IOWA'S HIGHWAY SAFETY COMPREHENSIVE PLAN

Fiscal Year 1974 - Fiscal Year 1977

Prepared by

The Office for Planning and Programming

in conjunction with:

Department of Public Safety
Department of Public Instruction
Iowa Department of Health
Iowa Law Enforcement Academy
Iowa Highway Commission

STATE OF Iowa

CERTIFICATE OF COMPLIANCE WITH
REQUIREMENTS OF 23 U.S.C. 402(b)(1)

I hereby certify that:

(a) The Governor is responsible for the administration of the State's highway safety program through the Office for Planning and Programming (Name of State Agency) in accordance with Chapter 7.15, Code of Iowa 1971 (Statute, Executive Order, Directive).

(b) The political subdivisions of the State are authorized by Chapter 7.15, Code of Iowa 1971 (Statute, Executive Order, Directive), to carry out local highway safety programs within their jurisdictions as a part of the State highway safety program if such local highway safety programs are approved by the Governor and are in accordance with the uniform standards promulgated by the Secretary of Transportation under 23 U.S.C. 402.

(c) At least 40 per centum of all Federal funds apportioned to the State under 23 U.S.C. 402 for any fiscal year will be expended by the political subdivisions of the State in carrying out local highway safety programs authorized in accordance with 23 U.S.C. 402(b)(1)(B), except to the extent that this requirement has been waived by the Secretary of Transportation in accordance with 23 U.S.C. 402(b)(2).

(d) The aggregate expenditure of funds of the State and its political subdivisions, exclusive of Federal funds, for highway safety programs will be maintained at a level which does not fall below the average level of such expenditures for fiscal years 1965 and 1966.

(e) The State's highway safety program provides for a comprehensive driver training program which includes the elements specified in 23 U.S.C. 402(b)(1)(E).

Robert D. [illegible]
(Official Authorized by the Governor)

Governor's Representative for Highway Safety
(Title)

Jan. 11, 1973
(Date)

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I. EXECUTIVE SUMMARY

A. PROGRAM COMPOSITION

1. Iowa's Highway Safety Program as expressed by this plan was established by assessment, compliance review of National Standards, deficiency analysis, and subsequent expression of goals and objectives.

2. The specific Program Element Plans (PEPs) represent the commitment of various departments of Iowa government to accomplish the provisions of this plan.

3. The eleven PEPs were arrived at through a combination of generic program condensation of defined problem areas and executive discretion with regard to program management. The PEPs including the departments with input responsibility are:

a. Program Administration

(1) Office for Planning and Programming (OPP)

(2) Department of Public Safety (DPS)

(3) Department of Public Instruction (DPI)

(4) Iowa Department of Health (IDH)

(5) Iowa Highway Commission (HC)

b. Traffic Laws and Regulations

(1) OPP

(2) DPS

(3) Attorney General

c. Vehicle Requirements

(1) DPS

(2) DPI

d. Traffic Safety Education

(1) DPI

(2) DPS

e. Driver Licensing

(1) DPS

f. Police Traffic Services

(1) DPS

g. Traffic Courts and Adjudication

(1) OPP

(2) Iowa Courts Administrator

h. Emergency Medical Services

(1) IDH

i. Identification and Surveillance of Accident Locations

(1) HC

(2) DPS

j. Highway Design, Construction and Maintenance

(1) HC

k. Traffic Engineering Services

(1) HC

4. The administrative program responsibility resides with the Director of the Office for Planning and Programming (OPP) who acts as the Governor's Representative for Highway Safety. The Policies and Procedures Manual that governs the program is maintained by his office, and he is served by a Program Director, Coordinator, and Fiscal Manager. The Governor has assigned National Standard compliance to various agencies of state government. Each responsible State agency has personnel assigned specific highway safety duties. The PEPs are the expression of those agencies' solutions to Section II and Section III of this plan.

B. PROGRAM HIGHLIGHTS - PRIMARY GOALS AND OBJECTIVES

Iowa's traffic accident trends have been decreasing since 1966. The figures in this plan are largely taken from 1971 statistics. We experienced a slight increase in fatalities from 1971 to 1972, but this has been the pattern for the last ten (10) years. Even years are higher than the preceding odd year, but not as high as the previous even year.

From an analysis of these trends combined with a statistical breakdown of other traffic related data, certain problem areas have been identified. For the sake of continuity with the basic factors involved (human, vehicle, and environment), the problems are discussed in this plan under these three factors. Our basic task is to make these factors and their interaction as safe as possible. If a safety probability factor of 100 percent were assigned to each and we could ensure that each factor was 100 percent safe, we could predict with 100 percent assurity that there would be no accidents. Since we have not yet reached this level of achievement we will not offer a percentage or predict a level of decrease.

Some of the problems generally identified were:

1. Human Factor Problems

   a. The incidence of crashes in high traffic volume areas represents a large share of all accidents. This problem could be caused by deficiencies in any of the factors. We felt, however, that it was related more to driver error, thus making it a human factor problem.

   b. We also experience an inordinantly high percentage of crashes involving one vehicle. Again, all three factors could share problems resulting in this deficiency, but we choose to address it as

primarily a human factor.

c. There is a disproportionate involvement of the 15 to 24 year olds in our accident picture, even though our driver education programs reach 97 percent of those students eligible.

d. Alcohol, recreational vehicles and bicycles are some of the other statistically significant trends highlighting problems.

e. Problems not so readily identified through analysis relate to manpower development, planning, administration, pupil transportation and emergency medical services.

2. Vehicle Factor Problems

a. While data is insufficient to determine the extent malfunctioning vehicles play in our accident picture, we feel more cost effective efforts must be applied to our present system.

b. Motorcycle fatalities combined with an alarming rise in accidents will continue to be a problem until helmet legislation is passed. Operator efficiency must also be improved.

c. Analysis of vehicle data with other countermeasure data has been developed.

d. Certain deficiencies associated with school bus standards must be improved if we are to continue our record in this area.

3. Environmental Factor Problems

a. The project to readily locate high accident locations statewide continues to require close attention. We anticipate an operational system by the end of 1975.

b. The ability to identify environmental deficiencies and correct hazards along all roadways will require attention.

c. Railroad crossings and approaches must also receive attention.

The overall goal of this plan is to reduce the incidence of property damage, personal injury and fatal crashes that result from correctable deficiencies. This will be accomplished through countermeasure programs designed to attack deficiencies in the areas of driver, vehicle, and environment controls.

Specific objectives for this plan are:

1. To realize a reduction in all areas of crashes due to driver error. This will require more responsive education programs at all age levels, and stricter licensing programs designed to insure only qualified drivers are allowed to operate in the system.
2. We must identify the extent and impact drugs, including alcohol, are making on our crash experience and implement effective countermeasure programs to eliminate correctable deficiencies.
3. We must improve existing programs and design more cost efficient programs for insuring that vehicles in the traffic system are being properly maintained.
4. We must reduce high crash trends within seasonal and other fad type vehicles due to the increased number of operators who are not as proficient with that vehicle as their primary mode of transport. This includes motorcycles, campers, other recreational trucks, and bicycles.
5. We must reduce the incidence of crashes compounded by hazards adjacent to or within all highway right-of-ways.
6. We must improve our evaluation procedures to insure the programs are viable and producing the desired reductions in all types of crashes.
7. And lastly, we must insure that our crash data is pertinent, reliable, timely and truly represents all factors involved.

C. PROGRAM COMPLIANCE WITH REGARD TO THE 13 NHTSA EMPHASIS ITEMS FOR SPECIFIC ATTENTION

1. Motorcycle Safety Helmet Legislation - At the writing of this plan the State Senate had passed our bill worded in accordance with the National Model Legislation two (2) to one (1). We are anticipating opposition in the House, but are confident that legislation will be passed prior to this plan's implementation. The PEPs that will impact this area are:

a. Traffic Laws and Regulations (E-2)

b. Motor Vehicle Requirements (E-3)

c. Traffic Safety Education (E-4)

2. Blood Alcohol Concentration - The State is in compliance at .10; however, it is anticipated that further legislation will be introduced to provide guidelines for enforcement officers, and set lesser penalties for impairment at .05.

The PEPs that will impact this area are:

a. P & A (E-1)

b. Traffic Laws and Regulations (E-2)

c. Traffic Safety Education (E-4)

d. Police Traffic Services (E-6)

e. Traffic Courts (E-7)

3. Classified Drivers License - Preparations have been made to introduce legislation establishing a classified driver licensing system prior to implementation of this plan. If passed, the program should be completely operational by the end of the 1975 calendar year.

PEP E-5, Driver Licensing, will impact this area.

4. Periodic Motor Vehicle Inspection - While the State has an extensive inspection program for vehicles at time of title transfer and after a crash,

the inspection is not periodic. This program was developed as an interim measure to validate and justify the need for periodic inspection. It also provides time to allow the staff to develop proper planning and administrative capabilities. We will attempt to achieve legislative support for periodic motor vehicle inspection during the 1975 fiscal year, with a completed program by the end of the 1974 calendar year.

PEP E-3, Motor Vehicle Requirements, will impact this area.

5. Uniform Rules of the Road - Plans are underway to bring the State's Motor Vehicle Code into compliance by January 1, 1975.

PEP E-2, Traffic Laws and Regulations, will impact this area.

6. Driver License Advisory Board - While the State is in compliance with this activity, we intend to expand their role to insure coordination between driver improvement requirements and the licensing function.

7. Reporting of Traffic Court Convictions - We will attempt to secure 95 percent conviction reporting program during 1974, with a completed operational system by January 1, 1975.

8. Emergency Medical Services - The Comprehensive Plan has been submitted for approval. Legislation will be introduced establishing regulatory and certification requirements for ambulance attendants prior to implementation of this plan. The program should be operational on 1 July 1973.

PEP E-8, EMS, will impact this area.

9. Periodic Driver Reexamination - The state requires reexamination for visual acuity at least once every four years. Plans to require knowledge testing at the same time interval are being formulated now, with the intent of introducing legislation during the second session of the current General Assembly.

PEP E-5, Driver Licensing, will provide the capabilities necessary to expand into this activity.

10. School Bus Safety - The State currently has a safety administrator and provides school bus driver training through Area Schools and adult education. As soon as this program is expanded to handle the load, legislation will be introduced to require this training prior to licensing and subsequent school bus operation.

PEP E-4, Traffic Safety Education, will impact this area with specific programs and activity.

11. Selective Traffic Law Enforcement - Currently two of our seven cities with populations over 50,000 have selective enforcement programs. The FARE program will further implement this activity in five cities over 50,000 including the original two, and STEP programs will be initiated in the last two cities during the last six months of 1974.

PEPs E-1, P & A, and E-6, Police Traffic Services, contain programs that will accomplish this requirement.

13. Blood Alcohol Concentration Testing - Legislation is planned to be introduced by various supporters during the current session prior to implementation of this plan. If their efforts fail, legislation will be introduced each subsequent session. Specifically, this legislation will require testing on all deceased and surviving drivers/pedestrains over age 15 involved in fatal crashes within four hours of the crash.

PEP E-1, P & A, contains provisions to plan and administer alcohol countermeasures.

If current efforts fail to achieve results, we will address this activity in more detail in next year's revision to this plan, and in subsequent AWPs.

II. PROGRAM ASSESSMENT

A. Standard 1, Motor Vehicle Inspection

1. Compliance: The motor vehicle inspection program in Iowa began January 1, 1972. The program meets the DOT Standard 301 in that all vehicles in the state are inspected at initial registration. However, the Iowa MVI program does not call for annual inspection thereafter, but rather it calls for inspection at each subsequent transfer of title, or after the vehicle has been in a crash and is deemed unsafe by a peace officer. The Department of Public Safety is the sole agency with responsibility for the program, with the exception of school bus inspection, which is administered by the Department of Public Instruction.

The Motor Vehicle Inspection Program in Iowa is a state licensed system. A station, garage, or dealer applies for a permit as an inspection station. The applicant's facility is then inspected for space, equipment, and personnel requirements by one of several MVI field agents.

The Motor Vehicle Inspection Division of the Department of Public Safety maintains close control over inspection stations. The division is staffed by a full-time director, an assistant director, secretarial personnel, and field agents with peace officer status.

Since the Motor Vehicle Inspection Program went into operation, the administrative staff has:

a. Developed rules and regulations in detail, and had them subsequently approved by the legislative Departmental Rules Review Committee.

b. Processed applications for 1,500 inspection stations.

c. Maintained close control of stickers and inspection numbers. This has paid off in revealing a number of faulty and fictitious inspections.

d. Trained field personnel and supervised their work, including investigations into questionable station practices.

e. Printed and distributed a detailed MVI handbook for inspection stations.

f. Printed and made available to the public leaflets explaining the inspection program.

g. Participated in hearings to revoke permits of those stations found delinquent in inspection practices.

Program financing is maintained on a self-supporting basis out of the cost of the inspection. The cost of an inspection is:

Station Fee	$5.00
State Fee	.25
Sales Tax	.16
	$5.41

The $.25 state fee is held in a special trust fund earmarked by the legislature to be used for administrative support of the program.

All vehicles must be inspected at the time of initial registration in the state, and at the time of any subsequent transfer of title thereafter. The law states that the vehicle owner may choose any approved station. his vehicle fails to pass inspection, he may have it fixed at a place of his choice. The original inspection station must then reinspect the vehicle at no charge. The vehicle owner, upon failing inspection, may choose to have his reparied vehicle reinspected at a station other than the one that rejected his car. However, he must then pay again the full inspection fee. School buses are inspected every year by two school bus inspectors in the Department of Public Instruction.

All vehicles that may be legally registered fall liable to the inspection law. The inspection stations are classified by the type of vehicle they are equipped and staffed to inspect. There are 1500 inspection

stations licensed, making them easily accessible. They must conduct an eight hour business day, must be an established place of business, and must meet equipment and personnel requirements to be granted a permit.

Record of inspection is recorded on a uniform state form. This form requires a certification of the vehicle's odometer, as stipulated by state law. The form identifies the owner, gives VIN and is numbered to correlate with the approval stickers. The form provides for enumeration of all items to be inspected, and allows the station inspector to check whether an item passes or fails. It also provides for the inspector a space warning the owner that an item has passed, but may soon require attention. Failure of one item is cause for rejection of the vehicle. The inspection station number is written on the form, and the inspector must also sign the form.

One copy of the form must be presented to the county treasurer before title of the vehicle can be transferred. One copy of the form remains in the station's files, and one copy is sent to the Department of Public Safety's MVI Division.

The Department of Public Safety has the power to revoke a station's permit for a variety of reasons, including:

(a) The use of an uncertified inspector.

(b) A change in ownership or location of the station.

(c) Violation of the inspection law, including fictitious or faulty inspection.

Inspectors are currently certified on the basis of qualifications, either by training or experience. Presently, the MVI Division does not have rigid control of inspectors, but instead chooses to act against the stations, holding them responsible for their inspectors. A testing

program to certify inspectors is planned, but is behind schedule at this time.

Items to be inspected include all items specified in Standard 301 of the Department of Transportation's federal Highway Safety Program. The sticker issued for passing inspection includes the Department of Public Safety seal, and dates in a manner that the month, day, and year can be punched out. It must be adhered to the inside of the windshield of the vehicle. A largered and white rejection sticker is applied if the vehicle fails.

Enforcement of public compliance with the law is a relatively simple matter, since an individual vehicle cannot be bought or sold until it passes inspection. The state also has the authority to suspend the registration of a vehicle that fails inspection, 30 days after the inspection, if the vehicle has not been corrected, but has not had to do so yet.

Enforcement of stations has been rigid thus far, with several stations having their licenses revoked. Faulty inspection is the usual charge, but investigations have revealed fictitious inspections as well.

Tight sticker control has made the detection of faulty inspections much easier. Complaints from the public have served as the main starting point for investigations. Several complaints on a station in a short period of time, or a charge of a serious nature are reason for investigation. Field agents with peace officer status conduct the investigations.

SUMMARY: The motor vehicle inspection program has been implemented successfully in Iowa, and complies fully with the federal standard with the following exceptions:

(a) Inspectors have not been required to submit to written

examination to be certified.

b. The program is not yet operational on a periodic basis, but only at time of initial registration, and at time of title transfer thereafter; or at any time a vehicle is in a crash and deemed unsafe by the investigating officer. However, Iowa does require an annual inspection of every school bus by DPI.

c. Evaluation of the program is not possible to the extent necessary to truly judge the effect of the program, due to the problems in handling the large quantities of data (as many as 60,000 inspections per month).

2. Current Program Status: The most direct measure of the success of Iowa's Motor Vehicle Inspection Program would be a determination of the number of accidents prevented by correcting vehicle defects. At this time, these statistics are not available. However, there are statistics available that demonstrate that a large number of vehicle defects are being corrected, and that the program is operating smoothly.

The Iowa Automobile Dealers Association (IADA) estimates from survey figures that dealer operated stations alone have inspected 102,200 vehicles in the first nine months of 1972. This represents only a portion of the total number of vehicles inspected in 1972, since it excludes non-dealer operated inspection stations. Motor Vehicle Inspection division records show that about three percent of the registered vehicles in the state are inspected per month, or about 60,00 vehicles per month.

IADA figures set the rejection rate at about 17 percent for dealers. Overall rejection rate is placed at about six percent for all stations, by the MVI division.

These figures, when projected, show that almost 40 percent of the vehicles registered in the state will be inspected in 1972. While not a

perfect program in the sense that all vehicles will not be inspected every year, the program will result in approximately 43,000 defective vehicles being corrected in 1972. Furthermore, the public has been successfully educated to the point that people are not afraid to protest faulty inspection. The public seems to be more cognizant of the necessity for safe vehicles. These assumptions are borne out by the fact that over 3,000 inspection complaints were received in the first nine months of 1972. Seventy-five percent of these complaints were directly related to an unsafe condition of a vehicle that was overlooked in inspection.

The IADA survey also showed that 79 percent of the dealers are in favor of annual inspections for all vehicles. Comments received by the MVI division from the general public indicate that the public as well also favors annual inspection. Eighty-five percent of the dealers felt that the current inspection procedure is about right in thoroughness, but the public feels the inspection should be tougher. The inspection process currently takes an average of 65 minutes for a used car, and 31 minutes for a new car, which would seem to indicate that a thorough inspection is being done.

The MVI division is still in the infant stage, and analytical and programmatic activities have been limited. However, the division has worked extremely hard at insuring that all inspections are done properly. A staff of six field investigators check into every complaint, with many follow-ups. These field agents have peace officer status. So far, 19 hearings on failure to properly conduct an inspection have been held. Sixteen of these hearings have resulted in a revocation of an inspection permit, two of which have been appealed to the district court. Very little lenience has been allowed in the conduction of inspections.

3. Plans for Future Activities: Plans for future activities can be broken down into three basic areas:

a. Inspector certification and training. The MVI division of the Department of Public Safety is currently planning a two-phase program of inspector testing and training. It was hoped that inspectors could be administered a written test through the Area Schools in the fiscal year 1972. This program, however, has not been started at this time, due to delays in getting inspection procedure rules approved and published. Progress has been made in that a manual of inspection rules and procedures has been printed and distributed to all inspection stations. It is still planned to begin testing of inspectors in fiscal 1973.

b. Tougher enforcement of inspection law through Motor Vehicle Registration. Currently, MVR records are not correlated with inspection records. Because of the peculiar nature of the Iowa inspection program, which requires an inspection before title can be transferred at time of sale, vehicles found defective by inspection must be corrected before they can be sold. The desire to sell a car usually means that the owner will get his vehicle corrected. The program has therefore been somewhat self-enforcing.

However, nothing is being done at this time about those vehicles that are rejected and then retained by the owner without corrections. Iowa Automobile Dealer Association figures estimate the percentage of rejected vehicles not corrected and reinspected as small, but still amounting to about 2,500 vehicles per year.

Future plans to revoke the registrations of these vehicles depend upon the successful completion and operation of the TRACIS traffic records program, not expected before mid-1974.

c. Annual Inspection. The Department of Public Safety is not planning to ask the legislature for an annual inspection immediately. The limited MVI program currently underway has given the Department a chance to gear up the program and get it running smoothly. It is felt, however, that much is yet to be done before the MVI Division will be ready for annual inspection. Items "a" and "b" above should be accomplished before annual inspections are initiated.

However, IADA figures show that 79 percent of the dealers favor annual inspection. Comments received by the MVI Division from the general public are running almost unanimously for annual inspection.

The public is finding Motor Vehicle Inspection to be a valuable thing, because it assures them of purchasing a safe vehicle, and gives them recourse if they find the vehicle unsafe.

d. Upgrading MVI records-keeping systems to better evaluate the system, and better enforce the system.

B. Standard 2, Motor Vehicle Registration

1. Compliance: The overall picture for motor vehicle registration in Iowa is that the state is basically in compliance with the federal Highway Safety Standard 302, with sufficient system flexibility and capability to allow for future expansion into full compliance. The Department of Public Safety is responsible for motor vehicle registration in Iowa.

All motor vehicles must be registered to be legally driven on Iowa's highways and roads. Vehicles are registered in Iowa by 99 county treasurers. However, the role of these treasurers has been reduced in recent years until at this point in time, they serve more as outlets for people seeking to renew registrations, while centralized records are kept at the state level by the Motor Vehicle Division of the Department of Public Safety. There is an advantage to this system, in that there is not too severe a workload at any one county, with the exception of a two-week period at two or three heavily populated counties. Because of this situation, there is no need to stagger registration renewal dates, allowing for cleaner administration of the program.

The treasurers register vehicles under the control of the Motor Vehicle Division of the Department of Public Safety. This allows for a centrally administered program. The state has a central MVR file that identifies all vehicles by owner, VIN and license number. Commencing February 15, 1972, a conversion of all motor vehicle files from manual to electronic data processing was begun.

Five pilot counties began issuance of title certificates on optical computer readable forms, which are forwarded to the MV division daily for processing. On July 1, 1972, all counties began issuing title cer-

tificates on OCR forms. In addition, a large percentage of counties will prepare 1973 registration renewal slips on OCR forms, and by the latter part of 1974, all counties will utilize the OCR forms.

The full data base will not be captured until 1974. It will not be until then that the MV Division will have the automated capability to fulfill all of the requirements of Standard 302. But it is reasonable to expect that at this time, the MVR system will be able to correlate with driver licensing, motor vehicle inspection, and vehicle recall records to accomplish the tasks outlined in the standards.

Iowa is in full compliance concerning size and reflectability of license plates. State law requires that plates be reflectorized.

The state MVR records do have provisions for gross laden weight, which could be correlated for a classified driver license program.

At the time of initial registration, Iowa requires proof of ownership and origin. The dealer transfers these to the owner at time of sale. Each registration application, and each subsequent registration, contains the following information:

a. Make

b. Model year

c. V.I.N.

d. Body style

e. Full name and address of owner

f. Color

e. Weight

Before a car may be registered in Iowa, it must pass a full safety inspection, which includes verification of the odometer and of the VIN.

In addition to the above information, each registration slip that accompanies the license plates for a vehicle contains the following:

a. Date issued

b. License plate number

c. Registration audit number

d. Registration fee

e. Owner's signature

The registration certificate must be carried in the vehicle and must be presented upon demand of a peace officer.

Iowa presently issues license plates on a three-year basis. The registration of a vehicle must be renewed yearly, with a decal issued that must be placed on the license plate to update it. A vehicle involved in a change of ownership must have its title transferred within five days of sale. Plates remain on the vehicle, but a new registration slip is issued. Each vehicle must pass safety inspection before title can be transferred. This includes verification of odometer and VIN.

The Department of Public Safety controls the use of temporary dealer issued plates, and permanent dealer plates for demonstrators, through the Dealer License Division. Dealer operations are audited periodically to guard against misuse.

The Department also issues plates and registrations for special mobile equipment, such as some farm implements. These registrations are restricted to certain types of roads.

The general information system of the Iowa MV system meets federal standards in that:

a. Input forms are being upgraded so that data will be instantly entered into the system. By 1974, the data base will be maintained on an accurate-to-within-a-day basis.

b. Data elements include all required information on vehicle and owner.

c. Inquiries to the system are rapid on either a pencil-paper basis or emergency basis. Top priority will eventually be given to law enforcement agencies, with MVR records available on-line through remote terminals.

The Iowa MVR system is not in compliance in the following areas:

a. DL files and MVR files are presently not correlated; however, when the data base is completed, these files are expected to be easily correlated to allow for driver control through the MVR system. However, driver control is presently aided by the MVR system on an individual case basis.

b. Motor vehicle inspection records are not presently being converted to EDP, and therefore cannot be correlated with MVR records. However, a correlation of a sort is attained because a vehicle must be inspected before title can be transferred any time thereafter. A copy of the inspection form must accompany the application for registration or transfer of title. The state has the authority to revoke registration of any vehicle that is found defective and is not corrected.

c. No plans are being made to correlate manufacturers' defect recalls with MVR records. However, the automated system will allow for this type of expansion in the future.

2. Current Program Status: Iowa had 2,831,821 vehicles registered as of December 31, 1971. The MV registration record system, to keep track of these vehicles, and a projected 200,000 additional vehicles per year, will be part of the Traffic Records and Criminal Justice Information System (TRACIS). The TRACIS plan calls for a total traffic records data base of 7,216,000 records. Therefore, motor vehicle registrations will

represent about 43 percent of the traffic records portion of TRACIS.

The planned TRACIS system will provide for rapidly doing all of the present duties of the MV division concerning records keeping. Currently upon application for title, four copies of the motor vehicle title are made. One is kept by the County Treasurer in a registration file, and one is kept by the Treasurer in a title file. The lien holder receives a copy as well, and the registration slip is sent to the applicant. Previously, a record of the title was also sent to the Department of Public Safety's MV division, where a title file, VIN file, and plate number file were updated. The Optical Computer Readable forms for titling and registration that will be used statewide in the near future will greatly speed up this file keeping process.

Other functions that should be improved by automation will be the issuance of duplicate plates and duplicate titles, which both require correcting and updating of manual files at this time. Another function that is becoming more and more pressing is the identification of abandoned vehicles, disposition of vehicles, and subsequent updating of files.

A more detailed account of the current status of the MV records is given in the Traffic Records sections of this plan.

3. Plans for Future Activities: The completion of the automated MVR system will be the main task for the future. Only when this is done will other expanded activities be possible.

C. Standard 3, Motorcycle Safety

1. Compliance: The Iowa motorcycle safety program is deficient in many areas. First of all, Iowa has no motorcycle driver education program. The Department of Public Instruction does conduct workshops concerning motorcycle education in order to encourage motorcycle education in schools. However, the individual school districts may or may not offer motorcycle driver education, and the vast majority do not.

Commercial motorcycle schools are not licensed by the state at this time. Instructors are not licensed by the Department of Public Instruction, and a standard curriculum has not been developed for motorcycle education. It is suggested by DPI that the schools offer a section on motorcycles in regular Driver Ed.

The state does substantially meet the requirements for motorcycle licensing. The state requires that each new applicant for a motorcycle license take both a written test and a driving test for motorcycle. When originally initiated in 1968, the Department did "semi-grandfather" this requirement into effect, by stating that for the first two years, experienced motorcyclists were only required to take the written test.

Each applicant for a motorcycle license must already possess a valid operator's license. When the applicant passes his motorcycle test his operator's license is then validated for motorcycle. If an applicant has not passed the motorcycle test, his license is marked as not valid for motorcycle. The state is basically in compliance in this area. Of course, all applicants for any license must pass a vision screening test, and the same medical requirement as apply to other drivers apply to motorcyclists. A special form certifying that an applicant is physically

qualified can be required of any applicant, and appeal to the medical advisory board is a possibility in any case.

The knowledge test meets federal requirements for content. The driving ability test is administered by a qualified license examiner in an off-street area. The driving test includes a visual vehicle safety inspection, a test for familiarity of controls, and for ability to control the machine.

The state motorcycle licensing program is deficient in the following ways:

(a) Retesting is not required for every renewal.

(b) Protective equipment is not required for driving test.

(c) The state does have a motorcycle supplement to its driver license manual, but it needs expansion and updating, and is not adequate.

All motorcycles must obey the same laws as other motor vehicles. In addition, it is against Iowa law to:

(a) Ride sidesaddle.

(b) Use same lane for more than two motorcycles.

(c) Carry more passengers than the motorcycle was built for.

A motorcycle must be equipped with a seat and foot pegs for any passengers.

The state does need to re-evaluate its definitions and requirements for motorcycles, in order to remove unsafe types of motorcycles from the road (specifically, minibikes) and to insure that all motorcycles are capable of keeping up with the flow of traffic.

Iowa's biggest deficiency in its motorcycle safety program is that there is no requirement that motorcycle operators and passengers use personal protective equipment. The passage of mandatory helmet legisla-

tion and eye protective devices must become a priority item for the new comprehensive plan.

The state is in compliance with motorcycle vehicle equipment standards. Motorcycles must have rearview mirrors, passenger seat and footrests, and necessary lighting equipment.

Each motorcycle must face the same inspection requirements as other vehicles. The state inspection law requires that a motorcycle be inspected at time of initial registration, and at time of every subsequent transfer of title thereafter, and at any time the vehicle has been in a crash, and is deemed unsafe by the investigating officer. The state lacks full compliance in that annual inspection of every vehicle is not yet a reality.

The actual inspection of a motorcycle is in compliance with federal standards. Inspection stations are classified and must meet special equipment and personnel requirements to be certified to inspect motorcycles.

The Department of Public Safety is responsible for motorcycle licensing, registration, and inspection. The Department is currently upgrading the accident reporting system and traffic records system to meet federal guidelines. The state requirements for motorcycle accident reporting are the same as for all vehicles, and meet the federal standards.

SUMMARY: The Iowa Motorcycle Safety Program complies with the federal Standard substantially only in the areas of testing of motorcycle riders, vehicle equipment, and motorcycle rules of the road. As shall be demonstrated in the next section, the two most important elements are personal protective equipment and motorcycle driver education, and these two elements are not complied with in Iowa.

2. Current Program Status: The motorcycle safety program in Iowa is entirely inadequate to keep up with the tremendous increase in motorcycle registrations. Chart 3-B-1 shows that motorcycle registrations are climbing rapidly, accompanied by an alarming rise in motorcycle accidents. In the first ten months of 1972, Iowa experienced a 55 percent increase in motorcycle fatalities over 1971. Chart 3-B-2 demonstrates why motorcycle safety must be a priority area. In deaths per 10,000 registrations, motorcycles run from 20 to 30 percent ahead of all motor vehicles. Injuries per 1,000 accidents are 50 to 100 percent more than for all motor vehicles.

In attacking the motorcycle problem, it has been determined from Department of Public Safety statistics that young riders present the biggest portion of people in motorcycle crashes. Chart 3-B-3 shows that in 1969 48.62% of all people involved in motorcycle accidents were under the age of 20 years, compared to 29.6 percent of all motor vehicles for the same year. For 1970, the story is essentially the same, with 46.10 percent of all people in motorcycle accidents under the age of 19, compared to 29.6 percent of all motor vehicle accidents. Part of this discrepancy could be explained by the fact that motorcycling is a young person's sport, requiring more physically of the rider than does an automobile require of a driver. But not all motorcyclists are under 19, and it can be assumed that the 15 to 19 year olds are somewhat over represented among those involved in motorcycle accidents.

Further evidence that the young predominate among those involved in motorcycle accidents is given in chart 3-B-4.

Chart 3-B-1

IOWA MC REGISTRATIONS AND FATALITIES

ACTUAL AND TREND: 1960-1972

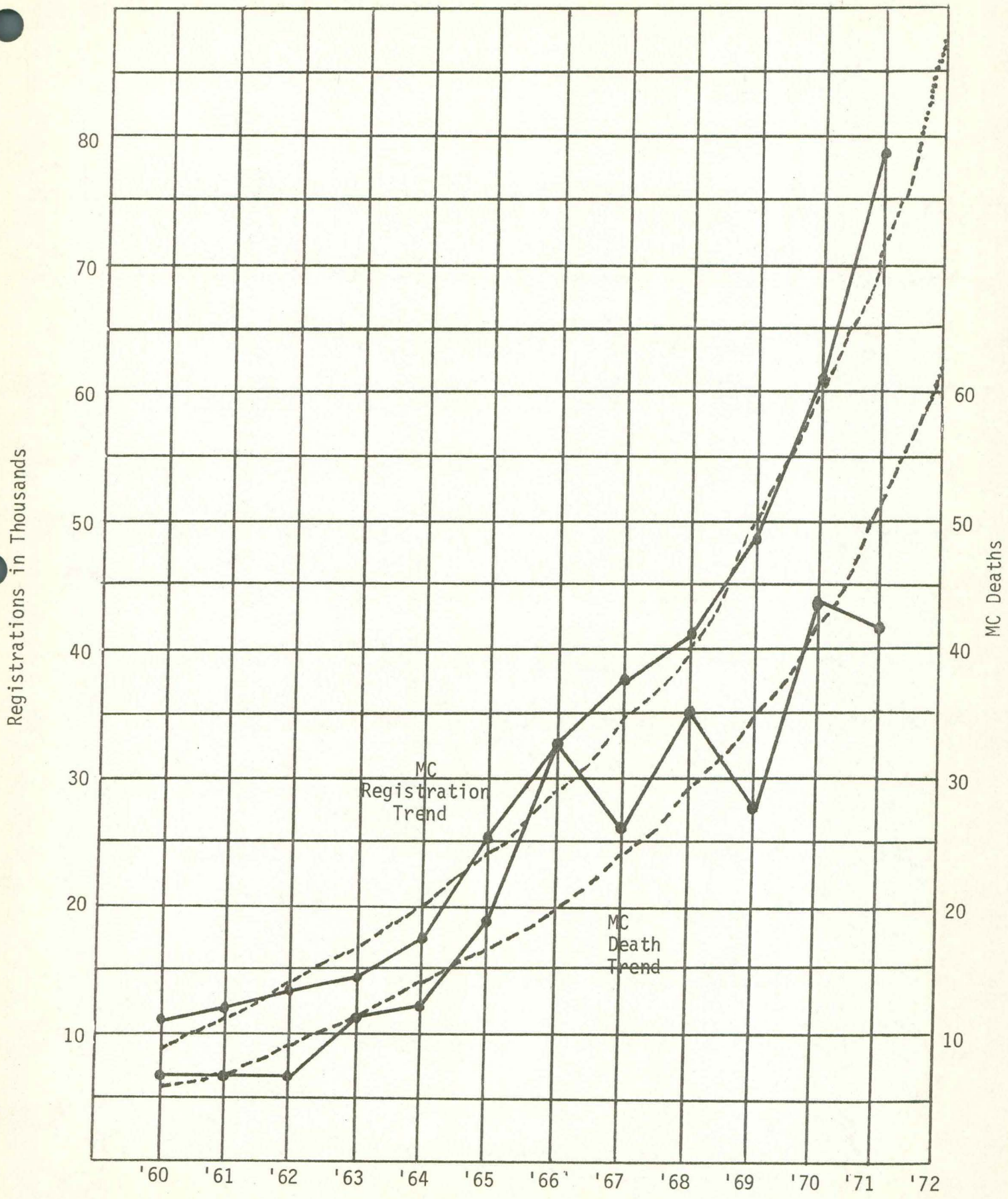


Chart 3-B-2

COMPARISON BETWEEN MOTORCYCLE RISK AND ALL MOTOR VEHICLES RISK

Year	Deaths/10,000 Registrations		Deaths/1,000 Accidents		Injuries/1,000 Accidents	
	All M.V.	Motorcycles	All M.V.	Motorcycles	All M.V.	Motorcycles
1967	4.35	6.90	11.36	22.01	458	831
1968	4.45	7.86	11.04	27.64	430	796
1969	3.87	5.79	8.91	24.03	381	778
1970	4.39	7.06	10.38	29.30	378	765

Chart 3-B-3

ALL MOTORCYCLE ACCIDENTS AND ALL MOTOR VEHICLE ACCIDENTS BY AGE GROUP:

1969 AND 1970

Age Group	Motorcycle Accidents				All Motor Vehicle Accidents			
	1969	%	1970	%	1969	%	1970	%
15 or under	39	3.34	61	4.06	15,197	10.2	13,533	9.2
16	84	7.19	126	8.38	5,568	3.8	6,243	4.2
17	146	12.50	155	10.31	7,750	5.2	7,771	5.3
18-19	299	25.60	351	23.35	15,399	10.4	16,024	10.9
20-24	299	25.60	426	28.34	23,641	15.9	24,397	16.5
25-34	168	14.38	222	14.77	24,272	16.3	24,004	16.3
35-44	52	4.45	50	3.33	18,232	12.3	17,707	12.1
45-54	14	1.20	28	1.86	15,804	10.6	15,727	10.7
55-64	10	0.86	9	0.60	11,161	7.5	11,523	7.8
65-74	4	0.34	7	0.47	6,608	4.4	6,784	4.6
75 and over	1	0.08	2	0.13	2,649	1.8	2,832	1.9
NS	52	4.45	66	4.39	2,194	1.5	920	0.6
TOTAL	1168	100.0%	1503	100.0%	148,475	100.0%	147,465	100.0%

CHART 3-B-4

OCCUPATIONS OF MOTORCYCLE FATALITIES

Students	34.6%
Laborers	26.8%
Skilled or Semi-Skilled	13.4%
Retired	3.2%
Military	3.9%
All Others	18.1%
TOTAL	100.0%

The largest percentage of those killed in motorcycle accidents gave their occupation as students.

The point here is that young people have motorcycle accidents, and that is could be implied that lack of experience is a reason for this high accident rate. It has already been stated that the State of Iowa is deficient in the area of motorcycle education. These statistics, although not perfect measures, show that possibly more attention should be paid to motorcycle drivers education.

Chart 3-B-5, below, shows that the majority of motorcycle fatal accidents happen in some sort of traffic:

CHART 3-B-5

DISTRIBUTION OF FATAL MOTORCYCLE ACCIDENTS

1967 - 1970

Type of Accident	%
Collision with Other Motor Vehicle	69.5%
Ran off the Road	17.0%
Overturned	5.9%
Collision with Fixed Object	3.4%
Collision with Pedestrian	2.5%
Other	1.7%
TOTAL	100.0%

The average motorcycle accident involves a motorcycle and another vehicle. This has been well known for many years, and these facts are usually met by claims from motorists that motorcycles are "invisible" and cries from motorcyclists that automobile drivers are "out to get them." This debate serves no useful purpose here and only clouds the real issue of what should be done to protect the motorcyclists. A special kind of highly defensive driving must be developed and taught to motorcyclists.

Other factors point out that motorcyclists must learn to cope with other traffic.

Forty-two and one-half percent of all fatal motorcycle accidents occur between the peak traffic hours of 4 p.m. and 9 p.m. In those fatal motorcycle accidents involving another vehicle, and where the other driver was charged with a violation, 51.2 percent of those violations involved failure to yield, improper turn, or crossing the center line. This implies that a lack of attention for motorcycles is responsible for many motorcycle deaths. The public must be educated to look out for motorcycles.

In those accidents where only the motorcycle was involved, 57.8 percent of the motorcyclists were charged with failure to have vehicle under control. Once again, this indicates a lack of riding ability on the part of motorcyclists.

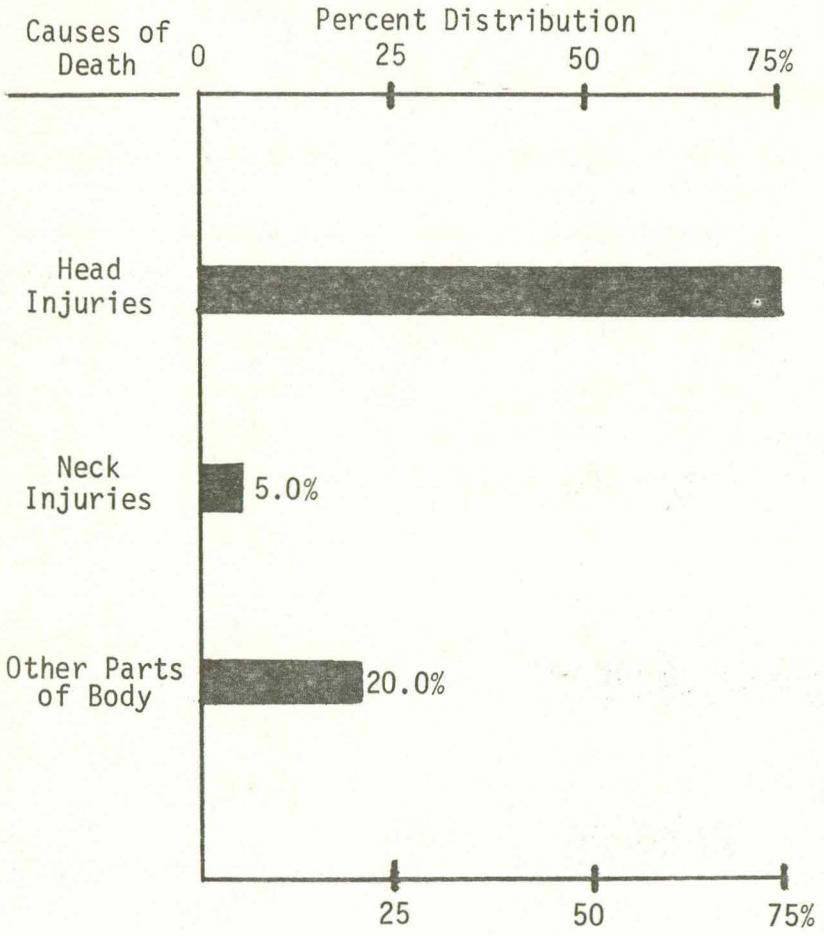
Most fatal motorcycle accidents happened on a clear day, with dry roads, and no unusual conditions. However, 67.8 percent of all motorcycle fatalities occurred where there were no traffic control devices.

The final chart in this section is chart 3-B-6, which shows a comparison between type of fatal motorcycle injuries sustained in 1970, and non-fatal injuries for the same year. Head injuries are far and away the leading fatal injury sustained, being listed as cause of death in almost

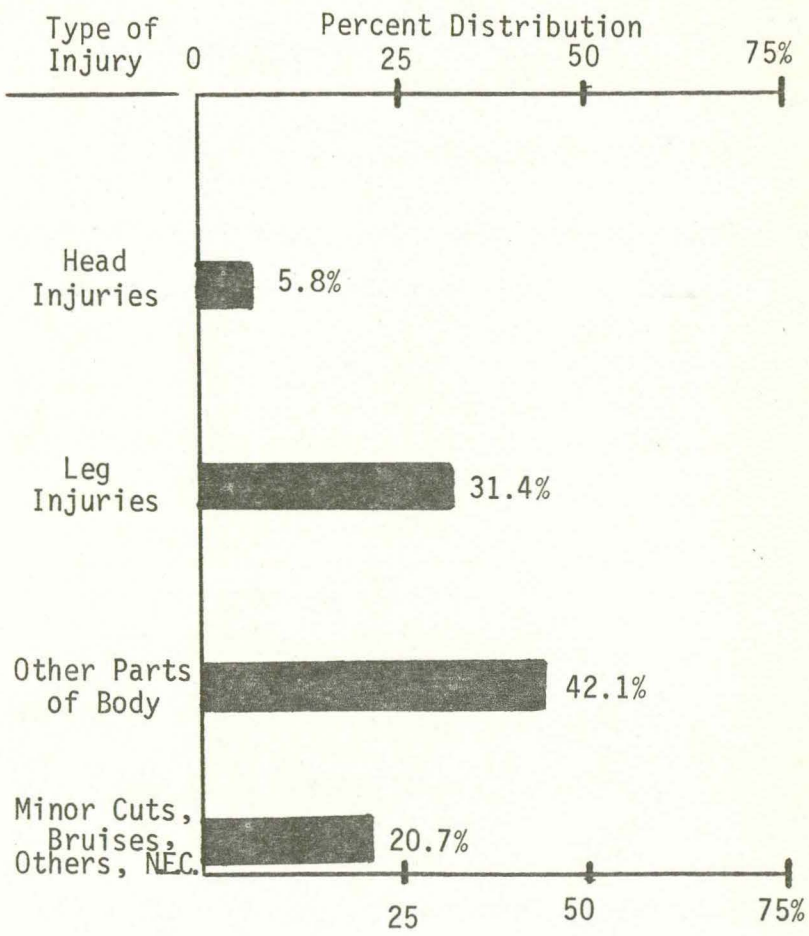
Chart 3-B-6

COMPARISON BETWEEN TYPES OF INJURIES

IN FATAL AND INJURY MOTORCYCLE ACCIDENTS: 1970



FATAL ACCIDENTS



INJURY ACCIDENTS

Sources: 1. Fatal Accident Reports
2. 10% Systematic Sample of MC Injury Accidents

Research: Department of Public Safety

75 percent of all fatalities. However, head injuries are not nearly so prevalent among non-fatal injuries. While these figures are not conclusive concerning the advisability of wearing protective helmets, the figures do serve to reinforce the opinion that helmets could save many lives, and should be a priority.

3. Plans for Future Activities:

(a) Legislative or administrative. The statistics presented above point out that mandatory helmet legislation should be a priority in the upcoming four years. In addition, a committee of motorcyclists and Public Safety officials will be organized to review all existing laws and administrative guidelines concerning motorcycles. Of prime importance will be:

(1) Lighting equipment requirements both in the Iowa Code, and administrative rules concerning registration and inspection.

(2) Laws and rules concerning motorcycles sizes, both for the purpose of limiting the use of mini-bikes on public roads, and assuring that motorcycles that travel Interstate and primary highways are capable of maintaining speeds with the flow of traffic.

(3) Guidelines concerning maximum alteration of steering mechanisms and frames, and quality of equipment used in those alterations.

(b) Safety programs. It is hoped that the following programs promoting and assuring safe motor cycle operation can be undertaken:

(1) An expansion of motorcycle education in the public schools, through a cooperative effort of the Department of Public Safety and the Department of Public Instruction.

(2) The development of a motorcycle riders' manual, with both rules of the road and solid riding advice for the novice.

(3) A program of public awareness of the role of motorcyclists on the road, and a fostering of cooperation between motorcyclists and other motorists.

D. Standard 4, Driver Education

1. Compliance: In Iowa the State Department of Public Instruction, Division of Pupil Transportation, Division of Driver Education, is charged with program compliance and program development. The driver education program is in compliance with the Standard except for three major areas. These areas are: (1) a total K-12 integrated program complete with curriculum development, course guides and standards and regulations; (2) teacher preparation programs for secondary driver education; and (3) pre and post licensing adult driver education programs to include curriculum development, course guidelines, and program standards.

2. Current Program Status:

(a) Teacher education. The Driver Education Standard requires that driver education teachers have at least 12 semester hours in safety education in addition to the basic qualifications. At the present time, a minimum of 10 semester hours of safety education courses are required in Iowa.

Presently, there are four colleges and universities that are preparing driver education teachers. All of them offer at least a full minor in driver and traffic safety education with just one institution recommending the teachers for approval on the 10 semester hour minimum. We hope in the near future that this can be changed.

Since the preparation of the last Comprehensive Plan, the Driver and Safety Education staff has strived to upgrade the teacher preparation programs in Iowa. With funds provided by the NHTSA we have provided scholarships and in-service workshops for the driver education teachers. Also, we have encouraged local school districts that have received simulation equipment and multiple car driving

ranges under Highway Safety funds to include a workshop on the proper use of such facilities in their grant applications.

Since the preparation of the last Comprehensive Plan, legislation was passed in 1970 allowing driver education teacher candidates to practice teach not only in the classroom phase but in the laboratory phase as well.

As will be noted in the Comprehensive Plan, there will be continued emphasis on teacher preservice and inservice programs.

(b) Facilities and Equipment Improvement. The Driver Education Standard states that the driver education programs "should be standardized and improved to the greatest practical extent in adequacy of physical facilities and equipment." At the time of the preparation of the last Comprehensive Plan, 21 high schools in 14 school districts had at least a three phase program. At the present time with funds provided by the NHTSA there are eight high schools in five school districts with off street multiple car driving ranges and 28 high schools in 19 school districts with simulation equipment. During the period covered by this Comprehensive Plan there will be more activity in this area. Special attention will be given to regionalizing with several districts sharing equipment and facilities.

(c) Curriculum Development. Since the preparation of the last Comprehensive Plan, every driver education teacher has been furnished with a revised Driver Education Curriculum Guide (DE-68-2-003); and curriculum materials such as films, filmstrips, transparencies, etc., have been placed in the 16 Regional Educational Media Centers for use by all local driver education programs (DE-71-001(001).

In the development and selection of curriculum materials special emphasis has been given to alcohol and drug education as it relates to driver education. The Driver and Safety Education Section has encouraged local school district personnel to include this type of instruction in their driver education programs. In 1970 the five annual regional workshops that the Section co-sponsored dealt specifically with alcohol and drug curriculum development as it relates to driver education. Special attention was given to alcohol related materials in the Media Center Project. Also, the Model Driver Education Curriculum that is presently being developed as part of Project PRIDE will include information, materials, and learning activities on alcohol education.

(d) Programs for Special Needs Students. The NHTSA funded pilot project for the Des Moines Independent Community School District on teaching the physically handicapped to drive is in the last year of the three year program. As part of this project, three films will be developed for use by other driver education teachers in Iowa to assist them in teaching the handicapped to drive. Also, a most important part of the project is the inservice teacher seminars that are held. The response to these has been most encouraging. It is planned that these workshops will be continued in this Comprehensive Plan.

Evaluation. The Driver Education Standard required that each state in cooperation with its political subdivisions shall have a research and development program; the program shall be periodically evaluated. To this end a project is now underway in Iowa, Project PRIDE. It is the stated purpose of Project PRIDE to measure

the effectiveness of driver education as a countermeasure to the highway accident problem. In addition to measuring present programs, a model curriculum will be developed and implemented and compared against traditional programs.

Selection of criteria to evaluate driver education programs was one of the first tasks undertaken. The classroom general knowledge examination was constructed from items developed by Highway Safety Research Institute (HSRI) at the University of Michigan, Ann Arbor, under federal contract FH-11-7616.

The Driving Attitude Survey (DAS) developed by Schuster and Guilford was selected to measure driving attitudes. It is important to note that Iowa norms do exist.

The criteria of driving performance was considered valid but presented insurmountable administrative and psychometric problems. The funds which were to be used toward the measurement of driving performance were then shifted so that an interview of a sample of those students tested could be accomplished.

The ultimate criteria of accident and violation records of those students tested and interviewed will also be used in measuring the effectiveness of driver education.

The comparisons to be made are those between two, three, and four phase programs by when they are being taught and by the location of the school district, i.e., urban or rural. Therefore, all school districts' programs were classified by type of program, location, and whether they offered a program in the summer or semester. After the classification was complete a random sample of programs were drawn. From these programs a random sample of classes were

drawn. All schools that were randomly drawn and asked to participate in the project agreed to participate.

In developing the Model Curriculum, other ongoing and completed projects are being incorporated. The HumRRO Task Analysis is without a doubt one of the most notable and vital of the documents to be used.

Subelement K-12, Traffic Safety Education: In Chapter 4, Program Development and Operations, of the Driver Education Standard, it states that the state education agency should provide "school systems with technical assistance in driver and highway safety education at all grade levels." Since the preparation of the last Comprehensive Plan, the Driver and Safety Education Section staff has been assisting local education agencies in the development of safety education programs. This assistance has been in the form of consultative services, inservice programs, and instructional materials. Fiscal Year 1973 was the first year of a multi-year project for the development of a comprehensive Kindergarten-Twelfth Grade Traffic Safety Education Curriculum Guide. The first step in this development will be the Kindergarten-Sixth Grade Curriculum Guide and Model Program. The curriculum will include but not be limited to the following areas:

Pedestrian
Bicycle
Two-Wheeled Motor Vehicles
Snowmobiles and Other Recreational Vehicles
School Bus Safety
Other Vehicle Passenger Safety

The curriculum and supportive materials will be developed so that it will be possible to integrate the program into an existing

curriculum structure. The curriculum will be implemented into a single elementary school as a pilot program. This implementation will include teacher inservice training and instructional and administrative feasibility.

Since the preparation of the last Comprehensive Plan the Driver and Safety Education Section personnel have encouraged and assisted the local school districts in the initiation of an accident reporting system thet will assist them in identifying their high accident types and locations. This would support and give direction to their safety education instructional programs.

The completion of the Traffic Safety Education Curriculum Guide (7th - 12th grade) as well as the start of the implementation of the program is planned in this Comprehensive Plan.

Subelement - Adult Driver Education: Chapter IV of the Driver Education Program Manual states that Driver Education Courses for beginning adults should have "course content similar to that provided for beginning school age youths, consist of at least 10 clock hours of classroom instruction and 6 clock hours per student of behind-the-wheel instruction, and that all courses should be scheduled over a period of at least 3 calendar weeks."

In Iowa adult beginning drivers have the opportunity of enrolling in driver education programs by many of the local public school districts and in the 15 Area Community Colleges. However, there are no standards and/or regulations dealing with driver education programs for those over age 18. To be in compliance with the Driver Education Standard it will be necessary to develop course guides, instructional materials, teacher preparation courses,

and standards and regulations for pre-licensing, post licensing, and adult beginner driver education programs. This subelement will get special attention in this Comprehensive Plan.

E. Standard 5, Driver Licensing

1. Compliance: The Department of Public Safety has responsibility for all driver licensing with the exception that school bus drivers must obtain special endorsement from the Department of Public Instruction. The Department of Public Safety maintains driver control through its Driver Licensing Division. Related functions are also within the Public Safety Department, including divisions of Financial Responsibility, and Driver Improvement.

The State of Iowa is basically in compliance concerning the application for a driver license. The application contains all data elements outlined in both the original Standard 305, and Supplement 1 to Standard 305, issued February 15, 1972. Basic improvements since the last comprehensive plan include the adoption of an Optical Computer Readable license form and application, which permits rapid entry into the data bank.

At time of application, the applicant must present proof of date of birth, and must sign a false information statement. Driver education information is included on the application form.

The driver examination for a license is fully comprehensive in the following areas:

a. The applicant must pass the test concerning rules of the road. This is a written test, and also includes information questions on various driving situations.

b. Driving ability must be demonstrated by a road test. The road test is administered by a trained uniformed or civilian examiner, with items to be tested stipulated on an examiner's form.

Somewhat less comprehensive is the test for physical requirements. However, the Iowa program should not be considered deficient concerning medical requirements. Each applicant must be tested for vision. If the

examiner is in doubt about an applicant's physical ability to drive, he may request a doctor's statement to be filled out. The Department may refuse to accept an applicant on the basis of this form, but all cases may be appealed to the medical advisory board.

Iowa is somewhat deficient in frequency of testing. Exams are administered in Iowa at time of initial application. A person will also be required to retest when his license has been revoked, and may be requested to retest by the Driver Improvement Director. However, Iowa does not retest every driver every four years, and is therefore deficient in this area. Since the comprehensive plan of 1968, the D.L. Division has made steps to gear up for retesting of all drivers, so progress is being made. These steps will be discussed in the next section.

The license examiner may check the driving record of any applicant. This process will be greatly enhanced by the full implementation of the TRACIS program, which will allow for rapid access to driver records.

The license issued in Iowa is basically in compliance with the standard. The instruction permit may be issued to anyone over the age of 14 who has passed the written and medical tests. If the applicant is under the age of 18, he must also obtain parental or guardian permission and must have had driver education. The driving test is required for all original licenses as defined in the standard, with the exception that only the written and vision tests are normally required of applicants holding a valid license from another state, or if the applicant has received driver education and passed successfully. The examiner has the option of requiring the driving tests in these cases.

Restricted licenses include physical and equipment restrictions, day time restrictions, and work-school restrictions. New licensing forms soon to be adopted list the codes for all restrictions on the back of the applicant's copy.

The license format itself is in compliance with Standard 305. With the advent of OCR form usage, quick entry into the driver information system is achieved.

The Driver License Division of the Department of Public Safety is responsible for maintaining Driver Records. A record is maintained on every licensed driver in the State, containing driver I.D. information, convictions, revocations, suspensions, and accidents. Warning letters, hearings, and other actions are also recorded, as well as physical and medical information, and Driver Education and Driver Improvement Data.

The driver record section will be automated under the TRACIS system. The time lag between issuance of license and entry into the system has already been reduced from months to days by means of the OCR system. Rapid access to the system is already a reality, with on-line rapid access planned for the future.

The Driver Improvement Section of the Driver License Division substantially meets the federal requirements. Actions taken on problem drivers can include advisory letters for two violations in one year, hearings and interviews with drivers facing the possibility of suspension, instruction individually or through a Driver Improvement course, referral to a medical authority, suspension, probation, or revocation. Appeal may be made to an appropriate official such as a hearing officer, the medical advisory board, or the Commissioner of Public Safety. The courts serve as a last resort.

The Department of Public Safety updated and revised its Driver License manual in 1971 so that it meets federal guidelines.

Driver examiners must undergo both on the job training with an experienced examiner, and intensive training in the Driver license Divi-

sion on licensing procedures. The Department maintains both permanent and mobile testing sites, making the examinations readily available to the public.

The medical advisory board in Iowa substantially meets all federal requirements, although plans are being made to make better use of the board.

SUMMARY; Iowa is substantially in compliance with Standard 305, with the main exceptions being:

a. Drivers are not tested at least every four years.

b. Drivers from other states applying for an Iowa license are not required to submit to a driving test.

c. Applicants with a certification of completion of drivers education need not take the driving test.

2. Current Program Status: Iowa is currently in the midst of upgrading its driver licensing system to allow for expansion into full compliance with the federal standard. In order to provide for retesting every time a license is renewed, the Department has moved toward issuance of four-year licenses from two years. This will allow for a more managable number of renewals each year. 1971 statistics showed that 1,087,187 drivers still had two year licenses, while 433,099 drivers had four year licenses.

Drivers under 21 are not issued four year licenses, and people over 65 only get two year licenses. Furthermore, drivers with physical impairments may be required to renew every two years. Drivers under 21 years number 304,300 or about 16.5 percent of the driving public. People over 65 who have licenses number 205,712, or about 11.1 percent of all drivers. Subtracting these two groups from the total number of drivers, we find that about 580,000 regular drivers still have two-year licenses.

In other words, about 30 percent of Iowa drivers have been phased into the four year program. (These figures do not allow for drivers issued two year licenses for physical reasons.) By the end of the upcoming four year period, all regular drivers should be issued four year licenses.

Iowa is also switching from uniformed examiners to civilian examiners. The reason behind this switch is to lower the cost of each examination and return troopers to enforcement duty. In 1971-1972, seventeen civilians were trained and established into positions as examiners.

The Department of Public Safety, Drivers License Division, has switched to Optical Computer Readable license forms. This has resulted in a great improvement in entering data into the record system. During 1971, keypunching of driver license forms for data entry ran as much as two to three months behind the actual issuance of the license. This meant that drivers under suspension or revocation could apply for and receive a new license and drive for many weeks before the error would be discovered. With the OCR system, this information is kicked out immediately. Further redesigning of the driver license form will center around applying the license to a uniform accident report and traffic citation. This should greatly improve accident and driver licensing data analysis efforts.

Driver information is currently on-line through terminal scopes within the Department. Rapid access will soon be available on-line to police agencies through remote terminals.

The Department of Public Safety initiated a series of meetings with the Medical Advisory Board to re-evaluate department policy on licensing those with disabilities. An immediate result was revamping of the requirements for epileptics applying for a license. An epileptic will soon be able to get a temporary license if he remains seizure-free for one year (the subject's physician must certify this to be true). The

temporary license is good for a year, at which time the case must be reviewed. This new policy is more lenient, yet allows for greater control.

The licensing procedures for motorcycles are substantially in compliance with Standard 303. In Iowa, a person must beve a valid operator's license, which is then endorsed for motorcycle.

However, Iowa does not have a classified system of licensing at this time. Proposals for a classified system have been submitted to the legislature in the past, but have not been successful. Presently, a person holds only one license in Iowa; it may be an operator's license or a commercial license. A commercial license allows the bearer to drive passenger vehicles as well.

3. Plans for Future Activities: Future activities include the following:

(a) Legislative. Resubmission of a proposal for a classified licensing system. The system proposed would be based on size of vehicle as determined by number of axles. It would provide for expansion to allow upward classes based on driving training and ability.

(b) Administrative. Review of medical requirements for a license with thought toward including some type of control over people with other deficiencies, such as a history of heart trouble, drug usage (by prescription) and other problems. The medical advisory board would be both a resource for information and a sounding board for future action.

Administrative changes are also planned to convert the Driver License Division to completely civilian control and personnel. The remainder of the uniformed examiners will be replaced by

civilians, and the directorship of the division, presently under a Highway Patrol captain, will become a civilian post.

Administrative rules concerning problem drivers with a history of recidivism are also being revamped. New rules in this area, pertaining to driver improvement action, have been recently submitted to the legislative rules review committee.

(c) Programs. Activities will continue toward full implementation of the automated licensing system, in conjunction with TRACIS. In the upcoming four years, a plastic "credit card" license will be issued, to be used with the uniform accident report, and uniform traffic citation. With the issuance of plastic licenses, the Department will begin issuing all licenses from a central location, rather than having them issued in the field. License examining will be expanded to include re-examination of all drivers, although this goal is in the more distant future. Decisions must first be made as to the locations, style, and number of future examining stations.

F. Standard 6, Codes and Laws

1. Compliance: The Federal Standard 306 calls for a codes and laws study officer. The Iowa Attorney General is the officer with responsibility for oversight of codes and laws activity, with assistance provided by the Department of Public Safety.

Iowa has completed the first phase of the program suggested in Standard 306. The University of Iowa Law School was contracted to do a section by section comparison study of the Iowa Code and the Uniform Vehicle Code. This study has been completed and printed and distributed to the legislative study committee for consideration on adopting the recommendations of the study into law.

The approach that is most probable in bringing the Iowa Code into compliance will be a chapter by chapter revision, rather than a wholesale amending of the Code.

Iowa's activity in codes and laws has been limited, but much progress has been made, and the state is substantially in compliance.

2. Current Program Status: The codes and laws study was completed in early 1972; since then activity has centered on review of the document. Key decisions on how the study will be adopted, and which parts will be adopted, must now be made. Furthermore, new laws have been passed since the code study was completed. This means that more research will be necessary to bring the study up to date.

In order to facilitate the many changes that will be made in the Code in the near future, the Department of Public Safety has printed and made available a loose-leaf Iowa Code book for enforcement personnel. This book is hard bound and easily updatable by printing and distributing loose leaf fillers.

In the area of training, the Highway Patrol has run every trooper through an Iowa Laws refresher course. In addition, the Iowa Law Enforcement Academy has been provided with a supply of the latest code books to carry out training of local officers.

3. Plans for Future Activities: In order to facilitate the adoption of the codes study recommendation, the Department of Public Safety plans to add one full-time codes coordinator with legal talents. This person will coordinate departmental activities with the Attorney General's office, and will provide staff capability to the legislative study committee for research purposes. In this way, the following objectives will be reached:

(a) The study will be kept up to date with existing and future code changes.

(b) New legislation will follow an orderly pattern to conform with study recommendations.

G. Standard 7, Traffic Courts

1. Compliance: The Iowa Supreme Court has been assigned program compliance and development. With the advent of Iowa's Court Reform Act of 1972, the traffic courts are now independent of any fee system, fines, costs, or other revenue. The same act also provided a Courts Administrator. This legislation brought the state into standard compliance; however, very little refinement has been accomplished. The following areas could be improved:

(a) A specific traffic courts administration should be added to the state's Court Administrator.

(b) Seminars and/or short familiarization courses should be established in the areas of alcohol adjudication education, presentance investigation, and other traffic safety emphasis programs.

(c) The development of specific lines of communication with statewide traffic safety priorities.

2. Current Program Status: As discussed in paragraph one, the Court Reform Act has been the primary activity to date. The Courts Administrator has just recently been appointed to the position, and at the time of this plan has not yet established his program. Therefore, little activity has been accomplished. Some local information and education programs have taken place in the areas of alcohol emphasis education. The seminars have been conducted by the Iowa Law Enforcement Academy and in conjunction with our Selective Traffic Enforcement Programs. The state's TRACIS program will provide on-line traffic records to the courts on a need basis. (See the Traffic Records Element.)

3. Future Activities: The primary emphasis will be on the development of a working relationship with the Courts Administrator for the

purpose of achieving the following activities:

(a) Creation of a Traffic Courts Administrator.

(b) Development of a detailed Comprehensive Plan for traffic courts that will accomplish Standard requirements.

(c) Better Traffic Safety Emphasis programs and information designed to make the courts more efficient.

(d) A rationale for computer terminal output support to District Courts with an education program on effective computer utilization of information.

H. Standard 8, Alcohol in Relation to Highway Safety

1. Compliance: The Standard 308 states several specific objectives:

(a) Legislation which specifies chemical test procedures for determining blood alcohol content. The standard also calls for specifications of qualifications for persons involved in analysis of blood, urine, breath, or other bodily substances. The state implied consent law does not lay out specifications for analytic personnel, but does state that blood, breath, urine, or saliva may be used for a BAC determination. The Iowa breath testing program provides that only trained technicians may analyze breath samples, and outlines the procedures for sample collection, transport, and analysis.

The breath testing program is not subscribed to by all local jurisdictions, however. Some still rely wholely on blood tests, in which case a doctor or medical technician must draw the sample. Some jurisdictions use urine samples where equipment is readily available. Saliva is rarely used, as the arresting officer has his choice as to the type of test offered, after a blood test has first been offered and refused.

(b) Legislation that specifies that a BAC of .10 percent or more is presumptive evidence of driving under the influence of alcohol. Iowa is in complete compliance.

(c) Legislation which provides that a person's operator's permit shall be revoked if arrested on reasonable grounds for belief that he has committed related traffic offenses, and subsequently refuses, on request, to submit to a BAC test ("Implied Consent" legislation). Iowa is in complete compliance.

(d) Quantitative tests on the bodies of all drivers and pedes-

trians 15 years of age or older who die within four hours of a crash. This would take legislation in Iowa. Iowa has not complied, although legislation has been submitted in several sessions.

Chemical testing procedures themselves are substantially in compliance. This was accomplished for breath analysis by development of an easy collection method for breath samples, which are shipped to central labs, where technicians meeting the federal standards carry out analysis.

2. Current Program Status: Iowa statistics show that alcohol is a major factor to be considered in the Iowa Highway Safety Program. The Department of Public Safety has estimated that alcohol involvement was present in Iowa from 15 percent to 30 percent of all fatal accidents. These figures are far below national estimates of alcohol involvement in 50 percent of fatal accidents. The Iowa figures may be conservative because Iowa does not require chemical tests on all drivers involved in fatal crashes. These figures do place alcohol at the top among contributing factors in fatal crashes, and therefore the alcohol countermeasures program is of top priority in the state. However, legislation requiring blood tests in all fatals should be a priority to better analyze the problem.

With this in mind, Iowa developed a program of breath analysis for Blood Alcohol Content (BAC) in 1969. This program is ongoing at present. Emphasis in the area of alcohol countermeasures is also demonstrated by the fact that revocations of driving privileges for OMVI or refusal to submit to chemical testing (implied consent) have increased by 64.4 percent since 1960.

Activities concerning alcohol countermeasures have generally centered around enforcement. Breath testing for BAC has come into widespread usage since the last Comprehensive Plan. In addition, local departments have been encouraged to add other modern enforcement techniques for

alcohol. Many departments have been provided with video tape equipment for alcohol enforcement. At present, 48 Iowa departments use this technique. One department has reported a conviction rate of 96.8 percent in cases that were taped.

A four-day alcohol seminar has been developed by the Iowa Law Enforcement Academy. This seminar involves not only police, but also prosecutors and judges. The seminar includes demonstrations of enforcement techniques, lectures on legal questions, and panel discussions. Alcohol Enforcement training has been expanded by the ILEA in basic and advanced courses as well.

Iowa has taken a big step beyond enforcement in the area of rehabilitative countermeasures by virtue of House File 1082. This bill, passed in 1972, provides that:

(a) A driver improvement school should be developed by the Department of Public Instruction for OMVI convictees, and should be offered statewide at the 16 Area Community Colleges.

(b) A judge shall have the option of sentencing an OMVI convictee to this school, or to another type of rehabilitative measure, based on the person's drinking problem.

(c) The Department of Public Safety shall have the ability to issue a convictee a temporary driving permit to attend the school.

(d) The Department of Public Safety shall have the ability to forgive a portion of the convictee's driver license revocation period, if the subject completes the drinking-driver course.

This bill will be of great benefit because:

(a) It will bring drinking-drivers into a rehabilitative system to cut down on recidivism.

(b) It will provide a link between the law enforcement effort and the rehabilitative efforts in the state.

The Department of Public Instruction has given alcohol a priority status in its driver education curriculum guides, which contain an in depth section on alcohol. In addition, DPI has initiated an alcohol education unit which serves full time to aid schools in alcohol related programs. This unit has also served for the Department of Public Instruction in the administration of the Hughes Bill on alcohol, and has been instrumental in planning the drinking driver schools under House file 1082.

3. Plans for Future Activities:

a. Legislative. A bill to require blood tests of all victims of fatal crashes, over 15 years of age, and of all surviving drivers of fatal crashes, will be resubmitted to the legislature.

b. The House File 1082 calls for drinking driver improvement schools to be available by July 1, 1973. The Department of Public Instruction and the Department of Public Safety will prepare this course. Evaluation of these courses will be undertaken during the upcoming four years.

c. Alcohol countermeasures used in the ASAP programs will be utilized where possible through state and local law enforcement efforts. Other judicial and rehabilitative countermeasures will also be utilized where possible.

I. Standard 609, Identification and Surveillance of High Accident Locations

1. Compliance: In evaluating the state's compliance with Standard 609 it is noted that the state is operating with a standardized accident report form. This report form does enable the state to manually locate accident locations. Further manual manipulation of these report forms provides for compiling of basic information ex post facto. It is further noted that under the present situation of accident location and accident analysis a 30% degree of compliance to the Standard has been achieved. However, with the continued increase in vehicle operation it has become imperative that a system of accurate identification of accident locations and a rapid analysis of accident locations be developed if we are to achieve 100% compliance with the Standard.

2. Current Program Status: The activity in this standard area involved two major programs. In program one, the State established a milepost system and placed the markers on all Primary roads as well as portions of the Interstate System. On the remaining Interstate mileage the milepost system has been established and the markers will be placed in the field at a subsequent date.

In program two, the State has completed the Developmental phase of an Accident Locator and Accident Analysis System. This program was the initial phase of a system that is capable of accurately identifying specific accident locations and providing capabilities for continued surveillance of all highway systems accident information as a basis for improving high and potentially high accident experience locations.

3. Plans for Future Activities: A program has been developed to reduce the number and severity of highway accidents through the use of a Locator System common to all public highways and a method of rapid accident

analysis needed to initiate and evaluate corrective action in the problem areas. Upon completion of the Developmental Phase of the Accident Locator and Analysis System the program moved to Phase I of Implementation. In Fiscal Year 1974 and Fiscal Year 1975, Phases II and III of the Implementation will be completed and this will establish the ability of accurate identification of accident locations at all levels of jurisdiction and place the state in compliance with that facet of the Standard. During the Implementation phases, a uniform accident form will be developed that will be used by all reporting agencies and result in further compliance with the Standard.

During Fiscal Years 1974 and 1975, two accident teams will be established to analyze data, make field exams, set priorities, and evaluate improvements on the various road systems. Two more additional teams are planned for Fiscal Year 1976. Establishment of these teams in conjunction with the program of rapid surveillance and analysis should result in Standard compliance by the close of Fiscal Year 1976.

When the Location and Analysis Systems become operational in Fiscal Year 1975, they will provide a means for making a detailed accident evaluation of all road systems in the State. These expanded evaluation procedures will be used to improve the ongoing spot safety improvement program being conducted in accordance with Federal PPM 21-16.

J. Standard 10, Traffic Records

1. Compliance: The TR system is in total conformance with highway safety program standard 4.4.10. As a minimum the standard requires the following:

a. Information on vehicles in real time includes:

(1). Make

(2). Model year

(3). Identification number (VIN)

(4). Type of body

(5). License plate number

(6). Name of current owner

(7). Current address of owner

(8). Registered gross laden weight of every commercial vehicle

(The above items are part of the standard vehicle file.)

(9). Rapid entry of new data into the records or data system. (Optical character recognition is currently being used to enter new data into TRACIS concerning vehicles. Work is ongoing with State funds to implement an on-line vehicle registration system.)

(10). Controls to eliminate unnecessary or unreasonable delay in obtaining data. (TRACIS is a real-time system that is fully duplexed to create the highest degree of reliability possible and to eliminate as far as possible any unnecessary or unreasonable delay in obtaining information in the state.)

(11). Rapid audio or visual response upon receipt at the record station (TRACIS) of any priority request for status of vehicle possession authorization. (TRACIS will be able to respond in real-time to requests for vehicle information. At the busiest

point, TRACIS will be able to respond within two minutes to the officer in the field.)

(12). Data available for statistical compilation and needed by authorized sources. (TRACIS will routinely generate a large number of statistical data required periodically by authorized and official agencies. In addition special statistical reports may be generated upon request.)

(13). Identification and ownership of vehicles sought for enforcement or other operational needs. (Obviously real-time vehicle registration data will satisfy the needs for enforcement and other operational needs around the state.)

b. Information on drivers and conforming to the Drivers License Standards

(1). Positive identification

(2). Current address

(3). Driving history. (TRACIS will store positive identification, address and driving history information on-line available throughout the state.)

(4). Rapid entry of new data into the system. (New data from any source concerning the driver license or driver history system will be entered rapidly as it is submitted. Direct entry, error correction, and OCR entry systems are being developed.)

(5). Controls to eliminate unnecessary or unreasonable delay in obtaining data which is required for the system. (TRACIS has built within it controls to assure that information is not lost or unreasonably delayed. For example, the Uniform Traffic Citation arrest will result in a hold file pending disposition. If no disposition, an inquiry will be sent to the proper court.)

(6). Rapid audio or visual response upon receipt at the record station (TRACIS) of a priority request for status of the driver license validity. (The first level data for drivers license inquiry on TRACIS in real-time will be validity.)

(7). Ready availability of data for statistical compilation and needed by authorized sources. (TRACIS will generate a high volume of periodical statistical reports to authorized agencies. Special statistical compilations can be generated upon request.

c. Information on types of accidents including:

(1). Identification of location in space and time. (TRACIS is developing in close cooperation with the locator system currently being developed by the Iowa Highway Commission. The Uniform Crash Report will interface and identify the location and space of time of accident.

(2). Identification of drivers and vehicles involved. The uniform accident report in conjunction with vehicle and driver license files will identify the appropriate drivers of vehicles.

(3). Type of accident. (Data coding techniques and procedures currently being developed utilizing the Iowa Crash Report to accurately define type of accident.)

(4). Description of injury and property damage.

(5). Description of environmental conditions.

(6). Causes and contributing factors including the absence or failure to use available safety equipment. (The Iowa Crash Report and coding techniques associated will accurately collect damage data, environmental condition data and the causes and contributing factors to the accident, including the use, absence,

or failure to use available safety equipment.) All traffic records statistics are guaranteed as public information by Iowa law. (Provided the statistics do not identify individuals.)

2. Description of current activities

a. Uniform Traffic Citation: A tentative Uniform Traffic Citation has been designed and will be discussed with representatives of the Highway Safety System around the state during the next month. Procedures for processing Uniform Traffic Citations are in development. Violation record formats have been developed and the current driver license violation records will be converted shortly.

b. Uniform Accident Report: It has been decided to call the Uniform Accident Report in Iowa the Iowa Crash Report. An extensive coordination effort among state and local officials in deriving the Iowa Crash Report has resulted in a final design which was submitted to the Department of Public Safety in December of 1972. All data entry procedures are being developed to utilize the Uniform Accident Report as inputs into the accident system of TRACIS. Included on the Uniform Accident Reports (Crash Reports) are the data elements necessary to precisely locate accidents on the Iowa roadway.

c. Motor Vehicle Registration: The records for approximately 1.1 million vehicles have been converted to machine readable form. The registration receipts for these motor vehicles have been prepared on the high speed printer and have gone out to County Treasurers. Certain difficulties have been experienced with forms and high speed printing, but most of these have been resolved. For those registrations on which errors occur for scanning or in the data field, on-line error correction procedures have been established and are

operating currently.

d. Drivers License: The Drivers License Processing System for inputting drivers license application information into the TRACIS system has been completed. Drivers license edit criteria have been programmed into the system and file maintenance programs are currently being worked on. The current driver license file is now available to TRACIS terminals on-line for eight (8) hours a day.

3. Plans for Future Activities

a. Uniform Traffic Citation: The Uniform Traffic Citation for Iowa must, by statute, be activated on July 1, 1973. Before this time, procedures for inputting traffic citation information into the driver history will be operating and the driver license system will be on-line twenty-four (24) hours a day.

b. Uniform Accident Report: The Uniform Crash Report will be tested in mid-spring with formal implementation on July 1, 1973. Procedures for coding accidents into the system will be completed in 1973.

c. Motor Vehicle Registration: The other thirty-nine (39) counties of Iowa will be required to submit motor vehicle information to the TRACIS system prior to August 1, 1973. It is anticipated that automated vehicle registration will be providing service to all Iowa counties during the next year. The numbering scheme has been changed for Iowa license plates and the motor vehicle record system has been finalized and file maintenance programming is currently under way. It is anticipated that about fifty percent of the motor vehicle file for the state will be on-line in March of 1973, with the remainder coming into the system as they are input by the local officials.

d. Drivers License: It is currently anticipated that a plastic credit card drivers license will be implemented on July 1, 1973, if the Iowa legislature approves. The drivers license system and its links to accident and violation records will be operational in the spring of 1973 (approximately March 1, 1973).

e. Statistical Reporting: The traffic records statistical reporting system will be under development for many years. Essential statistical reports will be programmed first and an array of periodical statistical reports will be generated in the fall of 1973, including statistical reports required by the Department of Transportation and the National Safety Council.

K. Standard 11, Emergency Medical Services

1. Compliance: The Iowa Department of Health has created an Emergency Medical Services Section and assigned it standard compliance and program development. With the exception of needed legislation establishing requirements and certification criteria, the state is in compliance with the Standard. When the proposed legislation is passed, standards will be provided on a statewide basis.

2. Current Program Status: Organizational standards are presently set by the agency or company operating the ambulance or hospital facility. Hospital based ambulance services generally follow the same organizational pattern (an assigned crew for each shift consisting of orderlies, technicians and/or other hospital personnel). Fire departments (except when receiving funds under highway safety) still use the general alarm system of alerting the ambulance crew. A relatively new organizational pattern is the volunteer ambulance service. Organized along the same lines as a volunteer fire department, this is a group of people - often women included - that operate an ambulance service. Unlike the volunteer fire department, most of these organizations have a duty roster and the crew is dispatched by a radio paging system. Although often housed in a fire station, these organizations are separate and apart from the fire department.

All future planning for EMS is being done on a county or area wide basis. The first area-wide plan was completed in August 1972. This included nine Iowa counties and one county each in South Dakota and Nebraska. Additional planning is being done in cooperation with the Comprehensive Health Planning agencies.

Each service at present develops its own operational procedures. Guidelines are provided for ambulance services that receive highway safety funds. The only established authority at the scene of an accident is that of the law enforcement officer. He is, by law, responsible for the scene. The various training programs being conducted for ambulance and law enforcement personnel emphasize the necessity of delegating responsibilities to each of the responding operational units: police - traffic control and accident investigation; fire departments - control and prevention; rescue squads - extrication, rescue, and support for ambulance crews; ambulance service - patient care and transportation.

Legislation will be considered if this training does not develop the mutual respect and cooperation that is needed.

The Iowa Highway Patrol is the only organization that has state requirements for training personnel in emergency care procedures. All members of the Highway Patrol are now required to complete a 20-hour emergency care course designed expressly for the law enforcement officer. This training is being given by the Area Colleges in lieu of the American Red Cross Advanced First Aid Course that was previously required. It is expected that this course will be adopted by the State Law Enforcement Academy, which will then use it as a standard for training of all law enforcement officers in the state.

The Basic Emergency Medical Technician Ambulance course (81 hour dunlap) has been accepted by the EMS Advisory Council as the suggested basic requirement for all ambulance personnel. Personnel assigned to ambulance services that receive DOT funds are required to successfully complete the EMT-A training program and other ambulance personnel are encouraged to complete the course. At least one city now requires completion of the EMT-A course for license to work as an ambulance attendant in any ambulance operated in

the city. Legislation will be introduced which, if passed, would set standards for personnel and require the completion of the Basic EMT-A course for all ambulance personnel.

At the present time there are no state standards for ambulances. Ambulances funded with DOT funds must meet rigid specifications which are as close as possible to the recommended specifications as set forth by DOT in the "Ambulance Design Criteria" booklet. Communities are assisted in planning for ambulance services even though they decline or do not qualify for federal funds and many are purchasing ambulances that meet the criteria.

Legislation will be introduced which, if passed, would set standards for all ambulances in the state. This would be a phase-in program that would bring all ambulances up to standard within five years.

Ambulance distribution has generally been without planning and is related to the desire of either public or private sectors to develop an ambulance service. Some areas are therefore almost void of ambulances, while others are saturated. There is no legislative provision for either ambulance districts or franchises. With few exceptions, the only planning done in ambulance distribution has been since the development of the EMS Section in the State Health Department.

Planning calls for adequate distribution of ambulances to provide a response time of no more than 15 minutes under most conditions and no more than 30 minutes under any condition. Rescue units will be available to support ambulance on each accident call.

There are currently no state standards for EMS communications. Most ambulances that now have radios operate on a low band law enforcement net (37.10) with the capability of communicating only with the law enforcement agency.

The new EMS Communication System will provide standards for all phases of the EMS response system.

3. Plans for Future Activities: Primarily, future activity will be essentially the same as current efforts. There will be increased efforts in the areas of regional planning, identification and improvement of regional trauma centers, and passage of proper EMS standards. In addition, the state's approved EMS Comprehensive Plan will be updated and complied with as task force reports are accepted to the plan. Specific attention will be placed on implementing the state's EMS Communication plan.

L. Standard 612, Highway Design, Construction, and Maintenance

1. Compliance: In reviewing the criteria relative to the state's compliance with Standard 612 those roads under the jurisdiction of the Iowa State Highway Commission have a 70% degree of compliance. Basic policy and procedures of the Iowa State Highway Commission involving spot improvements, snow and ice removal, break away devices, skid evaluations, guard rail design, cooperative lighting, grade crossing signalization, emergency assistance training for maintenance personnel, and emergency help on the Primary road system has resulted in such compliance. However, the majority of mileage in the public road systems of the state are under the jurisdictions of county and city governments. Those jurisdictional levels of government have been continuously plagued with inadequate funding for the upgrading of their complete systems. In order to impact upon the accident problem of the county and city road systems the state must provide the guidance and assistance needed.

2. Current Program Status: In this Standard area the following activity has occurred since submission of the 1968 Comprehensive Plan.

A skid evaluator was purchased and placed in operation. This machine in conjunction with an already existing machine gives the state the capability to skid test all state-maintained roads on a biennial basis.

A special problems team will be established to review skid test data for corrective action, review data to determine needs for railroad crossing improvements and develop policies and procedures for a hazard identification and removal program.

A skid evaluator will be purchased and manned so that all paved roads and streets on the local highway system that have a speed limit greater than 40 mph will be inventoried.

Additional personnel will be secured to conduct the field operations required in the hazard and railroad crossing inventories. These programs will be continued in accordance with anticipated Federal Programs.

A state contruction and maintenance traffic control manual will be developed, printed, and distributed.

A Field Manual of Standards and Procedures for the erection and maintenance of signs in compliance with MUTCD will be developed and printed.

Video tape equipment for the production and viewing of training tapes will be acquired. These tapes will be produced by Iowa State Highway Commission personnel or acquired from outside sources. It is anticipated that the training films will cover such subjects as procedures for the installation and maintenance of traffic control devices, roadway hazard inventory and analysis procedures and other inventory and analysis activities conducted under the 3+ Standards. In addition, the equipment will also be used to provide a record of on site physical characteristics of accident locations that are being analyzed.

At the present time in-house research is being conducted on the merits of improving the skid resistance of PCC pavement by burning the surface. If this research indicates such action is feasible, a proposal for the design, construction and testing of an operational machine will be outlined in the Annual Highway Safety Work Program.

M. Standard 613, Traffic Engineering Services

1. Compliance: The Iowa State Highway Commission has within its organizational structure a Department of Traffic and Safety. Outlined in the Policy and Procedures of this department are many of the objectives, tasks and functional areas embodied in Standard 613. The ongoing activity of the Traffic and Safety Department does result in 65% compliance with Standard 613. However, limited manpower, limited budget and major application of the Department's functions on only the Primary road system points up the action needed for full compliance with this Standard.

2. Current Program Status: The following projects constitute the major activity accomplished in this standard area:

A developmental phase of a Traffic Control Device Inventory was completed. This project, which included a pilot study, identified inventory items, designed the field forms and procedures, developed an update system and provided cost analysis on the conduction of a complete inventory.

A manpower needs study as it relates to Traffic Engineering capabilities in the State of Iowa was conducted. In view of the findings of this study, In-Service Traffic Engineering Short Courses were developed and initiated. These short courses are now being conducted by the State University of Iowa at various locations throughout the State and offered to Technicians, Engineers and County Engineers.

An intensive three-week training course on the theory and application of the Traffic Engineering Science was made available to seven

staff personnel of the Iowa State Highway Commission. This course, which was conducted by Northwestern University, was attended by various individuals in the Safety and Traffic Section of the Iowa State Highway Commission, who have Traffic Engineering responsibility.

A new Iowa Manual of Uniform Traffic Control Devices has been adopted. This manual consists of the National Manual which has been adopted as the basic Iowa Manual and those addenda that apply only to Iowa situations. Statewide distribution of the manuals will occur as soon as they can be assembled. The addenda will be prepared as required and distribution of it will follow.

During the past Comprehensive Plan period, an attempt was made to provide Traffic Engineering Services to those units of local government that have traffic control problems, or need traffic engineering services but do not have the trained personnel to develop an effective program. Various local government units made application and received safety grants to conduct inventories of signs and signals in addition to conducting Traffic Engineering Studies of problem areas.

3. Plans for Future Activities: During the proposed Comprehensive Plan period, the State program will strive for 100% compliance with this Standard through initiation of the following activities:

In order to upgrade the skills of Engineers with Traffic Engineering or related responsibilities, a two-week seminar will be conducted by Northwestern University for Iowa State Highway Commission personnel. In addition, Traffic Engineering training for selected Technicians will be provided.

Traffic Engineering assistance to those jurisdictions unable to provide for such will be continued. Six Traffic Engineer positions will be created. These individuals will serve in a District capacity and will be of service to local jurisdictions, as well as acting as liaison

between the local unit and the State level Traffic and Safety Department.

The program of providing funds for local Traffic Engineering Studies will be continued on an expanded basis.

Traffic Control device plans will include development of methods and procedures for the upgrading of signals, regulatory, warning and guide signs on the primary road system to comply with federal requirements. In addition, development of procedures for daytime-nighttime inspection of traffic control devices on the primary road system will be initiated.

Training seminars will be held to acquaint city and county officials with the 1971 MUTCD procedures and requirements. The plans of local government to comply will be outlined in the Annual Work Program as a line item of a subelement plan or as part of the local project section of the Annual Work Program.

Staff will be provided for a speed limit survey of roads on local systems.

The Code of Iowa will be reviewed for desirable changes relating to Traffic Engineering and where needed the necessary legislation will be proposed.

Initiation of these proposed plans in this Standard in conjunction with the proposed activity in Standard 609 should bring the state into 100% compliance by the close of the Comprehensive Plan period.

N. Standard 14, Pedestrian Safety

1. Compliance: Public Safety: The federal Standard 314 calls for an investigation of pedestrian crashes in great detail. No special attention has been paid by the Department to the investigation of pedestrain accidents. Rather, the on-scene investigation techniques of police on all accidents has been upgraded by increased accident investigation training and equipment for local officers. Reference to the sections of this plan on police traffic services and accident investigation will give a better picture of activities in this area. However, special measures concerning the investigation of pedestrian accidents have not been considered at this point because pedestrian safety is not a high priority item at this time.

Engineering and land use factors in pedestrian safety are the responsibilities of the Highway Commission.

The Department of Public Safety has undertaken a safety information program in cooperation with schools and other societal groups on a statewide basis, by virtue of 14 full-time safety officers.

On the local level, pedestrian and bicycle public information programs have been initiated in three Iowa cities.

2. Current Program Status: Pedestrian safety has not been a priority item for the Department of Public Safety because of the following reasons:

(a) Pedestrians represent only about 6.5 percent to 7.3 percent of all people killed in fatal accidents.

(b) Over 80 percent of all pedestrian fatalities occur in larger cities, indicating that pedestrian efforts could better be spent in traffic control efforts and local education programs in these high volume areas.

This is not to say that the Department has ignored pedestrian problems Fourteen Highway Patrol safety officers make about 30 percent of their contacts with school age children, who represent the biggest percentage o people involved in pedestrian accidents.

Furthermore, safety program assistance has been provided to localities whenever requested, with safety information programs established in Clinton, Dubuque, Davenport, and a "safety town" established in Cedar Rapids.

The Department of Public Safety has recently determined that pedestrian accidents may account for a much higher percentage of fatalities in urban areas than originally thought (40 percent of all motor vehicle fatalities in some cities). This is coupled with the statistics displayed in Chart 14-B-1, which shows that bicycle fatalities have increased sharply in the past three years.

Therefore, while keeping the pedestrian and bicycle problem in proper perspective with other types of accidents, it is clear that a more organized and comprehensive approach to pedestrian-bicycle safety activiti is needed.

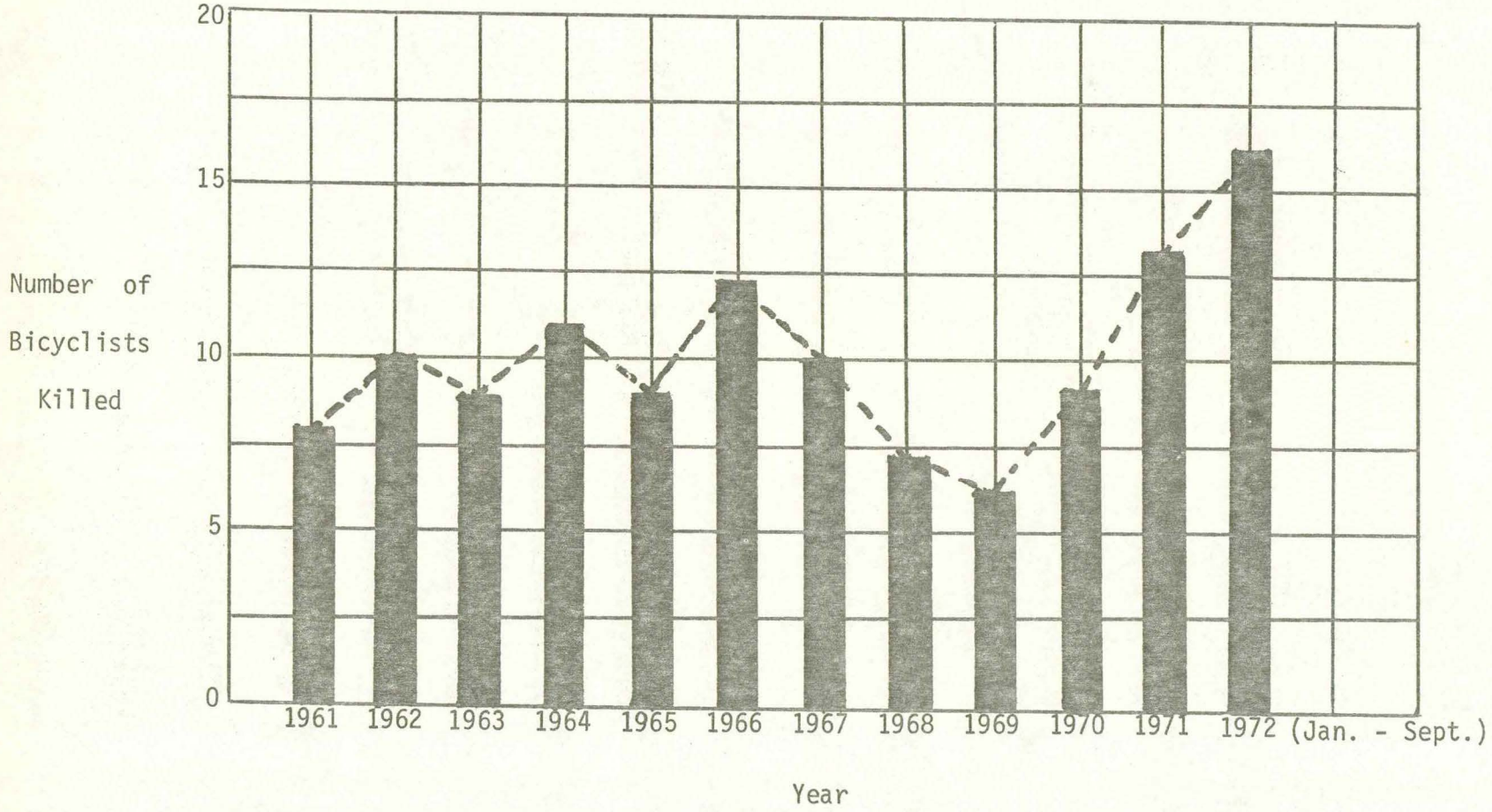
3. Plans for Future Activities: A limited number of comprehensive pedestrian programs should be developed in local areas. Contact should be made by both DPS and DPI with school boards and other governmental units, as well as police departments. Bicycle safety should be a part o any urban program.

The State program of safety officers should be continued at the prese or an equivalent level, backing up local efforts wherever possible.

A program will be initiated to update Standards for school crossing signs, signals and pavement markings and to implement these Standards in an orderly manner.

Chart 3-B-7

NUMBER OF BICYCLISTS KILLED: STATE OF IOWA, 1961-1972 (Jan.-Sept.)



O. Standard 15, Police Traffic Services

(1) Compliance with Standards. In the area of police training, the Iowa Law Enforcement Academy (ILEA) has primary responsibility for certifying all basic law enforcement training, and specifically trains all state enforcement officers with the exception of the seven (7) Metros and the Highway Patrol, which conduct their own basic and advanced training, with the approval of the Academy. Iowa law requires that all police officers, regardless of status, must attend the ILEA's basic course, or a course approved by the ILEA. The ILEA's basic training course is 240 hours in duration, well surpassing federal recommendations.

Traffic subjects include:

1.	Traffic Systems	4 hours
2.	Motor Vehicle Laws	12 hours
3.	Traffic Law Enforcement	4 hours
4.	Patrol Procedures	6 hours
5.	Traffic Direction	2 hours
6.	Report Writing	2 hours
7.	Laws of Evidence, Search Arrest, Confessions	12 hours
8.	Accident Investigation	16 hours
9.	Court Organization, Testifying	3 hours
10.	Drinking Driver Control	5 hours
11.	Emergency Medical Care	20 hours

In addition, the ILEA offers advanced training for all police officers, and a variety of specialty traffic courses. Special courses include:

(a) Accident Investigation, patterned after Northwestern University Traffic Institute's (NUTI) short course. The ILEA course makes use of NUTI materials, but is specifically geared to Iowa. 80 hours.

(b) Traffic Law Enforcement (TLE), Once again patterned after the NUTI short course, but adapted not only to Iowa, but to specific localities that request the training. Designed to be advanced TLE training for patrol or traffic divisions. 80 hours.

(c) First line supervisor's school, designed to give the line officer advanced training in traffic and patrol division supervision. 80 hours.

(d) OMVUI seminar, a short seminar that brings officers, prosecutors, and judges together to review chemical and mechanical alcohol enforcement techniques, and discuss the legal and social ramifications of alcohol enforcement. 40 hours.

In addition, ILEA personnel are constantly being utilized for local short courses and seminars, as well as Highway Patrol short courses, seminars, and basic training.

In the area of Police Training, Iowa has a solid program offering a variety of courses, with highly qualified instructors. Iowa surpasses the federal standard for police training.

Federal standard 315 sets out a number of objectives and a wide variety of procedures for accomplishing these objectives. The Highway Safety Program has served to promote many of these procedures on the state and local level. A discussion of the actual extent of such things as selective enforcement programs will be given in the next section on current program status.

Since the last comprehensive plan, the Department of Public Safety, with prime responsibility for the police traffic program has initiated selective programs on a limited basis in three major Iowa cities. The Department has also used Highway Safety funds to equip many smaller departments for increased traffic efforts.

The approach that the Department has used in these cities has conformed closely to federal standards. These programs are multi-phased:

(a) Officers are trained to observe traffic flow, recognize dangerous driving situations, report environmental hazards, and handle emergency situations.

(b) Supervisors are provided with administrative training to handle data, in some cases.

(c) Officers are equipped with modern equipment to better carry out enforcement duties.

(d) Actual enforcement, making maximum use of existing data.

(e) Evaluation and retraining.

These programs conform as closely as possible to federal standards, within funding limitations. It should be noted, however, that while the approach of the program has been substantially in compliance with federal standards, funding limitations have prevented the Department from undertaking a more expansive approach, which would bring Iowa into compliance on a statewide basis.

Accident Investigation will be discussed in relation to Standard 318.

SUMMARY: Iowa's police training program substantially surpassses the federal standards.

The approach taken in PTS activities by the Department of PUblic Safety conforms to federal standards. However, Iowa police agencies do not conform statewide, due mainly to funding limitations.

2. Current Program Status. Iowa Department of PUblic Safety figures show that of 510 police departement surveyed in the state, $33,377,474 were expended in 1971. These departments accounted for 2,565 full-time policemen. Of these, 2,099 spend over 50% of their time in traffic enforcement, or a total of over 2,000,000 man-hours of traffic enforcement annually. The departments surveyed include sheriffs, police, and a sample of town marshalls. It can be reasonably estimated that local expenditures for traffic enforcement well surpass $16,000,000 annually. These departments operate 1035 patrol vehicles, and 70 patrol motorcycles. Over 900 of these are fully marked, including warning lights. 198 departments operate 233 radar units. Forty-eight departments operate video tape equipment for OMVUI arrests.

Population is the main determinant in the extent of police traffic activity in a county. Twenty percent of the reporting departments were in counties of 50,000 or over. These departments account for 46.2% of all uniformed officers, 36.7% of all patrol cars, and 61.5% of all patrol motorcycles. These departments represent only about 26% of those departments using radar. However, these larger

departments operate 32.7 percent of the radar units in the state. The use of video tape an an OMVUI enforcement tool is evenly distributed among departments of various sizes, due to a large degree to the Highway Safety Program, which aided many small departments in acquiring VTR units.

Public Safety statistics show that the enforcement effort in the state has been increasing over the past ten years. Table 15-B-1 shows that the number of revocations, suspensions, and temporary driving permit cancellations per 1,000 licensed drivers has more than doubled in the last ten years. However, this increased effort has not been accompanied by a decrease in traffic accidents. Chart 15-B-2 shows that as revocations, suspensions, and TDP cancellations per 1,000 drivers increased, so did motor vehicle fatalities. This relationship is highly significant.

The danger in taking these figures too seriously is that revocations and suspensions are only one measure of enforcement effort. However, as an indirect measure, it can be said with some confidence that enforcement efforts, while increasing, have not been as effective as is necessary. Continued upgrading of Iowa's Traffic Records system will improve upon this analysis.

One reason for a lack of effectiveness in traffic enforcement could be a lack of training in effective traffic law enforcement. The Department of Public Safety survey shows that 80.18% of local officers have received some sort of basic training. However, the extensive traffic training now given by the ILEA has only recently been initiated. The present basic course is 240 hours, but the average local officer has received 172 hours basic, ranging from no basic to the full 240 hours.

To bring these local officers up to date on effective traffic law enforcement techniques, the ILEA initiated an aggressive program of in-service and short TLE courses. This, also, is a recent endeavor, and survey statistics show that less than 20 percent of the reporting departments offered some type of in-service training in 1971. This includes ILEA efforts.

Chart 15-B-1

REVOCATIONS, SUSPENSIONS AND TDP CANCELLATIONS

PER DRIVER: IOWA STATE, 1969-1972

Year	Number per Licensed Driver	Number per 1,000 Licensed Drivers
1960	.0063	6.3
1961	.0062	6.2
1962	.0056	5.6
1963	.0060	6.0
1964	.0087	8.7
1965	.0100	10.0
1966	.0120	12.0
1967	.0120	12.0
1968	.0140	14.0
1969	.0138	13.8
1970	.0142	14.2
1971	.0132	13.2

Another reason for a lack of effectiveness of enforcement could be due to a lack of selectivity in enforcement. Although the level of traffic enforement per officer is high, 50% of an officer's time, on the average, only 18 departments (3.55%) have the traffic-dedicated units most amenable to a selective enforcement effort. This in itself probably means little, since there are advantages in non-specialization among police officers.

However, only 25% of the reporting departments assign personnel on the basis of traffic volume. Only 11.7% of the reporting departments assign personnel according to accident experience. 94% of the departments reported that they assign on the basis of emergency needs, but for the majority of departments, this is the only rationale used in assigning traffic personnel.

Very little has been said up to this point concerning enforcement on the state level. The need for selectivity by state troopers is even more critical, considering that 400 Troopers must cover the entire state. In many areas, the Highway Patrol is the main traffic enforcement authority.

The Patrol has been running well below its statuatory complement of men for a period of time, making thorough enforcement an even tougher task on the state level. The problem presently for the Patrol is somewhat the opposite of the local jurisdications. The Patrol has one of the finest reporting systems in the nation for controlling and gathering data on personnel. It is well-equipped and has the training to carry on traffic enforcement. However, the Patrol lacks manpower to cover all areas that demand attention.

The situation in Post #1 demonstrates the situation. Interstates 80 and 35, which intersect at this post, require an ever-increasing number of Troopers. In addition, traffic flow in cars per day has increased by almost 20,000. The new Highway Emergency Long-Distance Phone system (HELP) has proven highly successful in bringing aid to motorists, but requires one trooper full-time, and sometimes two on duty at once.

The situation is especially critical in post #1 because this post has six counties which could qualify as higher than average fatality counties, including Polk County, with almost six percent of the state's fatalities yearly. Post #1 commander estimates his needs at 9 additional Troopers, one additional Sargeant.

SUMMARY: Statistics show that local departments have a substantial number of officers (about one for every 1,000 licensed drivers) that spend an average of 50% of their time on traffic.Enforcement, as measured by revocations and suspensions per 1,000 drivers, has gone up. But so have accidents, and therefore more effective training and assignment of police must be undertaken.

The Highway Patrol, on the other hand, has an abundance of know-how and equipment, but lacks the personnel needed for effective enforcement.

3. Plans for Future Activities. Present police traffic programs address themselves directly to the need of increased training and increased selectivity. Therefore, future plans would call for:

(a) Expansion of the police traffic training program at the Iowa Law Enforcement Academy, in order to train a larger number of officers per year.

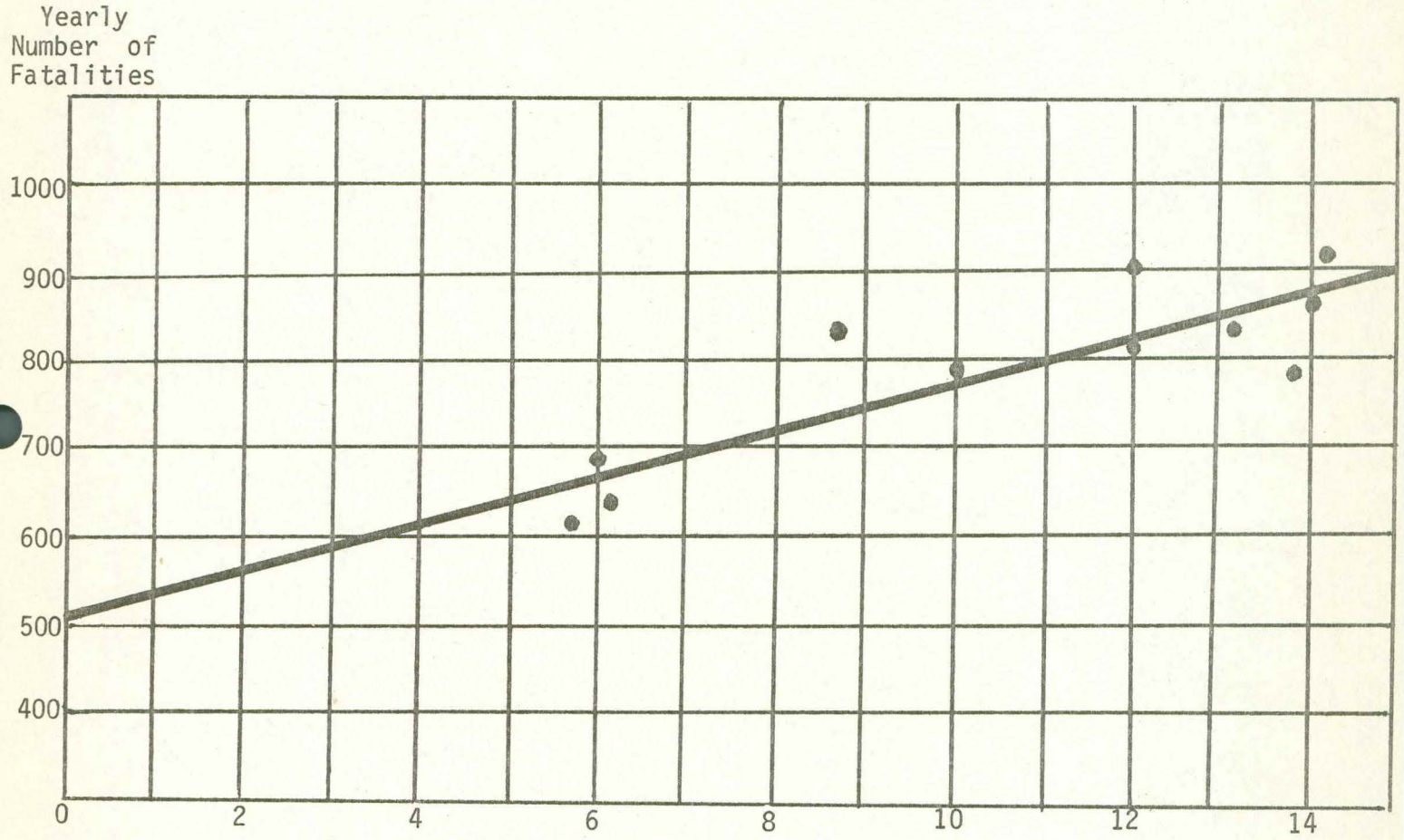
(b) Expansion of selective enforcement programs by increasing the activities on local sites already underway, and by increasing the number of sites.

(c) Initiation of measures on the state level to relieve manpower problems, with new men being assigned to selective enforcement duties.

Chart 15-B-2

RELATIONSHIP BETWEEN REVOCATION-SUSPENSION RATE

AND MOTOR VEHICLE FATALITIES IN IOWA, 1961-1971



r = 0.84 (highly significant)

*per 1,000 licensed drivers

P. Standard 16, Debris Hazard Control and Cleanup

1. Compliance: The Department of Public Safety, with primary responsibility for Standard 316, has developed a series of simple programs that-together with ongoing programs by the State Fire Marshall's Office, Iowa Civil Defense, and Iowa Police Radio, brings the state basically into compliance:

(a) Procedures for prompt notification of debris situations creating a highway hazard has been answered, first of all, by a simple but effective motorists' aid system, called the Highway Emergency Long-Distance Phone (HELP). The HELP System amounts to a toll-free 800 telephone number by which any motorist can reach Highway Patrol headquarters. The HELP line is used by motorists for a variety of things, including reports of erratic drivers, crimes being committed, etc. But the highest number of calls consist of stalled or otherwise disabled vehicles and accidents.

A State Trooper is on duty to answer the phone 24 hours a day.

(b) Procedures for rapid, safe removal of debris is carried out through the HELP mechanism because the Trooper on duty has a rapid access file of all tow truck facilities, in order of location, and with notes on the abilities of each facility in removing vehicles or debris. The file also contains all law enforcement agencies by location so that the agency most capable of rapid arrival on the scene can be notified if needed. The trooper also has immediate access to the statewide Iowa Police Radio System, which puts him into contact with all state police agencies and with Iowa Civil Defense.

(c) For immediate restoration of traffic flow, local officers can quickly arrive on the scene if needed. In the case of hazardous

materials, each state and local police officer has been provided with a manual outlining procedures for handling any number and variety of hazardous materials.

(d) For correcting permanently damaged highway locations, the Highway Commission is provided with a location report on every accident. In addition, the Highway Commission is provided with information on every call received on the HELP line.

2. Current Program Status: The program outlined above substantially meets the needs of the Iowa traffic system. The HELP line has, on the average, received about 140 calls a week, which can be broken down into the following categories:

Accident Reports	31%
Mechanical Breakdowns	20%
Stalled due to Fuel, Oil, Water	4%
Reports of Dangerous Road Conditions	8%
Motorist Assist (directions, medical aid)	15%
Fires	2%
Law Enforcement Assistance	15%
Miscellaneous	5%

These figures show that a large number of hazardous traffic situations are being quickly answered.

Manuals for handling hazardous materials have served their purpose; however, more hazardous situations have arisen as a result of train derailments than motor vehicle accidents.

3. Plans for Future Activities: Plans for future activities include continuation of the HELP system. Additional manpower may be added to cope with peak weekend periods.

TRACIS will include a "Resource Data Information File" that in conjunction with the accident locator system will provide for inventory and rapid access of all clean-up, fire fighting, civil defense, and explosives handling facilities, with this information on-line to police officers.

The Department of Public Safety has acquired legislation to facilitate the removal of abandoned vehicles from the roadway. Procedures will be developed to administer this program.

Q. Standard 17, Pupil Transportation

1. Compliance. The federal standard identifies four major areas. The pupil transportation program is in full compliance with the Standard with respect to the provision for administration but is only in partial compliance with the other requirements for (a) identification and equipment, (b) operation, and (c) vehicle maintenance.

2. Current Program Status.

a. Identification and equipment of school vehicles.

(1) School buses purchased since the issuance of the Standard meet the requirements.

(2) A memorandum was mailed to the administrators of all public and private schools in Iowa on September 1, 1972, notifying them of the changes that had to be made on the older buses in order to comply with the Standard. The expected completion date for these changes is September 1, 1973. Iowa has adopted the eight lamp system of warning lights.

(3) Legislation will be required to amend the Iowa Code relating to the conversion of school buses which are used wholly for purposes other than transporting pupils.

b. Operation.

(1) Personnel

(a) School Bus Drivers.

Every person in Iowa who drives a school bus is required by law to have a valid Iowa chauffeur's license and a School Bus Driver's Permit. An applicant for the latter must meet special physical, mental, and moral requirements that are established by the state for this purpose. An annual physical examination is required.

A pilot project for the training and improvement of school bus drivers which is funded by a Highway Safety Project Grant under Section 402 (c) of Public Law 89-564 is being conducted in cooperation with the Iowa Central Community College, Fort Dodge, Iowa.

In addition to this project, forty-one (41) clinics for school bus drivers were conducted throughout the state in 1971-1972 with 1,868 drivers in attendance. Thirty clinics have been scheduled for the 1972-1973 school year.

In cooperation with the Department of Public Safety, the National Safety Council Defensive Driving Course was revised to fit the specific needs of school bus drivers. This course is offered by several of the area schools.

A Handbook for School Bus Drivers has been developed and distributed to all school bus drivers in Iowa. This publication was financed by funds provided by the NHTSA.

(b) School Bus Mechanics.

A workshop for school bus mechanics is conducted annually at Iowa State University with an average attendance of 90 mechanics.

(c) Transportation Supervisors.

A workshop for pupil transportation supervisors and administrators is conducted annually at the University of Iowa with an average attendance of 40.

(2) Pupil Instruction.

A "Teachers Guide for Pupil Passenger Safety" has been developed and distributed to all public and private schools in the state. This publication also includes a unit on emergency evacuation drills.

(3) Vehicle Operation.

(a) Routes are reviewed annually for safety hazards.

(b) Iowa law requires every passenger to have a comfortable seat and auxiliary seating accomodations are not permitted.

(c) Iowa law requires the driver of a vehicle to stop when approaching a stopped school bus on which the red warning signals are flashing.

(d) Legislation will be necessary before drivers of school vehicles with lap belts can be required to wear them. The same applies to passengers in Type II school vehicles that are equipped with seat belts.

(e) Stop arms are operated only in conjunction with the red signal lamps.

(f) By September, 1973, the red warning signal lamps will be used only when the school vehicle is stopped to load or discharge passengers.

c. Vehicle Maintenance.

(1) A "School Bus Maintenance Manual" has been developed and distributed to all school districts. This publication includes a suggested inspection schedule for checking the numerous items as well as listing the operations to be performed.

(2) All school vehicles are inspected annually. Additional personnel will be needed to perform this function on a semi-annual basis.

(3) A daily pre-trip inspection form has been devised and copies mailed to all public and private schools. This provides spaces for recording any defects discovered.

3. Plans for Future Activities.

a. Legislative.

Proposed legislation relating to the definition of a school bus, the conversion of school buses for use wholly for purposes other than transporting pupils, and the use of seat belts to comply with the provisions of the Standard has been written and will be submitted to the 64th General Assembly.

b. Administrative.

Two full time non-certified individuals will be added to the staff to perform the semi-annual inspections and to assist in other aspects of the vehicle maintenance program.

This will permit the present personnel in the division to devote more time to the school bus driver training program and to the planning of bus routes and loading zones.

c. Programs.

The primary emphasis will be directed to developing a plan for selecting, training, and supervising pupil transportation personnel to assure that such persons will attain a high degree of competence in and knowledge of their duties. These activities will include the following:

(1) To plan and conduct a four-day workshop for school bus mechanics in cooperation with the Extension Division of Iowa State University at Ames.

(2) To plan and conduct a five-day conference for transportation supervisors and administrators in cooperation with the University of Iowa at Iowa City.

(3) To plan and conduct clinics for school bus drivers which will be held in the evenings at 25 locations throughout the state.

(4) To participate in a one-day Statewide Safety Education Conference for school administrators at the University of Northern Iowa.

(5) To participate in a Pupil Transportation Seminar which is held once a week during the Spring Quarter at Iowa State University.

(6) To plan and conduct a program for "School Bus Safety Week" which will be held in April of each year.

(7) To issue by August 31 of each year, the "Careful Drivers Award" to all school bus drivers who operate a bus during the school year without being involved in an accident. Local districts apply for the award on application forms distributed by the division.

(8) To establish an advisory committee to review the results of the pilot program conducted under a Highway Safety Project Grant at the Area V Vocational and Technical School which will then develop a standardized program.

(9) To work with the training institutions in the preparation of materials and procedures to be used by the instructors.

(10) The continue, in FY'74 of this plan, the School Bus Driver Training and Improvement Program so that those activities that were originally planned can be completed, and each of the remaining 14 Area Schools can be provided with materials to carry on a similar training program.

(11) To develop, in FY'75 and FY'76 of the plan, an individual programmed instruction program for school bus drivers.

(12) To conduct two workshops in each of the 15 areas on special maintenance problems.

(13) To provide, in FY'74, FY'75, and FY'76 of the plan, through an agreement with the University of Iowa a course for pupil transportation supervisors at the 15 community colleges in Iowa.

(14) To prepare, in FY'74 of the plan, an administrative guide for superintendents and school bus supervisors.

(15) To coordinate, in FY'76 and FY'77 of the plan, workshops for school bus drivers on driver evasive maneuvers.

(16) To provide, in FY'75, FY'76, and FY'77 of the plan, one Mobile School Bus Driver Training Lab each year for the purposes of school bus driver training and improvement.

R. Standard 18, Accident Investigation and Reporting

1. Compliance: The federal Standard 318 identifies two areas of the accident reporting system:

(a) Gathering information. The state of Iowa requires that all motor vehicle crashes resulting in more than $100 property damage, or resulting in a personal injury, must be reported to a police agency, and a state accident report must be filed. Local and state police agencies may or may not choose to investigate a "property damage only" accident, and many local police agencies rely on the drivers to report all but the most serious property damage accidents, especially those agencies in high accident volume areas.

A state or local policeman investigates every personal injury accident, while a state trooper will usually investigate a fatal accident, unless physically impossible.

Because police agencies hold the major responsibility for accident investigation, a program of regular in-service classes in proper accident investigation has been initiated in the Iowa Law Enforcement Academy, for local police. This program is comparable to any other A.I. training program in the nation, and is capable of training about 80 officers a year.

Iowa's accident information gathering system is deficient in the following ways:

(1) Iowa does not engage in detailed investigations of physical and anatomical factors in accidents. Post mortems are carried out only in cases of unusual circumstances. Iowa does not require blood tests on victims and survivors of fatal crashes. This is required in Standard 308, but is basically an information gathering requirement.

(2) Iowa does not yet have a uniform accident report form necessary to meet the needs of the traffic records system.

(3) Traffic engineers are not involved in accident investigation, although police are trained in rudimentary engineering factors that may contribute to accidents, and are encouraged to work with local engineers to the utmost. There are isolated examples of where this approach has proven successful, such as one hazardous, accident producing site in Davenport that was eliminated by city engineers on the basis of information supplied by an ILEA trained police investigator

(b) Data Entry and Storage. The Department of Public Safety is the sole agency responsible for overall accident records. Local agencies are encouraged to maintain local accident records to carry out local programs. Public Safety is the agency responsible for accurate reporting, coding of data, and data processing.

A higher priority has been placed by the Department on proper data entry and processing. Long before Standard 318 was promulgated, the Department realized that accident information being received from state and local officers, and from private citizens, was not being treated properly so that usable data for management was being produced. To deal with this problem, the Department has done the following things to essentially bring Iowa into compliance with Standard 318 requirements for data entry and storage:

(1) An assessment of current data elements in the accident data bank, and the development of possible new programs for data entry and access.

(2) The hiring of qualified personnel with the analytical and statistical knowledge to make better use of existing incoming accident

data.

(3) A reassessment and reorganization of the accident coding section of the Department to attain better coordination of data input and analysis, and to attain a higher degree of accuracy.

2. Current Program Status: Presently, a committee of Public Safety and TRACIS personnel are engaged in redesigning the state accident report, the "Iowa Crash Report," and developing uniform accident report forms.

The Iowa Law Enforcement Academy is carrying on its accident investigation training program, with two classes of 40 officers each scheduled for 1973.

Analytical personnel in the Department of Public Safety are revamping the following accident data mechanisms:

(1) Classifying

(2) Locating

(3) Coding

(4) Fatality reporting and analysis

3. Plans for Future Activities: Steps in the direction of including non-police personnel into the investigation process should be initiated. The first activity will be legislation to require blood tests in fatal accidents. This would greatly improve the quality of information concerning accident involvement.

The accident investigation training program will be expanded to train more officers.

The accident data entry sections of DPS will be revamped, with better control by statistically capable people.

II. PROGRAM ASSESSMENT

B. Nature and Extent of Problem

1. Trends in the Iowa Highway Safety Picture: Traffic crashes remain one of the major causes of death in Iowa. Despite the fact that traffic deaths were greatly decreased in the year 1971, 826 Iowans were killed on the state's highways. The overall trends, however, are quite encouraging.

Chart number one, for instance, shows the trend in motor vehicle registrations for a ten year period and the projected trend up to 1976. The trend shows that motor vehicle registrations will continue to increase greatly during the upcoming four years. 1971 showed slightly more than 2.1 million vehicles registered in Iowa. The prediction is that another 200,000 vehicles will be in operation by the year 1976, or an increase of almost ten percent.

However, chart two shows that motor vehicle deaths per 10,000 motor vehicle registrations were at an all-time low in 1971, and in fact appear to be on the decrease since 1967. Notice that the lowest number of deaths per 10,000 registrations during the period 1963-1966 was 4.4. But from 1966 to 1971, the highest this figure climbed was 4.5 deaths per 10,000 vehicles registered.

Increased registrations mean an increase in exposure for Iowa drivers, by virtue of having more cars on the road. Another measure of exposure is the number of licensed drivers in the state. Chart number three shows the actual number of licensed drivers from 1961 to 1971. It also shows the trend in licenses issued during this period, and projects the number of licensed drivers up to 1976. 1971 showed about 1.7 million licensed drivers in Iowa. The projection is that this number will increase by another 100,000 by 1976, or about six percent.

The truest measure of exposure, however, is the number of vehicle miles driven in the state, because this measure also reflects the number of miles driven by out-of-state motorists as well as Iowa drivers. Chart number four shows that the number of vehicle miles driven has increased sharply in the last ten years, and is expected to continue to increase in the upcoming four years. Chart number four shows that about 18.6 billion miles were driven in Iowa in 1971. This number is projected to increase to almost 23.0 billion vehicle miles driven by 1976, or an increase of about 23.7 percent.

Chart number five takes the number of vehicle miles driven and divides that number into the number of motor vehicle deaths by year. The result is a mileage death rate, or motor vehicle deaths per 100 million vehicle miles driven. This figure is considered to be the truest measure of actual accident risk on the state's highways, by authorities on highway safety such as the NHTSA and the Federal Highway Administration. Chart five, then, presents an encouraging picture for Iowa's highway safety program. The period from 1961 to 1965 showed an increasing picture of deaths per 100 million vehicle miles driven on Iowa's highways. The 1961-1965 projection shows that over 7.0 people would have been killed in Iowa per 100 million vehicle miles in 1971, had the trend continued. But the trend in deaths per mile driven reversed itself in 1966. 1971 showed an all-time low of 4.4 motor vehicle deaths per 100 million vehicle miles driven, and the projected trend shows this figure as predicted to drop to less than 3.5 by 1976 (vehicle miles driven are estimated by the Iowa Highway Commission).

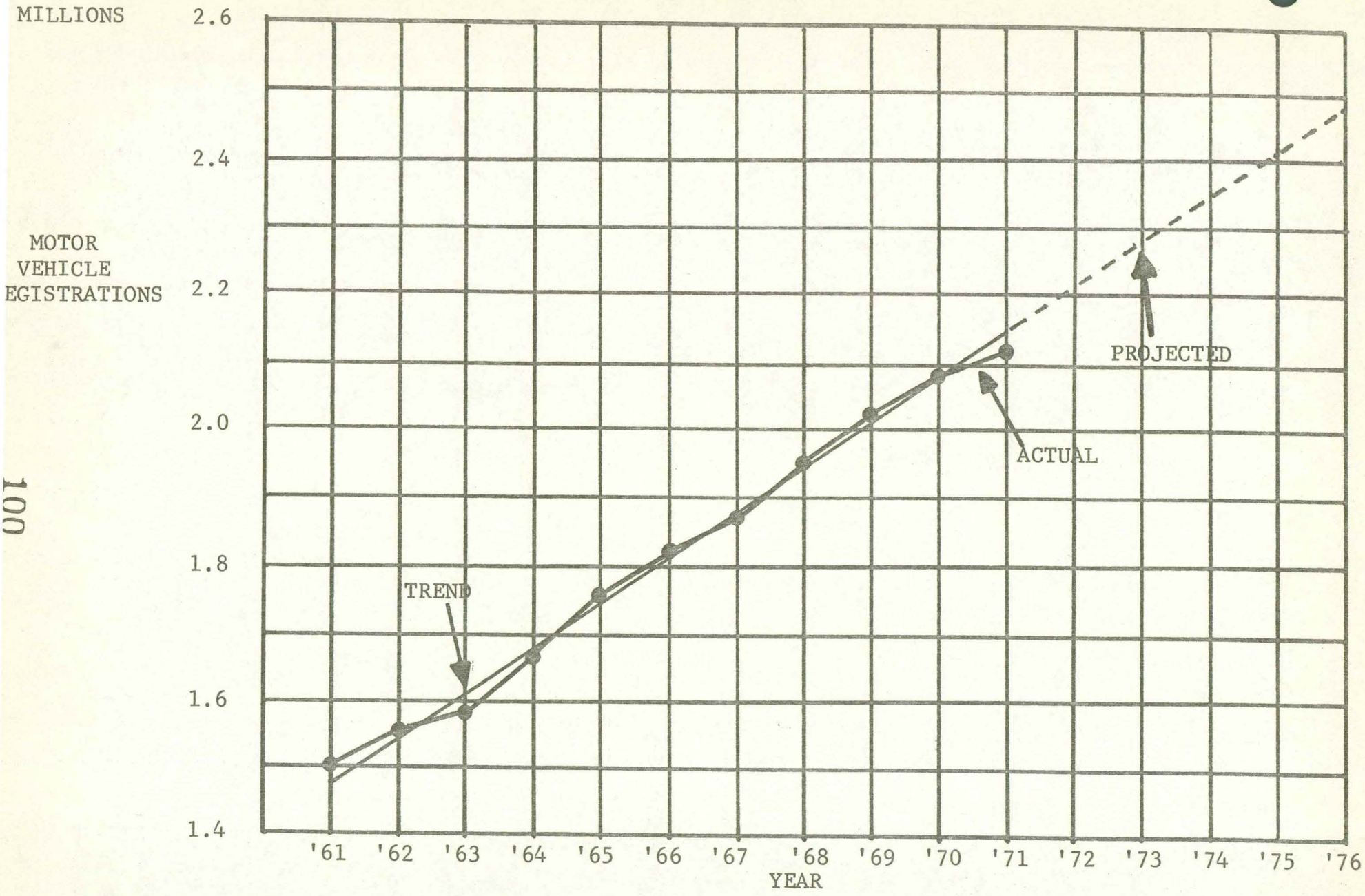
The decrease in motor vehicle deaths per 100 million vehicle miles driven could be considered a function of the great increase in vehicle miles driven as shown previously in chart number four. In other words, Iowa could conceivably have an increase in the actual number of motor vehicle deaths and still show a decrease in vehicle mileage death rate. Chart six, however,

shows that this is not the case, and once again, this is very encouraging for the Iowa highway safety program. Chart six shows the actual number of motor vehicle deaths for the period from 1961 to 1971. As can be seen from chart number six, the actual number of motor vehicle deaths per year appears to be leveling off, despite the year to year fluctuations. In fact, the statistical projection is for a slight decrease in the actual number of motor vehicle deaths in the upcoming four years. 1972, which is not included on this graph, seems to be following this projection. As of December, the year 1972 was running only slightly ahead of 1971, with 803 motor vehicle deaths from January through December 12, 1972, as compared to 788 motor vehicle deaths for the same period of 1971.

The overall trends, then, show that exposure for drivers in the highway system has been increasing by virtue of more vehicles, more drivers, and more vehicle miles driven, and will continue to increase at least for the next four years. The trends are also encouraging for the overall picture in that motor vehicle deaths are predicted to decrease gradually in the future.

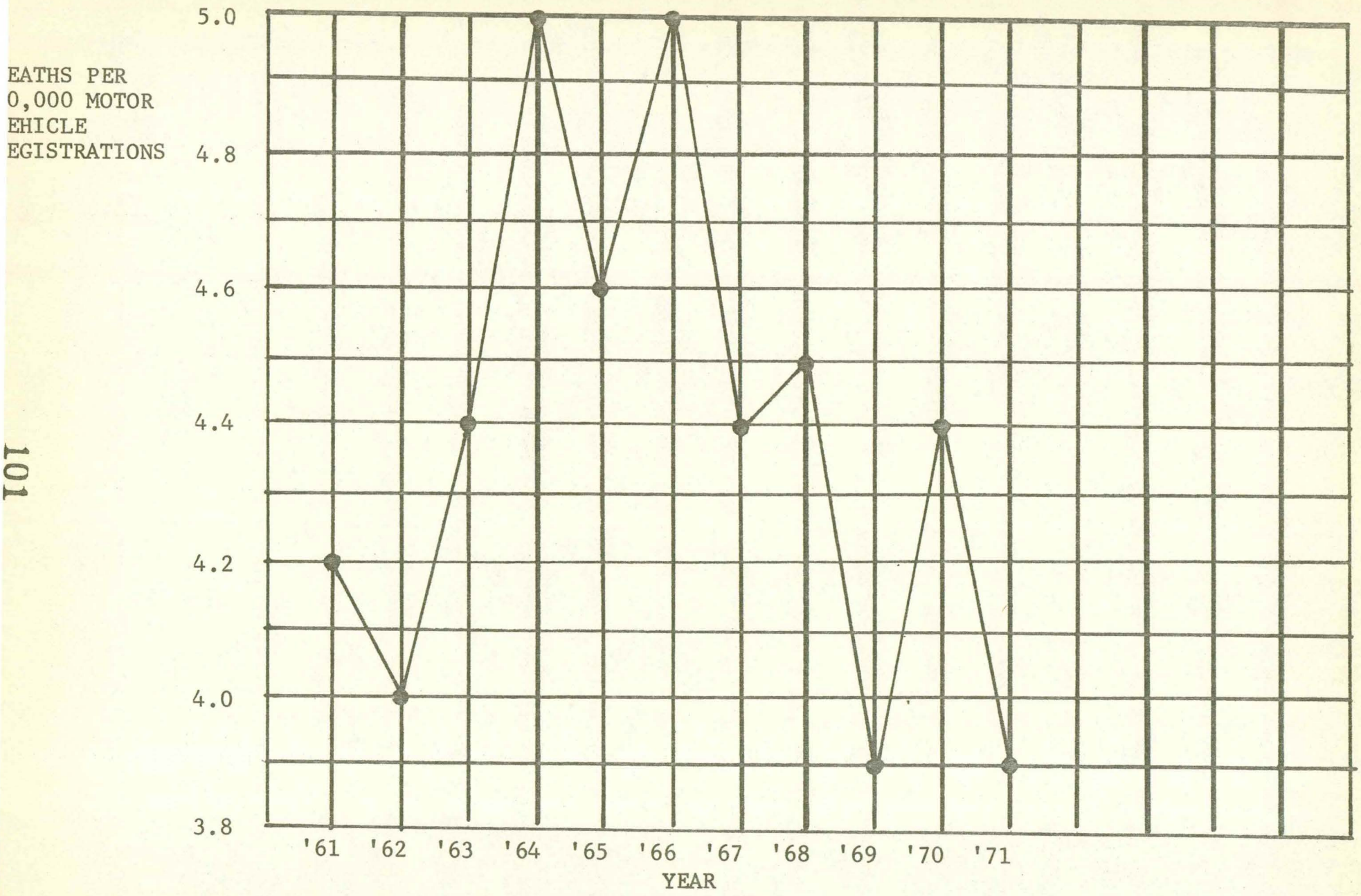
These graphs showing the overall trends are of little use in evaluating the Iowa highway safety program, at least by themselves. But by analyzing other data, it is possible to discover counter-trends which should point out weaknesses in Iowa's safety program.

CHART NUMBER ONE



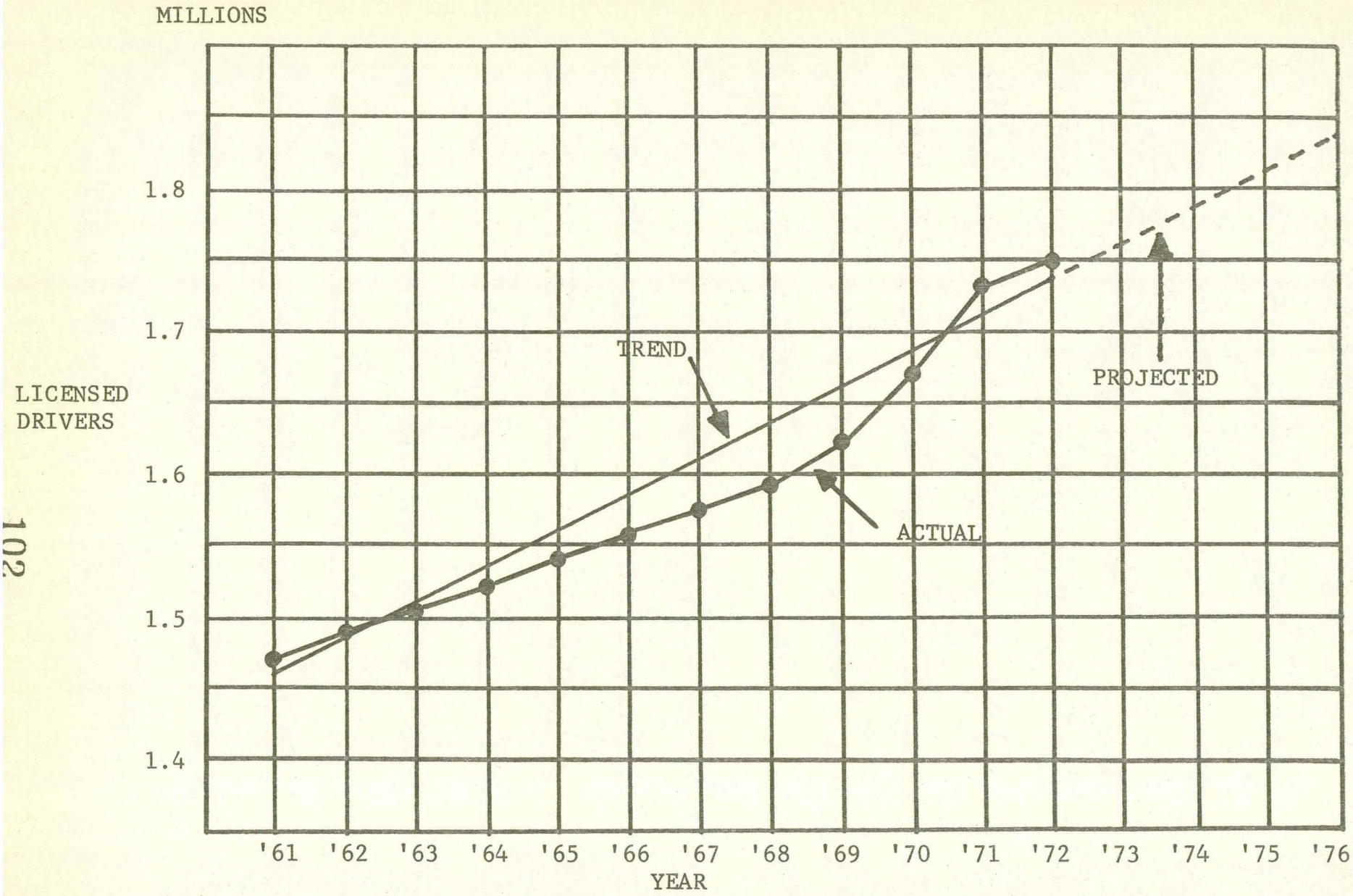
ACTUAL, TREND AND PROJECTED MOTOR VEHICLE REGISTRATIONS:
STATE OF IOWA, 1961-1976

CHART NUMBER TWO



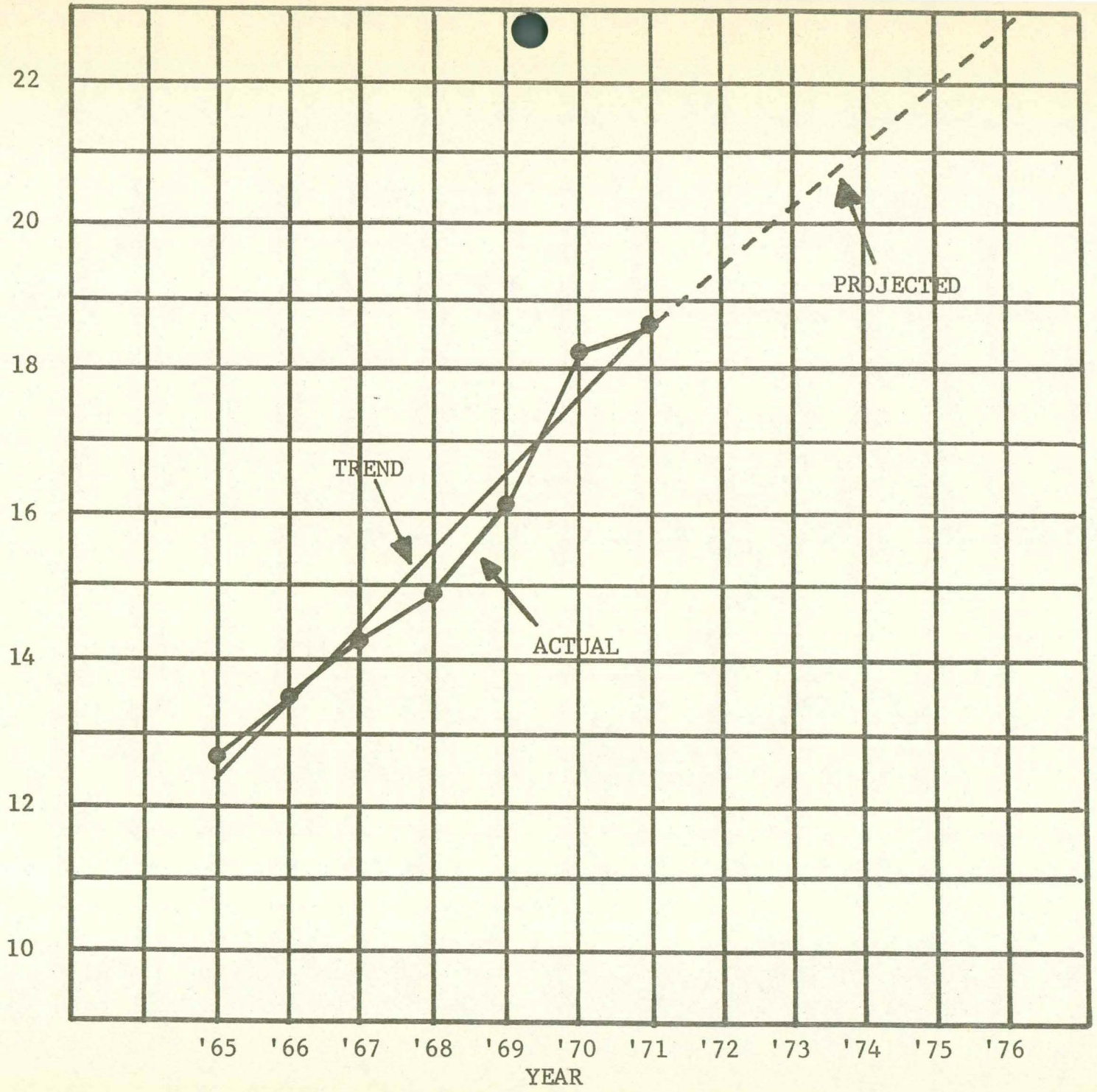
MOTOR VEHICLE DEATHS PER 10,000 MOTOR VEHICLE REGISTRATIONS: STATE OF IOWA, 1961-1971

CHART NUMBER THREE



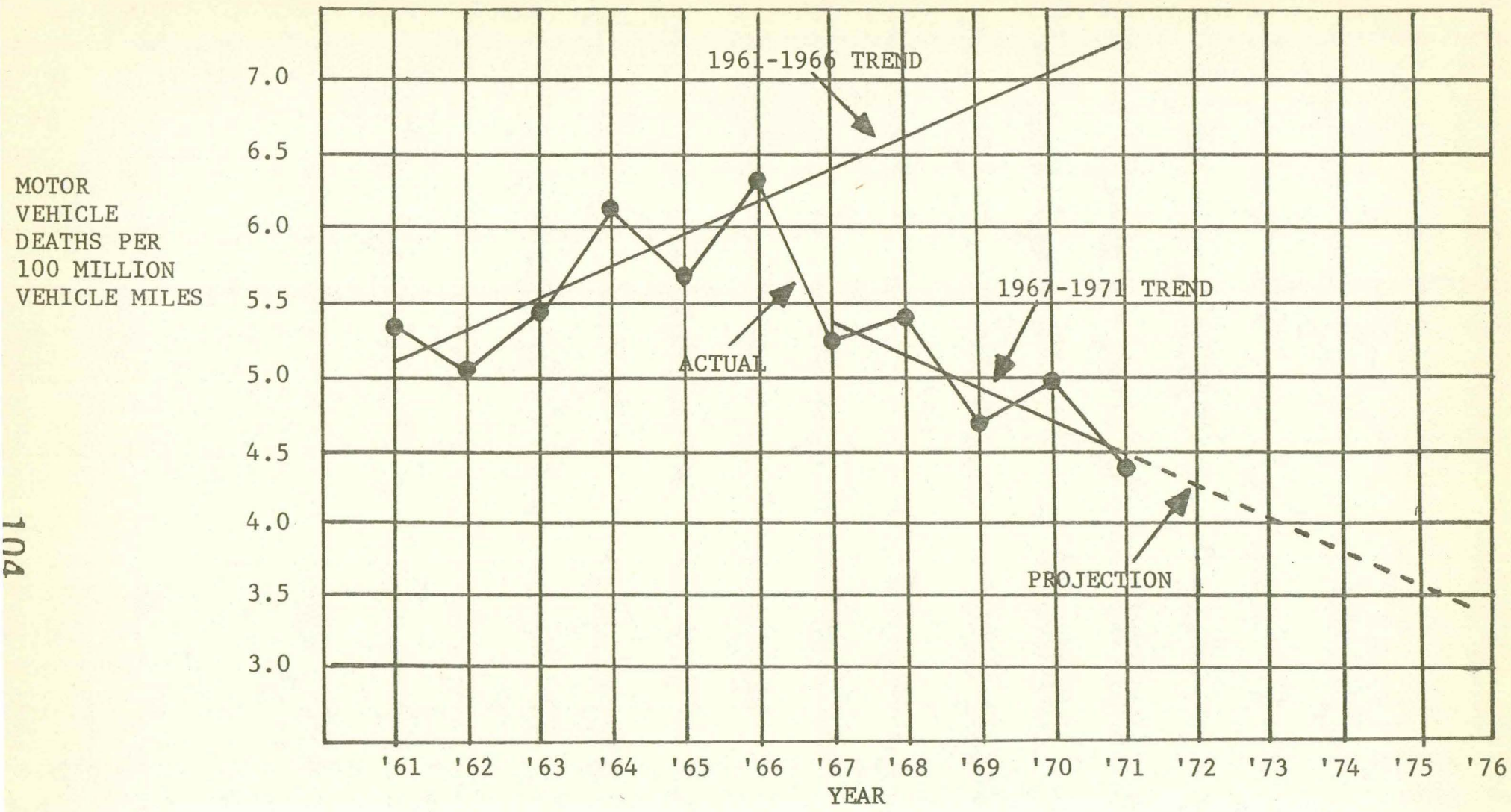
ACTUAL, TREND, AND PROJECTED LICENSED DRIVERS:
STATE OF IOWA, 1961-1976

CHART NUMBER FOUR



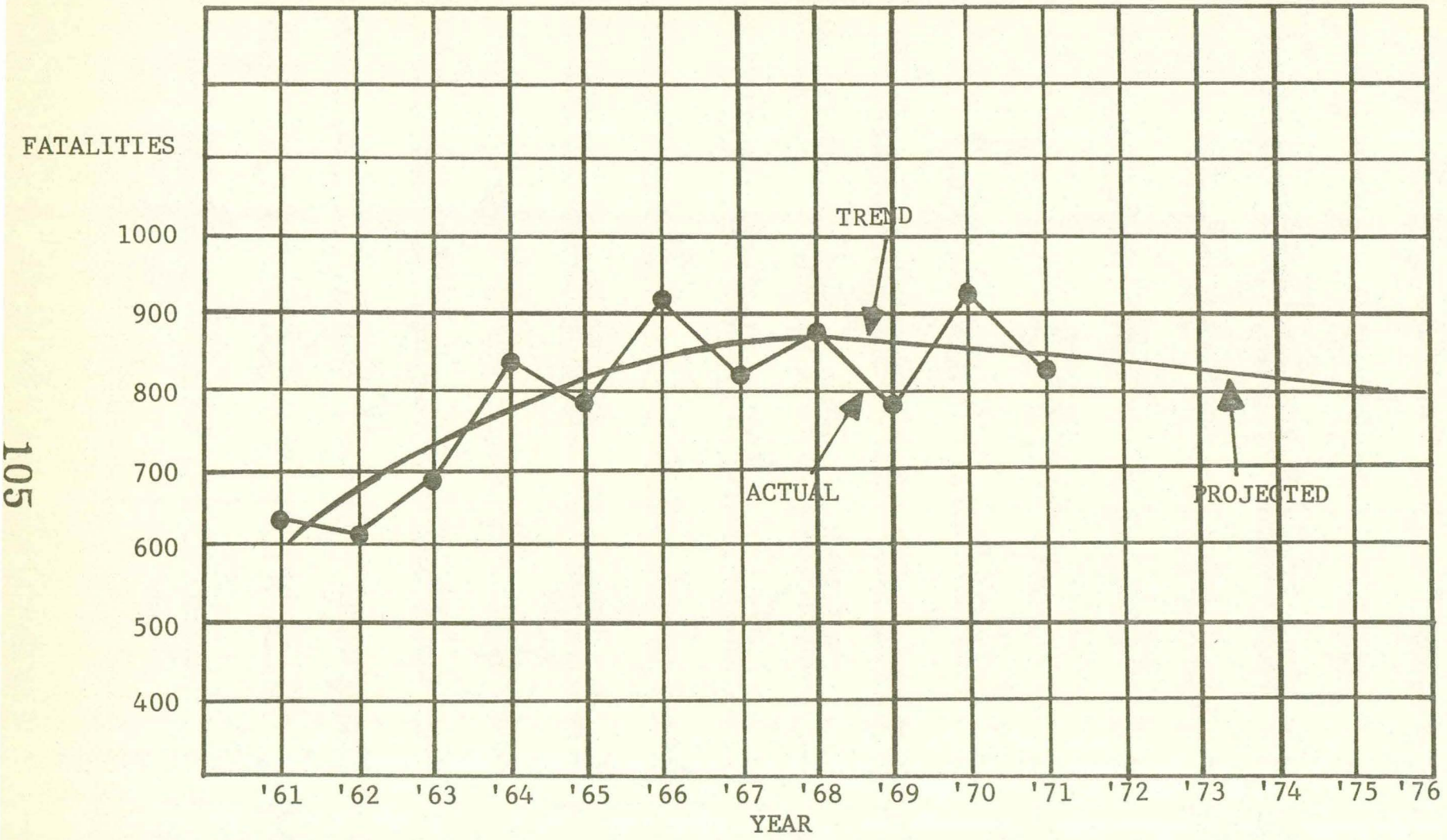
ACTUAL, TREND, AND PROJECTED VEHICLE MILES DRIVEN:
STATE OF IOWA, 1965-1976

CHART NUMBER FIVE



ACTUAL, TRENDS, AND PROJECTED MILEAGE DEATH RATE:
STATE OF IOWA, 1961-1976

CHART NUMBER SIX



ACTUAL, TREND, AND PROJECTED MOTOR VEHICLE FATALITIES:
STATE OF IOWA, 1961-1976

2. Breakdown of Accident Statistics: Chart seven shows a breakdown of all accidents in Iowa from 1969 to 1971 by type. As can be seen from these figures, the largest percentage of accidents are motor vehicles colliding with motor vehicles. An average of 63.7 percent of all accidents over the three year period occurred in this manner. Chart eight shows that the largest number of fatalities occurred in the same way. Second in frequency in both fatals and all accidents are motor vehicles running off the road. "Ran off road" represents a somewhat higher percentage of fatals, however, than of all accidents.

It can be inferred from these imperfect measures that the phenomenon of motor vehicles colliding with one another is a function of either driver error, improper traffic control, or both. It could be expected that the majority of these accidents would occur where exposure is highest.

"Running off the road," on the other hand, could be most probably due to driver error, either because the driver was overextending his driving abilities, or his vehicle's abilities, or because the driver was in inadequate physical condition due to drinking or lack of sleep.

Chart Nine would seem to bear out these assumptions. Fatal accidents when broken down by major contributing factor, show that three things are among the leading contributing factors of traffic accidents. They are: excessive speeding, failure to yield, and drinking. Excessive speed was a major contributing factor in from 17.7 percent to 19.4 percent of all fatals. Speeding too fast for conditions is an example of an overextension of driving ability. It should be stressed at this point that further development of analysis and reporting criteria must be established to accurately measure impact.

Failure to yield was a major contributing factor in from 12.5 percent to 15.5 percent of all fatal accidents. This offense could either be a

function of driver error or poor traffic control, or both. Better reporting and data analysis would allow further definition of the problem.

Drinking is stated as a major contributing factor in chart nine in from 14.4 percent to 18.7 percent of all fatal accidents. However, other Department of Public Safety assessments place this figure as high as 30 percent of all fatal accidents. The conservative nature of these figures is most likely due to a lack of thorough reporting of alcohol involvement, and improvement in this area is needed. In any case, alcohol ranks as a major contributing factor in motor vehicle accidents no matter how the percentage is figured.

Chart ten gives an overall picture of all motor vehicle accidents by type of vehicle for Iowa for a three-year period, and a percentage distribution for each year. It is readily apparent that regular passenger vehicles represent the major portion of all vehicles in accidents, running from 83.5 percent to 85.2 percent of all vehicles involved. Therefore, the main area of concern for the Highway Safety Program must lie with the average motorists.

However, other areas of emphasis also are brought to light by chart ten. While the number of passenger vehicles involved in accidents fluctuates without an apparent trend, other types of vehicles are involved in accidents in clearly increasing numbers. Small trucks, for instance, are increasing steadily in both number and percentage of accident involvement. This could very well be due to the boom in pick-up camper arrangements and motor homes.

Motorcycles as well have increased in the number and percentage involved in accidents. Motorcycles represent 0.7 percent of all vehicles involved in accidents in 1969, but increased to 1.2 percent by 1971. The picture of motorcycle fatalities is even more striking, going from 2.9

percent involvement in fatal accidents in 1969, to over 8 percent involvement for the first ten months of 1972. In raw numbers, 28 motorcyclists were killed in 1969, while 65 were killed in the first ten months of 1972. Chart eleven shows the upswing in motorcycle fatalities over a 12-year period. Special attention might be given to motorcycle and other recreational vehicles.

Chart 7

PERCENTAGE DISTRIBUTION OF ALL ACCIDENTS
BY TYPE OF ACCIDENT: STATE OF IOWA, 1969-1971.

Type of Accident		1969	1970	1971
Ran Off Road		12.5	12.2	11.2
Overturned		0.6	0.6	0.8
Collision of M.V. with:	Pedestrian	1.3	1.4	1.3
	Motor Vehicle	64.3	63.7	63.1
	Parked Motor Vehicle	12.2	11.5	12.7
	Railroad Train	0.5	0.4	0.4
	Bicycle	0.6	0.6	0.6
	Animal	2.5	2.7	2.8
	Fixed Object	5.0	6.3	6.4
Other Object		0.2	0.2	0.2
Other Non-Collision		0.3	0.4	0.5
Total		100.0%	100.0%	100.0%

Chart 8

TOTAL NUMBER AND PERCENTAGE DISTRIBUTION OF FATAL ACCIDENTS BY TYPE OF ACCIDENT: STATE OF IOWA, 1969-1971.*

Type of Accident		1969	%	1970	%	1971	%
Ran Off Road		203	31.8	199	26.5	188	27.6
Overturned in Road		12	1.9	12	1.6	6	0.9
Collision of M.V. with:	Pedestrian	55	8.6	66	8.8	54	7.9
	Motor Veh.	278	43.5	355	47.3	334	49.1
	Parked Motor Vehicle	5	0.8	8	1.1	6	0.9
	Railroad Train	37	5.8	34	4.5	25	3.7
	Bicycle	6	0.9	9	1.2	13	1.9
	Animal	2	0.3	2	0.3	-	-
	Fixed Object	41	6.4	56	7.5	47	6.9
Other Object		-	-	4	0.5	-	-
Other Non-Collision		-	-	6	0.8	7	1.0
Total		639	100.0	751	100.0	680	100.0

*Details do not always add to 100% due to rounding.

Chart 9

PERCENTAGE DISTRIBUTION OF FATAL ACCIDENTS
BY MAJOR CONTRIBUTING FACTOR: STATE OF IOWA, 1969-1971

Major Cause	1969	1970	1971
Speed	17.7	18.2	19.4
Failed to Yield	15.5	13.5	12.5
Drove Left of Center	6.7	7.1	5.6
Improper Passing	1.7	1.7	1.3
Passed Stop Sign	0.8	1.6	1.9
Improper Turn	1.4	0.8	1.3
Disregarded Traffic Signal	0.5	0.8	0.4
Following Too Close	0.8	0.7	0.7
Other Improper Driving	14.4	0.7	2.6
Reckless or Careless	-	3.7	5.4
Inadequate Brakes	0.6	1.3	0.9
Improper Lights	0.2	0.3	0.1
Drinking	18.7	14.4	14.5
Surface Condition	5.8	9.1	5.3
Weather	2.2	2.0	2.2
Light	-	-	-
Character of Road	0.5	-	-
Road Defects	0.2	0.8	0.3
Vision Obscured	7.2	9.3	9.0
Pedestrian Violation	2.3	2.5	3.1
Avoiding Vehicle or Object	-	0.9	2.1
Animal on Roadway	0.3	-	-
Improper Lane Change	0.2	-	-
Wind	-	-	-
Asleep	-	3.6	4.6
Inattentive-Distracted	-	5.3	5.0
Others, n.e.c.	2.3	1.7	1.8
Total	100.0%	100.0%	100.0%

Chart 10

TOTAL NUMBER AND PERCENTAGE DISTRIBUTION OF VEHICLES INVOLVED IN ALL ACCIDENTS BY TYPE OF VEHICLE: STATE OF IOWA, 1969-1971*

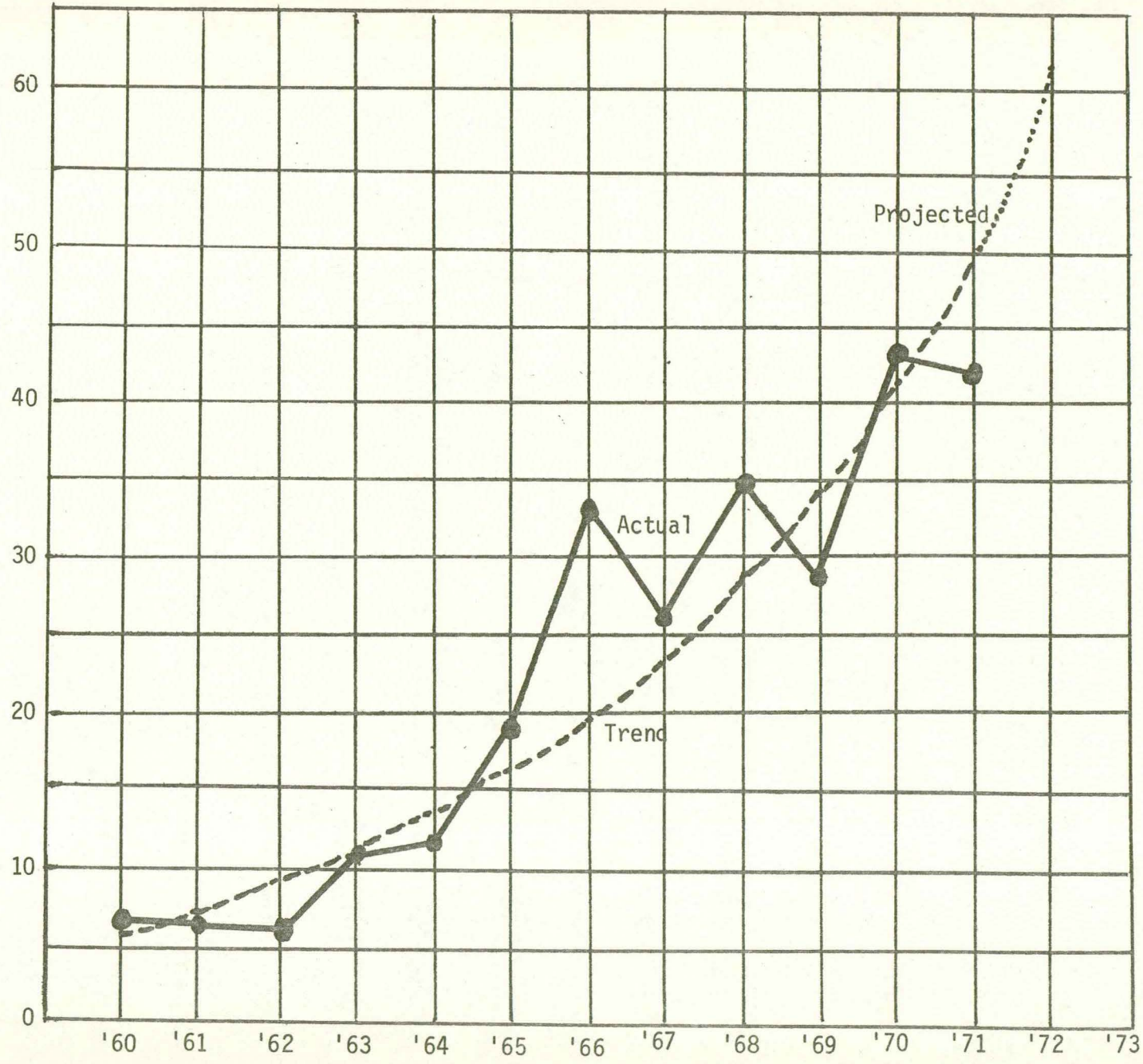
Type of Vehicle	1969	%	1970	%	1971	%
Car	134,740	85.2	135,060	84.9	132,087	83.5
Car-Trailer	161	0.1	205	0.1	199	0.1
Ambulance	178	0.1	155	0.1	112	0.1
Truck	14,977	9.5	15,798	9.9	17,040	10.8
Truck-Trailer	163	0.1	107	0.1	95	0.1
Truck-Tractor	452	0.3	468	0.3	378	0.2
TRK-TRAC-Semi	2,097	1.3	1,916	1.2	1,750	1.1
Emergency Truck	29	1/	21	1/	21	1/
Other Truck	216	0.1	125	0.1	102	0.1
Farm Tractor	534	0.3	495	0.3	526	0.3
Taxi-cab	171	0.1	149	0.1	136	0.1
Motorcycle	1,168	0.7	1,510	0.9	1,885	1.2
Emergency Motorcycle	0	-	0	-	1	1/
Bus	430	0.3	407	0.3	368	0.2
School Bus	302	0.2	291	0.2	302	0.2
Other Motor Vehicle	156	0.1	87	0.1	207	0.1
Not Stated	2,403	1.5	2,303	1.4	3,048	1.9
Total	158,177	100.0	159,097	100.0	158,257	100.0

1/ Less than 0.1%

* Details do not always add to 100% due to rounding

Chart 21

IOWA MOTORCYCLE ACCIDENT FATALITIES: 1960-1972



3. Problem Identification

a. Introduction: This section of the plan will deal with the problems highlighted through the careful analysis of trends and statistical breakouts accomplished in the previous paragraphs of this section. However, the statistics cited are not necessarily complete or conclusive to the extent they can truly identify all of the program deficiencies or problem areas. Therefore, certain problems will be discussed that are the expression of expert opinions in the various disciplines of highway safety.

The overall problems of highway safety stem from what we shall call the "Three Primary Factors" and how they interact. They are the "Human Factor," the "Vehicle Factor," and the "Environmental Factor." As previously discussed in the Executive Summary, 100 percent assurance that each factor is 100 percent safe would guarantee a complete safe system, and to say that any one factor is more important than the other would misrepresent the total problem this state faces in highway safety. The subsequent subparagraphs will discuss the problems associated with each of the three factors.

b. Human Factor: The following deficiencies are those normally classified with Driver Control problems.

(1). The incidence of crashes in high traffic volume areas highlighted in the table on page 122 represent a large percentage of the total number of annual traffic accidents in Iowa. This problem area is symptomatic of several problems that occur statewise only to a lesser degree.

(a) The problem of insuring that enforcement agencies address their own selected traffic enforcement needs must be resolved.

(b) We have not applied any countermeasure activity to areas that experience seasonally high traffic volume related accidents.

(c) The level of traffic enforcement manpower development needs to be upgraded at the recruit, in-service, and instructional levels.

(d) There is a deficiency in information awareness programs designed to acquaint the motoring public with high volume accident areas or of the special skills required when driving in this environment. (Presently most of the educational activities are directed at the student level through information and curriculum oriented programs.)

(2). As indicated in table 8 on page 104, a large number of crashes involve one vehicle. The extent to which the three factors or their interrelation impact this problem cannot be stated because of the apparent lack of viable accident data necessary to determine the primary cause and contributing factors. At best, we only have vague generalities such as: "fell asleep," "driver error," "speed," "lost control," etc. At worst, we can only estimate the extent that the roadway, alcohol, or defective vehicles might affect the problem.

(3). There is a disproportionate involvement of the 15 to 24 year old drivers in Iowa's accident experience. Specifically, impact must be made on the following deficiencies:

(a) This age group accounts for more than 50 percent of all license suspensions for reckless driving.

(b) Chart 12 shows that 48.8 percent of all driver license suspensions were in the 19 and under age group.

(c) About 25 percent of Iowa's driving public is under 24 years of age; however, they account for almost 40 percent of the fatal crashes.

(4). Approximately 30 to 35 percent of the fatalities in Iowa are estimated to be alcohol related, and approximately 20 percent of the accident reports listed alcohol as a contributing factor. In order to impact this problem the following deficiencies must be corrected.

(a) BAC levels must be obtained for all operators of motor vehicles involved in fatal accidents to themselves and/or to others for the purpose of determining the true impact alcohol has on the crash experience in Iowa.

(b) More efficient alcohol investigation to determine the extent of alcohol involvement must be performed throughout the state.

(c) The impact the problem drinking driver has on our accident experience must be identified.

(d) Action oriented countermeasures must be established to impact identified problem related areas.

(e) More efficient coordination in alcohol oriented education, information, enforcement, and treatment programs must also be implemented and improved where currently available.

(5). An increase in recreational vehicles is being accompanied by an increase in accidents involving those vehicles, while we are experiencing a decrease in accidents per other types of vehicles registered. For purposes of this plan, recreational vehicles include small trucks (campers or pickup trucks with camper units attached), motorcycles, and bicycles. There are other vehicles

designed for off-street operation, such as snowmobiles, that do not require licensing and therefore are not legally operated on the roadway. These vehicles do not constitute a highway safety problem, even though they are also experiencing an increase in accidents.

(a) The largest single problem with these vehicles is the motorcycle. Motorcycle fatalities and accidents have risen sharply. Again the 19 or younger group represents almost 50 percent of the accidents.

(b) Seventy-five percent to eighty percent of bicyclists killed in Iowa from 1969 to 1971 were under the age of 15.

(c) The state does not have a special or classified system of licensing. We do, however, require motorcyclists pass a written and performance test on that vehicle.

(6). Iowa's trial courts are currently involved in a total reorganization, as enacted by SF 427 of the 64th General Assembly. This bill creates a unified trial court as of June 1, 1973, with general and original jurisdictions of all actions and proceedings, including probate and juvenile matters, to be knows as a district court.

The new court's authority will be exercised by district judges, by district court associate judges, and judicial magistrates. The act establishing the court establishes traffic violation offices where scheduled violators may be admitted and disposed of before the time specified in a uniform citation and complaint for appearance before the court. All other types of courts will be abolished effective July 1, 1973. Because of this massive realignment, the highway safety program has had little contact with the courts

administrator. We will insure in the future that all possible support is provided these courts as relates to traffic safety.

(7) The area of manpower development may be a problem to the extent that the state has been unable to accurately assess the impact of our current efforts. Manpower is basically divided into two areas: staff for program planning and administration, and the development of both professional and para-professional expertise in the highway safety career spectrum.

(a) P & A Staff - could become a real problem if the program increases substantially. State government is very reluctant to increase existing departmental manpower authorizations. The use of consultants, also, draws considerable displeasure. To date, the turnover of personnel in the program areas has been nominal. The largest problem has been four (4) Governor's Representatives and three Program Directors in the last year and one-half.

(b) Professional and para-professional highway manpower development in related career fields is presently the responsibility of the departments assigned "Standard" compliance. While obtaining qualified instructors in various fields is sometimes costly or otherwise inconvenient, manpower development is not generally considered a problem by itself in Iowa. For example, the complete lack of trained Emergency Medical Technicians-Ambulance (EMT-A) in Iowa was and to a lesser degree still is, a problem; but the proper expertise and training guidance is currently available in the state and the accomplishment of the activity is just a matter of time and resources.

(8). Emergency Medical Services continue to be a broad area of concern toward the development of an effective safety program. Historically most of the emphasis in EMS has been directed to the hospitals, with little or no regard to the transport and other pre-emergency room activity.

(a) Iowa is losing the private operator at an increasingly alarming rate due to the high costs of operation and the uncertainty of payment. Medical insurance for ambulances is lower than the normal costs; therefore, most small operators leave the business if they cannot obtain financial assistance from the political subdivision in which they operate.

(b) Defining and reducing ambulance response times continues to be a problem.

(c) Upgrading the levels of attendants proficiency and establishing desired levels of competency are an ongoing concern.

(d) Efficient means of communication at all levels of the EMS system from notification through dispatch to victim delivery remains a problem.

(e) Efficient integration of the various disciplines and activities necessary from reporting the accident to delivery remains a problem. Responsibilities and capabilities of the various agencies and disciplines involved at a crash site need to be resolved. Specifically, who handles victim stabilization until rescue or extraction equipped ambulance arrives. Crash site protection is also involved in the EMS function to a certain degree.

(9). Deficiency in Iowa's compliance with the Uniform Motor Vehicle Code needs to be resolved.

(10) A methodology for local involvement and planning of highway safety resources must be established along with the need to identify problem areas within the political subdivision.

(11) Iowa has a shortage of reliable data that can be effectively utilized for program management.

Like most states, Iowa collects all of the traffic data normally required for the controlling of the driver and the vehicle. There are noted deficiencies in the following areas:

(a) The program to completely automate our traffic records system is not complete.

(b) Proper enforcement of controls has not been established to insure accuracy and timeliness of all highway safety data.

(c) The program to accurately locate accident sites has not been completed.

(d) The collection of BAC levels on motor vehicle operators involved in fatal accidents has not been provided for.

(e) Personnel need improved manpower development in the proper preparation of safety data for designing reports, information preparation for data storage, traffic safety data analysis, and report generation.

(12) While the above problems do not necessarily represent all of the areas that require attention, they do represent the major areas of concern. Other activities such as expanded Driver License Advisory Boards, timely reporting of traffic convictions, and Periodic Driver Re-examination emphasis areas will be addressed in Section III and various PEPs.

The state will also maintain and increase our compliance within the areas of pupil transportation and certain areas of driver education even though short term payoff isn't readily apparent. In the case of pupil transportation, our accident record is probably one of the most enviable in the country, and could not be justified as a short term area that would receive a high priority. However, it would not be practicable in long term planning to limit the amount of resources applied that could achieve the performance and expertise necessary to insure it never becomes a problem in the future; i.e., "an ounce of prevention now may be worth a pound of cure."

b. Problems associated with the Vehicle Factor are not as complex at the state and community level as they are at the national level. Safety design, engineering requirements, and control are exercised federally. Basically the problems that face us in this area are discussed below:

(1). This state's motor vehicle inspection program is not accomplishing its mission of insuring an efficient system for maintaining safe vehicles. The system was based on the premise that 40 percent of the state's registered vehicles changed hands annually; therefore, it was reasoned that if an inspection system was imposed at time of transfer, we would eventually reach most vehicles. The biggest problem, however, is that the program is not reaching the vehicles that need inspection the most.

(2). Motorcyclists are not presently required to wear protective equipment such as helmets or eye protection. This require-

ment has definitely proven to be a life saving countermeasure and therefore receives one of our highest priorities. Although the human factor has much to do with the application of this requirement, for program purposes, protective devices such as these are considered vehicle equipment.

(3). There has been little effort to correlate vehicle data with other countermeasure activity. Once the computerized system of traffic records is operational, programs will be initiated to correct this deficiency.

(4). Although Iowa experiences one of the finest pupil transportation records in the country, there are noted deficiencies that will require attention:

(a). There are not enough inspectors to accomplish semi-annual inspections on all public school buses.

(b). State controls on public school buses do not apply to the private sector that transports children for other than educational purposes.

c. Environment Factor - In reviewing the distribution of fatal accidents by type for 1969-1971 (Chart 8 on page 104) the two largest categories are "Collision of M.V. with another motor vehicle." (46.6 percent average) and "Ran off road" (28.6 percent average). Intuitively, we know that the highway environment is a factor in a number of cases; however, it is difficult to determine where these problem areas are located throughout the state from the type of data available. In the category of "Collision of M.V. with fixed object" (6.9 percent average) and the category of "Collision of M.V. with railroad train" (4.7 percent average), the "what" has been identified but the "where" is still difficult to determine.

(1). The distribution of fatal accidents by major contributing cause (Chart 9 on page 105) lists several items which could be related to the environment. They are as follows:

Failed to yield	13.8%	('69-'71 avg)
Passed stop sign	1.4%	"
Disregarded traffic signal	0.6%	"
Surface condition	6.7%	"
Road defects	0.4%	"
Vision obscured	8.5%	"
Avoiding vehicle or object	1.0%	"
TOTAL	32.4%	"

Obviously, driver action is heavily involved in a number of the above categories. In many cases, however, traffic control devices, road geometry (vertical and horizontal), surface skid resistance and miscellaneous objects within the right of way are implicated or responsible for the accident. It is difficult to reduce these factors to numbers, percentages, etc.; however, past experience with a limited number of investigations tells us that these factors should be investigated further.

(2). It is apparent that more intense inspection (both spot checks and full inventories) of road and street systems are necessary to identify deficiencies in traffic control devices, deficiencies in geometry, deficiencies in skid resistance qualities and hazardous objects within the right of way. Accident statistics on Chart 14 show that 55 percent of all miles driven and 53 percent of all fatalities occur on local secondary roads and urban streets; therefore, efforts will have to be made to isolate problems and make corrections on these systems as well as the primary and interstate systems.

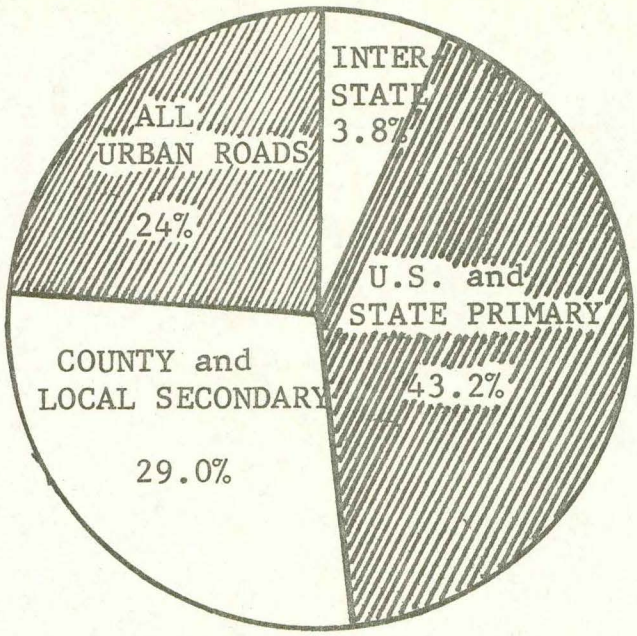
(3). Chart 15 indicates a continued problem concerning railroad grade crossing problems that must be resolved. The only

problem that remains is finding resources that can be utilized for capital improvements.

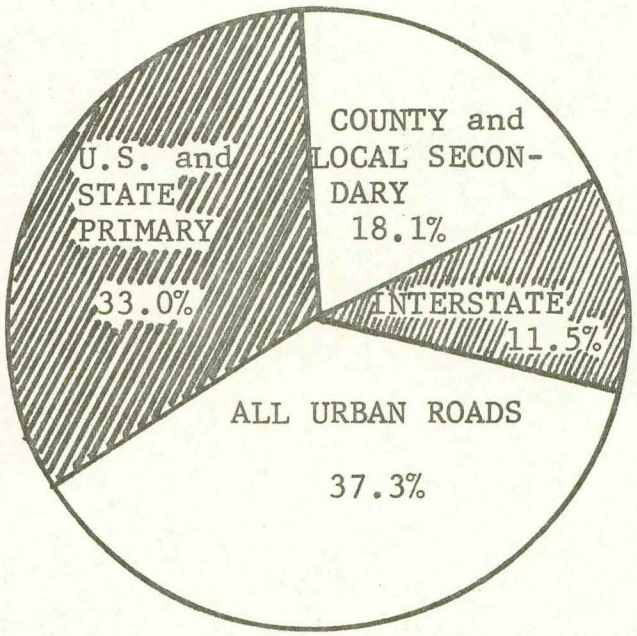
Chart 12

VIOLATIONS BY AGE: STATE OF IOWA, 1968-1971

Violation	19 or under	%	20-24	%	25-34	%	35-44	%	45-54	%	55-64	%	65 and up	%	Total	%
Serious Violation	7,359	30.3	7,829	32.2	4,920	20.2	2,163	8.9	1,356	5.6	535	2.2	154	0.6	24,316	100.0
Violation of TDP	24,051	89.2	2,137	7.9	525	2.0	146	0.5	71	0.3	33	0.1	8	*	26,971	100.0
Habitual Violator	2,347	29.2	3,326	41.4	1,585	19.7	489	6.1	197	2.5	67	0.8	23	0.3	8,034	100.0
Incompetent	94	2.0	275	5.8	390	8.3	500	10.6	631	13.4	560	11.9	2,267	48.1	4,717	100.0
Unlawful Use of License	786	48.9	649	40.3	77	4.8	41	2.5	35	2.2	18	1.1	3	0.2	1,609	100.0
Judgment	89	6.8	275	20.8	445	33.7	247	18.7	166	12.6	74	5.6	23	1.7	1,319	100.0
Speeding	494	45.2	326	29.8	167	15.3	52	4.8	34	3.1	18	1.6	2	0.2	1,093	100.0
Violation of Restricted License	530	48.6	223	20.4	76	7.0	40	3.7	53	4.8	69	6.3	100	9.2	1,091	100.0
Driving While Under Sus. or Revoc.	312	31.2	384	38.4	207	20.7	47	4.7	34	3.4	14	1.4	2	0.2	1,000	100.0
Reckless Driving	385	51.1	212	28.2	66	8.8	34	4.5	28	3.7	25	3.3	3	0.4	753	100.00
All Others	1,572	22.6	1,633	23.4	1,442	20.7	1,026	14.7	824	11.8	357	5.1	112	1.6	6,966	100.0
Total	38,019	48.8	17,269	22.2	9,900	12.7	4,785	6.1	3,429	4.4	1,770	2.3	2,697	3.5	77,869	100.0



PERCENTAGE DISTRIBUTION OF MOTOR VEHICLE FATALITIES BY TYPE OF ROAD, STATE OF IOWA, 1971



PERCENTAGE DISTRIBUTION OF MOTOR VEHICLE MILES DRIVEN BY TYPE OF ROAD, STATE OF IOWA, 1971 (Source: Iowa Highway Commission)

Chart 15

RAILROAD CROSSING FATAL ACCIDENTS AND FATALITIES: 1969-1972, IOWA

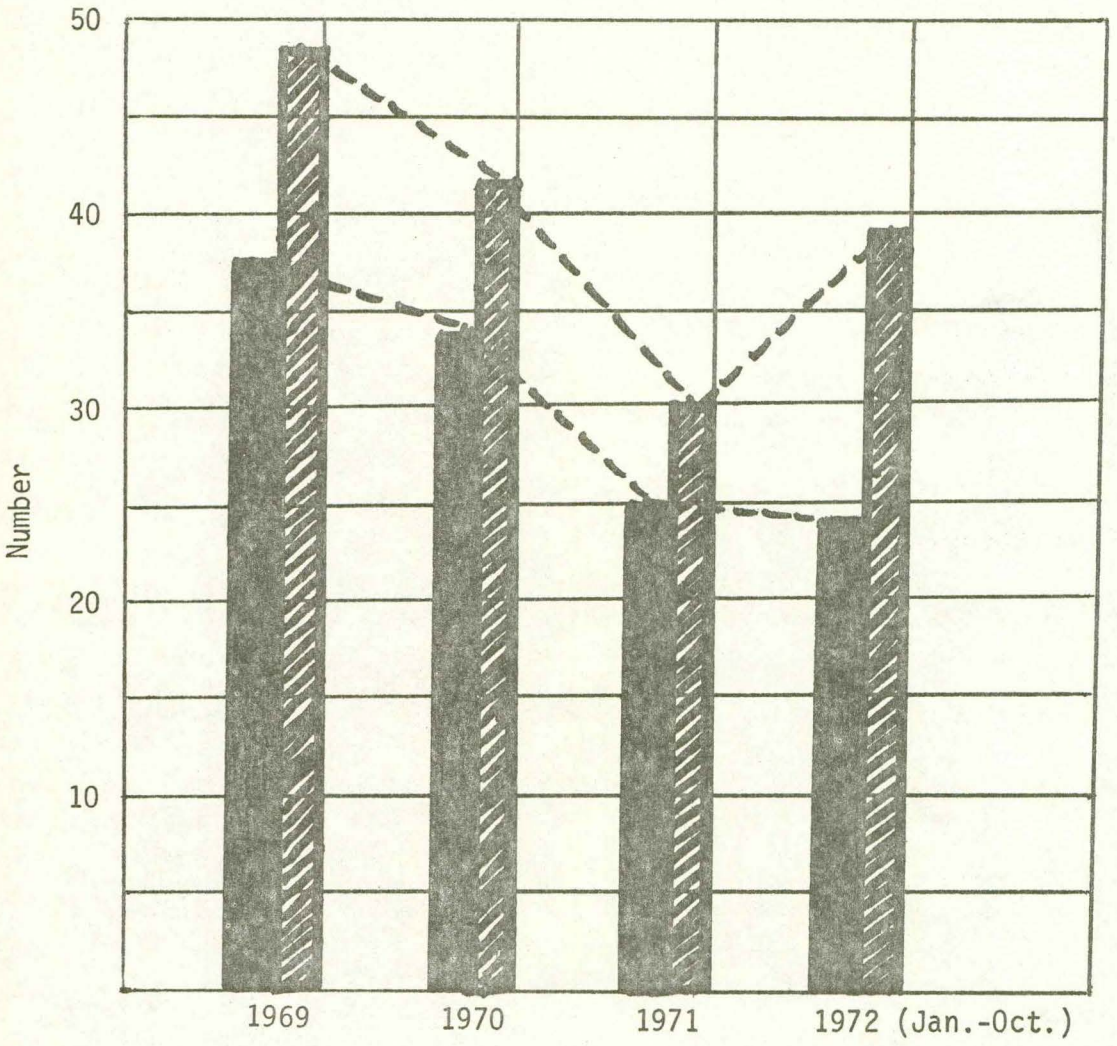
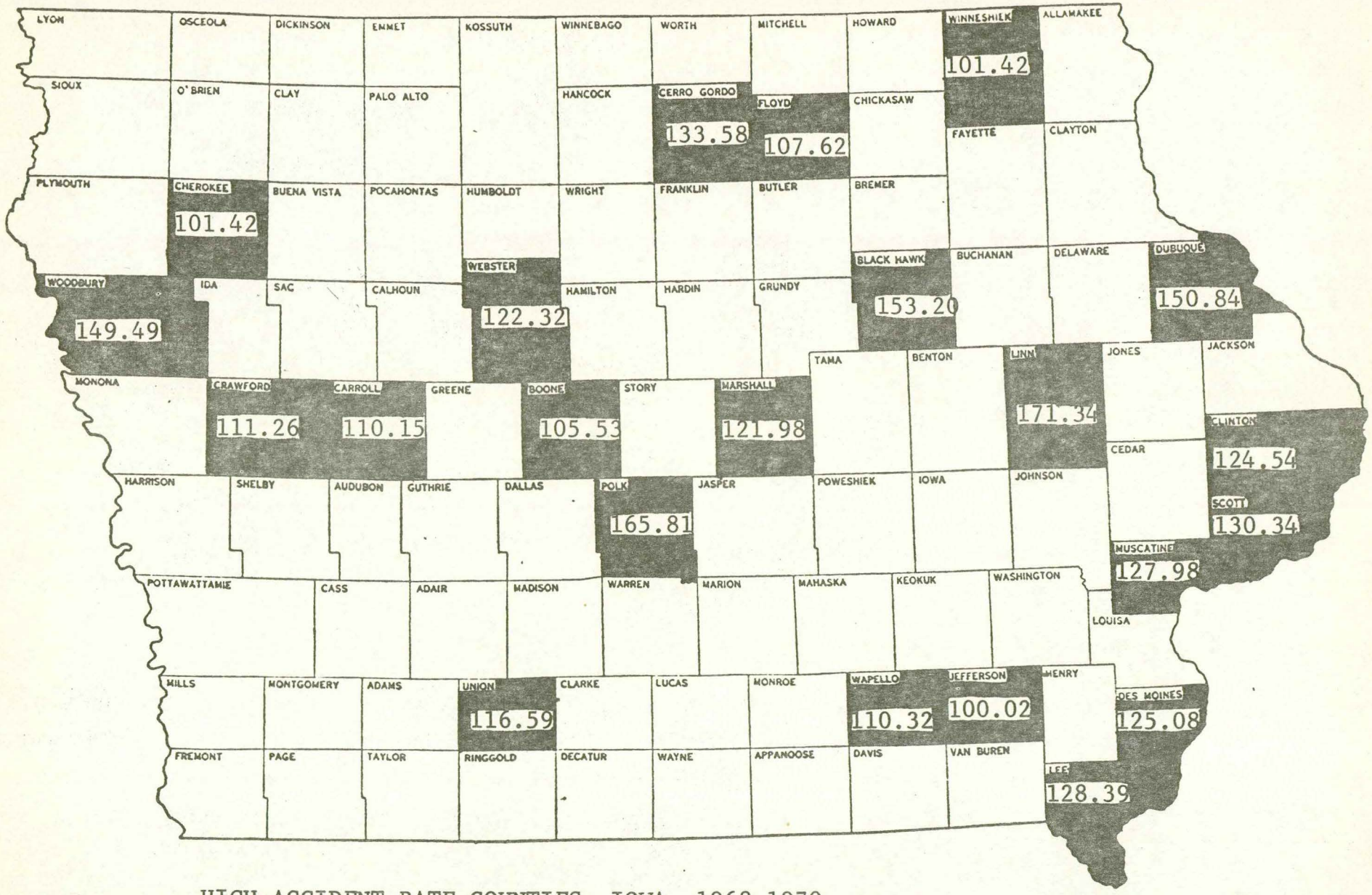


Chart 16



HIGH ACCIDENT RATE COUNTIES: IOWA, 1968-1970

ABOVE STATE AVERAGE OF 100

CP-11021

III. PROBLEM GOALS, OBJECTIVES, AND RESOURCES

A. Introduction

This section of the plan will apply goals, objectives and resources to those problem identified in Section II. The following three areas were not discussed as separate problems because they are inherently involved in all of our difficulties. They are Traffic Records Data, Political Subdivision Planning and Administration, and Manpower Development.

As you will notice, the need to improve both the quality and quantity of our traffic data is evident throughout this plan. While our automated system for traffic records is over fifty percent complete, the accuracy of that data and the capability for in-depth analysis must be refined. Specific plans for this activity are discussed in PEP E-1, P&A. The ability to locate and maintain surveillance at high accident locations is also of prime importance to planning and efficient utilization of resources. PEP E-9, Identification and Surveillance of Accident Locations, addresses this issue.

A methodology for local involvement and planning of resources must be established, along with the need to identify problem areas within the political subdivisions. If possible, the need must be recognized in such manner that will provide the maximum impact on realized deficiencies. We cannot afford to spend our resources on ineffectual local commissions or planning groups. It is our hope that if action funds to impact problems defined are made available to local government, they should be willing, with state expertise, to provide the necessary planning. See PEP E-1, P & A, discussion on CLASP.

Lastly, manpower resources and proficiency remain a problem. Since the inception of this program, the planning and administration staffs at

the state level have been trying to catch up to the level of activity currently funded. If the program were to expand no further, the present manpower levels would be sufficient. In fact, the existing staffs are already strained. This is evident by later hours, strained travel budgets, late reports, and missed deadlines. We must now plan for eventualities that were not recognized in the past. Specifically, this program cannot grow or expand until we have qualified manpower in sufficient quantities to insure program objectives are met. Our ability to meet time frames of National Emphasis Programs and our own identified deficiencies will directly relate to our ability to obtain and equip our staff. Therefore, throughout the following problem discussions and PEPS, this state has taken an aggressive approach that will assure sufficient manpower availability for responding to expanded activities, priorities, and resources. As an example, our current staff strength was based on program requirements two years ago. Since then our administrative workload alone has multiplied four times; i.e., the CP, AWP, Annual Reporting, and program monitoring requirements, not to mention additional administrative workloads required for accident and training reporting. In short, this plan could not maintain status quo, unless increases in manpower are realized.

B. Program Prioritization

Chart 12, Prioritization of Programs, on page , establishes management guidance to decision makers if forthcoming resources are less than anticipated in this plan. The following key defined the alphabetic characters in Chart 12:

A - First priority that must be supported substantially as written

B - Second priority that is more flexible than "A" but should be supported as close as written consistent with available resources.

C - Third priority that will be purely dependent on the availability of resources and is as flexible as needs vary.

It must be recognized that as program objectives are met, the priorities of these activities will change.

C. Problem Goals and Objectives Discussion

The following problem discussions specifically direct goals, objectives, emphasis, and resources to impact the problems identified and discussed in Section II of this plan. The PEPs in Section IV are the various agency plans that resulted from the following discussions.

Chart 17

PRIORITIZATION OF PROGRAMS

Element	Title	FY 74	FY 75	FY 76	FY 77
E-1	Planning and Administration				
01	P&A (Various Agencies)	A	A	A	A
02	CLASP	A	A	A	A
03	Traffic Records	A	A	B	C
E-2	Traffic Laws and Regulations				
04	Codes and Laws	A	B	C	C
E-3	Motor Vehicle Requirements				
05	Motor Vehicle Services	C	C	C	C
06	Special Vehicle - School Bus	A	A	B	B
E-4	Traffic Safety Education				
07	K-12 Traffic Safety Education	A	A	B	B
08	Secondary Driver Education	B	C	C	C
09	Adult Driver Education	A	B	B	B
10	Special Vehicle Personnel Education	B	C	C	C
11	Public Information (DPS)	B	B	C	C
E-5	Driver Licensing				
12	Driver Licensing	B	B	B	B
E-6	Police Traffic Services				
13	Police Traffic Training	A	A	A	A
14	Enforcement, State	A	A	B	B
15	Enforcement, Local	A	A	A	A
E-7	Traffic Courts				
16	Traffic Courts	A	A	B	B
E-8	EMS				
17	EMS Training and Equipment	A	A	B	B
E-9	Identification and Surveillance of Accident Locations				
18	Accident Location and Analysis	A	A	A	A
19	Surveillance and Evaluation	A	A	A	A
20	Corrective Action	B	B	B	B

Element	Title	FY 74	FY 75	FY 76	FY 77
E-10	Highway Design, Construction and Maintenance				
21	Inventories, Standards	B	B	B	B
22	Surface Safety	C	C	C	C
23	Traffic Environment	C	C	C	C
E-11	Traffic Engineering Services				
24	Personnel	A	A	A	A
25	In-Service Training	B	B	B	B
26	Inventories, Studies and Control Devices	B	B	B	B
27	Pedestrian Safety - Standards, Studies and Devices	C	C	C	C

PROBLEM #1: CRASHES IN HIGH-TRAFFIC VOLUME AREAS

Statement of Problem

The incidence of crashes in high traffic volume areas is illustrated by the map on page 122. Several high-population counties are also highest in accident rate.

In the ten highest fatality counties, about fifty percent, on the average, of each county's traffic deaths occur in city population centers.

On the average, about sixty-four percent of the traffic crashes in Iowa involve two or more motor vehicles colliding in traffic.

Alcohol accounts for over thirty percent of Iowa's traffic deaths. The State Program Elements created to attack this major problem are:

- Program Administration (E-1)
- Police Traffic Services (E-6)
- Traffic Engineering Services (E-11)

Goal

To reduce loss of life and property due to traffic crashes by attacking high traffic volume-traffic crash areas with concentrated effort.

Objectives/Programs Required to Attack Problem

Program Planning and Administration - To improve and expand administrative capabilities at the state and local levels to attack problems in specific areas.

- Improve and upgrade various state agencies to carry out planning and programming functions
- Initiate CLASP (County Level Accelerated Safety Program) to engage local jurisdictions in problem solving.

Police Traffic Services - To initiate selectivity in enforcement and improve enforcement in high traffic volume-traffic crash areas.

- Provide training to improve quality and capability of traffic enforcement officers.
- Provide capability for higher selectivity of enforcement on state level to attack rural high-traffic crash areas.
- Initiate selective enforcement in high traffic crash local jurisdictions through Mini-Step programs.
- Initiate alcohol countermeasures through mini-ASAP programs.

Traffic Engineering Services - To provide programs specifically for improvement of traffic flow in high traffic volume jurisdictions through engineering.

- Provide in-service training for resident engineers.
- Upgrade traffic control through inventories and studies of traffic control devices to identify needed improvements.
- Develop system for refined identification and surveillance of high-accident areas.

National Emphasis Programs affecting this problem are:

NHTSA - Selective traffic enforcement

FHWA - Traffic Engineering Service

FHWA - Identification and Surveillance of High Accident Locations

Required Resources

Legislation

- Program Administration - No additional legislation required at this time.
- Police Traffic Services - (Immediate) legislation to raise statutory manpower complement of Iowa Highway Patrol.

Manpower

- Program Administration - (Immediate) one assistant Highway Safety coor-

(2) Iowa does not yet have a uniform accident report form necessary to meet the needs of the traffic records system.

(3) Traffic engineers could provide input to accident investigators regarding possible causative factors involved in crashes. They could also be utilized in multi-disciplinary accident investigations. There are isolated examples of where this coordination has proven successful, such as one hazardous, accident-producing site in Davenport that was eliminated through coordination between the city engineers and a police investigator who was aware of the impact they could make.

(b) Data Entry and Storage. The Department of Public Safety is the sole agency responsible for overall accident records. Local agencies are encouraged to maintain local accident records to carry out local programs. Public Safety is the agency responsible for accurate reporting, coding of data, and data processing.

A higher priority has been placed by the Department on proper data entry and processing. Long before Standard 318 was promulgated, the Department realized that accident information being received from State and local officers, and from private citizens, was not being treated properly so that usable data for management was being produced. To deal with this problem, the Department has done the following things to essentially bring Iowa into compliance with Standard 318 requirements for data entry and storage:

(1) An assessment of current data elements in the accident data bank, and the development of possible new programs for data entry and access.

(2) The hiring of qualified personnel with the analytical and statistical knowledge to make better use of existing incoming accident

dinator and one alcohol countermeasures coordinator for Department of Public Safety. Two additional coordinators for CLASP with expertise in engineering and enforcement. An administrative assistant and a local project coordinator must be added to the Highway Commission staff.

- Police Traffic Services - Two additional people to carry out Police training at Iowa Law Enforcement Academy. Twenty to fifty additional Highway Patrolmen over four-year period for selective enforcement teams (5-10 per year).

PROBLEM #2: HIGH INCIDENCE OF SINGLE-VEHICLE CRASHES

Statement of Problem

An average of about thirty-eight percent per year of all fatal motor vehicle accidents are single vehicle crashes.

This includes (average/year):

ran off road	28.3%
overturned	1.5%
with parked car	0.9%
with fixed object	6.6%

Data is not sophisticated enough to identify specific causal factors. Above data would suggest, however, that design factors related to roadside hazards and surface conditions would contribute to deaths and injuries.

Accidents involving lone drivers could also be a function of driver attitude and skills.

Program element plans created to attack the problem are:

- Program Administration
- Motor Vehicle Requirements
- Traffic Safety Education
- Driver Licensing
- Police Traffic Services
- Highway Design, Construction and Maintenance

Goal

To reduce loss of life and property due to single vehicle crashes through a general application of specific countermeasures programs.

Objectives/Programs Required to Attack the Problem

Program administration - To improve and make more efficient the system to gather data concerning the problem.

- Develop an efficient data gathering system through uniform crash re-

porting and uniform citations.

- Design a system to analyze data to determine causal factors.

Motor Vehicle Requirements - To remove unsafe vehicles and drivers from the road through the registration and inspection system.

- Complete the automation of the registration system for quick identification of problem vehicles.
- Upgrade inspection program to insure no defective vehicles are on the road.

Traffic Safety Education - To reduce single-vehicle crashes through improved driver skills and attitudes.

- Increase immediate driver skills through improved model secondary driver education curriculum and available teaching capabilities.
- Improve immediate driver attitude through intensive public information and awareness program.
- Affect long-range driver attitudes through a comprehensive K-12 grade safety education program.
- Improve adult driver skills by expanding adult driver education programs.

Driver Licensing - To remove unsafe drivers through more selective licensing.

- Strengthen driver licensing medical advisory board to better screen drivers with hazardous health problems.
- Automate driver licensing system.
- Increase ability of driver licensing system to examine drivers more often (long range goal, periodic re-examination).

Police Traffic Services - To improve data gathering through upgraded accident investigation techniques.

- Train police officers to gather accurate and complete investigative accident data.

Highway Design, Construction, and Maintenance - To identify and remove hazards in the roadway environment that either contribute to the causation or increased severity of an accident.

- Inventory existing hazards.
- Create uniform method and timetable for elimination of identified hazards.
- Continue identification and spot improvement of high-skid areas on both state and local roads.

National Emphasis Programs affecting this problem are:

NHTSA - Motor Vehicle Inspection

NHTSA - Driver Licensing Advisory Boards

NHTSA - Periodic Driver Re-Examination

NHTSA - Driver Improvement

(Note: Alcohol is considered of major import, but will be discussed in problem #4)

FHWA - Highway Design, Construction, and Maintenance

Resources Required

Legislation

- To expand motor vehicle inspection program to annual mandatory inspection. (Submit - 1975 General Assembly session.)
- To require periodic driver re-examination. (Submit - 1976 session.)

Manpower

- One person to coordinate public information/awareness program (1974).
- Twenty-one additional civilian driver examiners.
- Two additional training personnel at Iowa Law Enforcement Academy (one - FY 74, one - FY 75).

- Two additional people at Highway Commission for hazard inventory (FY 74).
- Two to three additional people to coordinate K-12 and adult driver education programs.

PROBLEM #3: A DISPROPORTIONATE REPRESENTATION OF 15 TO 24 YEAR OLD DRIVERS IN OUR CRASH EXPERIENCE

Statement of the Problem

This age group accounts for more than fifty percent of all license suspensions for reckless driving and Chart Twelve (12) on page 119 shows that 48.8 percent of all driver license suspensions were in the 19 and under age group. (Note: Any licensed driver under 18 years of age convicted of a moving violation automatically loses his license and is not allowed to reapply until he reaches age 18.)

While only twenty-five percent of our driving population is under age 24, this group accounts for almost forty percent of the fatal crashes.

Specific state program elements created to attack this major problem are:

- Planning and Administration (E-1)
- Traffic Safety Education (E-4)
- Driver Licensing (E-5)

Goal

To reduce the incidence of crashes involving the 15 to 24 year old group.

Objectives/Programs designed to attack this program are:

Planning and Administration - Insure adequate resources are available to implement specific action programs designed to attack this problem, and to provide sufficient expertise to create those programs.

- Assist local agencies in defining and implementing programs to attack this problem through the CLASP mechanism.
- Supply sufficient data to insure that the deficiencies within this age group can be identified, evaluated, and impacted by the various agencies (State and local) having jurisdiction or program responsibilities over this area of concern.

Traffic Safety Education - Create viable educational and informational programs designed to impact this problem through short and long range objectives.

- Implement a K-12 long-range program designed to impact educational deficiencies within this age group.
- Create and implement viable long-range secondary education programs utilizing the most efficient techniques for the purpose of improving the driving performance levels within this age group.
- Implement immediate dynamic informational programs designed to adjust attitudes in this age group, with the intent of creating social pressures to resolve this deficiency.

Driver Licensing - To improve methods of insuring that licensed drivers are knowledgeable and possess adequate skills to deal with modern driving problems.

- Increase field staff personnel to handle increased emphasis on more comprehensive testing.
- Provide electronic data processing techniques to more efficiently deal with and isolate deficiencies within the spectrum of this problem.
- Develop a program designed to relate and refer demonstrated deficiencies within this group to driver improvement actions or programs.

National Emphasis Programs affecting this problem are:

Driver License Advisory Boards

Periodic Driver Reexamination

Driver Improvement Programs

Required Resources

Legislative

- Legislation providing driver improvement schools for deficiencies in addition to the OMVUI schools will be initiated prior to FY 1977.

- Legislation will be requested to allow for periodic driver re-examination prior to FY 1976. (Note: Specific target dates will depend on how fast our expansion of administrative capabilities can be accomplished to handle the increased efforts.)

Manpower

- Twenty additional civilian driver licensing examiners. (Note: Same personnel as Problem #2.)

PROBLEM #4: CRASHES WITH ALCOHOL INVOLVEMENT

Statement of Problem

Latest figures show that alcohol is involved in from thirty to thirty-five percent of Iowa's fatal traffic crashes.

Approximately twenty percent of state accident reports list alcohol as a major contributing factor in fatal crashes.

These figures mean that alcohol is by far the major identifiable factor in fatal traffic crashes.

It is recognized, however, that data on alcohol involvement is based largely on the opinion of the investigative officer.

Statistics, therefore, are incomplete, and alcohol involvement may be much higher.

Program elements created to attack this problem include:

- Program Administration
- Police Traffic Services
- Traffic Courts
- Traffic Safety Education

(Note: The alcohol problem is dealt with in some manner in virtually every program element concerned with the 14+ standards. Above elements are named because they contain specific alcohol countermeasures.)

Goal

To reduce the traffic crashes due to drinking and driving through programs designed to remove and keep the drinking driver off the road.

Objectives/Programs Required to Attack This Problem

Program Administration - To create a system for better gathering data on alcohol related accidents and improve coordination and planning of alcohol counter-

measures activity.

- Create alcohol coordinator in DPS to plan, coordinate, and administer such diverse countermeasures as the drinking-driver improvement program, and miniature ASAP's, which may include all aspects of the national ASAP programs
- Seek legislation and other measures to insure correct data is gathered on alcohol-related crashes.
- Establish highway safety activity in court system.

Police Traffic Services - To develop, initiate, and encourage enforcement activity aimed specifically at the drinking driver.

- Build alcohol enforcement training into basic and advanced police courses at the ILEA.
- Create specialized alcohol enforcement training courses.
- Emphasize alcohol enforcement in STEP program activity.
- Initiate Mini-ASAP programs utilizing all or some of the ASAP countermeasures.

Traffic Courts - To improve judicial understanding and participation in solving alcohol problems.

- Coordinate closely drinking-driver improvement program with judiciary through the alcohol coordinator.
- Include judicial countermeasures in Mini-ASAP's.

Traffic Safety Education - To improve attitude and knowledge of alcohol in relation to the driving task.

- Provide emphasis on alcohol through educational service to school districts, aimed at K-12th grades (long range).
- Provide emphasis on alcohol through educational services to school districts, aimed at the secondary driver education classes (short range).

National Emphasis Programs affecting this problem are:

NHTSA - BAC at .10 for presumptive evidence of intoxication (accomplished)

NHTSA - Blood tests on deceased and surviving drivers of fatal crashes (submitted by 1975)

Required Resources

Legislation

- To establish a system to determine BAC's of all drivers and pedestrians who die within four hours of a traffic crash.
- To raise complement of Highway Patrol (same as required in previous problems).

Manpower

- One alcohol coordinator to plan, administer, and coordinate all alcohol countermeasure activities (same as required under previous problems).
- Two additional instructors at Iowa Law Enforcement Academy (same as required under previous problems).
- Twenty to fifty additional Highway Troopers (as required in previous problems).
- Limited manpower at local level where unavoidably necessary to implement ASAP-type countermeasures.

PROBLEM #5: SPECIAL VEHICLE CRASHES

Statement of Problem

Special vehicles include recreational vehicles such as campers and motor homes, motorcycles, bicycles, and school buses and emergency vehicles.

Snowmobiles are not registerable for highway use, and therefore are not included.

The largest single problem is the motorcycle, with an increase in crash fatalities of 942 percent in ten years (7 in 1962, 66 in 1972).

Motorcycle deaths have increased to over thirteen percent of the motor vehicle fatality problem.

Nineteen year olds and under represent over fifty percent of motorcycle accidents.

Small trucks account for an increasing percentage of traffic accidents (9.5% in 1969, 10.8% in 1971), counter to the trend for all motor vehicles.

School buses account for a steady 300 accidents per year, but involve a large number of people (children) in each accident.

Bicycle accidents have doubled since 1969, as shown by Chart 3-B-7 on page 70.

Ambulances and other emergency vehicles continue to hold steady in percentage of the total vehicle crash problem

Program Elements created to attack the problem are:

- Program Administration
- Motor Vehicle Requirements
- Driver Licensing
- Police Traffic Services
- Emergency Medical Services
- Traffic Safety Education

Goal

To reduce traffic crashes involving specifically identifiable types of vehicles other than the passenger automobile; develop preventive programs to insure these crashes do not increase with the booming popularity of some of these vehicles.

Objectives/Programs Required to Attack the Problem

Planning and Administration - To provide capability to carry out specific vehicular safety programs.

- Improve capability of Department of Public Instruction to carry out inspection of school buses.

Motor Vehicle Requirements - To insure all special vehicles are in good condition, capable of meeting the demands of the traffic system, and equipped with necessary safety equipment.

- Automate registration system to improve identification of special vehicles.
- Include motorcycles, trailers, and motor homes in the inspection program.
- Review and upgrade equipment requirements for special vehicles.
- Review and upgrade motorcycle definitions and requirements to remove unsafe types of vehicles (i.e. minibikes).
- Require safety helmets and eye protection for motorcyclists.

Driver Licensing - To insure drivers are capable of operating the special vehicles they own.

- Coordinate driver licensing records with registration records.
- Establish classified licensing system.

Police Traffic Services - To aid in the training of special vehicle drivers.

- Establish evasive maneuvers driving training for police in conjunction with school bus driver and ambulance driver training.

Emergency Medical Training - To aid in the training of special vehicle drivers.

- Establish evasive maneuvers driving course for ambulance drivers in conjunction with police, and school bus drivers.

Traffic Safety Education - To insure a safe pupil transportation system; provide education for special vehicle drivers.

- Establish training program for school bus drivers, mechanics, and supervisors, and approve pupil transportation programs.
- Provide educational services to area schools and local school districts to improve motorcycle and other recreational vehicle driver education.
- Carry out public information/awareness program concerning special vehicles.

National Emphasis Programs affecting this problem are:

NHTSA - Motorcycle Helmet Legislation

NHTSA - Classified Driver Licensing

NHTSA - School Bus Safety

NHTSA - Motor Vehicle Inspection

Required Resources

Legislation

- To require motorcyclists to wear helmets and eye protection (submit immediately).
- To redefine motorcycles (submit immediately).
- To require annual motor vehicle inspection (submit by 1975).
- To require classified driver licenses (submit immediately).

Manpower

- Two additional school bus inspectors.

- One coordinator of Public Information/Awareness Program (same as stated in previous problems).

PROBLEM #6: EMERGENCY MEDICAL SERVICES

Statement of Problem

Until two years ago, the primary thrust of EMS was geared to hospital activity, with little or no concern for the ambulance operation. This task was historically left to the funeral directors or other civic minded private concerns.

Rising costs of operation within the private ambulance sector, combined with maximum ceilings imposed by Medicare for ambulance reimbursement, have made the small ambulance business unprofitable unless otherwise subsidized, thus causing an acute shortage of service in Iowa.

In addition, the corresponding levels of ambulance attendants professional knowledge and skills had been almost nonexistent on a statewide basis.

Until a year ago, there were no provisions to establish any coordinated statewide approach to emergency communication. While the plan has been completed, implementation remains to be accomplished.

There are no State guidelines, controls, or any established requirements for the purpose of standardizing or otherwise insuring a statewide level of competence in EMS.

While the number of emergency vehicles has decreased, their involvement in accidents has remained constant, indicating a need to improve driver proficiency.

The State Program Elements created to attack this problem are:

- Emergency Medical Services

Goal

To reduce loss of life and aggravated injuries due to ill equipped, poorly trained, or otherwise untimely responsiveness to crashes by emergency medical service agencies throughout the state.

Objectives/Programs Required to Attack the Problem

Program Planning and Administration - To improve and expand EMS capability for planning and program implementation at local levels of government.

- Increase our capabilities to assist all levels of local government in upgrading their emergency medical services.
- Improve the state's capability to assist local governments in implementing the state's EMS communication system.

Emergency Medical Services - Improve, expand, and maintain the provisions established in the state's approved Emergency Medical Services Comprehensive Plan.

- Improve the basic plan with refined data, regional plans and studies, completed task force reports on facilities, legislation, cost projections, etc.
- Expand knowledge and skill levels consistent with performance established through the 81-hour EMT-A College of Surgeons approved program offered by the sixteen Area Colleges.
- Establish proficiency requirements (written and performance) for all EMT-A's.
- Upgrade ambulance and medical equipment in areas lacking sufficient response capabilities to insure that any Iowan is within at least a fifteen to thirty minute radius of a qualified EMS ambulance facility.
- Begin implementation of the EMS Communication Plan.
- Establish programs to improve the skills and expertise of drivers handling emergency vehicles.

National Emphasis Program affecting this problem is:

Emergency Medical Services

Required Resources

Legislation

- To establish certification and regulatory criteria for ambulance operations which will insure professional standards of operation are met.
- To allow specially qualified EMT-A's to utilize I.V. fluids, telemetry equipment, defibrillation equipment, and other advanced stabilization techniques under the direction of physicians.

Manpower

- Two additional field personnel will be necessary to enforce, inspect, assist, and monitor activities required by increased program requirements and legislative authority. (See PEP #1)
- An additional communications expert will be required to assist local government in conforming to the EMS Communications Plan provisions for their respective areas.

PROBLEM #7: CODES, LAWS AND ADJUDICATION

Note: Problems in these areas do not normally lend themselves traceable through accident statistics. Deficiencies in these areas can, however, be pinpointed.

Statement of Problem

Lack of expertise at the State level to apply, direct, and monitor specific codes and laws conformance requirements.

Our Comparative Study on the Iowa Motor Vehicle Code compared with UMVC findings must be implemented.

A format change to the Iowa Motor Vehicle Code must be accomplished.

To date there has been little traffic safety assistance provided to the state's court system.

Prior to the implementation of the state's Court Reform Act (effective July 1, 1973) there was no court administrator or method of processing conviction data. (See page 111 for a detailed discussion on the new court system.)

There is no correlative data to crash experience analysis concerning codes, laws, and/or the courts effect on the problem.

The State Program Elements created to attack this problem are:

- Traffic Laws and Regulations
- Traffic Courts and Adjudication

Goal

To establish a viable codes and laws and adjudication system that can represent and impact existing deficiencies in the needs of highway safety.

Objectives/Programs Required to Attack the Problem

Traffic Laws and Regulations - To reduce ambiguity in traffic codes by insuring uniformity with the UMVC.

- Update present Iowa code
- Draft legislation to bring the code into compliance
- Compare code deficiencies with existing accident data for trend analysis where possible.

Traffic Courts and Adjudication - To provide assistance in improving traffic courts and the adjudication system with regard to the current state of the art in highway safety.

- Provide resources to assist the Courts Administrator in improving traffic courts
- Improve communication between courts and other highway safety related agencies.
- Assist courts personnel in future planning for safety related activities.
- Provide assist for courts manpower development seminars and workshops

National Emphasis Programs affecting this problem are:

Uniform Rules of the Road

Reporting of Traffic Court Convictions

Required Resources

Legislation

- To bring the Iowa Motor Vehicle Code into national conformance

Manpower

- A codes and laws legislative research specialist to prepare draft legislation and legal expertise to future planning.
- Assist the Courts Administrator in providing a Traffic Courts Administrator and staff capability.

IV. PROGRAM ELEMENT PLANS

A. RATIONALE FOR ELEMENT SELECTION

1. The primary consideration for element selection was the establishment of various activities in manageable groups that would represent not only the program analysis, but would represent the various agency expertise involved with the various generic areas of highway safety.

2. The correlation between the elements and proposed revised Standards was intentional for the purpose of administrative reporting and simplicity. The authors of this document felt that proposed Standards represented a logical consolidation of NHTSA's current 14-plus Standards, and therefore could serve our purposes as well.

3. As will be noted in the various element plans, the style and format varies from agency to agency. This approach was planned in order to determine which format would be most efficient. Certain PEP's represent a fairly detailed comprehensive plan for that activity. It is anticipated that all PEP's will be as detailed within the next four fiscal years.

4. The various plans represent the opinions and conclusions of their authors. The PEP's are the expression of the activities the authors felt would be necessary to accomplish the goals and objectives described in Section III of this plan. It must be remembered that these PEP's represent the agencies responsible for each activity and a commitment to accomplish their stated goals and objectives.

5. True prioritization will be realized when resources, fiscal and otherwise, are known for a specific period of time. The plans represent a commitment to those activities that will impact stated goals and objectives. To say that any one activity deserves more consideration is to say, we know how to solve all the related problems of high-

way safety. We do feel, however, the plans represent a realistic assessment of our crash experience and outline realistic activities well within our ability to accomplish.

Element 1 Planning and Administration

Goal: To insure sufficient staff and management practices are provided to accomplish the provisions of this plan.

Objectives:

1. Maintain a balance between obligated funds (planned) and actual expenditures not to exceed a difference of 10 percent.
2. Insure an adequate unobligated balance is maintained for program revisions and/or other program requirements not to exceed 20 percent of the total funds authorized for a given fiscal year.
3. Insure the various agencies assigned program responsibility are suitably staffed and organized to carry out the provisions of their assigned responsibilities.
4. Insure that future revisions of this plan reflect the actual levels of compliance and represent a level of activity that can reasonably be obtained.
5. Insure that the evaluation of all program activity represents a true statement of the level of accomplishment and/or conformance to stated objectives.
6. Insure adequate and timely traffic records data requirements are met and insure sufficient resources are applied to meet records requirements at all levels of government.
7. Insure a mechanism is established to assist local levels of government in their planning processes so they can better assess their needs and impact programs.

Subelement 01 P&A

One subelement called Planning and Administration will be established to provide for the various activities necessary to accomplish the goal and stated objectives of this element. Activity within the subelement will be assigned to five agencies of State government. They are:

1. The Office for Planning and Programming (OPP), who is responsible for overall planning, administration, and program coordination.
2. The Department of Public Safety (DPS), who is responsible for program activities in the areas of:
    a. Motor Vehicle Inspection (MVI)
    b. Motor Vehicle Registration (MVR)
    c. Motorcycle Safety (MS)
    d. Driver Licensing (DS)
    e. Certain portions of Codes and Laws (C&L)
    f. Alcohol in Relation to Highway Safety
    g. Traffic Records
    h. Pedestrian Safety as related to information
    i. Information portions of Driver Education
    j. Police Traffic Services
    k. Hazard Control, Debris and Cleanup
    l. Accident Investigation
3. The Iowa Highway Commission (HC), who are basically responsible for FHWA's three-plus standard areas.
4. The Iowa Department of Health (IDH), who is responsible for activity in the field of emergency medical services.
5. The Department of Public Instruction, who is primarily responsible for activities in Driver Education and Pupil Transportation.

Subelement 02 CLASP

Until the County Level Accelerated Safety Program becomes an ongoing activity, the program will be part of the planning and administrative function.

Goal: To insure high risk counties are provided the statewide planning expertise necessary for establishment of local needs assessment, program prioritization, and local programs evaluation.

Objectives:

1. To develop and refine selection rationale of risk counties and develop models that will assist counties in the development of their own programs.
2. To create a unified statewide assistance program that expresses the demonstrated needs of the counties experiencing high risk situations.
3. To provide the expertise and resources necessary to impact identified problems within the local levels of state government.
4. And eventually become the complete rationale for program implementation at the local levels of government.

Procedures:

1. Create a staff sufficient to create model programs and test their performance in selected high risk areas.
2. Create an ongoing task force approach to identifying highway safety problems at the local levels of government that represent the disciplines at all levels of government.
3. Demonstrate and evaluate this premise initially in two selected areas and expand the program if proven successful.
4. Establish this concept as an ongoing statewide approach to program implementation at the local level.

Subelement 03 Traffic Records

Due to the restructure of our TRACIS system, all requirements for our traffic records system upgrade will be conducted through the Department of Public Safety effective July 1, 1973.

Goal: To provide a completely automated traffic records system that will meet all requirements for fast and efficient dissemination of traffic safety related data and provide for the effective and viable data generation necessary to insure needs assessment, program planning, and evaluation.

Objectives:

1. Provide a Uniform Traffic Citation for the collection of accurate violation data acceptable for EDP.
2. Provide a Uniform Accident Report for the collection of accurate crash data acceptable for EDP.
3. Automate and establish procedures at all levels of government for Motor Vehicle Registration data.
4. Establish an automated Driver Licensing processing system and data base on driver histories.
5. To upgrade traffic statistical reporting programs as necessary to insure efficient program planning and administration.

Procedures:

The attached charts indicate the planned time frames for the above stated objectives and approximate levels of funding that will be required. To be realistic, however, it must be noted that certain administrative changes in personnel and agency responsibilities have created a temporary lack of direction. The specific responsibilities and plans necessary to implement the above referenced objectives will

be incorporated into this plan and subsequent work programs when certain administrative decisions are made.

Basically, the activity under the following traffic records requirements may be divided into three parts: data input requirements, data output requirements, and executive management information systems (MIS):

1. Uniform Traffic Citation

   a. System input will be effected prior to FY '74.

   b. Output will by statute be available effective July 1, 1973.

   c. MIS requirements will be initiated by the DPS data analyst in FY '74.

2. Uniform Accident Report

   a. Input will be tested in the latter third and all of the fourth quarter of FY '73.

   b. Formal implementation will take place on July 1, 1973.

3. Motor Vehicle Registration

   a. Thirty-nine (39) counties will be required to submit MV information prior to August 1, 1973. These are the last counties required to input the system.

   b. About 50 percent of the motor vehicle file for the state will be on-line by March of 1973. The rest will be spread over the next year.

4. Driver License

   a. The plastic credit card drivers license will be implemented on July 1, 1973, provided approval by the Iowa legislature. Most of the DL links to accident and violation records will be programmed by June of 1973.

   b. A completely operational system of most of the drivers in state will be completed by FY 1975.

5. Statistical Reporting

The traffic records MIS will be under development as an ongoing process. Essential reports will be completed in the fall of 1973, including reports required by NHTSA and the National Safety Council.

Problems Impacted: See Problem #1, Page 135; Problem #2, Page 139; Problem #3, Page 143; Problem #4, Page 146; Problem #5, Page 149.

ELEMENT E-1
Planning and Administration

SUBELEMENTS:	FY 1974	FY 1975	FY 1976	FY 1977
01 Planning and Administration				
a. OPP - Statewide				
1. Manpower	Maintains 3 full-time professionals for Program Director, Coordinator, and Fiscal Management			
2. Legislation	None →	Institute legislation of program responsibility and direction →		
b. DPS				
1. Manpower				
a. Overall Administration	Ongoing →			
b. Program Coordinator	Establish →	Ongoing →		
c. Assistant Coordinator	Establish →	Ongoing →		
d. Alcohol Coordinator	Establish →	Ongoing →		
e. Data Analyst (402)	Ongoing →			
f. Data Analyst (403)	Ongoing →			
2. Legislation	Necessary Table of Organization Adjustments →			
c. IDH				
1. Manpower				
a. Director of EMS	Ongoing →			
b. Administrative Assistant	Ongoing →			
c. Program Coordinator	Ongoing →			
d. Two additional field personnel	Establish →	Ongoing →		
2. Legislation				

ELEMENT: E-1
Planning and Administration

SUBELEMENTS:	FY 1974	FY 1975	FY 1976	FY 1977
01 Planning and Administration (continued)				
d. HC				
1. Manpower				
a. Program Coordinator	Ongoing →			
b. Program Assistant	Establish →	Ongoing →		
c. Local Project and Contract Administrator		Establish →	Ongoing →	
2. Legislation				
e. DPI				
a. One-half Fiscal Capability Employ one half-time individual with fiscal responsibility (Federal Funds)	Hire →	Ongoing →		
02 CLASP				
1. Manpower	2 Additional Coordinators →	Ongoing →		
2. No Legislation Required				
03 Traffic Records				
1. Manpower	See DPS P&A Requirements			
2. Legislation				

ELEMENT:	FY 1974	FY 1975	FY 1976	FY 1977
SUBELEMENTS:				
a. BAC levels on persons 15 years of age or older involved in fatal crashes	Establish →	→	→	→
b. Authority to implement a two-part driver license	Approval anticipated in FY '73 →	→	→	→
3. Activity				
a. Uniform Traffic Citation				
b. Uniform Accident Report	Operational →	Ongoing MIS Activity and Refinement →	→	→
c. Motor Vehicle Registration →	50% Complete →	Total System Operational →	MIS Activity →	→
d. Driver License →	Completed →	Total System Operational →	Ongoing Refinement and MIS →	→
e. Statistical Reporting →	Basic Reports Operational →	Advanced Systems Generation →	Ongoing Development →	→

COMPREHENSIVE HIGHWAY SAFETY PLAN Program Element Plan (PEP)	1. STATE Iowa	DATE: 2 January 1973
	2. Program Element Title: Planning and Administration (E1)	

3. Prepared by: Lance C. Faust — Title: Director, Iowa Highway Safety Program
Agency: Office for Planning and Programming
Approved by: Robert C. Bonz — Title: Governor's Representative for Highway Safety
Agency: Office for Planning and Programming

4. Program Element Will Implement Standards Checked	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18

5. Subelements	6. Estimated Costs (In Thousands)											
	FY 197 4			FY 197 5			FY 197 6			FY 197 7		
	Total	S/L	Fed.	Total	S/L	Fed.	Total	S/L	Fed.	Total	S/L	Fed.
01 P & A (Various Agencies)												
A. OPP	90	--	90	90	--	90	90	--	90	90	--	90
B. DPS	505	455	50	524	473	51	536	485	51	557	505	52
C. IDH	100	40	60	110	50	60	115	60	55	120	70	50
D. HC	44	16	28	56	16	40	56	19	37	56	25	31
E. DPI	10	6	4	10.5	6.5	4	10.6	6.5	4.1	11.3	7	4.3
02 CLASP	100	UNK.	100	100	UNK.	100	100	UNK.	100	100	UNK.	100
03 Traffic Records	1,380	1,180	200	1,333	1,123	210	1,100	1,000	100	1,050	1,000	50
7. Total	2,229	1,697	532	2,223.5	1,668.5	555	2,007.6	1,570.5	437.1	1,984.3	1,607	377.3

ELEMENT- Traffic Laws and Regulations (E-2)

GOAL- To reduce ambiguity in traffic codes by insuring a uniformity between Iowa laws and the laws of other states, and with local ordinances.

SUBELEMENT 04 Codes and Laws

OBJECTIVE- Bring Iowa's traffic codes into compliance with the Uniform vehicle code.

ACTIVITIES-

a. Provide legal help to the legislative study committee in order to aid in keeping the codes and laws comparison study up to date, and to aid in the writing of legislation.

b. Update the codes and laws study on a periodic basis.

c. Submit legislation to bring Iowa into compliance with the Uniform Vehicle Code.

REQUIRED RESOURCES-

a. Legislation. various legislation to bring the Iowa code into compliance with the UVC.

b. Manpower. One man to aid in legislation research and writing. Must have legal training.

RESPONSIBILITY- The Department of Public Safety and the Office of the Attorney General are responsible for traffic codes and laws, in cooperation with other related state agencies.

Problems Impacted: See Problem #7, Page 156.

ELEMENT: Traffic Laws and Regulations	FY 1974	FY 1975	FY 1976	FY 1977
SUBELEMENTS:				
Codes and Laws				
Research Staff Capability------	$20,000.00	$20,000.00	$20,000.00	$20,000.00
Update Codes Study----------				
Submit Legislation----------				

COMPREHENSIVE HIGHWAY SAFETY PLAN
Program Element Plan (PEP)

1. **STATE** Iowa **DATE:** 2 January 1973

2. **Program Element Title:** Traffic Laws and Regulations (E-2)

3. **Prepared by:** Mike O'Donnell **Title:** Highway Safety Coordinator
Agency: Department of Public Safety
Approved by: [signature] **Title:** Governor's Representative for Highway Safety
Agency: Office for Planning and Programming

4. Program Element Will Implement Standards Checked	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
						XXX												

5. Subelements	6. Estimated Costs (In Thousands)											
	FY 197 4			FY 197 5			FY 197 6			FY 197 7		
	Total	S/L	Fed.	Total	S/L	Fed.	Total	S/L	Fed.	Total	S/L	Fed
04 Codes and Laws	20	—	20	20	—	20	20	—	20	20	20	—
7. Total	20	—	20	20	—	20	20	—	20	20	20	—

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ELEMENT- Motor Vehicle Requirements (E-3)

GOAL- To reduce accidents through rapid identification of vehicles and owners, to insure control of vehicle usage by unsafe drivers, and to insure that all vehicles are in a safe condition.

SUBELEMENT 05 Motor Vehicle Services

OBJECTIVE- reduce accidents through vehicle control, and through motor vehicle inspection.

ACTIVITIES-

a. Complete the conversion of motor vehicle registration system to electronic data processing.

b. Assess needs of motor vehicle transportation system, and expand MVR system where possible to meet those needs.

c. Operate and improve present motor vehicle inspection system.

d. Investigate the advisability of expanding to periodic motor vehicle inspection, and expand if investigation warrants.

e. Redefine registration terms for motorcycle and other special vehicles to remove unroadworthy vehicles from the roads, and to fit with classified driver licensing system.

SUBELEMENT 06 Special Vehicle - School Bus

OBJECTIVE- Insure safety of vehicles used in student transportation system.

ACTIVITIES-

a. Personnel in the Division of Transportation shall inspect all vehicles used as school buses semi-annually, and shall determine by no later than November 15, and April 15 of each year, that all vehicles used as school buses are in safe operating condition and meet state standards for construction as required by Section 285.8(4) and 321.374 of the Code of Iowa, and Federal Highway Safety Program Standard 17. The Division will employ two full-time non-certified individuals to perform the semi-annual inspections.

b. Prepare inspection schedule and send letter of notification to the Iowa Highway Patrol Post office, the county superintendents, and the administrators of public and parochial schools.

c. In cooperation with the Iowa Highway Patrol, to physically inspect and then complete an inspection report form of each vehicle and to issue an approval seal if the bus is in satisfactory condition.

d. To maintain files for the inspection report forms and prepare detailed statistical data relating to types of vehicles inspected and deficiencies found.

e. To issue approval seals on receipt of a statement from the school district that necessarey repairs and corrections have been made on the buses that failed to pass inspection.

f. To assist local school districts in initiating and improving preventative maintenance programs.

g. Division of Transportation personnel, Department of Public Instruction, as the occasion arises, shall experiment with techniques and equipment which will contribute to the safety of the pupil passengers and the motoring public.

h. To arrange for the installation of new devices and equipment on school buses for experimental purposes and to make an analysis of the test results.

i. To prepare visual aids and other materials on a trial basis prior to being adopted for use in the various facets of the transportation program.

j. Division personnel will, each year of the plan, offer two workshops in each of the 15 areas on special maintenance problems.

REQUIRED RESOURCES-

a. Legislation. To adjust motor vehicle registration fee collection system and filing system on the county level to facilitate the automated MVR system.

b. Legislation. To require motorcycle operators and passengers to wear protective headhear and eye protection devices.

c. Legislation. To require that all vehicles in the state be inspected at least annually in addition to present inspection requirements.

d. Legislation. To amend the Iowa Code in relation to the conversion of school buses to vehicles for purposes totally unrelated to transporting pupils to and from school.

e. Manpower. Additional personnel in the Division of Transportation, Department of Public Instruction, to perform inspection of all school buses on a semi-annual basis. Two people needed.

RESPONSIBILITY-

a. The Department of Public Safety has sole responsibility for the registration of all vehicles in the state. The Department of Public Safety has responsibility for the inspection of all vehicles in the state, with the exception of those vehicles used as school buses.

b. The Department of Public Instruction has sole responsibility for inspecting, required equipment, and insured safety of all vehicles in the state used as school buses. The Department of Public Safety shall cooperate with the Department of Public Instruction in this task where ever possible.

Problems Impacted: See Problem #2, Page 139; Problem #5, Page 149.

ELEMENT:

MOTOR VEHICLE REQUIREMENTS

SUBELEMENTS:

	FY 1974	FY 1975	FY 1976	FY 1977
Motor Vehicle Services				
Convert to Electronic Data Processing				
Operate Motor Vehicle Registration system	$1,006,000.00	$901,000.00	$900,000.00	$900,000.00
Expand to Periodic Motor Vehicle Inspection				
Operate Motor Vehicle Inspection Program	400,000.00	400,000.00	400,000.00	400,000.00
Redefine registration rules on Motorcycles				
Special Vehicle-School Bus				
Employ School Bus Inspectors	27,000.00	27,500.00	28,500.00	29,000.00
Prepare Inspection Schedule				
Experiment with School Bus Safety Equipment				
Prepare Materials				
Plan and Hold Workshops on Special Maintainance	15,000.00	15,000.00	15,000.00	15,000.00

ELEMENT: MOTOR VEHICLE REQUIREMENTS (continued)	FY 1974	FY 1975	FY 1976	FY 1977
SUBELEMENTS:				
Special Vehicle-School Bus (cont)				
Local School Bus Operations---------	$ 26,407,000.00	27,507,500.00	$ 28,607,500.00	$ 29,708,000.00

COMPREHENSIVE HIGHWAY SAFETY PLAN
Program Element Plan (PEP)

1. **STATE** Iowa **DATE:** 2 January 1973

2. **Program Element Title:** Motor Vehicle Requirements (E-3)

3. **Prepared by:** Mike O'Donnell **Title:** Highway Safety Coordinator
Agency: Department of Public Safety
Don Koroch Chief, Driver and Safety Education
Approved by: Department of Public Instruction **Title:** Governor's Representative for Highway Safety
Agency: Office for Planning and Programming

4. Program Element Will Implement Standards Checked	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
	XXX	XXX	XXX							XXX							XXX	

5. Subelements	6. 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.
05 Motor Vehicle Services (DPS)	1,406	1,406	--	1,301	1,301	--	1,300	1,300	--	1,300	1,300	--
06 Special Vehicle - School Bus (DPI)	26,449	26,407	42	27,550	27,507.5	42.5	28,651	28,607.5	43.5	29,752	29,708	44
7. Total	27,855	27,813	42	28,851	28,808.5	42.5	29,951	29,907.5	43.5	31,052	31,008	44

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ELEMENT - Traffic Safety Education (E-4)

GOAL - To reduce traffic related accidents, deaths, personal injuries and related property losses by improving attitudes, knowledge, and skills of all Iowa residents, particularly those enrolled in school from kindergarten through adult education.

SUBELEMENT 07 - K-12 Traffic Safety Education

OBJECTIVE - Assist local school districts in providing a comprehensive system of traffic safety education programs designed to improve the performance of highway users and reduce highway crashes, injuries, and deaths.

ACTIVITIES -

a. Provide consultative services to local public school districts
b. Provide in-service teacher workshops
c. Assist teacher education institutions in program development
d. Direct the development of comprehensive K-12 Traffic Safety Education Curriculum Guides
e. Acquire necessary curriculum materials and teaching aids
f. Evaluate ongoing and special traffic safety education programs

REQUIRED RESOURCES -

a. Manpower - Additional personnel in the Driver and Safety Education Section of the Department of Public Instruction to perform those tasks associated with this phase of the program.

RESPONSIBILITY -

a. The Department of Public Instruction has sole responsibility for the expansion, improvement, and development of needed educational programs in the public schools of Iowa.

SUBELEMENT 08 - Secondary Driver Education

OBJECTIVE - Assist local school districts offering approved driver and safety education programs with advisory-leadership services in the areas of administration, consultative services, teacher preparation and certification, program planning, instructional materials, research and evaluation designed to provide highway users with the knowledge, skill development, and understanding necessary for improved performance as a motor vehicle operator.

ACTIVITIES -

a. Provide consultative services to local public school districts
b. Assist local districts with federal project planning and application

c. Maintain necessary records and reports on all ongoing projects.
d. Review and revise where necessary state driver education standards and regulations
e. Assist in departmental and North Central evaluations
f. Analyze and determine approval of local school district driver education programs
g. Maintain fiscal records and determine reimbursement due local school districts
h. Provide teacher in-service programs and workshops
i. Cooperate with teacher preparation institutions in improving their programs
j. Encourage local school districts to expand and improve their driver education programs by acquiring the necessary equipment and materials
k. Assist local school districts to establish an ongoing evaluation program.

RESPONSIBILITY -

a. The Department of Public Instruction has sole responsibility for the expansion, improvement and development of needed educational programs in the public schools of Iowa.

SUBELEMENT 09 - Adult Driver Education

OBJECTIVE - Assist local school districts and area community colleges in initiating, expanding and improving beginning adult driver education, driver improvement, and post-licensing and pre-licensing programs.

ACTIVITIES -

a. Provide in-service workshops for teachers of adult driver education
b. Develop programs and courses for pre-service teachers
c. Develop necessary curriculum guides and materials for adult driver education
d. Evaluate existing adult level driver education programs
e. Maintain necessary data on programs, students, and teachers
f. Develop standards and regulations for adult-level driver education programs

REQUIRED RESOURCES -

a. Manpower - Additional personnel in the Driver and Safety Education Section of the Department of Public Instruction to perform those tasks associated with this phase of the program.

b. Legislation - To adjust driver education statute to include programs for adults.

RESPONSIBILITY -

a. The Department of Public Instruction has sole responsibility for the expansion, improvement and development of needed educational programs in Iowa.

SUBELEMENT 10 - Special Vehicle Personnel Education
(Motorcycle and Other Recreational Vehicles)

OBJECTIVE - Assist local school districts, area community colleges, and colleges and universities to integrate concepts and learning activities on motorcycles and other recreational vehicles into their driver education and public information programs designed for the purpose of improving the performance of highway users and reducing recreational vehicle crashes, injuries, and deaths.

ACTIVITIES -

a. Sponsor in-service teacher workshops on motorcycle and other recreational vehicle driver education
b. Develop necessary curriculum materials for this program
c. Encourage the use of protective equipment for all drivers of this type of vehicle
d. Assist Department of Public Safety personnel with their legislative program, including helmet legislation

RESPONSIBILITY -

a. The Department of Public Instruction has secondary responsibility for the Standard, but major responsibility for the educational programs.

(School Bus)

OBJECTIVE - Exercise general supervision over the pupil transportation program in order to provide a safe, efficient, and economical system of transporting children to and from the schools of Iowa.

ACTIVITIES -

a. Maintain a vigorous school bus driver approval program
b. Maintain the necessary records and reports on the transportation program
c. Review and revise where necessary the state standards and regulations for the pupil transportation program
d. Work closely with the state advisory committee on pupil transportation
e. Plan and conduct workshops for school bus drivers, mechanics, and supervisors
f. Prepare necessary curriculum guides and materials for the training programs
g. Develop an administrative guide for superintendents and school bus inspectors

RESPONSIBILITY -

a. The Transportation Division of the Department of Public Instruction has sole responsibility for this phase of the Pupil Transportation Program.

SUBELEMENT 11 - Public Information, Department of Public Safety

OBJECTIVE - Affect public attitudes concerning traffic safety in order to foster safe driving habits

ACTIVITIES -

a. A comprehensive public awareness program through the mass media
b. A public information program through personal contact, utilizing fourteen Iowa Highway Patrol safety officers
c. A program to develop motorcycle information materials for public use

RESOURCES REQUIRED -

a. One person to develop and coordinate the public awareness program

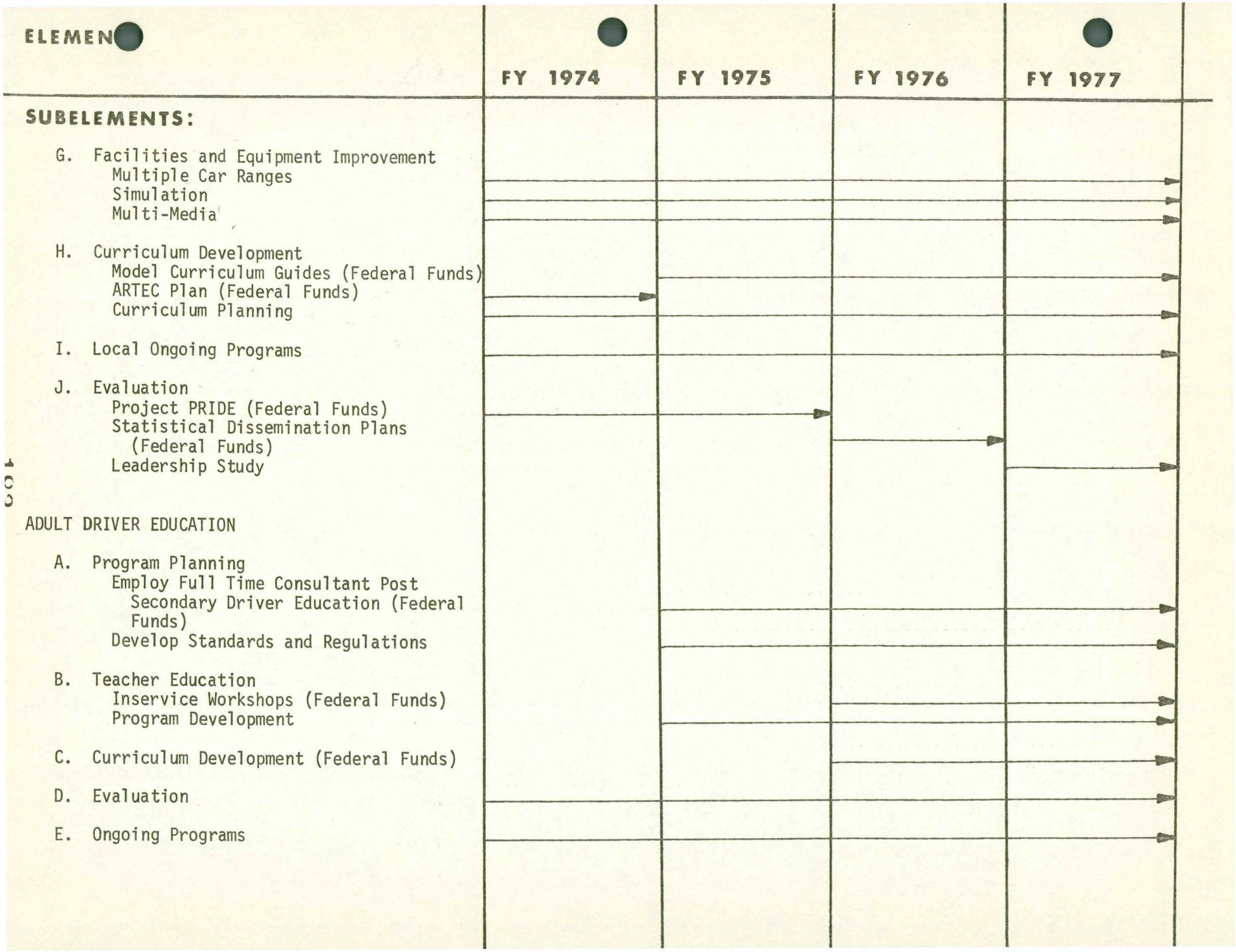
RESPONSIBILITY -

a. The Department of Public Safety will be responsible for this subelement, relying heavily upon the cooperation of the Department of Public Instruction, which has overall responsibility for traffic safety education.

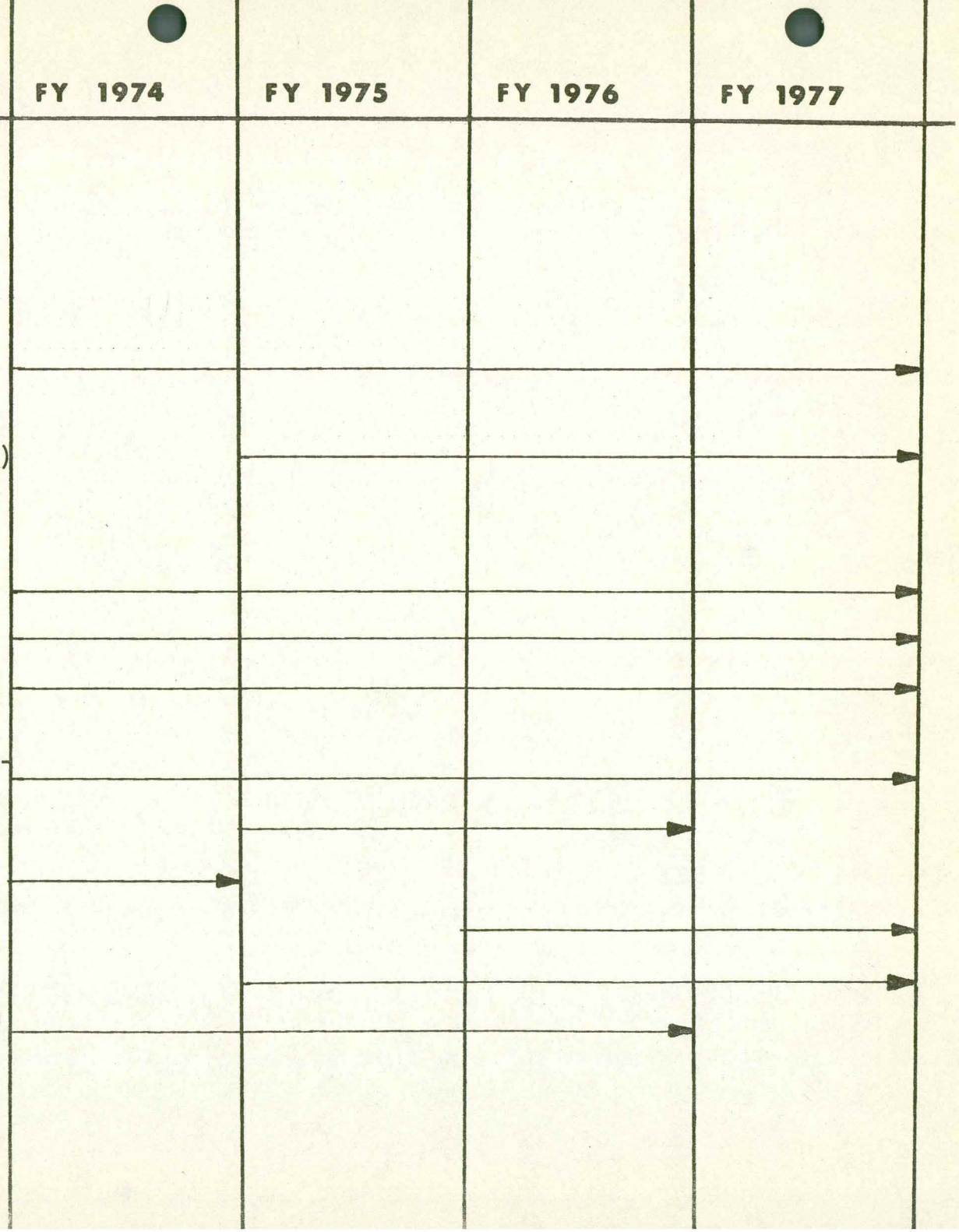
Problems Impacted: See Problem #2, Page 139; Problem #3, Page 143, Problem #4, page 146; Problem #5, Page 149.

ELEMENT: TRAFFIC SAFETY EDUCATION

	FY 1974	FY 1975	FY 1976	FY 1977
SUBELEMENTS:				
K-12 TRAFFIC SAFETY EDUCATION				
A. Program Planning Employ K-12 Traffic Safety Education Consultant and one support staff. (FY'74-FY'76 Federal Funds)	→	→	→	→
B. Teacher Education Inservice Workshop - K-6 Traffic Safety Education (Federal Funds)		→	→	→
C. Curriculum Development K-6 Curriculum Guide (Federal Funds)	→	→		
7-9 Curriculum Guide (Federal Funds)		→	→	→
10-12 Curriculum Guide (Federal Funds)			→	→
K-12 Curriculum Materials (Federal Funds)		→		
D. Evaluation Evaluate Model K-6 Curriculum (Federal Funds)			→	→
SECONDARY DRIVER EDUCATION				
A. Program Planning	→	→	→	→
B. Development of Standards and Regulations	→	→	→	→
C. Consultative Services	→	→	→	→
D. Driver Education Program Approval	→	→	→	→
E. Reimbursement Local Programs	→	→	→	→
F. Teacher Education Special Needs Students Workshop (Federal Funds)	→	→	→	→
Model Curriculum Workshops (Federal Funds)		→	→	→


ELEMEN
FY 1974
FY 1975
FY 1976
FY 1977
SUBELEMENTS:
G. Facilities and Equipment Improvement
Multiple Car Ranges
Simulation
Multi-Media
H. Curriculum Development
Model Curriculum Guides (Federal Funds)
ARTEC Plan (Federal Funds)
Curriculum Planning
I. Local Ongoing Programs
J. Evaluation
Project PRIDE (Federal Funds)
Statistical Dissemination Plans (Federal Funds)
Leadership Study
ADULT DRIVER EDUCATION
A. Program Planning
Employ Full Time Consultant Post Secondary Driver Education (Federal Funds)
Develop Standards and Regulations
B. Teacher Education
Inservice Workshops (Federal Funds)
Program Development
C. Curriculum Development (Federal Funds)
D. Evaluation
E. Ongoing Programs

ELEMENT:



SUBELEMENTS:

SPECIAL VEHICLE PERSONNEL EDUCATION
(Motorcycle and Other Recreational Vehicles)

A. Teacher Education
Inservice teacher workshop for motorcycle and recreational vehicle education (Federal Funds)

B. Curriculum Development for Motorcycle and Recreational Vehicles (Federal Funds)

SCHOOL BUS

A. School Bus Driver Approval

B. State Administration

C. Development of Standards and Regulations

D. School Bus Personnel Training
School Bus Driver Training and Improvement (Federal Funds
Individualized Instruction Program (Federal Funds)
Develop Administrative Guide for Superintendents (Federal Funds)
School Bus Driver Workshops (Federal Funds)
Provide Training Labs in FY'75, FY'76, FY'77 (Federal Funds)
Develop School Bus Supervisors Program (Federal Funds)

ELEMENT: MOTOR VEHICLE REQUIREMENTS

SUBELEMENTS:	FY 1974	FY 1975	FY 1976	FY 1977
SCHOOL BUS				
A. Experimentation with Safety Equipment	→	→	→	→
B. Prepare Materials				
C. Plan and hold workshops on special maintenance problems (Federal Funds)				

ELEMENT: TRAFFIC SAFETY EDUCATION	FY 1974	FY 1975	FY 1976	FY 1977
SUBELEMENTS:				
Public Information-Public Safety				
Special Public Awareness Program----------	$80,000.00	$80,000.00	$10,000.00	$10,000.00
Public Information Activity---	167,000.00	174,000.00	175,000.00	176,000.00
Public Information, Motorcycles----------	20,000.00			

COMPREHENSIVE HIGHWAY SAFETY PLAN
Program Element Plan (PEP)

1. **STATE** Iowa **DATE:** 2 January 1973

2. **Program Element Title:** Traffic Safety Education (E-4)

3. **Prepared by:** Dwight R. Carlson **Title:** Consultant, Driver and Safety Education
Agency: Department of Public Instruction
Approved by: [signature] **Title:** Governor's Representative for Highway Safety
Agency: Office for Planning and Programming

4. Program Element Will Implement Standards Checked	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
	.		XXX	XXX				XXX						XXX			XXX	

5. Subelements	6. 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.
07 K-12 Traffic Safety Education	40	N/A	40	165	N/A	165	109.5	N/A	109.5	93	23	70
08 Secondary Driver Education	4,712.6	4,404.6	308	4,554.2	4,132.2	422	4,472.9	4,139.9	333	4,440.7	4,137.7	303
09 Adult Driver Education	140	140	0	164	147	17	180.5	157.5	23	189.5	164.5	25
10 Special Vehicle Personnel Education	148.5	44	104.5	210.5	46	164.5	232.5	48	184.5	133.5	50	83.5
7. Total	5,041.1	4,588.6	452.5	5,093.7	4,325.2	768.5	4,995.4	4,345.4	650	4,856.7	4,375.2	481.5

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COMPREHENSIVE HIGHWAY SAFETY PLAN
Program Element Plan (PEP)

1. **STATE** IOWA **DATE:** 2 JANUARY 1973

2. **Program Element Title:** TRAFFIC SAFETY EDUCATION (E-4)

3. **Prepared by:** MIKE O'DONNELL **Title:** HIGHWAY SAFETY COORDINATOR
Agency: DEPARTMENT OF PUBLIC SAFETY
Approved by: [signature] **Title:** GOVERNOR'S REPRESENTATIVE FOR HIGHWAY SAFETY
Agency: OFFICE FOR PLANNING AND PROGRAMMING

4. Program Element Will Implement Standards Checked	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
			XXX					XXX						XXX				

5. Subelements	6. 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.
11 PUBLIC INFORMATION - PUBLIC SAFETY DEPARTMENT	267	167	100	254	174	80	185	175	10	186	186	--
7. Total	267	167	100	254	174	80	185	175	10	186	186	--

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ELEMENT - DRIVER LICENSING (E-5)

GOAL - To reduce accidents through the control of unsafe drivers by an adequate licensing system.

SUBELEMENT 08 - Driver Licensing

OBJECTIVE - Operate an adequate licensing system to insure that only qualified drivers are licensed.

ACTIVITIES -

a. Convert uniformed license examiners to civilian examiners dedicated 100% to licensing duties.

b. Expand field examining personnel to facilitate increased testing of applicants and renewals

c. Convert DL record keeping system, and license issuance system, to Electronic Data Processing

d. Initiate a classified driver licensing system

e. Coordinate driver improvement actions with driver licensing system to aid in assuring that unsafe drivers receive this training.

f. Insure that all school bus drivers are qualified physically, and are trained to drive school buses.

REQUIRED RESOURCES -

a. Legislation. To revamp the Driver Licensing system to better facilitate EDP.

b. Legislation. To allow the Department of Public Safety to initiate a classified driver licensing system.

c. Legislation. To allow knowledge testing within a four-year period is being drafted now with possible introduction during the second session of our current assembly. If not then, at least by the next General Assembly.

d. Manpower. Sixteen additional license examiners (civilian) in FY 1974, and five additional civilian examiners in FY 1975.

e. Manpower. One civilian director of driver licensing in FY 75.

f. Manpower. Seven civilian hearing officers in FY 74; an additional three civilian hearing officers in FY 75.

RESPONSIBILITY- The Department of Public Safety has sole responsibility for driver licensing in Iowa, with the exception that the Department of Public Instruction, with sole responsibility for pupil transportation systems in the state, issues school bus driver permits to candidates who qualify physically and mentally. A school bus driver must first be issued a chauffer's permit by the Department of Public Safety.

Problems Impacted: See Problem #2, Page 139; Problem #3, Page 143; Problem #5, Page 149.

ELEMENT:

DRIVER LICENSING

SUBELEMENTS:	FY 1974	FY 1975	FY 1976	FY 1977
Driver Licensing				
Convert to Civilian Examining Personnel	$200,004.00	$301,401.00		
Field Examining Personnel	636,934.00	652,147.00	$960,000.00	$980,000.00
Convert to Electronic Data Processing				
Administrative and Record-Keeping Activities	1,040,997.00	1,076,974.00	1,100,000.00	1,100,000.00
Initiation of Classified system				
Operation of DL system	806,995.00	627,338.00	625,000.00	625,000.00
Driver Improvement Coordination	10,308.00	10,308.00	10,500.00	10,500.00
Special Permit-School Bus				
Periodic Knowledge Reexamination at Least Every Four Years	introduce	reintroduce if necessary	ongoing	

COMPREHENSIVE HIGHWAY SAFETY PLAN
Program Element Plan (PEP)

1. **STATE** Iowa **DATE:** 2 January 1973

2. **Program Element Title:** Driver Licensing (E-5)

3. **Prepared by:** Mike O'Donnell **Title:** Highway Safety Coordinator
Agency: Department of Public Safety
Approved by: [signature] **Title:** Governor's Representative for Highway Safety
Agency: Office for Planning and Programming

4. Program Element Will Implement Standards Checked	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
					XXX												XXX	

5. Subelements	6. 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.
12 Driver Licensing	2,695	2,695	--	2,668	2,668	--	2,695	2,695	--	2,715	2,715	--
7. Total	2,695	2,695	--	2,668	2,668	--	2,695	2,695	--	2,715	2,715	--

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ELEMENT- Police Traffic Services (E-6)

GOAL- Reduction of Traffic Accidents in high traffic volume areas through improved police traffic services.

SUBELEMENT 09 Police Traffic Training

OBJECTIVE- Improve police traffic services such as enforcement, accident investigation, and first aid; initiate driver training for police, ambulance drivers, and school bus drivers.

ACTIVITIES-

a. Carry out the best traffic enforcement training program possible through the Iowa Law Enforcement Academy's basic and advanced training programs.

b. Increase traffic enforcement training staff at the ILEA to increase the amount and variety of traffic training available.

c. Conduct a variety of traffic related short courses through the ILEA for the benefit of those officers already on the street.

d. Build an evasive manuevers driving course to be used to train police, ambulance drivers, and school bus drivers.

e. Conduct above mentioned evasive manuevers driving program.

f. Expand the ILEA facility to increase the number of men possible to traing per year.

SUBELEMENT 10 Enforcement, State

OBJECTIVE- Improve traffic enforcement on the state level; initiate a selective traffic enforcement program in high accident areas, using the Iowa Highway Patrol.

ACTIVITIES-

a. Maintain and increase present level of police traffic activities on the state level.

b. Establish special selective traffic enforcement teams within the Iowa Highway Patrol to concentrate enforcement efforts on high accident locations throughout the state.

SUBELEMENT 11 Enforcement, Local

OBJECTIVE- Encourage increased traffic enforcement on the local level; initiate programs designed to increase selectivity in local traffic enforcement.

ACTIVITIES-

a. Encourage increased traffic enforcement through training and assistance to local jurisdictions.

b. Initiate selective traffic enforcement programs in high accidents with priority given to high traffic volume areas such as Iowa's seven metropolitan areas.

REQUIRED RESOURCES-

A. Legislation. To enable the Iowa Highway Patrol to increase its manpower to facilitate enforcement programs.

b. Manpower. Two additional people to carry out police traffic training program at the Iowa Law Enforcement Academy.

c. Manpower. 20 to 50 additional Highway Troopers for state selective enforcement teams.

AREAS OF RESPONSIBILITY-

a. Police traffic training. The Iowa Law Enforcement Academy is the state agency charged with the responsibility for all police traffic training in the state. The ILEA must also work closely with the Iowa Department of Public Health on emergency medical portions of their training program, and must work closely with the Department of Public Health, Department of Public Instruction, Department of Public Safety, and other related state agencies in the development of the evasive manuevers driving course.

b. Enforcement, State. The Iowa Department of Public Safety has prime responsibility for state enforcement, in cooperation with the ILEA and other related state agencies.

c. Enforcement, Local. The Iowa Department of Public Safety has prime responsibility for administering the local law enforcement projects, incooperation with the local police jurisdictions. The Iowa Law Enforcement Academy will provide assistance where ever possible.

Problems Impacted: See Problem #1, Page 135; Problem #2, Page 139; Problem #4, Page 146; Problem #5, Page 149.

ELEMENT: POLICE TRAFFIC SERVICES	FY 1974	FY 1975	FY 1976	FY 1977
SUBELEMENTS:				
Police Traffic Training				
Iowa Law Enforcement Academy Operation	$283,000.00	$320,000.00	$450,000.00	$450,000.00
Increase Traffic Trng. Staff	20,000.00	5,000.00		
Traffic Enforcement Training	20,000.00	40,000.00	45,000.00	50,000.00
Build Evasive Driving Course	100,000.00			
Conduct Evasive Drvng. Program		5,000.00	5,000.00	5,000.00
ILEA Facilities Expansion	675,000.00	675,000.00		
Enforcement, State				
Actual Patroling Costs	6,619,000.00	6,820,000.00	7,020,000.00	7,220,000.00
Statewide Selective Traffic Enforcement Program	150,000.00	150,000.00	150,000.00	100,000.00
Enforcement, Local				
Actual Traffic Enforcment Costs	16,700,000.00	16,800,000.00	16,900,000.00	17,000,000.00
Selective Enforcement Programs Seven Metros	150,000.00	150,000.00	150,000.00	150,000.00

COMPREHENSIVE HIGHWAY SAFETY PLAN
Program Element Plan (PEP)

1. **STATE** Iowa — **DATE:** 2 January 1973

2. **Program Element Title:** Police Traffic Services (E-6)

3. **Prepared by:** Mike O'Donnell — **Title:** Highway Safety Coordinator
Agency: Department of Public Safety
Approved by: [signature] — **Title:** Governor's Representative for Highway Safety
Agency: Office for Planning and Programming

4. Program Element Will Implement Standards Checked	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
								XXX						XXX	XXX		XXX	

5. Subelements	6. 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.
13 Police Traffic Training	1,098	958	140	1,045	1,000	45	500	455	45	505	455	50
14 Enforcement, State	6,769	6,619	150	6,970	6,820	150	7,170	7,020	150	7,320	7,220	100
15 Enforcement, Local	16,850	16,700	150	16,950	16,800	150	17,050	16,900	150	17,150	17,000	150
7. Total	24,717	24,277	440	24,965	24,620	345	24,720	24,375	345	24,975	24,675	300

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Element 7 Traffic Courts and Adjudication

There has been a massive reorganization of the Iowa Court system during the past year. Specifically:

"Iowa's trial courts are currently involved in a total reorganization, as enacted by Senate File 428 of the 64th General Assembly. This bill created a unified trial court as of July 1, 1973, with general and original jurisdictions of all actions and proceedings, including probate and juvenile matters, to be knows as 'Iowa District Courts.'

"The new court's judicial power will be exercised by district judges, district court associate judges, and judicial magistrates.

"The act creating the court establishes traffic-violation offices where scheduled violations may be admitted and disposed of before the time specified in the uniform citation and complaint for appearance before the court.

"Under the act, all justice of the peace courts, mayors' courts, police courts, superior courts, and municipal courts and offices connected therewith will be abolished effective July 1, 1973."

For this reason, the highway safety staff had little opportunity to establish program activity. The "Courts Administrator" has only been realized within the last two months. We do feel, however, that the new system might be receptive to assistance in the areas of traffic courts administration.

Goal: To establish a viable traffic court system statewide that represents and impacts positively the adjudication requirements of highway safety.

Objectives:

1. Develop lines of communication with the court system that will enable proper planning and administration of responsibility.

2. Provide in-service educational and information programs that will increase the level of understanding in highway safety related matters.

3. Insure proper dissemination of records data to insure proper presentance information is available to all courts, and that proper conviction records and related judicial statistics are maintained.

4. Insure that uniform rules to govern procedures in traffic cases have been adopted and are being enforced.

5. Establish procedures to insure the following effectiveness measures can be assessed.

   a. Percent or number of courts referring traffic law offenders to driver improvement facilities.

   b. Percent or number of judges receiving special training in traffic court procedures.

   c. Percent or number of courts trying traffic cases separately and apart from all other court cases.

   d. Percent or number of traffic cases in which prior conviction certifications were used to impose adequate corrective penalty.

Activity:

1. Establish a specific traffic courts administrator to assist the Courts Administrator if necessary to enhance the traffic court system.

2. Establish and maintain effective lines of communication between all agencies involved with highway safety and the courts system.

3. Insure the traffic courts are provided all possible assistance necessary to maintain efficiency and expertise.

4. Insure that the courts personnel are included and encouraged to par-

ticipate in establishing their own comprehensive highway safety plan to replace this one.

Required Resources:

1. Manpower:

   a. Training and other related manpower development activities to provide the courts with the most current expertise in the field of highway safety.

   b. The creation of a Traffic Courts Administrator with staff may be necessary to provide efficient courts management. At present, the system only calls for a Courts Administrator.

2. There isn't any required legislation in the foreseeable future.

3. A complete review of the new courts system with regard to highway safety must be performed in the next year.

Problems Impacted: See Problem #4, Page 146; Problem #7, Page 156.

ELEMENT: E-7
Traffic Courts and Adjudication

SUBELEMENTS:	FY 1974	FY 1975	FY 1976	FY 1977
Traffic Courts				
1. Manpower				
a. Administrator and Staff	Create →	Ongoing →	→	→
b. Training	Establish →	Ongoing →	→	→
c. Statewide Seminars	Establish as Necessary →		→	→
d. Evaluation	Ongoing →	→	→	→

COMPREHENSIVE HIGHWAY SAFETY PLAN
Program Element Plan (PEP)

1. STATE Iowa **DATE:** 2 January 1973

2. Program Element Title: Traffic Courts and Adjudication (E-7)

3. Prepared by: Lance C. Faust **Title:** Director, Iowa Highway Safety Program
Agency: Office for Planning and Programming
Approved by: [signature] **Title:** Governor's Representative for Highway Safety
Agency: Office for Planning and Programming

4. Program Element Will Implement Standards Checked

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

5. Subelements / **6. Estimated Costs (In Thousands)**

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.
16 Traffic Courts												
A. Administration and Staff	30	UNK.	30	30	UNK.	30	30	UNK.	30	30	UNK.	30
B. Training	5	UNK.	5	10	UNK.	10	10	UNK.	10	10	UNK.	10
C. Statewide Seminars	3	UNK.	3	5	UNK.	5	10	UNK.	10	10	UNK.	10
7. Total	38	—	38	45	—	45	50	—	50	50	—	50

ELEMENT - Emergency Medical Services (E-8)

During the last several years there has been an increasing interest in the quality of emergency medical services that are available to Iowans. Many funeral directors who for years provided ambulance service have chosen to get out of the ambulance business. There have been many technological advances which have tended to increase the expectations that both physicians and patients have of ambulance services. Hospitals have expressed greater interest in community services outside the walls of the hospital and have become more interested in the provision of ambulance service. The type and level of activities in hospital emergency rooms has also been changing.

With the increased interest came the possibility of action on the local level without coordination or uniform performance criteria and equipment specification standards. The development and implementation of standards; first on a voluntary basis, and hopefully by legislation, is an important task assigned to the Emergency Medical Services section.

GOAL - To establish an emergency medical services system that will minimize the number of deaths and serious disabilities resulting from highway crashes and sudden illness by assuring prompt and adequate response, proper emergency care at the scene and in transit, and communications between technicians and physicians to insure appropriate definitive care.

OBJECTIVES -

a. Provide all persons in this state with prompt, efficient emergency medical care.
b. Provide for the periodic, comprehensive surveillance of all emergency medical services throughout the state.
c. Obtain data on EMS operations so that an analysis can be made which covers the mode of operation, time involved in answering calls, and services rendered.
d. Establish and enforce training, licensing, and related requirements for all ambulance operators, attendants, drivers, and dispatchers.
e. Establish and enforce requirements as to types and designs of emergency vehicles and their supplies and equipment.
f. Establish and enforce proper modes of operation and coordination of ambulances and other emergency care systems including implementation of the State EMS Communication Plan to include regional central dispatching with radio communications for coordinating operations among ambulances, the medical facility and the law enforcement agency.
g. Provide emergency care and rescue training programs and refresher courses for emergency medical service personnel, law enforcement and fire department personnel.
h. Encourage First Aid training as a requirement in all public schools and encourage First Aid and Medical Self Help training for the general public.

ACTIVITIES -

a. Expand consultation and technical services to local jurisdictions and planning agencies faced with developing and/or improving their EMS capabilities.
b. Expand funding assistance to those communities and regions that are purchasing approved ambulances, medical equipment, and communications equipment.
c. Expand training programs to include basic and advanced EMT-A courses, rescue courses, dispatchers course, and special workshops for ambulance supervisors, instructors, and course coordinators.
d. Establish and maintain mechanism for inspection and evaluation of ambulance services in compliance with pending legislation.
e. Establish and maintain effective means of total program evaluation.

REQUIRED RESOURCES -

a. Legislation

1. IDH is requesting legislation which will require the licensing of ambulance services and the certification of amublances and personnel under criteria developed by the Department of Health.
2. Legislation changing the medical practice act to allow the trained EMT-A to defibrillate, administer IVs, and perform other emergency techniques will be necessary before full implementation of an effective EMS system can be realized.

b. Manpower

1. IDH will need to contract with approximately five persons on a part-time basis to assist in the administration of examinations to students enrolled in the various training programs.
2. IDH will need an additional person to provide technical assistance during the implementation of the State EMS Communication Plan.
3. IDH will need an additional clerk-typist to assist with the increased demand for record keeping which will be required upon passage of the requested legislation.

Problems Impacted: See Problem #5, Page 149; Problem #6, Page 143.

ELEMENT: EMERGENCY MEDICAL SERVICES (E-8)	FY 1974	FY 1975	FY 1976	FY 1977
SUBELEMENTS:				
17 TRAINING:				
1. Basic EMT-A Courses	(students - 1200 ongoing	1200	1200	1200
2. Advance EMT-A Courses	(students - 60 establish	200 ongoing	200	200
3. Rescue Courses	(students - 300 ongoing	300	300	300
4. Dispatchers Courses	(students - 100 establish	100 ongoing	100	100
5. Special Seminars & Workshops	(no. of - 4 establish	4 ongoing	8	8
18 EQUIPMENT PROCUREMENT:				
1. Ambulances	(no. of - 20 ongoing	20	20	20
2. Communications Systems	(no. of - 4 re-establish	4 ongoing	4	4
3. Medical Equipment	(no. of sets 30 re-establish	30 ongoing	30	30
4. Rescue/Extrication Tools	(no. of sets 10 establish	10 ongoing	10	10

COMPREHENSIVE HIGHWAY SAFETY PLAN
Program Element Plan (PEP)

1. **STATE** IOWA **DATE:** 2 JANUARY 1973

2. **Program Element Title:** EMERGENCY MEDICAL SERVICES (E-8)

3. **Prepared by:** A. E. HUNTER **Title:** CHIEF, EMERGENCY MEDICAL SERVICES
Agency: IOWA DEPARTMENT OF HEALTH
Approved by: [signature] **Title:** GOVERNOR'S REPRESENTATIVE FOR HIGHWAY SAFETY
Agency: OFFICE FOR PLANNING AND PROGRAMMING

4. Program Element Will Implement Standards Checked	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
											XXX							

5. Subelements	6. 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.
17 TRAINING	165	85	80	260	135	125	335	175	160	370	200	170
18 EQUIPMENT	1,100	570	530	1,040	540	500	920	480	440	1,020	535	485
7. Total	1,265	655	610	1,300	675	625	1,255	655	600	1,390	735	655

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ELEMENT E-9
IDENTIFICATION AND SURVEILLANCE OF ACCIDENT LOCATIONS

FY-1974	FY-1975	FY-1976	FY-1977
1. Continue development of the Tracis Project for implementation on 1-1-74 (Comptroller). 2. Finish development and implement a new accident report form on 1-1-74 (Dept. of Public Safety). 3. Complete Phase I Implementation of the Accident Location and Accident Analysis Project. (Coding of rural nodes and literals and summary programs). 4. Complete map preparation for cities greater than 5,000 population (61±). 5. Complete coding of nodes and literals for cities greater than 5,000 population. 6. Prepare maps for cities less than 5,000 population (890±). 7. Code nodes and literals for cities less than 5,000 population. 8. Accomplish Phase II Implementation of the Accident Location and Accident Analysis Project. (Analytical programs and interface with road inventory on the Primary System.) 9. Classify all Primary Road intersections into categories for analysis purposes. 10. Review the current status of existing mileposts and take the necessary action to update and complete the System.	1. Accomplish Phase III Implementation of the Accident Location and Accident Analysis Project. (Interface with road inventory on the local road and city street systems). 2. Expand a Spot Safety Improvement Program in accordance with PPM 21-16.	1. Expand the Spot Safety Improvement Program with increased manpower provided below. 2. Arrange for an Accident Analysis Seminar for all personnel, state and local, who have responsibility for or work on traffic accident analysis.	1. Develop the capability to plot collision diagrams by computer.

MANPOWER NEEDS

1. Establish a team composed of one engineer and one technician to analyze data, make field reviews, recommend improvements and priorities, and evaluate improvements on the State Highway System. One (1) Engineer One (1) Technician	1. Establish a team composed of one engineer and one technician to analyze accident data for local roads and city streets and work with local officals on accident problems. One (1) Engineer One (1) Technician	1. Establish two additional teams similar to those set up in FY-1974 (For State System work) and FY-1975 (Local Systems work) Two (2) Engineers Two (2) Technicians	

COMPREHENSIVE HIGHWAY SAFETY PLAN Program Element Plan (PEP)	1. STATE IOWA DATE: 2. Program Element Title: IDENTIFICATION & SURVEILLANCE OF ACCIDENT LOCATIONS (E-9)
3. Prepared by: STEVENS & ANDRESEN Title: SAFETY ENGINEER & SAFETY ACT PROJECT COORDINATOR Agency: IOWA STATE HIGHWAY COMMISSION Approved by: Title: Agency:	

4. Program Element Will Implement Standards Checked	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
									X									

5. Subelements	6. Estimated Costs (In Thousands)											
	FY 197 4			FY 197 5			FY 197 6			FY 197 7		
	Total	S/L	Fed.	Total	S/L	Fed.	Total	S/L	Fed.	Total	S/L	Fed.
19 ACCIDENT LOCATOR & ANALYSIS	275		275	150		150	–		–	50		50
20 SURVEILLANCE & EVALUATION	82	50	32	114	50	64	198	58	140	178	74	104
21 CORRECTIVE ACTION AT ACCIDENT LOCATIONS	3,500	3,500		3,500	3,500		3,500	3,500		3,500	3,500	
7. Total	3,857	3,550	307	3,764	3,550	214	3,698	3,558	140	3,728	3,574	154

ELEMENT E-10
HIGHWAY DESIGN, CONSTRUCTION & MAINTENANCE

FY-1974	FY-1975	FY-1976	FY-1977
1. Review skid test data for the Primary and Interstate Systems in accordance with newly developed policy and procedure. 2. Review existing Railroad Crossing inventory data and develop a Grade Crossing Priority Improvement Program for all crossings in the State. 3. Develop policies, procedures and guidelines for a Hazard Identification and Removal Program. 4. Develop and print a State Construction and Maintenance Traffic Control Manual. 5. Develop a Field Manual of standards and procedures for the erection and maintenance of signs in compliance with MUTCD. 6. Purchase video tape equipment for production and viewing of training tapes on activities under Standards 609, 612 and 613. 7. Design, construct and test a pavement burning machine to improve skid resistance on P.C.C. pavement.	1. Purchase a third skid test unit for use on local roads and city streets. 2. Implement the FY-1975 Railroad Grade Crossing Improvement Program. (Similar programs will be implemented in succeeding years). 3. Begin an inventory of hazards and develop a hazard removal priority schedule. 4. Distribute the Construction and Maintenance Traffic Control Manual to Commission Departments and Districts, Counties, Cities, Utility Companies, Contractors and other appropriate organizations.	1. Begin an inventory of skid resistance numbers on local roads and city streets. The inventory will continue during the test season of each succeeding year.	
Provide funds for local projects	Provide funds for local projects	Provide funds for local projects	Provide funds for local projects

MANPOWER NEEDS

1. Establish a special problems team composed of one engineer and one technician to handle activities under Standard 312.	1. Provide two technicians to assist in gathering information needed for the Railroad Crossing Improvement Program and the Hazard Elimination Program.	1. Provide two technicians to operate the local skid test unit.	
One (1) Engineer One (1) Technician	Two (2) Technicians	Two (2) Technicians	

COMPREHENSIVE HIGHWAY SAFETY PLAN
Program Element Plan (PEP)

1. STATE IOWA DATE:

2. Program Element Title: HIGHWAY DESIGN, CONSTRUCTION & MAINTENANCE (E-10)

3. Prepared by: STEVENS & ANDRESEN Title: SAFETY ENGINEER & SAFETY ACT PROJECT COORDINATOR
Agency: IOWA STATE HIGHWAY COMMISSION
Approved by: Robert D. Title:
Agency:

4. Program Element Will Implement Standards Checked	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
												X						

5. Subelements	6. Estimated Costs (in Thousands) FY 197 4			FY 197 5			FY 197 6			FY 197 7		
	Total	S/L	Fed.	Total	S/L	Fed.	Total	S/L	Fed.	Total	S/L	Fed.
22 INVENTORIES, STANDARDS, EQUIPMENT & PERSONNEL	6,458	6,179	238 41*	3,458	3,179	249 30*	6,437	6,179	228 30*	3,422	3,179	213 30*
23 SURFACE SAFETY	15,800	15,800		15,800	15,800		15,800	15,800		15,800	15,800	
24 TRAFFIC ENVIRONMENT	3,100	3,100		3,100	3,100		3,100	3,100		3,100	3,100	
7. Total	25,358	25,079	238 41*	22,358	22,079	249 30*	25,337	25,079	228 30*	22,322	22,079	213 30*

* FEDERAL NON-SAFETY FUNDS

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ELEMENT E-11 (A)
TRAFFIC ENGINEERING SERVICES

FY-1974	FY-1975	FY-1976	FY-1977
1. Hold Training Seminars to acquaint County and City Officials with provisions of the MUTCD. 2. Arrange for and accomplish special training for District Traffic Engineers. 3. Hold second Northwestern University Traffic Engineering Seminar for Commission Staff Engineers, County Engineers and City Engineers. 4. Develop methods and procedures for a program to update regulatory, warning and guide signs on the State Maintained System. 5. Develop methods and procedures for a program of daytime and nighttime inspection of traffic control devices on the State Maintained System. 6. Review appropriate sections of the Vehicle Code of Iowa for development of a legislative program relating to Traffic Engineering and Traffic Control Devices.	1. Initiate a program to provide local jurisdictions with Traffic Engineering services thru previously established District Traffic Engineers. 2. Implement the program to upgrade regulatory, warning and guide signs on the State Maintained System. 3. Conduct a traffic signal inventory on the State Maintained System and develop a Priority Improvement Program. 4. Arrange for a Traffic Engineering Seminar for Commission Staff Technicians. 5. Conduct a special speed study on all State Maintained Highways less than 24' wide. 6. Initiate a program to systematically check for traffic control device compliance on local roads and city streets.	1. Initiate a program to provide a speed limit survey service for local jurisdictions. 2. Implement the Traffic Signal Priority Improvement Program on the State Maintained System. 3. Develop or arrange for a special Traffic Engineering course for Construction Engineers. 4. Develop a Traffic Engineering Training Program for Counties and Cities.	
Provide funds for local projects	Provide funds for local projects	Provide funds for local projects	Provide funds for local projects

MANPOWER NEEDS

1. Establish and fill six District Traffic Engineering positions. 2. Establish two new Traffic Engineering positions in the Commission Central Office.		1. Provide one technician to do speed limit survey work for local jurisdictions.	
Eight (8) Engineers		One (1) Technician	

Problems Impacted: See Problem #1, Page 135

ELEMENT E-11 (B)
PEDESTRIAN SAFETY

FY-1974	FY-1975	FY-1976	FY-1977
1. Develop updated standards for school crossing signs, signals and pavement markings. Provide funds for local projects	1. Develop and implement a systematic program for upgrading school crossing control. 2. Conduct a detailed study to determine needs for improved pedestrian safety. Provide funds for local projects		
MANPOWER NEEDS			

COMPREHENSIVE HIGHWAY SAFETY PLAN Program Element Plan (PEP)	1. STATE IOWA DATE: 2. Program Element Title: TRAFFIC ENGINEERING SERVICES (E-11)
3. Prepared by: STEVENS & ANDRESEN Title: SAFETY ENGINEER & SAFETY ACT PROJECT COORDINATOR Agency: IOWA STATE HIGHWAY COMMISSION Approved by: Robert O. [illegible] Title: Agency:	

4. Program Element Will Implement Standards Checked	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
													X	X				

5. Subelements	6. Estimated Costs (in Thousands)											
	FY 197 4			FY 197 5			FY 197 6			FY 197 7		
	Total	S/L	Fed.	Total	S/L	Fed.	Total	S/L	Fed.	Total	S/L	Fed.
25 PERSONNEL	956	800	156	956	800	156	972	839	133	972	878	94
26 IN-SERVICE TRAINING	30		30	5		5	30		30			
27 INVENTORIES, STUDIES & CONTROL DEVICES	5,200	5,000	200	5,416	5,000	416	5,286	5,000	286	5,286	5,000	286
28 PEDESTRIAN SAFETY -- STANDARDS, STUDIES & DEVICES	40		40	60		60	70		70	70		70
7. Total	6,226	5,800	426	6,437	5,800	637	6,358	5,839	519	6,328	5,878	450

U.S. DEPARTMENT OF TRANSPORTATION
NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION
SUMMARY OF COSTS - COMPREHENSIVE PLAN

STATE: IOWA

PAGE 1 OF 2 PAGES

Form Approved
OMB No. 004-R2439

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.
E-1 PLANNING AND ADMINISTRATION	2229	1697	532	2223.5	1668.5	555	2007.6	1570.5	437.1	1984.3	1607	377.3	8444.4	6543	1901.4
01 P&A (VARIOUS AGENCIES)	749	517	232	790.5	545.5	245	807.6	570.5	237.1	834.3	607	227.3	--	--	--
02 CLASP	100	0	100	100	0	100	100	0	100	100	0	100	--	--	--
03 TRAFFIC RECORDS	1380	1180	200	1333	1123	210	1100	1000	100	1050	1000	50	--	--	--
E-2 TRAFFIC LAWS AND REGULATIONS	20	0	20	20	0	20	20	0	20	20	20	0	80	20	60
04 CODES AND LAWS	20	0	20	20	0	20	20	0	20	20	20	0	--	--	--
E-3 MOTOR VEHICLE REQUIREMENTS	27855	27813	42	28851	28808.5	42.5	29951	29907.5	43.5	31052	31008	44	117709	117537	172
05 MOTOR VEHICLE SERVICES	1406	1406	--	1301	1301	--	1300	1300	--	1300	1300	--	--	--	--
06 SPECIAL VEHICLE - SCHOOL BUS	26449	26407	42	27550	27507.5	42.5	28651	28607.5	43.5	29752	29708	44	--	--	--
E-4 TRAFFIC SAFETY EDUCATION	5308.1	4755.6	552.5	5347.7	4499.2	848.5	5180.4	4520.4	660	5042.7	4561.2	481.5	20878.9	18336.4	2542.5
07 K-12 TRAFFIC SAFETY ED.	40	0	40	165	0	165	109.5	0	109.5	93	23	70	--	--	--
08 SECONDARY DRIVER ED.	4712.6	4404.6	308	4554.2	4132.2	422	4472.9	4139.9	333	4440.7	4137.7	303	--	--	--
09 ADULT DRIVER EDUCATION	140	140	0	164	147	17	180.5	157.5	23	189.5	164.5	25	--	--	--
10 SPECIAL VEHICLE PERSONNEL EDUCATION	148.5	44	104.5	210.5	46	164.5	232.5	48	184.5	133.5	50	83.5	--	--	--
11 PUBLIC INFORMATION (DPS)	267	167	100	254	174	80	185	175	10	186	186	0	--	--	--
E-5 DRIVER LICENSING	2695	2695	0	2668	2668	0	2695	2695	0	2715	2715	0	10773	10773	0
12 DRIVER LICENSING	2695	2695	0	2668	2668	0	2695	2695	0	2715	2715	0	--	--	--
E-6 POLICE TRAFFIC SERVICES	24717	24277	440	24965	24620	345	24720	24375	345	24975	24675	300	99377	97947	1430
13 POLICE TRAFFIC TRAINING	1098	958	140	1045	1000	45	500	455	45	505	455	50	--	--	--
14 ENFORCEMENT, STATE	6769	6619	150	6970	6820	150	7170	7020	150	7320	7220	100	--	--	--
15 ENFORCEMENT, LOCAL	16850	16700	150	16950	16800	150	17050	16900	150	17150	17000	150	--	--	--

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HS Form
May 1972 217

U.S. DEPARTMENT OF TRANSPORTATION
NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION
SUMMARY OF COSTS - COMPREHENSIVE PLAN

STATE: Iowa

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Form Approved
OMB No. 004-R2439

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.
E-7 Traffic Courts	38	0	38	45	0	45	50	0	50	50	0	50	183	0	183
16 Traffic Courts	38	0	38	45	0	45	50	0	50	50	0	50	--	--	--
E-8 EMS	1265	655	610	1300	675	625	1255	655	600	1390	735	655	5210	2720	2490
17 EMS Training	165	85	80	260	135	125	335	175	160	370	200	170	--	--	--
18 EMS Equipment	1100	570	530	1040	540	500	920	480	440	1020	535	485	--	--	--
E-9 Identification and Surveillance of Accident Locations	3857	3550	307	3764	3550	214	3698	3558	140	3728	3574	154	15047	14232	815
19 Accident Loc. & Analysis	275	0	275	150	0	150	0	0	0	50	0	50	--	--	--
20 Surveillance and Evaluation	82	50	32	114	50	64	198	58	140	178	74	104	--	--	--
21 Corrective Action	3500	3500	0	3500	3500	0	3500	3500	0	3500	3500	0	--	--	--
E-10 Highway Design, Construction and Maintenance	25358	25079	238 41*	22358	22079	249 30*	25337	25079	228 30*	22322	22079	213 30*	95375	94316	928 131*
22 Inventories, Standards	6458	6179	238 41*	3458	3179	249 30*	6437	6179	228 30*	3422	3179	213 30*	--	--	--
23 Surface Safety	15800	15800	0	15800	15800	0	15800	15800	0	15800	15800	0	--	--	--
24 Traffic Environment	3100	3100	0	3100	3100	0	3100	3100	0	3100	3100	0	--	--	--
E-11 Traffic Engineering Services	6226	5800	426	6437	5800	637	6358	5839	519	6328	5878	450	25349	23317	2032
25 Personnel	956	800	156	956	800	156	972	839	133	972	878	94	--	--	--
26 In-Service Training	30	0	30	5	0	5	30	0	30	0	0	0	--	--	--
27 Inventories, Studies and Control Devices	5200	5000	200	5416	5000	416	5286	5000	286	5286	5000	286	--	--	--
28 Pedestrian Safety -- Standards, Studies and Devices	40	0	40	60	0	60	70	0	70	70	0	70	--	--	--
TOTAL OR SUBTOTAL	99563.1	96321.6	3205.5 41.0*	97979.2	94368.2	3581.0 30.0*	101272.0	98199.4	3042.6 30.0*	99607.0	96852.2	2724.8 30.0*	398426.3	385741.4	12553.9 131.0*

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