



*Paul E. Toussaint has worked for the Federal Highway Administration since 1968 and is currently assigned as Division Administrator to the Frankfort office. He also has had assignments in New Hampshire, Puerto Rico, New York, and Connecticut.*

*Mr. Toussaint earned his engineering degree from the University of Vermont and his masters from Rensselaer Polytechnic Institute in New York.*

## FIRST CONCURRENT SESSIONS

Thursday, September 16, 1993

Paul E. Toussaint, Division Administrator  
Federal Highway Administration

### **THE ROAD MAP TO FINANCING FINANCIAL IMPLICATIONS OF ISTEA**

#### **Introduction**

It is certainly a pleasure to with you. Your interest in this Forum is commendable and shows a great deal of commitment by each of you to transportation in Kentucky.

Do you realize the amount of information that exists on a Kentucky highway map? Not only does it have the expected things (roads, cities, counties, lakes, and rivers), but it is also a source of historical information such as recreational data, safety tips, and numerous other pieces of information that is interesting for the visitor as well as the residents of this state.

Like Kentucky's highway map, ISTEA is full of useful information but a great deal of it is non-traditional. Everyone knows the obvious things within this landmark legislation--the potential for more money, the redefinition of the highway system, the flexibility that it offers the states in administering their programs. All of this is true, but ISTEA is much more--it is a map for how things should be done in the future, not how they were done in the past.

Our panel "Partners in Financing" is fundamental in the transportation business. If the financing element is not in place, all elements of the program suffer. Design does not get started or completed, and construction contracts do not get awarded. Everything depends on funding--I know it and you know it.

But in times of budget constraints, we often have to look beyond the traditional things we have done in the past. We have to look for ways that we might leverage our resources a little more. Rather than talk about the dollars and cents of ISTEA, or belabor the fact that we have not gotten all dollars promised, I want to talk about some of the opportunities that exist within ISTEA that should make our overall financing more effective. These are not hidden elements, it is just that they are not the traditional way of approaching highway financing or solving transportation problems. We have to take the time to look at the back of the map and see what useful information exists there. Specifically, I want to cover: 1) financial implications of technology and 2) financial implications of partnerships.

Consider these facts:

- The interstate construction is behind us and application of technology will be the substitute.

- Partnerships are "in" and the old school of "us versus them" is out. We need cooperation if we are to achieve the best transportation system for the available resources. (Federal/State; Public/Private).

- A much broader view of who benefits from transportation investments is being taken with ISTEA. For instance, if we can be a catalyst for the private sector, that is welcomed, not frowned upon.

ISTEA can (and will) have a profound impact on the way we do business, both operationally and financially.

## **FINANCIAL IMPLICATIONS OF TECHNOLOGY**

Technology is an area within ISTEA that we need to fully exploit and reap some of the financial benefits. It is one of the underlying principles that is set forth in the ISTEA policy statement. Section 2 of this Act states "The National Intermodal Transportation System shall be adapted to (intelligent vehicles), magnetic levitation systems, and other new technology wherever feasible and economical..." Technology offers a tremendous potential for solving many of our problems with non-traditional solutions and in a very cost-effective manner. In today's environment, we cannot afford to be without the tool of technology when we address transportation issues. Inability to apply technology will not only limit our solution but can have a negative impact on our budgets.

IVHS is one example of this technology. ISTEA put the funding in place to get this program moving in a big way. Funding has gone from \$4 million in FY 90 to \$218 million in FY 93, and should continue at that level through FY 97. Congress has made a commitment for this nation to be a leader in the IVHS arena and now it is up to the states and the private sector to step forward. And, they are doing just that.

- Kentucky is one of the national leaders in the IVHS effort. Through the leadership and foresight of the Center and UK who are spearheading a jointly funded, multi-state IVHS project that will allow properly

equipped trucks to pass through only one weigh station within the I-75 corridor, as long as their credentials are valid. The vehicle will be inspected once, identified by a special transponder (about the size of a credit card), and tracked by a roadside reader. All identification will be computerized and communications made with the vehicle while it is traveling at mainline speeds. Kentucky officials did not wait for someone to tell them this was the way to do business, they were already investigating these options because it was apparent that this technology could be cost-effective both for them and the truckers. They are now on the leading edge and setting the standard for others in IVHS activities. Not only that, but we have significant interest and participation by the private sector, since they see the tremendous financial opportunities that exist with deploying IVHS technology. Incidentally, much of the private interest is from the defense industry because it has the technology, the expertise, and it needs the business. As a matter of fact, early on in this program, we had one defense contractor offer to fund the project on their own, just so they could have their foot in the door. This was so surprising that we did not know how to react at the time, but the potential for significant private sector investment to leverage our regular funds does exist.

- Application of this technology will solve an immediate problem, at a nominal cost.

- During the study, our expected outlay of funds will be in the \$10-15 million range.

The financial benefits that we expect to accrue are:

1. Trucking industry--efficiency, safety, economy.
2. State government--administration efficiency, economic.
3. Defense industry--economic, jobs, apply technology.
4. Highway users--efficiency, safety.

Deployment of IVHS technology should save money, time, improve safety, conserve energy, and reduce congestion. More importantly, using technology may well be the only solution that we can afford to implement in many of the congested corridors. Let me explain this further.

- Americans are the most mobile society in the world. We have more vehicles per capita (825/1000); they are used more (10,500 miles/year or two trillion annual miles); and these numbers continue to grow.

Congestion is a major issue in many of our larger urban areas. It is estimated that we lose two billion hours in productivity and waste 1.4 billion gallons of fuel nationwide due to congestion, amounting to about \$120 billion in losses. Even in the rural areas, such as on I-75, we are beginning to see the evidence of congestion and the need to upgrade the facility.

- Environmentally, we have several issues that may affect the way we do business. Wetlands, air quality, and hazardous waste are just part

of this equation. Everyday, these items absorb a bigger part of project cost, and it will likely continue that way. With air quality, for instance, significant progress has been made in cleaning up our vehicles. A 96-percent reduction in hazardous chemicals and a 76-percent reduction in NOX is evidence of this success. In fact, exhaust from a 1993-94 vehicle may be cleaner than the air that goes in the carburetor. Unfortunately, the increases in the number of vehicles and mileage driven counteract many of these gains. It is a classic case of winning the battle but losing the war. Due to CAAA mandates, the day of adding capacity to correct a problem in non-attainment areas is going to be difficult if not impossible. In fact, ISTEA/CAAA have specific prohibitions with some funding categories on adding capacity. We are going to have to control demand and maximize the efficiency of what we have before adding lanes. Technology may be the only way that this can be realistically achieved. Special studies are part of ISTEA where congestion pricing is being evaluated to see if it can have an impact on driver behavior. This will require deployment of technology to document usage of the facility and price it according to the real costs. Additionally, in the revised planning guideline, financial plans must be developed that represent a realistic estimate of the resource that will be available to implement the plan. Part of that financial package may well include state-of-the-art toll collection and congestion pricing.

Technology is the wave of the future. It will represent a major commitment of resources and may be the only feasible means of achieving some of our future transportation goals. We must look upon the positive financial aspects that will come from this arena:

- High payoff for the dollars expended;
- Opportunities for participation of the private sector;
- Re-establishing the United States as a leader in transportation technology.

- Benefits to the users in the form of safety and reduced congestion.

### **Financial Implications of Partnerships**

As noted above, technology is one area that is opening up many avenues for developing new business relationships within our transportation community. In the past, we had a lot of reservations on how we dealt with the private sector. This includes contractors, consultants, and others. The typical posture was one of keeping a distance between us and telling them how to do everything. If they completed the job on time and made a profit, then we, the public sector, somehow felt that we did not do our job properly or that we should have gotten more. If they lost time and/or money, then it was their fault for doing a poor job of managing. That has all changed. Now we are actively seeking ways to use their knowledge and expertise. We want their input on how to do some of the tough jobs so that they get done on time and within budget. We want

them to make a profit--it is good business for us all. Not only are new partnerships being formed within the highway field, but older methods of doing business are being questioned with the ultimate objective of doing a better job for the money at hand. ISTEA has provided the opportunity for openness, trust, and willingness of the partners to do more than is required to get the job done.

1. I have had former defense contractors come to my office to explain what they can do for the highway program. The private sector is actively soliciting ways that it can work with the transportation community. We must not look at this in a negative sense but as an opportunity to do more with the limited resources we have. Private sector resources may eventually be able to free up some state funds to enable the construction effort to expand.

2. I have had private firms come forward to explore the potential for them to privatize such things as the rest areas on the Interstate System. They see this as a business venture and, at the same time, it could relieve the state of a burden for maintaining those facilities. It is a potential win-win situation for everyone. Under the current law, this is not allowed but a financial opportunity is being explored. Is it possible that the law will be changed? Maybe!

3. Privatization was something that was taboo for quite awhile. Now it is being looked upon as another means of developing partnerships to insure that we have a strong and competitive transportation system. We have taken the partnership one step further by allowing innovative contracting procedures. Highway projects where the contractor guarantees the work may well be a method employed in some cases in the near future. Under this scenario, contractors and designers would work together; do all the work from start to finish; and then guarantee their product for a reasonable amount of time. While the up-front dollar cost may not be any less, we would hope that the quality of the work would be much greater and the maintenance burden to the state vastly reduced. If you look at these types of partnerships and consider them during a period of governmental downsizing, then the financial benefits could be significant. Further, it may be the only way of keeping our transportation infrastructure in a reasonable state of repair.

4. ISTEA has taken a major turn with regard to toll roads. It seems strange that we are promoting the concept of toll roads as a financial tool. Now the opportunity exists to participate with federal funds in the initial construction of toll roads and bridges, rehabilitation of toll facilities, and replacement of free facilities with toll. This is just another option to leverage the funding for the total transportation. Some states have even gone so far as to have private development of highway facilities that would be eligible for federal funding. Naturally, there are some strings attached to such programs but the opportunities do exist. Realistically, I do not see this happening in Kentucky, but you can never tell.

## CONCLUSION

ISTEA is a road map for transportation into the 21st century.

We have to remember that it contains more than the traditional and expected approaches to getting the job done. We have to turn the map over and look at the information that exists there for everyone, not just the tourists. Financing transportation needs is difficult and will not get easier, but if we are innovative in our thinking and share both the risks and the rewards with our partners, we will be able to stretch our resources much further than we think.