TRANSPORTATION POLICY AND ECONOMIC DEVELOPMENT:
OUR CHOICE FOR THE FUTURE

Proceedings from:
Conference I - April 14, 1992
Conference II - August 25, 1992
Conference III - November 17, 1992

Sponsored by the
Upper Great Plains Transportation Institute
North Dakota State University
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NORTH DAKOTA'S TRANSPORTATION NETWORK -- OUR CHOICE FOR THE FUTURE

Tuesday, April 14th, 1992 -- The Sheraton Inn, Bismarck, ND

New transportation legislation and new funding mechanisms will move us toward a more flexible and choice-oriented world. The conference outlined below will challenge participants to discover new ideas for North Dakota's growth and development by providing a quality transportation system in this new environment. Three speakers will give an overview of recent events and challenge the audience to engage in a thought-provoking and idea-generating session. Smaller focus groups will then be formed, and with the help of a facilitator, be asked to help shape the future of North Dakota's transportation network.

Conference Program

9:30 a.m. Registration
10:00 a.m. Introduction & Overview
   Barbara Rohde, Research Fellow, Humphrey Institute
   University of Minnesota
10:20 a.m. Speaker #1
   Denver Tolliver, Upper Great Plains Transportation Institute
   North Dakota State University
11:00 a.m. Speaker #2
   Kathy Ruffalo, U.S. Senate Environment and Public Works
   Committee professional staff
11:40 a.m. Discussion/Q&A
12:00 p.m. Lunch
12:45 p.m. Keynote Speaker
   Les Lamm, President - Highway Users Federation for Safety & Mobility
1:45 p.m. Instructions for Focus Group Sessions
2:00 p.m. Focus Groups
3:15 p.m. Break
3:30 p.m. Reports from Focus Groups with Q&A
4:30 p.m. Wrap Up and Quality Check
5:00 p.m. Reception
Biographical Sketches of Speakers from Conference I

Barbara Rhode
Research Fellow - Humphrey Institute
University of Minnesota - Minneapolis

Barbara Rhode is a Research Fellow with the Humphrey Institute of Public Affairs at the University of Minnesota.
Prior to her appointment with the Humphrey Institute, Barbara served on Representative Byron Dorgan's staff for six years as chief of staff. She then became director of the state of Minnesota's Washington office.
Barbara graduated from the University of North Dakota.

Kathy Ruffalo
Professional Staff Member - Senate and Environment Public Works Committee - Washington, D.C.

Kathy Ruffalo is a Professional Staff Member to the Senate and Environment Public Works Committee. She handles the surface transportation responsibilities.
Prior to her work with the Senate and Environment Public Works Committee, Kathy was a legislative assistant to Senator Quentin Burdick where she handled agricultural issues.
Kathy received her BS degree in Industrial Engineering from Northwestern University.

Les Lamm: Keynote Speaker
President - Highway Users Federation
Washington, D.C.

Les Lamm is the President of the Highway Users Federation. Prior to his appointment with the Highway Users Federation he held several administrative positions with the Federal Highway Administration. He also worked with the US Bureau of Roads. Les is currently President of the Intelligent Vehicle and Highway Society of America and is involved with many organizations promoting the U.S. highway system.
Denver Tolliver  
Research Scientist - Upper Great Plains Transportation Institute  
North Dakota State University - Fargo

Denver Tolliver is a Research Scientist at the Upper Great Plains Transportation Institute, North Dakota State University, where he has been employed since February of 1980. Denver's primary research specialization are: freight transportation, railroad economics and costing, and multimodal planning. He is currently involved in the development of an interdisciplinary graduate transportation degree program at North Dakota State University, scheduled to begin in the spring of 1993.

Denver has previous experience with the ND Department of Transportation. He was a rail planner and developed North Dakota's rail benefit-cost model and helped develop their first state rail plan. Denver also developed a branch line viability and cost procedure, and analyzed the impacts of restructuring the Milwaukee Road.

Denver holds a PhD from the Virginia Polytechnic Institute, he majored in Environmental Design & Planning and minored in Transportation.
North Dakota's Transportation Network:
Our Choice for the Future
Conference 1 - April 14, 1992
Sheraton Inn, Bismarck, ND

Introduction & Overview: Gene C. Griffin

My name is Gene Griffin. I'm with the Upper Great Plains Transportation Institute of North Dakota State University, and I would like to welcome you all here this morning to what I think is an important first step in trying to identify transportation's relationship to the economy and what some of the important transportation issues for the State of ND are, and that is what we're going to try to accomplish today.

Just a little bit of housekeeping, there's restrooms down the hall -- to my left I guess and coffee and water in the back. We also want to let you know that this program today is sponsored by the Humphrey Institute of the University of Minnesota and Barbara Rohde will tell you a bit more about that when she gets into her remarks.

But, if I could, I'd like to spend just a few minutes talking (and I know some of you don't think I can spend a few minutes talking) about the importance of transportation and the importance of this meeting today.

If you want to go back in our memories (well, some of our memories anyway), to the 1940s when we didn't live in a global economy and when transportation was not near as advanced as it is today. You think of an economic environment in which it was much more of a local economy that we focused on. And the reason for that is because transportation provides place and time utility. Without that the world that we know today would not exist. Why do you think we have a global economy today? Why do you think that it's bursting out all over? Do you think it's because knowledge is expanding and doubling every two to three years? Well, that may be part of it. Do you think it's because we're looking at the elimination of some of the institutional and political barriers that we've had. Well that's part of it. But you take transportation out, good sound efficient freight transportation system -- people transportation system--then were reduced back to those local economies where you eliminate transportation and you don't need monetary exchanges, you don't need a political system, you don't need systems of government because you simply have tribal form of life where the economic system is based on barter.

Transportation has changed all of that throughout the history of the world, and we are moving toward a better, more efficient transportation system and it is inextricably tied to the future success of the world as a whole, this nation and particularly the state of North Dakota. We sit in what some think is a very remote location of the United States of North America, but we're not remote if we have a good viable transportation system. That's very important to us, because we don't have the critical mass of resources and we don't have the critical mass of population in one location that many
other states do, You don't have to look very far to the east -- you can go as far as Minneapolis to see that -- Denver to the South West, and to the West probably Spokane, certainly Seattle. We don't have that, probably never will, so transportation is extremely vital to us to provide the interconnectivity that we need to make our economic system function. Furthermore, its vitally important to our social well being. How do we get to schools, to churches, to meetings? How do we socialize? That all requires a very good transportation system. So what we want to focus on today and in the succeeding two meetings is how do we maintain that transportation system for the benefit of the citizens of North Dakota and the region.

Our first speaker today is Barbara Rohde. How many people know where Pettibone is? I see you've got friends already, Barbara. Barbara is a native of Pettibone who migrated to the capital in the east. She served on Dorgan's staff for six years as chief of staff, she then became director of the state of Minnesota's Washington office. From there she joined the staff of the University of Minnesota at the Humphrey Institute last year where she presently works. She's a graduate of University of North Dakota, and this morning she will describe the project that led to this particular meeting and how it all fits into the larger role of the regional project and the role that North Dakota is going to play in that. So, with that would you please help me welcome Barbara Rohde.
Thank you. It's great to be home, and at six o'clock tonight I'm going to be heading for Pettibone so I'm really looking forward to it. I want to take just a few minutes and talk a little bit about how this program evolved and how the Humphrey Institute became involved with it. Last year as they were going over the new transportation act, some members of congress came to the Humphrey Institute and asked if they would do a study of how federal, state and local cooperation added toward good a federal program. They provided us with a grant last year, and we started working on it. When we began to work on it we decided that the best way to really get the information was not for a bunch of academics sitting down in Minneapolis to come up with this study but to work with people in each of the states and really bring it back to the grass roots level, because that is where the good information is coming from.

Before we go directly into this transportation part of the program, I'd like to talk just a little bit about the state and local policy program. I know that you all have a packet on it, but I'd like to encapsulate it quickly. This program started about two years ago under the grant from the Northwest Area Foundation with the Humphrey Institute. The Northwest Area Foundation is the foundation of Burlington Northern headquartered in St. Paul, and they provide about half of the states that we do the work for this area of the country and University of Washington does the work for all the states with the exception of Montana. The states that are comprised in the area are Montana, North Dakota, South Dakota, Iowa and Minnesota. We are doing work on three areas right now -- transportation is one of the major areas. We also are doing work in science and technology, telecommunications (and that's primarily geared toward the world areas of telecommunication) and public policy and economic development. We're also doing work in ethanol. I know there's a lot being done here, but I think its probably one of the larger efforts that been undertaken to work on regional issues. I maybe one of the minority in Washington that think this way, but I think regionalism is going to become the issue for the future, and I personally think that the Southern States are far ahead of us. For example, the Southern Growth Board and the Southern Energy companies there are already working in conjunction, so we're about 15 years behind. With that, I want to move on to talk to you about the transportation program and how what you're doing here today is so vital as we put together the whole package at the Humphrey Institute.

First of all I want to say that this is one study we do not want to be among the big books sent to congressional staff that go on a shelf somewhere and are never looked at. We want to make sure that this will be a study that has a lot of reality base to it. We are going to be making a presentation (probably late this year) to the appropriation committee that funded us on where we think money should be flowing in the future. This slide gives you kind of an overview of the project. You can see why this is a difficult project to undertake. We are in three different regions for the federal highway administration under this study. We try to look at this as positive rather than negative, because transportation issues are handled rather differently under each regional administrator. We're getting much different feedback from
Iowa than we have from Minnesota, and were expecting to have much different feedback from this area too. The purpose of this study is to help state and local leaders and policy makers understand regional economic problems. I would expand this to say federal law makers, because I think federal law makers are really grasping with what works, what doesn't work, what they can do, and what they can't do. We're hoping to be able to provide some information back to them on this. In trying to increase discussion in economic development: issues of the region, what we generally find is that states know their own areas very well but are not as familiar with regional issues -- North Dakota doesn't know as much about South Dakota, Minnesota doesn't know as much about North Dakota -- so we were hoping to be able to pull this together a little bit under this study. We believe we can have new information, and that the changes will help to encourage the development of public policy in the region.

This slide illustrates the work plan. We're about five months into the plan right now. An eighteen month study was originally conceived, but because some of the people wanted the information back a little quicker than that, we intend to comprise it in a fourteen month study and intend to be slashing as we go along. We've done research analysis at the university, and this is one of the planning conferences that are being held around the area at this time. South Dakota held theirs yesterday, I believe, and Minnesota held theirs a couple weeks ago. From the information we receive here, we will be able to see the similarities and differences which might exist between the states, and then use that information as we go along to the next round.

I'm going to quickly describe kind of the time frame that we have. We started this whole project in December when we brought together what we thought were the transportation leaders from the area and place them on the steering committee. Gene Griffin sits on our steering committee for North Dakota, and he has been helping us here. The consultations began a little bit later than what we had hoped. We hoped we would be starting in February, but, because of some of the work that we had there, we weren't able to get them off the ground until April. We're hoping that between April and September we should be able to hold three conferences in each one of these states. From this conference, Gene and I, along with Sam Schuth, a graduate student at the Humphrey Institute and an assistant on this project, will be determining what we're doing right, what were doing wrong and plan another forum several months in the future which will focus on the specific areas that were highlighted here.

We are also providing funds to research agendas and other selected areas, so if there are issues that you feel need to be addressed further, please bring those up in your focus groups today. You are the kind of people we really need to hear from on it. We're hoping to pull this together between our academic partners in the states to the conferences like this, and probably by October prepare a final draft, put the final touches on it, and send it back to congress hopefully by December or January of next year when the new congress will be working.

Now again, I want to stress something that I don't think is shown in some of these charts. This area of the country has been known for the cooperation between local, state and federal governments and what can be achieved. What we would like is to be able to find more opportunities to bring these areas together.
I'll give you an example before I leave of what really happens when people think of this. I worked on a project in Minnesota of training traffic controllers at a building that's gone bankrupt by the Minneapolis public school system. A lot of the kids from Minnesota did not have the funds or the time to go to Oklahoma City to become air traffic controllers, but they could take projects at their own school (Community College in Wadena or where ever). Some of these people came to me and said can't we train some of these people up here, could we get just some of the funds up here -- they'll pay some and we'll pay some. Well, the project got started two years ago, and I just heard two weeks ago that they're closing down Oklahoma City for a year and bringing all their people up to Minneapolis. They want them to learn how the Minneapolis project works, because they think that's the way that they should keep training air traffic controllers in the future. This is just an example of what can happen when the people that really know what's going on in the field bring their thoughts and their efforts together.

We're looking forward to hearing from you today. That's the most you'll hear us speak all day today. Thank you very much. I'm so happy that you could all come and participate.
Thank you very much Barbara. I just want to comment a little bit about the diversity of the crowd that I see here. A lot of times when we start talking about transportation we get a room full of people that are in government or at universities -- people that have some kind of professional affiliation with it. We often miss the providers of the transportation -- the carriers. We often miss the shippers and receivers and those people that actually depend on the transportation system. I see out here today, and from the list of attendants, that we have a very good representation today. I'm very pleased with that, and you are all to be commended for taking time to attend this today.

Our next speaker is Denver Tolliver. Denver is one of our staff members at the institute, and has been with the institute since 1980. Prior to that, he was with the North Dakota Highway dept (now the ND Dept. of Transportation) serving as a rail planner. Denver took a leave of absence to go out and get his PhD in Environmental Planning and Transportation at VPI, Virginia Polytechnic Institute, and it has served ND very well as he brought back a wealth of knowledge and ideas that have been transformed into a very viable research program that's having an impact, not only in the state of ND, but nation wide as well. Today, he will speak to us about transportation investment options and criteria. I like that word investment, because we need to start thinking about the five to six hundred million dollars that we have to invest in the next few years in our highway infrastructure. And he's also going to speak about transportation investments in agricultural economy and relate to that directly, and then to railroad investment issues -- all which effect us.

Please help me welcome Denver Tolliver.
In my presentation today, I'd like to emphasize some of the relationships between transportation and the rural economy, and between transportation investment and economic development. There are many different ways in which transportation investment can affect the economies of rural states such as North Dakota. I would like to highlight a few of the effects that I feel are most important.

First of all, transportation investment creates personal mobility and accessibility for all citizens and residents, particularly for the workforce. There is a hidden economic benefit in personal mobility. The physical mobility of the work force helps to match labor supply and demand at regional and local levels. But more importantly, personal accessibility and mobility affect the quality of the lives of people who live in rural areas. If they can’t have personal mobility and accessibility, they're going to migrate elsewhere. The second major impact of transportation investment is on freight distribution, and that is what I'm going to focus on today.

Transportation investment can foster efficiency and effectiveness in freight transportation which is then felt throughout the entire economy. The basic impacts of transportation investment are a reduction in distribution costs and greater options for shippers. Because transportation affects personal accessibility and mobility in freight distribution, it also has an impact on the locational attractiveness of areas, particularly those trying to attract new industry and diversify the economic base. However, I think an important point that is sometimes missed in talking about attracting new industry is that freight transportation is critical to the maintenance and the enhancement of the existing economic base of rural areas. So, what I'm going to focus on today is transportation investment options to increase trade efficiency and effectiveness and to maintain and enhance the existing economic base. Since the economic base of the Upper Midwest is heavily focused on agriculture, I'm going to use agriculture to illustrate some of the concepts I'm talking about.

In general, I think there are four major areas or options where investment can be made in transportation that will foster economic development. The first major area is infrastructure, and this is what most people focus on when asked about transportation investment and rural economic development. Most people automatically think of roads, bridges, railroad tracks, and ports and terminals -- the physical infrastructure. Although infrastructure provides the physical capacity and is a necessary condition for economic growth and development, it isn't sufficient in and of itself to enhance economic growth. There are three other areas where I think either federal, state or
local investment could be made that would enhance economic development. One area is in transportation operations.

Efficient operations result in greater utilization of the infrastructure and create the capacity to move more people and freight across a given network. For example, in metropolitan areas, investments in highway operations technology generally generate more benefits than construction of new highways. Those benefits are primarily in the form of improved traffic management and traffic flow. In rural areas, we don't quite get the benefits that are realized in metropolitan areas, but there is still a lot to be said for improved transportation systems management options.

Many of the operating investments are centered around technology, and technology is the third big area that I would like to talk about -- both new technology and the adaptation of existing technology to transportation. Technology can be very exotic and high-scale, such as Intelligent Vehicle Highway Systems. Alternatively, technology can comprise traditional concepts that don't have the high-tech appeal but nevertheless generate a great amount of benefits. I'll illustrate some of these concepts as I go through the presentation.

The fourth big area, planning and management, is frequently overlooked. Investments in better databases, better analysis techniques, and better planning procedures can generate just as many benefits overall for economic development as building new roads and bridges. These four general areas have specific applications across the modes of transportation, and I'll just briefly discuss what those are.

With respect to highways, most of the emphasis today in terms of infrastructure is on the maintenance and rehabilitation of existing pavements, bridges and tunnels, instead of new construction. Consequently, there is a great deal of concern about how these investments can be optimized -- that is, create the most benefits for the most people. In terms of operating technology, smart highways and smart cars offer a great deal of benefit for both metropolitan and rural areas. However, rather than following a carte blanch approach, I think federal, state and local policy makers need to conduct a very in depth benefit/cost analysis and feasibility study to determine where these technologies could be applied in rural and non-metropolitan areas, and how they could generate the most benefits.

Although IVHS has captured most of the attention, I think there are other new technologies in highway transportation that could have some tremendous benefits, such as reassessing truck and trailer configurations. You might be familiar with a study that the Transportation Research Board recently finished that looked at alternative trailer configurations in terms of their axles and axle loadings and what the differences could mean in terms of efficiency and the cost per ton mile, as well as highway
impacts. Their conclusion was that if we are not constrained by standard configurations, we can increase the efficiency of truck operations without incremental pavement damage. In fact, we can actually reduce pavement damage. There are also some interesting investment opportunities in the research and design of new tractors and promoting efficiencies in these new designs.

An important concept today is the focus on planning, forecasting and management technologies. Many benefits can be generated from better forecasting technologies, particularly concerning truck traffic; more frequent and better needs assessments and investment analysis; and project selection that tries to take a fixed budget and allocate it in such a way that it generates the most benefit for the most people. We are moving in that direction with some very nice pavement management databases and other databases at state departments of transportation. However, there are opportunities for more improvements and advancements.

The options in terms of railroad investment are somewhat similar, yet quite different. Most of the investment in highways is from public agencies. On the contrary, most of the investment in railroads comes from private agencies. However, there is growing sentiment and growing support for public investment in railroad track and roadway. The Federal Railroad Administration recently conducted a study of local and regional railroads, and came to the conclusion that there was vast under-investment in track maintenance and capital expenditures, and that the industry really needed to catch up. The FRA was primarily approaching this from a safety perspective, but the conclusions have major impacts for freight distribution and efficiency, and subsequently for the local economy and economic development.

There isn't a similar study concerning large railroads, but if we just think about where the local and regional railroads bought most of their track, we can see that this trend actually started in the Class I railroad industry through deferred maintenance and capital expenditures on branch lines. Furthermore, this trend is probably continuing today. I'll give some examples later of what deferred maintenance can mean in terms of freight distribution impacts. Typically, it reduces the operating speed on branch lines, reduces the service frequency, and impacts both the operator and the shipper.

In addition to railroad infrastructure and operating investment, there is also a great deal of concern about equipment. Many of you following agricultural transportation issues have seen a great deal of controversy over equipment availability (freight cars and locomotives) and how they are allocated. In fact, a recent study by the USDA concluded that given existing replacement trends of covered hopper car fleets and projected demands through the year 2000, we could see a serious hopper car shortage by the end of the century. Some people say that its already here, and indeed spot shortages have manifested themselves in this region during the last ten years.
There are a lot of related railroad issues that are appropriate for discussion in focus
groups. Who should own the equipment? Who should finance it? How is it allocated?
We have a model in the U.S. which says that car ownership lies with the private
sector and that railroad owned freight cars get used first over shipper-owned freight
cars. That’s completely different from the Canadian system in which the Grain
Transportation Agency of the government owns and allocates about 70% of grain
covered hopper cars. I’m not saying that approach is appropriate, but these are issues
that need to be discussed.

There is an opportunity for investing in planning, management, and technology in
railroads, just as there is in highways. The absolute level of maintenance expenditures
is one thing, but the related issue is how efficiently those maintenance dollars are
spent. There are a lot of options in this area, particularly in databases. The Class I
industry has developed a very detailed set of databases, but similar databases for
regional railroads do not exist. To some extent, the regional industry is not able to
promote and analyze itself the way that it needs to do. So, I think there are some
opportunities for improvements in this area.

Even though most of the focus in this part of the country is on railroads and highways,
I think we’d be remiss if we didn’t discuss waterway issues, as there are some critical
issues looming on the horizon. The Upper Mississippi River system is a potential
bottleneck to the transportation of grains and oilseeds, particularly from this part of
the country to the Gulf for export. That system (and by that system I mean the locks
and dams, primarily) is aging. It’s an old system, and it needs some investment.
Many of you are probably aware that periodically, due to low water, congestion, or
other seasonal problems, there are bottlenecks at lock and dam 26 and other locks
and dams on the system. The Army Corps of Engineers is mapping out a long term
investment strategy nationwide, and in their initial analysis it appears that a great deal
of money is already being allocated out to the Ohio River system and other eastern
river systems -- not to the Upper Mississippi. From an investment standpoint, to
support economic development in the Upper Midwest, I think waterway investment is
something that the focus groups would want to discuss.

There are a lot of other areas related to transportation modes, such as airports and
airways, that I’m not going to discuss, but I would like to point out one thing. We’ve
traditionally focused on transportation investment as isolated investments in each
mode. That’s primarily because the money comes from different sources. What we’ve
always done is take highway money and invest it in highways, take railroad money
and invest in railroads, waterway money and invest it in waterways. Once we begin
by demarcating the funds in this manner, we are going to wind up sub-optimizing. As
long as there was a lot of transportation money (or unlimited funds), then we didn’t
risk too much. But, now we’re getting into an era of financial constraints and there is
not enough money to go around. Thus, one of the things we need to start looking at is optimizing investment from a multi-modal perspective -- that is looking at all modes simultaneously.

There is a National Cooperative Highway Research Project currently underway to examine how state, federal, and local governments can better optimize their limited transportation dollars by looking at all modes when they make transportation investments. I'll just give you an example based on some work I've done lately in North Dakota and other states. In many instances we find that a limited amount of money invested to rehabilitate a railroad branch line actually generates more benefits than investing that money in the highway system, particularly when we consider the infrastructure and operating costs and the impacts on the regional economy over the long run. This generalization isn't always true, but it is in some cases. I think a multimodal orientation and perspective is what we need, more so than the traditional modal pattern of investment.

Those are some of the options. However, these options obviously need some type of criteria to guide investments, because there is a whole range of things that can be done. Historically, when public funds are invested we always look at the net benefits that are generated, and the projects that generate the most benefits warrant the most investment. However, we really haven't looked at the full picture, particularly when we've been investing in highways. The types of benefits that we've traditionally looked at for highway investment are user benefits. That is, if we invest in highways we reduce vehicle operating cost, travel time and fuel consumption. These are very important benefits. However, there is more to the analysis. Highway investment also reduces truck operating cost. Similarly, when we invest in railroads we look at the benefits to the shippers or operators from reducing railway travel time, fuel consumption and vehicle costs. All of these factors directly impact users. We clearly need to look at user and operator costs in railroad analysis. However, we also need to look at impacts on distribution costs and how they affect the regional economy. If we don't do that, we're only getting part of the picture. So, I would suggest that we need some revised benefit cost criteria before we start seriously discussing long term investment criteria and projects.

I'll illustrate some of these concepts briefly by focusing on how transportation investment affects the agricultural economy. There are four areas where investment affects the agricultural economy by affecting either operators or users. First of all, investment affects the performance of highways and railroads. By that, I mean the serviceability. In highways, serviceability essentially means the roughness of the pavement and the comfort of the ride. For railroads, the impact is somewhat similar in that the track structure supports a certain safe train speed. Lower investment or maintenance levels are going to result in lower speeds.
However, investment also affects the economic life of highways and railroads. In short, in addition to lower performance, under-investment reduces economic life. Transportation investments also affect the satisfaction of users and transportation service levels, particularly service frequency. Another thing we tend to overlook is that investment affects the coverage of the transportation system. The abandonment of rail lines or the abandonment of rural roads can increase the distance that someone has to travel to get from a supply point to a processing point. Some studies have recently been done in Iowa and other areas that examined increased circuity when some rural roads and rural bridges were eliminated.

To give you an idea of what a change in highway funding can mean for a regional economy, I'd like to introduce a couple of concepts. When we're talking about impacts on the regional economy, what we're usually looking at is how distribution costs affect farmer's incomes through changes in net farm income or net producer income. Any time net farm income is reduced, there are two obvious effects. One is a reduction in personal income or household income, but more importantly there is a decrease in gross business volume because the producer has less to spend in the economy, purchasing fewer goods and supplies. North Dakota has a very good input/output model which quantifies all these relationships. Every dollar of lost income in the farm sector results in about 1.5 dollars of total lost household income and about 3 dollars in regional economic impacts when the effects on gross business volume are considered. In essence, one dollar translates into three.

Now, I'll work through an example, based on some preliminary numbers. Suppose we lower the overall level of funding for the highway system in North Dakota and we drop the pavement serviceability rating from say a high-fair level where it is right now (of about 3.5), to a low-fair level or even poor level about 2.5. In other words we cause about a one point drop in pavement serviceability rating. This translates into an 8% increase in vehicle operating cost and approximately a 3.5% increase in travel time. If we look at all of the travel on North Dakota's rural and minor arterials and collectors, this translates into about 29 million dollars a year in lost travel time and opportunity cost if we value time at about $10 per hour, plus about 70 million dollars in vehicle operating cost. In other words, if we reduce the pavement serviceability rating from 3.5 to 2.5 we're looking at nearly 100 million dollars annually.

However, that's only part of the picture. Disinvestment has a very specific impact on agricultural business and particularly on farm truck operations. A one point drop in pavement serviceability rating from 3.5 to 2.5 will increase farm truck costs by about 7.5% or 8 cents per mile. Last year, elevators shipped out about 500 million bushels of grains from North Dakota. I'm not sure if that's a three year average, but I think it's close to it. Let's just say we take that number. What that winds up translating into is about four million dollars a year in increased vehicle operating cost if the pavement
serviceability rating declines from 3.5 to 2.5. The 4 million, in turn, results in about 12 million dollars a year in gross business volume. In this calculation, I assumed an average farm truck trip of about 15 miles.

What typically happens is that the outbound movement from the elevators sometimes moves by truck all the way to markets. Frequently, it moves from satellite elevators to a subterminal elevator, so there is a further impact. If you assume, an average haul of about 15 miles for the outbound movement then you can double the impacts to 25 million dollars a year.

Again, that’s only the portion of the picture that relates to truck operations and truck movements. There is an equally severe impact resulting from railroad deferred maintenance or disinvestment. When railroad capital investments are not made or deferred, train speed is reduced, service frequency is reduced and derailments increase. All of those factors increase operator cost. In a recent case study of the Red River Valley and Western done at the Transportation Institute, we found that we could reduce operator cost about 5 cents per hundred weight by rehabilitating rail lines on that system. The benefits vary with the rail line and with the carrier, but that’s probably fairly representative of what we’re going to find on North Dakota’s rail line network if we rehabilitate the branch lines and light density system.

This savings sometimes translates into reduced railroad rates, or it goes back to the railroad operators. In the case of local and regional railroads that are headquartered in the state, this can have an impact on the local economy. The transportation sector has a different multiplier than the one I mentioned earlier, but let’s just assume that we take the 5 cent figure and multiply it by the 500 million bushels that I talked about earlier, and assume that roughly half of it remains in the state. Again, this represents another 4 to 5 million dollar benefit annually. By the time we run this benefit through the economy we’re talking about 12 million dollars and that’s just railroad investment. Eliminating deferred maintenance doesn’t necessarily show what happens when rail lines are abandoned. When rail lines are abandoned the impact is pronounced. According to some recent studies done in different parts of the country, when a rail line is abandoned, there’s a net impact on the highway system of about 3 cents a ton mile. In addition, there’s approximately a five cent/bushel transloading cost that is incurred. Those costs can be substantial and can mount very easily. In a study I did in Nebraska of the proposed abandonment of the C&NW northern main line, there were no alternative rail transloading facilities within 100 miles. In this study, the impacts totaled over three million dollars a year.
Just briefly, I'll conclude with some specific concepts on railroad investment issues. What I tried to present today are some general illustrations and ideas to help you realize how transportation investment affects the agricultural economy and the scale and magnitude of the impacts.

We've seen some tremendous changes in the industrial organization of the railroad industry in the last ten years. I think we're going to see some more in the next ten years. They're very significant, and they impact both the efficiency of operations and distribution costs. There's been a great deal of growth in the "short line" sector which consists of local and regional railroads. This sector of the railroad industry is now contributing a significant amount of traffic, revenue and jobs. Nationwide, local and regional railroads now operate over 40,000 miles of track. In addition, they employ over 20 million people and that contribution is growing. I would like to point out that these tracks and employees exist mostly in rural and non-metropolitan areas -- low density operations that Class I carriers have said that they do not want to operate.

As I mentioned earlier, these industries are a lot different from large railroads. The large railroads tend to have central headquarters far removed from the rural area, and they have deep pockets. So, investment in large railroads really has a limited economic impact. However, some of the short lines are small businesses that are located in-state or in the region. Many of their direct requirements come from within the region, particularly the labor. Thus, they can have an impact on the efficiency and cost structure of the regional economy. Again, the multiplier for the transportation sector in North Dakota is about 3. In other words, every dollar that is saved through investment in the transportation sector, translates into three dollars in overall business volume.

To give you an idea of what this trend really means, today I believe there are over 250 of these small railroads. In 1979, there were 41 Class I or big railroads in America. Today, there are only 14. Five years from now, there may only be eight. What we're seeing is a new organizational structure, basically a trunk-line short-line system, with big railroads operating the main line tracks with the rest of the tracks (that are used for pick up and delivery) being operated by smaller operators.

The bottom line is that this new organizational structure has an impact on investment strategies and policies. Very few people want to invest a lot of money in a big organization like the Burlington Northern, where the money winds up going out of state. However, it's a different story when we invest money in smaller railroads. State and local governments know that much of this money is going to be spent locally to hire people and purchase inputs.
The state of Washington is doing some very interesting things which I think the focus groups may want to consider. To try to facilitate preservation and enhancement of local rail services, the state has developed its own public assistance program for rehabilitation which is independent of any federal programs. Furthermore, the state constitution allows port and rail districts and other quasi-public entities to rehabilitate or acquire lines. Any city or town in the state of Washington can declare itself a rail or port district. It doesn't make any difference if its on the water or not. Well, that's irrelevant except that it creates different types of management and financing entities that can examine options and raise funds for investment in rehabilitation and rail line preservation, and probably do it on a more localized level than state and federal government.

I think the hook is going to come out here in about five minutes, so I'm going to briefly mention a few other concepts which you might want to consider. I think in the current regulatory environment that we have now, that started in 1980 with the deregulation of railroads and motor carriers, we are relying a lot less on regulation and a lot more on market competition. What that means for federal, state, and local governments is that investment strategies need to be designed overall so that they promote and maintain competition. It is no longer simply sufficient to invest so as to create efficiency and benefits. One has to look at the long term. How is this investment going to affect the competitiveness of modes? Is it going to keep them competitive, or is it going to favor one mode to the extent that other modes are going to be run out of business? I think balanced investment strategies are needed to recognize railroad and truck trade offs and comparative advantages. I think each mode of transportation does have it's comparative advantages. In general, what we've seen is that in long distance transportation, railroads in particular have always been very efficient. In fact, once cargo is in a train consist on a main line, the cost per ton mile is very low. However, getting it there from remote stations and gathering points is always a problem. Motor carriers have been quite competitive in originating and delivering freight and, in instances where back hauls are available, have provided competition for railroads in markets in this part of the country -- particularly into Minneapolis and Duluth. So, I think the investment strategies need to recognize and preserve modal advantages and competitiveness.

I'll come back just briefly to the concept of equipment availability and ownership. There are several options which I think the focus groups will probably want to consider. One of them is for the government to acquire, own, and allocate freight cars. That's what is happening in Canada right now. I think its highly inefficient. I think it serves some fundamental purpose, but in actuality it increases the cost of distribution and uncertainty in the system. The other option is to have railroads completely own and allocate all the freight cars. I don't think that completely works either. Railroads tend to want to maximize return on investment and, because there are seasonal
fluctuations and year to year fluctuations in demands, the fleet is never going to be sufficient to satisfy shipper expectations. Somewhere in between those two extremes, I think there is a compromise solution. What it might very well entail for the states in this particular part of the country are some sorts of pool arrangements that have been tried in the past, working out some system with the railroads in which shipper-owned equipment is allowed better access.

With that, I think I've used my 30 minutes and I want to try to beat the hook.

Thank you very much for your attention.
THE IMPACTS OF TRANSPORTATION
INVESTMENT AND PERFORMANCE
ON AGRICULTURAL ECONOMIES

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I. Transportation Investment Options and Criteria

II. Transportation Investments and The Agricultural Economy

III. Railroad Investment Issues
Part 1 - Transportation Investment Options and Criteria

I. Investment Areas Related to Economic Development
   - Infrastructure
   - Operations
   - Technology
   - Planning and Management

II. Investment Options
   - Highways
     - Pavement and Roadway
     - Bridges & Tunnels
     - Traffic Flow and Management
     - IVHS
     - Truck/Trailer Configurations
     - Tractor Design & Efficiency
     - Needs Assessment & Forecasting
     - Investment Analysis and Project Selection
     - Management Systems and Data Bases
II. **Investment Options** (Continued)

- Railroads
  - Track and Roadway
  - Bridges, Trestles, and Tunnels
  - Operating Speed
  - Service Frequency
  - Equipment Availability (Freight Cars)
  - Power Availability and Efficiency
  - Car/Track Dynamics
  - Truck Maintenance Procedures
  - Investment Analysis and Project Selection
  - Management Systems and Data Bases

- Waterways
  - Locks and Dams
  - Channels
  - Harbors/Ports
  - Tug Costs and Technology

- Multimodal Connections, Terminals, and Facilities

- Airports & Airways
III. Investment Criteria

- Net Benefits
- Types of Benefits
  - Users
    - ✓ Vehicle Ownership
    - ✓ Travel Time
    - ✓ Fuel
  - Operators
  - Distribution/Logistical Efficiency
  - Regional Economic
- Revised Benefit/Cost Criteria
Part 2 - Transportation Investment and the Agricultural Economy

I. The Effects of Investment on Transportation Systems
   - Performance (Serviceability)
   - Economic Life
     - Pavements
     - Track Structures
   - Service Levels
     - User Satisfaction
     - Congestion
     - Service Frequency
   - Coverage
     - Distance
     - Accessibility
Impacts of Reduced Highway Funding on Household Income and Business Volume

Highway Funding

- Pavement Serviceability

- Travel Time
  + Vehicle Ownership
  + Fuel Consumption
  + Maintenance Cost

  + Distribution Cost
    + Truck Rates
      + User Fees

- Net Farm Income

- Household Income

- Gross Business Volume
Impacts of Reduced Railroad Investment on Household Income and Business Volume

- Railroad Investment
  - Train Speed
  - Service Frequency
  - Derailments
    - Operator Costs
      - 1. Fuel
      - 2. Crew Costs
      - 3. Equip. Ownership & Maintenance
      - 4. Spot Track Maint.
      - 5. Overheads
    - Railroad Rates
    - Distribution Costs
  - Household Income
  - Gross Business Volume
Impacts of Reduced Railroad Funding on Household Income and Business Volume

Railroad Abandonment

Transshipment to Rail Transloading Point

Elevator Transloading Costs

Truck Length of Haul

Shipping Costs

1. Rates
2. Truck Costs
   a) Travel Time
   b) Vehicle Ownership
   c) Fuel

Distribution Costs
Part 3 - Railroad Investment Issues

I. Changes in Industrial Organization

- Growth of Local and Regional Railroads
  - Significance of Traffic, Revenue, and Employment
  - Significance to Light-Density Lines
  - Small Business -- Headquartered in State or Region
  - Direct Requirements Include Local Inputs
  - Efficiency and Cost Structure

- Class I Carrier Consolidation
  - 41 Class I Railroads in 1979
  - 14 Today

- New Organizational Structure: Trunk-Line/Short-Line Systems

- Implications of Transportation Investment
  - Public Assistance for Rehabilitation
  - Quasi-public Entities (e.g. port or rail districts)
  - Small Business Funds
II. Changes in Regulation and Pricing

- Staggers Act 1980
  - Market Dominance
  - Competitive Tests
    - ✔ Revenue/Cost Ratio
    - ✔ Market Share
    - ✔ Geographic and Product Competition

- Constrained Market Pricing

- Results
  - Greater Variability in Railroad Pricing
  - Competitive Pricing → Market Share
  - Competitive Markets:
    - Full Cost < Price < Variable Cost
  - Non-Competitive Markets: Price > Full Cost
  - Overall Benefits: Decrease in Distribution Cost
  - Greater Dynamics in Rate Structure
  - Shift From Regulation to Market Competition
II. Changes in Regulations and Pricing (Continued)

- Implications for Investment
  - Strategies to Promote and Maintain Competition
  - Balanced Investment Strategies
  - Recognition of Rail-Truck Tradeoffs and Comparative Advantages

III. Equipment Availability and Ownership

- Rail Cars
- Trailers and Containers
- Power
Presentation: An Overview of the Intermodal Surface Transportation Efficiency Act of 1991, Kathy Ruffalo

I've been asked to give an overview of the Intermodal Surface Transportation Efficiency Act of 1991 commonly referred to as the "Ice Tea". Many of you, like myself, have probably heard more bad jokes attempting to use the acronym ISTEA so I will not start out with one. But I will say that with a title like the Intermodal Surface Transportation Efficiency Act it does make you wonder about the efficiency of it.

The President signed this legislation on December 18th. The act is usually referred to as a landmark piece of legislation. But with over 250 pages, maybe landfill is a better term.

But seriously, I'd like to begin by reading the declaration of policy of the ISTEA. It is the policy of the united states to develop a national intermodal transportation system that is economically efficient and environmentally sound, provides the foundation for the nation to compete in the global economy, and will move people and goods in an energy efficient manner. For most of us, the emerging transportation crisis in this country is symbolized by the increasing number of traffic jams, potholes and delays in most urban and suburban areas. Many do not realize the true importance of our tremendous network of roads and bridges to our economy, national security and way of life. The health of our citizens, the movement of perishable food and access to employment depend upon a revival of an efficient transportation network.

Since its inception in the 1950s, the Federal Aid Highway program has been re-authorized with the continuing goal of completing the interstate highway system. The interstate system has proven to be very popular, but with less than one-half of one percent of the mileage left to be constructed, the interstate system is essentially completed. Thus, we have entered the phase of what is commonly referred to as the post-interstate era. Convinced the federal aid highway program should be continued, the members of the environment and public works committee were faced with serious questions. As urban areas become more densely developed and rural areas become less populated, the desire to meet rapidly diverging needs has taken on increasing urgency. A monolithic program cannot bridge these demands.

Some of the larger urban areas are finding less room for and more resistance to traditional highway solutions despite their traffic jams. Meanwhile, rural areas are faced with declining populations and eroding tax bases. These rural areas, like North Dakota, must struggle to maintain basic services and require a traditional highway program more than ever.
Therefore, the government has reached a consensus on two basic goals. The first goal being that the best benefit-to-cost ratio for transportation spending, and Denver touched upon this, is achieved by concentrating on highway maintenance not expanding capacity for new construction. Two, emphasis on maintenance rather than on increasing capacity is possible and desirable only if transportation becomes more efficient and productive. The underlying objective of the new transportation policy is in placing a greater emphasis on moving people and goods rather than developing a transportation program that merely attempts to move more vehicles.

As an example of the current situation, a major U.S. shipping company recently came to the committee and told us that the schedule of the arrival of their ships in Oakland is dictated as far back in the transportation chain as Hong Kong due to the traffic congestion in Oakland. So these are the problems that we all face in this country, especially in the urban areas.

Before I begin describing the ISTEA, let me give you some things to think about in order to give you a perspective of the obstacles that Congress and the nation faced with our current infrastructure needs.

The United States has 3.9 million miles of public roadway which accommodate 187 million vehicles traveling beyond 2.1 trillion miles each year. While travel grew rapidly in the 1980s total highway mileage changed very little. However, in constant dollar investment per unit of travel total expenditures have actually declined by more than 1/2 since 1960.

I think I can fairly characterize the ISTEA as having a strong tendency towards maintenance. The cost of keeping roads and bridges in adequate repair and maintaining modest levels of service is generally much lower than the cost imposed by poor conditions and performance. If investments for repairs are not made when pavements are in the low-fair range they will obviously deteriorate.

According to the 1991 status report on the nations highways and bridges, the annual cost to maintain — not improve, but just to maintain — overall 1989 conditions and performance is estimated at 33.1 billion dollars a year through the year 2009. Compare this to a budget authorization in the ISTEA for fiscal year 1993 of only 20.5 billion dollars for all programs. Thus, even though the ice attempts to spend down the balance in the highway trust fund over the life of the bill, we have a long way to go.

Our bridges aren't in any better condition. The average annual cost to maintain overall bridge conditions as they are reported as of Dec. 31, 1989 is estimated at 4.2 billion dollars annually to the year 2009. That's just to maintain. Compare this to an authorized level in the ISTEA of roughly 2.8 billion dollars.
This bill is a secured bill, and, as I said earlier, it attempts to spend down the trust fund. Therefore, more money, and Gene touched upon this, will be apportioned to the states. Many states will have problems meeting the federal match requirements — generally 20% of the cost of the project. These states will probably have to consider an increase in their respective gas taxes to raise the necessary revenue. While raising taxes is obviously not a popular issue, many polls have suggested that a gas tax increase is palatable if, and I stress if, it used for infrastructure. Many members have introduced either supplemental appropriations or other legislation to increase infrastructure spending. In fact, infrastructure has become one of the trendy buzz words among the members of Congress. However, the current budget conditions have made passage of such bills very difficult.

Many coalitions were formed during the debate over the enacting of the bill. One such coalition was the crescent coalition that many of you have heard of. Aptly named for the crescent shape made on the map, this coalition included such states as California, Texas and Florida. The coalition was originally formed to push for policy changes in the highway program. Many other states with different policy interests formed what was called the breadbasket coalition to counter this push. These states were interested in maintaining the traditional program structure.

Well, eventually the crescent coalition became embroiled in the issue of formulas used to apportion federal gas tax money. I'll touch on the formulation in just a minute, but I will say that once the crescent coalition was bogged down in formulas, it lost it's focus and both coalitions faded from the scene. I do not mean to say that once policy changes to the formulas locked up the coalitions, that these states were not heard from again. In fact, quite the contrary. But, the primary focus in the debate became the donor/donee issue.

A donor state is a state that contributes more gas tax revenue to the highway trust fund than it receives back under the current apportionment formulas. A donee state is just the opposite. They receive more federal funds then they contribute to the trust fund. It may seem obvious to many that it is only fair that a state should receive back the same as they contribute. Keep in mind, though, that states like ND, SD, and MT have declining populations and declining tax bases. Yet, these states have a large amount of federal aid interstates and roads to maintain and fewer funds to accomplish this. Large growth states like Florida, California, and Texas also have a tremendous amount of federal aid roads, but have the tax base and population to generate the necessary revenue. One thing to think about, if it does ever become a dollar into the trust fund and one dollar out for every state, what is the purpose of a federally run surface transportation system? With a situation such as that, one could argue for the states keeping their own revenue and running their own program.
During the 1982 surface transportation debate, the issue of trust fund contributions was a big issue. In 1986-87, it was a larger issue yet. However, last year the donor states were very willing to go the mat on the formula issue. Fearing that time was running out during the legislative session, the donor states and the representative members of Congress were more than willing to filibuster and bring down the bill.

During the conference on the bill, the committee staffs of both the House and Senate ran more variations of these formulas than I care to remember, all in an effort to make equity in the formula issue. But when November came around, and the congressional session was set to end, the prospect of not having a surface bill until the following year was a grim one. States were already having to deal with a two month delay in re-authorization. I truly believe that both the President and the congressional leaders thought of the condition of the nations economy and did not want to see further delay in passage of this bill. A surface bill with this amount of money is certainly a job creator.

There are still more donee states than there are donor states, for now. Everyone in Washington can count votes and the donor states were out numbered. A vote was taken on a new formula system, and it failed to pass. With mounting pressure to finish the bill, the donor states were finally satisfied with program flexibility and were willing to forgo a filibuster this time.

Now that I’ve given you a broad overview of the political environment surrounding the bill, I’d like to touch on the new program briefly and the flexibility. And again, some of this is in the handout on the ISTEA and it goes into much more detail than I will.

As you all know, government tends to waste a lot of time and money micro-managing decisions that have nothing to do with national purpose. But before we all start favoring rural over urban, maintenance over construction, we should remind ourselves that the best solutions come from those closest to the problems. For the most part, Congress felt that it was important to give state and local officials the flexibility to choose the transportation options that best suit their transportation needs. After all, different parts of the country have different transportation priorities.

The newly created surface transportation program or STP gives local officials that flexibility. The STP works essentially like a block grant program, an approach that emphasizes planning, intermodal transportation programs, and control by local officials. Rigid spending categories of the past have been eliminated.

STP funding may be applied to a variety of projects that include highways, bridges, bicycle transportation, pedestrian walkways, and wet land banking among others.
The intent of this program is to provide maximum flexibility to local governments. Many will undoubtedly proceed with the same types of projects that have been built in the past due to local priorities. Some jurisdictions, however, will use the flexibility to redo the transportation programs to meet changing conditions and emerging transportation demands.

I must also note that ten percent of the STP funds that a state receives must be spent on safety activities such as rail/highway crossings and hazard elimination. And another ten percent is to be spent on what we call transportation enhancement activities. Again these enhancements encompass a wide variety of eligible projects that include, but are not limited to, acquisition of scenic easements and scenic or historic sites, landscaping, historic preservation and the control or removal of outdoor advertising.

Another innovative program is the National Highway System or NHS which is the new system of 155,000 miles plus or minus 15% at the discretion of the secretary. The NHS will include the interstate system, principal arterioles and strategic defence highways, and is to be funded at a level of 21 billion dollars over six years.

The states, in cooperation with local governments, are to propose those roads to be included in the NHS. However, this proposed new system will not be officially recognized until approved by congress. The requirement for a legislative approval process provides local officials with an opportunity to lobby their congressional delegations regarding preferred routes.

NHS must have congressional approval by Sept. 30 1995 or federal funds will not be available for this system or the interstate maintenance program. Something else to keep in mind, since the NHS requires congressional approval it has been suggested as very likely a possibility that the donor states I described earlier will see this as an opportunity to re-open the program and fight the formula battle again. The general accounting office has been mandated to study these formulas and their equity. Their report is due to be released prior to the congressional approval and you may be assured that if the results do say, as they probably will, that the current formulas are inequitable, it will be fuel for the formula fire. While I do not want to be the bearer of bad news, rural states must be prepared to battle this issue if it does, in fact, reappear in 1995.

Some other interesting provisions in the ISTEA are the changes made to the planning arm of the state and local officials. Congress has the desire to put more people into the planning process, and Denver touched on how important the planning process is to the new program. While local officials in areas less than 50,000 population will not be delegated the decision making authority provided urbanized areas, the legislation makes clear that all local jurisdictions are intended to be included in transportation planning.
The relevant section of the act provides the state shall consider, and I quote, the transportation needs of non-metropolitan areas through a process that includes consultation with local elected officials with jurisdiction over transportation. Likewise the state-wide project selection in areas less than 50,000 population projects on the NHS or projects undertaken pursuant to the bridge and interstate maintenance program are to be selected by the state in consultation with local elected officials. All other projects that need to be selected by the state in cooperation with local officials, the legislation provides no guidance as to how consultation and cooperation should be defined or distinguished from each other. It will be interesting to see how the federal highway administration's guide will resolve this dilemma. It is clear, though, that congressional intent is to bring local officials into the planning process.

Not surprising that since this transportation bill came on the heels of a clean air act, there are close ties between the two bills. Later changes to the highway and transit programs will assist the state and local governments to meet clean air act requirements. A new program was created to provide assistance in meeting clean air compliance regulations. The new program is the congestion mitigation and air quality improvement program. Funding for this program is made available to the state based on proportion of the population living in ozone or carbon monoxide non-attainment areas in each state as a percentage of total U.S. population living in such areas.

Eligible projects are those that are judged by the secretary of transportation and the EPA administrator to be likely to contribute to attainment of national ambient air quality standards. the program is small, providing only about 1 billion dollars, but states like ND that do not have an non-attainment area are guaranteed 1/2 of 1% of the funds and they may use these funds as flexible STP funds.

The ISTEA makes a significant departure from the previous federal law regarding the mingling of federal aid highway funds and toll revenue. The intent was to stimulate greater public and private investment in transportation through partnerships and, as you all know, most local and state governments do not have all the necessary financial resources to meet all their transportation infrastructure needs.

In recognition of the need to develop innovative transportation programs in order to become more efficient and productive, several provisions of the ISTEA were adopted to accelerate technological development. The ISTEA authorizes funding to develop Intelligent Vehicle Highway Systems or IVHS, Magnetic Levitation or Mag Lev, and high speed ground transportation programs, among others.

Now, I've just described the major initiatives of the surface transportation program and there are a number of other important provisions I would just like to briefly mention, because I don't think the summary that you have touches upon some of these.
To promote intermodal transportation, the ISTEA established a new office of Intermodalism with the purpose of maintaining and disseminating intermodal transportation data and the coordination of federal research on intermodal transportation. The ISTEA also created a bureau of transportation statistics to enhance data collection, analysis, and reporting. One problem that became apparent during the debate was the lack of up-to-date and useful transportation data. It is hoped that by the time Congress meets again to draft a new surface transportation bill, if it does, the data will be available for an effective and productive debate.

Also, while not under the jurisdiction of the Environment and Public Works Committee, I've been asked to speak on FAA re-authorization. Given the shortness of the legislative year, I am told it is unlikely that the big picture issues of deregulation and competition will be addressed. Greater topics will include capacity expansion, central air service, and noise. As for capacity expansion, the 1990 re-authorization allows the imposition of passenger facility charges to compliment the federal grant program. These funds are to be used for airport development projects. This program is being reviewed. No significant changes are anticipated with the essential air service program and there is continued controversy over the ability of airport operators to pose local restrictions on noise.

To conclude, and you all have been very patient this morning, we all take pride in our nation's wealth and freedom. But the status of the super power cannot be claimed by a nation which consistently ignores its long term investment needs. Historically, total actual investments have been less than the amounts needed to maintain the overall serviceability of our roads. Total capital investment has not kept pace with system demand. For this reason, highway and bridges conditions and performance continue to decline. I find it rather interesting, that we can view the situation in the former Soviet Union and understand one of the fundamental problems they're experiencing is the collapse of their infrastructure. This nation must look and learn from their mistakes and look to long term investment in infrastructure.

There is much more to the new legislature than I have described here. I have focused on the intent of Congress because any major legislature represents only the broad brush strokes in a very complicated picture. Most of the detail will be provided by federal regulations yet to be published. So, it is not now possible to describe exactly how the new program and planning requirements will work. Members of Congress will be watching with the condition that the process will produce creative results that can be adopted for future federal transportation programs.

Thank you.
Thank you Gene. Good afternoon folks. I'm going to be showing some slides on the screen here, and if you don't have a good view of the screen, you might want to adjust your chair.

It's a pleasure to be here in North Dakota. What I thought I'd do is tie into some of the comments you heard from Kathy and some comments made in your Q&A session this morning.

This recent transportation legislation is a major happening in the last year that's going to effect every state and local transportation manager for years to come. I very much enjoy getting around and talking about the possible impacts on different groups of people. I looked at Gene's agenda and it really looks exciting, because the topic you have is something that is dear to the heart and soul of anybody in a state like North Dakota. If you look at a rural community that is based on economic activity involving something as basic as agriculture and something as perhaps new and off the ground as tourism, you see that you can do neither without transportation. You need to get products out and to get travelers in. Consequently, the premise of the meeting that what happens behind the transportation system dictates your state's future economic choices is an absolutely solid point of view.

I'd like to go through some slides and tell you a little bit about the surface transportation legislation of last year. Rather than focusing on the politics of how the delegates put this together, as Kathy did, I'll focus on the possible impacts and the areas in the legislation that you might want to watch out for. If schedule permits, we'll have some time to talk about some of these as we go along.

I also have the Highway Users Federation summary of the 1991 legislation. I notice your attendance booklet has copies of the Federal Highway Administration version, and that's a good summary as well. Our summary tries to look at the features of the legislation and put them in the kind of focus that perhaps the private organizations might like. That will give me a chance to tell you a little bit about the membership of the Highway Users Federation.

We are almost entirely private sector in our membership, and we date back almost exactly sixty years. We were founded in late 1932. Like our initiating organizations -- the motor vehicle manufacturers, petroleum companies, and shippers of all kinds, many agricultural interests have been with us since day one. The trucking industry, auto clubs, the insurance companies and others, got together in the mid 1930's. What brought them together was the severe depression and the government's need for money at all levels. People looked around for worthy sources of revenue and, low and behold, the budding road oriented industries of the time looked like very clear targets. If you owned a motor vehicle in the mid 1930s you had to be rich. You had to have a lot of money to put a toy on the road. Consequently, the governments of that era looked at road traffic with an eye toward taxation, regulation,
restrictions, and so forth. Believe it or not, I think we’re in some of the same situations right
now -- not for the same reason, we’re not in any depression, but we certainly have a situation
where governments at all levels are short on funds and are looking for sources of additional
revenue.

There are also concerns and arguments flying back and forth over the tie between
transportation and environmental issues. Some people like to draw a line in the sand and say
we can’t have one without hurting the other. I don’t see it that way. I think we can have a
situation in which we can use technology to make advances on the environmental front and
improve transportation as well.

Frankly, that is how I see the 1991 ISTEA legislation. It did many things that I think will be
helpful, but it also left many options. Rather than dictating what should work best across the
country, Congress left a lot of decisions to be worked out by local and state governments and
by private sector customers of the transportation systems. And that’s where I think the
Highway User Organization, as well as other user groups, comes in.

The legislation has several characteristics, many of which we worked on. The Highway Users
Federation tried to lead a coalition of private sector organizations toward talking to Congress
about what we thought was needed in surface transportation. Perhaps some of you were
involved in a series of public hearings that we had around the country, including one here in
the mid 1980s, to begin focusing on present transportation needs. I think that process worked
well, because we were able to have a say in a lot of the features in this ISTEA legislation. I
will emphasize again, however, there are things that you, looking at the legislation from the
standpoint of rural community, would want to watch closely.

The outlook of the Highway Users Federation is certainly pro-highway. We worry about the
roughly 90% of America’s travelers that use the road system. However, that does not mean
that we’re anti- any other mode of transportation. We don’t feel we can be. The entire national
transportation system in our country at this point is so fragile. There are no redundancies to
speak of. Every single mode has to work as efficiently as it can in order for us to even carry
today’s traffic, let alone offer the possibility of having an improved, upgraded, and increased
level of economic activity through the 1990s and beyond. We don’t get involved in, nor do we
like to see anybody else pushing the "our load versus their load" kind of argument. You see
some of these in the national press every so often.

From the point of view of the Highway Users Federation, this 1991 legislation is a blueprint.
It’s not a six-year blueprint. It is probably more like a twenty-five to thirty year blue print. I
think the features that are in this legislation will constitute the federal transportation priorities
for decades to come, much in the way of the 1956 legislation which developed the interstate
highway system.

So to start with, we’ll look at a few descriptions here. There were no new taxes, which I think
was good for the US economy. If we had imposed additional taxes while in an economic
slide, I don’t think anybody would have profited. On the other hand, we were able to get
additional funding for highways and for transit through an extension of taxes that had been scheduled to expire in 1995.

Eventually, the highway program may increase by maybe 30-35 percent and transit may increase in the same rough order of magnitude. But again, because of immediate budget pressures, most people will find, and I know this is true in North Dakota, that the budget you have to work with this year is basically equal to what you had in 1991. Everybody is suffering a little bit of inflation, so that means that buying power is down a little bit. In your case, you're very quickly off the mark. According to the latest Federal Highway Administration table, North Dakota ranked number five in the country in using the money which was made available in fiscal 90-92. That's an enviable record, one which North Dakota achieves frequently. In this particular framework I'd say keep it up. That's what everybody should be doing.

What you have to work with is roughly 104 million dollars of new money distributed. However, because of budget controls you only spend roughly 97 million of that. In effect, Washington is telling you that we're going to give you some money but you're going to have to keep some of it in Bismarck. You can't put it out in the form of transit improvements or highway improvements this year. That is a reflection of things that have been going on throughout the 1980s to the point that the balance in the federal highway trust fund right now is over 20 billion dollars -- 12+ billion dollars for highways, and the rest for transit. I don't like that at all. I don't think that's healthy. That tells me that the federal government is collecting taxes from highway users around the country and is just not willing to spend them. Now, if the legislation works the way it's designed to, by the end of this legislative period (by 1997) we will bring those balances down, but it sure hasn't happened yet. The balance is still growing through 1992.

Let me just mention a couple of other things on this chart. A lot of the money is flexible. In fact, perhaps as much as 85 to 90 billion dollars of the funds could be used either for road, bridge, or transit improvements or a mix of the same or low-cost/short-run kinds of capital investments like traffic signal improvements in urban areas, and just a large number of activities. That is unprecedented flexibility in terms of the size of the money. Basically, it is the same kind of flexibility that we've had since 1973 for the Federal Aid Urban System money. Flexibility has worked in the past in North Dakota. Many people are surprised when they see this list, but North Dakota is one of about a dozen states which have allowed some of the urban system money to be used for transit improvements during this last 20 year period.

There are four key words in the legislation and they all appear on the slide. One is intermodal. To me, that is very much of a plus for the highway system, too. You can't have intermodal anything unless you begin to worry about the 80% of the trips that take place on one of the systems. To me, a strong intermodal series of transportation systems begins with a good highway system and a good seamless opportunity to transfer from highways to or from another mode at places like airports, rail ports, water ports, and other transfer facilities. I think the concept of an intermodal system is good, and I'm sure it's going to stay throughout the next couple of decades or so.
The second word to look at is the descriptor efficiency. If Congress really means what they say, if they are concerned that transportation can help the productivity of United States industries, then they really have to worry about the productivity of the highway program. Eighty percent of the value of all freight around the country is now being carried on road systems. If you don’t worry about that 80% in the chance to influence the productivity rate, then you’re not going to have an overall increase in efficiency.

Third and fourth words are down at the bottom of the chart. A large portion of the bill is devoted to improvements in transportation safety and in environmental quality. There is enough money in the legislation to once and for all complete all of the remaining gaps in the original interstate system, plus money to continue protecting the level of performance on some of the older roads. In North Dakota you’ve got some older interstate facilities. You were one of the earlier states to complete the original interstate route. Consequently, you’ve got a lot of interstate pavement which is reaching the end of its economic life. It is going to be important for you to have a continued stream of federal funds to protect that level of investment. You built your share of the interstate system, 670 miles or so, at a cost of roughly 832 million dollars, which has got to be one of the worlds great bargains. The way your interstate system is being used, and will continue to be used well into the next century, you couldn’t begin to do it if we didn’t start it until the mid 1980s. You’ve got it in place and you need to make sure that it is protected.

To me, the next priority should be to make the national highway system work. The national highway system is a new concept, and it will basically take the place of what used to be the federal aid primary system, using the interstate as a core system and ending up with roughly four percent of the road system in every state. That four percent of the road network is designated to carry about 40% of all U.S. travel year in and year out, and maybe as much as 75% of all U.S. heavy travel. So this system really ought to be the crown jewel of federal involvement in the highway system. We ought to make sure that the national highway system is taken care of very well.

There are a couple of little features in this that are worth looking at. A four percent system for North Dakota might be somewhere in the range of maybe 3,500 miles or so, which is less than your current federal aid primary system. As Dick and the staff try and make adjustments from the federal aid primary system down to the new national highway system, you’re probably going to be taking some U.S. numbered and some major county roads or state highways off the federal system. You’re going to hear from a lot of local officials over that. Nationally, roughly 130,000 miles that are now federal aid primary routes are not going to be eligible for the national aid highway system. I think that is going to hurt somewhere and will probably end up back in Congress for some kind of solution between now and 1995.

The other key point on this chart is that there is a deadline. If Congress does not approve the national highway system by 1995, funds for the national highway system are scheduled to disappear. In effect, they would be canceled for the remainder of this bill. That would be a tremendous penalty. I’ve already described what I think the economic value of the national highway system would be. If we don’t have any federal funding for it, particularly in a state like North Dakota where federal funds represent just about 90% of most of your capital
investments and anywhere between 85 and 90% of your highway related capital investments, then we’re going to be in big trouble. We can’t afford to have that happen. We must have this 1995 deadline complied with.

One of the other features that Congress put in this legislation is that they want a lot more authority to be delegated to state and local transportation managers. In turn, they want these transportation systems around the country to be better managed than they are today. So, they set up a requirement that six different types of management systems be in place over the next few years. One of these systems, the pavement management system, is pretty well in place in most state DOTs. But, we have yet to conceive of many of the other systems. There isn’t even a manual out on how you would, for instance, make a safety management system work around the state, or how you would set up an intermodal facilities management system, or how you would do a public transportation facilities management system. So, many of these management systems are going to be breaking new ground. This is another reason why state DOTs and local transportation managers really need to have a close tie with their customers. With regard to the highway system, we feel your customers are the members of the Highway Users conference here in North Dakota. We’d like to work very closely with Dick and the staff as some of these management systems get underway.

Another feature of this legislature is that much of the national highway system money can be transferrable to the surface transportation program. I’d like to make sure that when and if funds are transferred out of the national highway system, they’re done so with a very close state-oriented look at what this does to transportation priorities around the state. As I look at where your money has been spent on the new highway transportation system in North Dakota, already I see there is only about one million dollars left. That’s a fast spending bunch of bucks in this state. On the other hand, there’s a load of money left in some of the other categories. When this happens in a state like North Dakota, I’d like to see more money coming into the national highway system so that some of these other needed improvements on the long distance travel facilities can be carried out as well.

The surface transportation program involves a great deal of flexible funds. These funds are available for use on any road and street in the state other than those that are already on the national highway system or roads that are just serving local access. You’re probably going to deal with 16-17% of your total road system eligible for surface transportation funding. There is a great deal of money involved in this — a larger pool of funds than you had with federal aid secondary and federal aid urban system funds. One of the issues that we will want to look at very closely is how these funds are being used. Congress will want to look at this as well. For instance, at the end of March there was roughly 35 million dollars in this category just sitting there that hasn’t been used yet. If some of the surface transportation money doesn’t get converted into project improvements in the early years of the program, Congress will be descending around the country and asking why. This is really is one of the key points in the legislation that unified Congress, and if it doesn’t seem to be popular they’re going to be asking why.
This chart shows you how some of the funds are broken down. I had to laugh when I finally saw the Federal Highway Administration's chart of the distribution of the surface transportation money. One of the watch words we heard during the Congressional debate was simplify. They wanted to simplify the process, make funds flexible, and leave a lot of latitude to state and local transportation managers. Yet, the first federal highway table that came out had eleven columns, because Congress had set up sub-categories for different purposes in different geographic areas. Every time this money gets split up it means a little less flexibility, so it's a tradeoff that shows up very obviously.

The bridge program is basically carried on as it was in the past, although the funding level went up roughly 50%. Here's another area that requires attention. You have roughly four billion dollars of old bridge money that hasn't been used yet. As the state begins to conduct its long term transportation plan, one of the things you'll need to be concerned about is setting priorities around the state and determining whether they are parallel to the priorities indicated by the size of the different funding amounts that come from Washington. If they aren't, you're going to have to find a reason to shift the money around from one category to the other.

Bridge money may be one area that the state would want to shift. That ability is built in, but I think you're going to have to justify to people worried about bridges that it is proper and cost effective to the citizenry of this state.

Another money shift might be in the congestion and air quality program. Most people thought this program would apply only to states, generally around the ocean and gulf coasts, that are not meeting air quality standards. But, low and behold, there is a one and one-half percent minimum stuck in for this program for every state, so you do have a little bit of money here. Roughly four million dollars of that hasn't been used yet, and that money could be very flexible and very highly productive to the state. Again, you're going to have to work out state priorities before you get into this money as well. The reasons for this program relate to the urban areas that are having trouble meeting the 1990 air quality standards, and this is going to be a new breakthrough area in requiring Department of Transportation and the EPA to work together. So here's one that we're going to be looking at around the country. In the mean time, I would hope that states like North Dakota can make early use of this money for some of the high priority otherwise unfunded problems around the state.

Safety, again, is one of the watch words of the legislation, and here I'd like to congratulate North Dakota. You've been having consistent reductions in your state wide traffic fatality record. You're down to roughly 1.9 fatalities per 100 million motor vehicle miles traveled, which is exactly the national level last year. It is very rare for a rural state with high speed travel and so forth to be down at or under the national average, so I would say keep that up. You've got some additional funding coming in through these categories to work on your remaining safety problems. You're going to have a lot of help out of the motor carrier industry as they continue building safer and safer vehicles. I also see a great deal of potential in Intelligent Vehicle Highway Systems. I really see tremendous advantages coming to rural areas from the opportunity to use IVHS technology to prevent single vehicles from running off the road or to prevent vehicles from running into one another on rural stretches of road. I think there's a lot of gain to be derived out of a safety area. In fact, I would invite you to take on
the national goal in safety, which we agreed to just a few weeks ago at a conference we held in Washington, to try to get that 1.9 fatality rate down to a level of 1.0 by the year 2000. If we do that, than instead of having 42 or 41,000 fatalities per year, the national fatality record will be down to 25 to 26,000 fatalities.

Motor carrier safety is another area that received a lot of emphasis in the legislation. Here again, I think there are a load of gains to be derived for rural America if we make the motor carrier safety funding and if we can make things, like the uniformity provisions in this legislation, work well. Uniformity, permitting the long distance trucker to make a trip through seven or eight states using only one pad of paper rather than a six-inch high stack that they have to have now, has the opportunity to influence productivity in the trucking area. Most people estimate that truckers waste as much as two billion dollars a year filling out these multiple applications to several states. If we can eliminate that, that's a real gain for productivity right off the bat.

It is going to be tough to develop a state wide transportation planning program. Very few states have done that before, and this legislation calls for the state DOTs to work even more closely with the local transportation managers and in states all across the country. There are places where it works well, but, more often than not, this kind of cooperation is going to have to be taken on as a brand new activity. I would urge everybody to keep track of that. I think this is an area where people are going to be looking very closely at the product and if it isn't working well, they'll come back to visit some of these principles in '91, perhaps establishing penalties and so forth. I would invite you, through the DOT, to begin working more closely with the user community. We would certainly be welcome, from the Highway User conference point of view, to pull together your highway users to help you on this. What I'd like to see is a cooperative relationship where the users of the transportation facilities, your customers in effect, work with the transportation managers to jointly identify where the deficiencies are now, where they're likely to be over the next five to ten years, and what the priorities are of taking care of these deficiencies. There's always going to be more deficiencies than we have funds to take care of them.

The companion feature is that the same kind of added emphasis on planning takes place in urban areas. While you're not urban in the sense that New Jersey and coastal California are urban, you have your urban areas as well. You're going to have to look at these features and make them work also.

The last thing I'll mention is that the Highway User Federation attempted to get a number of features in the legislation, and I'll just run through some of these to give you an idea of why we think this is a good piece of legislation. First of all, we wanted to have funds to complete and protect the interstate system. Those funds are in there. We wanted emphasis on the national highway system and the funds are in there. We wanted to make sure they continue to work. We want to make sure that the 1995 deadline for system approval is met. We wanted more emphasis on funding to take care of this growing traffic congestion in urban and suburban areas, and certainly there's enough of money there. We can make the surface transportation program work well. At the same time, we did not want to overlook rural America, because the problems with basic access that rural America has suffered in recent
years have been increasing visible. I think Dick has done an excellent job as spokesman for rural America and consequently, the portions of the surface transportation program that allow funding and, in some cases, reserve funding for rural problems are very helpful. I would have liked it if the metropolitan and the rural funds were separated to avoid conflict among rural and urban regions in state legislatures and other parts of the country, but that didn’t work. And also, we wanted funding to keep the bridges safe. Obviously, we got roughly a 50% increase there so that part of it worked. We also wanted to have additional funding and additional emphasis on traffic safety -- that’s in there. We wanted additional help for federal stimulation of research including research on Intelligent Vehicle Highway Systems, that’s in there.

We also wanted to have national attention on the need for the development of a scenic and recreational roadway system. Every state in the country would love to operate the amount of economic activity you get from tourism. In order to do that, you’re going to have to make sure that tourists know where your attractions are and how to get there. That in turn means that you’re going to have scenic and recreational facilities with their own system identification for out of state travelers that are coming into North Dakota.

The last feature that we wanted was more emphasis on transportation planning and a better managed transportation system. And that, as I’ve mentioned in the last couple of slides, we got as well. We feel we were 9 for 9 in our main priorities. We like the legislation. We want to make it work. We want to help transportation managers make it work for the benefit of the private sector groups which we represent both at the national level and also at the state highway user conference level. What we have here is a mandate to do something and a license and an opportunity to do what’s really preferable and what’s right from the point of view of your community and your state. We all approach it from that standpoint as we try and see how much of a benefit we can get out of this legislation. By the time we get into the twenty first century, we will have found that this legislation and the bills that follow it are really going to have upgraded the entire transportation system. Maybe someone in my position standing here in the year 2000 won’t have to lead off every conversation talking about the fragility of the US transportation system. If we do that then I’m convinced that, in keeping with the improvement in transportation performance, we will also have this large scale improvement in the health of the economic activity around the country that all of us want to have happen.

So this is my message. What we have here is worth working for to make sure it works well. It won’t work if we all sit back and just leave it to Washington or to Bismarck. We’re all going to have to keep our hand in it, keep our own priorities in mind, and work with our counterpart public and private agencies to make this bill perform the way it should.

So let me leave you with that. Again, I think this is one of the most significant things that we’ve seen happen in the last thirty-five years. It is something that can work to everybody’s benefit, but it won’t work unless everybody works to make it work.
Focus Group Summary:

1. Focus Group Title: Railroads
   - adequacy of rail equipment supply
   - volatility in demand for rail transportation services
   - equity in distribution of rail equipment among shippers and regions
   - maintenance of the railroad infrastructure, particularly the light density branch line system
   - need public/private partnership to establish and maintain core rail system that will adequately serve current and future needs
   - marketing information is needed for analysis and to maintain competition in railroad transportation
   - competition will promote efficiency in provision of rail services
   - promoting efficiencies in the operation of the light density rail network is in the best interests of all
   - performance of the national transportation system is just as critical to North Dakota as our local system
   - without public/private partnership, we must expect private sector profit motive alone to drive decisions regarding system rationalization
   - long term viability of light density rail network is critical, and ownership decisions may include consideration of least cost operator, retention of service to rural shippers, employment, effects on the basic economic sectors
   - need to promote intra- and inter-modal competition, but at no one's particular expense, and promote competition to the end of gaining efficiencies resulting from competition
   - need to recognize and promote the inherent advantages or efficiencies of each mode.
2. Focus Group Title: Truck Regulatory

- severe economic and logistical barriers exist in the state which restrict free trade
- reciprocity problems with surrounding states and provinces hinder trade
- taxation will continue to be a big issue -- user fee increases seem to be inevitable
- diversion of funds to non-transportation use must be stopped and reversed
- using transportation funds to gain federal matching dollars is a far better investment of local funds
- uniformity in state laws and regulations is critical to provide productivity gains
- education to increase the supply of drivers will alleviate current shortage

3. Focus Group Title: Highway Engineering

- new legislation allows flexibility in setting own highway design standards
- liability issue arises as result of deviations from standards
- changing rural road demands may suggest reduced design standards, but equipment sizes may not accommodate narrower bridges or other scaled back portion of the system
- need analysis on local land use to account for obsolescence before spending funds in rural areas
- inconsistency in design standards among functional road classes should be evaluated to accommodate door-to-door service
- need expanded research effort local roads and rural pavements to assist in the long-term planning process

4. Focus Group Title: Agricultural Transportation

- assessment of transportation needs required in rural communities
- retention of branch line network is necessary for rural development
- intermodalism needs to be promoted
- rail pricing and equipment issues are critical to rural communities
- changes in rural economies and funding patterns require stepped-up planning efforts to properly prioritize funds
- standardized regulations are needed
- "core" or primary system with adequate feeder network still required to give agriculture access to markets
- international trading agreements will have an increasing impact on rural economies; effects on trading patterns needs to be analyzed to determine appropriate policy decisions
5. Focus Group Title: Highway Finance

- need to funding mechanisms in place now to provide matching funds
- seat belt and helmet law issue needs to be resolved to avoid sanctions or penalties
- diversion of funds must be addressed
- matching funds from rural areas for demonstration projects will be hard to raise
- equitable treatment of cross-border truck traffic is essential
- raising transportation revenues of any kind will be difficult in near future
- appropriate use of transportation funds for economic development must be analyzed
- state-wide planning needs to be enhanced, and should include state, county, city, and township plans

6. Focus Group Title: Aeronautics:

- air service to our state is crucial to our economy
- financial health of carriers is a primary concern in the industry today
- air cargo issues may be important to rural areas as capacity constraints are reached at some metropolitan facilities
- planning is critical so funds are spent wisely
- funding at the federal level is static at a time when demands are escalating
- "knee-jerk" reactions to problems do not fit with long-term planning efforts
- organizational structure of governing agencies needs to be assessed
North Dakota's Transportation Network:  
Our Choice for the Future  
Conference 1 - April 14, 1992  
Sheraton Inn, Bismarck, ND

Reports from Focus Groups

Gene Griffin

In the closing session, what we'd like to do is to have each of the recorders from the focus groups give a report on what they identified as issues. I believe these will all be combined into a report that you will receive sometime down the road prior to the next meeting.

Railroad Focus Group

Dan Zink - The Upper Great Plains Transportation Institute; Fargo, ND

The rail focus group generally concentrated on about four or five different issues and there were about a half a dozen more that we didn't have time to address. The first one really focused on the whole idea of rail equipment supply. There were some unhappy memories of the situation this winter and two years ago when country elevators had trouble getting the number of cars they wanted. It wasn't just rail cars, but there were also some potential problems with locomotive supply and so on. We narrowed it down to needing some solutions to the volatility of the demand of rail equipment, as well as developing some kind of policies on equity in the distribution of rail equipment among shippers and among agents.

Maintenance of the railroad infrastructure was a pretty important issue. We decided that the state really needs a policy for investment in rail facilities above and beyond what's being done right now. This should include some kind of public and private partnership to establish the core rail system that's going to serve the needs of North Dakota well into the future. That could involve some kind of financing package that we may not have in place right now. We concluded that appropriate and correct marketing information involving all of the participants in the transportation or the marketing system is desirable, because it allows the carriers and shippers and all participants to compete, which is going to promote efficiency in the system.

We had a lot of discussion on the light density rail network in North Dakota and how we can promote ways to improve the efficiencies with which cars are gotten on and of the branch lines -- whether that be short line ownership or changes in different structures then previous. The general conclusion was, without a lot of specifics, that promoting efficiencies in light density rail operations is in the best interest of all concerned.

We also discussed the fact that the North Dakota transportation system certainly doesn't exist in isolation. The performance of the national transportation system is just as critical to North Dakota as is our local system. Two examples are the condition of the Upper Mississippi lock and dam systems and the conditions of ports which may or may not be able to handle the capacity for a strong export year. We have to exist in the entire national and
global context of the transportation system -- realizing all the time that whatever we want from our railroad system is not going to be free. We have to remind ourselves that a profit motive will drive basically all of the decisions in that policy arena, and we have to recognize that there are no free lunches.

As far as railroad pricing, we pointed out that there are a couple things that we really need. Number one is competitive rates with other producing regions so North Dakota producers and shippers can move their product to export points -- especially to compete with other regions. We also need equity within the producing region so there are not situations where grain may be hauled locally that is not in the best interest of all concerned.

As far as ownership of lines, especially the ownership of the light density branch line network, there’s a lot of discussion about short line ownership or class I ownership. We decided that we need to establish what criteria should be used to decide who should be operating the North Dakota railroad network. Should it be the lowest cost operator? Should it be the carrier that provides the most employment? Should it be the carrier that can retain rail service to the most shippers? What other factors should be considered in whether or not a line basically needs to be sold off from Class I larger carriers to short line carriers?

We concluded that we need to promote both intermodal and intramodal competition and promote competition at no one’s particular expense, but promote competition to the end of gaining the efficiency that will result from competition.

And finally, we need to recognize and promote the inherent advantages or efficiencies to be gained from each mode, whether it be through length of haul or local services.

**Truck Regulatory Focus Group**

**Duane Cossette - Raymond Cossette Trucking; Fargo, ND**

We talked at length regarding truck regulatory issues, and after much discussion our attention focused in five basic areas, the first of those being reciprocity or free trade. The second was truck regulation, the third overall tax or user fee diversion, four was the uniformity issues, and the fifth was driving schools or the education side of beginning truck drivers.

First we’ll look at the reciprocity issues or concerns. This is considered by the group as the number one priority. Today, severe economic and logistic barriers exist in North Dakota restricting free trade. For an example, with our neighbors in Manitoba, partnerships throughout industry groups have become more and more important. The need to become a part of a shipper’s core group is extremely important, because you allow to carry the quality chain forward. To be successful today, shippers must compete globally, so they restrict the number of members or suppliers. North Dakota carriers have a severe disadvantage when competing in the international scene with Canada. For an example, our neighbors in Minnesota have full
reciprocity and are able to go into Manitoba without any additional cost. Yet, here in North Dakota we not only can’t do it, we have a tremendous burden. For example, for our fleet to service Manitoba we will have to spend $44,000 in reciprocity costs. Our extended authority, which allows us to serve our customer base, also requires us to have a license plate on the truck in order to enter Canada. Because we don’t know which truck is going into Manitoba, we must license all the trucks and that is a $44,000 issue -- an issue that shippers don’t have to pay if they’re dealing with carriers based out of a different state. I think North Dakota is one of three states within the United States that doesn’t grant reciprocity with Manitoba.

Also, we see some agricultural reciprocity problems or concerns. For instance, Montana restricts some agricultural carriers but does not allow a free zone.

The regulatory issue is a sensitive one among motor carriers. After lengthy discussions, it became apparent that this will continue to be a path that is forced upon us through economic and environmental efficiencies. It is necessary that the regulatory climate continues to change.

The third issue was overall taxation. It’s important for us to realize that in today’s environment we’re going to be asking user fees. User fees will become more of an necessity to support the economic well being of various states. Certainly, the motor carrier group, as well as all users of highways, contributes a lot of dollars to support that. It is important that those dollars do not become diverted. We have seen some of those things in the past such as the bingo stamp diversion. Basically, 5 million dollars per biennium have been diverted from highway funds into the general fund. If you take that and expand it four or five times to represent the dollar amount that can be produced in the state with federal funds, you see that it is a very important 5 million dollars that should remain in the highway fund to help bring the greatly needed federal matching funds to North Dakota.

The next issue relates to uniformity. This is an issue that needs to be always in our minds. As we continue to make and pass regulation, it’s very important that we’re looking at our needs on an international, if not global, level. Too often today, laws and regulations are in place that restrict the ability to cross the borders or to have consistencies in the business. We find that within the 48 states, as well. We talked about size and length, but the main focus of our group was to look at opportunities for productivity. One possibility would be to increase the height of trailers here to 14 feet. We compete a lot with the western states who have adopted the 14 foot height as a standard. Again, we must keep that focus around us to make sure that our regulations are compatible and not only focus strictly within our immediate needs.

The last issue is the driving school and the educational side. The supply side of drivers is extremely important. It’s a good career. It’s a career that we need to develop in the younger years as we approach the high school side and develop truck driving as a career. Today we have many burdens in place. Most carriers ask that the drivers be 25 years old and have 100,000 miles, and yet there’s nothing to get them there. Comments were made that we’ll put fighter pilots in the air and we want the young minds to do that, yet we don’t put them out
driving our trucks. We think that, through apprenticeship programs, we can take young people that can be focused, select a career, find one that their good at, make good money, and be real contributors to society. Dickenson State has a truck driving program, and we should be looking at ways to foster and promote that.

Highway Engineering Focus Group

Charlie Gullichs - North Dakota Dept. of Transportation; Bismarck, ND

We had a little trouble staying focused on engineering. It seems like everyone was more interested in money and where the money was coming from and how much was available, but nevertheless, we did talk about some engineering aspects. I don't know if it's been mentioned before, but the new highway bill allows, in some cases, the states to set their own design standards for construction of highways. Interstate and the national highways must still be built to FHWA or the current AASHTO standards. But other highways on the service transportation system can be built to state adopted standards. At this point in time, we do not have any state adopted standards. This is something that could be done, and we are looking at doing this -- especially for the city projects.

One of the issues or concerns in deviating from the approved standards is liability. If you design and build a highway project to something other than a standard, then you are opening yourselves up to possible law suits if their should be an accident. With that in mind, there should be standards in place before the project is built to protect yourself from that liability.

Reducing the standards for highways other than the national highway system could allow bridges to be built narrower to accommodate traffic. In some cases, though, there's concern about the large farm vehicles that are so wide they can't even cross some of the existing bridges. So, even though standards are reduced, there is a concern about how to accommodate the large farm equipment that may want to move across those particular areas.

Another concern that was brought up was that sometimes a project will be built to pretty high standards only to find that in a couple years there's a lesser need for that road -- it is no longer a school bus route or people have moved away so there's nobody there to use it. That brought up the concern that before building a project, especially a local road, there should be a little more emphasis placed on gathering data on land use in the area to determine how long that facility is going to be used as a school bus route and so forth.

Another area of concern was that in the movement of goods a truck may load up at a terminal, get on the interstate, and go on into Minnesota or Wisconsin someplace only to find that they have to go several miles off the interstate. Then, because of the restrictions on that road, are unable to get to the place where they need to deliver their product. This points out an inconsistency in the design of roads off of the interstate, in that they aren't designed to
accommodate the interstate traffic that wants to get off the interstate to a terminal or warehouse. Perhaps there needs to be some study made to ensure that the designs are consistent with the major routes that are being served.

The fourth area that was brought up and discussed was research. It was suggested that there is a need for research on local pavements or local roads. In conjunction with this, the new highway bill does specify that twenty-five percent of the planning and research money is to be spent on research. We are currently working on this, and probably will be involving the counties and the cities to see what their research needs may be and to how include them in the research program.

Agriculture Transportation Focus Group

Dave Rustebakke - North Dakota Farm Bureau; Bismarck, ND

I guess if you went over a few more issues here, you would probably cover most everything that we talked about in our group, but probably in more detail. We sort of brush stroked over different areas like regulation and dealing with railroads. We broke the topic down into about three different areas. The first one is railroads. We would like to look into the future of railroads and where they’re going and what is happening with the differences in them. The committee felt that an assessment should be done for railroads to determine what is needed in each community. How much rail transportation is needed in that community? How much road transportation? We should not only be looking at the flow, but the counties so that their specific needs, such as heavy transportation facilities like grain, can be met.

The group also looked at branch lines and felt that they serve a useful purpose. They like the main lines, but they felt that branch lines do have a purpose.

They also talked about the port authority idea that was brought up today and what the possibilities are of that being instituted. We didn’t have a real opposition to it, but we would like some more information about how it could be used in this state. I think there was also a feeling that we might be able to do something about that right now with legislation that we already have on the books.

They also talked about intermodal transportation and its future. It was brought up that the pasta plant will probably have to look at an intermodal type system, yet, we don’t currently have an intermodal type system in this state. That’s something we may want to look at in the future for economic development in the state.

One other issue that they talked about, was multi origins for unit car trains so it wouldn’t have to come out of one place -- maybe involve a lot of different places on the same line to give you multi origins. We also discussed the future availability of cars. Are rail cars
going to be available? We felt that rail car availability was almost as important as the type of track and the types of cars running on those kinds of track.

We then moved into the roads and highways. Similar to the railroad, we felt that there needs to be studies done on this. Charlie was just talking about dealing with design specs. What are the different needs of the future for these different highways? It was brought up that Richland County did a similar study to this about three or four years ago, and the group was interested in the results of that study. Is it being implemented? Is it a useful tool? So, we had a question on that. We felt that would be a good area to look into.

They also talked about the changes in agricultural transportation. It's gone from the 300 bushel truck and single axles that we used to have to the tandem axle trucks -- some of them are driving semi trucks now. That needs to be looked at when were talking about roads and transportation systems.

We also talked a little about the need to prioritize or develop primary systems in different areas to provide accessibility to main roads. That falls into the next issue we talked about -- regulations. We felt there's a real need for standardized regulations -- whether that be the reciprocity issue with Montana or the load limits from one highway to the other or the types of trucks that can be used on those roads. Maybe we could keep load limits the same and reduce speeds. In any case, try to develop some standardizations that they can use.

The last issue that we talked about was how the North American free trade agreement could make a difference in North Dakota as being maybe one of the primary routes of commodities through the states. What affect will it have? How are they going to effect the tax base? How they are going to help pay for the roads?

Highway Finance Focus Group

Lavonne Langord - AAA of North Dakota; Fargo, ND

Ironically, so many of the topics that we discussed in our group have already been covered by previous speakers up here, but I'm going to at least go through the steps that we went through. I think we'll probably all have the same end result.

We were fortunate to have two state legislators with us, which was pretty helpful in a couple of these issues. The first issue we discussed was the necessity of getting matching funds as soon as possible. We were informed that for fiscal year '92 we are 3 million dollars short. For fiscal year '93, 9 million dollars will be needed match the federal funds coming. The second thing we talked about was the need for a helmet and safety belt law. We were informed that if a helmet and safety belt law is not enacted in North Dakota by 1994, in the first year 1.2 million dollars would need to be shifted into safety issues -- 2.5 million by the second year. This being a very major issue, what our group came up with was the need to
educate the public that these funds for construction and maintenance for highways will be lost unless we have helmet and safety belt laws in place. Interesting enough, the two legislators said that this issue was the hottest issue. They have raised taxes and faced many other issues in the last session, but they heard from more of their constituents about this issue than any other. So, it will be something hotly debated.

The third thing we talked about was the diversion of funds which has been brought up by other groups, I understand. Right now, between 22 and 23 million dollars is being diverted, a major portion of that going to the highway patrol. Realistically, we don't feel as a group, and the highway department personnel and legislators that were with us agreed, that there is any chance of that ever being changed in the future. Highway patrol funding coming out of the general fund is not a possibility.

The fourth thing we talked about was the demonstration projects with the counties and the cities that are not state funded. Right now, and over the next six years, there's 72 million dollars in demonstration projects. These local governments (the counties and the cities) have to match 20% of that -- 80% coming from federal funds. Where these counties and these cities are going to get the funding that they need in order to complete these demonstration projects has become a major problem. Because of changes made within the last session, there is now a larger burden placed on those local governments. There are also several laws in place that restrict where the assessment for this money can be made, the level of it, and the sources of it. So, its going to be a major problem.

The fifth thing that we discussed at length was Canadian truck travel. Our result was that we ask that it be looked into. What are North Dakota trucks paying to go into Canada versus what Canadian trucks pay to go into our state? Enough has been said about that.

We also talked about vehicle registration fees. We do know that North Dakota has lower registration fees than states surrounding us. Realizing that it's quite difficult to compare apples to apples when motor vehicle staff people have tried to get this information from other states, but the two legislators did indicate that would be a major interest to them. The registration fees were raised last session, so the question coming up again is very questionable.

We also talked about bridges. We're fortunate (I guess fortunate if you want to call it that) that the deficient bridges that are in this state now are on non-federal roads. Again, this goes back to the problem with the counties and the cities finding funding for that. That is just another area that they have to fund.

We also talked about the use of highway money for economic development, as did another group here. Specifically, the need for four lane roads. Les Lamm did inform us, though, that it is possible to change or switch the federal funds so that they do cover those non-federal roads for economic development purposes.
The last thing we talked about was that state-wide planning needs to be done. And it
needs to be done to include the state, the county, the city, and township plans.

Aeronautics Focus Group

Gary Ness - North Dakota Aeronautics Commission; Bismarck, ND

One thing I noticed as I sat and listened today, we have deregulation of the farm credit
administration, deregulation of the S&L’s, deregulation of trucking, deregulation of rail,
deregulation of the airline industry -- when are we going to do it right? Our focus group was
bouncing all over, like everybody else I’m sure, and the one thing that came out is that air
service to our state is most important to our economic development or economic survival.
When you look at the region, we transcend the regional outlay of the Humphrey Institute,
because North Dakota’s service is a main one to four different hubs, Chicago, Minneapolis,
Denver, and Salt Lake. They’re being served by seven different airlines and seven areas.
When you look at us in terms of air service, we’re better than anybody in the region, except
for Minneapolis, for service to our communities. The one thought pattern that came out of our
meeting was that Minneapolis, who is a recipient of 70% of our passenger load into the
system, is not really aware of us as a percentage of their total traffic. They are a link, like they
have been since statehood, and are very important to us in what happens down there.

The other factor along with this is the health of our carriers -- the airlines that service
us. We have two big players with us, Continental and Northwest, and there is some real
concern by the committee about their health. There was talk of the proposed commission to
view the health of the industry and where the industry is going. The bill that came out of the
House states that 6 billion dollars was lost in the last two years in the airline industry. There
have been mergers and bankruptcies and no new carriers stepping forth within this volatile
community. After a lot of other discussion, that basically was the focus of what we wanted to
look at today.

One focus in the future should be air cargo changes. We had a short discussion this
morning on whether we should build a new airport in the Minneapolis area or build up the
capacities that are already out there. We talked about capacities of roads and streets, but we
are lacking capacity in some places and have excess capacity in others. That has to be on
the federal side The FAA has to address that and take a stand issues such as a new airport in
Chicago. Why we are spending money building a new airport in Chicago when it could be
better spent maintaining the function of the airports that feed Chicago?

When you look at a 3 billion dollar or 10 billion dollar price tag, you see that the buck
is so important to us today that we can’t spend it foolishly. We’ve already spent too much
money in that area right now with five side by side studies on one airport.
Minneapolis, and what happens in Minneapolis as far as the aviation community is concerned, is very important. The Humphrey Institute, being where it is, is a real touchstone to look at as far as the direction.

The funding at the federal level is static. They're projecting 2.1 billion dollars per year for the next three years. But demands are being placed on airports that take away from them the ability to maintain. The last five big regulations that came out of the FAA and out of Congress were knee jerk reactions to specific incidents. A mistake was made at Laguardia. An airplane didn’t de-ice enough and they ended up having a serious accident. Now there’s a proposal to have de-icing equipment at the end of every runway on every commercial airport. That ain't cheap! You take a look at a lot of the other reactions -- they get more expensive every time. You just have to take a good grip and take a look.

On the funding side, North Dakota is a recipient state. When you take a look at the funding side of the federal highway bill you see that we receive about two dollars for every one dollar we put in. I think that we are happy with the planning that we have accomplished through our airports, but the organizational structure with FAA can be improved. When we meet again, and are a little more organized, I think we should look at the open sky issue -- how that fits into the free trade act and how that affects our airports and the market areas in which we work.
North Dakota's Transportation Network:
Our Choice for the Future
Conference 1
April 14, 1992
Focus Group Members

### Aeronautics

<table>
<thead>
<tr>
<th>Name</th>
<th>Organization</th>
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<tbody>
<tr>
<td>Jim Hatlelid</td>
<td>Midco Data Systems</td>
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<tr>
<td>Mark Holzer</td>
<td>ND Aeronautics Commission</td>
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<tr>
<td>Kevin Kudina</td>
<td>Federal Express</td>
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<tr>
<td>Gary Ness*</td>
<td>ND Aeronautics Commission</td>
</tr>
<tr>
<td>Mike Ryan</td>
<td>Minot International Airport</td>
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<tr>
<td>Sam Schutt</td>
<td>Univ. of Minnesota - Humphrey Institute</td>
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<tr>
<td>Bob Selig</td>
<td>Grand Forks Regional Airport Authority</td>
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<tr>
<td>Russell Staiger</td>
<td>Bismarck-Mandan Development Assoc.</td>
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### Highway Engineering

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<tbody>
<tr>
<td>Gary Doerr</td>
<td>Kadrmas, Lee &amp; Jackson, P.C.</td>
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<tr>
<td>Jerry Dunlevy</td>
<td>Concrete, Inc.</td>
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<tr>
<td>Henry Fietzek</td>
<td>J. R. Simplot</td>
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<tr>
<td>Charles Gullicks*</td>
<td>ND DOT - Wetlands, Environ., Archeology</td>
</tr>
<tr>
<td>Chuck Morman</td>
<td>Morton County Highway Dept.</td>
</tr>
<tr>
<td>Larry Rosencrans</td>
<td>ND Assoc. of Oil &amp; Gas Producing Counties</td>
</tr>
<tr>
<td>Harley Swenson</td>
<td>Swenson, Hagen &amp; Co.</td>
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<td>Stan Wright</td>
<td>City of Stanley</td>
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### Agriculture

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<tr>
<td>Syd Craft</td>
<td>ND Grain Growers Assoc.</td>
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<tr>
<td>Frank Dooley</td>
<td>NDSU - Ag Econ</td>
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<tr>
<td>Stan Erickson</td>
<td>Red River Valley Potato Growers Assoc.</td>
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<tr>
<td>Joe Glatt</td>
<td>Kem Electric Coop</td>
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<tr>
<td>Jill Hough</td>
<td>Upper Great Plains Transportation Institute</td>
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<tr>
<td>Don Leapoldt</td>
<td>Upper Great Plains Transportation Institute</td>
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<tr>
<td>Ron LeClerc</td>
<td>Economic Development &amp; Finance</td>
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<td>John Leininger</td>
<td>ND Farmers Union</td>
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<tr>
<td>Connie McBride</td>
<td>Office of Congressman Byron Dorgan</td>
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<td>John Mittleider</td>
<td>ND Barley Council</td>
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<td>Paul Olson</td>
<td>Olson Implement Co.</td>
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<td>Jim Peterson</td>
<td>ND Wheat Commission</td>
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<td>Dave Rustebakke*</td>
<td>ND Farm Bureau</td>
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<td>Lloyd Schmidt</td>
<td>Red River Valley Potato Growers Assoc.</td>
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<tr>
<td>Steve Strege</td>
<td>ND Grain Dealers Association</td>
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<td>Ken Yantes</td>
<td>ND Township Officers Association</td>
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### Highway Finance

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<tr>
<td>Bradley Ballweber</td>
<td>Northern Improvement</td>
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<tr>
<td>Gary Berreth*</td>
<td>ND Dept. of Transportation</td>
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<tr>
<td>Floyd Borud</td>
<td>Power Fuels, Inc.</td>
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<td>Fay Connell</td>
<td>Country West Real Estate</td>
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<td>Paul Deiderich</td>
<td>Industrial Builders, Inc.</td>
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<td>Robert Johnson</td>
<td>ND Public Service Commission</td>
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<tr>
<td>David Johnston</td>
<td>Valley City Area Chamber of Commerce</td>
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<td>LaVonne Langord</td>
<td>AAA of North Dakota</td>
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<tr>
<td>Carol Lovro</td>
<td>Highway Users Federation</td>
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<td>Robert Maeyaert</td>
<td>TMI Systems</td>
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<td>James Moench</td>
<td>ND Farmers Union</td>
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<td>Curt Peterson</td>
<td>Associated General Contractors of ND</td>
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<td>Norlyn Schmidt</td>
<td>ND DOT - Planning</td>
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<tr>
<td>Kenneth Solberg</td>
<td>ND State Senator</td>
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<td>Gerry Wilkie</td>
<td>Rolla Chamber of Commerce</td>
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### Truck Regulatory

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<tr>
<td>John Beardmore</td>
<td>Big Dipper Ent.</td>
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<tr>
<td>Dina Butcher</td>
<td>ND Grain Growers Association</td>
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<tr>
<td>Duane Cossette</td>
<td>Raymond Cossette Trucking</td>
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<td>Dennis Erickson</td>
<td>ND Dept. of Transportation</td>
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<tr>
<td>LeRoy Ernst</td>
<td>ND Motor Carriers Association</td>
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<tr>
<td>Mike Geinert</td>
<td>Cloverdale Transportation</td>
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<tr>
<td>Don Hockhalter</td>
<td>Consolidated Freightways</td>
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<td>Bruce Larson</td>
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<tr>
<td>Julie Rodriguez</td>
<td>Upper Great Plains Transportation Institute</td>
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<tr>
<td>Robert Senger*</td>
<td>ND Public Service Commission</td>
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<tr>
<td>William Springer</td>
<td>Cummins Diesel Sales, Inc.</td>
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### Railroads

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<tr>
<td>Wanda Baar-Hoechst</td>
<td>Transportation-Communication</td>
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<tr>
<td>Jim Bobb</td>
<td>Southwest Grain Cooperative Terminal</td>
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<tr>
<td>Darwin Bossart</td>
<td>Adrian Equity Elevator</td>
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<tr>
<td>Kent Buss</td>
<td>National Sun Industries</td>
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<tr>
<td>Doug Erhart</td>
<td>BMWE Legislative Director</td>
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<td>Bruce Hagen</td>
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<td>Robert Lenertz</td>
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<td>John Risch, III</td>
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<td>Ron Rowland</td>
<td>Wahpeton Chamber of Commerce</td>
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<tr>
<td>Vern Wills</td>
<td>ND Mill and Elevator</td>
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<tr>
<td>Daniel Zink</td>
<td>Upper Great Plains Transportation Institute</td>
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* Facilitator
CONFERENCE EVALUATION FORM SUMMARY

<table>
<thead>
<tr>
<th>Sections</th>
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<th>Somewhat Valuable</th>
<th>Very Valuable</th>
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<td>Barbara Rohde</td>
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<td>Denver Tolliver</td>
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<td>Kathy Ruffalo</td>
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<td>Les Lamm</td>
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Comments from conference attenders:
Good Program, good speakers, need more information to ascertain needs across the state.

Need more!

List some recommendations for the facilitators - a direction.

Don’t let these idea’s die here, work to implement them and give the media an opportunity to publicize.

Need to orient everyone on thinking to the future and be pro-active on tough local issues rather than reactive.

Communities need to be educated as to what the trends are in the future.

Meeting was very preliminary which could lead to ideas.

We need cooperation between Highway Dept. and general public.

Big Issue -- funding.

Lots of good ideas and problems brought up. Lots of items to work on in future. With the combination of ideas brought forward and a give & take attitude from each other, mountains can be moved in future.

The value of this particular meeting won’t be completely apparent until a later time.
We can see that more planning and more study needs to be done to maintain and improve the transportation systems of North Dakota.

With so many things to do and so little money to do it, there will be some very difficult decisions to be made.

Use an overhead and let group reporters write their summary points.

Focus Groups; now they have gone over idea's, would do better if they met again...to bad time will not allow this to occur.

Please increase focus on Aviation for the region.

Follow-up sessions will be very valuable.

This type of conference is needed, keep up the good work.

Use the issues brought up here to highlight future conferences.

Many of the groups come up with the same concerns. We need to make sure that it does not stop here. North Dakota's future will depend on transportation, and these concerns need to be addressed now. Lets carry this forward to those who can make these decisions.

Good format. Followed time frames. Hope information obtained today can be expounded on at future sessions.

Thanks for the invitation to attend. This conference is the first step in having some input into North Dakota's transportation future.

I thought the conference was well planned and presented by the speakers.

I think it is a very helpful and an excellent approach to getting things done.

Good conference. Future should have more emphasis on aviation.

Need better ideas of Humphrey groups "work scope." What's focus for Congress from study? Put on agenda of goals of group. Need instructions of who is attending. Need to hear more of what intermodal means for air, train, road, and water. What can region do to be intermodal.

Who is on steering committee?

Invite airline managers, air freight, and air taxi as spray representative as user groups to establish industry needs.
CONFERENCE II PROCEEDINGS
TRANSPORTATION AND ECONOMIC DEVELOPMENT:
OUR CHOICE FOR THE FUTURE

Tuesday, August 25th, 1992 – The Sheraton Inn, Bismarck, ND

New transportation legislation and new funding mechanisms will move us toward a more flexible and choice-oriented world. The conference outlined below will challenge participants to discover new ideas for North Dakota's growth and development by providing a quality transportation system in this new environment. Three speakers will highlight decisions facing North Dakota in the next decade and challenge the audience to engage in a thought-provoking and idea-generating session. Smaller focus groups will then be formed, and with the help of a facilitator, be asked to help shape the future of North Dakota's transportation network.

Conference Program

9:30 a.m. Registration
10:00 a.m. Welcome & Introduction
Gene Griffin, Director - Upper Great Plains Transportation Institute
10:15 a.m. Speaker #1
Gary Ness, Director - ND Aeronautics Commission
"Rural Aviation and Economic Activity"

Speaker #2
Ray Zink, Chief Engineer - ND Department of Transportation
"Road and Bridge Decisions for the 90's"

Speaker #3
Bill Davis, Deputy Director -
Department of Economic Development & Finance
"Transportation's Role in Expanding North Dakota's Economy"

12:00 p.m. Lunch
12:45 p.m. Keynote Speaker
Representative Byron Dorgan

1:30 p.m. Instructions for Focus Group Sessions
1:45 p.m. Focus Groups
3:15 p.m. Break
3:30 p.m. Reports from Focus Groups with Q&A
4:00 p.m. Wrap Up and Quality Check
4:15 p.m. Reception following the conference
Biographical Sketches of Speakers

Gary Ness - Director -
ND Aeronautics Commission
Bismarck, North Dakota

Gary Ness has been the Director of the North Dakota Aeronautics Commission since 1986. The mission of the Aeronautics Commission is to promote, enhance and regulate aviation in the state.

Gary’s previous experience is diverse. He is a graduate of North Dakota State College of Science and North Dakota State University. He served in the U.S. Navy as a naval aviator. After naval service Ness was employed by the Federal Land Bank in the Grand Forks area. He also served as Vice President of First Federal Savings and Loan of Grand Forks. Gary also worked as a sales manager for AGSCO, a regional agricultural chemical company headquartered in Grand Forks.

Ness holds a commercial multi-engine and instrument pilot certificate. He is the treasurer and serves on the executive committee of the National Association of State Aviation Officials (NASAO). Ness serves on the Board of International Northwest Aviation Council which is made up of eight states and four Canadian Provinces. He is a member of the "National Standing Committee on Aviation" for AASHTO representing Region IV. Ness is also a member "Joint Committee on Domestic Freight Policy" for AASHTO.

Ray Zink - Chief Engineer -
ND Department of Transportation,
Bismarck, North Dakota

Ray Zink is the Chief Engineer at the North Dakota Department of Transportation.

Ray grew up in Bordulac, North Dakota. He graduated from North Dakota State University in 1959 with an Engineering degree. He began working with the North Dakota Department of Transportation in 1959 in the Design Division. He became Assistant Maintenance Engineer in 1967 and Maintenance Engineer in 1974. In 1982, he became the Chief Engineer.
Bill Davis is the acting Deputy Director of Marketing and Technical Assistance within the North Dakota Department of Economic Development and Finance. Previously, Bill has been acting director of the agency and was director of the Industrial Development division within the Department. He initially came to the Department as special projects coordinator.

Mr. Davis has been an owner and principal in several small businesses specializing in consulting services for environmental compliance, business consulting and community development. He worked for Technical Planning Information of Bismarck for five years as Director of the Planning and Research Division. Bill started his career with North Central Planning in Devils Lake as a Human Resource planner. He has a B.A. Degree in Public Administration from St. Cloud State University. Bill is a Devils Lake native.

Currently, Bill is a member of the Governor's Policy and Planning Office, President of the North Dakota Indian Arts Association, and a member of the Industrial Development Association.

Byron L. Dorgan: Keynote Speaker
North Dakota Congressman - House of Representatives

Byron Dorgan is serving his sixth term as North Dakota's lone voice in the U.S. House of Representatives. He is one of the most active members of the House Ways and Means Committee. As Chairman of the Select Committee on Hunger's International Task Force he has pushed to put North Dakota's impressive agricultural industry to work feeding the hungry around the world. Dorgan also serves in the House leadership as an At-large Whip in the Democratic Caucus.

Dorgan received his B.S. from the University of North Dakota. He earned his MBA from the University of Denver and subsequently worked for a Denver-based aerospace firm. At age 26 he became the youngest constitutional officer in North Dakota history when he was appointed by the Governor to serve as the State Tax Commissioner. He was elected to that statewide office by large margins in both 1972 and 1976. While in office, Dorgan was selected as one of 10 outstanding officials in the United States by Washington Monthly.

In 1980 Dorgan won an open seat in the U.S. House of Representatives with 58 percent of the vote. He has been re-elected to the U.S. House by overwhelming margins in five successive elections.
Public Finance

The passage of the Intermodal Surface Transportation Efficiency Act (ISTEA) in December 1991 create new opportunities for state and local governments, as well as creates significant new financing challenges. The act shifts responsibility for planning and setting transportation priorities from the federal government to states and regional bodies, while setting standards for certain areas such as safety at the federal level. The very title of the act predicts a new way of doing business in the area of transportation, with a new focus on surface transportation, intermodal planning and efficiency.

While intergovernmental cooperation in planning and setting transportation priorities is encouraged by the new act, such cooperation is frequently incidental rather than systematic. It is more common for states and local jurisdictions to compete with each other for limited funds than to cooperate in developing the best and most efficient transportation solutions.

While ISTEA authorizes increased funds for transportation infrastructure for the next six years, there is no guarantee that these funds will in fact be appropriated. With the federal deficit as large as it is, Congress and the President will be hard-pressed to fully fund the transportation authorization while cutting spending in other areas or increasing taxes. Even if all of the funding is appropriated, citizen and business demands for infrastructure improvements and maintenance go well beyond available funds.

What is the solution? States must begin a long-term process to redesign and restructure their systems of planning and setting transportation priorities. The types of shifts that need to occur can be grouped into four major areas:

**Current System**

Modal autonomy in planning, priorities and funding  
Jurisdictional focus, dedicated funding, fixed formulas  
Emphasis on funding capital improvements, maintenance and operating costs  
Limited linkage between who benefits and who pays

**Alternative Model**

Intermodal, customer oriented approach in setting funding priorities  
Regional, cooperative model with increased flexibility  
Emphasis on long-term costs and benefits of transportation improvements  
Greater use of pricing and benefit assessment

**Modal Autonomy vs. Intermodal Approach**

**Current system:** Until the passage of the Intermodal Surface Transportation Efficiency Act (ISTEA), public funding of transportation systems in the U.S. was handled differently for each mode of transportation. The planning and setting of priorities with each mode relied on a separate federal funding stream, working within the framework of a separate federal authority (Federal Highway Administration, Federal Transit Administration, Federal Railroad Administration, etc.) As Figure 1 shows, Minnesota's transportation financing is representative of most states, with a heavy bias towards funding highways.
Even though most state departments of transportation have incorporated the other modes within their missions, highway funding and planning has tended to dominate their work. The 1956 Federal-Aid Highway Act and the Highway Revenue Act enhanced the emphasis on highway transportation by establishing the Federal Highway Trust Fund and by authorizing the completion of the Interstate system. The 1978 and 1980 deregulation of the airline and railway industries has further complicated intermodal transportation planning and funding decisions.

Table 1 indicates federal transportation infrastructure priorities.

**Alternative model:** While ISTEA encourages an intermodal approach to planning, prioritization and funding transportation systems, states have just begun to think about how their organizations and systems should change to become intermodal. If intermodal is to become more than a buzzword, it will require redefining planning systems to consider all modes in the planning process. An initial step may be to create an intermodal team, as the Minnesota Department of Transportation has done. However, eventually each of the components of the system for planning and setting priorities should be organized on an intermodal basis. This may mean examining and redefining processes that have been in place for many years. Moving towards a more integrated intermodal transportation system will require more public and private financing ventures.
<table>
<thead>
<tr>
<th>Priority</th>
<th>1989 Federal Spending(^a) (in billions of dollars)</th>
<th>Priorities</th>
<th>20 percent increase in Spending(^b) (in billions of dollars)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Surface transportation total</td>
<td>$17.9</td>
<td>* Maintain and improve condition of existing facilities.</td>
<td>$21.5</td>
</tr>
<tr>
<td>Highways and bridges</td>
<td>13.8</td>
<td>* Expand system capacity through implementation of existing traffic management techniques, HOV and smaller lanes, signalization, and automated toll facilities.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>* R&amp;D on advanced technologies, e.g., intelligent vehicle/highway systems.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>* Improve intermodal connections.</td>
<td></td>
</tr>
<tr>
<td>Mass transit</td>
<td>3.5</td>
<td>* Expand transportation system capacity and efficiency by adding transways and improving intermodal connections, stations, terminals, and parking facilities.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>* Modernize equipment and rehabilitate rails.</td>
<td></td>
</tr>
<tr>
<td>Rail (passenger)</td>
<td>0.6</td>
<td>* Modernize capital equipment.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>* Implement high-speed rail in overcrowded corridors.</td>
<td></td>
</tr>
<tr>
<td>Airports and airways total</td>
<td>6.6</td>
<td>* Complete National Airspace System Plan.</td>
<td>7.9</td>
</tr>
<tr>
<td></td>
<td></td>
<td>* Expand system capacity through other advanced surveillance, guidance, and communications technologies.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>* Expand system capacity with airport and runway construction.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>* Improve intermodal connections.</td>
<td></td>
</tr>
<tr>
<td>Ports and waterways total</td>
<td>1.0</td>
<td>* Continue to maintain and rehabilitate existing facilities.</td>
<td>1.2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>* Expand capacity on a selective basis.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>* Improve landside (intermodal) connections.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>* Address environmental issues</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>25.5</td>
<td></td>
<td>30.6</td>
</tr>
</tbody>
</table>

\(^a\) Federal spending totals include some noninfrastructure expenditures, such as for safety.

\(^b\) A 20 percent increase is hypothetical. However, for surface transportation, it approximates the impact of spending the current Highway Trust Fund balance over a 5-year period.

Jurisdictional Focus vs. Regional Cooperation

Current system. Over the years, the system of funding highways has had a strong jurisdictional focus. Transportation funding is dedicated by federal law and state constitutions. Each jurisdiction -- state, county, city -- receives an allocation of highway funds under fixed formulas. Most highways are included in the Federal-Aid System and are eligible for federal aid. The Federal-Aid System is divided into four divisions: the Interstate System, the Federal-Aid Primary System, the Federal Urban System and the Federal-Aid Secondary System. State systems also include trunk, county, municipal and town road and bridge accounts.

User charges comprise the largest source of tax revenue for highway financing. User fees include: motor-fuel taxes, registration fees, motor vehicle excise taxes, driver license fees, and weight-distance taxes. A comparison of user fees and total revenue is shown in Figure 2. Nationally, 60% of all highway revenues were generated by user taxes in 1989. The Minnesota Highway User Tax Distribution Fund derives funding from a twenty cent gasoline tax, vehicle registration fees, and motor vehicle sales taxes. Ninety-five percent of this fund is allocated to: the Trunk Highway Fund (62.0%), the County-State Aid Highway Fund (29.0%), and the Municipal-State Aid Street Fund (9.0%) (Figure 3). Other states use similar formulas. General funds, property taxes, and local bonds are also used to finance capital outlays, maintenance and operations of highways and roads (Figure 4).

![Figure 2](image)

User-taxes as Percentage of Total Current Revenues for Highways, All Levels of Government, 1987

TRANSPORTATION FUNDS MANAGED BY MNDOT
FY 1990 Unaudited – $Millions

Source: Minnesota Department of Transportation

Distribution of Total Spending on Roads and Highways,
By All Levels of Government, 1987

While constitutionally allocated trust funds may provide predictability and stability to the system, they can also limit expenditure decisions. Currently, there is little opportunity for a jurisdiction to consider the opportunity cost, or alternative uses of these funds. Also, since each jurisdiction has its own sources of money, there is no particular incentive to cooperate with other jurisdictions in transportation planning.

States also allocate their own funding for transportation and have mandates for state level planning. Yet there is little incentive for regional or cooperative transportation between states. The emerging competition for north/south trade corridors is generating some new cooperative efforts between states, but this is more the exception than the rule.

**Alternative Model.** States should consider placing greater authority for planning, setting priorities and making transportation funding decisions at regional level within and among states. The federal government should encourage long-term joint transportation planning between states. This should occur both on a multi-state regional basis and between each state and its neighbors. Federal funds should be allocated to pay for these multi-state planning efforts, and the federal government should consider giving higher priority to funding multi-state transportation plans over single-state priorities.

ISTEA may force the greater participation of Regional Development Commissions, Metropolitan Planning Organizations and provides the foundation for interstate cooperation in transportation planning.

**Capital Improvements vs. Maintenance**

**Current system.** The current system of transportation funding encourages capital improvements over maintenance and operating costs. By law federal funding is restricted to capital improvements; therefore, highway operations and maintenance is left largely to the states and local governments (Table 2 & Figure 5). In 1989, state and local governments financed over half of all highway capital improvements. Maintenance of deteriorating infrastructure has become an increasingly important issue for state DOTs. The question is whether the current system offers too much of an incentive to build new roads and not enough encouragement to take into account the long-term costs of supporting this infrastructure.
Table 2

HIGHWAY MILEAGE AND FUNDING STATISTICS

<table>
<thead>
<tr>
<th>Road classification</th>
<th>Miles</th>
<th>Jurisdiction</th>
<th>Capital funding</th>
<th>Maintenance funding</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interstate System(^a)</td>
<td>44,000</td>
<td>State</td>
<td>90% Federal, 10% State</td>
<td>100% State</td>
</tr>
<tr>
<td>Federal-Aid Primary System(^b) (excluding Interstate)</td>
<td>260,000</td>
<td>State</td>
<td>75% Federal, 25% State</td>
<td>100% State</td>
</tr>
<tr>
<td>Federal-Aid Secondary System(^c)</td>
<td>400,000</td>
<td>State</td>
<td>75% Federal, 25% State</td>
<td>100% State</td>
</tr>
<tr>
<td>Federal-Aid Urban System(^d)</td>
<td>125,000</td>
<td>State</td>
<td>75% Federal, 25% State</td>
<td>100% State</td>
</tr>
<tr>
<td>Local roads(^e)</td>
<td>2,751,000</td>
<td>Counties, municipalities, and townships</td>
<td>not eligible for federal aid</td>
<td>Local and State</td>
</tr>
<tr>
<td>Federal roads(^f)</td>
<td>228,000</td>
<td>Federal</td>
<td>100% Federal</td>
<td>100% Federal</td>
</tr>
</tbody>
</table>

\(^a\)Routes that connect principal metropolitan areas, serve the national defense, or connect with routes of continental importance in Mexico or Canada (Subsystem of the Federal-Aid Primary System).

\(^b\)Interconnecting roads important to Interstate, statewide, and regional travel.

\(^c\)Major rural collectors that assemble traffic and feed to the arterials.

\(^d\)Urban arterial and collectors routes, excluding the urban extensions of the major primary arterials.

\(^e\)Residential and local streets.

\(^f\)Roads in national forests and parks, roads on military and Indian reservations.


Figure 5

Capital Spending Per Mile of Road by All Levels of Government, 1987, By Road Jurisdiction

![Bar chart showing capital spending per mile of road by state, city, and rural areas for various states including Illinois, Minnesota, Iowa, Wisconsin, Kansas, Missouri, Nebraska, and South Dakota.]

Alternative model. Each transportation decision should include an analysis of long-term benefits and costs, and these should be an integral part of the initial funding decision. While there may be short-term public gratification and political benefit in new capital investments, these must be balanced against the long-term costs of maintenance, operations and safety. Some Midwestern states will have to face difficult decisions between maintaining infrequently used rural roads and maintaining the entire transportation system. Efficient transportation investments are not always politically popular or feasible. Future funding decisions will be focused on balancing equity of access against economic efficiency as rural populations continue to migrate to metropolitan areas.

Who Benefits? Who Pays?

Current system. There is currently only a limited linkage between who benefits and who pays for transportation service. While user charges, motor fuel taxes and motor vehicle taxes and fees, are the primary source of funding for highways, there is only an indirect linkage between those who benefit and those who pay for highway improvements and costs. Tolls are a limited source of funds in some states, but are not common in the Upper Midwest. Local real estate taxes and assessments link local road benefits to the local community. In some cases, private property owners may share in costs where they derive benefits from highways. While the ISTEA encourages experiments in congestion pricing, this has not been tried very extensively in the U.S.

Alternative model. Increased use of benefit charges and pricing can contribute to a more efficient transportation system, assist in the process of setting priorities, and provide additional funding for transportation infrastructure investments. If a development or business benefits from a specific transportation improvement, a share of the cost should be assessed against that business. Congestion pricing should be considered as a solution to reducing peak hour congestion in the Twin Cities Metropolitan area, encouraging drivers to consider other modes, and help to fund the high cost of urban transportation improvements.
Trade and Commerce

Do Transportation Investments Pay Off in Economic Growth?

Most researchers agree that, in general, investments in infrastructure should mirror rates of economic growth. That is, infrastructure investments should follow rather than lead economic development. These researchers also prove that infrastructure supports economic activity and that continued decline in this type of investment will eventually erode our productivity, competitiveness and quality of life. Strategic investments in transportation infrastructure include those that make the system more efficient by reducing the costs of getting people and products to their destinations. This may mean building or improving roads in areas that connect with major trade routes, transport major export commodities, help to reduce congestion, or improve access between various modes of transportation.

In 1965, Niles Hansen, a University of Texas economist classified regions into three categories: congested, lagging and intermediate. This typology may help to show how investments in infrastructure can pay off. A congested community benefits from infrastructure investments by reducing the time wasted on choked highways – this helps to accommodate the growth experienced by these faster growing areas. A lagging community is one in which employment and industry are declining, little benefit comes from increased infrastructure investments in such areas. Intermediate areas are those which lack specific infrastructure improvements but have a trained workforce and prospects of future economic growth.

The Basics of the Upper Midwest’s Economy

The five states of the Upper Midwest, including Minnesota, Iowa, North Dakota, South Dakota and Montana, are centrally located just west of the St. Croix and Upper Mississippi rivers and south of the Canadian border with Manitoba, Saskatchewan and Alberta. This region shares a history of trade and commerce based on agricultural production and trade. This agricultural base led to the development of the Twin Cities of Minneapolis - St. Paul as a financial services center and distribution hub for much of the region’s value-added agricultural and manufactured products.

In keeping with its agricultural and natural resource-based economy, the region is relatively sparsely populated. Between 1960 and 1985, the population of the Upper Midwest grew at a rate well below the national average (see CURA Trade Centers study). Within the Upper Midwest, there continues to be growth of urban centers and loss of population in rural communities.

Upper Midwest Population

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Iowa</td>
<td>2,943,000</td>
<td>57%</td>
</tr>
<tr>
<td>Minnesota</td>
<td>4,324,000</td>
<td>35%</td>
</tr>
<tr>
<td>North Dakota</td>
<td>660,000</td>
<td>63%</td>
</tr>
<tr>
<td>South Dakota</td>
<td>715,000</td>
<td>72%</td>
</tr>
<tr>
<td>Montana</td>
<td>805,000</td>
<td>65%</td>
</tr>
<tr>
<td>U.S.</td>
<td>248,239,000</td>
<td>19%</td>
</tr>
</tbody>
</table>

Source: Almanac of 50 States
Agriculture is very important to the region. Iowa is second in the nation for agricultural exports, South Dakota leads the U.S. production of oats and rye and is second in sunflower seeds and flaxseed. Minnesota is ranked first in sugar beet production, third in soybeans and fifth in corn production. The region is also strong in numerous livestock products. The producers of these agricultural products continue to consolidate -- during the past 30 years the number of farms and farmers has decreased by 37 percent.

Natural resource based activities such as mining, energy resources and tourism are also important to the region's economy. During the past two decades there has been rapidly accelerating development of fossil fuels in the Western Dakotas and Montana and increasing tourism development in Montana and Minnesota.

Over the past several decades these states' economies have experienced a great deal of change. For the states of Minnesota and Iowa this has meant a tremendous diversification and continued growth of the economic base. For the Dakotas, the past twenty years have led to loss of population and economic activity overall. Montana continues to reap benefits from its natural resources of minerals, forestry and wilderness (tourism) as well as a small but vital manufacturing sector. The service sector has grown over the past decade both nationally and in the region. At the same time, many manufacturing sectors have lost employment.

The most striking change in employment in the Upper Midwest has been the growth in service industries, particularly those servicing the business and the computer industry. This has been the case in high population density states like Minnesota as well as low-density states such as North Dakota.

### Upper Midwest Employment by Industry Percent Change 1979 - 1989

<table>
<thead>
<tr>
<th>Industry</th>
<th>Iowa</th>
<th>Minnesota</th>
<th>N. Dakota</th>
<th>S. Dakota</th>
<th>Montana</th>
<th>U.S.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agriculture</td>
<td>44.31</td>
<td>60.68</td>
<td>23.27</td>
<td>28.07</td>
<td>38.59</td>
<td>73.09</td>
</tr>
<tr>
<td>Mining</td>
<td>-29.92</td>
<td>-60.15</td>
<td>17.73</td>
<td>-23.12</td>
<td>-33.35</td>
<td>-25.09</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>-11.92</td>
<td>1.60</td>
<td>3.64</td>
<td>17.66</td>
<td>-19.74</td>
<td>-9.27</td>
</tr>
<tr>
<td>Trans., Comm., Pub. Util.</td>
<td>8.88</td>
<td>14.67</td>
<td>13.80</td>
<td>3.60</td>
<td>7.06</td>
<td>17.68</td>
</tr>
<tr>
<td>Wholesale Trade</td>
<td>-10.36</td>
<td>14.88</td>
<td>-11.89</td>
<td>-4.45</td>
<td>-11.42</td>
<td>18.65</td>
</tr>
<tr>
<td>Retail Trade</td>
<td>8.24</td>
<td>19.18</td>
<td>5.18</td>
<td>7.56</td>
<td>-0.91</td>
<td>27.64</td>
</tr>
<tr>
<td>Fin., Ins. &amp; R. Est.</td>
<td>19.12</td>
<td>30.34</td>
<td>-77.24</td>
<td>39.84</td>
<td>-4.45</td>
<td>31.82</td>
</tr>
<tr>
<td>Services</td>
<td>39.75</td>
<td>51.97</td>
<td>43.92</td>
<td>41.95</td>
<td>31.66</td>
<td>62.98</td>
</tr>
<tr>
<td>TOTAL</td>
<td>6.72</td>
<td>20.35</td>
<td>12.22</td>
<td>16.28</td>
<td>1.39</td>
<td>22.70</td>
</tr>
</tbody>
</table>

Source: U.S. Census, County Business Patterns
Trade: The Engine of Economic Growth

The goods producing activities of the region, including manufacturing, construction, farming, agricultural services, forestry, fisheries and mining, are a measure of the region's economic growth potential. These goods are exported outside the region and bring additional income to the area. According to the Bureau of Economic Analysis data on income from employment in these industries, only two states in the region, Minnesota and Iowa, exceed the national rates of goods producing income.

Foreign trade is a part of this export income. In the five states these exports are as follows:

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Iowa</td>
<td>2,189</td>
<td>30</td>
<td>30</td>
</tr>
<tr>
<td>Minnesota</td>
<td>5,091</td>
<td>18</td>
<td>20</td>
</tr>
<tr>
<td>North Dakota</td>
<td>360</td>
<td>45</td>
<td>47</td>
</tr>
<tr>
<td>South Dakota</td>
<td>205</td>
<td>49</td>
<td>45</td>
</tr>
<tr>
<td>Montana</td>
<td>229</td>
<td>48</td>
<td>44</td>
</tr>
</tbody>
</table>

The ability to produce and deliver goods to trading partners is an essential part of a healthy economy. In the Upper Midwest, goods produced are shipped to other regions of the U.S. and to foreign destinations. The following table shows the importance of foreign exports to the economy of these five states.

<table>
<thead>
<tr>
<th>State</th>
<th>Foreign Exports as Percent of Gross State Product, 1990</th>
</tr>
</thead>
<tbody>
<tr>
<td>Iowa</td>
<td>4.2</td>
</tr>
<tr>
<td>Minnesota</td>
<td>5.4</td>
</tr>
<tr>
<td>North Dakota</td>
<td>1.7</td>
</tr>
<tr>
<td>South Dakota</td>
<td>3.2</td>
</tr>
<tr>
<td>Montana</td>
<td>1.8</td>
</tr>
<tr>
<td>U.S. (as a pct. of GNP)</td>
<td>10.2</td>
</tr>
</tbody>
</table>

Source: Survey of Current Business

Increasing globalization of the world's economy, along with "freeing" up of trade restrictions among North American neighbors places the Upper Midwest in a unique position to capture a greater share of the increasing north-south trade with Canada and Mexico. According to one recent study, the Red River Trade Corridor between Upper Midwest and Manitoba is the fourth largest corridor along the Canadian border, accounting for nearly $8 billion in trade annually. These commodity flows include energy, wood and paper products, chemicals and agricultural products flowing south from Canada and industrial equipment, electronics, motor vehicles and parts, consumer goods and agricultural products flowing north. As this level of trade increases, it will require more attention to the connectivity between this region and other destinations throughout the U.S. on a north-south axis.
Getting Our Products to Market

Minnesota is a pole for much of the economic activity of the region. Minneapolis - St. Paul is one of 28 airline hubs nationally. Of these hubs, Minneapolis – St. Paul airport ranks 16th in aircraft departures and 12th in freight shipments per 10,000 residents. Several of the region's intermodal (rail/truck, rail/barge) hubs are located in Minnesota (e.g. Twin Cities, Dilworth, International Falls, Duluth/Superior). According to University of Minnesota economist, Wilbur Maki, the Twin Cities serves as the core metropolitan area of the multi-state commodity-producing region and as a part of the global transportation - communications network.

The Upper Midwest's trade and commerce depends heavily on its transportation infrastructure. The region has a number of well maintained interstate and highway thoroughfares which carry passenger vehicles within and through the region. In addition, to motor vehicles, passengers rely on the air services available at major commercial air hubs such as the MSP airport as well as other commercial and private aviation centers throughout the region. The vital service sector and headquarters functions of the Twin Cities rely heavily on the existence of the Minneapolis - St. Paul airport and its daily access to major markets throughout the world.

Passenger and Air Freight in Upper Midwest, 1989

<table>
<thead>
<tr>
<th>State</th>
<th>Passenger Enplanements</th>
<th>Freight Enplanements (tons)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Iowa</td>
<td>1,042,003</td>
<td>7,816</td>
</tr>
<tr>
<td>Minnesota</td>
<td>8,871,085</td>
<td>65,765</td>
</tr>
<tr>
<td>North Dakota</td>
<td>500,561</td>
<td>3,077</td>
</tr>
<tr>
<td>South Dakota</td>
<td>350,015</td>
<td>1,645</td>
</tr>
<tr>
<td>Montana</td>
<td>678,614</td>
<td>9,109</td>
</tr>
</tbody>
</table>

Source: FAA Statistical Handbook

Annual aircraft operations are projected to increase dramatically, showing an increase of 75% from 2.1 million to 3.9 million over the next thirty years. This is due to an envisioned increase in the amount that each aircraft is used especially as aircraft are used to a greater extent for business purposes.

Goods produced in the region rely primarily on shipments by trucks along the extensive interstate and intrastate highway system of the region. The following table shows the modes by which the region shipped its manufactured freight in 1989. Trucking is clearly the dominant force in the region. This varies somewhat by commodity. Grains and coal shipments are carried by the region's rail system and some barge traffic. Air cargo accounts for high value computers and scientific instruments as well as printed matter.
Inbound and Outbound Manufactured Freight, 1989
(millions of tons)

<table>
<thead>
<tr>
<th>State</th>
<th>Total</th>
<th>Truck</th>
<th>Rail</th>
<th>Air</th>
<th>Water</th>
</tr>
</thead>
<tbody>
<tr>
<td>Iowa</td>
<td>94.2</td>
<td>74.0</td>
<td>17.0</td>
<td>.020</td>
<td>3.2</td>
</tr>
<tr>
<td>Minnesota</td>
<td>126.9</td>
<td>103.7</td>
<td>18.3</td>
<td>.076</td>
<td>4.8</td>
</tr>
<tr>
<td>North Dakota</td>
<td>14.8</td>
<td>11.3</td>
<td>3.5</td>
<td>.045</td>
<td>0.0</td>
</tr>
<tr>
<td>South Dakota</td>
<td>14.6</td>
<td>13.3</td>
<td>1.3</td>
<td>.001</td>
<td>0.0</td>
</tr>
<tr>
<td>Montana</td>
<td>35.7</td>
<td>30.1</td>
<td>5.6</td>
<td>.017</td>
<td>0.0</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>286.2</strong></td>
<td>232.4</td>
<td>45.7</td>
<td>0.159</td>
<td>8.0</td>
</tr>
<tr>
<td><strong>Percent of Total</strong></td>
<td><strong>100.0</strong></td>
<td>81.2</td>
<td>16.0</td>
<td>0.0</td>
<td>2.8</td>
</tr>
</tbody>
</table>

Source: American Trucking Associations Foundation/Reebie Associates

According to the ATA Foundation, 77 percent of the total freight moved throughout the Midwest is transported by midwestern trucking companies.

While water does not account for as large a share of total shipments as other modes, it is important to point out that the total shipments by barge through the Rock Island District of the Mississippi River grew nearly 90 percent from 1979 to 1989, and was dominated by grain and coal.

**Miles of Public Roads and Streets**

<table>
<thead>
<tr>
<th>State</th>
<th>Total</th>
<th>Urban</th>
<th>Rural</th>
<th>Federal Aid Primary Highway</th>
</tr>
</thead>
<tbody>
<tr>
<td>Iowa</td>
<td>112,551</td>
<td>7,843</td>
<td>94,425</td>
<td>9,566</td>
</tr>
<tr>
<td>Minnesota</td>
<td>129,553</td>
<td>12,912</td>
<td>115,458</td>
<td>10,206</td>
</tr>
<tr>
<td>Montana</td>
<td>71,360</td>
<td>2,113</td>
<td>69,092</td>
<td>6,644</td>
</tr>
<tr>
<td>N. Dakota</td>
<td>86,384</td>
<td>1,600</td>
<td>84,579</td>
<td>6,109</td>
</tr>
<tr>
<td>S. Dakota</td>
<td>73,378</td>
<td>1,574</td>
<td>71,622</td>
<td>6,674</td>
</tr>
</tbody>
</table>

Source: FHWA

**Levels of Public and Private Investment**

Investment in infrastructure has slowed during the past several decades. Capital outlays for infrastructure are 1.6 percent of the gross national product today compared to 2.2 percent in 1963. Investments in infrastructure come from both public and private sectors. Public sector sources include federal, state, and local governments. During the past ten years, the burden of building and maintaining our transportation infrastructure has been shifted to the state and local level. These needed investments must now compete with an increasing array of other public goods in an environment of reduced taxing capacity.
The American Commission on Intergovernmental Relations (ACIR) produces a measure of tax capacity based on property values, sales tax and mineral production for each state as well as tax effort – the burden placed on the states' revenue base relative to the national average. The following summarizes these for the Upper Midwest region.

State Fiscal Summary

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Iowa</td>
<td>$15,487</td>
<td>84</td>
<td>118</td>
<td>20</td>
</tr>
<tr>
<td>Minnesota</td>
<td>$17,657</td>
<td>103</td>
<td>117</td>
<td>20</td>
</tr>
<tr>
<td>North Dakota</td>
<td>$13,563</td>
<td>85</td>
<td>107</td>
<td>17</td>
</tr>
<tr>
<td>South Dakota</td>
<td>$13,685</td>
<td>78</td>
<td>95</td>
<td>18</td>
</tr>
<tr>
<td>Montana</td>
<td>$14,078</td>
<td>84</td>
<td>102</td>
<td>20</td>
</tr>
<tr>
<td>U.S.</td>
<td>100</td>
<td>100</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: American Commission on Intergovernmental Relations.

The private sector invests in infrastructure mainly in plant and equipment. Private sector investments related to transportation include fleets of motor vehicles, material handling equipment, warehouses as well as computerized inventory and communications equipment. In an era of "just-in-time" delivery of parts and materials to U.S. manufacturers transportation is substituting for warehousing. This makes the speed and reliability of the transportation system even more crucial for the competitiveness of American manufacturers.

The following table shows the ratios of total public capital stock to total private capital for this region in two years, 1978 and 1988, derived by the Federal Reserve Bank of Boston from BEA data. This study (see Munnell, 1990) concluded that public capital investment has a statistically significant positive impact on private sector output. It also showed that although this public capital investment enhances productivity, public capital substitutes for private capital – the more public investment available the less private investment is required. It also proved a significant positive impact between investment in public capital and employment growth.

Ratio of Public Capital Stock to Private Capital Stock

<table>
<thead>
<tr>
<th>Year</th>
<th>Iowa</th>
<th>Minnesota</th>
<th>Montana</th>
<th>N. Dakota</th>
<th>S. Dakota</th>
</tr>
</thead>
<tbody>
<tr>
<td>1978</td>
<td>1: 2.8</td>
<td>1: 2.0</td>
<td>1: 3.3</td>
<td>1: 3.8</td>
<td>1: 2.3</td>
</tr>
<tr>
<td>1988</td>
<td>1: 2.5</td>
<td>1: 2.2</td>
<td>1: 3.1</td>
<td>1: 4.2</td>
<td>1: 2.2</td>
</tr>
</tbody>
</table>

Source: Federal Reserve Bank of Boston
New Models for Cooperation in Infrastructure Development

Deregulation:

The Motor Carrier Act of 1980 relaxed the restrictions governing interstate movement of goods. This Act led to a dramatic increase in the number of road transport carriers and intermediaries. Between 1979 and 1985 the number nearly doubled. As a result, a hub and spoke network for less than truckload (LTL) emerged to take advantage of the economies of scale of consolidating shipments.

Most analysts believe that deregulation led to a relative fall in prices, and contrary to some fears service to rural areas has not deteriorated. The most significant impact of deregulation has been the greater competition between modes as trucks are now competitive with rail even on long hauls. While this competition has in many ways been beneficial, it has also made planning for an intermodal transportation system very difficult due to the entrenched interests of competing modes.

- Minnesota recently adopted a new law regulating the intrastate trucking operations. This law allows for greater competition in transporting of less than truckload (LTL) shipments.
- Border crossings with Canada managed jointly. Montana Governor, Stan Stephens recently led a trade delegation to Alberta, Canada that worked to create a jointly operated vehicle inspection station at the border at Coutts, Alberta. In addition the Montana/Alberta Advisory Committee has been given increased emphasis to help expand the trade, cultural and intergovernmental ties between Canada and Montana.

Intermodalism:

A recent University of Minnesota study of use of intermodal shipping found that Intermodal Railroad-Truck (IRT) is used by a great variety of industries. The most common characteristic of users of IRT was that their shipments tended to be low-volume per unit of size and had a distant destination. The benefits of IRT include reduced energy consumption, pollution, congestion, and road deterioration. Promoting greater use of IRT is limited by present regulatory structure.

- Siting of new intermodal truck/rail yards is difficult. The City of Minneapolis is planning to development such a new facility, working with industry to improve inner-city goods movement and reduce delays in through shipments.

Public-Private Finance

The Pennsylvania Partnership Act: provided for more formal partnership arrangements between the public and private sector, and permits municipalities to act jointly with each other and with the private sector to finance transportation projects. The act provides a process for pooling resources to take advantage of economies of scale. It also establishes transportation development districts which may raise revenues through: 1) imposing an assessment on business property or benefitting projects, 2) imposing any other taxes permitted by law, 3) issuing notes and bonds, and 4) accepting grants, gifts and donations. Finally, this act requires that the transportation development districts establish multi-year transportation improvement programs that identify priorities.
Interjurisdictional Cooperation

With the increasing potential for new markets brought forth by the trade agreement with Canada and the potential for a trade agreement with Mexico, the major goods shipment axis will shift from its traditional east-west orientation to a north-south one. (Larry Swanson of the University of Montana has analyzed the trade flows between U.S. and Canada.) The Red River Trade Corridor has organized a coalition of business institutions and governmental institutions including Minnesota, North Dakota, and Manitoba to promote trade within the corridor. A similar effort is being undertaken by several western states.

South Carolina’s State Development Board has initiated the use of GIS (Geographical Information Systems) to better coordinate infrastructure investments and other community and economic development activities. The GIS system allows policymakers to consider large geographical based data related to policy analysis and industrial site selection. GIS systems have the potential to connect transportation infrastructure investments with other infrastructure needs such as water and wastewater systems, and with broader economic development objectives. This GIS program has been a joint effort of several state agencies including the Highway Department, the Department of Health and Environmental Control, and the Water Resources commission.
Role of Technology in Transportation

The advent of new technologies in transportation has enhanced the economic growth of the Upper Midwest. New technologies will continue to be part of the development of the region’s transportation system. A variety of areas can be used to highlight the changes technology will bring to this region. These apply to all modes of transportation. The following graphic represents possible changes in surface transportation.

This paper looks at both current and future technology innovations now being considered by various transportation venues. The Upper Midwest and other regions of the country are also exploring such opportunities. The most advanced technology being tested in the region is Intelligent Vehicle Highway Systems (IVHS). This paper highlights its passenger and commercial vehicle applications.

Great gains have been achieved in recent years by using additional technology information systems for aviation traffic management. Today’s advances in transportation technologies are centered around surface transportation. In each of the states of the region, research projects are being conducted by the state Departments of Transportation and by universities. In some cases, private enterprise such as Motorola, 3M and other companies are involved in these projects. The region must be ready to evaluate and test various modes of this technology during the next five years.
Throughout the region, agriculture serves as a key ingredient to economic prosperity. Transportation of agricultural products as well as other products is essential to the economic growth of the region. The use of new technologies, such as on-line systems between shippers and carriers, can keep costs competitive by creating faster and more efficient delivery systems.

In addition, new technologies may increase the productivity of transportation vendors and government regulators. Several research projects are testing more efficient monitoring of government regulatory requirements. In addition, training for future employees of transportation related industries might be aided by satellite based education systems.

The five state region will be able to serve as a model for regional cooperation in technology implementation.

Current Technologies Being Implemented in the Five State Region

IVHS

Minnesota is one of the nation's leading research centers of Intelligent Vehicle - Highway Systems (IVHS). Minnesota Guidestar is the state's IVHS program and is a joint effort between the Minnesota Department of Transportation and the University of Minnesota's Center for Transportation Studies.

Minnesota Guidestar plans to reduce traffic congestion and improve safety. By decreasing delays, air quality will be improved and energy will be conserved.
Research is focused on three primary areas: 1) attempting to prevent congestion and predicting where and when it will occur 2) providing motorists with in-vehicle information on a variety of topics, including congestion, weather conditions and routing advice 3) developing fleet dispatching services for taxis, busses and emergency vehicles.

<table>
<thead>
<tr>
<th>Beneficiaries</th>
<th>Benefits</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Public</td>
<td>Travel</td>
</tr>
<tr>
<td>Commuters</td>
<td>Decreased travel time</td>
</tr>
<tr>
<td>Shoppers</td>
<td>Increased safety</td>
</tr>
<tr>
<td>Public transportation users</td>
<td>Increased comfort and convenience</td>
</tr>
<tr>
<td>Tourists</td>
<td>Increased security</td>
</tr>
<tr>
<td>Trucking companies</td>
<td>Decreased cost</td>
</tr>
<tr>
<td>Bus companies</td>
<td>Economic</td>
</tr>
<tr>
<td>Taxis</td>
<td>Increased productivity</td>
</tr>
<tr>
<td>Small package delivery</td>
<td>Improved international competitiveness</td>
</tr>
<tr>
<td>Emergency services</td>
<td>Product innovation</td>
</tr>
<tr>
<td>Automotive manufacturers</td>
<td>Environmental</td>
</tr>
<tr>
<td>Electronics manufacturers</td>
<td>On-time delivery</td>
</tr>
<tr>
<td>Traffic systems suppliers</td>
<td>Information</td>
</tr>
<tr>
<td>Researchers</td>
<td>Decreased air pollution</td>
</tr>
<tr>
<td>State DOTs</td>
<td>Increased noise pollution</td>
</tr>
<tr>
<td>Traffic departments</td>
<td>Increased fuel savings</td>
</tr>
<tr>
<td>Transit agencies</td>
<td>Increased trip efficiency</td>
</tr>
<tr>
<td></td>
<td>More uniform and effective traffic enforcement</td>
</tr>
<tr>
<td></td>
<td>Improved trip planning</td>
</tr>
</tbody>
</table>

IVHS Beneficiaries (Source: Mobility 2000)

IVHS-CVO

There is a great deal of interest in commercial applications of IVHS at the federal level. Currently, the Federal Highway Administration is funding research of regional strategies for IVHS-CVO. Several studies are being done across the country, investigating how states can cooperate with each other.

Researchers in Iowa and Montana are investigating applications of Intelligent Vehicle - Highway Systems (IVHS) in Commercial Vehicle Operations (CVO). The Iowa research is being conducted by the Midwest Transportation Center (MTC) and the Montana investigation is being done in cooperation with the Washington State Transportation Center (TRAC).

According to Mark Hallenback, Director of the Washington State Transportation Center, there is an eight state project in the Northwest, another eight state project in the Southeast, and a third project with three states in the Southwest.

The regional projects are designed to "encourage and assist regional states and industry in adopting advanced IVHS technologies which can increase the productivity and safety of motor carriers and efficiency of state regulatory programs."
There are two broad goals of the FHWA sponsored research:

- Free Flow of Interstate Truck Movement
- Electronic Commercial Driver/Vehicle Safety Inspections

The first goal hopes to create "transparent borders." Using electronic technologies to coordinate states' regulatory systems would allow commercial vehicles to travel from one state to another easily and smoothly. Compliance with registrations, licenses and permits would be verified electronically by a regulatory agency. Further, mileage could be reported to the states electronically."

Researchers at the MTC in Iowa are leaders of the IVHS-CVO applications field. They have identified five promising applications for IVHS-CVO.4

- Weigh-in-motion with automatic vehicle identification
- Pre-clearance for safety inspection
- "One-Stop-Shopping" for licenses, registrations, and permits
- Automated, apportioned fuel tax administration using instrumented state line crossings
- Automatic toll collection using electronic toll and traffic management systems

Researchers at MTC estimate complying with states’ regulations and permit requirements cost $12,000 per tractor-trailer per year. This does not include the cost of taxes, tolls and fees associated with registration requirements. Assuming "that the Iowa’s motor carriers surveyed are indicative of motor carriers throughout the country, a conservative estimate of the national cost of complying with administrative rule and regulation is approximately $6 billion per year."10

MTC says there is a need for a new paradigm for the successful application of IVHS-CVO application. More work "on institutional and policy issues is needed in terms of research, within the motor carrier community, and among policy-makers and there staffs."11

Telecommunications and Distance Education

North Dakota has several education programs reliant on telecommunications technology. The Upper Great Plains Transportation Institute is developing a two-way interactive satellite system.12 The system will link up four universities and six Departments of Transportation. The satellite system, expected to be operational by the end of September 1992, is designed to accomplish three objectives:

- Establish a graduate program in transportation at the four universities to be linked, North Dakota State University, University of Wyoming at Laramie, Utah State-Logan, Colorado State-Fort Collins.
- Stimulate technology transfer and research awareness between the universities and the DOT’s.
- Create discussion between the DOT’s in areas of policy and technical expertise.

The University of North Dakota-Grand Forks is developing a satellite based education program which will broadcast aviation instruction to universities across the United States.13 UND has received $4.5 million from the FAA to develop the system and it expects to receive additional FAA funding. The FAA hopes the service will provide more consistent aviation instruction.
The satellite education program will provide aviation instruction to ten universities by September 1992. Eventually, this service is expected to serve between forty and fifty universities.

UND has recently acquired a Cray supercomputer which will develop better models to predict weather conditions. The university will use the computer to research weather conditions as they relate to transportation challenges, such as de-icing of planes.

UND is also providing computer based instruction for students training to be pilots. Gone is the old manual based education. Students studying hydraulic systems are now able to see the operation of the systems in motion on their computer screens.

Pave-Tech

"Pave-Tech" is being used by the North Dakota Department of Transportation. "Pave-Tech" uses a mini-van equipped with cameras to inventory the condition of North Dakota state highways. This technology improves the state's pavement management system, providing a more consistent inventory of state highway conditions.

Before "Pave-Tech," twenty-four ND-DOT workers spent three months investigating the conditions of state highways (equivalent of eight full-time workers).

Now, with the use of the $130,000 mini-van, three DOT workers do the work that the twenty-four did previously. Once the ND-DOT is finished cataloging its roads and highways, it plans to lease out the mini-van to cities and counties.
Regional Technology Projects

Nine projects are being tested throughout the nation in conjunction with the Federal Highway Administration. Several of these projects have multi-city and multi-state parameters.

The following graph shows the location of these projects.

A brief synopsis of the work of these projects is as follows:15

TRANSCOM: A consortium of 14 transportation and public safety agencies in the New York and New Jersey area which are working to improve inter-agency responses to traffic incidents.

SMART Corridor Project: A joint demonstration project located along 12.3 miles of Santa Monica Freeway corridor in Los Angeles. The objective is to provide congestion relief through various alternatives.

Guidestar Project: A cooperative effort that will bring together a number of on-going operational traffic management and traveler information systems with a range of IVHS projects in Minnesota.

Pathfinder Project: A cooperative effort by Caltrans, FHWA and General Motors to provide in-vehicle navigation to improve traffic flow.

TravTek: TravTek represents a public/private partnership involving the City of Orlando, Florida, the Florida DOT, FHWA, General Motors, and the American Automobile Association (AAA) to
provide traffic congestion information and various guidance facilities to 100 test vehicles equipped with an in-vehicle TravTek device.

ADVANCE: An effort to evaluate performance of the first large-scale dynamic route guidance system in the nation in a joint project including the Illinois DOT, Motorola, Inc., the Illinois University Consortium and the FHWA.

DIRECT: Located in the Detroit, Michigan area, it will deploy and evaluate four alternative low cost methods of communicating advisory information to motorists.

HELP/Crescent: HELP (Heavy Vehicle Electronic License Plate Program) is a multi-state, multinational research effort to design and test an integrated heavy vehicle monitoring system.

Advantage I-75: The project represents a partnership of public and private sector interests along the I-75 corridor to allow transponder equipped and documented trucks to travel any segment along the length of I-75 at mainline speeds with minimal interruption at weigh/inspection stations.

Possible Projects for Five State Region

The following is a list of possible cooperative efforts between the states within the region.

- Duplicate I-75 project possibly along I-94 and I-29.
- Expand GuideStar focus into five state region; broaden to include rural applications of IVHS.
- Expand current Iowa project for truck licensing and regulating into five state consortium.
- Provide linkages for radio or transponder information amongst properly equipped vehicles in five state region.
- Duplicate HELP/Crescent Project for heavy vehicle monitoring.

The possibilities for developing a five state consortium project are limited by the funds and the equipment available. However, as this information demonstrates, a need exists in the nation to determine how this work would be implemented into larger scale designs.
Endnotes

1. Leading work on this topic includes:

   Aschauer, David Alan. 1991 "The Third Deficit" GAO Journal pp. 4-8;

   Forkenbrock, David J., Thomas Pogue, Norman S. J. Foster and David J. Finnegan 1990 Road Investment to Foster Local Economic Development Iowa City: Public Policy Center;

   Munnell, Alicia H., Editor. 1990 Is There a Shortfall in Public Capital Investment? Boston: Federal Reserve Bank;


6. Sources for the Environment, Safety and Quality of Life section are as follows:


   Brandt, Steve. 1988. Light rail may be wrong cure/Study finds flaws in assumptions that led to push for system in Hennepin. Star Tribune. March 21: 1A.


7. All maps and graphics in this paper are from *An Overview of the IVHS Program Through FY 1992*, Federal Highway Administration, Washington, D.C.

8. IVHS Funding for Institutional Issues Development Memorandum, FHWA, 5/21/92.

10. MTC report.

11. MTC report.

12. Interview with Gene Griffin, Director of Upper Great Plains Transportation Institute, 5/20/92.

13. Interview with Scott Bergstrom, Director of Technology Based Instruction Research Laboratory, 5/21/92.


The Once and Future Transportation Plan

For decades highways have been kings of the road: dominating transportation policy, taking charge of its funding. But no longer.

With the passage in 1991 of a major new surface transportation bill, Congress shifted policy away from a single-minded obsession with Interstate highways and focused it on a variety of means of moving people and goods.

These changes, as expressed in the Intermodal Surface Transportation Efficiency Act, offer unique opportunities to state and local officials: It lets them decide for themselves the most suitable forms of future transportation for their regions—from new high-tech subways to low-tech car-pool lanes. "Our idea is to let states compete among themselves. Let them learn from each other's mistakes; copy each other's successes," says U.S. Senator Daniel Patrick Moynihan, a principal architect of the transportation act. "Those who make wise decisions will prosper. Those who make poor decisions will pay."

This edition of The Public's Capital highlights three areas of the new transportation bill that pose significant opportunities and challenges to state and local governments:

- Devolution. Decision-making authority moves away from the federal government to the states, and in urban areas, from state agencies to metropolitan planning organizations. MPOs, rather than departments of transportation, will have a chance to call the shots, deciding which projects the region should invest.
Who Gets What: The Major Funding Provisions of ISTEA

National Highway System: $21 billion for construction and repair of Interstate highways and major state roads. States can transfer 50 percent of the money to the Surface Transportation Program. States can also spend highway money on non-NHS projects that will improve traffic flow on national highways. An additional $17 billion is earmarked for Interstate maintenance.

Surface Transportation Program: $23.9 billion for roads, transit, transportation enhancement and safety. Some of the money is allocated by formula to urban areas. An additional $14 billion from four other programs can either be transferred to the Surface Transportation Program or spent on projects eligible for the program.

Transit: $12.4 billion for new systems and equipment. Of that, 40 percent is for new starts. 40 percent for rail modernization and 20 percent for bus and other uses. About half the money is to be spent on 64 specifically authorized projects. In addition, $17.4 billion has been earmarked for transit operating assistance.

Congestion Mitigation and Air Quality Improvement Program: $6 billion for projects that will help areas struggling to achieve air quality goals.

Interstate Completion and Trade-in: $13.4 billion to complete the Interstate system and honor prior commitments for Interstate transfers to rapid transit projects.

New Technologies: $660 million for smart cars; smart highways research and development; $725 million for research and development leading to the production of a magnetic levitation train system.

Special Projects: $6.2 billion earmarked for 538 specific projects, such as replacement of a bridge in Portland, Maine, and improvement of an expressway in Chicago.

Bridge Repair and Replacement: $16.1 billion for continuation of existing bridge program. Up to 40 percent of a state’s bridge funds may be transferred to the National Highway or Surface Transportation programs.

The PUBLUC’S CAPITAL, a quarterly forum on infrastructure issues, is prepared for GOVERNING under the direction of Marshall Kaplan, dean of the Graduate School of Public Affairs, University of Colorado at Denver and Alan Altshuler, director of the A. Alfred Taubman Center for State and Local Government of the John F. Kennedy School of Government, Harvard University. David Luberoff of Harvard University and Peggy Cuciti of the University of Colorado serve as co-editors. All unsigned articles in The PUBLUC’S CAPITAL are the work of Cuciti, Luberoff, Altshuler and Kaplan. The publication of The PUBLUC’S CAPITAL is coordinated for GOVERNING by Penelope Lemov.

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GOV1ERNING
The States and Localities

The challenge: Most of these regional planning councils have been around since the 1960s but they have little experience allocating resources or resolving high-stake disputes.

- Clean air. To help localities reduce traffic congestion while meeting air quality standards, the bill pushes investment in approaches that cut down on travel by persons driving alone. The challenge: The investments ISTEA is likely to underwrite—mass-transit systems, expansion of car-pool lanes—are well-received by the public but recent experience suggests that they have negligible effects on air quality and trivial effects on congestion. Alternative strategies that do seem to work—congestion tolls, parking charges at work sites—are, unfortunately, wildly unpopular with the folks at home.

- Innovative technology. ISTEA puts money into such politically acceptable and sophisticated technologies as Intelligent Vehicle and Highway Systems and high-speed magnetic levitation trains. Both these technologies hold out the promise of a technological fix that won’t arouse environmental concerns or NIMBY passions. The challenge: There are formidable barriers to implementing IVHS and considerable evidence that high-speed trains are not feasible in major travel corridors.

For all its tilt toward the new, there is still plenty of business as usual. The bill directs funds to more than 500 specifically identified projects, which is inconsistent with the theme of local flexibility but helped assure the bill’s passage.

These challenges underscore both the promise and the limits of the new bill. In 1956, when the Interstate highway system was first funded, few imagined the political turmoil that would be provoked as highways transformed patterns of urban and rural life. It remains to be seen if the new vision will be less disruptive or if it will produce new forms of turmoil as policy makers sort through the new guidelines for decisions and give life to the new decision-making structures.
Ready or Not, Here Comes Regional Power

If there's one point of agreement on the new transportation bill, it's this: Putting regional planning councils in charge of decision-making is the biggest gamble in the whole bill.

Congress is betting that these low-key advisory units—metropolitan planning organizations, by official moniker—can turn themselves into Type-A agents who can wield political clout as they coordinate policy, set priorities and make hard funding decisions. Without such a transformation, the high hopes for ISTEA as a force for change in urban transportation policies may not be realized.

Congressional sponsors of ISTEA latched on to MPOs as a way of changing transportation policy: They wanted less emphasis on building roads and more on custom-fitting alternative investments, such as mass transit or car-pool lanes, to regional transportation needs. There was widespread concern that state transportation departments had too ingrained a bias toward road building and had been relatively insensitive to the impact of highways on urban areas and environmental goals.

MPOs, on the other hand, tend to represent a variety of metropolitan interests. As such, they were perceived to be in a position to push states and localities toward investments that encompass a variety of solutions for regional traffic and air quality problems. "We don't know how this will play out," admits John Bosley, counsel to the National Association of Regional Councils, which represents MPOs and other regional groups. "But we think we've turned a corner and the old road gang has lost control."

The new act requires states to allocate a fixed percentage of available funds to urban areas (see sidebar on allocations, p. 66). MPOs for urban areas larger than 200,000 people (as well as MPOs in smaller areas that have not met air quality goals) are given the responsibility of deciding, in consultation with state DOTs, how to spend that money.

MPOs are not accustomed to exercising real power. Created in the 1960s and early '70s, MPOs have been advisers to local governments on transportation, urban renewal and land use activities. They prepared metro-area plans but those rarely had much impact on hard-nosed spending decisions. Anxious not to offend any of their local government participants, MPOs produced long, unprioritized wish lists of projects. State DOTs were precluded from funding unlisted projects but they could, and routinely did, pick and choose from the lists with broad discretion.

The new act dramatically changes these historic practices by requiring the MPOs to set the priorities. They will for the first time have to balance urban and suburban interests, choose among transit and road investments, and reconcile mobility with clean air goals. "The funding allocation power gives MPOs considerable clout," says Bruce McDowell, director of research for the U.S. Advisory Commission on Intergovernmental Relations. "Now they have some chips when they come to the table. That has been their biggest problem until now."

While they may have new powers, the bigger concern is whether they'll know how to use them. McDowell notes that regional councils of government, which serve as MPOs in many parts of the country, "have proven themselves useful institutions for exchanging views, discussing issues, [and] providing data and analysis....[However] most have not proven themselves as political policy makers, especially when the issues are controversial."

The ability of MPOs to grow into their new role is complicated by confusion over delineation of responsibility, especially in regard to state agencies. The bill contains language that requires consultation and cooperation between state DOTs and MPOs. This means that state DOTs are sure to be key actors: They have the technical expertise and they control the state funds needed to match federal grants. Some fear that state planners may attempt to subsume the MPO process. Others such as Ray Chamberlain, president of the American Association of State Highway and Transportation Officials, are worried that one result of legislative murkiness will be that "nobody is in charge."

Others expect astute local policy makers, who may have ignored MPOs in the past, to focus on making the regional organizations work. Bill Roberts, legislative director of the Environmental Defense Fund, which strongly backed the MPO provisions, figures that when the MPO wasn't that important, "a mayor might appoint his brother-in-law as its representative. Now that the MPO has power, you can be sure a mayor will make sure he has somebody good representing him on the MPO."

Larger jurisdictions will probably move to gain greater control over the MPOs, many of which are dominated by smaller jurisdictions in their metropolitan areas. In the Denver metropolitan area, for instance, the Council of Governments, which serves as the region's MPO, makes most of its decisions via a majority vote of all governments. There is a little-used provision in the organization's by-laws, however, that allows weighted voting. This could be invoked if a larger jurisdiction felt pushed to protect its interests.

There are also a number of structural problems that could make life miserable for MPOs. ISTEA calls for transportation plans to be coordinated across types of transportation, local governments and policy sectors, specifically those involved with air quality, land use and transportation. The law, however, doesn't adequately address the structural fragmentation that makes such coordination difficult. Large metropolitan areas are frequently divided into several MPOs. In addition, air quality and congestion management may be handled by a layer of agencies with non-overlapping jurisdictions. This patchwork structure reflects a distrust of regional governance typical of many local officials and residents.
Finally, for all the hoopla surrounding their new role, MPOs will control only about $9 billion of the $150 billion authorized by ISTEA. As Lawrence Dahms, executive director of the San Francisco Bay Area MPO, notes. “We have to recognize expectations about resources. The amount of money we are receiving in the Bay Area will not even pay for two interchanges in our current plan.”

By most accounts, devolution of power will produce a variety of outcomes. In some areas, there will be substantial shifts in the types of projects that receive funding. In others, the outcome may be the status quo. In yet other areas, there could be institutional gridlock. What is clear is that MPOs—which have long decried their lack of power—are being given a chance to prove themselves in action. The test, notes Dahms, will be street-level performance. “We have to think in terms of outcome, not as we have in the past, just of process.”

The Big Question: Can MPOs Do the Job?

Congress granted significant powers to metropolitan planning organizations. Can they fill the shoes Congress set out for them?

Yes. The good news is:

1. MPOs have a flexible outlook. Unlike state departments of transportation, which traditionally make investment decisions, MPOs do not have ties to a single transportation solution, such as highways.
2. MPOs are experienced. They’ve long had to coordinate the concerns of several jurisdictions, special interests and assorted government agencies at one time.

No. The bad news is:

1. MPOs rarely set priorities. Made funding decisions, exercised real power.
2. MPOs don’t have the technological expertise to develop the sophisticated models that can predict relationships between transportation improvements, congestion, air quality and land use.
3. MPOs don’t have clear lines of responsibility. ISTEA leaves things murky on the relationship and divisions of responsibilities between MPOs and state agencies. With their greater experience, state agencies may be able to run roughshod over MPOs.
4. MPOs face structural barriers in coordinating policy. Large metropolitan areas, for instance, are often divided into several MPOs. And air quality and congestion management are often handled by other agencies whose jurisdictions don’t overlap the MPO’s.

CLEAN AIR

Transportation’s New Priority

Cleaner air or faster commutes? That’s been the policy question for more than two decades. And one that the new transportation bill resolves in favor of clean air.

It does so by making it significantly more difficult to build new highways in areas that fail to meet federal clean air goals. Instead, the act encourages states and localities to attack traffic problems through mass transit systems, special lanes for high-occupancy vehicles and other facilities designed to provide alternatives to solo automobile travel. The idea is to reduce pollutants from automobiles by cutting back on the number of miles cars travel.

This aspect of the transportation bill delighted environmentalists, many of whom fought hard for it. “We hit a lower-deck home run,” says Bill Roberts, legislative director for the Environmental Defense Fund.

But that victory, however heroic, may be hollow. By targeting the attack on automobile mileage, the transportation bill may not be as effective in cleaning up the air as its sponsors and backers hope. In fact, the transportation investments encouraged by the bill and most likely to emerge in the coming years have little potential to reduce air pollution. At best, they may only keep it from getting worse. This is not the first time a transportation bill has been linked to air quality. Since the mid-1970s, federal law has nominally mandated that transportation investments conform to clean air goals. But the federal commitment to enforcement was weak, and states found ways to get around the requirements. Some refused to include in their plans options aimed at reducing total vehicular miles traveled—VMTs—in transportation jargon; others drew up plans but neglected to fund them. In addition, transportation departments were able to include new road construction projects as part of their strategy for cleaning up the air. Their rationale was simple: Congestion is highly polluting; new roads relieve congestion. What they neglected to say is that additional road capacity induces more travel, which over time may nullify any gains.

ISTEA gets tough with these past practices. Transportation agencies will now have to establish targets for reducing total automobile travel and demonstrate that these targets are being achieved. VMTs will have to be taken seriously. As the Environmental Defense Fund’s Bill Roberts puts it, “Can the mandated targets be achieved? It’s a matter of policy. I would say that it is virtually impossible.”

ISTEA supports strategies for dealing with VMTs in three important ways: It allows a much larger share of transportation funding to be used for mass transit and other alternatives to road construction. It shifts the locus of decision making from state transportation departments to metropolitan planning organizations (see previous story), where transit is likely to get a more sympathetic hearing. And it eliminates “phantom projects” by requiring that regional plans rank projects by priority and build them in that order.
A Primer on Pollutants, Congestion and The New Transportation Policy

The link between transportation and clean air is rooted in chemistry. About 50 percent of the chemicals that combine to form smog are emitted by motor vehicles, as is about 90 percent of the carbon monoxide in urban air.

Since the 1960s, policy makers have tackled this problem in two ways. First, they emphasized reduction of emissions through technical improvements in automobile engines and gasoline. Then they regulated emissions from new and existing stationary sources, such as factories, power plants and the like. These two strategies produced substantial reductions in emissions and a noticeable improvement in air quality. Moreover, they proved to be popular with politicians because their costs, while large, are not readily apparent to voters. Instead, they are hidden in the prices of products such as automobiles.

There is also a third line of attack: reduce air pollution by cutting back on automobile travel. But that approach has never been seriously pursued. There have been public subsidies for mass-transit systems, but the effects of those systems on automobile travel have been invisible. Regulatory actions, such as mandatory no-drive days or limits on employer-provided parking, and pricing policies, such as parking surcharges at work sites, have invariably floundered in the face of their unpopularity.

The result is that while automobiles are much cleaner than those of the early 1970s, the gains from emissions reductions per vehicle mile traveled have been significantly offset by increases in automobile travel. In the Los Angeles area, for example, where the population has increased by 50 percent in the last 20 years, auto emissions have been reduced by about 70 percent but total vehicle miles traveled has doubled. The net effect is that automobile-created pollution dropped about 35 percent. In areas where travel growth has been slower, pollution reductions have doubtless been greater. Even so, many areas have been unable to attain the nation’s ambitious air quality goals.

This approach, if implemented, represents an almost complete reversal of historic patterns in transportation decision making, contends Denver city councilman Ted Hackworth, chair of the National Association of Regional Council’s task force on the surface transportation bill. “The local political and development interests must understand that transportation must address the Clean Air Act first and development needs second.”

Will it work? Until regulations implementing the new clean air and surface transportation laws are written, it is impossible to predict how states and metropolitan areas will respond to the federal policy direction. Recent experience in Los Angeles suggests, however, that many of the measures most likely to be implemented have only limited impacts on air quality.

Since the late 1980s, the Los Angeles area, the most polluted in the country, has undertaken an ambitious program to improve air quality. Its 1989 plan calls for quadrupling transit ridership, eliminating 3 million daily work trips through telecommuting and eliminating another 1.7 million daily work trips via ride sharing—all by the year 2010.

Achieving these goals requires substantial efforts, and they are being made. Ride sharing is encouraged through investments in special car-pool lanes and by regulations that require employers to develop transportation management plans that reduce the number of vehicles employees use to commute to work.

Martin Wachs, a professor at the University of California in Los Angeles, has been monitoring these efforts. He’s found that substantial increases in carpooling occur only when employees face negative incentives, such as parking charges. In Century City, a major mixed-use employment center, Wachs reports, 92 percent of those who receive free parking drive to work alone. By contrast, only 74 percent of those who have to pay for parking drive to work alone. “It is very difficult to get very large shifts from single-occupant commuting to ride sharing by employing only incentives for ride sharing,” he claims. “We must also pay attention to reducing the incentives for driving alone.”

Congested highways not only fray drivers’ tempers, they compromise air quality.
Employees are not necessarily passive in the face of such regulation. Public employee unions in the Los Angeles area worked to get a rule adopted that prohibits the region’s Air Quality Management District from adopting any regulations that violate collective bargaining agreements or place an undue impact on the poor. If free parking is considered a fringe benefit, its removal violates the first element. The use of parking charges to induce carpooling could easily qualify as a violation of the second.

In further efforts to lure commuters from their cars, the Los Angeles plan calls for spending more than $43 billion on mass transit. Yet almost every study of ridership shows that few mass transit riders are returned car commuters and most new subway riders used to ride the bus.

Chang-Hee Christine Bae of the University of Southern California estimates that all of the mode shift strategies in the 1989 Los Angeles plan—employer ride sharing, elimination of parking subsidies, auto use restrictions, increased carpooling, transit improvements—will produce less than 2 percent of the total projected reductions for each of the two chemicals that are precursors to smog formation and about 3 percent of the plan’s projected reductions in carbon monoxide (see sidebar on pollutants, p. 70).

Bae adds that implementing all the plan’s travel reduction strategies—alternative work schedules, telecommuting, better land use planning—will produce 1.3 and 21 percent reductions in the two precursors to smog formation and a 31 percent reduction in carbon monoxide. “Even if they could be achieved,” Bae concludes, “the VMT-reduction measures [in the Los Angeles plan] make only a modest contribution to the total emissions reductions.”

There are several reasons why VMT-reduction strategies have limited effects on air quality. Most pollution from automobiles comes when cars are first started and when they cool down after being turned off: In an average 10-mile trip, roughly half the pollution is from this phenomenon. Thus, a shift from automobile to transit will have little impact if workers still drive to the transit station. Similarly, telecommuting can reduce the number of work trips made each week. There is some evidence, however, that workers are likely to respond by moving their residences further out into the country which could, in effect, then lengthen the remaining work trips.

Because the gains from behavior-changing measures are so limited, it may make more sense to reduce emissions via emerging technologies. Consider, for example, the work done by Professor Donald Stedman of the University of Denver. In collecting data on 300,000 cars under actual travel conditions, Stedman discovered that half the emissions came from less than 10 percent of the fleet. It makes more sense to concentrate on these vehicles, he suggests. One way to get the diehard offenders off the road is by using a mobile emissions monitoring device. Such devices could be deployed to haul in polluting cars the same way radar is used to catch speeders.

Such an effort, however, may be hindered by policies that focus on VMT as a surrogate measure of automobile pollution. Yet, despite evidence that a strategy of reducing VMTs produces minimal gains at relatively high costs, there has been little call to re-examine that approach.

One explanation is that VMT reductions would facilitate achievement of a number of other goals, most notably congestion relief, open space preservation, energy conservation, city revitalization and prevention of global climate change.

Another comes from environmentalists who say that the nation’s goal ought to be to reduce all forms of air pollution regardless of cost. Since air quality goals outlined in the Clean Air Act cannot be fully attained through other means, even steps with small impacts must be undertaken.

But there has been little effort to question whether air quality goals are realistic. As Alan Altshuler, director of Harvard University’s Taubman Center for State and Local Government, noted in his 1979 book, The Urban Transportation System, those standards are designed to guarantee pollution levels “that can be tolerated by anyone, however ill or fragile, without ill effects.... By way of comparison, a safety standard that entailed zero levels of mortality and personal injury would be achieved only by a total ban on travel.”

While the rhetoric of the Clear Air and Surface Transportation acts suggests that stringent measures will be taken to achieve clean air goals, it is entirely conceivable that there will not be the political will to make hard decisions. Policy makers must discern whether the goals merely reiterate a society’s hopes or actually give voice to a national commitment.
INNOVATIVE TECHNOLOGY

High-Tech Highways Could Rule the Road

Gone are the days of building new highways. Today all efforts are on squeezing more out of what we have.

Asphalt and concrete will be replaced as the building blocks of future transportation systems. Computers, electronics and communications technologies known as Intelligent Vehicle and Highway Systems will come into their own.

This technology, its proponents believe, can do it all: reduce congestion, enhance safety, save fuel, help clean the air and provide a spur to emerging American industries.

Advocates also contend that investments in IVHS make sense on industrial policy grounds. While many of the technologies underlying IVHS were developed in the United States for use in aerospace and defense, European countries and Japan are widely perceived to be leaders in applying the technologies to everyday transportation needs. Those countries have gained that edge through a public commitment of funds and by establishing public-private partnerships.

Others believe its impact will be minor. This disparity in views can be seen in estimates of IVHS reductions in travel time: These range from 2 percent to 50 percent.

Whether IVHS is a high-tech savior, or just a technological mirage, remains to be seen. To find out what it can do, however, will require hefty financial commitments as well as unprecedented levels of cooperation among governmental agencies and between the public and private sectors.

The Intermodal Surface Transportation Efficiency Act gets the ball rolling by authorizing $660 million over six years to research, develop and test IVHS. The investment is warranted.

Fragmentation of authority among governmental jurisdictions may also be a problem. A recent IVHS demonstration project was delayed several years because of the difficulty of getting governments to work together.

IVHS implementation also requires unprecedented levels of cooperation between the public, which controls the roads, and the private sector, which owns the vehicles and some of the technologies. The full benefits of government investment in traffic management systems will not be realized without related private investment. Similarly, the risk to industry of investing in development of in-vehicle hardware is too great unless government invests in the infrastructure, or allows private investment, perhaps under a franchise arrangement.

The marketability of in-vehicle systems will be much greater if the same hardware can be used from one geographic area to the next and if different system components are compatible. These problems can best be resolved if "systems architecture" is defined at the outset. Such an architecture defines the major components of a system, the function of each component and standards for component interface. It leaves plenty of room for multiple private industry providers of individual systems, healthy competition and technological advancement.

While the development of systems architecture and standards are needed, the process of getting there will be difficult. Much research, development and operational field testing is required.

Choices of what to test, and how, will have positive impacts on some commercial developers, negative impacts on others. This will put pressure on the administrators of federal research and development dollars. They will also be pressured by state and local governments that prefer investments in proven technologies.

Cost may be a definitive barrier. The magnitude of the investment required to implement IVHS is daunting. Mobility
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2000, an informal advisory group of public and private organizations, has called for government IVHS expenditures of $34 billion over 20 years. As the strategic plan is fleshed out, that number is likely to rise.

Other obstacles for IVHS include anti-trust considerations that make it difficult for private-sector groups to work together, liability issues, particularly with respect to automatic vehicle control systems; and privacy issues associated with automatic vehicle identification systems. Some believe these institutional obstacles are so severe that broad-scale implementation is unlikely over the next decade or two.

Moreover, like some other advances envisioned by ISTEA, IVHS may not solve the problems it is supposed to address. GAO warns that an automated highway system may provide more efficient vehicle travel, but in so doing might "generate additional vehicle-milage because of its improved convenience." Induced travel growth could undo many of the benefits in travel time, safety, air quality and fuel consumption promised by system advocates.

There is another serious objection, one that revolves around using fancy high-tech gear when cheap, no-tech solutions could do the same job. Accusing the authors of the new transportation bill of riding a "high-tech white elephant," Brookings Institution economist Clifford Winston suggests that a lower-cost but politically more difficult solution to congestion and traffic problems is appropriate pricing of transportation infrastructure. Federal policy makers, he argues, are beginning to understand this in the case of airports where they are suggesting the use of congestion tolls: higher landing fees during peak periods.

"The use of intelligent vehicle systems in air transportation using radar and air traffic control communications was not solving airplane congestion," he wrote recently. "Adding that a similar realization will come with respect to road congestion."

IVHS advocates view congestion pricing as a political hot potato and would prefer not to justify system development in those terms. But as the Transportation Research Board notes, IVHS is an "enabling technology." It will allow policy makers, if they so choose, to move to a system of charging for the use of roads during congested time periods.

Perhaps it is no accident that Senator Moynihan's speeches supporting IVHS sounded the themes of productivity and pricing. Recalling the opening of the Triborough Bridge 54 years ago, Moynihan pointed out that men and women are still sitting in booths collecting tolls. "That is not productivity.... Twenty-five cents worth of electronics on a credit card would record that you had crossed the Triborough Bridge. If they had any sense they would charge you 50 cents at midnight and $2.50 at 6 o'clock and maybe a quarter at tour in the morning.... Be up to date. Learn productivity, think congestion pricing."

INNOVATIVE TECHNOLOGY

High-Speed Trains Are On Track but Off Course

Magnetic levitation: The term hints at a high-tech mystery wrapped in a futuristic enigma. No wonder high-speed trains designed to run on the maglev principle have gained an inordinate amount of attention. It's an attention that, so far, exceeds the technology's potential to be a cost-effective means of transportation.

Congress signaled its belief in the train's potential by targeting $725 million of surface transportation act funds to the development of a prototype. Maglev, which has been tested but never used, is a system that uses magnetic forces to suspend a vehicle over a guideway while an electric motor provides the forward motion. Since there is no physical contact between guideway and vehicle, speeds of 300 miles per hour or more are possible. Congress also allocated another $100 million to support more conventional high-speed rail technologies.

Advocates claim high-speed rail will attract riders from both gridlocked roads and crowded airports, thereby reducing congestion, improving air quality and eliminating the need for disruptive construction of either new roads or airports. Federal investment in maglev backers further claim, is justified by the fact that no one has yet to put a maglev train into service, though both Japanese and German firms are testing proposed systems. By contrast, the Japanese, French and Germans currently operate more conventional high-speed trains capable of traveling almost 200 miles per hour.

There is, however, increasing evidence that high-speed trains in general and magnetic-levitation systems in particular cannot generate enough revenues to be self-supporting. They may also be politically controversial.

A Transportation Research Board report, released during deliberations over the surface transportation bill, found that under the most likely scenarios of cost, high-speed trains—maglev and other technologies—would break even only if they carry some 6 million passengers a year. This level of ridership is almost impossible to achieve, the report concluded.

Because high-speed trains tend to be significantly more expensive than driving, most of the riders would be people who would otherwise use airlines to make their trips. In addition, because airlines are faster than trains for long trips, the trains would be competitive only in medium-length corridors of 200 to 500 miles. Air travel currently exceeds the required 2 million passenger volume in only one U.S. corridor—between Los Angeles and San Francisco. The TRB report projects, moreover, that by the year 2010 air travel will exceed the required passenger volumes in only three other corridors: Boston/New York, Washlgton, D.C./New York and Los Angeles/Phoenix (see charts, p. 6). This means that high-speed trains will be economically viable only if they knock out their airline competition or receive large subsides.

Experiences in Florida, California and Nevada support the TRB findings. There, efforts to build privately financed high-speed trains are floundering amid questions of financial feasibility. A proposed high-speed rail franchise is moving ahead in Texas. It too is contingent on receiving a large subsidy.

The TRB report estimates that a high-speed train system carrying 2 million
passengers per year easily could require a subsidv of over $100 per passenger. Such
a system would break even only if its fares were high and its capital, operating and
maintenance costs were at the low end of estimates.

Congress explicitly recognized this reality. The ISTEA’s conference
committee report on the maglev program noted that government subsidies for high-
speed trains may be appropriate in cases
where economic externalities such as pollution, time lost due to congestion,
and condemnation of private property to
build new airports and highway lanes are
not adequately reflected in the cost of
alternative transportation modes.”

Even if the subsidies become available, maglev trains face substantial obstacles.

For starters, the system requires a 35-
foot wide, elevated right-of-way extending into the center of the city. The route
must be extremely straight because it is
impossible to maintain high travel speeds
in sharp turns. This means that new
maglev lines cannot use existing rail or
highway rights-of-way if they are to
achieve high speeds. A TRB analysis of 39
potential U.S. maglev routes using
Interstate rights-of-way found that curves
causing speeds of less than 227 miles per
hour occur every 1.4 miles or so. The
same problem would afflict conventional
high-speed rail systems, though at least
they could share conventional track with
other trains on the approaches to
downtown stations.

Efforts to develop new, straighter
right-of-ways are bound to be trouble.
Even in rural areas, residents are likely to
fight proposed lines that pass through
their land without providing any benefits.
Farmers in Texas are currently organizing
against land takings required for that
state’s proposed high-speed rail network.

Airlines will also fight potential
subsidies for rail. One of the leading foes
of the Texas system, for example, is
Southwest Air, which currently provides
extensive service between the state’s major
cities.

Despite these obstacles, proponents
claim that the federal investment in new
high-speed trains, particularly maglev, is
justified. “We have always been on the
edge of transportation innovation,” says
U.S. Senator Daniel Patrick Moynihan.
“It is our intention that we should stay so
and this bill embodies that purpose.”
Water is becoming so expensive that reclaimed water can command high market prices. In Colorado, Aurora delivers reclaimed water to a golf club at 45 cents per 1,000 gallons—as cheap as other alternatives available to the club. In Arizona, stringent policies to cut groundwater overdrafts have encouraged communities to look for viable reclamation projects even without state funding. Tucson is completing a 10-year, $65 million project to deliver 35,000 af/yr of reclaimed water. Gilbert, a small Arizona town, has been delivering wastewater for over a year—one of its projects is a waterskiing park that uses 200 af/yr to fill two lakes. Irvine Ranch in California found that using reclaimed water for landscape irrigation and toilets in office developments is 33 percent cheaper than buying and treating additional water. It has built an extensive dual distribution system that includes 107 miles of pipelines for reclaimed water. Today, reclaimed water accounts for about 25 percent of all its water use.

One of the problems in recycling municipal wastewater is that customers do not always need water when municipalities produce it. But ingenuity in structuring contracts can overcome this problem without building expensive storage facilities. Tuolumne County Water District in Sonora, California, has contracted with 30 ranchers to take 1,300 acre feet of municipal wastewater during the April to October irrigation season. Ranchers receive the water at no cost but must take a specified amount of water at specific times. The water is delivered through sprinklers operated automatically by the district and the contract continues even if the land changes hands. Ranchers now select crops and planting times to take advantage of the reclaimed water.

Setting the Rules

Water suppliers investing in water reclamation projects must know their rights. Can they sell reclaimed water to other users? What are their liabilities concerning quality? How can they legally use reclaimed water? And what are the regulatory and legal requirements for a reclamation project? Uncertainty about these questions increases risk and makes projects less feasible. States can reduce the uncertainty by taking three steps.

First, define reclaimed water as a resource with clearly defined rights, including the right to sell. If states fail to establish effluent rights, they run into legal claims from downstream users who have come to depend on return flows of effluent for their own use. Several states, including Arizona and Nevada, are moving to establish legal frameworks governing effluent water.

Second, review health and environmental regulations. Many laws and regulations were created when new water sources were cheap, when treatment technologies were less developed and when water quality monitoring was less exact than it is today. California, for example, carefully reviewed existing reclamation projects and found a noticeable lack of health incidents associated with the use of treated wastewater. It is, accordingly, revising a 10-year-old regulation to make it easier to use effluent.

Third, create a streamlined, accessible regulatory process. Effluent is widely used in Arizona because the state has established clear regulatory authority over the use of reclaimed water. Effluent reuse and recharge are solely regulated by the Arizona Department of Environmental Quality.

By contrast, consider the attempt by Pleasant Valley County Water District, in Camarillo, California, to buy reclaimed water from the nearby city of Thousand Oaks. Thousand Oaks has been discharging water into Conejo Creek since 1961. Permits for the sale are needed from the state Water Resources Control Board, the state Department of Fish and Game (concerned with impacts on wildlife), and the U.S. Corps of Engineers. Approvals are required under California’s Environmental Quality Act. Permission will not come easily. In its application to the Water Resources Control Board, Thousand Oaks is claiming appropriative rights to all the water it discharges from its treatment plant, but farmers and water districts have protested, claiming that they have been using the discharged water for years.

Psychic Drains

Financial and regulatory considerations are not the only factors delaying recycling projects. There is also public fear of health risks, based in part on the performance of some wastewater treatment plants. Overcoming these fears may require more demonstration projects where plant operation and water quality are carefully monitored. The Denver Water Department has been operating a demonstration plant for seven years; it has shown that wastewater can be treated so it equals or even exceeds the quality of other potable water sources. Despite the success of the pilot project, fears remain. State and local governments will have to work to overcome these fears by demonstrating the economic and environmental benefits of reclamation programs.

Reclaimed water isn’t the only answer for dry Western states. At best it can only meet a part of growing future demands. But it can do so at lower cost than many of the alternatives now under serious consideration. If states take the appropriate steps, they can ensure that reclaimed water at a reasonable cost will be an important part of future municipal water portfolios.

Roger Vaughan is an economist and the co-editor of the Water Strategist, a quarterly journal, from which this article is adapted.
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RESEARCH REPORTS

False Dreams and Broken Promises: The Wasteful Federal Investment in Urban Mass Transit

Myths and Facts of the Nation's Transit Policy

These two papers, issued by two conservative think tanks, represent unsuccessful efforts to change the course of last fall's debates over federal transportation policy. The first paper, by Illinois-based transportation consultants Jean Love and Wendall Cox, argues that transit subsidies have not achieved their stated goals of increasing ridership, alleviating congestion, reducing air pollution, revitalizing cities or aiding the poor. The second paper, written by Peter Gordon, a professor of urban and regional planning at the University of Southern California, reiterates these arguments and notes that demand for transit actually has fallen as rising incomes have allowed more people to pursue the American dream of low-density living. Love and Cox call for an end to federal transit subsidies, elimination of barriers to private service and competitive contracting for subsidized services. Gordon calls as well for congestion pricing, emissions charges, full-cost parking charges at work sites, transportation vouchers for the poor, deregulation and increased privatization.


Liberalization Without Deregulation: U.S. Telecommunications Policy During the 1980s

During the last 20 years, the structure of the U.S. telecommunications industry has shifted from the public utility model to one geared toward competition. Although considerable regulation persists, the growth of competition has produced remarkable savings, calculates Robert Crandall, a senior fellow at the Brookings Institution. Some $3 billion may have been gained from increased efficiency and new technology, another $1 billion from limited rate rationalization. Further deregulation could produce additional savings. Crandall argues, but political pressures make it unlikely that policy makers will embrace full deregulation in the near future.


How Federal Spending for Infrastructure and Other Public Investments Affects the Economy

Carefully chosen federal investment in physical infrastructure would yield economic rates of return higher than the average return on private capital, concludes this report by the Congressional Budget Office. The highest economic benefits would result from maintaining existing assets and from expanding capacity in highly congested facilities. Based on its review of the evidence, however, the CBO believes that recent studies have exaggerated the importance of additional physical infrastructure to economic performance. The report also reviews the effects of investment in human resources and research and development activities.


Privatization of Municipal Wastewater Treatment

Privatization of infrastructure is often touted as a way to take advantage of efficiencies in the private sector. This comparison of costs of privately and publicly operated wastewater treatment facilities, however, found no statistically significant difference between public and private sector costs. Indeed, if results from one particularly high-cost facility are included, the private facilities, on average, are more expensive than the public systems. Author Randall Holcombe, of Florida State University, contends this is due to the fact that most privatization contracts contain few incentives for efficiency. Because they often allow a pass-through of costs, they may actually encourage inefficient behavior.


Federal Options for Reducing Waste Disposal

As more waste is generated, concern about the health and safety implications of disposal is rising. This report by the Congressional Budget Office considers alternative policies for reducing the amount or toxicity of waste. CBO suggests that the best theoretical approach—a pricing system in which households and businesses are charged according to the amount and toxicity of waste they produce—may not be feasible in practice. Five other policy alternatives are also evaluated: unit-based pricing, a disposal tax and reuse subsidy, a virgin material tax, an investment tax credit for recycling, and a recycling credit system.


Public Sector Maintenance: The Case of Local Mass Transit

Private transit operators tend to devote significantly more resources to maintenance than public sector operators, contends Brian Cromwell, an economist with the Federal Reserve Bank of Cleveland. This may be due to federal and state grants programs that encourage investment in new equipment over maintenance of existing equipment. Alternatively, it may be that institutional features of private ownership tend to be more supportive of maintenance activities.

The Rising Tide of User Fees

Over the last 20 years localities have moved toward increased dependence on user fees for the goods and services they provide. Rapidly growing Sun Belt states rely on them more heavily than older Northeast states. Thirteen public functions eat up 80 percent of the fees raised.

Who uses them the most

What user fees support

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<th>Percentage of service funded by user charges</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 20 40%</td>
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</tbody>
</table>

- Roads and parking
- Transit
- Air transportation
- Water transportation
- Water supply
- Electric power supply
- Gas supply
- Sewerage
- Solid waste management
- Parks and recreation
- Natural resources
- Hospitals
- Housing and community development

Introduction and Overview: Gene Griffin

We’re running a little late, so if we could all take a seat, we’ll get started. It is very nice to see the crowd we have here today.

My name is Gene Griffin. I am with the Upper Great Plains Transportation Institute. We are hosting these conferences. The sponsor is The Humphrey Institute of Public Affairs located at the University of Minnesota.

I’d like to welcome you to the second of three conferences on “Transportation and Economic Development: Our Choice for the Future.” I think it’s a very appropriate topic. I would like to thank all of you for taking time from your busy schedules to participate in this conference, and I think your participation is extremely important. Those of us at universities and other public institutions and government, sometimes have a tendency to forget who the customer is; who really uses the transportation system. If we don’t have the involvement of the customers, the people that actually use the system, we run the real risk of mismanaging, misdesigning, and misplanning that system. So your presence here today is very important and we thank you for taking the time from your busy schedule to be with us.

You should all have a folder in which you have the agenda, and the focus groups with which you are assigned to. There are six focus groups: Aeronautics, Highway Engineering, Agriculture, Highway Finance, Truck Regulatory, and Railroad.

We did try to develop a safety focus group but couldn’t quite get it done. So if you have safety concerns, they would be appropriately dealt with under Highway Engineering, under Railroads, under Truck Regulatory and so on. All of those areas have safety issues associated with them as well as Highway Finance.

You will also find a summary of the results of the focus groups’ discussion and the points that were developed in the previous meeting which will serve as a reminder of what you came up with the last time and spring forth into today’s focus group discussions. Finally you will find a blue evaluation form that we encourage you to fill out before you leave today. We found the results to be very informative in structuring this particular session and we hope that you will fill them out and give us some idea of how we should go forward with the project to complete it with the third conference.

The program is very similar to the one we had last time. We will try and provide some insights and some knowledge this morning and at the luncheon, that will hopefully provoke some thinking on your part, which you can take into the focus groups’ discussions this afternoon. The heart of this program is the focus groups’ discussion, so be prepared to really sit down and give it your best effort to make that contribution which is necessary to make this a success.
Again, think of yourself as the customer making that contribution. "How would I best be served as a user of transportation? How does it relate to economic development?" Then we will wrap up after the focus group discussions this afternoon. We will wrap up with reports from an assigned reporter of each focus group and then we will go into a question-and-answer session. We will give just a few instructions for the focus groups immediately after lunch and prior to going into the focus groups.

So what do we want to accomplish today? Let me sum it up and boil it down into something very concise if I can. And that is, what we want to do is to build on the last meeting. Whether you were here or not is not critical, because you have the results from the focus group discussions which should give you the same background as if you had been here. What we will want to do then is to add to those points, refine them, and distill them so that we can start getting down to something that's fairly well articulated in terms of what the relationship is between transportation and economic development. What's important to you as an individual in transportation. Try and think in those terms and we'll move forward with that.

I'd like to say just a few words about the role of infrastructure in the future. I think it's very critical because there is some popular thinking now about a country, a state, or a trading block, that differentiate them from another country, another state, another major international trading block. Incidentally that's what we are seeing evolving in the world today, a global economy where you've got the General Agreement on Tariffs and Trades. GATT is continually working towards breaking down the artificial barriers in trade. You've got the development of large trading blocks—the North American Free Trade Agreement, the European Community—these are the two most prominent ones. The Pan Asian Trading Block which Japan is working very hard to organize would include many of the Asian countries, but we are starting to see from two fronts, this tearing down of trade barriers through both the creation of large trading blocks and also through the general reduction of trade barriers through GATT. But in that kind of environment, the thought is that there are only two things that are going to distinguish you, the country, and the state from another country, state, or trading point. These are human capital and the infrastructure. If you think about it, it makes a lot of sense because everybody has land and other natural resources. When these become scarce, we tend to develop substitutes, we tend to develop technology that allows us to use them more efficiently; the coils, for an example. We tend to have high enough prices not to use them at all.

And you've got financial capital that moves around the world electronically with a flip of a switch.

You've also got technology. We are working very hard at making technology very transferable and people that are in the competitive environment are working very hard to figure out how to replicate technology without infringing on patent rights; that is, if patent rights do come into play. So when you think about all the components of economy, culture, and society and what makes it great, or what makes it not so great, we have what? We have human capital and we have the infrastructure within which human capital can function efficiently in a motivated way. That is why I think transportation often does not get the kind of importance it should in the public policy arena. If you think about infrastructure, and there are several kinds in the transportation infrastructure there is a health infrastructure; there is an educational
infrastructure—you can't teach students without schools. But with all those infrastructures, they are important; water and sewer. Transportation is the key link that allows any economy to specialize.

Somebody was asking me the other day about a trade corridor and how they could enhance a particular location in this corridor. I said the first thing you have to figure out in the trade corridor is, why are things moving between point A and B, and hope that you are on that line some place. The reason things move is because somebody wants to consume something at one point and somebody else can produce it profitably at another point. And so without transportation that exchange never takes place. So transportation is the key link in economic development and the infrastructure. The transportation infrastructure is what allows human capital to really manifest itself into the kind of productivity that we want. One last word on human capital. It needs to be well trained human capital. There is a lot of human capital in Mexico, it's not very well trained, but there is a lot of it there. I don't know that we want to compete in that market.

So what we are going to do this morning and then again to just be a bit redundant; we are going to give you some ideas to think about that you can take into the focus group discussions this afternoon in addition to the information that was provided at the last conference.

Our first speaker this morning is Gary Ness. Gary is the Director of the North Dakota Aeronautics Commission. He is going to speak to us on rural aviation and economic activities. I've got a lot of good things to say about Gary. First of all, he is an old Navy man as I was, so we know he is okay. He also graduated from North Dakota State College of Science and North Dakota State University. After the Navy, he worked in the savings and loan area of the banking industry. He has worked for AGSCO, and also has commercial multi-engine and instrument pilot certificates, which I think is probably appropriate, given his position. So with that, would you please help me welcome Gary.
Thank you Gene. I changed that bio the other day because when you read it in its entirety it sounds like I can't keep a job. I've got a prepared statement and then we are going to go to an overview of North Dakota.

Through decades of investment planning, the state of North Dakota has developed an extensive network of 100 public use airports. This aviation network, which is comprised of 7 commercial service and 93 general aviation facilities, links the state's residents and businesses to the rest of the nation and the world. In addition, there are about 400 private airstrips within the state. Specific factors concerning North Dakota's aviation network are: approximately 3,500 pilots in North Dakota utilize more than 500 airports/airstrips; North Dakota has 55 pilots per 10,000 people, the 6th highest ratio in the nation; there are 28 aircraft per 10,000 people in North Dakota, the 5th highest ratio in the nation; and North Dakota ranks second nationwide in the number of public use airports per 10,000 people.

Aviation is one of the most important factors that influences North Dakota's economic growth and development. It functions as an economic activity that generates employment, the purchase of goods and services, and the payment of taxes. It provides services that contribute significantly to agricultural, commercial, and industrial growth and development. The economic impact is defined as employment and expenditures attributed to aviation in North Dakota. These impacts include both the direct and indirect economic impacts and induced economic impact.

The significant economic impact of aviation on North Dakota's economy is estimated at approximately $175 million or approximately 1.5 percent of North Dakota's gross product. Including the secondary or induced spending that circulates throughout the economy the total impact reaches approximately $440 million. Another important factor concerning aviation's impact is that it generates jobs throughout North Dakota. The number of jobs directly attributed to aviation is estimated at 3,100 or approximately one percent of the state's civilian labor force. The additional jobs generated to support this work force is estimated at 6,200. The seven commercial airports contribute about $150 million and about 2,300 employees directly to the state's economy. Included in induced impact, the aviation component provides $373 million and about 4,700 employees. One of the least visible aviation elements, to the general public, is the 93 public use general aviation facilities throughout North Dakota. This element, however, contributes $16 million and 394 employees directly to North Dakota's economy. Conclusions of the induced impacts total about $40 million and about 780 employees from activities on general aviation airports in North Dakota.

Major non-aviation businesses throughout North Dakota rely on the aviation network to conduct their businesses. Based on survey findings from over 600 major businesses, approximately 75 percent of these businesses utilize commercial air service, 45 percent utilize
general aviation aircraft, and over 65 percent consider proximity to an aviation facility important (the most important in their state selection criteria). While aviation's quantitative economic impact is an important asset to North Dakota, money and employment generated are by no means the only contribution that is made. The enhanced quality of life provided for its residents makes this state's aviation network a truly valuable asset.

Examples of aviation growing and enhancing the communities throughout the state include emergency management services. The air ambulance helicopters operating out of Bismarck and Fargo provide a valuable service to North Dakota citizens in need of emergency medical care. The air taxi operators fly from the major medical centers in Bismarck and Fargo to 20 satellite clinics statewide and in surrounding states. In addition, doctors fly weekly to the state's rural communities to maintain public medical care including radiology, anesthesiologist, and surgery. Without aircraft usage these medical services would not be readily available in the more rural areas of North Dakota. For example, more than a dozen doctors routinely fly from the Bismarck Municipal Airport to communities in need of medical support such as Glen Ullin, Elgin, Wishek, Beach, and Rolla.

Environmental services. The state airports are also important to the protection and control of wildlife. Airports are the basis for: 1) blackbird control via flight dispensing, 2) shootings by the Department of Interior, 3) buffalo roundups in the Badlands, 4) transfer of samanites from North Dakota to the Great Lakes, 5) cattle hay hauling during blizzards, 6) the state wildlife census count (obtained via air surveillance to provide the basis for hunting regulations), and 7) the patrol of electrical transmission lights helps ensure prevention of power failures.

Aviation education. Future aviators for North Dakota and the nation are trained through numerous educational programs provided in the state. The University of North Dakota (UND) Aero-Space Science program makes a phenomenal contribution to aviation technology, conducting research in aeronautical technology and operations, weather modification, and flight training. Dakota Aerotech in Fargo trains professional aviation mechanics. The Travel Career Institute of Bismarck trains airline professionals and travel consultants. Of course, the young astronaut program within the state's schools inspires the state's space travelers.

Aviation manufacturing. Although aviation manufacturing is not as extensive in North Dakota as in some other states, there are several companies located within the state manufacturing aviation related products. These products include ultra-light aircraft kits at Edgeley, aerial spray boom operations out of Wahpeton, aircraft wings out of Casselton, cloud seeding equipment out of Bowman and Bismarck, radar operations out of Bismarck, rebuilding aircraft at Casselton, Beulah, and Hazen, and windsocks and training equipment out of Minot and Dickinson.

Private airstrips. Some crop sprayers, members of the Flying Farmers Association, and the Experimental Aircraft Association, rely on the state's more than 400 private air strips as the base for their activities. These landing strips are typically only 2,600 feet by 60 feet, grass landing fields along side farm sites, and are especially valuable to residents in the state's rural areas. Activities at these fields include transportation of machinery, applying pesticides, and patrolling of blackbird migration patterns.
In a study that we made a few years ago, you can see the importance of aviation. When we asked companies, "What do you look at as site selection criteria for your company as you're moving into a community?" The responses were: 1) available labor supply; 2) approximate proximity to the urban business districts; 3) proximity to a commercial service airport; 4) convenient highway access; 5) proximity to a general aviation airport; 6) academic cultural centers, rail transportation facilities, suppliers of raw material, major resources, and water transportation facilities. Of the top five, aviation was listed twice. That was a surprise to us when we did the study. Also, when we did the study, we looked at the demands on North Dakota rural aviation as far as: "Where would you want to go if you got on an airplane and wanted to do business?" This is basically what we came up with as the demand factors on aviation travel in North Dakota. As you can see, between the four major cities the numbers are: 3,500 enplanements from Minot to Grand Forks, (so it would be 7,000 people going back and forth through there), Bismarck to Grand Forks is 6,900 (so you would be looking at about 14,000), 20,000 from to Bismarck to Fargo, and 4,300 from Minot to Bismarck. Then we took a look at the other areas in the state to see how they fit. Now how do we maintain that type of activity?

This is as effective today as tomorrow in commercial service routing. The important infrastructure, as far as getting people from point A to point B to deal with business within the state, the region, the nation and international, as you can see here, are basically the larger airline groups: Delta, Continental, Northwest. They are going to cities like Salt Lake City, Denver, Minneapolis, and Chicago. The dotted lines are the regional carriers that have been developed since about 1979, mostly since 1985-86. We have hooked up now with Great Lakes Aviation which is United Express. Denver, Bismarck, Jamestown, and Grand Forks can go to Devils Lake, Aberdeen, and Pierre, and they are also working in the Fargo-Fergus Falls-Minneapolis area. You are looking at commuter type aircraft on either end (19 passenger, twin-engine). We have Air Vantage working out of Minneapolis to Fargo, Bismarck, and Minot. Big Sky is in Billings from Williston down to Dickinson or Bismarck.

You're looking at a lot of available transportation infrastructure for communities. The tough part is getting people to use it. We are, in North Dakota, a little spoiled and we're starting to come back. We don't want to get into two-engine airplanes. I get the opinion that if you don't look up at the propeller or look up at the engine, you don't want to climb into the thing on a commercial basis. The rest of the country is very used to it, but we are spoiled. But it's coming back. You take a look at Great Lakes and what they are doing, they've got full airplanes now so the availability of transportation is there and we've got to use it or lose it. There is a program "The Essential Air Service Program" out of the federal government which maintains the Williston-Bismarck-Sidney-Billings routing and the Devils Lake-Jamestown-Minneapolis routing on a subsidized basis. This is in place until about 1998. Reauthorization was made which is on a subsidy basis. The rest of the route structures are on subsidy. There are approximately 100 flights a day in and out of the state to maintain our economic base.

These are the freight runs that we have in the state. We did a cargo study at the Aeronautics Commission last year. Some cases are commercial airlines that are handling freight in the state. In some cases it's FedEx and UPS, so you can see that there is a good movement as far as freight is concerned. There is one out of Devils Lake to Rugby that we don't have on the slide which does break down right into the size of a community such as Rugby.
What do we have in North Dakota? When I talked about the seven or eight commercial service airports, we could say eight because Dickinson fits in the category but they don't have commercial air service, so they kind of drop out technically. We've got 93 airports in seven or eight cities, and 92 airports in the eight commercial service airports. The railroad gave us a great mythology in mapping out where areas are and you can see right across there just about where the railroads run.

When it comes to economic activity, you ask "What can I get my twin-engine executive type airplane into?" Whether it be a Citation I or Citation II in the jet category or the King Air, the 421 type. The circles indicate those airports that maintain one asphalt airstrip, the facility to bring in executive type aircraft. When we asked the question of businesses, how far away from an executive type aircraft airport would you want to be, thirty minutes was the guideline. They didn't want to sit in the car any longer than thirty minutes. When you start drawing circles and then start drawing thirty minute ranges, we come pretty close in North Dakota to being able to provide airports for this initial selection criteria.
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<th>Economic Impact ($000,000)</th>
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<td>Region 8</td>
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North Dakota State Aviation System Plan

TABLE B-1

PLANNING REGION IMPACTS

STATE TOTAL 2/$439.4

$121.4

$127.5

$19.5

$91.0

$4.8

$263.6

$175.8
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<td>Region 7</td>
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<td>1,020</td>
</tr>
<tr>
<td>Region 8</td>
<td>101</td>
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<td>202</td>
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<tr>
<td>STATE TOTAL</td>
<td>3,141</td>
<td>3,141</td>
<td>6,282</td>
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1/ (Expenditure) Induced = Direct x 1.5.
(Employment) Induced = Direct x 1.0.

2/ Totals may not add due to individual rounding.
<table>
<thead>
<tr>
<th>Rank</th>
<th>Site Selection Criteria</th>
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<tbody>
<tr>
<td>1</td>
<td>Available labor supply</td>
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<tr>
<td>2</td>
<td>Proximity to an urban business district</td>
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<tr>
<td>3</td>
<td>Proximity to a commercial service airport</td>
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<tr>
<td>4</td>
<td>Convenient highway access</td>
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<tr>
<td>5</td>
<td>Proximity to a general aviation airport</td>
</tr>
<tr>
<td>6</td>
<td>Proximity to academic or cultural centers</td>
</tr>
<tr>
<td>7</td>
<td>Proximity to rail transportation facilities</td>
</tr>
<tr>
<td>8</td>
<td>Proximity to suppliers of raw materials</td>
</tr>
<tr>
<td>9</td>
<td>Proximity to natural resources</td>
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<tr>
<td>10</td>
<td>Proximity to water transportation facilities</td>
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</table>
• Regional/Commuter City
* Major/National City

DEMAND - MAJOR ROUTES

DEMAND - SECONDARY ROUTES

North Dakota State Aviation System Plan Update

EXHIBIT

INTRASTATE O&D PASSENGER
PUBLIC AIRPORTS IN NORTH DAKOTA

AIRPORTS GREATER THAN BASIC UTILITY 1 WITH ASPHALT RWY
I want to tell you how small Bordulac really is. When I graduated from high school there were two of us. I graduated Valedictorian and obviously my classmate was Salutatorian. Every time he introduces me he says that we graduated together; he graduated 2nd and I graduated next to the bottom.

But before I get into the text of my speech, I want to talk about an old family friend, Joe. He was 70 years old and his wife convinced him that he should go to the doctor and get a physical. He never had a physical, but the doctor said, "Joe, I can't believe it. For someone 70 years old, you are in tremendous physical condition. Just out of curiosity I'd like to know how old your dad was when he died?"

Joe said, "Did I say my dad was dead?"

The doctor said, "Your dad's still alive?"

"Yip," he said. "He is 90 years old, has a big garden, runs a mile every day, is in great shape."

The doctor said, "Well, how old was your grandfather when he died?"

Joe said, "Did I say my grandfather was dead?"

"You mean he is still alive?"

"Yes, he is a 111 years old, goes after the mail every day. In fact, he is getting married tomorrow."

The doctor said, "Why would anybody 111 years old want to get married?"

Joe said, "Did I say he wanted to get married?" Pick your ancestors well.

There is no question that in the area of surface transportation highways that the 90's are going to be a decade of transition. And that transition is reflected in the most recent highway bill which was passed last fall and signed last December. That bill was called The Intermodal Surface Transportation Efficiency Act and its called the ISTEA by those of us who have to deal with it on a day-to-day basis. That was a six-year bill and that was the first time there has ever been a bill that long and so that gives you some indication of how things are changing in the transportation industry. That bill covers the fiscal year from '91 through fiscal year '96. There is some significant things in that bill that indicates that this is an era of transition. For instance, by definition that bill said that the interstate system is behind us,
there are no longer funds appropriated on the federal level specifically for interstate. Now the first interstate funds were appropriated in 1957 and that went through 1991. So that's a long era of funding. However, there's no longer interstate funds as such.

In the old highway bill we had a whole host of categories, I think if you counted all of them you'd get somewhere around 22 or 23 of them. Basically in the new bill there are two major categories and that is one of the National Highway Systems and the other one is on the Surface Transportation Program. And under those two major headings, there are subheadings dealing with safety and bridges and those kinds of things. The Interstate and other primary roads make up the National Highway System, and they are included in the National Highway Funding Program. I'll come back to that in a minute. Virtually everything else comes under the Surface Transportation Program. That means the old federal aid, secondary funds that funded the counties, and some of the state's secondary system no longer exists.

The urban funding that we had for many years is no more. There is no longer a category for urban funding on the federal level. What that has meant within the Department of Transportation is that the Commissioner has had to decide how to divvy up this funding. I will come to that in a minute too.

But of major significance is the amount of money that is in this bill compared to the old bill. For a long time, at least I've been chief engineer almost eleven years, and we have hovered around $70 million in federal funds. In fiscal '92, we got just about $98 million in federal funds. But to give you an indication of the congressional thinking on the ISteA bill, the old bill was five years in duration and we got $387 million in federal funds under various categories. In the new bill we will get $736 million of federal funds in various categories but let's get down to the nitty gritty of all of this and let's talk first about funding.

In fiscal year '91, the highway bill, the ISteA Bill, said we should have gotten about $106 million. We actually got about $98 million. Fiscal year '93, the major bill said we should get $113.5 million and we don't know yet what we're going to get because Congress hasn't passed the budget bill for the Highway Bill for fiscal year '93. We thought they were going to do it before they recessed for the Republican Convention and that runs into the Labor Day recess and they will not be back until something like the 7th or 8th of September and they have not passed the budget bill for the ISteA appropriation. The best scenario that we see and think is going to pass is the Senate version which is $96 million. Two million dollars less than what we had in fiscal year '92 and it's considerably less than the $113 million that the ISteA Bill said we should have. This causes all kinds of problems for the DOT. One of the things is how do you plan your future program? You almost have to design and put in place enough projects to obligate $113.5 million. But then you come along, and when the year actually arrives, they only give you $96 million or $98 million. You're constantly taking projects and pushing them into the future and putting more projects on the shelf, but you do not dare take the chance of not preparing for $113 million because, lo and behold, they may have a year they feel they should appropriate all that money and you better have the plans ready or you're going to lose the money. This really puts us in a see-saw situation of trying to manage our resources whether financial or personnel, our maintenance program or our construction program. In addition to that, how do you relate this bigger program that you're never quite sure what you're going to get? How do you relate that to what the counties are
going to get? There is one thing different now for the cities. In the past we used to guarantee $10 million for federal funds. Under our new process, if the federal funding goes down, the cities' share will go down as well. This is going to be a new aspect for cities to deal with, they are not used to pushing projects into the future as counties and states have had to do for a considerable length of time. There are some other things in the Highway Bill that give us some anxieties. We like the money but there are some things that give us some anxiety. For instance, under the Surface Transportation Program, ten percent of the money must go for transportation enhancements. The federal government has given us a list of what would qualify as an enhancement. For example, planting would be an enhancement, a bike track and bike paths would also be an enhancement. We think the rehabilitation of our rest areas would be an enhancement but it's not clear as to what enhancements includes, plus the issue that many organizations outside of the traditional transportation community think that they have got a good grasp on the transportation enhancement.

We have had requests to restore historical ports because the historical people think that transportation enhancement money could be used for this. We get constant calls saying, why don't you use your enhancement money for this. The fact is, this enhancement money is part of the overall package of money that the department gets and it's not a separate sum of money that we can get our hands in for things like bike trails, the tourism industry, or for historical restoration. If they take money out of the enhancements fund they are taking money out of the transportation fund. The other thing, ten percent of the Surface Transportation Program has to be spent for safety. And that sounds great, but if you look into what is needed in North Dakota for safety, its going to be tough to responsibly spend that amount of money on safety issues.

For instance, we just, in the last two weeks decided that we probably do not have any more railroad crossings that we can justify putting signals. We have taken the traffic volumes down to a hundred vehicles per day and we have put signals on crossings that have that few of vehicles on. We question whether it's responsible use of federal funds to spend $80,000 to put in a signal system which must be maintained for a crossing that handles less than a hundred vehicles a day. And yet there is a great amount of money to spend on signals for railroad crossings.

The Surface Transportation Program gives us about $40 million a year. If you take ten percent out for safety, and ten percent out for enhancements, that is $4 million a piece, you're down to $32 million. The cities would get somewhere around $6 million of that, the counties would get another $8 million so we are down to around about $20 million that is left for the state to spend on everything other than the National Highway System.

Let's talk about the National Highway System. We have to tell the Federal Highway, by next April 15th, what the National Highway System will be like in North Dakota and they have told us that we can have between 2250 and 2300 miles on the state system. Today, with the interstate and primary system, we have about 5500 miles that are on the primary and interstate system. So we are going to have to cut our miles in half if you look at the suggested map the Federal Highway has given to us, what they think should be the maximum highway system in North Dakota. I think the Commissioner is happy that he is retiring at the end of December. If you look at the number of miles that exist on the National Highway
System southwest of the Missouri River, what you will have is I-94, and then you'd have U.S. 85 and that is it. And I know that there is going to be some people at Bowman on Highway 12 that are not going to like that. In fact, Highway 85 north of Williston is not on the map of the Federal Highway System. The Federal Highway Administration sent us a map to work on. We'll put it together and send it back to them by next April 15th. Congress has until December 30, 1995, to establish a National Highway System. The point that I'm saying is that we would have about 2300 miles that are under the National Highway System, we'd have about 7300 miles of Interstate System. That leaves us 5000 miles of road which under present funding, we have about $20 million a year to spend on them. That is not enough. When we look at what is expected of the transportation department, we as engineers sometimes ask ourselves if we have built a system that we can't maintain. It costs us a half million dollars to recycle a mile of interstate highway. And yet every time we rebuild it, the system is expected to be stronger. When I came to work for the DOT, the national weight for a truck was 60,000-65,000 pounds. About a year after that, it went to 73,280 pounds and it sat there for quite awhile. Then we ran into the energy problems of the 70's and about 1980, the national weight lift went to 80,000 pounds and today it's 105,500 pounds and there are people who want to take that to 117,000 pounds.

The axle weights have increased during that time as well. And one of the things that is disturbing to us as engineers, is that people constantly want to increase the gross weight of the vehicle and they want to increase the axle weights, but they don't want to recognize what that does. I was telling the Commissioner the other day that during the energy crunch, the transportation people came in. Fuel had gone up tremendously and they were in trouble and we got to recognize that North Dakota lives and dies by the truck. And the decision was made to change the axle weight from 18,000 to 20,000 pounds on the single and 32,000 to 34,000 on tandems. I remember sitting in that meeting with about eight or ten people and I said, "By doing that you're taking our twenty year design and your making it about a fifteen year design road. You're giving away twenty-five percent of the life of the road." And in about two minutes they decided to go ahead with it, but no one really wanted to face up to the fact that they'd given away twenty-five percent of the life of the road. Well, those decisions were made in the late 70's or 80's and here we are at least fifteen years later and we're struggling to hang on to the system.

In addition to that, we're looking at the Free Trade with Canada. In Canada's Act, the weights are heavier than ours. And a good rule of thumb to keep in your memory, is that if you increase the weight of an axle by ten percent, you increase the effect of it by fifty percent. It's to the power of four. If you increase it by ten percent, you take 1.1 and you multiply it times itself to four times and you will come up with about 1.47 and that is the effect. And yet the bulk of our system out there today, was constructed when we were still driving trucks at 18,000 pound axles. Now I'm not complaining about the truck industry. I recognize as I said that North Dakota rises and falls on the trucking industry. Without it we'd be in big trouble. The point that I'm making is, we as engineers have to take that into our decision making process that it costs a whole lot of money to increase axle weights ten percent. A lot more than what is generated by the increase in license fees or gas fees.

There are some other things in the ISTEA that we have to be concerned about. We have to come up with management systems. We have a paid management system already. We
pretty much have a bridge management system in place. We do have to come up with a public transportation management system, a mode of transportation system, a safety one, and the one I like is congestion.

I was at a national meeting one time and I said, "The only congestion we ever had in North Dakota was when the President came. And our plan was going to be not letting the President come anymore!"

We do need seat belts and motorcycle helmet laws or we're going to lose some money and we're not going to lose it to the DOT, but the money goes from construction over to education and that's several million dollars. If we think we have trouble responsibly spending money for railroad crossings, I don't know if we could responsibly spend several million dollars a year to teach people to wear seat belts. I don't think that is going to happen to be honest with you. If I can digress for a minute. I have a friend who works for American Family in Madison, WI. American Family is giving serious thought to when you buy your license or you buy your insurance, you must agree that you will always wear your seat belt. If you're in an accident and you don't have your seatbelt hooked up, your coverage is decreased by ten or fifteen percent. And I think that this is probably the only way you're going to get people to wear seat belts.

We have to develop a statewide transportation improvement plan. I'm not sure exactly when that has to be in place, but sometime in 1995 or 1996. I was somewhat amazed at what Gary had on the overhead when he told us about what people tell him they look for when they want to locate a commercial facility. Of the top five, four of them were aviation and number four was an adequate highway system. We are constantly called into meetings with cities and other ones that say you know these people are not going to come to our city unless you have load free restrictions, or unless we have four lanes. We get a tremendous story laid on us that nothing is going to happen to this town unless you and the DOT do tremendous things. An example of that was the location of the pasta plant that went to Carrington which is awfully close to Bordulac. We could tell Carrington that they would have a load free road south of Carrington all the way to 94 which is one of the criteria they asked for because in 1989 we decided to redo the road south of Carrington and to bring it up load free. The problem with that is; that everybody thinks we did that in the last three or four months. And I've had three or four people say if you can in two months decide to give Carrington south load free status, why can't you do that for our town. I went up to the ground breaking and they were telling us how responsive the DOT was and I told them "It's nice that decisions made in 1989 work out so well for what happens in 1992."

Four laning of highways. We get constant requests to four lane highways, and for additional interchanges on the four lanes that we do have, and it's simply, financially not there. And you know we tell people that we think we're better off giving you a driving surface that is stronger, safer than giving you two driving surfaces that are mediocre and yet there is something about four lanes, there is something about an interchange that people still say, you know, Fargo's got more interchanges than we do. Do you think you could give us some?

I think if nothing else happens in the 1990's, that the attitude of, I don't know if I want to use the word confrontation, but the attitude of demanding from government has to change a little
bit. I think that we have to recognize the transportation in North Dakota goes all the way from the townships up to the DOT. And every entity that is involved in transportation is going to have to be part of the solution. We, the DOT cannot confront the townships, they can't confront us. It's going to be the townships, the counties, the cities, the DOT's, and in some cases, there is going to be some private money that if you sit down together, you can put together a transportation system that we can afford and one that we need. The days of "whoever has the biggest clout with the loudest voice gets what they want," are gone because the money is gone.

Let me just conclude with something I'm sure that's on everybody's mind and that is, you know, the tax situation and gas tax. I'm not going to go into specifics, but I do want to tell you that ISTEA is taking us from $70 million up to $96 or $98 million and if they fulfill the way they appropriated up to $113 million. But our tax structure that is in place today supported a $70 million federal funding. Now we're getting through 1991 and 1992 by spending down some of our balances. We've robbed some of our money out of maintenance and we're not going to be able to do that any more. We're not going to be able to match the money in 1993 and 1994 as we did in '91 and '92. And that is a fact of life. The cities and the counties aren't getting more money and we hear them saying, "we need some more help from that strategy mind is coming." We get back $2.11 for every dollar we send to Washington. For every dollar we can come up with locally, we can get four dollars from Washington and if that is not the greatest economic development thing around I don't know what is. The other side of it is, if we don't match it, what is going to happen to our state highway system and to our county systems and to our urban systems? They're going to go the other way, and we can't afford that.
Good morning everyone. Thank you Gene. I know better than to take up ten minutes of somebody's lunch hour, especially being the last speaker before noon.

I'd like to share with you this morning some facts about the importance of transportation in North Dakota's economy. In the 1930's more than 50 percent of the population in North Dakota was located outside our major corridors. Today it's approaching 80 percent living along our major corridors. What I am talking about is U.S. Highway 2; I-29; I-94 and so that is how vitally important transportation is in development and patterns. We're seeing an exodus out of the rural areas and we're seeing a pattern of migration along those corridors, so if there is any misunderstanding about the importance of transportation, it is an example of how we need to focus on our rural strategy, but also why we need to invest in this infrastructure.

In order to find the future role of transportation expanding North Dakota's economy, we must examine for a moment the state's strategy. Most of you are aware the state's strategy is embodied in a program called "Growing North Dakota." As a part of the Department of Economic Development, we focus on three areas in our economy. We look at primary sector businesses. In those primary sector businesses we look at retention and expansion for the businesses, we look at new starts on tourism and we look at industrial improvement.

Within our strategy when we focus on those activities, it is very important to understand that we focus on primary sector activities. We don't get involved in a lot of retail. We see retail as a consequence. We see services as a consequence in primary sector activities and that is the generation of new wealth. Now, the current strategy on "Growing North Dakota" is to focus on value added, for commodities, energy and agriculture, food processing, by-products development, expanding our manufacturing base, targeting medical products, innovative technologies and manufacturing, aerospace, exported services or telecommunication-based industries, the likes of Choice Hotels in Minot, Rosenbloom Travel in Linton, Impact Telemarketing in Grafton, and U.S. Health Care in Bismarck. Claims processing is a type of activity in U.S. health care where value is added and requires analytical skills. Those types of analytical skills drive higher wages. We're not interested in data entry companies per se, unless they bring good jobs to North Dakota. We are also looking at and encouraging the development of intellectual properties, software, tourism development, tourism enhancement and international trade.

Today I'd like to take the opportunity and talk about international trade in terms of what it means. In North Dakota, within our department, we tend to treat Canada as a neighbor and as a state and the provinces as states. Our strategy is often focused on how the industrial development people on our staff address the businesses in Manitoba, Saskatchewan, Ontario, and Alberta. We treat them like we treat a business from any other state, so we take a little different approach and say we were dealing with somebody from Europe or Asia. The strategies under "Growing North Dakota," I think, really afford some exciting opportunities for
the transportation industry. With the advent of the Canadian Free Trade Agreement and the North American Free Trade Agreement, the transportation industry stands to play a predominant role in the expansion of the North American continent and beyond. The trade between Canada, our number one trading partner, is continuing to grow.

Mexico with its 85-86 million people will soon surpass Japan as their number two trading partner. We have a country that is anxious to consume our products and services and the new trade agreement will enhance that opportunity for transportation. North Dakota is in a geographically strategic location, and needs only to actively invest its resources to capture the transportation of major goods and services. We are in an enviable position geographically. We see the Western states and the Rocky Mountain states scrambling to get organized and develop their corridors. Currently there is an estimated $10 billion worth of trade flowing through North Dakota and Canada. It flows along our corridors, our rails, U.S. Highways 85, 83, 52, 281, and I-29; all currently following enormous volumes of trade. In June of 1991, there were 12,219 trucks entering North Dakota from Canada at the 18 Ports of Entry. In July of 1992, the latest figures I have available, there were 15,644 trucks entering the United States from Canada, approximately 28 percent increase or 3,200 additional trucks. An important point to understand, and I am quoting Larry Swanson, a professor at the University of Montana. He has done a lot of work for the trade corridor, (the Red River Trade Corridor) and is involved in a transportation study working with the Rocky Mountain group. He said the important point is that trade and economic activities happen in space and to the degree it happens in North Dakota, the more we can benefit from it. It has to happen somewhere and the more we can make it happen in North Dakota, the more we can benefit from it.

What do we need to do? We need to understand the trade activity in our region and what our neighbors, development strategies are. Canada and the western provinces have embarked for some time now on the diversification strategy. Not a lot unlike what we tried to design in "Growing North Dakota." The Canadian's are taking their bite, their energy resources, their agriculture resources, and are adding value to them. They're diversifying their economies and a great deal of that activity will be flowing through North Dakota. We need to understand what Montana is up to, we need to understand what the Rocky Mountain states are up to, we need to understand what Mexico is up to and how the southern corridors are going to act and react to the new trade agreements.

A lot of focus is on agricultural exports, a lot of debate, and a lot of discussion but the truth is agricultural exports between the two nations is limited. Agriculture accounts for 8 percent of the U.S. exports to Canada and only 6 percent of Canada's exports to the United States.

A word about Alberta and Saskatchewan. We are sitting beside the Saudi Arabia of North America. Billions of dollars of products, special chemicals, and energy are exported into the United States headed for the Eastern market. It has to flow East. We are in a very advantageous position to capture the activity associated with that trade. All we need to do is pay careful attention to how they are approaching it, what mode's they are utilizing, and how we support and enable that activity to occur in North Dakota. Once we understand the dimensions and opportunities, we need to develop a plan. We need to think about, and yes, even talk about, consequences of base closures in North Dakota. And I don't think we need to assume it is inevitable that it's going to happen just because we talk about it. But I don't
believe we can bury our head in the sand either. We need to have a strategy. We need to incorporate that strategy for those bases in the event that it might possibly happen. We need an alternative plan, and we need to think about it with respect to the opportunity we have in international trade and free trade with Canada. The plan that we need to adapt with all the players, is that everyone needs to clearly understand and support it. I believe that intermodal transportation is clearly the approach and I don't think we can wait to develop a long-term, long-range plan for intermodal transportation. I think we need to do that immediately and begin the process.

Never before have we had a single opportunity that affords so much concrete, opportunity for all portions of North Dakota. Because of our strategic location, because of our fine network of highway systems and airports, the entire state stands to benefit from the flow of trade in commerce across each one of the routes. Very little of the state's area will be unaffected and very little of the state will not benefit from what we've designed and capitalized on. We need to set aside turf and regulatory squabbles, ensure that all modes—rail, roads, air—participate fairly and equally. The vehicle by which this process can be accomplished is the Intermodal Surface Transportation Efficiency Act of 1991 which we were talking about and what Mr. Zink spoke specifically about. ISTEA provides the planning mechanism and some of the financial resources to make it happen. We need to get involved and support the efforts of the Department of Transportation and The Upper Great Plains Transportation Institute and their efforts as a part of the activity that is going on today. I see legislation as a trade bill. I see this trade in Congress legislation. I don't see it as bricks and mortar. I think we have to look at how we are going to invest in the strategic ports of entry, how we are going to invest and facilitate intermodal transportation activities; I think those should be the priorities. And that is the basis on which we should start. I believe we've got to continue to invest and protect our road system. I am not suggesting we neglect that at the cost of the trade opportunity, but I think if we really focus, we can do both.
TRANSPORTATION AND ECONOMIC DEVELOPMENT:
Our Choice for the Future
Conference 2 - August 25, 1992
Sheraton Inn, Bismarck, ND

Keynote Address:  Byron Dorgan, North Dakota State Representative

Thank you very much. It's nice to see all of you here. It's a daunting challenge to speak to a group that includes Dick Backes because you're supposed to tell people something and nobody can ever tell Dick Backes anything. Dick, it's nice to see you here, you do an excellent job and I am pleased to see you.

I've been traveling around the state as I've done every August for twelve years. Holding town meetings and visiting with people is interesting because of what you hear and learn from people. At a town meeting in Carrington where there were a couple of people who had been at the bar first, apparently rehearsing what it was they were going to tell me and I'll tell you what, they had that down pretty well. They knew pretty much everything there was to know in the world and used almost all the terms that have been used in my life to describe me but they were actually pretty good when they left.

One of the things I was going to mention to you today is that in this public sector, (I know Representative Belter and Senator Tollefson and others who are in public life) there is a lot of credit when you do something right and whole lot of criticism when you do something wrong. In fact, many participate in that criticism and that's as it should be. And you forget that from time to time because you meet lot of people who are very nice and then all of a sudden something hits you from the backside.

I received letters from a fifth grade class in Carrington, North Dakota. The teacher assigned them the responsibility to write the Congressman. I got a packet of about twenty-five letters from the fifth graders in May. One young man said, "Dear Congressman Dorgan, I know who you are, I see you on television sometimes. My dad watches you on television too. God, does he get mad!" Could have been your son, Wes.

Anyway, it's an interesting state and a wonderful time. Things look pretty good: green, big crops, the combines out there are moving pretty slow and they are moving slow for a good reason. They're filling up those hoppers and there are a lot of smiles about what I think we have in front of us in terms of hauling crops to the grain elevator.

I want to begin just briefly by telling you about the story I read about transportation. It was a story about a man in France named Joseph Montgolphiere. Joseph Montgolphiere, in about 1782, in late winter, was in his home in southern France, sitting in a big easy chair one night and he had the fireplace going and he was watching that fireplace very closely. One of the things he noticed in the fireplace was that the smoke rose up the chimney and the sparks went up the chimney. As he sat there in his house in France a couple of hundred years ago, and he thought to himself, "You know, I wonder if a person could capture that smoke and those sparks, what if you could put something around it and it to would go up, not necessarily a chimney, just go up." About three months later this inventive and inquisitive fellow named Montgolphiere was out in a field in France and he had a bunch of wet straw that he had burned, creating a lot of smoke and sparks and he had himself fashioned a giant bag of sorts
with the best material he could find a couple of hundred years ago, and he was creating the
first balloon. And the first balloon actually flew, not very far, but it flew with a couple of ducks,
a chicken and one sheep. According to stories Benjamin Franklin was in the crowd when this
experiment was going on, and the balloon began to rise and someone from France standing
next to him turned to Benjamin Franklin and said, "Of what possible value could this be?" And
Ben Franklin said, "Of what value is a newborn baby?" He said this will open up the sky to
mankind, and it did from the ground, to the balloon, to the moon, starting with a little guy in
France, a couple of hundred years ago, dreaming, sitting in front of a fireplace. I read about
that in a book written by Poilsum, *All I Really Need to Know I Learned in Kindergarten*. And
what he said after he told the story of the first balloon flight by Montgolphiere, it's the people
standing on each other's shoulders, dreaming dreams on each other shoulders who see over
the horizon and who build for the future. Now my guess is Montolphiere could never have
imagined an automobile, never dreamed of an interstate highway, certainly couldn't think of
railroads and would certainly not likely think of 747's going coast to coast today, but all of
those are products of dreamers who built and created a transportation system. And part of it
started with a person who dreamed of flying in a balloon.

Now this country has come to a point where things are kind of troubled. Our economy is
stuttering a little bit, stalled, people are wringing their hands and gnashing their teeth
wondering what is next. What will happen? I think, if you look at two hundred years of
history in this country, we waiver back and forth but we always come back to the center line,
we always come back to the broad center in which the American people collectively roll up
their sleeves and make the right decisions and forge right ahead. And I am convinced that
will be the case now.

We have a very serious federal budget deficit that inhibits our ability to save and invest and
therefore be more productive. That is the problem with a deficit, the lack of savings because
you don't have therefore the investment capital.

I want to tell you just briefly of a testimony before Congress by a chief economist from the
Deutsch Bank in Japan. He came to this country a month or two ago and here's what he
testified to. He said in his projection, by 1997 Japan will become the world's largest
manufacturing country and just after the year 2000, Japan will become the world's largest
economy. Why? Because he said that each year Japan invests $440 billion more than the
United States invests in new plants and equipment. If you have newer plants and equipment,
it means you are more productive. If you're more productive, you win in economic
competition.

Now why do they invest so much more in new plants and equipment? Because we have
deficits which means we don't have the accumulation of savings and therefore, investments.
That is why fiscal policy is so important to our future. If we're going to fix all of this, the
trouble that we find, we have to deal with the core problems—the fundamental issues,
including fiscal policy and deficit. Now I mentioned deficit only because there has been a lot
of gridlock. You've heard the word "gridlock" and part of that is because of deficits, because
there is not an abundant amount of money that is produced from an economy that is growing
and produces more revenue. In fact, an economy that is in recession creates more deficits if
nothing else happens.
That gridlock, however, lifted just briefly with the passage last December of the new Intermodal Surface Transportation Efficiency Act which is a $161 billion act that, I think, most of you are well aware of, which was a cooperative venture between the Congress and the President in an attempt to decide that we ought to, if nothing else, understand the need to continue to invest in the infrastructure in this country. That act, now has to be fully funded as we go along and I hope it will be.

One of the controversies is what is happening to the money in the trust funds? We collect taxes from people and we say when you drive up to a gas pump, thanks for coming, we're going to take a little of your money and put it in a trust fund because we want to fix bridges and we want to repair roads and we want to do some other good things with it with respect to our transportation system, but then at least in the last six, eight, and ten years; there has been a tremendous pressure not to spend it out of that trust fund because if you keep it in the trust fund and allow the trust fund to grow it makes the federal deficit look smaller, but that is not an honest representation to the American people of what that money was for. That money was collected on the condition in which we said to the American people, "We're going to spend that money out of a trust fund for these special purposes and those needs exist". So one of the things we have to do is to make sure we move money out of the trust fund to fund this act, to make sure that we've got the spending available to make the investments in the future.

Now the act itself tries to deal with much more regional and local planning which I think is an important step forward. Part of this country's achievement has been to build this enormous federal highway system but it's largely built. It needs to be repaired and maintained, but it's largely built. We don't have that kind of inertia or initiative in front of us with respect to a federal highway system. This bends policy in a slightly different direction to say now we want more flexibility and the use of funds for transportation with local and regional areas. And that makes a lot of sense to me and I think its going to serve all of us in this country better in the future.

With respect to other elements of our transportation system aside from highways, we also have some serious challenges. Airlines. I tell you what is happening to the airlines in this country is of great concern to me. We have one of the best carriers in America, serving here in Bismarck, North Dakota and four other points, three other points in North Dakota — Northwest Airlines. I think Northwest is a good carrier. They do a good job, they've got good equipment, they maintain it well. I like the company. There was a time when I didn't, I used to sue it and they used to sue me when they were going on strike and you know they keep flying Chicago to Hawaii but cut off services to North Dakota and Montana. That was in the old days with Donald Nyrod. It's a different carrier. Even in those days they made good money and they were a good company, but now it's a different carrier and we rely on it. But you know what has happened to Northwest? It's what has happened to so many other airlines. Deregulation for too many Transportation Secretaries was the euphemism for saying "Let's not care what happens to airlines." Heck, if Carl Icon wants to buy one, we know Carl Icon doesn't know anything about running an airline. If he wants TWA, gosh, let him have it. You can give airplane toys to kids, you can certainly give TWA to Carl Icon if he wants it. So he buys it and runs it into the ground.
If somebody wants to buy Northwest, and I think Al Checci is a good guy. Al Checci doesn't know anymore about the airline business than I do or than any of you do. He wants to buy Northwest and load it with $3.3 billion worth of debt. Transportation Secretary says, heck yes, that is not a big problem. Well it is a big problem. Mr. Checci came to see me a couple of times as he was trying to buy Northwest because I was publicly so critical of it and my point was "We should not, in this country, allow airlines to become pawns in this speculative LBO or leverage buyout, hostile takeover games, because airlines are too fragile for that.

The first economic activity to be turned down in the recession is going to be an airline. It's always going to be the case because travel, in many cases for business and certainly for pleasure, is an option not a necessity; and it's the first quake that people cut back. We should never, ever have let airlines become pawns in junk bonds and LBO's, and hostile takeovers. It should never have happened. And, in my judgment, there ought to be some more regulations to make certain that doesn't happen in the future.

I'm worried about Northwest Airlines. I hope the heck they make it. But here's a company that is losing a lot of money. They not only have this enormous debt to carry from the takeover, in this case a friendly buy-out, but they also tried to fly through substantially increased energy crisis, fly through a recession, and then fly through a continued sluggish economy and it is very hard for them to do that. I hope and pray that they make it because it is very important to this state.

When we talk about transportation in North Dakota, if we would see trouble with Northwest Airlines of a significant nature, and see Northwest Airlines pull significant service out of some of our key cities, the transportation network in this state would be seriously disadvantaged. Yes, we would get other carriers in, but frankly, Northwest does a good job for our state. I want to see them stay here and help them.

I've worked for a couple of years and finally got American Airlines to come to North Dakota because I also believe in competition. American Airlines is now serving Fargo to Chicago non-stop. It was about two and a half years ago that I first brought an American Executive to Fargo and we had a meeting with statewide people and took a couple years and they are finally here. I think all that makes sense for us. We need good service, we need competitive service, and we need to be able to demonstrate to people in the air transportation sector that this is a good place to do business because you can get on a plane and be any place in America in a relatively short time.

With respect to railroads in this state; we have, I think, some of the same problems that we have with airlines and the issue regulations. My feeling is that, far from regulations being awful, in some cases regulation is necessary. I'm not suggesting we should over-regulate or re-regulate everything. In some cases deregulation has been a terrific boom. In some cases the lack of regulation is a disaster for us. With respect to railroads in my judgment when you have areas in the private sector where there is no competition and where shippers are simply at the mercy of those who run the railroads, then it seems to me you need something more than a regulating agency that is brain dead and unfortunately I can't tell you that is the case in this country today. We need, reasonable, fair regulations to make certain in areas where there is no competition, that shippers are not taken advantage of, but that is not something I
can stand here and tell you today and I think that is something that needs a change.

We lived in Regent, North Dakota. I don’t know if anybody here knew my father, but my father was a terrific horseman and he used to tell me a story. When he came to Regent as a young boy, from Fort Ripple down in Elbow Woods where he had been herding horses. When he came to Regent he brought a couple of horses with him as a young man and he was looking for a place to board them. So he said he was out searching for areas to board them and he asked a farmer north of Regent and the guy said $25 a month for a couple of horses and of course, he wanted to keep the manure. My dad went to another place and he said $20 a month plus he wanted to keep the manure from the horses. He went to a third place and the guy said five bucks a month.

And so my dad told me he hauled the horses out there and he asked the guy, “You know you didn’t ask about manure and you were much cheaper than the rest. I’m kind of curious why?” The guy said, “Well Emmett, let me tell you something. When you’re receiving only $5 a month to board horses, you’re just not generating a whole lot of manure.”

Well he used that in sort of an Irish way to say to me almost everything in life, almost everything that you’re involved in, you’re going to get out of it exactly what you put into it. You really are. If you put a lot into something, you’re going to get a lot out of it. If you don’t, you won’t.

These kinds of conferences are really excellent forms in which a lot of different people from a lot of different sectors in the state can talk about our transportation system. What is right about it, what is wrong with it, how to improve it, how to serve this state in the future. I want to mention just a couple of quick items that don’t relate necessarily to transportation, but have some connection.

The price of wheat. I was just talking to Troy over here from Carrington about how challenging it must be for him to come from a city where they have a new plant going up. Wouldn’t that be nice. I mean, you’ve got to wake up and feel good about that. Here’s a city that is going to expand. Here’s a city with opportunity. All of us would like that. Well, I can work forever, for the next forty years and so can every legislator here, on economic development and it won’t mean a fraction of what ten cents on a bushel of wheat will mean to the state of North Dakota, or what a quarter or a dollar on a bushel of wheat will mean to the state of North Dakota.

They say that ten cents on a bushel of wheat means nearly $30 million to North Dakota. Ten cents means nearly $30 million. A dollar is $300 million and it moves up and down, mostly down, and you understand the consequences of that on this state’s economy. The point I was making to the Government Accounting Office that I’ve asked to take another look at this is that something has changed with respect to grain prices and it’s affecting our state.

We’re told farmers should operate in the marketplace. The marketplace is really where they should be. That would be fine if the marketplace worked. The marketplace doesn’t work. Even a hint of a big crop and the prices sink like a lead weight. You see it. I mean you get a report that the crops are going to be a little bigger, collapse time for prices. But what happens
when you have a twenty year low of carryover stocks in durum or low carryover stocks in wheat, and despite this crop of wheat, we’re going to have relatively low carryover stocks worldwide. What happens to prices? Do they bounce back up? Is there upward buoyancy? Heck no. Something fundamentally different has been happening in grain markets in the last five years than happened ten years and twenty years before that. I don't know what it is; but some of you may have some theories about it. It's changed.

The relationship of grain carryover stocks to price has fundamentally changed in a way that victimizes producers with only a downward cut of the knife. The market system at this point is not serving producers on the upside when carryover stocks are short. We need to try to find out why and see what we can do about that. Can we control the markets? Probably not. But if the markets don't work, at least we can control those who preach about markets and try to find some other approach to have farmers get a decent price for what they raise.

Next, let me just mention trade. The Canadian Free Trade Agreement was an advantage for parts of this country. It opened up 20 million new people in the northern part of this hemisphere for credit cards and for banking activities and for insurance and a whole range of things. So was it a net deficit for this country? I can't say that, some parts benefitted. Has this been helpful to agriculture? Heck no. We have 10 million bushels of durum coming south that is subsidized up to sixty cents a bushel with a railroad subsidy. Now if you raise a bushel of durum here, and a bushel of durum up there and they ship it to a pasta plant in New York with sixty cent less cost, who's the pasta plant going to buy from? Them, not us, and that is not fair trade. It might be free by some definition but it sure as heck isn't fair.

Mexico. I don't know what is going to happen to the Mexico Free Trade Agreement. There is going to be a lot of controversy in the coming months. It may have some benefits for this country; undoubtedly it will. I'm told that investment bankers, insurance companies, and a whole range of financial service industries are salivating at the prospect of getting 90 million new customers. Hopefully, in an economy that grows. So there is some benefits.

I think there is going to be some trouble with wages going south. Ross Perot said it a couple months ago. He said, "A business person would be asinine not to move the manufacturing plant to Mexico if it’s negotiated the way it's currently being discussed." So I think there is some potential problem with manufacturing jobs flooding south. And there’s certainly some potential trouble with sugar heading north. I don't think there is much question about that. We have to watch very carefully the trade agreements to make certain that our interests are protected. Nobody else is out there except us wondering what is going to happen to us if they do that. That is our job and frankly when I say ours, all of us, there is nobody better qualified for that than us to make our case and we just have to be very careful when we talk about trade.

The fact is, this state's future is inexorably linked to trade. We must find a foreign home for a lot of what we produce. We could, should, and will insist that foreign markets be much wider open to us than they are now and we've not been nearly good enough as a country on insisting on it. Let me give you a success story to demonstrate the failure.
The success story is the beef agreement with Japan and my guess is that some of you who might raise beef here, say the beef agreement with Japan was terrific, we're getting a lot more beef into Japan, and we are. That is for sure. T-Bones cost about $30 a pound in Tokyo, but we're still getting a lot more beef into Japan. Not getting enough in, not getting as much as we should in. In fact, the negotiators with the Japanese Agreement, you'd have thought they'd just won the Olympic Gold Medal. Heck, they got this thing done, and they applauded themselves, they had celebrations. On the front page of the papers, it lauded this enormous new agreement with Japan.

I want to tell you what it does. After the agreement is fully implemented, after everything has phased into beef, there will remain only a fifty percent tariff on beef going into Japan. That is victory! In every other circumstance, it will be described as a failure. In any circumstance in which we impose that on anybody else, it will be defined as a major failure. But our negotiators accepted this as a major success when dealing with the Japanese because they are so hard to deal with.

The fact is, if we buy 3.5 million of their cars and pickup trucks, we ought to insist that we want a market in Japan open to our products as well. I'm not someone who believes that trade war benefits anybody. I think it's destructive to this country's interest. Nor do I think we should do anything to start one. But I do believe we ought to exhibit a little nerve, to stand up and finally insist that the interest of American producers are interests that have to be satisfied in trade as well.

China is an interesting example. Do you know that this year China is going to have a $15 billion trade surplus with us? We'll have a $15 billion deficit with China. And we're told, hey be real careful, don't upset China, don't say anything to the Chinese about human rights for gosh sakes. Oh yea, they butchered those kids and made that papier mache statue of the Statue of Liberty. Yea they did, but don't make them upset. Holy cow! You make the Chinese upset, they're going to stop buying grain. We're a cash cow for the Chinese for hard currency. Fifteen billion dollars in trade surplus with us this year; the Chinese are going to stop that! Are you kidding me! They've got the best deal in the whole world. In fact, we discovered they're not only selling us goods made with cheap Chinese labor, we're buying socks in K-Mart that were made in Chinese prisons for gosh sakes. We can't compete with Chinese labor, let alone Chinese prisons.

My point isn't that we should do anything destructive that shuts down markets. My point is that we ought to have the nerve to insist on fair treatment and say we are going to take all these things you sent us because we want the consumer to have the ultimate choice of products made everywhere around the world. But in exchange, we insist that American goods find their way into your marketplace which opens up opportunities for this country, for us here in North Dakota. And it also relates to the issue of transportation because when you're an export-oriented economy, as we are in North Dakota, you've got to have transportation vessels and opportunities to move things all around this country and all around the world.

There's one other element of transportation that a lot of people don't think about and that is the transportation of ideas and the transportation of the intangible things that will affect our future in a very significant way. If you go to Linton and see what Hal Rosenbuth has done,
and if you go to U.S. Health Care or to Choice Hotels, you will see that there is another highway that leads out of North Dakota. It's the fiber optic highway. It makes Linton as close to Manhattan as the Hudson River. There is no geographic difference any more with this fiber optic highway over which you send data and information. That is another element of our ability to transport things from this state. We are, I believe, in the top two or three in fiber optic capability in this state among all the states in the nation. And that has to do with a lot of foresight and planning by people in North Dakota and that I think also portends well for our future.

I want to conclude today by telling a quick story about a point I want to make about all of these things. Some of the things that you deal with everyday are very controversial. You know, policy. What do you invest in? What don't you invest in? Do you build this or don't you? Do you repair this or don't you? Where do you get the money? Is that tax going to be levied or isn't it? Those are very controversial areas and often they are embroiled in enormously difficult public debate.

The oldest member of Congress, was called Claude Pepper. He was an old duffer. He wouldn't mind my saying that, he has passed on now. But he was 87 years old and he had gone to Congress during Franklin D. Roosevelt's first term. He was still there when I was there, but he was sharp as a tack. He could give a speech that would bring tears to your eyes because he was so eloquent. He was a wonderful guy.

He was standing out in front of my office building, the Cannon Office Building, with a new congressman from Louisiana named Jimmy Hayes. Old Claude, age 87, and young Jimmy Hayes, standing there talking and a boy scout troop leader with his boy scouts, this was in June, came walking down the sidewalk and ran into these two guys. Didn't know they were congressmen, didn't know it was Claude Pepper and said, "Hey fellas, can you tell me where The Jefferson Monument is?" and Claude Pepper said, "Well sure." He said, "What you do is, you go across the Capitol Plaza here and the building with the flag on top, that is the Russell Building. You take a right, go down one block and turn left and it will be right there." And the boy scout master thanked them and trooped off with his boy scouts; and Claude looked over at Jimmy who had sort of an incredulous look on his face and Claude said, "Oh! I can see you think I gave them the wrong direction, don't you?" He said, "You see, Jimmy, that boy scout leader he asked where The Jefferson Monument was. Now, I am well aware The Jefferson Memorial is down by the fourteenth street bridge, everybody knows that, he said. But because Jefferson wasn't able to be in this country during the summer they wrote the Constitutional Convention of The Constitution in Philadelphia, he mostly contributed through the mails from France, and his major contribution was in The Bill of Rights and especially in the area of free speech. So I sent that young group of boys and their leader over to the front of the Dirksen Building where today there's a demonstration on abortion going on which I think will demonstrate better than anything in this country the fine principles of free speech which is ultimately the monument of Thomas Jefferson."

Well, I imagine that was lost on the boy scout leader. But you know the ultimate ability that all of us have in this umbrella of free speech is to take whatever ideas we have as individuals, as pieces of an organization, or as a group representing a state and go represent that to try to create part of a whole, to try to create a piece of the public sector policy. That is something
that is pretty unusual and we forget sometimes how easy it is for us to simply be involved and to make a difference.

These kinds of conferences in which we weld together the transportation interest and the understanding of how they affect our daily lives in the state, but more than that, how they affect our future and the changes necessary for them to help create the future we want. These are invaluable opportunities for us to assert ourselves on this issue and I am really pleased today to be invited to spend a few minutes with you. I hope that all of us can work together in the years ahead on transportation issues to help this state and this country. Our job, it seems to me, is to find ways to do the right things to make this state and country grow again and make a greater dent.

Thank you very much!
TRANSPORTATION POLICY:
OUR CHOICE FOR THE FUTURE

Upper Great Plains Transportation Institute
and
The Humphrey Institute of Public Affairs

Focus Group Summary:

1. Focus Group Title: Railroads

- adequacy of rail equipment supply
- volatility in demand for rail transportation services
- equity in distribution of rail equipment among shippers and regions
- maintenance of the railroad infrastructure, particularly the light density branch line system
- need public/private partnership to establish and maintain core rail system that will adequately serve current and future needs
- marketing information is needed for analysis and to maintain competition in railroad transportation
- competition will promote efficiency in provision of rail services
- promoting efficiencies in the operation of the light density rail network is in the best interests of all
- performance of the national transportation system is just as critical to North Dakota as our local system
- without public/private partnership, we must expect private sector profit motive alone to drive decisions regarding system rationalization
- long term viability of light density rail network is critical, and ownership decisions may include consideration of least cost operator, retention of service to rural shippers, employment, effects on the basic economic sectors
- need to promote intra- and inter-modal competition, but at no one's particular expense, and promote competition to the end of gaining efficiencies resulting from competition
- need to recognize and promote the inherent advantages or efficiencies of each mode.
2. Focus Group Title: Truck Regulatory

- severe economic and logistical barriers exist in the state which restrict free trade
- reciprocity problems with surrounding states and provinces hinder trade
- taxation will continue to be a big issue -- user fee increases seem to be inevitable
- diversion of funds to non-transportation use must be stopped and reversed
- using transportation funds to gain federal matching dollars is a far better investment of local funds
- uniformity in state laws and regulations is critical to provide productivity gains
- education to increase the supply of drivers will alleviate current shortage
- need for free I-94 corridor from Montana to Illinois for state weighing and inspections to eliminate unnecessary costs

3. Focus Group Title: Highway Engineering

- new legislation allows flexibility in setting own highway design standards
- liability issue arises as a result of deviations from standards
- changing rural road demands may suggest reduced design standards, but equipment sizes may not accommodate narrower bridges or other scaled back portion of the system
- need analysis on local land use to account for obsolescence before spending funds in rural areas
- inconsistency in design standards among functional road classes should be evaluated to accommodate door-to-door service
- need expanded research effort local roads and rural pavements to assist in the long-term planning process
- classify roads of all types (Township to Federal) based on traffic count and composition
- financial justification must exist in order to increase length and width of roads
- need more stringent enforcement on road limits to keep roads in good shape
- both lanes of a four-lane highway should be utilized for cost efficiency

4. Focus Group Title: Agricultural Transportation

- assessment of transportation needs required in rural communities
- promote efficiency in railroad industry with branch lines and elevator service
- retention of branch line network is necessary for rural development
- more equitable treatment between unit trains and single car movements
- intermodalism needs to be promoted
- more systematic approach for transporting commodities - eliminate unneeded transportation
- rail pricing and equipment issues are critical to rural communities
- changes in rural economies and funding patterns require stepped-up planning efforts to properly prioritize funds
- increase funding for federal and secondary roads to maintain infrastructure
- standardized regulations are needed
- reciprocity agreement with border states (Montana) for fuel tax permits within 50 mile radius of the border
- "core" or primary system with adequate feeder network still required to give agriculture access to markets
international trading agreements will have an increasing impact on rural economies; effects on trading patterns needs to be analyzed to determine appropriate policy decisions

5. Focus Group Title: Highway Finance

- need to funding mechanisms in place now to provide matching funds
- seat belt and helmet law issue needs to be resolved to avoid sanctions or penalties
- diversion of funds must be addressed
- matching funds from rural areas for demonstration projects will be hard to raise
- equitable treatment of cross-border truck traffic is essential
- raising transportation revenues of any kind will be difficult in near future
- appropriate use of transportation funds for economic development must be analyzed
- state-wide planning needs to be enhanced, and should include state, county, city, and township plans
- address railroad competitiveness and conditions because as elevators consolidate rural roads will have to handle more larger trucks
- put dollars toward research using new technology
- need to increase gas tax ($.05 per gallon) for matching funds
- vehicle registration fee should be based on weight because of deterioration rather than age and weight
- need to look into economic benefit of north-south routes
- consider if federal funds should be spent on maintenance and construction

6. Focus Group Title: Aeronautics:

- air service to our state is crucial to our economy
- financial health of carriers is a primary concern in the industry today
- consolidation of North Dakota airports is expected
- air cargo issues may be important to rural areas as capacity constraints are reached at some metropolitan facilities
- communicate with metropolitan airports about issues and opportunities
- planning is critical so funds are spent wisely
- funding at the federal level is static at a time when demands are escalating
- "knee-jerk" reactions to problems do not fit with long-term planning efforts
- organizational structure of governing agencies needs to be assessed
- develop plan where FAA may consider sharing authority with an organization in North Dakota to disperse funds
Reports from Focus Groups

AERONAUTICS FOCUS GROUP

Steve Johnson - Director of Operations, Grand Forks Regional Airport

What our group chose to do was to go back through the points that had been determined at the last meeting, rediscuss them, like anybody that gets the last review on any document that we chose to edit, and so on. Here are some of the issues and you'll see that some of them are the same as before, but they are what we think are important to aeronautics.

We think it's vitally important to start creating a climate, a regional climate if you will, of support in interchange regarding our air services. We believe that now there may be a focus on Fargo air service development and Grand Forks air service development. We think there needs to be a regional focus on air service development. We also think there might be some advantages to be gained in establishing communications with the metropolitan airport’s commission in Minneapolis since about 80 percent of our air travels end up going through Minneapolis. It probably would be good to establish contact with those people, discuss the issues, and maybe even the opportunities.

We concur with the earlier group’s assessment that the financial condition of air carriers is critical right now. In addition, we think there should be support for a piece of legislation that’s part of the latest airport improvement program before Congress. It calls for the creation of the Airline Competition Commission. What this group would do is to take another look at deregulation and take another look at some of the anti-competitive practices that are going on in the airline industry right now.

Our group also supports the reference to possible air cargo opportunities that may arise in North Dakota as the result of some constraints being reached at some of the larger facilities — Minneapolis for example. We think there may be some room for cargo development in North Dakota. We concur, as we said earlier, and combined a couple of the objectives there, that at this point in aeronautics, planning is critical so the funds we do have are spent wisely. We point out that federal funding is pretty much static right now and the demands for aeronautics money is constantly increasing.

One of the major points that we concur with that the earlier group had was all the knee-jerk regulation reactions that are being proposed as a result of aircraft accidents are creating real hardships in the aviation industry with regard to planning. In other words, things like the signing and marking requirements that are new to airports. Increased security requirements as a result of events in the Middle East, de-icing requirements that are now coming upon airports.
We ask that each of these new requirements be looked at indepth before they are adopted and we like the idea of a check coming along with each one of these new regulations if it's mandated. We also think there may be a need for something in the nature of a working group that might suggest other alternative methods for disbursing the funds that will become available when the other airports start collecting PFC's. Maybe a little bit of explanation is needed here.

We talked a little bit about Passenger Facility Charges earlier when HUB airports like Minneapolis start collecting PFC's. They'll have to forfeit a certain percentage of their normally received entitlement funds. These entitlement funds will roll back into a discretionary pot that will be made available to the smaller airports. Right now the FAA will determine how those discretionary funds are distributed. We think perhaps a working group of North Dakota airports might be able to come up with an alternative method where by the FAA might share some of that dispersing authority. Maybe the Aeronautics Commissioner.

We're concerned about North Dakota state funding for future airport development and improvements. As it was explained to us the pot of money for the North Dakota block grant has decreased from $1 million annually to $170,000 annually. What that really means is that it is matching share that airports can use when they get federal money. So really it's compacted many times over, the economic impact of that drop in state funding.

And last but not least, we're concerned about the overall decline in the general aviation industry. The number of people that are able to enjoy flying as part of their business and part of recreation. We talked about the consolidation that may be necessary in North Dakota airports. The reason that we may well have 10-30 percent fewer airports by the year 2000 than what we have now. It may be economically different.

HIGHWAY ENGINEERING FOCUS GROUP

Gary Doerr - Kadmmas, Lee, and Jackson

We ought to have a diverse group to talk about highway engineering. We had county commissioners, CMS administrators and coordinators. We even had some engineers in the group, and we had to fend for ourselves. They took a few shots at us, but they have some very delicate concerns.

One thing that we saw as being a problem is the Federal Regulation Bureau is very specific. If you don't leave a whole lot of leeway in what can be done, and we think that with the new highway bill there's some flexibility built in that we think we can use to our advantage in these rural states. What we would like to see is a system of roadway classifications that classify roads all the way from the township level up to the federal highway system, and along with that a classification would be based on traffic count and traffic competition. Local input would be included from the local government all the way up through the state DOT. We would like to see a graduated scale of highway design standards so the County Commissioners Township Board can meet to decide what road is what classification and have
some minimum design standards to set up for each classification. We would like to also see, if possible, some urban standards developed as well as rural standards developed so cities can have similar standards and goals from one area to another. We realize they can't be changed based on soil conditions and environmental concerns, but we think it would be nice to have at least something for the communities to look at and feel comfortable with. What we realize with all these standards is that we are going to have to have a lot of inter-governmental coordination and cooperation and we feel that it's going to have to be done just to get some of these things accomplished.

One question that was brought up, and I wasn't totally able to answer, was "What is the direction of the state design going? Is it towards privatization or away from it or somewhere in between there?"

Another concern that came up was that a lot of local projects are designed around these materials that are there and we were wondering if we are really getting the quality product based on designing around what happens to be handy at the time. We would like to encourage the use of looking at many alternatives in the design phase and look at various solutions and that should help bring down the costs and their end product. A major item of concern we had was the truck roadway. We agree that the length and width is continuing to be pushed to grow larger and longer and we would recommend that any request for increases are met with resistance, at least until some financial justification or impact is presented to the local authorities that will be granting the increases.

We feel that if there's some decent financial calculations down to show how vast an impact on our roads, it means a lot more to people than telling them we're doing 40 percent more damage to our roads. We think the realm of truck regulatory and load limits on enforcing this acute. The more we can enforce the limits that we have, the more education we have, the better job of being able to keep our roads in decent shape.

The last item we talked about was trying to shift the traffic to the opposite side on four-lane roads. It seems pretty basic. Is there a reason why we can't design our roads a couple of feet wider and shift center lines back and forth? People drive by the center line anyway. Might be a valid thing to look at. Thank you.

AGRICULTURE FOCUS GROUP

Leland Barth - The Department of Agriculture

The agricultural group focused on a variety of transportation issues that we feel are important issues and we finally agreed on a few of the issues. The group agreed that we need more efficiency in the railroad industry. The attention of branch lines, encourage use of branch lines to take pressure off highways. Also encourage railroads to pick up cars along the rail lines which elevators are located on. Pick up flat cars from one elevator and go to the next to come up with a unit.
A more systematic approach to transporting commodities to elevators and elimination of unneeded transportation. For example, transporting a commodity grown in the southern part of the state to the northern or central part of the state and then transporting it to a central location such as Fargo or Minneapolis. More equitable treatment between unit car and single car railroad.

The group also encouraged the development of intermodal transportation throughout the state. Development of a receiving-shippers facility. We decided to poll where it should be, but we didn’t come up with a solution.

Also, the group encouraged the increased federal funding for highways and secondary roads throughout the state to help maintain infrastructure with farming to transport commodities to elevators and markets. Also, standardized programs for trucks across the state highways.

Encourage a package of some type of excess tax on Canadian trucks entering the United States carrying grain or commodities which travel across our highways.

Also, the development of a reciprocity agreement with Montana on a fuel tax permit within a fifty-mile radius of the border on either side.

And finally, the use of air freight for transporting ag commodities wherever possible. One of the group members used the example of flight test pilots flying into UND’s Aerospace Center with empty cargo planes and flying out empty. I think there could be more development of using these cargo planes for transportation.

HIGHWAY FINANCE FOCUS GROUP

LaVonne Langord - AAA

My group first reviewed the last session that we held here earlier this year and we summarized what had been discussed in the focus group regarding financing. We went around the table and asked for input from different participants and any questions that they had and one of the first questions that came up was, "Is there any new technology to reduce cost coming in future." And we responded, yes, there is a lot of research going on in the state right now. In fact, there’s ISTEA. North Dakota has to spend a $5 million and that actually amounts to one-half percent of all the money that they receive under ISTEA on research and development. There’s going to be a lot of new technology down the road and this new technology will be for the dollars we get under the bill. In fact, some of the examples were given. Karen of the Humphrey Institute was with us and she was able to give us a lot of helpful questions and insight.

The first question she had was the ability of our rural roads to handle the more and larger trucks due to the consolidation of off-farm elevators. In this area railroad competitiveness and conditions must be addressed.
We talked about statewide planning, which is another ISTEA requirement. Input from county, cities, and special interest groups need to be considered when applying for any future funding. We also discussed county and township road funding and how the State Highway Department cannot legally intervene when disputes arise. Under the ISTEA regulations we had a lot of discussion about the new rules and rates. They have increased so much that we were told that extra staff was actually needed in order to administratively handle these rules and regulations. In fact Commissioner Backes, who also was with us, commented on whether we had any extra money. When it all boils down, and it really is just more paper work and red tape. With so many special interest groups and all the requirements we have, we really have to sit down and figure out where the money can be spent. Natural requirements written, a lot of our special county matching requirements. In 1992, we're talking fiscal 1992 now, North Dakota is $3 million short in matching funds. For 1993, that is going to $9 million, which brings it to a total of $12 million. By the time that actually gets repaid, there's another $3 million that has to be matched when those funds are repaid. So it's kind of a snowball effect. In fact, all these rules, a total of $15 million, has to be repaid by April of 1994. That is not along time from now.

And again, the comment was made that we need a minimum of 5¢ per gallon gas tax increase to pay for this part of our matching fund.

Vehicle registration fees were discussed. Why are they based on age and weight? Should it be based only on weight? Really weight is what's causing the deterioration of our highways. It was actually explained to us that it was a social policy set years ago and that our fees are much lower than surrounding states. This maybe something that will be looked at in the upcoming legislature. Studies are being done now on north and south bound routes in the state. Is there really any increased usage, any extra money being spent in the state of North Dakota? If we are really receiving no economic benefits from these north and south routes, the fees have to be increased.

In conclusion, rules and regulations are eroding the highway funds we used to get. Candice with the Humphrey Institute, said that this is not going to get any better. In fact, she says it's going to get worse once everything settles down. So many of the rules and regulations are very irrelevant to metropolitan areas but not very many of them are relevant to rural states like North Dakota and the group wants to go on record to do some things. First of all, we should have more discretion on how the money is going to be spent. And we need to go on record that we are in favor of generating adequate state funds to match all federal funds, and to pay back the funds that we discussed earlier, if borrowed with the federal matched waiver. The very last thing we talked about was maintenance. For some reason maintenance is not considered under federal funding. Maintenance also has to be considered along the same lines as generating the funding needed to repay the matching funds.
Good afternoon. Our group received consensus on three major issues, looked at their problems, and also their solutions. The three major issues were: the lack of transparent borders. The shortage of supply of trained drivers. And the lack of workers compensation extra-territorial coverage.

We looked at the lack of transparent borders and the first thing that came up was the lack of the Canadian reciprocity, which of course hinders trade. An example is that it costs a North Dakota carrier $180 more than a Minnesota carrier, or a carrier from any other state, to transport into and through Ontario.

The second issue was the multi-state weighing and inspections that occur creating unnecessary costs for states as well as transportation companies. There needs to be a free corridor established.

The third item was the need for improvement and uniformity in addressing multi-state provincial issues, ranging from planning of a multi-state corridor, to help justify and promote more highway miles that would qualify with the National Highway Systems. We felt it would work with other states and that presented as a group we'd have a better chance of qualifying for miles. To affecting such things as intermodalism and size and weight.

The next problem is the shortage of the supply of trained drivers. Today our industry faces severe shortages which are projected to only get worse. One of the major concerns is the lack of truck driving being seen as a profession for students graduating from high school. Today students graduate at 18 years old, who are old enough to operate a fighter jet, yet must be 21 years old to get a CDL.

The lack of workers compensation extra-territorial coverage. North Dakota law requires employers to purchase work comp coverage from the state fund, yet will not provide multi-state coverage. Because of the state fund, other sources of coverage are unavailable and subjects the employers of the state to lawsuits from employees, which is the very protection that was written into the basic premise of the law.

The solutions to these, the transparent borders, the first being Canadian reciprocities. It is simply an administrative agreement which we propose happen as soon as possible. The second issue, that of multi-state weighing inspections, is talk of a free I-94 corridor which would run from Billings, Montana, to Chicago, Illinois. The process could begin with a joint port of entry program to collect multi-state fees and reduce the administrative costs that would end up leading us into intelligent vehicle highway systems in years to come. The need for uniformity could be provided by a multi-state provincial consortium which was of interest to Minnesota.
The shortage and the supply of trained drivers. We could look to the use of Dickinson State College to put together a driver apprenticeship program to thoroughly train and educate drivers under strict guidelines, allowing the student to drive at a younger age. I believe there would be federal funds available for that. The lack of workers compensation coverage just needs to be dealt with in this next coming legislative session. That’s all we had.

RAILROAD FOCUS GROUP

Dan Zink - Upper Great Plains Transportation Institute

The Railroad Focus Group addressed about a dozen or so issues, but we weren’t able to boil down a lot of them. We have a fair amount of general statements but only a couple of specific recommendations. Many of the issues that we talked about today, within the scope of this conference, are unresolvable. For example, the car shortage issue. Many of these railroad issues are also outside the scope of this project or the scope of ISTEA. There are really very few rail freight programs within ISTEA. The rail issues in ISTEA are really related to transit and passenger transportation, so we’ll go through these knowing that many of them are on the fringe of where the concentration of this conference and this project are going.

First is the issue of equity and efficiency in rail equipment supplies. We are plagued by rail equipment supply problems on a regular basis it seems; it is an issue with nationwide attention and with very few easy answers. We decided on the general recommendation that increased emphasis on equity and distribution of the existing rail fleet during the times of car shortages is an appropriate policy to pursue. Also, there has been a lot of attention given to the role of the Interstate Commerce Commission in the new deregulated environment since 1980, and some displeasure with that role. Our group’s recommendation was to strengthen the oversight role by the Interstate Commerce Commission, especially in non-competitive situations like in the upper midwest where we don’t have effective barge competition. We also recommended that we try to de-politicize the ICC through the appointment process.

One specific recommendation that we had was that we should very strongly investigate expanded opportunities for piggyback and container shipments from North Dakota railroad origins. Right now there are no active piggyback facilities in this state. With all the specialty commodities that we do produce, there might be opportunities for development of an intermodal facility within the state of North Dakota rather than going through Winnipeg or into Minnesota for shipment via piggyback or container on flat car. We came to the policy conclusion that transportation investment or infrastructure investments need to be analyzed and planned from a multi-modal approach. We need to consider investment in all modes for the long-term benefit of the transportation network, including the possibility of transferring, for example, highway funds to invest in the portion of the rail network if the long-term benefit to the highway network is there. If we can take traffic, especially heavy-axle traffic off our highways and put it on the railroads, we may save money in the long-term in highway investment.
We concluded that we need to maintain a very high quality public-private partnership to help maintain a rail system that will adequately serve current and future needs, and to target a portion of those existing programs towards new industrial development. We have a very effective program with the Local Rail Freight Assistance program and we thought we should consider the possibility of targeting at least some of those funds toward new industrial development. Most of the LRFA funds have gone toward rehabilitating existing light density branch lines. We concluded that performance of our national and international transportation system is just as critical to North Dakota as our local system. We cited the example of the upper Mississippi River locks and dams and the effects of their age and condition on markets for North Dakota products. Also, the St. Lawrence Seaway system is very important in providing a competitive alternative for midwest product shipments. It is very important that we maintain both of those systems for the long-term health of the economy.

There was a lot of discussion about ownership of our light density branch-line rail network, whether it should be Class I, owned by the larger railroads like Burlington Northern, or short-line ownership. We concluded that the retention of a viable light density rail network is critical to rural employment and the state's basic economic sector. We concluded that regulations especially taxation, should treat all modes equitably, and policies that are targeted too specifically toward one mode should keep that equity issue in mind. We need to recognize and promote the inherent advantages or efficiencies of each mode, and promote policies that don't exist at the expense of one mode over another. Finally, we mentioned the issue of rail crossing safety. We felt that the rail crossing safety issue is very important to North Dakotans, and everyone in the group expressed eagerness to work with the DOT on establishing appropriate policies for rail crossing safety.
WRAP-UP

Jim Moench, ND Farm Bureau

I do want to add my appreciation and thanks to the focus groups and reporters. You all did an excellent job of taking complex issues and working through to a further point than you were at the last conference and we do have one more conference to go.

My job is to wrap-up, to pull together the conference and what happened so far. I’m not going to try and recap what has been said by the speakers.

I just want to give you some thoughts on what I heard here today and perhaps we can agree or disagree on them. Also, I’ll mention what we should do at the third conference and how we could structure it so that we can come out with some specific kinds of recommendations to make to the Humphrey Institute. Hopefully it will be mailed with the other five states and will also go on to Congress. We have a fairly short time frame in order to get our third conference in place and how we’re going to do it all and what is going to come out of it.

The steering committee is going to try to meet right after this and discuss how the third conference is going to go.

I guess what I heard from the first two presentations this morning was that we do have an infrastructure in place and we have a plan here in North Dakota that is capable of doing a lot of things. We do have a pretty good plan here. We’ve got a lot of issues and challenges, a lot of things to work up and worry about but we do have a plan and something to start with.

We are facing an environment that is changing, and the world is changing. We’ve got the Canadian Free Trade, and a lot of problems at least for agriculture, that surfaced. We’ve got the North American Free Trade and GATT. We’re seeing a world economy developing and we need to understand what the new environment is going be whether we want it or not. It’s going to be there and we need to understand that and change in order to make our state a winner.

Then during the noon luncheon we heard some policy issues on whether some of this trade is fair or free. But the biggest concern I heard was the national transportation system’s help is an important issue and maybe it needs to be looked at in regards to the current national hands-off regulatory attitude. It cannot continue. It’s not the best for the nation as far as transportation policy or for maintaining the plan that we have here in North Dakota and the rest of the country. It’s not doing what we hoped it would do or what it should be doing.

Then at the conference we changed to the focus groups and I think with the focus groups, at least the ones that I had a chance to see, we’re in an environment where ISTEA was passed. There were a lot of efforts done by a lot of folks in this room and others to pass the Highway Bill and we have great expectations. We’re going to get all this money and everything is going to be rosy. The biggest problem is going to be to convince legislatures
that, in fact, we've got to raise a little extra money to match, and highways are going to be paved with gold and we're going to go off into the future. We're finding out now that as more and more of the Bill is being digested, that those great expectations are slipping away. Some of the flexibility that we thought we were going to get and the extra money we even thought we might see, isn't necessarily happening. So where do we go from here? And what happens?

The next issue as far as national highway bills are concerned is the Technical Corrections Bill. One of the things that I think we've got to take a look at in the transportation area is something that agriculture faced about five, maybe even ten years ago. There is a tremendous influence by special interest groups on transportation and there are all kinds of groups from the American Disabilities, and Unions too. You name it. I think there is even a court house that got built in New York City. Special interest groups that are putting their oars into the Highway Bill. It's a large pot of money. So we've got to figure out how we are going to deal with those folks. For example, agriculture is trying to figure out how we deal with all the special interest groups that are impacted and what used to be farm organizations and the ag committee's bill. That isn't happening any more. I don't think it's happening in transportation anymore either, where state DOT Directors and public works committees get together and haul out a transportation bill.

There's a lot of interest in thinking about regional focus. Just what is a regional focus? One of the groups I was in was townships, counties, and cities who were talking about having to plan and work together. There's also the state, and even interstate, that needs cooperation with Canada. It needs to be addressed when we're looking at regional focus. We must develop new methods for people to sit down between the township and all the way to the state or higher and plan together. Right now there is a more adversarial relationship it seems. There's probably a pork barrel relationship where "if I can get enough political power I can get my project built," rather than "does this make sense in the plan." Planning is the key. I think a lot of folks felt that there is a pretty good planning effort going on in the state but at the federal level it's all really a pork barrel, more than there is any kind of national transportation plan.

Intermodalism needs to be worked on. Direct competition may not always be the best for society. An example would be, that the roads take a hit, the department takes a hit when there is large movements that move off railroads and onto roads. But the main view of the transportation industry or the trucking industry is that it's a pretty good deal. We need to work out what may be the best for the whole deal. Transportation needs to be fair, maybe too critical to be used as the financial tool. The biggest transportation allocation and how that works out would go back to the intermodalism and things that are dealt with.

Regulation seems to take a hard hit, not so much in figures concerned but maybe too little regulation at the federal level as far as fairness of transportation allocation. But there is tremendous concern about regulations that are coming down saying you must do this, you must do that in order to utilize transportation dollars. You will have a helmet law, a seat belt law, and you will put this kind of door in your rest stops. You will have this grade on the side; whatever it is that is costing a lot of money. We need to have regulations fit the region, the area, and the local environment and they need to have some sort of cross benefit review.
Money needs to be managed at the state level. Again, some of the regulations try to manage the money at the local level. Overall, I think that everyone is committed to matching federal dollars and to using those dollars for economic development in the state. I think the final challenge to us all is that we really need to do a major educational effort on the needs and importance of transportation. I appreciate you’re coming. I hope that you can come to the third one and help us again with your input and ideas. There is a steering committee meeting afterwards and the reception is in the room across the way. Thank you.
**Aeronautics**

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<tr>
<th>Name</th>
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<tbody>
<tr>
<td>Mark Holzer</td>
<td>ND Aeronautics Commission</td>
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<td>Steve Johnson</td>
<td>Grand Forks Regional Airport Authority</td>
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<td>Kevin Kudrna</td>
<td>Federal Express</td>
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<td>Gary Ness*</td>
<td>ND Aeronautics Commission</td>
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<td>Ken Ness</td>
<td>Minot International Airport</td>
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<td>Keith Porter</td>
<td>Porter Architects</td>
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**Highway Engineering**

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<td>Gary Doerr</td>
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<td>Tory Hart</td>
<td>Carrington Chamber of Commerce</td>
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<td>Arthur Hedberg</td>
<td>Mountrail County</td>
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<td>Cal Klewin</td>
<td>Bowman Development Corporation</td>
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<td>Jon Mill*</td>
<td>Burleigh County Highway Department</td>
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<td>Glenn Olson</td>
<td>City of Devils Lake</td>
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<td>Jeffery Rodacker</td>
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<td>Adrian Elevator</td>
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<td>Syd Craft</td>
<td>ND Grain Growers</td>
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<td>Dave Leftwich</td>
<td>ND Department of Transportation</td>
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<td>John Leininger*</td>
<td>ND Farmers Union</td>
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<td>Allen Palmer</td>
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<td>Kimberly Vachal</td>
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<td>Westley Weible</td>
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<td>Gary Berreth*</td>
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<td>Candace Campbell</td>
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<td>Gary DeCramer</td>
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<td>James Moench</td>
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<td>Rudy Nelson</td>
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<td>Duane Cossette*</td>
<td>Raymond Cossette Trucking</td>
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<td>Bruce Larson</td>
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<td>Robert Maeyaert</td>
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<td>Julie Rodriguez</td>
<td>Upper Great Plains Transportation Institute</td>
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<td>Vicki Steiner</td>
<td>ND Association of Oil &amp; Gas Producing Counties</td>
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<td>J. P. Wiest</td>
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**Railroads**

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<td>John Bitzan</td>
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<td>Bill Davis</td>
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<td>Doug Erhart</td>
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<td>Sharon Trudell</td>
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<td>Dan Zink*</td>
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* Focus Group Facilitator
CONFERENC EVALUATION FORM SUMMARY

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Comments from conference attendees:

I thought each speaker did an excellent job on their presentation in being objective, informative, and interesting.

The focus group session is the most important aspect of these conferences.

Excellent speakers!

It is very difficult to get the small groups to focus on the issue and come up with policy statements.

Could we get the Summary prior to the next meeting?

Probably the greatest benefit of this particular meet was the chance for non-highway folks to gain valuable insights into highway problems, hopefully they took notes.

I feel we need to have some type of regulations reinstated in our transportation systems.

Will all participants see final report as it will be presented to Congress?

Think this type of meeting are very informative! Want to go to the next one.

Excellent information was presented. Need for less regulations from the Federal Government was evident.

Most problems can be addressed by communications and this gave everyone an opportunity to address their concerns.

ND DOT should work closer with ND Counties; communities with their local transportation concerns.
Enjoyed being a part of this process--felt it gave me a different perspective on transportation issues.

Very important topics!

Focus groups provide excellent opportunity for education and suggestions for improvements on our transportation system.

Very well presented by all! Good group discussions.

Very good conference!

Conference was a good idea. I guess I am not aware of what the results will be and to whom they'll be presented. Almost half of the Aeronautics focus group was no-show.

Good form!

Byron Dorgan's address put all of our discussion into a context that says that what we do counts.

Conference well put together - good balance of speakers and of people attending.

This is a very valuable exercise and continue the process.

It was a good conference with excellent discussion on valuable issues.

These sessions are extremely important and they offer an excellent opportunity to learn and to give your input on these very important transportation issues.

We need to be sure the suggestions are followed up on and implemented wherever possible.

We need better instruction as to purpose of focus group discussion.

Davis was strong - could see vision in his ideas.

Information - wrap-up was sound, but I'm not sure we needed it - we all were here and know what was said - should be shorter, too.

Need explanation of Humphrey Institute goals out of ND efforts.

Still need some intermodal ties of transportation to sell "ND" as not being isolation but port of region (Region needs states to combine to "sell" globally & compete).

Need Economic Development people to educate transportation staff on where and how to attract industry and coordinate site locations

Is demands of out-migration of business to rural areas impacting transportation ability to move goods to people.
Some lack of connection between issues - lack of focus - would have benefitted from common theme or vision amongst each speaker and topic. For example, economic development or vision of 2020 for individual transportation systems.

Wrap-up speaker too long. We were there. He doesn't need to take 20 minutes to summarize - and to even summarize focus summaries. Long day--let people go.
TRANSPORTATION POLICY: 
OUR CHOICE FOR THE FUTURE 

Tuesday, November 17th, 1992 – The Holiday Inn (former Sheraton Inn), Bismarck, ND

New transportation legislation and new funding mechanisms will move us toward a more flexible and choice-oriented world. The conference outlined below will challenge participants to prioritize transportation policy for North Dakota’s growth and development. Four panel members will describe issues facing North Dakota in the next decade. Participants will play a key role at the conference as they break into focus groups to discuss and prioritize important transportation issues facing North Dakota.

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Conference Program

9:30 a.m.   Registration
10:00 a.m.  Welcome & Introduction
            Gene Griffin, Director -
            Upper Great Plains Transportation Institute

10:05 a.m.  Panel Session
            Important Transportation Issues Facing North Dakota’s Economy
            Gary Ness, Director - ND Aeronautics Commission
            Duane Cossette - Raymond Cossette Trucking
            Gary Berreth - ND Department of Transportation
            Jon Mielke - Public Service Commission

11:00 a.m.  Focus Groups
12:00 p.m.  Lunch
1:15 p.m.   Keynote Speaker
            Mike Crum, Associate Professor of Transportation and Logistics -
            Iowa State University
            The Role of Logistics in State and Regional Transportation Planning

2:15 p.m.   Break
2:30 p.m.   Results
3:00 p.m.   Group Discussion and Wrap Up
4:00 p.m.   Reception following the conference
Transportation Policy: Our Choice for the Future

Biographical Sketches of Speakers

Gary Ness - Director,
North Dakota Aeronautics Commission, Bismarck, North Dakota

Mr. Gary Ness has been the Director of the North Dakota Aeronautics Commission since 1986. The mission of the Aeronautics Commission is to promote, enhance and regulate aviation in the state.

Gary’s previous experience is diverse. He served in the U.S. Navy as a naval aviator. After naval service Ness was employed by the Federal Land Bank in the Grand Forks area. He also served as Vice President of First Federal Savings and Loan of Grand Forks. Gary also worked as a sales manager for AGSCO, a regional agricultural chemical company headquartered in Grand Forks.

Gary is a graduate of North Dakota State College of Science and North Dakota State University. He holds a commercial multi-engine and instrument pilot certificate. He is the treasurer and serves on the executive committee of the National Association of State Aviation Officials (NASAO). Ness serves on the Board of International Northwest Aviation Council which is made up of eight states and four Canadian Provinces. He is a member of the "National Standing Committee on Aviation" for AASHTO representing Region IV. Ness is also a member "Joint Committee on Domestic Freight Policy" for AASHTO.

Duane Cossette - President, Raymond Cossette Trucking, Inc., Fargo, North Dakota

Mr. Duane Cossette has been President of Raymond Cossette Trucking, Inc., since January 1, 1992. He served as Executive Vice President since 1981. Raymond Cossette Trucking, Inc. is a refrigerated carrier specializing in providing just-in-time inventory to food manufacturers and distributors. The company has several sister companies such as Paragon Transportation.

Duane is a graduate of the University of North Dakota in Grand Forks. He is a Director to the American Trucking Association, Vice President of the North Dakota Motor Carriers, and has served on the Transportation Cluster of the Governor's Economic Development Round Table. Duane speaks regularly at industry events and has publications on file at the Hill Reference Library.
Gary Berreth - Assistant Chief Engineer, Planning and Preconstruction, North Dakota Department of Transportation, Bismarck, North Dakota

Mr. Gary Berreth has been the Assistant Chief Engineer, Planning and Preconstruction at the North Dakota Department of Transportation (NDDOT) since 1990. He is responsible for coordinating and supervising the Planning Division, Bridge Division, Design Division, Engineering Services Division, Materials and Research Division, and Secondary Roads Division.

Gary has worked extensively in engineering. He worked for the State of California Department of Water Resources on construction of the California State Water Project. He served two years in the U.S. Army in construction engineering. He had an honorable discharge in 1968. Gary began employment with the North Dakota Highway Department in 1968 in urban transportation planning and also in urban design. He was registered as a professional engineer in 1971. Gary was assigned to traffic and special studies in 1972 and traffic engineering and highway safety in 1975. Gary became Division Engineer for Intermodal Planning and Rail Assistance Division in 1978. He became Planning Engineer in 1982.

Gary graduated from North Dakota State University in 1966 with a degree in Civil Engineering. He also attended special training at Northwestern University in traffic engineering.

Jon Mielke - Director
Public Service Commission, Bismarck, North Dakota

Mr. Jon Mielke has been with the Public Service Commission (PSC) since 1980. He has served in several capacities dealing primarily with rail and truck transportation and the licensing of grain elevators and auctioneers. He also serves as a hearing officer in cases assigned to him by the Commission. Jon’s current role with rail transportation involves advising the Commission concerning the regulation of various intrastate matters, representing state interests before federal agencies such as the Interstate Commerce Commission, and working directly with carriers to address shippers’ needs. Jon and the Commission work hard to maintain close contacts with the grain industry, railroads, and various commodity groups to help ensure that the state’s railroads are financially viable and responsive to the needs of North Dakota shippers.

Prior to working for the PSC Jon served as an aide to the city manager in Minot, North Dakota, and later as a rural public transportation coordinator with the North Dakota Highway Department.

Jon is a native of Grafton, North Dakota. He has an undergraduate degree in business administration and a masters degree in public administration from the University of North Dakota.
Michael Crum - Associate Professor of Transportation and Logistics, Iowa State University

Michael Crum is a Professor of Transportation and Logistics in the College of Business at Iowa State University since 1980.

Dr Crum’s research interests are primarily in the area of transport policy impacts on transportation and logistics management. His research has been published in a number of academic and trade journals. He is currently involved with two research projects funded through the U.S. Department of Transportation’s University Transportation Centers Program. One project is an analysis of labor relations in the U.S. railroad industry and one project is an analysis of the transportation system in Iowa and its suitability for the future economic needs of the state.

Michael Crum received his PhD in Transportation Management at Indiana University. During the 1988 academic year he was a Fulbright Scholar at the Central School of Planning and Statistics and the Research Institute for Transport Economics in Warsaw, Poland. Currently he is the Director of the International Education Committee for Delta Nu Alpha Transportation Fraternity and is on the Board of Examiners for the American Society of Transportation and Logistics. He is also a member of the Transportation and Public Utilities Group of the American Economic Association and is co-editor of the Journal of Transportation Management.
TRANSPORTATION POLICY:  
Our Choice for the Future  
Conference 3 - November 17, 1992  
Holiday Inn, Bismarck, ND

Presentation:  Gary Ness, Director, North Dakota Aeronautics Commission

One thing that I was thinking about, a friend of mine told me a story the other day about a planning process, and that's basically what we're in. We're in an input planning process. He said that he runs an electronics firm. He had 850 hours of troubleshooting book, put together for a product for a customer in Europe. 850 hours of hard work trying to figure out what possibly could go wrong with the product and how to alleviate that problem. Everything he wanted to know that could go wrong, was in the book. So he took it across the pond and he handed it to this customer. His customer said, "Now, this is for electronic transmission, right?" He said, "Yup, everything that could go wrong is in the book." "What if the battery is dead?" No answer.

And I think when we look at the process, that we're going to go forth in. We've got to think what if the battery goes dead. We've got to plug that in. Now, what is the battery? The battery in infrastructure is finance. It's the thing that makes the thing go in a straight line. So if we're not planned for that battery to be generated and the financing to be in place at the federal, state and local level to get what infrastructure that we have in mind done, all the troubleshooting that we do in the book is not going to be worth a damn.

That's the one key issue I think, across the board, whether rubber tires, concrete, rails, aviation, is the financing in the projects we want to get done in the communities, to help with economic recovery or the redevelopment of the rural area. ISTEA, did not in reality, take a look at aviation because it's a surface transportation act. However, within the state process, we're going to have the opportunity for the input because an airport is an economic generator for a community. It has to be accessed and it has to be accessed cleanly and efficiently. We only have certain periods of time in a day when it's really busy and it's really an aggravation and in some cases, it's a safety factor.

But we have to balance that with the surface transportation. And within that focus in rural aviation, as we looked at the past two meetings, is the air service into the communities that are participating in the growth of the state. When you take a look at today's airline industry, we're looking at a very fragile industry. We're looking at, in the state of North Dakota, one of our carriers in Chapter 11. That's Continental. We're looking at several that are struggling to keep cashflow available. The key in the past has always been deregulation caused this, deregulation caused that. I think we've got to throw that away. Deregulation was 12 years ago, damn near 13.
Now if you take a look at the rest of the industries that have things like that happen to them, they've made their changes, they've made the commitment to make the changes. I take a look back at the business ag chemicals (I worked in that industry). Now, anything that has been changed by regulation, or changed by anything, is ag chemicals. That industry has made the adjustment. They've continued forth with good profit margins and customer relations.

Now the airline industry was deregulated. And they keep pointing back to 1979 and say well we're deregulated and that causes the problem. It's time to put that aside. It's time to look at real issues within that industry. And how it's developed into the infrastructure. And forget the deregulation problem. We have to look to the future and instead of looking back and saying they did it to us, look at the future, step forward, take a real look at what transportation costs. And what it costs you to go from point A to point B.

A $650 ticket to Chicago and back on a Wednesday and a Thursday is ridiculous. In the same point, $175 ticket from Friday to Sunday is even more ridiculous. That's an economic issue that the industry has to look at. In relation to North Dakota in the rural area, we have to be able to put together a system of airports, out of major cities, to accommodate carrier-type traffic. And it goes back to that battery, it goes back to the planning at the local level, the state level, and the federal level, to put that into place. And what are the real needs?

There's one thing really wrong with the airport improvement act that we have at the federal level. It finances new and replacement construction. It does not do enough for maintenance and repair and operations. So, thus, to get the job done, you've got to do it brand new. You've got to tear it up, you've got to replace it. Instead of really evaluating the maintenance and the construction, the maintenance and repair of a facility, in being able to put the thing in place at a lesser rate, at a lesser cost, but the same strength factors that are available.

And also, at the airports that have extended themselves to the capacity, that's as big as they're going to get, as big as they are to service the facility and the community and everything else, why not take some of that enplanement funds, which are the belly button funds, the people that get on the airplane, we get so many dollars back from the tax. Why not use that for some operation, under a guideline, operation and management on the airport, instead of just the construction side.

North Dakota is a recipient state in aviation. We put in about 3 million (this is a rough estimate) a year and get about 6 back. So if we're looking at the roadside and the aviation side, it's about the same balance there, so we have to really take a look at that battery in the future.
Two and a half years ago the federal government jacked up the fuel tax on the aviation side. As a state director, I told the FAA if you want us as a partner in the construction phase in the operation in the states, you can’t do that. Because the only thing that drives my agency, is basically fuel tax. I can go to my pilots and I can go to the industry and say I need a cent and a half to get this done, but if you go in and put four cents on that, the cent and a half disappears. I think we have to look at that across the board in all taxes. That battery, again, that we’re talking about.

Where do we fit the battery in the future? I looked at the 2 percent increase in the tax that you pay on your airline ticket, it went from 8 percent to 10 percent. That two percent did not come back to aviation. That went to federal debt reduction. Why?

The secondary airports in the state that we discussed in Conference II are the little generators of economic activity in the smaller communities. Case in point, Casselton. Seven years ago Casselton was a grass strip with two Piper J-3 cubs on it. Some people in that community decided that they wanted something different, they had some plans and they were ambitious in their directions. Right now, that’s an all concrete, 3,000 foot air strip with a partial parallel taxiway. There’s nine businesses on that field and 23 people employed. It’s got 55 aircraft based. So you can see it’s a generator that was created and all those businesses are connected to aviation and there’s about 4 or 5 other things going on at this time.

Now as we look at rural North Dakota and try to maintain our smaller communities, the decision makers come in aircraft. They don’t want to spend 120 miles, two hours on the road. We had a focus group that sat down in a strategic planning mode and said how far will you drive as a businessman to visit a prospective place of employment. Half an hour, max. That’s all I’m interested in, half an hour. You start drawing circles, like we did in Conference II. It pinpoints, if you were out there, when you want to do it, you’ve got to be within a half an hour of some sort of air facility that will handle business-type aircraft.

The real key point that I think is the focus, when I went through the issues, is the knee-jerk reaction. I think you remember I talked about the lighted signage, those that were here in Conference II. The fact that because of an accident in Detroit, we had to put lighted signs on an airport in Lisbon, North Dakota, at $45,000. We went after that. The national association went after that. On November 2, the FAA said this is really dumb, let’s take a look at this and they rescinded the lighted signage requirement. But, it took a national effort, it took an organization of 50 state directors, saying take a look at this guys. It’s going to cost North Dakota. Cost was $2 million minimum and you start putting that into the other states and it got to be real big numbers.
I think that is in all the way across the board, the rubber tires, the steel rails, the concrete and the airports knee jerk reaction on regulatory efforts, have to be a key and we cannot let that happen. And all that comes down to is communication. To come back and say, take a look at this, let's really see how that affects us.
TRANSPORTATION POLICY:  
Our Choice for the Future  
Conference 3 - November 17, 1992  
Holiday Inn, Bismarck, ND

Presenter:  Duane Cossette, President, Raymond Cossette Trucking

I represent the truck regulatory section and I want to start with the words change. Change, change, change. We are a part of a rapidly changing world. It is believed that 95 percent of the technology we will use in the year 2000 has not yet been invented. We must be able to foresee change and adapt. There is a new world order, a new world of global competitiveness. It is said by 1995, a short three years from now, four of every five businesses will face global competition.

Five years ago, American business recognized the opportunity to find differentiation in their products through transportation. As technology grew, it became easier to duplicate products and develop them with similar costs. They turned to logistics to produce low costs or just-in-time inventories to meet customer specifications.

While the crystal ball is crystal clear as it relates to the importance transportation will play in an environment of global competition, among our new competitors, we will see companies that have a 20-, 30-, or even a 40-year head start in the implementation of quality leadership. We will see products produced in developing countries whose labor and energy costs are substantially below world price. We will see companies with a well-educated and thoroughly trained workforce able to consistently produce and deliver products with little or no variation.

So what should we do? Well being here is a start. But in being here, we must affect change. We must begin to look at regulation through a new set of glasses. We must assure regulation carries a consistent theme in four areas: (1) we must eliminate artificial barriers that restrict trade; (2) we must assure that any future tax increases maximize the use of those funds and to the extent possible are offset the increase costs by improving productivity; (3) we must assure regulation does not impede education and training; and (4) we must develop strategic business and state alliances to reduce administrative costs wherever possible.

Our objective today is to look at truck regulation, but again, change is in order. We can no longer look specifically at any particular mode. We must assure our descendants promote intermodal harmony. Today, it is not uncommon to see products leave Asia by ship, arrive at America’s west coasts and move across America or Canada by train or by truck, with two drivers, and arrive in Europe by plane, provided just-in-time delivery at the lowest intermodal cost. The word intermodal will become a household word.
With this in mind, let's look at first, the regulatory parameters we identified earlier. We must eliminate artificial barriers that restrict trade. North Dakota has become a lonely island by restricting international trade. And it's placed severe economic and logistical barriers on the very industry it is so critically dependent upon. For example, a carrier based in almost any other state than North Dakota can provide service to the province of Ontario at no cost. It will cost a North Dakota-based carrier $110 to deliver ten miles into Windsor, Ontario, a sister city to Detroit, as Mandan is to Bismarck. Well, certainly this problem must get better as we get closer to home. Right? Wrong.

Let's look at Manitoba. Again, a carrier based in almost any other state rather than North Dakota, can deliver to the province of Manitoba free. A North Dakota carrier is required to purchase a Manitoba-based plate for $325 or an additional 30 percent more than the face plate which allows us to travel the 48 states of America.

Let's look at the states that have free reciprocity with Ontario. First, let's look at the border states, that border Canada. And they are from East to West. Maine, New Hampshire, Vermont, New York, Ohio, Michigan, Wisconsin, Minnesota, North Dakota, Montana, Idaho, Washington. Of the twelve border states, only North Dakota and Idaho do not have reciprocity.

Next, let me just read off the states with reciprocity. Alabama, California, Colorado, Connecticut, Delaware, Florida, Georgia, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Maine, Maryland, Massachusetts, Michigan, Minnesota, Mississippi, Missouri, Montana, Nebraska, New Hampshire, New Jersey, New York, North Carolina, Ohio, Oklahoma, Oregon, Pennsylvania, Rhode Island, South Dakota, South Carolina, Tennessee, Texas, Utah, Virginia, Washington, West Virginia, Wisconsin.

Maybe this is one time a thousand words paint a picture. Manitoba has similar states. In an industry where freight can be won or lost over one cent per mile, it makes it nearly impossible for a North Dakota carrier to compete and carry America's exports just north of its homeland. To make it worse, our customers continue to increase exports. We have no choice but to provide the service, at a loss, so as not to alienate a customer.

Gary talked about a fragile industry in the airline industry. The trucking industry is also a fragile industry. When you go to investors they look at the trends of the transportation side and they say, 'why would anyone invest in truck transportation?' We must make a change.
I would like to address two more areas of restrictive legislation. First, North Dakota is a monopolistic state and that they require North Dakota carriers to purchase their work comp coverage from the state fund, period, no options. The problem is basically North Dakota does not provide coverage beyond its borders which opens us up to lawsuits from our employees. But in addition, retaliatory costs from other states. It takes away the very protection that lead to the establishment of work comp legislation, freedom from suit.

The second issues involves intrastate regulation. It is legislation that has served its purpose but its time has come. Both United States and Canada have moved to deregulate intrastate commerce. As America strives to become more competitive, it is essential to let the market dictate the price. Earlier discussions indicated a shipment of goods from Fargo, North Dakota, to Bismarck, North Dakota, nineteen carriers have the same rate, yet from Moorhead to Bismarck there were nineteen different rates.

The second parameter. We must assure any future tax increases, maximize the use of those funds, and to the extent possible, offset the increased cost by improving productivity. We understand that increased taxes may be necessary to generate the revenue needed to obtain matching federal funds.

But a paramount obstacle stands in the way. That issue involves diversion of funds from the highway fund to the general fund of approximately $5 million that per biennium from the sale of bingo stamps. The issue is diversion, as Gary talked about. We must assure that money that is collected is used to its maximum potential and does not face diversion. With diversion you lose support. This must be rescinded.

Next, we must look at the ways of using local funds to get a four-fold increase in matching funds. Now after we've generated the necessary revenue to obtain matching federal funds which we will do, we must be receptive to look at changes, administratively, that can improve productivity to offset costs. One of the areas includes uniformity of state laws and regulations. The cost of compliance today, for our industry, is over $1 billion. Yet we question the effectiveness.

The next parameter. We must assure regulation does not impede education and training. Today our industry faces a critical shortage of professional truck drivers. Our industry is growing jobs, at the same time America is trying to put people back to work. But one of the problems is, regulation has helped to dry up the supply chain of drivers. Today you need to be 21 years olds to get a commercial drivers license, and many companies expect 25 years old with a minimum of 100,000-200,000 miles. When students graduate at 18 years old and choose not to take part of higher education, they are at the right age to fly a fighter jet, but must pursue other endeavors rather than driving—a profession that easily exceeds $30,000 a year.
I believe we have the opportunity to change all that. Yes, change. I believe that we can implement a program similar to the one Minnesota implemented, by using a simulator to train airline pilots. First, Dickinson State has a very good program today, with exceptional placements. Second, we need to invest in a simulator to reduce operating costs. We need to get an exempted from the DOT to establish an extensive, I mean extensive, apprenticeship program in which the student learns not only about driving, but also about the industry and its costs structure.

Local companies could take part in the on-the-road training to reduce costs. Then after thoroughly training, you have a productive tax-paying citizen working within one of America’s most vital industries.

The last parameter, we must develop strategic business and state alliances to reduce administrative costs wherever possible. First, we need to look at state alliances and develop, for example, joint points of ports of entry where each state would collect fees for the other. We need to move towards adoption of intelligent vehicle and highway systems that can indicate a truck clear from Illinois going through to Seattle has been checked and is cleared magnetically or electronically.

Next, we need to look at what services may be provided by the private sector and entertain competitive pricing and service standards.

In closing, we talked a lot about change, but what we really have is opportunity.
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Presenter: Gary Berreth, Assistant Chief Engineer, North Dakota DOT

You heard the first two speakers and I guess one of the things that came across loud and clear was some of the same issues that they're talking about, different things happening in transportation also apply to highways. One of the things that maybe everybody should understand is one thing is for certain, we're not talking transportation as being either highways, either railroads, either aeronautics, either trucking or whatever. I think when we talk transportation now days, we're talking about all of them. The fact that we're talking intermodal type concerns, rather than just an issue of one mode versus another mode is very important to remember.

Some of the other parallels that you heard in the other two conversations came up in both the focus groups on highway engineering and highway finance. There's a cross in the issue of dollars or financing, (which seems to be an issue that crosses all borders). The other issue is regulations.

Regulations, some of us may be talking about a little different aspect with respect to aeronautics, or trucking. Here you're talking about regulations of the industry per se with things such as licensing between states or reciprocal type agreements. Regulations in an area like highway industry or working on highway related activities, has to do more with what the feds say we have to do. And we have to follow these guidelines. We have to follow these regulations.

Now, that's fine for some uniformity nationwide, but what happens is you end up in a situation where a state like North Dakota probably doesn't have the same applications or needs that a well-developed state or very heavily developed like California and New York have.

The one issue on highway engineering that came out loud and clear was design standards. Design standards are important but you have to tailor them to what your needs are. The reality of it is, do we need the same type of design standard for a four-lane facility, two-lane facility or just a prairie road or a country road. Do they have to be the same? So design standards are very important. One of the things that I think is an issue in North Dakota is we have to use some common sense, we have to tailor and balance the needs of what we really need in highway engineering to what our desires are and it has to be tailored to what we're talking about.

There's a lot of discussion on the hierarchy above, we have to bite the bullet and look at what our needs are for the importance of a particular route.
This all comes into one of the things that we're talking about; highway financing. We're talking about what the costs are for engineering standards. We're talking about what the costs are for regulations that we have to follow through on because of requirements. That leads into the other focus group from traffic engineering into the highway financing issue.

There was some talk about aeronautics, how much money North Dakota gets in aeronautics versus what they pay in. The same thing applies in the highway industry. We are what they call a recipient state, we get about $2 back for every dollar that is paid out in federal taxes. So, it's important to have that federal dollars coming in because we only have two sources of revenue for highway financing, we either have federal money or we have state money. Both of those sources of funds come from a highway trust fund that's generated predominantly by fuel tax, and in North Dakota we also have registration fees and those type of things.

The other thing that is important for people to know is that when we talk about the use of those dollars for transportation, particularly in the highway industry, we're talking about use for construction activities, and the other one is maintenance activities. One of those things that came up in the discussion of the group is that federal monies cannot be used for maintenance-type activities. That is a glitch in the federal law that more or less says that you have to spend your state funds only for maintenance-type activities.

Now, what about maintenance. The importance of maintenance. You can use your dollars for whatever they are. You can let your federal dollars go as far as they will go to reconstruct your facilities but what you find on the state level, county level, township level, city level, is you're going to find that predominantly there is about a 2 to 1 difference in what your needs are versus what you have money for.

Now, what happens to that other half of the projects that need to be done? What if you don't have the federal dollars or the dollars to reconstruct, or take care of rebuilding them to last (on highways, it's generally a twenty year design life). You have to do something to bandaid them along, or maintain them, to get to the point where something can be done with them.

Maintenance is something that starts almost immediately after you do a construction project. It's not that you construct something and expect not to touch it for twenty years. You have to start a maintenance program that brings it out to that twenty-year life. If you do not provide the maintenance that's going to try to maintain it, or bandaid it, you're going to end up paying considerably more than having construction costs when you get to the end of that twenty-year period than you would have, had you been spending those maintenance dollars.
Commissioner Backes often uses the analogy of what maintenance dollars do—it's like a leak in your roof. If you have a leak and you don't maintain it or fix it, what happens? Before long you're going to have to replace the whole roof. The other one is the same thing as changing oil in your car. If you don't change oil in your car, because you want to get away from spending money on maintenance, before long you're going to end up replacing the whole engine.

The same thing applies in the area of highway engineering and roadway facilities or whatever. You have to spend some maintenance dollars or your final costs are going to be considerably more than what you pay had you not been spending maintenance dollars.

I think one of the things that we're all going to have to look at is that we're in a different ball game now. We've got a different picture nationwide and we're not talking not just highways any more, we're talking intermodalism and we're talking all modes of transportation. I think the cause/Effect relationship, what happens in one mode, say it's aeronautics or it's trucking or whatever, impacts another one.

I think we have to start looking more, not just as Ncrth Dakota, we have to start looking in the region as far as what transportation is going to do, where movement is going to go, what's going to be happening and we have to do the one thing, and I think that the ISTEA, or the Intermodal Service Transportation Efficiency Act, is going to force is we have to start looking ahead. We have to start looking around us. We have to see what's happening. We have to be competitive and I think we also have to be innovative in what we're going to be doing in North Dakota, not only from the aspect of financing, but regulations and everything else. And, I think North Dakota is going to be in good shape.
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Presenter: Jon Mielke, Public Service Commission

The difficulty with going fourth in a panel structure like this is that you're sitting there listening to the other presenters and when they're all such heavy hitters, I find myself rewriting my presentation three times before I get up here. Some of what I'm going to say I've stolen from the earlier presenters, but I do that as a compliment to them because they were excellent presentation.

I also want to steal a little bit from this guy I heard talk last week at the Durum Forum in Minot, Dr. Bill Wilson from NDSU. He's a heavy hitter in ag economics and a member of the Minneapolis Grain Exchange and really knows his stuff, he's world class. He was going on and on about durum production in North Dakota and comparing it to Canadian production and costs of transportation and elevation costs and export enhancement programs and GATT talks and growth market free trade agreements, free trade agreement with Canada. And he went on for about 45 minutes and he finally looked up, he said, "Now, let's cut through all the bull shit. What we're talking about is competition."

And Gary hit on that when he talked about deregulation. Hey people, that's a fact of life. Maybe you don't like it. Well, then don't try to sell, because it's a fact of life. We're competing with people all over the world. A steal here from Duane, 'that's a challenge', but it's also an opportunity because we have an excellent transportation system in North Dakota. If anything, maybe we're a little bit over built and have some artificial costs built into it, but there's an opportunity to take what is an excellent system, glean out those inefficiencies and make us even better able to compete in those world markets.

I guess the bottom line is that there is no free lunch, even though Griffin is going to pick up the tab for lunch today, it's not free to any of us here because we're giving up our time to be here. That's one thing we're going to get in return for it I guess. But there are costs associated with that. I think if we're going to compete, North Dakota in the domestic market as well as in the global market, we have to start with a self-assessment. And that holds true whether you're in government or whether you're a carrier, or whether you're a shipper. It's a three-way partnership. We're all in this together. We have to look at our own operations and say, maybe we start with what are the artificial inefficiencies that we have built into the system. Duane talked about some of those whether it's the bingo stamp program. There are costs associated with that and somebody ends up paying for that.
You also have to look at your operations and say, are there ways that we can do things better. Can we eliminate some of our internal costs. Governor Sinner spoke at the Durum Forum last week and I'll go back here on some of the artificial inefficiencies and some of those are socially imposed costs. He was talking about the cost of mining in North Dakota and we have some very efficient mine haul operations in North Dakota. He said that 55 cents out of every dollar in costs associated with mining North Dakota coal are socially imposed costs. Whether it's liability insurance or workmen's comp. It was a long, long list. But over half of the costs of that production were, I guess artificial costs, or socially imposed costs. I'm not saying that those costs were all bad. That's a social decision that somebody has to make. But when those decisions are being made it's incumbent upon people in government as well as the industries that are involved and the consumers to recognize that, again, there's no free lunch. Somebody is going to pay for those costs. Either in terms of higher costs, higher taxes, or maybe it's a lessening of our ability to compete in markets. So we have to make those decisions with our eyes wide open. And then determine whether or not those actions are truly beneficial.

We talk about this as being a way of life and I'm just going to relate to you some of the things I've done in the last week and every place I turn it comes up. I mentioned the Durum Forum and shortly before that I was at a Wheat Commission function from all over the state.

You hear the term ISTEA, you probably figured out what that is. It doesn't mean it's time for a break, it's the Intermodal Service Transportation Efficiency Act. What's that key word? Efficiency. We're looking for efficiency. Part of that Gary mentioned is the planning process. We're looking to use those funds more efficiently.

Saturday morning I took my kids to a basketball camp out at the University of Mary. What are they trying to do? Build their skills. Get better at what they do. That's what it's all about. We're all trying to get better at what we're doing. You can look at professional or college sports, those people have been refining those skills. Sometimes you also see the coach running up and down the sidelines, ranting and raving at the official. Sometimes there he thinks he got a bum call, but what he's really trying to do is influence the interpretation of the rules. We're doing that too. We're talking about negotiations in the GATT talks over in Europe. We're trying to influence the rules. We're trying to level the playing field. Even once you have those rules in place, then you're still looking for interpretations that help give you that edge. Help make you better able to compete.
I guess I draw another analogy there. I had a person working with me, (I'm a curler) and an instructor that was out working with me said, the thing that people do quite often and maybe it's a natural tendency, is that when you're playing sports and you miss a shot, you try to analyze what you did wrong. Maybe that's human nature, you're looking at what you're doing wrong. He said the best thing to do is analyze a shot you do right, so the next time something goes wrong, rather than dwelling on what you're doing wrong, let's go back and say, I remember what I was doing right when I was making that shot. I want to do that again next time. Let's build on that positive and I'll come back with a point.

North Dakota has an excellent transportation system. What we're all here to do is to build on that. To work with the legislature, whether that's state or national, to build on that and hopefully remove some of those inefficiencies that have costs associated with them.

Going specifically to the points identified by the rail focus group and also by the ag group. Very briefly, they all come down to exactly the kind of the things that all the presenters have been talking about this morning. Working with the carriers to promote profitability. There is no free lunch. There are costs associated with things, given our regulatory environment, the competitive environment of the world, and funding realities, carrier profit levels are going to dictate what service levels we're going to have and along with that, what level of maintenance in line retention we're going to have at the national level and the state level.

We don't have to look back too far to see what happens when you have nonprofitable carriers. The Milwaukee Road, Rock Island, Penn Central, a lot of names you don't see any more and for good reason. The economics just weren't there.

Relatedly, to making carriers profitable, we have to promote carrier efficiencies. We have to build on the inherent efficiencies and advantages that each of those modes have. We have to make them better able to do what they do and then take advantage of those to help us market our goods around the country and around the world.

From a public perspective we have to promote competition between carriers and among modes. And, again, once you strip away all the artificial advantages, now let's get right down to the playing field and let people have it and do what they do best—promote competition.
Again, from a public perspective, we have to collect, analyze, and disseminate the market information. We do that a great deal in North Dakota with grain movement data supplied by elevators. That information drives a lot of things that we do, that we can take to the carriers and say, here's the proof, you guys are losing market share. Why is that? What are you doing wrong that's causing that grain to go to some other mode or to some other carrier? And relatedly, to go back to the positive. Hey, you guys had a great year. What did you do different this year than last year? Build on that.

And, that will all come back to helping North Dakotans participate in strong grain markets. I'd much rather sell our grain into a $3 or $4 market than not being able to ship it out and have the market drop to $2. That's economic development, selling it to a strong market rather than a weak market.

Jumping down to agricultural transportation. A lot of this is redundant and maybe that's because of the close ties between the ag community, our bulk commodities and the rail industry. One thing that sticks out there is a need to do an assessment of the transportation needs of our communities. We have to prioritize those needs and dictate how and where available funds are going to be spent. A big part of that income facting efficiencies, we have to eliminate unneeded transportation, whether that's moving grain against the market in farm trucks and put it on rail and taking it back the other direction. There's cost associated with that. Either it's less money for the farmers or more expense for the carriers. But either one of those are wasting scarce resources. So we have to eliminate those unneeded transportation movements, services and facilities.

Now, those are some easy words and some tough decisions given the scarce resources we have. There are 105,000 miles of roadways in North Dakota. Maybe we're over developed and nobody wants to lose their local roads. Just like nobody wants to lose their local school or their branch line of their elevator. But there are some stark realities out there and when it comes to spending scarce dollars, we're going to have to make some tough choices. Getting leaner and meaner will make us better at what we're doing.

I mentioned railroad, the branch line efficiencies, the profitability, that comes right back to line retention. Some of the same decisions we may have to make with local roads, we have to make with branch lines. Are there a need for all those? We've got a lot of branch lines in North Dakota. Fewer than we had at one time and a lot fewer than were proposed at one time, but hopefully those are now becoming more efficient. Some of those are still destined to disappear off the map, but let's help make those carriers efficient so that it's truly a rationalization that is warranted by the economics, the true costs associated with operating those lines. And, hopefully, efficient operation will allow more of those to stay in place.
The last thing I'll mention is the promotion of carrier efficiencies by eliminating governmentally imposed inefficiencies. Duane touched on this and it was one of the highlights of the ag group that should be seeking to standardize regulation between states, making it easier for carriers to comply with those socially imposed costs that government puts out there, hopefully making those rational decisions on something that's easier to comply with. Thereby, helping make those carriers more efficient, better able to compete, that provide the services that we need to market into what's truly a world economy. That's a fact of life.
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Keynote Address: Dr. Michael R. Crum, Associate Professor
Transportation and Logistics, Iowa State University

Thank you for the kind introduction, Jill. With regard to my year in Poland I won’t bore you with a lot of stories, but I will relate the one that most of my Polish friends find the most amusing. In Poland they do not celebrate birthdays very much, but rather, as a devoutly Catholic country, they celebrate name days. On his or her name day the honoree brings in the cakes, cookies, tea, coffee, and so forth. Within the first month I was there, I was invited to an office name day party for one of the women at the research institute. Only one of the twenty Poles in attendance spoke any English. I asked her how to say, in Polish, thank you for the delicious cakes. She told me, and in my mind I rehearsed it over and over. As we were getting ready to leave, I walked up and expressed my thanks. Or so I thought. Suddenly, everyone burst in to laughter. It turns out I had thanked her for bearing my children. For the next several days going to the institute I observed much whispering and laughing in my vicinity. However, the Poles did really appreciate my efforts to learn their language.

In Poland I gave numerous presentations and seminars dealing with the changes in U.S. transportation policy, particularly the changes in economic regulation. Poland was, at that time, on the verge of essentially deregulating and privatizing its entire economy, including transportation. It was a fascinating time to be there as the first free elections in the East Bloc resulted in the decline of communism and the rise to power of the Solidarity trade union. But, anyway, on to the matter at hand.

Jill asked if I would speak to the topic of logistics considerations in transportation policy and planning. I am currently involved in a research project which is assessing transportation in the context of the future economic needs of the state of Iowa. During the course of this study the project team, which was led by Dr. David Forkenbrock of the University of Iowa, identified and assessed both the role of transportation in the state’s economy and the role of the state government in providing transportation. This has entailed a review and analysis of state investment in transportation infrastructure and state policies which affect transportation. My role in the project has mostly been to assess the current and project the future logistics needs of Iowa shippers.

Today, I thought it might be appropriate given the focus of this conference to direct my comments in two areas. First, I would like to discuss and review the relative significance of the key components of freight logistics to the U.S. economy and how logistics productivity has improved markedly since 1980. The cost data I will be presenting appear in various publications and were assembled by Robert Delaney of
Cass Logistics. Second, I would like to share with you the approach we took to incorporating the business logistics perspective in our study of Iowa's transportation system as well as some of our more interesting findings and recommendations.

As you know, logistics is far more than just transportation. Logistics management involves managing the flow of raw materials and component parts from source through manufacturing processes and the flow of finished goods through distribution channels to the final consumer. Inventory and inventory-related costs comprise a significant portion of total logistics costs. As you can see from the table on this transparency, the capital costs of inventory, taxes, obsolescence, depreciation, and storage accounted for approximately $221 billion of expenditure in 1990. At any given point in time we have about $600 billion worth of inventory in our economy. I would contend that that is a significant volume. Streamlining or minimizing inventories is a key goal of shippers, and one facilitated by improved transportation service.

With respect to transportation, truck transport by far accounts for the largest percentage of total transportation cost. Expenditures for for-hire, private (or own account — perhaps a more descriptive term), and local truck transportation accounted for $277 billion in 1990. The other modes of transportation collectively accounted for another $75 billion of logistics expenditures. Transportation thus represented almost 60% of the $600 billion of total logistics costs in 1990.

Given the magnitude of freight transportation costs and its relative significance to the U.S. economy (it comprises about 11% of GNP), any productivity gain regardless of how small the percentage is going to translate into very large dollar savings.

Government impacts logistics efficiency primarily through its policies and investments in transportation. These must be congruent with one another in order to realize the full potential of transportation benefits. I often use in the classroom an example that I think illustrates an incongruence between policy and investments. If you will recall at the time the airlines were deregulated, there were all sorts of forecasts that deregulation would greatly increase passenger demand for air travel. Lo and behold, the forecasts proved accurate. However, we failed to make the necessary investments to insure that the air transport system could efficiently and effectively handle the increased demand in spite of having a considerable sum of unallocated funds sitting in the airport and airway trust fund. Also, other aspects of our air transportation and other economic policies were not implemented in a congruent manner with deregulation. One good example is the failure to apply anti-trust regulations and criteria to a number of airline "mega" mergers. Consequently, we have found ourselves with incongruent investment and regulatory policies, and have not, in my opinion, realized the full potential of airline deregulation.
Government policy establishes the economic and business environment for transport users and suppliers and influences carrier operating efficiency, service innovativeness, technology advances, and pricing behavior. Changes in federal freight transportation regulatory policy have led to significant transportation productivity gains. Just as important, and much more subtle, are the logistics productivity gains that have resulted from shipper logistics strategies made possible by the economic deregulation of freight transportation. What I would like to do is to highlight a few of these and take a look at how our logistics performance has improved dramatically, and then postulate where our future logistics productivity gains will be coming from.

Two sets of legislation which were enacted in the early 1980s produced substantial gains in logistics productivity. The deregulation acts, or regulatory reform acts since we don't have totally free rail and truck transport markets, are generally and rightfully credited with having played the most significant role in improving logistics productivity. However, the Surface Transportation Assistance Act of 1982 also contributed greatly to increased productivity in the trucking industry. This latter act standardized the weight limit on federal and interstate highways and permitted larger vehicles. The resulting increased equipment, labor, and fuel efficiencies more than offset the increased federal fuel tax which was also a part of the act.

The Motor Carrier Act of 1980 and many ensuing ICC rulings produced greater operating efficiencies for trucking firms in a number of ways. For example, there are far fewer deadhead, or empty, vehicle-miles in trucking today, both for commercial carriage and for private carriage. Indeed, private carriers have benefited greatly from deregulation as they now have the ability to trip lease to for-hire carriers and brokers, to engage in compensated intercorporate hauling for other firms in the corporate family, and to acquire ICC operating authority under certain conditions. Private carriers, on average, have reduced their percentage of total vehicle-miles which are deadhead from 25% prior to deregulation to about 10% today.

Additionally, the removal or relaxation of route and commodity restrictions in ICC certificates of public convenience and necessity not only permitted a reduction in deadheading for for-hire carriers, but also enabled them to reduce the amount of freight that is interlined. Interlined shipments are those that are transported by two or more carriers operating in end-to-end configuration. Interlining creates additional transactions costs and handling costs. Given the door-to-door service capability of motor carriers, there is rarely economic rationale for interlining, but about 11% of truck freight was interlined in 1978. By 1987 this figure had dropped to less than 3%.

A final key source of productivity gains for trucking has been labor. The competitive pressures exerted in the less regulated transportation markets and the huge influx of and turnover among truckload carriers have greatly diminished the economic power of the Teamsters Union. Nearly all of the new carriers are non-union.
While the average labor wage rate has increased during the years since deregulation, it has not kept up with the rate of inflation. As a result, in real terms labor costs have declined in the trucking industry, though the employment level is up.

For the railroad industry the Staggers Rail Act of 1980 and subsequent ICC rulings granted a number of market freedoms that have led to operating efficiencies and productivity gains. For example, a number of the largest railroads in the country took advantage of the expedited merger approval process and the ICC’s penchant for end-to-end railroad mergers and created large, inter-regional systems. Such mergers allowed the carriers to increase traffic density and average length of haul by reducing interlining, restructuring their systems to eliminate asset redundancy, and rerouting freight. The railroads also have found it much easier and quicker to abandon low-density lines that had become economically obsolete, thus increasing their traffic densities. Railroads do realize economies of density as the economic literature will attest to.

With the new competitiveness in transportation markets, both intramodal and intermodal, the railroad companies have aggressively pursued cost reduction. Not surprisingly, given that labor costs account for about 50% of total rail costs, management has focused much of its efforts in the labor area. Labor productivity has increased dramatically in the railroad industry as the labor force has shrunk by about 50% since 1980. It is ironic (or unfortunate, from the perspective of labor) that labor went to bat for the industry in 1980 lobbying for economic deregulation as it recognized the need for a financial revitalization of the industry. Labor obviously did not foresee that railroad rationalization would also include a great deal of labor force rationalization.

Intermodal transport had long been looked at as making a great deal of economic sense in a number of markets, but had failed to live up to its potential with little growth in the decades preceding deregulation. Each of the last eleven years, however, has been a record year for the railroad industry in terms of intermodal rail carloadings. Intermodal now accounts for more than 15% of the industry’s total revenue. While total deregulation of intermodal has certainly had a major impact on its growth, it can’t take full credit. The growth in containerized imports, particularly from the Pacific Rim, moving to U.S. destinations on double-stack trains has also been a key influence. At the time of deregulation, 80% of intermodal traffic was trailer on flat car, or TOFC, and 20% was container on flat car, or COFC. This year, for the first time, COFC accounts for more carloadings than TOFC. In spite of the recent public bickering over the LCV and other issues, the prognosis for continued growth in intermodal is very positive as the number of partnerships and joint ventures between rail and truck firms continues to increase.
Deregulation spurred the pace of transportation technology advancement because the pricing and market freedoms bestowed upon carriers better enables technology innovators to profit from their initiatives. Not only are new technologies being developed, but older technologies are being applied more widely and more effectively. While the advancements in information technologies have been central to cost and service improvements in transportation, one should not overlook the less sexy types of technological progress. Improvements in fuel economy have been phenomenal, and, of course, a number of alternative sources of energy are being tested, some with very good results. Equipment tracking and tracing capabilities and traffic control, in general, have experienced marked improvements. One reason intermodalism has grown is because of better technologies — from the articulated, double-stack "car" to the carless technologies. Equipment manufacturers working closely with carriers and shippers have been able to develop containers for products that before were thought not to be candidates for containerization — for products ranging from automobiles to lumber. This greatly increases the likelihood for expansion of containerized movements of domestic freight.

Though much attention has been paid to the productivity and cost gains fostered by the new regulatory environment, logistics productivity has benefitted just as much from the transportation service improvements that have followed deregulation. Perhaps most notably, transportation is no longer the weak link in the logistics chain of just-in-time manufacturers. Just-in-time production capabilities, or the ability to produce a relatively small number of units economically, were in existence long before transportation deregulation. However, the ability of carriers to meet the transportation needs that enabled manufacturers to reduce inventory levels of both cycle and safety stock was severely impeded by economic regulation. Just-in-time production and inventory management places more exacting requirements and demands on transportation, such as the need for precision scheduling of smaller shipments with a higher frequency of service. In general, carriers must be much more flexible and responsive in catering to shippers' service needs. For some shippers the service time windows are getting pretty narrow as production scheduling becomes more precise and storage capacity shrinks. The aforementioned improvements in information and other technologies will only lead to even greater demand for tighter transportation schedules in the future.

Logistics channel relationships, particularly those between the shippers and carriers, have changed greatly as a result of the increased service demands as well as the desire to reduce transaction costs. Transaction costs from a shipper perspective are costs incurred in searching for transportation suppliers, negotiating service/rate packages with them, and monitoring and evaluating their performance.
Currently, the shipper-carrier relationship is undergoing the same type of change as did the manufacturer-supplier relationship during the ten years preceding transport deregulation. That is, shippers are using a limited number of carriers, establishing more formal relationships with them, and more closely integrating their operations. A colleague of mine at Iowa State and I have been conducting research on these three aspects of the relationship between shippers and motor carriers: the core carrier concept, contracting, and electronic data interchange (EDI). We surveyed 214 shippers, mostly very large manufacturing firms, and 265 Class I and II motor carriers, which represents 13% of the population of Class I and II trucking firms.

The shipper respondents had been actively engaged in reducing the number of trucking firms they use and expected to continue doing so. On average, the number of truck transport suppliers declined from 1,500 per shipper in 1984 to about 1,000 in 1989, a 33% reduction. Our carrier respondents reported that, on average, about 30% of their total revenue comes from one shipper, and 60% of their business comes from the largest 20% of their shipper accounts. The carriers also report that about 40% of their total revenue is under contract, and slightly less than 25% of total truck freight moves under EDI. Both contracting and, in particular, EDI use are expected to increase over the next few years. With regard to EDI the trucking industry is barely scratching the surface of its potential as most of the current use is for the purpose of shipment tracing. Equipment dispatch and financial transactions between shippers and motor carriers are the functions most likely to be next performed electronically. The most successful motor carriers will be those that learn to derive operating benefits in addition to the marketing benefits from their EDI systems.

I have reproduced a few cost graphs which show the magnitude of the logistics productivity gains I have just described. The operating efficiency gains and service improvements resulting from transportation economic deregulation are evident in these graphs as the relative proportion of U.S. GNP comprised of total logistics costs, transportation costs, and inventory costs declined markedly after 1980.

During the 1970s total logistics costs averaged about 13.7% of U.S. GNP. After a slight increase right after 1980, logistics costs as a percentage of GNP began to decline until reaching a near steady-state level in 1987. In 1990 total logistics costs were about 11% of GNP. The drop from 13.7% to 11% is a reduction of nearly 20%.

Transportation costs dropped from an average of about 8.1% of GNP during the decade of the 70s to about 6.3% in 1990, a decline of slightly more than 22%. Inventory costs have been reduced at a comparable rate, from an average of 5.2% of GNP during the 1970s to about 4% in 1990, a decline of about 23%. Admittedly, inventory levels are dependent on a number of factors other than transportation, such as the level of interest rates and the health of the economy. However, unarguably, the
vast improvement in transportation service quality has been a major contributor to shippers' ability to reduce inventory costs.

The next two graphs reveal the trends in real rail and truck costs to shippers since the economic deregulation of these two modes. As you can see from the rail cost graph, average real rail revenue per ton-mile began declining almost immediately after passage of the Staggers Rail Act of 1980. Obviously, real rail rates have not declined for every commodity or every market, but on average they have dropped significantly. Similarly, average real truckload (TL) rates began decreasing almost immediately after passage of the Motor Carrier Act of 1980, and in 1988 were at less than 90% of their 1973 level. Real less-than-truckload (LTL) rates actually rose for the first four years post-deregulation before declining to their 1973 level by 1988. The productivity gains and competitive pressures fostered by deregulation have greatly benefited shippers.

Let me reiterate a point made earlier. Both total logistics costs and transportation costs as percentages of U.S. GNP have leveled off since the mid-1980s. Shipper and carrier productivity cannot be expected to advance at the same pace as during the 1980s. Though some argue that significant transportation efficiencies can be gained by deregulating intrastate movements in the 42 states that still have some form of economic regulation, it is my opinion that future improvements in transportation, and thus logistics, efficiency will result primarily from prudent public investments in transportation.

I must emphasize and clarify the qualifier "prudent" when discussing public investments in transportation. Government expenditures on transportation infrastructure will promote economic development and enhance the nation's competitiveness in the global economy only if the result is to lower total transportation costs. If a government investment in a road, waterway, airport, etc. does not lower transportation costs, the investment is not unproductive but actually counterproductive as the capital so invested could have been used elsewhere. This is particularly true in this day and age of budgetary crises in the federal and, in most cases, state governments. While the well-documented deteriorated state of public transportation infrastructure in the U.S. is a deterrent to logistics performance, the public sector must carefully evaluate each maintenance and construction or reconstruction project from the standpoint of its economic justifiability.

Government investments and policies in transportation influence a number of logistics- and transportation-related costs via their impact on:

- **Safety**: safety is a logistics concern as accidents affect insurance premiums, the transport firm's quality of service, and entail the loss of productive employees and capital assets.
- **Travel time**: inventory costs vary directly and positively with travel time, but the impact on transportation cost is not as clear — reduced travel time due to reduced congestion generally means lower transportation costs; reduced travel time due to higher speeds has varying impacts on fuel efficiency, equipment wear and tear, and driver and equipment utilization.

- **Variations in travel time**: production and inventory costs are reduced as variations in travel time are reduced as production disruptions and safety stock are eliminated or minimized.

- **Vehicle operations**: the quality of the infrastructure affects vehicle operating costs such as fuel consumption, equipment maintenance and repair, asset and labor utilization, etc.

- **The environment**: logistics as much or more than any other functional area of the firm impacts the environment; environmental costs such as the costs of air and noise pollution are both social costs and private costs as the government attempts to internalize these costs via emission and noise standards.

Given these preliminary and brief comments on transportation's role in economic development, I would like to turn now to discussing how logistics considerations were incorporated in our study of transportation in Iowa. The primary objective of our study was to devise a strategic plan of sorts for transportation policy and investment in Iowa. Toward that end the study included the following tasks or components:

- An assessment of the current state of transportation in Iowa.

Essentially, this was the data collecting part of the study, and the following types of questions were addressed — how are freight and passenger transportation needs currently served, how good is transportation service with respect to the infrastructure and the quality of carrier service, what are the current traffic patterns, what are the key policies affecting transportation, and so on.

- A projection of the future economic needs of Iowa.

In this part of the study demographic trends were discerned, emerging logistics strategies of the private sector were identified, state economic development plans were studied, and the general economic, social, and political environments were assessed.

- A determination of the transportation system's ability to adequately meet these needs.
We identified problematic areas or potential problematic areas in our transportation system as well as various approaches or solutions to eliminating or mitigating them.

- The establishment of principles and priorities to guide the formulation of state transportation policy and transportation investment decisions.

Our recommendations encompassed a wide range of topics and issues including the appropriate criteria for evaluating transportation investments, alternatives approaches to the financing of public projects, emerging technologies, the private sector/public sector interface, and so on. I will touch upon some of our recommendations at the end of my speech.

The approach we adopted for gaining or incorporating the private sector logistics perspective was multi-pronged. Each project funded through the Midwest Transportation Center, our region's analog to the Upper Great Plains Transportation Institute and one of the original ten university centers established under the U.S. Department of Transportation's University Research Program, is required to have a project advisory committee. Our committee consisted of 17 individuals representing the key public and private sector players. From the private sector were six persons representing each mode of transport except pipeline — two trucking firm, one rail, one barge, one airline, and one small package firm executives; five shippers from a diverse set of manufacturing/distribution firms and shipper groups; and a representative from the Iowa Business Council, one of our funding agencies. These individuals provided valuable input on the emerging logistics and transportation strategies and needs of Iowa shippers. On the public sector side we had representation from both the legislative and executive branches of the state government as the chairpersons of both the House and Senate transportation committees, the director of the Office of Management, and the head of the Iowa Transportation Commission were committee members. Additionally, labor was represented by the head of the local Teamsters union.

I must admit that, initially, I had some reservations and concerns about working with such a large group representing such diverse interests. I envisioned encountering great difficulties reaching a consensus on the many controversial topics we were addressing. However, I was pleasantly surprised by the effort, cooperation, and keen insights provided by the committee members. These folks exhibited true statesmanship in the sense of putting the state's interests ahead of any parochial interests.

In addition to the advisory committee we formed five sub-committees that each provided expert input to the advisory committee and the research team on more narrow and specific issues. Each subcommittee was chaired by an advisory committee
member and was comprised of individuals who had knowledge and experience in the specific focus areas. Four of the subcommittees dealt directly with logistics considerations: the Agri Industry Transportation Practices and Needs subcommittee, the Goods and Package Movement Practices and Needs subcommittee, the Industrial Transportation Practices and Needs subcommittee, and the Transportation and Business Location Decisions subcommittee. The fifth subcommittee, Transportation and State Policy Goals, addressed mostly the non-economic or social goals associated with transportation policy and investments.

As another source of input, we conducted a mailed questionnaire survey of Iowa manufacturing, warehousing, and distribution firms that employ at least 50 workers. The survey was a cost effective way for us to gain a broader-based view of shipper attitudes about the quality of transportation in Iowa, the future transportation and logistics needs of the state, and various transportation and logistics issues. It was designed such that we could compare logistics trends of Iowa shippers with those identified in the national survey that I and my Iowa State colleague conducted, from the study I mentioned earlier. We received 234 completed surveys from the 474 that were delivered for a response rate of nearly 50%.

Finally, we invited twenty-five or so trade organizations and other groups that represent various transportation users to a closed session with the advisory committee and research team to present their views on the future transport needs of the state. Representatives from twelve of these organizations gave oral presentations and another four or five submitted written statements.

We feel that we implemented a systematic and comprehensive approach to attaining valuable input from the most appropriate sources. A number of keen insights, surprising revelations, and creative suggestions were gained. I would like to take what little time I have left to mention a few of our more significant findings and to present some of our recommendations and conclusions.

In general, Iowa businesses are quite satisfied with the quality of and the access to transportation facilities within the state. Transportation is viewed as providing a competitive advantage by a substantial majority of all shippers, but somewhat more so by the urban respondents. Not surprisingly, logistics management trends in Iowa mirror those reported in national surveys. Thus, there appear to be no significant problems or weaknesses in today's transportation system in Iowa.

Given that highway and road transport consume a large share of the total state expenditure on transportation and account for the lion's share of total Iowa freight volume, we devoted considerable attention to this mode. Some of the more interesting results of our study have to do with the issue of expanding two-lane highways to four-lanes. We were aware of a mindset in some communities that four-lane highways are
essential to economic development, to attracting new businesses. In Iowa, where the movie "Field of Dreams" was filmed, this is known as the "Build it and they will come" syndrome. The feedback we received through the survey and the subcommittees generally confirmed what the research team had believed a priori: direct access to a four-lane highway is not essential. There was wide disagreement on the need for an expanded network of four-lane highways in highways. Rather, there was general support for giving priority to maintaining Iowa's existing highways and roads over upgrading two-lane roads to four lanes. The primary concern of shippers is with the performance of the highway: good quality road, good surface, smooth flow of traffic, and little variability in transit times. Unless traffic volumes are very high, four-lane highways are not needed to ensure smooth flow of traffic and low transit time variability.

The construction of four-lane highways is extremely costly. An alternative approach is to upgrade two-lane highways which currently do not have the traffic volumes sufficient to justify four lanes to "super-two" highway status. A "super-two" highway has the following features:

- two paved travel lanes 12-15 feet wide
- ten-foot shoulders, completely paved or having at least a three-foot strip of asphalt and the rest gravel, with a 33-foot clear zone in rural areas
- a geometric design normally found on four-lane highways:
  - a design speed of 70 mph except in areas of rolling hills where the design speed is 60 mph
  - maximum grades of three degrees
  - vertical clearances of at least 16 feet
  - bridges that exceed the road width by three feet on each side
- passing lanes approximately every five miles
- bypasses around smaller communities whenever possible
- turn lanes and acceleration lanes at intersections where conditions warrant

The capital costs of upgrading from a two-lane to a super-two highway were estimated in two recent Iowa studies to be approximately 40 percent of the costs of a four-lane highway, and the annual maintenance costs were about half as great.
Additionally, both studies showed that most of the economic gains that would be realized from a four-lane highway would also be obtained by a super-two. Where traffic volumes are forecasted to rise, the super-two might serve as an interim step to eventual construction of a four-lane highway.

An issue which has received considerable publicity at the national level is the longer combination vehicle, or LCV. The respondents to our survey share a fairly common view among transportation professionals. That is, they view LCVs as having great potential for improving trucking productivity, and there is some recognition that they may do less damage to the highways. However, they have concerns about LCV safety performance. Consequently, there is a strong reluctance to support allowing triple 28s or double 48s on Iowa highways.

Proponents of LCVs assert that they have an excellent safety record. Actually, there have been a number of studies that reach quite different conclusions. The basic problem of comparing LCV safety performance with that of conventional trucks is the substantially different environment in which each operates. LCVs generally are operated under optimal safety situations, e.g., on low traffic density highways, in good weather, during daylight hours, etc. There are no comparable safety data on conventional trucks operating under similar conditions which would permit a valid comparison of the relative safety performances of each type of vehicle configuration. Thus, the jury is still out. There is currently a federally mandated moratorium on expansion of LCV operating territory until further evidence of their safety is available.

In wrapping up I’d like to briefly touch upon a few of the transportation policy recommendations I have listed on this last transparency. The first one listed is fundamental to making transportation investments that lead to improvements in logistics productivity and economic development. Transportation investments must meet the economic criterion of cost savings exceeding costs. Given that a number of transport projects have been the result of pork-barrel politics, this is easier said than done.

In the interest of both economic efficiency and equitable treatment, user charges should reflect cost causation and should cover costs. In looking to the future we believe the fuel tax, as the primary source of highway user tax revenue, will need to be reexamined. The emergence of intelligent vehicle highway systems, or IVHS, offers opportunities for direct taxation based on use in some transportation corridors. Furthermore, as alternative fuels come on line, states will be forced to rethink the means by which they finance their highways.

IVHS has tremendous potential for improving logistics and transportation performance. More efficient routing, improved safety, and reduced congestion are just a few of the benefits achievable with IVHS. The economic gains will be even greater if
the public and private sector work together to develop systems that are compatible with the management information systems of commercial operators and that are affordable for even the smallest operator.

The research team recommends thicker pavement on a designated heavy truck highway system as these roads are reconstructed, and recovering the incremental cost of the thicker pavement from user charges levied on the heavier trucks. One complaint often heard from truckers, and it is legitimate, is that the current highway system was not designed to the standards required by today’s vehicles. An optimal pavement investment policy would result in a thickness that minimizes the sum of initial capital and long-term maintenance costs. Truck operating, and thus shipping, costs should be reduced.

Our analysis of traffic forecasts and the pattern of traffic demand on the Mississippi River lead us to recommend against heavy investment in major capacity expansion. The cost of expanding one 600-foot lock to 1200 feet length is about $380 million, and the total cost of such an expansion program to the federal government would be around $4.8 billion. The user charges assessed barges cover only a very small fraction of the costs of constructing and maintaining the waterway system. Rehabilitating the locks and making minor needed improvements would cost between $10 and $20 million per lock. Based on our analysis of the capital cost differences between proper maintenance of upper Mississippi River locks with their current capacity and a major expansion to 1200 foot lengths, we conclude that the state of Iowa should encourage the federal government to maintain the current capacity.

I hope that this gives a general flavor of our approach to incorporating the logistics perspective in our study of Iowa’s transportation system and the basic principles that we believe should guide transportation investment and policy. The final report will be completed and available for anyone interested probably in late February of next year.

I thank you for the opportunity to visit with you, and I appreciate your attentiveness.
LOGISTICS CONSIDERATIONS IN TRANSPORTATION POLICY AND PLANNING

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GOVERNMENT ROLE IN BUSINESS LOGISTICS

- KEY COMPONENTS OF BUSINESS LOGISTICS COSTS

- GOVERNMENT IMPACTS TRANSPORTATION WITH ITS POLICIES AND INVESTMENTS: THESE MUST BE CONGRUOUS IN ORDER TO REALIZE FULL POTENTIAL OF TRANSPORTATION BENEFITS

- GOVERNMENT POLICY ESTABLISHES THE ECONOMIC AND BUSINESS ENVIRONMENT FOR TRANSPORT USERS AND SUPPLIERS AND INFLUENCES:
  - OPERATING EFFICIENCY
  - SERVICE INNOVATIONS
  - TECHNOLOGY ADVANCES
  - PRICING BEHAVIOR

- CHANGES IN FEDERAL TRANSPORTATION REGULATORY POLICY HAVE LED TO SIGNIFICANT TRANSPORTATION PRODUCTIVITY GAINS

- LOGISTICIANS HAVE ALSO BEEN ABLE TO IMPLEMENT A NUMBER OF STRATEGIES WHICH HAVE RESULTED IN AN IMPROVEMENT IN TOTAL BUSINESS LOGISTICS PERFORMANCE
TRANSPORTATION PRODUCTIVITY GAINS SINCE 1980

- ECONOMIC REGULATORY REFORM OF RAILROAD AND TRUCKING INDUSTRIES (MOTOR CARRIER ACT OF 1980 AND STAGGERS RAIL ACT OF 1980)

- SURFACE TRANSPORTATION ASSISTANCE ACT OF 1982

- TRANSPORTATION PRODUCTIVITY GAINS RESULTED FROM:
  
  ♦ INCREASED OPERATING EFFICIENCIES OF MOTOR CARRIERS
    
    • FEWER DEADHEAD MILES
    
    • LESS INTERLINING
    
    • MORE DIRECT ROUTING
    
    • LARGER VEHICLES
    
    • REDUCED LABOR COSTS
  
  ♦ INCREASED OPERATING EFFICIENCIES OF RAILROADS
    
    • LESS INTERLINING
    
    • INCREASED TRAFFIC DENSITIES
    
    • SMALLER LABOR FORCE
  
  ♦ SIGNIFICANT GROWTH IN INTERMODAL TRANSPORT
  
  ♦ IMPROVED TECHNOLOGIES
TRANSPORTATION SERVICE IMPROVEMENTS HAVE ALSO RESULTED AND PERMITTED SAVINGS IN RELATED LOGISTICS COSTS

♦ JUST-IN-TIME PRODUCTION AND INVENTORY MANAGEMENT HAS PLACED MORE EXACTING REQUIREMENTS AND DEMANDS ON TRANSPORTATION

- SMALLER, MORE FREQUENT SERVICE
- PRECISION SCHEDULING -- NARROW TIME WINDOWS
- GENERALLY, MORE RESPONSIVE SERVICE
- REDUCED INVENTORIES -- BOTH CYCLE AND SAFETY STOCKS
- REDUCED STORAGE CAPACITY NEEDS

♦ LOGISTICS CHANNEL RELATIONSHIPS HAVE CHANGED AS A RESULT OF INCREASED SERVICE DEMANDS AND THE DESIRE TO REDUCE TRANSACTION COSTS

- CORE CARRIER CONCEPT
- CONTRACTING
- INTEGRATION/COOPERATION
- Logistics costs as a percentage of U.S. GNP appear to have levelled off since the late 1980s.

- Carrier and shipper productivity cannot be expected to advance at the same pace as during the 1980s.

- The deteriorated state of the public transportation infrastructure is a deterrent to logistics efficiency.

- Future improvements in business logistics efficiency will result primarily from prudent public investments in transportation.

- Government investments in transportation influence a number of logistics- and transportation-related costs via their impact on:
  - Safety (accident costs - personal and property)
  - Travel time (inventory and transportation costs)
  - Variations in travel time (production and inventory costs)
  - Vehicle operations (transportation costs)
  - The environment (air and noise pollution)
LOGISTICS CONSIDERATIONS IN STATE TRANSPORTATION PLANNING: THE IOWA STUDY

♦ OVERVIEW OF PROJECT

♦ ASSESS THE CURRENT STATE OF TRANSPORTATION IN IOWA

♦ PROJECT THE FUTURE ECONOMIC NEEDS OF IOWA

♦ DETERMINE WHETHER THE TRANSPORTATION SYSTEM IS ADEQUATE TO MEET THESE NEEDS

♦ ESTABLISH PRINCIPLES AND PRIORITIES FOR STATE POLICIES AND INVESTMENTS IN TRANSPORTATION

♦ HOW LOGISTICS CONSIDERATIONS WERE INCORPORATED

♦ PROJECT ADVISORY COMMITTEE

• MODAL REPRESENTATION (6)

• SHIPPER REPRESENTATION (6)

• GOVERNMENT REPRESENTATION (3)

• IOWA DOT REPRESENTATION (1)

• IOWA BUSINESS COUNCIL (1)

• LABOR REPRESENTATION (1)
♦ SUBCOMMITTEES

- AGRI INDUSTRY TRANSPORTATION PRACTICES AND NEEDS
- GOODS AND PACKAGE MOVEMENT PRACTICES AND NEEDS
- INDUSTRIAL TRANSPORTATION PRACTICES AND NEEDS
- TRANSPORTATION AND BUSINESS LOCATION DECISIONS
- TRANSPORTATION AND STATE POLICY GOALS

♦ SURVEY OF IOWA BUSINESSES
LOGISTICS SURVEY OF IOWA BUSINESSES

■ SURVEY INSTRUMENT

♦ INFORMATION ABOUT RESPONDING FACILITY

♦ TRANSPORTATION AND THE FACILITY’S COMPETITIVE POSITION (WITH PARTICULAR FOCUS ON HIGHWAY TRANSPORT)

♦ ASSESSMENT OF GENERAL LOGISTICS AND TRANSPORTATION ISSUES

■ SURVEY RESPONDENTS

♦ TARGET: MANUFACTURING AND WAREHOUSING FIRMS EMPLOYING AT LEAST 50 WORKERS

♦ 474 SURVEYS MAILED, 234 RESPONDENTS (49.4%)

♦ LIGHT MANUFACTURING, HEAVY MANUFACTURING, AND WAREHOUSING/DISTRIBUTION NEARLY EQUALLY REPRESENTED

♦ URBAN:RURAL SPLIT WAS 39%:61% (FEW DIFFERENCES OBSERVED IN THEIR RESPONSES)
- KEY SURVEY FINDINGS

- LOGISTICS MANAGEMENT TRENDS IN IOWA MIRROR THOSE REPORTED IN NATIONAL SURVEYS

- IOWA BUSINESSES ARE GENERALLY QUITE SATISFIED WITH THE QUALITY OF AND THEIR ACCESS TO TRANSPORTATION FACILITIES IN THE STATE

- IOWA TRANSPORTATION VIEWED AS PROVIDING COMPETITIVE ADVANTAGE BY SUBSTANTIAL MAJORITY OF ALL SHIPPERS, BUT SOMewhat MORE SO BY URBAN RESPONDENTS

- HIGHWAY INVESTMENT:
  - DIRECT ACCESS TO 4-LANE HIGHWAYS NOT ESSENTIAL
  - WIDE DISAGREEMENT ON NEED FOR EXPANDED NETWORK OF 4-LANE HIGHWAYS
  - GENERAL SUPPORT FOR GIVING PRIORITY TO MAINTAINING IOWA'S EXISTING HIGHWAYS AND ROADS (OVER UPGRADING 2-LANE ROADS TO 4 Lanes)

- LCVs: WHILE VIEWED AS PRODUCING SIGNIFICANT COST SAVINGS, SAFETY CONCERNS MAKE MOST FIRMS RELUCTANT TO SUPPORT ALLOWING TRIPLE 28s OR DOUBLE 48s ON IOWA HIGHWAYS

- VERY LITTLE SUPPORT FOR MORE STATE EXPENDITURES TO MAINTAIN SELECTED RAIL LINES
TRANSPORTATION POLICY RECOMMENDATIONS

■ PROMOTE EFFICIENCY IN RESOURCE ALLOCATION: RESOURCES SHOULD BE DEVOTED TO TRANSPORTATION FACILITIES ONLY IF THE TRANSPORTATION COST SAVINGS WOULD EXCEED THE COSTS OF CONSTRUCTION, OPERATION, AND MAINTENANCE.

■ ASSESS USER CHARGES THAT COVER COSTS: USER CHARGES FOR ALL VEHICLES OPERATING ON THE STATE'S ROADS SHOULD BE BASED ON THE COSTS THESE VEHICLES IMPOSE.

■ ESTABLISH EFFECTIVE VEHICLE MONITORING: A SERIOUS COMMITMENT SHOULD BE MADE TO ESTABLISHING AUTOMATIC VEHICLE IDENTIFICATION AND WEIGH-IN-MOTION CAPABILITY ON THE STATE'S MAJOR HIGHWAYS.

■ WORK TOWARD A WEIGHT-DISTANCE TAX: IOWA SHOULD PLAY A LEADERSHIP ROLE IN DESIGNING AND IMPLEMENTING A MULTISTATE WEIGHT-DISTANCE TAX ON HEAVY VEHICLES. BOTH A VEHICLE CONFIGURATION AND ITS LOAD ON A PARTICULAR ROAD SEGMENT SHOULD BE TAKEN INTO ACCOUNT IN DETERMINING THE AMOUNT OF THE TAX. EMPHASIS SHOULD BE PLACED ON ADMINISTRATIVE EASE AND MARGINAL COST PRICING OF ROAD USE.

■ REDUCE CROSS-SUBSIDIES: CROSS-SUBSIDIES AMONG USERS OF THE STATE'S ROAD SYSTEMS SHOULD BE REDUCED. WITH MANY PRIMARY ROADS REACHING ADVANCED STAGES OF THEIR LIFE CYCLES, CROSS-SUBSIDIES FROM THESE VITAL HIGHWAYS SHOULD NOT BE ALLOWED TO INCREASE.

■ MAKE WIDER USE OF SUPER-TWO HIGHWAYS: SUPER-TWO HIGHWAYS SHOULD BE BUILT IN LIEU OF FOUR-LANE HIGHWAYS WHEN TWO-LANE ROADS ARE IDENTIFIED FOR UPGRADING, EXCEPT WHEN PROJECTED TRAFFIC VOLUMES JUSTIFY THE ADDITIONAL CAPACITY.
- **ENCOURAGE A PRUDENT WATERWAY FACILITY PROGRAM:** THE FEDERAL GOVERNMENT SHOULD BE ENCOURAGED TO PROPERLY MAINTAIN EXISTING LOCKS AND DAMS ON THE UPPER MISSISSIPPI RIVER, BUT HEAVY INVESTMENT IN MAJOR CAPACITY ENHANCEMENTS SHOULD NOT BE SUPPORTED.

- **COORDINATE INVESTMENT AND PRICING AMONG MODES:** INVESTMENT DECISIONS FOR WATERWAY FACILITIES, RAILROADS, AND RURAL ROADS SHOULD BE COORDINATED TO THE FULLEST EXTENT POSSIBLE; PRICING STRATEGIES SHOULD PROMOTE COMPETITION AMONG THE MODES SERVING AGRICULTURE AND INDUSTRY.

- **USE THICKER PAVEMENT ON MAJOR HIGHWAYS:** AS THEY ARE RECONSTRUCTED, THICKER PAVEMENT SHOULD BE USED ON HIGHWAYS THAT SERVE HEAVY TRUCK TRAFFIC; THE INCREMENTAL COST OF THE THICKER PAVEMENT SHOULD BE PAID THROUGH USER CHARGES LEVIED ON HEAVIER TRUCKS.

- **CONDUCT FURTHER ANALYSIS OF LONGER COMBINATION VEHICLES:** RESEARCH ON THE FEASIBILITY OF LCVs SHOULD CONTINUE, WITH EMPHASIS ON SAFETY, PRODUCTIVITY GAINS, PAVEMENT AND BRIDGE WEAR, AND ENERGY AND ENVIRONMENTAL IMPACTS.

- **COOPERATE WITH PRIVATE SUPPLIERS OF TRANSPORTATION:** GOVERNMENT AND INDUSTRY WITHIN IOWA AND OTHER STATES SHOULD EXPLORE COOPERATIVE ARRANGEMENTS TO RESPOND EFFECTIVELY TO EMERGING OPPORTUNITIES IN SUCH AREAS AS INTERMODALISM AND INTELLIGENT VEHICLE HIGHWAY SYSTEMS.
COMPONENTS OF 1990 U.S. LOGISTICS COST

<table>
<thead>
<tr>
<th></th>
<th>$ BILLIONS</th>
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<tbody>
<tr>
<td><strong>INVENTORY CARRYING COSTS</strong></td>
<td></td>
</tr>
<tr>
<td>Interest</td>
<td>$ 66</td>
</tr>
<tr>
<td>Taxes, Obsolescence, Depreciation</td>
<td>84</td>
</tr>
<tr>
<td>Warehousing</td>
<td>61</td>
</tr>
<tr>
<td><strong>Subtotal</strong></td>
<td>$221</td>
</tr>
<tr>
<td><strong>TRANSPORTATION COSTS</strong></td>
<td></td>
</tr>
<tr>
<td><strong>MOTOR CARRIERS:</strong></td>
<td></td>
</tr>
<tr>
<td>Public and For-Hire</td>
<td>77</td>
</tr>
<tr>
<td>Private and for Own Account</td>
<td>87</td>
</tr>
<tr>
<td>Local Freight Services</td>
<td>113</td>
</tr>
<tr>
<td><strong>Subtotal</strong></td>
<td>$277</td>
</tr>
<tr>
<td><strong>OTHER CARRIERS:</strong></td>
<td></td>
</tr>
<tr>
<td>Railroads</td>
<td>32</td>
</tr>
<tr>
<td>Water Carriers</td>
<td>21</td>
</tr>
<tr>
<td>Oil Pipelines</td>
<td>9</td>
</tr>
<tr>
<td>Air Carriers</td>
<td>13</td>
</tr>
<tr>
<td><strong>Subtotal</strong></td>
<td>$75</td>
</tr>
<tr>
<td><strong>SHIPPER-RELATED COSTS</strong></td>
<td>$ 4</td>
</tr>
<tr>
<td><strong>DISTRIBUTION ADMINISTRATION</strong></td>
<td>$ 23</td>
</tr>
<tr>
<td><strong>TOTAL U.S. LOGISTICS COST</strong></td>
<td>$600</td>
</tr>
</tbody>
</table>

Costs in Constant 1973 Dollars (1973 = 100)

Source: Robert D. Delaney, Cass Logistics, Inc.
Revenues in Constant 1987 Dollars/Ton-Mile

Deregulation (Truck & Rail)

Source: Robert D. Delaney, Cass Logistics, Inc.
TRANSPORTATION POLICY: Our Choice for the Future
Conference 3 - November 17, 1992
Holiday Inn, Bismarck, ND

Results: Gene Griffin, Director, Upper Great Plains Transportation Institute

The following tables illustrate the results from the questionnaire you filled out after lunch.

**TRANSPORTATION POLICY: OUR CHOICE FOR THE FUTURE**

<table>
<thead>
<tr>
<th>Region</th>
<th>Percent (n=49)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Region 1 (Williston)</td>
<td>0.0</td>
</tr>
<tr>
<td>Region 2 (Minot)</td>
<td>4.1</td>
</tr>
<tr>
<td>Region 3 (Devils Lake)</td>
<td>6.1</td>
</tr>
<tr>
<td>Region 4 (Grand Forks)</td>
<td>6.1</td>
</tr>
<tr>
<td>Region 5 (Fargo)</td>
<td>30.6</td>
</tr>
<tr>
<td>Region 6 (Jamestown)</td>
<td>6.1</td>
</tr>
<tr>
<td>Region 7 (Bismarck)</td>
<td>38.8</td>
</tr>
<tr>
<td>Region 8 (Dickinson)</td>
<td>0.0</td>
</tr>
<tr>
<td>Out of State</td>
<td>8.2</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Focus Group</th>
<th>Percent (n=48)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Railroads</td>
<td>16.7</td>
</tr>
<tr>
<td>Truck Regulatory</td>
<td>14.6</td>
</tr>
<tr>
<td>Highway Engineering</td>
<td>10.4</td>
</tr>
<tr>
<td>Agricultural Transportation</td>
<td>25.0</td>
</tr>
<tr>
<td>Highway Finance</td>
<td>25.0</td>
</tr>
<tr>
<td>Aeronautics</td>
<td>8.3</td>
</tr>
<tr>
<td>Topic</td>
<td>Not</td>
</tr>
<tr>
<td>-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td>-----</td>
</tr>
<tr>
<td>Eliminate artificial barriers that restrict trade. (TR)</td>
<td>0.0</td>
</tr>
<tr>
<td>Regulations imposed at the federal and state level that are not applicable/realistic or cost effective should be revised or eliminated. (HF)</td>
<td>0.0</td>
</tr>
<tr>
<td>Assessment of transportation needs required in rural communities. (Ag)</td>
<td>0.0</td>
</tr>
<tr>
<td>Build a public/private partnership to encourage all of the above. (RR)</td>
<td>0.0</td>
</tr>
<tr>
<td>Statewide intermodal plan should be developed in conjunction with local political subdivisions to address transportation, economic social needs in most efficient manner. (HF)</td>
<td>0.0</td>
</tr>
<tr>
<td>Interstate consistency in load limits at maximums which provide adequate protection of the road and highway system. (HE)</td>
<td>0.0</td>
</tr>
<tr>
<td>Improving consistency in design standards in an effort to reduce the cost of construction in all areas. (HE)</td>
<td>2.0</td>
</tr>
<tr>
<td>Education and communication of transportation issues and must take place to create public awareness. (HF)</td>
<td>0.0</td>
</tr>
<tr>
<td>Increase funding for federal and secondary roads to maintain infrastructure. (Ag)</td>
<td>0.0</td>
</tr>
<tr>
<td>Expanded research to reduce the present and future expense of road systems and improved pavement management, and better management of county systems new product development. (HE)</td>
<td>0.0</td>
</tr>
<tr>
<td>Utilization of technology provided by university research efforts. (Aero)</td>
<td>1.9</td>
</tr>
<tr>
<td>Efficient collection and use of public funds with the focus being to offset increased costs with offsetting productivity gains. (TR)</td>
<td>3.8</td>
</tr>
</tbody>
</table>
## Importance of Topics Selected by Focus Groups

<table>
<thead>
<tr>
<th>Topic</th>
<th>Not</th>
<th>Slightly</th>
<th>Somewhat</th>
<th>Very</th>
<th>Somewhat + Very</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prevent diversion of trust fund monies to nontransportation uses. (Aero)</td>
<td>7.8</td>
<td>9.8</td>
<td>15.7</td>
<td>66.7</td>
<td>82.40</td>
</tr>
<tr>
<td>Standardized regulations are needed. (Ag)</td>
<td>3.8</td>
<td>15.4</td>
<td>26.9</td>
<td>53.8</td>
<td>80.70</td>
</tr>
<tr>
<td>Eliminating liability problems to protect against lawsuits resulting from design changes. (HE)</td>
<td>0.0</td>
<td>19.6</td>
<td>43.1</td>
<td>37.3</td>
<td>80.40</td>
</tr>
<tr>
<td>Rail pricing and equipment issues are critical to rural communities. (Ag)</td>
<td>0.0</td>
<td>19.6</td>
<td>43.1</td>
<td>37.3</td>
<td>80.40</td>
</tr>
<tr>
<td>Collect, analyze, and disseminate market information to influence carrier decisions, promote competition, and protect the public interest. (RR)</td>
<td>2.0</td>
<td>17.6</td>
<td>49.0</td>
<td>31.4</td>
<td>80.40</td>
</tr>
<tr>
<td>International trading agreements will have an increasing impact on rural economies; effects on trading patterns needs to be analyzed to determine appropriate policy decisions. (Ag)</td>
<td>0.0</td>
<td>21.2</td>
<td>36.5</td>
<td>42.3</td>
<td>78.80</td>
</tr>
<tr>
<td>Diversion of transportation funds must be eliminated. (HF)</td>
<td>7.7</td>
<td>13.5</td>
<td>17.3</td>
<td>61.5</td>
<td>78.80</td>
</tr>
<tr>
<td>Development of intra and interstate air cargo and air passenger service to compete in the national-international economy. (Aero)</td>
<td>0.0</td>
<td>21.6</td>
<td>54.9</td>
<td>23.5</td>
<td>78.40</td>
</tr>
<tr>
<td>Need for increased funding for all levels of government for matching federal aid and maintenance. (HF)</td>
<td>2.0</td>
<td>19.6</td>
<td>33.3</td>
<td>45.1</td>
<td>78.40</td>
</tr>
<tr>
<td>Assure regulation promotes education and training. (TR)</td>
<td>1.9</td>
<td>23.1</td>
<td>48.1</td>
<td>26.9</td>
<td>75.00</td>
</tr>
<tr>
<td>Ensure adequate service - equipment supply issues and the equitable distribution of cars when demand is high. (RR)</td>
<td>5.8</td>
<td>19.2</td>
<td>38.5</td>
<td>36.5</td>
<td>75.00</td>
</tr>
<tr>
<td>Development of national standards to guide the development of technology. (TR)</td>
<td>6.0</td>
<td>20.0</td>
<td>34.0</td>
<td>40.0</td>
<td>74.00</td>
</tr>
<tr>
<td>Need to promote the inherent advantages of all modes and to reflect the interrelationships among modes in transportation decisions. (RR)</td>
<td>0.0</td>
<td>27.5</td>
<td>27.5</td>
<td>45.1</td>
<td>72.60</td>
</tr>
<tr>
<td>Topic</td>
<td>Percentages</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>---------------------------------------------------------------------</td>
<td>------------------</td>
<td>----------</td>
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</tr>
<tr>
<td></td>
<td>Not</td>
<td>Slightly</td>
<td>Somewhat</td>
<td>Very</td>
<td>Somewhat + Very</td>
</tr>
<tr>
<td>Encourage regional air transportation and multi-modal planning to</td>
<td>1.9</td>
<td>26.9</td>
<td>48.1</td>
<td>23.1</td>
<td>71.20</td>
</tr>
<tr>
<td>facilitate problem solving in intermodal infrastructure. (Aero)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Consistency in road classification all across the state regardless</td>
<td>1.9</td>
<td>26.9</td>
<td>25.0</td>
<td>46.2</td>
<td>71.20</td>
</tr>
<tr>
<td>if it is federal, state, county, or township. (HE)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Explore the development of IVHS to promote efficiency, reduce</td>
<td>5.9</td>
<td>25.5</td>
<td>45.1</td>
<td>23.5</td>
<td>68.60</td>
</tr>
<tr>
<td>administrative costs and assure better collection of funds. (TR)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Need to promote carrier viability. (RR)</td>
<td>8.0</td>
<td>24.0</td>
<td>52.0</td>
<td>16.0</td>
<td>68.00</td>
</tr>
<tr>
<td>Educational effort to explain the meaning of ISTEA legislation.</td>
<td>7.8</td>
<td>37.3</td>
<td>39.2</td>
<td>15.7</td>
<td>54.90</td>
</tr>
</tbody>
</table>

We will be sending a mail questionnaire to everyone who has attended at least one of the conferences. Justification for the importance of each policy issue will be included with the questionnaire.
Discussion: Dan Zink, Red River Valley and Western Railroad

My role in this group discussion is to lead everyone in discussing whether or not they disagree or agree with rankings from the questionnaire, and what kind of priorities and direction we should take right now. This morning during our panel session, there were about a half dozen recurring themes — issues we'll have to be dealing with in the very near future. And within each one of these issues, is the potential for some gain to our state.

First let's discuss the issue of efficiency. Efficiency in transportation can be defined as providing better transportation services at lower costs to promote the general well being of the economy of our state. But why aren't these gains being accomplished right now? One reason may be that there's pains to go along with each one of these gains. Let's talk about those just a bit.

In the area of efficiency, we're talking about better service and lower cost. Somebody has to go through the work to try to accomplish that for providing better and better motor carrier service, better rail service. Somebody has to incur some kind of cost or pain to get to that. You could be talking about something as painful as replacing people with machines, or replacing an old process with a new process. It involves change, which alone is painful enough, especially for us traditional guys.

This issue of productivity has been another recurring theme. We heard a lot about the issue of productivity this morning, and how our transportation carriers and shippers (and our general economy) has to become more productive. We hear a lot about that today in terms of different countries, especially in their labor productivity. If we want to enhance the productivity of our transportation system, we've got to try to get better at what we do. And, again, that involves some change, and therefore possibly some pain.

We heard a great deal about the issue of legislation — what's appropriate legislation to have in place? The goal is to have effective legislation in place, no more, no less. Our task is to decide which pieces of legislation those are. Each one of us, should be involved in developing that legislation. We all know that it is not easy to contact our legislators, it's not easy to go before our legislative subcommittees and bare our souls and tell what we think about pieces of legislation. So that's something that we should all think about — that we need to get involved in developing the right legislation to promote business development.
We heard a great deal about education. We can cite all the statistics we want about how often technology turns over, how we've all got to learn about the other parts of the world, and to learn about our own businesses better. But the inevitable conclusion is that we have to continually educate ourselves, and if we don't, we will fall behind. That goes far beyond just our traditional elementary, secondary, higher education system. We all have to educate ourselves on a continual basis. But we would likely agree that we must start with our traditional system.

Taxation was another popular topic this morning. This fits nicely into the legislative discussion. I wouldn't even begin to propose that more taxes, or higher taxes, are necessarily better or even that lower taxes are necessarily better. Again, the pain is that we have to get involved. We have to decide on what the appropriate levels of taxation are to get a transportation system in place that will move our economy forward.

Planning comes up in nearly all of our conversations. Results of the survey and all the speakers this morning, emphasized that we have to plan for the future. What kind of system do we want? A large part of this discussion we're having today, and indeed this project, involves planning for the future. The pain that will be involved is simply this: planning is hard work! You've got to sit down, you have to tune your thought processes to the future and say, what is right? And, that's really a lot of work. I commend everyone here today for going through some of that pain to try and advance our transportation system.

We heard a lot about intermodalism. Today we have representatives from railroads, we've got shipper representatives, state representatives, and others. We often think of each other in more of a competitive nature or an adversarial nature. We have to put some of those things away. North Dakota has a fine transportation system. If we look at that system as a whole, try to improve that system as a whole, and promote the entire transportation network, our economy will be better off. The short-term pain, I honestly believe, will be worth the long-term gain.

We heard the word competition in almost every other sentence all day long, and nobody has to tell you what kind of pain is involved in facing tough competition. I think it scares us all to find out, for example, that the Canadians are shipping wheat into the U.S. Motor carriers, like Duane, are taking grain away from the company I work for, competition like this is something you battle on a day-to-day basis. Most everyone we heard today talked about competition, and the fact that competition forces us to get better at what we do. It forces us to provide better service at lower costs in order to promote the well-being of our own companies. This will improve the position of our customers, the residents of North Dakota, and the economy of the region.
These are some of the "gainful" and "painful" issues we have been discussing today. Each one of them, however, I believe, are achievable. We have to go through that pain to achieve that gain. I would encourage everyone to get involved in that legislative process, and discussions like this conference today to try to move our transportation system forward.
TRANSPORTATION POLICY:  
Our Choice for the Future  
Conference 3 - November 17, 1992  
Holiday Inn, Bismarck, ND

Wrap Up: Jim Moench, North Dakota Farmers Union

I think it's important what we've done here in the last three meetings. We will carry the message from the region forward to the national level.

Just to give you a thought. I heard about a conference where all the photojournalists in the world were pulled together and they were having a lot of seminars and things like this, and one of the presenters to the photojournalists presented this situation to them.

If you were a photojournalist standing on the edge of the river and there was a man drowning in the river and you had two choices, the choices you could make were (1) you could save that person or (2) you could take a Pulitzer prize winning photo, what F stop setting would you put on your camera?

I'm afraid from the rural point of view, when we get to Washington and start looking at ISTEA and the ramifications there, they may not be asking the right questions when it comes to rural issues and rural perspectives. We need the input that came out of here and out of the other states, to say to Congress, you need to understand the rural issue here, you need to know what we're talking about. You need to understand our perspective and I think that little story illustrates that.

Thank you for giving us input and insight, I really appreciate your efforts in this conference.
HUMPHREY INSTITUTE PROJECT - CONFERENCE 3
November 17, 1992

Focus Groups

Aeronautics

Douglas Benson
Bob Bushfield
Jack Daniels
Mark Holzer
John Mercer
Gary Ness*
Michael Polowitz
Mike Ryan

Upper Great Plains Transportation Institute
City of Grand Forks
Ser Vair Accessories, Inc.
N.D. Aeronautics Commission
Mercer Engineering
N.D. Aeronautics Commission
City of Grand Forks
Minot International Airport

Agriculture

Darwin Bossart
Syd Craft
Frank Dooley*
Joe Glatt
Jill Hough
Dave Kline
Mel Maier
Sarah Nordby
Allen Palmer
Jim Peterson
Ted Pietron
David J. Sinner
Pete Thoreson
Ken Yantes

Adrian Equity Elevator Co.
ND Grain Growers Assn.
North Dakota State University
KEM Electric
Upper Great Plains Transportation Institute
North Dakota DOT
North Dakota Wheat Commission
ND Dept. of Agriculture
National Farmers Organization
North Dakota Wheat Commission
North Dakota Farm Bureau
Unity Seed Co.
North Dakota Farm Bureau
ND Township Officers Assn.

Highway Engineering

Joe Belford
Duane R. Bentz
Mike Geinert
Harvey Kadmas*
Lucy Klain
Roger Middaugh
Rudy Nelson
Glenn J. Olson
Ray Zink

North Dakota DOT
Cloverdale Transportation
North Dakota Concrete Prod.
Humphrey Institute
Traffic Engr, City of Bismarck
ND Rural Cooperative
City of Devils Lake
North Dakota DOT
Highway Finance

Richard J. Backes       North Dakota DOT
Brad Ballweber         Northern Improvement
Gary L. Berreth*       North Dakota DOT
John Bitzan            Upper Great Plains Transportation Institute
Kaye Braaten           
Jerry Hjelmstad        N.D. League of Cities
LaVonne Langord        AAA North Dakota
James Moench           North Dakota Farmers Union
Curt Peterson          Assoc. General Contractors of ND
Walt Peterson          North Dakota DOT
Dave Rustebakke        North Dakota Farm Bureau
Ron Salmela            Humphrey Institute
Bill Weimer            North Dakota DOT

Railroads

Bill Binek             Public Service Commission
Kent Buss              National Sun Industries
Jon Mielke*            North Dakota PSC
Cathy Petersen         C J Peterson
John Risch             United Transp. Union
David Seyfried         Humphrey Institute
Denver Tolliver        Upper Great Plains Transportation Institute
Sharon Trudell         RRV & Western Railroad
Vern Wills             ND Mill & Elevator
Dan Zink               RRV & Western Railroad

Truck Regulatory

Duane Cossette*        Raymond Cossette Trucking
Mike Crum              Iowa State University
Gary DeCramer          Humphrey Institute
Dennis Erickson        North Dakota Highway Patrol
LeRoy Ernst            North Dakota Motor Carriers
Gene Griffin           Upper Great Plains Transportation Institute
Brenda Lantz           Upper Great Plains Transportation Institute
Bruce Larsen           North Dakota DOT
Julie Rodriguez        Upper Great Plains Transportation Institute
Nick Sinner            RRV Sugarbeet Growers Assn.

*Focus Group Facilitator
CONFERENCE EVALUATION FORM SUMMARY

<table>
<thead>
<tr>
<th>Sections</th>
<th>Not Valuable</th>
<th>Somewhat Valuable</th>
<th>Very Valuable</th>
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<tbody>
<tr>
<td></td>
<td>1 &amp; 2</td>
<td>3</td>
<td>4 &amp; 5</td>
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<tr>
<td>Gary Ness</td>
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<td>5</td>
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<td>Gary Berreth</td>
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<td>Jon Mielke</td>
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<td>11</td>
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<td>Mike Crum</td>
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<td>10</td>
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<tr>
<td>Focus Groups &amp; Discussion</td>
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<tr>
<td>Wrap Up</td>
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<td>1</td>
<td>8</td>
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</tbody>
</table>

Comments from conference attendees:

Focus Group was really informative and helpful.

Wrap Up great - short but succinct.

Good!

Now need to implement recommendations.

Excellent job of staying on topic being discussed.

Still more time spent on problems than solutions.

Keep this up!

Well done - format is excellent!

Good job!

Great job by UGPTI staff!!

Very good job on wrap up - good job of pulling the different focus groups together and look at all issues as one picture.

Is there a way to draw in representatives from the Native Am population for there consultation? Either the Business Rep/Assoc?
First Conference I have attended and didn’t know what to expect. Impressed by number of well-informed involved people from diverse backgrounds and the obvious common interest.

Excellent process and ranking. Role of Aviation surprisingly and appropriately high.

Very productive participation by group.

Need a format where intermodal groups get together to put out a competitive partnership to foster economic opportunities to “selling” North Dakota. Use truck, rail, and air to work together to foster industrial and Ag-growth in North Dakota. Groups need to work nationally to keep regulatory issues at bay. Don’t give up and fight for what helps stimulate progress. Standardize state rules to make competition equal.
### TRANSPORTATION POLICY AND ECONOMIC DEVELOPMENT: OUR CHOICE FOR THE FUTURE
#### MAIL SURVEY RESULTS

**WHICH REGION IS YOUR BUSINESS HEADQUARTERS LOCATED IN?**

<table>
<thead>
<tr>
<th>Region</th>
<th>Percent (n=73)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Region 1 (Williston)</td>
<td>3.9</td>
</tr>
<tr>
<td>Region 2 (Minot)</td>
<td>8.1</td>
</tr>
<tr>
<td>Region 3 (Devils Lake)</td>
<td>1.0</td>
</tr>
<tr>
<td>Region 4 (Grand Forks)</td>
<td>9.8</td>
</tr>
<tr>
<td>Region 5 (Fargo)</td>
<td>24.4</td>
</tr>
<tr>
<td>Region 6 (Jamestown)</td>
<td>7.5</td>
</tr>
<tr>
<td>Region 7 (Bismarck)</td>
<td>38.1</td>
</tr>
<tr>
<td>Region 8 (Dickinson)</td>
<td>1.7</td>
</tr>
<tr>
<td>Out of State</td>
<td>5.6</td>
</tr>
</tbody>
</table>

**WHICH CATEGORY BEST DESCRIBES YOUR INVOLVEMENT WITH TRANSPORTATION?**

<table>
<thead>
<tr>
<th>Involvement in Transportation</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>State/Federal Transportation Planning</td>
<td>17.3</td>
</tr>
<tr>
<td>Motor Carrier</td>
<td>13.1</td>
</tr>
<tr>
<td>Railroad</td>
<td>5.8</td>
</tr>
<tr>
<td>Aeronautics</td>
<td>13.5</td>
</tr>
<tr>
<td>Academic</td>
<td>10.8</td>
</tr>
<tr>
<td>Economic Development</td>
<td>11.0</td>
</tr>
<tr>
<td>Policy or Legislative</td>
<td>9.1</td>
</tr>
<tr>
<td>Agricultural</td>
<td>19.4</td>
</tr>
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</table>
## North Dakota’s Prioritized Transportation Policy Issues

<table>
<thead>
<tr>
<th>Item</th>
<th>Importance of Topics</th>
<th>Percentages</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Interstate consistency in load limits at maximums which provide adequate protection of the road and highway system (HE)</td>
<td>2.0 3.0 40.8 54.3 95.1</td>
<td></td>
</tr>
<tr>
<td>2. Improving consistency in design standards in an effort to reduce the cost of construction in all areas (HE)</td>
<td>2.0 8.4 50.0 39.6 89.6</td>
<td></td>
</tr>
<tr>
<td>3. Expanded research to reduce the present and future expense of road systems. Improved pavement management and better management of county systems new product development (HE)</td>
<td>1.0 9.6 50.9 38.4 89.3</td>
<td></td>
</tr>
<tr>
<td>4. Need for increased funding for all levels of government for matching federal aid and maintenance (HF)</td>
<td>3.8 10.3 41.2 44.7 85.9</td>
<td></td>
</tr>
<tr>
<td>5. Diversion of transportation funds must be eliminated (HF)</td>
<td>7.5 8.0 22.4 62.1 84.5</td>
<td></td>
</tr>
<tr>
<td>6. Eliminate artificial barriers that restrict trade (TR)</td>
<td>3.3 12.2 37.1 47.4 84.5</td>
<td></td>
</tr>
<tr>
<td>7. Prevent diversion of trust fund monies to nontransportation uses (AR)</td>
<td>8.1 8.1 22.5 61.3 83.8</td>
<td></td>
</tr>
<tr>
<td>8. Standardized regulations are needed (AG)</td>
<td>3.4 15.6 37.2 43.8 81.0</td>
<td></td>
</tr>
<tr>
<td>9. Encourage regional air transportation and multi-modal planning (AR)</td>
<td>2.0 18.7 62.3 17.0 79.3</td>
<td></td>
</tr>
<tr>
<td>10. Eliminating liability problems to protect against lawsuits resulting from designs changes (HE)</td>
<td>5.7 15.7 43.0 35.6 78.6</td>
<td></td>
</tr>
<tr>
<td>11. Consistency in road classification all across the state regardless if it is federal, state, county, or township (HE)</td>
<td>3.0 20.1 42.9 34.0 76.9</td>
<td></td>
</tr>
<tr>
<td>12. Development of intra and interstate air cargo and air passenger service (AR)</td>
<td>0.0 24.4 51.3 24.4 75.7</td>
<td></td>
</tr>
<tr>
<td>13. International trading agreements will have an increasing impact on rural economies; effects on trading patterns needs to be analyzed to determine appropriate policy decisions (AG)</td>
<td>2.6 22.0 55.8 19.6 75.4</td>
<td></td>
</tr>
<tr>
<td>14. Increase funding for federal and secondary roads to maintain infrastructure (AG)</td>
<td>4.7 20.1 38.4 36.8 75.2</td>
<td></td>
</tr>
<tr>
<td>15. Regulations imposed at the federal and state level that are not applicable / realistic or cost effective should be revised or eliminated (HF)</td>
<td>9.3 17.7 23.5 49.4 72.9</td>
<td></td>
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<tr>
<td>16. Development of national standards to guide the development of technology (TR)</td>
<td>4.6 26.3 50.3 18.8 69.1</td>
<td></td>
</tr>
<tr>
<td>17. Need to promote the inherent advantages of all modes and to reflect the interrelationships among modes in transportation decisions (RR)</td>
<td>6.8 24.1 39.6 29.5 69.1</td>
<td></td>
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<tr>
<td>Item</td>
<td>Percentages</td>
<td></td>
</tr>
<tr>
<td>----------------------------------------------------------------------</td>
<td>-------------</td>
<td></td>
</tr>
<tr>
<td>18. Build a public / private partnership to encourage items 11-14 (RR)</td>
<td>7.5 24.1 47.5 21.0 68.5</td>
<td></td>
</tr>
<tr>
<td>19. Statewide intermodal plan should be developed in conjunction with local political subdivision to address transportation, economic, social needs in most efficient manner (HF)</td>
<td>12.3 19.4 40.5 27.9 68.4</td>
<td></td>
</tr>
<tr>
<td>20. Ensure adequate service - equipment supply issues and the equitable distribution of cars when demand is high (RR)</td>
<td>6.0 26.5 34.3 33.2 67.5</td>
<td></td>
</tr>
<tr>
<td>21. Need to promote carrier viability (RR)</td>
<td>7.0 25.4 43.0 24.5 67.5</td>
<td></td>
</tr>
<tr>
<td>22. Education and communication of transportation issues and needs must take place to create public awareness (HF)</td>
<td>9.0 24.5 34.9 31.6 66.5</td>
<td></td>
</tr>
<tr>
<td>23. Efficient collection and use of public funds with the focus being to offset increased costs with offsetting productivity gains (TR)</td>
<td>5.8 29.2 51.0 14.1 65.1</td>
<td></td>
</tr>
<tr>
<td>24. Assessment of transportation needs required in rural communities (AG)</td>
<td>10.1 26.6 34.1 29.3 63.4</td>
<td></td>
</tr>
<tr>
<td>25. Educational effort to explain the meaning of ISTEA legislation (AR)</td>
<td>15.7 21.5 41.2 21.7 62.9</td>
<td></td>
</tr>
<tr>
<td>26. Assure regulation promotes education and training (TR)</td>
<td>11.5 31.4 44.1 13.0 57.1</td>
<td></td>
</tr>
<tr>
<td>27. Explore the development of IVHS to promote efficiency, reduce administrative costs, and assure better collection of funds (TR)</td>
<td>7.5 38.2 45.9 8.4 54.3</td>
<td></td>
</tr>
<tr>
<td>28. Rail pricing and equipment issues are critical to rural communities (AG)</td>
<td>14.0 31.8 39.7 14.5 54.2</td>
<td></td>
</tr>
<tr>
<td>29. Collect, analyze, and disseminate market information to influence carrier decisions, promote competition, and protect the public interest (RR)</td>
<td>10.3 36.6 36.2 16.9 53.1</td>
<td></td>
</tr>
</tbody>
</table>

**NOTE:** The six focus groups were weighted equally
NORTH DAKOTA'S TRANSPORTATION POLICY
AND
ECONOMIC DEVELOPMENT RECOMMENDATIONS

HIGHWAY ENGINEERING

- There is a need for interstate consistency in maximum load limits in order to provide adequate protection of the road and highway system.

Different load limits exist in surrounding states and in Canada. The possible increase in traffic moving north and south, as a result of the North American Free Trade Agreement (NAFTA), could cause problems for the transportation system (Highways 85 and 83 are good examples). Many of our state highways were not designed to carry increased volumes of heavy loads. Uniform design standards would provide consistency in load carrying capacity from state to state and promote the intra- and interstate movement as well as international movement of goods and services.

- There is a need to improve design standards (geometric designs i.e., width of lanes) in an effort to reduce the cost of construction in all areas.

Consistent geometric design standards would alleviate the need for funds to develop a specific design for each construction area. We need to look at the life cycle cost estimates in determining the most effective long-term design standards. There may be instances where the up front costs may be more, but the long term benefits would be cost-effective.
HIGHWAY FINANCE

- Need for increased funding for all levels of government for matching federal aid and maintenance.

The North Dakota Department of Transportation (NDDOT) will need about $21 million in additional state funds to match additional federal aid and provide an adequate maintenance program during the next biennium. In addition, the DOT will have to pay back about $12 million in federal funds that it borrowed to match federal-aid during fiscal years 1992 and 1993. The counties and cities also received an increase in federal funding through the new highway bill and must match the available revenue. Because roadway construction needs at all levels of government are approximately double what can be taken care of with available construction dollars, additional maintenance dollars are needed to hold together an aging infrastructure and cover accelerating costs.

- The Diversion of transportation funds must be eliminated.

The diversion of transportation funds for other purposes has been occurring at the federal and state level. At the federal level, highway user fees have been used to help alleviate the federal deficit and subsidize the ethanol industry. Currently, 2.5 cents of the federal motor fuel tax goes towards deficit reduction. The new Intermodal Surface Transportation Efficiency Act (ISTEA) also allowed use of traditional highway construction funds for transportation enhancement improvements which are non-traditional highway construction activities. At the state level, during the 1991-93 biennium, about $18 million will go to fund the Highway Patrol and $1.3 million to fund state radio.

1 Diversion of funds is also a problem within the aeronautics industry.
TRUCK REGULATORY

- Eliminate artificial barriers that restrict trade.

We need to promote economic efficiency in intra- and intermodal competition in an effort to create a more level playing field for industries located in the interiors of the United States. This is critical in an era of development in a global economy. Artificial barriers that restrict motor carrier commerce militate against integrating the development of the regional economy into a global economic network.

- Development of national standards to guide the development of technology.

The use of national standards would enhance efficiency in the technological and regulatory environments in which Intelligent Vehicle Highway System (IVHS) and Commercial Vehicle Operations (CVO) users could operate under "seamless borders."

AERONAUTICS

- Encourage regional air transportation and multi-modal planning.

This would facilitate problem solving in an intermodal infrastructure. For example, North Dakota regional air carriers rely on Minneapolis as a hub and it would be beneficial for the regional carriers to be included in the planning process of Minneapolis’ new or existing airport. Multi-modal accessibility is also a key item to consider in the development of airport facilities in the region.

- Development of intra and interstate air cargo and air passenger service is important to overcome isolation from economic growth.

This is critical for the regions’ economic communities to compete in the national-international economy for sustaining and enhancing business growth, medical services, shipment of commodities, and marketing of state value-added agricultural products (i.e., high quality processed beef).
RAILROADS

• Need to promote the inherent advantages of all modes and to reflect the interrelationships among modes in transportation decisions.

A multi-modal approach to transportation planning and operations would improve public investment and regulatory decisions. This is imperative in an era of a global economy that is dependent upon an efficient and cost competitive transportation network.

• Need to develop policies to promote adequate service and carrier viability.

The public and private sectors need to work together to develop and promote policies in the global market place to be sure there is adequate transportation services and equipment available to sell agricultural products in the national markets.

AGRICULTURAL TRANSPORTATION

• International trading agreements will have an increasing impact on rural economies; effects on trading patterns needs to be analyzed to determine appropriate policy decisions.

We must recognize the role of transportation within the context of international trade because of its importance to competition. Transportation and economic policies must be developed and updated that take into consideration changes in world markets and promotes the efficient movement of commodities.