an innovative and comprehensive financing strategy to address it. We do not have sufficient financial support from existing Federal programs to guarantee the freight security and mobility in the way we would like. Therefore, I have developed an innovative finance proposal for freight projects.

My proposal for a National Freight Security and Infrastructure Bank demonstrates how to develop an innovative funding base and how to deliver freight transportation projects with public/private collaboration, while conforming to transportation programming requirements at the Federal, State and local levels.

While there may be some concern that user fees may not be the best way to fund freight security and mobility, we simply cannot lose sight of the option. Security and mobility are key elements of America's ability to remain competitive in the global economy.

These are the same considerations that led President Dwight David Eisenhower to create the Interstate Highway System. Creation of the Interstate Highway System was primarily driven by security concerns during the cold war years of the 1950's and 1960's (i.e., the need to quickly, safely and efficiently deploy troops and material).

Today we face similar security concerns that must be addressed as we aggressively pursue goods movement infrastructure development. Many of our present challenges may seem insurmountable. But our nation's history is rich with examples of how Americans can rise above the challenges of the day.

The bottom line is that a comprehensive approach will simultaneously enhance America's economic development and mitigate environmental and safety issues—while at the same time addressing national security.

National Freight Security and Infrastructure Bank

The National Freight Security and Infrastructure Bank (NFSIB), a stand-alone Federal agency, would be funded by a new uniform NFSIB security and infrastructure fee, administered by U.S. Customs, and based in part upon a percentage of the existing duties on all imported cargo through border crossings and through the nation's seaports. The NFSIB would establish security and infrastructure fees for certain commodities, which at present have no existing U.S. Customs duty, but which have security or infrastructure impacts. The amount of the NFSIB security and infrastructure fee would be adjusted annually based upon the change in the Consumer Price Index (CPI).

U.S. Customs would be responsible for collecting the NFSIB security and infrastructure fee. US Customs would receive compensation from NFSIB for providing this administrative service. Fees would flow to the National Freight Security and Infrastructure Trust Fund, which would be administered by the NFSIB. The NFSIB's staff and administrative costs would be funded by fees paid by project sponsors (from non-NFSIB import cargo fee resources). The NFSIB's Board of Directors would consist of 15 representatives from the public and private sectors, including the U.S. Department of Transportation, U.S. Customs, ports, steamship lines, shippers, trucking and railroad industries.

85 percent of the Trust Fund would be available as cash, or pledgable revenue to support project financings of eligible freight security and infrastructure projects. Project sponsors would be responsible for developing financing plans for individual projects. Project sponsors could choose direct funding, and/or use of leveraging strategies, including issuing debt, or a combination of funding strategies, in which the project sponsor would rely on cash or pledgable revenue provided by the NFSIB. 10 percent of the Trust Fund would be remanded to the U.S. Department of Transportation for grants for discretionary freight security and infrastructure projects, and 5 percent would be available to the U.S. Customs Service for administering the collection of fees.

Project sponsors/applicants may include any of the following: States; cities; regional and local public agencies; port authorities; joint powers authorities; and joint applicants involving public agencies and private transportation firms or associations.

All eligible projects must address security and transportation needs of imported cargo through seaports located in specified Global Gateway Regions of the United States, or through selected border crossings, or through selected inland cargo interchange points, or through the area of jurisdiction of the local Metropolitan Planning Organization. Projects nominated for funding must be included in the Regional Transportation Plan adopted by the Metropolitan Planning Organization. Regardless of their distance from the seaport, border crossing, or interchange point, all nominated projects must address one or more of the following goals associated with the movement of imported cargo: 1) increase national or homeland security, 2) expe-

dite shipments of imported cargo by increasing capacity, improving communications and information sharing, reducing delay or increasing speed or efficiency of shipment, and 3) relieve traffic congestion, reduce air and noise pollution or mitigate other environmental impacts.

The Board of Directors of the NFSIB will determine which projects will receive funding. Funds will flow directly from the NFSIB to project sponsors. Project sponsors must provide 25 percent matching funds from any source. The U.S. Department of Transportation shall approve projects recommended for funding by the NFSIB, and shall have veto power over any project funding recommended by the NFSIB.

Global Gateway Regions shall include:

- 1) Southern California, including ports of Los Angeles, Long Beach, Hueneme and San Diego;
- 2) Northern California, including the Port of Oakland, Port of Stockton; 3) Pacific Northwest, including the Ports of Portland, Seattle and Tacoma;
- 4) Gulf Coast, including the Ports of Galveston, Houston, Corpus Christi, New Orleans, Mobile, Tampa;
- 5) Southeast, including Jacksonville, Miami, Everglades, Palm Beach, Charleston, Charlotte, and Savannah;
- 6) Northeast and Mid-Atlantic, including the Ports of New York/New Jersey, Philadelphia, Boston, Wilmington, Baltimore and Norfolk;

Border Crossings shall include:

- 1) Laredo, TX
- 2) El Paso, TX
- 3) Bellingham, WA
- 4) Portal/Northgate, ND
- 5) International Falls, ND
- 6) Sault Ste Marie, MI
- 7) Detroit/Port Huron, MI
- 8) Niagara Falls, NY
- 9) Plattsburg, NY
- 10) Otay Mesa
- 11) Calexico

Inland interchange points shall include:

- 1) Chicago, IL
- 2) Memphis, TN
- 3) Kansas City, MO
- 4) Washington, DC
- 5) Richmond, VA
- 6) Charleston, WV
- 7) Ft Worth, TX
- 8) Chattanooga, TN
- 9) Denver, CO
- 10) Little Rock, AR
- 11) Minneapolis/St. Paul, MN
- 12) St. Louis, MO
- 13) Albany, NY
- 14) Syracuse, NY
- 15) Cincinnati, OH
- 16) Columbus, OH
- 17) Pittsburgh, PA
- 18) Hattiesburg, MS
- 19) Atlanta, GA
- 20) Lexington, KY
- 21) Birmingham, AL
- 22) Nashville, TN
- 23) Cairo, IL
- 24) Louisville, KY
- 25) Indianapolis, IN
- 26) Charlotte, NC
- 27) Raleigh/Durham, NC

Examples of projects that would be eligible for funding include:

1) California Global Gateways

Accounting for 40 percent of all U.S. waterborne commerce, California represents the largest trading complex in the United States. Freight transport capacity, however, has not kept up with demand. Although the Alameda Corridor opened in April of 2002, serious deficiencies in railroad track and yard capacity and freeway capacity still exist in the L.A. area. California is facing explosive growth in international

trade through its ports and border crossings over the next 20–25 years. Grade separations and other mitigations are needed to relieve freight-related congestion in local communities. Examples of specific projects that could apply for NFSIB funding include:

Alameda Corridor-East (extension of the Alameda Corridor through the San Gabriel Valley, Orange County, San Bernardino County, and Riverside County);—Gerald Desmond Bridge replacement in the Port of Long Beach;—Oakland Joint Intermodal terminal at the Port of Oakland.

2) *Florida's Gateway Project: The Americas Corridor*

Florida is the fourth largest container handling State in the Nation, with the State's South Florida seaports handling an important share of the international goods flowing through the State to and from global markets. The goal of the Americas Corridor is to optimize the movement of international cargo and domestic freight among seaports, rail lines and State highways in South Florida. In particular, the 60 linear miles of the intermodal transportation system linking South Florida's three seaports is of critical concern. The containers moving across the docks of three South Florida seaports, each of which is also a premier cruise port and located adjacent to a busy downtown center, must traverse the choked streets of urban neighborhoods to access the Interstate highway system, impeding mobility, productivity and compromising the nation's security. Double tracking of the rail system between Jacksonville and Miami is another specific project that will be required in the future.

3) *Chicago Cross Town Highway and Rail Improvements*

In Chicago six Class I railroads converge at some 18 major intermodal terminals ringing the city. 1,500 trains per day approach these terminals and 3,500 cross-town container moves occur daily. The stress on the region's roadways is enormous, and the delay to cargo delivery is increasingly inefficient. A series of improvements to this fragmented infrastructure would add capacity and velocity to the rail and trucking systems.

4) *New York/New Jersey Port Access Projects*

The Port of NY/NJ is the largest port complex on the east coast, and the second largest in the Nation. Significant environmental concerns hamper overall freight investment. New highway building is constrained by land availability and environmental concerns. 15,000 trucks move in and out of the port area each day, but each truck trip faces an average of 30–50 minutes of delay due to increasing congestion in the area. The port has devised a series of port access improvements and intermodal connectors needed in the region.

STATEMENT OF PROFESSOR DAVID J. FORKENBROCK, DIRECTOR, PUBLIC POLICY CENTER, UNIVERSITY OF IOWA

A New Approach to Assessing Road User Charges

This testimony describes a major study in progress to develop a new approach for charging vehicles that travel on public roadways. The new approach applies intelligent transportation system (ITS) technology to the problem of assessing road user charges, enabling these charges to be fairer, more stable, and more flexible. Though very simple in concept, the new approach has required that a number of institutional and technological issues be resolved. It is to resolve both types of issues that we are undertaking this research.

Phase I of this research was concluded in September 2002, and a final report is available from Professor Forkenbrock. The first phase of this research was funded through a special consortium comprised of the Federal Highway Administration and 15 State departments of transportation: California, Connecticut, Iowa, Kansas, Michigan, Minnesota, Missouri, North Carolina, Ohio, Oregon, South Carolina, Texas, Utah, Washington, and Wisconsin. If funded in the transportation reauthorization bill, Phase II will field-test the concepts developed, so that by the time implementation is considered, the new approach will be ready to implement by State legislatures and Congress. It is vital that it be fully tested because nationally the amount of revenue generated by road user charges is substantial—the motor fuel tax alone generates upwards of \$50 billion annually.

PROBLEMS WITH CURRENT METHODS FOR CHARGING ROAD USERS

At both the State and Federal level in the United States, the primary method for charging road users is the motor fuel tax. In many ways this tax has served quite

well. Road users are charged roughly on the basis of the amount of travel on the public road system. As such, motor fuel taxes have the desirable attribute of being a “pay-as-you-go” form of user charge. There are, however, several major shortcomings with motor fuel taxes including:

- first and foremost, an inability to generate the necessary revenue to provide quality transportation services in future years as hydrogen fuel cell vehicles and those with other new propulsion systems become more commonplace;
- high evasion, perhaps up to 10 percent for diesel fuel under some circumstances;
- increased fuel efficiency meaning lower receipts per mile traveled;
- no relationship to the type or cost of the facility being used or the level of service provided; and
- a weak relationship to the relative costs of particular trips such that some vehicle operators pay user charges that exceed the costs they impose, while others pay substantially less than their costs.

From the standpoint of public policy, motor fuel taxes are not entirely satisfactory. Vehicle operators are not given price signals to make them aware of the costs a particular trip may impose on society. With motor fuel taxes, it is not possible for government agencies to provide incentives to vehicle operators to change the nature of their road use, such as traveling on higher-standard roads or during off-peak hours.

The move away from State and Federal motor fuel taxes must be accomplished with great care. Combining fuel tax receipts at both levels of government, this tax accounts for almost two-thirds of all road user charges. In short, a very large amount of road financing capability is at stake.

STUDY OBJECTIVES

The purpose of Phase I of this research has been to design a system for charging road users that embodies as many attributes of an ideal user charge system as possible. Among the key attributes of an ideal system are that it enables:

- A low cost of collection for both agency and user.
- A stable revenue stream.
- An ability to assess higher user charges for users who impose higher costs (e.g., contributions to congestion delays by autos and road damage by heavy vehicles).
- A low evasion rate.
- Incentives for users to travel on appropriate roads and to spread their trips across time periods.
- Any form of vehicle propulsion to be accommodated.

The approach to charging road users must not be burdensome, and it must be tamperproof, highly reliable, and a useful tool for achieving a variety of policy objectives. Of paramount importance, it certainly must not diminish the privacy of road users.

Fortunately, newly emerging ITS technology makes it possible to design an approach to charging road users that avoids the problems and shortcomings of current mechanisms and that embodies the desirable attributes listed above.

To progress closer to an ideal system of road user charges, our research is leading to a new approach that is practical and cost-effective. The new approach will enable a real-time assessment of road user charges that is based on mileage accrual and, in the case of heavy vehicles, also on actual vehicle operating weights and configuration, as well as the type of road being traveled.

SKETCH OF THE NEW APPROACH

Key to the new approach is a simple on-board computer. The computer stores a record of actual road use charges. Periodically, this record is uploaded and transmitted to a data processing center; we refer to it as the collection center. The center bills a vehicle owner and reimburses the States, counties, and cities operating the roads on which the vehicle has traveled. The on-board system is simple, secure, and capable of protecting the user’s privacy. Importantly, the on-board system enables a variety of user charge conventions. In its simplest form, this approach can be used to assess a vehicle-miles-traveled (VMT) tax. With a VMT tax, the computer would calculate road mileage actually traversed; it compares this mileage with that obtained through an odometer feed. It then applies appropriate user charge rates to the mileage traveled within each jurisdiction (typically each State). Only data on user charges due are stored in the on-board computer (i.e., where travel has occurred is not stored). Periodically, the vehicle owner uploads these stored data to a collection center. The collection center operates much like a credit card billing center.

Charging Autos

Inputs to the computer can be quite simple for autos, involving only a global positioning system (GPS) receiver, a geographic information systems (GIS) data file, and the vehicle's odometer (for back-up data on distance traveled). The GIS file contains data polygons that define boundaries of the respective States. A receiver on-board the auto uses GPS signals to determine the vehicle's position. The computer reconciles this position with the stored data polygons to determine the State in which travel has occurred; the miles traveled within that data polygon are used to compute user charges, which in turn are stored. When a vehicle crosses into another State, it enters a different data polygon, and travel within that polygon is used to compute user charges. Of course, sub-State polygons, such as those defining a metropolitan area, also are feasible. The GIS file that defines polygons is stored in the on-board computer and is readily updateable. Periodically, the collection center transmits updates of the GIS file to the vehicle using a smart card as a "messenger." A smart card is a small credit card-sized plastic device that contains an internal embedded computer chip in the form of a microprocessor and/or a memory module. This technology was developed in France more than 20 years ago. Smart cards are very durable and should serve a typical user for the life of the vehicle. If the smart card is lost or destroyed, it can easily be replaced at a small cost to the user (a typical smart card costs less than \$5).

Communication via a smart card is done using a reader that closely resembles the credit card readers found in nearly all businesses.

Normally, the smart card occupies a slot in the vehicle's dash panel. The on-board computer continuously updates the smart card regarding total user charges owed to each State or other jurisdiction that is defined by a polygon. Data transferred to the smart card, then, are in units of dollars, the on-board computer having (1) measured the distance traveled within each polygon, (2) applied the appropriate per-mile user charge as established by the applicable jurisdiction, and (3) calculated the user charges owed to each jurisdiction. Thus, the vehicle operator can remove the smart card at any time and insert into a reader to transmit the charges due to the collection center.

Why would a vehicle owner want to upload billing data very often? A simple display on the instrument panel during vehicle startup displays the current user charges stored in the on-board computer. Each jurisdiction can choose to levy an interest charge for road use that occurred more than, say, 30 or 45 days in the past. The instrument panel display can show both current user charges and interest accrued. As the interest charges mount, the display will serve to encourage the person to upload the billing data. Failing to upload data at all may result in a requirement to pay all user charges in arrears before receiving the next year's vehicle registration.

During the data uploading process, the smart card authenticates the user and then anonymously uploads the road use information. When the collection center identifies the user, it checks for fraudulent behavior or malfunctions. If there is a problem, the smart card is notified to prompt the user to go to a service center, and the system flags that particular vehicle. During this communication, the collection center updates the vehicle's rate schedule through the smart card, if the stored schedule is not current. The center also provides a one-time encryption key to the smart card to facilitate anonymously uploading how much of the user charge arose from travel in each jurisdiction. Once the collection center receives the information on how much of the mileage occurred in which jurisdictions, the center correctly apportions the funds to the appropriate jurisdictions in which travel has occurred.

We stress that the apportionment data would be anonymous. It is not necessary to know which vehicle generated a particular sum of user charges for each jurisdiction; what is necessary is the amount to be apportioned. In every case, the total amount for all jurisdictions taken together equals the single value uploaded in the initial contact made by the vehicle via the smart card. Thus, all of the necessary data are transmitted, but the only figure that can be tied to a particular vehicle is a single dollar amount for total user charges and interest, if applicable, due. This approach maximizes user privacy.

User acceptance of the new approach to assessing user charges could be increased if other benefits result. For example, navigation displays, now a costly option on luxury autos, could become standard equipment or a low-cost option. Nearly all of the components needed for such displays would be on-board the auto; adding them in a mass-production manner would be simple. Note, too, that looking a few years into the future, regardless of how user charges are assessed, traveler information displays are likely to become commonplace (their costs already are beginning to fall). In that case, adding the capacity to store road use information would be easy and inexpensive.

Another user benefit of the GPS/GIS system would be emergency location notification. The Advanced Collision Notification System, which is beginning to receive national attention, uses cellular transmissions to relay a vehicle's exact location to the appropriate service provider in the event of a crash, health problem, or mechanical breakdown. The protection this sort of system offers motorists is likely to be valuable to many people, but it would be especially beneficial to elderly drivers and those who travel in remote areas or unsafe parts of cities. It should be stressed, however, that it is not the GPS system that transmits any form of location data. GPS satellites only send radio waves that the vehicle's GPS receiver uses to calculate its location. GPS satellites are unable to receive any form of information from a vehicle.

Charging Heavy Vehicles

In the case of large trucks and other heavy vehicles, the on-board computer system could be very simple, enabling only a per-mile user charge to be levied, or it may be slightly more complex. Like autos, heavy vehicles will have a GPS receiver and stored GIS information on data polygons. Because privacy is much less of an issue with commercial vehicles, the polygon data could be supplemented with several levels of road classes. In this way, user charges for road use by heavy vehicles can be varied according to the standard of road traveled. For example, a State may choose to levy a lower per-mile charge for travel by heavy vehicles on interstate highways and other facilities that are capable of withstanding high axle loads without being damaged. The road user charges uploaded to the collection center can easily be made to reflect several different per-mile rates that vary with the standard of road used. Likewise, combination trucks with additional axles could be assessed lower per-mile user charges because they damage roads less. Optionally, an on-board weight indicator could be included, which would be activated each time the cargo doors are closed (in the case of a freight semi-trailer truck). The weight indicator, which is a simple strain gauge attached to the trailer's suspension, transmits information to the on-board computer, indicating the current weight. A code informs the computer about the configuration of the trailer, especially the number of axles. The computer then takes into account vehicle weight and configuration, along with type of road being traveled, in calculating the road use charges that are due.

It is noteworthy that the new approach eliminates the pitfalls of such methods as weight-distance taxation: the uniform per-mile rate (regardless of current weight) of that approach is replaced with a much more flexible approach, and evasion will cease to be a problem. Of course, individual States can determine the extent to which they levy user charges based on the type of road being traveled or on vehicle weight and configuration.

With the new approach, motor carriers will benefit by the elimination of toll-booths, and interstate permitting can be automated. Also, opportunities that do not exist today become available; for example, by adding axles and traveling on higher-standard roads, operators could minimize their user charges.

Related Advantages

At least two related advantages would accrue to State departments of transportation in addition to the inherent benefits of the new approach. One advantage is that the expensive weigh-in-motion (WIM) scales used by many States can be eliminated. Another advantage is that toll facilities on roads and bridges no longer will be necessary. With segment-specific user charges, adjustments can be made for what are now toll roads and bridges. Privately owned highways, similar to SR 91 in California, will become highly feasible.

PROGRESS TO DATE-PHASE I

Phase I of the effort to design and test the new approach to assessing road user charges was recently completed. In Phase I, we accomplished the following:

- Developed the basic concept of using intelligent vehicle technology to assess road user charges.
- Refined the concept to absolutely maximize road user privacy.
- Incorporated features to ensure system security, robustness, and user convenience.
- Ensured that for the States, road use revenue will be stable, evasion will be extremely difficult, and fairness among both road users and taxing jurisdictions will be maximized.

Research Process Followed

Dr. David Forkenbrock, principal investigator of this research, formed a research team comprised of several groups, each of which has had specific responsibilities. The groups studied:

- Legal aspects of privacy as it relates to road use.
- The most promising computer and electrical engineering approaches to collecting, storing, and transmitting road use data.
- Economic and policy needs, desirable attributes, and practical considerations in assessing road user charges.
- Technological capabilities existent today and likely to become available in the coming few years related to GPS, GIS files, on-board computers, data transmission, and other key components.

Work completed by the respective groups has been published in the form of a report that is accessible to a layperson. The research leading to publication of this report was reviewed in a series of meetings with representatives of the 15 participating States and the Federal Highway Administration. Throughout the 2-year Phase I effort, one-to 2-day meetings have been held every 6 months. The States and FHWA have been kept fully apprised of research progress, emerging issues, and intended research directions. Attendance in these meetings by the States and FHWA has been excellent, nearly 100 percent.

Where the Research Effort Currently Stands

Phase I has led to the conclusion by the research team and the funding agencies that the new approach as described above is conceptually sound and operationally practical. It is highly flexible, so that each State can embody a variety of public policies regarding road user charges. The new approach will enable fair, stable user charges to be levied, even when hydrogen fuel cell vehicles and other vehicles that burn less or even no fossil fuels become commonplace, as they surely will. Many other limitations of current motor fuel taxes can be eliminated with the new approach, and essentially all of the attributes of an ideal user charge system listed at the beginning of this discussion paper can be incorporated.

Even though the concept and features of the new approach are technologically and practically feasible, a great deal of testing and refinement is needed before it is ready for national implementation. We need to study how best to integrate the on-board equipment with emerging vehicle technologies, the best way to operate the collection center, and how the States would prefer to structure their road user charges, given the advances possible with the new approach. Choices need to be made regarding the sorts of data storage and uploading features to adopt. The bottom line is that before a gradual replacement of the motor fuel tax can be implemented, all parties must be very certain that the new approach works very well and does what policymakers want it to. Extensive testing is the only way to be sure that the on-board equipment is reliable under widely varied weather and operating conditions, tamperproof, and convenient for diverse groups of drivers whose needs are quite different.

THE NEXT STEP-PHASE II

Phase II is needed to fully test and demonstrate the basic concepts just discussed, to refine the working features of the new approach to assessing road user charges, and to develop working specifications for the applicable components.

Context for the Research

This is an opportune time to develop the new approach to assessing road user charges. Auto manufacturers are making rapid advances in the electrical systems of their products. Soon, many of the systems needed to deploy the new approach will become standard equipment on most if not all autos. It is especially significant that several auto manufacturers intend to incorporate on-board computers to carry out various functions that now rely on mechanical switches, gauges, and linkages. These on-board computers will afford much greater user flexibility, and they will include such features as GPS receivers to facilitate emergency location and navigation, as well as electronic odometers. Such odometers are an important back-up system in the event that the GPS receiver should fail or be denied signals. In the same vein, major trucking companies are making widespread use of GPS to pinpoint the location of freight shipments.

This is a propitious time to begin collaborating with motor vehicle manufacturers as they dramatically change their on-board electrical systems and include advanced new features. Specifically, we propose to work closely with these manufacturers to find the best means for incorporating the components needed to support the new approach. Early cost estimates are highly favorable in that the additional expense

of adding the data storage and uploading capabilities will not be at all large, less than \$100. Features like electronic odometers that cannot be tampered with are forthcoming, as vehicle manufacturers protect the limits of their mileage-based warranties.

Phase II Work Plan

Before State legislatures can pass the necessary enabling legislation, a comprehensive demonstration program must be carried out. As mentioned earlier, Federal and State motor fuel taxes generate over \$50 billion annually. One must be very sure that the replacement approach is completely sound before implementing it. Following are key components of the Phase II work plan:

- Systematically test the security and reliability of on-board computers and data uploading methods.
- Evaluate the acceptability of the approach by diverse user groups. These user groups include both operators of autos and various types of trucks.
- Carry out a well-designed operational test program. Five geographic areas across the United States will be selected as test sites, and several hundred autos and trucks will be outfitted with the required on-board equipment. Prototype uploading facilities will be established, and a prototype collection center will be developed cooperatively with a selected private firm.
- Work with several national interstate trucking firms to test the feasibility of assessing a mileage-based user charge system across numerous States. A key objective will be to make the new approach integrate well with trucking firm needs. Certainly, the greatest cost of Phase II will be outfitting participating autos and trucks with the necessary equipment to carry out a meaningful test of system robustness, security, and user convenience. Also significant will be the expenses related to establishing a prototype collection center. The center probably can be established cooperatively with a credit card processing company because the necessary capabilities are very similar.

Funding Requested in the Transportation Reauthorization Bill

As we have discussed, Phase II of this multi-year research program is critically important. It will enable the technology and implementation strategies to be fully refined before State legislatures debate a major change in transportation financing. Technological advances in cleaner, less fossil-fuel consuming vehicle propulsion systems mean change is inevitable; the issue is how best to charge vehicles with a range of propulsion systems for travel on public roads and highways.

Our research team estimates that funding Phase II of this university-based research program at the level of \$3 million per year for the duration of the forthcoming transportation reauthorization bill will enable a full operational test of this promising approach. We stress that most of these funds will be used to outfit private vehicles for the operational test. The remainder will be used to design the test, work with equipment manufacturers on detailed specifications for the on-board gear, recruit participants, and analyze the results.

The specific request is for an authorization of \$3 million per year to the Iowa Department of Transportation to commission a demonstration of the intelligent transportation system (ITS) approach to assessing road user charges based on on-board computerized systems. The Iowa DOT will in turn commission the University of Iowa Public Policy Center to carry out the demonstration.

The Research Team

Leading Phase I and the proposed Phase II is the Public Policy Center at the University of Iowa. The Center is an interdisciplinary research unit in the Office of the Vice President for Research. Director of the Center and Principal Investigator for this research is Dr. David Forkenbrock, who originally conceived the new approach. Dr. Forkenbrock has an international reputation as a scholar in the area of transportation policy and finance. He is assisted by a team of engineers, policy analysts, and social scientists from various universities and firms, who collectively are uniquely qualified to carry out this national study. New members with technical evaluation skills will be added to the research, and more active communications with vehicle designers within the auto and truck manufacturing industry will be established.

We foresee a continuing role for the 15 State departments of transportation that have worked closely with the research team during Phase I of this project. The representatives of these DOTs are knowledgeable about the new approach being developed, and they have offered many useful suggestions as our work has progressed. Together with the equally valuable representatives of FHWA, we propose to continue our association with them.

Importance of Phase II Research

Evidence of the importance of this issue may be found in the recent efforts by several European nations to implement some form of distance-based user charges. For example, the Netherlands' parliament has passed legislation calling for this type of user charges to be implemented within the next several years. The United Kingdom and Germany are evaluating similar proposals. The study team has been actively collaborating with senior staff in these countries.

The United States' energy security and environmental quality both will benefit by the exciting new vehicle propulsion technologies soon to be made operational. The need is to ensure that these vehicles can be charged for road use in a fair, cost-effective, and convenient way that protects the privacy of road users. At the same time, the inherent problems with the motor fuel tax can be eliminated.

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STATEMENT OF RIC WILLIAMSON, MEMBER, TEXAS TRANSPORTATION COMMISSION

INTRODUCTION

My name is Ric Williamson, a member of the Texas Transportation Commission, and I am pleased to provide this testimony on behalf of the commission and the Texas Department of Transportation (TxDOT) regarding transportation financing innovations in Texas. This testimony will provide information on Texas' current use of available State and Federal transportation financing mechanisms and our plans to implement new tools. I will also suggest changes to the existing Federal transportation financing tools that will help Texas take better advantage of them in our continuing effort to meet our State's tremendous mobility and access needs as effectively and efficiently as possible.

TEXAS' EXPERIENCE WITH EXISTING FEDERAL FINANCE TOOLS

The Federal Government has traditionally financed highways through 80 percent reimbursement grants but the last three major pieces of Federal transportation legislation—ISTEA, the NHS Act of 1995, and TEA-21—have produced alternative forms of “non-grant” assistance. Over that same timeframe (since the early 1990's), Texas has slowly accrued complementary authority on the State level to enable us to begin to use these new Federal financing tools for transportation. Positioning TxDOT to utilize innovative financing where it is determined to be appropriate serves the users of the State's transportation system by accelerating construction of select projects of significance, delivering customer benefits ahead of schedule, and augmenting stretched revenues. While this section describes our experience to date, it also represents only the beginnings of a new era in transportation financing for Texas.

State Infrastructure Banks

Background. In November 1995, the President of the United States signed Public Law 104-59, known as the 1995 National Highway System Designation Act (NHS Act). Section 350 of that law allowed the United States Secretary of Transportation to designate a maximum of ten States as pilot projects for the State Infrastructure Bank program. Texas was selected as one of the initial pilot States for an NHS Act SIB. About 30 States eventually elected to participate.

A State Infrastructure Bank, or a SIB, operates chiefly as a revolving loan fund and may provide a wide range of financial assistance in addition to loans. The purpose of the pilot program is to attract new funding into transportation, to encourage innovative approaches to transportation problems, and to help build needed transportation infrastructure. The NHS Act provides that each designated State may transfer up to 10 percent of certain Federal dollars, match those funds with State funds, and deposit them into a State Infrastructure Bank. The greatest benefit of this program may well be the creation of a self-sustaining, growing, revolving loan fund.

In 1997, the 75th Texas Legislature passed Senate Bill 370, which created the State Infrastructure Bank to be administered by the Texas Transportation Commission, the governing body of the Texas Department of Transportation. In September 1997, the Texas Transportation Commission approved the administrative rules that

govern the State Infrastructure Bank. The SIB allows cities and counties to access capital at lower-than-market rates. Since its creation, interest in the SIB program has been strong. TxDOT has approved 41 loans totaling more than \$252 million to cities, counties, and toll authorities around the State. The loans are helping fund more than \$1 billion in transportation projects in Texas.

TEA-21 Changes. Section 1511 of the Transportation Equity Act for the 21st Century (TEA-21) created a new State Infrastructure Bank (SIB) Pilot Program allowing the establishment of TEA-21 SIBs in only four States: California, Florida, Missouri, and Rhode Island. California, Florida, and Missouri also had NHS Act SIBs. Texas was not included. Pre-existing SIBs created pursuant to Section 350 of the NHS Designation Act of 1995 (NHS Act SIBs) continue to exist, but Federal funds authorized for fiscal year 1998 or later may not be used to capitalize them.

Through language in the fiscal year 2002 Department of Defense Appropriations Act, Texas Senator Kay Bailey Hutchison and Texas Congressmen Tom DeLay and Chet Edwards were instrumental in adding Texas to the list of TEA-21 SIB Pilot Program States. With this change, Texas may now use up to 10 percent of its NHS, STP, IM, Bridge, Seat Belt Incentive Grant, and Minimum Guarantee funds to capitalize its SIB. Without Federal funds, future loan applications—and any large single loan—would likely have little chance of being considered. The SIB has been our single most important financial tool in accelerating the delivery of projects. The ability to capitalize the SIB with future Federal funds will keep it an effective program for years to come.

Texas supports the continuation of the TEA-21 SIB authority Texas now enjoys. In addition, we recommend that the reauthorization legislation shorten the time limits on the ability to draw down the Federal funds to capitalize our SIB. Finally, we encourage you to clarify that repayments to the SIB are cleansed of Federal requirements to ensure that future lenders (mainly cities and counties in Texas) are able to access the funds without Federal restrictions. Cities and counties, who are currently not subject to Federal requirements on their own projects, may not have access to SIB funds if they must follow Federal rules to use those funds.

The Transportation Infrastructure Finance and Innovation Act of 1998

According to FHWA, the Transportation Infrastructure Finance and Innovation Act of 1998 (TIFIA, sections 1501–1504 of TEA-21) is intended to provide Federal credit assistance to major transportation investments of critical national importance, such as intermodal facilities, border crossing infrastructure, expansion of multi-State highway trade corridors, and other investments with regional and national benefits. The TIFIA credit program is designed to fill market gaps and leverage substantial private and other non-Federal co-investment by providing supplemental and subordinate capital. Through three types of financial assistance products, TIFIA offers credit assistance of up to 33 percent of total project costs. The three types of products, designed to address projects' varying requirements throughout their life cycles, include:

- Secured loans, direct Federal loans to project sponsors offering flexible repayment terms and providing combined construction and permanent financing of capital costs;
- Loan guarantees, providing full-faith-and-credit guarantees by the Federal Government to institutional investors such as pension funds which make loans for projects; and
- Standby lines of credit as secondary sources of funding in the form of contingent Federal loans that may be drawn upon to supplement project revenues, if needed, during the first 10 years of project operations.

The kinds of projects specifically listed as eligible for TIFIA support include international bridges and tunnels, inter-city passenger bus and rail facilities and vehicles (including Amtrak and magnetic levitation systems), and publicly owned intermodal freight transfer facilities (except seaports or airports) on or adjacent to the National Highway System. However, any type of highway, intermodal, or transit project eligible for Federal assistance through surface transportation programs under Title 23 or chapter 53 of Title 49 U.S.C. is also eligible for TIFIA support, assuming it meets program criteria. Those criteria include: (a) project cost of at least \$100 million or 50 percent of the State's annual apportionment of Federal-aid funds, whichever is less, except that for intelligent transportation system projects, the minimum cost is \$30M; (b) project support in whole or in part from user charges or other non-Federal dedicated funding sources; and (c) inclusion in the State's transportation plan and the statewide Transportation Improvement Program (STIP).

Qualified projects meeting those criteria are evaluated by USDOT and selected based on the extent to which they generate economic benefits, leverage private capital, promote innovative technologies, and meet other program objectives. Each

project must receive an investment grade rating on its senior debt obligations before its Federal credit assistance may be fully funded.

History of the Central Texas Turnpike Project TIFIA Loan

The \$916.76 million TIFIA loan for the Central Texas Turnpike Project is the largest such loan in the history of the program. The TIFIA loan funds will help fund the \$3.6 billion first phase of the Central Texas Turnpike Project, which is a toll highway facility through central Texas.

The commission will use the loan proceeds to partly finance design and construction of the first phase of the Central Texas Turnpike Project, which is composed of three distinct elements: Loop 1, SH 45 North, and the northern segment of SH 130. Loop 1, a 3.5-mile element, will serve as a major north-south route in the Austin vicinity. SH 45 North, about 13.2 miles in length, will serve as a connector between the cities of Austin, Round Rock, and Pflugerville. SH 130, a 49-mile element, will be an eastern bypass for Austin, Texas, and is parallel to and east of I-35, one of the more congested urban parts of the interstate.

The Texas Turnpike Authority Division of TxDOT is managing the project. TxDOT has retained a general consultant engineer and two engineering firms to assist with management of the construction project. The Loop 1 extension and SH 45 will be constructed using the traditional design-bid-build process, and SH 130 is under an exclusive development agreement with Lone Star Infrastructure. The first phase of the turnpike project will be open in segments and the final phase will open to traffic in December 2007.

The entire 65-mile project is expected to be complete and open to traffic by December 2007.

- SH 130: From IH 35 south to US 71—September 2007
- SH 130: From SH 71 south to US 183—December 2007
- SH 130: From US 183 south to IH 10: to be determined based on future project financing
- SH 45: From Ridgeline East to three-quarters of a mile west of Loop 1 interchange—December 2007
- SH 45: From three-quarters of a mile west of Loop 1 interchange to SH 130—September 2007
- Loop 1: From Parmer Lane to one quarter mile south of SH 45 interchange: September 2007

Central Texas needs relief from traffic congestion as soon as possible and tolls are the fastest way to accomplish it. By selling bonds and using tolls to pay off the bonds, these roads will be completed and open to traffic years ahead of schedule compared to using traditional transportation funds. In addition, toll roads help stretch limited transportation dollars. In this case, the State is getting a \$2.9 billion project for only an initial \$700 million equity injection.

The four elements of the funding package include local contributions, State highway dollars, a Federal loan and the sale of bonds, which will be paid for through the collection of tolls. In addition to the TIFIA loan, the commission has issued \$1.2 billion in revenue bonds and \$900 million in bond anticipation notes. The remainder of the project will be financed through contributions from TxDOT and contributions of right-of-way by the surrounding jurisdictions.

The TIFIA loan is an example of a Federal program helping us bring these needed highway projects on-line. We could not have put this financial package together without the TIFIA loan. To maximize the use of the loan—and save taxpayers approximately \$75 million—we are using the TIFIA loan as a possible backstop to sell Bond Anticipation Notes (BANs) to finance construction and take advantage of current low short-term interest rates. The interest rate we get on the BANs is lower than the TIFIA loan. The full TIFIA loan may be used later, but only if interest rates make it a good deal for taxpayers.

The 65 miles of new toll roads in central Texas will cost \$2.9 billion. This covers right of way acquisition, utility adjustments, design, and construction for SH 45 North, Loop 1 and the first 49 (most needed) miles of SH 130. With the addition of required reserve funds, interest, insurance and issuance costs, the total estimated costs are \$3.6 billion.

Conservatively, it is estimated it would take at least 20 years to build these roads using traditional funding sources. By selling bonds, these roadways will be completed and open to traffic in 5 years.

Advance Construction/Partial Conversion of Advance Construction Advance construction (AC) and partial conversion of advance construction (PCAC) are cash-flow management tools that allow States to begin projects with their own funds and later convert these projects to Federal assistance.

AC allows a State to construct Federal-aid projects in advance of the apportionment and/or obligation limitation. Under normal circumstances, States can “convert” advance-constructed projects to Federal-aid at any time sufficient Federal-aid apportionments and obligation authority are available. States may convert and obligate the entire eligible amount, based on funding availability or, using PCAC may obligate funds in stages.

PCAC allows States to obligate only the Federal funds necessary for the amount of expenditures anticipated in a year. This process thereby eliminates a major single year “draw down” of Federal funds in one fiscal year. PCAC may be used in conjunction with GARVEE bonds when Federal funds are obligated for debt service payments over a period of time.

Using this technique affords the availability of Federal-aid funds to support a greater number of projects. The partial conversion technique can enable completion of a project earlier than under the conventional approach, avoiding construction cost inflation, and bringing the benefits of a completed facility to the public at an earlier date. To date, TxDOT has utilized the PCAC financing tool on approximately 170 projects.

Tapered Match

Tapered match enables the project sponsor to vary the non-Federal share of a Federal-aid project during development and construction so long as the total Federal contribution toward the project does not exceed the Federal-aid limit.

Under the tapered match approach, the non-Federal matching ratio is imposed on projects rather than individual payments. Therefore, Federal reimbursements of State expenditures can be as high as 100 percent in the early phases of a project provided that, by the time the project is complete, the overall Federal contribution does not exceed the Federal-aid limit established when the project was authorized. To ensure effective management of Federal funds, FHWA limits the use of tapered match to situations that result in expediting project completion, reducing project costs, or leveraging additional non-Federal funds. TxDOT has used tapered match to expedite project completion on approximately 880 projects.

Tapered match may be most useful in cases where the project sponsor of a Federal-aid project lacks sufficient funds to match Federal grants at the start of the project, but expects to accumulate the match in time for project completion. Tapering may also be beneficial when a project sponsor needs to overcome a near-term gap in State matching funds, thereby avoiding delays in getting the project underway. Tapering also allows a sponsor to advance a project before fully securing capital market financing.

This technique may be used to facilitate a project when a new local transportation tax has been enacted, but revenue collections have yet to accumulate sufficient matching funds. Using tapered match, the project can move forward immediately with 100 percent Federal funds, allowing time for the tax revenues to accumulate. The locally generated revenues would be used to fund the final 20 percent share of project costs.

Toll Credits

States may apply toll revenues used for capital expenditures to build or improve public highway facilities as a credit toward the non-Federal share of certain transportation projects. Toll credits are earned when a State, a toll authority, or a private entity funds a capital highway investment with toll revenues from existing facilities. The amount of toll revenues spent on non-Federal highway capital improvement projects earns the State an equivalent dollar amount of credits to apply to the non-Federal share of a Federal-aid project. To utilize this tool, the State must certify that its toll facilities are properly maintained and must pass an annual maintenance of effort test to earn credits. By using toll credits to substitute for the required non-Federal share on a Federal-aid project, Federal funding can effectively be increased to 100 percent.

Toll credits provide States with more flexibility in financing projects. For example, by using toll credits, 1) Federal-aid projects can be advanced when matching funds are not available, 2) State and local funds normally required for matching may then be directed to other transportation projects, or 3) project administration may be simplified when a single funding source is used. States wishing to take advantage of the toll credit provision must apply toll revenues to capital improvements and meet the maintenance of effort test that may result in an increased investment in transportation infrastructure. At this time, TxDOT has utilized toll credits on 34 construction projects. Toll credits have also been used on certain transit projects.

Flexible Match

Flexible match allows a wide variety of public and private contributions to be counted toward the non-Federal match of Federal-aid projects. The NHS Act and TEA-21 introduced new flexibility to the matching requirements for the Federal-aid program by allowing certain public donations of cash, land, materials, and services to satisfy the non-Federal matching requirement. These matching options include:

- The value of private and certain State and local contributions, including publicly owned property;
- Funds from other Federal agencies may count toward the non-Federal share of recreational trails and transportation enhancement projects;
- Funds from the Federal Lands Highway Program may be applied as non-Federal match for projects within or providing access to Federal or Indian lands; and
- Funds from Federal land management agencies may be used as the match for most Federal-aid highway projects.

Also States may seek program-wide approval for Surface Transportation Program (STP) projects. The matching requirement would then apply to the program instead of individual projects.

Flexible match provisions increase a State's ability to fund its transportation programs by:

- Accelerating certain projects that receive donated resources;
- Allowing States to reallocate funds that otherwise would have been used to meet Federal-aid matching requirements; and
- Promoting public-private partnerships by providing incentives to seek private donations.

To date, TxDOT has been unable to use this financing mechanism. The main reasons are that it is limited to certain programs within the Federal-aid highway program and that the program implementation requirements are cumbersome. While we are not currently using this financing option, we believe that the flexible match concept should be continued and indeed expanded in the TEA-21 reauthorization. We recommend that Congress expand the flexible match provision for use, at the State's discretion, in all of the existing Federal-aid highway programs.

Section 129 Loans

Section 129 loans allow States to use regular Federal-aid highway apportionments to fund loans to projects with dedicated revenue streams.

A State may directly lend apportioned Federal-aid highway funds to toll and non-toll projects. A recipient of a Section 129 loan can be a public or private entity and is selected according to each State's specific laws and process. A dedicated repayment source must be identified and a repayment pledge secured.

The Federal-aid loan may be for any amount, up to the maximum Federal share of 80 percent of the total eligible project costs. A loan can be made for any phase of a project, including engineering and right-of-way acquisition, but cannot include costs prior to loan authorization. A State can obtain immediate reimbursement for the loaned funds up to the Federal share of the project cost.

Loans must be repaid to the State, beginning 5 years after construction is completed and the project is open to traffic. Repayment must be completed within 30 years from the date Federal funds were authorized for the loan. States have the flexibility to negotiate interest rates and other terms of Section 129 loans. The State is required to spend the repayment funds for a project eligible under Title 23.

States can use Section 129 loans to assist public-private partnerships, by enhancing startup financing for toll roads and other privately sponsored projects. Because loan repayments can be delayed until 5 years after project completion, this mechanism provides flexibility during the ramp-up period of a new toll facility.

Loans can also play an important role in improving the financial feasibility of a project by reducing the amount of debt that must be issued in the capital markets. In addition, if the Section 129 loan repayment is subordinate to debt service payments on revenue bonds, the senior bonds may be able to secure higher ratings and better investor acceptance.

If a project meets the test for eligibility, a loan can be made at any time. Federal-aid funds for loans may be authorized in increments through advance construction procedures, and are obligated in conjunction with each incremental authorization. The State is considered to have incurred a cost at the time the loan, or any portion of it, is made. Federal funds will be made available to the State at the time the loan is made.

The President George Bush Turnpike Project in Texas exemplifies how a Section 129 loan can play an essential role in the total financing package. This project links four freeways and the Dallas North Tollway to form the northern half of a circumferential route around the city of Dallas. Primary funding for this \$940 million

project included a low interest, long-term Section 129 loan and revenue bonds. This \$135 million loan was critical in ensuring the affordability of the project's senior bonds. Completion of this important beltway extension will be accomplished at least a decade sooner than would have been possible under traditional pay-as-you-go-financing.

Summary of Texas Project Financing Mechanisms

Texas has only recently begun to use the variety of Federal project financing mechanisms made available in ISTEA, the NHS Designation Act, and TEA-21. However, we have found their use to be beneficial and will continue their use in the future. Generally, as we've applied these financing options to our projects, we've found that they are most beneficial for projects that will take longer than 2 years to pay out, thereby allowing us to stretch our available funding and maintain a steady letting schedule from year to year. We typically consider using one of these financing options on projects over \$5 million and sometimes on smaller projects at the end of the fiscal year.

We encourage Congress to continue, expand, and enhance these Federal transportation financing mechanisms for use at the State's discretion. As we set a new course for a 21st century transportation system for Texas, we will continue to consider the use of all financing tools available to us to meet the transportation mobility needs of the State.

NEW TEXAS FINANCING TOOLS

In the statewide election on November 6, 2001, 68 percent of Texans voted in favor of the constitutional amendment known as Proposition 15. The passage of Proposition 15 provided TxDOT with three new tools to establish innovative financing for Texas State highways. With these tools TxDOT can begin to improve mobility and safety for all Texans by building more highways faster, thus keeping up with the population growth in the State and preparing for the opening of the border in June.

The three financing tools provided to TxDOT with the passage of Proposition 15 are the creation of the Texas Mobility Fund, the authority for the Texas Transportation Commission to approve the creation of Regional Mobility Authorities by counties, and the authorization for TxDOT to use State highway fund moneys for equity in toll roads.

Texas Mobility Fund

By voting to create the Texas Mobility Fund, Texas voters approved a funding mechanism to supplement the traditional pay-as-you-go method of financing highway construction in the State of Texas. Money in the Texas Mobility Fund must be appropriated by the State legislature and cannot include revenue from the gas tax, vehicle registrations or other dedicated funds. The legislature can provide revenue support to the Mobility Fund without raising taxes by committing general revenue to the fund.

Currently there is no money in the Texas Mobility Fund. Once money has been appropriated to the Texas Mobility Fund, however, it can be used to finance road construction on the State-maintained highway system, publicly owned toll roads, and other public transportation projects. It is estimated that for every \$100 million placed in the fund, \$1 billion in bonding for road projects will be created. The issuance of debt to pay for public works projects is well established at the local level. The Texas Mobility Fund now allows this method of funding to be used for State highway projects, on and off the State system, and allows a combination of both revenue and general obligation bonds.

In working to meet the States' transportation needs, the Texas Mobility Fund will help the department accomplish two things:

- Preserve the funds currently used for highway construction under the pay-as-you-go system; and
- Allow any new funding sources made available to highways to be used for payment of debt service on bonds issued to finance projects.

Toll Equity

Toll Equity, the second financing option made possible by the passage of Proposition 15, will make potential toll projects more viable, speeding up congestion relief, while stretching limited State transportation funds. Toll Equity allows, for the first time, State highway funds to be used on toll roads without requiring repayment of the funds. Before the passage of Proposition 15, TxDOT could loan highway funds for toll projects but they had to be repaid. The loan increased the initial borrowing costs for toll road projects, impacting the overall viability of the project. Having to

repay the department from tolls generated from the project often resulted in higher tolls and larger up front contributions from TxDOT.

Toll equity has made future toll projects more attractive to investors because it allows the projects to accelerate debt retirement and hasten production of toll revenues. If a community decides to go with a toll equity approach on a project in an existing toll authority, the commission must approve the project to be constructed by that toll authority. If the community and/or the project are outside an existing authority, the commission will consider creating a regional mobility authority, the third tool created by the passage of Proposition 15.

Regional Mobility Authority

A regional mobility authority (RMA) would be created for the purpose of constructing, maintaining, and operating a turnpike project in a region of the State. A RMA will allow local officials to exercise more responsibility, thus encouraging local innovation and better responses to the particular needs and desires of the local community. In order for a RMA to be created, one or more counties must petition the commission for authorization to create a RMA. The petition must contain certain information, such as a resolution from the commissioners court of each county and a description of how a RMA would improve mobility in that particular region. If TxDOT finds that the petition meets all the requirements it will notify the county(ies) and conduct one or more public hearings that conform to the criteria set forth in the rules adopted by the commission.

If and when the commission gives approval, the county that petitioned the authorization of the RMA will create a RMA by resolution of each county to be a part of the RMA. Each county resolution must appoint directors consistent with the rules adopted by the commission. A board of directors, appointed by the county commissioner's courts where the proposed turnpike project is, representing political subdivisions, would govern each RMA. The Governor will appoint the presiding officer.

Each TxDOT district will identify currently programmed projects that, from an engineering standpoint, could be developed as tolled facilities. These projects will be limited to new location or major capacity expansions. For each project selected with local support, any funds released from the State transportation plan through the issuance of revenue bonds for toll projects will be replaced by an equal amount of project funding in the same district and with the same programming authority as the original funds held.

In most cases, projects selected to be developed as toll projects will be accelerated due to the issuance of toll bonds as opposed to waiting for programmed dollars. In addition, major projects will be developed as one project instead of being segmented, for the same reason. Surplus revenues from an RMA toll project can be used for other transportation purposes within the authority, if needed.

The Trans Texas Corridor

Currently the department is focusing on how to use the Texas Mobility Fund, the toll equity concept, the authority of counties to create RMAs, and the exclusive development agreement concept to implement Governor Rick Perry's Trans Texas Corridor proposal.

The Trans Texas Corridor will be a multi-use, statewide transportation corridor that will move people and goods safely and efficiently. The Trans Texas Corridor will include toll roads, high-speed passenger and freight rail, regional freight and commuter rail, and underground transportation for water, petroleum, gas and telecommunications. The Corridor, as envisioned, is a 50-year plan for addressing the long-range transportation needs of Texas.

Governor Perry established the Trans Texas Corridor concept as the vision of the future of transportation in Texas. He has directed TxDOT to develop and refine the concept and come up with an implementation process. TxDOT has established a preliminary map showing where the Trans Texas Corridor should be developed. These corridors were selected based on the existing and forecasted infrastructure needs of the State. The current location of the State trunk system and congressional high priority corridors were also taken into account when developing the Corridors. In terms of a starting point, the Governor has asked the Commission to focus on developing routes that are already part of the States long-range plan. For example, SH 130 is a new location highway that eventually will run from Seguin to Georgetown and parallel to I-35. SH 130 is already a part of TxDOT's plans, therefore it is logical that SH 130 be a starting point for development of the Corridor. Ultimately, it will be the commission that will make the final decision about which projects are built and when.

Building the Trans Texas Corridor will provide Texans with more and better transportation options. The Corridor will improve mobility and safety by reducing

traffic congestion on current highways. The reduced congestion will have environmental benefits such as a reduction in the volume of air pollution in our urban areas. It will provide a fast, safe and reliable rail system, allowing Texans and their business to move, if they so choose, by rail instead of road, further reducing congestion and air pollution. The Corridor will move hazardous materials away from urban centers, and off heavily traveled highways, providing safer transport of such materials. The State will also benefit from economic development opportunities as a result of a faster, safer, and more comprehensive transportation system.

TxDOT delivered The Trans Texas Corridor Plan to the Governor this summer. The plan outlines the basic design of the system and identified four routes as priority corridor segments. Under the action plan approved by the commission, TxDOT has designated its Texas Turnpike Authority Division as the central office to oversee the development of the corridor. Although it is a process that could take up to 50 years, the corridor report's action plan sets forth a series of first steps to be undertaken over the next year. Estimated total cost of the corridor ranges from \$145.2 billion to \$183.5 billion. The report discusses a variety of funding possibilities, although planners generally envision a public-private effort paid for with tolls, bonds, and other financing tools.

The goal, at TxDOT, is to begin construction on the most appropriate segment as soon as practical. TxDOT envisions the build-out of the Trans Texas Corridor to take approximately 50 years. However, based upon our 85 years of experience in the business, TxDOT projects that most of the Corridor could be under construction or finished within 25 years and perhaps less. To a great degree, the time required to build the Corridor is dependent upon the interested parties and their proposals.

As mentioned previously, the Trans Texas Corridor will utilize three types of financing tools (the Texas Mobility Fund, RMAs, and toll equity) combined with a project delivery mechanism known as exclusive development agreements. The Texas Mobility Fund will be used, if properly capitalized, to help build the segments of the Corridor that are less toll viable. If the Corridor is attractive enough, the legislature may commit a portion of general revenue funds toward the construction. These funds would be released to the commission to pay debt service on bonds issued to finance the Corridor.

With regard to RMAs, certain high growth areas of the State are uniquely situated to help themselves and the State through the creation of a RMA. If we use the example of SH 130 and Travis, Williamson, and Hays Counties, you can see the benefit of RMAs to the Trans Texas Corridor. A RMA in Travis, Williamson, and Hays Counties would generate revenue to pay for local transportation goals much sooner while allowing the State to spread scarce State revenue over other important projects in the area—projects such as the segment of the Corridor east of I-35. In addition, a successful RMA could ultimately invest in light rail linked to a regional commuter rail that is part of the Trans Texas Corridor. The rules governing a RMA are flexible in nature and are intended to foster partnerships between local governments and the State in the development of transportation facilities that provide an efficient delivery of the end product.

Toll Equity, as mentioned before, is the phrase used to depict the amount of State Highway Funds that may be used to construct a toll road without the requirement that the funds be repaid. The law limits TxDOT's annual toll equity contributions to a percentage of the Federal funds it receives each year. TxDOT will use toll equity funds on those proposals that generate the maximum total funding on the most appropriate segments and routes identified during the planning stages. With toll equity, any segment of the Corridor could be made toll viable. However, TxDOT will create and construct the Corridor based on a plan that identifies the most financially viable segments and routes and constructs them first, providing cash-flow to pay for the next logical segments and so on.

An Exclusive Development Agreement is a contract and construction method that allows any organization to propose a transportation project, including design, construction, maintenance, and operation and/or financing to TxDOT. If TxDOT determines the concept is viable and it supports the long-range Transportation plan of the State, the concept is approved and put to the public for competing proposals. TxDOT will review all proposals and select the best one for negotiation and final contract. TxDOT must also determine a project is compatible with existing and planned transportation facilities before a concept may be approved.

For the Corridor, it is anticipated that interested parties will make proposals for the Corridor, resulting in permission to operate part, or the entire Corridor. For those parties that used this method to win a contract from TxDOT, the right for the Commission to assume control of any part of the Corridor will be negotiated into the contract. This will protect the public's investment into the future.

By State statute, TxDOT can use the Exclusive Development Agreement method for four projects only. Therefore, unless State law is changed, this will be a minor tool in the creation of the Corridor—unless, of course, one party proposed to build the entire Corridor or a major part of the Corridor and the Commission believed it to be in the best interest of the public.

All of the tools mentioned here (the Texas Mobility Fund, RMAs, toll equity, and Exclusive Development Agreements) can be used on any TxDOT project, not just the Corridor. No matter where these tools are used they will benefit the public. They will help us build more highways faster and continue to expand our infrastructure to keep up with growing population and increasing traffic.

HELPING STATES TAKE ADVANTAGE OF FINANCING TOOLS

Texans need to have a full array of financial and project development choices available to us, so that we can move forward to meet our transportation needs. Innovation and flexibility have become essential to enabling State and local governments to solve today's transportation challenges. The recently approved tolling authority for the I-10 (Katy Freeway) corridor is an example of the types of flexible financing and project development processes we now need for transportation projects. Reauthorization of Federal surface transportation programs and funding in 2003 will present many opportunities for releasing the creative powers of Texas and other States.

Tolling of Interstate Routes

In March 2002, the FHWA approved a toll road proposal that calls for the construction of four toll lanes in the median of the I-10 Katy Freeway in the Houston region. The toll lanes will generate up to \$500 million in revenue toward the reconstruction of I-10, thus completing funding for the project and potentially cutting construction time in half.

Despite the ultimate approval of the Katy Freeway tolling mechanism under Section 1216(a) of TEA-21, our experience with the process reveals some areas for improvement that, if implemented, would encourage more States to use this important financing option. In particular, the Harris County Toll Road Authority (HCTRA), one of our major partners in the Katy Freeway expansion project, had some initial concerns about certain requirements in the Section 1216(a) program that would have required a review and reapplication for the tolling authority every 3 years. This type of requirement often threatens the viability of the underlying bonding mechanism that the applicant is using to support the overall project. For the Katy Freeway project, HCTRA (the bonding authority in the project) was ultimately given a waiver of the reapplication process and HCTRA, TxDOT, and the Houston Metropolitan Transit Authority moved forward with our application under Section 1216(a).

TEA-21 also provided a pilot program under Section 1216(b) that allows States to toll portions of the interstate system. Thus far, no State has successfully applied for this authority. TxDOT initially applied for tolling authority under Section 1216(b) for the Katy Freeway project. However, we were unsuccessful in this application mainly because the program requires an analysis to demonstrate that the facility could not be maintained or improved from the State's apportionments and allocations. This analysis is not time restrictive, i.e., projects can be funded over long periods of time, and therefore it is very difficult to demonstrate the funding shortfalls required to obtain Section 1216(b) authority. For the Katy Freeway project application (and frankly for any other application we may attempt), TxDOT of course could choose to use any of its \$2.2 billion in annual Federal apportionments for the project instead of funding another project, so we couldn't pass the "funding shortfall" test. What we need is the ability to use this tolling authority to supplement our existing funding, not replace it. This situation is a major reason, we think, why this pilot program has never had a project approved for implementation. As currently written, this program appears too restrictive to go forth with a meaningful project.

While the States have not successfully pursued the interstate tolling authority provided in Section 1216(b) for a variety of reasons (including political opposition from those who would ultimately pay the tolls), we in Texas would like to see it continue as an option for States. At the time Texas first considered using this provision, we did not have the various State-supported financing mechanisms and authority that we have recently acquired to help us take a new look at ways to finance our transportation needs. Also, we now have the Trans Texas Corridor plan that could benefit from the potential use of the Section 1216(b) authority. As a result, we recommend that the Congress continue, expand, and improve the flexible application of the Section 1216(a) and Section 1216(b) provisions in the reauthorization of TEA-21.

Buying Back Portions of the Interstate to Allow Tolling. With the exception of the Section 1216 provisions mentioned above, Federal law generally prohibits imposing tolls on Interstate highways for which Federal funds have been used. In several situations, however, Congress has enacted specific legislation to allow States to reimburse the Federal Government for Federal funds applied to a highway segment, thereby relieving a highway segment of the prohibition against tolls. The FHWA has provided TxDOT staff with six examples of legislation authorizing such repayment of Federal funds for highways in Connecticut, Delaware, Maryland, Michigan, New Hampshire, and New Jersey. Texas would like to pursue this option in the development of the Trans Texas Corridor and other needed improvements. Your efforts to make this option as easily accessible as possible will greatly assist our future endeavors as we seek new ways to fund our tremendous transportation needs in Texas.

Despite the availability of this option to buy back portions of the Interstate, we believe that the Congress needs to take a new look at the issue of residual Federal investment. For the most part, the Federal investment in the interstates has essentially been depreciated, leaving only increasing costs to maintain the aging system—costs that often are taken up by the States. We believe that States should be given the option to toll their interstates without the requirement of reimbursement of long-ago Federal funding so that we can improve and maintain the interstates to meet the mobility and access needs of our citizens and business communities.

Since the beginning of the Interstate era in 1956, Texas has contributed more in Federal motor fuels tax payments than the State has received in Federal highway program funds, including its share of the Interstate Construction and Interstate Maintenance program funds. When these interstate program funds were originally distributed to Texas, we did not get a 100 percent return on our contributions. Now, if we were to repay a portion of the Federal funding it would be redistributed to all States. Since Texas continues to get less than a dollar for dollar return, Texas would suffer twice in the distribution of those funds. Therefore, we recommend that donor States (those that received less than 100 percent of their share of contributions to the Highway Trust Fund compared to their share of distributions through the Federal-aid highway programs) be allowed to toll portions of the interstate system without Federal reimbursement. This approach would partially compensate the donor States for their contributions to the national system and allow them extra flexibility in handling the mobility needs in their States.

Allow Toll Credits to be Derived from Federally Funded Projects

Currently if a project utilizes any Federal funding then all costs of the project are ineligible to be counted as toll credits by the State. In today's environment where fewer and fewer projects are 100 percent toll-viable and require a mix of funding sources it is becoming more unlikely that a toll project will be built without some form of Federal assistance.

We believe the non-Federal expenditures on these projects should be eligible as toll credits on a pro-rata basis. We consider toll credits to be a valuable tool in Texas and have distributed these primarily to small transit providers who might otherwise have to turn down Federal assistance due to a lack of matching funds.

Privatizing Rest Areas

In a review of the Texas rest area system in the late 1980's, an internal TxDOT task force concluded that an innovative method of improving rest area quality without increasing costs appeared to be the concept of contracting with private developers to create joint development facilities. In other words, a commercialized rest area.

Commercialization could transform selected rest areas into "travel service centers," which would offer the traveling public facilities and services beyond those available at our existing sites. In addition to restrooms and picnic tables, commercialized rest areas could provide the public with food and fuel facilities and expanded travel information. These facilities could also provide expanded truck parking, a need that was only recently reaffirmed by a July 2002 FHWA Report on Truck Parking Facilities. One of the recommendations for State action in the FHWA report was to encourage the formation of public-private partnerships to address the nation's truck parking needs. At the same time, commercializing a rest area could reduce or eliminate the cost to the TxDOT of constructing and maintaining the facilities.

In 1990, the Center for Transportation Research (CTR) at the University of Texas began a study to determine the feasibility of rest area commercialization in Texas. This study found that commercialization would be feasible and could turn many rest areas sites into revenue generators. However, as the study points out, Title 23 USC,

Section 111 prohibits the commercialization of rest areas with direct access to an interstate highway. It should be noted that this concept is supported by AASHTO. A 1989 AASHTO Task Force that studied commercialization recommended that the Federal restriction be lifted. Language lifting the ban on rest area commercialization on the interstate system was included in an initial draft of ISTEA; however, interests opposed to the concept defeated the provision. Tourist industry interests, truck-stop interests (National Association of Truck Stop Owners), and other private sector interests view rest area commercialization as unwanted competition, even though they can participate in such development.

As we explore ways to maximize available funds to meet our transportation needs, Congress should allow States to use this concept on interstate routes.

Continue and Improve Access to Railroad Rehabilitation and Improvement Financing Act Funds

The Railroad Rehabilitation and Improvement Financing program (authorized in TEA-21) offers \$3.5 billion in loans and guarantees to public or private sponsors of intermodal and rail projects, with \$1 billion reserved for projects benefiting freight railroads other than Class I carriers. Projects can include acquisition, development, improvement, or rehabilitation of intermodal or rail equipment or facilities. The program is intended to make funding available through loans and loan guarantees for railroad capital improvements. No direct Federal funding is authorized in TEA-21; however, the Secretary is authorized to accept a commitment from a non-Federal source to fund the required credit risk premium.

Texas to date has had little opportunity to use the financing tools made available by the RRIF. In 2001 Amtrak approached the States of Mississippi, Louisiana, and Texas for assistance with the credit risk premium for a RRIF loan. The loan would have allowed one of the freight railroads in the region to upgrade its tracks to allow an extension of Amtrak's Crescent line to run between Meridian, Mississippi and Dallas/Fort Worth. The Texas Constitution prohibits the use of dedicated State Highway Fund dollars for non-highway purposes; therefore TxDOT was unable to participate in the opportunity to bring additional passenger rail service to our State. However, supporters of the rail proposal approached the Texas Legislature and garnered an appropriation of \$1.7 million in other State funds for Texas' share of the credit risk premium. Unfortunately, Amtrak later announced that it was postponing its plans for the extension, known as the Crescent Star.

Despite TxDOT's and Texas' limited involvement to date in railroad financing, as we begin development of the Trans Texas Corridor (which includes a freight rail, a commuter rail, and a high speed passenger rail component), the continued availability of financing from the RRIF will prove important. We encourage Congress to continue the program and to provide additional funds in the TEA-21 reauthorization.

Changes to the TIFIA Program

The Transportation Infrastructure Financing and Investment Act (TIFIA) program has been possibly the single most important benefit for public-private partnerships in transportation and has provided opportunities both to fill the gaps in finance plans and to make finance plans more efficient and cost effective. While the program may end the current authorization period undersubscribed, this is not a reflection on the program's value or its potential utility. Rather, it reflects the very long lead times required for project sponsors to design finance plans and adapt, often only with new State legislation, to new financing methods.

The clear benefit from TIFIA is flexibility in structuring repayment and deferral of interest. This feature enhances cash-flow from the projects during the initial construction period to pay for senior debt and fill rate stabilization and debt services reserve funds. Another benefit comes from the ability to leverage revenues from a "startup" toll road project. For a tax-exempt borrower such as TxDOT, the subordinate TIFIA loan produces savings in both interest rate costs and costs of bond issuance.

Our experience suggests several potential drawbacks from TIFIA. Resolving some of these concerns may require changes to the TIFIA law; others might be corrected within the existing statutory and regulatory framework.

Encourage Equity Investments in Projects Supported with TIFIA Credit. Congress should reauthorize the TIFIA program and refine it to encourage more private investment in projects supported with TIFIA credit. More thought should be given to the blending of private investment and TIFIA credit. Several of the current applicants for TIFIA credit, including TxDOT, are requiring private contractors to contribute subordinated debt or equity investments to the financing plan. Indeed, rat-

ing agencies and bond insurers have come to expect contractors to take part of their fee in the form of a project investment. Congress should encourage this expectation.

The good news is that the contracting community is increasingly able to make these investments. The bad news is that, if the owner is using TIFIA credit, TEA-21 currently offers the owner a Hobson's choice: either the contractor's credit must be investment grade according to rating agency criteria (a result more favorable to the contractor than the owner wants or needs to allow) or the contractor's investment must be subordinate to TIFIA in right of payment (a risk the contractors cannot accept when TIFIA credit is large). This challenge can be cured by refining TIFIA to rank a developer's claim senior to TIFIA's without requiring that the developer's credit be investment grade and to allow the developer to receive payment of equity returns and subdebt payoff as long as the entity receiving TIFIA funds meets all its debt service obligations and coverage ratios. To allay concerns about diluting TIFIA credit quality, TIFIA could limit subdebt or private equity payoff to a specified percentage of project costs.

Minimize Impact of TIFIA Loan "Springing Up." Legal advisors to FHWA have been reluctant to interpret the TIFIA statute to limit the event under which the TIFIA loan would "spring" to parity to a bankruptcy filing or similar proceeding that results in an abandonment, liquidation, or dissolution of the project. We are concerned that insolvency is defined broadly, resulting in the TIFIA loan "springing" to parity with senior bond indebtedness. This could adversely affect the ability to attract credit enhancement (e.g., insurance) for the bonds and result in higher interest cost. Credit enhancers consider the "worst case scenario" when evaluating their desire to guarantee bonds and the risk of doing so. The benefit of subordinating the TIFIA loan could be eroded if the credit enhancers evaluate their risk by assuming they will be sharing in revenues and other assets on parity with FHWA.

Following receipt of TxDOT's TIFIA commitment letter, FHWA announced it would apply the "Mega Project" finance plan and reporting requirements to all TIFIA projects. As interpreted by FHWA, these requirements are more burdensome than the capital markets or SEC disclosure rules require. Furthermore, it's unclear how FHWA will use this information.

More Liberal Terms in TIFIA Loan Agreements. To leverage new project revenue streams, reduce transactional costs, and attract private debt capital, FHWA must consider more liberal terms in the financial covenants in the TIFIA loan agreement. For example, we believe that there should be no debt service reserve requirement for the TIFIA loan. Also, FHWA must be willing to subordinate its debt to that issued to design/build contractors as payment for their work.

The Central Texas Turnpike Project is a multi-phased capital program with multiple funding sources. TIFIA loan draw requirements/priorities as well as provisions relating to repayment and final maturity of the TIFIA loan must give consideration to the complexity of the projects.

As mentioned earlier, Governor Perry is exploring large-scale corridor development in Texas. We certainly expect TIFIA to be an important financing tool in this effort. Critical to this would be the ability to subordinate TIFIA to equity returns as well as senior debt service payments.

Change Internal Revenue Code Private Activity Rules. Congress should modernize the Internal Revenue Code rules on private activity and management contracts as they apply to surface transportation. Project sponsors are now actually forced to turn down true private equity for important public projects if they expect to issue tax-exempt debt. This is not the result Congress intended when it adopted these restrictions in 1986. Inexplicably, these same restrictions do not apply to other public works such as airports and solid waste facilities. During the 106th Congress, Senator Smith authored a bill to cure these exact problems. Both houses of Congress ultimately passed this important curative legislation as part of a larger tax bill that year, but President Clinton vetoed the larger bill.

TxDOT is embarking on an ambitious program that has the potential for attracting significant private equity. Curing this anomaly in the tax code would allow sorely needed private equity and innovation to be incorporated into surface transportation development without sacrificing access to the lower interest rates in the tax exempt financing markets.

Modernize Internal Revenue Code Advance Refunding Rules. Congress should modernize the IRS rules applicable to surface transportation to permit two advance refundings. Most conventional transportation projects are funded on a pay as you go model or with bonds backed by tax revenues. As such, sponsoring agencies issue bonds only to advance funds as needed for construction. To finance a public-private partnership dependent in part on the project's own revenues, the bond markets require 100 percent of all capital costs be funded up front, at the time they invest.

This means that the sponsor is issuing bonds many years removed from the economic conditions that will affect the project when it has opened.

If interest rates become more favorable over time, IRS rules prevent the sponsor from refunding the bonds more than once, even though doing so would help reduce tolls, pay off debt quicker, and leverage dollars more efficiently. Other businesses aren't so restricted. These rules are even more puzzling because there is no loss to the Treasury from advance refundings.

Encourage Design-Build and DBOM Contracting. Congress should continue to encourage Design-Build and Design-Build-Operate-Maintain (DBOM) contracting for federally funded projects and remove regulatory barriers to State DOT use of procurement processes. Private section financing frequently requires certainty early in the design phase for capital and long-term maintenance and rehabilitation costs. In effectively providing such certainty, these forms of contracts are an essential building block for project financing.

TEA-21 required FHWA to issue a rule governing procurement. While the rule is not final, the problems identified in the published draft have been documented in comments submitted by AASHTO and others. Unless FHWA incorporates the recommended revisions into its final rule, this critical tool will have been undermined unless Congress intervenes.

Allow Selection of Contractor Prior to ROD to Enhance Financial Benefits of Construction Acceleration. Congress should make clear to the USDOT modal administrations that it did not intend NEPA to prevent procurement activity from being completed prior to issuance of records of decision (ROD). One of the key values of effective project financing is construction acceleration. We recognize the major contribution to environmental planning that NEPA has brought to major Federal actions. No one suggests that construction should commence before a ROD. But FHWA is reading NEPA to prevent the issuance of an RFP, the selection of a contractor, and the award of a contract pending a final ROD. None of these actions affects the selection of a project alternative or even the decision not to build. For a State DOT to use its own funds to accelerate contractor selection so that it is prepared to move quickly if a "build" alternative is selected is acting in parallel rather than in sequence. This does not prejudice the NEPA process.

Modify Existing Transportation Programs to Enhance Funding Flexibility

ISTEA and TEA-21 provided improved flexibility for States in addressing their varied transportation needs by allowing greater levels of transferability among the existing highways and transit funding categories. For example, States can transfer up to 50 percent of their National Highway System apportionments to the Interstate Maintenance, Surface Transportation Program, Congestion Mitigation and Air Quality Improvement Program, and Bridge Replacement and Rehabilitation Program. In addition, up to 100 percent of NHS apportionments may be transferred to STP if approved by the Secretary of Transportation. Similar transferability provisions are available for the other Federal-aid highway programs listed above. In addition, States have the option to use their Federal transit formula program funds for a highway project and vice versa. This type of transferability should be expanded, at State discretion, among the entire array of transportation programs.

ISTEA and TEA-21 also enhanced flexibility by expanding the list of eligible activities that can be funded with highway program funds. For example, STP funds can be used for highways, bridges, transit capital projects, and intracity and intercity bus terminals and facilities. However, this is an area where additional flexibility will help States in finding funding solutions to meet their varied transportation needs. When you consider a concept as complex as the Trans Texas Corridor, it becomes obvious that having the flexibility to address multimodal funding issues is essential. We encourage Congress to consider expanding the eligibility of existing highway, transit, and rail programs to allow, at the State's discretion, the use of any of these funds for a broader range of transportation activities. At the same time, it will be essential for Congress to either consolidate or simplify the program procedures of the various modal programs or allow States to use the simplest procedures among them so that the flexibility of expanded eligibility is not negated by regulatory differences among the modal programs. This flexibility will better enable us in Texas to pool our available resources to tackle multimodal transportation projects. This is the future of transportation in Texas; Federal funding programs should facilitate our efforts, not provide roadblocks to efficient and effective use of Federal transportation dollars.

CONCLUSION

As you can see, Texas has indeed entered a new era in planning, building, and financing needed transportation systems. We can no longer afford to rely solely on

the traditional pay-as-you-go method of finance for needed transportation systems. We are committed to taking advantage of every available transportation finance and project development mechanism. We will need your assistance to enable us to fully and flexibly use the complete range of tools to meet our growing transportation demands. We look forward to working with you to make our launch into the new century of transportation financing a continuing success for Texas and the Nation.

If you have any questions about the information provided here, please contact Tonia Ramirez in TxDOT's Federal Legislative Affairs Section at 512-463-9957.

