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REPORT

THE TEXAS TRAFFIC SAFETY PROGRAM

STATE HIGHWAY AND PUBLIC TRANSPORTATION COMMISSION

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THE TEXAS TRAFFIC SAFETY PROGRAM
FY80 ANNUAL REPORT

TRAFFIC SAFETY SECTION
SAFETY AND MAINTENANCE
OPERATIONS DIVISION

STATE DEPARTMENT OF HIGHWAYS
AND PUBLIC TRANSPORTATION

OCTOBER, 1980

COMMISSION

A. SAM WALDRUP, CHAIRMAN
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ENGINEER-DIRECTOR
M.G. GOODE

STATE DEPARTMENT OF HIGHWAYS
AND PUBLIC TRANSPORTATION

AUSTIN, TEXAS 78701

October 1980

The Honorable William P. Clements
Governor of Texas
State Capitol
Austin, Texas 78701

Dear Governor Clements:

Pursuant to Executive Order WPC-12, the State Department of Highways and Public Transportation is pleased to submit the FY80 Annual Report of the Texas Traffic Safety Program.

The Texas Traffic Safety Program consists of education, enforcement, engineering, and evaluation projects; these elements form a network of interaction designed to improve the traffic safety environment in the state. Over \$52 million was committed to traffic safety projects during the fiscal year.

During the fiscal year, the Department underwent a substantial reorganization to consolidate traffic safety resources and eliminate duplicative efforts. The Department's mission and level of involvement in traffic safety activities have been significantly strengthened as a result of the reorganization.

As Texas continues to grow, the potential for highway traffic safety problems increases due to the increased number of vehicles on our streets and highways. This Department is fully committed to reducing the number of traffic fatalities and injuries to the lowest possible number within the limits of available technology, resources, and human understanding.

Sincerely,

A handwritten signature in cursive script that reads "M. G. Goode".

M. G. Goode
Engineer-Director

CONTENTS

INTRODUCTION	1
BACKGROUND	2
ADMINISTRATIVE REORGANIZATION	3
STAFF TRAINING	4
PROGRAM DEVELOPMENT	5
PROGRAM FUNDING	6
SAFETY PROGRAMS	8
PUBLIC EDUCATION	8
ENFORCEMENT	9
ENGINEERING	10
EVALUATION AND RESEARCH	11
OUTLOOK	12
PROGRAM ACTIVITIES SUMMARY	13
PROGRAM ACTIVITIES BY TYPE OF PROGRAM	14
FUNDS OBLIGATED FOR ALL SAFETY WORK	17

INTRODUCTION

In 1979, motor vehicle traffic accidents claimed the lives of 4,229 men, women, and children in Texas. An additional 184,550 were injured. Until the enormity of these senseless deaths and injuries is felt on a personal level, the matter of traffic safety will be viewed by motorists as someone else's responsibility. While traffic safety is ultimately the responsibility of each driver, it is the goal of the Texas Traffic Safety Program to reduce the number of traffic fatalities and injuries to the lowest possible number within the limits of available technology, resources, and human understanding. The Traffic Safety Program seeks to increase the awareness of the driving public about traffic safety issues in ways that will prevent accidents.

Each year the State Department of Highways and Public Transportation obligates millions of dollars for safety work, the majority of which is earmarked for construction improvements to roadways. Another portion is available for discretionary use for nonconstruction safety projects; the Texas Traffic Safety Program is a combination of construction and nonconstruction projects developed to address identi-



fied problems and needs. This Annual Report will document the implementation of the FY80 Traffic Safety Program and will summarize program activities during the fiscal year.

TEXAS TRAFFIC SAFETY PROGRAM: **BACKGROUND**

The Texas Traffic Safety Program was created by the National Highway Safety Act of 1966 and the Texas Traffic Safety Act of 1967. The U.S. House of Representatives Report No. 1700 (1965) identified traffic fatalities as a major societal problem as the nation became increasingly mobile while the Mileage Death Rate (persons killed per 100 million miles driven) had steadily increased during the previous decade. The report further determined that no formal accident prevention program existed at any level of government, that there was no planned or coordinated effort to curb the rising death toll.

Consequently, the Congress altered its historically passive role in traffic accident prevention to one of leadership. The resultant Highway Safety Act of 1966 directed that each state Governor, likewise, assume a leadership position in accident prevention. The Governors were to be directly responsible for insuring that a statewide comprehensive traffic safety program was developed and implemented. Funds to assist Governors with this task were provided by 23 USC, Chapter 4.

The U.S. Department of Transportation, through the Federal Highway Administration (FHWA) and the National Highway Traffic Safety Administration (NHTSA), was designated as the federal department responsible for administering the program. The FHWA was assigned responsibility for admin-

istering the roadway element and the NHTSA was assigned responsibility for the driver and vehicle elements. Both agencies were to jointly administer the pedestrian element.

The Traffic Safety Program addresses the traditional Highway Safety Standard areas of:

1. Periodic Motor Vehicle Inspection
2. Motor Vehicle Registration
3. Motorcycle Safety
4. Driver Education
5. Driver Licensing
6. Codes and Laws
7. Traffic Courts
8. Alcohol in Relation to Highway Safety
9. Identification & Surveillance of Accident Locations
10. Traffic Records
11. Emergency Medical Services
12. Highway Design, Construction & Maintenance
13. Traffic Engineering Services
14. Pedestrian Safety
15. Police Traffic Services
16. Debris Hazard Control and Cleanup
17. Pupil Transportation Safety
18. Accident Investigation and Reporting

These standard areas set the parameters within which the Traffic Safety Program operates.

ADMINISTRATIVE REORGANIZATION

The State Department of Highways and Public Transportation has a long history of involvement in highway safety. As the State agency responsible for road-building and maintenance operations, the Department maintains a highway system widely recognized for its safety design features. In 1976, however, the scope of the Department's safety mission began to expand beyond its traditional engineering interests when the resources and functions of the Governor's Office of Traffic Safety were transferred to it.

The Texas Traffic Act of 1967 directed that a comprehensive traffic safety program be developed and implemented by the Governor, and authorized the Governor to employ personnel necessary to implement the Act. On May 5, 1976, the Governor, by Executive Order, delegated this responsibility to the State Department of Highways and Public Transportation, instructing the Engineer-Director to assist the Governor in administering the Texas Traffic Safety Program. The Engineer-Director attached the Office of Traffic Safety to the Maintenance Operations Division on September 1, 1976, and directed that the Office of Traffic Safety continue planning, developing, coordinating, implementing and administering the Texas Traffic Safety Program.

At the same time, the Highway Safety Engineering Section of the Maintenance Operations Division administered the federal funding program for safety improvements on interstate, state, and local highways while maintaining accident records and conducting analyses of these records. The Office of Traffic Safety conducted

similar efforts in addition to its nonconstruction programs.

In August, 1979, the Governor named the Engineer-Director his highway safety representative. In this capacity, the Engineer-Director reviewed the organization of the Department and subsequently reorganized traffic safety resources to assure that the goals of the traffic safety program would be accomplished. This reorganization generally unified Departmental traffic safety activities, eliminated duplication of efforts and programs, and integrated previously fragmented program functions.

The initial step in consolidating traffic safety resources was the redesignation of the Maintenance Operations Division as the Safety and Maintenance Operations Division. Personnel of the Highway Safety Engineering Section and the Office of Traffic Safety were combined to form the Traffic Safety section. The district offices of the Office of Traffic Safety were transferred to the Department's District Offices which then assumed local program responsibilities. Each District Engineer designated a Traffic Safety Specialist to conduct day-to-day activities and to provide assistance to local efforts as traffic safety problems are identified and effective corrective actions are developed, monitored, and evaluated. All District traffic safety activities are coordinated to promote the achievement of state goals and objectives.

STAFF TRAINING



Because the Department's reorganization of traffic safety resources had far-reaching implications and affected staff personnel not previously active in the traffic safety program, the Traffic Safety Section sponsored training sessions that ultimately involved about 300 people. The first four sessions were held in October and November, 1979, to acquaint District Engineers, Division Heads, and other Senior District and Division personnel with the traffic safety program. Over 200 employees attended these sessions held in Abilene, Dallas, Bryan-College Station, and Waco. The 25 District Traffic Safety Specialists received extensive training during a two week short course held in Austin; this short course was tailored especially for the Traffic Safety Specialists and their new responsibilities. An additional 50 people attended a two day workshop in Austin in June, 1980, designed to provide training in the technical aspects of contract preparation and execution, submission of claims, and project monitoring procedures. The training sessions provided maximum participation by Departmental personnel at every level of involvement in the traffic safety program and aided in a smooth transition to the new organization.

PROGRAM DEVELOPMENT



The Department uses a five-step management process to develop the traffic safety program. This process includes (1) problem identification, (2) countermeasure development, (3) planning and programming, (4) project activity, and (5) evaluation. The first step involves the collection and analysis of statewide traffic data to determine trends and subpopulations within the state which are over-represented in traffic accidents and other traffic safety problems. The next step, countermeasure development, involves the establishment of goals and priorities in response to identified problems. The most effective countermeasures or problem solution plans are then identified and selected on the basis of which will help to reduce accidents associated with identified problems. The planning and programming step includes activities related to determining the scope and cost of individual projects, identifying which projects will be implemented, and the actual contracting process. Costs are computed, funds are budgeted, contracts are negotiated, and personnel are assigned to individual projects. This step effectively and efficiently allocates available financial and human resources in response to the identified problems and problem solution plans. The next step in the management process is project activity. In this step, projects are implemented and coordinated. Periodic claims for payment and progress reports are submitted, and each project is monitored through completion. The

final step in the process is evaluation. Evaluations of the projects are used to determine if individual projects met their stated goals in terms of administrative tasks and the reduction of accident losses. An important part of the evaluation process is the determination of the reasons for the success or failure of certain projects. This information is used in the continuous refinement and improvement of the management process for the traffic safety program. The Highway Safety Plan is prepared prior to the beginning of the fiscal year to show the identified problems and the suggested problem solution plans. In FY80, the identified traffic safety problems were categorized into eight basic program modules or topics:

- Accidents Associated with Hazardous Moving Violations
- Passive Traffic Control Devices
- Education, Training, and Public Awareness
- Traffic Safety Professionals
- Traffic Data Analysis, Automation, and Program Evaluation
- Roadway-Related Accidents and Traffic Engineering
- School Bus Driver Training
- Planning, Administration, and Program Development

As a result of the identified needs and the problem solution plans, 446 non-construction projects were implemented during the fiscal year to serve as countermeasures to traffic safety problems.

FUNDING

Federal funds administered by the U. S. Department of Transportation are the principal source of funding for the Texas Traffic Safety Program. The National Highway Traffic Safety Administration (NHTSA) provided \$13.3 million in FY80 to be used for traffic safety education, enforcement, training, and the administration of the program at the county and local level; \$2.7 million of this amount was carried over from FY79. The Federal Highway Administration (FHWA) provided \$3.3 million, of which \$1.8 million was carried over from FY79, to be used for nonconstruction traffic safety engineering projects. Another \$24.3 million was provided by the FHWA under the Title II program for specific categories of traffic safety engineering construction projects including the removal of roadside hazards, pavement marking, railroad crossing passive warning devices, and safer off-

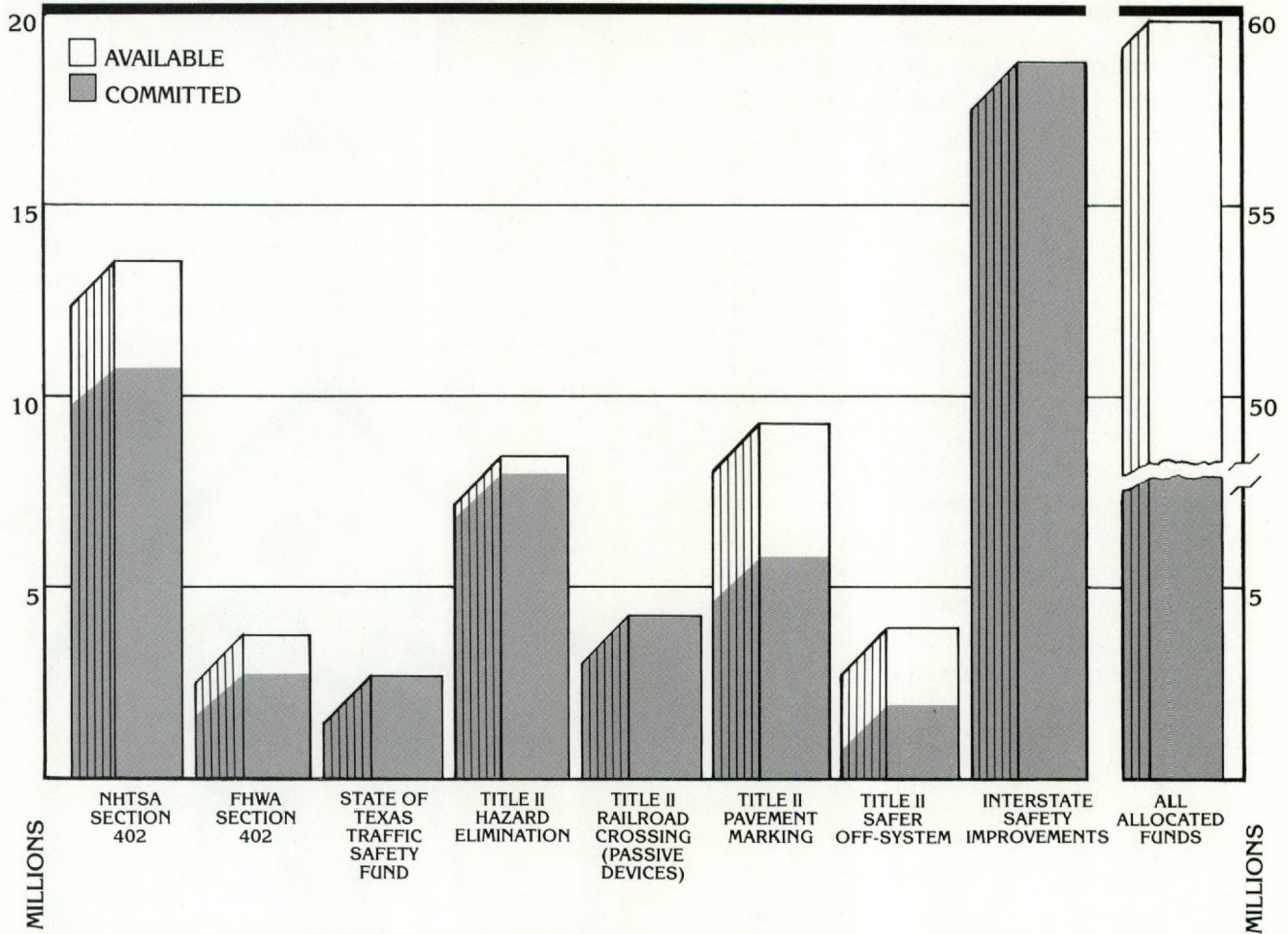
system roads. The State of Texas provided \$2.4 million for planning, administration, and selected project costs. Another category of funds is available for interstate system safety improvements. Funds are not specifically allocated to this program; in FY80, Texas obligated \$17.6 million to interstate safety improvements.

When interstate funds are included, a total of \$60.9 million was available to the traffic safety program in FY80; of this amount, \$53.7 million was committed to projects and administration during the fiscal year.

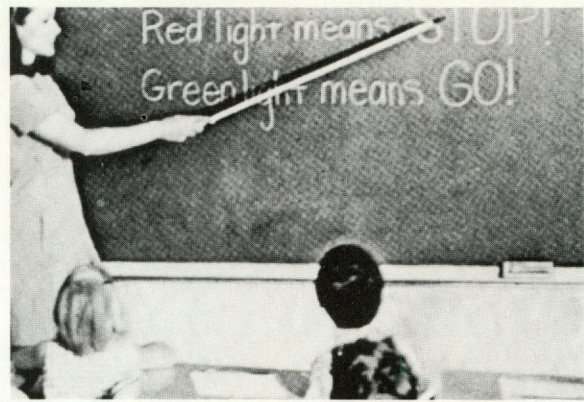
Federal regulations specify that at least 40% of all Section 402 expenditures must be expended by local jurisdictions. In Texas, \$9.2 million or 65% of the \$14.1 million Section 402 obligated funds were contracted to local jurisdictions.

SOURCE	AMOUNT AVAILABLE	AMOUNT OBLIGATED
NHTSA Section 402 Funds	\$13.3 million	\$11.4 million
FHWA Section 402 Funds	\$ 3.3 million	\$ 2.7 million
FHWA Title II Funds		
Hazard Elimination	\$ 8.2 million	\$ 8.0 million
Rail-Highway Passive Devices	\$ 3.6 million	\$ 3.6 million
Pavement Marking	\$ 9.1 million	\$ 6.0 million
Safer Off-System Roads	\$ 3.4 million	\$ 2.0 million
State of Texas Traffic Safety Fund	\$ 2.4 million	\$ 2.4 million
Interstate Safety Improvements	\$17.6 million	\$17.6 million
TOTAL	\$60.9 million	\$53.7 million

FY80 SAFETY PROGRAM FUNDS



SAFETY PROGRAMS PUBLIC EDUCATION



Safety programs in Texas are categorized into four general areas: education, enforcement, engineering, and evaluation. These programs form the nucleus of the FY80 Traffic Safety Program in Texas.

Over \$2.6 million was committed to 56 education projects throughout the state. The primary aim of these projects is to create and sustain positive attitudes and behavior toward traffic safety and to generate public awareness about specific safety elements. Three projects for the youth/child education program reached about 400,000 school-age children in 10,000 schools and provided specialized traffic safety education materials and training. This material includes a puppet theater, do-it-yourself filmstrip kits, safety coloring books, and other concepts designed to make traffic safety interesting as well as informative. Two driver education projects were funded, and four media programs were implemented. Three projects promoted the use of seat belts while another four projects supported the motorcycle safety program. Funding for 26 traffic safety coordinators, 12 public education specialists, and two

school bus driver training programs was also made available.

Support of the 55 mph national speed limit was emphasized throughout the year to encourage driver compliance with the speed limit. The Texas Jaycees participated in a grassroots campaign supporting compliance with the speed limit, and major employers in the state were also involved in a campaign to encourage compliance.



ENFORCEMENT



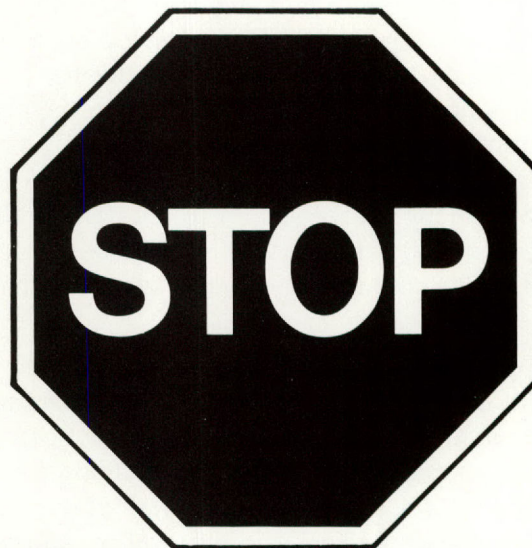
Enforcement programs include the Selective Traffic Enforcement Program (STEP), police operations training, adjudication training, and alcohol support projects. Over \$8.1 million was committed to 139 enforcement projects in FY80. The STEP projects increase the level of enforcement of selected traffic laws that, when violated, often contribute to major accidents. The increased enforcement occurs at identified high-accident locations at selected times of day. Because the majority of traffic accidents are caused by violations involving speed, alcohol, and other driver errors, most STEP projects focus on these violations.

Police operations training increases the effectiveness of law enforcement officials by providing instruction in current traffic laws and enforcement techniques, procedures, and policies. Three hundred sixty-six law enforcement officials in Texas participated in police operations training during the year as part of the traffic safety program, and approximately 250 traffic court officials received training in the newest methods of traffic court administration.

Alcohol support projects included the training of about 300 breath test instrument operators,

the funding of four local alcohol support specialists, and education programs developed for drivers arrested for alcohol-related traffic offenses.

Funding for these projects produces increased traffic enforcement activity to reduce the potential for major accidents. The training of law enforcement officials and traffic court officials improves the level of proficiency in the arrest and adjudication of traffic violations.



ENGINEERING



Over \$2.7 million was committed to 240 non-construction engineering projects. These funds provided for traffic engineering assistance to small communities and city governments which ordinarily could not afford traffic safety expertise. Other engineering projects include engineering training, the construction zone barricade program, the sign replacement program, and traffic engineering surveys and photologging.

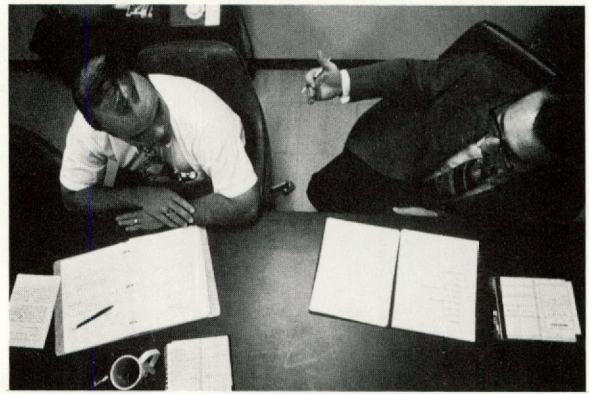
Seventeen area traffic engineers were funded and 84 safety technicians received engineering training under this program. Twenty-eight cities and one county participated in the construction zone barricade program, and 154 cities, 11 counties, and three universities participated in the sign replacement program. Traffic engineering surveys were conducted for 44 cities, 12 counties, and four universities. Thirteen photologging projects were also funded.

Approximately \$19.6 million was obligated to Title II construction projects. The 40 hazard elimination projects funded in FY80 cost \$8 million and included the construction of protected turn lanes, traffic signal upgrading, guardrail upgrading, and removal of roadside

hazards. A total of \$6 million was committed to 26 projects under the pavement marking program, which consists of marking roadways with new center and edge lines and upgrading roadways through the installation of traffic reflective buttons and longer-life striping. Seven projects costing \$3.6 million were funded to install passive devices at railroad crossings. And 12 projects costing \$2 million were implemented under the safer off-system road program, which provides for safety improvements to any roadway off the federal-aid highway system.



EVALUATION & RESEARCH



Over \$1.2 million was committed to research and evaluation projects. These projects identify traffic safety problems through data analysis as well as the evaluation of the benefits and cost-effectiveness of the traffic safety program and its component projects. During the year, a format was developed to allow for identification of high-accident locations; a feasibility study was authorized to test the possible development of an accident predictor file based on data in the Department of Public Safety's drivers license file; and an inventory of accident data systems in large city police and traffic engineering departments was conducted.

Funding was also provided for the continuation of the Emergency Medical Services Data Reporting System which enables communities to measure emergency vehicle response time performance, analyze the skills of local emergency medical service personnel, and review the overall effectiveness of the program. Continued support was also provided for the Texas Department of Health's investigation of health-medical factors as a cause of accidents.

Drivers who have been evaluated by the Medical Advisory Board of the Department of Pub-

lic Safety and are later involved in an accident are reviewed to determine if their reported mental, physical, or emotional problem was a causative factor in the accident. This project will determine the significance of these factors in accident situations, the adequacy of the Medical Advisory Board, and the validity of the guidelines used by the Board to recommend to the Department of Public Safety that a license be denied, issued, or renewed.



OUTLOOK



One or more people died in a motor vehicle traffic accident every day in 1979 in Texas. Of the 254 counties in Texas, 121 recorded an increase in motor vehicle traffic accident deaths in 1979. The State Department of Highways and Public Transportation is fully committed to reducing the number of deaths and injuries occurring as a result of traffic accidents on Texas roadways.

The implementation of a successful traffic safety program defined in terms of an actual reduction in the number of traffic fatalities is a formidable task because of Texas' size and rapid population growth.

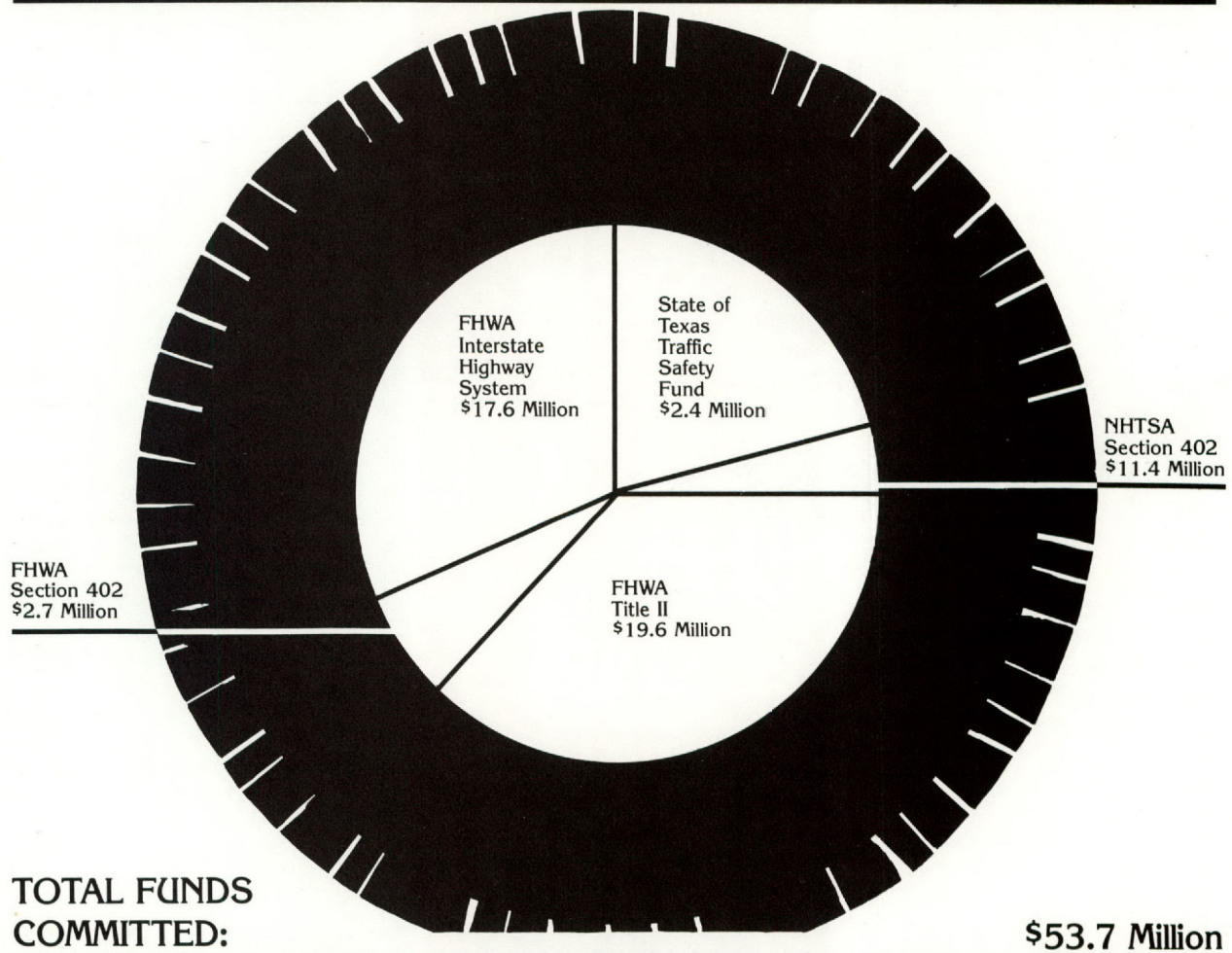
The State of Texas has more miles of highways than any other state. In 1979, over nine million licensed drivers operated ten million-plus registered vehicles over the state's highway network. Between 1970 and 1978, the number of licensed drivers and registered vehicles in Texas increased at an annual rate of five percent. Adjusting for the effects of the 1974 Arab oil embargo, the number of vehicle-miles traveled increased at an annual rate of six percent for the same period. As a result of the increase in the number of vehicle-miles traveled and the number of vehicles on the roads, many of the state's major highways and roads have reached or exceeded their design capacity.

Research in the area of traffic safety has shown that there is a definite correlation between an increase

in traffic levels and an increase in traffic fatalities. Because of the nature and pressures of growth on the traffic safety environment, it may be unrealistic to expect a sustained reduction in fatalities in absolute terms in the immediate future. It is realistic, however, to expect that the prudent use of available resources can deter sharp increases in fatalities and injuries that may otherwise be expected to accompany the state's growth. While containing the increase in fatalities is a worthwhile achievement, this Department will not relax its efforts to reduce the number of fatalities occurring daily on Texas roadways. The administrative reorganization of resources has maximized the impact of the traffic safety program and significantly improved the framework within which the traffic safety program is administered. By providing funding for programs designed to educate current and future drivers, to increase enforcement of traffic laws, to implement needed engineering improvements, and to evaluate the impact of these programs, the State of Texas has mobilized its resources to work for the reduction of traffic accidents and deaths throughout the state.

FY80 PROGRAM ACTIVITIES

SUMMARY



FY80 PROGRAM ACTIVITIES BY TYPE OF PROGRAM

EDUCATION

	NUMBER OF PROJECTS	TOTAL COST (\$000)
Youth/Children Education Program		
Driver Education	3	\$ 26.8
General and Specific Media Program	2	363.2
Promotion of Seat Belt Use	4	426.6
Motorcycle Safety Program	3	89.9
Traffic Safety Coordination Program	4	59.1
Public Education Specialist	26	1,161.4
School Bus Driver Training	12	432.3
	<u>2</u>	<u>126.5</u>
Total	56	\$ 2,685.8

ENFORCEMENT

Impact STEP	1	\$ 28.7
Alcohol Support	16	1,283.4
Police Operation Training	21	174.6
Adjudication Training	1	62.6
Local Alcohol Support Specialist	4	170.5
Increased Traffic Law Enforcement— Comprehensive	69	3,504.2
Increased Traffic Law Enforcement— Speed Limit	9	1,041.9
Increased Traffic Law Enforcement— Driving While Intoxicated	15	1,048.3
Compliance with 55 National Maximum Speed Limit	<u>3</u>	<u>790.7</u>
Total	139	\$ 8,104.9

ENGINEERING

	NUMBER OF PROJECTS	TOTAL COST (\$000)
Construction Barricade	28	\$ 207.5
Sign Replacement Program	117	588.4
Engineering Training	11	428.4
Area Traffic Engineers	17	587.2
Programmer	1	33.6
Traffic Engineering Surveys and Photologging	66	912.5
Hazard Elimination	40	8,000.0
Pavement Marking	26	6,000.0
Railroad Crossing	7	3,600.0
Safer Off-System Roads	12	2,000.0
Interstate Safety Improvements	15	17,600.0
Total	340	\$39,957.6

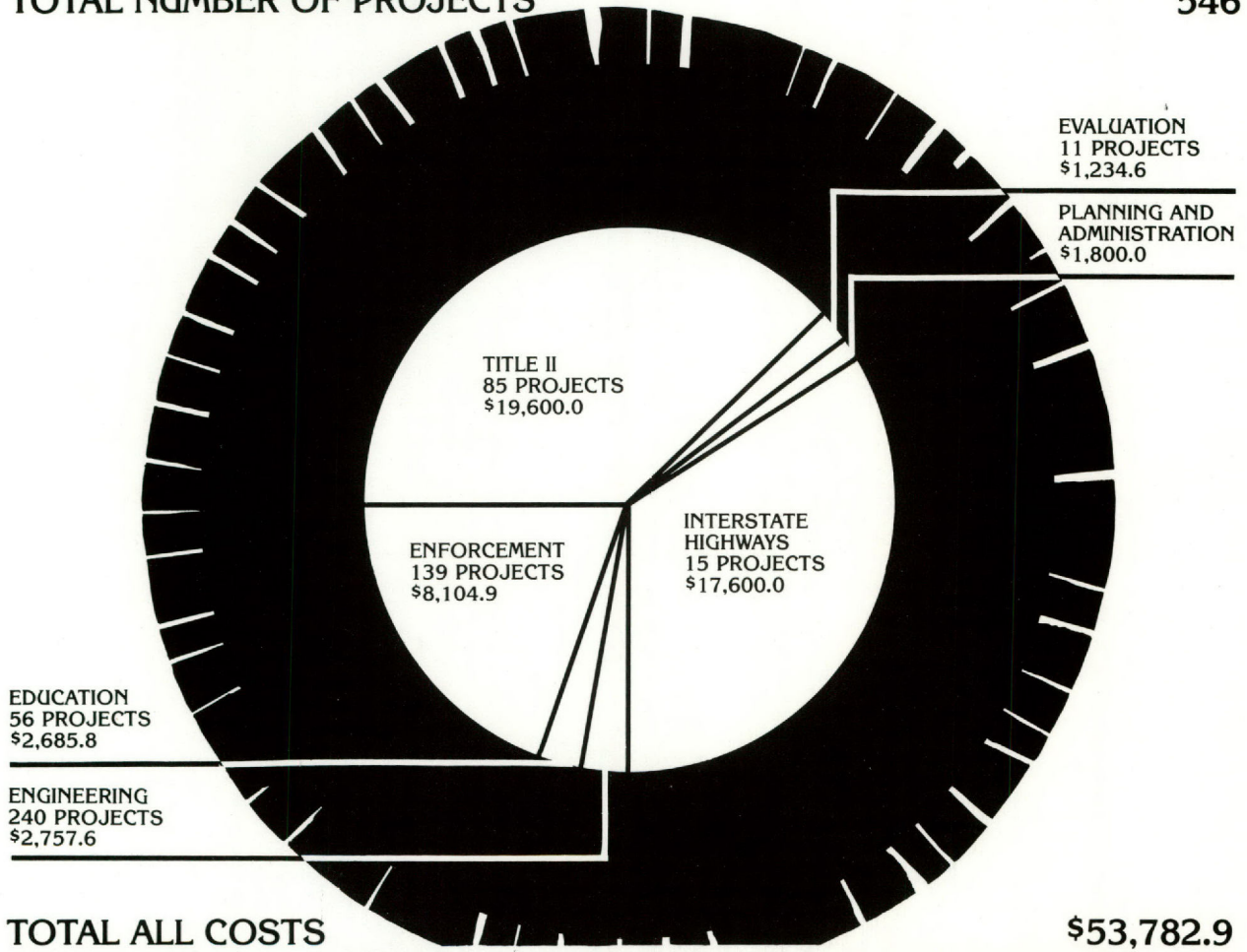
EVALUATION

Evaluation of 55 National Maximum		
Speed Limit	1	\$ 93.7
Data Analysis	2	504.9
Traffic Safety Evaluation	6	320.0
EMS Data	1	239.2
Health-Medical Accident Factor Investigation	1	76.8
Total	11	\$ 1,234.6

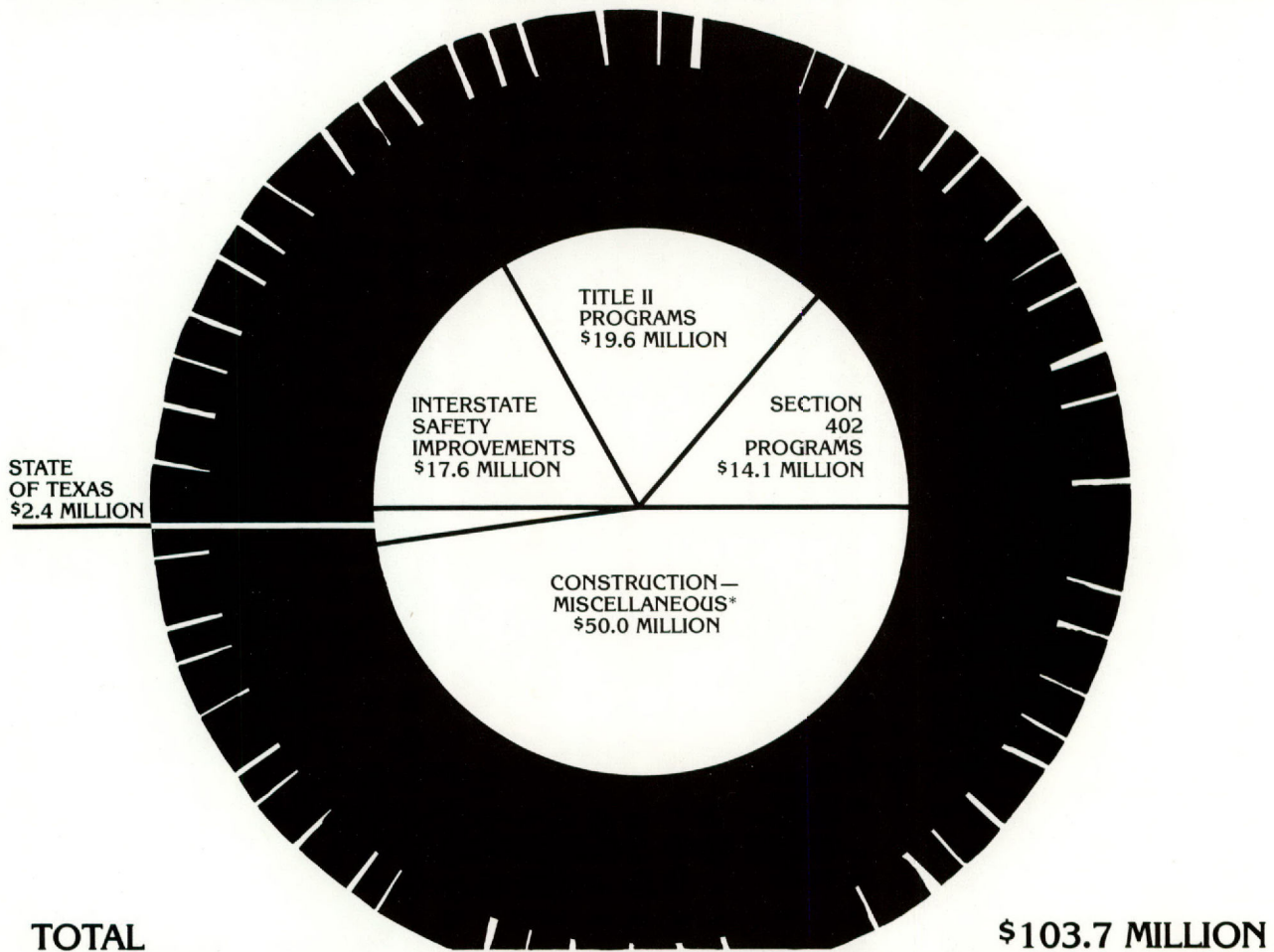
FY80 PROGRAM ACTIVITIES BY TYPE OF PROGRAM

TOTAL NUMBER OF PROJECTS

546



FY80 FUNDS OBLIGATED FOR ALL SAFETY WORK





STATE DEPARTMENT OF HIGHWAYS
AND PUBLIC TRANSPORTATION

