HISTORY AND PRESENT STATUS

STATE DEPARTMENT OF HIGHWAYS AND PUBLIC TRANSPORTATION

SEPTEMBER 1982

HISTORY AND PRESENT STATUS

of the

State Department of Highways and Public Transportation

September 1982

PREFACE

This publication is the first part of a continuing Strategic Planning effort to appraise the crucial opportunities and problems the Department faces, to formulate policies and assumptions upon which the Department is to move forward and to assess the likely consequences of alternate reasonable courses of action, in effect to answer three questions: Where are we now? Where are we going? How do we get there?

This document is intended to provide background information for the second part of Strategic Planning already underway. When complete, the Strategic Plan will delineate the mission, objectives, policy, and assumptions on which this Department will move forward to meet the challenges of the next twenty years.

TABLE OF CONTENTS

HISTORY OF THE TEXAS SURFACE TRANSPORTATION SYSTEMS

The history of Texas surface transportation systems is generally characterized as increasing in volume and complexity as the state progressed from the sparsely populated frontier era to the industrial revolution.

The early roads were poor by any standards: ox-wagon freighters and overland stages were mired in mud or plagued with dust and dry furrows. The condition improved little until the transportation demands in the latter part of the 1800's forced state leaders to take action.

During the period 1876 to 1916, the legislature granted cities and counties the powers to draft labor, levy taxes, and issue bonds for road work; however, no statewide coordinated system of roads was developed. Several attempts were made to create a State Highway Department during this period, but failed. The passage of the Federal Aid Road Act of 1916 prompted the 35th Texas legislature to create the State Highway Department in 1917 and the basic fiscal and administrative structures of the present Department were formulated in the decade that followed.

Funding was based on the concept that users should pay for highways. As a result automobile registration fees were authorized, half of which went to counties; and a gasoline tax was created, one-fourth of which went to the School Fund.

A three-member Commission was appointed and a State Highway Engineer was selected by the Commission. The State was divided into five districts (then called field divisions) which grew to 25 by 1932.

Although the formulative period of the post-WWI and Depression Era years saw much of the present main highway arteries constructed, it was during the years

1940-1967 that almost two-thirds of the present system was built.

The escalating highway system was built to accommodate the tremendous increase in the use of personal automobiles: In the relatively good economy following WWII, Americans in general and Texans in particular, used a healthy portion of their increased buying power to invest in greater personal mobility.

The post-WWII era witnessed further decline of many inter-city transit systems. The last of the trolley tracks were covered with asphalt in Dallas in 1956. Urban public transportation systems had suffered a general decline after WWI with a slight resurgence during WWII. Inter-city ridership generally dwindled during the automobile boom of the fifties and sixties.

The early 70's brought new problems to the forefront for Texas' transportation system: The Arab oil embargo heralded spiraling inflation which eroded highway funding while serious urban traffic congestion began to develop in Houston, Dallas and other metropolitan areas.

The Legislature established the Texas Mass Transportation Commission in 1969 and then merged it with the Highway Department in 1975 to create the State Department of Highways and Public Transportation.

As a means of compensating for inflation, the Legislature passed House Bill 3 in 1977 which appropriated from the General Fund a sum based on a level of operation plus inflation costs.

At present, inflation in highway construction has subsided, however, Texas' population is growing rapidly and the current budget is strained to meet costs on the existing system. There are no funds to accomodate the population growth which is projected to increase by 50% by the year 2000.

ORGANIZATION

Since 1917, the organization of the State Department of Highways and Public Transportation has evolved to meet new challenges and responsibilities assigned by the State Legislature and to meet requirements of various federal agencies.

The present organization consists of fourteen headquarters divisions, twenty-four districts and an urban project office in Houston (APPENDIX I). The district offices are further decentralized by resident offices and maintenance section offices.

The administrative control of the Department is vested in the State Highway and Public Transportation Commission and the State Engineer-Director. The three-member Commission is appointed by the Governor who designates one member as chairperson. The Senate must then approve the appointees. Commissioners serve for a period of six years, with the term of one member expiring every two years. Their duties are to formulate overall policies and plans for the Department.

The Commission appoints a State Engineer-Director, for an indefinite term, to administer the policies and plans of the Commission and to direct the workings of the Department in general. In order to qualify for this position, he must be an experienced, registered, professional engineer.

The Administration of the Department consists of the State Engineer-Director, Deputy State Engineer-Director and Assistant State Engineer-Director. Four sections that operate directly under the above are the (1) Program Section, (2) Office of General Council, (3) Internal Review and Audit Section; and, (4) Management, Information, Policy and Research Section.

Each of the fourteen headquarters divisions generally lends a particular area of expertise and service to the district construction, maintenance, and

multimodal transportation effort. (More detailed information is listed in "You and the State Department of Highways and Public Transportation" published by the Human Resources Division and in individual division manuals.)

Individual district engineers are charged with the actual on-site construction, maintenance and multimodal transportation effort in their district with the assistance of applicable headquarters divisions.

As of June, 1982, the Department's full-time equivalent personnel authorization consists of 47 exempt, 6,920 classified, and 7,320 hourly positions. Approximately 85 percent of the full-time positions are in the districts with the Administration and Austin office divisions making up the remaining 15 percent.

On September 1, 1969, the Department had a high of 20,272 full-time equivalent employees. On September 30, 1982, the Department was operating with 14,234 classified and hourly full-time equivalent employees. Through better management practices and a streamlining of responsibilities, more work is actually being done with about 29% fewer employees.

It is anticipated that a better trained work force and the use of automation will enable the Department to maintain an optimum work force of about 14,240 classified and hourly full-time equivalent positions to accomplish the tasks necessary to fulfill its obligations to the people of Texas.

OPERATIONS

POLICY AND PROGRAMS

The State Department of Highways and Public Transportation functions as a service organization for the people of Texas. The responsibility of the Department is to provide a comprehensive system of highways, assist in public transportation, and act as the local non-federal sponsor of the Gulf Intracoastal Waterway.

The authority to provide for a comprehensive system of roadways was first established in the Texas Constitution. The Legislature, according to Constitutional provisions, delegated this authority to the Department by enacting House Bill 2 in 1917. Subsequent legislative acts modified and refined the Departments operations (See APPENDIX II).

In 1975, the Legislature further exercised its Constitutional powers and charged the Department with the responsibility for public transportation development and the intracoastal waterway.

Although the major policies governing the Department are generally developed by the Commission as a result of laws enacted by the Legislature, Executive Orders issued by the Governor and requirements associated with federally sponsored programs also affect Departmental policy.

The present policies governing the Department may be classified in terms of the Department's internal and external operations. The Department's internal operating policies are those practices and procedures which guide the day-to-day, in-house administration and operation of the Department. These internal operating procedures are governed by Administrative Orders, Administrative Circulars, Manual Change Letters, Newsletters and Management by Objective Documents.

The external operating policies of the Department may be defined as those rules and regulations adopted by the Commission or Administration which advise the citizens of Texas of the practices and procedures followed by the Department in performing the duties assigned by the Legislature. These policies also establish the general procedures under which the Austin Division Offices operate and are contained in the Department's "Rules of Practice and Procedures." These rules are now a part of the Texas Administrative Code and are available to the public through the Office of the Secretary of State.

As chief administrator, the Engineer-Director is responsible for administering the Department's internal and external operating policies as they relate to the programs under the direct supervision and control of the Department. Such programs are primarily concerned with highway maintenance, construction, public transportation and intracoastal waterway matters.

MANAGEMENT INFORMATION SYSTEM

The Department is presently implementing a comprehensive automated Management Information System (MIS) to manage and control the large amounts of data utilized each day by various levels of management. Communication with the System will be accomplished via remote terminals located in District and Division offices. The general configuration of this system consists of a centralized data base with an automated data controller (MDC) that controls the flow of information for most updates, day to day operations and various subsystems operating under MDC.

The Design and Construction Information System (DCIS) is an application subsystem under MIS that tracks design and construction from inception to completion. The Contract Information Segment (CIS) of DCIS established necessary information for tracking contracts which have been awarded. DCIS and

CIS were implemented in September of 1982.

The Maintenance Management Information System (MMIS) presently consists of two subsystems, the Maintenance Cost Reporting (MCR) subsystem which tracks maintenance costs by function, maintenance foreman and district; and the Pavement Evaluation System (PES) which tracks the relative condition of highways from which statewide strategies and budgets for routine maintenance expenditures, major maintenance projects, rehabilitation and reconstruction projects can be determined. The Pavement Management System (PMS) subsystem under MMIS is in the conceptual stage and will utilize data from the PES and Roadway Information System (RIS) for maintenance cost projections and other related uses. The Maintenance Cost Reporting (MCR) subsystem and the Pavement Evaluation System (PES) are now operational.

The Material & Supply (M&S) System will maintain a current inventory of the material assets of the Department as well as their locations. Resupply information and the issuance of materials and supply will also be a part of this system. Cataloguing and limited inventory will be accomplished by early 1983.

The Equipment Operating System (EOS) will consist of inventory control and asset value, equipment utilization and expense, and replacement analysis on all major equipment, as well as a minor equipment inventory. Full implementation of the system is scheduled for early 1983.

The Human Resources Management System (HRMS) will consist of applicant tracking to provide the Department with data concerning potential employees, a career profile for each employee and a history file of each employee. This system will also be interfaced with the salary and labor payroll system.

The HRMS Career Profile will be complete in late 1982, with the applicant tracking system to be completed by September, 1983.

The Salary and Labor Distribution (SLD) System will be completed by June, 1983. This system will interface time reporting with the Financial Information Management System (FIMS).

The Financial Information Management System (FIMS) is one of the most complex systems in MIS and will consist of accounting information concerning revenues, expenditures, assets, liabilities, encumbrances and equity. This subsystem will interface with various other systems in MIS to transmit and receive financial information. Completion of FIMS is scheduled for June, 1983.

The Transportation Network Information System (TRANSNET) is in preliminary stages and will provide a common data base of roadway information for usage by all applicable MIS Systems.

The above systems comprise the existing MIS development efforts and will be implemented by September, 1983. Additional enhancements to the system will be made as necessary.

MANAGEMENT STYLE

The State Department of Highways and Public Transportation utilizes a Management by Objectives form of management. This process consists of the following six steps:

1. Roles and Missions - describe the nature and scope of work to be performed
2. Key Results Areas - help determine where time, energy and talent should be invested
3. Indicators - factors capable of being measured, that can be looked at within each key result area to give an indication of effective or ineffective management

4. Objectives - statements of measurable results to be achieved
5. Action Plans - the sequence of actions to be carried out in order to achieve the objectives
6. Controls - assures the effective accomplishment of objectives

Management by Objectives was initiated in the Department in 1980 and has now been fully implemented.

In addition to Management by Objectives a modified zero base budget concept is utilized in the Department.

Texas initiated its zero based budgeting system for the 1976-77 biennium and the basic system is being applied (with some modifications) for the present budget submission.

OPERATIONAL PLANNING

Operational Planning for the needs of the Department to the year 2002 was initiated in July 1981. Six functional areas, (Construction, Rehabilitation, Maintenance, Public Transportation, Auxiliary Operations, and Administration and Support) were assigned to task forces to determine what the needs of the Department are in each area. The needs are not based on anticipated funding but are assessed based on overall mobility needs of Texas in those areas under the jurisdiction of the State Department of Highways and Public Transportation. The Planning Document resulting from this study will provide management with information and procedures for making objective decisions concerning future transportation needs.

AUTOMATION CAPABILITIES AND UTILIZATION

Automation functions were centralized in the Department in 1965. The central processing units are housed in the Camp Hubbard Complex with remote

terminals located in the districts, divisions, and Houston Urban office. Central Processing Units were operating in excess of 90% of capacity in early 1982. New Central Processing Units with 32 million bytes of storage (approximately three times more memory) will be installed by October, 1982. In addition to more storage capacity they will process information two to three times faster, depending on job usage, than the early 1982 CPU's. In addition, six Regional Automation Centers will be implemented by 1983 to provide computer processing capabilities to all districts, supporting both engineering and administrative activities. Each Regional Center CPU will have eight million bytes of capacity and in addition will have a separate computer for interactive graphics applications.

Word processors have recently been purchased for many of the divisions and districts and further enhancement of their capabilities in the area of communications is planned. Detailed automation documentation and time schedules are in the current Five-Year Automation Development Plan (1982-1987).

USAGE OF CONSULTANTS

It is the practice of the State Department of Highways and Public Transportation (SDHPT) to do all preliminary engineering, design and plan work, and construction engineering supervision on projects with SDHPT personnel. Consulting services are used for projects for which the Department staff does not have the specialized expertise or available personnel required for specific projects. The Engineer-Director selects consultants based on the recommendations of a Consultants Review Committee which is comprised of five Austin office division engineers.

Interested firms complete a "Consultant Services Questionnaire" in order to be placed on a computerized file for consideration by the Committee.

As of June, 1982, there were 297 available consultants listed on the computerized file. During FY 1981, SDHPT had 110 consultants performing various services (engineering services, survey work, bridge inventory, etc.) at a total expenditure of $9,624,693.55.

RESEARCH

Research in the Department is generally initiated by Departmental personnel who present problems in the form of research statements to one of four area research committees, depending on the subject of the project. Each area committee has one or more areas of expertise. The area committees prioritize the problems presented and all four committee chairmen meet with the Research and Development Committee, comprised of Division heads from the engineering Divisions in Austin. Projects are approved or disapproved for further study depending on needs, priorities and budgeted funds.

In addition to the above research mechanisms, the Department maintains a research library of approximately 40,000 subjects and is a member of the Transportation Research Information System (TRIS) under the auspices of the National Academy of Science - Transportation Research Board. A 48 hour service assistance is also maintained to attempt to solve immediate research needs of the Department. State universities and private research firms perform contract research as needed.

Due to the rapidly changing technology in all areas of transportation, the Department is committed to an active research program in both the short and long term.

TRAINING

Prior to January, 1981, employee training was performed by various Divisions

in the Department. Effective January 1, 1981, training needs analyses, design, development and administration of training programs were centralized by Administrative Order 1-81. From September, 1981, through June, 1982, employees participated in classes in management, equipment skills, formal college training, State Management Development Center training, Texas A&M annual Short Course and other out-of-agency training. Participants in the above training numbered more than 6,400 with some participants attending more than one training function. Tuition and registration costs in excess of $267,000 were paid during this same period of time.

Additional Management Development Center classes began in August 1982, for middle management personnel and an executive level school will begin prior to the end of 1983. The current thrust in training is concentrated on developing a more highly trained employee with a coordinated career progression path.

TOURIST FACILITIES

The tourist industry continues to thrive in Texas, and in 1980, was the second most money-making activity in the state. Travel receipts for that year totaled $10.9 billion, according to the U.S. Travel Data Center, and thus surpassed the $9 billion produced by the state's agricultural production.

In order to furnish aid and assistance to the traveling public and stimulate travel to and within Texas, the Department operates and maintains twelve Travel Information Bureaus around the state and publishes Texas Highways magazine which has a total circulation of 273,000.

Presently, nine of the twelve bureaus are located on major highways entering the state and provide assistance to incoming tourists.

In addition to these nine facilities, the Department operates three visitor

centers within the state for the convenience of Texas tourists. These three centers include the Judge Roy Bean Visitor Center in Langtry, the information center in the State Capitol in Austin, and the Valley Tourists Bureau in Harlingen.

In 1981 survey cards were distributed at the state's twelve tourist bureaus to each out-of-state tourist party. A total of 27,233 cards were returned and a compilation of these cards indicate the following:

AVERAGE LENGTH OF STAY	Days	EXPENDITURES Per Person Per Day
U.S. Visitors (short term)	6.92	$ 26.67
U.S. Visitors (long term)	84.51	11.96
Foreign Visitors (short term)	9.01	21.13
Foreign Visitors (long term)	97.82	14.31

Currently, the Department maintains 72 rest areas along the Interstate highway system in Texas: 26 comfort stations on the state's primary, state and farm-to-market system; as well as 962 picnic areas located at various points throughout the state.

Although the primary purpose of these facilities is to provide a safe place for motorists to stop and relax, many visitors to Texas consider the rest areas, roadside parks, scenic turnouts and scenic overlooks along the right-of-way as additional tourist facilities.

MAINTENANCE

The Department's highway maintenance program consists of the preservation, repair and restoration of the State's highway facilities. The operation of the highway facilities and the services necessary to provide safe and satisfactory

highway transportation are also considered as functions of the maintenance program.

Since the Department is mandated by state statute to maintain the State Highway System, this function is assigned the highest funding priority within the Department.

The priority for funding and performing the various maintenance activities is based upon the following parameters established by the Department:

1. PROTECTION OF THE INVESTMENT - Protect the investment of public dollars in the highway, its right-of-way and all of its facilities.

2. SAFETY - Provide for the safety of the traveling public, for items not corrected by protecting the investment.

3. USER COMFORT - Provide for the comfort of the traveling public.

4. AESTHETICS - Provide for the beauty and the attractiveness of the roadway and facilities.

The work currently being conducted by the Department in preserving the State Highway System includes the maintenance of flexible and rigid roadway surfaces; shoulders and approaches; roadside rest areas; picnic areas (including litter and vegetation control); roadside drainage appurtenances; culverts and storm drains; bridges, traffic services (signs, signals, pavement markings, etc.); and tunnels and ferries.

The Department was also directed by the State Legislature in 1975 to enter into a contractural agreement with the Texas Water Quality Board (now the Texas Department of Water Resources) whereby personnel, equipment and materials in possession or under control of the Department may be diverted and utilized for

oil and hazardous substance spill and discharge cleanup.

As this broad list of maintenance activities indicates, the Department is proceeding with a comprehensive maintenance program designed to protect the state's investment in the highway system and to provide maximum benefits to the traveling public.

CONSTRUCTION

The Department's multimillion dollar construction program for the state is based upon the Twenty-Year Project Development and Control Plan. The Plan provides a framework for the orderly and systematic planning, development and control of construction projects by scheduling the Department's design and construction activities through future time periods, thus optimizing the utilization of available manpower, materials, equipment and funds.

The majority of construction underway at this time is in the urban areas where growth is generally outstripping the Department's resources. It should be noted here that it presently takes from seven to ten years to complete most major urban projects; therefore, the planning and allocation process for new construction projects, in light of an austere budget, is increasingly crucial.

The eight categories of work used in the Twenty-Year Plan were established according to sources of funds available for constructing projects on the various systems and according to the types of construction or improvement projects to be accomplished. These eight categories of work are: (1) Interstate Highway System - Construction; (2) Interstate Highway System - Rehabilitation; (3) Primary, Secondary and State System - Construction; (4) Primary, Secondary and State System - Rehabilitation; (5) Farm-to-Market and Ranch-to-Market Road System; (6) Urban System; (7) Safety and Betterment Projects; and (8) Miscellaneous Projects.

In addition to these eight work categories, the Plan features four future time periods which are focused on the development of a monthly letting schedule to put projects under contract. These four schedules, which make up the twenty-year time frame, consist of the Ten-Year Advanced Planning Schedule, Five-Year Development Schedule, Four-Year Letting Schedule and One-Year Advance Letting Schedule.

The criteria used by the Department in selecting and scheduling construction projects varies according to the type of construction or improvement project to be accomplished within each of the eight categories of work established in the Twenty-Year Plan.

It is also important to recognize that all Districts and/or geographic areas of the state do not have the same requirements for highway construction relative to these eight categories. Category 1, Interstate Highway System -Construction, illustrates this point in that several Districts have little or no Interstate Highway routes while other Districts have large highway mileages.

Overall, most of the projects in Categories 1, 3, 5 and 6 are proposed to address the system completion and capacity needs while Categories 2, 4, 7 and 8 primarily contain projects to upgrade, rehabilitate or improve existing facilities. More specifically, the following criteria are used in selecting and scheduling projects for each category of work in the Twenty-Year Plan.

Criteria for the selection of construction projects on the Interstate System, Category 1, were established by the Congress and dictated by the required design standards for this nationwide system. The Interstate Needs Estimate, updated each two years, outlines the projects necessary for completion of this system. These individual projects have been scheduled for letting or future development as a part of the Twenty-Year project Development and Control

Plan. The scheduling recommended by the Districts and established by the Austin headquarters, considers the sequence of projects necessary to eliminate gaps and to provide a usable system, subject to apportionment of Federal Interstate funds.

Category 2, Interstate Rehabilitation projects, are limited by law (Section 119 of Title 23 U.S.C.) "for resurfacing, restoring, rehabilitating and reconstructing the Interstate System." Projects in this category have been recommended by the Districts and selected on a statewide ranking based on measured roadway conditions and traffic volumes, with limitations governed by the availability of Federal-Aid funds for these specific improvements.

Projects for Category 3, Primary, Secondary, and State System-Construction, are recommended by the Districts and selected by the Austin headquarters for development and construction. Criteria for the selection of these projects depend on whether the project satisfies a system need or a local service need. Projects satisfying system needs are generally on the Principal Arterial System, contribute to or support that system and are selected according to route capacity, continuity, geometrics, serviceability, and mobility. Projects satisfying local service needs in high-growth areas are generally off the Principal Arterial System and are selected according to capacity and serviceability, new location, traffic volumes, traffic types and concentrated traffic demands.

Primary, Secondary, and State System Rehabilitation projects, Category 4, are also recommended by the Districts and selected in the Austin headquarters. The physical condition of the existing roadways in the category are analyzed according to roughness, slickness, distress, traffic loads, cost of continuing routine maintenance and environmental effects before a project is selected.

Category 5, Farm-to-Market and Ranch-to-Market Road System projects, are most needed by residents of their county. District Engineers receive recommendations from each county commissioner's court for these projects. District Engineers then evaluate all county requests for projects based on traffic volumes, mail routes, school bus routes, and existing facilities. Statewide consideration by the Austin headquarters is given to the development of letting schedules from the District Engineers' recommendations.

Projects in Category 6, Urban System, are requested by city governments for improvements that they feel are most needed by residents of their city. The Department and the Federal Highway Administration must concur in the cities selection. Project types vary widely from illumination and traffic controls to major structures and must meet Federal Highway Administration regulations. All improvements are made to improve traffic operations in urban areas.

Safety and Betterment projects, Category 7, are selected to protect the existing highway system investment and improve the safety of sections of roadway with seal coats and thin overlays. Criteria for project selection are the same as Category 4.

Category 8, Miscellaneous projects, are generally directed toward providing a safer and more usable facility for existing and forecast traffic volumes through specialized improvements. Considerations include an evaluation of geometrics, serviceability, safety and traffic control features. Types of trips and the composition of traffic volumes and accident statistics are also considered for various types of facilities and improvements.

THE HIGHWAY SYSTEM

Much of the highway system was constructed during the late fifties and early sixties. The average age of farm-to-market roads in December 1979 was 17.7

years while US and state highways was 13.8 years and Interstates 8.6. Much of this system has passed the 20 year age for which it was designed and is now due for major improvements.

In the past fifteen years, many sections of the Highway System have been modernized to accommodate heavier volumes of traffic. While the total network has grown relatively little in terms of linear miles, lane miles have increased from 139,337 miles in 1964 to 176,017 in 1980.

	Maintained Miles		Lane Miles	
	1964	1980	1964	1980
Interstate	1,423	3,126	8,837	21,981
U.S. & State Highways	25,886	27,598	60,279	71,697
Farm-to-Market Roads	34,885	40,772	70,221	82,339
TOTAL	62,194	71,496	139,337	176,017

Miles and Vehicle Miles

Public roads and streets in Texas represent more than a quarter of a million maintained miles. While less than 30% are state maintained, state systems carry almost three-fourths of all traffic.

	1980 Maintained Miles All Systems	1980 Annual Average Vehicle Miles (Billions) All Systems
Interstate	3,126	24.053
U.S. & State Highways	27,598	43.995
Farm-to-Market Roads	40,772	11.593
County Roads	136,917	4.443
City Streets	58,741	30.132
TOTAL	267,154	114.216

PUBLIC TRANSPORTATION

The Public Transportation Program of the Department began in June, 1975, with the enactment of Senate Bills 761 and 762. The Department was charged with the responsibility for encouraging the development of public and mass transportation and administering the newly created Public Transportation Fund (PTF).

Since the establishment of the PTF in 1975, twenty-five cities and two transit authorities have received state funding assistance. State assistance in the total amount of about $52 million has been committed to match almost $270 million in federal funds and $34 million in local funds to procure capital improvement projects costing about $356 million. These projects included the purchase of over 2,000 buses; approximately 93 acres of land for administration, maintenance, and park-and-ride lots; construction of 15 new transit facilities; 34,000 bus stop and information signs; and other transit related improvements.

In addition to the Public Transportation Fund, the Department administers the Urban Mass Transportation Administration Section 16b (2) Program and the Surface Transportation Assistance Act of 1978 Section 18 Program.

As of April 1, 1982, grant projects totaling $5.5 million for improved transportation to the elderly and handicapped (Section 16b (2)) have been approved for 155 service providers with another ten projects pending. More than 325 vehicles are operating under the present grants. The State of Texas had three projects approved under the Section 147 Rural Public Transportation Demonstration Program with about $1.25 million approved for these projects.

The newest program, Section 18, for Public Transportation for Non-Urbanized Areas, has had 28 projects approved as of April 1, 1982, totaling over $3 million. This includes 17 transportation grants and 11 technical assistance

projects.

The Department's major role in public transportation is administering the public transportation fund and responding to requests for assistance from the industry.

GULF INTRACOASTAL WATERWAY

In 1975, the State Legislature passed the Texas Coastal Waterway Act which authorized the State of Texas to act as local non-federal sponsor of the Gulf Intracoastal Waterway (GIWW) in Texas and further designated the State Highway and Public Transportation Commission to act as an agent for the State in fulfilling the responsibilities of non-federal sponsor. Prior to the passage of this Act, the GIWW in Texas did not have a single, local, non-federal sponsor. Therefore, any program attempted by the federal government had to be coordinated with the various navigation districts, river authorities and port authorities located along the waterway.

The Gulf Intracoastal Waterway (GIWW) extends from Apalachee Bay, Florida to Brownsville, Texas, a distance of 1,177 miles. The Waterway in Texas is composed of a 12 X 125 foot channel which extends approximately 425 miles along the gulf coast from the Sabine River to Brownsville. Over 60 million tons of commodities are transported over the Texas portion of the GIWW annually, making this facility one of the state's major transportation arteries.

The Department works closely with the United States Army Corps of Engineers to provide local cooperation and input into federal projects. The Department is also responsible for providing all land needed for construction and maintenance of a project, making any necessary alternations to pipelines, cables, or other utilities located in the project's right-of-way; and satisfying other requirements as determined by federal law.

One of the general requirements stipulated by federal law is that the federal government be held free from any damage that might result from construction and maintenance of a project. However, since the credit of the State of Texas cannot be pledged, agreements requiring payment of any future damages incurred by waterway projects between the Corps of Engineers and the state cannot be signed. Due to this conflict in state and federal law, implementation of full state sponsorship has been delayed.

In addition to serving as the non-federal sponsor of the GIWW, the State Highway and Public Transportation Commission received a legislative mandate to carry out the coastal policy of the State of Texas. The State has declared its support of the shallow-draft navigation of the state's coastal waters in an environmentally sound fashion and its desire to prevent the waste of both publicly and privately owned natural resources while at the same time preventing or minimizing adverse impacts on the environment. The state has also pledged itself to maintaining, preserving and enhancing wildlife and fisheries. Much of the state's coastal policy emphasized the importance of protecting the environment while supporting navigation functions at the same time.

In order to carry out this responsibility, the Commission continually evaluates the Gulf Intracoastal Waterway as it relates to Texas and reports its findings and recommendations to each regular session of the Legislature.

MOTOR VEHICLE REGISTRATION AND TITLES

The Department administers motor vehicle laws regulating registrations, certificates of title, dealer licensing and automobile salvage and wrecking yards.

A statewide central file of registrations and certificate of title records is maintained in a computer data base.

Most registrations are accomplished by a three part form which is mailed to each registered owner of a motor vehicle who pays the proper fee to the tax assessor-collector who forwards the state share to Austin.

Seventeen (17) motor vehicle regional offices located throughout the state coordinate administration of the registration and title laws with the county tax assessor-collectors located in their respective regions, provide across-the-counter services to the public, inspect automobile dealerships and wrecking yards, and audit trucking companies which proportionally register vehicles under the registration reciprocity agreements.

Motor vehicle title and registration fees collected accounted for 15.7% of the Department's fiscal year revenues in FY 81. Registration revenues varied from a low of $163 in Kenedy County to a high of $49,812,287 in Harris County. The registration revenues to the Department from four counties were over $119 million or approximately 41% of the State total. There are twenty-one (21) annual registration categories with 12,418,020 vehicles registered in FY 81 including exempt registrations. Passenger cars accounted for approximately 61%, trucks 24% and miscellaneous 15% of total registrations in the 1981 registration year.

Texas issued 3,853,312 certificates of title in calendar year 1981.

PHYSICAL PLANT

Due to the magnitude of the State Department of Highways and Public Transportation operations, a considerable investment in land, operating facilities, and equipment is required in order to function effectively.

Currently, the Department owns 2,646.3 acres of land (excluding roadway right-of-way, tourist information centers and rest areas) which are utilized by the districts and the Austin offices for building sites, maintenance facilities, equipment storage and other needs. The initial cost of this property was $3,181,147.94. In addition to this land, the Department also owns 1,294 buildings providing a total work area of 5,860,224 square feet. These buildings, located throughout the state, represent an initial capital outlay of $59,926,535. However, in order to meet current space requirements, the Department is leasing an additional 149,122 square feet of space in 26 buildings located in Austin and the districts. The annual cost to lease this additional space is $765,514.49.

As of August, 1981, the Department had 18,465 items of major highway equipment with a depreciated cost of $70,855,716.03 and automation equipment and other minor equipment costing over 20 million dollars.

The Department also owns 4 ferryboats operating between Port Bolivar and Galveston and 6 ferryboats operating between Aransas Pass and Port Aransas.

FISCAL RESOURCES

The State Highway Fund was established in 1917 in order to finance the construction and maintenance of the State Highway System. Originally this fund was financed with only vehicle registration fees. However, as the need for new highway construction and maintenance increased, the Legislature incorporated additional revenue sources into the fund.

Prior to 1977, approximately 90% of the revenue to the Department came from three sources: vehicle registration fees, motor fuel taxes, and federal funds from the FHWA. In 1977, the 65th Legislature passed House Bill 3 which provides additional funding based on a formula which is the difference between motor fuel taxes, sales tax on lubricants and license fees and a 1979 base funding level of 750 million dollars adjusted annually for inflation. Although these additional funds compensate for inflation, the formula does not take into consideration funds needed for construction and rehabilitation caused by increased population and increased usage of the highways.

The needs of the Department over the next 20 years are approximately 61 billion dollars as documented by the Operational Plan recently completed by the Department. This requires revenue in the amount of approximately $3 billion annually. In fiscal year 1981, total cash receipts were $1.8 billion. Traditional revenue sources are not anticipated to increase measureably because of declining motor fuel consumption and a tendency of the federal government to return more programs to state control. A reduction in the construction inflation rate, utilized as a factor in determining House bill 3 funding is also contributing to lower revenue to the Department.

Texas has historically been a donor state to the Federal Highway Trust Fund. Highway users in Texas have received an average return of 76 cents for each

dollar sent to Washington since 1956. As recent as 1978 the annual return was 62 cents for each dollar paid in federal user taxes. There have been several proposals for an increase in federal user taxes, and if this occurs it will become more important for Texas to support a change in the allocation formula for federal funding from the Highway Trust Fund.

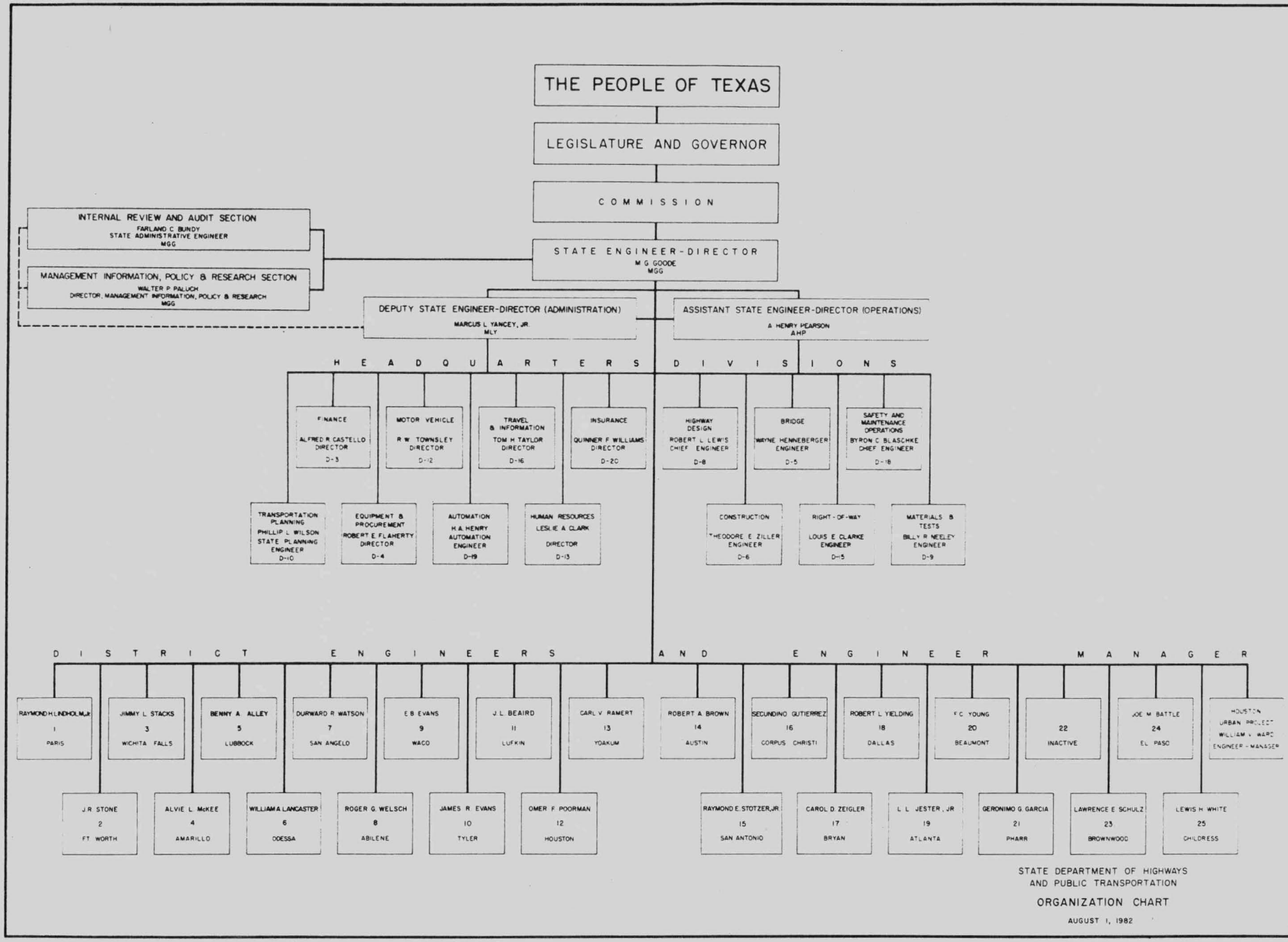
SUMMARY

The present department administrative and fiscal structure is essentially that originally created in the formulative years with certain additional responsibilities and funding alterations. Currently the administrative mechanisms are undergoing refinements, particularly in personnel training and automated processes. Those refinements will enhance the Management-by-Objectives style recently implemented. Almost all of the Management Information System and attendant automated processes should be operational by September, 1983.

This enhancement of the administrative structure is especially timely and necessary in view of two major challenges currently posed before the Department: (1) Much of the existing roadway system is rapidly maturing to, and beyond, the normal twenty-year design life and thus necessitates increased rehabilitation work; and (2) the population of Texas is rapidly growing, especially in urbanized areas, and new facilities are needed to accommodate this growth.

Current Department funding, however, is barely sufficient to maintain the existing system. As public pressure mounts due to potholes, congestion and a general decline in mobility; it is reasonable to assume that more public funds will become available to retain and increase the capacity of the surface transportation system. The Department, acting under the mandate to provide citizens with a viable transportation system, must assume such funding will become available and plan accordingly. This assumption and subsequent assessment of possible alternative actions are the subjects of the next step of strategic planning.

APPENDICES



STATE DEPARTMENT OF HIGHWAYS AND PUBLIC TRANSPORTATION

ORGANIZATION CHART

AUGUST 1, 1982

APPENDIX II

HISTORY OF THE TEXAS HIGHWAY SYSTEM

1876 - Texas Legislature gave counties "full power" to lay out and construct public roads. Incorporated cities were given power to issue bonds for the construction of streets and bridges. Counties were directed to select road overseers and were permitted to draft men for annual road duty.

1883 - Legislature authorized counties to levy a general road tax of 15 cents per 100 dollars property valuation.

1887 - Legislature authorized counties to issue bonds for the construction of bridges.

1890 - Legislature granted counties permission to levy an additional 15 cent ad valorem road tax if approved by a majority of tax paying voters.

1901 - Legislature eliminated drafted road gangs in counties which had road taxes.

1903 - Legislature unsuccessfully attempted to create a State Bureau of Public Highways.

1904 - A constitutional amendment was passed granting the State Legislature power to permit counties to issue bonds for the improvement of public roads.

1905 - Legislature unsuccessfully attempted to create the Office of State "EXPERT" Engineer.

1907 - First official speed limit was set by Legislature at 18 M.P.H. Automobile registration made mandatory in county of residence. First Texas Good

Roads Association dissolved. Legislature unsuccessfully attempted to appoint a State Highway Engineer.

1909 - Legislature provided for the establishment of road districts within counties which had power to issue road bonds. A bill was introduced to appoint a State Commissioner of Highways, but did not pass.

1910 - Second Texas Good Roads Association was established.

1911-1915 - Attempts were made to create a State Highway Department.

1916 - Federal-Aid Highway Act of 1916 was enacted by U. S. Congress.

1917 - Texas' Thirty-fifth Legislature passed House Bill 2 creating the Texas Highway Department. It was signed into law by Governor James E. Ferguson on April 4, 1917. The law provided for a three member Commission appointed to a two year term. Automobile registration fees were authorized which were based on horsepower. One-half of these fees were remitted to counties for maintenance of public roads in accordance with plans approved by the State Highway Department. State aid allocated to a county could not be more than 25% of construction costs (except for State "trunk" system which could be 50%) for a maximum of 10 miles of road per county per year.

1919 - Eight field divisions (districts) were created. Legislature authorized condemnation of timber, earth, gravel, and other materials for highway maintenance and construction.

1920 - Field divisions (districts) were increased to nine. First construction of a 20 mile section of road under supervision of the Highway Department was completed.

1921 - Congress amended Federal-Aid Highway Act of 1916 to require that construction and maintenance of highways would be under direct supervision of State Highway Departments after 1925. State Legislature appropriated operating expenses to the Highway Department.

1923 - Legislature passed a one cent occupation tax on gasoline with 3/4 of the revenues dedicated to the State Highway Department and 1/4 of the revenues dedicated to the available School Fund. All responsibilities for maintenance of state highways were placed on the State Highway Department effective January 1, 1924. State aid to counties for construction was increased to one half of cost. Field divisions were increased from nine to sixteen. Commissioners' terms increased to six years with the term of one commissioner expiring every two years.

1925 - Legislature relieved counties of duties of construction and maintenance supervision.

1927 - Legislature approved a 3 cents per gallon gasoline tax effective March 27, 1927, to be later reduced to 2 cents per gallon in September, 1928. Field divisions (districts) increased to seventeen.

1929 - Legislature reduced registration fees and increased gasoline tax to 4 cents per gallon. State Highway Patrol established. Field divisions (districts) increased to eighteen.

1932 - State Highway Commission announced an end to county financial aid for state highways except for right-of-way. State Legislature passed the State Assumption Highway Bond Law. One cent of the State gasoline tax was earmarked for refunding county and road district bonded indebtedness incurred in

connection with construction of "any designated highway" before September 1, 1932. Financing of construction improvements for highways becomes an exclusive state responsibility. Field divisions (districts) increased to twenty-five.

1933 - Main office activities moved to new State Highway Office building.

1934 - Congress set aside 1.5% of all funds apportioned under the Haydon-Cartwright Act of 1934 for planning and evaluation of roads in each state.

1935 - State Highway Patrol transferred to newly created Department of Public Safety.

1936 - Thirteen tourist information stations erected.

1938 - Field divisions were renamed districts.

1939 - State Legislature passed an act which made county debt for highways incurred prior to 1939 eligible for state aid.

1941 - Responsibilities for certificate of title transferred from Department of Public Safety to Highway Department.

1944 - Congress authorized Interstate and Defense Highway System, but did not allocate separate funding.

1945 - Urban Projects officers were placed in charge of expressway construction in Dallas, Fort Worth, Houston, and San Antonio.

1948 - Constitutional amendment was passed that authorized counties to levy a 30 cent ad valorem property tax for farm-to-market flood control.

1949 - Legislature passed Colson-Briscoe Act appropriating 15 million dollars annually for construction of farm-to-market roads.

1951 - Major portion of first Texas urban expressway opens (Gulf Freeway). State Legislature set maximum total share of gasoline tax for all counties at 7.3 million dollars.

1955 - Legislature changed gasoline tax to 5 cents per gallon.

1956 - Federal-Aid Highway Act prompted beginning of Interstate Highway Network.

1970 - Department initiated a new program providing for construction of ten rest areas with comfort stations.

1975 - State Highway Department merged with Texas Mass Transportation Commission to become the State Department of Highways and Public Transportation. Chief administrative officer redesignated Engineer-Director, Assistant for Operations and Assistant for Administration redesignated Assistant Engineer-Directors. Department was assigned duties as local non-federal sponsor of the Gulf Intracoastal Waterway and was also directed to assist in oil and hazardous substance spill and discharge cleanup.

1976 - The Governor's Office of Traffic Safety assigned to Department.

1977 - State Legislature passed House Bill 3 which provided funding from Omnibus Tax Clearance or General Fund for Highways based on a level of operation plus inflation costs. First 20 Year Project and Development Control Plan for construction implemented.

1979 - Texas Governor issued executive order assigning responsibility for Texas Traffic Safety Act of 1967 to Highway Department. Maintenance and Operations

Division redesignated Safety and Maintenance Operations Divison.

1982 - Districts reduced to twenty-four plus Houston Urban Office.