

COMMONWEALTH OF VIRGINIA, HIGHWAY SAFETY DIVISION

COMPREHENSIVE HIGHWAY SAFETY PLAN

For The Period, July 1, 1973 - June 30, 1977

by

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Highway Research Analyst

(A report prepared by the Virginia Highway Research Council  
Under the sponsorship of the Highway Safety Division of Virginia)

Virginia Highway Research Council

(A Cooperative Organization Sponsored Jointly by the  
Virginia Department of Highways and the  
University of Virginia)

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## PREFACE

This submission will replace the documents entitled "The Establishment of a Statewide Highway Safety Program in Virginia", and "The Establishment of a Statewide Highway Safety Program in Virginia — Supplementary Data for 1969-1970" as the State's Comprehensive Highway Safety Plan. It was prepared by the Virginia Highway Research Council for the Commonwealth of Virginia in fulfillment of the state's obligation to the National Highway Traffic Safety Administration.

This year, local Highway Safety Commissions were asked to assist the Highway Safety Division in the preparation of a State Comprehensive Highway Safety Plan. The local submissions followed a format similar to that of the state. Local commissions were assisted in this effort by the six area coordinators and the coordinator supervisor of the Highway Safety Division.

At the state level, the compilation of data necessary for the submission was assisted by numerous persons. Among them were the supervisor of Driver Education Services, Supervisor of Pupil Transportation, Supervisor of Emergency Medical Services, State Police Field Supervisor, State Police Safety Officer, State Police Investigations and Records Officer, Division of Motor Vehicles Driver Services Administrator, and a number of engineers from the Department of Highways.

Instructions used for the subject content of the State Comprehensive Highway Safety Plan were found in the 1972 June issue of the Highway Safety Program Manual, Volume 102.

The comprehensive plan is divided into four parts. Part I consists of an executive summary highlighting the goals and plans contained in the comprehensive

plan, the methodology used in preparing the plan, and a narrative dealing with progress in the implementation of specific areas for attention as outlined by NHTSA.

Part II contains an evaluation of the current situation, and includes a summary of accomplishments since the last comprehensive plan. This part also contains sections dealing with standard implementation and the nature and extent of the existing highway safety problem.

Part III is a statement of goals and objectives. It describes the desired goals and objectives, the programs required to achieve them, and the resources required to implement the proposed plan.

The program element plans (PEP) that make up the planning documents constitute Part IV. They provide a four-year projection, 1974-1977, of programs and projects under the various standard areas. A narrative discussing the program elements and subelements follows each PEP.



PART I

## SUMMARY OF OVERALL PLAN

The Virginia Highway Safety Division's Program Administration and Evaluation element is designed to ensure that the Commonwealth develops and implements highway safety programs contrived to reduce traffic crashes, injuries, and deaths. The Programs must be planned on a systematic and comprehensive basis to include all aspects of highway safety, with emphasis on the most vital areas. The program element is designed to assure that the highway safety program is based upon a thorough analysis of the state's highway traffic crash problems as documented by a traffic records system, coordinated to embrace the state's political subdivisions and appropriate elements of state government, and devised to make the most efficient use of human, financial, and technological resources. Subelement plans designed to attain the goals of Program Administration and Evaluation are: An improved traffic records system, the initiation of statewide alcohol safety programs, the continuation of the manpower training program at the Virginia Commonwealth University, and evaluation services provided by the Safety Section of the Highway Research Council.

The objectives of the Traffic Laws and Regulations element are to achieve uniformity among those traffic laws and regulations that are deemed essential for the safe and efficient use of the highways. This uniformity should aid the state in reducing the number of traffic crashes, including fatalities, personal injuries, and property damage, caused by resident and nonresident drivers not familiar with the state's traffic laws. Through striving for uniform traffic laws and

ordinances, and a rigorous campaign to reduce accidents attributed to alcohol and drugs, the state should attain these objectives.

The goal of the Vehicle Requirements provision is to diminish the number of deaths and injuries and the amount of property damage caused by motor vehicles with inspectable defects, as well as by traffic law violators who should have had their driving privileges revoked because of convictions for previous traffic violations. The underlying purposes of this element are: (1) To increase the potential of Virginia's registration system as an information mechanism capable of aiding various highway safety program areas, (2) to ensure that safety equipment on vehicles is not altered so as to render it ineffective, and (3) to ensure the safe operating condition of all registered vehicles. An extensive inspection and registration program for all motor vehicles in the Commonwealth should prove beneficial in attempting to achieve the aforementioned goals.

The objective of the Traffic Safety Education Program is to provide a comprehensive system for the traffic safety education programs designed to improve the performance of all highway users. Plans initiated to attain these results are: Driver Education Programs for secondary school students, Commercial Driver Education Schools, Driver Education Programs for Adults and Out-of-School Youth, Driver Improvement and Violator Schools, and Driver Education for the Handicapped. Additional programs in this area deal with Motorcycle Education, Pedestrian Safety, and Pupil Transportation Safety.

The goals of Driver Licensing are to test 100% of the applicants seeking their first Virginia vehicle operator's license and all license holders each four years thereafter. These countermeasures should help to reduce total crashes, property damage, injuries, and deaths by (1) preventing unqualified persons from becoming licensed drivers on the highways, and (2) removing from the highways drivers who fail to maintain proper qualification. These goals will be achieved through plans dealing with Driver Testing, Driver Licensing, Driver History Records, Driving Privilege Monitoring and Control, and Driver's Vehicle Registration Monitoring and Control.

The Police Traffic Services element is designed to ensure that these services are administered and performed in a manner intended to reduce traffic crashes, deaths, injuries, and property damage caused by individuals violating traffic laws. Particular attention is given to the repeat violator. Through emphasis on all realms of police traffic services, including accident investigation, selective traffic law enforcement, and debris, hazard control and cleanup, these goals can be attained.

The element titled Traffic Courts and Adjudication is designed to achieve a balanced local and statewide court and adjudication system which will promote highway safety through fair, efficient, and effective adjudication of traffic law violations; and to reduce recidivism rates through the use of appropriate punishment, training, and rehabilitation measures. Specific programs designed to achieve these objectives are the printing and distributing of operational and procedural manuals to all state traffic courts, the establishment of seminars for traffic court judges, and the creation

of a traffic courts and adjudication program.

The goals of the Emergency Medical Services element are to provide a state-wide emergency medical care system that will ensure quick identification of and response to highway crashes; sustain life through proper emergency measures, both at the scene and while in transit to a medical facility; and provide the coordination, transportation, and communications necessary to take the injured to an appropriate medical facility within the shortest practicable time, without creating additional hazards. These objectives can be reached through the conduct of current EMS Facilities and Communications programs.

In this document, attempts have been made to unify as well as simplify the structure of the FHWA administered National Emphasis Programs (or 3 + standards) by combining them under one encompassing program element title, Highway and Traffic Safety Engineering, and making each of the three and one-half standards into separate and distinct subelements. The objectives of the Highway and Traffic Safety Engineering element are to assure the full and proper application of modern traffic engineering principles and uniform standards for traffic control and safety, and to reduce the likelihood and severity of traffic crashes, fatalities, injuries, and property damage. Through constant improvements in Virginia's programs dealing with Highway Design, Construction, and Maintenance, Identification and Surveillance of Accident Location, Traffic Control Devices, and Pedestrian Safety, the aforementioned goals should be realized.

## METHODOLOGY

The Highway Safety Division of Virginia is well structured for its task of "carrying out the State's highway safety program, and encouraging, stimulating and developing highway safety programs and activities throughout the State." \* The Division is a part of the cabinet level Transportation and Public Safety group and reports directly to the Secretary of Transportation and Public Safety. Within the Transportation and Public Safety group are also found almost every other state agency having responsibilities under the highway safety program, such as the Virginia Department of Highways, the Division of Motor Vehicles, and the Department of State Police. Hence, coordination of its activities is facilitated by the Division's ready access to other responsible agencies.

The Highway Safety Division is further aided in its administrative efforts by the Virginia Highway Safety Commission and the Coordinating Committee. The Commission is composed of eleven citizen members appointed by the Governor who shall "advise and assist the Division in the performance of its duties and shall assist the Division specifically through the review and evaluation of the State's highway safety program."\*\* The Coordinating Committee is composed of the State Highway Commissioner, Superintendent of State Police, Commissioner of the

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\* Code of Virginia §2.1-64.16

\*\* Code of Virginia §2.1-64.16

Division of Motor Vehicles, the State Health Commissioner, the Superintendent of Public Instruction, the Director of the Highway Safety Division, and such other individual heads of state agencies as the Governor may appoint. The Coordinating Committee acts "to promote full cooperation by the State agencies represented in the execution of the State's highway safety program." \*

At yet another level, the Highway Safety Division maintains its contacts with local governments through 135 local Highway Safety Commissions. These commissions are also mandated by statute and "shall be appointed by the governing body thereof and which shall consist of such number of members as the governing body may determine, provided that at least one member shall be a member of such governing body. Such commission shall meet a minimum of four times each year and be charged with the responsibility for recommending to the governing body plans for the formulation of a highway safety program for the county or city and thereafter with the responsibility for a periodic review of the operation and effect of such program." \*\*

These entities are cited because of the role that each plays in the preparation of the Highway Safety Division's Comprehensive Highway Safety Plan .

At the state government level, heads of the state agencies having primary responsibility for program elements and subelements were contacted by the Division

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\* Code of Virginia §2.1-64.18

\*\* Code of Virginia §2.1-64.19

by letter with attached instructions and sample program element plans. (See Exhibit I-A.) Afterwards, a meeting and training session were held at the Highway Safety Division offices to fully discuss the preparation of PEPs for the comprehensive plan. After the training session, staff members of the Virginia Highway Research Council visited with individuals at the state agencies requiring additional help with the plans. Every effort was made to cover existing and proposed highway safety functions in the state agencies so as to assure comprehensive planning.

At the local level, letters requesting the submission of local plans for each relevant Program Element were sent by the Director of the Highway Safety Division to each local commission chairman. (See Exhibit I-B.) Moreover, the Division's area coordinators and coordinator supervisor were instructed in the preparation of PEPs and asked to assist local commissions. These six coordinators are the Highway Safety Division's field representatives and serve county and city governments within specified geographic areas corresponding to state planning districts.

While 100% cooperation was secured from state officials, it was never anticipated that 100% of the local governments would respond to the request for comprehensive plans. Of the local commissions 38, or 28%, of the total submitted plans. Programs and cost figures submitted by these commissions were used to extrapolate to statewide figures based upon population. It was recognized that the submissions from local commissions were not of a strictly random or representative sample, it was nevertheless felt that these data would suffice for projections.

After the accumulation and analysis of data submitted by the state and local officials, the material for the comprehensive plan was synthesized by the staff of the Safety Section, Highway Research Council. After its review and approval by the Director of the Highway Safety Division, the Coordinating Committee and the Highway Safety Commission reviewed and evaluated the proposed programs.



COMMONWEALTH OF VIRGINIA  
OFFICE OF THE GOVERNORJOHN T. HANNA  
DIRECTOR  
HIGHWAY SAFETY DIVISIONTELEPHONE NO.  
272-1431 EXT. 274  
P. O. BOX 27472  
RICHMOND 23261

September 7, 1972

Dear

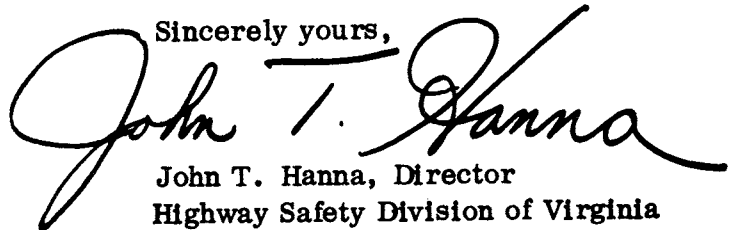
Enclosed are instructions for completing the State's Comprehensive Highway Safety Plan. Such a plan is required of each state by the National Highway Traffic Safety Administration in fulfillment of Federal Law.

The Comprehensive Plan will cover existing and proposed state and local highway safety activities for a four year period. It will identify state and local goals, set priorities, and indicate the extent to which the accomplishment of goals will contribute to improved highway safety standards. Major emphasis is to be placed on the analysis of highway safety problems, the selection of solutions, the development of a systematic plan, and the estimation of resources required to carry out the plan. The Comprehensive Plan will provide a framework for the preparation and approval of the Annual Work Program over a four year period.

I respectfully request that the completed form be returned to my office by October 15, 1972.

We are very hopeful that this plan will assist you as well as the Highway Safety Division in developing a highly effective highway safety program for the citizens of this Commonwealth.

Sincerely yours,



John T. Hanna, Director  
Highway Safety Division of Virginia

WLH:lk

- I-9 -

Enclosures

"WE'RE ALL OUT HERE TOGETHER"

## PREPARATION OF STATE COMPREHENSIVE HIGHWAY SAFETY PLAN

On the enclosed form please indicate the amount of money to be spent by your agency on highway safety over the next four years. In determining this amount consider the safety problems in the state and what the needs will be in solving them. Examine the local motor vehicle accidents, including fatalities, personal injuries and property damage, and relate requests for State and Federal funds to the areas of most need.

## Instructions for filling out form:

- Block 1. Enter program element title. Example — Driver Education, Emergency Medical Services.
- Block 2. Indicate which standard the program element will implement.
- Block 3. List subelements. Examples — High school driver education, EMS (rural), defensive driving, etc. (These should be problem areas.)
- Block 4. Show anticipated costs of programs over the next four years. An example is attached.
- Block 5. Total all costs.
- Block 6. Indicate who prepared plan.
- Block 7. Indicate who approved by and date of approval.

U.S. DEPARTMENT OF TRANSPORTATION NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION FEDERAL HIGHWAY ADMINISTRATION								STATE VIRGINIA					FORM APPROVED OMB No. _____													
COMPREHENSIVE HIGHWAY SAFETY PLAN - PROGRAM ELEMENT PLAN (PEP)								1. PROGRAM ELEMENT TITLE <b>Traffic Safety Education</b>																		
2. PROGRAM ELEMENT WILL IMPLEMENT STANDARDS CHECKED								0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
											X	X													X	
3. SUBELEMENTS								4. ESTIMATED COSTS (In Thousands)																		
								FY 1974			FY 1975			FY 1976			FY 1977									
								TOTAL	S/L	FED.	TOTAL	S/L	FED.	TOTAL	S/L	FED.	TOTAL	S/L	FED.							
1. Motorcycle Safety								112	56	56	112	56	56	150	75	75	200	100	100							
2. High School Driver Education								15,000	14,700	300	16,000	15,400	600	17,000	16,500	500	18,000	17,000	1,000							
3. Driver Improvement								158	105	53	165	55	180	90	90	200	200	100	100							
4. School Bus Safety								100	90	10	150	140	10	200	150	50	300	200	100							
5. Driver Education for the Handicapped								94	47	47	104	52	52	150	75	75	200	100	100							
5. TOTAL								15,465	14,988	466	16,531	15,758	773	17,680	16,890	790	18,900	17,500	1,400							
6. PREPARED BY								7. APPROVED BY																		
NAME AND TITLE Billy G. Johnson				AGENCY State Dept. of Education				NAME AND TITLE				AGENCY State Dept. of Education				DATE 10-15-72										

SAMPLE

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Hand  
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U.S. DEPARTMENT OF TRANSPORTATION NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION FEDERAL HIGHWAY ADMINISTRATION								STATE VIRGINIA				FORM APPROVED OMB No. _____								
COMPREHENSIVE HIGHWAY SAFETY PLAN - PROGRAM ELEMENT PLAN (PEP)								1. PROGRAM ELEMENT TITLE												
2. PROGRAM ELEMENT WILL IMPLEMENT STANDARDS CHECKED		0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
3. SUBELEMENTS		4. ESTIMATED COSTS (In Thousands)																		
		FY 1974						FY 1975			FY 1976			FY 1977						
		TOTAL	S/L	FED.	TOTAL	S/L	FED.	TOTAL	S/L	FED.	TOTAL	S/L	FED.							
5. TOTAL																				
6. PREPARED BY								7. APPROVED BY												
NAME AND TITLE				AGENCY				NAME AND TITLE				AGENCY				DATE				

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U.S. DEPARTMENT OF TRANSPORTATION NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION FEDERAL HIGHWAY ADMINISTRATION										STATE VIRGINIA					FORM APPROVED OMB No. _____							
COMPREHENSIVE HIGHWAY SAFETY PLAN - PROGRAM ELEMENT PLAN (PEP)										1. PROGRAM ELEMENT TITLE												
2. PROGRAM ELEMENT WILL IMPLEMENT STANDARDS CHECKED		0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18		
3. SUBELEMENTS		4. ESTIMATED COSTS (In Thousands)																				
		FY 1974			FY 1975			FY 1976			FY 1977											
		TOTAL	S/L	FED.	TOTAL	S/L	FED.	TOTAL	S/L	FED.	TOTAL	S/L	FED.									
5. TOTAL																						
6. PREPARED BY										7. APPROVED BY												
NAME AND TITLE					AGENCY					NAME AND TITLE					AGENCY					DATE		

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EXHIBIT I-B



COMMONWEALTH OF VIRGINIA  
OFFICE OF THE GOVERNOR

JOHN T. HANNA  
DIRECTOR  
HIGHWAY SAFETY DIVISION

August 15, 1972

TELEPHONE NO.  
272-1431 EXT. 274  
P. O. BOX 27472  
RICHMOND 23261

Dear Sir:

I am calling upon your local commission to assist the Highway Safety Division in the preparation of a Comprehensive State Highway Safety Plan. Such plans are required of each state by the National Highway Traffic Safety Administration in fulfillment of Federal Law. Completing the forms will also fulfill Section 2.1-64.21 of the Code of Virginia (copy attached) and will represent your highway safety program.

The Comprehensive Plan will cover existing and proposed state and local highway safety activities for a four year period. It will identify state and local goals, set priorities, and indicate the extent to which the accomplishment of goals will contribute to improved highway safety and implementation of the highway safety standards. Major emphasis is to be placed on the analysis of highway safety problems, the selection of alternative solutions, the development of systematic plans, and the estimation of resources required to carry out the plan. The Comprehensive Plan will provide a framework for the preparation and approval of the Annual Work Programs over the four year period.

Enclosed are forms and instructions to be used by your commission in complying with this request. You may want to contact your Area Coordinator for advice and assistance in the preparation of the plans. He will be very glad to help.

I respectfully request that the completed forms be returned by October 1, 1972 to your Area Coordinator (attached list of names, addresses and territories of each coordinator).

We are very hopeful that these plans will assist you as well as the Highway Safety Division in developing a highly effective highway safety program for the citizens of this Commonwealth.

Sincerely yours,

A handwritten signature in cursive script that reads "John Hanna".

John T. Hanna  
Director

Enclosures

"WE'RE ALL OUT HERE TOGETHER"

## PREPARATION OF STATE COMPREHENSIVE HIGHWAY SAFETY PLAN

On the enclosed form please indicate, by standard area, the amount of money to be spent on highway safety over the next four years. In determining this amount consider the safety problems in your community and what the needs will be in solving them. Examine the local motor vehicle accidents, including fatalities, personal injuries and property damage, and relate requests for State and Federal funds to the areas of most need.

Suggested Local Personnel To Contact For Data Collection

## (1) Driver Improvement School.

In order to determine the amount of money to be spent on Driver Improvement Schools, it is suggested that you contact the traffic court judge and the Driver Education Supervisor.

## (2) Traffic Courts.

The traffic court judge or city manager should be contacted to determine the traffic court needs over the next four years.

## (3) (4) (5) Identification and Surveillance of Accident Locations, Highway Design, Construction and Maintenance, and Traffic Control Devices.

For cities and counties with programs in these areas, it is suggested that the city manager, traffic, or superintendent of public works be contacted.

## (6) Pedestrian Safety.

Contact local safety clubs and/or the local school system for expenditures in this area.

(7) **Police Traffic Services.**

Budgets pertaining to traffic enforcement should be solicited from the Police Departments.

**INSTRUCTIONS FOR FILLING OUR FORM:**

- (1) Enter the name of your city or county in the space provided.
- (2) Under FY (Fiscal Year) column enter total amount of money you plan to spend on each standard area.
- (3) Under S/L (State/Local) indicate what part of the total will be state and/or local.
- (4) Under Fed. (Federal) indicate the amount of federal funds you will need in order to provide the very best safety program possible for your community.
- (5) The same procedure should be carried out for FY (Fiscal Year) 1974, 1975, 1976, 1977.
- (6) In the last three columns under total, enter all totals, S/L and Fed. for FY 74-77.
- (7) At bottom of page opposite total, enter total, S/L and Fed. for FY 74-77 for all standard areas.
- (8) An example is attached.
- (9) All costs shall be shown in thousands; example \$6 = \$6,000; \$60 = \$60,000, 600 = 600,000; 6,000 = million.
- (10) Enter signature of individual preparing report in space provided.  
  
See example.



U.S. DEPARTMENT OF TRANSPORTATION NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION SUMMARY OF COSTS - COMPREHENSIVE PLAN							STATE VIRGINIA			City-County			Name		
PROGRAM ELEMENTS AND SUBELEMENTS	ESTIMATED COSTS (In Thousands)														
	FY 1974			FY 1975			FY 1976			FY 1977			TOTALS		
	TOTAL	S/L	FED.	TOTAL	S/L	FED.	TOTAL	S/L	FED.	TOTAL	S/L	FED.	TOTAL	S/L	FED.
Driver Improvement Schools															
Traffic Courts															
Identification and Surveil- lance of Accident Loca- tions															
Highway Design, Con- struction and Mainte- nance															
Traffic Control Devices															
Pedestrian Safety															
Children Adolescents															
Pedestrian Under the Influence of Alcohol															
Police Traffic Services															
TOTAL															

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EXAMPLE A

U.S. DEPARTMENT OF TRANSPORTATION NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION SUMMARY OF COSTS - COMPREHENSIVE PLAN							STATE VIRGINIA			City-County Fun City			Name Kenneth Martin		
PROGRAM ELEMENTS AND SUBELEMENTS	ESTIMATED COSTS (In Thousands)														
	FY 1974			FY 1975			FY 1976			FY 1977			TOTALS		
	TOTAL	S/L	FED.	TOTAL	S/L	FED.	TOTAL	S/L	FED.	TOTAL	S/L	FED.	TOTAL	S/L	FED.
Driver Improvement Schools	14	7	7	18	9	9	20	15	5	20	18	2	72	49	23
Traffic Courts	50	45	5	60	58	2	65	64	1	70	70	0	245	237	8
Identification and Surveillance of Accident Locations	20	10	10	25	20	5	30	28	2	20	20	0	95	78	17
Highway Design, Construction and Maintenance	100	90	10	120	115	5	125	125	0	130	130	0	475	460	15
Traffic Control Devices	50	45	5	50	50	0	40	35	5	30	25	5	170	155	15
Pedestrian Safety															
Children	2	1	1	3	2	1	4	3	1	2	1	1	11	7	4
Adults	2	1	1	3	2	1	4	3	1	2	1	1	11	7	4
Pedestrian Under the Influence of Alcohol	1	1	0	2	1	1	3	2	1	2	1	1	8	5	3
Police Traffic Services	100	90	10	110	100	10	120	115	5	130	125	5	460	430	30
<b>TOTAL</b>	<b>339</b>	<b>290</b>	<b>49</b>	<b>391</b>	<b>357</b>	<b>34</b>	<b>411</b>	<b>390</b>	<b>21</b>	<b>406</b>	<b>391</b>	<b>15</b>	<b>1547</b>	<b>1428</b>	<b>119</b>

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## HIGHWAY SAFETY COORDINATORS

Mr. S. L. Campbell  
Coordinator Supervisor  
500 Moran Avenue  
Salem, Virginia 24153

Office Phone: 389-5452

Mr. Carey M. Arthur  
Coordinator  
1239 Oakwood Street  
Bedford, Virginia 24523

Office Phone: 389-5452

Mr. Franklin D. Barton  
Coordinator  
395 North 6th Street  
Wytheville, Virginia 24382

Office Phone: 228-3131

Mr. E. L. Johnson  
Coordinator  
P. O. Box 504  
Bedford, Virginia 24523

Office Phone: 352-7128

Mr. S. B. Dunn  
Coordinator  
116 N. Center Street  
Ashland, Virginia 23005

Office Phone: 798-8733

Mr. Ryland D. Ferris  
Coordinator  
P. O. Box 873  
Culpeper, Virginia 22701

Office Phone: 825-8315

Mr. Archie M. Gilbert  
Coordinator  
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## PLANNING DISTRICTS 15 - 18 - 19

S. B. Dunn  
1st DivisionCounties

1. Charles City
2. Chesterfield
3. Dinwiddie
4. Essex
5. Gloucester
6. Goochland
7. Greensville
8. Hanover
9. Henrico
10. King & Queen
11. King William
12. Mathews
13. Middlesex
14. New Kent
15. Powhatan
16. Prince George
17. Surry
18. Sussex

Cities

1. Colonial Heights
2. Emporia
3. Hopewell
4. Petersburg
5. Richmond

## PLANNING DISTRICTS 7 - 8 - 9 - 16

**R. D. Ferris**  
2nd Division

Counties

1. Arlington
2. Carolina
3. Clarke
4. Culpeper
5. Fairfax
6. Fauquier
7. Frederick
8. King George
9. Loudoun
10. Madison
11. Orange
12. Page
13. Prince William
14. Rappahannock
15. Shenandoah
16. Spottsylvania
17. Stafford
18. Warren

Cities

1. Alexandria
2. Fairfax
3. Falls Church
4. Fredericksburg
5. Winchester

TOWN

1. Vienna

## PLANNING DISTRICTS 10 - 11 - 13 - 14

E. L. Johnson  
3rd Division

Counties

1. Albemarle
2. Amelia
3. Amherst
4. Appomattox
5. Bedford
6. Brunswick
7. Buckingham
8. Campbell
9. Charlotte
10. Cumberland
11. Fluvanna
12. Greene
13. Halifax
14. Louisa
15. Lunenburg
16. Mecklenburg
17. Nelson
18. Nottoway
19. Prince Edward

Cities

1. Bedford
2. Charlottesville
3. Lynchburg
4. South Boston

## PLANNING DISTRICTS 1 - 2 - 3 - 4

F. D. Barton  
4th Division

<u>Counties</u>	<u>Cities</u>
1. Bland	1. Bristol
2. Buchanan	2. Galax
3. Carroll	3. Norton
4. Dickenson	4. Radford
5. Floyd	
6. Giles	
7. Grayson	
8. Lee	
9. Montgomery	
10. Pulaski	
11. Russell	
12. Scott	
13. Smyth	
14. Tazewell	
15. Washington	
16. Wise	
17. Wythe	

## PLANNING DISTRICTS 17 - 20 - 21 - 22

**A. M. Gilbert**  
**5th Division****Counties**

1. Accomack
2. Isle of Wight
3. James City
4. Lancaster
5. Nansemond
6. Northampton
7. Northumberland
8. Richmond
9. Southampton
10. Westmoreland
11. York

**Cities**

1. Chesapeake
2. Franklin
3. Hampton
4. Newport News
5. Norfolk
6. Portsmouth
7. Suffolk
8. Virginia Beach
9. Williamsburg



## PLANNING DISTRICTS 5 - 6 - 12

C. M. Arthur  
6th Division

Counties

1. Alleghany
2. Augusta
3. Bath
4. Botetourt
5. Craig
6. Franklin
7. Henry
8. Highland
9. Patrick
10. Pittsylvania
11. Roanoke
12. Rockbridge
13. Rockingham

Cities

1. Buena Vista
2. Clifton Forge
3. Covington
4. Danville
5. Harrisonburg
6. Lexington
7. Martinsville
8. Roanoke
9. Salem
10. Staunton
11. Waynesboro

§ 2.1-64.21. **Highway safety programs for counties and cities.** — Each county and city shall, upon the advice and with the assistance of the local highway safety commission, prepare and submit to the Governor, through the Highway Safety Division, a program for highway safety within such county or city which shall be subject to the approval of the Governor for purposes of determining the eligibility of such county or city to participate in funds and grants available under the federal Highway Safety Act of 1966 or such State funds as may be made available. Such plans shall specifically include, in addition to such matters as the Governor through the Highway Safety Division may require, material on the status of, need for and means to provide within such locality driver education and driver improvement courses for adults and out-of-school youths and identification of accident-prone locations on roads within the locality's jurisdiction and in cooperation with State agencies. Such programs shall be submitted by January one, nineteen hundred sixty-nine. (1968, c. 562.)

## AREAS FOR SPECIFIC ATTENTION

Vincent Walsh, Regional Administrator in the National Highway Traffic Safety Administration, in a September 20, 1972 letter to Governor's Representatives and Coordinators designated thirteen areas for specific attention within the Highway Safety Standards. These areas have been referred to throughout the compliance section of the Virginia State Comprehensive Plan. However, to facilitate discussion of the thirteen areas, a narration focused on the extent of compliance keyed to each specific area follows.

1. Motorcycle Safety Helmet Legislation — "A fully effective helmet law for motorcycle operators and passengers be adopted by the end of your next general session of the legislature and effectively implemented within one calendar year from passage."

A 1970 amendment to §46.1-172 of the Virginia Code requires operators and passengers of motorcycles to wear protective helmets. The new law went into effect July 1, 1970.

2. Blood Alcohol Concentration — "The presumptive or prima facie blood alcohol concentration set at 0.10 percent or lower. Legislative action to be completed by the end of your next general session of the legislature and effectively implemented within one calendar year from passage."

§18.1-57(3) of the Virginia Code raises a presumption of driving under the influence of alcohol at a level of

0.10% by weight of alcohol in the blood. The law went into effect July 1, 1972. It is anticipated that legislation will be introduced in the future which will change the 0.10% presumptive level to a legal limit.

3. Classified Drivers License — "A classified driver's licensing system utilizing the one license concept to be adopted by the end of the second general session of your legislature and effectively implemented within one calendar year from passage."

§46.1-374 of the Virginia Code states that a holder of a Chauffeur's license does not have to obtain an operator's license. The problem here is that there is no statutory prohibition against one individual simultaneously holding both an operator's and Chauffeur's license. To hold both licenses would be in noncompliance with the Standard. §46.1-374 should be amended to prohibit a Chauffeur licensee from holding an operator's license. The problem remains under consideration by Highway Safety Division and DMV officials.

4. Motor Vehicle Inspection — "A system for periodic inspection of all vehicles or an acceptable alternative program must be in operation by 1975. This would coincide with requirements of the Environmental Protection Agency."

Virginia conducts a semiannual inspection; however, cars must be inspected before they can be driven on

the highway and not at the time of registration. It is felt that Virginia's standard is, in fact, higher than the NHTSA Standard. A new state regulation requires every inspection station to check emission control devices to see that they have not been removed.

5. Uniform Rules of the Road — "State be in substantial conformance with the current edition of Chapter II Uniform Vehicle Code by January 1, 1975."

Increasing compliance with the provisions of the Uniform Vehicle Code (UVC) is being achieved in the State of Virginia through implementation of a number of measures designed to ensure utilization of UVC input in the decision making process. Among these measures are: (1) A comprehensive comparison and continuing update of the Code of Virginia with the UVC, conducted by the Michie Co. (law publishers) and funded through the Highway Safety Division; (2) employment by the Highway Safety Division of Mr. Paul Stotts (consultant), who works with the Virginia Code Commission and whose job it is to apprise members of the Commission of UVC provisions when motor vehicle statutes are being considered; and (3) the practice of the Safety Section of the Virginia Highway Research Council (which serves as

the research arm of the HSD) in regularly comparing the UVC with the Code of Virginia when preparing recommendations for new legislation. The Commonwealth is making every attempt to comply with the current edition of Chapter II Uniform Vehicle Code by January 1, 1975.

6. Driver License Advisory Boards — "A fully functioning Driver License Advisory Board, i. e. , Medical Advisory Boards, by January 1, 1974. "

§46.1-40.1 of the Virginia Code passed by the 1968 General Assembly establishes a medical advisory board to advise the driver license agency on medical criteria and vision standards.

7. Reporting of Traffic Court Convictions — "A minimum of 95 percent of convictions reported by the traffic courts to the State traffic records system by January 1, 1975. "

Virginia reports 100% of traffic convictions to the Division of Motor Vehicles, which updates the driver history file.

8. Emergency Medical Services — "Implementation of a fully operational comprehensive EMS plan, including a regulated training and certification program for ambulance attendants within one calendar year of the close of the next general session of your legislature. "

After July 1, 1972, every ambulance, when operated on an emergency mission, shall be occupied by at least one nondriver who holds an emergency medical care attendant's certificate issued pursuant to regulations adopted by the State Board of Health. Va. Code Ann. §32-310.4. It should be noted that Virginia's EMS Comprehensive Plan is being implemented as rapidly as resources permit.

9. Periodic Driver Reexamination — "A periodic reexamination program including vision and knowledge testing at least once every four years must be in operation within one calendar year of the close of the second general session of your legislature."

All Virginia operator's licenses issued after January 1, 1970 are issued to expire four years from the birth month of the licensee. Thereafter any such license shall be renewed in the birthday month of the licensee and shall be valid for four years.

For motor vehicle operators who are renewing their driver's license, a personal appearance is required and the citizen must pass a visual examination upon reaching certain age categories. Further, depending upon the individual's previous four years' driving history, a written or oral test on traffic regulations and a road test may be required. These tests provide a periodic screening of drivers and the removal, from the highways, of those no longer qualified for licensing.

In addition, essential preliminary planning has been initiated for utilization of vital research data in seeking legislative approval in certain areas of interest. These research results should prove beneficial in obtaining both legislative and citizen support in specific fields of endeavor. Results of this type of research will also determine the future course of action Virginia will undertake in attempting to achieve full compliance with the prescribed periodic driver reexamination program.

10. School Bus Safety — "Each state provide a school bus safety administrator and provide training for all school bus drivers by January 1, 1974."

Virginia employs a school bus safety administrator with the Department of Education with primary responsibility for pupil transportation safety. Training programs are not now mandatory for all persons involved in pupil transportation. Based on the assumption that federal funding for personnel will be made available to the appropriate state agency, a training program for school bus drivers should be implemented in Virginia by January 1, 1974. The existing discretionary programs are undergoing revisions, and regulations to mandate programs are under consideration.



11. Selective Traffic Law Enforcement — "Each state establish and implement procedures for the selective assignment of trained personnel to supervise vehicular and pedestrian traffic movement. The program is to be implemented in all State patrol organizations and cities over 50,000 population by January 1, 1974."

Part of Virginia's required curriculum for police officers within the state is focused on all aspects of traffic management. Several of the larger police jurisdictions also have implemented more extensive training programs for those personnel who will specialize in vehicular and pedestrian traffic movement. The Highway Safety Division Director is organizing a committee consisting of state police officials, and police officials from cities with a population of 50,000 or more in order to determine the best possible procedure for implementation of selective traffic law enforcement by the deadline date. Based on the findings of the committee and with the concurrence of its members, the Division plans to engage a consultant to provide aid in both recommending guidelines to follow in implementing this specific area for attention and preparing a manual denoting the aforementioned procedures.

12. Driver Improvement Programs — "Each state establish and fully implement a driver improvement program, responding to all classes of driver deficiencies by January 1, 1975."

Plans are being formulated by the Division of Motor Vehicles to propose an extensive driver improvement program to the 1973 General Assembly. The program would most likely include driver improvement interviews, driver group discussions, increased driver reeducation, improved driver licensing techniques, and use of warning letters.

13. Blood Alcohol Concentration Testing — "Systems established to determine the BAC's of drivers and pedestrians (over 15 years of age) who die within 4 hours after a traffic crash. The system to be implemented within one calendar year of the close of the next general session of your legislature."

A system to determine the BAC's of driver-pedestrian fatalities is already in existence in the state of Virginia. The offices of the State Medical Examiner regularly test blood samples of fatalities where either the investigating police officer or the Chief Medical Examiner feels that such a test may be useful in determining whether alcohol is a causative factor. Administrative efficiency and the reticence of attending physicians to take blood samples from critically injured patients (who later die) precludes 100% sampling, but it is felt that the frequency of such tests leads to statistically reliable estimations of the rate of alcohol in automobile accident involvement.

## PART II

## EVALUATION OF CURRENT SITUATION

## SUMMARY OF ACCOMPLISHMENTS SINCE LAST COMPREHENSIVE PLAN

Standard	Activity	Legislative	Administrative	Comments
301	A. Each inspection station maintains records in a form specified by the state which includes a vehicle identification number.		X	Much has been accomplished in the legislative and administrative facets of state program areas since the publication of Virginia's last comprehensive plan. Under the Periodic Motor Vehicle Inspection Standard, substantial improvements have been made. Virginia now includes a space for the vehicle identification number on the state's inspection receipt. The Commonwealth also has implemented an inspection procedure for maintaining the viability of motor vehicle emission control devices.
	B. Inspection of emission control devices on motor vehicles.		X	
302	A. "Alpha-Numerical" license plate classification system.		X	Advancements in the field of Motor Vehicle Registration has resulted in the adoption of an "Alpha-Numerical", 3 letters-3 numbers, system for accessible classification and identification of Virginia drivers and license plates. On October 1, 1972, implementation of a staggered license issue/renewal program providing for a multi-year license plate with annual revalidation began. Complete transition to this system is scheduled for 1974. Motor vehicle records are continuously being updated using automated data processing equipment and techniques. Full service branch offices in major cities are currently "on-line" processing 40% of titles and vehicle licenses against the automated vehicle title master file and cross reference files producing instantaneous printed output. This method of vehicle records maintenance will be expanded, contingent upon the availability of additional branch offices and data processing equipment.
	B. Staggered renewal program.		X	
	C. Amelioration of data processing system.		X	
303	A. Each motorcycle operator wears an approved safety helmet and eye protection when operating his vehicle on streets and highways.	X		Legislative accomplishments in the Motorcycle Safety Standard have resulted in the following requirements: motorcycle operators must wear a state approved protective helmet and eye protection, and motorcycle passengers must wear a protective helmet and be provided with a seat and a footrest.
	B. Each motorcycle passenger wears an approved safety helmet and is provided a seat and footrest.	X		
304	A. A program for adult driver training and retraining.		X	Progress in Virginia's driver education program has resulted in increased number of: Schools offering driver training and retraining to adults and out-of-school youth, licensed commercial driving schools, and certified commercial driving instructors. Additionally, two seat belt convincer devices have been acquired by the state and are being used throughout the Commonwealth to demonstrate the safety advantages of proper seat belt usage.
	B. Criteria for licensing commercial driving schools and certifying commercial driving instructors.		X	
	C. Purchase and utilization of two seat belt convincer devices to demonstrate the benefit of seat belt usage.		X	
305	A. A system providing for medical evaluation of persons whom the driver licensing agency has reason to believe have mental or physical conditions which might impair their driving ability.	X		In the standard area of Driver Licensing, a system has been created and implemented that not only provides for a medical evaluation of persons with possible mental or physical conditions which might impair their driving ability, but may require a driver whose record shows numerous traffic violations to appear for a driver improvement interview. Also in this program area, §46.1-26.1 was added to the Code of Virginia by the 1968 General Assembly to embrace the requirement that a medical advisory board or equivalent allied health professional unit composed of qualified personnel be founded for the purpose of advising the driver license agency on medical criteria and vision standards. In addition, Virginia has under construction a federally funded automated driver testing range which is scheduled for completion in July 1973. This range will allow objective testing of an applicant without an examiner in the car. The written examinations at this location and at another office of comparable volume are scheduled to be automated. This will enable Virginia to evaluate the effectiveness of objective versus subjective license examinations in a fully automated, semiautomated, and nonautomated testing environment. Evaluation of this project will be conducted by the Virginia Highway Research Council.
	B. A medical advisory board composed of qualified personnel to advise the driver license agency on medical criteria and vision standards.	X		
	C. Automated driver testing range.		X	

SUMMARY OF ACCOMPLISHMENTS (Continued)

Standard	Activity	Legislative	Administrative	Comments
306 A.	Comparison of the Code of Virginia with the Uniform Vehicle Code.	X		Accomplishments have been made in the field of Codes and Laws. The initial step toward complete concurrence of the Code of Virginia with the Uniform Vehicle Code has been accomplished with the submission of the updated Michie Company comparative analysis (1971). The study provides a ready tool to allow legislators to recommend changes in the COV based on the inconsistencies revealed in the comparison.
307 A. B. C.	A. <u>The Virginia Traffic Court Study</u> by Peat, Marwick, Mitchell and Company. B. Development of a traffic courts manual. C. Creation of a handbook for judges.		X X X	The Traffic Courts program has witnessed several accomplishments since the last comprehensive plan. In 1970, Peat, Marwick, Mitchell and Company was engaged to conduct a study of the traffic court operations in Virginia in relation to their impact on highway safety and, during the study, to determine the degree of compliance with the National Highway Safety Standards dealing with the operations of the traffic courts. This study was under Virginia's Comprehensive Highway Safety Program Plan, and was funded by a grant from the National Highway Safety Bureau. Under the auspices of the States Attorney General's Office, an operational and procedural traffic courts manual has been developed and will be distributed to all of the Commonwealth's traffic courts. Also in this standard area, an advisory group, made up of judges, lawyers, and the Director of the Highway Safety Division, has been created and is continuing work on the development of a handbook for judges concerning uniform court proceedings involving criminal, juvenile, and traffic court cases.
308 A. B. C. D.	A. Specification by the state of the following with respect to alcohol related offenses: (1) Chemical test procedures for determining blood-alcohol concentrations; (2) BAC not higher than .10% by weight, which defines the terms "intoxicated" and "under the influence of alcohol," and a provision making it either unlawful or presumptive evidence of illegality if the BAC of a driver equals or exceeds this limit. B. Any person placed under arrest for operating a motor vehicle while intoxicated or under the influence of alcohol is deemed to have given his consent to a chemical test of his blood, breath or urine for the purpose of determining the alcohol content of his blood. C. Alcohol Safety Action Project. D. Usage of the preliminary breath tests as a screening device for motorists believed to be driving under the influence of alcohol.	X X X	X X	Achievements in the standard area of Alcohol in Relation to Highway Safety have been numerous. In the 1970 General Assembly, a bill was passed allowing the use of preliminary breath tests as a screening device for all drivers presumed to be driving under the influence of alcohol. As amended in 1972, the State Code provides that the Virginia motorist is considered to have given implied consent to having a chemical test of his blood or breath made to determine the alcoholic content of his blood. §18,1-57(3) of the Virginia Code raises a presumption of driving under the influence of alcohol at a level of 0.10% by weight of alcohol in the blood. Virginia's implied consent law requires any driver arrested for DWI to submit to a blood or breath test.  The Highway Safety Division of Virginia was a successful applicant for an Alcohol Safety Action Project grant and is currently administering the many activities associated with this project. The Division also feels that the positive effect the ASAP has had on Fairfax County's DWI problem can be extended throughout the state by implementation of a state-wide Virginia Alcohol Safety Program (VASP).
309	Crash Investigation Team.		X	The funding of a Crash Investigation Team by the Highway Safety Division is the major accomplishment in the field of Identification and Surveillance of Accident Locations since the last comprehensive plan. The team conducts extensive investigations of accidents in attempting to uncover contributory factors in crashes.
310 A. B.	A. Continuation of efforts aimed at improving Virginia's Traffic Records Program. B. Motorist Data Base Project.		X X	Virginia has placed much emphasis on achieving full compliance with the requirements contained in the Traffic Records Standard. While the state complies with most of the outlined provisions in this area, the Commonwealth continually strives to attain consummate accordance with all facets of the Traffic Records program. Under theegis of the Traffic Records Committee, an interagency study team has intensively studied the state system to outline deficiencies and advance improvements. The initial step in the creation of a total traffic records data base for Virginia can be evidenced in the development of a Motorist Data Base. This project will produce an integrated, common data base which provides for all information filing and storage and retrieval needs of state agencies for driver and vehicle licensing and identification.

100

SUMMARY OF ACCOMPLISHMENTS (Continued)

Standard	Activity	Legislative	Administrative	Comments
311	A. Criteria for use of two-way communications.		X	<p>Under the Emergency Medical Services Standard, several major accomplishments have been reached since publication of the state's last comprehensive plan. The Bureau of Emergency Medical Services, Department of Health has expanded the program in two-way communications. To date, 75% of all emergency medical care units within the state are equipped with two-way systems. Additionally, since July 1, 1972, every ambulance, when operated on an emergency mission, shall be occupied by at least one non-driver who holds an emergency medical care attendant's certificate issued pursuant to regulations adopted by the State Board of Health.</p> <p>Virginia has developed an excellent master Comprehensive Health Planning Program. Consequently, twenty-two regional comprehensive Health Planning Districts will make detailed studies of the needs of their respective cities and counties. Present and future needs of emergency medical and health services will be categorized and assistance to local EMS Advisory Committees in seeking federal funds will be provided. A 71-hour paramedic training program has been adopted as the course of instruction for all potential emergency medical technicians. This program is endorsed by the Medical Society of Virginia and the Virginia Association of Volunteer Rescue Squads.</p>
	B. First aid certification for non-drivers on an emergency mission.	X		
	C. Development of a Comprehensive Planning Program.		X	
	D. Training Program.		X	
312	A. Intersection studies.		X	<p>Achievements made in Highway Design, Construction and Maintenance deal with the continuation of intersection studies and the implementation of the skid test program. The Highway Safety Division will continue its program of intersection studies for local political subdivisions. These studies may prove beneficial to these localities by offering suggestions as to how the design, construction, and maintenance variables of a troublesome intersection may be bettered. Funding for the skid test program has recently been approved and implementation of the plan is scheduled for FY 1973.</p>
	B. Skid test program.		X	
313	A. Publication and distribution of a "new signs" brochure and a traffic signal manual.		X	<p>The publication and distribution of a "new signs" brochure and a traffic signal manual constitute progress in the field of Traffic Control Devices. This brochure and manual should prove beneficial to all highway users by making them aware of new signs and traffic signals being installed on Virginia's highway systems.</p>
314	A. Statewide program for the protection of children walking to and from school, entering and leaving school buses, and in neighborhood play.		X	<p>The Highway Safety Division is responsible for several accomplishments and improvements in the area of Pedestrian Safety. The Division has initiated a program to provide school age children with reflective materials to attach to their clothing and other possessions to increase their visibility. The Highway Safety Division also created the "comic book" periodical, "Danny and the Demon Cycle." This publication is designed as a safety guide for bicycle riders.</p>
	B. Publication of "Danny and the Demon Cycle," as a safety guide for bicycle riders.		X	
315	A. Purchase of two helicopters for traffic patrolling.		X	<p>In the program area of Police Traffic Services, the purchase of two helicopters by the Highway Safety Division, for State Police Department traffic patrol purposes, and the implementation of more extensive training programs for those personnel specializing in vehicular and pedestrian traffic movement account for the major achievements since the last comprehensive plan.</p>
	B. Implementation of more extensive training programs for those personnel who will specialize in vehicular and pedestrian traffic movements.		X	
316	A. Creation of a manual on Debris, Hazard Control and Cleanup.		X	<p>As a result of a study conducted by Wilbur Smith and Associates, which dealt with Virginia's debris, hazard control, and cleanup program, a manual has been created which recommends procedures and guidelines for restoring an accident scene to its original condition. This manual exemplifies the progress made in the field of accident cleanup since the publication of the last comprehensive plan.</p>
317	A. Promulgation of Pupil Transportation Safety Standard.		X	<p>The NHTSA has promulgated standard 317 - Pupil Transportation Safety, since Virginia's last comprehensive plan. Under the Pupil Transportation Safety Standard, a program has been initiated to retrofit all Virginia school buses with mirror and light systems so as to comply with federal requirements. Additionally, a major evaluation and review program for all training procedures in pupil transportation is being developed.</p>
	B. Retrofitting of Virginia school buses with mirrors and light systems.		X	
	C. Evaluation of review program for all training procedures.		X	
318	A. Promulgation of an Accident Investigation and Reporting Standard.		X	<p>An assessment of this standard is being made to determine the Commonwealth's extent of compliance in this specific area and upgrade statewide accident investigation and reporting.</p>

## EXHIBIT 2

## DISTRIBUTION OF FEDERAL FUNDS FOR FY 1969

Standard 300 - Planning and Administration

<u>Subdivision or Agency</u>	<u>Amount</u>
Virginia Highway Safety Division	\$115,847.00
Total Federal Funds -300	\$115,847.00

Standard 304 - Driver Education

Albemarle County	\$ 19,295.81
Alleghany County	350.00
Arlington County	90,842.00
Bristol City	565.00
Chesapeake City	135,735.00
Clifton Forge City	17,293.00
Danville City	16,152.85
Fairfax City	9,250.00
Fairfax County	97,203.17
Fauquier County	2,000.00
Fluvanna County	1,370.00
Franklin County	696.09
Hampton City	7,156.75
Henrico County	198,743.87
Martinsville City	21,062.50
Patrick County	100.00
Portsmouth City	88,184.25
Prince Edward County	1,000.00
Prince William County	15,750.00
Richmond City	113,857.00
Roanoke City	22,739.00
Stafford County	3,000.00
Virginia Beach City	12,600.00
Total Federal Funds to localities - 304	\$874,946.29
State Department of Education	19,408.80
Total Federal Funding - 304	\$894,355.09

## EXHIBIT 2 (continued)

Standard 308 - Alcohol in Relation to Highway Safety

<u>Subdivision or Agency</u>	<u>Amount</u>
State Department of Health	\$ 14,600.00
Total Federal Funding - 308	\$ 14,600.00

Standard 309 - Identification and Surveillance of Accident Locations

City of Richmond	\$ 1,522.57
City of Richmond	2,809.99
Albemarle County	250.00
Gloucester County	850.00
Prince Edward County	200.00
Total Federal Funding to localities - 309	\$ 5,632.56

Standard 310 - Traffic Records

City of Richmond	\$ 18,728.50
Arlington County	8,857.00
Total Federal Funding to localities - 310	27,585.50
Highway Safety Division	87,000.00
Division of Motor Vehicles	15,959.72
Total Federal Funding - 310	\$130,545.22

Standard 311 - EMS

Brunswick County	\$ 4,709.00
Bristol City	16,300.00
Danville City	6,649.97
Dickenson County	2,509.64
Dinwiddie County	5,350.00
Emporia City	1,125.00
Franklin County (Boones Mill)	1,508.51
Franklin County	2,718.30
Giles County	2,750.00

## EXHIBIT 2 (continued)

## Standard 311 - EMS (continued)

<u>Subdivision or Agency</u>	<u>Amount</u>
Hanover County	\$ 4,000.00
King George County	128.00
Lexington City	625.00
Lunenburg County	6,000.00
Middlesex County	4,901.26
Page County	11,427.58
Petersburg City	4,951.00
Prince Edward County	400.00
Prince William County	7,600.00
Southampton County	11,455.77
<b>Total Federal Funds to localities - 311</b>	<b>95,109.03</b>
State Department of Health	62,028.00
<b>Total Federal Funding - 311</b>	<b>\$157,137.03</b>

Standard 315 - Police Traffic Services

Albemarle County	\$ 2,500.00
Charlottesville City	4,371.00
Henrico County	21,895.95
Portsmouth City	65,093.00
Richmond City	5,800.00
<b>Total Federal Funding to localities - 315</b>	<b>\$ 99,659.95</b>
<b>Total Federal Funding to localities</b>	<b>\$1,102,933.33</b>
<b>Total Federal Funding for FY 1969</b>	<b>\$1,417,776.85</b>



## DISTRIBUTION OF FEDERAL FUNDS FOR FY 1970

Standard 300 - Planning and Administration

<u>Subdivision or Agency</u>	<u>Amount</u>
Virginia Highway Safety Division	\$179,000.00
Total Federal Funds - 300	\$179,000.00

Standard 304 - Driver Education

Bath County	\$ 7,250.00
Bedford County	7,116.64
Bristol City	1,130.00
Charlottesville City	27,000.00
Clarke	21,757.42
Dinwiddie County	5,896.97
Franklin City	610.00
Franklin County	250.00
Galax City	48,034.00
Giles County	1,501.50
Gloucester County	11,180.47
Grayson County	6,265.56
Grayson County	6,777.06
Hampton City	42,000.00
Louisa County	15,767.50
Lynchburg City	27,436.50
Mathews County	4,914.32
New Kent County	3,476.00
Newport News City	38,250.00
Page County	4,117.11
Pulaski County	3,516.00
Richmond County	4,650.00
Southampton County	7,000.00
Staunton City	33,461.00
Virginia Beach	100,000.00
Waynesboro City	6,369.48
Westmoreland County	6,425.00
Wise County	16,000.00
Wythe County	500.00
York County	49,262.50
Total Federal Funds to Localities - 304	\$507,915.03

## EXHIBIT 3 (continued)

## Standard 304 - continued

<u>Subdivision or Agency</u>	<u>Amount</u>
Department of Professional and Occupational Registration	\$ 500.00
Virginia State College	22,200.00
State of Virginia	23,135.42
<b>Total Federal Funding - 304</b>	<b>\$553,750.45</b>

Standard 306 - Codes and Laws

Virginia Highway Safety Division	\$ 3,000.00
<b>Total Federal Funding - 306</b>	<b>\$ 3,000.00</b>

Standard 307 - Traffic Courts

Virginia Highway Safety Division	\$ 48,150.00
<b>Total Federal Funding - 307</b>	<b>\$ 48,150.00</b>

Standard 309 - Identification and Surveillance of Accident Locations

Staunton City	\$ 1,650.00
<b>Total Federal Funds to localities - 309</b>	<b>\$ 1,650.00</b>

Standard 310 - Traffic Records

Newport News	\$ 14,400.00
<b>Total Federal Funds to localities - 310</b>	<b>14,400.00</b>
Virginia Highway Safety Division	10,000.00
<b>Total Federal Funds - 310</b>	<b>\$ 24,400.00</b>

## EXHIBIT 3 (continued)

Standard 311 - EMS

<u>Subdivision or Agency</u>	<u>Amount</u>
Augusta County	\$ 3,600.00
Bedford County	1,943.75
Botetourt County	5,100.00
Buckingham County	5,624.17
Brunswick County	4,624.08
Craig County	2,000.00
Franklin City	8,350.00
Franklin County	4,050.00
Franklin County	3,997.05
Fauquier County	5,150.00
Galax City	5,000.00
Giles County	750.00
Greene County	6,400.00
Greenville County	450.00
Isle of Wight County	7,500.00
King George County	6,450.00
King William County	5,050.00
Loudoun County	16,668.16
Martinsville City	8,200.00
Montgomery County	600.00
Montgomery County	400.00
Meklenberg County	8,500.00
Nelson County	2,000.00
Northampton County	1,000.00
Pulaski County	2,600.00
Russell County	2,800.00
Rappahannock County	5,354.37
Shenandoah County	4,485.75
Scott County	5,000.00
Sussex County	5,000.86
Tazewell County	5,091.75
Winchester City	8,000.00
Wythe County	4,750.00
York County	5,603.00
Total Federal Funds to localities - 311	162,092.94
Department of Health	51,492.08
Department of Health	62,028.00
Total Federal Funds - 311	\$275,613.02

## EXHIBIT 3 (continued)

Standard 315 - Police Traffic Services

<u>Subdivision or Agency</u>	<u>Amount</u>
Buena Vista City	\$ 650.00
Campbell County	43,300.00
Hanover County	1,000.00
Petersburg City	4,538.00
Roanoke County	350.00
Virginia Beach	18,314.00
Total Federal Funds to localities - 315	68,152.00
State Police	252,636.00
Total Federal Funds - 315	\$353,788.00

Standard 316 - Debris Hazard Control and Cleanup

Virginia Highway Safety Division	\$ 40,000.00
Virginia Department of Highways	48,241.00
Total Federal Funds - 316	\$ 88,241.00
Total Federal Funding to localities	\$754,209.97
Total Federal Funding for 1970	\$1,527,592.97

## DISTRIBUTION OF FEDERAL FUNDS FOR FY 1971

Standard 300 - Planning and Administration

<u>Subdivision or Agency</u>	<u>Amount</u>
Virginia Highway Safety Division	\$213,150.00
Total Federal Funding - 300	213,150.00

Standard 304 - Driver Education

Arlington Co.	40,295.00
Buchanan Co.	43,997.50
Carroll Co.	48,770.00
Dinwiddie Co.	7,967.00
Fairfax City	9,300.00
Fairfax Co.	76,723.10
Falls Church City	7,105.00
Grayson Co.	1,895.00
King George	8,800.00
King William	2,900.00
Lancaster Co.	7,850.00
Lexington City	15,359.05
Madison Co.	14,265.00
New Kent Co.	4,551.00
Newport News City	100,000.00
Northampton Co.	10,400.00
Northumberland Co.	4,500.00
Norton City	31,777.50
Prince William Co.	12,775.00
Richmond City	48,800.00
Roanoke Co.	12,800.00
Russell Co.	9,169.00
Virginia Beach City	130,521.05
Waynesboro City	4,542.50
Wise Co.	15,000.00
York Co.	6,605.00
Total Federal Funding - 304	\$682,668.20
Highway Safety Division	6,000.00
State Department of Education	12,742.00
Total Federal Funds to Agencies	18,742.00
Total Federal Funding - 304	\$695,410.20

## EXHIBIT 4 (continued)

	<u>Amount</u>
<u>Standard 305 - Driver Testing and Licensing</u>	
Division of Motor Vehicles	\$104,346.00
Total Federal Funding	104,346.00
<u>Standard 306 - Codes and Laws</u>	
Virginia Highway Safety Division	4,375.00
Total Federal Funding	4,375.00
<u>Standard 308 - Alcohol and Drugs</u>	
Staunton City	2,875.00
Virginia Highway Safety Division	67,975.00
Total Federal Funding to Localities - 308	2,875.00
Total Federal Funding - 308	70,850.00
<u>Standard 309 - Identification and Surveillance of Accident Locations</u>	
Virginia Highway Safety Division	15,250.00
Total Federal Funding - 309	15,250.00
<u>Standard 310 - Traffic Records</u>	
Arlington Co.	8,629.50
Virginia Highway Safety Division	26,970.00
Total Federal Funding to Localities	8,629.50
Total Federal Funding - 310	35,599.50
<u>Standard 311 - Emergency Medical Services</u>	
Augusta Co.	6,750.00
Botetourt Co.	5,300.00
Charlotte Co.	7,911.00
Craig Co.	700.00
Culpeper Co.	4,500.00
Dickenson Co.	2,033.70
Fairfax Co.	9,800.00

## EXHIBIT 4 (continued)

Standard 311 - Emergency Medical Services (Continued)	Amount
Frederick Co.	5,750.00
Fries, Town of	5,090.00
Giles Co.	9,000.00
Gloucester Co.	3,898.00
Goochland Co.	7,227.50
Greene Co.	200.00
Hanover Co.	5,625.00
Harrisonburg City	5,450.00
Lee Co.	4,325.50
Loudoun Co.	7,051.25
Mathews Co.	3,618.05
Middlesex Co.	3,750.00
Montgomery Co.	6,318.30
Page Co.	13,149.00
Prince William Co.	1,746.80
Pulaski Co.	3,310.70
Radford City	5,000.00
Rappahannock Co.	967.50
Roanoke City	12,500.00
Roanoke Co.	4,125.19
Rockbridge Co.	1,975.50
Rockingham Co.	4,523.50
Shenandoah Co.	5,945.77
Smyth Co.	2,034.50
Tazewell Co.	3,886.64
Vinton, Town of	3,378.00
Washington Co.	10,000.00
Westmoreland Co.	10,500.00
Wise Co.	13,789.19
 Total Federal Funding to Localities - 311	 \$201,139.59
 Virginia Department of Health	 9,404.92
 Total Federal Funds - 311	 \$210,544.51
 <u>Standard 312 - Highway Design, Construction and Maintenance</u>	
 Highway Safety Division	 33,000.00
 Total Federal Funds - 312	 33,000.00

## EXHIBIT 4 (continued)

Standard 313 - Traffic Control Devices

Highway Safety Division	7,200.00
Total Federal Funds - 313	7,200.00

Standard 314 - Pedestrian Safety

Highway Safety Division	16,000.00
Total Federal Funds - 314	16,000.00

Standard 314 - Police Traffic Services

Accomac Co.	447.60
Amelia Co.	10,672.00
Arlington Co.	8,884.00
Big Stone Gap (Town of)	750.00
Emporia City	2,100.00
Hanover Co.	1,250.00
Henrico Co.	9,885.15
Loudoun Co.	1,000.00
Lynchburg City	1,981.86
Nansemond Co.	2,600.00
Norfolk City	17,661.00
Norton City	1,250.00
Pennington Gap City	1,650.00
Prince William	4,118.00
Roanoke Co.	550.00
Vinton City	6,500.00
Washington Co.	1,400.00
Waynesboro City	1,150.00
State Police	185,007.19
Highway Safety Division	7,800.00
Old Dominion University	584.00
Law Enforcement Training Standards Comm.	9,250.00
Total Federal Funding to Agencies	202,641.19
Total Federal Funding to Localities	91,483.61
Total Federal Funding	276,490.80
Total Federal Funding to Localities	986,795.90
Total Federal Funding for 1971	\$1,682,216.01



## EXHIBIT 5

## DISTRIBUTION OF FEDERAL FUNDS FOR FY 1972

Standard 300 - Planning and Administration

Highway Safety Division	\$180,000.00
Total Federal Funding	\$180,000.00

Standard 303 - Motorcycle Safety

Highway Safety Division	10,000.00
Total Federal Funding - 303	\$ 10,000.00

Standard 304 - Driver Education

Clifton Forge	9,667.50
Galax City	7,400.00
Dickenson Co.	9,880.00
Halifax Co.	32,100.00
Lee Co.	28,318.85
Madison Co.	12,450.00
Middlesex Co.	450.00
Northampton Co.	8,100.00
Nottoway Co.	17,500.00
Patrick Co.	15,200.00
York Co.	21,350.00
Richmond Co.	300.00
Woodrow Wilson Rehabilitation Center	64,645.00
Russell Co.	7,746.78
Pulaski Co.	50,000.00
Department of Education	25,405.96
Highway Safety Division ETV	2,151.00
Carroll Co.	14,800.00
Total Federal Funding to Localities - 304	\$299,908.13
Total Federal Funds - 304	\$327,465.09

Standard 305 - Driver Licensing

Division of Motor Vehicles	177,500.00
Total Federal Funding - 305	\$177,500.00

## EXHIBIT 5 (continued)

Standard 306 - Codes and Laws

Virginia Highway Safety Division (Legislative Bills)	\$ 3,000.00
Virginia Highway Safety Division (Manual of up-dated St. Traffic Laws)	10,000.00
Total Federal Funding - 306	\$ 13,000.00

Standard 307 - Traffic Courts

Franklin Co.	500.00
Roanoke Co.	57.50
Galax City	8,000.00
Virginia Highway Safety Division (Attorney General's Office)	5,100.00
Virginia Highway Safety Division (Traffic Court Conference)	9,625.00
Buchanan Co.	4,000.00
Patrick Co.	4,000.00
Total Federal Funding to Localities - 307	\$ 16,557.50
Total Federal Funding - 307	\$ 31,282.50

Standard 308 - Alcohol in Relation to Highway Safety

Virginia Highway Safety Division	200.00
Virginia Highway Safety Division	40,800.00
Total Federal Funding - 308	\$ 41,000.00

Standard 309 - Identification and Surveillance of Accident Locations

Newport News	8,030.00
Alexandria	13,688.00
Total Federal Funding to Localities - 309	\$ 21,718.00
Total Federal Funding - 309	\$ 21,718.00

Standard 310 - Traffic Records

Virginia Highway Safety Division	50,000.00
Total Federal Funding - 310	\$ 50,000.00

Standard 311 - Emergency Medical Services

Buckingham Co.	\$ 6,750.00
Chesterfield Co.	7,850.00
Gloucester Co.	6,050.00
Highland Co.	5,980.00
Lancaster Co.	4,250.00
Nottoway Co.	12,400.00
Roanoke Co. (Bent Mountain)	1,500.00
Roanoke Co. (Mt. Pleasant)	2,400.00
Roanoke Co. (#5 Fire Department)	6,650.00
Westmoreland Co.	6,750.00
Rappahannock Co.	1,250.00
Pittsylvania Co.	6,500.00
New Kent Co.	6,750.00
Montgomery Co. (Blacksburg)	6,433.13
Virginia Department of Health	25,825.00
Augusta Co.	2,202.86
Roanoke Co. (Ft. Lewis)	2,700.00
Bedford Co.	813.00
Petersburg City	13,500.00
Amherst Co.	9,250.00
Middlesex Co.	7,250.00
Prince Edward County	5,050.00
Roanoke City	900.00
Rockingham Co.	17,544.25
Roanoke (Vinton)	5,750.00
Botetourt (Troutville)	7,300.00
Dickenson Co.	10,610.00
Virginia Highway Safety Division	12,000.00
Virginia Highway Safety Division	25,345.00
Total Federal Funding to Localities - 311	\$164,383.24
Total Federal Funding - 311	\$227,553.24

Standard 312 - Highway Design, Construction and Maintenance

Farmville City	\$ 1,500.00
Alexandria City	2,875.00
City of Richmond	2,750.00
City of Richmond	7,500.00
City of Richmond	10,200.00
Total Federal Funding to Localities - 312	\$ 24,825.00
Total Federal Funding - 312	\$ 24,825.00

## EXHIBIT 5 (continued)

Standard 313 - Traffic Control Devices

Richmond City	\$ 750.00
Richmond City	850.00
Department of Highways	3,160.00
Department of Highways	18,500.00
Virginia Highway Safety Division	787.50
Virginia Highway Safety Division	2,600.00
 Total Federal Funding to Localities - 313	 \$ 1,600.00
 Total Federal Funding - 313	 \$ 26,647.50

Standard 314 - Pedestrian Safety

Chesterfield Co.	\$ 17,750.00
Fairfax County	17,750.00
Chesterfield Co.	22,609.50
Virginia Highway Safety Division	27,200.00
 Total Federal Funding to Localities - 314	 \$ 58,109.50
 Total Federal Funding	 \$ 85,309.50

Standard 315 - Police Traffic Services

Vienna, Town of	\$ 650.00
V.C.U.	15,224.00
Staunton City	687.50
Rockingham Co. (Broadway)	718.47
Rockingham Co. (Grottoes)	307.45
Rockingham Co. (Timberville)	2,837.55
Rockingham Co. (Elkton)	1,922.62
Roanoke Co.	3,541.50
Petersburg City	25,427.94
Nansemond Co.	3,000.00
Montgomery Co.	1,620.00
Henrico Co.	14,665.00
Fairfax Co.	20,315.00
Arlington Co.	10,630.00
Portsmouth City	25,000.00
Newport News City	36,000.00
Campbell Co.	46,082.00
Prince Edward City	24,500.00
Norfolk City	5,700.00
V.C.U.	7,500.00

Standard 315 - Police Traffic Services (Continued)	Amount
State Police (Helicopter)	90,392.81
State Police	33,593.00
Portsmouth City	10,000.00
Total Federal Funding to Localities - 315	\$233,605.03
Total Federal Funding - 315	\$380,314.84
Total Federal Funding to Localities 1972	\$820,706.40
Total Federal Funding 1972	\$1,596,625.67

## Exhibit 6

NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION'S  
DISTRIBUTION OF FEDERAL FUNDS FOR FY 1973

Standard 300 — Planning and Administration

<u>Subdivision or Agency</u>	<u>Amount</u>
Virginia Highway Safety Division	\$180,000.00
Total Federal Funding — 300	\$180,000.00

Standard 304 — Driver Education

Carroll County	\$ 15,731.00
Chesapeake	20,800.00
Chesterfield	30,000.00
Franklin County	20,000.00
Madison College	17,673.00
Madison County	2,500.00
Montgomery County	12,000.00
Northampton	8,100.00
Prince William	15,967.00
Pulaski	9,513.00
Stafford	18,643.00
Tazewell	20,236.00
Department of Education — In-School	11,429.00
Department of Education — Adult Driver Education	11,871.76
Williamsburg	16,000.00
V. C. U. Accident Inv.	3,209.14
V. C. U. Workshop	3,667.18
V. C. U. Police Traffic Sup.	4,348.21
V. C. U. Police Traffic Records	2,513.23
Falls Church	1,840.00
Virginia Beach	32,000.00
Winchester and Clarke	1,768.00
Total Federal Funding to Localities — 304	\$256,508.76
Total Federal Funds — 304	\$279,809.52

Standard 305 — Driver Licensing

D. M. V. (Va. Auto Dr. Testing)	\$107,500.00
Total Federal Funding — 305	\$107,500.00

Exhibit 6 (continued)

Standard 306 -- Codes and Laws

<u>Subdivision or Agency</u>	<u>Amount</u>
V. H. S. D. (Comparison Code)	\$ 600.00
V. H. S. D. Traffic Codes for Police	17,500.00
Total Federal Funding to Localities -- 306	\$ 17,500.00
Total Federal Funding -- 306	\$ 18,100.00

Standard 307 -- Traffic Courts

Botetourt	\$ 6,200.00
Total Federal Funding to Localities -- 307	\$ 6,200.00
Total Federal Funding	\$ 6,200.00

Standard 308 -- Alcohol in Relation to Highway Safety

Charlottesville	\$ 3,000.00
Department of Health	62,120.00
V. H. S. D. (Breath Testing Devices; training and associated supplies)	233,523.61
V. C. U. Breath Examiner Training	13,728.95
Virginia Highway Research Council	22,800.00
Total Federal Funding to Localities -- 308	\$250,252.56
Total Federal Funding -- 308	\$335,172.56

Standard 310 -- Traffic Records

D. M. V.	\$ 8,000.00
Chesapeake	23,964.00
V. H. S. D.	9,460.00
Total Federal Funding to Localities -- 310	\$ 33,424.00
Total Federal Funding -- 310	\$ 41,424.00

## Exhibit 6 (continued)

Standard 311 — Emergency Medical Services

<u>Subdivision or Agency</u>	<u>Amount</u>
Alexandria	\$ 4,134.00
Alleghany (Dunlap)	6,303.00
Alleghany (Bolling Springs)	280.00
Alleghany (Falling Springs)	561.00
Bedford County	5,752.58
Bedford City	6,900.00
Town of Chatham	2,382.60
Campbell County	7,480.00
Carroll County	1,000.00
Charlotte County	7,004.00
Clifton Forge	3,873.00
Dinwiddie	7,500.00
Franklin	6,861.00
Town of Gretna	428.25
Town of Front Royal	7,000.00
Harrisonburg	1,890.50
Hopewell	7,000.00
King George	7,050.00
Mecklenburg	6,956.41
Newport News	18,000.00
Northumberland	6,750.00
Richmond County	6,500.00
Sussex	7,500.00
Town of Victoria	7,250.00
Virginia Beach	23,250.00
Department of Health	35,000.00
Arlington	15,000.00
Fluvanna	6,000.00
Total Federal Funding to Localities — 311	\$173,706.34
Total Federal Funding — 311	\$208,706.34

Standard 314 — Pedestrian Safety

V. H. S. D. "Hot Dots"	\$ 18,000.00
V. H. S. D. "Bicycle"	2,500.00
Total Federal Funding to Localities — 314	\$ 20,500.00
Total Federal Funding — 314	\$ 20,500.00



## Exhibit 6 (continued)

Standard 315 -- Police Traffic Services

<u>Subdivision or Agency</u>	<u>Amount</u>
Charlottesville	\$ 500.00
State Police	9,660.00
Campbell	48,864.00
Lynchburg	200.00
Appomattox	125.00
Bristol	700.00
Town of Ashland	500.00
Hanover	750.00
Martinsville	600.00
Waynesboro	2,000.00
Roanoke County	15,300.00
State Police	100,000.00
State Police	80,000.00
Town of Vinton	6,500.00
Arlington County	4,998.00
Lynchburg	939.37
Henrico	1,100.00
Total Federal Funding to Localities -- 315	\$ 83,076.37
Total Federal Funding -- 315	\$ 272,736.37

Standard 316 -- Debris, Hazard, Control and Cleanup

V. H. S. D.	\$ 11,000.00
Total Federal Funding to Localities -- 316	\$ 11,000.00
Total Federal Funding -- 316	11,000.00

Total Federal Funding to Localities 1973 (NHTSA)	\$ 852,168.03
Total Federal Funding 1973 (NHTSA)	\$1,481,148.79

## Exhibit 7

FEDERAL HIGHWAY ADMINISTRATION'S  
DISTRIBUTION OF FEDERAL FUNDS FOR FY 1973

Standard 309 — Identification and Surveillance of Accident Locations

<u>Subdivision or Agency</u>	<u>Amount</u>
V. H. S. D. (CIT)	\$ 12,500.00
Total Federal Funding — 309	\$ 12,500.00

Standard 312 — Highway Design, Construction and Maintenance

Richmond City	\$ 3,150.00
Richmond City	4,000.00
V. H. S. D.	47,648.00
Virginia Department of Highways	85,000.00
Charlottesville	11,000.00
Total Federal Funding to Localities — 312	\$ 65,798.00
Total Federal Funding — 312	\$150,798.00

Standard 313 — Traffic Control Devices

V. H. S. D.	\$ 1,600.00
Henrico	5,000.00
Chesapeake	900.00
Richmond City	1,023.00
Charlottesville	4,000.00
Lynchburg	2,500.00
Petersburg	2,500.00
Henrico	4,000.00
Total Federal Funding to Localities	\$ 19,923.00
Total Federal Funding — 313	\$ 21,523.00

Standard 314 — Pedestrian Safety

Charlottesville	\$ 5,000.00
Chesterfield	29,355.00
Henrico	16,250.00
Total Federal Funding to Localities — 314	\$ 50,605.00
Total Federal Funding — 314	\$ 50,605.00

## Exhibit 7 (continued)

<u>Subdivision or Agency</u>	<u>Amount</u>
Total Federal Funding to Localities 1973 (FHWA)	\$136,326.00
Total Federal Funding 1973 (FHWA)	\$235,426.00

## STANDARD IMPLEMENTATION

## 301 - PERIODIC MOTOR VEHICLE INSPECTION

STANDARD:

Each State shall have a program for periodic inspection of all registered vehicles or other experimental, pilot, or demonstration vehicles with existing or potential conditions which cause or contribute to accidents or increase the severity of accidents which do occur, and shall require the owner to correct such conditions.

LEGEND:

Noncompliance = N.C.  
In Compliance = I.C.

Partial Compliance = P.C.  
Not Determinable = N.D.

STANDARD	COMPLIANCE	COMMENTS
I. The program shall provide, as a minimum, that:	I.	
A. Every vehicle registered in the State is inspected either at the time of initial registration and at least annually thereafter, or at such other time as may be designated under an experimental, pilot, or demonstration program approved by the Secretary.	I. A. I.C.	A. Virginia conducts a semiannual inspection; however, cars must be inspected before they can be driven on the highway and not at the time of registration. It is felt that Virginia's standard is, in fact, higher than the NHTSA standard.
B. The inspection is performed by competent personnel specifically trained to perform their duties and certified by the State.	B. I.C.	B. Virginia's law requires an inspector to have a minimum of one year's experience as a motor vehicle repair mechanic. Before a mechanic can be certified as an inspection mechanic, he must pass a written test given by a member of the State Police. He must also demonstrate his ability to use the different testing instruments used in the inspection program. Each certified inspector is required to attend an annual retraining session.
C. The inspection covers systems, sub-systems, and components having substantial relation to safe vehicle performance.	C. I.C.	
D. The inspection procedures equal or exceed criteria issued or endorsed by the National Safety Bureau.	D. I.C.	D. Virginia's inspection program is now basically in compliance with the D7.1 Inspection Code of the United States of America Standards Institute, which is endorsed by the National Highway Safety Bureau as a guide for minimum requirements. See Vol. I, Highway Safety Manual (Draft - May 31, 1968), p. 26.
E. Each inspection station maintains records in a form specified by the State, which includes at least the following information:	E.	E. §46.1-318 specifies that the Superintendent of the Department of State Police shall adopt and furnish to official inspection stations rules and regulations governing the making of inspections.
1. class of vehicle	1. I.C.	Hence, the expansion of required inspection data does not require additional legislation but rather it can be accomplished through administrative regulatory channels.
2. date of inspection	2. I.C.	
3. make of vehicle	3. I.C.	
4. model year	4. I.C.	
5. vehicle identification number	5. I.C.	5. Virginia includes a space for the identification number of its inspection receipt.
6. defects by category	6. I.C.	
7. identification of inspector	7. I.C.	
8. mileage or odometer reading	8. I.C.	
F. The State published summaries of records of all inspection stations at least annually, including tabulations by make and model of vehicle.	F. P.C.	F. An annual report on Virginia's inspection program is compiled which includes a 5% sampling of vehicle defects; however, defects are not reported by make and model of vehicle. To fully comply, records of Virginia's more than 4,000,000 inspections annually will have to be computerized. The Department of State Police is currently making plans for the adoption of a computerized information system.
II. The program shall be periodically evaluated by the State and the National Highway Safety Bureau shall be provided with an evaluation summary.	II. P.C.	II. Efforts are being made by State Police and Highway Safety Division staff to employ the records system above to provide periodic evaluation summaries.

302 — MOTOR VEHICLE REGISTRATION

STANDARD:

Each State shall have a motor vehicle registration program, which shall provide for rapid identification of each vehicle and its owner; and shall make available pertinent data for accident research and safety program development.

LEGEND:

Noncompliance = N. C.  
In Compliance = I. C.

Partial Compliance = P. C.  
Not Determinable = N. D.

	COMPLIANCE	COMMENTS
I. The program shall be such that every vehicle operated on public highways is registered and the following information is readily available for each vehicle:	I.	
A. Make	A. I. C.	
B. Model year	B. I. C.	
C. Identification number (rather than motor number)	C. P. C.	All Ford vehicles are titled by identification number in Virginia regardless of model year. All other vehicles are titled by identification number only if manufactured since 1953.
D. Type of body	D. I. C.	
E. License plate number	E. I. C.	
F. Name of current owner	F. I. C.	
G. Current address of owner	G. I. C.	An administrative rule of the Division of Motor Vehicles states that vehicle owners <u>must</u> forward a change of address to the Division of Motor Vehicles.
II. Registered gross weight of every commercial vehicle.	H. I. C.	
II. Each program shall have a records system that provides at least the following services:	II.	
A. Rapid entry of new data into the records or data system.	A. I. C.	
B. Controls to eliminate unnecessary or unreasonable delay in obtaining data.	B. I. C.	Virginia will be in a position, by January 1, 1973, to eliminate unnecessary or unreasonable delay in obtaining data. Virginia is in the process of obtaining additional computer capacity for data collection which should eliminate retrieval delays.
C. Rapid audio or visual response upon receipt at the records station of any priority request for status of vehicle possession authorization.	C. I. C.	
D. Data available for statistical compilation as needed by authorized sources.	D. I. C.	Virginia is capable of making reasonable data available for statistical compilation as needed by authorized sources.
E. Identification and ownership of vehicle sought for enforcement or other operation needs.	E. I. C.	
III. This program shall be periodically evaluated by the State, and the National Highway Safety Bureau shall be provided with an evaluation summary.	III. I. C.	The Commonwealth periodically evaluates its Motor Vehicle Registration Program and can provide, through its computer facilities, evaluation summaries for the N. H. S. B.

**STANDARD:**

For the purposes of this standard a motorcycle is defined as any motordriven vehicle having a seat or saddle for the use of the rider and designed to travel on not more than three wheels in contact with the ground, but excluding tractors and vehicles on which the operator and passengers ride within an enclosed cab.

Each State shall have a motorcycle safety program to insure that only persons physically and mentally qualified will be licensed to operate a motorcycle; that protective safety equipment for drivers and passengers will be worn; and that the motorcycle meets standards for safety equipment.

**LEGEND:**

Noncompliance = N. C.  
In Compliance = I. C.

Partial Compliance = P. C.  
Not Determinable = N. D.

Note: Virginia's statutory definition of a motorcycle (Va. Code Ann. § 46.1-1 (14) (1950) is broader than the definition in this standard since Virginia's definition includes 4-wheel vehicles weighing less than 500 lb. and equipped with an engine of less than 6 horsepower.

**COMPLIANCE**

**COMMENTS**

I. The program shall provide as a minimum that:

I.

A. Each person who operates a motorcycle:

A.

1. Passes an examination or reexamination designed especially for motorcycle operation.

(1) I. C.

Virginia now requires every person operating a motorcycle on Virginia highways to pass a "special examination pertaining to the ability of such person to operate a motorcycle with reasonable competence and with safety to other persons using the highways." Va. Code Ann. § 46.1-370.1 (1950).

2. Holds a license issued specifically for motorcycle use or a regular license endorsed for each purpose.

(2) I. C.

§ 46.1-373 was amended by the 1968 General Assembly to embrace this requirement; furthermore the statute provides that any licensee whose license is not appropriately indicated or endorsed shall be guilty of a misdemeanor.

B. Each motorcycle operator wears an approved safety helmet and eye protection when he is operating his vehicle on streets and highways.

B. I. C.

A 1970 amendment to § 46.1-172 requires operators and passengers to wear protective helmets.

This section remains in partial compliance since under state law a windshield can be employed in lieu of goggles or glasses. Legislation may be introduced in 1972 to bring Virginia in compliance by deleting the presently allowable substitution of a windshield for goggles.

C. Each motorcycle passenger wears an (a) approved safety helmet, and is provided with a (b) seat and (c) footrest.

C. (a) I. C.  
(b) I. C.  
(c) I. C.

§ 46.1-172 requires operators and passengers to wear protective helmets. Passengers are not, however, required to wear eye protection.

D. Each motorcycle is equipped with a rear-view mirror.

D. I. C.

See § 46.1-289 of the Virginia Code.

E. Each motorcycle is inspected at the time it is initially registered and at least annually thereafter, or in accordance with the State's inspection requirements. (See Periodic Motor Vehicle Inspection Standard.)

E. I. C.

A proclamation by Governor Godwin stated the following: "Effective January 1, 1967, all motorcycles shall have been submitted to inspection at an official inspection station and shall have corrected all defects thus found to exist and shall be reinspected within 6 months from each month of inspection thereafter, except as follows:

- (1) 4-wheel vehicles weighing less than 500 pounds and having less than 6 horsepower.
- (2) Bicycles with motors installed if the vehicle can be propelled by human power.

Note: Motorcycles are not required to be inspected at the time they are registered; however, they must be inspected to be operated on Virginia's highways.

II. The program shall be periodically evaluated by the State for its effectiveness in terms of reductions in accidents and their end results, and the National Highway Safety Bureau shall be provided with an evaluation summary.

II. N. C.

Virginia's effort is not presently evaluated in the prescribed terms. The Division of Motor Vehicles has plans for evaluation and the effort will not be difficult when undertaken. \* An initial evaluation technique might be to maintain a motorcycle accident/death data file broken down into helmet and non-helmet categories. Similarly, a data file for convictions of the motorcycle violations might be kept and analyzed for trends. A reduction in head injuries and a reduction of charges for not wearing a helmet might indicate the program's effectiveness.

304 - DRIVER EDUCATION

STANDARD:

Each State, in cooperation with its political subdivisions, shall have a driver education and training program. This program shall provide at least that:

LEGEND:

Noncompliance = N. C.                      Partial Compliance = P. C.  
In Compliance = I. C.                      Not Determinable = N. D.

COMPLIANCE

COMMENTS

I. There is a driver education program available to all youths of licensing age which:

I. I. C.

By action of the 1968 General Assembly it is required of all students to have a state approved course in Driver Education, consisting of 36 hours in the classroom and 14 periods of in-car instruction before obtaining an operator's license at age 16 or prior to age 18.

In the 1971-72 school year, drivers education was offered in all 332 senior high schools and 11 junior high schools. Of the 81,505 students eligible for drivers education, 65,976 were trained. Drivers education will be offered in the summertime to meet the demands of students seeking to fulfill the state requirement.

State approved programs of driver education are offered in nonpublic schools without reimbursement from State funds. Where nonpublic schools wish to offer driver education, all standards of teacher certification, time requirement, course content and equipment will apply and approval must be requested annually from the Driver Education Service. Upon satisfactory completion of the State approved program, students are eligible for the Insurance Credit Certificate and the Driver Education Certificate, which make them eligible to obtain an operator's license prior to age eighteen.

Private and parochial school students may be enrolled in the summer for in-car instruction with complete reimbursement from the State if the student passes the course.

A. Is taught by instructors certified by the State as qualified for these purposes.

A. I. C.

Virginia will not reimburse a school if its teachers are not endorsed by the State for behind-the-wheel and/or classroom instruction, nor will insurance credit be given to those students taking driver education courses taught by instructors who have not been endorsed; therefore, the State Driver Education Program embraces a built in incentive for endorsement. The July 1, 1968 requirements for teacher endorsement are 3 semester hours of General Safety Education and 3 semester hours of Basic Driver Education.

B. Provides each student with practice driving and instruction in at least the following:

B.

- 1. Basic and advanced driving techniques including techniques for handling emergencies.
- 2. Rules of the road, and other State laws and local motor vehicle laws and ordinances.
- 3. Critical vehicle systems and subsystems requiring preventive maintenance.
- 4. The vehicle characteristics, highway features and community programs:
  - a. that aid the driver in avoiding crashes,
  - b. that protect him and his passengers in crashes,
  - c. that maximize the salvage of the injured.
- 5. Signs, signals, and highway markings, and highway design features which require understanding for safe operation of motor vehicles.
- 6. Differences in characteristics of urban and rural driving including safe use of modern expressways.
- 7. Pedestrian safety.

- (1) I. C.
- (2) I. C.
- (3) I. C.
- (4)
- a. I. C.
- b. I. C.
- c. I. C.
- (5) I. C.
- (6) I. C.
- (7) I. C.

(1) At the present time 91 schools use the multiple-car driving range and 49 schools use simulators in teaching driver skills.

C. Encourages students participating in the program to enroll in first aid training.

C. I. C.

In grades 9 and 11 safety and first-aid courses are given through health and physical education classes.

## 304 — DRIVER EDUCATION (Continued)

STANDARD:LEGEND:

Noncompliance = N.C.  
In Compliance = I.C.

Partial Compliance = P.C.  
Not Determinable = N.D.

COMPLIANCECOMMENTS

<p>II. There is a State research and development program including adequate research, development and procurement of practice driving facilities, simulators, and other similar teaching aids for both school and other driver training use.</p>	<p>II. I.C.</p>	<p>§46.1-357 Code of Virginia states, as of July 1, 1969, that evidence of successful completion of a State approved driver education program be submitted to the Division of Motor Vehicles examining station by everyone making application for a Virginia operator's license prior to 18 years of age. This Driver Education Certificate will be printed in duplicate on a card designed for computer use. The original Certificate will be issued to the student upon successful completion of the State approved driver education program. The second copy is filed in the student's permanent record for future reference. Information from this certificate will be used for research and development.</p>
<p>III. There is a program for adult driver training and retraining.</p>	<p>III. I.C.</p>	<p>Evaluations of practice driving facilities, simulators, and similar teaching aids are performed by the Driver Education Department, State Department of Education, and the Highway Safety Division.</p> <p>The State does not subsidize adult driver education. Local programs have been set up allowing adults to enroll in a school driver education program or in a modified program adjusted for adult instruction which will be self-supporting through fees.</p> <p>77 schools throughout the state offer driver education and training for adults and out of school youth. In the last fiscal year 1,460 persons took part in the program.</p> <p>All employees of the State of Virginia, driving State owned vehicles, are offered a defensive driving course.</p> <p>Certain localities have initiated programs designed to retrain elderly drivers and rehabilitate problem drivers. (See also "Driver Licensing 305 — VI".)</p> <p>If the Insurance Credit Certificate is desired by adults under 25 years of age, the minimum time requirement of the State approved driver education program must be met.</p>
<p>IV. Commercial driving schools are licensed and commercial driving instructors are certified in accordance with specific criteria adopted by the State.</p>	<p>IV. I.C.</p>	<p>Commercial driving schools have been licensed since January 1, 1969 by the Board for commercial driver training schools — consisting of 5 members appointed by the Governor — "which shall adopt licensing standards relating to the location; equipment; courses of instruction; instructors; previous records of the school and instructors; financial statements; schedules of fees and charges; character and reputation of the operators; insurance in such sum and with such provisions as deemed necessary to protect adequately the interests of the public and such other matters as the Board may prescribe for the protection of the public." Va. Code Ann. 54-145.11 (1950). In the last fiscal year 49 commercial schools and 109 teachers were licensed within the state.</p>
<p>V. The program shall be periodically evaluated by the State, and the National Highway Safety Bureau shall be provided with an evaluation summary.</p>	<p>V. P.C.</p>	<p>The State Insurance Credit Certificate and the Driver Education Certificate are issued to those successfully completing this course.</p> <p>A recently initiated State program will compile information on each student upon completion of a Driver Education Course. Information will be computerized and stored by the Division of Motor Vehicles along with the driving record of the licensee. Upon request of the State Supervisor of Driver Education, said information, including traffic accidents and violations, will be retrieved and forwarded for evaluation. Such a system should provide the impetus for evaluation summaries to N.H.S.B.</p>



305 - DRIVER LICENSING

STANDARD:

LEGEND:

Each State shall have a driver licensing program: (a) to insure that only persons physically and mentally qualified will be licensed to operate a vehicle on the highways of the State, and (b) to prevent needlessly removing the opportunity of the citizen to drive. The program shall provide, as a minimum, that:

Noncompliance = N. C.  
In Compliance = I. C.

Partial Compliance = P. C.  
Not Determinable = N. D.

COMPLIANCE

COMMENTS

I. Each driver holds only one license, which identifies the type(s) of vehicle(s) he is authorized to drive. (See also Motorcycle Safety Standard.)

I. N. C.

§ 46.1-373 permits D.M.V. to issue 2 classes of licenses (operators and chauffeurs) and these licenses may designate additional types of vehicles for which the operator is licensed.

II. Each driver submits acceptable proof of date and place of birth in applying for his original license.

II. N. C.

§ 46.1-374 states that a holder of a Chauffeur's license does not have to obtain an operator's license. The problem here is that there is no statutory prohibition against one individual simultaneously holding both an operator's and Chauffeur's license. To hold both licenses would be in non-compliance with the Standard. § 46.1-374 should be amended to prohibit a Chauffeur licensee from holding an operator's license. The problem remains under consideration by Highway Safety Division and D.M.V. officials.

§ 46.1-368 requires that the application state only the name, year, month and date of birth, social security number, sex and residence address of the applicant. The problem for compliance in this case is that many persons either do not have a birth certificate or they are not certain of its location. A possible administrative alternative would be to allow applicants without a birth certificate to substitute a sworn affidavit stating their birth date or estimated birth date. Wilful misrepresentation in this affidavit would be a misdemeanor. Persons making false statements in application would not be issued a license for one year. § 46.1-363. § 46.1-364 of the Virginia Code states that the Commissioner may cancel or revoke any license or permit issued pursuant to this title, when it appears from the records of the Division or otherwise, that the information set forth in the application for such license or permit is false in any material particular.

III. Each driver:

III.

A. Passes an initial examination demonstrating his:

A.

1. Ability to operate the class(es) of vehicle(s) for which he is licensed.

1. I. C.

§ 46.1-369  
§ 46.1-370  
§ 46.1-370.1  
of the Virginia Code.

2. Ability to read and comprehend traffic signs and symbols.

2. I. C.

3. Knowledge of laws relating to traffic (rules of the road) safe driving procedures, vehicles and highway safety features, emergency situations that arise in the operation of an automobile, and other driver responsibilities.

3. I. C.

4. Visual acuity, which must meet or exceed State standards.

4. I. C.

B. Is reexamined at an interval not to exceed four years, for at least visual acuity and knowledge of rules of the road.

B. P. C.

See Va. Code § 46.1-380 and § 46.1-380.1.

Any operator's license issued in accordance with the provisions of this Chapter on and after January one, nineteen hundred seventy, shall be issued to expire four years from the birthday month of the applicant nearest to the month in which the license is issued. Applicants are also required to take a visual acuity and written test. § 46.1-357.2 and 46.1-369.

IV. A record on each driver is maintained which includes positive identification, current address, and driving history. In addition, the record system shall provide the following services:

IV. I. C.

Notification of change of address is not statutorily required by specific reference in Virginia. Division of Motor Vehicles requires by administrative regulation and policy that licensees give notice of any address changes. Administrative power for this requirement stems from § 46.1-26 (Authority to adopt rules and regulations).

A. Rapid entry of new data into the system.

A. I. C.

Virginia has purchased additional computer equipment for drivers license records. With this new equipment, D.M.V. feels that all records will be readily available upon reasonable request.

B. Controls to eliminate unnecessary or unreasonable delay in obtaining data which is required for the system.

B. I. C.

C. Rapid audio or visual response upon receipt at the records station of any priority request for status of driver license validity.

C. I. C.

D. Ready availability of data for statistical compilation as needed by authorized sources.

D. I. C.

Virginia is capable of making reasonable data available for statistical compilation as needed by authorized sources.

E. Ready identification of drivers sought for enforcement or other operational needs.

E. I. C.

STANDARD:

LEGEND:

Noncompliance = N. C.  
In Compliance = I. C.

Partial Compliance = P. C.  
Not Determinable = N. D.

COMPLIANCE

COMMENTS

<p>V. Each license is issued for a specific term, and must be renewed to remain valid. At time of issuance or renewal each driver's record must be checked.</p>	<p>V. I. C.</p>	<p>D. M. V. reviews each renewal applicant's record as part of its standard procedure of license renewal. Note also that § 46.1-380.1(e) empowers the Commissioner to require any applicant for renewal be fully examined as provided in § 46.1-357.2 and 46.1-369.</p>
<p>VI. There is a driver improvement program to identify problem drivers for record review and other appropriate actions designed to reduce the frequency of their involvement in traffic accidents or violations.</p>	<p>VI. I. C.</p>	<p>Virginia presently identifies so-called problem drivers from a review of the record by computer, and selected individuals are requested to appear for reexaminations and/or administrative hearings.</p> <p>Va. Code Ann. § 46.1-383, -430-137 (1950). All operators and chauffeurs who are convicted of two traffic violations or involved as a driver in two accidents involving personal injuries or property damage in excess of \$100 are mandatorily subject to reexamination. In addition, the Division of Motor Vehicles has the discretionary authority to reexamine any driver upon a reasonable determination that such driver is incompetent or otherwise unqualified to hold a license. Va. Code Ann. § 46.1-383 (1950). A program is proposed and funding scheduled which would allow a convicted traffic law violator to enroll in an adult driver education course in lieu of payment of his fine. Such a program is envisioned as a component of an overall and comprehensive adult driver education program.</p>
<p>VII. There is:</p> <p>A. A system providing for medical evaluation of persons whom the driver licensing agency has reason to believe have mental or physical conditions which might impair their driving ability.</p>	<p>VII. A. I. C.</p>	<p>At present, Virginia courts are required to report adjudications of insanity and feeble-mindedness to the Division of Motor Vehicles, and the superintendent or chief medical officer of any institution operated or licensed by the State Hospital Board is under a duty to report the release of any person admitted because of mental illness, mental deficiency, epilepsy, inebriety or drug addiction together with a statement as to his competency to operate a motor vehicle safely. Va. Code Ann. § 46.1-359, 427, -429 (1950). Further, § 46.1-383 was amended by the 1970 General Assembly to provide that the Division of Motor Vehicles "may require a physical examination by a licensed physician and a report of the results thereof" in the case of licensees whom the Division has good cause to believe are "incompetent or otherwise not qualified... to be licensed" and a driver whose record reflects multiple traffic violations may be required to appear for a driver improvement interview.</p>
<p>B. A procedure which will keep the driver license agency informed of all licensed drivers who are currently applying for or receiving any type of tax, welfare or other benefits or exemptions for the blind or nearly blind.</p>	<p>B. I. C.</p>	<p>§ 46.1-40.1 was passed by the 1968 General Assembly to embrace this requirement.</p>
<p>C. A medical advisory board or equivalent allied health professional unit composed of qualified personnel to advise the driver license agency on medical criteria and vision standards.</p>	<p>C. I. C.</p>	<p>§ 46.1-26.1 was passed by the 1968 General Assembly to embrace this requirement.</p>
<p>VIII. The program shall be periodically evaluated by the State and the National Highway Safety Bureau shall be provided with an evaluation summary. The evaluation shall attempt to ascertain the extent to which driving without a license occurs.</p>	<p>VIII. P. C.</p>	<p>State Police are empowered by Va. Code § 46.1-7 and 46.1-8 to make routine patrol checks for non-licensed drivers and periodic reports of such checks are required of each State Police Division. Efforts are being made to formulate the results of the road-checks into evaluation summaries.</p>

STANDARD:

Each State shall develop and implement a program to achieve uniformity of traffic codes and laws throughout the State. The program shall provide at least that:

- I. There is a plan to achieve uniform rules of the road in all of its jurisdictions.
- II. There is a plan to make the State's unified rules of the road consistent with similar unified plans of other States. Toward this end, each State shall undertake and maintain continuing comparisons of all State and local laws, statutes and ordinances with the comparable provisions of the Rules of the Road section of the Uniform Vehicle Code.<sup>1/</sup>

LEGEND:

Noncompliance = N. C.  
In Compliance = I. C.

## COMPLIANCE

- I. P. C.
- II. P. C.

Partial Compliance = P. C.  
Not Determinable = N. D.

## COMMENTS

On an intrastate basis, substantial progress has been realized in implementing a model traffic ordinance for Virginia counties and municipalities. Virginia Highway Safety Division has contracted for a model traffic ordinance to be distributed on a Statewide basis. The Virginia model traffic ordinance is an effort to comply with the National Highway Safety Act of 1966 and the National Model Traffic Ordinance.

Additionally, Virginia has conducted studies over the years, most recently in 1972, in an attempt to achieve uniform traffic laws as well as to bring Virginia's laws into conformity with the Uniform Vehicle Code.

There is no comprehensive program to bring Virginia in compliance with the Uniform Vehicle Code. However, legislative proposals for the 1972 General Assembly will reflect, wherever possible, the U. V. C. provisions. It is anticipated that conformity with the U. V. C. will be attained by reviewing the appropriate sections individually.

The 1972 study will be utilized to identify where the Uniform Code and the Virginia Code are at variance and to suggest how changes should be implemented.

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<sup>1/</sup> UNIFORM VEHICLE CODE, Revised 1962, National Committee on Uniform Traffic Laws & Ordinances, 525 School St., S.W., Washington, D. C.

307 - TRAFFIC COURTS

STANDARD:

Each State in cooperation with its political subdivisions shall have a program to assure that all traffic courts in it complement and support local and Statewide traffic safety objectives. The program shall provide at least that:

LEGEND:

Noncompliance = N.C.  
In Compliance = I.C.

Partial Compliance = P.C.  
Not Determinable = N.D.

COMPLIANCE

COMMENTS

- I. All convictions for moving traffic violations shall be reported to the State Traffic Records System.
- II. Program Recommendations  
In addition the State should take appropriate steps to meet the following recommended conditions:
  - A. All individuals charged with moving hazardous traffic violations are required to appear in court.
  - B. Traffic courts are financially independent of any fee system, fines, costs, or other revenue such as posting or forfeiture of bail or other collateral resulting from processing violations of motor-vehicle laws.
  - C. Operating procedures, assignment of judges, staff and quarters insure reasonable availability of court services for alleged traffic offenders.
  - D. There is a uniform accounting system regarding traffic violation notices, collection of fines, fees and costs.
  - E. There are uniform rules governing court procedures in traffic cases.
  - F. There are current manuals and guides for administration, court procedures, and accounting.

- I. I.C.
- II.
  - A. N.C.
  - B. I.C.
  - C. I.C.
  - D. I.C.
  - E. P.C.
  - F. P.C.

All records of traffic convictions are required to be reported to the Division of Motor Vehicles, which is charged with the statutory duty of maintaining records. Va. Code Ann. §46.1-412-16 (1950).

In the State of Virginia, it is not mandatory to appear in court on a moving hazardous traffic violation unless the charge is manslaughter. Judge G. B. Dillard, a Roanoke Municipal Judge, has estimated that approximately 90% of all violators charged with moving hazardous traffic offenses are required by the Judge to appear in Court. A 1967 report by Thompson and Meachum\*, however, indicated that only 6 of 77 county and municipal judges sampled required court appearance in all moving violations. The question will be discussed at the annual Judicial Conference, and the Highway Safety Division will consider submitting necessary legislation.

At present, the State auditor handles the accounting for the Courts not of record which handle traffic cases. He provides some forms for reports and other information and a manual concerning accounting procedures.

There is a program being set up to bring Virginia in compliance with this Standard.

The Highway Safety Division has contracted to establish current manuals and guides for administration court procedures, and accounting.

\*Thompson, John B. and Charles D. Meachum, "Administration and Enforcement of Selected Traffic Laws in Virginia," Virginia Highway Research Council, June 1967.

## 308 - ALCOHOL IN RELATION TO HIGHWAY SAFETY

STANDARD:

Each State, in cooperation with its political subdivisions, shall develop and implement a program to achieve a reduction in those traffic accidents arising in whole or in part from persons driving under the influence of alcohol. The program shall provide at least that:

LEGEND:

Noncompliance = N. C.  
In Compliance = I. C.

Partial Compliance = P. C.  
Not Determinable = N. D.

## COMPLIANCE

## COMMENTS

I. There is a specification by the State of the following with respect to alcohol related offenses:	I.	
A. Chemical test procedures for determining blood-alcohol concentrations.	A. I. C.	As amended in 1972, Va. Code Ann. § 18.1-55.1 (b) provides that Virginia motorists are deemed to have given implied consent to having a chemical test of the blood or breath to determine the alcoholic content of the blood.
B. (1) The blood-alcohol concentrations, not higher than .10 percent by weight, which define the terms "intoxicated" and "under the influence of alcohol," and	B. (1) I. C.	§ 18.1-57 (3) of the Virginia Code Ann. raises a presumption of driving under the influence of alcohol at a level of 0.10% by weight of alcohol in the blood.
(2) A provision making it either unlawful, or presumptive evidence of illegality, if the blood-alcohol concentration of a driver equals or exceeds the limit so established.	(2) I. C.	See I. B. (1) <u>supra</u> .
II. Any person placed under arrest for operating a motor vehicle while intoxicated or under the influence of alcohol is deemed to have given his consent to a chemical test of his blood, breath, or urine for the purpose of determining the alcohol content of his blood.	II. I. C.	See Virginia's Implied Consent Law, Va. Code Ann. 18.1-55.1 (c) (1950) which requires any driver arrested for DWI to submit to a blood or breath test.
III. To the extent practicable, there are quantitative tests for alcohol:	III.	
A. On the bodies of all drivers and adult pedestrians who die within four hours of a traffic accident.	(A) I. C.	The Department of State Police has been attempting to secure blood alcohol tests from fatal accident victims for several years. Virginia has a statewide medical examiner statute requiring that all medical examiners who investigate the deaths of drivers or pedestrians draw blood whenever possible from these decedents for examination by the chief medical examiner's office. See Va. Code Ann. § 19.1-41-42 (1950) and 1962 Medical Examiner's Handbook for the Commonwealth of Virginia, p. 19.
B. On all surviving drivers in accidents fatal to others.	(B) P. C.	Under present Virginia Code § 18.1-55.1(b)(1950) a surviving driver is administered a blood test only after being charged with driving under the influence of alcohol. The charge is left up to the discretion of the arresting officer, who must have reasonable cause to suspect the driver of being under the influence.
IV. There are appropriate procedures established by the State for specifying:	IV.	
A. The qualifications of personnel who administer chemical tests used to determine blood, breath, and other body alcohol concentrations.	A. I. C.	See Va. Code Ann. 18.1-55.1(d) (1950).
B. The methods and related details of specimen selection, collection, handling, and analysis.	B. I. C.	See Va. Code Ann. 18.1-55.1 (1950).
C. The reporting and tabulation of the results.	C. I. C.	See Va. Code Ann. 18.1-55.1 (1950).
V. The program shall be periodically evaluated by the State, and the National Highway Safety Bureau shall be provided with an evaluation summary.	V. N. C.	Virginia's effort is not presently evaluated in the prescribed terms. The Highway Safety Division intends to formulate plans for the initiation of a periodic evaluation summary.



309 - IDENTIFICATION & SURVEILLANCE OF ACCIDENT LOCATIONS (Continued)

STANDARD:

LEGEND:

Noncompliance = N. C.  
In Compliance = I. C.

Partial Compliance = P. C.  
Not Determinable = N. D.

COMPLIANCE

COMMENTS

1. To identify accident experience and losses on any specific sections of the road and street system.	1. I. C.	
2. To produce an inventory of: a. High accident locations. b. Locations where accidents are increasing sharply. c. Design and operating features with which high accident frequencies or severities are associated.	2. a. I. C. b. I. C. c. I. C.	Accident prone locations on the State maintained system are identified when 5 accidents within .10 of a mile have been recorded on the graphic log; at that time a request for a check investigation form is filled out and sent to the Accident Study Section of the Highway Department. The Department of State Police notifies the Highway Department of all fatal accidents, and upon such notification the Highway Department's Resident Engineers are requested to prepare a report; in addition, collision diagrams or schematic drawings of a location are prepared to show the paths of vehicles and pedestrians involved in these accidents; finally, spot maps are prepared to present the accident experience for a particular area or strip of highway.
3. To take appropriate measures for reducing accidents.	3. I. C.	Local governments not under the jurisdiction of the Department of Highways file every accident by location. Periodically, they pick a high accident location and have it examined by Resident Engineers and consultants for recommended remedial treatment. Schematic drawings are also used by local governments to show the paths of vehicles and pedestrians involved in these accidents. Spot maps are also used to present the accident experience for a particular area or strip of roadway.
4. To evaluate the effectiveness of safety improvements on any specific section of the road and street system.	4. I. C.	In both county and local governments, collision diagrams are studied by the traffic engineer to determine the type of remedial measure required to correct the accident problem at hand, and the Accident Study Section is advised of the action taken.
B. There is a systematically organized program:	B.	In jurisdictions under the Department of Highways, collision diagrams are prepared for equal periods before and after the remedial measures are undertaken to compare the type of accidents that have been eliminated with those that have continued to happen and to study the new problems that have developed.
1. To maintain continuing surveillance of the roadway network for potentially high accident locations.	1. I. C.	Programs are being employed wherever possible to aid local governments in further implementation of this standard.
2. To develop methods for their correction.	2. I. C.	All of the above operations are implemented on a continuing basis for both county and local government. Where local deficiencies exist Highway Safety Commissions and coordinators are suggesting remedial actions.
II. The program shall be periodically evaluated by the State and the National Highway Safety Bureau shall be provided with an evaluation summary.	II. I. C.	The State of Virginia will periodically evaluate this program and send an evaluation summary to the National Highway Safety Bureau.

## 309 — IDENTIFICATION &amp; SURVEILLANCE OF ACCIDENT LOCATIONS

STANDARD:

Each State, in cooperation with county and other local governments, shall have a program for identifying accident locations and for maintaining surveillance of those locations having high accident rates or losses.

LEGEND:

Noncompliance = N. C.                      Partial Compliance = P. C.  
In Compliance = I. C.                      Not Determinable = N. D.

PREFACE:

- (1) The following is a list of the 230 Virginia municipalities by population:
  - (a) 171 municipalities have populations of less than or equal to 3500 — these cities are under the jurisdiction of the Highway Department.
  - (b) 15 municipalities have populations of 3501-5000.
  - (c) 17 municipalities have populations of 5001-10,000.
  - (d) 15 municipalities have populations of 10,001-25,000.
  - (e) 3 municipalities have populations of 25,001-50,000.
  - (f) 9 municipalities have populations of 50,001 and up.

Note: (b) - (f) include cities which are not under the jurisdiction of the Highway Department.
- (2) It should be noted that Arlington and Henrico are the only counties which are not under the jurisdiction of the Highway Department.
- (3) The following exists or occurs on roads within the Highway Department's jurisdiction, approximately:
  - (a) 66% of all the miles traveled,
  - (b) 45% of all the reported accidents,
  - (c) 78% of all the fatalities, and
  - (d) 84% of the total miles in the State.
- (4) Therefore, approximately 55% of all the accidents occur on the 9000 miles of roads, or 15% of the total miles in the State, which are not within the Highway Department's purview.

COMPLIANCECOMMENTS

I. The program shall provide, as a minimum, that:

- A. There is a procedure for accurate identification of accident locations on all roads and streets.

I.

A. I. C.

Accurately identifying accident locations is the key to meaningful data in this area; for the primary and interstate systems, "graphic logs" are used, and reference is made to intersections for accident locations on the secondary system (however, between intersections is where the difficulty lies in pinpointing accident locations on secondary roads).

At the present time a study is being proposed by the Highway Safety Division to establish mileposting of major highways in the state to facilitate the pinpointing of accidents between intersections. Local governments not under the jurisdiction of the Department of Highways use the spot map method of pinpointing accident locations. The hiring of an engineering consultant, working with members of the Highway Safety Division and with the 59 cities and towns and two counties whose highways are not under the jurisdiction of the Department of Highways is being sponsored by the Highway Safety Division for 1970-72. This consultant identifies hazardous locations and recommends remedial treatment as required.

310 -- TRAFFIC RECORDS

STANDARD:

Each State, in cooperation with its political subdivisions, shall maintain a traffic records system. The Statewide system (which may consist of compatible subsystems) shall include data for the entire State. Information regarding drivers, vehicles, accidents, and highways shall be compatible for purposes of analysis and correlation. Systems maintained by local governments shall be compatible with and capable of furnishing data to the State system. The State system shall be capable of providing summaries, tabulations and special analyses to local governments on request.

The record system shall include: (a) certain basic minimum data and (b) procedures for statistical analyses of these data.

The program shall provide as a minimum that:

- I. Information on vehicles and system capabilities includes (conforms to Motor Vehicle Registration Standard):
  - A. Make
  - B. Model Year
  - C. Identification number (rather than motor number)
  - D. Type of body
  - E. License plate number
  - F. Name of current owner
  - G. Current address of owner
  - H. Registered gross laden weight of every commercial vehicle
  - I. Rapid entry of new data into the records or data system
  - J. Controls to eliminate unnecessary or unreasonable delay in obtaining data
  - K. Rapid audio or visual response upon receipt at the records station of any priority request for status of vehicle possession authorization.
  - L. Data available for statistical compilation as needed by authorized sources
  - M. Identification and ownership of vehicles sought for enforcement or other operational needs
- II. Information on drivers and system capabilities includes (conforms to Driver Licensing Standard):
  - A. Positive identification
  - B. Current address
  - C. Driving history
  - D. Rapid entry of new data into the system

LEGEND:

Noncompliance = N.C.  
In Compliance = I.C.

COMPLIANCE

Partial Compliance = P.C.  
Not Determinable = N.D.

COMMENTS

§46.1-399 of the Code of Virginia requires drivers of a vehicle involved in certain accidents to immediately notify police. §46.1-400 requires drivers involved in accidents resulting in personal property damage of \$100.00 or more to report within five (5) days to D.M.V. Police accident reports are filed with D.M.V. within 24 hours after the investigation. State Police and the Highway Department maintain a cooperative records system covering some 45% of the State reported accidents. A specially appointed Traffic Records study team has submitted recommendations for the development of a comprehensive system.

For comments on this section see 302 -- Motor Vehicle Registration.

An administrative rule of the Division of Motor Vehicles states that vehicle owners must forward a change of address to the Division of Motor Vehicles. 46.1-26.

The Division of Motor Vehicles indicates that it is capable of making reasonable data available as needed by authorized sources.

State Police and D.M.V. have a program which provides State Police with immediate access to D.M.V. records via tele-typewriter. The system provides for quick registration and vehicle data for traffic law enforcement needs.

For comments on this section see 305 -- Driver Licensing.



310 - TRAFFIC RECORDS (Continued)

STANDARD:

LEGEND:

Noncompliance = N. C.  
In Compliance = I. C.

Partial Compliance = P. C.  
Not Determinable = N. D.

	COMPLIANCE	COMMENTS
E. Controls to eliminate unnecessary or unreasonable delay in obtaining data which is required for the system	E. I. C.	
F. Rapid audio or visual response upon receipt at the records station of any priority request for status or driver license validity	F. I. C.	
G. Ready availability of data for statistical compilation as needed by authorized sources	G. I. C.	
H. Ready identification of drivers sought for enforcement or other operational needs	H. I. C.	See Standard 310, Section (M)
III. Information on types of accidents includes:	III.	See 309 - Identification and Surveillance of Accident Locations.
A. Identification of location in space and time	A. I. C.	The State accident program is implemented by the Safety Division of the Department of State Police and the Traffic and Planning Division of the Department of Highways; the Division of Motor Vehicles does maintain the dates and locations of accidents as well as whether there was property damage and/or personal injury, whether the driver was the owner of the car and whether the driver was insured.
B. Identification of drivers and vehicles involved	B. I. C.	It should be noted that the Division of Motor Vehicle Department of State Police and the Virginia Department of Highways record all pertinent data on the SR-300 Accident Report Form.
C. Type of accident	C. I. C.	
D. Description of injury and property damage	D. I. C.	
E. Description of environmental conditions	E. I. C.	
F. Causes and contributing factors, including the absence of or failure to use available safety equipment.	F. I. C.	The accident report form in Virginia includes the following: drivers' action indicated, pedestrian actions, condition of driver and pedestrian, vehicle condition, what drivers were doing, driver vision obscured, were safety belts in use, and a description of what happened. This information would seem to place Virginia in compliance with this standard.
IV. There are methods to develop summary listings, cross tabulations, trend analyses and other statistical treatments of all appropriate combinations and aggregations of data items in the basic minimum data record of drivers and accident and accident experience by specified groups.	IV. P. C.	These are available only on a limited basis because of the limitations of existing computer equipment and personnel. Since the Highway Department and the State Police deal with the accident and the Division of Motor Vehicles deals with the individuals in relation to the accident, a combination of these functions in a coordinated effort could result in complete compliance with this provision. The recommendations of the traffic records committee have alleviated these conditions.
V. All traffic records relating to accidents collected hereunder shall be open to the public in a manner which does not identify individuals.	V. N. C.	
VI. The program shall be periodically evaluated by the State and the National Highway Safety Bureau shall be provided with an evaluation summary.	VI. P. C.	Virginia's effort is not presently evaluated in the prescribed terms. Current evaluations and plans of the Highway Safety Division for more thorough evaluations should remedy this problem.

311 - EMERGENCY MEDICAL SERVICES

STANDARD:

Each State, in cooperation with its local political subdivisions, shall have a program to ensure that persons involved in highway accidents receive prompt emergency medical care under the range of emergency conditions encountered. The program shall provide, as a minimum, that:

LEGEND:

Noncompliance = N.C.                      Partial Compliance = P.C.  
 In Compliance = I.C.                      Not Determinable = N.D.

COMPLIANCE

COMMENTS

<p>I. There are training, licensing, and related requirements (as appropriate) for ambulance and rescue vehicle operators, attendants, drivers, and dispatchers.</p>	<p>I. P.C.</p>	<p>Chapter 16.1 of Title 32 of the Virginia code, enacted by the 1968 General Assembly, conferred the authority to establish training and licensing requirements on the Department of Health for all but rescue vehicle operators. Under this authority, all attendants are required to have received Advanced First Aid Certification. Additionally, it is a proposed requirement by the Bureau of Emergency Medical Services that all drivers and dispatchers pass an advanced First Aid Course.</p> <p>Implementation is pending on a program which will make paramedic training available to all emergency medical personnel registered with the Bureau. This program will be offered on a statewide local level basis.</p>
<p>II. There are requirements for types and numbers of emergency vehicles including supplies and equipment to be carried.</p>	<p>II. I.C.</p>	<p>Sections 32.310.1, - 310.3, and 310.8 of the Virginia Code, passed by the 1968 General Assembly require the State Board of Health and the governing bodies of the cities and counties to comply with this provision.</p> <p>Prior to issuing a permit for a vehicle to operate as an ambulance, the Virginia State Department of Health, or its duly authorized agent, shall determine that the vehicle for which the permit is issued meets all requirements as set forth in the Rules, Regulations and Procedures promulgated by the Virginia State Department of Health. These Rules, Regulations and Procedures encompass such areas as type and numbers of emergency vehicles and supplies and equipment to be carried. Ambulance permits are nontransferable and shall remain valid for a two-year period unless revoked or suspended by the Virginia State Department of Health during the validation period.</p>
<p>III. There are requirements for the operation and coordination of ambulances and other emergency care systems.</p>	<p>III. I.C.</p>	<p>The Bureau of Emergency Medical Services has been created within the Special Health Services Division of the State Health Department. One of the functions of the E. M. S. is to coordinate a program between ambulances and other emergency care systems. Hence, compliance with this standard is presently being accomplished in Virginia.</p> <p>After July 1, 1972, every ambulance, when operated on an emergency mission, shall be occupied by at least one non-driver who holds an emergency medical care attendant's certificate issued pursuant to regulations adopted by the State Board of Health, Va. Code Ann. 32-310.4 (1950).</p>
<p>IV. There are first aid training programs and refresher courses for emergency service personnel, and the general public is encouraged to take first aid courses.</p>		<p>The Bureau will initiate, through the use of field representatives, a refresher course in advanced first aid. This program will be on a continuous basis. As to the general public, students in grades 9 and 11 are required to take first aid courses and adults are generally made aware of such a need by rescue squad fund drives, American Red Cross courses, etc.</p>
<p>V. There are criteria for the use of two-way communications.</p>	<p>V. I.C.</p>	<p>The criteria for the use of two-way communications have been established by Federal regulations.</p> <p>The E. M. S. has through matching funds expanded the program in two-way communications. 75% of all emergency medical care units within the state are equipped with two-way communication systems.</p>
<p>VI. There are procedures for summoning and dispatching aid.</p>	<p>VI. I.C.</p>	<p>At present aid is summoned and dispatched in some communities by the local Police Department and in others by volunteer "around-the-clock" rescue squad dispatchers.</p> <p>Dispatcher units are now being installed in hospitals for emergency medical communication services from doctors to ambulance attendants.</p> <p>Also, in many communities, the fire department handles all dispatching units.</p>

STANDARD:

LEGEND:

Noncompliance = N.C.                      Partial Compliance = P.C.  
In Compliance = I.C.                      Not Determinable = N.D.

<u>STANDARD:</u>	<u>COMPLIANCE</u>	<u>COMMENTS</u>
VII. There is an up-to-date, comprehensive plan for emergency medical services, including:	VII.	
A. Facilities	A. I.C.	Expansion of vehicles, instruction and teaching facilities as well as establishment of squads in lacunal areas are now being programmed by the Emergency Medical Service Bureau.
B. Definition of areas or responsibility	B. I.C.	Compliance with this standard is covered in §32-310.8 Code of Virginia which grants each political sub-division power to franchise ambulance services. While implementation of emergency medical services is statutorily placed on local government, general support, counsel and evaluative assistance is incumbent on the State Bureau of E. M. S.
C. Agreements for mutual support.	C. I.C.	Through the coordination and "good offices" of the Emergency Medical Service, this standard meets full compliance.
D. Communications systems.	D. I.C.	There has been a gradual increase in communications systems since the founding of the Emergency Medical Service Bureau. Communications will be one of the Bureau's top priority programs this year.
VIII. This program shall be periodically evaluated by the State and the National Highway Safety Bureau shall be provided with an evaluation summary.	VIII. I.C.	Virginia's Emergency Medical Services program is evaluated every 60 days and an evaluation summary sent to the National Highway Safety Bureau. Field representatives visit the agencies and fill out individual evaluation reports. The forms used by Virginia for this evaluation are being used nationwide.

312 — HIGHWAY DESIGN, CONSTRUCTION, AND MAINTENANCE

STANDARD:

Every State in cooperation with county and local governments shall have a program of highway design, construction, and maintenance to improve highway safety.

LEGEND:

Noncompliance = N. C.  
In Compliance = I. C.

Partial Compliance = P. C.  
Not Determinable = N. D.

COMPLIANCE

COMMENTS

I. The program shall provide, as a minimum that:

I.

A. There are design standards relating to safety features such as sight distance, horizontal and vertical curvature, spacing of decision points, width of lanes, etc., for all new construction or reconstruction, at least on expressways, major streets and highways, and through streets and highways.

A. I. C.

For a description of the scope of the Highway Department's jurisdiction, see 309 — Identification and Surveillance of Accident Locations.

The Highway Department specifies design standards — termed "geometric design standards" — for all rural systems, primary extensions in cities, and subdivision roads (subdivision roads will not be maintained by the Highway Department unless such standards are met). The design standards in effect in localities not under the jurisdiction of the Highway Department and in Arlington and Henrico Counties — the only counties independent of the Department — closely follow the State standards.

B. Street systems are designed to provide a safe traffic environment for pedestrians and motorists when subdivisions and residential areas are developed or redeveloped.

B. I. C.

Each county has passed some subdivision design requirements, although all do not closely follow the Highway Department's standards.

C. Roadway lighting is provided or upgraded on a priority basis at the following locations:

C.

Roadway lighting is provided or upgraded on a priority basis in Virginia.

1. Expressways and other major arteries in urbanized areas.

1. I. C.

Interstate interchanges with a heavy volume of traffic are given a high priority rating. Expressways and other major arteries in urbanized areas are reviewed and lighting is installed if needed.

2. Junctions or major highways in rural areas.

2. I. C.

Junctions and major highways in rural areas are reviewed in conjunction with accident location studies. Provision for, or installation of, lighting apparatus is accomplished where studies reveal a lighting requirement.

3. Locations or sections of streets and highways having high ratios of night-to-day motor vehicle and/or pedestrian accidents.

3. I. C.

These locations and sections are reviewed and lighting installed, on a priority basis, where needed.

4. Tunnels and long underpasses.

4. I. C.

D. There are standards for pavement design and construction with specific provisions for high skid resistance qualities.

D. I. C.

Bituminous surfaces of all new construction, on primary, arterial and interstate highways, must contain 100% non-polishing aggregate.

At present, the Highway Department's published specifications do not require the use of silica sand in Portland cement concrete pavements. However, the Department as a matter of policy specifies contractually that 100% silica sand be employed in concrete pavements. The new published specifications contain this added requirement.

When the Maintenance Division of the Highway Department resurfaces pavements it is required that the large aggregate be polish resistant.

E. There is a program for resurfacing or other surface treatment with emphasis on correction of locations or sections of streets and highways with low skid resistance and high or potentially high accident rates susceptible to reduction by providing improved surfaces.

E. I. C.

Virginia resurfaces primary roads on which a stopping distance test car skids more than 133 feet on wet pavement during a locked wheel skid from an initial velocity of 40 mph to a final velocity of 0 mph.

There is a study under way to provide the State of Virginia with information that can be used to determine what wet friction levels are needed for various traffic conditions. Consideration will be given to geometric design, speed limits, materials, texture, manufacturing practices, and wet accident data. This study will be utilized as a part of the highway resurfacing program.

F. There is guidance, warning and regulation of traffic approaching and traveling over construction or repair sites and detours.

F. I. C.

The specifications for "construction signs" can be found in the appropriate section of the Virginia Manual of Uniform Traffic Control Devices for Streets and Highways. A survey of selected localities indicates full and complete compliance by local level government in the use of warning and guidance signs when construction of roads is necessary.

## 312 -- HIGHWAY DESIGN, CONSTRUCTION, AND MAINTENANCE (Continued)

STANDARD:LEGEND:

Noncompliance = N.C.  
In Compliance = I.C.

Partial Compliance = P.C.  
Not Determinable = N.D.

COMPLIANCE	COMMENTS
G. There is a systematic identification and tabulation of all rail-highway grade crossings and a program for the elimination of hazards and dangerous crossings.	<p>G. I. C.</p> <p>Rail-highway grade crossings are presently identified through a continual safety inventory process. Yearly, a special diagnostic team inspects such crossings and recommends that at least 50 grade-crossings having hazardous or undesirable aspects be eliminated. Such systematic identification and tabulation results in the elimination of between 5-10 hazardous grade crossings a year. Funding for such construction and improvements is on a 90% state monies and 10% railroad industry monies basis.</p> <p>Lastly, all interstate and most arterial highways in Virginia are designed and constructed to avoid any rail-highway grade crossings.</p>
H. Roadways and the roadsides are maintained consistent with the design standards which are followed in construction, to provide safe and efficient movement of traffic.	<p>H. I. C.</p> <p>The State's right-of-way is continually maintained. Similar compliance is achieved in the localities through municipal and other governmental ordinances.</p>
I. Hazards within the highway right-of-way are identified and corrected.	<p>I. I. C.</p> <p>Trees which are within a certain distance of the pavement are removed, and signs and guardrails are installed as needed.</p> <p>Compliance with this standard occurs on a priority basis as the availability of funds dictates.</p>
J. There are highway design and construction features wherever possible for accident prevention and survivability including at least the following:	<p>J.</p> <p>1. I. C. On the State level, the Highway Department has adopted the policy that the higher the traffic volumes and the prevailing speeds, the wider the shoulder or clear distance. In general the Highway Department tries to widen shoulder areas wherever feasible. § 15.1-465-467 empowers counties and municipalities to adopt ordinances regulating road construction in sub-developments. Localities are encouraged to adopt road construction ordinances which will conform with State standards. Resident engineers of the Highway Department provide support and coordination for the efforts of the localities.</p> <p>2. I. C. All new and replacement signs installed by the Highway Department and most localities are specified to be of the "break-away" type.</p> <p>3. I. C. Guardrails are installed wherever fixed objects cannot reasonably be removed or designed to yield.</p> <p>4. I. C. The Highway Department is specifying the installation of General Motors' redirecting parapets in current and future construction.</p> <p>5. I. C.</p> <p>K. There is a post-crash program which includes at least the following:</p> <p>1. I. C. The State Highway Department currently installs guidance signs for hospitals.</p> <p>2. I. C. State statutes in Virginia make it incumbent upon wreckers or others responsible for removing a "wrecked or damaged vehicle from a highway" to also perform specified clean-up duties. (See</p>
1. Roadsides clear of obstacles, with clear distance being determined on the basis of traffic volumes, prevailing speeds, and the nature of development along the street or highway.	
2. Supports for traffic control devices and lighting that are designed to yield or break away under impact wherever appropriate.	
3. Protective devices that afford maximum protection to the occupants of vehicles wherever fixed objects cannot reasonably be removed or designed to yield.	
4. Bridge railings and parapets which are designed to minimize severity of impact, to retain the vehicle, to redirect the vehicle so that it will move parallel to the roadway, and to minimize danger to traffic below.	
5. Guardrails, and other design features which protect people from out-of-control vehicles at locations of special hazards such as playgrounds, schoolyards and commercial areas.	
K. There is a post-crash program which includes at least the following:	
1. Signs at freeway interchanges directing motorists to hospitals having emergency care capabilities.	
2. Maintenance personnel trained in procedures for summoning aid, protecting others from hazards at accident sites, and removing debris.	

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312 - HIGHWAY DESIGN, CONSTRUCTION, AND MAINTENANCE (Continued)

STANDARD:

LEGEND:

Noncompliance = N.C.  
In Compliance = I.C.

Partial Compliance = P.C.  
Not Determinable = N.D.

COMPLIANCE

COMMENTS

3. Provisions for access and egress for emergency vehicles to freeway sections where this would significantly reduce travel time without reducing the safety benefits of access control.

3. I.C.

§33-288.1, Va. Code Ann.) State Police assist such clean-up efforts by supervising crash scene safety and traffic control. Highway Department maintenance personnel are available to be called upon when extraordinary need arises, i.e., major hazards and severe multiple vehicle accidents.

Emergency crossovers are constructed for use by policemen, firemen, and rescue squads.

313 -- TRAFFIC CONTROL DEVICES

STANDARD:

Each State, in cooperation with its county and local government, shall have a program relating to the use of traffic control devices (signs, markings, signals, etc.) and other traffic engineering measures to reduce traffic accidents.

- I. The program shall provide, as a minimum, that:
  - A. There is a method:
    - 1. to identify needs and deficiencies of traffic control devices.
    - 2. To assist in developing current and projected programs for maintaining, upgrading, and installing traffic control devices.
  - B. Existing traffic control devices on all streets and highways are upgraded to conform with standards issued or endorsed by the Federal Highway Administrator.
  - C. New traffic control devices are installed on all streets and highways, based on engineering studies to determine where devices are needed for safety. Such devices conform with standards issued or endorsed by the Federal Highway Administrator.
  - D. There are programs for preventive maintenance, repair, and daytime and nighttime inspection of all traffic control devices.
  - E. Fixed or variable speed zones are established, at least on expressways, major streets and highways, and through streets and highways, based on engineering and traffic investigations.
- II. This program shall be periodically evaluated by the State and the National Highway Safety Bureau shall be provided with an evaluation summary.

LEGEND:

Noncompliance = N.C.  
In Compliance = I.C.

Partial Compliance = P.C.  
Not Determinable = N.D.

COMPLIANCE

COMMENTS

- I.
  - A.
    - 1. I.C.
 

Municipalities of more than 3500 people are included in the Highway Department's jurisdiction in this area, in addition to the Department's normal jurisdiction; thus, the Department directs and coordinates a State and local effort in this area (for the Department's normal jurisdiction, see Standard 309 -- Identification and Surveillance of Accident Locations). Each locality is now required to have its signs comply with the standards set out in the Virginia Manual of Uniform Traffic Control Devices for Streets and Highways, which closely follow the national standards issued by the Bureau of Public Roads, by January 1, 1969. Va. Code Ann. 46.1-187(1950).
    - 2. I.C.
 

Traffic control devices are maintained, upgraded, and installed on a continuous basis at the State, county and local government levels in Virginia.
  - B. I.C.
 

See I.A.1 supra.

The only potential problem with this feature of the standards occurs in local government and a majority of those not under the jurisdiction of the Highway Department are in full compliance with the standard.
  - C. I.C.
 

Engineering studies conducted by the Highway Department include examination of the direction of traffic, review of accident history for the past 3 years, and inspection of the site for restricted sight distances or other possible causes of accidents to determine whether or not a particular accident situation is amenable to a traffic signal remedy. Also see I.A.1. supra.

Local governments, not under the jurisdiction of the Department of Highways, use traffic control devices approved by the Federal Highway Administrator wherever engineering studies carried out by the local traffic engineer deem them necessary.
  - D. I.C.
 

District Traffic Engineers, or one of their assistants, travel over the primary system at least once a year at night to determine whether or not signs are readily visible and reflectorized. Resident Engineers travel over the secondary roads looking for areas in need of improvement or repair.

In many cities and counties not under the jurisdiction of the Department of Highways the traffic engineers and Police Department travel over the streets and highways to determine whether or not signs are readily visible and reflectorized.
  - E. I.C.
 

See Va. Code Ann. 46.1-193 (1950).
- II. P.C.
 

The Virginia Department of Highways periodically inventories every traffic control device under its jurisdiction. Evaluation summaries could be prepared although the value of so doing is questioned. Local governments could inventory their devices with somewhat more difficulty. The Highway Safety Division will initiate a program to encourage the submittal of evaluation summaries.

## 314 -- PEDESTRIAN SAFETY

STANDARD:

Every State in cooperation with its political subdivisions shall develop and implement a program to insure the safety of pedestrians of all ages. The program shall provide, as a minimum, that:

LEGEND:

Noncompliance = N. C.  
In Compliance = I. C.

Partial Compliance = P. C.  
Not Determinable = N. D.

COMPLIANCE	COMMENTS
	<u>PREFACE:</u>
	Although many municipalities spend substantial sums for the safety of their pedestrians, the bulk of this money is spent for the protection of pedestrians of school age, i. e. to pay the traffic policemen or women and to mark off the crosswalks. Therefore, whatever formal effort is made to reduce the deaths and injuries of pedestrians is accomplished by the State.
I. There is a continuing Statewide inventory of pedestrian-motor vehicle accidents, identifying specifically:	I. I. C.
A. The locations and times of all such accidents.	A. I. C. The locations and times of all accidents are included in the accident report forwarded to the Division of Motor Vehicles.
B. The age of all of the pedestrians injured or killed.	B. I. C.
C. The condition and features of the accident location at the time of the accident.	C. I. C.
D. The extent to which alcohol is present in the blood of fatally injured pedestrians 16 years of age and older.	D. I. C. See Standard 308 III. A.
E. Where possible to determine, the extent to which pedestrians involved in accidents have physical, mental, or sensory disabilities.	E. P. C. The Department of State Police estimates that such a determination is made in less than 10% of the cases involving pedestrians; usually when the accident victim was known to the investigating officer.
F. The age, make, model, and condition of the vehicle involved in the accident.	F. I. C. The age, make, model and condition of the vehicle involved in the accident are included in the accident report sent to Division of Motor Vehicles.
G. Causes and contributing factors particularly pedestrian and driver actions.	G. I. C. This information, where feasible, is also included in the accident report.
II. There are established Statewide operational procedures for improving the protection of pedestrians through reduction of potential conflicts with vehicles:	II.
A. By application of traffic engineering practices including pedestrian signals, signs, markings, parking regulations, and other pedestrian and vehicle traffic control devices.	A. I. C. Traffic engineers in the State, county and local government study high pedestrian accident locations for solutions, including the use of traffic control devices.
B. By land-use planning in new and redevelopment areas for safe pedestrian movement.	B. I. C.
C. By provision of pedestrian bridges, barriers, sidewalks, and other means of physically separating pedestrian and vehicle pathways.	C. I. C.
D. By provision of environmental illumination at high pedestrian volume and/or potentially hazardous pedestrian crossings.	D. I. C. See Standard 213.1. C. (3).
III. There is established a Statewide program for familiarizing drivers with the pedestrian problem and with ways to avoid pedestrian collisions.	III. I. C. Statewide programs for familiarizing drivers with the pedestrian problem and with ways to avoid pedestrian collisions are now almost exclusively handled through public information releases of the Highway Safety Division for television, radio, newspapers, etc. and posters for visual display.



STANDARD:

LEGEND:

Noncompliance = N. C.  
In Compliance = I. C.  
Partial Compliance = P. C.  
Not Determinable = N. D.

COMPLIANCE

COMMENTS

III.

A. The program content shall include emphasis on:

A.

- (1) behavior characteristics of the three types of pedestrians most commonly involved in accidents with vehicles: (a) children; (b) persons under the influence of alcohol; (c) the elderly.
- (2) accident avoidance techniques that take into account the hazardous conditions and behavior characteristics displayed by drivers and each of the three high-risk pedestrian groups listed in subparagraph (1).

- (1) a. I. C.  
b. I. C.  
c. I. C.

(2) P. C.

Public information releases relevant to pedestrian safety sometimes refer to accident avoidance measures. Defensive driving courses now being offered throughout the State and in public schools stress these techniques. The programs are seldom specifically related to the high risk pedestrian groups of subparagraph (1).

B. Emphasis on this program content shall be included in:

B. I. C.

- (1) all driver education and training courses;
- (2) driver improvement courses;
- (3) driver license examinations.

- (1) I. C.
- (2) I. C.
- (3) I. C.

These features are routinely included as subelements of each one of the program in B (1), (2), and (3).

IV. There are Statewide programs for training and educating all members of the public as to safe pedestrian behavior on or near streets and highways.

IV. I. C.

A. For children, youths, and adults enrolled in schools, beginning at the earliest possible age.

A. I. C.

Virginia begins teaching pedestrian safety in the first grade and continues teaching it through high school. School crossing guards and safety patrols are used to insure safe trips to and from school.

The State Department of Education, local school boards, and local police coordinate their efforts to provide programs for the students to instill the importance of pedestrian safety.

Virginia was rated "outstanding" by AAA in the quality of its public education in the 1969 Pedestrian Safety Inventory Program. These programs are handled through the public information releases of the Highway Safety Division. (See also item IV above.)

B. For the general population via the public media.

B. I. C.

V. There is a Statewide program for the protection of children walking to and from school, entering and leaving school buses, and in neighborhood play.

V. P. C.

Programs in Virginia consist of school safety patrols, school crossing guards and bus patrolmen. These programs are supervised by personnel of the school divisions. § 46.1-235 states that no one shall play on a highway or street, other than upon the sidewalks thereof, within a city or town or on any part of a highway outside the limits of a city or town designated by the State Highway Commissioner exclusively for vehicular travel.

The Highway Safety Division has initiated a program to provide school age children with reflective materials to attach to their clothing and other possessions to increase the childrens' visibility.

This program is enforced by the State Police and local police authorities as a routine part of their duties.

VI. There is a Statewide program for establishment and enforcement of traffic regulations designed to achieve orderly pedestrian and vehicle movement and to reduce vehicle-pedestrian conflicts.

VI. I. C.

VII. There is a review of the effectiveness of established programs by the State and the National Highway Safety Bureau for the purpose of determining the adequacy and effectiveness of programs and to define needs for safety standard amendment.

VII. P. C.

The American Automobile Association and the Division of Motor Vehicles keep records of all pedestrians killed and publish annual reports of their findings. Virginia, in fact, won a Special Citation for Pedestrian Program Activities among all states in the 1969 AAA Pedestrian Safety Inventory Program.

315 — POLICE TRAFFIC SERVICES

STANDARD:

Each State in cooperation with its political subdivisions shall have a program to insure the provision of efficient and effective police services: to prevent accidents; to aid the injured; to document the particulars of individual accidents; to supervise debris removal; and to restore safe and orderly traffic movement.

LEGEND:

Noncompliance = N.C.  
In Compliance = I.C.

Partial Compliance = P.C.  
Not Determinable = N.D.

COMPLIANCE

COMMENTS

I. The program shall provide as a minimum that there are:

I.

A. Suitable training procedures in all aspects of police vehicular and pedestrian traffic services related to highway safety, including use of appropriate instructional materials and techniques for recruit, advanced, in-service and soecial course training.

A. I.C.

Virginia State Troopers are required to attend an intensive 20-week basic training program when they are first employed. Each recruit is then required to attend a one-week retraining program annually at which he receives many hours of traffic training, exclusive of field training. The supervisors are required to attend a retraining program annually; special training programs are conducted for investigators and the canine corps. In addition to the schools operated by the Department of State Police, members attend the FBI National Academy, Northwestern University Traffic Institute and 63 other specialized schools. Local areas either use the training facilities of the Department of State Police or have their own classroom — based recruit traffic training program.

B. Periodic in-service training courses for uniformed and other police department employees dealing with:

B.

Most Virginia Police Departments provide members of the police force with training at the F. B. I. National Academy. These officers are employed to instruct periodic in-service training courses in these areas for uniformed and other police department employees.

(1) Administration and management of police/vehicular and pedestrian traffic services.

(1) I.C.

(2) Analysis, interpretation and use of traffic accident data.

(2) I.C.

(3) Insurance of prompt post-accident response, including aid to the injured.

(3) I.C.

C. Operational procedures for the selective assignment of trained police personnel to vehicular and pedestrian traffic duties and enforcement patrols in hazardous or congested areas based on:

C.

The Department of State Police uses (1) traffic volume and (2) collision experience as the two basic assignment factors. However, all the listed factors and, in addition, highway rules are considered.

Local police departments likewise employ these criteria.

(1) Traffic volume

(1) I.C.

(2) Collision experience

(2) I.C.

(3) Traffic violation frequency

(3) I.C.

(4) Emergency and service needs

(4) I.C.

(5) Time of day and day of week

(5) I.C.

D. Procedures for investigating, documenting, and reporting.

D.

It should be noted that State Troopers as well as local policemen investigate all accidents for which they are called and they report those accidents requiring a report by law.

In the case of individual accidents;

(1) The human, vehicular, and highway causes of individual accidents.

(1) I.C.

(2) The human, vehicular, and highway causes of injuries and deaths, including failure to use safety belts.

(2) I.C.

These factors are included on the accident report form which is sent to the Division of Motor Vehicles.

(3) The efficiency of the post-accident response.

(3) I.C.

All accident reports must be sent to the Division of Motor Vehicles within five (5) days (§46.1-400). Reports by officers investigating accidents must be filed 24 hours after completing the investigation (§46.1-401).

E. Operational procedures for reporting to the appropriate agencies the need for correcting hazardous highway defects and conditions, including defective signs, signals, controls, and construction deficiencies.

E. I.C.

State Police officers upon the investigation of accidents involving highway defects report these findings to appropriate highway resident engineers and appropriate State Police authorities.

Local police officers report such accidents to highway resident engineers and/or responsible traffic engineers.

315 -- POLICE TRAFFIC SERVICES (Continued)

STANDARD:

LEGEND:

Noncompliance = N.C.  
In Compliance = I.C.

Partial Compliance = P.C.  
Not Determinable = N.D.

COMPLIANCE

COMMENTS

F. Appropriate agreements by the State and its political subdivisions regarding primary operational authority, police traffic supervision, and cooperative responsibilities where concurrent jurisdictional boundaries and problems exist, and appropriate participation of each law enforcement agency in the comprehensive highway safety program of the State and its political subdivisions.

F. I.C.

II. The programs shall be periodically evaluated by the State, and the National Highway Safety Bureau shall be provided with an evaluation summary.

II. P.C.

Virginia State Police Traffic Service Program is evaluated by the State and an evaluation summary is sent to the National Highway Safety Bureau.

316 - ACCIDENT CLEANUP

STANDARD:

Every State in cooperation with county and local subdivisions shall have a program which shall provide for rapid, orderly, and safe removal from the roadway of wreckage, spillage, and debris from motor vehicle accidents, and for otherwise reducing the likelihood of secondary and chain-reaction collisions, and conditions hazardous to the public health and safety.

LEGEND:

Noncompliance = N. C.  
In Compliance = I. C.

Partial Compliance = P. C.  
Not Determinable = N. D.

COMPLIANCE

COMMENTS

I. The program shall provide, as a minimum:

I.

A. that operational procedures are established and implemented for:

A.

1. enabling rescue and related salvage equipment and personnel to get to the scene of accidents:

1. I. C.

The 1968 Virginia General Assembly rewrote §46-1-267 of the Code of Virginia, restricting the use of red flashing or steady burning lights to fire departments, volunteer fire companies, and volunteer rescue squads, to permit ready identification by the motoring public. Vehicles used for towing disabled vehicles or constructing, maintaining or repairing highways are restricted to the use of amber warning lights. These restrictive provisions were passed in order to facilitate rescue and related salvage vehicles getting to the scene of accidents. Additionally §46.1-225 makes unlawful the failure to yield the right-of-way to police, fire-fighting vehicles, rescue vehicles, or ambulances.

Also, some wreckers have two-way communication units enabling the police to call them when necessary.

a. on heavily traveled freeways and other limited access roads;

a. I. C.

b. in other types of locations where wreckage or spillage of hazardous materials on or adjacent to highways endangers the public health and safety;

b. I. C.

2. extricating the injured from wreckage quickly and without aggravating the injuries themselves;

2. I. C.

Rescue squads and other emergency medical service personnel are provided operational procedures training for the removal of accident victims.

3. warning and detouring approaching drivers safely past hazardous wreckage or spillage on the road ahead;

3. I. C.

4. safe handling of spillage or potential spillage of materials that are:

4. I. C.

The Highway Department, State Police and Health Department have established criteria for the handling of spillage and potential spillage and secured qualified personnel for these purposes.

a. radioactive

a. I. C.

b. flammable

b. I. C.

c. poisonous

c. I. C.

d. otherwise dangerous

d. I. C.

5. removing wreckage and spillage from roadways or otherwise preventing them from affecting the resumption of safe, orderly traffic flow.

5. I. C.

B. that adequate numbers of rescue and salvage personnel are properly trained in accident cleanup techniques as they are developed.

B. I. C.

II. The Program shall be periodically evaluated by the State and the National Highway Safety Bureau shall be provided with an evaluation summary.

II. N. C.

Virginia's effort is not presently evaluated in the prescribed terms, although the Highway Safety Division has plans to initiate procedures for periodic evaluations.

STANDARD:

Each State, in cooperation with its school districts and its political subdivisions, shall have a comprehensive pupil transportation safety program to assure that school vehicles are operated and maintained so as to achieve the highest possible level of safety.

LEGEND:

Noncompliance = N.C. Partial Compliance = P.C.  
In Compliance = I.C. Not Determinable = N.D.

COMPLIANCE

COMMENTS

- I. Each State shall provide as a minimum that:
  - A. Administration. 1. There shall be a single State agency having primary administrative responsibility for pupil transportation and employing at least one full-time professional to carry out its responsibilities for pupil transportation.
  - 2. The responsible State agency shall develop an operating system for collecting and reporting information needed to improve the safety of school vehicle operations, in accordance with Safety Program Standard No. 10, "Traffic Records," § 204.4.
  - B. Identification and equipment of school vehicles. Each State shall establish and maintain compliance with the following requirements for identification and equipment of school vehicles. The use of stop arms is at the option of the State.
    - 1. Type I school vehicles shall:
      - a. Be identified with the words, "School Bus," printed in letters not less than 8 inches high, located between the warning signal lamps as high as possible without impairing visibility of the lettering from both front and rear, and have no other lettering on the front or rear of the vehicle;
      - b. Be painted National School Bus Glossy Yellow, in accordance with the colorimetric specification of Federal Standard No. 595a, Color 13432, except that the hood shall be either that color or lusterless black, matching Federal Standard No. 595a, Color 37038;
      - c. Have bumpers of glossy black matching Federal Standard No. 595a, Color 17038; unless, for increased night visibility, they are covered with a retroreflective material.
      - d. Be equipped with a system of signal lamps that conforms to the schoolbus requirements of Federal Motor Vehicle Safety Standard 108.49 CFR 571.21; and
      - e. Have a system of mirrors that will give the seated driver a view of the roadway to each side of the bus, and of the area immediately in front of the front bumper, in accordance with the following procedure:  
When a rod, 30 inches long, is placed upright on the ground at any point along a traverse line 1 foot forward of the forwardmost point of a schoolbus, and extending the width of the bus, at least 7½ inches of the length of the rod shall be visible to the driver, either by direct view or by means of an indirect visibility system.
    - 2. Any school vehicle meeting the identification requirements of 1.a-d above that is permanently converted for use wholly for purposes other than transporting pupils to or from school shall be painted a color other than National School Bus Glossy Yellow, and shall have the stop arms, and equipment required by section IV. B.1.d, removed.
    - 3. Type I school vehicles being operated on a public highway and transporting primarily passengers other than school pupils shall have the words, "School Bus," covered, removed, or otherwise concealed, and the stop arms and equipment required by section IV. B.1.d shall not be operable through the usual controls.
    - 4.a. Type II school vehicles shall either:
      - (1) Comply with all the requirements for Type I school vehicles; or
      - (2) Be of a color other than National School Bus Glossy Yellow, have none of the equipment specified in IV. B.1.d, and not have the words, "School Bus," in any location on the exterior of the vehicle, or in any interior location visible to a motorist.
    - b. The State shall establish conditions under which one or the other of the above two specifications for Type II vehicles shall apply.
  - C. Operation. Each State shall establish and maintain compliance with the following requirements for operating school vehicles:
    - 1. Personnel. a. Each State shall develop a plan for selecting, training, and supervising persons whose primary duties involve transporting school pupils, in order to assure that such persons will attain a high degree of competence in, and knowledge of, their duties.

- I.
  - A. 1. I.C. Virginia operates with a separate administrative structure for pupil transportation safety. There has been a verbal designation for a separate agency.
  - 2. I.C.
  - B.
    - 1. a. N.C. The lettering on Virginia buses is currently less than 8" high and other letting appears on the front or rear of the vehicle. Evaluation of 1973 specifications is in progress.
    - b. I.C.
    - c. I.C.
    - d. I.C. Very few buses in use in Virginia manufactured prior to 1962 have the 4 lamp system.
    - e. P.C. All 1972 bus models are equipped with a fully complying mirror system. Many school divisions have retrofitted their buses with standard mirror systems so that 20% of all buses within the State are equipped with the standard mirror system.
    - 2. I.C. Regulated by § 46.1-169.1 of the Virginia Code.
    - 3. I.C. Regulated by § 22-280.1
    - 4. a. (1) I.C.  
(2) I.C.
    - b. I.C.
- C.
  - 1. a. P.C. Training programs are not now mandatory for all persons involved in pupil transportation. The existing discretionary programs are undergoing revisions. Regulations to mandate programs are under consideration.

317 -- PUPIL TRANSPORTATION SAFETY (Continued)

STANDARD:

LEGEND:

Noncompliance = N.C. Partial Compliance = P.C.  
 In Compliance = I.C. Not Determinable = N.D.

COMPLIANCE

COMMENTS

<p>b. Every person who drives a Type I or Type II school vehicle occupied by school pupils shall, as a minimum:</p> <p>(1) Have a valid State driver's license to operate such a vehicle(s);</p> <p>(2) Meet all special physical, mental, and moral requirements established by the State agency having primary responsibility for pupil transportation; and</p> <p>(3) Be qualified as a driver under the Motor Carrier Safety Regulations of the Federal Highway Administration 49 CFR 391, if he or his employer is subject to those regulations.</p> <p>2. <u>Pupil instruction.</u> At least twice during each school year, each pupil who is transported in a school vehicle shall be instructed in safe riding practices, and participate in emergency evacuation drills.</p> <p>3. <u>Vehicle operation.</u> a. Each State shall develop plans for minimizing highway use hazards to school vehicle occupants, other highway users, pedestrians, and property, including but not limited to:</p> <p>(1) Careful planning and annual review of routes for safety hazards;</p> <p>(2) Planning routes to assure maximum use of buses, and avoid standees;</p> <p>(3) Providing loading and unloading zones off the main traveled part of highways, wherever it is practicable to do so;</p> <p>(4) Establishing restricted loading and unloading areas for schoolbuses at, or near schools;</p> <p>(5) Requiring the driver of a vehicle meeting or overtaking a schoolbus that is stopped on a highway to take on or discharge pupils, and on which the red warning signals specified in IV. B. 1. d are in operation, to stop his vehicle before it reaches the schoolbus and not proceed until the warning signals are deactivated; and</p> <p>(6) Prohibiting, by legislation or regulation, operation of any vehicle displaying the words, "School Bus," unless it meets the equipment and identification requirements of this standard.</p> <p>b. Use of flashing warning signal lamps while loading or unloading pupils shall be at the option of the State. Use of red warning signal lamps for any other purpose and at any time other than when the school vehicle is stopped to load or discharge passengers shall be prohibited.</p> <p>c. When vehicles are equipped with stop arms, such devices shall be operated only in conjunction with red signal lamps.</p> <p>d. <u>Seating.</u> (1) Seating shall be provided that will permit each occupant to sit in a seat in a plan view lateral location, intended by the manufacturers to provide seating accommodation for a person at least as large as a 5th percentile adult female, as defined in 49 CFR 571.3.</p> <p>(2) Bus routing and seating plans shall be coordinated so as to eliminate standees when a school vehicle is in motion.</p> <p>(3) There shall be no auxiliary seating accommodations such as temporary or folding jump seats in school vehicles.</p> <p>(4) Drivers of school vehicles equipped with lap belts shall be required to wear them whenever the vehicle is in motion.</p> <p>(5) Passengers in Type II school vehicles equipped with lap belts shall be required to wear them whenever the vehicle is in motion.</p> <p>D. <u>Vehicle maintenance.</u> Each State shall establish and maintain compliance with the following requirements for vehicle maintenance:</p> <p>(1) School vehicles shall be maintained in safe operating conditions through a systematic preventive maintenance program.</p> <p>(2) All school vehicles shall be inspected at least semi-annually, in accordance with Highway Safety Program Manual Vol. 1, published by the Department of Transportation January 1969. School vehicles subject to the Motor Carrier Safety Regulations of the Federal Highway Administration shall be</p>	<p>C. 1. b.</p> <p>(1) I.C.</p> <p>(2) I.C.</p> <p>(3) N.D.</p> <p>2. P.C.</p> <p>3.</p> <p>(1) P.C.</p> <p>(2) P.C.</p> <p>(3) N.C.</p> <p>(4) P.C.</p> <p>(5) I.C.</p> <p>(6) I.C.</p> <p>b. N.C.</p> <p>c. I.C.</p> <p>d.</p> <p>(1) N.D.</p> <p>(2) N.D.</p> <p>(3) I.C.</p> <p>(4) N.C.</p> <p>(5) N.C.</p> <p>D.</p> <p>1. I.C.</p> <p>2. I.C.</p>	<p>In Virginia, there are few (17) privately owned buses that would be affected by I. C. C. regulations.</p> <p>One school drill per year is required by law so most school divisions have a formal program of this type.</p> <p>Planning and review of routes for safety hazards is not mandatory.</p> <p>Standees are permitted with restrictions by state board regulations.</p> <p>A few schools of older vintage require curb side loading which is not restricted.</p> <p>Red lights are now used as a pre-warning system. A change in law to comply with this requirement will depend on retrofit of all buses with an 8-light system.</p> <p>No stop arms are used in the State.</p> <p>Administrative regulations do not prohibit standees. Some schools do exercise options that prohibit this practice.</p> <p>In order to comply with this requirement to formulate plans to eliminate standees the Department would need to require a state-wide survey.</p> <p>State law does not require mandatory seat belt use by drivers although possible changes are under consideration.</p> <p>Same as above.</p>
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STANDARD:

LEGEND:

Noncompliance = N. C.      Partial Compliance = P. C.  
In Compliance = I. C.      Not Determinable = N. D.

COMPLIANCE

COMMENTS

inspected and maintained in accordance with those regulations (49 CFR Parts 393 and 396).

(3) School vehicle drivers shall be required to perform daily pretrip inspections of their vehicles, and to report promptly and in writing any defects or deficiencies discovered that may affect the safety of the vehicle's operation or result in its mechanical breakdown. Pre-trip inspection and condition reports for school vehicles subject to the Motor Carrier Safety Regulations of the Federal Highway Administration shall be performed in accordance with those regulations (49 CFR 392.7, 392.8, and 396.7).

3. P. C.

Daily pre-trip inspections are recommended by the Virginia Board of Education but compliance varies with localities. A State plan for mandatory performance is under consideration.

II. Program evaluation. The pupil transportation safety program shall be evaluated at least annually by the State agency having primary administrative responsibility for pupil transportation. The National Highway Traffic Safety Administration shall be furnished a summary of each evaluation.

II. I. C.

Although the Department of Education conducts periodic evaluations some elements may be added for the annual evaluation.

**STANDARD:**

Each State shall establish a uniform, comprehensive motor vehicle traffic accident investigation program for gathering information — who, what, when, where, why, and how — on motor vehicle traffic accidents and associated deaths, injuries, and property damage; and entering the information into the traffic records system for use in planning, evaluating and furthering highway safety program goals.

**LEGEND:**

Noncompliance = N.C.      Partial Compliance = P.C.  
In Compliance = I.C.      Not Determinable = N.D.

STANDARD	COMPLIANCE	COMMENTS
I. Each State shall provide as a minimum that:	I.	
A. <u>Administration.</u> 1. There shall be a State agency having primary responsibility for administration and supervision of storing and processing accident information, and providing information needed by user agencies.	A. 1. N.C.	Although the proposed Traffic Records System for Virginia would be headed by one agency responsible for providing accident information, currently the Department of Highways, the Division of Motor Vehicles, the State Police, and local police departments all have primary responsibility for limited aspects of the accident investigation and reporting duty of the State.
2. There shall be employed at all levels of government adequate numbers of personnel, properly trained and qualified, to conduct accident investigations and process the resulting information.	2. I.C.	The principal information gatherer of the system, the police officer, is trained in accident investigating and reporting within the police department's educational curriculum.
3. Nothing in this standard shall preclude the use of personnel other than police officers, in carrying out the requirements of this standard in accordance with laws and policies established by State and/or local governments.	3. I.C.	
4. Procedures shall be established to assure coordination, cooperation, and exchange of information among local, State, and Federal agencies having responsibility for the investigation of accidents and subsequent processing of resulting data.	4. I.C.	The accident reports of the State are for the confidential use of all State agencies for accident prevention and cannot be used for any evidentiary purpose.
5. Each State shall establish procedures for entering accident information into the statewide traffic records system established pursuant to Highway Safety Program Standard No. 10, Traffic Records, and for assuring uniformity and compatibility of this data with the requirements of the system, including as a minimum:	5. P.C.	Currently the input characteristics of traffic record information differ among the various agencies.
a. Use of uniform definitions and classifications acceptable to the National Highway Traffic Safety Administration and identified in the Highway Safety Program Manual.		
b. A standard format for input of data into the statewide traffic records system.		
c. Entry into the statewide traffic records system of information gathered and submitted to the responsible State agency.		
B. <u>Accident reporting.</u> Each State shall establish procedures which require the reporting of accidents to the responsible State agency within a reasonable time after occurrence.	B. I.C.	State law requires that police officers file an accident report within 24 hours of completion of their investigation (§ 46.1-401) and drivers involved in accidents must file a report within 5 days of the accident (§ 46.400). Police delays in completing accident investigations by police officers may have a detrimental effect on updating the personal history files.
C. <u>Owner and driver reports.</u> 1. In accidents involving only property damage, where the vehicle can be normally and safely driven away from the scene, the drivers or owners of vehicles involved shall be required to submit a written report consistent with State reporting requirements, to the responsible State agency. A vehicle shall be considered capable of being normally and safely driven if it does not require towing and can be operated under its own power, in its customary manner, without further damage or hazard to itself, other traffic elements, or the roadway. Each report so submitted shall include, as a minimum, the following information relating to the accident.	C. 1. I.C.	Although drivers are required to file accident reports when involved in accidents, the property damage must exceed \$100 in value. The reports include the information required under this standard.
a. Location.		
b. Time.		
c. Identification of driver(s).		
d. Identification of pedestrian(s), passenger(s), or pedal-cyclist(s).		
e. Identification of vehicle(s).		
f. Direction of travel of each unit.		
g. Other property involved.		
h. Environmental conditions existing at the time of the accident.		
i. A narrative description of the events and circumstances leading up to the time of impact, and immediately after impact.		
2. In all other accidents, the drivers or owners of motor vehicles involved shall be required to immediately notify the police of the jurisdiction in which the accident occurred. This includes, but is not limited to accidents involving: (1) Fatal or nonfatal personal injury, or (2) damage to the	2. P.C.	Any driver involved in any accident resulting in personal injury or death must immediately notify the police in the jurisdiction where the accident took place. (§ 46.1-399) There is no necessity for immediate notification if the damage is solely to property.



STANDARD:

LEGEND:

Noncompliance = N. C. Partial Compliance = P. C.  
In Compliance = I. C. Not Determinable = N. D.

COMPLIANCE

COMMENTS

<p>extent that any motor vehicle involved cannot be driven under its own power, in its customary manner, without further damage or hazard to itself, other traffic elements, or the roadway, and therefore requires towing.</p> <p>D. <u>Accident investigation.</u> Each State shall establish a plan for accident investigation and reporting which shall meet the following criteria:</p> <p>1. Police investigation shall be conducted of all accidents as identified in section IV. C. 2 above. Information gathered shall be consistent with the police mission of detecting and apprehending law violators, and shall include, as a minimum, the following:</p> <p>a. Violation(s), if any occurred, cited by section and subsection, numbers and titles of the State code, that (1) contributed to the accident where the investigating officer has reason to believe that violations were committed regardless of whether the officer has sufficient evidence to prove the violation(s); and (2) for which the driver was arrested or cited.</p> <p>b. Information necessary to prove each of the elements of the offense(s) for which the driver was arrested or cited.</p> <p>c. Information, collected in accordance with the program established under Highway Safety Program Standard No. 15, Police Traffic Services, section I-D, relating to human, vehicular, and highway factors causing individual accidents, injuries, and deaths, including failure to use safety belts.</p> <p>2. Accident investigation teams shall be established, representing different interest areas, such as police; traffic; highway and automotive engineering; medical, behavioral, and social sciences. Data gathered by each member of the investigation team should be consistent with the mission of the member's agency, and should be for the purpose of determining probable causes of accidents, injuries, and deaths. These teams shall conduct investigations of an appropriate sampling of accidents in which there were one or more of the following conditions:</p> <p>a. Locations that have a similarity of design, traffic engineering characteristics, or environmental conditions, and that have a significantly large or disproportionate number of accidents.</p> <p>b. Motor vehicles or motor vehicle parts that are involved in a significantly large or disproportionate number of accidents or injury-producing accidents.</p> <p>c. Drivers, pedestrians, and vehicle occupants of a particular age, sex, or other grouping, who are involved in a significantly large or disproportionate number of motor vehicle traffic accidents or injuries.</p> <p>d. Accidents in which causation or the resulting injuries and property damage are not readily explainable in terms of conditions or circumstances that prevailed.</p> <p>e. Other factors that concern State and national emphasis programs.</p> <p>II. <u>Evaluation.</u> The program shall be evaluated at least annually by the State. Substance of the evaluation report shall be guided by Chapter V of the Highway Safety Program Manual. The National Highway Traffic Safety Administration shall be provided with a copy of the evaluation report.</p>	<p>D. P. C.</p> <p>1. P. C.</p> <p>2. I. C.</p> <p>II. N. C.</p>	<p>As a practical matter, extensive information is gathered through police investigation of those accidents which most likely will involve criminal prosecution. There is, however, no Statewide plan which mandates collection and recordation for all accidents of information necessary to prove the offense and other relevant environmental factors. Frequently the only formal compilation occurs for serious offenses such as manslaughter where the Commonwealth's Attorney has a direct hand in the prosecution.</p> <p>Virginia has one crash investigation team which utilizes social scientists, engineers and medical doctors to investigate accidents to determine causation. The greatest need of the State in this standard is to reduce the staggering work load of the one team by increasing the number of teams within the State.</p> <p>The only evaluation of existing accident investigation and reporting procedures occurs periodically, conducted by the State agency which performs that particular function.</p>
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## NATURE AND EXTENT OF EXISTING HIGHWAY SAFETY PROBLEM

A. Introduction

Each year more people operate more vehicles and travel more miles on Virginia's streets, roads and highways. In the past, as this mobility and traffic exposure increased, traffic crash statistics increased concomitantly. It is the purpose of the Highway Safety Division to significantly change this relationship through programs and legislation designed to provide safer highways and better equipment, by combating the drinking driver and by creating a more informed and concerned public. The immediate objective of the Highway Safety Division is to reduce the mortality, morbidity, and property damage of traffic accidents in Virginia with major emphasis placed upon the reduction of fatal crashes. However the total number of crashes would not be expected to decrease at this time since the safety program is directed at reducing the severity of crashes. The evidence of recent years indicates that this objective is being accomplished, as subsequent analyses will show. Safety programs are playing a significant role in reducing the severity of traffic crashes in Virginia, and it will be the express purpose of the Highway Safety Division to continue with the implementation of these successful programs as thoroughly and as rapidly as possible.

B. Accident Exposure Statistics

There are various factors which contribute to accident exposure, the most important of which include the following: Motor vehicle registrations, number of licensed operators, and annual vehicle miles of travel. Exhibits 8, 9, 10A, 10B, 11 and 12 clearly show that the factors determining accident exposure have been steadily increasing in Virginia. Motor vehicle registrations, Exhibit 8, have been increasing at an average of 5.0% per year since 1965, with the increase being 6.6% from 1970 to 1971. Exhibit 12 shows motorcycle registrations in Virginia, and it is clear the the number of motorcycles on Virginia's highways is rapidly increasing, with an average annual increase in registrations of 21% since 1965. The trend has accelerated in the last few years, and the increase from 1970 to 1971 was 26.8%. The number of licensed operators, shown in Exhibit 9, has been increasing each year at a slower rate of increase than the number of registrations, and it is predicted that the steady trend will continue through 1977.

Exhibit 10A is a graph showing the historical trend of the annual vehicle miles of travel in Virginia and projections through 1977, when it is expected miles of travel will reach 37.6 billion. Exhibit 10B is the computer printout of the linear regression analysis performed to obtain the projections. It is important to note that the coefficient of determination is .975 and the standard error of the estimate is small, which means we have a very accurate method of forecasting annual vehicle miles of travel in Virginia. This

ability is important because vehicle miles of travel can and will be used to forecast many traffic accident statistics. Exhibit 11 gives the breakdown of annual vehicle miles of travel by road system.

### C. Accident Statistics

The Highway Safety Division has set the goal of impacting many traffic accident statistics. To do this, safety programs have and are being established to provide better equipment and safer highways and to educate the public in order to change driver attitudes towards highway safety.

An example of the type of problems faced is the growing number of motorcycles on Virginia highways. Exhibit 13 shows that the growing number of registrations has been followed by a rapid increase in the total number of motorcycle crashes. It is expected that the total crashes will continue to rise with growing registrations. Safety programs in this area are designed to reduce the severity of these crashes and to keep the number of fatalities from growing as fast as total crashes. While the number of motorcycle fatalities have been reduced from the peak of 48 in 1967, and efforts such as the mandatory safety helmet law have been made to reduce the severity of motorcycle crashes, it is recognized that continuing efforts must be made in this area as motorcycle safety becomes an increasingly significant factor, as evidenced by the slightly larger percentage increase in fatalities over total crashes from 1970 to 1971.

Since it is recognized that the drinking driver is a major problem in highway safety, the Safety Division is viewing with a great deal of interest the progress of the Alcohol Safety Action Project in Fairfax, Virginia. Preliminary results through September 1972 show fatalities down 17% from 1971 and the number of alcohol-related arrests up from 162 to 1,939, an increase of over 1,000%. It is hoped that the results from the project will supply information which can be applied in other areas of the state in order to significantly impact the drinking-driving problem in Virginia.

Exhibit 14 is a summary of accident statistics in Virginia from 1961-1971, supplied by the Virginia Department of Highways; In 1971, for the second straight year, fatal accidents and fatalities decreased while annual vehicle miles of travel and total accidents increased. This is the type of result the Safety Division is seeking, and while we may not expect to decrease fatalities every year in face of increasing accident exposure, we certainly expect to significantly affect the historical relationship of fatalities to the exposure statistics, as will be shown later. Exhibit 15A shows the historical pattern of the death rate per 100 million vehicle miles of travel and projections through 1977, while Exhibit 15B is a reproduction of the computer printout showing the results of the time series analysis used to project the death rate. The decrease in the death rate is a reflection of a great number of variables such as increased use of interstate highways,

improved road conditions, better equipment and the safety campaign in general. It is felt that the projection for a death rate of 3.1 per million vehicle miles of travel by 1977 can reasonably be met with continued emphasis on highway safety programs in Virginia.

The interstate, arterial and primary, and secondary highway systems in Virginia comprise the total mileage under the jurisdiction of the Virginia Department of Highways. In 1971 these systems experienced 58% of the total annual vehicle miles of travel in Virginia. Exhibit 16 provides a summary of accident statistics for the interstate system, and Exhibit 17 shows the historical and projected death rates. Although the death rate experienced an increase in 1971 the interstate system remains the safest highway system in Virginia, and we are projecting a declining trend for the death rate on the interstate system through 1977. In 1971 there was a 5.2% increase in mileage open to traffic and an 11.3% increase in annual vehicle miles of travel on the interstate system. While the system experienced 27% of the total miles traveled on the highway systems under the Department of Highways it experienced only 12% of the total accidents, 14% of the fatalities, 12% of the injuries, and 17% of the property damage. In terms of rates, the frequency per million vehicle miles of travel was 156 for accidents, 64 for injuries and 2.6 for fatalities as compared with 356, 153 and 6.1 on the arterial and primary system, and 577, 223 and 4.7 on the secondary system.

The accident summary for the arterial and primary system is shown in Exhibit 18, and the historical and projected death rates for this system are shown in Exhibit 19. The death rate experienced a small decline from 1970 to 1971 and is expected to continue a gradual declining trend through 1977. In 1971 this system experienced a 3.75% increase in annual vehicle miles of travel. Fifty-three percent of the travel, 54% of the total accidents, 66% of the fatalities, 56% of the injuries, and 56% of the property damage occurred on these highways in 1971.

The secondary road system has been considered the most hazardous of the highway systems under the jurisdiction of the Virginia Department of Highways. Exhibit 20 gives the accident summary for this system and Exhibit 21 depicts the historical and projected death rates for the system. Since the secondary highway system has been recognized as being the most hazardous system, efforts have been made to make it safer, and the impact on the death rate since 1969 has been dramatic. As can be seen in Exhibit 21, the death rate has dropped sharply, and declined by 25.3% from 1970 to 1971. In 1971 the secondary system experienced 20% of the travel, 34% of the total accidents, 20% of the fatalities, 32% of the injuries, and 27% of the property damage.

Exhibits 22A through 26B show the major accident statistics for the entire state, the projections for these statistics through 1977, and the expected impact of safety programs on these statistics. Exhibit 22A is a graph for total accidents and projections through 1977. The projections were obtained by means of a linear regression analysis correlating total accidents to billion vehicle miles of travel, as shown in Exhibit 22B. As can be seen in Exhibit 22B, the coefficient of correlation is .96, and thus vehicle miles of travel is an accurate indicator of total accidents. As the exposure factors discussed earlier continue to increase, along with growing urban congestion, the total number of accidents is expected to continue to increase as in the past, and the emphasis will be on reducing the severity of these accidents. Hence it is felt that the 172,000 projected accidents for 1977 is a reliable figure.

Exhibit 23A shows the historical figures and projections for injuries based on the linear regression analysis shown in Exhibit 23B. Exhibits 24A and 24B depict the same situation for injury accidents, which follow a similar pattern to injuries. The coefficient of correlation for each regression equation is about .96, making the relationship of injuries and injury accidents to billion vehicle miles of travel a reliable one for forecasting purposes. At this point the safety program is not expected to have as dramatic an impact on the absolute number of injuries and injury accidents as compared with fatal accidents, as emphasis is going towards reducing fatalities and the severity of injuries. It is believed that safety programs will eventually impact the historical trend in injuries and injury accidents and bring about reductions from the increasing trend, but it is certainly more important at present to reduce the severity of these injuries and significantly reduce fatalities.

Exhibits 25A and 26A are graphs of fatalities and fatal accidents and are extremely similar, as would be expected since the ratio of fatalities per fatal accident is 1.15/1. Exhibits 25B and 26B show the linear regression analysis correlating fatalities and fatal accidents to billion vehicle miles of travel and the use of this relationship to forecast fatalities and fatal accidents through 1977. Note that the coefficient of correlation is .89 for fatalities and .93 for fatal accidents, lower than those obtained in other regression equations for traffic statistics. It is felt that the reason for this fact is explained by the impact on fatalities of safety programs in Virginia. Exhibits 25A and 26A show that since 1969 fatalities and fatal accidents have gone down, and appear to have broken the historical pattern that could have been expected. Through 1969, regression analysis was an effective means of forecasting these statistics, but due to the recent impact on fatalities and fatal accidents of the highway safety program this is no longer the case. Exhibits 25A and 26A reflect the situation by showing forecasts based on historical trends and a forecast reflecting the impact of safety programs. While it is not felt that the number of fatalities and fatal accidents can be expected to decrease

in absolute numbers every year as has been done for the past two years, it is expected that we will see a significant reduction in these variables from what would be expected based on steadily increasing exposure factors and the historical relationship between the exposure factors and fatal accidents.

Exhibits 27 through 31 highlight the pedestrian accident statistics for Virginia. Exhibit 27 shows that the increase in pedestrian injuries peaked in 1970 and that they are expected to gradually decline through 1977. Exhibit 28 gives the breakdown of pedestrian injuries by urban and rural areas, where it is seen that injuries are expected to decrease in the urban areas but continue to increase in the less controllable rural areas. Total pedestrian fatalities are shown in Exhibit 29, which indicates that the rapid increase in fatalities has been stopped and fatalities are expected to increase at a much slower rate. The slowing of pedestrian fatalities is a result of breaking the rapidly increasing trend recently experienced in the urban areas, as shown in Exhibit 30, and holding rural pedestrian fatalities at a stable level, as shown in Exhibit 31.

EXHIBIT 8

ACTUAL AND PROJECTED MOTOR VEHICLE REGISTRATIONS

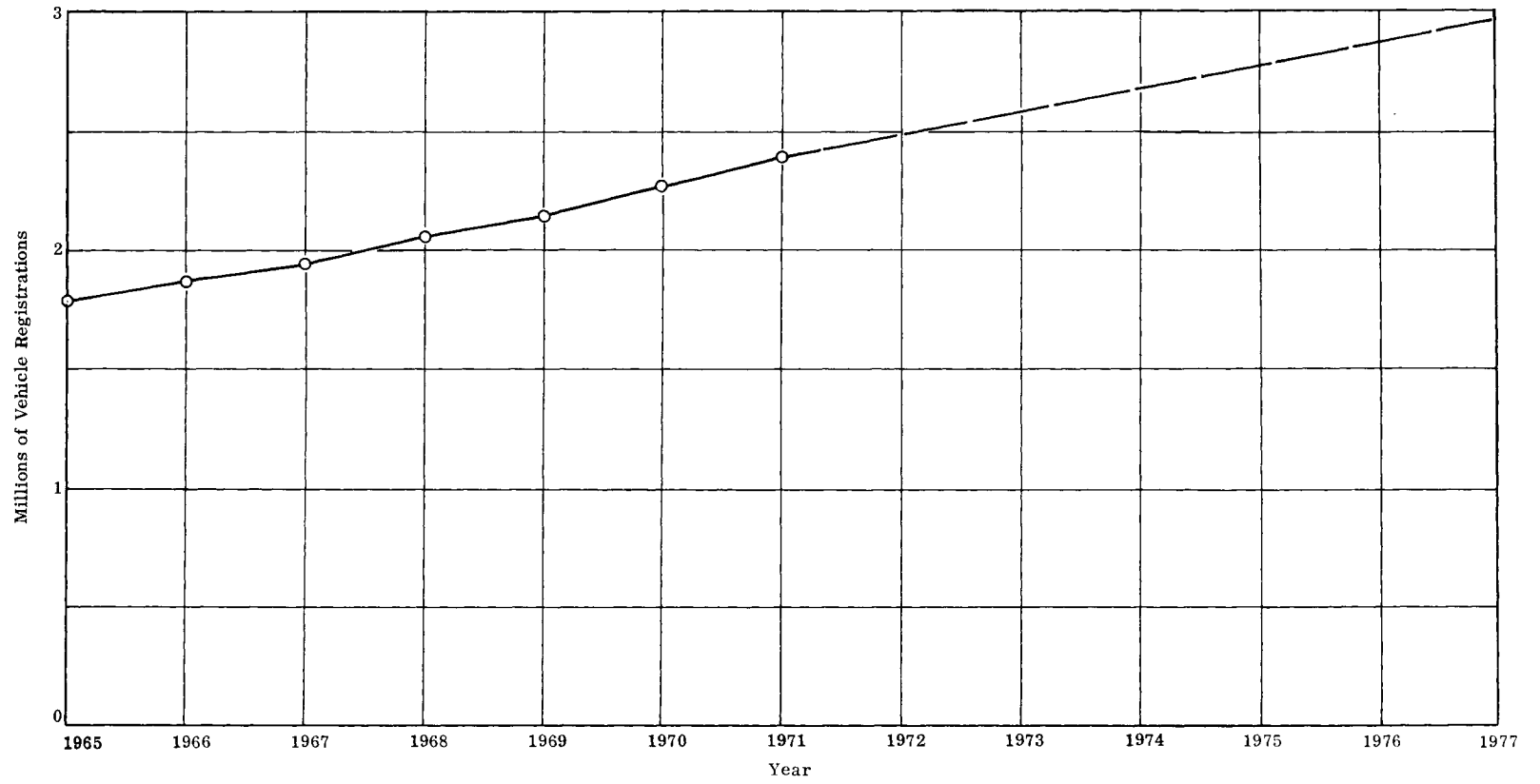


EXHIBIT 9

ACTUAL AND PROJECTED NUMBERS OF LICENSED OPERATORS AND CHAUFFEURS

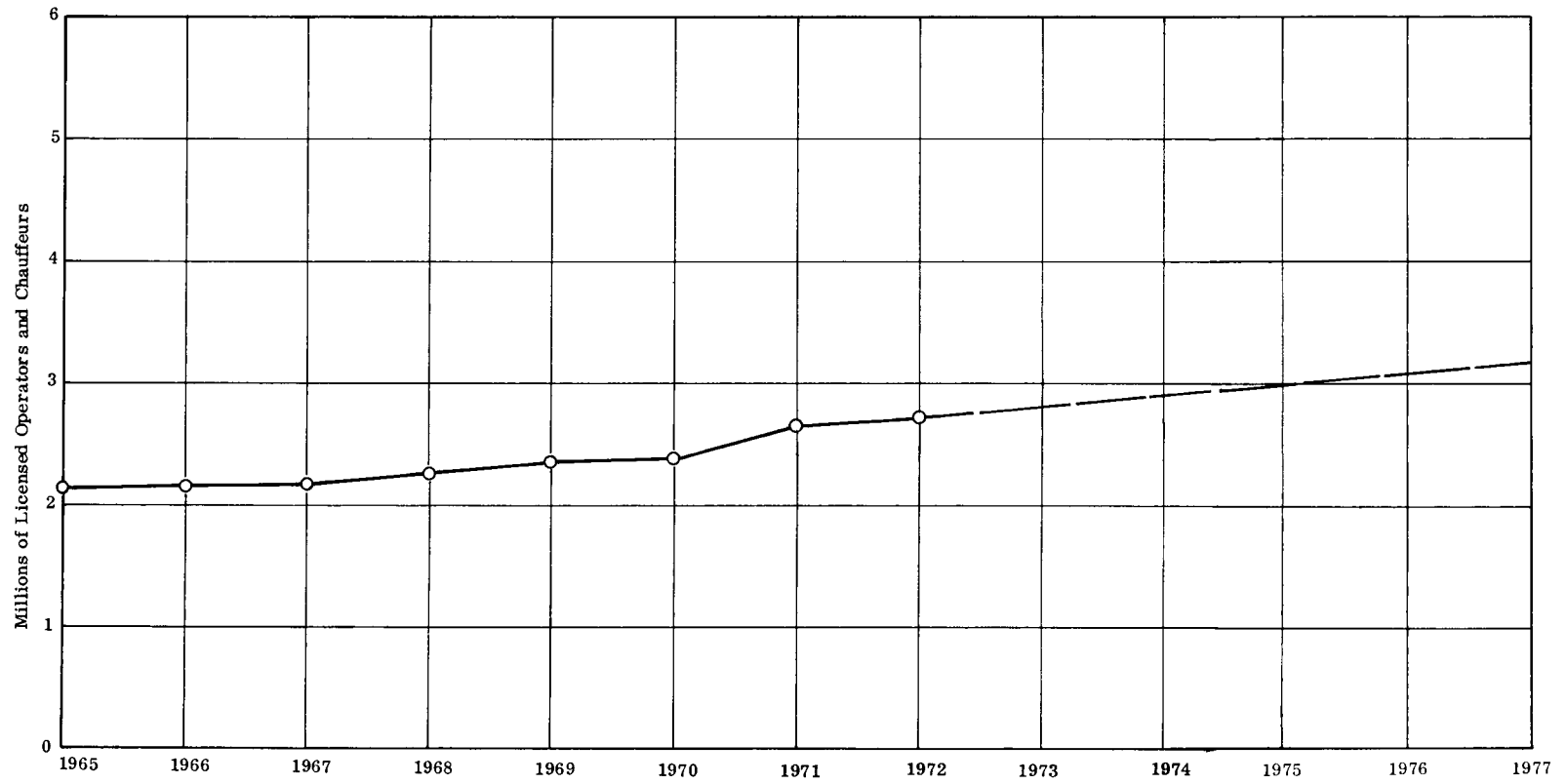




EXHIBIT 10A

ACTUAL AND PROJECTED ANNUAL VEHICLE MILES OF TRAVEL

89-II

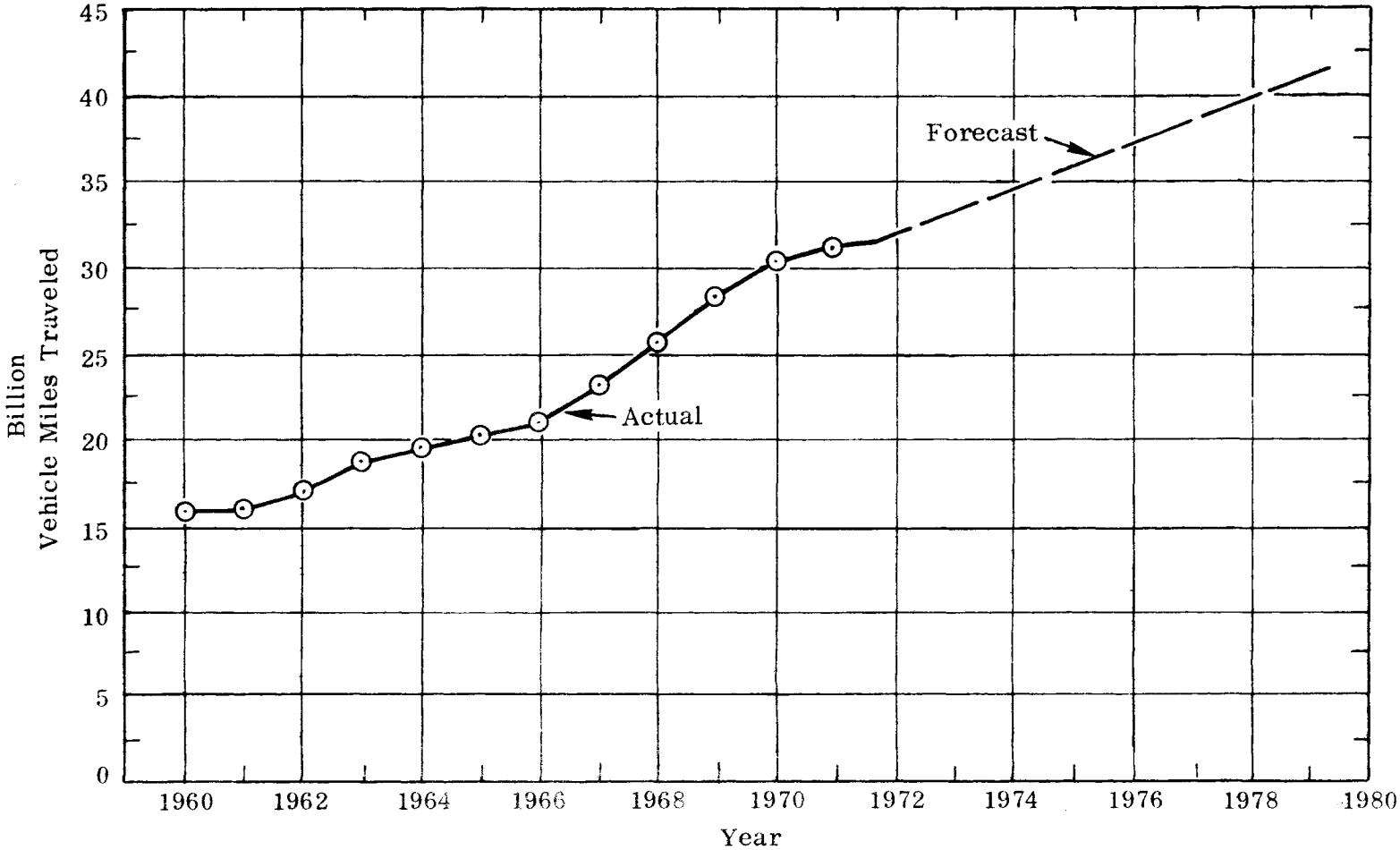


EXHIBIT 10B

VEHICLE MILES OF TRAVEL AS A FUNCTION OF TIME  
THE REGRESSION EQUATION IS:

$$Y = 13.2199 + 1.35451 X$$

STATISTICS OF THE SAMPLE

COEFFICIENT OF CORRELATION = .987397

THERE IS A -

0.05 PROBABILITY THAN AN R OF .58 WILL OCCUR RANDOMLY

0.01 PROBABILITY THAT AN R OF .71 WILL OCCUR RANDOMLY

COEFFICIENT OF DETERMINATION = .974953

STANDARD ERROR OF ESTIMATE OF THE POPULATION = .821075

UNASSOC SUM OF SQUARES= 6.744

TOTAL SUM OF SQUARES= 269.103

T-STATISTIC= 19.7295 DEG. OF FREEDOM= 10

DO YOU WANT A FULL PRINTOUT OR PROJECTIONS ONLY

1=FULL PRINT, 0=PROJECTIONS, 2=STOP PROGRAM

?1

INDEPENDENT VARIABLE (X) DATA:

MEAN = 6.5

STANDARD DEVIATION = 3.60555

DEPENDENT VARIABLE (Y) DATA:

MEAN = 22.0242

STANDARD DEVIATION = 4.9461

S.E.P. = STANDARD ERROR OF ANY POINT ON REGRESSION LINE

X-ACTUAL	Y-ACTUAL	Y-FOR	(A-F)/F	FOR/ACT	S.E.P.
1	16.22	14.5744	.1129	.898544	.445861
2	16.23	15.9289	.0189	.981447	.38942
3	17.02	17.2834	-.0153	1.01548	.337538
4	18.28	18.6379	-.0193	1.01958	.292653
5	19.21	19.9924	-.0392	1.04073	.258433
6	20.55	21.3469	-.0374	1.03878	.239497
7	21.64	22.7014	-.0468	1.04905	.239497
8	23.66	24.0559	-.0165	1.01673	.258433
9	25.61	25.4104	.0078	.992208	.292653
10	26.95	26.765	.0069	.993134	.337538
11	28.42	28.1195	.0106	.989425	.38942
12	30.5	29.474	.0348	.96636	.445861

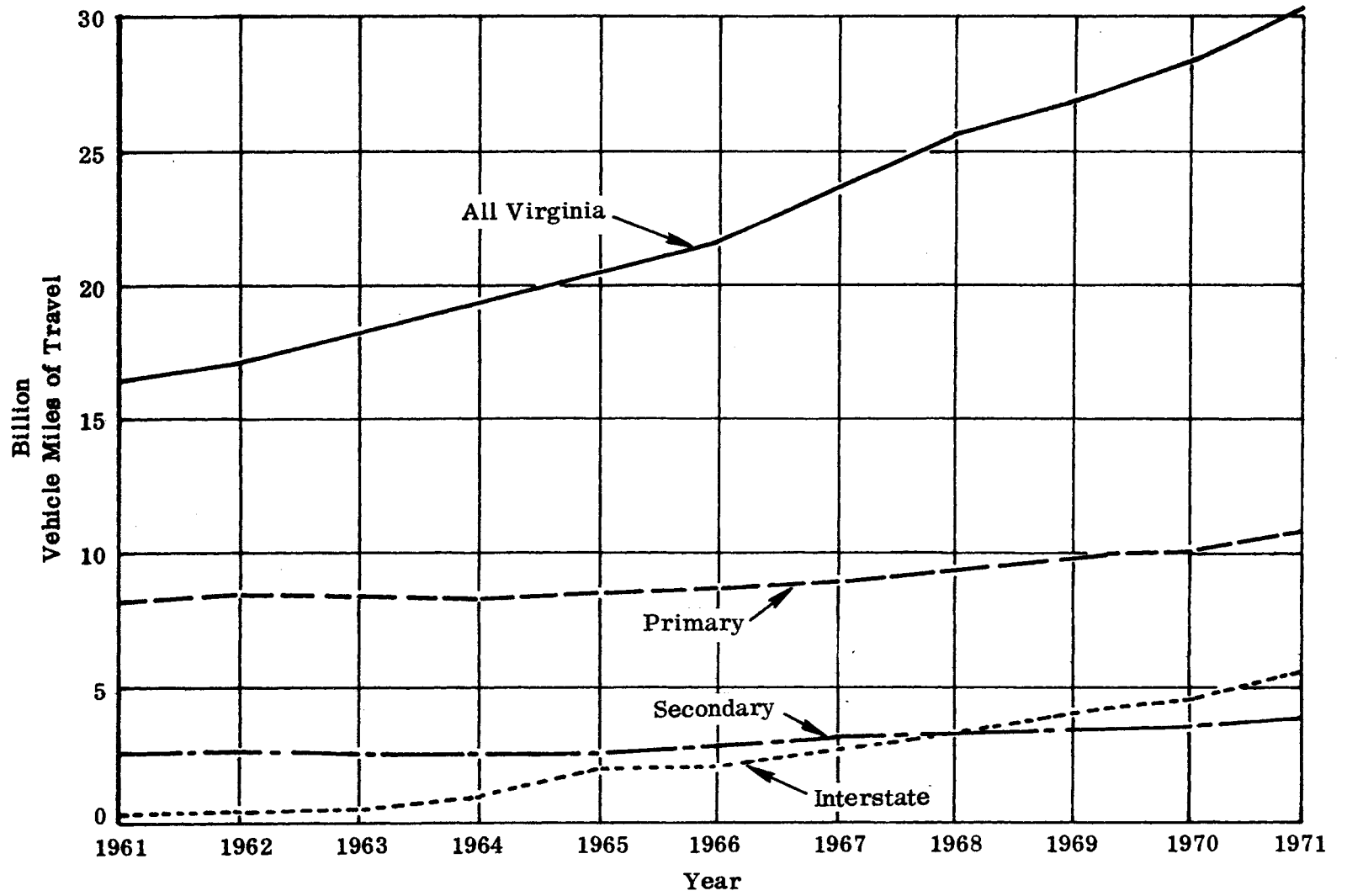
PROJECTIONS

95 PCT. CONFIDENCE INTERVAL = PROJECTION + OR - 2 STANDARD ERRORS

INDEPENDENT VARIABLE	PROJECTION	95 PCT. CONFIDENCE INTERVAL	
		-----	-----
13	30.8285	28.9002	-- 32.7567
14	32.183	30.1875	-- 34.1785
15	33.5375	31.4678	-- 35.6072
16	34.892	32.7418	-- 37.0422
17	36.2465	34.0103	-- 38.4827
18	37.601	35.2739	-- 39.9281

EXHIBIT 11

VEHICLE MILES OF TRAVEL IN VIRGINIA 1961 THROUGH 1971



II-65

1973

EXHIBIT 12

ACTUAL AND PROJECTED MOTORCYCLE REGISTRATIONS

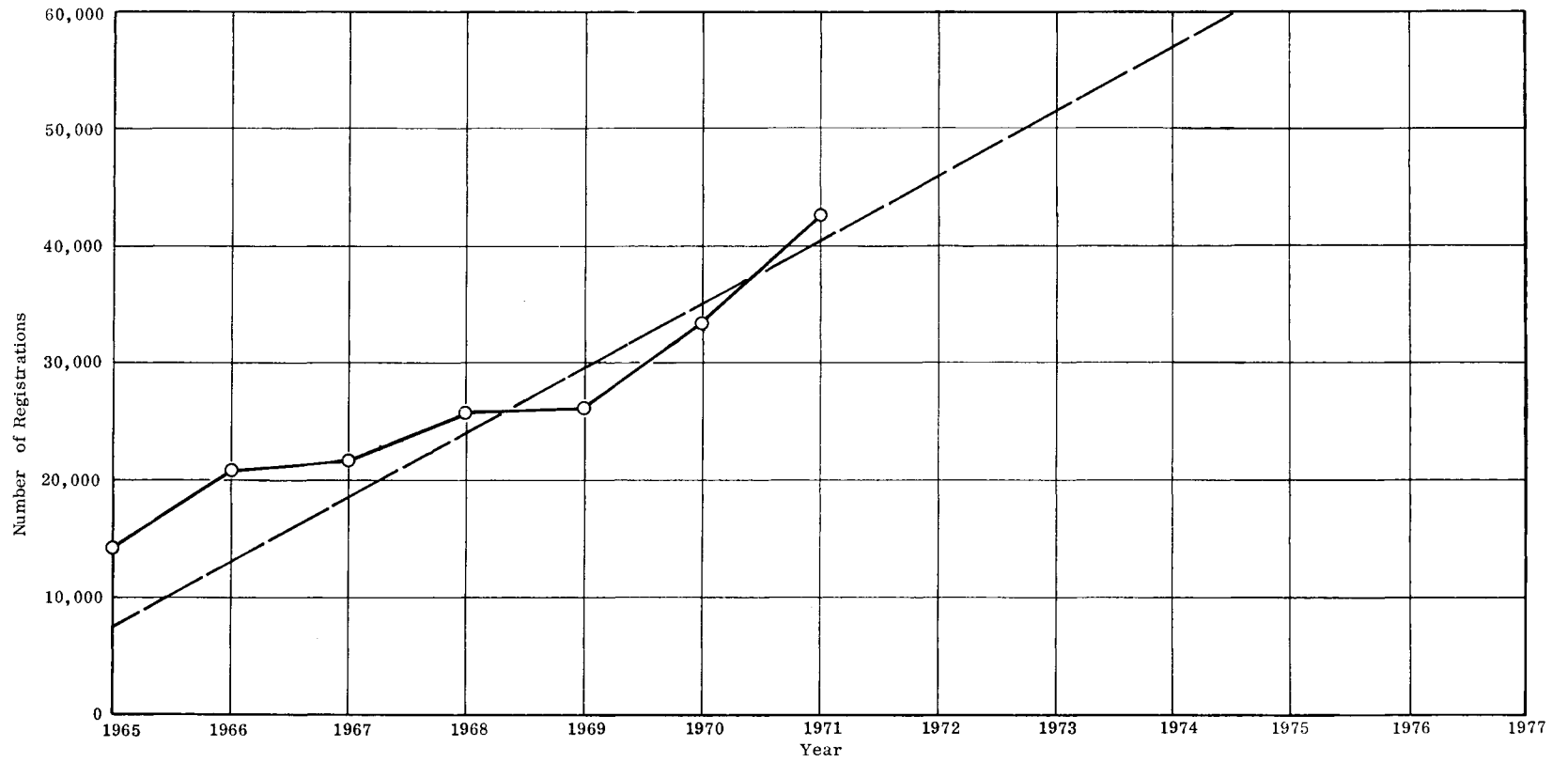
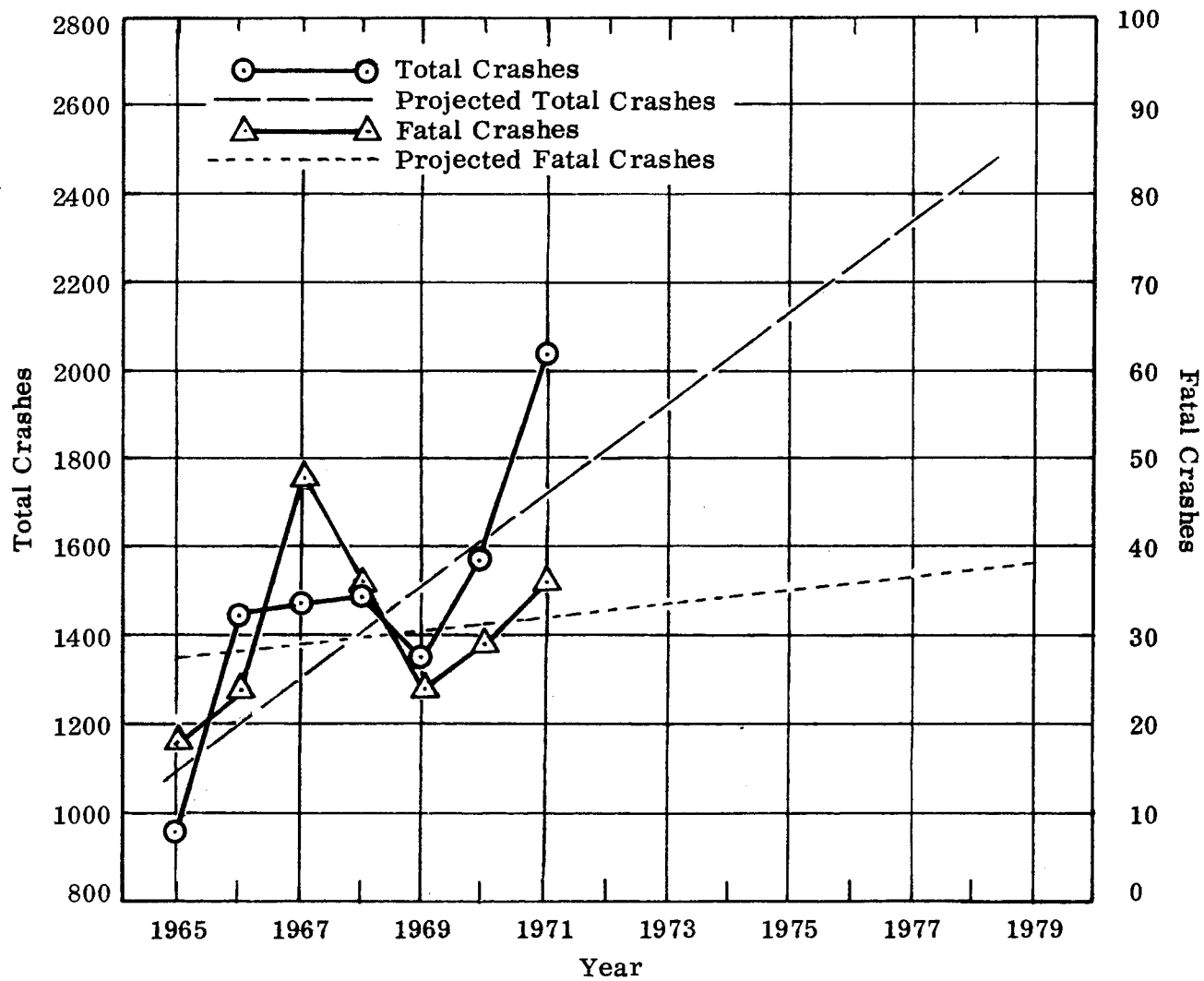


EXHIBIT 13

Actual and Projected Motorcycle Crashes and Fatal Crashes



II-67

EXHIBIT 14

ACCIDENT SUMMARY BY YEARS - ALL VIRGINIA HIGHWAYS, STREETS AND ROADS - YEARS 1961 - 1971

YEAR	LENGTH IN MILES	ANNUAL VEHICLE MILES OF TRAVEL (THOUSANDS)	FATAL ACCIDENTS	PERSONS KILLED	INJURY ACCIDENTS	PERSONS INJURED	PROPERTY DAMAGE ACCIDENTS	TOTAL ACCIDENTS	AMOUNT OF PROPERTY DAMAGE	ECONOMIC LOSS	ACCIDENT RATE	INJURY RATE	DEATH RATE	PEDESTRIANS KILLED (INCL IN PERSONS KILLED)	PEDESTRIANS INJURED (INCL IN PERSONS INJURED)
1961	56,882	16,234,000	727	856	19,300	29,237	65,481	85,508	\$26,652,400	\$145,520,000	527	180	5.3	157	2,224
1962	56,204	17,018,400	826	974	21,687	33,143	71,538	94,051	30,100,000	175,300,000	553	195	5.7	205	2,343
1963	57,436	18,277,700	820	989	23,088	35,309	74,908	98,816	31,600,000	178,000,000	541	193	5.4	163	2,377
1964	58,404	19,210,100	871	1,050	25,677	39,246	82,788	109,336	35,000,000	189,000,000	569	204	5.5	185	2,520
1965	58,875	20,550,100	881	1,062	26,079	39,263	84,219	111,179	36,000,000	191,000,000	541	191	5.2	163	2,427
1966	59,319	21,640,000	908	1,106	27,761	41,849	87,606	116,275	37,000,000	200,000,000	537	193	5.1	182	2,521
1967	59,781	23,659,000	1,005	1,223	28,743	43,122	81,313	111,061	37,000,000	230,000,000	469	182	5.2	217	2,514
1968	60,428	25,614,000	1,036	1,218	30,146	45,693	89,255	120,437	43,500,000	245,000,000	470	178	4.8	232	2,535
1969	60,705	26,951,000	1,117	1,304	31,846	48,050	98,636	131,599	**	265,000,000	488	178	4.8	241	2,500
1970	61,136	28,418,000	1,066	1,231	32,296	48,354	103,561	136,923	**	270,000,000	482	170	4.3	240	2,609
1971	61,508	30,504,000	1,054	1,218	33,577	50,051	109,776	144,407	**	305,000,000	473	164	4.0	224	2,527
PERCENT CHANGE 1971 over 1970	+0.61	+7.34	-1.13	-1.06	+3.97	+3.51	+6.00	+5.47	-	+12.96	-1.87	-3.53	-6.98	-6.67	-3.14

\*DATA OBTAINED FROM "VIRGINIA TRAFFIC CRASH FACTS" - DEPARTMENT OF STATE POLICE

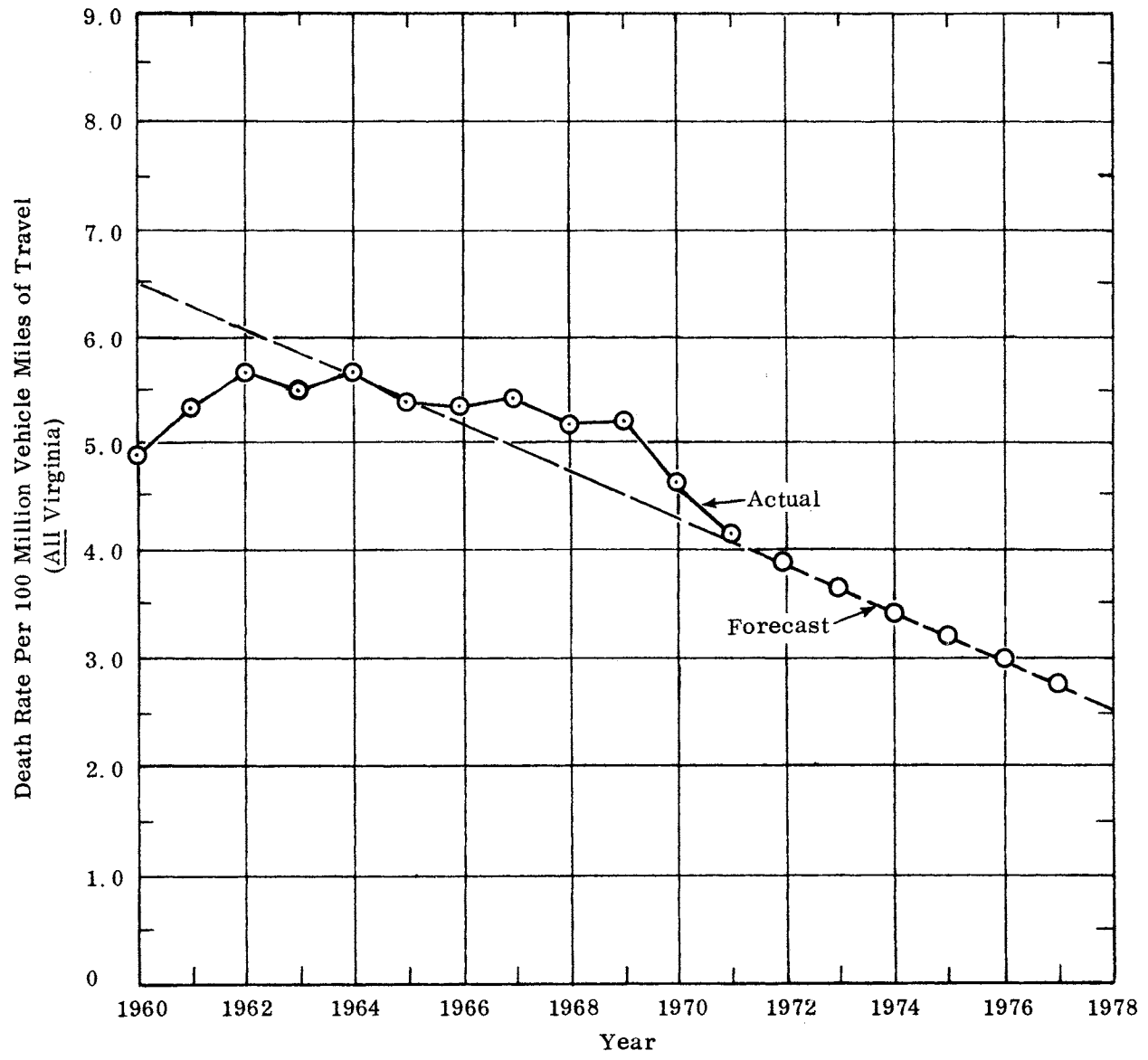
\*\*DATA UNAVAILABLE

1446

89-II

EXHIBIT 15A

Actual and Projected Highway Death Rates



1448

EXHIBIT 15B

DEATH RATE AS A FUNCTION OF TIME

THE REGRESSION EQUATION IS:

Y = 7.47143 + -.162337 X

STATISTICS OF THE SAMPLE

COEFFICIENT OF CORRELATION = .848189

THERE IS A -

.05 PROBABILITY THAN AN R OF .43 WILL OCCUR RANDOMLY

.01 PROBABILITY THAT AN R OF .55 WILL OCCUR RANDOMLY

COEFFICIENT OF DETERMINATION = .719425

STANDARD ERROR OF ESTIMATE OF THE POPULATION = .64538

UNASSOC SUM OF SQUARES= 7.91351

TOTAL SUM OF SQUARES= 28.2059

T-STATISTIC= 6.97982 DEG. OF FREEDOM= 19

DO YOU WANT A FULL PRINTOUT OR PROJECTIONS ONLY

1=FULL PRINT, 0=PROJECTIONS, 2=STOP PROGRAM

00

PROJECTIONS

95 PCT. CONFIDENCE INTERVAL = PROJECTION + OR - 2 STANDARD ERRORS

INDEPENDENT VARIABLE	PROJECTION	95 PCT. CONFIDENCE INTERVAL		
22	3.9	2.48324	--	5.31676
23	3.73766	2.30345	--	5.17188
24	3.57533	2.12238	--	5.02828
25	3.41299	1.94007	--	4.88591
26	3.25065	1.75659	--	4.74472
27	3.08831	1.57197	--	4.60466

DONE



EXHIBIT 16

ACCIDENT SUMMARY BY YEARS -- INTERSTATE SYSTEM -- YEARS 1961 - 1971

YEAR	LENGTH IN MILES	ANNUAL VEHICLE MILES OF TRAVEL (THOUSANDS)	FATAL ACCIDENTS	PERSONS KILLED	INJURY ACCIDENTS	PERSONS INJURED	PROPERTY DAMAGE ACCIDENTS	TOTAL ACCIDENTS	AMOUNT OF PROPERTY DAMAGE	ACCIDENT RATE	INJURY RATE	DEATH RATE
1961	126.36	409,611	16	21	168	286	442	626	\$ 427,200	153	70	5.1
1962	142.86	486,915	9	9	282	442	699	990	654,300	203	91	1.8
1963	216.69	647,580	17	20	320	497	821	1,158	672,200	179	77	3.1
1964	365.70	1,159,540	32	37	536	849	1,284	1,852	1,248,569	160	73	3.2
1965	468.62	2,115,429	52	73	1,014	1,664	2,596	3,662	2,271,200	173	79	3.5
1966	557.21	2,586,804	73	96	1,200	1,984	2,838	4,111	3,089,400	158	76	3.7
1967	626.96	3,123,253	92	118	1,366	2,126	2,958	4,416	4,021,800	141	68	3.8
1968	666.28	3,759,050	89	98	1,600	2,582	3,684	5,373	4,624,627	143	69	2.6
1969	693.78	4,354,250	108	122	1,782	2,913	4,309	6,199	5,255,359	142	67	2.8
1970	774.00	4,682,993	84	97	1,871	2,914	4,774	6,729	6,069,220	144	62	2.1
1971	813.95	5,212,912	115	135	2,143	3,357	5,875	8,133	8,057,500	156	64	2.6
Percent Change 1971 over 1970	+5.16	+11.31	+36.9	+39.17	+14.53	+15.20	+23.06	+20.86	+32.76	+8.33	+3.22	+23.8

EXHIBIT 17

ACTUAL AND PROJECTED DEATH RATES ON INTERSTATE SYSTEM

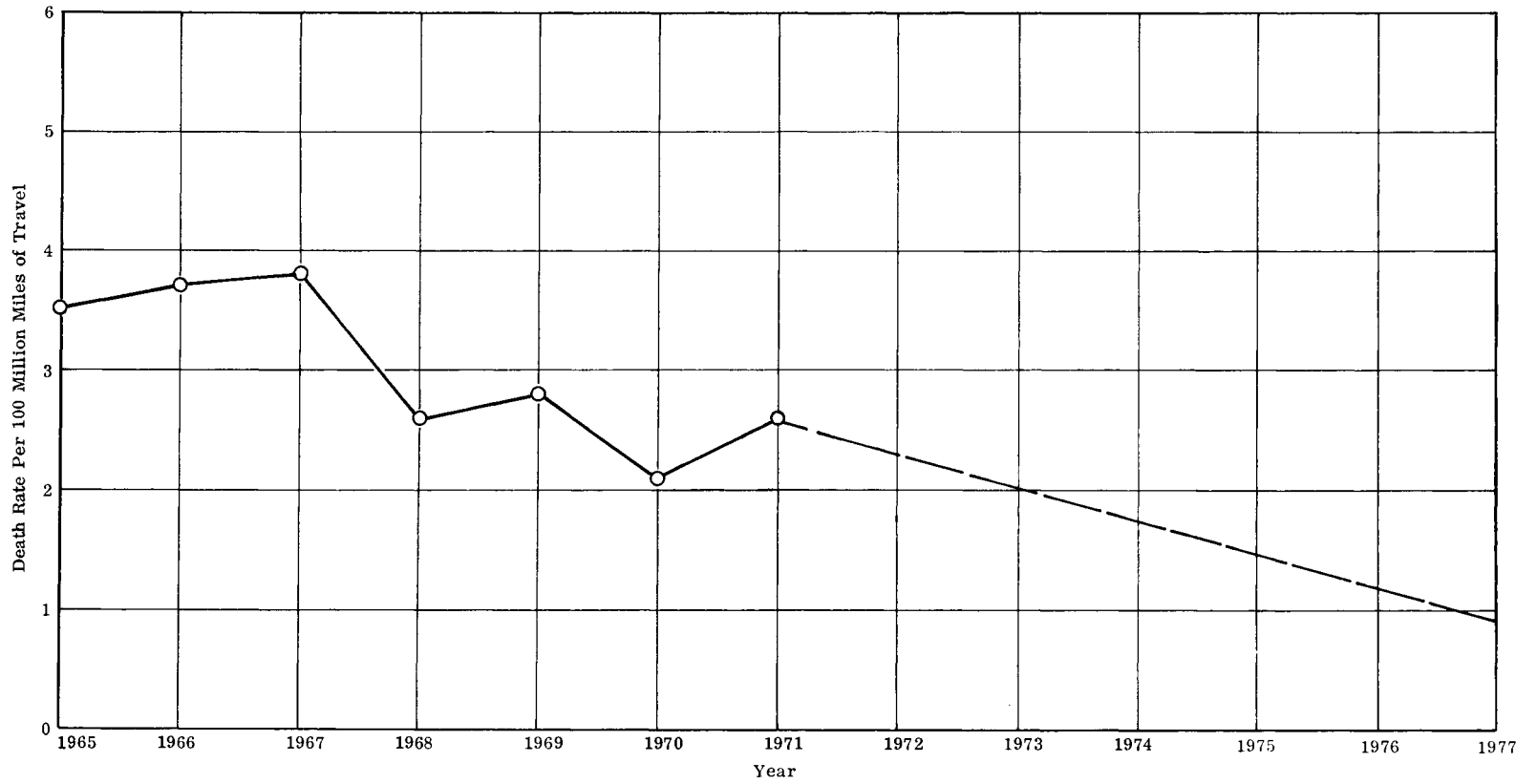


EXHIBIT 18

ACCIDENT SUMMARY BY YEARS - ARTERIAL AND PRIMARY SYSTEM - YEARS 1961 - 1971

YEAR	LENGTH IN MILES	ANNUAL VEHICLE MILES OF TRAVEL (THOUSANDS)	FATAL ACCIDENTS	PERSONS KILLED	INJURY ACCIDENTS	PERSONS INJURED	PROPERTY DAMAGE ACCIDENTS	TOTAL ACCIDENTS	AMOUNT OF PROPERTY DAMAGE	ACCIDENT RATE	INJURY RATE	DEATH RATE
1961	7,782.59	8,261,576	425	522	7,210	12,139	18,714	26,349	\$13,054,300	319	147	6.3
1962	7,753.10	8,395,817	474	591	8,163	13,727	20,190	28,827	14,793,600	343	163	7.0
1963	7,605.65	8,463,857	467	593	7,810	13,186	18,868	27,145	14,767,400	321	156	7.0
1964	7,606.43	8,283,656	462	589	8,447	14,199	20,837	29,746	15,984,200	359	171	7.1
1965	7,622.43	8,410,173	434	539	8,078	13,234	20,905	29,417	16,223,900	350	157	6.4
1966	7,629.87	8,695,925	465	569	8,540	13,974	21,386	30,391	16,761,400	349	161	6.5
1967	7,643.09	8,983,525	492	618	8,797	14,191	20,165	29,454	18,204,700	328	158	6.9
1968	7,670.97	9,495,714	515	628	9,176	14,950	21,738	31,429	19,726,760	331	157	6.6
1969	7,682.12	9,968,172	529	638	9,625	15,483	24,463	34,617	23,101,690	347	155	6.4
1970	7,688.87	10,060,743	511	620	9,703	15,544	25,403	35,617	24,644,791	354	155	6.2
1971	7,683.40	10,438,777	527	635	9,961	15,959	26,707	37,195	26,649,100	356	153	6.1
Percent Change 1971 over 1970	-0.07	+3.75	+3.13	+2.41	+2.65	+2.66	+5.13	+4.43	+8.13	+0.56	-1.29	-1.61

EXHIBIT 18

EXHIBIT 19

ACTUAL AND PROJECTED DEATH RATES ON ARTERIAL AND PRIMARY SYSTEM

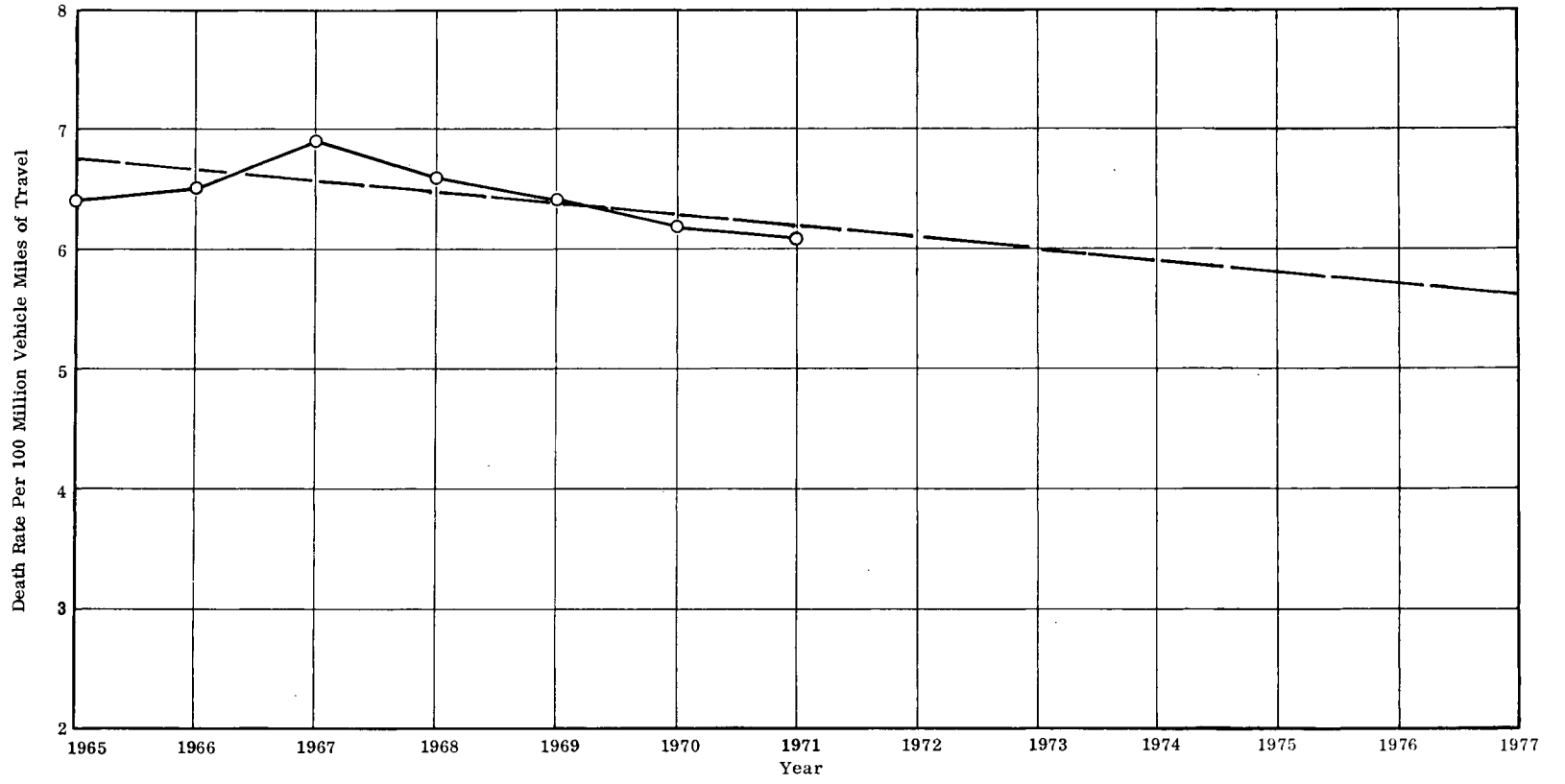


EXHIBIT 20

ACCIDENT SUMMARY BY YEAR - SECONDARY SYSTEM - YEARS 1963 - 1971

YEAR	LENGTH IN MILES	ANNUAL VEHICLE MILES OF TRAVEL	FATAL ACCIDENTS	PERSONS KILLED	INJURY ACCIDENTS	PERSONS INJURED	PROPERTY DAMAGE ACCIDENTS	TOTAL ACCIDENTS	AMOUNT OF PROPERTY DAMAGE	ACCIDENT RATE	INJURY RATE	DEATH RATE
1963	41,521.42	2,469,417	147	166	3,820	5,885	10,363	14,330	\$ 5,624,108	580	238	6.7
1964	41,515.73	2,583,456	155	182	4,125	6,183	11,000	15,280	6,087,404	591	239	7.0
1965	41,673.26	2,786,025	188	222	4,478	6,748	12,237	16,903	7,047,531	607	242	8.0
1966	41,865.87	2,978,196	163	199	4,933	7,390	13,276	18,372	8,011,614	617	248	6.7
1967	41,983.89	3,195,943	185	222	5,044	7,579	12,231	17,460	7,956,554	546	237	6.9
1968	41,838.89	3,320,096	182	201	5,474	8,110	14,063	19,719	9,915,392	594	244	6.1
1969	41,971.36	3,568,331	242	276	5,737	8,500	15,309	21,288	11,659,717	597	238	7.7
1970	41,937.35	3,711,240	205	235	5,792	8,434	16,316	22,313	12,324,991	601	227	6.3
1971	42,114.71	4,001,956	169	188	6,089	8,943	16,820	23,078	13,143,900	577	223	4.7
Percent Change 1971 over 1970	+0.42	+7.83	-17.56	-20.0	+5.12	+6.03	+3.08	+3.42	+6.64	-3.99	-1.76	-25.38

EXHIBIT 21

ACTUAL AND PROJECTED DEATH RATES ON SECONDARY SYSTEM

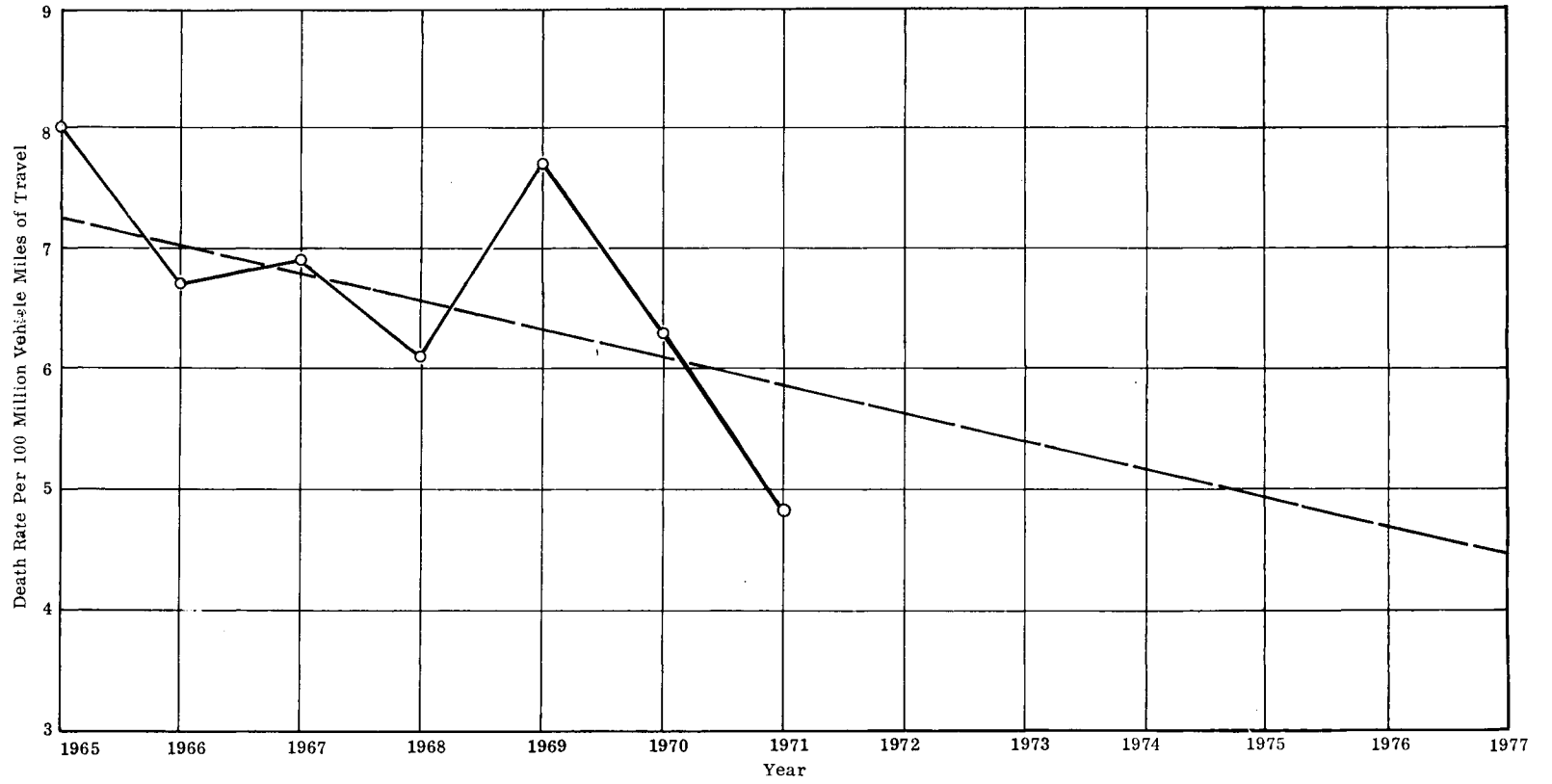
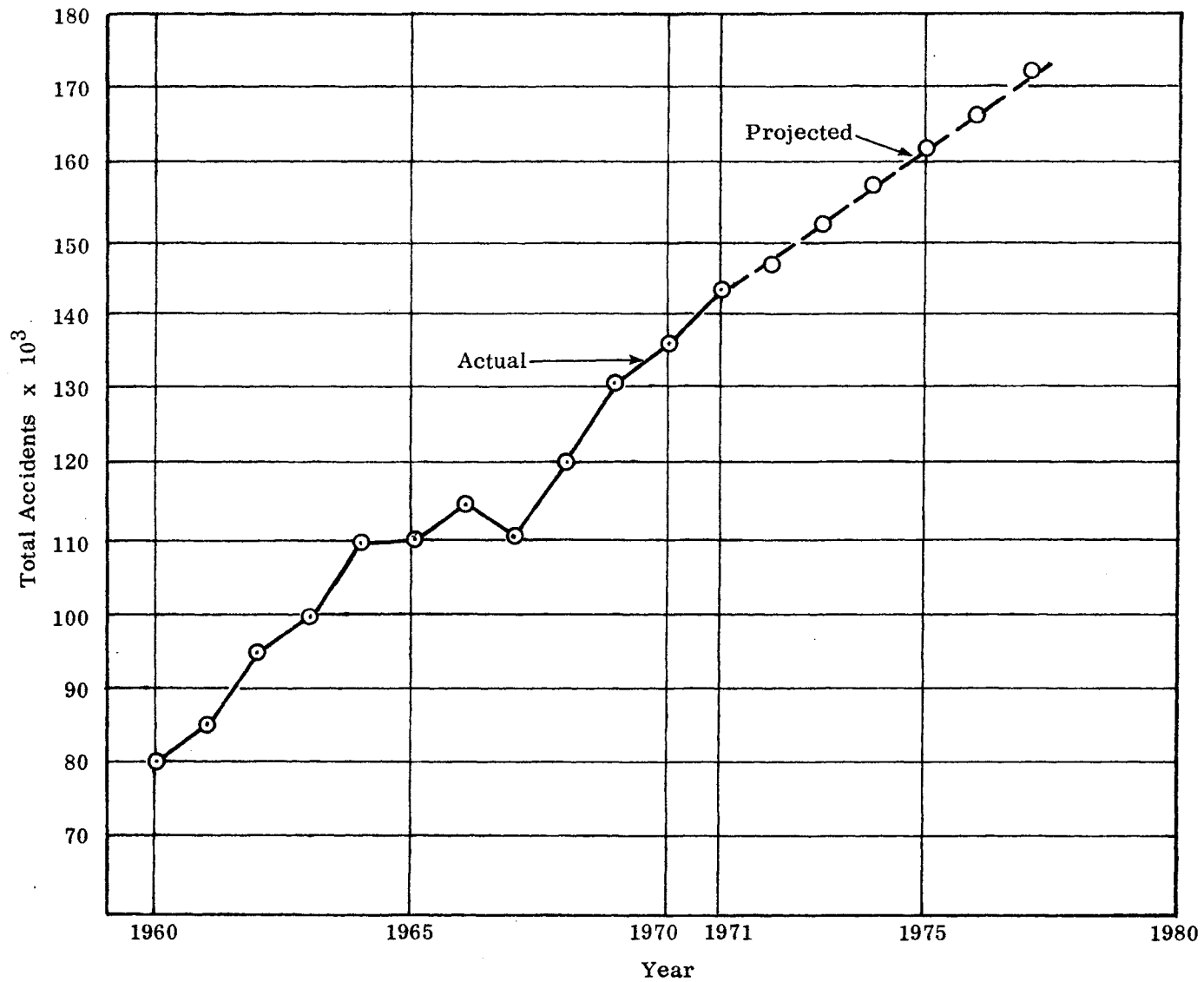


EXHIBIT 22A

ACTUAL AND PROJECTED VEHICLE ACCIDENTS



II-77

1355

EXHIBIT 22B

TOTAL CRASHES AS A FUNCTION OF VEHICLE MILES OF TRAVEL

THE REGRESSION EQUATION IS:

$$Y = 26.3183 + 3.87483 X$$

STATISTICS OF THE SAMPLE

COEFFICIENT OF CORRELATION = .963511

THERE IS A -

0.05 PROBABILITY THAN AN R OF .58 WILL OCCUR RANDOMLY

0.01 PROBABILITY THAT AN R OF .71 WILL OCCUR RANDOMLY

COEFFICIENT OF DETERMINATION = .928354

STANDARD ERROR OF ESTIMATE OF THE POPULATION = 5.58385

UNASSOC SUM OF SQUARES= 311.752

TOTAL SUM OF SQUARES= 4352.19

T-STATISTIC= 11.3831 DEG. OF FREEDOM= 10

DO YOU WANT A FULL PRINTOUT OR PROJECTIONS ONLY

1=FULL PRINT, 0=PROJECTIONS, 2=STOP PROGRAM

?1

INDEPENDENT VARIABLE (X) DATA:

MEAN = 22.0242

STANDARD DEVIATION = 4.9461

DEPENDENT VARIABLE (Y) DATA:

MEAN = 111.658

STANDARD DEVIATION = 19.891

S.E.P. = STANDARD ERROR OF ANY POINT ON REGRESSION LINE

X-ACTUAL	Y-ACTUAL	Y-FOR	(A-F)/F	FOR/ACT	S.E.P.
16.22	80.3	89.1681	-.0995	1.11044	2.54982
16.23	85.5	89.2068	-.0416	1.04335	2.54718
17.02	94.1	92.268	.0198	.980531	2.34515
18.28	98.8	97.1503	.0169	.983302	2.05489
19.21	109.3	100.754	.0848	.92181	1.87507
20.55	111.2	105.946	.0495	.952753	1.68822
21.64	116.3	110.17	.0556	.947289	1.61721
23.66	111.1	117.997	-.0585	1.06208	1.70538
25.61	120.4	125.553	-.0411	1.0428	2.0219
26.95	131.6	130.745	.0065	.993504	2.32585
28.42	136.9	136.441	.0033	.996648	2.70886
30.5	144.4	144.501	-.0007	1.0007	3.30484

PROJECTIONS

95 PCT. CONFIDENCE INTERVAL = PROJECTION + OR - 2 STANDARD ERRORS

INDEPENDENT VARIABLE

PROJECTION	95 PCT. CONFIDENCE INTERVAL
30.83	145.779
32.18	151.01
33.54	156.28
34.89	161.511
36.25	166.781
37.6	172.012

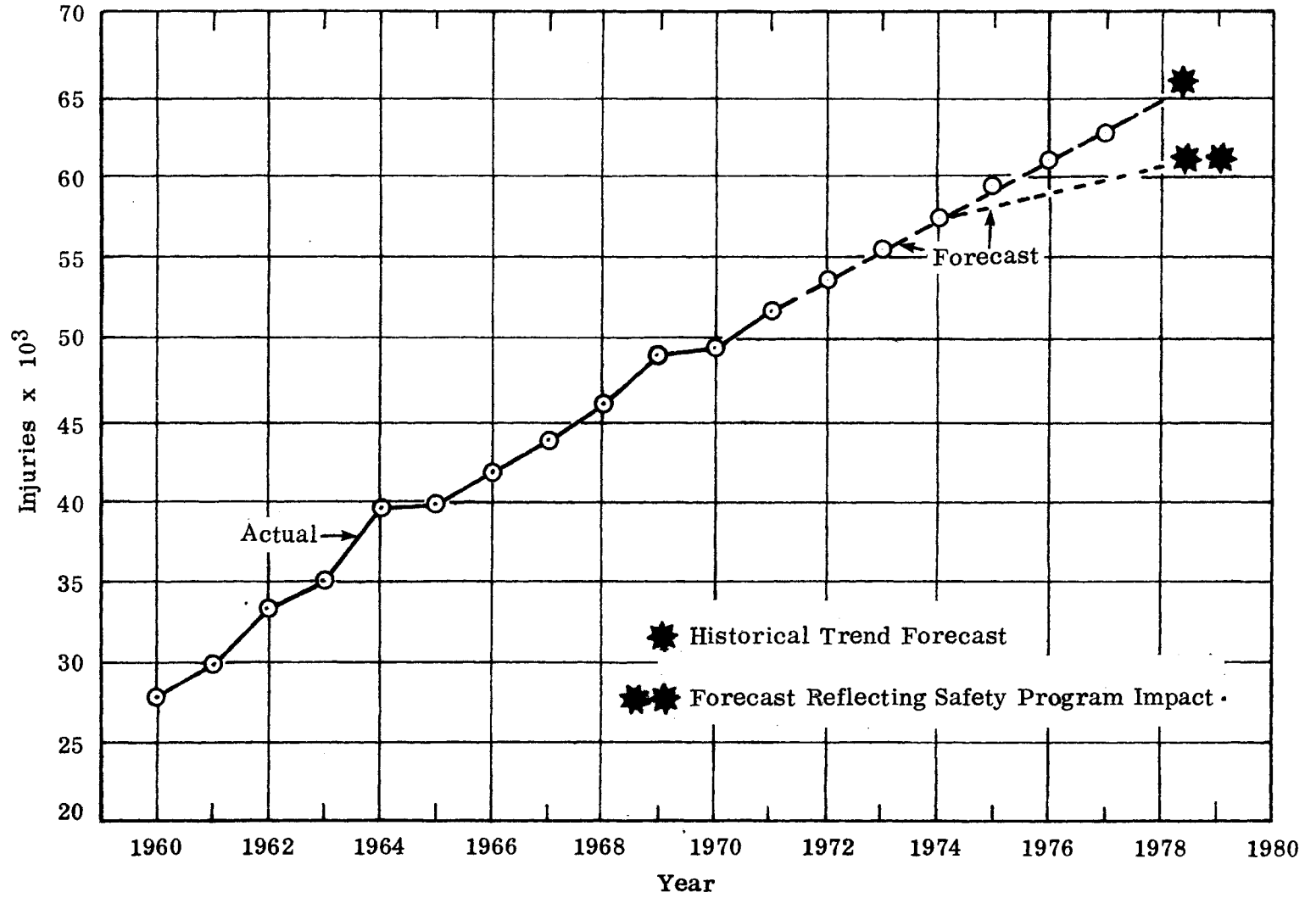
95 PCT. CONFIDENCE INTERVAL
132.701
137.486
142.26
146.957
151.652
156.278

II-78



EXHIBIT 23A

ACTUAL AND PROJECTED NUMBER OF PERSONS INJURED IN MOTOR VEHICLE ACCIDENTS



II-79

1987

INJURIES AS A FUNCTION OF VEHICLE MILES OF TRAVEL  
THE REGRESSION EQUATION IS:

$$Y = 7.85053 + 1.46246 X$$

STATISTICS OF THE SAMPLE

COEFFICIENT OF CORRELATION = .959183

THERE IS A -

0.05 PROBABILITY THAN AN R OF .58 WILL OCCUR RANDOMLY

0.01 PROBABILITY THAT AN R OF .71 WILL OCCUR RANDOMLY

COEFFICIENT OF DETERMINATION = .920032

STANDARD ERROR OF ESTIMATE OF THE POPULATION = 2.23676

UNASSOC SUM OF SQUARES= 50.0284

TOTAL SUM OF SQUARES= 625.586

T-STATISTIC= 10.7261 DEG. OF FREEDOM= 10

DO YOU WANT A FULL PRINTOUT OR PROJECTIONS ONLY

1=FULL PRINT, 0=PROJECTIONS, 2=STOP PROGRAM

?1

INDEPENDENT VARIABLE (X) DATA:

MEAN = 22.0242

STANDARD DEVIATION = 4.9461

DEPENDENT VARIABLE (Y) DATA:

MEAN = 40.06

STANDARD DEVIATION = 7.54132

S.E.P. = STANDARD ERROR OF ANY POINT ON REGRESSION LINE

X-ACTUAL	Y-ACTUAL	Y-FOR	(A-F)/F	FOR/ACT	S.E.P.
16.22	27.4	31.5716	-.1322	1.15225	1.0214
16.23	29.24	31.5862	-.0743	1.08024	1.02034
17.02	33.15	32.7416	.0124	.98768	.939413
18.28	35.31	34.5843	.0209	.979447	.823141
19.21	39.25	35.9444	.0919	.91578	.751109
20.55	39.26	37.9041	.0357	.965463	.676261
21.64	41.85	39.4982	.0595	.943803	.647819
23.66	43.12	42.4523	.0157	.984516	.683136
25.61	45.69	45.3041	.0085	.991554	.800927
26.95	48.05	47.2638	.0166	.983638	.931682
28.42	48.35	49.4136	-.0216	1.022	1.0851
30.5	50.05	52.4556	-.0459	1.04806	1.32384

PROJECTIONS

95 PCT. CONFIDENCE INTERVAL = PROJECTION + OR - 2 STANDARD ERRORS

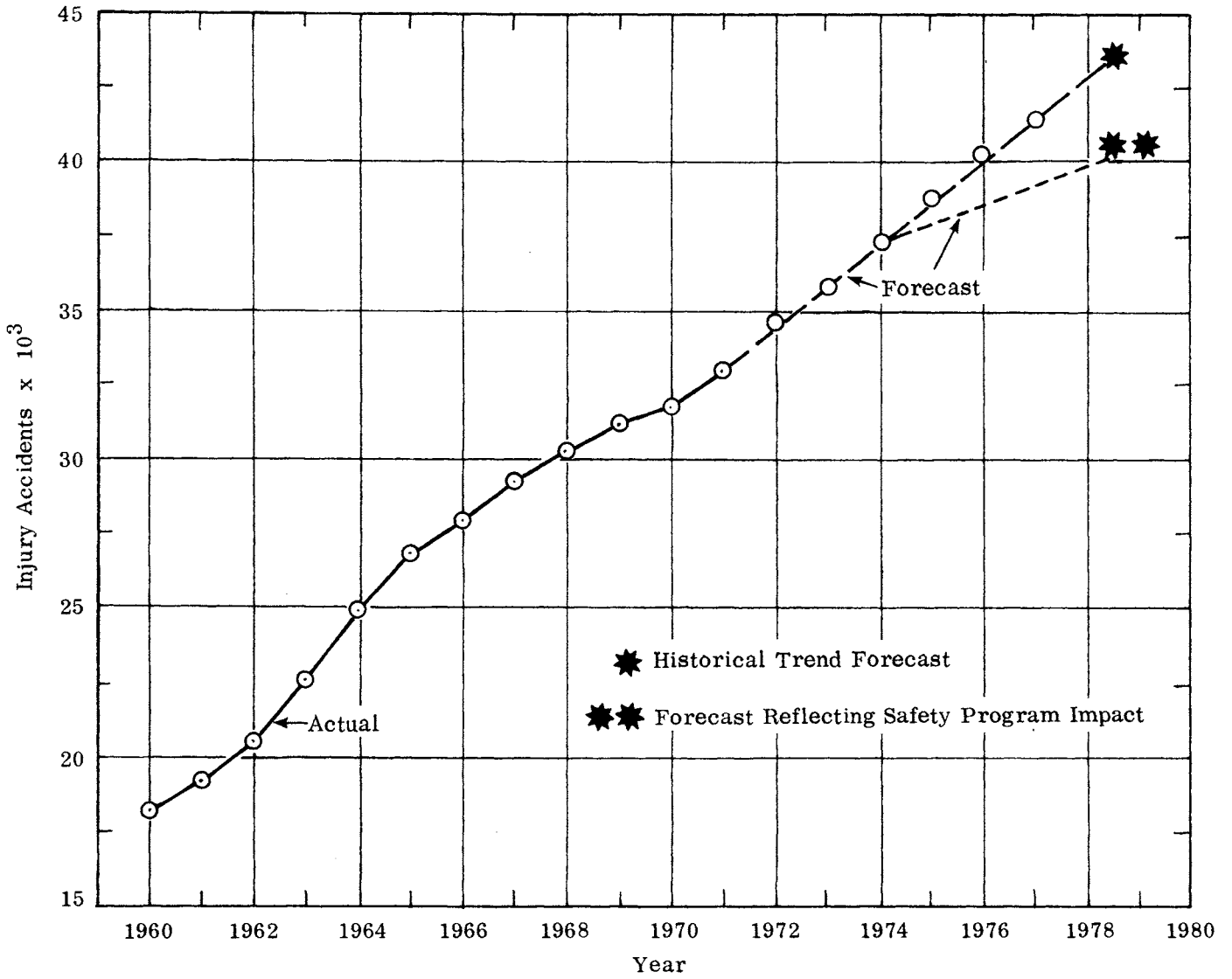
INDEPENDENT  
VARIABLE

PROJECTION

95 PCT. CONFIDENCE INTERVAL

INDEPENDENT VARIABLE	PROJECTION	95 PCT. CONFIDENCE INTERVAL
30.83	52.9382	47.6992 -- 58.1771
32.18	54.9125	49.4949 -- 60.3301
33.54	56.9014	51.2852 -- 62.5177
34.89	58.8757	53.0456 -- 64.7058
36.25	60.8647	54.8042 -- 66.9252
37.6	62.839	56.5365 -- 69.1416

EXHIBIT 24A  
 ACTUAL AND PROJECTED HIGHWAY INJURY ACCIDENTS



## EXHIBIT 24B

INJURY ACCIDENTS AS A FUNCTION OF VEHICLE MILES OF TRAVEL  
THE REGRESSION EQUATION IS:

$$Y = 4.38756 + 1.00492 X$$

S T A T I S T I C S O F T H E S A M P L E

COEFFICIENT OF CORRELATION = .96525

THERE IS A -

0.05 PROBABILITY THAN AN R OF .58 WILL OCCUR RANDOMLY

0.01 PROBABILITY THAT AN R OF .71 WILL OCCUR RANDOMLY

COEFFICIENT OF DETERMINATION = .931707

STANDARD ERROR OF ESTIMATE OF THE POPULATION = 1.41126

UNASSOC SUM OF SQUARES= 19.9182

TOTAL SUM OF SQUARES= 291.672

T-STATISTIC= 11.6802 DEG. OF FREEDOM= 10

DO YOU WANT A FULL PRINTOUT OR PROJECTIONS ONLY

1=FULL PRINT, 0=PROJECTIONS, 2=STOP PROGRAM

?1

INDEPENDENT VARIABLE (X) DATA:

MEAN = 22.0242

STANDARD DEVIATION = 4.9461

DEPENDENT VARIABLE (Y) DATA:

MEAN = 26.52

STANDARD DEVIATION = 5.14933

S.E.P. = STANDARD ERROR OF ANY POINT ON REGRESSION LINE

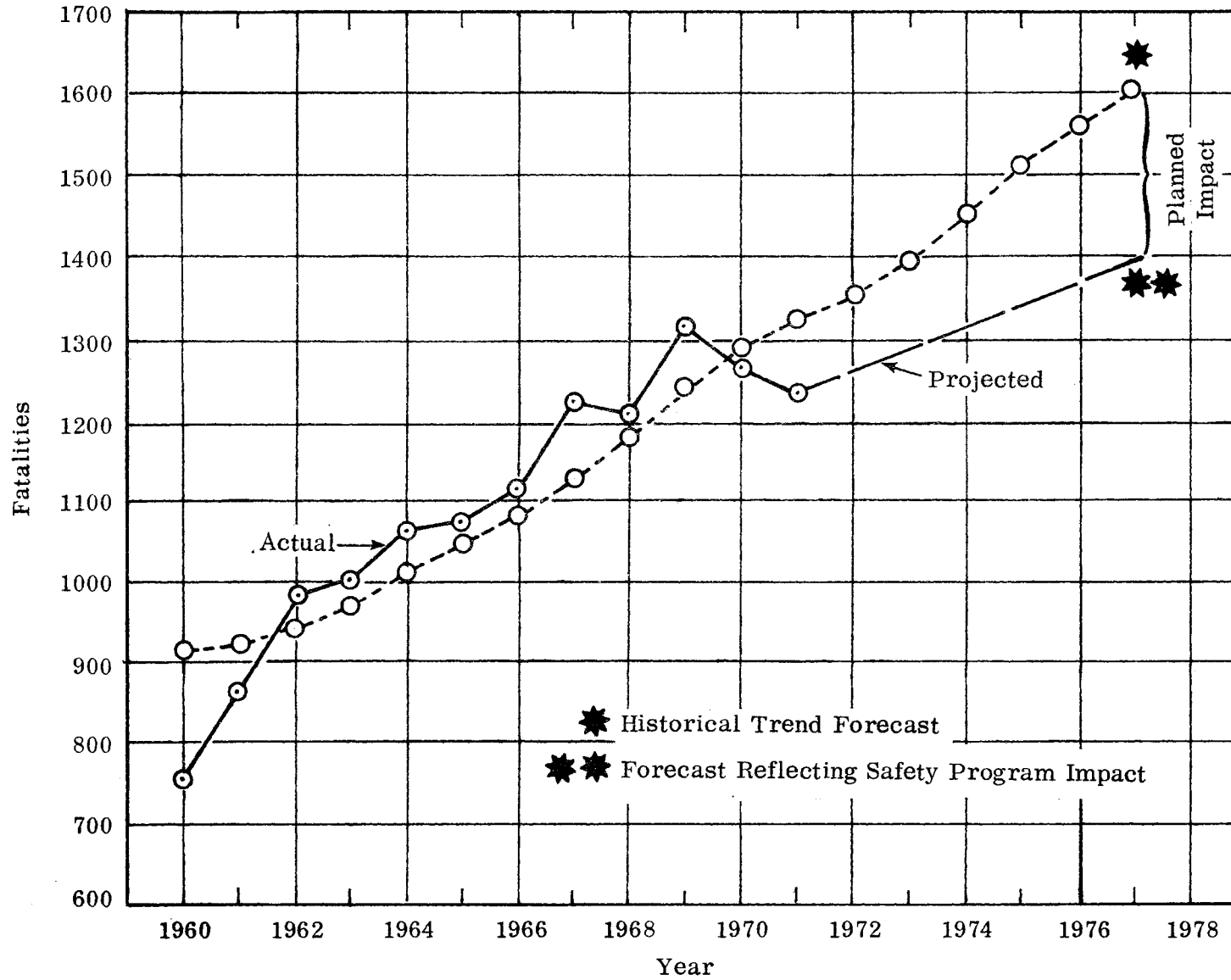
X-ACTUAL	Y-ACTUAL	Y-FOR	(A-F)/F	FOR/ACT	S.E.P.
16.22	18.02	20.6873	-.129	1.14802	.644442
16.23	19.3	20.6973	-.0676	1.0724	.643776
17.02	21.69	21.4912	.0092	.990836	.592714
18.28	23.09	22.7574	.0146	.985596	.519353
19.21	25.68	23.692	.0839	.922585	.473906
20.55	26.08	25.0386	.0415	.960068	.426681
21.64	27.76	26.1339	.0622	.941424	.408736
23.66	28.74	28.1639	.0204	.979954	.431019
25.61	30.15	30.1235	.0008	.99912	.511016
26.95	31.85	31.47	.012	.98807	.587837
28.42	32.3	32.9473	-.0197	1.02004	.684637
30.5	33.58	35.0375	-.0416	1.0434	.835265

P R O J E C T I O N S

95 PCT. CONFIDENCE INTERVAL = PROJECTION + OR - 2 STANDARD ERRORS

INDEPENDENT VARIABLE	PROJECTION	95 PCT. CONFIDENCE INTERVAL	
		-----	
30.83	35.3691	32.0636	-- 38.6746
32.18	36.7258	33.3076	-- 40.1439
33.54	38.0924	34.5489	-- 41.636
34.89	39.4491	35.7706	-- 43.1275
36.25	40.8158	36.9919	-- 44.6396
37.6	42.1724	38.1959	-- 46.1489

ACTUAL AND PROJECTED TRAFFIC FATALITIES



II-83

EXHIBIT 25B

FATALITIES AS A FUNCTION OF VEHICLE MILES OF TRAVEL  
 THE REGRESSION EQUATION IS:

$$Y = 417.839 + 30.1674 X$$

STATISTICS OF THE SAMPLE

COEFFICIENT OF CORRELATION = .891672

THERE IS A -

0.05 PROBABILITY THAN AN R OF .58 WILL OCCUR RANDOMLY

0.01 PROBABILITY THAT AN R OF .71 WILL OCCUR RANDOMLY

COEFFICIENT OF DETERMINATION = .79508

STANDARD ERROR OF ESTIMATE OF THE POPULATION = 79.4478

UNASSOC SUM OF SQUARES= 63120.

TOTAL SUM OF SQUARES= 308022.

T-STATISTIC= 6.22892 DEG. OF FREEDOM= 10

DO YOU WANT A FULL PRINTOUT OR PROJECTIONS ONLY

1=FULL PRINT, 0=PROJECTIONS, 2=STOP PROGRAM

?

INDEPENDENT VARIABLE (X) DATA:

MEAN = 22.0242

STANDARD DEVIATION = 4.9461

DEPENDENT VARIABLE (Y) DATA:

MEAN = 1082.25

STANDARD DEVIATION = 167.338

S.E.P. = STANDARD ERROR OF ANY POINT ON REGRESSION LINE

X-ACTUAL	Y-ACTUAL	Y-FOR	(A-F)/F	FOR/ACT	S.E.P.
16.22	756	907.153	-.1667	1.19994	36.2792
16.23	856	907.455	-.0568	1.06011	36.2417
17.02	974	931.287	.0458	.956147	33.3671
18.28	989	969.298	.0203	.980079	29.2372
19.21	1050	997.354	.0527	.949861	26.6787
20.55	1062	1037.78	.0233	.977192	24.0202
21.64	1106	1070.66	.033	.968047	23.01
23.66	1223	1131.6	.0807	.925265	24.2644
25.61	1218	1190.43	.0231	.97736	28.7679
26.95	1304	1230.85	.0594	.943903	33.0926
28.42	1231	1275.2	-.0347	1.0359	38.542
30.5	1218	1337.94	-.0897	1.09848	47.0217

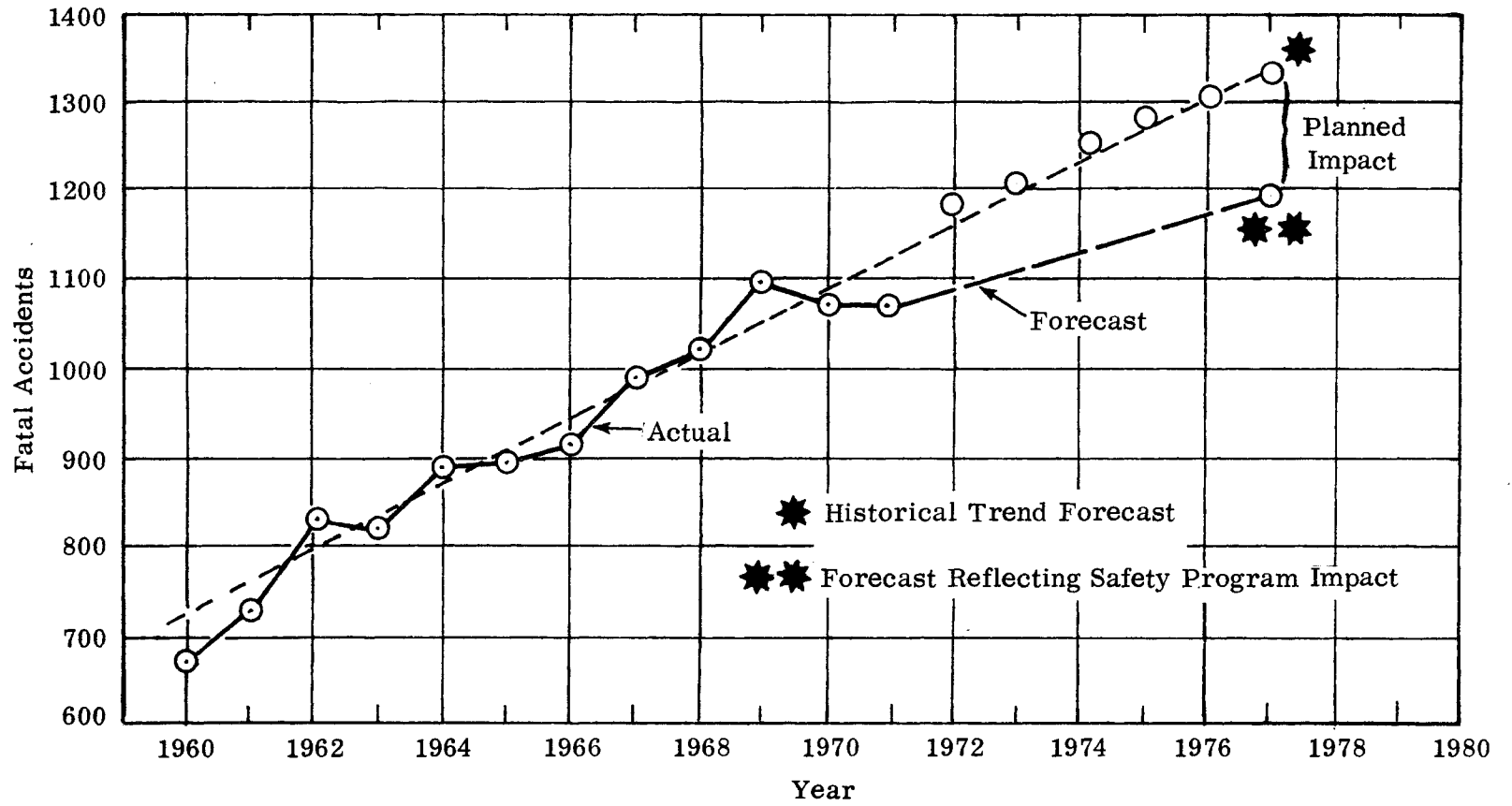
PROJECTIONS

95 PCT. CONFIDENCE INTERVAL = PROJECTION + OR - 2 STANDARD ERRORS

INDEPENDENT VARIABLE	PROJECTION	95 PCT. CONFIDENCE INTERVAL	
		-----	-----
30.83	1347.9	1161.82	-- 1533.98
32.18	1388.62	1196.2	-- 1581.05
33.54	1429.65	1230.17	-- 1629.14
34.89	1470.38	1263.3	-- 1677.46
36.25	1511.41	1296.14	-- 1726.67
37.6	1552.13	1328.27	-- 1775.99

EXHIBIT 26A

ACTUAL AND PROJECTED FATAL ACCIDENTS



II-85

11-10-85

## EXHIBIT 26B

FATAL ACCIDENTS AS A FUNCTION OF VEHICLE MILES OF TRAVEL  
THE REGRESSION EQUATION IS:

$$Y = 327.31 + 26.7028 X$$

S T A T I S T I C S O F T H E S A M P L E

COEFFICIENT OF CORRELATION = .935659

THERE IS A -

0.05 PROBABILITY THAN AN R OF .58 WILL OCCUR RANDOMLY

0.01 PROBABILITY THAT AN R OF .71 WILL OCCUR RANDOMLY

COEFFICIENT OF DETERMINATION = .875457

STANDARD ERROR OF ESTIMATE OF THE POPULATION = 52.2464

UNASSOC SUM OF SQUARES= 27295.4

TOTAL SUM OF SQUARES= 219178.

T-STATISTIC= 8.38413 DEG. OF FREEDOM= 10

DO YOU WANT A FULL PRINTOUT OR PROJECTIONS ONLY

1=FULL PRINT, 0=PROJECTIONS, 2=STOP PROGRAM

?1

INDEPENDENT VARIABLE (X) DATA:

MEAN = 22.0242

STANDARD DEVIATION = 4.9461

DEPENDENT VARIABLE (Y) DATA:

MEAN = 915.417

STANDARD DEVIATION = 141.157

S.E.P. = STANDARD ERROR OF ANY POINT ON REGRESSION LINE

X-ACTUAL	Y-ACTUAL	Y-FOR	(A-F)/F	FOR/ACT	S.E.P.
16.22	674	760.429	-.1137	1.12823	23.8579
16.23	727	760.696	-.0443	1.04635	23.8332
17.02	826	781.791	.0565	.946479	21.9429
18.28	820	815.437	.0055	.994435	19.227
19.21	871	840.27	.0365	.964719	17.5445
20.55	881	876.052	.0056	.994384	15.7962
21.64	908	905.158	.0031	.99687	15.1318
23.66	1005	959.098	.0478	.954326	15.9568
25.61	1036	1011.17	.0245	.976031	18.9183
26.95	1117	1046.95	.0669	.937287	21.7623
28.42	1066	1086.2	-.0186	1.01895	25.346
30.5	1054	1141.74	-.0769	1.08325	30.9224

P R O J E C T I O N S

95 PCT. CONFIDENCE INTERVAL = PROJECTION + OR - 2 STANDARD ERRORS

INDEPENDENT VARIABLE	PROJECTION	95 PCT. CONFIDENCE INTERVAL	
		-----	-----
30.83	1150.56	1028.18	-- 1272.93
32.18	1186.61	1060.06	-- 1313.15
33.54	1222.92	1091.74	-- 1354.11
34.89	1258.97	1122.79	-- 1395.15
36.25	1295.29	1153.72	-- 1436.85
37.6	1331.33	1184.12	-- 1478.55



EXHIBIT 27  
ACTUAL AND PROJECTED PEDESTRIAN INJURIES

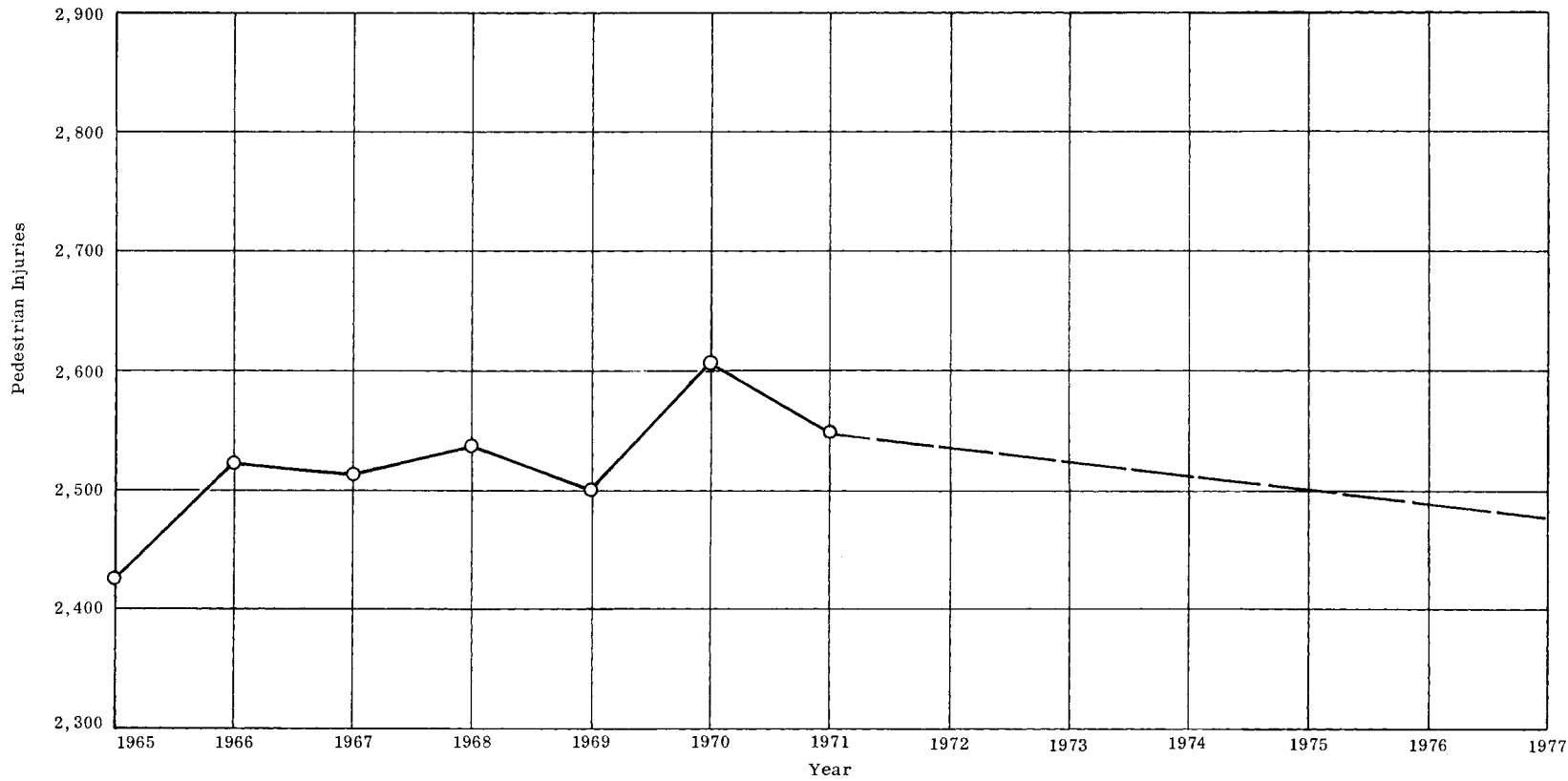


EXHIBIT 28

ACTUAL AND PROJECTED PEDESTRIAN INJURIES

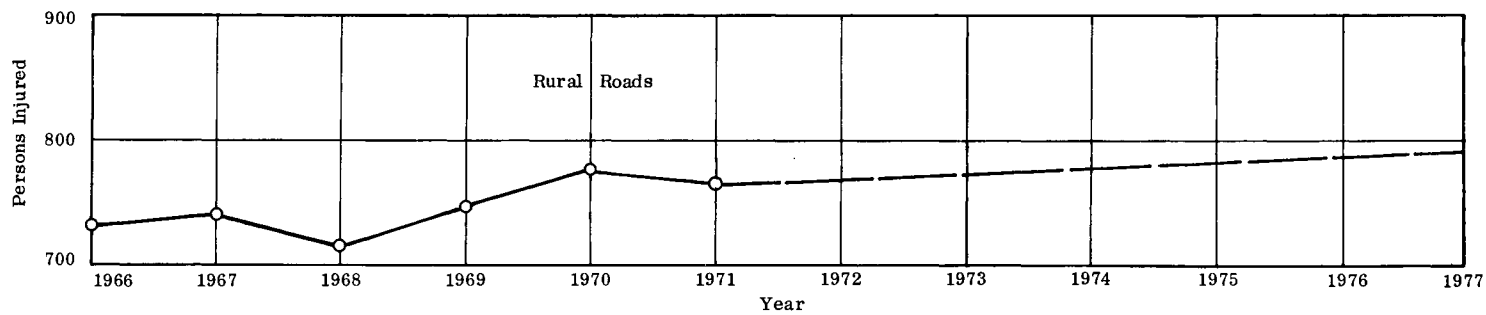
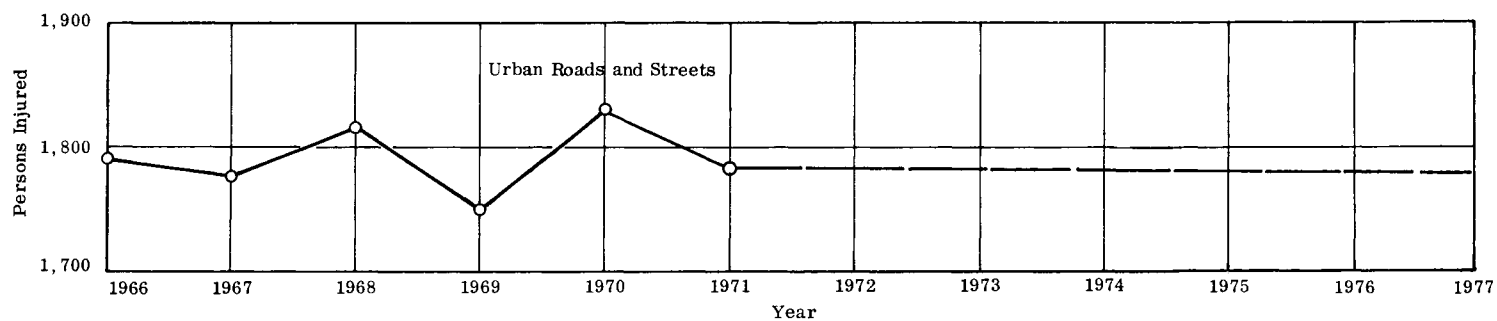


EXHIBIT 29

ACTUAL AND PROJECTED PEDESTRIAN FATALITIES

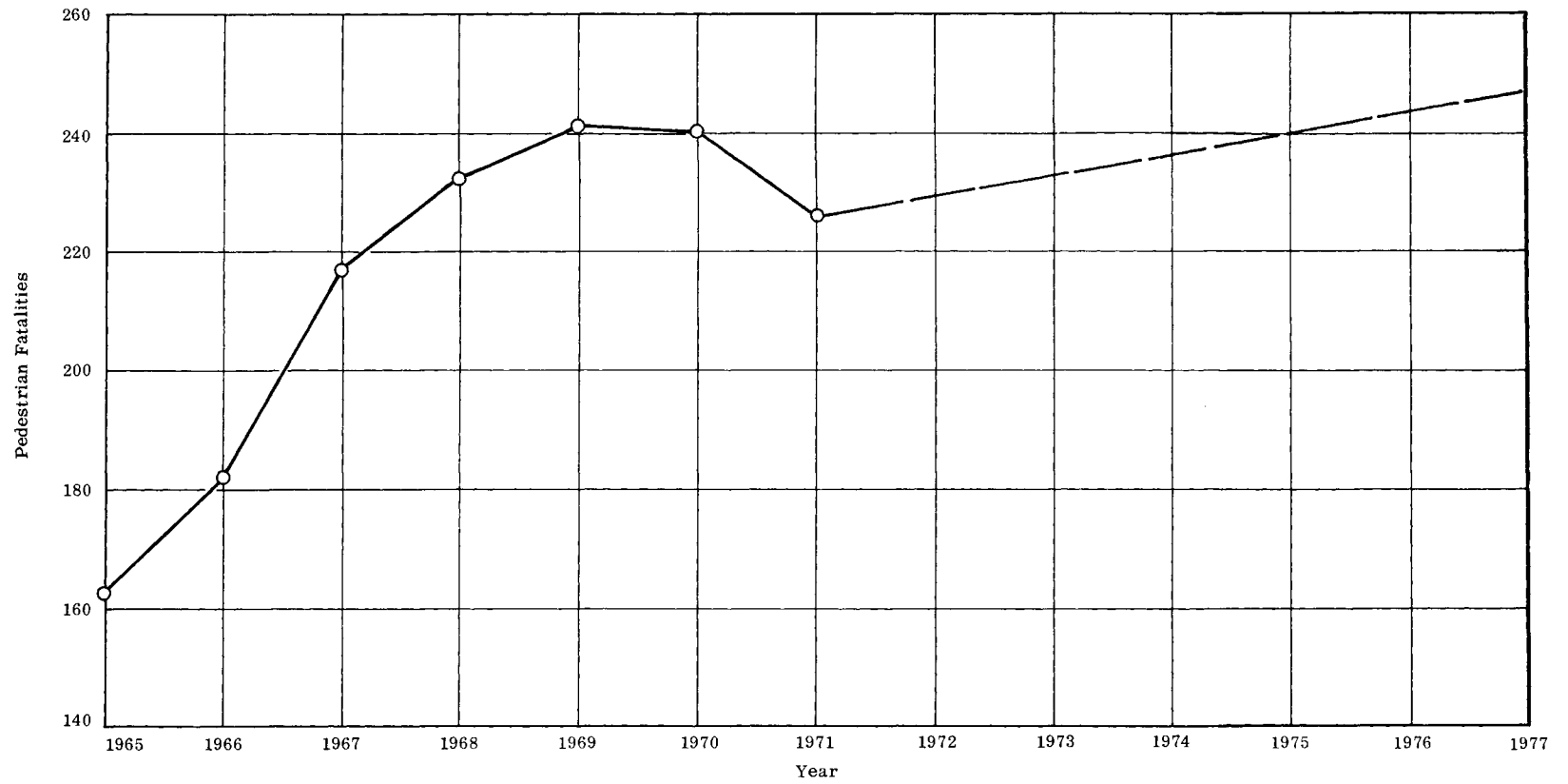


EXHIBIT 30

ACTUAL AND PROJECTED PEDESTRIAN DEATHS — URBAN ROADS AND STREETS

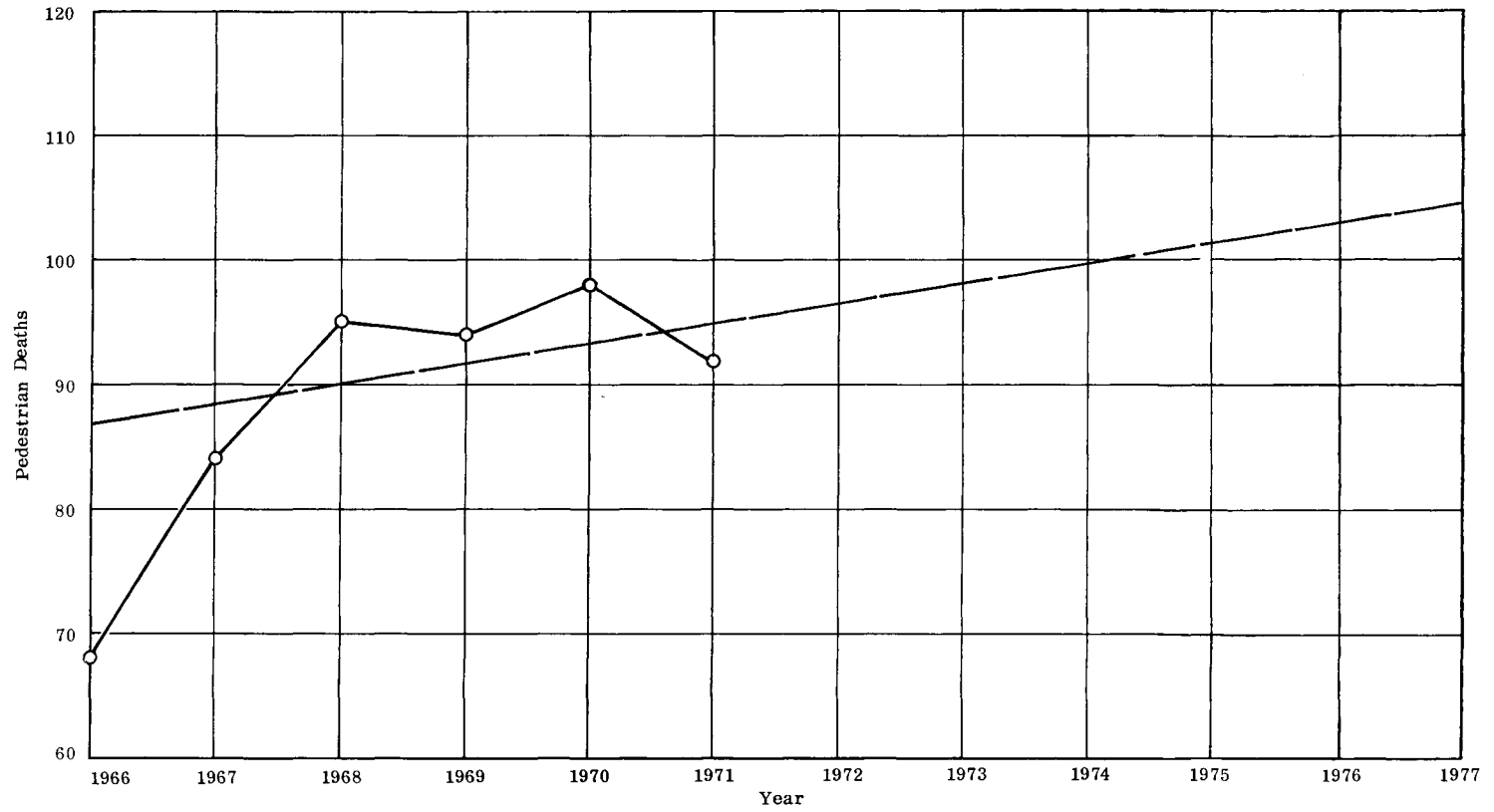
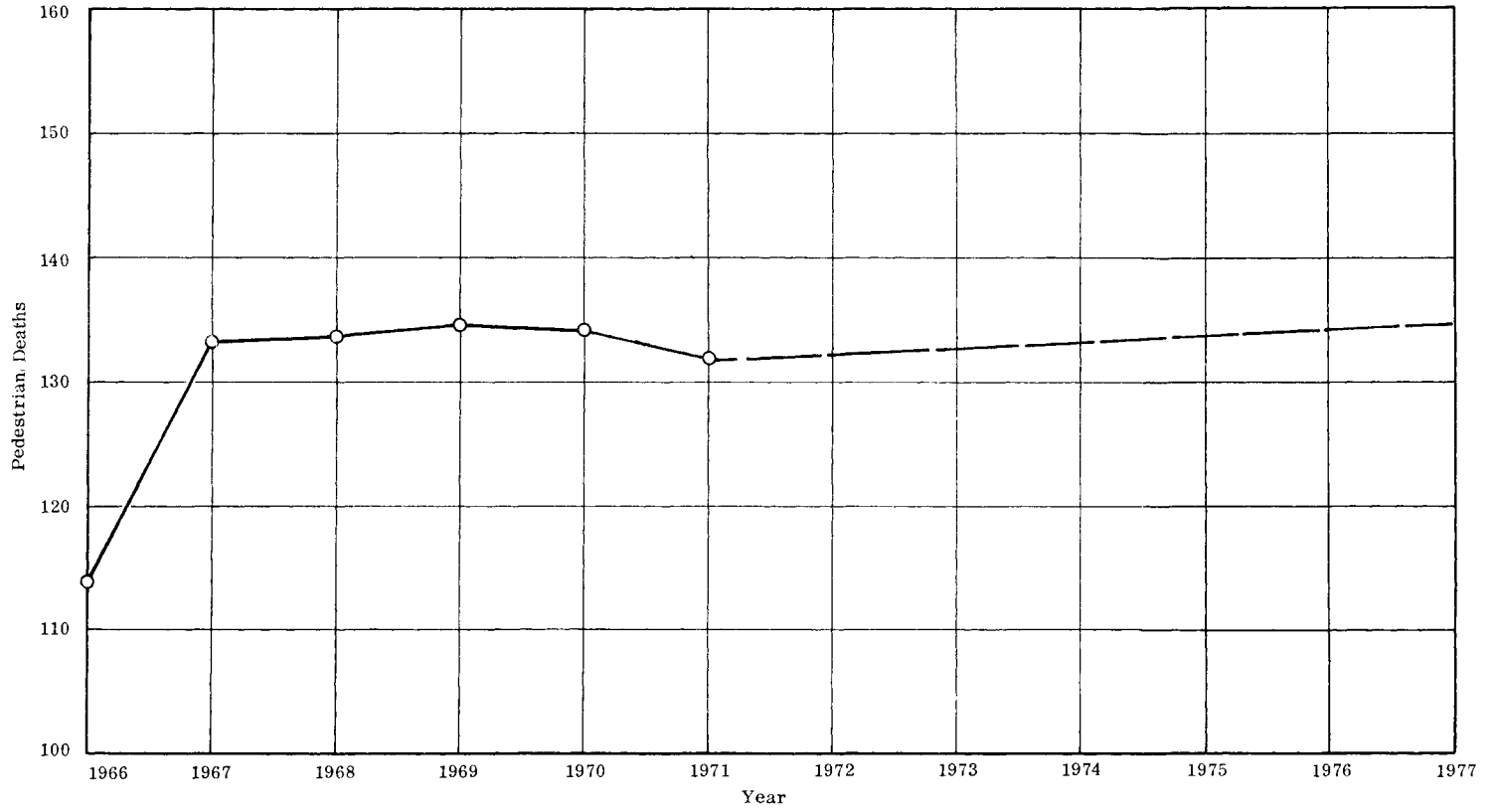


EXHIBIT 31

ACTUAL AND PROJECTED PEDESTRIAN DEATHS — RURAL ROADS



- 16-II -



PART III

## STATEMENT OF GOALS AND OBJECTIVES

The goals and objectives of each highway safety program element and sub-element in the Commonwealth of Virginia have already been articulated in the Executive Summary and are defined further in the Program Element Plans (PEP's) which follow. Taken as a whole they reflect a comprehensive plan for Virginia; the goals and objectives of which are to reduce fatalities, personal injuries, and property damage crashes through the implementation of countermeasure programs that work.

More than \$20 million in federal funds has been programmed for the period FY 1974 - FY 1977 to implement projects designed to achieve these goals. Yet it is recognized that less than this amount will probably be allocated to the Highway Safety Division of Virginia for project funding. Hence the Division has established program priorities so that such funds as are made available can be employed in areas to achieve maximum dollar impact or cost effectiveness.

The establishment of program priorities has been accomplished in Virginia through the use of twelve criteria for evaluating likely project impact and an incremental funding chart which breaks down the programming of federal funds into ten separate funding levels.

## CRITERIA FOR DETERMINING PRIORITIES

The following 12 criteria are used by the HSD when determining where federal funds will be expended.

- (1) Amount of money required and percent of total funds received by state.
- (2) Predicted accident reductions by types.
- (3) Return on investment using average accident figures.
- (4) Accident reductions required to break even.
- (5) Method proposed for determining the effectiveness of the program in both management and its impact on highway safety.
- (6) Probability that the program will be successful.
- (7) Length of program.
- (8) Time lag between expenditure of funds and benefit derived.
- (9) Newness and innovations of program by type -- will it develop a new technique for promoting highway safety.
- (10) Short- and long-range impact and fit with goals and objectives of the state's comprehensive program.
- (11) Percent of the state services -- volume and coverage.
- (12) Compliance in particular standard area.

## FUNDING LEVELS

Exhibits 32-35 show the programs that have been selected by the staff of the Highway Safety Division, in accordance with the above criteria, arrayed in the incremental funding charts. These exhibits also display the financial resources that are planned for allocation to each standard area, depending upon federal funds received.



STATE PRIORITIES  
For FY74 — Exhibit 32

Element	Subelement	Title	10%			20%			30%			40%		
			Amount Requested	Date Funded	Amount Funded	Amount Requested	Date Funded	Amount Funded	Amount Requested	Date Funded	Amount Funded	Amount Requested	Date Funded	Amount Funded
N-1		Program Administration and Evaluation												
	300	Planning and Administration	73.6			147.2			220.8			294.4		
	310	Traffic Records	46.0			92.0			138.0			184.0		
		Total	119.6			239.2			358.8			478.4		
N-2		Traffic Laws & Regulations												
	306	Codes and Laws	18.4			36.8			55.2			73.6		
	308	Alcohol and Drugs	46.0			92.0			138.0			184.0		
		Total	64.4			128.8			193.2			257.6		
N-3		Vehicle Requirements												
	301	Periodic Motor Vehicle Inspection	4.6			9.2			13.8			18.4		
	302	Motor Vehicle Registration	4.6			9.2			13.8			18.4		
		Total	9.2			18.4			27.6			36.8		
N-4		Traffic Safety Education												
	303	Motorcycle Safety	13.8			27.6			41.4			55.2		
	304	Driver Education	32.2			64.4			96.6			128.8		
	314	Pedestrian Safety	18.4			36.8			55.2			73.6		
	317	Pupil Transportation Safety	32.2			64.4			96.6			128.8		

STATE PRIORITIES  
For FY74 - Exhibit 32 (continued)

Element	Subelement	50%			60%			70%			80%			90%			100%		
		Amount Requested	Date Funded	Amount Funded	Amount Requested	Date Funded	Amount Funded	Amount Requested	Date Funded	Amount Funded	Amount Requested	Date Funded	Amount Funded	Amount Requested	Date Funded	Amount Funded	Amount Requested	Date Funded	Amount Funded
N-1																			
	300	368.0			441.6			515.2			588.8			662.4			736.0		
	310	230.0			276.0			322.0			368.0			414.0			460.0		
		598.0			717.6			834.2			956.8			1076.4			1196.0		
N-2																			
	306	92.0			110.4			128.8			147.2			165.6			184.0		
	308	230.0			276.0			322.0			368.0			414.0			460.0		
		322.0			386.4			450.8			515.2			579.6			644.0		
N-3																			
	301	23.0			27.6			32.2			36.8			41.4			46.0		
	302	23.0			27.6			32.2			36.8			41.4			46.0		
		46.0			45.2			64.4			73.6			82.8			92.0		
N-4																			
	303	69.0			82.8			96.6			110.4			124.2			138.0		
	304	161.0			193.2			225.4			257.6			289.2			322.0		
	314	92.0			110.4			128.8			147.2			165.6			184.0		
	317	161.0			193.2			225.4			257.6			289.8			322.0		

## STATE PRIORITIES

## For FY74 - Exhibit 32 (continued)

Element	Subelement	Title	10%			20%			30%			40%		
			Amount Requested	Date Funded	Amount Funded	Amount Requested	Date Funded	Amount Funded	Amount Requested	Date Funded	Amount Funded	Amount Requested	Date Funded	Amount Funded
		Total	96.6			193.2			289.8			396.4		
N-5		Driver Licensing												
	305	Driver Testing & Licensing	4.6			9.2			13.8			18.4		
		Total	4.6			9.2			13.8			18.4		
N-6		Police Traffic Services												
	315	Police Traffic Services	23.0			46.0			69.0			92.0		
	316	Accident Cleanup	4.6			9.2			13.8			18.4		
	318	Accident Investigation and Reporting	23.0			46.0			69.0			92.0		
		Total	50.6			99.2			151.8			202.4		
N-7		Traffic Courts & Adjudication												
	307	Traffic Courts	13.8			27.6			41.4			55.2		
		Total	13.8			27.6			41.4			55.2		
N-8		Emergency Medical Services												
	311	Emergency Medical Services	32.2			64.4			96.6			128.8		
		Total	32.2			64.4			96.6			128.8		
3+		Highway and Traffic Safety Engineering												
	312	Highway Design, Construction & Maintenance	27.6			55.2			82.8			110.4		

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STATE PRIORITIES  
For FY74 — Exhibit 32 (continued)

Element	Subelement	50%			60%			70%			80%			90%			100%		
		Amount Requested	Date Funded	Amount Funded	Amount Requested	Date Funded	Amount Funded	Amount Requested	Date Funded	Amount Funded	Amount Requested	Date Funded	Amount Funded	Amount Requested	Date Funded	Amount Funded	Amount Requested	Date Funded	Amount Funded
		483.0			579.6			676.2			772.8			869.4			966.0		
N-5																			
	305	23.0			27.6			32.2			36.8			41.4			46.0		
		23.0			27.6			32.2			36.8			41.4			46.0		
N-6																			
	315	115.0			138.0			161.0			184.0			207.0			230.0		
	316	23.0			27.6			32.2			36.8			41.4			46.0		
	318	115.0			138.0			161.0			184.0			207.0			230.0		
		253.0			303.6			354.2			404.8			455.4			506.0		
N-7																			
	307	69.0			82.8			96.6			110.4			124.2			138.0		
		69.0			82.8			96.6			110.4			124.2			138.0		
N-8																			
	307	161.0			193.2			225.4			257.6			289.8			322.0		
		161.0			193.2			225.4			257.6			289.8			322.0		
3+																			
	312	138.0			165.6			193.2			220.8			248.4			276.0		

STATE PRIORITIES

For FY74 - Exhibit 32 (continued)

Element	Subelement	Title	10%			20%			30%			40%		
			Amount Requested	Date Funded	Amount Funded	Amount Requested	Date Funded	Amount Funded	Amount Requested	Date Funded	Amount Funded	Amount Requested	Date Funded	Amount Funded
	309	Identification & Surveillance of Accident Locations	13.8			27.6			41.4			55.2		
	313	Traffic Control Devices	13.8			27.6			41.4			55.2		
	314	Pedestrian Safety	13.8			27.6			41.4			55.2		
		Total	69.0			138.0			207.0			276.0		
		TOTAL	460.0			920.0			1380.0			1840.0		

- III-7 -

1  
2  
3

STATE PRIORITIES  
For FY74 — Exhibit 32 (continued)

Element	Subelement	50%			60%			70%			80%			90%			100%		
		Amount Requested	Date Funded	Amount Funded	Amount Requested	Date Funded	Amount Funded	Amount Requested	Date Funded	Amount Funded	Amount Requested	Date Funded	Amount Funded	Amount Requested	Date Funded	Amount Funded	Amount Requested	Date Funded	Amount Funded
	309	69.0			82.8			96.6			110.4			124.2			138.0		
	313	69.0			82.8			96.6			110.4			124.2			138.0		
	314	69.0			82.8			96.6			110.4			124.2			138.0		
		345.0			414.0			483.0			552.0			621.0			690.0		
	TOTAL	2300.0			2760.0			3220.0			3680.0			4140.0			4600.0		

## STATE PRIORITIES

For FY75 -- Exhibit 33

Element	Subelement	Title	10%			20%			30%			40%		
			Amount Requested	Date Funded	Amount Funded	Amount Requested	Date Funded	Amount Funded	Amount Requested	Date Funded	Amount Funded	Amount Requested	Date Funded	Amount Funded
N-1		Program Administration and Evaluation												
	300	Planning & Administration	84.575			169.15			253.725			338.30		
	310	Traffic Records	49.750			99.50			149.250			199.00		
		Total	134.325			268.65			402.975			537.30		
N-2		Traffic Laws & Regulations												
	306	Codes and Laws	19.900			39.80			59.700			79.60		
	308	Alcohol and Drugs	44.775			89.55			134.325			179.10		
		Total	64.675			129.35			194.025			258.70		
N-3		Vehicle Requirements												
	301	Periodic Motor Vehicle Inspection	4.975			9.95			14.925			19.9		
	302	Motor Vehicle Registration	4.975			9.95			14.925			19.9		
		Total	9.950			19.90			29.850			39.8		
N-4		Traffic Safety Education												
	303	Motorcycle Safety	14.925			29.85			44.775			59.7		
	304	Driver Education	34.825			69.65			104.475			139.3		
	314	Pedestrian Safety	19.900			39.80			59.700			79.6		
	317	Pupil Transportation Safety	34.825			69.65			104.475			139.3		

STATE PRIORITIES  
For FY75 — Exhibit 33 (continued)

Element	Subelement	50%			60%			70%			80%			90%			100%		
		Amount Requested	Date Funded	Amount Funded	Amount Requested	Date Funded	Amount Funded	Amount Requested	Date Funded	Amount Funded	Amount Requested	Date Funded	Amount Funded	Amount Requested	Date Funded	Amount Funded	Amount Requested	Date Funded	Amount Funded
N-1																			
	300	422.875			507.45			592.025				676.6				761.175			845.750
	310	248.750			298.50			348.250				398.0				447.750			497.500
		661.625			805.95			940.275				1074.6				1208.925			1343.250
N-2																			
	306	99.500			119.40			139.300				159.2				179.100			199.0
	308	223.875			268.65			313.425				358.2				402.975			447.750
		323.375			388.05			452.726				517.4				582.075			646.750
N-3																			
	301	24.875			29.85			34.825				39.8				44.775			49.750
	302	24.875			29.85			34.825				39.8				44.775			49.750
		49.750			59.70			69.750				79.6				89.550			99.500
N-4																			
	303	74.625			89.55			104.750				119.4				134.325			149.250
	304	174.125			208.95			243.775				278.6				313.425			348.250
	314	99.500			119.40			139.300				159.2				179.100			199.0
	317	174.125			208.95			243.775				278.6				313.425			348.250



STATE PRIORITIES  
For FY75 -- Exhibit 33 (continued)

Element	Subelement	Title	10%			20%			30%			40%		
			Amount Requested	Date Funded	Amount Funded	Amount Requested	Date Funded	Amount Funded	Amount Requested	Date Funded	Amount Funded	Amount Requested	Date Funded	Amount Funded
		Total	104.475			208.95			313.425			417.9		
N-5		Driver Licensing												
	305	Driver Testing & Licensing	4.97			9.95			14.925			19.9		
		Total	4.97			9.95			14.925			19.9		
N-6		Police Traffic Services												
	315	Police Traffic Services	24.875			49.75			74.625			99.5		
	316	Accident Cleanup	4.975			9.95			14.925			19.9		
	318	Accident Investigation and Reporting	24.875			49.75			74.625			99.5		
		Total	54.725			109.45			164.175			218.90		
N-7		Traffic Courts & Adjudication												
	307	Traffic Courts	14.925			29.85			44.775			59.7		
		Total	14.925			29.85			44.775			59.7		
N-8		Emergency Medical Services												
	311	Emergency Medical Services	34.825			69.65			104.475			139.3		
		Total	34.825			69.65			104.475			139.3		
3+		High and Traffic Safety Engineering												
	312	Highway Design, Construction & Maintenance	29.850			59.70			89.550			119.4		

STATE PRIORITIES

For FY75 -- Exhibit 33 (continued)

Element	Subelement	50%			60%			70%			80%			90%			100%		
		Amount Requested	Date Funded	Amount Funded	Amount Requested	Date Funded	Amount Funded	Amount Requested	Date Funded	Amount Funded	Amount Requested	Date Funded	Amount Funded	Amount Requested	Date Funded	Amount Funded	Amount Requested	Date Funded	Amount Funded
		522.375			626.85			731.595			835.8			940.275			1044.750		
N-5																			
	305	24.875			29.85			34.825			39.8			44.775			49.750		
		24.875			29.85			34.825			39.8			44.775			49.750		
N-6																			
	315	124.375			149.25			174.125			199.0			223.875			248.750		
	316	24.875			29.85			34.825			39.8			44.775			49.750		
	318	124.375			149.25			174.125			199.0			223.875			248.750		
		273.625			328.35			383.075			437.8			492.525			547.250		
N-7																			
	307	74.625			89.55			104.475			119.4			134.325			149.250		
		74.625			89.55			104.475			119.4			134.325			149.250		
N-8																			
	311	174.125			208.95			243.775			278.6			313.425			348.250		
		174.125			208.95			243.775			278.6			313.425			348.250		
3+																			
	312	149.250			179.1			208.950			238.8			268.650			298.500		

STATE PRIORITIES

For FY75 -- Exhibit 33 (continued)

Element	Subelement	Title	10%			20%			30%			40%		
			Amount Requested	Date Funded	Amount Funded	Amount Requested	Date Funded	Amount Funded	Amount Requested	Date Funded	Amount Funded	Amount Requested	Date Funded	Amount Funded
	309	Identification & Surveillance of Accident Locations	14.925			29.85			44.750			59.7		
	313	Traffic Control Devices	14.925			29.85			44.750			59.7		
	314	Pedestrian Safety	14.925			29.85			44.750			59.7		
		Total	74.625			149.25			223.875			298.5		
		TOTAL	497.5			995.0			1492.5			1990.0		

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STATE PRIORITIES  
For FY75 - Exhibit 33 (continued)

Element	Subelement	50%			60%			70%			80%			90%			100%		
		Amount Requested	Date Funded	Amount Funded	Amount Requested	Date Funded	Amount Funded	Amount Requested	Date Funded	Amount Funded	Amount Requested	Date Funded	Amount Funded	Amount Requested	Date Funded	Amount Funded	Amount Requested	Date Funded	Amount Funded
	309	74.625			89.55			104.475			119.4			134.325			149.250		
	313	74.625			89.55			104.475			119.4			134.325			149.250		
	314	74.625			89.55			104.475			119.4			134.325			149.250		
		373.125			447.75			522.375			597.0			671.625			746.250		
	TOTAL	2487.5			2985.0			3482.5			3980.0			4477.5			4975.0		

STATE PRIORITIES  
For FY 76 -- Exhibit 34

Element	Subelement	Title	10%			20%			30%			40%		
			Amount Requested	Date Funded	Amount Funded	Amount Requested	Date Funded	Amount Funded	Amount Requested	Date Funded	Amount Funded	Amount Requested	Date Funded	Amount Funded
N-1		Program Administration and Evaluation												
	300	Planning and Administration	96.84			193.68			290.52			387.36		
	310	Traffic Records	48.42			96.84			145.26			193.68		
		Total	145.26			290.52			535.78			581.04		
N-2		Traffic Laws & Regulations												
	306	Codes and Laws	21.52			43.04			64.56			86.08		
	308	Alcohol and Drugs	48.42			96.84			145.26			193.68		
		Total	69.94			139.88			209.82			279.76		
N-3		Vehicle Requirements												
	301	Periodic Motor Vehicle Inspection	5.38			10.76			16.14			21.52		
	302	Motor Vehicle Registration	5.38			10.76			16.14			21.52		
		Total	10.76			21.52			32.28			43.04		
N-4		Traffic Safety Education												
	303	Motorcycle Safety	16.14			32.28			48.42			64.56		
	304	Driver Education	37.66			75.32			112.98			150.64		
	314	Pedestrian Safety	21.52			43.04			64.56			86.08		
	317	Pupil Transportation Safety	37.66			75.32			112.98			150.64		

STATE PRIORITIES

For FY76 — Exhibit 34 (continued)

Element	Subelement	50%			60%			70%			80%			90%			100%		
		Amount Requested	Date Funded	Amount Funded	Amount Requested	Date Funded	Amount Funded	Amount Requested	Date Funded	Amount Funded	Amount Requested	Date Funded	Amount Funded	Amount Requested	Date Funded	Amount Funded	Amount Requested	Date Funded	Amount Funded
N-1																			
	300	484.2			581.04			677.88			774.72			871.56			968.4		
	310	242.1			290.52			338.94			387.36			435.78			484.2		
					871.56			1016.82			1162.08			1307.34			1452.6		
N-2																			
	306	107.6			129.12			150.64			172.16			193.68			215.2		
	308	242.1			290.52			338.94			387.36			435.78			484.2		
					419.64			489.58			559.52			629.46			699.4		
N-3																			
	301	26.9			32.28			37.66			43.04			48.42			53.8		
	302	26.9			32.28			37.66			43.04			48.42			53.8		
					64.56			75.32			86.08			96.84			107.6		
N-4																			
	303	80.7			96.84			112.98			129.12			145.26			161.4		
	304	188.3			225.96			263.62			301.28			338.94			376.6		
	314	107.6			129.12			150.64			172.16			193.68			215.2		
	317	188.3			225.96			263.62			301.28			338.94			376.6		

STATE PRIORITIES  
For FY76 — Exhibit 34 (continued)

Element	Subelement	Title	10%			20%			30%			40%		
			Amount Requested	Date Funded	Amount Funded	Amount Requested	Date Funded	Amount Funded	Amount Requested	Date Funded	Amount Funded	Amount Requested	Date Funded	Amount Funded
		Total	112.98			225.96			338.94			451.92		
N-5		Driver Licensing												
	305	Driver Testing & Licensing	5.38			10.76			16.14			21.52		
		Total	5.38			10.76			16.14			21.52		
N-6		Police Traffic Services												
	315	Police Traffic Services	26.90			53.8			80.7			107.6		
	316	Accident Cleanup	5.38			10.76			16.14			21.52		
	318	Accident Investigation and Reporting	26.90			53.8			80.7			107.6		
		Total	59.18			118.36			177.54			236.72		
N-7		Traffic Courts and Adjudication												
	307	Traffic Courts	16.14			32.28			48.42			64.56		
		Total	16.14			32.28			48.42			64.56		
N-8		Emergency Medical Services												
	311	Emergency Medical Services	37.66			75.32			112.98			150.64		
		Total	37.66			75.32			112.98			150.64		
3 +		Highway and Traffic Safety Engineering												
	312	Highway Design, Construction and Maintenance	32.28			64.56			96.84			129.12		

STATE PRIORITIES  
For FY76 -- Exhibit 34 (continued)

Element	Subelement	50%			60%			70%			80%			90%			100%		
		Amount Requested	Date Funded	Amount Funded	Amount Requested	Date Funded	Amount Funded	Amount Requested	Date Funded	Amount Funded	Amount Requested	Date Funded	Amount Funded	Amount Requested	Date Funded	Amount Funded	Amount Requested	Date Funded	Amount Funded
		564.9			677.8			790.86			903.84			1016.82			1129.8		
N-5																			
	305	26.9			32.28			37.66			43.04			48.42			53.8		
		26.9			32.28			37.66			43.04			48.42			53.8		
N-6																			
	315	134.5			161.40			188.3			215.2			242.1			269.0		
	316	26.9			32.28			37.66			43.04			48.42			53.8		
	318	134.5			161.40			188.3			215.2			242.1			269.0		
		295.9			355.08			414.26			473.44			537.62			591.8		
N-7																			
	307	80.7			96.84			112.98			129.12			145.26			161.4		
		80.7			96.84			112.98			129.12			145.26			161.4		
N-8																			
	311	188.3			225.96			263.62			301.28			338.94			376.6		
		188.3			225.96			263.62			301.28			338.94			376.6		
3+																			
	312	161.4			193.68			225.96			258.24			290.52			322.8		



STATE PRIORITIES  
For FY76 — Exhibit 34 (continued)

Element	Subelement	Title	10%			20%			30%			40%		
			Amount Requested	Date Funded	Amount Funded	Amount Requested	Date Funded	Amount Funded	Amount Requested	Date Funded	Amount Funded	Amount Requested	Date Funded	Amount Funded
	309	Identification & Surveillance of Accident Locations	16.14			32.38			48.42			64.56		
	313	Traffic Control Devices	16.14			32.38			48.42			64.56		
	314	Pedestrian Safety	16.14			32.38			48.42			64.56		
		Total	80.7			161.70			242.1			322.80		
TOTAL			538.0			1076.0			1614.0			2152.0		

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1500

STATE PRIORITIES  
For FY76 -- Exhibit 34 (continued)

Element	Subelement	50%			60%			70%			80%			90%			100%		
		Amount Requested	Date Funded	Amount Funded	Amount Requested	Date Funded	Amount Funded	Amount Requested	Date Funded	Amount Funded	Amount Requested	Date Funded	Amount Funded	Amount Requested	Date Funded	Amount Funded	Amount Requested	Date Funded	Amount Funded
	309	80.7			96.84			112.98			129.12			145.26			161.4		
	313	80.7			96.84			112.98			129.12			145.26			161.4		
	314	80.7			96.84			112.98			129.12			145.26			161.4		
		403.5			484.20			564.9			645.60			726.30			807.0		
	TOTAL	2690.0			3228.0			3766.0			4304.0			4842.0			5380.0		

STATE PRIORITIES  
For FY77 - Exhibit 35

Element	Subelement	Title	10%			20%			30%			40%		
			Amount Requested	Date Funded	Amount Funded	Amount Requested	Date Funded	Amount Funded	Amount Requested	Date Funded	Amount Funded	Amount Requested	Date Funded	Amount Funded
N-1		Program Administration and Evaluation												
	300	Planning and Administration	109.345			218.69			328.035			437.38		
	310	Traffic Records	46.04			92.08			138.12			184.16		
		Total	155.385			310.77			466.155			621.54		
N-2		Traffic Laws & Regulations												
	306	Codes & Laws	23.02			46.04			69.06			92.08		
	308	Alcohol & Drugs	51.795			103.59			155.385			207.18		
		Total	74.815			149.63			224.445			299.26		
N-3		Vehicle Requirements												
	301	Periodic Motor Vehicle Inspection	5.755			11.51			17.265			23.02		
	302	Motor Vehicle Registration	5.755			11.51			17.265			23.02		
		Total	11.51			23.02			34.53			46.04		
N-4		Traffic Safety Education												
	303	Motorcycle Safety	17.265			34.53			51.795			69.06		
	304	Driver Education	40.285			80.57			120.855			161.14		
	314	Pedestrian Safety	23.02			46.04			69.06			92.08		
	317	Pupil Transportation Safety	40.285			80.57			120.855			161.14		

STATE PRIORITIES  
For FY77 — Exhibit 35 (continued)

Element	Subelement	50%			60%			70%			80%			90%			100%		
		Amount Requested	Date Funded	Amount Funded	Amount Requested	Date Funded	Amount Funded	Amount Requested	Date Funded	Amount Funded	Amount Requested	Date Funded	Amount Funded	Amount Requested	Date Funded	Amount Funded	Amount Requested	Date Funded	Amount Funded
N-1																			
	300	546.725			656.07			765.415			874.76			984.105			1093.450		
	310	230.2			276.24			322.28			368.32			444.36			460.400		
		776.925			932.31			1087.695			1243.08			1428.465			1553.850		
N-2																			
	306	115.1			138.12			161.14			184.16			207.18			230.200		
	308	258.975			310.77			362.565			414.36			466.155			517.950		
		374.075			448.89			523.705			598.52			673.335			748.150		
N-3																			
	301	28.775			34.53			40.285			46.04			51.795			57.550		
	302	28.775			34.53			40.285			46.04			51.795			57.550		
		57.510			69.06			80.570			92.08			103.590			115.100		
N-4																			
	303	86.325			103.59			120.855			138.12			155.385			172.650		
	304	201.425			241.71			281.995			322.28			362.565			402.850		
	314	115.1			138.12			161.14			184.16			207.18			230.200		
	317	201.425			241.71			281.995			322.28			362.565			402.850		

STATE PRIORITIES

For FY77 — Exhibit 35 (continued)

Element	Subelement	Title	10%			20%			30%			40%		
			Amount Requested	Date Funded	Amount Funded	Amount Requested	Date Funded	Amount Funded	Amount Requested	Date Funded	Amount Funded	Amount Requested	Date Funded	Amount Funded
		Total	120.855			241.710			362.565			483.42		
N-5		Driver Licensing												
	305	Driver Testing & Licensing	5.755			11.51			17.265			23.02		
		Total	5,755			11.51			17.265			23.02		
N-6		Police Traffic Services												
	315	Police Traffic Services	28.775			57.55			86.325			115.1		
	316	Accident Cleanup	5.755			11.51			17.265			23.02		
	318	Accident Investigation and Reporting	28.775			57.55			86.325			115.1		
		Total	63.305			126.61			189.915			253.22		
N-7		Traffic Courts and Adjudication												
	307	Traffic Courts	17.265			34.53			51.795			69.06		
		Total	17.265			34.53			51.795			69.06		
N-8		Emergency Medical Services												
	311	Emergency Medical Services	40.285			80.57			120.855			161.14		
		Total	40.285			80.57			120.555			161.14		
3+		Highway and Traffic Safety Engineering												
	312	Highway Design, Construction and Maintenance	34.53			69.06			103.59			138.72		

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STATE PRIORITIES  
For FY77 — Exhibit 35 (continued)

Element	Subelement	50%			60%			70%			80%			90%			100%		
		Amount Requested	Date Funded	Amount Funded	Amount Requested	Date Funded	Amount Funded	Amount Requested	Date Funded	Amount Funded	Amount Requested	Date Funded	Amount Funded	Amount Requested	Date Funded	Amount Funded	Amount Requested	Date Funded	Amount Funded
		604.257			725.13			845.985			966.84			1087.695			1208.550		
N-5																			
	305	28.775			34.53			40.285			46.04			51.795			57.550		
		28.775			34.53			40.285			46.04			51.795			57.550		
N-6																			
	315	143.875			172.65			201.425			230.2			258.975			287.750		
	316	28.775			34.53			40.285			46.04			51.795			57.550		
	318	143.875			172.65			201.425			230.2			258.975			287.750		
		316.525			379.83			443.135			506.44			569.745			633.050		
N-7																			
	307	86.325			103.59			120.855			138.12			155.385			172.650		
		86.325			103.59			120.855			138.12			155.385			172.650		
N-8																			
	311	201.425			241.71			281.995			322.28			362.565			402.850		
		201.425			241.71			281.995			322.28			362.565			402.850		
3+																			
	312	172.65			207.18			241.71			276.24			310.77			345.300		



1000

STATE PRIORITIES  
For FY77 — Exhibit 35 (continued)

Element	Subelement	50%			60%			70%			80%			90%			100%		
		Amount Requested	Date Funded	Amount Funded	Amount Requested	Date Funded	Amount Funded	Amount Requested	Date Funded	Amount Funded	Amount Requested	Date Funded	Amount Funded	Amount Requested	Date Funded	Amount Funded	Amount Requested	Date Funded	Amount Funded
	309	86.325			103.59			120.855			138.12			155.385			172.650		
	313	86.325			103.59			120.855			138.12			155.385			172.650		
	314	86.325			103.59			120.855			138.12			155.385			172.650		
		431.625			544.95			604.275			690.60			776.925			863.250		
	TOTAL	2877.5			3453.0			4028.5			4604.0			5179.5			5755.0		

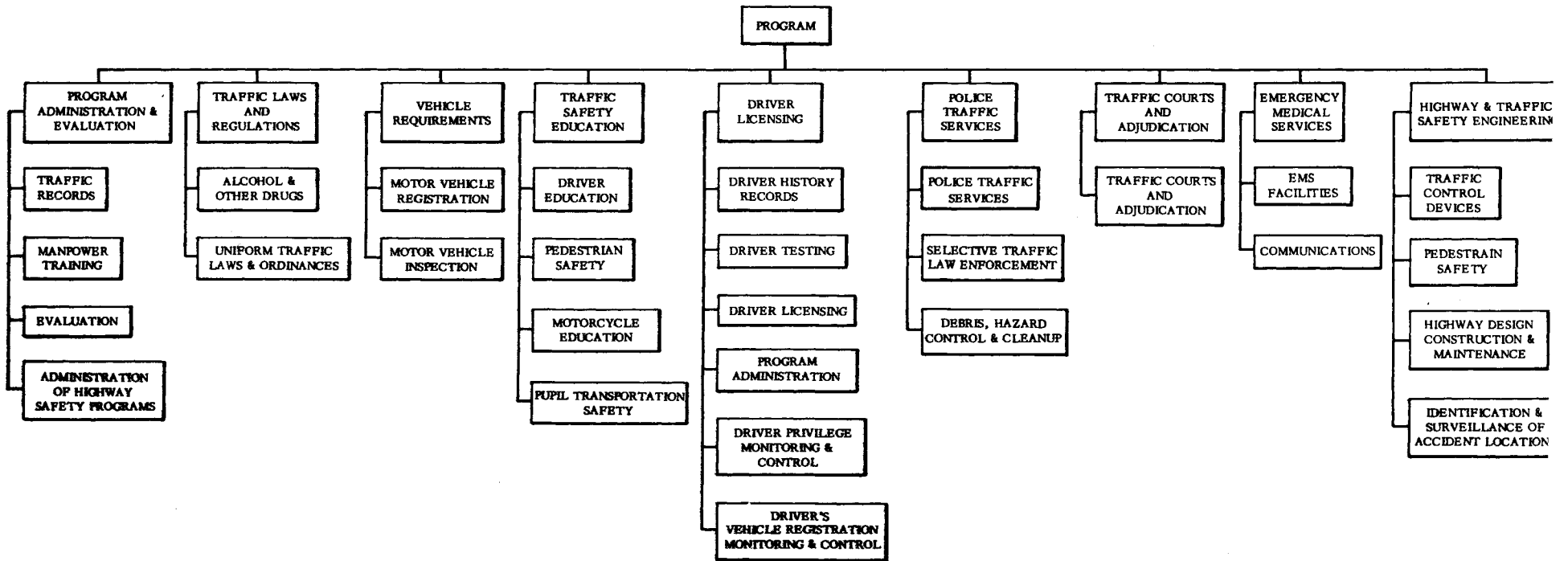


PART IV  
PROGRAM ELEMENTS

EXHIBIT 36

STATE COMPREHENSIVE HIGHWAY SAFETY PLAN

PROGRAM STRUCTURE



U.S. DEPARTMENT OF TRANSPORTATION NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION FEDERAL HIGHWAY ADMINISTRATION							STATE VIRGINIA				FORM APPROVED OMB No. _____														
COMPREHENSIVE HIGHWAY SAFETY PLAN - PROGRAM ELEMENT PLAN (PEP)							1. PROGRAM ELEMENT TITLE PROGRAM ADMINISTRATION AND EVALUATION																		
2. PROGRAM ELEMENT WILL IMPLEMENT STANDARDS CHECKED							0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
							X								.		X								
3. SUBELEMENTS							4. ESTIMATED COSTS (In Thousands)																		
							FY 1974			FY 1975			FY 1976			FY 1977									
							TOTAL	S/L	FED.	TOTAL	S/L	FED.	TOTAL	S/L	FED.	TOTAL	S/L	FED.							
Administration of Highway Safety Programs							747.5	431.5	316.	1035.8	620.4	415.4	1099.	653.	446.	1171.5	693.5	478.							
Evaluation							130.	110.	20.	175.	125.	50.	220.	140.	80.	265.	170.	95.							
Manpower Training							35.	0	35.	44.	0	44.	51.	0	51.	62.	0	62.							
Traffic Records							170.	85.	85.	170.	85.	85.	180.	90.	90.	185.	92.5	92.5							
Traffic Records - DMV							3837.	3740.	97.	4012.	4012.	0	4213.	4213.	0	4423.	4423.	0							
Traffic Records - State Police							57.	49.	8.	56.	47.	9.	45.	40.	5.	43.	37.	6.							
Traffic Records - VDH							1300.	200.	1100.	1400.	250.	1150.	1550.	300.	1250.	1600.	400.	1200.							
5. TOTAL							6276.5	4615.5	1661.	6892.8	5139.4	1753.4	7358.	5436.	1922.	7749.5	5816.	1933.5							
6. PREPARED BY							7. APPROVED BY																		
NAME AND TITLE A. D. Harvey, Evaluator				AGENCY D. M. V.			NAME AND TITLE				AGENCY				DATE 10-15-72										

R-340 Capt. H. V. Boone, Investigations and Records Officer - State Police  
C. H. Simpson, Jr. Highway Research Analyst - Highway Research Council

## PROGRAM ADMINISTRATION AND EVALUATION

### I. Administration of Highway Safety Program

The long-term goal of the Highway Safety Program in Virginia is to reduce the number of traffic crashes, including fatalities, personal injuries, and property damage attributable to poor highway safety practices throughout the state. This includes the failure to comply with any part of the Federal Highway Safety Standards as promulgated by the National Highway Traffic Safety Administration.

In order to accomplish this objective the state of Virginia, through its Governor, has established a Highway Safety Division charged with the responsibility for carrying out the state highway safety program and encouraging, stimulating, and developing highway safety programs and activities throughout the state.

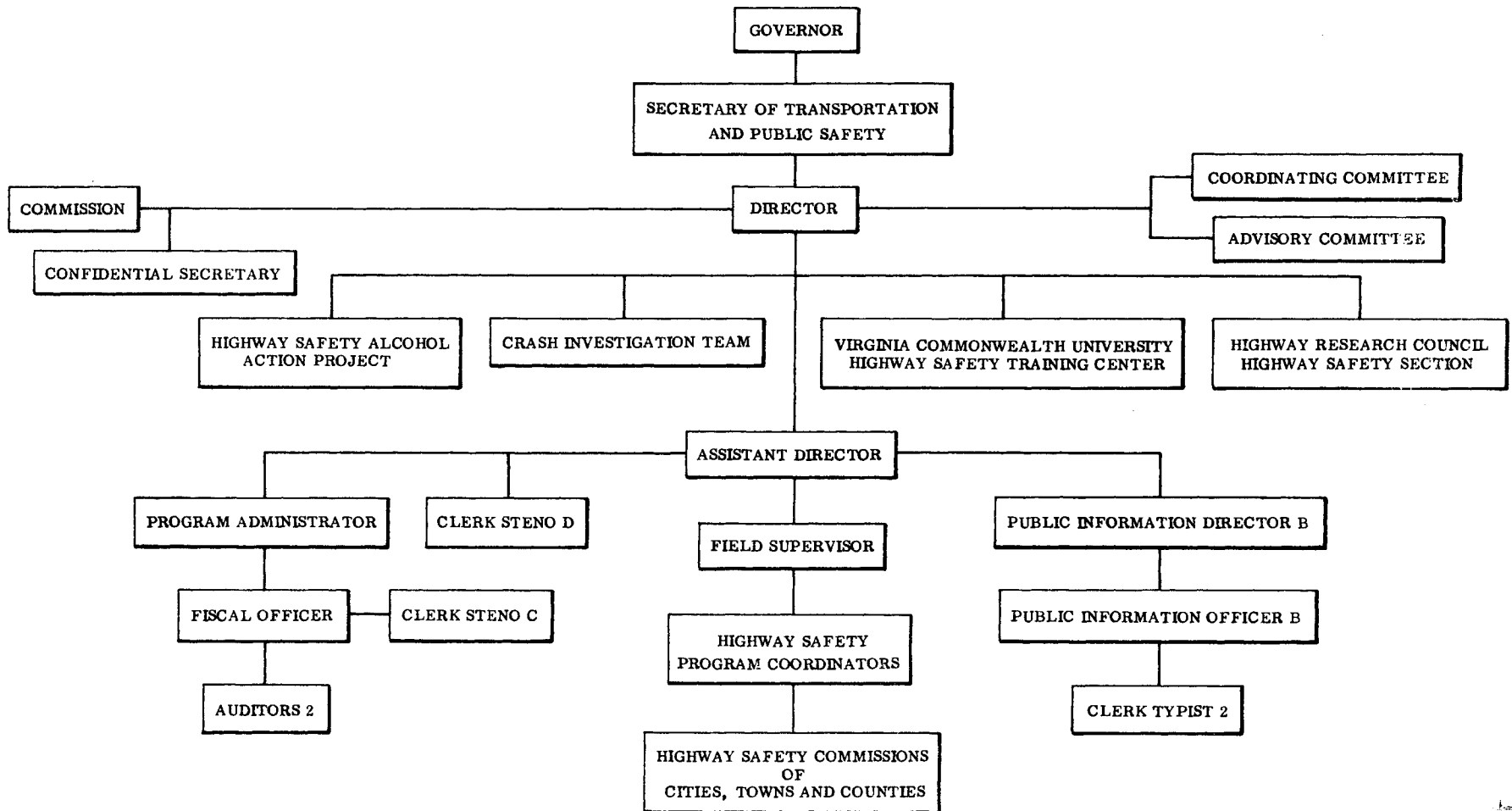
The Highway Safety Division of Virginia began operations August 1, 1968, with the Director assuming his responsibilities on that date and the Assistant Director joining the organization November 1, 1968. Since the inception of the organization, active local highway safety commissions have been established in every locality, and safety projects have taken place, or are current, in almost every locality in the state with Federal participation of over \$4 million during the years 1969-72. An organization chart for the Division is shown in Exhibit 37.

In carrying out its responsibility for highway safety, the Highway Safety Division has hired six full-time area coordinators, whose job is to help the local highway safety commissions in the development of local highway safety programs as well as carrying out the safety programs of the division. A full-time public information officer was hired to disseminate public information, utilizing media pertinent to highway safety standards.

EXHIBIT 37

HIGHWAY SAFETY DIVISION OF VIRGINIA

ORGANIZATION CHART



- IV-5 -

A program of particular concern to the Highway Safety Division deals with the establishment of a Virginia Alcohol Safety Program. One of the more significant programs initiated in the state during fiscal year 1973 was the Fairfax Alcohol Safety Action Project (ASAP). This cooperative effort between the Commonwealth of Virginia and the Department of Transportation is designed to identify the problem drinker and get him off the road. The 3½ year demonstration project attempts to accomplish this objective by focusing maximum resources in a limited geographic area. ASAP activities are divided into four specific countermeasure areas: (1) Assisting the police in apprehending problem drinking drivers; (2) offering new legal services for pre-trial investigation; (3) developing a new comprehensive system for treatment and rehabilitation; and (4) undertaking a program to change public attitudes toward the drinking driver.

Although it is too early to make a complete evaluation of the effectiveness of the ASAP in combating the drunken driver, several promising indications point to a positive effect on the Fairfax community. The arrest rate for DWI has increased 1800% over the previous year; there have been fewer fatal accidents; the percentage of alcohol-related fatalities v. nonalcohol-related fatalities has decreased; 90% of all drivers arrested for DWI have chosen to enter a rehabilitation program in lieu of regular DWI penalties; ASAP has had a catalytic effect on regular police patrols, resulting in a 10-fold increase in the DWI apprehension rate; media coverage and household and roadside survey results indicate an increase in community awareness of the drinking driver problem; and the judiciary has consistently utilized the discretion provided by ASAP in sentencing the offender.

The Highway Safety Division feels that the positive effect the ASAP has had on Fairfax County's DWI problem can be extended throughout the state by implementation of a statewide Virginia Alcohol Safety Program (VASP). The program would be centrally administered to allow avoidance of duplication of administrative personnel and maximum utilization of the lessons learned from the Fairfax ASAP. Any jurisdiction in Virginia which feels it has a significant DWI problem could apply to the HSD for development of an ASAP-type program for its area. After examining an area's demographic characteristics and particular enforcement problems, the Highway

Safety Division could tailor a program specifically to that jurisdiction's needs. The Fairfax Project has provided invaluable experience in determining those countermeasures most likely to be of help in combating the drunken driver. The ability to structure a program to a locality's needs based on intensive examination of the parameters of its DWI problem should decrease costs while increasing efficiency. Funding for the first phase, which would include proposal writing and solicitation of applications from local communities, would involve a relatively small capital outlay. The beginning of the operational phase, which would involve approximately three local alcohol safety programs, would require a somewhat higher level of funding.

Other programs the HSD will sponsor include the following:

- ( 1) The purchase of breath alcohol measuring devices and training for operators.
- ( 2) Multidisciplinary crash investigation teams. (See additional narrative in Identification and Surveillance of Accident Locations.)
- ( 3) Driver education.
- ( 4) Pedestrian safety.
- ( 5) Crash facts for each city and county in the state.
- ( 6) Adult driver education.
- ( 7) Educational TV.
- ( 8) Traffic records seminars.
- ( 9) Traffic engineering seminars.
- (10) Seminars for traffic court judges.
- (11) Implementation studies of 18 standards in state localities.

## II. Evaluation

Section 2.1-64.22 of the Code of Virginia authorizes the Director of the Highway Safety Division, subject to the approval of the Governor, to contract for the use of the facilities of any appropriate state agency for purposes of research, evaluation, and traffic accident prevention. If in the judgement of the Governor an additional facility is required, a center may be established in an existing state agency.

On July 1, 1969, the Highway Research Council at Charlottesville created the Safety Section, a new research group within the Council structure, to conduct research and evaluate projects for the Highway Safety Division. This relationship was secured by memoranda of agreement between the Director of the Highway Safety Division and the State Highway Research Engineer.

The Highway Research Council, founded in 1948, is sponsored cooperatively by the Virginia Department of Highways and the University of Virginia and is located in Thornton Hall, home of the University's School of Engineering and Applied Science. The Research Council has two objectives: (1) to serve as a center for securing and disseminating information leading to a more scientific and improved approach to highway transportation, engineering and research, and (2) to educate and train men in the fundamentals of highway engineering and other areas encompassed by highway transportation.

The Safety Section works to satisfy the research and evaluation requirements of the Director of the Highway Safety Division. The Section has six full-time professional staff members, a secretary, and five part-time graduate research assistants. These staff members are organized into five functional elements of research: (1) Highway safety programs, (2) behavioral research in highway safety, (3) legal research, (4) alcohol countermeasures, and (5) information technology.

Research in highway safety programs relates, for the most part, to the administration of the state highway safety program, including preparation of the required Comprehensive Highway Safety Plan and Annual Highway Safety Work Program. Work in this area also involves evaluation of state efforts to implement the Highway Safety Program Standards.

Behavioral research in highway safety encompasses the human element in the man, machine, and environment interaction that is driving.

Legal research relates to the almost continual assessment of the state's statutes on highway safety and a comparison of these statutes with the NHTSA Standards and the Uniform Vehicle Code. Proposed new statutes for highway safety are thoroughly researched before they are recommended to the Director of the Highway Safety Division for endorsement.

Research on alcohol countermeasures involves evaluation of the Fairfax Alcohol Safety Action Project. The full project is being researched for overall project impact and the success of each individual countermeasure.



Information technology is an important part of the development of expertise in highway safety programming and planning. Data are necessary to enable administrators and planners to develop programs which will impact problem areas. Research in information technology is designed to better identify problem areas with accurate data.

III. Manpower Training

The state highway safety program is approaching compliance with the requirement to establish a comprehensive manpower development system within the state. Plans are being initiated to establish an undergraduate program in highway safety at Virginia Commonwealth University. There is, at present, a program option in traffic and highway safety available in the Administration of Justice and Public Safety Department.

Division officials have acted as guest lecturers for both the Highway Safety Curriculum and the Alcoholic Rehabilitation Program.

There has also been established at VCU a Highway Safety Training Center. This training center exists to serve the specific training needs of the Highway Safety Division not satisfied by the regular degree programs. As of this writing training sessions have been held for police officers to train them in the principles and fundamentals of breath testing to determine blood alcohol levels. Additional training programs are being considered for the near future.

IV. Traffic Records — Statewide

The goal of Virginia's traffic records program is to diminish the number of traffic crashes including fatalities, injuries, and property damage due to the lack of sufficient traffic records for police enforcement and for the evaluation of existing and newly developed highway safety programs. Accident statistics generated by a traffic records system are the only data for evaluating the effectiveness or success of highway safety programs. The National Highway Traffic Safety Administration has denoted to the Commonwealth of Virginia that the state's performance in the area of "traffic records" is more insufficient than any other area enumerated in the state's comprehensive highway

safety program. The Governor's Management Study also mirrored this inefficiency. The current responsibility for the maintenance of traffic records is shared by three agencies: (1) DMV, (2) State Police, and (3) Highway Department. There is no centralized effort at managing the automated processing of traffic records in Virginia.

In order to accomplish the implementation and continuation of a trenchant traffic records system, the Highway Safety Division established a Traffic Records Committee to scrutinize the current traffic records system and make recommendations for its improvement. The committee, in turn, appointed an interagency Feasibility Study Team to evaluate the current system, make recommendations for improvement, and propose a new system to satisfy three tests of feasibility: technical, operational, and economic.

The Feasibility Study Team defined the deficiencies in the present traffic records system of the Commonwealth as: (1) Nonuniform accident reporting; (2) untimely processing and dissemination of accident data; and (3) imprecise and inchoate recording of accident data. To improve the system the study team made the following recommendations: (1) A central authority must be established that will be responsible for the control, integrity and operation of the total system. This authority must have the responsibility for cost effectiveness in the areas of computer equipment, software and programming systems, priorities and the expertise in the planning, implementation and continuity of the system. (2) A uniform accident reporting system must be drafted and adopted in the Commonwealth of Virginia. (3) A training program must be instituted to educate law enforcement agencies throughout the Commonwealth in the administration and use of the uniform reporting system. (4) The amount of time allowed for an officer to submit a preliminary accident report to the entering agency must be reduced to 72 hours from the time of the accident. (5) All accidents must be investigated and reported by a law enforcement officer. (6) A uniform traffic records locator system must be established for the Commonwealth.

The Traffic Records Committee will continue to study the recommendations for the further development of the system. It will also consider the purchase, acquisition, or leasing of the necessary equipment. Upon completion of the study, implementation of the recommendations made by the team should result.

Traffic Records -- DMV -- Traffic Records Automated Data Processing Program

This program is responsible for the physical maintenance, and the input and output of information for driver history records and motor vehicle records files, which are separate and distinct. Primary objectives are to minimize data input time and to furnish requested information through appropriate output media with a minimum of response time. It is anticipated that the Motorist Data Base Project (see below) will be completed and the above files merged in July 1975.

Motorist Data Base Project

The Division of Motor Vehicles is working with the Virginia Traffic Records Committee on the development of a motorist data base. This project will produce an integrated, common data base which provides for all information filing, storage, and retrieval needs of the Division of Motor Vehicles, and federal, state, and local government agencies for driver and vehicle licensing and identification. This is the initial step in the creation of a total traffic records data base for the Commonwealth of Virginia which is to include the four functional areas of driver, vehicle, accident, and highway data necessary to meet the needs of federal, state, and local governments. It is anticipated that this project will be merged into the traffic records automated data processing program in July 1975.

Automated Traffic Records Statistics Project

This project is designed to expand the comprehensive data that the Division of Motor Vehicles is required to maintain and to research statistical requirements of federal, state, and local agencies. This statistical data base is being developed along with the motor data base and will provide at a minimum: (1) Current statistics based on fiscal or calendar years to time of inquiry utilizing video display and/or printed output; (2) automated reports for predetermined time periods; and (3) special reports as needed by federal, state, and local government agencies. The Division of Motor Vehicles will continue to work with the Traffic Records Committee in the development of new records systems necessary to the effective evaluation of highway safety programs.

Traffic Records — State Police

The Department of State Police is committed to the continuing enhancement of present traffic records processing. The major task now performed is the publication of Crash Facts. This annual survey is an in-depth, detailed study of Virginia's traffic crashes. Persons, vehicles, road and weather conditions, general locations, and time of crashes are all part of the statistical picture presented by Crash Facts. It has been and will continue to be a valuable resource in Virginia's traffic records development. Supplementing the Crash Facts program are a number of traffic records projects planned for the next four years.

Conversion from Magnetic Tape Files to Disc Packs

The first step will be the conversion of accident data from serial-type files to random-access files on mass storage devices. Disc files offer the considerable benefit of flexibility in data management and utilization. Subsequent traffic records processing will be greatly aided by this conversion. This project will also broaden the base of traffic data by capturing data that are not now retained. Certain data elements, such as violations information, are not now present on the magnetic tape files. These elements will become part of the more comprehensive disc files. The general aim for this phase of development is to construct an accident file which conforms essentially to the National Highway Traffic Safety Administration recommendations. The necessary foundation will then be laid for a long-range program for improving Virginia's traffic records processing.

Jurisdictional Report Program

A project of very high priority is the proposed jurisdictional report program. These reports will consist of locality-specific information similar to that in Crash Facts. The level of detail, of course, may vary between Crash Facts and the jurisdictional reports, but essential data will be provided on traffic accidents within a closely defined geographical area. Present plans call for the report to be available on a quarterly basis, with the option of a monthly report if the users' response warrants it. It is felt that supplying city and county officials with vital information relating to their jurisdiction will be a valuable step in highway safety planning.

### Improvement of Data Entry

Another project that is planned is an evaluation of present traffic records data entry methods. This project has not been reflected in enclosed cost estimates, but it is felt that present data handling techniques can be improved. A thorough study and evaluation, using cost-effectiveness considerations, will produce a report containing recommendations for administrative use.

### Accident/Violation Study

Plans call for an accident/violation study to be undertaken in fiscal year 1975. This would be an annual survey of drivers' actions cited by investigating officers as being contributory to crashes. Since the Department of State Police is in the business of law enforcement, this report can be a valuable operational resource. In addition, attempts will be made to relate accident connected charges with their dispositions. This annual information will focus attention on the role of the criminal justice community in promoting highway safety.

### PMVI Evaluation Program

The final project which has been considered at this point is the mechanical defect report. This study will compare defects at the time of a crash with defects detected during the inspection of automobiles. Since both types of information are handled by State Police, a report of this type seems warranted. In addition to its use in the general highway safety program, the data can be of use in evaluating present inspection policies.

### Traffic Records — VDH — Statewide Locater System

The development of a statewide locater system is currently under way by representatives of the Department of Highways and the Highway Research Council. It is the intent of the Department of Highways to develop a "paper" locater system, implement it on its own highway network, and make the system available to localities whose roads and streets the Department does not maintain.

The VDH at present has a graphic log system covering all interstate, arterial, and primary roads and a limited portion of the secondary road network. The paper system mentioned above would encompass the graphic log system for those road

systems for which it is available. A more simple but compatible paper locator system will be developed for application on the remaining segments of the secondary system and urban streets.

File Integration Project

Currently, the highway file is maintained as three separate files. The Department of Highways plans to integrate these three separate files into a single highway file that will be compatible with the other three basic files of the Traffic Records System (i. e. driver, vehicle, and accident).

U. S. DEPARTMENT OF TRANSPORTATION NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION FEDERAL HIGHWAY ADMINISTRATION										STATE VIRGINIA					FORM APPROVED OMB No. _____														
COMPREHENSIVE HIGHWAY SAFETY PLAN - PROGRAM ELEMENT PLAN (PEP)										1. PROGRAM ELEMENT TITLE TRAFFIC LAWS AND REGULATIONS																			
2. PROGRAM ELEMENT WILL IMPLEMENT STANDARDS CHECKED										0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	
																X		X											
3. SUBELEMENTS										4. ESTIMATED COSTS (In Thousands)																			
										FY 1974			FY 1975			FY 1976			FY 1977										
										TOTAL	S/L	FED.	TOTAL	S/L	FED.	TOTAL	S/L	FED.	TOTAL	S/L	FED.								
Uniform Traffic Laws and Ordinances										110.0	55.0	55.0	126.0	63.	63.	145.0	72.5	72.5	166.0	83.0	83.0								
Alcohol and Other Drugs										627.0	341.0	286.0	718.0	382.	336.	793.3	429.1	364.2	871.0	475.0	396.0								
5. TOTAL										737.0	396.0	341.0	844.	445.	399.	938.3	501.6	436.7	1037.0	558.0	479.0								
6. PREPARED BY										7. APPROVED BY																			
NAME AND TITLE C. H. Simpson, Jr., Hwy. Res. Analyst					AGENCY Va. Hwy. Res. Council					NAME AND TITLE					AGENCY				DATE 10-15-72										

## TRAFFIC LAWS AND REGULATIONS

I. Uniform Traffic Laws and Ordinances

The state of Virginia is attempting to reduce the number of traffic crashes, including fatalities, personal injuries, and property damage caused by those drivers who are ignorant of Virginia laws as well as those of other states. In many instances this ignorance is not the fault of the driving public, but the fault of many cities and towns because of the vast array of changing and conflicting traffic laws both within the state and between states.

In attempting to alleviate this problem Virginia strives for complete uniformity of traffic laws among its cities and towns. The initial step toward concurrence of the Code of Virginia with the Uniform Vehicle Code has been accomplished with the submission of the updated Michie Company comparative analysis (1971) of the rules of the road. The study provides a ready tool to allow legislators to recommend changes in the COV based on the inconsistencies revealed in the comparison. A bill was introduced in the last General Assembly which would have provided for a committee with the duty to study the discrepancies of the COV with the UVC and report legislative recommendations to the General Assembly. This bill was not passed. However, the Virginia Code Commission is currently working on revisions to the Code of Virginia and the Highway Safety Division is working with that body to recommend and sponsor changes relating to uniform traffic laws.

The Highway Safety Division plans to develop and implement a public information program to: Familiarize the public with new and existing codes and laws, distribute copies of the Motor Vehicle Law of Virginia throughout the state; introduce a training program in order to familiarize policemen with the provisions of the code; and update, publish, and distribute model traffic ordinances to Virginia's cities and counties. In addition, the HSD will contract for the reprinting of new Virginia traffic laws as soon as they are passed.



A program is also being developed to encourage the adoption of the model traffic ordinances by the cities and counties. Several cities and counties have requested funds to conduct individual studies dealing with the adoption of model traffic laws and ordinances in their respective municipality.

## II. Alcohol and Other Drugs

In order to reduce the number of traffic crashes, including fatalities, injuries and property damage, attributed to alcohol abuse, the following areas need immediate attention in Virginia.

Although Virginia's presumptive level of intoxication has been lowered to .10% by weight of alcohol in the blood, efforts should be made to legislate a .10% blood alcohol level as a legal limit for intoxication. No longer would a .10% blood alcohol level be merely a rebuttable presumption of being intoxicated but a conviction for DWI would be required if the blood alcohol level exceeded .10%, regardless of extenuating circumstances.

In the 1970 General Assembly, a bill was passed allowing the use of preliminary breath tests as a screening device for all drivers believed to be driving under the influence of alcohol.

Additionally, the Division plans to work with local police for the purpose of sampling the blood of every driver involved in a fatal accident.

The 1972 General Assembly passed legislation permitting the use of quantitative breath testing devices.

The Highway Safety Division has ordered a sufficient quantity of breath testing devices and intends to train policemen in their use. The Division will continue to develop and implement alcohol countermeasures indoctrination programs for all policemen. The purpose of these programs will be to familiarize all law enforcement personnel with the problems presented by drinking drivers and pedestrians.

As mentioned before in the narrative for Program Administration and Evaluation, Virginia has received a 3½ year demonstration program, the Fairfax Alcohol Safety Action Project, funded by the federal government under contract with the Department of Transportation's Office of Alcohol Countermeasures. The ASAP activities in four specific countermeasure areas will: (1) Assist the police in apprehending problem drinking drivers; (2) offer the courts new services for pre-trial investigation; (3) develop a new comprehensive system for treatment and rehabilitation; and (4) undertake a program to change public attitudes toward the problem drinking driver. It is anticipated that similar programs, on a smaller scale, will be started in several of the larger metropolitan areas around the state. These programs are planned to be problem-specific to the needs of the community based upon the development of countermeasure activities to assist local agencies.

A related and rapidly changing field is drug abuse in relation to traffic safety. A recent survey conducted by the Highway Research Council for the Highway Safety Division linked marihuana and drug use and highway safety among high school students of the state. The findings suggested that drug use is a significant factor in many accidents. The data showed that approximately 36% of fatal motor vehicle crashes involving 16-19 year old drivers may involve marihuana. It is felt that drug use coupled with driving is a particularly lethal combination. An increase in drug use and driving will warrant greater examination of the current Code provisions relating to drugs and highway safety. Such a study, designed to upgrade drug provisions of the Virginia Code, is in progress. Unfortunately the effort has been hampered by a lack of objective scientific data on accident causation, the effects of drug use on one's ability to safely operate an automobile, and lack of practical and accurate test methods to determine the presence of drugs. Both the information and educational campaigns will focus on educating the normal driver to this danger.

The Traffic Records Committee has completed a feasibility study on traffic records in Virginia and is now planning for

the implementation of an improved traffic records system which will enable researchers to evaluate our traffic laws and regulations program more effectively. With specific references to the evaluation of traffic laws and regulations, it is planned that reports of all warrants issued in traffic cases be forwarded to the system so that correlation can be made of warrants issued and ultimate case disposal.

U.S. DEPARTMENT OF TRANSPORTATION  
 NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION  
 FEDERAL HIGHWAY ADMINISTRATION

STATE  
 VIRGINIA

FORM APPROVED  
 OMB No. \_\_\_\_\_

COMPREHENSIVE HIGHWAY SAFETY PLAN - PROGRAM ELEMENT PLAN (PEP)

1. PROGRAM ELEMENT TITLE  
**VEHICLE REQUIREMENTS**

2. PROGRAM ELEMENT WILL IMPLEMENT STANDARDS CHECKED	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
		X	X																

3. SUBELEMENTS	4. ESTIMATED COSTS (In Thousands)												
	FY 1974			FY 1975			FY 1976			FY 1977			
	TOTAL	S/L	FED.	TOTAL	S/L	FED.	TOTAL	S/L	FED.	TOTAL	S/L	FED.	
<b>Motor Vehicle Inspection</b>													
1. Periodic Motor Vehicle Inspection	443.	443.	-	485.	485.	-	539.	539.	-	581.	581.	-	
<b>Motor Vehicle Registration</b>													
1. Motor Vehicle Titling	1530.	1530.	-	1607.	1607.	-	1687.	1687.	-	1771.	1771.	-	
2. Motor Vehicle Licensing	2611	2611	-	2742.	2742.	-	2879.	2879.	-	3023.	3023.	-	
3. Motor Vehicle Records	2531.	2531.	-	2658.	2658.	-	2791.	2791.	-	2931.	2931.	-	
4. Motor Fuel Tax	552.	552.	-	580.	580.	-	609.	609.	-	639.	639.	-	
5. Program Administration	91.	91.	-	96.	96.	-	101.	101.	-	106.	106.	-	
<b>5. TOTAL</b>	<b>7758.</b>	<b>7758.</b>	<b>-</b>	<b>8168.</b>	<b>8168.</b>	<b>-</b>	<b>8606.</b>	<b>8606.</b>	<b>-</b>	<b>9051.</b>	<b>9051.</b>	<b>-</b>	

6. PREPARED BY				7. APPROVED BY				
NAME AND TITLE		AGENCY		NAME AND TITLE		AGENCY		DATE
R. M. Terry, Safety Officer		Dept. of State Police						10-15-72
R-340 A. D. Harvey, Evaluator		Div. of Motor Vehicles						

- 02-AJ -

10-15-72

## VEHICLE REQUIREMENTS

I. Motor Vehicle Inspection

## A. Periodic Motor Vehicle Inspection

Summary of Overall Plan — The Virginia Official Inspection Program very closely parallels the National Highway Traffic Safety Administration recommendations contained in the Highway Safety Program Manual.

Virginia's inspection program establishes minimum standards which are comparable to the ANSI D.7 Inspection Code and establishes minimum criteria for the establishment and operation of stations. The program requires inspection semiannually to detect vehicle defects, which must be corrected within a 7 day period of time.

The Department of State Police constantly evaluates the program and makes improvements which are necessary to ensure mechanically safe vehicles on the public highways of the Commonwealth.

Evaluation of Current Program — Virginia law requires all Virginia registered motor vehicles to be inspected semiannually prior to operation on the public highways. This law is effective and actively enforced.

The inspection is performed by experienced mechanics who are certified by the State Police and covers systems, subsystems, and components having a substantial relationship to safe vehicle performance. The inspector is given individual instruction regarding the use of equipment and his duties. Satisfactory completion of an examination is essential. The individual's mechanical and moral reputations are considered. A certified mechanic must attend a retraining session annually to maintain certification.

Recent legislation provides for the inspection of the vehicle emission control devices on 1973 and subsequent year model vehicles. All certified mechanics were trained for this inspection

during September of 1972. The Department has also recently added the inspection of hood latches to the official manual and has advised mechanics of this change.

Each inspection station maintains a copy of the inspection receipt for two years. The original of the receipt is filed at State Police Administrative Headquarters. The Department has gradually changed the inspection receipts to provide a space for the identification number and instructions have been issued for it to be included on each receipt. In addition, the Department requires the date of inspection, class of vehicle, make of vehicle, model year, defects, name of inspector and station, and the odometer reading.

A summary of these records, based on a sample tabulation, is published annually.

Goal and Objectives — The Virginia Department of State Police will continue to improve the PMVI Program and carefully evaluate vehicle defects which contribute to or cause traffic crashes.

The information from the inspection receipts is important for categorizing vehicle defects and is also an effective tool used to insist on uniformity and thorough inspections. These receipts sometimes indicate a lack of thoroughness, which is immediately corrected when brought to the attention of the station supervisor.

Only a small sample of these receipts are currently tabulated. Additional personnel will make it possible for these receipts to serve a more useful purpose.

Each year it is necessary to appoint additional stations and certify more mechanics to meet the public demand and provide for the increased number of vehicles operated on the public highways.

The State Police plan to increase both the number of stations and mechanics annually by approximately 4 to 5%. Supervision

will be increased accordingly and each citizen complaint will be carefully investigated. Appropriate disciplinary action will be taken if the facts so warrant.

In addition, plans are being formulated to initiate a program which will automatically identify defects in motor vehicles during inspection proceedings.

## II. Motor Vehicle Registration

The long-range goal of the Motor Vehicle Registration program is to reduce the number of deaths, injuries, and the amount of property damage caused by traffic law violators whose driving privileges have been or should have been revoked or suspended as a result of previous conviction and/or crash involvement.

The immediate goal is to continue to improve the response time for content and quality of vehicle records that will enable law enforcement personnel to apprehend traffic violators and crime suspects in a minimum amount of time, and vehicle manufacturers to identify owners of vehicles with safety defects for recall.

The Division of Motor Vehicles is responsible for this endeavor and performs the following in pursuing the above goals:

### A. Motor Vehicle Titling

DMV maintains a record of legal owners and lienholders of motor vehicles and trailers and requires that they pay a titling fee and sales tax on the vehicle. The titling tax is appropriated by statute for the construction, reconstruction, and maintenance of highways and the regulation of traffic thereon.

### B. Motor Vehicle Licensing

DMV requires that all vehicles and trailers be licensed in order to provide accurate and instant identification of owners. Legislation is being drafted which will require vehicle owners to furnish address

changes to the Division of Motor Vehicles. On October 1, 1972, implementation of a staggered license issue/renewal program providing for a multi-year license plate with annual revalidation began. Complete transition to this system is scheduled for 1974. The extended plate number assignment to a vehicle will facilitate identification of problem driver-owners of motor vehicles in the Division of Motor Vehicle records. License and uninsured motor vehicle fees for vehicles licensed without liability insurance coverage, are collected at the time of licensing or revalidation and are processed against the motor vehicle records file. Vehicles too large for normal highway operation and licensing are required to obtain mileage permits before being operated on the highways under restricted conditions.

### C. Motor Vehicle Records

Motor vehicle records are continuously updated using automated data processing equipment and techniques. Full service branch offices in major cities and metropolitan areas are currently "on-line" processing 40% of titles and vehicle licenses against the automated vehicle title master file and cross-reference files to produce immediate update and printed output. Plans call for expanding this method of vehicle records maintenance as additional branch offices are opened, contingent upon the availability of data processing equipment. All other vehicle work is processed "on-line" upon receipt in Division of Motor Vehicle Headquarters.

Direct computer links to state and local law enforcement agencies and DMV Headquarters' terminals permit immediate response to inquiries for vehicle information. Information on stolen vehicles is entered directly in DMV "on-line" automated files at the discretion and request of the State Police, with simultaneous update of the NCIC files in Washington, D. C.

Methods for linking the motor vehicle records files with the driver history records files to automatically identify all vehicles owned by a driver are under development as an aid in law enforcement and control of problem drivers.



#### D. Motor Fuel Taxes

Revenue derived from the collection of motor fuel taxes is appropriated for use by the Virginia Department of Highways for the construction, reconstruction and maintenance of highways, utilizing feasible techniques of safety engineering to eliminate crash causes due to highways and to reduce the severity of those that do occur. Automated processing and data retention are currently utilized for recording collections and for the refunding of fuel taxes. "On-line" inquiries are being developed.

Full compliance with motor vehicle registration requirements will be achieved with passage of legislation requiring address changes to be furnished the Division of Motor Vehicles by vehicle owners. Emphasis is now on the reduction of record update and retrieval times and the improvement of the quality of the record information.

U.S. DEPARTMENT OF TRANSPORTATION  
 NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION  
 FEDERAL HIGHWAY ADMINISTRATION

STATE  
 VIRGINIA

FORM APPROVED  
 OMB No. \_\_\_\_\_

COMPREHENSIVE HIGHWAY SAFETY PLAN - PROGRAM ELEMENT PLAN (PEP)

1. PROGRAM ELEMENT TITLE  
**TRAFFIC SAFETY EDUCATION**

2. PROGRAM ELEMENT WILL IMPLEMENT  
 STANDARDS CHECKED

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
			X	X										X				X

3. SUBELEMENTS

4. ESTIMATED COSTS (In Thousands)

	FY 1974			FY 1975			FY 1976			FY 1977		
	TOTAL	S/L	FED.	TOTAL	S/L	FED.	TOTAL	S/L	FED.	TOTAL	S/L	FED.
	<b>DRIVER EDUCATION</b>											
1. High School	18860.	18500.	360.	22660.	22200.	460.	27210.	26640.	570.	32710.	32040.	670.
2. Private and Parochial	600.	600.	0	720.	720.	0	864.	864.	0	1037.	1037.	0
3. Commercial	0	0	0	0	0	0	0	0	0	0	0	0
4. Adult and Out-of-School Youth	105.	95.	10.	126.	114.	12.	152.	138.	14.	183.	166.	17.
5. Driver Improvement	50.	35.	15.	60.	42.	18.	72.	51.	21.	87.	62.	25.
6. Violators School	50.	35.	15.	60.	42.	18.	72.	51.	21.	87.	62.	25.
7. Handicapped	100.	80.	20.	120.	96.	24.	144.	116.	28.	173.	140.	33.
<b>MOTORCYCLE EDUCATION</b>	115.	70.	45.	130.	80.	50.	150.	90.	60.	175.	105.	70.
<b>PEDESTRIAN SAFETY</b>	105.	25.	80.	115.	30.	85.	130.	35.	95.	150.	90.	60.
<b>PUPIL TRANSPORTATION SAFETY</b>	37200.	35890.	1310.	38100.	37840.	260.	40000.	39740.	260.	42900.	42640.	260.
<b>5. TOTAL</b>	<b>57185.</b>	<b>55330.</b>	<b>1855.</b>	<b>62091.</b>	<b>61164.</b>	<b>927.</b>	<b>68794.</b>	<b>67725.</b>	<b>1069.</b>	<b>77502.</b>	<b>76342.</b>	<b>1160.</b>

6. PREPARED BY

7. APPROVED BY

NAME AND TITLE Billy G. Johnson, Supervisor of	AGENCY State Dept. of Education	NAME AND TITLE	AGENCY	DATE 10-15-72
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R-340  
 Driver Education  
 R. A. Fynum, Supervisor of Pupil Transportation

100

## TRAFFIC SAFETY EDUCATION

I. Driver Education

A. High School Driver Education (Public, Private, and Parochial) — The long-term goal of the high school driver education program in Virginia is to help reduce the number of traffic crashes, fatalities, personal injuries, and property damage caused by drivers with bad driving habits or attitudes. To accomplish this the state intends to make a driver education program available to all eligible students and to accept the responsibility at the state level for providing leadership in directing, coordinating, supervising, and promoting such a program. (See Attachment A.) Projects and programs being utilized to implement the driver education programs as presented in attachment A are shown below:

- (1) Passage in 1968 of legislation requiring that all persons successfully complete a state approved driver education program consisting of both classroom and in-car instruction before being eligible to apply for a Virginia operator's license prior to age 18.
- (2) Statewide educational television utilizing "Sportsmanlike Driving" series.
- (3) Semester course scheduling.
- (4) Driver education certification.
- (5) Alcohol countermeasures curriculum, including alcohol guide.
- (6) Driver education car control program.
- (7) Membership in Virginia Association for Driver and Traffic Safety Education (VADETS) and the Virginia Education Association.
- (8) "Curriculum Guide for Driver Education in Virginia".
- (9) Multiple-car driving range guide.

In addition, Virginia's Highway Safety Division plans to establish a seat belt education program and a training program for operators of emergency vehicles in this standard area.

## ATTACHMENT A

WORK PROCEDURES IN DEVELOPING THE STATE APPROVED  
DRIVER EDUCATION PROGRAM

Active assistance by staff members includes:

1. Providing advisory and consultive services to help local school systems improve and expand their programs;
2. Aiding school systems in developing effective patterns of administration and supervision;
3. Establishing standards for high school courses;
4. Encouraging teacher preparation institutions to offer high-quality teacher preparation programs;
5. Developing and distributing resource materials (curriculum guides, administrative handbooks, and other pertinent information);
6. Developing guides to aid school divisions in purchasing or otherwise obtaining automobiles and other equipment for laboratory instruction, including plans for the preventive maintenance of such equipment and its periodic replacement;
7. Advising school systems on matters of insurance and legal responsibilities related to administration and operation of programs;
8. Stimulating school systems to undertake in-service programs for teachers and to encourage these teachers to acquire additional professional preparation;
9. Serving as liaison staff to develop and maintain close working relationships with interested agencies (both official and nonofficial);
10. Providing advice about types of, and specifications for, facilities and equipment to take advantage of new developments in driver education (use of television, multiple-car driving ranges and simulators);
11. Approving and advising all commercial schools that conduct driver education programs for anyone under 18 years of age.

The Division of Motor Vehicles and the Driver Education Service of the State Department of Education have designed a method to analyze the driving history of students completing a driver education program in order to determine the effectiveness of the program in preparing them to become better drivers. Statistics showing the frequency, type of accidents, and convictions are analyzed to determine if the students involved had successfully completed a driver education program and the school division in which the program was completed. A report containing this information is sent annually to all school divisions. This report includes the number of accidents, violations, and fatalities within each school division, and personal injury and property damage figures broken down by types, as well as by male and female drivers. (See Attachment B for example.)

School divisions in Virginia continue to update their programs by purchasing simulators and developing multiple-car driving ranges and by employing additional teachers to provide driver education to eligible students.

- B. Commercial Driver Education Schools** — The long-range goal of the commercial driver education program in Virginia is to make available a state approved driver education program to drivers or learners who are unable to attend a school sponsored driver education program. It is felt that after the initiation of this program, the number of traffic crashes, including fatalities, personal injuries, and property damage, can be reduced by extending training and education to yet another category of drivers.

In Virginia anyone under the age of 18 wishing to apply for a Virginia operator's license must first complete a state approved driver education program consisting of both classroom instruction and in-car instruction. In some cities and counties the local school division is unable to offer driver education to all eligible students. For this reason, students are enrolling in state approved commercial driving schools so they may obtain their operator's licenses prior to becoming 18 years of

ATTACHMENT B

BREAKDOWN OF DRIVER EDUCATION STATISTICS

SAMPLE COPY

SCHOOL DIVISION

1000

		<u>1970-71</u>	<u>1971-72</u>
1. Total number of students successfully completing a State-approved Driver Education program in the State:		63,087	65,976
2. Total number of students successfully completing a State-approved Driver Education program in your school division:		<u>317</u>	<u>154</u>
3. The rank of your division as compared to other school divisions for students successfully completing a State-approved Driver Education program:		<u>33</u>	<u>64</u>
4. Total number of violations in the State-City and County	City	<u>3,995</u>	<u>1,556</u>
	County	<u>6,974</u>	<u>2,920</u>
	Total	<u>10,969</u>	<u>4,476</u>
5. Total number of violations in your school division:		<u>41</u>	<u>14</u>
*6. The rank of your division as compared to the rank of other school divisions in violations:		<u>39</u>	<u>41</u>
*7. Your rank in the State as to the number of students trained in your division as compared to your rank for the number of violations in your school division:	Trained	<u>33</u>	<u>64</u>
	Violations	<u>39</u>	<u>41</u>
8. Your school division had <u>13</u> violations for every 100 students trained in the school year 1970-71 as compared to <u>9</u> violations for every 100 students trained for the 1971-72 school year.			
9. The average number of violations per 100 students trained in the State is:	County	<u>17</u>	<u>7</u>
	City	<u>18</u>	<u>6</u>

\*Cities ranked with cities.

\*Counties ranked with counties.

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ATTACHMENT B (continued)

DRIVER EDUCATION STATISTICS  
FOR FISCAL YEAR ENDING JUNE 30, 1972

SAMPLE COPY

<u>Accidents</u>	<u>No.</u>	<u>No. Drivers Involved</u>		<u>Violations Type</u>	<u>No.</u>	<u>No. Drivers Involved</u>	
		<u>M</u>	<u>F</u>			<u>M</u>	<u>F</u>
Personal Injury	0	0	0	Speeding	1	1	0
Property Damage	3	3	0	Reckless Driving	1	1	0
Fatality	0	0	0	Oper. Improper Control	6	4	1
				Drive Wrong Side Road	1	1	0
				Improper Passing	1	1	0
				Oper. Veh. Illegal/No Inspect. Sticker	1	1	0
				Unlic. Person — Unlic. Veh.	1	1	0
				Carry Passen. Unlaw. on Motorcy.	1	1	0
				No. Oper. Lic.	1	1	0
<b>TOTALS</b>	<b>3</b>	<b>3</b>	<b>0</b>		<b>14</b>	<b>12</b>	<b>1</b>

- IV-31 -

1526

age. At present any commercial school offering driver education to a person under 18 must teach from the state approved "Curriculum Guide for Driver Education in Virginia". This curriculum is identical to that used in the public schools. The Driver Education Service of the State Department of Education must approve all commercial schools that instruct students under 18 and issue driver education certificates and insurance credit certificates. Other commercial schools, whose main function is to train adults, are licensed by the Department of Professional and Occupational Registration.

The 1968 session of the General Assembly passed an act establishing the State Board for Commercial Driver Training Schools. In creating this Board, the legislature gave it authority to license all commercial driver training schools and to establish rules and regulations relating to location, equipment, courses of instruction, instructors, previous courses of instruction, previous records of each school and instructors, financial statements, schedule of fees and charges, character and reputation of the operators, and insurance in such sum and with such provisions as deemed necessary to protect adequately the interests of the public. The Board also adopts rules and regulations which it deems necessary for the protection of the public.

C. Adult and Out-of-School Youth — The Driver Education Service has employed a full-time staff member to travel throughout the state to help localities establish out-of-school driver education programs. The adult program will include additional training for adults, out-of-school youth traffic law violators, emergency medical services personnel, and motorcyclists. The course would also be available to policemen and firemen. Programs established by the Driver Education Service include defensive driving and driver improvement programs for adults and out-of-school youths and a driver education program for motorcyclists and emergency medical service personnel. Equipment, classrooms, and personnel from the local high schools will be utilized for this program.



- D. Driver Improvement and Violator Schools -- To reduce the number of crashes, including fatalities, personal injuries and property damage caused by bad driving habits and/or attitudes of drivers, Virginia plans to increase the number of cities and counties that provide driver improvement schools to which "repeater" traffic law violators are referred by the courts in lieu of fines or revocation of licenses. In most cases the violator must receive eight hours of classroom instruction. The Driver Education Service of Virginia will attempt to establish schools in as many cities and counties as possible. The equipment and personnel of the local high schools will be utilized for this program. One full-time staff member has been employed at the state level for coordination of the program. A driver improvement school has been developed recently in the Fairfax area in conjunction with the Alcohol Safety Action Project in order to make a driver education course available to those individuals charged with driving while intoxicated. An evaluation of the Fairfax program will be made as a part of the regular ASAP research efforts and will be used in the development of additional or similar programs in the future.

Driver Improvement Schools are part of the adult driver education program in Virginia. Traffic violators remain anonymous while attending the schools. In many cases judges have requested that their local governing bodies establish these schools.

- E. Driver Education for the Handicapped — The Driver Education Service of Virginia is attempting to make available a driver education program to help drivers with both mental and physical handicaps. At present some high schools offer vocational driver education along with their regular curriculum. Several communities have special driver education programs for the handicapped. Driver education is also offered at one detention home for boys.

State approved driver education programs are offered at the following state rehabilitation centers; the Woodrow Wilson Rehabilitation Center, the Virginia School for the Deaf and Blind at Staunton, and the Virginia School at Hampton also offer the state approved driver education program.

Driver education certificates developed by the Driver Education Service and Division of Motor Vehicles will be issued to all handicapped drivers completing the state approved program. This certificate is explained in detail in the description of the high school driver education program.

II. Motorcycle Education — Although the number of motorcycle registrations in Virginia has been increasing each year, it is fortunate that this tremendous growth has not been accompanied by an immense increase in deaths and injuries resulting from motorcycle accidents.

In an effort to reduce the number of motorcycle-related crashes, Virginia has established programs in accident prevention measures and in post-crash procedures for the minimization of injuries. These programs include:

- (1) Establishment of motorcycle training classes and facilities for both in-school and out-of-school motorcycle operators.
- (2) Public information programs, via news media, to familiarize automobile operators with the inherent limitations and hazards of motorcycle operators.
- (3) The presentation of motorcycle safety awards to operators, passengers, and dealers.

Recognizing that crashes will occur, regardless of precautions, Virginia has enacted legislation requiring that all motorcycle drivers and passengers wear a state approved helmet and some type of eye protection, and that each motorcycle carrying a passenger be equipped with a seat and a footrest for the passenger. During the next fiscal year the state plans to employ a consultant to develop and submit an educational program in motorcycle safety to be used throughout the Commonwealth. Motorcycle safety will be included as part of the driver education curriculum.

Guidelines for developing a motorcycle education program have been completed and sent to all political subdivisions by the Driver Education Service of the State Department of Education. Multiple-car driving ranges and other equipment at high schools will be utilized in teaching the motorcycle safety program. The state is also looking into the possibility of building several training courses for instruction in the proper operation of motorcycles. These courses would be very similar to the multiple-car driving

ranges. The Driver Education Service of Virginia is working with the Traffic Records Division to develop a data system that would enable the state to evaluate effectively the entire motorcycle safety program throughout the state.

III. Pedestrian Safety — In 1971, 2,410 crashes involving motor vehicles and pedestrians occurred in Virginia. Two hundred pedestrians — 16.4 percent of the total traffic deaths in Virginia -- were killed in these crashes.

Of this total, 132 pedestrians were killed in rural areas of the state compared to 92 in urban areas. Ninety-eight of these rural fatalities occurred to persons who were crossing the highways at some place other than an intersection. Nineteen persons were killed while walking along rural highways.

In pedestrian-vehicle collisions, 121 pedestrians between the ages of 15 and 64 were killed and 1,132 were injured. Eight children under age four, 46 between the ages of 5 and 14, and 46 persons over age 65 were killed. Forty-eight of the pedestrians killed had been drinking.

The long-term goal of Virginia's pedestrian safety program is to reduce the number of vehicle-pedestrian accidents, with emphasis on the rural areas.

The Highway Safety Division of Virginia plans to work with local political subdivisions in developing programs that will help reduce the number of pedestrians killed on our highways. The first area of concentration will be a public information program for the purpose of educating pedestrians, from preschool age to the elderly, as well as drivers. This program will include television spot announcements, posters, radio spots, motion picture films, exhibit material, billboards, bus and mail truck type cards, coloring books, "hot dots", and "lite-a-bike" kits.

At this time pedestrian safety is taught in Virginia schools beginning in the first grade. Safety patrols are formed to assist school children walking to and from school. Also adult school crossing guards are employed and stationed at high traffic volume intersections where children must cross.

It is anticipated that a full-time pedestrian safety education coordinator will be employed by the State Department of Education to work with the cities and towns in developing good safety programs to improve the pedestrian safety program for the entire state. The Highway Safety Division will continue its bicycle safety programs, which include: (1) Reflectorized "lite-a-bike" kits and bicycle pedal reflectors, which make bicycles visible at night; (2) the purchase of bicycle testing machines to test bikes for safety features and thus determine whether they are safe to be used on the streets and highways; and (3) the procurement of bicycles that include a recording of two bicycles talking to each other about bicycle safety.

The Highway Safety Division, State Department of Education, Driver Education Service, and persons at the local levels are working together to provide the state with the best program possible.

- IV. Pupil Transportation Safety -- A major purpose of the Board of Education, Department of Education, and the local school systems of Virginia is to promote the safe, efficient, and effective transportation of pupils to and from public schools.

The paramount goal is that of providing for the operation of pupil transportation systems without personal injury to pupils and other highway users or damage to property.

Programs directed toward the accomplishment of the above goals include, but are not limited to, the following:

- A. Study and assessment of laws and regulations affecting the transportation of pupils as required by Chapter 13, Title 22, of the Code of Virginia, as well as pertinent sections of Title 46.1.
- B. Provision of information and assistance to local school divisions related to the determination of needs to be met, routing of buses to attain maximum use, review of bus routes for hazardous environmental conditions, inspection and preventive maintenance programs for school buses, and a review of pedestrian and vehicular traffic at school sites involving operation of school buses.

- C. Analysis and use of data compiled from reports on all crashes involving school buses, school pupils and personnel who ride school buses, including injury or death while crossing the road and/or while waiting at bus stops.

Presently, guideline information is not available for implementation of Federal Highway Safety Program Standard No. 17 — Pupil Transportation Safety. In the absence of such specific information, the Department has developed the following broad program objectives to ensure that Virginia is in compliance with the standard within the time period available. Included in the program objectives are:

- A. A "State-of-the Art" study of pupil transportation and determination of needs to be met.
- B. To meet the determined needs.
- C. Existing programs will be reviewed and revised.
- D. New programs will be developed where needed.

#### Vehicle Requirements

In keeping with the aim and goal expressed in the introductory paragraphs of Pupil Transportation Safety, and the requirements of Section 22-276 of the Code of Virginia, the Board of Education has adopted standards and specifications for the design, construction, and equipment for public school buses used in Virginia. The purpose of these efforts is to assure safe usage as well as protection of passengers.

These specifications are made available to operators of private and parochial schools upon request. The trend toward using state specifications is widespread among many such schools; however, this is voluntary action on their part. They do have to comply with minimum requirements of various sections of Title 46.1 of the Motor Vehicle Code which relate to school buses. These are, for the most part, based upon specifications and regulations of the Board of Education. The Administration, when issuing Standard No. 17, indicated that vehicle requirements may require more time for compliance. Crash related data may also be helpful in the development of vehicle requirements for school buses.

### Selection and Training of Bus Drivers

The responsibilities of the school bus driver in safely transporting pupils between home and school are wide ranging in depth and scope. It is, therefore, imperative that great care be taken in the screening, selection, placement, training, and supervision of school bus drivers to ensure that they have the mental and physical capabilities necessary to perform their duties.

Programs directed toward the accomplishment of the above objectives have been carried out to varying degrees by local school systems with assistance and guidance from the Department of Education.

Various requirements for school bus drivers have been established by state law, regulations of the Board of Education, and policy provisions of the local school boards. Title 22, Code of Virginia lists specific annual requirements for drivers of public, parochial, and private school buses. These include:

- A. Certification by a physician that the person is physically and mentally capable of safely operating a school bus.
- B. Statement from a physician that the person is free of infectious diseases.
- C. Certification by the Division of Motor Vehicles that the person's driving record is free of certain serious driving offenses during the previous five years.
- D. Endorsement by two citizens that the person is of good moral character.
- E. Issuance of a special license classification showing that the person has passed a special school bus driver license examination.

The Department of Education annually conducts or participates in driver safety meetings in each local school division to discuss laws, regulations, safe driving practices, changing conditions, etc. Each school division is encouraged to establish programs for training bus drivers. In support of this, the Department has detailed the content which such programs should include. Department personnel have assisted in the development of many local programs. It is important to recognize that in addition to basic programs of instructions, attention must be given to meeting certain conditions which vary with each locality.

A review of the Department's training guide for developing bus driver training programs is being made. Initial efforts are being taken to determine how to best illustrate the material for optimum effectiveness. The final decision on the content which these programs must eventually include is contingent upon guidelines from the National Highway Traffic Safety Administration.

The Department of Education has produced and released a new film, entitled The School Bus Driver, as evidence of its continuing efforts to make material available for training school bus drivers.

#### Safety Instruction — Bus Riders

In keeping with the aim and goal initially expressed in this plan, local school divisions, supported by the Department, have acted responsibly in the area of safety instruction for bus riders.

The programs conducted are varied and many. Some of these are:

- A. Safety units are included in the curriculum guide, Health Education Grades K-7. Part of these units are directed to pupils who ride school buses.
- B. Local law enforcement agencies or members of the Department of State Police promote and/or conduct such safety programs with the approval and cooperation of the local school authorities.
- C. Suitable materials for this purpose are made known to school administrators.
- D. While traveling between students' home and school, practical safety instruction is imparted to riders by school bus drivers and school personnel.
- E. Another film, Riding Your School Bus, was recently provided by the Department to supplement this program.
- F. Emergency evacuation drills have been required in Virginia for several years.
- G. Department personnel assist localities in promoting this kind of program.

Additional material of expendable and nonexpendable nature may have to be developed and required.

U. S. DEPARTMENT OF TRANSPORTATION  
 NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION  
 FEDERAL HIGHWAY ADMINISTRATION

STATE  
 VIRGINIA

FORM APPROVED  
 OMB No. \_\_\_\_\_

COMPREHENSIVE HIGHWAY SAFETY PLAN - PROGRAM ELEMENT PLAN (PEP)

1. PROGRAM ELEMENT TITLE  
**DRIVER LICENSING**

2. PROGRAM ELEMENT WILL IMPLEMENT STANDARDS CHECKED	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
						X													

4. ESTIMATED COSTS (In Thousands)

3. SUBELEMENTS	FY 1974			FY 1975			FY 1976			FY 1977		
	TOTAL	S/L	FED.	TOTAL	S/L	FED.	TOTAL	S/L	FED.	TOTAL	S/L	FED.
	Driver Testing	3191.	3062.	129.	3235.	3215.	20.	3376.	3376.	0	3545.	3545.
Driver Licensing	1935.	1935.	0	2032.	2032.	0	2134.	2134.	0	2241.	2241.	0
Driver History Records	2418.	2418.	0	2539.	2539.	0	2666.	2666.	0	2799.	2799.	0
Driving Privilege Monitoring and Control	1251.	1171.	80.	1314.	1230.	84.	1380.	1380.	0	1449	1449	0
Driver's Vehicle Registration Monitoring and Control	1869.	1869.	0	1962.	1962.	0	2060.	2060.	0	2163.	2163.	0
Program Administration	96.	96.	0	101.	101.	0	106.	106.	0	111.	111.	0
5. TOTAL	10760.	10551.	209.	11183.	11079.	104.	11722.	11722.	0	12308.	12308.	0

6. PREPARED BY

7. APPROVED BY

NAME AND TITLE A. D. Harvey, Evaluator	AGENCY Div. of Motor Vehicles	NAME AND TITLE	AGENCY	DATE 10-15-72
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## DRIVER LICENSING

Goals and Objectives

The goal of driver licensing by the Virginia Division of Motor Vehicles is to test all first applicants for the Virginia vehicle operator's license and all license holders every four years thereafter. The objective of this program is the reduction of crashes, property damage, injuries, and deaths by (1) preventing unqualified persons from becoming drivers on the highways, and (2) removing from the highways drivers who fail to maintain standards of qualification. These goals will be achieved by:

I. Driver Testing

The Division is conducting the following testing programs:

- (1) For citizens who have never held a driver's license, passage of an examination on Virginia's motor vehicle laws and a vision test is required prior to the issuance of a temporary license (instruction permit). This permit allows the citizen to learn proper driving habits and skills under the supervision of a licensed driver and is valid only when the holder has a licensed driver occupying a seat by him.
- (2) For citizens who have never held a Virginia driver's license or who have let their license expire, passage of an examination on Virginia motor vehicle laws, a vision test, and a road test is required. However, the road test may be waived if the citizen holds a valid license from a reciprocating state.
- (3) For citizens who are renewing their driver's license, personal appearance is required and the citizen must pass a visual examination upon reaching certain age categories. In addition, depending upon his previous four years' driving history, he may be required to pass a written or oral test on traffic regulations and a road test. These tests provide a periodic screening of all drivers and the removal from the highways of those no longer qualified for licensing.

- (4) For citizens who (a) are qualified to operate only under restricted conditions such as the use of hand controls or during daylight hours only, and (b) whose driving history has required a mandatory revocation of the driving license, a complete examination is required prior to the issuance or reissuance of a driver's license.

To improve highway safety by improved testing of drivers, the Division is requesting federal funds for the following projects:

- (1) Mobile Examining Station Project -- This project will determine the feasibility of using mobile examining stations in areas of the state now serviced by traveling examiners, and, if feasibility is established, DMV will acquire two mobile examining stations and conduct a pilot operation to verify the practicality and public acceptance of the use of such stations.
- (2) Visual Display Driver Testing Project (Pilot Project) -- This project will study the feasibility of using visual display driver testing devices in lieu of written examinations in selected examining stations; and, if feasibility is established, DMV will acquire visual display driver testing devices and conduct a pilot operation. These devices would permit greater utilization of existing manpower given the increasing number of examinations for driver licenses and examinations required for the renewal of them.
- (3) Virginia Automated Driver Testing Project -- Virginia has under construction a federally funded automated driver testing range which is scheduled for completion in July, 1973. This range will allow objective testing of the applicant without an examiner in the car. The written examination at this location and at another office of comparable volume will be replaced by the visual display exam. This will enable Virginia to evaluate the effectiveness of objective versus subjective license examinations in fully automated, semiautomated, and nonautomated testing environments. Evaluation of this project will be conducted by the Virginia Highway Research Council.

## II. Driver Licensing

The examination station issues a color photograph bearing the identifying number and signature of the individual who successfully completes the required examinations, or who is seeking a replacement license. A temporary license bearing the person's name, address, identifying number, date of birth, type of license and classes of vehicles for which the person is qualified to operate, and any known or new restrictions is issued to accompany the photograph. The temporary license expires after ninety days. The permanent license issued at Division of Motor Vehicles Headquarters carries the above information plus the legal jurisdiction of the address and an expiration date one of four years in the future, depending upon the type of license.

In addition, legislation is being drafted to require license applicants to furnish proof of their date and place of birth for their initial license.

Subject to the availability of automated data processing tele-communications "on-line" issuance of driver licenses at the time of examination is planned. A driver history file update will begin in June, 1973, with full service branch offices in major cities. These metropolitan areas currently have "on-line" vehicle titling and licensing capabilities. This service will be expanded to additional offices as they are established.

Legislation is being drafted to permit the issuance of a single driver's license which is classified more in line with federal recommendations than are the two classified licenses currently issued.

The detection of drivers receiving welfare, tax, or other benefits, or who are blind or nearly blind, from records maintained by these agencies is subject to the development and implementation of the traffic records data base. Most drivers in the above categories are detected by examinations conducted at license renewal and are placed under control or are removed from the highways. The Virginia Division of Motor Vehicles is currently issuing identification cards in conjunction with the Virginia Commission for the Visually Handicapped to those persons who are certified as legally blind.

### III. Driver History Records

Driver history records are maintained by automated data processing utilizing direct access magnetic storage. A variety of processing techniques are used to enter and retrieve information furnished by driver testing, driver licensing, driver privilege monitoring and control, and driver vehicle registration privilege control programs. Personnel assigned to this program area also administer the Virginia Habitual Offender Act and notifications to the Department of Transportation.

Inquiry into the Driver History Records is by video display device and/or printing devices when a printed copy of the driver history is required. Pre-punched cards are also used to obtain printed records. Direct computer links to state and local police departments have been established to provide driver identification and status of driving privilege for immediate use, with a printed record being available upon request from Division of Motor Vehicle Headquarters. Printed records are normally furnished on a twenty-four to seventy-two hour turn-around time depending upon the day of the week on which the request is received. Persons requesting printed records in person at Division of Motor Vehicle Headquarters are usually serviced in thirty minutes or less. Reduction of printed record turn-around and the improvement in the quality of record information are continuing goals in this area.

### IV. Driving Privilege Monitoring and Control

This program subelement involves the processing of: (1) All convictions received from the courts for entry into Driver History Records; (2) the revocation and/or suspension of drivers as required by statute or the courts as a result of conviction; (3) the referral of records of drivers with conflicting medical information or unusual conditions to the Medical Advisory Board; and (4) a formal hearing program which may result in the revocation or suspension of the driving privilege for those drivers whose history indicates multiple crashes and/or traffic violations of a minor nature.

Routine examinations of driver capability after crash involvement and/or short-term mandatory revocation of the driving privilege after conviction have been reexamined to determine their effectiveness in reducing subsequent

crashes and traffic violations. To supplement existing punitive approaches a Driver Improvement Project, partially financed by federal funds, is being planned. This project consists of: (1) Detecting and sending a warning letter to those drivers whose driving records have begun to deteriorate; (2) conducting group and individual interviews and counselling drivers whose records continue to deteriorate; and (3) requiring participative driver training for those who show no improvement after phase one or two. With the exception of the warning letter program, full implementation of this project will await legislative approval in January, 1974.

#### V. Driver's Vehicle Registration Monitoring and Control

The Driver's Vehicle Registration Monitoring and Control is concerned with: (1) The control of vehicles operated by drivers whose privileges are contingent upon maintaining proof of financial responsibility (as a result of previous uninsured vehicle crash involvement, convictions, or judgements); (2) the processing of vehicle crash reports for driver records; and (3) verification of liability insurance or the payment of the Uninsured Motor Vehicle Fee on vehicles involved in crashes.

Failure to meet or maintain requirements for vehicle licensing results in the suspension of the driving and/or registration privilege of the vehicle owner.

A major step in the processing of vehicle crash reports was implemented July 1, 1972, as a result of legislative changes, when Virginia changed from a positive to negative reporting of liability insurance of vehicles involved in crashes. This has resulted in a reduction in the processing required for crash reports.

The reduction of time required to process insurance forms for proof of financial responsibility, crash reports, and the identification of all vehicles owned by a driver and the quality of information recorded for the driver history file are continuing goals.

Virginia will be in full compliance with motor vehicle registration requirements upon (1) the passage of legislation to require proof of date and place of birth of applicants for original license and to permit the issuance of a single classified driver's license instead of two classified licenses; (2) the establishment of the Motorist Data Base to include information on drivers receiving benefits or exemptions, for being blind or nearly blind, from welfare, tax, or other agencies; and (3) the implementation of the Automated Traffic Records Statistics Project.

U. S. DEPARTMENT OF TRANSPORTATION NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION FEDERAL HIGHWAY ADMINISTRATION										STATE VIRGINIA					FORM APPROVED OMB No. _____													
COMPREHENSIVE HIGHWAY SAFETY PLAN - PROGRAM ELEMENT PLAN (PEP)										1. PROGRAM ELEMENT TITLE POLICE TRAFFIC SERVICES																		
2. PROGRAM ELEMENT WILL IMPLEMENT STANDARDS CHECKED										0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
																									X	X		X
3. SUBELEMENTS										4. ESTIMATED COSTS (In Thousands)																		
										FY 1974			FY 1975			FY 1976			FY 1977									
										TOTAL	S/L	FED.	TOTAL	S/L	FED.	TOTAL	S/L	FED.	TOTAL	S/L	FED.							
Police Traffic Services (State)										13157.	13157.	-	17882.	17882.	-	18429.	18429.	-	18960.	18960.	-							
Police Traffic Services (Cities and Counties)										26423.	25723.	700	27383.	26583.	800.	28276.	27376.	900	29541.	28541.	1000.							
Selective Traffic Law Enforcement										100.	50.	50.	100.	50.	50.	100.	50.	50.	100.	50.	50.							
Debris, Hazard Control and Cleanup										622.	472.	150.	632.	532.	100.	651.	556.	95.	687.	597.	90.							
5. TOTAL										40302.	39402.	900.	45997.	45047.	950.	47456.	46411.	1045.	49288.	48148.	1140.							
6. PREPARED BY										7. APPROVED BY																		
NAME AND TITLE					AGENCY					NAME AND TITLE					AGENCY					DATE								
Major T. S. Pearson Field Supervisor					State Police															10-15-72								

- IV-47 -

R-40 C. H. Simpson, Jr. Hwy. Res. Analyst - Highway Research Council

1542

## POLICE TRAFFIC SERVICES

### I. Police Traffic Services (State)

#### Summary of Overall Plan

The ultimate goal of the Virginia State Police in highway safety is the reduction of motor vehicle crashes involving deaths, personal injuries and property damage. To accomplish this, many services are performed. These services include, but are not limited to:

#### 1. Well-rounded Traffic Law Enforcement

Members of the Virginia Department of State Police reported 230,793 arrests which cleared the courts during the 1971 calendar year. Arrests for offenses involving the highway totaled 222,932, or 96.59% of the total reported, and resulted in a conviction rate of 93.03%.

The Department also actively enforces the pedestrian laws. More than 5,881 arrests are made annually for these violations, which include hitchhiking and other related pedestrian offenses.

#### 2. Investigation of Accidents

Troopers investigate more than 43,500 accidents annually. In addition to interviewing witnesses and gathering factual information at the scene, arrests are made for violations of the law which contribute to accidents.

#### 3. Patrol of Highways

Troopers operating State Police vehicles travel almost 30 million miles annually. During this patrol more than 2,200 abandoned vehicles are recovered and removed from the highways. The almost 165,000 motorists assisted are those who are experiencing mechanical difficulty, seeking directions, etc. More than 800 stolen vehicles are recovered annually. During this patrol, highways and traffic are scrutinized for adverse conditions.



The police traffic services of the State Police have gradually been expanded, improved, and updated. The Department is constantly reevaluating and seeking the improvements which will make the greatest contribution toward highway safety.

Police Training

The Department training greatly exceeds the recommendations of the Highway Safety Program Manual.

The basic recruit training consists of approximately 500 hours of on-the-job training. (During this time the conditional employee performs various duties under the direction of and in the presence of an experienced police officer.) Once this training is completed satisfactorily the trainee must undergo 958 hours of formal instruction. One hundred and sixty subjects are taught, with emphasis on the highway transportation system, state motor vehicle laws, relationship of violations and accidents, patrol procedures, laws of evidence, traffic direction and control, report writing, accident investigation, police court relations, police driver training, and first aid.

Formal in-service training is conducted in the classroom for 36 hours annually, with supervisors receiving an additional 24 hours. Other special training is conducted as the need arises. The subjects covered include each of those recommended in Volume 15 of the Highway Safety Program Manual. Representatives also periodically attend the Northwestern University Traffic Institute, the FBI National Academy and other schools.

Traffic Law Enforcement

The State Police are assigned to the counties according to the need, based on traffic volume, accidents and miles of highways. Individual assignments and patrol are based on accident frequency, violations, radar surveys, traffic, etc. and studies are conducted to determine if arrests are occurring in the same vicinity as accidents.

Special studies regarding wrong-way driving are often indicative of areas where problems exist. Accident prone locations are given special attention.

#### Traffic Direction and Control

Troopers are trained to use uniform signals when directing traffic at accident scenes and other congested areas.

#### Accident Investigation

A written policy has been established by the Department regarding the response to accidents and their investigation. The investigations closely parallel the Highway Safety Program Manual.

#### Hazardous Conditions - Crash Prone Locations

The State Police report hazardous conditions which are observed or come to their attention. These reports cover defective highways, signing and lighting, and incompetent drivers.

In addition to the routine analysis of Virginia's 1971 motor vehicle crash experience to provide meaningful information for enforcement, engineering, and educational purposes, the logging operation of the Accident Records Section identified 2,715 crash-prone locations. These locations were brought to the attention of enforcement and engineering personnel for further analysis and corrective action as the existing conditions warranted in furtherance of the cooperative efforts with the Department of Highways to eliminate highway hazards and correct unsafe driver behavior.

#### Additional Police Traffic Services

The Department cooperates with other agencies and furnishes assistance to police agencies requesting and needing aid. Two helicopters patrol regularly and fixed-wing aircraft are also utilized.

## Goals and Objectives

Of immediate concern is the need to further expand present services and personnel. The record will indicate that present methods of controlling death and injury on the highways are reasonably effective. Even with a steady increase in traffic volumes, Virginia has had two consecutive years of decreases in fatalities. The death rate during 1971 was 4.0 compared with the national average of 4.7, and only eleven states experienced a lower rate. Expansion of those services enumerated herein should further reduce this rate.

## II. Police Traffic Services — Cities and Counties

The goal of the police traffic services programs in Virginia is to reduce traffic crashes, deaths, injuries and property damage caused by those individuals violating the traffic laws. Particular attention is given to the repeat violator. Additional problems faced by Virginia cities and towns are the lack of sufficient enforcement at high accident locations and the lack of training in handling all aspects of enforcement.

In attempting to accomplish the aforementioned objective, the cities and towns throughout Virginia plan to develop and implement the following programs: (1) The establishment of a minimum of at least 200 hours of training for all new recruits; (2) refresher traffic training and in-service training courses will be made available to officers performing traffic duties; (3) additional training for supervisory personnel in the fundamentals of organization, administration, and the use of records; (4) the development of traffic sections within the police departments; (5) traffic records systems; and (6) additional training in all phases of traffic investigation. To further accomplish this goal the cities and counties in Virginia will be hiring additional personnel, purchasing new equipment, and establishing better communications systems for their police work.

The Law Enforcement Officers Training Standards Commission is developing a visual file that will contain information pertaining to training of all police officers in the state and the amount and type of training they have had. This system will be available for use in the

evaluations of the police traffic services program. A data system is also being developed by the Traffic Records Committee that will enable us to evaluate the PTS program more effectively.

### III. Selective Traffic Enforcement

Many of the law enforcement agencies in Virginia are in the process of developing a selective traffic enforcement program which provides for the assignment of law enforcement officers to traffic functions by time and location on the basis of demonstrated need, determined by the application of the following factors: (1) Traffic volume; (2) crash experience; (3) traffic violations; and (4) alcohol and other drug usage in specific geographic areas. This selective utilization of manpower is one of the best usages of police resources and should have a substantial impact on traffic crash reduction. Virginia will spend federal funds totaling \$210,000 during FY 1973 on the various aspects of a selective traffic enforcement program. As of this writing, the Highway Safety Division is soliciting proposals from local governments for the initiation of the selective enforcement program.

### IV. Debris, Hazard Control and Cleanup

Local political subdivisions, in cooperation with the Commonwealth, are developing programs which provide for the rapid, orderly, and safe removal from the roadway of wreckage, spillage and debris resulting from motor vehicle crashes. Rapid cleanup should reduce the likelihood of secondary and chain reaction collisions and conditions which are hazardous to the public health and safety. A study has been conducted by Wilbur Smith and Associates which deals with Virginia's debris, hazard control and cleanup program. The study resulted in a manual being created which recommends procedures and guidelines for restoring an accident scene to its original condition.

This procedure manual is indexed, categorized, and designed for use by local and state officials. All known resources and capabilities for restoring the accident sites to safe conditions are listed with administrative officials who need to be notified for site restoration.

An important result of the study is the familiarization of each governmental agency and contributory group with its responsibility in the area of debris, hazard control and cleanup. Hopefully, this manual and follow-up meetings between state agencies will assure a more thorough understanding by public officials of the importance of debris control and cleanup and will ensure a uniform and effective statewide program in this subelement area.

At present, wrecker services in most cities and counties throughout the state are required to clean up all accident sites. The Virginia Department of Highways also has available special crews for debris cleanup in emergency situations as well as continuous cleanup of dead animals and trash from the highways. In addition, four regional training courses are proposed which would train appropriate local officials in the handling and disposition of hazardous materials as well as encouraging a uniform debris, hazard control and cleanup program.

U.S. DEPARTMENT OF TRANSPORTATION  
 NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION  
 FEDERAL HIGHWAY ADMINISTRATION

STATE  
 VIRGINIA

FORM APPROVED  
 OMB No. \_\_\_\_\_

COMPREHENSIVE HIGHWAY SAFETY PLAN - PROGRAM ELEMENT PLAN (PEP)

1. PROGRAM ELEMENT TITLE  
**TRAFFIC COURTS AND ADJUDICATION**

1549

2. PROGRAM ELEMENT WILL IMPLEMENT STANDARDS CHECKED	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
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3. SUBELEMENTS	4. ESTIMATED COSTS (In Thousands)											
	FY 1974			FY 1975			FY 1976			FY 1977		
	TOTAL	S/L	FED.	TOTAL	S/L	FED.	TOTAL	S/L	FED.	TOTAL	S/L	FED.

Traffic Courts and Adjudication	1500.	1350.	150.	1650.	1450.	200.	1850.	1550.	300.	2000.	1650.	350.
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5. TOTAL	1500.	1350.	150.	1650.	1450.	200.	1850.	1550.	300.	2000.	1650.	350.
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6. PREPARED BY						7. APPROVED BY						
NAME AND TITLE			AGENCY			NAME AND TITLE			AGENCY			DATE
C. H. Simpson, Jr. Hwy. Res. Analyst			High. Res. Council									10-15-72

## TRAFFIC COURTS AND ADJUDICATION

### I. Traffic Courts and Adjudication

Basic to any discussion of the Virginia traffic court system is a general understanding of its structure. In general, the majority of traffic offenders enter the traffic court system in a "court not of record", which is a court having jurisdiction limited to claims of \$3,000 or less and to trials of misdemeanors (most traffic offenses being misdemeanors). From that point, appeals may proceed to the circuit court level, and, in a few instances, to the Virginia Supreme Court of Appeals. While this analysis is a bit oversimplified, it suffices for purposes of discussion due to the fact that the majority of offenses are disposed of at the lowest level (the court not of record). Consequently, it is this court that potentially has the greatest impact on the bulk of traffic offenders.

In recognition of the importance of a viable traffic law system in achieving the deterrence of behavior involving risk to the motoring public, a good deal of critical analysis is being directed toward the Virginia traffic court system. The first phase of the analysis consisted of a contract between the Highway Safety Division and Peat, Marwick, Mitchell, and Co. (consultants) to study the Virginia traffic court system in terms of its impact on highway safety and to determine the degree of compliance with the NHTSA standards dealing with traffic courts. A number of the study's recommendations have acted upon: (1) Perhaps the major recommendation of the study was the suggestion that a standardized administrative procedures manual be developed for the use of the lower courts. While the Supreme Court has promulgated rules of procedure for other courts, as yet, it has not promulgated rules for the courts not of record. There is, however, a degree of uniformity among local courts due to the fact that a committee of judges proposed rules some years ago, many of which were adopted by the courts. Nevertheless, the study noted that there was little standardization of approach among the courts.

To rectify the situation, a committee was appointed by Chief Justice Snead of the Virginia Supreme Court to develop such a manual. The committee is

composed of judges, members of the Attorney General's staff, and a professional staff of consultants consisting of practicing attorneys, law professors, etc. The manual is expected to cover procedures for criminal courts and juvenile and domestic relations courts as well as traffic courts. Its funding will be provided from both highway safety funds and a LEAA grant. Completion of the manual is expected during the next fiscal year. It is expected that the availability of the manual will be of substantial benefit to traffic court judges in the operation of their courts, particularly to the newer judges, as well as contributing to the overall image of the system in the eyes of the public by promoting uniform treatment within the state regardless of the locality wherein the offense occurs.

(2) Related to the goal of improving the image of the court is the question of the adequacy of court facilities. The study found that a number of the courts visited were operating under near deplorable conditions. Given the importance of having the proper indicia of authority to administration of justice, the Highway Safety Division has initiated a court restoration project to enable the courts to meet certain minimum standards deemed necessary in a court of law for the efficient administration of justice. Courts where restoration has been completed include those of Patrick County and the City of Galax. The court serving the City of Norton is undergoing construction at this time. (3) Two of the study's recommendations related to the present traffic records system in terms of its inability to provide quick and efficient access to driver record information and the inadequacy of current statistical data. The problems with the present traffic records system stem partly from the fact that the conversion from manual to automated record keeping has largely proceeded on a one-to-one basis, resulting in underutilization of existing equipment, inadequate interfacing between competing data systems, duplicative efforts, and slow, costly data retrieval. In an effort to reach a solution, a traffic records committee was formed, consisting of representatives from the Highway Safety Division, the Division of Motor Vehicles, the Department of Highways, the State Police, the Division of Automated Data Processing, the Driver Education Services, the Department of Health, and personnel from various local police departments. A subcommittee thereof was engaged in a feasibility study to identify statewide needs for data output, and the report of this subcommittee has been completed.

If the recommendations of this group are adopted, a central authority would be established with overall supervisory responsibility for record



keeping. Data users could then address inquiries, complaints, etc. to one office instead of encountering the diffuse authority which presently exists. One new data item which the new traffic records system will produce is the convictions/summons rate, so as to enable researchers to assess the relative leniency of different jurisdictions in enforcing traffic laws.

As there always exists the need for increased opportunities for exchanges between judicial personnel, an annual seminar is being planned in order to provide additional training for judges, as well as to promote an interchange of ideas as to the proper administration of justice and interpretation of existing and new legislation.

Finally, greater involvement of the judicial system in the rehabilitation of problem drivers is contemplated. Through the cooperation of local courts, traffic offenders are being processed through violator schools held in local educational facilities, with an eye to reeducating the driver rather than punishing him. Examples of this approach already exist in the Falls Church and Fairfax County areas.

U.S. DEPARTMENT OF TRANSPORTATION NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION FEDERAL HIGHWAY ADMINISTRATION							STATE VIRGINIA				FORM APPROVED OMB No. _____														
COMPREHENSIVE HIGHWAY SAFETY PLAN - PROGRAM ELEMENT PLAN (PEP)							1. PROGRAM ELEMENT TITLE EMERGENCY MEDICAL SERVICES																		
2. PROGRAM ELEMENT WILL IMPLEMENT STANDARDS CHECKED							0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
																		X							
3. SUBELEMENTS							4. ESTIMATED COSTS (In Thousands)																		
							FY 1974			FY 1975			FY 1976			FY 1977									
							TOTAL	S/L	FED.	TOTAL	S/L	FED.	TOTAL	S/L	FED.	TOTAL	S/L	FED.							
Emergency Medical Services all Facilities							2646.	2283.	363.	2581.	2231.	350.	2968.	2593.	375.	3413.	3013.	400.							
Communications							2800.	2700.	100.	20.	10.	10.	20.	10.	10.	20.	10.	10.							
5. TOTAL							5446.	4983.	463.	2601.	2241.	360.	2988.	2603.	385.	3433.	3023.	410.							
6. PREPARED BY							7. APPROVED BY																		
NAME AND TITLE S. Hellman, Supervisor				AGENCY EMS Dept. of Health			NAME AND TITLE W. R. Southward, Jr. M. D.				AGENCY Dept. of Health			DATE 10-15-72											

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## EMERGENCY MEDICAL SERVICES

### I. EMS Facilities

Prior to the action of the 1968 General Assembly, the Commonwealth of Virginia did not have laws governing the operation of emergency medical service vehicles (ambulance services) nor were there any requirements for medical supplies or equipment. Ambulance attendants who were directly or indirectly involved in handling victims of motor vehicle accidents or sudden illness were not required to have specialized training. The possession of a valid American Red Cross advanced first aid card or a United Bureau of Mines card was sufficient.

The ambulance situation prior to 1968 was of little concern to most localities. If an ambulance was needed, contact was made with a funeral home, fire company, private establishment, or the rescue squad. These services were generally used only as a means of transportation for the sick, injured, helpless or incapacitated. Emergency care at the scene or enroute to a medical facility was practically nonexistent. The services rendered were very inadequate and the special emergency care equipment aboard the ambulance could not be used by the attendants with confidence.

The General Assembly of 1968 enacted under Title 32 a new chapter 16.1 governing ambulance operations. The law included the creation of an Advisory Committee on Emergency Medical Services to establish standards, rules, and regulations governing emergency services. The Governor created by executive order the Office of Emergency Medical Services within the Department of Health. A study was made of emergency medical services in Virginia in 1968. This study revealed that only 82 percent of the ambulance attendants held a valid advanced class first aid training card and only 65 percent of the 814 ambulances had

two-way radios; seven of the 96 Virginia counties were without emergency medical service based within their boundaries; 27 counties had inadequate ambulance coverage; and 10 counties were in the process of establishing 13 emergency medical agencies. Local agencies and civic clubs were approached with a suggested plan to organize an operational local emergency medical service agency. Progress has been made since 1968 in overcoming the deficiencies mentioned above. Today (1972) in Virginia there are 208 volunteer rescue or life saving squads and another 90 fire companies maintaining ambulance services. In addition, there are 82 funeral homes offering ambulance transportation. The total number of emergency medical service agencies is 411, but there continues to be a lack of an emergency medical service agency within the confines of several political subdivisions. Three counties lack emergency medical service, and the citizens depend on neighboring jurisdictions for emergency service assistance. One city bordering another city lacks an emergency medical service base of operation. The maximum response time should be 20 minutes, and most of the 135 political subdivisions can meet this response time.

## II. Communications

A recent study of existing emergency medical service two-way radio communications installations showed that 85 percent of the agencies had voice contact with their base of operations. Only 10 percent of the present 411 individual base agencies have voice contact with medical facilities.

The emergency medical services now has a priority program to expand communications in ambulances and health care facilities. Funds have been requested for fiscal years 1973-75 to initiate a statewide emergency health-medical service communications system. The statewide system will require cooperative work and support from other state agencies -- The Virginia Hospital Association, Regional Medical Program, and Comprehensive Health Planning. Local participation will be expected.

Communications facilities are essential for the mobilization of rescue squads and equipment is needed for the establishment of an "on-site" center whereby law enforcement personnel, emergency ambulance

crews, and highway and utility authorities are immediately advised of existing circumstances and anticipated future action. This will enable all personnel involved to: (a) Provide emergency care and transportation for all injured; (b) prevent any additional mishaps at the scene; and (c) restore movement of traffic and repair utilities as soon as possible.

The communications control center can advise medical facilities of the number and types of injuries while ambulances are enroute and can reroute ambulances to another medical facility when the assigned facility is overcrowded. Improved communications can provide for adequate physician and nursing teams in the emergency room to receive the injured and thereby reduce waiting time. Communications control can also locate life saving medical supplies and drugs at facilities within the state or in neighboring states.

Immediate voice radio communications between the ambulance, the emergency room, and other medical centers will be instrumental in saving lives, particularly in times of disaster.

#### Comprehensive Health Planning

The Commonwealth has developed a master Comprehensive Health Planning Program. Twenty-two regional comprehensive Health Planning Districts will make in-depth studies of the needs of their respective cities and counties. Present and projected needs of emergency medical and emergency health services will be categorized. Assistance to local Emergency Medical Services Advisory Committees in seeking federal funds will be provided.

#### Regional Medical Program

The Virginia Regional Medical Program has met several times this year and is favorably inclined toward development of a statewide Emergency Health and Service communications project. Representatives of Emergency Health and Emergency Medical personnel of the State Department of Health have been selected by the Commissioner of Health to meet with the Director and several key staff members of the Virginia Regional Medical Programs

Office. A project has been submitted to begin this program. Due to the vast amount of funds that will be required, this statewide Emergency Medical Service Communications project will require the heaviest expenditures in the 1974-75 fiscal year until completion in 1975.

#### Training

Training has been categorized as a priority item along with improved communications. In 1968, 82 percent of the ambulance attendants were trained in advanced first aid. In 1970, this percentage climbed to 90 percent, and as of October 1971, 98 percent of the attendants had advanced first aid training. In 1972, the percentage reached 98.6 percent.

The Emergency Medical Technician Training Program began in 1971. A 71-hour paramedic training program has been adopted as the course of instruction for all potential emergency medical technicians. The training program was endorsed by the Medical Society of Virginia and the Virginia Association of Volunteer Rescue Squads.

During the present fiscal year, over 1,500 persons will satisfactorily complete this course. Each subsequent year, the Office of Emergency Medical Services will graduate a minimum of 1,000 emergency medical technicians. There will be a 20-hour refresher course during 1973 and each year thereafter. The refresher course will be required every three years.

In summary, the Emergency Medical Services has made significant gains since the enactment of the 1968 Chapter 16.1 of the Virginia Code concerning ambulances. New rules and regulations have been established concerning emergency medical care. Advanced first aid training under the Emergency Medical Technician Training Program has been implemented as a standard for all attendants. Funds have been requested for initiation of a statewide emergency health/medical services communications system. Improvement in these areas should enable the Emergency Medical Services to continue with an effective program.

Efforts during the previous year, as indicated by field staff, show continued progress toward meeting state goals. New agencies automatically replaced the few that ceased operations. Training and communications have been categorized as "top priority" for our operation during the remainder of this year and in the following fiscal years. The recognition by the Department of Transportation, Emergency Medical Service Program Division, of Virginia as a model state in the implementation of standard 311 is gratifying; yet, much of this credit must be given to the individuals and Emergency Medical Service organizations throughout the Commonwealth that continue to serve those who are sick, injured, wounded or helpless.

U.S. DEPARTMENT OF TRANSPORTATION NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION FEDERAL HIGHWAY ADMINISTRATION							STATE VIRGINIA					FORM APPROVED OMB No. _____													
COMPREHENSIVE HIGHWAY SAFETY PLAN - PROGRAM ELEMENT PLAN (PEP)							1. PROGRAM ELEMENT TITLE HIGHWAY AND TRAFFIC SAFETY ENGINEERING																		
2. PROGRAM ELEMENT WILL IMPLEMENT STANDARDS CHECKED							0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
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3. SUBELEMENTS							4. ESTIMATED COSTS (In Thousands)																		
							FY 1974			FY 1975			FY 1976			FY 1977									
							TOTAL	S/L	FED.	TOTAL	S/L	FED.	TOTAL	S/L	FED.	TOTAL	S/L	FED.							
Highway Design, Construction and Maintenance - VDH							445676.	445676.	-	461323.	461323.	-	477649.	477649.	-	494595.	494595.	-							
Highway Design, Construction and Maintenance - Cities							44874.	35900.	8974.	42610.	34941.	7669.	40001.	34001.	6000.	41487.	34642.	6845.							
Highway Design, Construction and Maintenance - USD							100.	100.	-	100.	100.	-	100.	100.	-	100.	100.	-							
5. TOTAL							490650.	481676.	8974.	504033.	496364.	7669.	517750.	511750.	6000.	536182.	529337.	6845.							
6. PREPARED BY							7. APPROVED BY																		
NAME AND TITLE C. O. Leigh, Maint. Eng. P. P. Coldiron-Location & Des. Eng. " " R-340 F. L. Furroughs-Constr. Eng. C. H. Simpson, Jr. Hwy. Res. Analyst - High. Res. Council							AGENCY Va. Dept. of High.					NAME AND TITLE					AGENCY			DATE 10-15-72					

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U.S. DEPARTMENT OF TRANSPORTATION NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION FEDERAL HIGHWAY ADMINISTRATION										STATE VIRGINIA					FORM APPROVED OMB No. _____													
COMPREHENSIVE HIGHWAY SAFETY PLAN - PROGRAM ELEMENT PLAN (PEP)										1. PROGRAM ELEMENT TITLE HIGHWAY AND TRAFFIC SAFETY ENGINEERING																		
2. PROGRAM ELEMENT WILL IMPLEMENT STANDARDS CHECKED										0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
																			X									
3. SUBELEMENTS										4. ESTIMATED COSTS (In Thousands)																		
										FY 1974			FY 1975			FY 1976			FY 1977									
										TOTAL	S/L	FED.	TOTAL	S/L	FED.	TOTAL	S/L	FED.	TOTAL	S/L	FED.							
Identification and Surveillance of Accident Locations - VDH										396.	396.	-	407.	407.	-	418.	418.	-	430.	430.	-							
Identification and Surveillance of Accident Locations - HSD										250.0	125.0	125.0	280.0	140.0	140.0	320.0	160.0	160.0	376.	188.	188.							
Identification and Surveillance of Accident Locations - Cities										550.0	350.0	200.0	560.0	385.0	175.0	625.0	401.0	224.0	610.0	389.0	221.0							
5. TOTAL										1196.	871.	325.0	1247.	932.	315.0	1363.	979.	384.0	1416.	1007.	409.							
6. PREPARED BY					7. APPROVED BY																							
NAME AND TITLE F. F. Small, High. Traffic Eng.					AGENCY Va. Dept. of Highways					NAME AND TITLE					AGENCY					DATE 10-15-72								

R-340 C. H. Simpson, Jr. Highway Res. Analyst - Highway Research Council

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U.S. DEPARTMENT OF TRANSPORTATION NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION FEDERAL HIGHWAY ADMINISTRATION							STATE VIRGINIA					FORM APPROVED OMB No. _____								
COMPREHENSIVE HIGHWAY SAFETY PLAN - PROGRAM ELEMENT PLAN (PEP)							1. PROGRAM ELEMENT TITLE HIGHWAY AND TRAFFIC SAFETY ENGINEERING													
2. PROGRAM ELEMENT WILL IMPLEMENT STANDARDS CHECKED		0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
															X					
3. SUBELEMENTS		4. ESTIMATED COSTS (In Thousands)																		
		FY 1974			FY 1975			FY 1976			FY 1977									
		TOTAL	S/L	FED.	TOTAL	S/L	FED.	TOTAL	S/L	FED.	TOTAL	S/L	FED.							
Traffic Control Devices - VDH		5470.0	5470.0	-	6066.0	6066.0	-	6184.0	6184.0	-	6779.0	6779.0	-							
Traffic Control Devices - Cities		4001.0	3281.	720.	4035.0	3350.	685.	4091.0	3396.	695.	4126.0	3425.	701.							
Traffic Control Devices - HSD		100.0	100.0		110.0	110.0		120.0	120.0		135.0	135.0								
5. TOTAL		9571.0	8851.	720.	10211.0	9526.	685.	10395.0	9700.	695.	11040.0	10339.	701.							
6. PREPARED BY							7. APPROVED BY													
NAME AND TITLE				AGENCY			NAME AND TITLE				AGENCY		DATE							
J. C. Pullock, Jr. Traffic Engr.				Va. Dept. of Highways									10-15-72							

R-340 C. H. Simpson, Jr. Highway Res. Analyst - Highway Res. Council

U. S. DEPARTMENT OF TRANSPORTATION NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION FEDERAL HIGHWAY ADMINISTRATION										STATE VIRGINIA					FORM APPROVED OMB No. _____													
COMPREHENSIVE HIGHWAY SAFETY PLAN - PROGRAM ELEMENT PLAN (PEP)										1. PROGRAM ELEMENT TITLE HIGHWAY AND TRAFFIC SAFETY ENGINEERING																		
2. PROGRAM ELEMENT WILL IMPLEMENT STANDARDS CHECKED										0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
																								X				
3. SUBELEMENTS										4. ESTIMATED COSTS (In Thousands)																		
										FY 1974			FY 1975			FY 1976			FY 1977									
										TOTAL	S/L	FED.	TOTAL	S/L	FED.	TOTAL	S/L	FED.	TOTAL	S/L	FED.							
Pedestrian Safety — FHWA										110.0	50.0	60.0	125.0	60.0	65.0	140.0	65.0	75.0	160.0	70.0	90.0							
5. TOTAL										110.0	50.0	60.0	125.0	60.0	65.0	140.0	65.0	75.0	160.0	70.0	90.0							
6. PREPARED BY										7. APPROVED BY																		
NAME AND TITLE					AGENCY					NAME AND TITLE					AGENCY				DATE									
C. H. Simpson, Jr. High. Res. Analyst - High. Res. Council																			10-15-72									

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## HIGHWAY AND TRAFFIC SAFETY ENGINEERING

### I. Highway Design, Construction, and Maintenance

Virginia's administrative organization lends itself to a two-part division of authority, one program operating under the auspices of the Department of Highways and another under the direction of the cities. The Virginia Department of Highways has jurisdiction over all highways within the 171 municipalities which have populations of less than or equal to 3,500. This amounts to over 50,000 miles of highways. The remaining 10,000 miles of roadways are within the jurisdiction of the cities with populations of over 3,500, which also include the counties of Arlington and Henrico. There are 59 municipalities and two counties which design, construct, and maintain their own highways, and are responsible for identification and surveillance of accident locations and traffic control devices in their areas. The Department of Highways works with these municipalities in this endeavor.

The long-term goal of the highway design, construction, and maintenance programs in Virginia cities, as well as in the Virginia Department of Highways, is to reduce the number of traffic crashes including fatalities, personal injuries and property damage attributed to poorly designed, constructed, and maintained highways by providing adequate design, construction and maintenance of all roadways.

Objectives established by these 61 political subdivisions to provide safe streets and highways include the following: Assure that new and existing streets and highway systems are designed, constructed, and maintained in a manner that promotes safety; assure that capital improvements either to modernize roads or install new facilities meet approved safety standards; assure that precautions are taken to protect passing motorists as well as highway workers from accident involvement at highway construction sites; reduce crashes by emphasizing overhead and sight distance restrictions.

In order to accomplish these goals the cities throughout Virginia, with assistance from the Highway Department, plan to develop and implement many of the following programs: (1) Establish means of communications with all city agencies, with the immediate task of acquiring radio equipment capable of monitoring other city frequencies; (2) Install electronic warning devices near overhead obstructions; (3) Remove sight distance obstructions where accident experience has been great; (4) Rebuild arterial routes into 4 lane streets; (5) Adopt ordinances requiring commercial entrances to meet state highway standards; (6) Construct parking garages to eliminate on street parking; (7) Establish needs; (8) Improve street lighting and street paving in locations where the pavement is slick; (9) Develop proper procedures for roadway and roadside maintenance; (10) Construct already planned loops and roadways; (11) Survey railroad grade crossings and recommend safety features; (12) Programs for installing guardrails at hazardous locations and for the updating of guardrails will be developed and implemented. (13) Bridge widening; (14) Employ competent structural engineers to inspect bridges not under the VDH jurisdiction; (15) Hire personnel and provide proper training and equipment; (16) Install signs at freeway interchanges directing motorists to hospitals having emergency care capabilities.

In addition, the Highway Safety Division plans to continue its program of intersection studies for local governments. These studies may prove beneficial to local political subdivisions by suggesting how the design, construction, or maintenance variables of a particular intersection may be improved.

## II. Identification and Surveillance of Accident Locations

The long-term goal of the Highway Department's program in this subelement of Highway and Traffic Safety Engineering is to reduce the number of traffic crashes including severe injuries and property damage by identification and surveillance of accident locations, location correction and follow-up evaluations and analyses.

The contiguous objective of this program is to establish an accident identification and surveillance system consistent with increasing volumes in traffic and accident demands, utilizing a continuous automatic data processing identification system to provide maximum and definite coverage.

1565 The initial phase of this system consists of programs which correlate accidents, traffic and geometrics. This, in turn, allows for identification and evaluation of individual locations based on geometrical differentials and enables the establishment of critical rates for each type of facility. The second phase of the system requires a continuous data base for determining the effectiveness measure of each type of improvement in relation to adjacent geometrics, traffic volumes and community characteristics. The final phase entails a continuous analysis system for program data and findings. This includes location selection, improvement requirements, benefit/cost analysis, construction implementation and after studies with findings fed back into the data base.

The Highway Safety Division of Virginia has founded a crash investigation team. The team conducts indepth investigations of accidents in attempting to uncover contributory factors to accident causation. By pinpointing and rectifying those factors which may lead to motor vehicle crashes, a reduction in the number of crashes, including fatalities, injuries, and property damage, should result. Plans are being formulated to establish additional crash investigation teams to serve in various localities throughout the state.

The Highway Department, Highway Safety Division and personnel representing the cities not under the jurisdiction of the VDH will jointly implement:

- (1) A statewide locator system that will provide the means for accurate and uniform recording of accident locations continuously on all interstate, primary, and secondary roads, as well as satisfy the internal needs for recording highway locations at the Department of Highways.
- (2) Traffic conflict studies will be further integrated into the program to determine improvement needs at identified locations.
- (3) A photograph logging system will be purchased for identification of accident locations;
- (4) Increased utilization of the findings of the multidisciplinary accident team.

The cities (all those jurisdictions with a population greater than 3,500) have in the past been hampered in their efforts by lack of organization and adequate funding. Traditionally their program to identify accident locations has been solely a manually developed spot map for each city listing all previous accident locations. A tentative attempt to mimic the Highway Department "before and after" studies through multidisciplinary teams is being pursued; but again lack of funds has been the most significant limiting factor. The Highway Safety Division is helping out by hiring consultants to work with the cities and counties. It is hoped that these additional employees will create more efficient programs for identifying traffic sites and also formulate effective countermeasures after indepth studies of accident locations.

Finally a publication of Crash Facts focusing on the local jurisdictions will provide a more accurate picture of existing trends relating highway safety design to accident causation. Every locality will then know exactly how well its traffic safety program is progressing.

In sum, the effectiveness of city programs for the identification and surveillance of accident locations depends primarily on the efforts of local officials. If these administrators are unconvinced of the worth of the program their individual commitments will be correspondingly diminished. It takes a strong public and private stance in support of these programs to both increase budgetary outlays and mobilize supportive personnel. Recognizing this need the Highway Safety Division has vigorously pushed its educational campaign toward city officials so as to create a more favorable operating climate.

### III. Traffic Control Devices

The Virginia Department of Highways long-term goal in this field is to reduce the number of traffic crashes, fatalities, personal injuries and property damage due to lack of and/or improper control devices throughout the state. The VDH plans to improve the program by continuing to improve and update all traffic control devices as need demands. It is VDH policy, upon notice of a high accident location, to investigate

said location, with the use of specially trained personnel, and make recommendations accordingly. Breakaway signs are now installed at new sign locations and also where replacements have to be made. Changeable message signs are being considered for installation on certain Virginia highway systems. These signs may prove beneficial in the realization of outlined goals in this area. The VDH plans to work with the Traffic Records Committee to develop a more effective evaluation of the program by keeping records on traffic signals that have been improved since 1969. It is anticipated that more effective evaluation of the program can be made upon completion of the state's new traffic records data system.

In Virginia those municipalities not under the jurisdiction of the Virginia Department of Highways install and maintain all traffic control devices and apply traffic control tactics when the need arises. Their objective is to reduce the number of crashes including fatalities, personal injuries and property damage caused by (1) nonuniform markings and signing, and (2) poor traffic markings and signing.

In order to reduce the number of crashes attributed to poor signing and marking practices, local officials, with guidance from the Virginia Department of Highways, intend to implement proper and modern traffic engineering principles and uniform standards for traffic control.

Programs that will be initiated by the Highway Safety Division to achieve the aforementioned objectives are:

- (1) The hiring of traffic engineers to work with those jurisdictions unable to justify a full-time traffic engineering staff.
- (2) Establishment of a training program for upgrading the skills of practicing engineers, and provisions of basic instruction in traffic engineering techniques to subprofessionals and technicians.
- (3) Establish a program for a complete inventory of all TCDs in every city to determine needs and deficiencies.
- (4) A periodic review of existing traffic control devices, including a systematic upgrading of substandard devices to conform with standards issued or endorsed by the FHWA.



- (5) Establish a maintenance program to ensure proper operations and timely repair of control devices, including daytime and nighttime inspection.
- (6) Initiate programs utilizing traffic engineering manpower.

Several communities are presently installing Opticom, which should reduce the amount of time required by fire department vehicles and ambulances to reach the emergency situation and at the same time prevent congestion and hazardous conditions at major intersections.

#### IV. Pedestrian Safety

The objective of the pedestrian safety program is to reduce the number of accidents, including fatalities, personal injury and property damage, attributed to lack of sufficient sidewalks and the proper lighting in areas of high volume pedestrian traffic. The municipalities in Virginia plan to:

- (1) Establish a program to identify high volume-pedestrian related accidents;
- (2) Construct additional sidewalks in the vicinity of the schools and communities;
- (3) Initiate studies to determine areas where additional sidewalks are needed;
- (4) Install lighting in the areas of high pedestrian volume;
- (5) Development of a manual on pedestrian crossing markings to assure the proper maintenance of pedestrian crossings;
- (6) Construction of pedestrian barriers at intersections and crosswalks.



SUMMARY OF COSTS

U. S. DEPARTMENT OF TRANSPORTATION NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION SUMMARY OF COSTS - COMPREHENSIVE PLAN							STATE Virginia			Page _____ of _____ Pages			Form Approved OMB No. _____		
Program Elements and Subelements	Estimated Costs									(In Thousands of Dollars)					
	FY 1974			FY 1975			FY 1976			FY 1977			TOTALS		
	Total	S/L	Fed.	Total	S/L	Fed.	Total	S/L	Fed.	Total	S/L	Fed.	Total	S/L	Fed.
<b>Program Administration &amp; Evaluation</b>															
Administration of Highway Safety Programs	747.5	431.5	316.	1035.8	620.4	415.4	1099.	653.	446.	1171.5	693.5	478.	4053.8	2398.4	1655.4
Evaluation	130.	110.	20.	175.	125.	50.	220.	140.	80.	265.	170.	95.	790.	545	245.
Manpower Training	35.	0	35.	44.	0	44.	51.	0	51.	62.	0	62.	192.	0	192.
Traffic Records - Statewide	170.	85.	85.	170.	85.	85.	180.	90.	90.	185.	92.5	92.5	705.	352.5	352.5
Traffic Records - DMV	3837.	3740.	97.	4012.	4012.	0	4213.	4213.	0	4423.	4423.	0	16485.	16388.	97.
Traffic Records - State Police	57.	49.	8.	56.	47.	9.	45.	40.	5.	43.	37.	6	201.	173.	28.
Traffic Records - VDH	1300.	200.	1100.	1400.	250.	1150.	1550.	300.	1250.	1600.	400.	1200.	5858.	1150.	4700.
	6276.5	4615.5	1661.	6892.8	5139.4	1753.4	7358.	5436.	1922.	7749.5	5816.5	1933.5	28276.8	21006.9	7269.9
<b>Traffic Laws and Regulations</b>															
Uniform Traffic Laws & Regulations	110.	55.	55.	126.	63.	63.	145.	72.5	72.5	166.	83.	83.	547.	273.5	273.5
Alcohol and Other Drugs	627.	341.	286.	718.	382.	336.	793.3	429.1	364.2	871.	475.	396.	3069.3	1627.1	1382.2
	737.	396.	341.	844.	445.	399.	938.3	501.6	436.7	1037.	558.	479.	3556.3	1900.6	1655.7
<b>Vehicle Requirements</b>															
Motor Vehicle Inspection	443.	443.	0	485.	485.	0	539.	539.	0	581.	581.	0	2048.	2048.	0
Motor Vehicle Registration	7315.	7315.	0	7683.	7683.	0	8067.	8067.	0	8470.	8470.	0	31535.	31535.	0
	7758.	7758.	0	8168.	8168.	0	8606.	8606.	0	9051.	9051.	0	33583.	33583.	0
<b>Traffic Safety Education</b>															
Driver Education	19765.	19345.	420.	23746.	23214.	532.	28514.	27860.	654.	34277.	33507.	770.	106302.	103926.	2376.
Motorcycle Education	115.	70.	45.	130.	80.	50.	150.	90.	60.	175.	105.	70.	570.	345.	225.
Pedestrian Safety	105.	25.	80.	115.	30.	85.	130.	35.	95.	150.	90.	60.	500.	180.	320.
Pupil Transportation Safety	37200.	35890.	1310.	38100.	37840.	260.	40000.	39740.	260.	42900.	42640.	260.	158200.	156110.	2090.
	57185.	55330.	1855.	62091.	61164.	927.	68794.	67725.	1069.	77502.	76342.	1160.	265572.	260561.	5011.
<b>Driver Licensing</b>															
Driver Testing	3191.	3062.	129.	3235.	3215.	20.	3376.	3376.	0	3545.	3545.	0	13347.	13198.	149.
Driver Licensing	1935.	1935.	0	2032.	2032.	0	2134.	2134.	0	2241.	2241.	0	8342.	8342.	0
Driver History Records	2418.	2418.	0	2539.	2539.	0	2666.	2666.	0	2799.	2799.	0	10422.	10422.	0
Driver Privilege Monitoring and Control	1251.	1171.	80.	1314.	1230.	84.	1380.	1380.	0	1449.	1449.	0	5394.	5230.	164.
Driver Vehicle Registration Monitoring and Control	1869.	1869.	0	1962.	1962.	0	2060.	2060.	0	2163.	2163.	0	8054.	8054.	0
Program Administration	96.	96.	0	101.	101.	0	106.	106.	0	111.	111.	0	414.	414.	0
	10760.	10551.	209.	11183.	11079.	104.	11722.	11722.	0	12308.	12308.	0	45973.	45660.	313.
<b>Police Traffic Services</b>															
Police Traffic Services	39580.	38880.	700.	45265.	44465.	800.	46705.	45805.	900.	48501.	47501.	1000.	180051.	176651.	3400.
Selective Traffic Law Enforcement	100.	50.	50.	100.	50.	50.	100.	50.	50.	100.	50.	50.	400.	200.	200.
Debris, Hazard Control and Cleanup	622.	472.	150.	632.	532.	100.	651.	556.	95.	687.	597.	90.	2592.	2157.	435.
	40302.	39402.	900.	45997.	45047.	950.	47456.	46411.	1045.	49288.	48148.	1140.	183043.	179008.	4035.
<b>Traffic Courts and Adjudication</b>															
Traffic Courts and Adjudication	1500.	1350.	150.	1650.	1450.	200.	1850.	1550.	300.	2000.	1650.	350.	7000.	6000.	1000.
	1500.	1350.	150.	1650.	1450.	200.	1850.	1550.	300.	2000.	1650.	350.	7000.	6000.	1000.
<b>Emergency Medical Services</b>															
EMS Facilities	2646.	2283.	363.	2581.	2231.	350.	2968.	2593.	375.	3413.	3013.	400.	11608.	10120.	1488.
Communications	2800.	2700.	100.	20.	10.	10.	20.	10.	10.	20.	10.	10.	2860.	2730.	130.
	5446.	4983.	463.	2601.	2241.	360.	2988.	2603.	385.	3433.	3023.	410.	14468.	12850.	1618.
<b>TOTAL ESTIMATED COSTS FOR SUPER EIGHT STANDARDS</b>	129964.5	124385.5	5579.	139426.8	134733.4	4693.4	149712.3	144554.6	5157.7	162368.5	156896.	5472.5	581472.1	560569.5	20902.6
<b>Highway and Traffic Safety Engineering</b>															
Highway Design, Construction and Maintenance	490650.	481676.	8974.	504033.	496364.	7669.	517750.	511750.	6000.	536182.	529337.	6845.	2048615.	201912.7	29488.
Identification and Surveillance of Accident Locations	1196.	871.	325.	1247.	932.	315.	1363.	979.	384.	1416.	1007.	409.	5222.	3789.	1433.
Traffic Control Devices	9571.	8851.	720.	10211.	9526.	685.	10395.	9700.	695.	11040.	10339.	701.	41217.	38416.	2901.
Pedestrian Safety	110.	50.	60.	125.	60.	65.	140.	64.	75.	160.	70.	90.	535.	245.	290.
<b>TOTAL ESTIMATED COSTS FOR THREE PLUS STANDARDS</b>	501527.	491448.	10079.	515616.	506882.	8734.	529648.	522494.	7154.	548798.	540753.	8045.	2095589.	2061577.	34012.
<b>GRAND TOTAL</b>	631491.5	615833.5	15658.	655042.8	641615.4	13427.4	679360.3	667048.6	12311.7	711166.5	697649.	13517.5	2677061.1	2622146.5	54914.6