Indiana's Goals on Cost-effective Delivery of Transportation Services

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In my remarks about transportation, I plan to look to the past for some historical perspective and then to the future environment in which we will find ourselves. We have the good fortune to be part of an era of transition for transportation. It will challenge us to work together to meet the needs of the citizens of this state.

At the time we formed the new Department of Transportation, my staff and I developed a mission statement. This statement is:

> INDOT shall provide leadership in establishing safe, reliable statewide transportation systems that ensure the efficient movement of people and goods and promotes economic vitality within Indiana.

There are two key points in this statement. First, the concept of leadership. An excellent transportation infrastructure can only be developed through the combined forces of all public jurisdictions. However, the State must take a leadership role in coordinating the planning and execution of that system. And I now know about leadership. Bishop Sheen had a good definition of leadership. He said, "When you are getting kicked from the rear it means you're in the front."

The second key concept is infrastructure. Transportation is the means by which higher level goals for the state and region are supported. At no time like the present is this concept more important to understand. We have got to understand the dynamics of our economy, anticipate the opportunities for transportation to enhance and shape those dynamics, then prepare to invest resources necessary to accomplish what needs to be done.

When the interstate highway system was conceived, our entire nation was far more rural than now and our post World War II economy was just taking off in the rapid expansion of manufacturing. Our transportation challenge was to get agricultural products to urban centers, raw material and component parts to manufacturing facilities, and finished goods to consumer markets nationwide. The states met the challenge and we now have nearly 43,000 miles of interstate, which has effectively accomplished those goals.

Also during this time, it was recognized that the Federal government needed to support other systems that were crucial to economic development: urban mass transit, aviation and railroads. Thus, for the last twenty to thirty years, federal and state transportation planning and implementation has developed a mode at a time with separate programs for state, federal and local involvement in each mode. As you know, until last year, highways were managed by a different entity than the other modes in this State.

Changing environmental conditions force us to re-examine these strategies now. Those changes are the relocation of people toward more urban environments, increasing air travel for goods and people, moving from a manufacturing-only based economy toward more information services, and to markets that are international in nature. These changes create a different transportation challenge for us now. National boundaries cannot define our transportation needs. Nor can state boundaries provide parameters for our future programs. Our challenge now is to support the competitiveness of regional economics in a global environment.

Every one of you are aware of the changes that have occurred in attracting and supporting industry in your area and in Indiana as a whole. Most of you have a heightened awareness of the need to be part of a supply and demand network that is attractive to commerce. The effective movement of people and goods in this environment requires a different response than just building roads. We must be transportation problem-solvers in addition to being road builders.

Fundamental to a regional strategy is the fact that all regions are different. The mix of public transit, highways, people movers, goods movers, rail, water, and air travel will vary from state to state and region to region. This means that our future policies will be characterized less by narrow funding categories with many restrictions and regulations and more by encouraging creative, intermodal solutions with flexible funding support. In this way, congested, urban multi-state centers, such as northwest Indiana and the Falls City area, can create a transportation system that meets its needs, while southwest Indiana can continue the development of an effective highway network.

The emphasis in the future needs to be on transportation systems, and systems that are linked. It is important that we look at the single mode systems that have developed and discover the links to other modes and the gaps between them. Elements of system management need to be utilized. They are:

1. network management;
2. selective expansion;
3. demand and supply management;
4. structural integrity; and
5. creative and flexible revenue management.

Again, the current condition of transportation systems varies by region and effective systems will demand different solutions by region.

How is Indiana positioning itself in this period of transition and opportunity? I will review accomplishments of the past year and give you a preview of our major thrusts and issues for the coming years. The key themes for INDOT will be efficiency, planning and intermodalism in the context of our department goals of customer focus, excellence in the way we do our work, team work and leadership.

In 1989, the first year of Governor Bayh's administration, the emphasis was on efficiency and reorganization in our Department. To this end, we accomplished the following:

- Created the Department of Transportation;
- Restructured the Department to reduce twenty-two divisions to seventeen;
- Initiated a planning process which defined our mission, identified customers, products and services and established improvement programs and goals;
- Consolidated and eliminated jobs in order to reduce overhead; and

- Encouraged countless examples of cost avoidance (or stretching our dollars further).

For example, for the first time, we attracted a private corporation to help fund printing of the State map. This enabled us to print 600,000 more maps at no cost to Hoosier taxpayers.

Another example is where our own employees enabled us to avoid significant cost. We are in the second year of a significant skills upgrade program called certified tech. We are upgrading the skills of our construction inspection force in order for them to become more flexible and to increase the quality of our projects. These people went to school in the winter, and therefore left a large hole in our supplementary maintenance force, which was needed for the extra jobs we have in the winter. Instead of keeping up to 150 seasonal workers through the winter, we chose to shut down jobs that were less essential — to move people to work that was more essential. This was a sacrifice for all those that moved, but again, is an example of a major cost avoidance.

There have been many improvement initiatives in Development. The first was to bring all activities associated with pre-construction activities under one office. We hope that local officials have seen benefits from this. We have selected a consultant to do a design manual, which will allow us to limit our engineer's time spent in review as well as help local agencies shorten the development process. We initiated a major effort to better coordinate utility relocation work with our projects. We have begun value engineering with training for fifty engineers earlier this year.

We consolidated all department administrative functions under one office, including those in the intermodal group. Operations has designed a major reorganization of the districts, again to reduce overhead. We have begun decentralization in several ways:

1. Increasing contract change approval levels for District Directors;
2. Decentralizing approval levels for signal and sign changes; and
3. Taking care of more and more permits at the district;

In engineering, we began three major initiatives that will have major long term positive impact. We began the design of a pavement and bridge management program, which is now well underway. We also initiated a formal pavement design process between the Design Division and the Materials Division under the guidance of the Chief Engineer. Plus, we are continuing our quality assurance program in concrete pavements.

In the Intermodal Office, we have become far more aggressive in helping to preserve Indiana's rail system. Through judicious use of the railroad loan fund, we have helped preserve lines. We succeeded in preventing and slowing down abandonment in several areas. We are still fighting to preserve the Shelbyville to Cincinnati Line.

We now have a statewide program to prioritize railroad crossing upgrades. We completed the change in ownership of the South Shore Railroad. This change is expected to reduce operating inefficiencies that have plagued the commuter service since 1977.

We have assumed strong leadership with the Lieutenant Governor for Indiana's involvement in the third regional airport study. Finally, we have created

a long-range planning division that has begun investigating the creation of a transportation strategy for Indiana.

As you know, the Governor recently released the Highway Improvement Program for the next ten years. This was a significant accomplishment for the Department, and it was the result of some very different processes than previously used in the Department. Our objectives were fairly simple in developing this program:

1. Set service level goals for our facilities, then establish a preservation program to meet those goals. The importance of preservation cannot be over emphasized. Public investment in preservation of infrastructure has a cost/benefit ratio vastly higher than new construction. Life cycle value compared to cost makes this a very prudent investment.
2. In order to develop our capital improvement program we set out to obtain the best data possible on all new construction projects to evaluate whether and when they should be in the highway program. We evaluated the road condition, projected traffic levels, public support and cost of all projects. From this we established a base level of new construction that we thought was appropriate.

We have established service level goals for our roads and bridges that allow us to maintain at least current levels, and in some instances higher levels. Indiana ranks tenth in the U.S. for urban interstate pavement condition and twenty-first for rural interstate pavement conditions. We rank in the top ten nationally in non-interstate pavement conditions. This general condition has allowed the state to rest on its laurels for the last several years and considerably decrease the investment in preservation. We have now set replacement cycle targets based on good service levels as follows:

I RESURFACE		
I Resurface	13 years	10 years
80% 3.5 or above	72 C/L mi	96 C/L mi
2% 2.5 or below	28.5 M	57 M

N-I RESURFACE		
N-I Resurface	19 yr. cycle	16 years
50% 3.5 or above on a scale of 1-5	540 C/L mi	625
10% 2.5 or below	55 M	67.2 M

Our state bridges are in a similar situation. Approximately ten percent have structural deficiencies that indicate replacement need and a little over ten percent have a deck condition rating of four or less on a scale of one to nine. Bridge condition is pretty much a function of age, and there was a bubble of bridge building in the twenties and thirties. Those bridges are now coming due for replacement. Again, we have proposed a program that is based on life cycle estimates and service levels.

BRIDGE REPLACEMENTS

	FROM	TO
Bridge replacements	107 yr. cycle	72 yr.
Object: Maintain average		
Structural condition	49 bridges	82
of six out of nine	27.5 M	63.3

BRIDGE REHABILITATION

Bridge rehabilitation	26 yrs.	30 yrs.
Object: Maintain		
average deck	95	115
Condition of six	32 M	40 M

The preservation program we are pursuing takes us from an investment level of $190 million in fiscal year 1989 to $382 million in the year 2000.

New construction is done for a variety of reasons, such as to relieve congestion, solve safety problems, increase mobility and enhance economic development. 7 percent, or 78 miles, of our interstate mileage is considered congested and 9 percent, or 917 miles, of our non-interstate system is considered congested. We estimate that congestion is growing at 0.5 percent per year, or 54 miles. We have a continual backlog of safety related problems and plan a substantial investment each year to deal with this. Unfortunately, we have no projection of the highway needs based on enhancing economic development, and this last projection is perhaps the most important. We are working on developing long-range transportation strategies and modal system strategies that complement our economic development strategies, but that is not in place yet. In the meantime, we have identified $2.2 billion worth of projects that we believe should be in development to be eligible for funding for the future.

As you have also heard, we need new money in fiscal year (FY) 1992 to fund new construction. I will explain why. For the last two to three years, an average of $200 million per year has gone into new construction. We believe that we cannot sacrifice preservation for new construction in the future, so the prudent level of preservation will erode $100 million of the $200 million. The other $100 million has been funded by the bond program, which expires in 1992. We are proposing a construction level of $100 million per year. This is not enough to take care of all of our needs, but it will enable us to establish a stable, efficient development program that is prudent given our funding constraints. We need to applaud the Governor's efforts to secure a new funding source for state highways. This is critical as we hear more and more talk from Washington about the need for states to increase their funding.

Key activities in 1990 will be to continue the major improvement programs initiated in past years, such as pavement management and quality assurance. Initiating the development process for an expanded preservation program and increasing the productivity of that development process will be a key objective this year. However, our primary thrust in the Development Divisions will be meeting our letting schedules for the next eighteen months.

Reworking the development process will be minimized by:

- Choosing the right projects for the Highway Improvement Program;
- Providing cost-effective solutions to highway problems at scope;
- Implementing a design manual to define our requirements for design plans; and
- Insisting on quality assurance by consultants and reducing INDOT review.

Bottlenecks in the development process will be minimized by resolving issues such as wetland mitigation, hazardous waste, railroads and utilities as early in the development process as possible.

We will implement the following new technology to improve productivity:

- Computer-aided design (CAD);
- Lap-top computers (especially for people working in the field);
- A new call-distribution system for permits; and
- The Bid Analysis Management System (BAMS).

We have just announced our new Adopt-a-Highway Program, and shortly we will initiate our new Cone Crew Safety Program. We will continue overhead reduction by consolidating some Toll Road administrative functions with Central Office. We will continue our decentralization of functions to the districts. We will also be improving processes throughout our operating districts, such as fleet management, logistics, sign making, etc. We will develop a transportation strategy for Indiana that will drive policy, planning and budget proposals for each of the modes.

What are the issues which we need to address as we begin to develop that strategy? As I explained, our highway program attempts to meet the public needs for preservation and capital improvement of our highway system within the constraints of funding.

This leads me to what I think is the major highway issue facing us: **cost**. A single mile of new interstate facility costs $7 million. This issue is forcing us to search for improvements to our transportation system that don't involve building new roads. Our challenge is to increase the mobility of goods and people at the lowest possible cost. Preservation and more creative use of existing facilities becomes important, as well as exploring alternate modes to solve problems.

The major issue facing Indiana with regards to its rail system continues to be abandonment. The major class I railroads have been downsizing over the past twenty years in an effort to remain competitive with the other modes. In the past 20 years, Indiana has lost 34 percent of its rail system to abandonment. The cuts so far have involved lines where the rail system was obviously over built. The lines had little or no traffic and therefore the abandonments had little or no public impact.

The situation is beginning to change. Railroads are still trying to cut back in an effort to increase the overall return from their operations. However, they are now targeting marginally profitable lines with significant traffic levels. In a worst case scenario, Indiana could lose 14 percent of its existing system in the next three years. Much of this threatened tract is part of the state's core system as defined by the rail plan and is therefore a vital part of the transportation network.

In addition to adverse effects on existing shippers, rail abandonments also have the following results:

1. Communities that lose rail service become less attractive economic development sites.
2. Rural roads and bridges come under increased demand as traffic is diverted to the highways (three trucks for every rail car).
3. Rail passenger corridors disappear.
4. Access to and from Indiana's ports is reduced.
5. Since track costs over $1 million per mile to replace once removed, future use of the most fuel efficient and environmentally safe mode of transportation is limited at a time when these issues are becoming more important.

All of the above represent losses to the private sector but they also have a large public sector cost. For example, when freight moves by rail, 100 percent of the costs (including maintenance of the right-of-way) are borne by a private company. If the railroad is not available, heavy freight will have to move over the public highway, increasing the maintenance costs to the public sector.

As Indiana begins to take a look at its intermodal transportation system, I am confident that rail will play an important role. The Rail Division has already begun to become more vocal by speaking out for the State's interests instead of passively accepting the railroad's will. Future policy will continue to do this.

CURRENT ISSUES FACING THE INDUSTRY

Although federal operating assistance has remained relatively constant, transit systems have experienced a dramatic decline in federal capital support since 1985. The demand to replace social service agency vehicles far outstrips our financial resources. We can only afford to replace 50 vehicles per year out of a demand for 150 replacement vehicles.

Indiana lacks a local funding mechanism to finance the capital and operating costs of existing and proposed commuter railroads, or regional transportation projects in general. Currently, this only affects northwest Indiana but will eventually impact Indianapolis and other major urban centers.

In general, the quality of urban transit service is declining. This is due in part to the lack of local political and financial support. Although it seems that rural and small urban public transportation services are improving. This is due in part to flexible service delivery.

The Department plans try to encourage service innovation without jeopardizing current transit service providers. There is also a duplication of transportation services throughout the social service delivery network. The Department plans to attempt to address this as the study of consolidation of human services delivery proceeds.

Funding for capital improvements for airports is near the top of the list of aviation issues. Expanded funding must come from the federal, state and local levels. Land use compatibility, environmental conflicts and noise are also continuing to complicate the expansion of our aviation system.

Operational capacity is a major problem in Indianapolis, Fort Wayne and northwest Indiana. The alternatives involve developing general aviation reliever airports (in the case of Indianapolis and Fort Wayne), and new airport capacity (which is under study in northwest Indiana).

Finally, what are the intermodal issues? Intermodal planning is defined as the serious examination of trade-offs and interactions between competing and

complementary transportation modes. If serious intermodal planning is to have a result, then funding channelled through narrow modal programs will not fill the bill. We need flexibility in funding. Other questions which we must address in our planning and policy making are as follows:

- What kind of infrastructure do we need for economic development? How much of an investment is this over the next twenty years?
- How do we encourage linkage of existing transportation modes?
- How do we resolve conflicts between safety or environmental concerns and economic development (such as consideration of heavier trucks).
- What kind of policies should be put in place to encourage intermodal solutions to urban/suburban congestion?
- What kind of transportation network will most effectively serve the population as it continues to get older?
- How much can we afford to invest in land acquisition for highway or rail projects far into the future? Can we afford not to invest?

As I said at the beginning of this talk, the key themes will be efficiency, planning and intermodalism, while clearly maintaining a customer focus and excellent service delivery. We are very fortunate to be part of the transportation industry at this time of transition. We have the opportunity, all of us together — federal and state government, local entities and industry — to shape a better way, and become a more prosperous, competitive Indiana.