PANEL TESTIMONIES

PRESENTED TO
TEXAS HOUSE OF REPRESENTATIVES
COMMITTEE ON TRANSPORTATION

AND

TTI ADVISORY COMMITTEE

MARCH 24-25, 1992
# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>LIST OF PRESENTORS</td>
<td>1</td>
</tr>
<tr>
<td>INTERMODAL SURFACE TRANSPORTATION EFFICIENCY ACT OF 1991 - (ISTEA)</td>
<td>2</td>
</tr>
<tr>
<td>INTELLIGENT VEHICLE HIGHWAY SYSTEM - (IVHS)</td>
<td>11</td>
</tr>
<tr>
<td>PANEL PRESENTATIONS</td>
<td></td>
</tr>
<tr>
<td>Aviation</td>
<td>21</td>
</tr>
<tr>
<td>Economic Development</td>
<td>27</td>
</tr>
<tr>
<td>Highway Facilities</td>
<td>28</td>
</tr>
<tr>
<td>Marine</td>
<td>48</td>
</tr>
<tr>
<td>Motor Carrier</td>
<td>56</td>
</tr>
<tr>
<td>Pipeline</td>
<td>63</td>
</tr>
<tr>
<td>Railroad</td>
<td>72</td>
</tr>
<tr>
<td>Safety</td>
<td>77</td>
</tr>
<tr>
<td>Urban</td>
<td>84</td>
</tr>
</tbody>
</table>
PRESENTORS

INTERMODAL SURFACE TRANSPORTATION EFFICIENCY ACT of 1991-(ISTEA)  
Madeleine Bloom, Director  
Office of Policy Development  
Washington, D.C.

INTELLIGENT VEHICLE HIGHWAY SYSTEM-(IVHS)  
Sadler Bridges, Deputy Director  
Texas Transportation Institute  
and  
William J. Harris, Associate Director  
Texas Transportation Institute

AVIATION PANEL STATEMENT  
Paul Gaines, Member  
Aviation Panel

HIGHWAY FACILITIES PANEL STATEMENT  
Arnold Oliver, Member  
Highway Facilities Panel

MARINE TRANSPORTATION PANEL STATEMENT  
Brink Miller, Member  
Marine Transportation Panel

MOTOR CARRIER PANEL STATEMENT  
Robert Culley, Director  
Legislative Affairs, TMTA

PIPELINE PANEL STATEMENT  
Bill Walton, Chairman  
Pipeline Panel

RAILROAD PANEL STATEMENT  
Eddy Handley, Chairman  
Railroad Panel

SAFETY PANEL STATEMENT  
Henry Lewis, Member  
Safety Panel

URBAN PANEL STATEMENT  
Larry Heil, Chairman  
Urban Panel
INTERMODAL SURFACE TRANSPORTATION EFFICIENCY ACT OF 1991 - (ISTEA)

A Presentation before the Transportation Committee
Texas House of Representatives

by

Madeleine Bloom
Director
Office of Policy Development
Washington, D.C.

March 24, 1992
College Station, Texas
OVERVIEW

The Intermodal Surface Transportation Efficiency Act of 1991 made major changes in our highway and surface transportation program. The Federal-Aid Highway Program, for the past 20 years, had been directed primarily toward the construction and improvement of four Federal-aid systems—Interstate, primary, secondary, and urban—which constituted about 851,000 miles of the 3.9 million miles of roads in the United States. Now, instead of four Federal-aid systems, there are two systems:

-- the National Highway System (NHS); and

-- the Interstate System, which is a component of the NHS.

Plus, a new block-grant type program, the Surface Transportation Program (STP), will be available for all roads not functionally classified as local or rural minor collector. Thus, the Federal-aid program will encompass about 920,000 miles and will be based on a new framework.

The Intermodal Surface Transportation Efficiency Act (ISTEA) of 1992 is characterized by the following major actions:

-- Increased investment and increased spending of the Highway Trust Fund.

-- A restructured Federal-aid highway program with expanded flexibility between highway and mass transit modes in both urban and rural areas.

-- The establishment of a process for designating a new National Highway System, consisting primarily of Interstate and a portion of major primary system routes, to focus Federal resources on the most important roads.

-- Greater investment in research and new technologies such as the intelligent vehicle-highway systems.

-- Enhanced private sector and toll opportunities through removal of restrictions on the use of Federal funds for toll roads and ability of private entities to own such facilities.
Incentives and funding to promote congestion relief, safety and to enhance the environment through actions such as wetland banking and highway beautification.

Enhanced productivity of motor carriers through State uniformity in vehicle registration and fuel tax reporting. This will reduce the recordkeeping and reporting burden on businesses.

PROGRAMMATIC CHANGES

The ISTEA is a 6-year bill with total funding authorizations of approximately $155 billion of which approximately $121 billion is from the Highway Trust Fund. Because the Interstate completion and I substitution programs are virtually done, there is a decrease in funding in these areas. In fact, by 1996 these programs are completed. In contrast, there is a very sizable, over 40 percent, increase in bridge apportionments to meet bridge safety, repair and connectivity needs. Similarly, funding specifically earmarked for urban transportation dramatically increases from $750 million in FY 1991 to $2.6 billion in FY 1992.

A key feature of the ISTEA is a new surface transportation block-grant type program called the STP that may be used by the States and localities for any roads that are not essentially local. Transit capital projects and bridges are also eligible under this program. The STP program is subdivided by regions in the State with 50 percent of the funds divided by population among each of its areas over 200,000 and the remaining areas of the State. Of the amounts not going to areas over 200,000, the State must use a minimum amount in areas under 5,000 population. The balance of the STP funds are eligible for use anywhere in the State. The law provides across the board opportunities to transfer highway funds to transit capital purposes. Of the approximately $121 billion authorized, over two-thirds can be transferred in this manner.

The law also establishes a new Congestion Mitigation and Air Quality Improvement program and directs funds toward projects in Clean Air Act non-attainment areas for ozone and carbon monoxide. Further, a congestion pricing pilot program is included to establish and monitor such programs with up to five State or local governments. Up to three such programs may be on Interstate System routes.
THE NATIONAL HIGHWAY SYSTEM

The National Highway System (NHS) is an important program element within the ISTEA. The NHS will be designed to consist of approximately 155,000 miles (plus or minus 15 percent) of major roads in the United States. It will constitute about 4 percent of the national road mileage, but this limited mileage should carry an estimated 40 percent of all highway travel. The designation of this system is already under way as a cooperative State/local/Federal process and must be submitted to Congress by December 1993. During the interim period, while the system is being developed and is not yet approved by Congress, the principal arterial network will serve as the NHS. Congressional enactment of the NHS is required by September 30, 1995.

Building on the success of the Interstate System, the NHS will serve new production and population centers, reflecting the major demographic and travel changes that have occurred since the Interstate routes were designated some 40 years ago. The NHS will incorporate the Interstate System and, through the designation of mileage for upgrading or addition, include routes that address the needs of (1) interstate and regional commerce and travel, (2) national defense (STRAHNET), (3) intermodal transfer facilities (including international airports and major shipping ports), and (4) international commerce and border crossings.

The highway transport program and underlying financing should provide the base for economic growth, plus vitality in the new international marketplace. Improvements in the highway facilities which most directly impact interstate commerce will substantially influence economic performance. Inadequate infrastructure acts as a significant constraint on private sector productivity. Improvements such as more direct routing, increased speeds, or improved safety, reduce transport costs. As a result they make private capital investments more productive.

The transportation network plays a pivotal role in serving new demands and allowing the economy to respond to emerging opportunities, whether economic change is prompted by changes in consumer tastes, by the advent of new technologies, or by changes in the international marketplace. Targeted transportation improvements allow better utilization of excess capacity whereas poor transportation service can be a key constraint on its full use. Putting key infrastructure investments in place stimulates full use of what our industries have to offer. The characteristics of modern, high quality intercity transportation service—speed, reliability and security—make possible changes in the production processes which improve productivity.
The NHS should be responsive to the needs of the "new economic geography" which has reshaped the location of America's economic activity. Traditional boundaries among transport providers, modes, and agencies—both freight and passenger—have become blurred through recent deregulation, service innovations, and new communications and computer technology. Intermodal hubs are taking on increasing importance as the competitive pressure to reduce logistics costs continues. Fully capitalizing on these new realities will require organizational restructuring, a strong inter-modal focus, and new forms of public/private cooperation.

Economic success is both a contributor to transport system congestion and decay as well as its victim. Changes in patterns of activity and location have imposed major new traffic burdens on parts of the existing network not intended for such travel. Both exurban and suburban areas in growing regions of the country have been subject to new levels of congestion. The existing road networks cannot accommodate the current or anticipated demand. Operating conditions declined significantly between 1985 and 1989. The amount of daily peak-period travel that occurred under heavily congested conditions on both the Interstate and the other NHS eligible highways increased, as did the number of miles subjected to heavily congested conditions. About 8,300 miles of Interstate highways routinely experience serious congestion. In 1989, it is estimated that about 70 percent of urban Interstate peak-period travel occurred under congested or heavily congested conditions.

Congestion has imposed extremely large costs on interregional and interstate travel. There are now substantial delays caused by congestion on the major highway systems—including the Interstate—resulting from the growth in long distance travel together with urban travel. The economic costs of highway congestion are substantial for long distance freight movement, itself central to U.S. competitiveness. Businesses as well as individuals are paying the price every day that inefficiencies in transportation persist.

RESEARCH

Equally important to interstate commerce and economic competitiveness is transportation research. With respect to research, the ISTEA provides enhanced funding and allows expanded collaborative research and development with public and private groups. In addition, the ISTEA made the following research additions: specifies minimum funding for SHRP implementation and long-term pavement performance; expands university transportation centers; authorizes funding and directs certain specific research studies.
Further, under the research title, specific authority for technology transfer is established and a Research Advisory Committee is created. For the States, the Highway Planning and Research funding is increased to 2 percent with at least one-fourth of that to be spent for research, development, and technology transfer.

The act also created a Bureau of Transportation Statistics (BTS) at the departmental level, to enhance data collection, analysis and reporting. The BTS is to publish an annual report starting January 1, 1994.

The research title of the ISTEA contains strong support for IVHS as well. The Act promotes compatible standards, evaluation of operational tests and an information clearinghouse. A strategic IVHS plan must be submitted to Congress 1 year from enactment. There are provisions covering prototype automated highway and vehicle systems, an IVHS corridor program, and IVHS-related planning grants to States/localities.

**SURFACE TRANSPORTATION PROGRAM (STP)**

With funding in excess of $23 billion over 6 years, the STP is the largest single program authorized by the ISTEA. As with virtually all highway and transit programs off the Interstate System, the Federal share is now 80 percent of eligible costs, up from 75 percent under prior laws.

This category affords States and local officials the most flexibility—and the most responsibility—in shaping their transportation futures. The intent is that the State and local governments, which are the best judge of what facilities are needed, have the tools to make such decisions with as few obstacles as possible.

Funds under the STP may be used to improve any road that is not local or classified as a minor collector. However, even in the case of local roads and rural collectors, STP funds may be used for certain types of projects. These include highway safety improvements, elimination of hazards and rail-highway grade crossing programs, as well as bicycle transportation, pedestrian walkways, and bridge replacement and rehabilitation projects.

Funding under the STP may be used in traditional ways—to construct or improve roads and bridges. But it also may be used in nontraditional ways, for carpool and vanpool projects, for fringe or corridor parking facilities, for capital and operating
costs of traffic management and control, for wetland banking, and for many more.

Perhaps the most significant change is that up to 100 percent of STP funds can be used to pay capital costs for rail or bus mass transit and for publicly owned intracity or intercity bus terminals or facilities. Similarly, transit funds which were authorized in a different title of the ISTEA, may be transferred to highway projects. In either case the Federal share is 80 percent.

TOLLS AND PRIVATE PARTICIPATION

Another ISTEA area of great potential is the toll road initiatives. Under this act, tolls are permitted to a far greater degree than in the past on Federal-aid facilities. Types of projects that may be implemented include: initial construction of toll facilities; 4R work on toll facilities; reconstruction of free bridges or tunnels and conversion to toll facilities, and preliminary studies to determine the feasibility of the above types of projects. Further the tolls on such Federal-aid facilities may be continued indefinitely, i.e., do not have to be rescinded when the debt is retired as long as the proceeds are used for eligible transportation purposes.

For the first time private entities may actually own the toll facilities although the State must assure that the statutory requirements are being carried out.

New financing arrangements are suggested since the States may loan the Federal funds for a toll project's cost to another public or private agency constructing the project. Repaid loan funds may be used for any purposes under the original category from which the loans were made without any subsequent Federal requirements.

Although the toll and private sector involvement features will not be something that all States will want to avail themselves of, where applicable these provisions could prove to be very important tools in meeting highway investment requirements. Based on the 1990 Highway Conditions and Performance Report to the Congress, it is estimated that annual capital investment of $46 billion from all sources will be needed to maintain overall conditions and performance through 2009. This includes pavement, safety, and capacity-related requirements on all existing roads and bridges, and new construction in suburbanizing areas to accommodate expected growth. At this level of investment, overall conditions and performance can be maintained throughout the country, except for the largest urbanized areas, where demand
will continue to exceed available highway supply. This estimate includes restrictions on the addition of new highway capacity and an aggressive traffic management strategy in urban areas.

The annual capital investment level to improve overall conditions and performance over the same time period is an estimated $75 billion a year. At this level, highways only in fair condition or in poor condition would be improved by the year 2009. Existing and future bridge deficiencies would be eliminated and substantial new highway capacity would be added to accommodate expected travel demand.

The point of citing these estimates is that both substantially exceed the actual capital investment from all sources which was only $33 billion in 1989. The new privatization and toll features offer opportunities to make up some of the short fall, particularly if States leverage investment through use of loan provisions. The purpose of the toll financing and privatization legislation is to allow new patterns of investment and therefore it follows that it is important to minimize Federal regulation and to focus on project-specific issues as they arise; to maximize States' discretion; and to rely on the traditions within the financial community with respect to many of the financing options and to encourage the pursuit of a variety of approaches.

Not all projects, of course, will be feasible either for conversion to tolls or for building as tollways to begin with. However, there is potential for utilizing the toll/private sector option in some States and localities to maximize infrastructure investment.

**EFFECTS OF THE ISTEA ON THE NATION'S TRANSPORTATION AND ECONOMY**

The ISTEA will have significant economic and transportation effects. It has already spurred the immediate release of over $11 billion into the economy in FY 1992. This will support more than 600,000 construction-related jobs in FY 1992 and provide continued support for jobs in the highway and construction industries over the 6-year life of the legislation. As the President stated when he signed the bill, "It will build roads, fix bridges, improve mass transit and create new jobs--keeping our traffic on the move and our economy on the mend. It is also expected to reduce congestion and help maintain mobility."

The bill breaks new ground in requiring management systems to improve accountability and optimize investment. Also, stronger planning processes at the metropolitan and statewide levels are intended to more effectively incorporate environmental and multimodal concerns at an early stage in the planning process. System performance is a major emphasis of the ISTEA. It is too
early to forecast specific outcomes. However, local and State
governments are given unprecedented latitude to use Federal
funding on surface transportation projects they select and to
involve the private sector to a greater extent. Effective
multimodal solutions to transportation problems could impact the
way cities or industries function in the future and induce basic
changes in economic growth.

The same day as the President signed the bill he made it clear
that the Department of Transportation and the Federal Highway
Administration (FHWA) were to put the money to work as quickly as
possible. The formula Federal highway funds, $15.6 billion, were
apportioned to the States on the day the ISTEA was signed. Since
then, virtually every office of the FHWA has been working to
adapt existing procedures to the demands of the new law, while
simultaneously getting the funding into surface transportation
projects and the jobs these projects create. Despite the fact
that the legislation was signed on December 18, 2 months after
the start of the fiscal year, nationally the States are 20
percent ahead of their use of funds last year, with almost 40
percent of the total actually committed.

In its 1988 Report to the President and the Congress, the
National Council on Public Works Improvement pointed out that the
quality of the Nation's infrastructure is a "critical index of
its economic vitality." The Council warned that the Nation's
infrastructure, including its transportation infrastructure, is
"barely adequate to fulfill current requirements, and
insufficient to meet the demands of future economic growth and
development." Implementation of the ISTEA over the next
5 1/2 years should help spur the important contributions to
local, State, regional, and national economic growth that an
improved highway system can provide. A strong, continuing
Federal-aid program is a critical ingredient of a national policy
designed to sustain and improve present levels of growth and lay
the groundwork for future prosperity.
INTELLIGENT VEHICLE HIGHWAY SYSTEM - (IVHS)

A Presentation before the Transportation Committee Texas House of Representatives

by

Sadler Bridges
Deputy Director
Texas Transportation Institute
The Texas A&M University System
College Station, Texas

and

William J. Harris
Associate Director
Texas Transportation Institute
The Texas A&M University System
College Station, Texas

March 24, 1992
College Station, Texas
Interstate Highway Program

1956 - 1992

Largest Public Works Project in History

35 year cost $125 Billion
Intermodal Surface Transportation Efficiency Act of 1992

New Era in Transportation

New Highways will continue to be built

"Highways of National Significance"

Maintain the System

Operate the System

Emphasis on Environment

Transportation as a tool for Economic Development
System Operations

Efficient use of System

Use all of the Transportation System

Highways--Private Transportation

Transit--Public Transportation

Rail--Intercity Alternate

Air--Intercity Public Transportation
Efficient use of Highways

Congestion is a major urban problem in Texas and the nation

Public Transit is a viable alternate even in Sun Belt Cities

Elementary that highways and transit need to work together on solving urban congestion

TxDOT has adequate cooperation in Houston but could be improved in Houston, San Antonio, & Dallas-Ft. Worth
IVHS
Intelligent Vehicle Highway Systems

Using technologies of Computers and Communications in the Highway System

Emphasis Areas:
Safety Improvement
Congestion Reduction
IVHS

TxDOT and TTI involved in describing national effort since 1987

Mobility 2000

San Antonio 1989

Dallas 1990

$162 million in new Federal Law
IVHS America

"A utilized Federal Advisory Committee"

TxDOT and TTI are members

Marc Yancey, Herb Richardson, Bill Harris, Sadler Bridges, & Mike Walton are currently in leadership positions

Many others from both organizations serve on committees
IVHS

TxDOT and TTI efforts

Smart Commuter Test

Houston — Congested Corridor

Dallas — IVHS Planning Funds

Traffic Management Centers

National Traffic Control Simulator Lab
IVHS

Safety implications

Ability to prevent accidents not just minimize effects

IVHS is not just a Urban program
AVIATION TRANSPORTATION ISSUES IN TEXAS

A Presentation before the
Transportation Committee
Texas House of Representatives

by the

Aviation Panel
Advisory Committee
Texas Transportation Institute

March 24, 1992
College Station, Texas

Panel Chairman: John W. Schwab - San Angelo Municipal Airport
Panel Coordinator: George Dresser - Texas Transportation Institute

Panel Members:
John M. Dempsey - Federal Aviation Administration
Gene L. Faulkner - Greiner, Inc.
Paul P. Gaines - City of Houston Aviation Dept.
Kay Bailey Hutchison - State Treasurer
Herbert D. Kelleher - Southwest Airlines Company
Derald Lary - McAllen-Miller International Airport
John W. Schwab - San Angelo Municipal Airport
Clay Wilkins - Texas Department of Transportation
INTRODUCTION

Mr. Chairman, members of the committee, my name is John Schwab. I'm the manager of Mathis Field, the commercial service airport serving the San Angelo area. I also have the honor of being the chairman of this distinguished panel of aviation experts assembled here today.

I'd like to begin by introducing the members of our aviation panel who have participated in developing today's testimony.

I'm proud to be able to say that the gist of my presentation today is, "Ask not what your legislature can do for aviation; ask what aviation can do for our state." I appreciate the fact that I am preaching to the choir in extolling the benefits of aviation to the state of Texas. But I don't think the message can be repeated too often: Aviation and airports mean jobs and economic opportunity.

And I'm not just talking about D-FW and the other major airports in Texas. On a smaller scale, each of our communities' airports represent an asset similar in value to what D-FW represents to the Metroplex. If you don't believe me, talk to the folks from our new Texas Department of Transportation, Division of Aviation. They will tell you about the calls they get from rural county judges and mayors asking how quickly an airport can be built or improved because the community is in competition for a new small industry or business desiring to locate in their community but needing air access, or an expansion opportunity for an existing industry, or they are in competition for one of the state's new prison sites.

AVIATION'S CONTRIBUTIONS TO TEXAS

The magnitude of the contribution aviation makes to the state of Texas is worth noting. It's been a few years now since the calculations were made, but aviation in Texas was found to account for over 600,000 jobs and $40 billion in annual economic impacts. This doesn't include the jobs that may come to a city because it has excellent air transportation facilities.

We do not have any specific legislative recommendations this year. However, we would like to briefly mention several areas of concern to the aviation community that have broad implications and which may be of state concern.
AVIATION EMPLOYMENT OPPORTUNITIES

Recently you may have read of the intensive and expensive competition among cities and states for United and Northwest airlines' new maintenance facilities. The siting of these new facilities involved intensive negotiation among the states, the cities, and the carriers. The financial commitments made by the states and cities totaled several hundred million dollars. The competition among states and cities for the proposed McDonald Douglas MD-12 manufacturing facility is equally intense. The word is out -- aviation creates jobs. Texas is a major aviation manufacturing state. Cuts in military budgets are adversely affecting jobs in this sector. We need to be on the lookout for other aviation opportunities that can absorb the skills of our workforce. The role of the state in competing for aerospace-related job opportunities, or automobile manufacturing job opportunities for that matter, may need to be clarified.

Interestingly, Socata's Aerospatiale General Aviation Division, a French firm, has announced its intention to build its Tampico Club primary trainer in Grand Prairie, Texas. This comes at a time when no U.S. manufacturers are building primary trainers.

In spite of announced cutbacks in the civil aircraft manufacturing workforce, the long-range outlook for the airline manufacturing and auxiliary industries is very strong. Worldwide there is a growing dependency on the air delivery of persons, cargo, and services. The growth of this element of the global infrastructure is projected to continue well into the next century. Competitiveness for aerospace jobs and opportunities is dependent on a well educated, technical workforce pool. The state must continue to strengthen and expand its educational programs being conducted by such institutions as Texas State Technical College.

ECONOMIC HEALTH OF AIRLINES IN TEXAS

Though the state of aviation in Texas is not dismal, there are soft spots you should be aware of. The national recession has affected aviation as it has other sectors of the economy. The airlines have been especially hurt. Last year was their worst year ever, following on the heels of their previous "worst year" in 1990. Fuel prices were up for much of the year, and business travel was down throughout the year. The Gulf War adversely affected foreign and domestic air travel.
None of the three Texas-based major airlines did well. Only one came out in the black and one continued in Chapter 11 bankruptcy. As the Democratic candidate from Massachusetts likes to point out, you've gotta be careful that you don't kill the goose that lays the golden eggs. This is not the time to place any additional financial burdens on the airlines. Sure, those costs get passed along to the passenger; but if you aren't selling tickets at $200, you aren't going to sell more at $205.

FEDERAL FUNDING FOR AIRPORTS

On the positive side, federal funds for improving our airports have been relatively available compared to past years. In 1990 and 1991, Congress appropriated increased funding from the Aviation Trust Fund for the FAA's Airport Improvement Program. This money is now flowing into our state's airports. Federal funding for Texas airports increased from $73 million in 1990 to $108 million last year. Federal funding in 1992 is expected to be slightly higher than in 1991. There is some discussion of additional Airport Improvement Program funding becoming available this summer -- an election year bonus. Should this occur, our airport sponsors will be ready to respond.

The state's larger general aviation airports are also benefiting from the increased federal program. Assuming that the federal program continues in its current form, that part of the state's airport system designed to serve executive and business turboprop and jet aircraft will be adequately funded. These airports, which serve communities with populations of 10,000 or more or function as reliever airports in the larger metropolitan areas, provide access for business aircraft users throughout the state. A new airport has been constructed to serve the eastern end of San Patricio County and the Navy's Home Port project at Ingleside; and a new airport to serve the City of Hillsboro and one to serve the Cities of Midlothian and Waxahachie, the site of the Superconducting Super Collider, are under construction, all with federal funding.

Congress also approved the Passenger Facility Charge (PFC), a tax on airline passengers which can be imposed and retained by the airport. Money from this tax will begin to finance improvements at commercial service airports in 1992. Savannah was the first airport approved by FAA to initiate the PFC. Many Texas commercial service airports
are seriously considering implementing the PFC. The revenue from PFCs will provide greater funding and greater funding flexibility for this select group of airports.

STATE FUNDING FOR AIRPORTS

At the other end of the spectrum, state funding for improving and maintaining the smaller airports in our state aviation system remains inadequate. This deficiency has been cited in all our previous testimony. One out of five airports in the Texas airport system is not eligible for federal assistance. The communities served by these airports must rely on state financial assistance. State assistance declined from $3 million in FY 1991 to $1.85 million in FY 1992. Despite the success of the state program to channel federal airport improvement dollars, the lower level of state funding is not enough to keep up with matching funds for the growing federal program, while providing the necessary dollars for preservation and reconstruction at those airports not eligible for federal funds. As to new airports, the state simply is not able to construct any new airports without federal participation.

FUTURE OF AVIATION IN TEXAS

Looking ahead to the next two years, what is on the horizon for aviation? One thing you have already heard a lot about is the multi-modal/intermodal integration of the transportation system. Both the USDOT and our TxDOT are committed to looking at a single transportation system instead of separate modal systems. Airport access by public and private transportation, including trucks, cars, buses, and rail systems, will be examined more closely. Planning for integrated systems will be getting underway shortly. Aviation looks forward to being an active partner in this planning process.

Several military airfields in Texas have been identified for closure; Bergstrom Air Force Base in Austin, Carswell Air Force Base in Fort Worth, and Chase Field Naval Air Station in Beeville. If further cuts in the military budgets are made, additional facilities might also be closed. We expect that the communities associated with these airports will take a close look at alternative uses for them, similar to what the City of Houston has done with the former Ellington Field Air Force Base. These airports represent valuable public
investments that offer new opportunities for economic development. Although we do not have a specific recommendation, we wonder if there is a leadership role for the state in converting these facilities to civilian use. Other states, including our neighbor Louisiana, have taken an affirmative role in planning for the redevelopment of military facilities scheduled for closing. It may very well be an appropriate role for Texas state government also.

The impact on the state's aviation system of a possible free-trade agreement with Mexico has not been closely examined. TxDOT has already begun to study the impact of free-trade on the bridge and highway system between Mexico and Texas. The impact on the aviation system could spread well beyond the border, generating the demand for additional freight facilities at many of the state's airports. Texas needs to be prepared to accommodate and take advantage of this potential growth in economic activity.

I'd like to conclude my remarks at the point where I began. Aviation is not just a mode of transportation -- it's an economic tool. Germany, as an example, has long recognized this. The Germans include aviation in their federal department for economic development. Texas' excellent aviation system is one of the reasons that our state's economy is growing at a faster rate than that of the country as a whole. Public investment in aviation pays off -- in jobs and in induced development. Current estimates are that every $100 put into airport development generates an additional $250 elsewhere in the community. Investment in aviation is an investment in the future of Texas.

Thank you for hearing us this morning. Aviation will be happy to help you build a better Texas.
ECONOMIC DEVELOPMENT PANEL STATEMENT

The Economic Development Panel of the TTI Advisory Committee did not make a formal panel presentation at this meeting, but they did participate in the presentations by other panels.

Panel Chairman: Stanley Holmes - GTE Telephone Operations
Panel Coordinator: Dock Burk - Texas Transportation Institute

Panel Members: Ronnie Hale - First City Texas
Judge Dick Holmgreen - Brazos County
Charles Jack Keese - Texas Transportation Institute
Eugene Maier - Maier and Associates
Mike Weiss - Senate Comm./Environ./Public Works
Walter Wendlandt - Attorney
Phil Wilson - Lichliter/Jameson & Assoc., Inc.
HIGHWAY TRANSPORTATION ISSUES IN TEXAS

A Presentation before the
Transportation Committee
Texas House of Representatives

by the

Highway Facilities Panel
Advisory Committee
Texas Transportation Institute

March 24, 1992
College Station, Texas

Panel Chairman: Bruce Cloud - H. B. Zachry Company
Panel Coordinator: Dick McCasland - Texas Transportation Institute
Panel Members: L. DeBerry - Howard/Needles/Tammen/Bergendoff
Milton Dietert - Texas Department of Transportation
M. G. Goode - Consultant Engineer
Tom Johnson - Associated General Contractors
Luther Jones - Texas Turnpike Authority
Bobby L. Myers - Texas Dept. of Transportation
Arnold W. Oliver - Texas Dept. of Transportation
Lawrence Olsen - TX Good Roads/Transp Assoc.
Tim Word - Dean Word Company
HIGHWAY FACILITIES PANEL TESTIMONY FOR 1992

TO THE

TEXAS HOUSE OF REPRESENTATIVES COMMITTEE ON TRANSPORTATION

The State of Texas has been performing highway transportation services for its citizens for nearly 75 years. The state legislature created the first highway department in 1917, and we have continued to evolve ever since. As the needs and demands of Texas drivers have changed, the department, with the assistance and direction of the legislature, has responded.

In its 58th year of operation, the Texas Highway Department became the State Department of Highways and Public Transportation when it was assigned responsibility for the administration of state public transportation funds. In our 74th year, we became the Texas Department of Transportation (TxDOT), with the additional responsibility for the state’s aviation programs. Change will continue in the department. In September, the Texas Motor Vehicle Commission will join us to regulate motor vehicle dealers in the state. Finally, last year Texas voters adopted a constitutional amendment allowing the department to expend State Highway Fund monies to aid the Texas Turnpike Authority in the construction of toll facilities. With the passage of this amendment, House Bill 9, the TxDOT reorganization bill, authorizes the Texas Sunset Advisory Commission to begin its study to determine the feasibility of a 1997 merger of TTA with TxDOT.

As you can see, our 75 years of excellence in providing a dependable and safe state transportation system for Texans is only the beginning of the department’s efforts to
serve its customers, the travelling public. Despite all of these changes, we are facing our greatest challenge ever in our current process of departmental reorganization.

As you know, House Bill 9, combined with our sunset legislation, requires the department to reduce the number of district offices in the state from 24 to no more than 18 by September 1, 1992. In November 1991 the Texas Transportation Commission adopted a plan for a total of 18 districts. In doing so, the Commission considered cost and benefit factors including highway activity and the number of employees required to staff a district. As a result of this reorganization process, the Commission decided to reclassify seven district office headquarters and open a new district office in Laredo. The Laredo district office would be the first new district headquarters added to the department since 1932.

During the Third Called Session of the 72nd Legislature in January of this year, both houses of the legislature adopted a resolution requesting the Transportation Commission to postpone the implementation of proposed district changes until June 1, 1993. In addition, the Legislature asked the Commission to publish its criteria for determining the location of district offices and conduct one or more public hearings on the proposed locations.

In response to this resolution, the Texas Transportation Commission on January 28, 1992 adopted a minute order that stated that "it is clearly the will of the majority of the legislature that implementation of House Bill 9 district reorganization requirements be delayed until June 1, 1993." The Minute Order directed the Executive Director to suspend the implementation of district reorganization activities. However, the minute
order also directed me to continue to research, analyze, develop, and implement internal organization measures, provided that such efforts are consistent with the operation of no fewer than 24 district office locations. Our plans go forward in this area. We plan to establish the district office in Laredo in the future and have already assigned a district engineer to this post to study the necessary requirements.

The realignment and reorganization of the districts is a big undertaking. It represents major challenges for us, many of which we have already faced in our reorganization efforts to date. In complying with the requirements of House Bill 9, we not only must consider public reaction and legislative intent but also continue to maintain and improve the quality of service we provide to those who rely on the state's transportation system. In addition, we must make it as easy as possible on our employees. If we do reduce the number of district headquarters, we will continue to have a strong local presence in those offices we downsize, either through an area engineer or a maintenance office. We will continue to be easily accessible and responsive to city and local government needs, as well as the general public.

Many of the subtle changes in the department since we last met in 1990 reflect our increased sensitivity to the needs of the travelling public. The most important sign of this is the creation by legislative direction of four advisory committees. These advisory committees are to advise the Transportation Commission on the development of rules concerning specific aspects of the department’s responsibilities. The advisory committees on Public Transportation, Environment, Bicycle Rules, and Aviation are anticipated to assist the department in increasing its awareness within their areas of expertise. They
will help to ensure that the needs and views of the people affected by the department’s operations have input into the decision making process.

**HIGHWAY FUNDING IN TEXAS**

**State Funding** The activities previously described are the result of legislative action to foster a more cost-effective and efficient state government. As a result of the Comptroller’s *Breaking The Mold* initiative, the legislature passed and the governor signed several measures that culminated in a transfer of funds from the State Highway Fund to the general revenue fund or to other funds for activities that may or may not be related to transportation. One such measure involved the transfer of $342 million over five years in motor vehicle registration fee revenues from the Highway Fund to the counties to offset the effects of a similar transfer of motor vehicle sales taxes to the general revenue fund. In all, the Highway Fund will experience a $380 million loss in revenues over a five year period due to such transfers of funds.

In 1991, the Legislature also raised the motor fuels tax a nickel to 20 cents per gallon, one-quarter of which goes to public education. With virtually no allocation from general revenue, the department is almost wholly user-funded. This funding increase alone will allow the state to complete an additional 9 percent of the transportation projects authorized in the state’s ten year project development plan. Combined with new federal funding, the department will now be able to meet 48 percent of its planned transportation projects over the next ten years.
With the adoption of Proposition 2, the state may now use State Highway Fund dollars to assist the Texas Turnpike Authority in the construction of toll projects in the state. However, all Highway Fund monies expended for toll projects must be repaid to the Highway Fund out of the revenues of the toll project. The new federal surface transportation legislation authorizes the state transportation agency to grant or loan up to 50 percent of the cost of a toll project to the responsible public or private entity. This use of state and federal funds for toll projects could provide a viable option for addressing the state's urban congestion problems while, in the long term, freeing up state dollars to complete more planned transportation system projects.

**Federal Funding** The federal Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA) will bring $7.1 billion to Texas over the next six years for surface transportation programs. At an average of $1.19 billion per year, this represents about $325 million more for highways and highway safety in Texas each year than the state received since 1987. About 94 cents of every Texas dollar paid into the Federal Highway Trust Fund over the next six years will be returned to Texas, significantly improving our rate of return.

Funds for Texas include about $1.6 billion for a National Highway System (NHS). The NHS is the newly designated federal highway network that will include all Interstate highways and other selected principal arterials. Texas highways included on the NHS are for the most part those highways that have been designated as the Texas Highway Trunk System (which I will discuss in greater detail later on).
States may transfer 50 percent of their NHS money to other road programs or to transit. Up to 100 percent of NHS funds may be transferred in states with Clean Air Act non-attainment areas if approved by the Secretary of Transportation. (Four Texas metropolitan areas are eligible for these funds - El Paso, Dallas/Fort Worth, Houston/Galveston, and Beaumont/Port Arthur.)

The new Surface Transportation Program will provide $2.65 billion to Texas in federal funding for a broad range of transportation uses which could include highway construction and rehabilitation, mass transit, car pool projects, bicycle programs, and other uses. These program funds will be distributed to the states based on an adjusted Fiscal Year 1987-1991 historic share. $675 million come to this program from various "equity adjustment" programs like minimum allocation. The program requires that about 26 percent of the funds directed to the Surface Transportation Program be spent in urbanized areas with a population of more than 200,000. This means that over the next six years, about $693 million will be available to urban areas in Texas for projects to be developed through metropolitan planning processes in cooperation with TxDOT. About 14 percent of Surface Transportation Program funds must be spend outside the urban areas. The remaining 50 percent is available for use anywhere within the state.

The new Congestion and Air Quality Program allocates $561 million to Texas to address the mandates of the Clean Air Act in achieving air quality standards and reducing traffic congestion in our urban areas. Funds would be used in areas that fail to meet the air quality levels under the Clean Air Act. Projects would include those that
would contribute to an area's compliance with the act. (The effects on Texas of the 1990 Clean Air Act Amendments will be discussed later.)

Texas will receive $145 million in a new program to compensate states for the costs of roads built by the states before the creation of the Interstate System and later incorporated into that system.

Texas will receive $153 million to complete its portion of the Interstate System and $1.28 billion to maintain the Interstate System in Texas over the next six years. We will be able to spend up to $610 million to replace and rebuild Texas bridges as well.

The Act also provides a federal/state match of 80/20 for all programs, except for Interstate highway projects which do not add lane capacity, which will remain at the current 90/10 percent ratio.

About $240 million is designated for 15 special highway projects throughout the state. Also included in the Act is about $33 million for a North-South High Priority Corridor that calls for $70 million to be expended on improvements to U.S. 71 from Alma, Arkansas to the Louisiana border.

In addition, the Act contains about $665 million that has been earmarked for the new Dallas Area Rapid Transit (DART) light rail system, the Houston Priority Corridor Guideway Project and the Dallas-Fort Worth RAILTRAN System.

The ISTEA restructures the numerous federal highway and safety programs into a simplified structure including only four major programs. This new structure gives states and local governments greater flexibility. Federal highway funds may be used on any public road except local roads or rural minor collectors. States and local governments
may use federal funds for a much broader range of activities. This could include capital costs for mass transportation, carpool and vanpool projects, fringe and corridor parking facilities, pedestrian and bicycle facilities and programs, and wetland loss mitigation. Finally, the new structure allows for the transfer of funds from one federal program to another, allowing for optimal usage of federal transportation dollars to meet the transportation needs of the states and localities.

The new federal surface transportation legislation changed the nature of federal funding for Texas. Although the state will receive about a 33 percent increase in federal funding over the next six years, the legislation does not achieve the goal of redressing the inherent inequity of the Highway Trust Fund distribution formulas. Rather than reflecting the changing nature of transportation in Texas and throughout the nation, the historical figures and inequities have been maintained for the next six years.

Furthermore, the bonus funds used to achieve an acceptable "equity" in the bill are restrictive in nature for Texas. For example, the states' discretion in the use of minimum allocation funds is somewhat limited in the bill.

**Funding Forecast** Even though we have received additional state and federal funding, we still need to find ways to increase and enhance our revenues and to bring some stability to our revenue stream. Also, when funding the state's transportation system, it is in the state's best interest that users continue to pay their equitable share for building, maintaining and operating the state's transportation system.
Effects of Inflation

Without additional revenue over time, inflationary trends drastically threaten the citizens' investment in the Texas transportation system. Inflationary trends shrink the amount of state dollars available for construction to the point that insufficient funds remain for state funded projects. At the same time, federal funds are lost due to the inability to put up the state share of federally-funded transportation projects. Based on forecasted revenues and expenditures inflated at a rate of 5 percent annually, without recent funding increases, by 1996 all state funds would have been expended to meet the state share on federal-aid projects and $100 million in federal funding would have been lost. Also, during the period 1996-1998, there would have been no funds available for state funded projects and nearly $1 billion in federal funds would have been lost.

Although recent state and federal legislation has provided an annual increase in funding of nearly $600 million for highway construction and maintenance, the situation presented above has only been postponed. By looking at the actual spending power of our current and future revenue streams in terms of constant 1970 dollars, we see that inflation has eroded the buying power of annual revenues during the period of 1970 to 1998. Forecast revenues to the department in 1998 are expected to be nearly $3.5 billion; however, in 1970 dollar buying power this equates to $795 million. From 1970 to 1998, revenue in actual dollars will have increased 5 times while in constant dollars the increase will have been only 1 1/4 times.
Counter-Inflationary Steps One method that other states have taken to address the negative effects of inflation on fixed-rate fuel taxes is the use of a \textit{variable} motor fuel tax, sometimes referred to as fuel tax indexing. Ohio, Michigan, and Wisconsin have adopted various versions of the variable motor fuel tax in recent years. This mechanism provides a reasonable adjustment to the equitable user tax without the need for periodic legislative action to increase the fixed-rate fuel tax. A gradual indexed increase rather than a periodic large tax boost is potentially more acceptable to the public and enhances public acceptance of fuel taxation. The most significant benefit of a variable motor fuel tax is that it provides purchasing power stability to the fuel tax revenue stream, thereby protecting the taxpayers' investment in the infrastructure of the state.

The concept of a user based transportation system must be supported, and all users of the system should contribute toward the system's upkeep. One of the areas of revenue that we will be exploring in the future is the pricing of alternative fuels. With the push to convert to compressed natural gas or CNG powered vehicles, we believe it necessary that the taxation of these fuels bring in an equivalent amount of revenue to that generated by our traditional motor fuels. Otherwise, our revenue base will diminish even further.

\textbf{CHANGING DEMANDS ON THE STATE'S TRANSPORTATION SYSTEM}

Inflation and inequitable federal funding methods are not the only problems we face in maintaining a dependable infrastructure for Texas. Increasing population growth, expected expansion of trade traffic across the U.S./Mexico border, and the continued
migration of people to the metropolitan areas of the state create continual demands on
the state's transportation system. We must work to meet, anticipate, and respond to
these increasing demands on the system.

**Population Changes** According to State Comptroller John Sharp's *Texas to 2011* report,
Texas' total population will grow to 20.8 million people over the next two decades. This
should make Texas the second-most populous state (behind only California) by the
middle of this decade.

This population will be an older population. The aging baby boom generation will
cause the average age of the American population to rise over the next 20 years from
30.8 years to 35.3 years.

The largest population growth will occur among people aged 45 to 64. The
elderly population above age 64 also will grow faster than the average, as baby boomers
begin to reach retirement age.

This aging population will require action to address the special needs of older
drivers. The department has initiated a study to address the issues concerning the older
driver. The scope of this study is to install, then evaluate, roadway improvements
designed specifically for older drivers. Improvements in the Paris and Pharr Districts will
include the use of advance street signing, larger letters on signs, raised reflective
pavement markings, and wider edgelines and center lines. These projects will be let to
contract once the plan preparation is complete. In addition, we have already begun to
use brighter signs on our roadways.
The Texas population will continue to grow in the metropolitan areas of the state, compounding the mobility problems in these urbanized areas. San Antonio, Fort Worth, Austin, El Paso, Houston, and Dallas will grow faster than most of the rest of the state. Over the next 20 years, Texas’ six largest metropolitan areas are expected to add 3.5 million residents, accounting for most of the state’s population growth through the year 2011. However, growth will also occur in localities outside these six metropolitan areas. Current department data indicate that about 53 percent of all Texans live in the six largest metropolitan areas of the state. The Comptroller’s report forecasts that this figure will increase to 66 percent by the year 2011.

The six largest Texas metropolitan areas account for 56.9 percent of all registered vehicles in the state. These 8 million vehicles contributed to 143 million daily vehicle miles travelled in these urban areas (or 48.6 percent of total state daily vehicle miles). The six largest Texas metro areas have an urban transportation system consisting of about 29,000 lane miles; That’s only 16 percent of the state’s total lane miles.

Impact of CAAA on Urban Areas. The 1990 Amendments to the Clean Air Act will have critical impacts on the urban areas of this state. Houston/Galveston, Beaumont/Port Arthur, Dallas/Ft. Worth, and El Paso and certain surrounding counties have been designated as non-attainment areas for exceeding ozone standards. El Paso has been found to exceed carbon monoxide standards as well. These metropolitan areas are therefore subject to very strict Environmental Protection Agency (EPA) guidelines and deadlines. Deadlines for compliance with the EPA non-attainment guidelines are in
effect now and will extend indefinitely depending upon the level of compliance in these urbanized areas. The impact of the Clean Air Act Amendments on the transportation industry in these cities is extensive.

The Clean Air Act Amendments of 1990 provide that no federal agency may approve, accept or fund any transportation project or program unless the plan or program has been found to conform with the state implementation plan under the Act. In particular, emissions expected from the implementation of the program must be found to be consistent with estimates of emissions and necessary emissions reductions as established in the state implementation plan. Metropolitan planning organizations (MPOs) may not approve or fund a project or program until it determines that the project or program provides for the timely implementation of transportation control measures consistent with schedules included in the state implementation plan. Finally, all transportation projects, plans, or programs in these urbanized areas must conform with the emission reduction projections and schedules reflected in the state implementation plan.

The objective of obtaining federal air quality standards will become the critical, and in some cases, the controlling, factor in making transportation investment decisions in non-attainment areas. Implementing transportation control measures will be a viable response to mandates to control, limit, and/or reduce emissions from mobile sources. In addition, employers in Houston with 100 or more employees must increase the average vehicle occupancy of employee work trips by 25% above the area average. The
movement into carpooling, flex-time, and public transit usage may well get a boost from the Clean Air Act regulations.

**A New Role: The Movement Of People And Goods** Since the department will only be able to meet **48 percent** of the state's project needs over the next ten years without further funding, we must find alternatives to address these transportation system needs. As leaders in transportation service, Texas must take the initiative to explore new ways to move people and goods. With the growth of population in urbanized areas, we will one day run out of space for new roads to meet urban congestion problems in many corridors. In light of this inevitable trend, we must adopt a new role; we must focus on the movement of **people and goods** rather than just the movement of vehicles.

To address the congestion problems of tomorrow, we must look into alternatives to roadway construction such as congestion pricing, alternatives to the traditional 8-5 workday (flex-time) for workers, increased emphasis on public transit usage, carpooling, and other new ways to effectively and efficiently manage our transportation system.

**Rural Transportation System** Coinciding with an increased demand on urban transportation systems is the changing nature of the rural transportation network. The new National Highway System will benefit citizens and travellers in rural areas as well as in urban areas. In addition, the NHS will improve our ability to move people and goods to and from urban markets. The National Highway System will meet the growing
demands of international and interstate trade and traffic, further enhance safety and mobility, and aid in economic development in rural areas.

In 1990 this panel presented information to you about the Texas Trunk System, a network of rural four-lane roadways designed to connect every urban area with populations of 20,000 or more. Cities with populations of 10,000 and over will either fall on or be within 25 miles of the system. The system is estimated to consist of 10,500 miles, approximately 2,700 of which is Interstate. Slightly over half this mileage will need to be upgraded. The Texas Trunk System should fit within the parameters of the new National Highway System to provide enhanced travel mobility throughout the state and should qualify for federal funding to upgrade the system.

Intermodalism The department's sunset legislation requires us to develop a statewide transportation plan to include all modes of transportation in the state. The legislation authorizes the department to enter into memoranda of understanding with the other transportation agencies to provide consolidated and cooperative planning procedures for the state. As a result of these cooperative actions, we will be able to develop a statewide transportation system that encompasses all modes of travel to serve the individual traveller.

The federal surface transportation reauthorization legislation contains a demonstration project in Ft. Worth to build an Intermodal Center. The project will create and construct a center where four modes of transportation — vehicle, bus, train, and aircraft, --- will connect to provide more efficient transfer and commuter service for
people in the Fort Worth area. This intermodal center will receive federal funding and should lead the way toward increased intermodalism throughout the state and the nation.

The department will also be involved in the high-speed rail effort through coordination with the High-Speed Rail Authority on the development and construction of interchanges and overpasses for the high-speed rail system. Once again we are on the verge of a new era in transportation in Texas, and the department has a place in this future.

International Trade Finally, as the nature of trade between the United States and Mexico changes in response to the proposed Free Trade Agreement, so too will the demands on the Texas transportation system change. The department has already taken several steps to address this expected change. In 1991 the department created the International Liaison Office. This office will coordinate and monitor all department functions relating to international activities. Also at some point in the future the department will create a new district with headquarters in Laredo to place greater emphasis on the expected increasing demands on the transportation system along the border. Furthermore, the department will be involved with the Governor's statewide task force effort to anticipate and respond to the traffic resulting from increased trade between the two countries.
THE TEXAS TRANSPORTATION SYSTEM AND ITS NEEDS

As I stated earlier, Texas faces important changes in the state’s transportation system with the completion of the Interstate, increased urban congestion, a new focus on a National Highway System, greater truck traffic across the border, research and development of intermodal travel, and shifting federal and state financing of transportation projects. We must begin a new way of doing things -- take on a new role -- to keep in step with the changing pace of the state’s transportation system. In order to enhance our ability to move people and goods throughout the state, we must continue to focus our efforts in research and revenue enhancement.

Research I have already mentioned one area of research and development that is underway in Texas: the creation of an intermodal center in Fort Worth. The development and study of Intelligent Vehicle/Highway Systems (IVHS) is also underway, with special projects in Houston and Dallas, where urban congestion problems are the greatest. Intelligent Vehicle/Highway Systems (IVHS) use advanced driver assistance devices to monitor and report road and traffic conditions. Continued research in IVHS design in Texas will keep us on the cutting edge of the future of transportation systems. As the urbanized areas continue to experience increased congestion, the transportation systems of the future must contain sophisticated driver/vehicle interactive devices and methods to minimize congestion. The Texas Department of Transportation will work with local governments and transit authorities to develop and implement these advanced
driver assistance systems to provide improved mobility for the travelling public throughout the state.

The Texas Transportation Institute is working to develop improved materials and methods for better road building in the state. With the completion of the Interstate System and a new focus on operating and maintaining the system, we must find new, efficient and environmentally sensitive ways to improve the way we provide transportation opportunities to our clients. The department’s sunset legislation and reorganization legislation require us to maximize the use of reclaimed asphalt pavement (RAP). The department retains ownership of all of the RAP generated on the highway system in the state but may transfer ownership of it to local governments for use on roadways. Research to determine the best method for using this resource is still underway. However, we have been stockpiling RAP along the right-of-way for reuse in construction contracts for several years and are including RAP in our contract specifications.

Revenues Earlier I discussed the advantages of inflation indexing for the motor fuels taxes as experienced in other states. It is vitally important that we work together to protect the Texas taxpayers’ investment in the state’s transportation system. Since inflation is so variable in our present economy, its effects on the motor fuels tax revenues of the state can be critical. In fact, without continual increases in the motor fuels tax, the risks of not protecting our revenues against inflation are compounded; the flow of federal transportation dollars may stop if we are not able to put up our state share of matching
funds for federal-aid projects. We must take the necessary steps to provide quality transportation services and to prevent this loss of funding from occurring.

During the 72nd Legislative Sessions, the Texas Legislature took several steps to promote revenue enhancement within state agencies. In the Department of Transportation's sunset legislation, the Legislature required the department to investigate and maximize the use of revenue enhancement methods. Other legislation provided for leasing of right-of-way initiatives, contracting with private entities for the production and marketing of travel materials, and increased privatization of department maintenance activities.

These and other avenues of revenue enhancement are under consideration and may possibly provide additional revenue to help us to continue to provide the needed transportation services for the people of Texas.

CLOSING REMARKS

As you can see from this presentation, change is the buzzword of the day in the Texas transportation community. The organizational, funding, and system structures of transportation in Texas are undergoing radical change. The evolution of transportation services in the country will continue throughout the rest of this century. As we in Texas respond to this changing environment, we shall continue our efforts to provide a safe, economical, effective, and efficient transportation system that is aesthetically pleasing and environmentally sensitive.
MARINE TRANSPORTATION ISSUES IN TEXAS

A Presentation before the
Transportation Committee
Texas House of Representatives

by the

Marine Transportation Panel
Advisory Committee
Texas Transportation Institute

March 24, 1992
College Station, Texas

Panel Chairman: Berdon Lawrence - Hollywood Marine
Panel Coordinator: Frank McFarland - Texas Transportation Institute

Panel Members:
Tony Alejandro - U. S. Coast Guard
James M. Goldston - Goldston Engineering, Inc.
Berdon Lawrence - Hollywood Marine
Alvin R. Luedcke, Jr. - TX Department of Transp.
Brink P. Miller - U. S. Army Corps of Engineers
R. H. Parker, Jr. - Parker Brothers and Co., Inc.
Edward Roe - Clean Channel Association
Ted Thorjussen - West Gulf Maritime Association
Mr. Chairman, the Marine Transportation Panel would like to express our appreciation to you and the members of the Transportation Committee for again giving us the opportunity to present some of the important issues that are facing the marine industry and the State. Texas is the most important maritime state in the U.S. - in terms of ton-miles, tonnages and economic impact. The maritime industry of the region from Brownsville to Orange, Texas - with all its related and supporting activities - represents a vital part of the area's economy. It provides well over 100,000 jobs and contributes 3.6 billion dollars to the economy. About 110,000 jobs in the State of Texas are either directly or indirectly related to the shipment of goods through the Port of Houston alone. In 1989, on the Gulf Intracoastal Waterway vessel movements totaled more than 80 million tons of cargo worth 23.6 billion dollars.

Water transportation will continue to play a vital role in the State's future economic well being. The people of Texas, and their representatives in local and state governments need to understand how this vital industry fits into the overall economy, how important it is to the economic well being of the state and some of the current problems being faced by the maritime industry. You have graciously given this panel the opportunity to present some of the major problems facing the marine industry and, for that, we thank you.

Mr. Chairman, our panel has previously recommended that a study be made of the economic importance of the maritime transportation industry to the economy and people of Texas. We still believe this study is needed. We request that the Legislature provide funds to do a comprehensive study to document the role of the maritime industry in the State of Texas. We recommend that this study not only provide estimates of the economic impact, but also attempt to trace the impact of waterway imports, waterway exports, and internal movements, to give an indication of how waterway transportation directly affects the people of Texas and the nation. We further recommend that $300,000 be provided for this study and that the study be conducted over approximately a two year period.

We wish to now discuss other specific problems which are affecting the marine industry which we feel the Legislature can offer its assistance in solving or preventing.

I. Placement of Dredged Materials on the Gulf Intracoastal Waterway (GIWW)

**Background:** One of the most important activities of the State of Texas is to provide funds for acquiring sites for placement of dredged material taken from the GIWW. We thank the Legislature for its past monetary support and strongly urge continued support in this area. In coordination with state agencies, seven areas have been identified as being critical where additional disposal sites are needed. Progress has been
made in West Bay, the Freeport area, and East Matagorda Bay with the purchase of 89 acres near Redfish Bay being recently authorized by the Texas Transportation Commission. Further work needs to be addressed in the High Island, Bolivar Peninsula, and Laguna Madre areas.

There is great potential to beneficially use dredge material removed from Texas’ navigation channels to provide erosion control, habitat and wetland creation, and beach nourishment. We must pursue these opportunities with a State and local commitment to beneficially use dredge material and the provision of funds for the local share of these projects.

**State Action Requested:** This panel requests funding for the Texas Department of Transportation to develop a master plan for the purchase of dredged material disposal sites and identify optimum dredging methods to support the maintenance of the main channel of the Gulf Intracoastal Waterway. The plan should address placement issues, environmental issues, dredging schedules and maintenance requirements for the portion of the GIWW located in the State of Texas. This plan should be developed in concert with the Coastal Zone Management Plan which is under the direction of the General Land Office.

The State of Texas should support the concept of beneficially using dredge material from Federal maintenance projects, to include provision of the non-Federal share of the cost for this alternate placement of dredge material.

**II. Erosion Control**

a) **Coastal Act:**

**Background:** Texas passed landmark legislation in 1991 which provides that the General Land Office will have substantial authority to regulate the land use of “Coastal Areas.” We applaud the legislative initiative to develop a comprehensive plan for the Texas Coastline. And certainly this dovetails into our call for a comprehensive long term plan for the Gulf Intracoastal Waterway system.

The GLO has been given wide latitude to regulate a very broad spectrum of issues that will have a tremendous impact on the Texas economy. The erosion and environmental issues are highly complex and it is crucial that the GLO maintain a balanced approach toward coastal land use.

According to the Federal Coastal Management Act of 1972 (as found in 16 USC 1456 et seq), once the state plan is approved, then any action taken in the state by a federal agency must be reviewed by the General Land Office to make certain that the action sought by the federal agency is consistent with the state plan. If the federal action
is not consistent, then the federal agency is prohibited from undertaking the activity sought until court approval is obtained. It is very important for the state and the marine industry to recognize the importance of federal activity on the waterways within the state. If the Coastal Management Plan is too restrictive, many federal improvement projects on the waterways could be stopped or slowed down. This could severely affect both the economy of the State of Texas and the safe usage of Texas’ waterway systems.

State Action Requested: We request that the Texas Department of Transportation assist the Texas Coastal Coordination Council, headed by the General Land Office, in developing a Coastal Management Plan to ensure that the state plan is in accord with the maintenance plan of the Gulf Intracoastal Waterway and other navigation channels within the State of Texas.

b) Sargent Beach:

Background: As we indicated in our 1990 testimony, continued erosion of the Texas coastline is a major problem. The U. S. Army Corps of Engineers published a report in November 1991 outlining the problems associated with the erosion of Sargent Beach and proposed solutions to the problem. It is suggested that a barrier-type plan be installed along a seven mile stretch which has been severely eroded. Unless significant action is taken now, erosion of this narrow barrier by the Gulf of Mexico will begin to have significant impacts on this reach of the GIWW by the turn of the century or possibly before, depending on hurricanes. Severing the GIWW at Sargent Beach would isolate about 250 miles of the GIWW southwest of Sargent Beach from the rest of the inland waterway system and result in the products moving in the GIWW through the Sargent Beach area having to shift to much more expensive alternate modes of transportation. This could directly affect Corpus Christi, Victoria, and the Rio Grande Valley, as well as, result in a significant economic loss to the marine industry, to users, and to the State of Texas.

For example, approximately 6,000 barges a year traverse the GIWW through the Sargent Beach area and enter the Port of Corpus Christi carrying a total of approximately 7,000,000 tons of cargo. This is 10% of the total annual cargo handled by the Port of Corpus Christi that would, if the GIWW were shut down near the Sargent Beach area, have to be moved by other means at many times the cost. This would have a very detrimental impact on the Port of Corpus Christi. We would be likely to see similar results in the Ports servicing Victoria and the Rio Grande Valley.

In order to construct the barrier as planned to prevent the complete erosion of Sargent Beach, the U.S. Army Corps of Engineers will be required to acquire rights of way from various landowners. It is not known at this time whether this project will be completely or partially funded by the federal government. We understand that the Texas Department of Transportation has researched avenues for allocating funds for the
purchase of rights of way for the Sargent Beach project and expects to be able to provide the funds necessary for the purchases. We want to thank the State for taking an active role in the Sargent Beach project.

**State Action Requested:** We ask that the Texas Department of Transportation, as the designated representative for the State of Texas in all GIWW local sponsor activities, monitor the progress of the Sargent Beach area and assist the U.S. Army Corps of Engineers in any way possible so that we can preserve the GIWW in the Sargent Beach area. This would include allocating the funds necessary to purchase the rights of way necessary for completion of the project should expected federal funds not be made available for this phase of the project.

III. **Texas Oil Spill Prevention and Response Act of 1991**

**Background:** In August of 1990 the President signed into law the Oil Pollution Act of 1990 which is the most comprehensive oil spill liability act in the nation’s history. This act provides for comprehensive regulation of the transportation of oil on the nation’s waterways. The Act created an excise tax on oil imports which provides funds to compensate damaged parties resulting from an oil spill. States and third parties can recover oil spill damages from this fund and it certainly behooves the State of Texas to recover any costs it incurs from the fund. This Act grants the individual states the right to enact their own oil spill statutes with almost no restrictions on the state statutes.

Subsequent to the passage of the Oil Pollution Act of 1990 (OPA’90), Texas enacted the Texas Oil Spill Prevention and Response Act of 1991. (TOSPRA) This act is one of the toughest laws yet enacted by any state to provide for strict liability for oil spill related damages.

The Texas General Land Office (GLO), under the auspices of the newly enacted Oil Spill Prevention and Response Act has promulgated regulations for vessels and facilities that handle oil within or close to Texas Coastal Waters. These regulations provide for significant additional burdens of vessel and facility owners and operators in Texas. While the Legislative intent is clear that Texas provide for oil spill indemnification to persons damaged by oil spills, it is important that the GLO foster the growth of prevention and response capabilities in addition to merely managing fund for compensation.

It is also important that the GLO avoid impairing trade to Texas ports by working with the U.S. Coast Guard to avoid duplicative and burdensome regulatory compliance with State requirements that are already being handled by the Coast Guard.

The General Land Office published its final interim rules implementing TOSPRA. We are concerned that the requirements imposed on the marine industry are overly
burdensome and may adversely affect the economic contribution currently made to the State of Texas by the marine industry. Unfortunately, as written, TOSPRA is one of the most stringent oil spill bills in the nation. It permits unlimited liability for natural resource damages, extends recovery under a strict liability regime to claimants who have historically not been granted a right or cause of action for damages and permits very few real defenses.

State Action Requested: This panel requests that the Transportation Committee urge the GLO to exercise restraint when carrying out the administrative rules of TOSPRA in order to prevent a broadening of the original intent of the act. Texas is the largest maritime state in the nation in terms of ton-miles, tonnages and economic impact and much of this tonnage consists of petroleum and chemical products. Clearly, there needs to be a balanced approach in the implementation of this act and, the federal regulators, such as the U.S. Coast Guard and the Environmental Protection Agency, should be the leaders in the regulation of international and interstate vessel movements.

IV. Natural Resources Conservation Act

Background: Transportation of oil and hazardous substances within Texas waters has historically been regulated by the Texas Water Commission. However, as a result of the enactment of the Texas Oil Spill Prevention and Response Act of 1991, the General Land Office has been given complete authority over oil spills in Texas coastal waters. There are now two separate agencies who have control over "spills" in Texas, with the jurisdictional issue dependant upon the type of substance spilled. "Hazardous Substances" are defined by the EPA under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) or those designated by the Water Commission, with both exempting petroleum from the definition of hazardous substance. The list of products and substances classified as hazardous is extremely long. A tremendous amount of such products are transported by vessel along the Texas coast and within our waterway system.

In the first 1991 Special Session, the Texas Legislature consolidated several environmental state agencies into a super agency which will be known as the Texas Natural Resource Conservation Commission. The effect of the consolidation will be the restructuring of the Texas Water Commission, the Texas Air Control Board, the Texas Department of Health for issues involving solid waste, and the Texas Railroad Commission regarding certain issues relating to oil and gas and other minerals, into this new Natural Resource Conservation Commission.

State Action Requested: This panel is concerned about the long term impact of somewhat overlapping and conflicting jurisdictional situations between the General Land Office and the new Natural Resource Conservation Commission. As such, we request that the Texas Legislature carefully monitor any new legislation and/or rules implementing
existing statutes to make certain that the General Land Office and the new Resource Conservation Commission are working together and not duplicating nor creating conflicting rules and regulations.

V. Environmental Crimes Act

Background: Several bills were introduced in the last session of the Legislature which consolidate existing criminal provisions, created new criminal provisions, significantly increased the fines and penalties for violation of the criminal provisions and established a system of strict liability of officers and directors of companies that violate certain environmental statutes. Unlike the current law which requires the State to prove criminal intent, the proposed law sought to impose criminal penalties for a violation without a required showing of criminal intent.

While this panel certainly feels that officers and directors should be responsible for their actions, provided, that the officer or director has the requisite criminal intent, the proposed statute imposing these significant criminal fines and penalties without requiring the state to prove criminal intent, can have a very detrimental impact on the long term economy of the state. If enacted, these laws will deter qualified companies, and their officers and directors, from entering the state to do business due to extremely onerous personal and legal exposure.

State Action Requested: We ask the state to monitor any environmental crime bills introduced before the Legislature, and to require any bill imposing strict criminal liability on corporations and their officers and directors to include an element of criminal intent. Absent this requirement, these bills would have a very detrimental effect on the maritime industry in the State of Texas.

VI. Economic Issues

a) Expanding the G\WW into Mexico

In 1990, the Texas Legislature passed H.B. 1879, creating the Texas-Mexico Initiative designed to strengthen the economic ties between the State of Texas and Mexico. The Texas-Mexico Initiative will assist economic development by creating the Texas-Mexico Development Fund to select and fund Texas’ cost benefit and analysis projects with implementation guidelines to help Texas business people determine profitable economic activities with Mexico that will generate substantial revenue for the
state. Several organizations have put forth the proposal of extending the Gulf Intracoastal Waterway into Mexico. The coastal area of Mexico certainly lends itself to this type of navigation project and the benefits to Texas are clearly tremendous. This proposition may lend itself to a review by the advisory board for the Texas-Mexico Authority created by the enactment of H.B. 1029 to study Texas-Mexico issues.

**State Action Requested:** We support the expansion of the GIWW into Mexico and encourage the Transportation Committee to study the feasibility of expanding the GIWW into Mexico.

b) **Tax Imposition**

**Background:** For the last several sessions of the Texas Legislature, the marine industry has been hit with increased costs, penalties and fees. In 1991, the marine industry was impacted by the Texas Oil Spill Prevention and Response Act, which increased liability for physical and economic damages, and increased administrative, criminal and civil penalties.

During the Special Session, a bill was introduced to repeal the diesel fuel tax exemption for “off road” users. Although the bill was overwhelmingly defeated, we want the Transportation Committee to understand that the marine industry cannot afford to absorb any new costs as damages or fees.

**State Action Requested:** The marine industry in Texas is highly competitive with other states and regions. Consequently, any tax or other legislative initiative that raises the costs of Texas’ maritime operations relative to similar operations in other states and regions should be avoided. We endorse the state’s efforts to obtain more of the existing revenue that is being collected at the federal level for use in Texas for Texas problems. The marine industry cannot withstand any additional taxes. We ask that the Legislature refrain from imposing any new taxes or fees on the marine industry.

**CONCLUSION:**

Mr Chairman and Committee Members, we again would like to express the appreciation of the members of the Marine Panel of the TTI Advisory Committee for this opportunity to discuss these issues with you. We believe these are very important issues that will significantly affect the marine industry, the economy of the State of Texas and, ultimately, the residents of our state, and therefore, are worthy of your consideration and study. If our panel can be of any assistance to you in any way, please feel free to contact us.
MOTOR CARRIER TRANSPORTATION ISSUES IN TEXAS

A Presentation before the
Transportation Committee
Texas House of Representatives

by the

Marine Transportation Panel
Advisory Committee
Texas Transportation Institute

March 24, 1992
College Station, Texas

Panel Chairman: Vacant
Panel Coordinator: Tom Urbanik - Texas Transportation Institute
Panel Members: Richard Atwell - Coastal Transport Company, Inc.
               Jack Conlee - Conlee Moving & Storage, Inc.
               Earl Davis - Tyler Pipe Industries
               Robert Floyd - Texas Motor Transportation Assoc.
               J. A. Haralson - J. A. Haralson Moving & Storage
               Stoney Stubbs, Jr. - FFE Transportation Services
               M. A. Taylor - Mgmt. Action Tech. & Systems
               John H. Walker, Ill - J. H. Walker Trucking
               LaVan Watts - Lufkin Industries, Inc.
Testimony of Texas Motor Transportation Association
Texas Transportation Institute
March 25, 1992

In the past 10 years the trucking industry has endured an ever-growing burden of government-imposed costs, particularly safety regulations, which has cost the national trucking industry billions of dollars annually.

Many of these regulations, such as the Commercial Driver’s License program and mandatory drug testing, were needed and were strongly endorsed by the industry. TMTA has a solid record of support for truck safety legislation. As costs continue to increase, however, the trucking industry now looks to the regulated system to ensure industry economic stability in order to pay for these government-imposed costs.

Safety costs money—a great deal of money—and the costs incurred by trucking companies from government regulations continue to increase at an alarming rate on an annual basis.

In 1991, the Texas trucking industry felt the brunt of $2.9 billion in government costs—roughly nine percent of the total costs for the entire United States. The Commercial Driver’s License program costs the average TMTA member company $12,000 each year. Drug testing costs the average company $7,875. Vehicle inspections run $13,500.

This year in Texas, the trucking industry will face $680 million in federal highway taxes and another $850 million in state taxes. Safety costs and compliance with the Clean Air Act will be an additional $85 million.

On a national scale, the U.S. trucking industry will incur $31 billion in government-imposed costs in 1991, a full 12 percent of the industry’s expected gross revenue of $260 billion and almost 10 times the expected profit margin of just 1.5
percent. The industry projects that by the year 2000 the total government-imposed costs will jump to $73 billion.

This year, we expect total government-imposed costs in the state of Texas to hit $2.9 billion. By the year 2000 that figure could leap to $6.4 billion.

These government regulations are necessary, but the fact remains that they cost money. The trucking industry now has made it clear that it can no longer continue to absorb the costs alone; thus, shippers are increasingly aware of possible rate increases.

Throughout the 1980s, the trucking industry was able to offset cost increases—in many cases without passing them on to the shipper. We were able to do that through reduced costs and increased productivity via the use of more productive trucks, new technology and smarter, better-trained managers.

Maintaining the level of high performance in the 1990s, given the increased governmental regulations, will prove a more difficult and costly task. Despite reduced operating costs and increased productivity, 1989 profit margins were still less than two percent. For many industry segments in Texas, profits were virtually non-existent.

While we continue to fight to improve and survive by being more productive and offering better and more innovative services, future increases in government-imposed costs without continued economic regulation to help cover costs will drive some of us out of business.

Besides safety regulations, the trucking industry faces government-imposed costs in three categories: highway taxes, environmental standards and labor.

TMTA understands the need to accept increases in fuel taxes and permit fees to help pay the cost of safety programs and to construct and maintain highways. However, these programs also cost the industry big dollars.

Although the commercial trucking industry comprises only 13 percent of the total miles driven and eight percent of the vehicles registered in the country, it will pay
more than $18 billion in 1991 in federal and state truck taxes—a full 32 percent of the total federal and state highway user taxes.

Fuel taxes make up the largest share of highway taxes. For every gallon of highway diesel fuel used in this country, the federal government collects 20.1 cents. The states collect an average of 19 percent more. Together, those taxes add about 60 percent to the wholesale price of fuel. That’s a lot of taxes for an industry that buys 36 billion gallons of fuel and gasoline each year.

Consider also that the industry pays highway taxes for vehicle registration fees in all states, bingo stamp fees in 39 states, weight-distance taxes in six states, and the heavy vehicle use tax, tire tax, and the new truck tax to the federal government.

Also of concern are the costs incurred in simply paying these taxes. The DOT estimates it costs the industry between $1 billion and $3 billion a year just to complete the paperwork to pay the taxes. We feel, however, that we are making progress in this area to reduce the burden and duplication.

One of the newest areas of costs are environmental issues. While the trucking industry supports efforts to improve the environment, the price tag to the industry will be staggering.

The industry faces or will face requirements concerning low-sulphur diesel fuel, improved emissions standards, storm water permit requirements, upgrading and replacing underground tanks, installing water collection and treatment systems for truck washing facilities, and disposing of used tires and used oil as well as many other new requirements.

All environmental improvements to fuel, vehicles and facilities carry a high price tag. For example, the low-sulphur diesel fuel required by 1994 will cost three to seven cents more per gallon and cost the industry an increase of $1.7 billion a year. Also, improved emissions standards will push the cost of new vehicles up 10 to 20 percent, or $1 billion per year.
The combined costs of all environmental regulations are staggering, costing the
trucking industry billions of dollars in the next few years.

In addition to the trucking-specific costs, the industry also faces many others, such
as labor, which are shared by other businesses.

Despite our best efforts to improve safety, trucking companies are labor intensive
and therefore have a higher workplace injury rate than most businesses. As a result,
the industry suffers disproportionately from skyrocketing workers’ compensation
premiums and medical claims. This is especially true in the state of Texas, where the
typical trucking company’s insurance premiums exceed $1 million annually.

These costs currently total as much as $9 billion in the U.S. annually. At current
growth rates, this figure could leap to $24 billion by the year 2000. The industry
anticipates heavy burdens from mandated changes in leave, health benefits and
Disability Act requirements. The cost per worker or per facility is likely to be higher
in trucking than in larger or less labor-intensive firms. Also, the industry has large but
hidden labor costs for workers, managers and executives who must learn about and
comply with the ever-growing list of governmental regulations.

Overall, the trucking industry has worked hard to make the air cleaner, and roads
and the workplace safer. At the same time, a productive trucking industry has given
U.S. goods a competitive advantage over those produced elsewhere.

We conclude that our efforts have been worthwhile. In fact, we’ve witnessed a 40
percent drop in the fatal accident involvement rate for heavy trucks from 1977-1988,
despite an increase in miles driven of 36 percent. We’ve also seen a drop in total
fatalities for medium/heavy trucks, a 17 percent drop in total number of fatal truck
accidents, and five percent fewer trucks and 16 percent fewer drivers placed out-of-
service.

Still, there remains much the industry can do: We can train our people better,
manage disability costs, improve performance standards and eliminate the needless
government paperwork costs that do nothing to improve our industry. We must ensure
government actions benefit safety, the environment and the well-being of our
employees without putting an unfair burden on the industry.

However, the trucking industry does not have a sufficient profit margin to absorb
increasing costs without your help. We rely upon and need the current regulated
system in the state of Texas to maintain a stable working environment and help ensure
a high standard of safety for both our industry and the general public.

We believe that a stable, regulated environment is the safest, surest and most
beneficial system for both the industry and the general public. Despite the extremely
low profit margins often encountered under the system, a regulated system helps
ensure federal, state and local compliance with all existing rules and regulations
governing the trucking industry.

Deregulation of the trucking industry would not only wreck our economic health
but would also endanger the personal safety of all who travel on Texas highways.
Economic regulation in tandem with safety regulation provides Texas trucking
companies the best opportunity to comply with stringent safety standards, driver
training provisions and insurance requirements.

In a deregulated environment, the special reduced rates that would be demanded of
trucking companies by mega-corporations would not be sufficient, in many cases, to
cover actual expenses incurred by the trucking company. Thus, many trucking
companies would be forced to cut costs in order to simply stay in business.

The result would be cuts to safety practices and vehicle maintenance as, ultimately,
many smaller companies would be unable to continue to adhere to governmental
regulations and also turn a profit. Many of these competitively-disadvantaged
companies would go out of business, resulting in the loss of thousands of jobs here in
Texas.

Under this scenario, all Texans would suffer.
### Government-Imposed Costs on the Trucking Industry

*Source: American Trucking Association*

<table>
<thead>
<tr>
<th></th>
<th>Federal (billions)</th>
<th>Texas (millions)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Highway Taxes and Fees</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Federal</td>
<td>8</td>
<td>8</td>
</tr>
<tr>
<td>State</td>
<td>10</td>
<td>13</td>
</tr>
<tr>
<td><strong>Safety Costs</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Testing/Inspections/</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Mandated Equipment</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hazmat Fees/Compliance</td>
<td>2</td>
<td>6</td>
</tr>
<tr>
<td><strong>Environmental Costs</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Original Clean Air Act</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>Amended Clean Air/Water/RCRA</td>
<td>--</td>
<td>8</td>
</tr>
<tr>
<td>Stormwater Permit</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Requirements</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Monitoring Diesel</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Emissions</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Installing Fuel Systems</td>
<td></td>
<td></td>
</tr>
<tr>
<td>for Alt. Fuels</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Underground/Aboveground</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Storage Tanks</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Truck Washing Facilities</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Used Oil and Tire</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Disposal</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Waste Collection/Treatment System</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CFC Recycling Units</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Recycling Anti-Freeze</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Labor Costs</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Workers Compensation</td>
<td>9</td>
<td>24</td>
</tr>
<tr>
<td>Mandated Health and Leave</td>
<td>--</td>
<td>8</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>$31 Bill.</td>
<td>$73 Bill.</td>
</tr>
<tr>
<td><strong>As Percent of 1991 Revenues</strong></td>
<td>12%</td>
<td>28%</td>
</tr>
<tr>
<td><strong>As Multiple of 1991 Profits</strong></td>
<td>8 times</td>
<td>18 times</td>
</tr>
</tbody>
</table>
PIPELINE TRANSPORTATION ISSUES IN TEXAS

A Presentation before the
Transportation Committee
Texas House of Representatives

by the

Pipeline Panel
Advisory Committee
Texas Transportation Institute

March 24, 1992
College Station, Texas

Panel Chairman: Bill Walton - Consultant
Panel Coordinator: Ray James - Texas Transportation Institute
Panel Members: Leroy Burch - Gifford Hill American
George H. Ewing - Gas Masters, Inc.
Jack B. O'Neill - Consultant
Holloway Sinclair, Jr. - United Gas Pipeline Co.
INTRODUCTION

The Pipeline Advisory Committee to the Texas Transportation Institute is pleased to have the opportunity to present a brief summary report on the pipeline transportation systems in the State of Texas to Chairman Cain and Texas House Committee on Transportation.

The extensive pipeline network in the State plays a crucial role in the movement of materials and products. The system is highly efficient, operates very economically, and provides many benefits to the public. The largest and most extensive pipeline systems are for the transportation of crude oil, refined oil products and natural gas. A growing part of the pipeline industry, however, are the petrochemical pipeline networks serving petrochemical complexes such as along the Houston Ship Channel. These pipelines serve as continuous connections to supplies and customers.
PIPELINE INDUSTRY IN TEXAS

To illustrate the current size of the pipeline industry in Texas, how we got here and to show its maturity, some statistics are needed.

Texas became the leading oil producer in the U.S. in the 1920s and continues on today. Since oil and gas pipelines serve the oil and gas producers and refiners of Texas, our growth and size has been closely tied to the state of the overall oil and gas business.

Texas now has 82,000 miles of crude oil lines, 32,000 miles of products lines and 137,000 miles of natural gas lines for a total pipeline infrastructure of 137,000 miles.

The growth rate over the past 10 years is on the order of 2.5 to 3% annually. This is half the growth rate enjoyed in the 1950s and 1960s. During the same past 10 year period Texas produced crude oil volumes have dropped about 28% (1.8 vs 2.5 MBD). Natural gas has remained about constant (6.6 TCFD). This current oil and gas production represents 13.3% of the energy produced in the United States.

Looking at employees, the pipeline industry has over 32,000 employees or 14% of the total oil and gas industry - the annual payroll is about $1.3 Billion. These Texans are employees of 1,288 pipeline companies. I believe we all understand the oil and gas industry is a mature industry and in fact a continuous decline in productions forecast is anticipated.

FUTURE TRENDS

It was mentioned earlier that the state of the pipeline business is tied to the oil and gas business. Some changes are forecast for this relationship as we approach the next century and crude oil production declines. As we see the future now:
• Natural gas pipeline movements will depend upon demand here in Texas as well as the other states.

• Crude oil and products pipeline movements will also depend upon demand but the declining Texas production will be offset by imports. The liquid pipeline business then will become more of a service to imports and Texas refineries that refine these imports to offset declining production.

• Other products such as synthetics and coal slurry are much further down the road depending on crude oil price and availability. Likewise for Nuclear power that is still having trouble getting started.

• There will be a continual growth in pipelines of 1-2% annually to handle changing sources of crude oil and increase in Natural gas consumption. Also we expect changes in service of some larger existing pipeline systems, such as from crude to gas, as the resources change.

• With this small forecast growth in pipeline infrastructure the pipeline companies will focus on competing to transport these resources as well as focus on pipeline safety and the protection of the public and environment.

**CHALLENGES FACING THE PIPELINE INDUSTRY**

Challenges facing the industry center around operating by regulation, pipeline safety, protection of the public and the environment.

The first challenge is operating by too restrictive regulations. Both federal and state regulations can and do inhibit efficient and safety operations and restrict growth of the pipeline industry. Let me be more specific by giving one example of regulatory constraint in the area of disposal of hazardous waste.
DOT requires re-hydrotesting certain existing pipelines. The reasons are not important in this illustration. Upon completion of the test, the test water must be disposed. The test water invariably contain benzene in excess of .5 PPM - the level recent dictated by Resource Conservation and Recovery Act (RCRA) as being a hazardous waste. This test water as a hazardous waste must be disposed under a National Pollutant Discharge Elimination System (NPDES) permit. Here is the constraint. Since the EPA has not delegated administration of the NPDES program to Texas as it has some other states, dual permits must be obtained from the EPA and Texas. It is our understanding the EPA considers these to be low priority discharges and therefore has not devoted the resources to issue permits in an effective manner.

The most obvious resolution is for EPA to issue a nationwide general NPDES permit to cover all hydrostatic water discharges and that Texas take over administration of the NPDES program.

The pipeline industry continues to place emphasis on public education for the protection of the public.

The pipeline industry has an ongoing public education program that includes distributing informational booklets to residents and businesses, and working with public safety officials along our rights-of-way and excavation companies. Also, there is an industry coordinated program of TV/radio public service announcements. The need for increasing public awareness is being brought about by urbanization adjacent and along our pipeline rights-of-way. Protection of the public brings me to the next challenge which is excavator damage to pipelines. This is a pipeline safety, public safety and environmental issue.
Damage by third party excavators who did not know of pipeline's existence or its exact location continues to account for the largest number of occurrences of damage and rupture to pipelines. Legislation requiring excavators to notify pipeline and other companies or utilities having underground facilities is a priority item to help reduce or eliminate damage to underground facilities from excavation.

To accomplish this goal the pipeline industry, as well as other having underground facilities, need the help of the Texas Legislation and in particularly the Transportation Committee to Champion this cause to provide this added measure of safety.

It is expected that federal legislation will be enacted, and Texas will adopt, to require one-call systems for regulated pipelines but this protects us only from other regulated pipelines - not other underground utilities or anyone else involved in underground facilities. Damage from regulated pipelines is not the problem in the first place.

Texas SB 96 would establish a mandatory one-call system for Texas. The bill was the result of months of work by various groups. While not perfect, it would establish a mandatory one-call system, participation would be required by owners of underground facilities, it would establish mandatory notification and penalties for violation. Unfortunately, opposition has developed by electric utilities, as well as from cattlemen's association, independent producers, general contractors association and Texas Municipal League.

The pipeline industry still strongly supports this bill, but it is uncertain whether it will pass.
Another challenge is the enforcement of drug and alcohol policies. About this time 2 years ago federal regulations regarding drug use in pipeline transportation became effective. And now the DOT will implement alcohol abuse regulation about the first of 1993 based on the "Mass Transit Drivers Act."

This regulation, which includes mandatory random testing as well as other requirements, is a significant and effective deterrent to drugs in the work place. Prior to this time, I might add, almost all major pipeline companies had drug and alcohol policies in place. These regulations extend to contractors doing maintenance work on operating pipeline systems.

We have seen fewer drug/alcohol problems in the work place since these regulations were implemented. The challenge is to salvage employees with these problems and yet terminate those that continue to be potentially dangerous to the public as well as company operations.

The last challenge to be mentioned is contingency planning. Like many of our other challenges, contingency planning involves pipeline safety and public as well as environmental protection. All transportation has some inherent risk, therefore ongoing emergency response planning is mandatory. Currently the nation and state and the entire oil industry, not just the pipeline sector, is implementing more effective emergency response organization and capability. This is being driven by two forces. First, there is the gradual urbanization of property adjacent to our facilities that I mentioned earlier, and secondly, by the incidents and environmental problems occurring over the past year. These plans are including the community and emergency response agencies to a greater degree than in the past.

To give an idea of environmental activities the pipeline industry is involved in, two examples come to mind:
The API has established the Environmental Excellence Program with 3 long term goals.

- Secure and maintain commitment to operate by the API Environmental Guiding Principles
- Establish credibility with Society
- Become respected participants in developing effective solutions to safeguard the community, workplace and environment.

The Gas Research Institute continues research in the areas of pipeline materials, coatings, nondestructive evaluation, corrosion, leak detection, environmental effects in ROW, stresses in pipelines under highways and railroads - all focusing on pipeline integrity.

THE PARTNERSHIP BETWEEN GOVERNMENT AND INDUSTRY

The regulatory world is changing as the public becomes more aware of the pipeline industry's role in public and environmental safety. We the pipeline industry should embrace them and seek creative ways to improve regulatory compliance.

To accomplish this, we need to move away from the historical evolutionary relationship where it seems at times, industry and the regulators are at opposite sides of issues and move closer together. However, the relationship must be built on rules and regulations that are fair and economically attainable. Two of government's
duties are to protect the environment and promote the general safety of the public. As these duties need to be performed in a manner that is acceptable to the public, there should be growing recognition that pipelines are a very safe means of transporting the energy products that we all rely on every day. Here let me say Texas and the federal government have sufficient laws to regulate our activities (except for a one-call law). Therefore, we ask that you regulate us under the regulations we have today.

Thank you. This concludes our prepared remarks. Now the panel will be happy to answer your questions.
RAILROAD ISSUES IN TEXAS

A Presentation before the
Transportation Committee
Texas House of Representatives

by the

Railroad Panel
Advisory Committee
Texas Transportation Institute

March 24, 1992
College Station, Texas

Panel Chairman: H. E. Handley, Jr. - Port Terminal Railroad Assoc.
Panel Coordinator: Hoy Richards - Texas Transportation Institute
Panel Members: Bill Barton - Texas Railroad Association
William J. Harris - Snead Chair of Trans. Engr.
A. M. Henson - Southern Pacific Transp. Company
Dan K. Joiner - Houston Railroads
Bob Neely - Texas High Speed Rail Authority
Ken W. Ross - AT & SF Railway Company
Rural Rail Service Preservation

Several hundred miles of railroad line will soon be abandoned, sold for scrap or turned over to a shortline operator in rural West Texas. For the past few months, local governmental agencies and others have attempted to salvage this situation. The problem is that there is no state policy to deal with this situation. Although the Texas Railroad Commission has rail planning responsibility there is no State agency having responsibility for insuring the continuation of rail transportation in areas where it is critical to the economic well-being of the people. Agricultural related industries in these areas are faced with plant closure, relocation or increased transportation charges for product movement.

During the next few years several other segments of Texas railroads will be placed on the abandonment roles or offered for sale to scrap dealers or shortline operators. Until such time that legislation can be put in place to properly address this issue, the Governor’s office should take the lead in marshaling state agencies in support of local government entities striving to keep rural rail service.

High-Speed Rail Passenger Service

The Texas High-Speed Rail Authority has granted a franchise to construct and build a billion dollar rail passenger system. How will this system fit into the Texas Rail Transportation Plan? What is its role in carrying out State Transportation Policy? Unless and until we have a State Transportation Policy and/or a State Transportation Plan these two questions cannot be answered. We now have a State Department of Transportation to implement both state transportation policy and plan. This next legislative session should include discussion of this significant responsibility of our state government.

Rail-Highway Safety

There are more people killed and injured in train and automobile crashes in Texas than in any other state. While these statistics are declining in many of our sister States our numbers increase. The victims of these accidents are
mostly young drivers, therefore, driver education is a possible solution to a portion of this problem.

Again, we need a coordinated effort among our engineers, law enforcement officers and driver education instructors to reverse this trend in highway-rail accident experience. An emphasis on this issue stemming from the Legislature will focus attention on the problem. Several states, including Missouri, Minnesota and Ohio are rewriting their highway-rail legislation to make it more compatible with current national programs. Texas should review its laws to determine needed improvements in the way the crossing program works in this state.

Transportation of Hazardous Materials

Our urbanized areas are criss-crossed with railroad and roadway routes on which hazardous materials are transported. We in Texas are fortunate to have the natural resources that support energy related industry. However, in order to reap the economic benefits from the production and processing of these resources we are faced with the problem of moving these products safely. Within our inland waterways and ship channels the threat of spills of materials hazardous to all forms of life exists. We must come up with a plan that can balance the economic benefits of these resources with public safety and quality of life.

Again, it will take strong leadership from the transportation related industry to ensure safety in the transportation of hazardous materials. A well-conceived plan proposed by representatives of private industry, governmental agencies and the scientific community can provide the basic frame work for legislation to cure these ills.

Transportation Links to Mexico

There only five rail ports of entry to Mexico. Although there are a much larger number of roadway entry points to Mexico they are deficient in handling the current demand for the exchange of goods between the two countries. Federal regulations involving truck operations along the U.S./Mexico border could stifle the very trade that we are attempting to encourage with our sister states in Mexico. We need a transportation policy for the U.S. Border Zone
and the Fronteria of Mexico. That policy should be put in place to supplement national policy regarding Mexico. The people of Texas have much more at stake than the rest of the nation when trade with Mexico is the issue. Without an adequate transportation infrastructure, South Texas cannot reap the potential benefits of a new and expanded trade alliance with Mexico.

**Preservation of Rail Rights-Of-Way**

When there is truly a reason for abandonment of rail right-of-way, on occasion that right-of-way moves through populated areas in a fashion that cannot be reproduced if that right-of-way is lost. Accordingly, the State should establish a mechanism by which it acquires and preserves those rights-of-way for future access recognizing that as the population and economy grows, continuous rights-of-way will be essential for communication, power distribution, pipeline, and surface transportation access. That surface transportation access should include maglev, rail or other modes of transportation as yet not developed. Without the right-of-way the transportation systems may not be able to be installed in an efficient and effective fashion.

**Further Consideration of Joint Rights-Of Way**

As the economy and population grow, the desirability of isolating higher speed rights-of-way, such as interstates and high speed rail systems, will continue to be of importance. To the degree that it is possible to create a single right-of-way, wider than the current right-of-way but not as complex as multiple rights-of-way, attention should be given to acquisition now of appropriate rights-of-way and reserving them to ensure Texas is not to be strangled in its attempt to achieve adequate transportation systems for the future. This problem of interference with existing use of land has already been raised in connection with attempts to consider a high speed train under the current franchise program. Current owners, quite rightly, are concerned about what will happen to current access to their land if a right-of-way is placed across it. If there is going to be disruption to create the right-of-way, consideration should be given to creating an adequate right-of-way so as to accommodate other modes of transportation which may be required in the future.
At the time the rail system, and latter the interstate system was established, land values were very different and the desire for creating access was paramount. However that circumstance is rapidly changing and the conflict between rights-of-way and other land uses are growing substantially. It is imperative that there be a plan ahead to anticipate and lay out an appropriate network of transportation corridors that will serve the present and future and anticipate requirements for the future. Such a program would place Texas far ahead of any other part of the United States in planning to ensure that the future generations can draw full benefit from advanced transportation technology.

Intermobility and Multi-Modalism

Another issue that may not be appropriate to define as an issue, per se, has to do with the broad process of intermodality and multi-modalism. The recognition of the importance of intermodal connections, so as to take full advantage of the full transportation system and not require one part of the system to more than it should do, was never reflected in any national transportation policy. In order to enhance the effective utilization of the rail system, much more attention needs to be given to the multimodal aspect of transportation. This is not reflected in the current organization or in the current legislative authority to address the transportation system that serves and connects Texas to the rest of the world.
RAILROAD TRANSPORTATION TESTIMONY

Presented to the House Transportation Committee

by

Texas Transportation Institute Advisory Committee, Railroad Panel

March 25, 1992

The railroad system in Texas continues to be a very important contributor to the state’s economy. Texas has 11,501 miles of rail which is about 10% of the nation’s total. This is more than any other state. Also, Texas has the largest railroad employment which totals 14,671 or 7% of the nation’s railroad employment.

A number of major issues are of concern to the railroad industry. These include concerns about the general economic stability of the railroad industry, creation of regional short lines from lines no longer profitable, and matters concerning safety.

ECONOMIC STATUS OF THE RAILROAD INDUSTRY

In order to maintain a dynamic and effective rail network, it is essential that unnecessary regulations or regulatory disparity from other modes that put railroads at a competitive disadvantage should be corrected. There are a number of regulations impacting costs that are critically important, such as abandonment/restructuring restrictions and overly protective labor laws including, a costly and divisive rail worker injury compensation scheme (FELA).

Generally, economic and labor issues are not matters for state regulation. However, such issues warrant the attention of the transportation community in Texas in its efforts to support Congressional initiatives to balance the federal regulatory bureaucracy for all modes so as to place the railroad industry on a level playing field with other competing modes. Railroads historically have been plagued by a set of regulations established in an earlier era before other industry and transportation modes were regulated.
The economic status of the rail industry is also impacted by local actions in Texas. Logically, local communities cannot exercise control over the speed of railroad trains engaged in interstate commerce. The Interstate Commerce Clause in the Constitution has been accepted as overriding local regulations that affect the speed of railroad operations. However, it is the desire of the railroad industry to work closely with local communities, recognizing their need for local understanding and their desire to be good citizens. Railroads need the sympathetic support and understanding of all groups so as to try to insure that the railroads provide the kind of support for the communities essential for railroads to exist and the communities to prosper. Any action that can be taken to encourage local communities to cooperate with railroads toward the end of improved service without jeopardizing safety should be pursued.

ABANDONMENTS

The abandonments of lower density railroad lines are inevitable given class I carrier's high overhead primarily caused by burdensome work rules and wage scales. In many cases, it is advantageous to retain rural railroad service if at all possible. The costs of rail service for the farm communities tends to be lower than the costs of truck service. The costs of highway upgrade or additional highway maintenance as a consequence of putting heavier loads when rail service is abandoned can lead to serious problems for county budgets. Accordingly, steps should be taken in Texas to assure that the new owner of a short line or regional railroad is not burdened by the same constraints (labor and otherwise) that led the mainline railroad to sell or abandon the line.

SAFETY

Safe transport, particularly of hazardous materials, has consistently been a primary concern for railroads for many decades. There are explicit and constructive programs directed at improving the structural integrity and puncture resistance of tank cars so as to reduce spillage during derailments/accidents. The safety record of railroads is good and there is little to demonstrate that increased
regulation will improve safety. There is no need to add costs and complexity to operations by increasing the regulatory environment.

In regard to grade crossing safety, efforts continue to upgrade grade crossing warning devices from crossbucks (passive) to flashers, bells and gates (active). The support in highway legislation for assuming the capital costs of railroad grade crossing systems has been a useful contribution toward reduced injuries and fatalities at railroad grade crossings.

Additional support should be given to Operation Lifesaver. This program represents a coordinated effort by highway authorities, railway authorities, citizens groups, and educational agencies to make people aware of the potential danger of grade crossings and to encourage full response to signals and barriers. Accidents have dropped 4%, fatalities 17% and injuries 22%. There is still a lot to be done and your help is needed.

GENERAL CONCLUSIONS

Since freight railroads are almost exclusively in the private sector, there is a tendency of government to overlook their contributions to economic development and to concentrate its attention on modes in which there is heavy governmental subsidy such as highways, airports and waterways.

Transportation is of ever increasing importance in the current drive toward national and international economic competitiveness. It is essential that Texas recognize how each mode can contribute to economic growth and adopt measures to assure that transportation is not a barrier to the economic goals of the state.
TRANSPORTATION SAFETY ISSUES IN TEXAS

A Presentation before the
Transportation Committee
Texas House of Representatives

by the

Safety Panel
Advisory Committee
Texas Transportation Institute

March 24, 1992
College Station, Texas

Panel Chairman: Henry Lewis - Motor Carrier Consultant
Panel Coordinator: Rodger Koppa - Texas Transportation Institute
Panel Members: George R. Gustafson - Texas Safety Association
Bobby G. Hodge - Tx Department of Transportation
David Martin - Employers Insurance of Texas
James Wilson - Texas Department of Public Safety
1992 TESTIMONY OF THE SAFETY PANEL OF THE TTI ADVISORY COMMITTEE

The Safety Panel of the Texas Transportation Institute Advisory Committee represents views from the trucking industry, the Texas Department of Transportation, the Department of Public Safety, safety professionals, and the insurance industry. Since our testimony to you two years ago, much progress has been made in transportation safety in Texas, but much remains to be finished or begun. Let me briefly recount some of the progress made and challenges still to be met from our perspective.

Commercial Drivers License

With the passage of HB 1342, effective September 1991, certain irregularities that remained after enactment of the original legislation for the Commercial Drivers License have been corrected, and implementation of the CDL appears to be proceeding very well. No doubt some fine tuning will be required as time goes on, but the CDL is off to a fine start.

Commercial Vehicle Inspection

Presently there exists a requirement in the Federal commercial vehicle regulations (396.17) that a vehicle must have a safety inspection on at least an annual basis. The items of inspection identified in those Federal regulations (which are also now State regulations under SB 1204) are considerably more stringent than those identified in the Texas Periodic Motor Vehicle Inspection (PMVI) under VCS 6701d, Article 15. In other words, a commercial vehicle could obtain a perfectly valid PMVI sticker just like the one that you get every year on your private car, and yet not be in compliance with the law adopted by SB 1204! The disparity between the long-standing Texas PMVI system and the commercial vehicle safety standards was first pointed out to you in the testimony presented in 1988.

A committee consisting of Department of Public Safety License and Weight and Vehicle Inspection personnel was formed to study the differences between these two parallel safety programs under legal mandate, and to provide the necessary language as input to legislation to enhance the present PMVI program to meet Federal requirements. The great advantage in such legislation will be that Texas truckers will no longer be subjected to a double standard: the annual PMVI inspection sticker will attest compliance with 396.17. The enhancement of one of the oldest and best periodic motor vehicle inspection programs in the nation (which also employs private enterprise in partnership with the State) is a very worthwhile goal. SB 95 was very nearly successful in
1991; a similar bill will be before you in 1993, and we urge its adoption by the Legislature.

Hours of Service for Commercial Drivers

Two years ago we discussed hours of service for commercial drivers with you. Present standards now in force in Texas require truck (and bus) drivers to drive no more than 10 hours within a 15 hour on-duty period, after eight hours off-duty, nor more than 60 hours in any seven consecutive days. "Off Duty" does not really mean "sleeping" or "resting," but rather for all practical purposes "not driving." No regulations are so flagrantly violated or are so difficult to enforce than hours of service regulations.

Driving a fully loaded 18-wheeler has little in common with driving a passenger car. The dynamics, time delays, and consequences of error are worlds apart. There is no transportation mode other than high-performance jet aircraft piloting that is less forgiving than motor vehicle operation in general and truck driving in particular. In contrast, the railroad engineer's job is far easier, and industry work/rest regulation far more strict.

As we reported to you the Federal Highway Administration is funding a large-scale study of truck and bus driver fatigue and hours of service by the Essex Corporation. This study may provide much more definitive data on the effects of different ratios of driving/not driving time on driver performance. Also planned is the development of countermeasures to driver fatigue: scheduling, arousal strategies, and revamped regulations more in accord with (a) the realities of the industry and (b) knowledge about the effects of work/rest cycle disruption which has been learned since 1935.

The Texas Legislature, through this House Committee, should continue to be aware of this research, and be prepared to support progress in hours of service regulations that enhance highway safety.

Driving While Intoxicated (DWI)

In 1988 and in 1990 those on this Panel recommended to you a very simple law which has gained tremendous support in many quarters: prompt suspension of the privilege to drive in the State of Texas upon arrest for DWI. DWI related fatalities appear to be on the rise again in Texas, 7.4 percent in 1990. Federal funds (the 408 and 410 Programs) are available for States that enact DWI suspension legislation to help in the formidable enforcement and administrative challenges that may arise. While the increase in administrative workload is unavoidable, administrative license suspension is purported to be
the single most effective deterrent to driving while impaired, and 29 states have
adopted some form of this countermeasure for DWI.

In Texas such legislation was proposed and nearly passed in 1991, and
needs to be re-considered in 1993. A major factor in its defeat in the 1991
Session was a Senate Committee question on the constitutionality of such a
law. It is our understanding that the US Supreme Court has ruled DWI
suspension to be constitutional provided a court hearing is held a "short" time
after roadside suspension.

A companion concern for us is the lack of a "zero tolerance" law in
Texas. All jurisdictions in the United States now set the minimum drinking
age at 21. Logically, drivers under 21 should not have any alcohol in their
systems. Evidence of any level of alcohol on arrest of a young driver should be
grounds for immediate suspension of the driving privilege. Consideration
should also be given to lowering the BAC limit from the current 0.10 percent
to 0.08 percent, following the lead of California. This reduces the level from
roughly the equivalent of a six-pack to that of four beers or a little less.
Recent demonstrations and controlled studies show driving performance to be
significantly diminished at BAC levels much lower than 0.08, to say nothing of
0.10 BAC.

A serious problem continues to exist with the adjudication of DWI
cases in Texas. DWI is the most frequently encountered offense in the county
court system, and the backlog of cases is tremendous. On a statewide level, a
recent TTI study found a productivity rate of about 50 percent. This figure
represents the number of cases dispositioned by court action (i.e., not
dismissed) vs. the total number of cases. Over the last several years, this
efficiency rate has not significantly increased. While this situation varies
greatly from county to county (and no two counties are exactly alike on the
procedures and paperflow of adjudication), it appears that, in general, attempts
to expedite the DWI adjudication process have not proven very successful, and
more effective countermeasures in the enforcement sector will only make the
backlog grow!

Another tool in the DWI battle that may come up in 1993, and which
we endorse, is alcoholic beverage seller and server training as a condition for
vendor licensing. Currently, there are provisions for limiting liability for
employers who do provide such training, but adding such a mandatory
condition for licensing adds a powerful incentive.
Highway Speeds

As things stand Texas at this time has the lowest fatality rate ever: 1.9 deaths per 100 million vehicle miles traveled. That's the good news. The bad news is that the latest figures on compliance with the posted speed limits—whether 55 or 65—suggest that Texas may soon be in jeopardy with regard to highway funds. Compliance with the posted speed limit has decreased to 50.8 percent. New sanction guidelines suggest the transfer of maintenance funds to safety programs. How this is to be implemented remains to be seen. Mean speeds on rural interstate highways generally have risen since the change to 65 MPH on certain major highways. The percentage of drivers exceeding 65 is now nearly 60 percent. A recent study by TTI shows that speeds on highways still zoned for 55 but near or intersecting 65 MPH highways increased after the change from 55 to 65.

Higher speed limits may mean more law enforcement presence will be needed. We will either be paying for more enforcement on the highways or we will be paying for more dead and injured Texans as highway posted and actual speeds increase. The enviable fatality rate of 1.9 may again go up in Texas.

A related issue which we cannot help commenting upon is the use of radar detection devices. TTI has done research on their impact on highway safety with equivocal results, but there is no doubt that their tolerance by the State of Texas gives tacit encouragement to speeders. These "fuzz busters" exist for only one reason: to facilitate speeding. The response of the State of Texas should be equally simple: outlaw them. Granted that enforcement will be feasible only in the context of arrest for other reasons, such interdiction could make it harder to acquire and keep these devices. Although there are now speed sensors available which use laser beams rather than radar, American ingenuity will no doubt come up with an appropriate detector. Hence any legislation should be broad enough to cover all devices that seek to defeat lawful measurement of vehicle speeds.

Seatbelt Usage

After the mandatory seat belt law was passed in the 1985 Legislature, safety researchers were amazed by the very high rate of compliance—from a dismal 15 percent to better than 66 percent in urban areas statewide, one of the highest in the nation among states that have adopted mandatory seat belt use. Although the percentage of seat belt wearers in the driving population declined after the initial honeymoon period to 54 percent in 1988, that slide has turned around. Recent surveys have shown increases in driver belt use to an all-time high of 67.5 percent in 1991. The record with respect to highway safety has followed the adoption of seat belt laws very closely. During the first 16
months after adoption, Texas highway fatalities decreased by 18.6 percent under what would have otherwise been expected.

Further studies will establish whether seat belt usage rates are continuing to increase or are leveling off. President Bush has set a national goal of 70 percent usage by 1992, and the DOT through the 402 Program has set aside grant funds for States to help them achieve such usage rates (with penalties for those who do not!). TTI's survey in 1991 found that six of the 18 cities surveyed were already above 70 percent usage rates for drivers. Our task is to find strategies in both the educational and law enforcement areas with funding from the DOT to keep compliance with this stunningly effective traffic safety countermeasure as high as possible.

But, we need to take several more steps. First, an unacceptable number of Texans are not buckling up their children. TTI child safety restraint surveys conducted in 14 urban areas in 1991 revealed that 41 percent of children aged newborn to 4 years old were riding unprotected by any restraint. Similar surveys conducted last year by the Texas Agricultural Extension Service revealed that 50 percent of children in this age range were not restrained. According to 1990 Department of Public Safety statistics, 34 children in this age range, 0 to 4, were killed in Texas motor vehicle accidents. 29 of those children were not restrained when they died.

As a second step, seat belt usage needs to be extended to include the rear seat. Two thousand rear seat passengers die each year as the result of injuries sustained in accidents. Many of these people are children, who in Texas are treated no different than adults when they reach the very young age of four, at least as far as seat belts are concerned. Regulation that needs to be passed would be very simple: all passengers in a motor vehicle must be provided with and use occupant restraints whenever a vehicle is under way! The automotive industry is progressing very rapidly in the provision of systems of occupant protection that integrate belts, airbags, interior padding and structure in ways that may render present-day belts obsolete and such regulation moot. Until such an ideal state of affairs is reached, Texas should enforce seat belt usage for all occupants, and especially for children of any age.

Federal Regulations

The Occupational Safety and Health Act reportedly will soon be publishing the final version of the "Occupational Protection in Motor Vehicles" Standard. The new regulation will require any employer with a fleet of one or more vehicles used in business to implement a formal, written safety plan. Just how this might be implemented in Texas remains to be seen, and bears close scrutiny by this Committee.
Closing Remarks

As you can see from these few remarks, there is still a lot of work still to do in the transportation safety arena, but there have been considerable advances in making our transportation as safe as possible for Texans and the rest of the nation.

Acknowledgements:

This presentation was prepared by Rodger Koppa, Quinn Brackett, Nancy Mounce and Katie Womack of TTI, from text and resource material provided by members of the Safety Panel, TTI Advisory Committee.
URBAN TRANSPORTATION ISSUES IN TEXAS

A Presentation before the
Transportation Committee
Texas House of Representatives

by the

Urban Panel
Advisory Committee
Texas Transportation Institute

March 24, 1992
College Station, Texas

Panel Chairman: Larry Heil - McDonald Transit Associates, Inc.
Panel Coordinator: Dennis Christiansen - TX Transportation Institute

Panel Members: Richard Christie - TX Department of Transportation
Dick Conley - Consultant
Mildred Cox - City of Dallas
Roger Hord - Houston Chamber of Commerce
Jack D. Huffman - City of Irving
James Huffman - TX Department of Transportation
Steve Lockwood - Federal Highway Administration
Michael Morris - North Central TX Council/Govt's
Tom Niskala - Corpus Christi Transit System
Gary L. Santerre - City of Fort Worth
C. Judson Shook, Jr. - City of Richardson
Bill Stockton - City of Austin
J. R. Stone - Texas Department of Transportation
W. V. Ward - Center for Transportation Research
URBAN TRANSPORTATION TESTIMONY
Presented to the House Transportation Committee
by the Urban Panel of the
Texas Transportation Institute Advisory Committee
March 24, 1992

We appreciate your taking the time to meet with us here today so that we may present
for your consideration our proposals for improving transportation in Texas cities. This is
a particularly timely opportunity because the ideas we will describe are responsive to the
1990 Clean Air Act Amendments and the 1991 Intermodal Surface Transportation
Efficiency Act. We hope this information will prove helpful in your deliberations about
future improvements for Texas transportation.

BACKGROUND

Texas cities today face many demands for attention and funding. Transportation must
compete with education, crime, economic development and environmental concerns for
the support of local communities. And many of these same needs eventually arrive at
the Legislature because of an inability to fund them at the local level. All of these
concerns must be addressed if we are to maintain our quality of life, but the funding
available is insufficient to adequately meet all of these needs. Yet providing increased
funding through the normal channels of taxation is unacceptable because it is too great a
financial burden on the citizens, and it diminishes the attractiveness of the state and
local areas for economic development.

In past years this panel has cited the need for constructing more and better highways and
improving public transportation and has recommended additional funding for those
improvements. You have been most responsive to those calls, providing needed
resources for highway improvements through increased motor fuel taxes on several
occasions. But every time those taxes are raised it becomes harder to do so the next
time. We recognize that it is difficult for you to repeatedly increase funding from the
motor fuel tax source. But it is important to recognize that roadway construction and maintenance costs and transit capital and operating costs are increasing, and inflation is continuing to erode the amount of work that tax revenue dollars will buy.

PROPOSAL

Faced with that fiscal dilemma, we come before you today to propose a strategy for improving transportation that need not require additional taxes. The actions we are proposing would be part of the Congestion Management Strategy that is required for every urbanized area with over 200,000 population by the new federal surface transportation act.

The approach proposed here provides for cost effective use of existing physical facilities and efficient use of scarce fiscal resources. It includes management of transportation system operation and travel demand. It also includes increased efficiency of development patterns and user funding for transportation improvements.

Our Congestion Management Strategy includes five categories of improvements. The first would make the best use of the existing transportation system with operational improvements and minor reconstruction to ease the flow of traffic on today's facilities and consequently improve bus service as well. The second action would reduce travel demand in single occupant, private vehicles, relieving congestion by reducing the number of vehicles using the transportation system. The third action would manage growth and redevelopment to assure that traffic generated by new developments is no greater than the transportation system can handle. The fourth step would provide new transportation solutions to move people more efficiently than today. The final action would use alternative funding approaches to provide transportation improvements.

The first three phases of the Congestion Management Strategy may not be popular with local governments, business, and travelers. Those actions may require increased local government controls and changes in personal travel habits. In order to gain public
acceptance of such actions, it will be important to demonstrate their value to the local
governments and the public. Therefore we are recommending a program of research
and demonstrations to verify that the proposed actions will be successful. Funding for
the research and demonstrations is potentially available in the new federal transportation
act.

Successful implementation of demand and growth management would probably require
actions by local governments to control travel and development plans. Although such
controls may be possible under current home rule powers, it would be desirable for the
Legislature to specifically authorize local governments to take such actions. Legislation
will probably be required if the controls are to be exercised by county governments. In
areas with larger suburban developments, all jurisdictions would have to participate if the
actions are to be successful rather than selectively punitive. For this reason the
authorization for controls should also require coordinated actions by all local
governments in multijurisdictional metropolitan regions. Current State and federal law
already permit most of the best possibilities in the last two categories of improvements.

THE NEED

The need for new approaches for improving transportation is due primarily to our
inability over the years to provide enough conventional transportation capacity to satisfy
the needs of the traveling public. Today we have an excellent highway system that
performs well during most of the day, but during peak periods in many of our major
metropolitan areas, travel demand eclipses available capacity. Buses operating in mixed
traffic are affected by congestion as well so transit has not provided an effective solution.
Giving the traveling public more conventional roadway capacity has not solved the
congestion problem, even though it has provided for movement of additional traffic and
in many cases improved levels of service.

The excellent roadway system that has resulted has permitted our urban areas to grow
and prosper, but the peak period traffic generated by that growth has used most of the
additional capacity provided. And forecasts of year 2010 traffic for the Dallas/Fort Worth area, for example, indicate that congestion will remain severe even if all of the roadway and transit improvements currently budgeted are built.

Still there are many locations where increased capacity and additional roadways are appropriate so those areas cannot be neglected. We should be especially mindful of the need to improve facilities that do not meet today's standards of safety and efficiency. It is also important to continue providing facilities to serve suburb-to-suburb travel, which is probably the fastest growing segment of the travel market. Transit is another option that holds promise for most of our urban areas and even for some rural locations as well.

The additional traffic has led to another situation that compounds the problem of congestion, increased air pollution. The air quality in at least four Texas metropolitan areas is bad enough to warrant federal intervention in the transportation development programs for those cities. The 1990 amendments to the Clean Air Act threaten harsh penalties for areas that do not reduce air polluting emissions from motor vehicles. A multifaceted approach such as the Congestion Management Strategy proposed here will apparently be necessary to achieve those reductions since no single kind of improvement has proved sufficient. If we don't exercise good faith efforts to reduce emissions, federal transportation funding for the State may be suspended until we do.

**STRATEGIC PLAN**

The actions we propose would address several different aspects of the transportation supply and demand situation. To be successful the several actions proposed here should be implemented simultaneously and coordinated in order to attain maximum effectiveness as soon as possible.

**System Management**

The first phase of the Congestion Management Strategy is improving management of the
transportation system in order to make the best use of the existing facilities and services. These actions would increase the supply of transportation services by improving traffic and transit operations. This phase would demonstrate that each local government and the Department are doing everything reasonable and proper make the best use of the existing transportation system in order to solve congestion problems without requiring major funding for construction of new or improved transportation facilities. The Department has set an example for this kind of improvement with their freeway operations teams. This kind of activity should be encouraged for all congested freeways, and funding should be specifically provided for improving management and coordination of roadway traffic and transit operations.

The kinds of actions included here would be improved traffic signal systems, remedial geometric improvements, such as adequate acceleration and deceleration lanes and curve radii and superelevation, better signing, and a list of other actions that would fill the rest of our time here today. Roadway improvements to facilitate transit operations are also part of this phase. These could include bus stops that are set back from through-traffic lanes and limited stop operation of buses. An improved transit schedule information system would also be important.

One key aspect of the system management activity is to reduce the number and effects of traffic accidents. It has been reliably estimated by FHWA and TTI that these incidents cause more than half of the traffic congestion on Texas highways, and they are particularly critical on high volume, high speed roadways that carry the greatest amount of traffic. Incident management as well as management of other freeway traffic operations is currently being handled by the freeway operations teams in Dallas and Fort Worth.

**Demand Management**

The second phase of the Congestion Management Strategy addresses Travel Demand Management and would attempt to reduce the demand for transportation services. The
goal of demand management is to modify travel patterns so that the number of vehicles using the existing roadway system more closely matches the capacity of the system. The primary objective of demand management is to reduce the number of vehicles on the road, particularly to reduce congestion during peak travel periods. This can be accomplished by encouraging ridesharing and shifting of trips away from the heaviest travel peaks. Demand management has historically concentrated on peak period travel, but improving air quality will likely require reducing off peak travel as well.

Demand management actions request or require employers to take actions such as modifying the work schedules of their employees. Such changes may be onerous to business as well as to travelers because they are initially disruptive and ultimately possibly inefficient or even counterproductive. But the greatest resistance usually comes from the travelers, who typically do not want to disrupt their personal schedules and habits, in many cases because of the interference caused with their social routines. In the face of mandates for clean air and environmental protection, we may have to pay increasingly greater attention to actions that will change the attitudes of Texans as to how they travel.

Demand management may be the most problematic category of actions in the Congestion Management Strategy because its success normally hinges on voluntary cooperation of both the private business sector and the traveling general public. To be even reasonably effective, the local governments must have authority to require changes in demand patterns. For demand management to work, the local government entities have to be firmly committed to such actions because they are sure to incur considerable political response from both employers and travelers. Government agencies themselves are often among the last to agree to demand management actions. For these reasons legislative encouragement may be necessary.

Growth Management

The third phase of the congestion management strategy is urban and suburban Growth
Management. Growth management has been used to a limited degree in other states to control or eliminate the need to expand water and sewer utility services. It has recently been increasingly recognized as an opportunity to improve air quality by reducing motor vehicle travel. For reducing travel, growth management would locate residences, employment, and services close to one another in order to reduce the length and number of motor vehicle trips by residents of the managed area. Some motor vehicle trips would be replaced by walking or bicycle travel to destinations close to travelers' homes.

The more traditional growth management strategy would limit the length of vehicle trips by prohibiting developments beyond existing urban or suburban boundaries unless available transportation or other services are adequate to serve that new development. Growth management is particularly appropriate for eliminating this currently occurring "leap-frog" effect of new developments beyond existing suburbs. Left unchecked, this new leap-frog development is going to require even longer trips to reach activities that remain in the central cities and their first generation suburbs. The undesirability of such longer trips may eventually lead to the deterioration and demise of older suburbs and the central cities, and it will certainly generate longer trips and more air pollution.

Prior to implementing growth management, however, it is important to assure the effectiveness of such actions. The various effects, desirability, and drawbacks of growth management applications must be clearly demonstrated, understood, and accepted if these actions are to be successful. Neither the business sector, particularly developers, nor the electorate like to be told what they can and can't do with their money. These actions may also require legislative support.

New Solutions

The fourth phase in congestion management is finding new solutions. For many reasons other than a lack of funding, the traditional solutions of building more freeways are increasingly difficult or will not work sufficiently well to provide the congestion relief desired. There is not enough right of way available along some freeways to provide the
additional capacity needed to relieve congestion and expanding the right of way is expensive because of valuable adjacent development. One possible option would be to provide additional capacity on elevated structures, but the cost and environmental impacts are essentially prohibitive. Building new freeways on new location is often prohibitive for the same reasons unless the right of way has been preserved, and of course there are many groups that oppose additional highway construction.

Several new solutions are possible however. One familiar to us in Texas is High Occupancy Vehicle lanes such as those built at numerous locations in Houston and one in Dallas. The HOV lanes in Houston have been very successful and have had excellent acceptance and support by the public. They are a good example of how to provide cost effective transportation improvements for the dispersed development patterns in Texas urban areas. Another approach to providing added capacity is improving principal arterial streets in freeway corridors to make them more attractive alternatives for trips that currently use freeways so as to relieve freeway congestion. Improved and new forms of public transportation, particularly buses operating on HOV lanes, are also proving effective.

The philosophy of new solutions is to concentrate efforts on the most cost effective ways to move people rather than on moving vehicles, as has been our past approach. This can be achieved by blending HOV lanes, arterial street improvements, and various forms of mass transit, depending on the characteristics of the area and travel served.

A high tech option that is being used increasingly is telecommuting, wherein the worker stays home for some or all of the work week, communicating with their headquarters by telephone, telefax, and computer. By proper scheduling and considerable participation this approach can significantly reduce traffic on days when commuters stay home. Flexible transit services have been successful in the Dallas area suburbs where traditional transit was not financially acceptable. Transportation management associations are being used in some cities, including Dallas, to organize private sector responses to transportation needs. New solutions may also include different approaches to traditional
tasks, such as speeding the project approval process by streamlining the requirements for clearances from various agencies outside the Department.

The transportation profession is currently excited about the potential for "high-tech" solutions in the form of "Intelligent Vehicle and Highway Systems," commonly called "IVHS." This effort has many attractive variations that can contribute to extensive improvements in traffic flow. On-board route guidance is one of the more familiar approaches, but other possibilities are dial-up highway system status reports and transit arrival information. The most "Orwellian" approach is automated highways, where the vehicle would be guided automatically on the highway without driver involvement. The IVHS systems will help us make better use of all roadways and transit services and by so-doing to reduce air pollution and save energy.

TTI is part of the national team studying the feasibility, considering possible applications, and developing designs for IVHS systems. Be assured that the potential contributions of IVHS to improving transportation in Texas will be available here as soon as anywhere; some are being implemented now in Houston and Dallas.

TTI is also studying the potential offered by fixed guideway transit systems to relieve urban and suburban congestion. Some of the systems built around the country have not lived up to their potential. We are examining ways to better understand their potential for and best ways to provide express transit service, whether by conventional rail technology, new technology small vehicle systems, or buses and other ridesharing vehicles operating on high occupancy vehicle lanes. You will hear from us when we have concluded the best systems and services to recommend for your consideration.

New Financing Sources

Finally the fifth phase of our proposed congestion management strategy is to consider new sources of funding. When the other potential improvements prove inadequate and a solution is required, we should turn to the conventional roadways that have served us
well in the past. The problem with them of course has not been their ability to move traffic, but the ability to provide sufficient funding to construct enough capacity to handle the traffic demand. This step in the strategy would consider new funding strategies other than conventional road user and general government taxation.

One option for new financing is anything but new, and that is toll roads. Most of the first good roads in this country were toll roads built by private entrepreneurs. Government put them out of business by building roads with tax dollars, but now the government wants them to get back in the business to relieve the tax burden. The new transportation act permits federal tax revenue assistance for both private toll roads and government toll roads. Toll road users pay for the added capacity that permits them to travel more easily.

Another potentially attractive option is the considerably more controversial approach known as road pricing. Road pricing charges road users for better levels of service than the normal, free traffic condition. Road pricing differs from toll roads primarily because the intention is to price the use of a facility at a level which will greatly relieve or eliminate congestion. Tolls are usually set considering only the amount needed from each user to repay the indebtedness incurred to build the road. One interesting road pricing strategy that has been proposed would be to charge single occupant vehicles to use an HOV lane; this has been proposed for State Highway 91 in Orange County California. TTI is watching that project for potential applications in Texas. Peak period road pricing is another possible option wherein vehicles must pay to use congested facilities during the heaviest travel periods. A third strategy is to charge vehicles that enter a congested area.

Another potential financing strategy is regional parking fees. These could be levied selectively to encourage ridesharing in the most congested corridors. But the problem with parking fees is the need to levy them uniformly in order to not unnecessarily disadvantage businesses in one city over another in a metropolitan region. Getting several local governments to cooperate on such a plan would require considerable
creativity and effort.

CONCLUSION

The research at TTI has indicated that no single solution will be adequate. New ideas and approaches are needed, and they will have to be combined with one another and with the more traditional solutions if we expect to have sufficient impact to alleviate congestion and reduce air pollution.

The best approach is to make the facilities we have work better to provide a higher level of service, following the old principle to use what you have before you buy any more. Once we have proved that the existing system is performing as best it can, then we can make a case that additional improvement can only be had by providing additional capacity. We must then prove that other approaches will work by demonstrating their success, either in Texas cities or others.

Many of the options that should be considered are not new, they have just been hard to implement or hard to sell to the electorate, local government, business, and the Legislature. They have been hard to sell because they are politically unpopular, and they are politically unpopular because they require the driver, the business operator, or the local government to change the way they do things. Such strategies as carpooling, riding public transit, and changing work schedules are unattractive because they require actions that are not voluntary and thus effectively penalize the public.

But we are in a new and unfortunate era when we may no longer be able to travel when and how we want. We must seek new solutions, and leadership is needed for our citizens to understand what must be done. We are asking you to provide that leadership, to endorse, recommend, and authorize congestion management strategies for all urban areas in Texas. We ask that you enact legislation that gives our local elected officials the support and authority to implement creative and effective transportation management actions.