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AFTERNOON SESSION

Friday, March 20, 1987

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I am pleased to discuss our program of Technology Transfer, known as T Square (T2), in support of the theme of the conference, "Increasing Productivity Through Leadership and Better Management." I want to cover two subjects. The first is our Technology Transfer Program, more specifically, what we call the T2 Centers -- how they work and where we are going with them. The second is highway legislation.

The Federal Highway Administration has had a T2 or Technology Transfer Program in operation through various means working through the state highway transportation agencies. The newest facet of that program is another acronym, RTAP, or the Rural Transportation Assistance Program. Started back in 1982, that element of our T2 Program is mainly geared towards local transportation issues. It's intended to help locals with their somewhat awesome responsibility of carrying out highway programs on most of the road mileage in the United States.

As an order of magnitude, most taxpayers believe the Federal-aid highway program is somewhat dominant. The Federal-aid highway program reaches only about 20 percent of the total road mileage. That leaves 80 percent for the state and local governments to take care of. That's their sole responsibility. On the bridges, about 55 percent are not on the Federal-aid system and the majority of deficient bridges are off the Federal-aid system. Nationwide there are 3 million miles of roads that the Federal government does not fund. The Federal government has very little involvement with roads that are strictly state and local responsibilities. There's a lot of work at the local level.

In Kentucky about 44,000 miles of roads aren't on the Federal-aid system. Of the 7,600 bridges that aren't on the Federal-aid system, there are about 4,400 that are strictly up to the locals to take care of. As these figures Rob Rupsch show, local agencies of Kentucky, as in all of the states, have a significant responsibility and impact on the travel of the citizens of the state.

The RTAP has about 60 projects. They are very diverse, ranging from developing training courses to simple microcomputer programs, pavement management packages, and maintenance managing packages. The real backbone of the RTAP is

the T2 Transportation Centers, including the Kentucky Transportation Center at the University of Kentucky.

We started off with about 10 centers back in 1982. We were a little nervous for we had never tried this before. As we began working with universities to transfer technology to the locals, we were cautious. We moved slowly because we wanted to see how these worked out before we got any deeper. We didn't plan to expand it, but they were an instant success. The demand on the existing centers and on other centers wanting to come in was so great that we continually added new ones. Presently, we have 42 centers which serve 44 states and the Commonwealth of Puerto Rico. Several states have centers that serve two states. Thirty-six are operated by universities and six by state highway agencies. The six operated by state highway agencies are in Alaska, Maine, New Mexico, Oregon, Virginia, and Washington.

Several of the centers were put in at universities that had ongoing outreach or extension programs. But most of the centers were new and started up with the RTAP. Other centers have started up since the RTAP with other funds and have been converted into T2 centers under RTAP. The budgets vary, but on average they are \$125,000 a year. Kentucky's is much higher. We pay \$62,500 and the remaining half is matched by the states and locals. Anytime a center is established, if it is going to survive at all, it also needs to have a sound fiscal base.

The centers get their funding from various sources. Federal-aid Highway Planning and Research funds are used in some states. State funds consist of: state highway agency funds, university cost sharing, and earmarked state-legislated funds. I think the legislation funds are the most successful.

Kentucky is an excellent example of a center that receives funding through legislation. I don't know what Kentucky's total budget is, but I think the Center gets a tenth of a cent of the gas tax, up to a maximum of \$190,000. I commend the legislature, the cabinet, and the Kentucky Transportation Center for working together to get this passed. This is a continuing source of funding, and it also provides accountability when there's that much state money going into it. I'm sure the Kentucky Center has to go before the legislators periodically to tell them what it's doing with their money. If the time ever came that the Center wasn't providing the service the legislature and the constituents intended, then some changes would be made.

The centers provide a variety of services, and training is by far the most popular. Each center that we have conducts an average of about 800 person/days of training a year. For example, the Kentucky Center's next training effort calls for Work Zone Safety, which is to be offered during the construction season. Work Zone Safety is one of the Federal Highway Administration's emphasis areas. I'm pleased to see that it is making its way down to the local level.

Cornell's T2 Center has conducted a limited survey on cost effectiveness with what they're doing. The survey on the training indicated that the local employees who took the training saved the locals about \$44 for every dollar of training cost. I don't know where you can get that type of benefit/cost ratio in any other business. There are similar results in the other centers.

Another important activity that we're undertaking with the centers is the development of a clearinghouse. This is going to be done by the American Public Works Association under a contract with the Federal Highway Administration. The purpose is to collect and disseminate information from the various centers. Many unique ideas come up from the locals to the centers on matters anywhere from maintenance to construction. Sometimes these ideas just stop when they get to the center. The purpose of the clearinghouse is to collect these ideas and make them available by disseminating them to the other centers. This will provide a broad basic knowledge and it also means that the centers don't have to go about duplicating each

other's effort and reinventing the wheel. This is just getting started, but it is operating nationwide. The first hard copy catalog will be out to the centers about April 1st.

We in the Federal Highway Administration have a continuing effort to develop training courses and/or revise training courses so they are compatible with the centers' needs. They range from right-of-way acquisition by local public agencies to bridge rehabilitation training and road surface management. These are available to the centers. We have some longer range expectations for the centers. One of these is to increase the role that states presently have with their centers. The state governments do not necessarily need to run to the centers; but they need to be more available to the centers to help with technical problems. In this way, the centers can better pass information on to the locals. The states also can help by supplying instructors to teach courses the centers offer. In addition, we see state governments broadening the funding base of centers.

At the Federal level, we are considering increasing our contributions to the centers. If it can be matched by the centers, then this will place the centers in a better position to expand their efforts.

We ultimately see all of the states covered by a T2 Center. Some of the centers today serve several states. Because of the clearinghouse, we see greatly enhanced networking among the centers, states, federals, and locals. Electronic bulletin boards interfacing with universities will provide information nationally, statewide, and between states. The communications aspect of this is tremendous.

Our real goal at the Federal level, other than the overall success of the centers, is to ensure that anyone who needs information gets it. It's that simple, and that's really the main purpose of the centers. By virtue of that information and training, the T2 centers should enable a receiver to do a much better job. These communication advances will result in improved transportation, and that is our overall goal.

Despite the short history of the centers, they have been extremely successful. One reason the centers have been successful is that the feds have stayed out of it. We've provided some funding, but we haven't told the centers how to operate. We've given the centers some sort of goals or requirements that they must fulfill. However, as far as how they go about doing their job, we've left it up to the centers, because every situation is different in every state. We've put some funding out. We have followed up. We do visit them to meet with the directors. However, the centers scale their programs to the needs of their individual customers. You have my commitment that this will continue.

The Urban Mass Transportation Administration (UMTA), another agency of the US Department of Transportation, is going to start a T2 Program. It was funded at \$5 million in the Department's appropriation act this year. Officials of UMTA are going to work it through the universities and existing centers. I can't really make any commitments for UMTA. However, I look at UMTA's program as another potential source of funding for the centers. They will probably have fewer centers than we do, maybe 8 or 10 nationwide, and their commitment on the total pot of money will be coming on line in fiscal year 1988.

Highway legislation is another area of concern. Both the House and the Senate have approved the Conference Report, which is the highway bill that came out of the Joint House-Senate Conference. There is also the issue of the 55 versus 65 speed limit. That was passed by both the House and the Senate. It has passed as a joint resolution. It is supposed to be part of the highway bill or parallel the highway bill. The 55/65 has been looked upon as a separate issue in the Senate.

What's happened is that there is a strong possibility of a veto of the highway bill by the President. I understand that the Administration has urged the Senate, at least

the Republican leadership, to take that resolution on 55/65, hang another "clean" highway bill on it, and pass it.

I am beyond my skill level with parliamentary procedure or congressional procedure. I don't know what really is going to happen. I feel a lot like a blind man I observed a couple of weeks ago on one of my trips. As I was walking, I saw this blind man with this tremendous looking seeing-eye-dog. This dog just led him in and out among the pedestrians and was doing a super job. I really admired the way that team worked together. When they got to an intersection the pedestrian sign said "Walk" and the dog stopped. All of a sudden the sign changed to "Don't Walk", and the dog started across with the man. Cars were whizzing all over and dodging the man and the dog. Finally a couple of folks went out to get him and brought him back to the curb. They sat down. The sign changed to "Walk" again, and the dog just sat there. When the sign changed and said, "Don't Walk", the dog went off again out into the traffic. The same thing happened again. They led him back to the curb. I stood there and soon I saw the man reach in his pocket and pull out some dog biscuits. He backed up against the front of a building and started feeding the dog these dog biscuits. I couldn't restrain myself any longer. I went up and I said, "Mister, that dog practically got you killed twice, and now you are rewarding him." The blind man said, "You just don't quite understand, young man. As soon as I find out where his head is, I'm going to kick his butt."

There's so much going on that I can't find the proper butt to kick. Even if I did, I don't have enough brass to do it. What we have here is sort of mass confusion. You can't predict that much about the veto. The threat is that the current bill the House and Senate pass will be vetoed. That is the threat. My guess is that it will, if it goes to the White House, be vetoed. The next question is, "Can the veto be sustained?" I don't know. I don't think anybody does at this point. I'm sure the folks that are charged with this responsibility in the department are head counting and talking to see if there are enough votes in the Senate to sustain a veto of the bill as it is.

If the veto is sustained, then there are two possibilities. One, both the House and the Senate will take a walk and say, "We'll take it up in October." Another is that there will be a strong push from the White House to get an acceptable bill. Some compromises will be made so they don't have to start over. They can patch it up in a matter of days and get it back in. There's still a lot happening. There are still a lot of unknowns. We got here because the House and the Senate passed quite different bills.

The Administration submitted a highway bill which did not receive strong consideration. The Administration's bill had some excellent programmatic changes in it. I'll admit to a parochial bent on this from pride of authorship of some of them. We were trying to combine categories in a lot of cases to give the states more flexibility. We recommended that we combine interstate and primary funds into one major pot apportionment to the states to enable them to decide on what system they wanted to spend it. We proposed to turn the urban and secondary programs, along with the Off-system bridges, into a highway block grant that we would give to the states to let them decide where to spend it with very little federal involvement. The Senate picked up the form for the first provision, the Combined Interstate-primary, but it died in conference. Unfortunately, neither the House nor the Senate picked up the Highway Block Grant.

The frustrating thing is that I go to a lot of meetings and talk to a lot of state, industry, and local folks and they all say, "I wish you feds would just give us some money and get out of our hair. Don't put so many requirements on everything." For five years, we've been trying to give states and locals back part of the highway program. You won't take it and that amazes me. One of the reasons is that there's a great mistrust between rural and urban, and between the states and locals. They are

afraid if we take out the formulas for the urban and secondary program, nobody's going to get their fair share. Some say the states are going to cream it off and put it on state highways. Cities say the rurals are going to get it all. The counties are afraid the cities are going to get it all. Regardless of that, it's our opinion that decisions like that should be made at the state and local level, and not at the federal level. We're going to continue trying to give some of the highway program back to you. Maybe one day you'll take it.

The House and Senate passed two different bills. They went to conference and came out with a camel or a turkey. There are some good points in the conference report, and there are some bad points. Some of the good points are that it does continue the highway program. It's a five-year bill. It continues funding for five years. It provides sufficient funding to complete the interstate system. It provides for administrative approval of the interstate cost estimate. We will no longer get caught up in deals like the one in 1984, when Congress was 18 months late approving the interstate cost estimate. The 5-year bill permits a lot more flexibility under the current law at the state level by permitting some transfers from Interstate 4R (resurfacing, restoring, rehabilitation, and reconstructing) and from 4R to primary. It increases the bridge discretionary fund from \$200 million to \$225 million. It approves the Tennessee bridge funding approach for all states.

Some here today have challenged Kentucky to come up with what locals can do to solve their bridge problems. I'm looking forward to seeing how Kentucky solves its bridge problems. The legislation currently has provisions in it that allow states and locals to fund their bridges like Tennessee did. In other words, use state funds that are put into local bridges and/or off-system bridges as a soft match for the Federal-aid on the primary system. It's a fund switch. It enables states and locals to focus on their statewide problems much better. This will be permissible in all states if the bill is signed. That's one of the good points, I think.

The bill also permits states to use up to a quarter percent of their apportionments for their education and training. This is also a provision that we have pushed. It's optional, but it is permitted. This would give the states, again, more flexibility if they wanted to use funds for the education and training of their staffs, and probably at the local level also. The bill also provides funding of the Strategic Highway Research Program at a quarter percent, which again is sorely needed.

The present highway bill has got some bad parts. It is symptomatic of what has happened over the last few years. It puts the Congress in a role that, in my opinion, was never intended. Congress is making decisions on design, on how to select consultants, on what condition clauses to put into your contracts, and on project selection. That is the state's role, in my opinion. It's not the federal role; it is the state's role.

The legislation creates an Interstate 4R discretionary pot of \$200 million. I understand it has very narrow eligibility and only a couple of states or areas may be able to qualify for it. That's narrowing it down. To me there is no reason for a 4R discretionary pot.

The bill contains many other dubious achievements:

- * It provides a five percent increase in federal participation if you use a certain amount of fly ash in a project.
- * It provides that a quarter percent of the funds that projects spend on landscaping must be spent on native wild flowers, unless you have determined that native wild flowers won't grow in that particular area.
- * It provides for Oregon to take some more advantage of the interstate substitution provisions, which went out of existence on September 30, 1983.

* It provides in Massachusetts that they can build a police barracks with access to the interstate system.

* In Florida, it provides that \$84 million can be put into park and ride facilities that have been previously questioned on size and location.

* It permits Arkansas to put interstate funds on a two-lane primary.

* It permits Michigan to allow a liquor store to remain partially within the interstate right-of-way. I'm a little harsh on that one, but it is a duty-free shop up at the Canadian border. It really isn't that bad, but I'll fire for effect. It's a special provision.

* Congress also sets the hours of High Occupancy Vehicle operation on the Shirley Highway in northern Virginia. Is that a congressional matter?

* It required the state of Massachusetts to salvage a historic house.

* In Ohio, it prohibits Federal-aid funds near a historic district, unless the state council or city council approves it.

The part of the bill that gives us the most heartburn, and probably will be the basic cause for veto, is a so-called "Demonstration Projects." This has been debated. Last year when Congress went home without passing a bill on October 18, the last day of the 99th Congress, these demonstration projects were the big issue. This year, there are something like 170 special-purpose place-named projects in the bill. One hundred and fifty are provided with special funding to an extent. Twenty are so called "priority projects," which means they are permitted to be funded out of any apportionment except interstate construction. How they are funded is a compromise. The House started off with one hundred percent Federal funding for these demonstration projects outside of the normal obligation ceiling. What happened when they went into Conference and came out with a compromise on this 150 projects is that they funded \$178 million a year in new money, over and above Federal-aid program apportioned funds. That's the 50 percent share. Thirty percent is funded out of a take-down from the various discretionary categories: interstate discretionary, bridge discretionary, interstate substitution discretionary, and the new interstate 4R discretionary, which amounts to \$107 million a year. A 20 percent state/local match also is required.

Kentucky has four of these projects in the bill. Three of them are funded and the other one is a priority project that you can fund out of any apportionment. Unfortunately for Kentucky and most other states, the \$178 million plus \$107 million plus the 20 percent annual funding over the life of the bill isn't enough to complete the projects.

When you take 50/30/20 over five years, the total funds amount to about \$1.7 billion over the life of the bill. The total cost of these 150 projects is about \$5.5 billion. I don't know where states and locals are going to get the rest of the money. It also means the money won't get distributed to the other states. It also means the next highway bill is going to have to feel some responsibility for continued funding of these things.

It's a nose under the tent issue. It's just bad public policy. It shouldn't be in a highway bill, and Congress shouldn't want it in a highway bill, even if some may benefit marginally.

With the next Congress, none may benefit. There will probably be a lot more than 150 in there. The demonstration projects started back in about 1973 with the Railway-Highway Crossing Demonstrations. Originally there were a dozen of them. Funding authorized for those was \$90 million in the first bill. Since then, the Railway-Highway Demonstration Program has grown to a total number of 19 projects and there has been \$761 million authorized for these projects.

The second round of demos was back in 1976 or 1978 when they had the bridge demos over the Ohio River. Congressman Bill Harshes and, I believe, Congressman Carl Perkins, were instrumental in those. In 1982 we had eleven Demos in the highway act. That's a pretty cheap price to pay for the nickel of tax increase and a 50 percent increase in the highway program.

In 1986, before Congress adjourned, they were considering 137 demos. In 1987, the bill as we know it, has 170 demos -- 150 funded and 20 optional. It doesn't take a rocket scientist to figure out that we're going to have probably 900 demos in the '91 highway act at a total cost of probably around \$53 billion. This breaks down to about \$13.5 billion a year, which is the entire size of the Federal-aid highway program. State and locals better be in line, or they aren't going to have a highway program.

That, in summary, is my objective look at the status of the highway legislation. What's going to happen? I don't know. I'd urge states and locals to keep track of it. I'd urge states and locals to consider it. I know that without a bill everyone is hurting. I happen to think that the proper bill could be passed. We, the Federal Highway people, will recommend a veto. But if they pass it, we'll have the money out within five minutes from when it is signed. We'll be helping you put it to work.