A SURVEY OF THE METHODS EMPLOYED IN SELECTIVE TRAFFIC LAW ENFORCEMENT

Thesis for the Degree of M. S.
MICHIGAN STATE UNIVERSITY

Thomas O. Reel

1965

A SURVEY OF THE METHODS EMPLOYED IN SELECTIVE TRAFFIC LAW ENFORCEMENT

By

Thomas O. Reel

AN ABSTRACT OF A THESIS

Submitted to
Michigan State University
in partial fulfillment of the requirements
for the degree of

MASTER OF SCIENCE

School of Police Administration and Public Safety

1965

APPROVED Raymond T. Galvin
Raymond T. Galvin (Chairman)

Glenn M. Schultz
(Member)

J. L. LeGrande
(Member)

ABSTRACT

A SURVEY OF THE METHODS EMPLOYED IN SELECTIVE TRAFFIC LAW ENFORCEMENT

by Thomas O. Reel

The purpose of this particular research study is to examine the various methods or techniques that are presently being utilized in the field of selective traffic law enforcement. As a part of this thesis, a model plan for selective enforcement has been developed as a point of reference from which the literature in this area and several case studies were compared.

From the review of the literature it was found that many of the recommendations of the model were validated, although the several preliminary parts of the model were not discussed. Variations in certain operational procedures were apparent in the various plans discussed in the literature, and this is also where the main emphasis was placed by most authors.

The four case studies revealed that a generally wide variation exists in the several types of selective enforcement programs that were examined. These variations

were most apparent when a small department was compared with a large metropolitan agency. Basic objectives, however, appear to be similar.

This data generally supports the contentions advanced in the model, but it cannot be concluded that the model is a totally valid one for all needs and circumstances.

Some further refinements are called for in the model itself, and more case studies conducted in greater depth appear necessary at this point which would be designed to test the effectiveness of a broad range of selective enforcement procedures.

It should be recognized that the research that was conducted as a part of this thesis did not, again, prove that the model was a valid or effective procedure. It did, however, point to the need for further important research in this area.

A SURVEY OF THE METHODS EMPLOYED IN SELECTIVE TRAFFIC LAW ENFORCEMENT

By

Thomas O. Reel

A THESIS

Submitted to
the College of Social Science
Michigan State University
in partial fulfillment of the requirements
for the degree of

MASTER OF SCIENCE

1965

ACKNOWLEDGEMENTS

I would like to express my sincere thanks to my advisor, Mr. Raymond Galvin, and to Mr. Glenn Schultz, of the Highway Traffic Safety Center, for their assistance and encouragement in the writing of this thesis. I am particularly grateful to those officers who cooperated during the interviews that were held as a part of the study. Finally, special thanks to my wife, Nancy, and to my parents for their continual encouragement.

TABLE OF CONTENTS

CHAPTER I

THE PROBLEM AND DEFINITIONS FOR TERMS USED

Traditionally, one of the major objectives of law enforcement has been the desire to effectively predict, and thus to control criminal activity. With the recognition of this objective, most police agencies have generally attempted to concentrate enforcement effort in those areas or districts where definite problems appear. Presently, however, many departments are not devoting adequate attention to establishing a realistic distribution of the patrol force that is based upon accurate records of criminal and quasi-criminal activity according to time, place, and type of occurrence.

One of the basic reasons to explain why this situation has developed is that, from an administrative viewpoint, at least, there are a variety of problems that must be resolved concerning the distribution of the patrol force for law enforcement purposes. As Leonard points out:

> Determination of the amount of patrol power required and its distribution are among the gravest

administrative problems confronting police management.[1]

Thus, because it is often a difficult task to devise an effective patrol distribution schedule, many departments have been content to remain with, or in many cases are bound by, a system which, in many instances, produces results which are generally less than satisfactory.

However, given a certain number of men available for patrol service, selectivity in assignment according to specific enforcement needs, at once appears to be the most logical and effective answer to the problems involved in the prediction and control of criminal activity. Although this concept of selective enforcement is not in itself a new or unique idea, it is obvious that the problems involved in deployment have rapidly become more complex, particularly for traffic control, with the advent of the automobile.

The fundamental theory of selective enforcement remains unchanged, however, since the total number of officers available for patrol must be distributed on the basis of the proportionate need for the essential police services. In

---

[1] V.A. Leonard, Police Organization and Management (second edition, Brooklyn: The Foundation Press, Inc., 1964), p. 182.

his discussion of this aspect of the patrol function, O. W. Wilson suggests that:

> . . . the minimum number of men needed for the special divisions can be estimated on the basis of essential duties that must be performed; and the number needed for patrol may be estimated by ascertaining the number required to provide an amount of patrol service (in terms of called-for services and routine patrol) comparable to that in departments that provide a superior quality of police service.[2]

If a primary purpose of law enforcement is to provide the best protection and service possible, then it follows that a plan for the selective distribution of available manpower, one which recognizes a variety of needs and conditions, is most likely to realize success in terms of predetermined goals and objectives.

It is this type of plan that must be developed to meet the problems involved in selective traffic law enforcement. Since the police have been charged with the responsibility of protecting life and property, they must, by necessity, seek continually to discover more effective ways to prevent accidents and move traffic more efficiently.

---

[2]O. W. Wilson, Police Administration (second edition), New York: McGraw-Hill Book Company, 1963), p. 251.

Although it is true that other official and non-official agencies or groups, and especially the courts, are involved in this matter, the police have frequently had to develop their own plans and programs, and generally with little or no unified support from these other factions.

Another point that must be recognized is that in order to reduce traffic accidents, it is first necessary to secure voluntary compliance to traffic laws and ordinances, and from all present indications, it appears proper to state that the police have failed to achieve this essential objective.

Obviously, more effective programs for traffic enforcement activities are now necessary and will need to be implemented before any noticeable decline in present accident rates will be noted. Primary consideration must be given to devising a plan that can provide the necessary manpower when and where it is needed, according to information provided be accident records and enforcement summaries.

This thesis will be primarily concerned with trying to provide some additional insight into this problem.

I. THE PROBLEM

Statement of the problem. The purpose of this study is to develop a model for selective traffic law enforcement; to review current literature that is pertinent to the problem of the distribution of the patrol force and selective traffic law enforcement; and to compare the literature and several case studies with the model to determine if it is a feasible plan.

The basic hypothesis of the study is that the model, illustrated briefly below, is valid; and further, that it can be supported through the literature and the case studies as developed in later chapters.

Statement of the model.

Step 1. Recognition of the role of the department in the area of traffic law enforcement.

Step 2. Analysis of the traffic law enforcement problems of the community.

Step 3. Consideration and determination of essential goals and objectives for

selective enforcement activity.

Step 4. Development of specific plans, policies, and procedures for selective enforcement that are consistent with departmental policy.

Step 5. Initiation of administrative procedures:

a. Development of a standardized system for filing all accident reports by street location.

b. Compilation of meaningful summaries of enforcement activity and accidents according to time, place, and type of violation involved.

c. Development of spot maps showing (1) high accident locations and (2) enforcement activity.

d. Assignment of available manpower based on above data.

Step 6. Communication of enforcement information to district commanders and/or

field units through special orders or directives.

Step 7. Evaluation of results.

Step 8. Introduction of necessary adjustments or changes where required.

Step 9. Development of alternative plans for special or unusual events or occasions.

Through the development of this model, an attempt will be made to discover answers to the following important questions:

1. Will the literature and the case studies support the recommendations advanced in the model?
2. Will the model provide a suitable frame of reference from which an effective selective enforcement plan could be developed?

The answers to these essential questions will be a major concern of this research.

Importance of the study. It is hoped that this study will have particular significance for enforcement officials in the field of highway traffic administration.

At the present time, only a few police traffic divisions are engaged in an active selective enforcement program, although it has been consistently recommended as the most effective method for reducing traffic accidents.

Scope of the study. The general subject-matter to be covered in this paper concerns the utilization of selective enforcement methods in traffic law enforcement. The essential nature of the research will be to present and analyze some of the enforcement procedures that are currently being recommended by the literature and those that are now being utilized by several police departments. Basically, the method or procedure will be (1) to develop a model for selective enforcement; (2) to review the literature in this area; and (3) to prepare case studies of various enforcement efforts in the area of traffic law enforcement.

Most of the information needed for the writing of this thesis was obtained from various library sources. The bulk of the material that will be analyzed in Chapter III consists of textbook material, the periodical literature and other sources.

The remainder of the data was obtained from the Annual Inventories (1963 data) of the certain selected cities

in the state of Michigan, and through personal interviews with various department officials.

II. DEFINITIONS FOR TERMS USED

Before continuing with a more comprehensive description and explanation of the model in Chapter II, definitions of several of the terms or concepts that will appear most frequently throughout the thesis will be examined. Certain definitions may represent a combination of one or more views regarding a certain practice or procedure, and in these cases the various sources will be recognized. Other terms may be defined as the need arises.

Effectiveness. This term may be applied to any procedure or method that produces a definite or desired result or effect.

Methods. Methods, or a method, implies a systematic way of doing things, especially according to a regular, orderly, and logical procedure.

Traffic Accident. As defined by the Dictionary of Highway Traffic, a traffic accident is "any accident involving a traffic unit in motion on a trafficway that results

in death, injury, or property damage. A traffic accident may involve more than one traffic unit if each unit comes in contact with some other unit involved while part of either is in contact with the road or sidewalk."[3]

Selective Enforcement. Selective enforcement is the total enforcement effort based upon "... an evaluation of potency (in terms of opportunity and desire), frequency, seriousness, location, and time of hazards".[4] This objective is accomplished through an efficient patrol procedure that recognizes specific needs and makes realistic adjustments in manpower accordingly.

Selective Traffic Law Enforcement. This concept is concerned with the prediction and prevention of traffic accidents that is based upon the utilization of accident records to determine the precise needs for enforcement effort according to time (i.e., time of day and day of week), place or location, and type of violation that is a factor in the greatest number of accidents.

---

[3]J. Stannard Baker and William R. Stebbins, Jr. Dictionary of Highway Traffic, (Evanston, Illinois: Northwestern University Traffic Institute, 1960) p. 241.

[4]O. W. Wilson, op. cit., p. 237.

Annual Inventory of Traffic Safety Activities. The Annual Traffic Inventory, as it is more commonly known, is an analysis of the traffic safety and management activities of municipalities and states administered by a specialized staff of the National Safety Council. Police traffic supervision is one aspect of this evaluation.

III. ORGANIZATION OF THE REMAINDER OF THE THESIS

The remainder of this study is divided into the following chapters:

Chapter II is concerned mainly with a description and explanation of the model.

Chapter III reviews the pertinent current literature relating to (1) problems in the distribution of the patrol force; (2) selective enforcement (as a basic objective of patrol); and (3) selective traffic law enforcement, its objectives and methods. Finally, comparisons are made between the literature and the model.

Chapter IV presents the case study method, the basic research involved, and the application of the model to the case studies.

Chapter V is a summarization of the entire thesis, including specific conclusions and recommendations regarding the study. Suggestions are also made for further research in this chapter.

CHAPTER II

AN EXPLANATION OF THE MODEL

I. Introductory Statement

There are a variety of ways that the problem of police manpower distribution for traffic law enforcement purposes can be approached. Although it seems unlikely that the discovery of any one method or system can provide all the answers to the wide range of problems that presently exist in this area, the basic issue remains one of trying to determine if any common or universal guidelines exist.

Final determination for the type of enforcement plan that will be initiated will depend upon a large number of factors. Some of these include: (1) the amount of manpower available for use in traffic law enforcement; (2) the extent and nature of the local accident problem; (3) the geography of the area to be served; (4) the type of area (predominantly urban, suburban, rural or other); and (5) the support of the general public, and especially of the news media and the various official and non-official groups throughout the community. Still another important factor that also must be taken into consideration is the attitude

of the chief or commissioner with regard to the role of the department in the realm of traffic law enforcement. Obviously, unless constant support for the program is generated both within and outside of the department, a truly effective selective enforcement plan may, in fact, never become a reality.

The essential purpose of this chapter is, therefore, to provide a model, or proposal, for developing an effecient and effective method for selective traffic law enforcement. No claim is made that this model will be able to provide simple or uncomplicated answers to the problems involved in distribution. From time to time a variety of proposals have been tried--admittedly, some have been successful, yet others have proven ineffective--this model is thus a further attempt at trying to provide a suitable frame of reference for this particular problem.

II. An Explanation of the Model

Step I. Recognition of the traffic law enforcement role. It is essential that law enforcement agencies recognize that traffic law enforcement is a basic police responsibility. Furthermore, unless this role is properly understood and accepted by those in authority or command, it

is unlikely that sufficient planning will be directed towards the development of effective selective enforcement procedures. Obviously, in some departments, this particular problem may not be a major issue, but it is nevertheless important to develop and maintain a sufficient degree of support for an active program.

Step 2. Analysis of the traffic law enforcement problems of the community. Once the primary obstacle of support has been recognized and overcome, it becomes necessary to review and analyze the wide variety of problems that are connected with determining an effective selective distribution plan. Preliminary studies should be conducted to determine more precisely what these problems may be, both within the community and within the department as well.

Certainly, at the present time, few, if any, meaningful answers have been discovered concerning which, if any, plan or technique is the best under all conditions and circumstances. What must be recognized is that, regardless of the final plan decided upon, certain problems will present themselves, and further, the department may be handicapped due to insufficient personnel or financial resources. In this early stage of planning, therefore, it

is essential that we try to anticipate these problems before they actually come up and then seek to provide answers or guidelines that will prevent costly interruptions or delays in the plan once it has been put into actual operation.

Step 3. Determination of goals and objectives. This step is probably one of the most often neglected aspects of planning for selective enforcement. In a very real sense, the determination of these essential goals or objectives will be closely allied to the acceptance of the police responsibility for traffic law enforcement. In other words, the aims of the program will, in most instances, reflect the over-all attitude of the department on this matter.

Many other important factors will also have to be considered before the ultimate goals and objectives are decided upon for the program. Some of these factors were noted in the introductory statement at the beginning of this chapter.

Step 4. Development of plans and policy. At this stage of the model, specific operational plans and procedures should be produced. An outline describing the exact nature and extent of the problem pointing to precise needs must be

established as a part of this procedure. If data for planning is not readily available or is inaccurate, immediate steps must be taken to correct this situation before final plans can be drawn. Past records describing enforcement activity and accident experience will form the basis for future activity, and thus must contain accurate information and be located easily. In some cases, it may be necessary to base the planning effort on records of present activity if past records are not complete.

Step 5. Initiation of administrative procedures. This step involves the actual operational phase of the model. At this point, administrative procedures must be determined and put into use.

A primary step will be the installation of a standardized system for processing and filing the accident report forms. The form itself should be of a uniform type to facilitate the clerical aspect of this process and to provide necessary information quickly and easily. The actual reports themselves should be filed according to the specific location of the accident if they are to be of value for enforcement purposes. Data from these reports may later be transfered to the accident spot map.

A second step will be to compile meaningful summaries for enforcement activity and of accident frequency according to time, place, and type of violation. Actually, this particular procedures provides the essential information upon which final determination of manpower will be based. It is important, therefore,that this data be correct. These summaries can be developed from the accident report forms, and the uniform traffic ticket and complaint.

The third procedure involves the development of spot maps to indicate (1) high accident locations, and (2) enforcement activity. The accident location map should show the exact location of the accident, the type of accident, and the nature of the violation involved. This information can be indicated by position, shape and coloring of each pin in the map. (It may also be desirable to indicate the time of day of each accident, and the weather or road conditions at the time of occurance. This additional information should help to improve our effectiveness and may be accomplished, once again, through coloring, shape, size, etc., of the pins used.) The enforcement map should indicate by the same system the location of the violation, the type of violation, and the time of day when the summons was issued. This information can be obtained from the uniform traffic ticket

and complaint.

Both of these maps should be kept for a sufficient period of time to show problem areas distinctly. Generally, it is advised that only one, or in some instances two, full-sized maps be used which can show more than just one month's activity without becoming cluttered, rather than maintaining separate maps for each month.

The final step in this process is the assignment of available manpower according to the enforcement needs as indicated by the data that has thus far been compiled. Traffic enforcement officers must be placed strategically at those locations or on line patrol at the proper time of day, where accidents are most likely to occur. Information will be made available as to the type or types of violations that are responsible for the greatest number of these accidents, and officers should be instructed to focus their enforcement efforts in this direction.

If, for example, the accident problem is most acute during the hours of 1:00 p.m. and 9:00 p.m., then this is the period when most officers must be available. Obviously, it is not realistic to simply assign an equal number of men to each shift, since it is highly unlikely that traffic acci-

dents will occur in so orderly a manner. Therefore, officers will have to be assigned on the basis of the time of occurence as well as the location of accidents. Time, in this sense, involves not only the time of the day, but the day of the week as well.

Step 6. Communication of data to field. Obviously, unless enforcement information is transmitted in concise form to the patrol units, it is of little value. Special orders or directives must be issued periodically to indicate those areas where effort should be concentrated. Shift supervisors should be held responsible for supervision of these locations to determine whether or not proper enforcement efforts are being applied.

Step 7. Evaluation. One of the most important questions that must be answered in the final analysis is whether or not the objectives that were determined earlier are actually being achieved. A system for evaluation of the various aspects of the program must be developed, therefore, to provide the administrator with the essential information that he needs to make the necessary decisions concerning the program.

Step 8. Introduction of adjustments or changes. If, through research and evaluation, there are indications that specific changes are called for, then adjustments are to be made at this point. It will be necessary to maintain a follow-up on any major alterations in the original plan to determine their success in achieving our earlier objectives.

Step 9. Development of special alternative plans. With the recognition that no plan devised can possibly supply all the answers to the problems involved in distribution, it is important that alternative plans or procedures be established to cover special or unusual problems or situations that may arise. This particular step does not imply a need for more than one major plan for selective enforcement purposes, but rather emphasizes that under certain circumstances it may be desirable to assign available manpower according to some other plan or system. These alternative plans may be necessary during special civic occasions, because of adverse weather conditions (seasonal variations), athletic events, or for a variety of other reasons that may reflect a noticeable change in the accident picture. Obviously, there are going to be occasions when it will not be logical or realistic to operate according to the usual method.

However, these special circumstances will generally be of a temporary nature, and therefore should not affect for any great length of time the normal operation of the program. Nevertheless, plans for these events should be determined well ahead of time.

In summary, these are the nine basic procedures or steps involved in the application of the model. The chapters that follow have been designed to compare or test this model or plan as stated here against the existing literature in this area, and with certain selected programs that are in operation at the present time.

CHAPTER III

REVIEW AND ANALYSIS OF THE LITERATURE

The basic purpose of this chapter will be twofold. First, the literature that is pertinent to this study will be examined, and secondly, these various sources will be analyzed in terms of their position with regard to the model.

Section I will be concerned with the general concept of selective enforcement as an essential part of patrol operations. In Section II attention will be directed more specifically towards the current literature on the utilization of selective enforcement techniques or methods in traffic law enforcement. Finally, a comparison will be made of the literature with the proposed model to help in determining its validity.

I. SELECTIVE LAW ENFORCEMENT

The importance of the patrol function and selectivity in patrol service. The effective operation of the patrol force must be regarded as the most important function of police service. It is upon this unit or division that primary responsibility for the accomplishment of the basic police

objectives must rest.[5]

The major purpose or aim of patrol is to eliminate, as far as possible, the actual or assumed belief in the opportunity for successful misconduct.[6] That is, the desire to commit a particular criminal act will be influenced, to some extent at least, by the apparent likelihood of arrest. The presence of patrol units, therefore, plays a primary role in effecting the beliefs and behavior of potential offenders.

In this sense, some of the basic objectives of patrol appear as: (1) the prevention of crime, (2) the suppression of criminal activity, (3) the apprehension of criminals, (4) the preservation of the peace, (5) the regulation of non-criminal conduct, and (6) the protection of life and property. To accomplish these duties, effective distribution of the police patrol force is imperative.[7]

---

[5]Samuel G. Chapman, Police Patrol Readings (Springfield, Illinois: Charles C. Thomas, Publisher, 1964), p. 171.

[6]Wilson, op. cit., p. 228.

[7]G. Douglas Gourley and Allen P. Bristow, Patrol Administration (Springfield, Illinois: Charles C. Thomas, Publisher, 1961), p. 92.

Current systems and practices for patrol force distribution. At the present time, there exists a wide range and variety of proposals for the effective distribution of the patrol force, and many of these plans undoubtedly have a great deal to offer in terms of a practical solution to what has become an extremely perplexing problem.

The explicit purpose of this particular section, therefore, is to present a review and analysis of the literature that is concerned with describing these current practices or proposals. It should be noted at this point also that even if some few of these programs posses certain merits in their own right, none have really provided all of the answers to the myriad of problems that now exist in this area. In short, it should be recognized that there is no infallible method or formula for determining precise needs in terms of manpower requirements that can be applied universally without very definite reservations for any given situation.

Certainly it is recognized that the requirements are indeed different for different types of situations, and that numerical strength of the patrol force will vary considerably according to the type and size of the community in terms of

population, to mention only one of the many factors that must be considered here. Yet it is entirely feasible, if not completely essential, for a department, regardless of the size of the community it serves, to develop and maintain some system, no matter rudimentary it may appear, for distributing its available manpower based on the relative need for police service.

One particular method that has been applied is a plan that was devised by O.W. Wilson for the Public Administration Service in 1941.[8] The author remarks that this system can be applied successfully by any department irrespective of the geographical size or population of the community to be served. The plan was found to operate effectively in the cities of Wichita, Kansas, in 1938; and San Antonio, Texas, the following year, prior to actual publication of the details two years later.

Wilson bases his initial planning on the premise that the actual need for police service arises from police hazards, and further, that the available manpower must be distributed in proportion to the distribution of these

---

[8]Orlando W. Wilson, Distribution of Police Patrol Force, Public Administration Service Publication No. 74 (Chicago: Public Administration Service, 1941), 27 pp.

hazards. From this point he develops twelve (12) fundamental procedures or steps that are necessary to the development of an effective distribution program. These steps are summarized below as follows:

Step 1. Determine the number of men that will be available for motorized or vehicular patrol duty by subtracting (1) the number of men necessary for foot patrol, point duty, and other similar assignments, and (2) annual, weekly, and sick relief time.

Step 2. Record on a large-scale map of the city, divided into small districts, the area and inspectional services for each district. There should be approximately 150 small districts for each 100,000 population. A map should be prepared for each shift to show the proportion of incidents, inspectional duties, and area in each small district.

Step 3. Incident cards should be prepared to show the district number, hour reported, and hour of occurrence for each incident, noting the district number.

Step 4. Next, these cards are to be tabulated to show the proportion of incidents during each hour of the day.

Step 5. The number and reporting hours for each shift are determined next. This determination is ascertained by analysis of the hourly distribution of incidents and other factors.

Step 6. The percentage of total incidents is computed on each segment of the day created by shift changes by adding the index for the hours of each period.

Step 7. The man-hours to be devoted to called-for services and routine patrol on each period created by shift changes is determined. (It was noted in the research that there is no absolute standard for measuring the man-hours necessary to perform these two services mentioned above, but after some study it was decided to take the number of man-hours available for each 1 percent of incidents on the 7:00 a.m. to 3:00 p.m. shift as a standard unit of measurement.)

Step 8. Compute the number of man-hours needed for inspectional services for each period created by shift changes. The total man-hours should be ascertained first for this particular service.

Step 9. The man-hours required on each shift for (1) called-for services and routine patrol (Step 7), and (2)

for court and inspectional services (Step 8) must next be computed.

Step 10. State the apportionment among the periods, expressed in terms of actual manpower requirements rather than man-hours, providing for continuous eight-hour service and relief.

Step 11. Men are assigned next to each shift in a manner that will insure a minimum deviation from the man-hour requirements.

Step 12. Finally, the city should be divided into a number of motorized beats for each period of the day, containing nearly equal needs for police service, to correspond to the number of men made available for assignment by the chronological distribution.

These, then, are the basic procedures that are to be followed in administering this plan. For a more comprehensive description of the steps involved, reference should be made to specific sources.[9]

---

[9]Wilson., op. cit., pp. 255-280; Orlando W. Wilson, Police Planning (Springfield, Illinois: Charles C. Thomas, Publisher, 1952), pp. 84-97; Orlando W. Wilson, Police Records, Their Installation and Use (Chicago: Public Administration Service, 1942), pp. 234-253.

A second plan or method worth noting is the one described by V. A. Leonard in his text, Police Organization and Management.[10] Under this system, the author points out that, basically, patrol force personnel should be distributed simultaneously in three directions--by function, by area, and by time.[11]

Although this particular plan does not describe in detail the administrative steps involved in distribution, it is quick to point out several of the problems that can and have arisen if proper organizational procedures are not followed. Leonard is of the firm belief that, in this sense, patrol, and the amount of patrol power required, must receive primary consideration at all times if the department and the various other divisions are to operate effectively and efficiently.

I. In discussing, first, the problem of functional distribution, the author warns of the common mistake of depleting the patrol force to satisfy the demands of specialized divisions, and on occasion, of the staff services as

---

[10] V. A. Leonard, op. cit., pp. 182-192.

[11] Ibid, p. 184.

well. Several references are made to departments where this particular situation has created some acute problems. It is Leonard's position, therefore, that the patrol force must be maintained at full strength, until it is absolutely essential that further task specialization is necessary.

II. A second factor that must be considered, according to Leonard, is geographical distribution. The individual patrol area, or beat, is described as being the ultimate unit upon which the whole structure of the police organization is based. Further, it is within this particular frame of reference that all of the basic functions of police service are discharged.[12] Police administrators must now recognize that certain of the earlier methods of assigning men to patrol are obviously unrealistic according to present-day needs and conditions.

Leonard, therefore, offers the following suggestions with regard to geographical distribution and the problem of beat layouts. One of the things he mentions is that in the formation of beat boundaries, special attention should be given particular sections within the area where crime is a chronic problem, or where potential emergencies may be

---

[12] Ibid, p. 187.

expected.[13] (Leonard also used the term "hazards" when describing the various classes of offenses that should be considered in determining proper distribution of men and equipment.)

Another recommendation that is made is for a constant evaluation of the hazards within each beat boundary.[14] Leonard contends that this procedure is necessary because of the changing character of each area within the community, and that studies of such changes as they relate to actual hazards should be applied at intervals of not more than five years.

A major administrative problem in this regard is the question of trying to devise a suitable formula. Leonard gives credit to August Vollmer for pioneering research in this area, although he admits that much more investigation is needed in developing an efficient, systematic approach.[15] One of Vollmer's chief contributions, according to the author, is

---

[13] Ibid, p. 188.

[14] Ibid.

[15] August Vollmer, "The Police Beat", The Police Yearbook (International Association of Chiefs of Police, 1933), p. 189.

that he urged the adoption of standard time units for the operations involved in performing routine patrol tasks. He believed that it should be possible to allocate patrol duty quantitively, in order that no single officer would have an impossible task to perform, and further, that all patrolmen would have definite minimum duty requirements as well.

At this point in the text it becomes particularly difficult to distinguish Vollmer's views from those of the author. Nevertheless, there is agreement that certain basic factors must be recognized in the determination of the size and boundaries of beats: (1) the case load patterns, (2) inspectional services, and (3) distribution of police hazards. (The changing sociological conditions within each beat are considered under the category of police hazards.)

The next procedure, according to the text, is the tabulation by hour of day and by existing beat boundaries, the number of Part I and Part II, miscellaneous reports, accidents, and number of arrests for the preceding six-month period.[16] Inspectional services performed, especially between the hours of 5:00 p.m. and 7:00 a.m., should be included as an important part of this tabulation.

---

[16]Leonard, op. cit., p. 189.

Vollmer also recognized the need for translating work into time units, or man-hours, to produce a common factor for computing an equitable work load distribution. Necessary changes in the work load distribution could also be projected in this manner. Because of the obvious variations in the number of man-hours required for all the types of services, it is suggested that each department make individual estimates of the average time required for each service it performs. Once these figures, or norms, are obtained, each work unit must be weighed. From this point, then, the percentage distribution of work load by existing beat layout and by shifts will need to be computed.

When the results obtained from the foregoing computations are known, problem areas or other weak points will be recognized, and remedial steps and procedures should be instituted. Adjustments may be necessary regarding beat boundaries, or in the size and number of beats from one shift to another.[17]

III. One final category which is discussed by Leonard concerns the chronological distribution of the police force. A major criticism leveled against the 3-shift arrange-

---

[17] Ibid., p. 190.

ment that one finds in common use today is that, in many cases, the standardized figures (8:00 a.m. to 4:00 p.m., 4:00 p.m. to 12:00 midnight, and 12:00 midnight to 8:00 a.m.) have not often enough been determined by a thorough analysis of the proper data and information regarding the needs for police services at particular times. In this sense, Leonard stresses the importance of a good, well-organized records division as the key to the problems that may exist in this area. He maintains that no serious statistical difficulties should be encountered regarding the chronological distribution of the force if the records system is properly administered.[18]

Although the author does feel that the traditional, three-platoon system is basically sound, with the change-over hours commonly used, he also is quick to point up the necessity of recognizing the need for special deployment of the patrol force, over and above the regular shifts, to handle case load peaks. An important point to note in this regard is that:

> where this procedure is based upon careful analysis of case load as indicated by records data, it represents a desirable

---

[18] Ibid., p. 191.

refinement in the selective distribution of manpower.[19]

In concluding his discussion, Leonard advises that the comments or suggestions that have been advanced apply only to the basic distribution of the patrol force. It would be unrealistic to establish a plan so rigid that it could not be modified to handle the wide range of emergency situations that frequently present themselves to the police. Mobile task forces must always be available to cope with such problems.

Another important reference in the area of patrol operations is the text Patrol Administration by G. Douglas Gourley and Allen P. Bristow.[20] In Chapter V the authors present what they consider to be a model distribution plan that would be suitable for a small or medium-sized city with operations conducted from a single headquarters.[21] The

---

[19] Ibid., p. 192.

[20] Gourley and Bristow, op. cit.

[21] Ibid., pp. 97-98.

six steps involved in this plan are listed briefly below:

Step 1. Manpower. Determine the number of men available for patrol service. This procedure involves subtracting from the total number of patrolmen all those who are on "fixed posts" or other special assignments. The result is the total motorized force available for service.

Step 2. Chronological distribution. Next, criteria must be selected on which to base distribution of available manpower according to a chronological pattern. (These criteria would be the same as the police hazards mentioned earlier.)

Step 3. Statistical analysis must then be made of these criteria by time of occurrence. From this information shift hours can be determined. (The authors recommend that shift changes be scheduled to include the peak load toward the latter half of the period.)

Step 4. Once the shift hours have been selected, the criteria (hazards) must be related proportionally. The number of officers available would then be assigned during the 24-hour period to correspond with the amount of activity. Overlapping shifts may be established during especially heavy peak periods, but this procedure is not recommended unless

absolutely necessary.

Step 5. Geographical distribution. When the number of officers on each shift is known, the community must be broken down into individual patrol districts. "Area factors (i.e., miles of streets, size of districts, and geographical barriers) are now added to the "time" criteria.

Step 6. One final aspect of this plan must be noted--that patrol districts must be established for each shift, as the number of patrolmen differs. Smaller, numbered reporting districts should also be set up to facilitate the enlargement or reduction of a regular patrol district during the 24-hour period.

Following this discussion, the authors illustrate the distribution system that was adopted by the Pomona, California, Police Department after extensive research in this area several years ago.[22] The step by step outline of the procedure followed in this particular case is described in some length in the text, and many of the details of the plan are basically similar to those of others noted earlier in this chapter. For these reasons, then, the plan will not

---

[22] Ibid., pp. 99-115.

be reproduced here. It is sufficient to say that the system itself, although quite involved at first glance, appears to be quite sound and entirely workable under most circumstances. Several graphs and charts are included as a reference to illustrate various phases of the plan itself, and these, at least, make the whole plan easier to comprehend.

Probably one of the most comprehensive studies now available on some of the issues involved in police patrol operations has recently been completed by Samuel G. Chapman.[23] The text itself provides an excellent series of articles on various aspects of patrol written by well-informed and experienced persons in this area. For our purposes, we will be concerned specifically with Section IV of this text--"Patrol Force Distribution".

As the author points out in the introduction to this chapter, the first article by Frank E. Walton is included mainly to give"... a comprehensive and authoritative review of the history and current status of police manpower distribution as well as some timely recommendations".[24]

---

[23]Chapman, op. cit.

[24]Ibid., p. 174.

In a sense, Mr. Walton does his own "review of the literature", as he notes the several approaches that have been taken to the problem of distribution since 1920 when Fosdick first published his text American Police Systems.[25] Aside from Raymond Fosdick, Bruce Smith, O.W. Wilson, Frank Kreml, and V.A. Leonard are also recognized as making significant contributions in this field.

Next, Walton proceeds to consider certain of the "common" factors that have been recognized as important in trying to devise an effective plan. Most of his discussion is based on the Wichita Plan and the more recent findings of the Los Angeles Police Department Study, and in many instances comparisons are drawn between these two well-known systems.

In the following article, "The Police Beat" by August Vollmer, the beat is recognized as the primary unit upon which the success or failure of the whole police operation depends.[26] Indeed, former Chief Vollmer foresaw very early the importance of distributing fairly and equitably

---

[25] Raymond B. Fosdick, American Police Systems (New York: Century Company, 1920).

[26] Vollmer, op. cit.

the work load for the patrolmen on all beats.

An article by John Ficklin presents a city manager's view of the police manpower problem in the next section of the text. Although the article itself is titled "Police Manpower Formula?", the author feels that a "formula", in this context, is really only an approach to the problem or a list of circumstances that must be developed.[27] In this sense, the author lists the following as major factors to be recognized:

a. The number of days and hours per work week.
b. The use of one or two men per patrol car.
c. The degree of specialization...
d. Because cost is the major reason for denying or minimizing requests for manpower increases--the level of salary paid.
e. The extent to which civilians are used in staff and clerical work.
f. The extent to which lesser trained personnel are used to relieve policemen of routine tasks.
g. The consolidation of radio dispatching facilities to conserve personal service requirements.
h. The degree of coordination with sheriff departments, particularly, to eliminate duplication of confinement, arrest records, etc.
i. The character of the city itself. Are its people generally law-abiding or not?

This list of considerations has been included at

---

[27] John Ficklin, "Formula for Determining the Number of Police Officers for a City" (paper read at a police chiefs' meeting in Vallejo, California, October 20, 1959).

this point because it indicates some ever-present, yet often ignored, areas of concern. These factors, along with others, contends Ficklin, must be given careful attention before any final decisions or plans are drawn regarding patrol force distribution.

In the next article, Wyman W. Vernon discusses some of the problems that the Oakland, California, Police Department faced during a reorganization study that was made several years ago.[28] Once the findings were complete. several changes were instituted to bring the department to a more efficient level of operation:

1. The department was centralized to provide:
   a. more men on the street,
   b. better supervision,
   c. more closely knit patrol operations.
2. Foot patrol was reduced and use of 1-man patrol cars was increased.
3. Patrol beats were redesigned according to the plan advanced by O.W. Wilson in Police Administration.

Vernon finally comments that although these specific

---

[28]Wyman W Vernon, "Oakland Appraises its Manpower Distribution", Police (March-April, 1957).

changes were made throughout the department, continuous effort is now being made to discover still more methods for increasing the kind and quality of service rendered.

The following article is also concerned with the Oakland Police Department, and deals specifically with some of the factors involved in this city's 1960 and 1962 beat surveys.[29] The report points out that the primary reason that these surveys were taken was "... to determine if the pattern of workload distribution had changed significantly to warrant changes in manpower deployment".[30] Although this research was concerned under one specific set of circumstances, it does appear that certain findings would have application in many similar cases. Especially important is the following program that was recommended by the Bureau as the most feasible long-range and diversified approach to the problem:[31]

1. Provide a map of the city and acetate overlays to each watch of the Patrol Division. Definite beat boundaries would be marked on the appropriate overlay with no references to workload.

---

[29] Report of the Bureau of Administration, Planning, and Research Division, Oakland, California, Police Department, 1960-62.

[30] Ibid., p. 201.

[31] Ibid., p. 204.

2. Define on another map a beat structure acceptable to all concerned through a series of conferences with the Planning and Research Division. Again, no reference to workload.

3. A computation of workload data should be made for each of the beats resulting from steps 1 and 2, and adjustments made accordingly.

4. Engage in another series of conferences to explain to the Patrol Division reasons for making particular adjustments to obtain concurrences or non-concurrences.

5. Subject resulting distribution to a simulated operation...

6. Establish the following goals to achieve a superior plan:
   a. straight boundaries of main streets, or natural boundaries, should be used whenever possible to facilitate dispatching.
   b. beats should be as nearly square as possible...
   c. the social character of beats should be as uniform as possible, and hazards must be well known.
   d. centers of activity should be as close to beat boundaries as possible to permit maximum coverage of incidents...
   e. measureable workload should be as equitably distributed as possible, taking into consideration such factors as area, topography and accessibility.

"Operation 25" is the name of a unique plan described in the next article that was initiated by the New York City

Police Department.[32] It is interesting to note that one of the major steps taken to reduce a high incidence of crime in this one particular section of the city was to increase, and to increase noticeably, the number of foot beats in the area. Although Chapman terms the plan a "saturation" effort, the article itself says that this is an unfounded criticism of the experiment, and that the overall results proved the plan "an unqualified success". It must be remembered, however, that this was an operation designed to attack a specific problem, and that some of the answers revealed by this study would not be as significant under a different set of circumstances.

The use of a flexible police unit is the next topic under discussion. George D. Eastman describes the duties of the Flexible Unit of the Pontiac, Michigan, Police Department as being important features in the selective enforcement program.[33] This particular six-man unit is yet another example of one community, or rather one department's way of

---

[32] "Operation 25", New York City Police Department, Michael Murphy, Commissioner, 1955.

[33] George D. Eastman, "The Flexible Unit--A Unique Striking Force", Police, August, 1960.

seeking to provide more efficient police service.

The next two articles in the text deal with what has been termed the "game theory", and its application to the problem of police manpower distribution. The first article by R. Dean Smith, "Random Patrol", although quite complicated in its approach, is another important way of attacking the patrol problem.[34] The philosophy of this whole scheme is that every move that police patrolmen must make should be entirely random or at least unpredictable so far as the criminal element is concerned. As Smith summarizes: "The trick is to improve your ability to predict the opponent, and at the same time reduce your opponent's ability to predict your moves".[35]

The second article dealing with the game theory is written in a much more concise and readable manner.[36] This system actually utilizes a roulette wheel to assign patrol officers in what can unquestionably be described as a completely random pattern.

Basically, the "system" works as follows:

---

[34] Chapman, op. cit., pp. 217-228.

[35] Ibid., p. 228.

[36] Ibid.

> ...four genuine roulette wheels have been equipped with specially prepared coded discs. Numbers on the discs correspond to map subdivisions. The village is divided into four patrol zones and there's a wheel for each zone. A spin of the wheel determines which area inside a zone a patrol car covers. [37]

Although this type of operation may appear somewhat questionable, the Village of Edina (population 32,000 and encompassing 16 square miles) seems convinced that the method has merit.

The final article in this section of Chapman's text, on Connecticut's resident state police system, was not included here since it is not really concerned with selective enforcement as it has been defined in this paper.

Before concluding this section on the various systems and practices for patrol force distribution, one further piece of research should be mentioned.

Early in 1961, the International Association of Chiefs of Police, under the authorship of R. Dean Smith, published a report entitled "Computer Applications in Police Manpower Distribution".[38] This report is intended to demon-

---

[37] Ibid., p. 229.

[38] R. Dean Smith, Computer Application in Police Manpower Distribution, (Chicago: International Association of Chiefs of Police, 1961) 98 pp.

strate how, with the aid of a medium-speed computer (IBM 650) it would be possible to establish a more realistic distribution plan. Because a computer system is able to analyze a great deal of data in a very brief period of time, it now is entirely feasible to obtain the sums of work-distance products within each beat, figures that were, until now, practically impossible to obtain using hand computation methods. Even though only a few departments presently have computers available for their own exclusive use, a program has been developed, as Smith points out. Through his research on this topic, Smith concludes that:

> ...with adequate financial support, considerable improvement in the methods applied to manpower allocation may be attained through the use of more powerful, high spped computers. The method developed here would be impractical without, at least, the medium-speed computer.[39]

Probably the most serious limitation involved in the whole operation is the cost factor. Obviously, in smaller departments, this single factor would make installation of a computer prohibitive, and actually, their distribution problems would not really warrant the use of such a device. Computer time can be rented, however, and this would appear

---

[39] Ibid., p. 78.

a feasible solution in medium- or large-sized agencies where, perhaps, other branches of the city government would also be involved.

II. SELECTIVE TRAFFIC LAW ENFORCEMENT

The Objectives of Traffic Law Enforcement. Without question, the police role in the area of traffic supervision has become an essential and necessary responsibility. There is hardly a community remaining now that has not come to rely almost entirely upon the police to "solve", as it were, this perplexing problem. Obviously, the traffic problem is not solely a law enforcement responsibility. Many additional official and non-official agencies and civic organizations have definite responsibilities in the realm of traffic safety also, and further, must be willing to assist the police in securing compliance for local traffic regulations.

The central obligation that the police have, however, is to see that all traffic laws and ordinances are enforced uniformly throughout their own jurisdictions. In order to meet this obligation effectively, each department must decide in advance upon the objectives it wishes to

achieve, and plan an enforcement program accordingly. Foremost among these objectives should be "...the creation of a deterrent to violators and potential violators...."[40] In furtherance of this basic objective, the International Association of Chiefs of Police have recommended that:

> Officers employed in traffic enforcement, while the highway is being used, look for pertinent defects in the behavior of people, especially of drivers and pedestrians, defects in vehicles and their equipment, and defects in roadway conditions. Enforcement work then does not begin with a condition or behavior requiring police attention, but actually begins with looking for such conditions or behavior. What to look for and how to look for it become as important for enforcement work as the specifications of laws and ordinances.[41]

The performance of these primary activities is accomplished through traffic patrol, the specific objectives of which have been recognized as:

1. Deterring violators.
2. Detecting and apprehending violators.
3. Observation and reporting of traffic accidents.
4. Observing road conditions, including view obstructions, which need attention.

---

[40] International City Managers' Association, Municipal Police Administration (fourth edition; Chicago: ICMA, 1954), p. 343.

[41] Ibid.

5. Providing certain services to the public.

6. Handling emergencies and keeping traffic moving smoothly. [42]

Through the vigorous pursuit of these and other objectives, the police will eventually create an atmosphere of voluntary compliance, and thereafter accident rates should be reduced.

The problem of how best to enforce traffic regulations still remains, however. Certainly any system or method which achieves these objectives that have been stated, with the minimum of cost and effort, must be considered effective.

In this thesis a model plan has been proposed for what the author considers to be an effective program, and in the section that follows, certain other plans and procedures will be reviewed in hopes of presenting the reader with a reasonably comprehensive view of selective traffic law enforcement methods currently in use.

Recommended procedures for selective traffic law

---

[42] Northwestern University Traffic Institute, Traffic Patrol (Chicago: Northwestern University Traffic Institute, 1961), p. 2.

enforcement activities. With the recognition of the need for some type of systematic approach to enforcement problems, various sets of standards or guidelines for developing more selective procedures in this area have been advanced. Many of the procedures in this area have been developed by research organizations such as the Traffic Institute at Northwestern University, the National Safety Council, or by individuals in the field of police and highway traffic administration. It is with these views that we are specifically concerned with in this section.

(I.) In a series of articles by Kreml and Larsen, published by the Traffic Institute and the International City Managers' Association, several important features necessary to the development of an effective selective enforcement program are discussed.[43] According to the authors, the whole basis for selective enforcement is "... complete and accurate information relating to the times and places of accidents, and the violations which are predominately involved".[44] (emphasis added) In other words,

---

[43]Northwestern University Traffic Institute, Municipal Police Traffic Supervision (Chicago: Northwestern University Traffic Institute, 1955), pp. 19-32.

[44]Ibid., p. 20.

accident records must be the essential ingredient if the program is to prove effective. The next suggestion is that adequate spot maps be provided to show where specific enforcement action is needed. It is recommended further that a single map be used instead of several different maps when indicating high accident areas. In order to obtain sufficient information for these maps, it is essential that all accidents be reported and related statistics regarding them be properly calculated.

Once these preliminary steps have been taken, the next problem becomes one of personnel. According to the data obtained previously from the accident records, men should now be assigned "...as nearly as practicable in proportion to the time frequency of accidents".[45] It is urged that manpower should be "matched" as closely as possible with (1) weekly peaks, (2) daily peaks, and (3) peak hours for accidents during the day.

The next factor to be considered is that of geographical area. In this regard, the text points out that the principal factor is the number of accidents in each area, but continues to add that "...if the units working are not

---

[45] Ibid., p. 21.

specialized, then the traffic work-load must be combined with the service requirement of general policing of the area".[46] Traffic enforcement units should still be assigned on either an area or line patrol basis once the beat boundaries have been established.

Finally, once time and area factors are known, the next procedure will be to direct enforcement efforts toward the predominant violations in accidents. "The principle of selectivity says that enforcement must be directed against the predominant violations somewhat in proportion to their frequency of occurence. In application we seek to have enforcement officers make traffic arrests in approximate proportion to these predominant violations".[47] Thus, every type of violation that needs attention must not be overlooked. Information as to the specific violations that should be especially noticed is best relayed to the patrol units through the use of an enforcement bulletin which describes the most pertinent facts about accidents in each particular district or beat. It is cautioned, however, that these bulletins are to be considered as a guide only, from which

---

[46] Ibid. p. 22.

[47] Ibid.

more specific enforcement plans for each period can be drawn.

The next procedure that is discussed by the authors is the problem of evaluation and how best this process should be carried out. Two factors, the quality and quantity of the total enforcement effort, form the basis for evaluation of the program in terms of its overall effectiveness in providing a deterrent effect. Although the text points out that the quality of enforcement is particularly difficult to measure, through selectivity we can improve on this condition. In this regard, the enforcement index (convictions and appropriate penalty for traffic arrests) is one method that can be used to improve on quality, if enforcement action is being aimed strictly at having the greatest effect in preventing accidents.

The problem of how to measure quantity is perhaps not so difficult to determine, and the text suggests several types of rates, reports, and summaries that could be used to measure the program's effectiveness.[48] It is further stressed by the authors that these various rates are to be considered as "management tools" only, through which the police adminis-

---

[48] Ibid., pp. 30 and 32.

trator may more closely guide and direct enforcement activity. The International Association of Chiefs of Police have offered what they believe to be either ineffective or satisfactory rates for each area of evaluation. This set of "Standards" still must not be taken as absolute or conclusive measures of overall effectiveness.[49]

(II.) Officials of the National Safety Council have for several years now been stressing the importance of, and the necessity for, advance planning for traffic law enforcement activities. The system that they have recommended has been detailed in memorandum form entitled "Accident Records as a Base for City Enforcement Planning".[50] Within these several pages a reasonably complete selective enforcement plan is discussed to provide answers to questions such as: (1) How should available personnel be assigned? (2) How much enforcement should there be? (3) How can the quality of enforcement be measured? Undoubtedly, these questions have always posed a very real problem for the administrator honestly concerned with getting the most from

---

[49] Ibid., p. 31.

[50] National Safety Council, Traffic Safety Memo 107, "Accident Records as a Base for City Enforcement Planning" (Chicago: National Safety Council, 1960), 12 pp.

his enforcement program in terms of fewer accidents.

In dealing with the first issue, that of assignment of personnel, the Council suggests that the two primary considerations should be time and place (location). In this sense, officers should be assigned at those hours and at those locations where accidents are occuring most frequently. Information for these assignments is obtained from one of several or various sources, such as accident summaries, punch cards, or spot maps and location files.

The proper work hours may be determined according to one of two possible methods. The first of these involves "...the calculation of percentages of accidents occuring each day and hour, and the other means drawing of graphs of accidents by days and hours".[51] Both of these methods are well illustrated in the memo sheet. With the percentage method, all accidents for each day of the week and also by hour of day are recorded and percentage figures are then derived. The graph method, a variation of the first method, involves plotting of accidents by days of the week, generally on a bar chart. For plotting accidents by hour of the day, a line chart is recommended.

---

[51] Ibid., p. 1-2.

Presuming that accurate records and statistics of either type mentioned are kept, it should now be possible to predict reasonably well the accident picture for a future period. In this sense:

> the most logical plan...is one in which the preceding year is divided into quarters, and each quarter is used to predict the experience of the same individual months of the following year.[52]

There are, of course, other variations on this basic method which could be followed if found to be more effective under certain conditions.

The next procedure is to assign men according to these estimated needs. First, the number of man-days needed for each day of the week must be determined. This figure would be in direct proportion with the number (or percentage) of accidents for each day. Simply stated, more officers would work on the days of the week when accidents were most frequently occuring, and leave time would be granted on those days when relatively few accidents were noted.

Once this determination has been made, the next problem is assigning these men to precise hours of the day.

---

[52] Ibid., p. 4.

Here the object is to assign available manpower again, matching the actual man-hours for enforcement to the earlier frequency distribution for all accidents. With the recognition that the conventional three-shift assignment is ineffective in meeting enforcement requirements, the following work shift schedule is suggested for a force with 30 officers available for traffic assignments:[53]

Shift	Number of Men
6:00 a.m. to 2:00 p.m.	7
1:00 p.m. to 9:00 p.m.	13
3:00 p.m. to 11:00 p.m.	5
8:00 p.m. to 4:00 a.m.	5
TOTAL	30

A refinement of this suggested technique involves the use of accident data by hour of specific days.

Specific locations where enforcement efforts are to be directed must now be determined. Assignments within the various districts or areas are usually made on the basis of spot map information, although punch card systems may be used.

---

[53] Ibid., p. 5.

Traffic patrol units are now given either an area or line (one single street that may require special attention) assignments. Obviously, these areas would include the specific high accident locations within each district. Other special spot maps may also be used if the accident problem warrants more detailed information.

Finally, once assignments have been completed, a standardized list of the most prevailent violations that have contributed to accidents should be devised. Generally, this listing should be somewhat less detailed than the violations noted in the conventional traffic accident summary. This information is relayed to the men in the field through the use of enforcement bulletins which would contain the necessary enforcement instructions for each district or area.

As far as evaluative procedures are concerned, the Council recommends three basic types of statistical rates for quantative analysis: (1) arrests vs. convictions, (2) conviction rates (on a population or motor vehicle registration rate basis), and (3) the enforcement index. In regards to quality of enforcement, the most meaningful figure to determine would be the accidents vs. arrests rate which would give some indication of how well enforcement was being matched with the

number and location of accidents. When reasonable matching is secured, quality is high.

These two sets of procedures or methods that we have just briefly reviewed probably represent the most common and familiar approaches to the problem of selective enforcement. It is reasonable to assume that a substantial number of police administrators have, in most instances, followed these recommendations in their own efforts, although some variations on these standards have appeared in the literature from time to time. Examples of some of these programs will be mentioned at this point.

Recognizing the need for more effective traffic enforcement techniques, the South Carolina Highway Patrol recently instituted a state-wide selective enforcement program.[54] The two officials of the patrol who helped develop the plan were convinced that this type of effort was needed to bring a reduction in their state's accident rate. Although most of the basic techniques that were discussed previously in this

---

[54] A. T. Brown, "Selective Enforcement", Traffic Digest and Review, July, 1960, pp. 16-19.

section were employed, the patrol did build into the system some unique features of their own which are described below.

First, through careful planning, the work hours for officers was reduced from 60 to 48 hours. This reduction "...was deemed advisable to insure the highest efficiency of each man while on duty and to adjust the patrol's working hours to correspond with the working hours of comparable law enforcement agencies in other states".[55] With selective enforcement, moreover, it was no longer possible for an officer to patrol aimlessly in a large assigned territory, and thus it became possible to reduce the total number of man-hours needed. A reduction in motor vehicle operations costs was also experienced.

A second feature of this program involved the redesigning of report forms relating to traffic law enforcement activities. The older forms were discarded and replaced with up-to-date, coded type forms that provided more precise factual data in regard to the time, place, and type of violations most needing attention. These forms were key-punched daily and later compiled into a monthly report on enforcement activity.

---

[55] Ibid., p. 16.

Instructions on how these forms were to be filled out were relayed to the field units through training sessions held in each district and county. The article points out here that an almost immediate reduction in clerical work was noted because hand tabulation methods were no longer used.

As individual reports were received and tabulated electronically, it became possible to issue monthly directives from headquarters that would suggest ways to improve enforcement methods in each district. These directives were further analyzed by the lieutenant and his sergeants in each district to determine what changes are necessary to keep the program up to date with the constantly changing accident picture. Finally, follow-up reports were made from the field units to headquarters on the progress being made in following the enforcement changes suggested by the original directives.[56] "Thus", it is concluded, "...a two-way exchange of ideas and information is opened--each aimed at reducing the fatalities, injuries, and property damage caused by traffic accidents".[57]

Another plan which has been developed by Chief

---

[56] Ibid., p. 19.

[57] Ibid.

John M. Gleason of the Greenwich, Connecticut, Police Department, stresses the need for keeping accurate accident data and complete investigation of all accidents as essential prerequisites to selective enforcement.[58] The author believes that since the basic principles involved in selective enforcement are relatively clear, the real task of the police administrator is one of decision-making. However, his ultimate decisions must be based strictly upon consideration of several preliminary problems.

First, provisions must be made for the periodic statistical processing of basic accident data. Summaries should show "...the number of accidents by hour of the week for a period of sufficient length to provide at least one accident for each of the 168 hours of the week. In smaller communities the experience studied may have to extend over a period of more than a year. In larger cities, six to eight months, or even shorter periods, are adequate".[59] Next, a spot map of the entire city showing accident locations must be devised. The author suggests that the "...experience

---

[58] John M. Gleason, "Elements of Selective Enforcement", Traffic Quarterly, April, 1950, pp. 214-224.

[59] Ibid., p. 221.

used here should extend back at least a year for larger cities, and in smaller cities for the same period required to obtain the hourly distribution data as described above".[60]

"At this point", states Gleason, "...the task of providing selective enforcement for a city becomes one of administrative decision."[61] The areas or problems that will need to be carefully considered appear as follows:

1. How many men or patrol units are going to be available for service?

2. How far can you, as an administrator, go in establishing one-man patrol units?

3. How will policies, especially those relating to working hours and accident experience, be determined?

4. How will the men be assigned so that the number on duty each hour will be approximately proportional to the number of accidents in that hour? (selective assignment by time)

5. The next problem is: where will these men be assigned? (Here the spot map is used as an aid for area assignments.)

6. Which precise streets or areas within each district need the most attention? (Finding out this information and using it is known as selective place assignment.)

---

[60] Ibid.

[61] Ibid., p. 222.

7. Which violations need the most attention? (selectivity by violation) (Again, the spot map should provide this information.)

8. Finally, how will the plan be evaluated? (Here the use of the enforcement index is recommended as an administrative tool.)

These, then, are the main areas of decision-making for selective enforcement programs according to yet another author's viewpoint.

Although we have only mentioned two alternative programs here that are slightly different from those recommended by the Traffic Institute and the National Safety Council, it is already possible to recognize features that are common to all of these plans. Before concluding this section, however, one other slightly different approach will be discussed.

We have reference to an article which was recently published by the National Safety Council's Don Hill, entitled "Short Form Selective Enforcement".[62] In this article,Hill states that many selective enforcement plans are too clumsy and generally unworkable. In addition, he feels that in many other instances lack of communications regarding selective

---

[62] Don Hill, "Short Form Selective Enforcement", Traffic Safety, December, 1957 (Research Review), pp. 75-79.

enforcement information has caused a breakdown of efficiency. His suggestion, therefore, is for a more simplified system which would meet the basic enforcement objectives "...within the limit of resources available to the average police department".[63]

The system itself employs two basic devices or work sheets, which, as the author points out, may be used either separately or in combination. These forms are: (1) the Accident Forecast and (2) the Selective Enforcement Analysis sheet. Standardized procedure for using both of these forms is summarized as follows:[64]

1. Decide the area and period to be covered. In the forecast, make sure that the base and projection periods are comparable. Take into account seasonal influences and community activity patterns.

2. "Balance out" days of the week. Make sure there are the same number in both periods.

3. a. In the Accident Forecast, evaluate and give weight to crowd-generating factors varying between the two periods.

   b. In the Selective Enforcement Analysis, make no adjustment, but take the variable factors into account in studying

---

[63] Ibid., p. 75.

[64] Ibid., pp. 76-77.

the analysis.

4. The blank columns (in the sample form) are "group" columns. Disregard them on the initial statistical tabulation, then use the information derived from this tabulation to decide on how to "group" days of the week, hours of the day, locations, or violations to make best use of available manpower.

5. In the violation table, condense standard accident-violation classifications into the categories shown. These are more meaningful in relation to what the officer actually sees on patrol. The denominator for this table is the number of violations in accidents. It is not necessary to try to "balance" base figures as between the several tables. The percentage is the thing.

6. In comment, make it brief and be sure the data supports it.

7. Make separate sheets for as many areas and periods as considered desirable. Possibilities are endless.

8. Provide a copy of each Accident Forecast or Selective Enforcement Analysis to each uniformed officer.

The description of this plan concludes the section on the literature pertaining to the methods currently utilized in selective traffic law enforcement. The remainder of this chapter will be devoted to a comparison of this literature with the model.

Comparison of the literature with the proposed model.

Step 1. Recognition of the traffic law enforcement role. Although this initial recommendation was not specifically discussed in the literature that has just been presented, it is closely associated with the issue of the number of men who are going to be available for traffic assignments. Most of the references cited assumed that a certain number will always be available for selective enforcement activity, but obviously this supposition will not be true in many cases, since other divisions will, at times, also be seeking additional manpower to fulfill their own requirements. It is essential to the success of any enforcement program, however, regardless of the method utilized, that enough officers be made available to insure satisfactory results. An important task of the traffic division commander in this respect is to try to maintain enough men within his own division to perform at least the basic traffic enforcement activities.

Step 2. Analysis of the problem. At this point the police administrator must decide which method or type of plan is best suited to his own needs. The literature has provided a reasonably accurate picture of certain factors that will need to be considered before determining precisely what type

of plan to adopt. As was pointed out earlier, when the model was developed, no one plan that has been devised or described in this thesis can provide all the answers for the individual problems that each department will experience. Because of this fact, a thorough analysis of each of these plans, as well as consideration of individual community problems, is essential.

Step 3. Determination of goals and objectives. Because every community's enforcement needs are different, goals and objectives will also vary. However, all of the plans reviewed, as well as the model, have as their primary goal the reduction of traffic accidents through selective enforcement. Other objectives as noted in several references include such things as: (1) more appropriate work-hour schedules, (2) better accident reporting and investigation methods, (3) mechanical coding and key punching of accident and enforcement forms, and (4) improved morale and greater work-output. Certainly, these objectives and others like them are significant and definitely merit consideration by police executives.

Step 4. Development of plans and policy. All of the systems or methods described in the literature show a

careful step-by-step procedure for developing a selective enforcement plan. In addition, most of these programs suggested that basic needs be outlined first before detailed plans were laid out. This would include such things as evaluation of present enforcement policies, as well as clerical procedures and types of reporting forms utilized.

Step 5. Initiation of administrative procedures. Although certain variations exist between the specific procedures recommended in the model and several of the plans mentioned in the literature, the basic operations that need to be performed appear to be similar.

The importance of the accident report form and its availability as stressed in the model, is also a major item according to the literature. Many of the plans reviewed also called for some type of key punch operation for these forms to facilitate extracting the necessary information for selective enforcement procedures.

Moreover, most of the references also urged the use of accident summaries to show which violations were most prevalent. The model goes one step further and suggests the use of summaries of enforcement activity as well as the accident summaries to indicate areas that may be receiving

too much enforcement activity while showing no apparent need.

The use of spot maps is recommended in practically every plan devised. It is apparent that this type of visual reference is now recognized as one of the most basic of all the tools of selective enforcement. Again, the model strongly recommends the use of spot maps for enforcement activity, as well as for accident frequency.

As far as assignment of available manpower is concerned, the literature recommends that officers be assigned according to the information provided from the summary sheets and the spot maps. Men would be placed at high accident locations at the times when accident frequency was greatest, and would be instructed to direct their enforcement activity to the violations most prevalent in the past accidents in this area.

Step 6. Communication of data to field. The use of an enforcement bulletin is recommended as one method that can be utilized for relaying information relating to selective enforcement activity. Most of the plans noted suggest the use of this or any other similar device for communication purposes. At this point in the model, no specific reference was included as to which particular type of directive should

be used. In this sense, regardless of the type of form that is adopted, it should be one which will eventually prove to be the most effective in helping to achieve the overall objectives of the program. Individual needs and circumstances will no doubt be the final determinants.

Step 7. Evaluation. The most frequently mentioned evaluative tool was the enforcement index. Although, admittedly, this is an important measurement of the quantity and quality of enforcement efforts, other types of evaluations should also be made on occasion as recommended in the literature. Again, in the final analysis, it will be the task of the police administrator to decide precisely what types of evaluative tests the program will be subjected to. He must, therefore, be completely familiar with the several types of measurements described in the literature. The central purpose of this step in the model is merely to make the administrator more aware that the use of recommended evaluative tools are an important part of his total program.

Step 8. Introduction of adjustments or changes. When alterations in the original plan are called for, it will be important to determine the effects that these changes may have brought in the accident picture. If the manpower

originally required is for some reason reduced, readjustments will be necessary immediately in order to maintain an effective program.

Step 9. Development of special alternative plans. Only one of the plans reviewed in the previous section makes note of the fact that there should be some provisions made to handle special situations or occasions. Although this final consideration of the model was not discussed in the literature reviewed previously, it should be included as an essential part of any worthwhile selective enforcement plan.

In this chapter a comparison of the model with several of the procedures as recommended in the literature was made. In the next chapter, the model will be compared with certain case studies of enforcement programs now in operation.

CHAPTER IV

THE CASE STUDIES

I. METHODOLOGY

The major purpose of this chapter is to provide a practical description of some additional techniques in the area of selective traffic law enforcement. A discussion and analysis of enforcement operations in various police departments throughout Michigan will be presented. At the conclusion of this section, summaries will be made of each system, and finally, comparisons will be made between the case studies and the model.

The cities or departments that were chosen for this survey are as follows:

1. Lansing (Population 113,000)
2. Grand Rapids (Population 202,000)
3. Detroit (Population 1,670,000)
4. Battle Creek (Population 44,000)[65]

These particular departments were selected primarily on the basis of their accessibility and to provide a wide

---

[65] Population figures from The 1965 World Almanac.

range of the types of procedures that must be adopted in communities of various sizes in terms of population and geographic area. All of the departments are of a specialized nature, and each includes a traffic division as an integral part of the total operation.

The basic method utilized in obtaining the necessary information needed for this section of the study was through the interview technique. Each question, or series of questions, was purposely directed toward each part of the model. Although an interview guide was used in this procedure, considerable latitude was permitted the interviewee in his responses to the questions put forth by the interviewer. It was felt that rapport could more effectively be established in this manner. The interviews were conducted under regular working conditions with various ranking officials in each department.

Notes were taken also on the various enforcement procedures and operations as they were actually described or observed. In addition, more precise data relating to selective enforcement activity during 1963 was obtained through portions of the Annual Traffic Inventories for each city. Portions of these reports, as well as the interview guide, and data forms for each department are illustrated in the

Appendix.

Each of the four case studies is summarized below. An analysis of each department's approach to the problem of selective enforcement, and a brief comparison with the model follows the case summaries.

II. THE CASE STUDIES

Case Summary No. 1

The Lansing Police Department is a specialized department which serves a community of approximately 115,000 persons in the south-central Michigan area. The vehicle code of the city provides specifically that a traffic division must be established as a part of the municipal police agency. It enjoys a unique position, therefore, as a truly specialized bureau within the department.

It was learned that the division is responsible for the performance of three basic functions: (1) accident investigation; (2) traffic law enforcement; and (3) traffic direction and control. (These are the three major areas as recommended by the Northwestern University Traffic Institute.) The performance of these responsibilities is accomplished at

the present time through the use of four (4) specially trained accident investigation units; thirteen (13) solo motorcycle units for traffic law enforcement purposes; and six (6) three-wheel motorcycle units used in combination with three men on foot patrol for parking control in the central business district. These units are all included under the immediate supervision of the traffic division commander. In addition, the district patrol units also perform traffic law enforcement tasks as a secondary assignment to their general patrol duties. No direct control is exercised over these personnel by the traffic division, however, although each patrol officer periodically receives a copy of the division's selective enforcement bulletin.

The status of the traffic division appears very satisfactory at this time and most of the officers in the department have a favorable attitude towards the performance of their duties.

It is felt by those in command that traffic accidents can best be reduced through an effective selective enforcement program. In this connection, the division has recently initiated a revised plan for selective distribution of the traffic personnel. A great amount of time and planning

effort have gone into this new program, but at this time it was too early to visualize precisely what the end results would be, although staff members are very optimistic. The central objective of this operation is to gain a firmer control over the quality of the enforcement effort. The solo motorcycle units are the ones primarily involved in this plan, but the patrol division is expected to improve on its present efforts at the same time. It should be noted at this point that the traffic division has also developed alternate plans for the assignment of their manpower for special events or occasions when it is not practical to operate according to the normal routine.

Accident records, which are now maintained by the Records Bureau, are utilized very extensively as a primary source of data for all selective enforcement activity. (At one time the traffic division was responsible for keeping these reports.) Information from these records and from the uniform traffic ticket and complaint is extracted and summarized on two types of daily report forms that were developed specially by the department for enforcement purposes. Eventually this information is transcribed to the standard monthly and annual summary forms as recommended

for use by the National Safety Council.

With this data the division eventually seeks to match enforcement activity with accidents by utilizing various charts and graphs which were developed to make the statistical figures more meaningful. Two spot maps are maintained for each month to show (1) enforcement activity, and (2) high accident location. Once this information is obtained from the accident reports, they are returned to the Records Bureau where they are filed according to a serial number and also by location.

The city map is divided into four (4) patrol districts for traffic law enforcement purposes and each solo motorcycle officer is assigned to one of these areas. These officers are given priority line patrol assignments by hour and are expected to patrol the rest of their area at all other times. They are briefed periodically as to which type of violations they are to be observing in their priority area. The patrol division units are given their instructions by district through an enforcement bulletin sent out on a quarterly basis.

As was noted previously, this system is still too new to be evaluated thoroughly but the division appears to be

very pleased with the results that have been noted thusfar.

Case Summary No. 2

The second case study was conducted at the Grand Rapids Police Department which is also a specialized agency. This city has a population of 202,000 persons and is located in the southwest-central section of the state.

The traffic division is chiefly responsible for the supervision of (1) accident investigation, and (2) traffic law enforcement activities. These two functions are carried out through the patrol division as the members of the traffic bureau perform only staff functions. Four accident investigation units have received special training in this area, but any patrol unit is equipped to handle accident reports in their district.

According to the traffic bureau staff, a very favorable relationship exists between their division and the other main divisions within the department, especially the patrol and records divisions. It was pointed out that without this cooperation it would be extremely difficult to have any control whatever over the patrol units. It was further estimated that the patrol division is engaged in traffic

activities for about 85% of their time on patrol yet, unfortunately, this is without direct supervision from the traffic division. Patrol commanders are supposed to interpret the selective enforcement data to the field units on each shift as they receive this data from the traffic bureau.

One of the main objectives of the division is to provide this information to the patrol commanders so that they can make the necessary manpower assignments. There is written policy on the procedures that are to be followed for the various aspects of the selective enforcement plan, and alternate plans have been devised for special events or other circumstances.

Accident records are utilized quite extensively by the traffic bureau as are the officer's daily enforcement reports to provide additional information for planning purposes. In addition, several items on each accident report and each uniform traffic ticket and complaint are coded, keypunched, and sorted on cards through an IBM system by the records bureau. This particular system eliminates the slower hand tabulation method of sorting this data, and makes possible the compilation of <u>daily</u> statistical reports for the traffic and patrol divisions. When the accident reports are

returned to the traffic bureau, they are filed according to location and maintained for a five year period in the file. Another unique feature of the records filing system is the fact that freeway accidents are kept separately.

Spot maps are kept only for personal injury, fatal, and pedestrian accidents and for all freeway accidents occuring within the city. A large scale spot map, showing all accidents, is maintained by the traffic engineering department in another building. There is no map for enforcement activity. Summaries, both daily and monthly, are made, however, of the number and type of violations for which each patrol officer has issued a complaint. Special directives for patrol assignments from the traffic division are generally formulated from this data and from the information received from the accident reports. These "selective enforcement reports" provide the patrol commanders with a wide range of statistical information from which they are presumed to make their traffic assignments. At one time in the department, specific locations and information relating to the time and type of violation to be observed was an integral part of this report, but this procedure has been discontinued. This is probably an unfortunate circumstance, since it appears

that the traffic division may be assuming too much in this respect. Several statistical evaluations, or more properly, ratios of accident experience and enforcement activity, are kept on a daily and monthly basis by the traffic division. The major item is still the enforcement index, however. There is little or no problem for the traffic division as far as adjustments in manpower are concerned, since there is no direct supervision of the patrol division personnel.

At the time of this interview one of the most pressing needs of the division, and the department as well, was related to be the need for more manpower. It would also be noted at this point that the need for improved physical facilities is being met with the construction of a modern Department of Justice Building.

Case Summary No. 3

The third case study was conducted at the Detroit, Michigan, Police Department, which now serves approximately 1.6 million persons in a geographical area of 139 square miles. This city was selected in order that the enforcement problems of a large metropolitan area could be more closely examined and presented as a part of this chapter.

The Traffic Division, headed by a Director of Traffic, is organized into eight bureaus each having a distinct traffic-related function to perform. These bureaus may be supervised by either an inspector or a lieutenant who will have under their command a wide variety of select personnel depending upon the type of operation they perform within the organization. It should be noted at this point that cooperation between these various bureaus was described as very favorable at the present time, although this has not always been the case.

It was stated that one of the chief responsibilities of the Accident Prevention Bureau (APB), from which this information was obtained, was the selective enforcement program, although major decisions relating to matters of policy on this subject are handled through the Office of the Director.

Approximately 162 persons are assigned to the APB to handle matters specifically relating to accidents and traffic law enforcement activities. The bureau has direct supervision over 36 APB scout cars which take care of about 41% of all the accidents within the city. These officers presently work on a 5-shift arrangement to provide maximum coverage during the peak accident hours.

Next, through the utilization of traffic accident records and statistics relating to enforcement activity, the bureau provides data relating to traffic enforcement needs to each precinct commander, who, in turn, lays out the manpower assignments within his area. Precinct safety officers are assigned to each of the 13 districts to act as a laison between the APB and the district commanders. These men are also responsible for maintaining accident spot maps for their own precincts. In addition, each precinct is informed by the APB of the number, type, and locations of accidents that are occuring within each scout car area within their district on a weekly, monthly, and yearly basis. This information is provided on forms developed specially for this type of procedure by the APB. Because this amounts to such a vast amount of data, an IBM data processing system and computer is utilized by the Bureau in compiling this information. This system is used by all of the divisions within the department.

As accident reports and the uniform traffic ticket and complaint are received, they are sent to the Records Bureau where the information contained on them is placed on IBM cards which are key-punched and sorted before being forwarded to the computer programming room. The traffic tickets

are discarded, but the accident reports are returned to the APB where they are recorded in a master log book and then filed by serial number. A card file listing of all of the major and minor streets in the city, as well as expressways, with the number and type of accidents occuring on each, is also maintained by the APB.

The APB keeps a spot map only for fatal and personal injury accidents for the city, as each precinct is responsible for keeping all accidents for their area on a spot map at the precinct station. No maps are kept to show enforcement activity either at headquarters or in the precincts. It was stated that this would be an almost impossible task and would have little meaning for accident prevention.

As far as evaluation of the program is concerned, the APB keeps a close record of the accidents and the total amount of enforcement that is being applied in each district. As was mentioned previously, the district or precinct commanders receive periodic reports which should indicate the scout car areas in their precinct that need the most attention. Here again, each precinct is expected to be enforcing primarily those violations which are appearing in the greatest number of accidents in their area. At the end of a certain

period, each precinct commander is informed precisely where his district stands in relation to the other 13 districts, and awards are made for outstanding efforts in the areas of accident prevention and enforcement activity. Although this type of competition may or may not be the best way of approaching the problem, because of geographic variations, population density, types of land use, etc., it does seem to work out quite satisfactorily for this department.

In the APB, statistics are kept on the activities of all the districts, and various charts, graphs, tables, and other similar visual aids are devised to show the progress that is being made from one year to another. The enforcement index is one measurement which is not used by the division, but other standards have been established.

In summary, it was pointed out that probably the most urgent need of the APB, and in fact of the entire division, is the dual need for more manpower and better training for all officers.

Case Summary No. 4

The fourth case study was completed at the Battle Creek, Michigan, Police Department. This department repre-

sents the smallest agency in terms of manpower and geographic area served, although it is still a specialized organization. The City of Battle Creek is located in the south-central Michigan area and presently has a population of about 47,000 persons.

The Traffic Bureau is included as a functional part of the Patrol (or Uniform) Division and has the following responsibilities to perform: (1) direction of traffic law enforcement efforts, (2) supervision of accident investigation, (3) control of parking enforcement, (4) control of school crossing guards, and (5) planning and execution of all traffic engineering activities within the city. This variety of tasks is supervised by the lieutenant in command of the Traffic Bureau. His immediate supervisor is the captain of the Patrol Division.

The first of these responsibilites and the one about which we are primarily concerned here is, again, that of directing traffic law enforcement activity. Since Patrol Division units handle all of this sort of activity, the Traffic Bureau is essentially a staff unit, in the sense that they provide enforcement information to the patrol captain who, in turn, interprets this data to each shift

commander. (It should be mentioned here that in all four case studies that were conducted, the traffic division was primarily regarded as a staff or informational unit, in that they were expected to furnish enforcement data for the patrol division.)

The Traffic Bureau in Battle Creek has what was described as a very acceptable working relationship with the Patrol Division and assignments are usually made in agreement with the Bureau's recommendation. In this sense, the status of the Bureau appears very good at the present time.

Traffic accident records are utilized by the Bureau as a base for enforcement planning and for traffic engineering changes. Summaries are made of both accident statistics and enforcement information (in Battle Creek this includes a summary of traffic radar activities) on forms developed within the Bureau itself. A small 3 x 5 card index file is also maintained which lists accidents by date of occurence for major streets and intersections. The reports themselves are filed by location in the Records Bureau.

Several very large-scale spot maps are kept in the Bureau to indicate precisely the location of all acci-

dents within the city for the present period and for all accidents of the previous year. A smaller map of the central business district is maintained separately to prevent this larger map from becoming too cluttered. As color pins are added to the map for each month's accidents, a photograph is made. This makes possible a comparison between months of the previous year to note effects of enforcement programs or engineering changes. It should be pointed out that these several maps, primarily because of their size and good detail, make an excellent impression of the type of work that is being done by the Bureau.

To supplement the spot maps, the Bureau also prepares line and bar charts to indicate the amount and type of progress that is being made. These serve as one evaluative tool.

Additional evaluative methods that are utilized include the enforcement index, which is now computed using only the categories on the accident reports that indicate serious injury or death (K, A, B). The index is figured for each of the three shifts for every month. The percentage of summons issued at all accidents is also recorded.

Communication of the most essential statistical

data and other information relating to the selective enforcement program is handled through the use of two types of directives from the lieutenant's office. These information sheets are sent weekly to (1) the Patrol Division captain, and (2) to each of the shift commanders. At the time that these are sent out, comments are made on what types of enforcement procedures should be followed to improve effectiveness in each of the four police districts of the city.

III. SUMMARY AND COMPARISON OF THE CASE STUDIES WITH THE MODEL

From the results of the case studies that were presented, several comments are now in order regarding their relationship to the model.

It can generally be stated that of the four case studies completed, none followed the recommendations of the model exactly through every step. The following comparison is given to illustrate the several variations and similarities between the model and the case studies.

Step 1. Recognition of the traffic law enforcement role. Although there was a wide variation in the types of police traffic responsibilities that each division

was expected to perform, traffic law enforcement activities (selective enforcement activities) received favorable support from the other major factions within the department. The size of the department, the method of organization, and the degree of specialization that was evidenced, were major factors in this regard.

Step 2. Analysis of the traffic law enforcement problems of the community. In each of the case studies, it was apparent that the local enforcement problems were well known to traffic division officials. Again, each department seemed satisfied with its approach to these problems.

Step 3. Determination of goals and objectives. A primary goal, if not the primary goal, of each department surveyed, was to reduce traffic accidents (to move traffic more safety and efficiently). It was felt that selective enforcement was the answer as far as the police role in the total traffic safety effort was concerned.

Step 4. Development of plans and policy. Specific plans or written policies concerning selective enforcement procedures appeared as an important part of each depart-

ment's enforcement program.

Step 5. Initiation of administrative procedures. There was evidenced a wide variation in the operational procedures for selective enforcement in each case study presented. The most notable differences were (a) in the method that accident reports were filed, (b) in the type of information that was kept on spot maps, and (c) in the methods and forms utilized for communication and evaluation. In addition, only one department made extensive use of an enforcement spot map, while other agencies kept this type of information on summary forms only.

Two of the case studies revealed the use of a serial number system for filing accident reports, while two departments filed by location only. However, summaries of enforcement activity and accident data according to time, place, and type of violation were utilized by all the departments. Although the basic purpose of these forms was acknowledged to be similar, it was noted that each agency had developed its own particular form for different purposes (these will be illustrated in the Appendix).

Manpower assignments for traffic patrol were, in every case, made on the basis of this data; however,

general patrol assignments were given primary emphasis.

Step 6. Communication. Communication of enforcement information to the field units was generally accomplished through the use of a selective enforcement bulletin or memo-type form or through verbal communication with those persons concerned with the supervision of patrol personnel. Where the traffic division assumed direct control over some of its own personnel, special orders were issued periodically describing precise assignments and types of violations to be enforced.

Step 7. Evaluation. The enforcement index was found to be the most commonly used evaluative tool, although two of the agencies described used other methods of evaluation tailored to their own program.

Step 8. Introduction of necessary changes. When adjustments in the selective enforcement program were necessary or apparent from evaluative measurements, or when manpower for traffic patrol was reduced, special directives were generally issued to the patrol commanders describing what reassignments were necessary.

Step 9. Development of alternative plans. All of the agencies surveyed had special assignment plans laid out in advance for special occasions or events. This included parade route maps, etc., for one department.

This summary and comparison concludes this chapter. Chapter V, which follows, is concerned with some general summary comments, as well as specific conclusions regarding the thesis as a unit.

CHAPTER V

SUMMARY AND CONCLUSIONS

I. SUMMARY

In this thesis the concept of selective assignment of police manpower for traffic law enforcement purposes has been examined from several points of view. A model or set of guidelines for a selective enforcement program was proposed as an essential part of the research. This model, as described in an earlier chapter, was, in turn, compared with some of the pertinent literature on the topic of selective traffic law enforcement and methods of patrol deployment, as well as with several case studies in this area.

The major purpose of this chapter is, therefore, to summarize briefly the findings from the review of the literature, and the results of the case studies, to determine finally whether or not the model is a valid and feasible plan for selective enforcement operations.

First, from the review and analysis of the literature, it would appear that the model, as proposed, is essentially valid in its description of certain of the most basic elements of selective enforcement. More specifically,

however, some of the similarities between those plans discussed in Chapter III and the model were revealed as follows: (1) Both the literature and the model emphasize strongly the use of accident records as the most basic source of information from which plans for selective enforcement activity may be developed. (2) The utilization of accident and enforcement summary forms is recommended by the plans reviewed in Chapter III and the model. (3) Spot maps, especially those needed to indicate high accident locations, are suggested by all of the plans discussed as well as the model. Assignment of manpower for traffic law enforcement purposes should be accomplished through the use of the information obtained from these summary forms and the spot map(s). (4) In most instances, the plans noted in the literature urged the adoption of some type of enforcement bulletin or some similar device for the purposes of communicating selective enforcement information to the patrol division commanders, shift supervisors, and the individual patrol units. The model did not point out precisely what type of form should be used for this purpose, only that it be issued in concise form and often enough to indicate specifically those areas where effort should be concentrated. (5) Finally,

where evaluation is concerned, the most often mentioned measurement was the enforcement index, although other evaluative ratios or indexes were also recommended. Here, again, the model did not specifically urge the adoption of any one particular type of measure, since it was felt that this should be left up to the judgment of the individual departments and officers.

Certain variations also were evident between the literature and the model, and these are listed as follows: (1) There was no mention in those plans reviewed concerning the recognition of the traffic law enforcement role. This recommendation, however, was included in the model as Step 1. (2) The need for preliminary analysis of individual traffic law enforcement problems in the community was not noted in the literature as being an essential part of selective enforcement, whereas this was considered to be an important factor insofar as the model itself was concerned. (3) There was little discussion regarding the determination of the various objectives or goals of selective enforcement in those reviewed, although most of the plans pointed out that selective enforcement, in and of itself, should be considered as a goal. (4) All of the plans reviewed

stressed the importance of accident records as a base for selective enforcement planning, although there was no total agreement as to how these reports were to be filed. The filing problem becomes obviously more complex with the increase in the volume of reports that are handled by the department. Many of the plans that were noted also called for some type of key punch operation to facilitate the handling of the data from these records. (5) The necessity for making adjustments in the original enforcement plan and how to expedite these changes was only casually mentioned in the literature. (6) Finally, only one plan that was reviewed made note of the fact that there should be some provision made to handle special events or occasions when the original plan was no longer feasible.

It should be noted also that several steps that were suggested by the model, as we have indicated, were not specifically mentioned in the literature, and this appears to be primarily because they were not regarded as strictly procedural considerations. In addition, several of these plans indicated a more detailed system by which precise manpower requirements and, thereafter, assignments, could be determined. This, however, was not the purpose of the model.

The model remains in this sense merely to provide a basic frame of reference from which a more specific set of procedures may be developed according to the needs and objectives of individual departments.

The case studies, it is felt, generally supported the model, although here again, depending upon the size of the department itself, certain definite variations, as well as common features, were recognized.

Several comments are now in order regarding these problems: (1) the first factor that must be recognized is that there was evidenced in these four case studies themselves a wide variation in the types of operational procedures utilized in selective enforcement activities. The most notable of the differences in this area were (a) in the way that accident reports were filed; i.e. the larger departments filed by serial number or some other method other than by location; (b) in the information that was kept on spot maps; and (c) in the methods of communication and evaluation. (2) The traffic division in all cases was found to be primarily a staff unit, although direct supervision was recognized over certain specialized personnel assigned specifically to the division. (3) It now appears

that several parts of the model were not particularly essential as far as the results of the case studies were concerned. More specifically, in connection with step 1 of the model (recognition of the traffic law enforcement role), this was not, according to the case studies, a significant problem as far as selective enforcement plans were concerned. It can also be stated at this point that in addition to this initial recommendation of the model, that steps 2, 3, 4, 8 and 9 did not seem to be particularly significant either as far as actual operational procedures were concerned. Considerations such as were noted in these several steps appeared to be the obvious aspects of the total program. More emphasis was directed, in each of the case studies reviewed, toward the mechanical features of the operation rather than at these other aspects of selective enforcement.

II. NEED FOR FURTHER RESEARCH

From the statements noted in the section just concluded, it is necessary at this point to make some suggestions for further research.

First, and most important, the <u>effectiveness</u> of selective enforcement methods, and especially those that

were reviewed, needs to be evaluated through a strictly controlled research design that, hopefully, could provide some further answers for police traffic administrators regarding this problem. It is felt that research of this nature would, if conducted properly, be of extreme usefulness in planning for selective enforcement.

Second, this future research could conceivably utilize portions of this study, particularly the chapters that were concerned with the review of the literature and the case studies that were developed, in comprising a more adequate hypothesis. It is felt that some duplication of research effort could be avoided in this way.

III. CONCLUSION

The results of this study appear to indicate that the model is valid only in that it could be used to provide a frame of reference from which a basic selective enforcement program could be developed.

It can be concluded, therefore, that the hypothesis was not validated, since no specific conclusions either substantially supporting or entirely discounting the model can be drawn. A totally new approach to this problem seems necessary.

A P P E N D I X

APPENDIX A

INTERVIEW GUIDE

1. What are the functions or responsibilities of the traffic division?

2. Does the traffic division receive favorable support and cooperation from: (a) the chief; (b) the district and division commanders; and (c) the troops?

3. What are the major objectives and policies of the traffic division?

4. How are accident records used in selective enforcement activity?

5. How are these reports filed?

6. Are accident spot maps maintained?

7. Are maps kept to show enforcement activity?

8. For what length of time are these maps kept?

9. What types of summaries of accident statistics and enforcement activity are utilized in selective enforcement?

10. On what basis are traffic manpower assignments made?

11. How is enforcement information or data transmitted to the field units or district commanders?

12. How are the results of the program evaluated?

13. How are adjustments in the method of assignment made?

14. Do any alternative plans exist to handle special events or occasions?

15. What are the needs of the division that could help improve your present system?

B I B L I O G R A P H Y

BIBLIOGRAPHY

A. BOOKS

Baker, J. Stannard and William R. Stebbins, Jr. Dictionary of Highway Traffic. Chicago: Northwestern University Traffic Institute, 1960.

Chapman, Samuel G. Police Patrol Readings. Springfield, Illinois: Charles C. Thomas, Publisher, 1960.

Fosdick, Raymond B. American Police Systems. New York: Century Company, 1920.

Gourley, G. Douglas and Allen P. Bristow. Patrol Administration. Springfield, Illinois: Charles C. Thomas, Publisher, 1961.

International City Managers' Association. Municipal Police Administration. Fourth Edition. Chicago: ICMA, 1954.

Leonard, V. A. Police Organization and Management. Second Edition. Brooklyn: The Foundation Press, Incorporated, 1964.

Smith, Dean R. Computer Applications in Police Manpower Distribution. Chicago: International Association of Chiefs of Police, 1961.

Wilson, Orlando W. Distribution of Police Patrol Force. Chicago: Public Administration Service, 1941.

Wilson, Orlando W. Police Administration. Second Edition. New York: McGraw-Hill Book Company, Incorporated, 1963.

Wilson, Orlando W. Police Planning. Springfield, Illinois: Charles C. Thomas, Publisher, 1952.

Wilson, Orlando W. Police Records, Their Installation and Use. Chicago: Public Administration Service, 1942.

B. PERIODICALS

Brown, A. T. "Selective Enforcement", Traffic Digest and Review, (July, 1960) pp. 16-19.

Eastman, George D. "The Flexible Unit - A Unique Striking Force", Police (August, 1960).

Gleason, John M. "Elements of Selective Enforcement", Traffic Quarterly (April, 1950), pp. 214-224.

Hill, Don. "Short Form Selective Enforcement", Traffic Safety (Research Review), (December, 1957) pp. 75-79.

Vernon, Wyman W. "Oakland Appraises its Manpower Distribution", Police (March-April, 1957).

Vollmer, August. "The Police Beat", The Police Yearbook, International Association of Chiefs of Police, 1933.

C. PUBLICATIONS OF THE GOVERNMENT, LEARNED SOCIETIES, AND OTHER ORGANIZATIONS

Ficklin, John. "Formula for Determining the Number of Police Officers for a City". Paper read at a police chiefs' meeting in Vallejo, California, October 20, 1959.

National Safety Council. Traffic Safety Memo 107. "Accident Records as a Base for City Enforcement Planning". Chicago: National Safety Council, 1960.

New York City Police Department. "Operation 25", Michael Murphy, Commissioner, 1955.

Northwestern University Traffic Institute. Municipal Police Traffic Supervision. Chicago: Northwestern University Traffic Institute, 1955.

Northwestern University Traffic Institute. Traffic Patrol. Chicago: Northwestern University Traffic Institute, 1961.

Oakland, California, Police Department. Report of the Bureau of Administration, Planning and Research Division, 1960-1962.

A P P E N D I X B

DATA FORMS

LANSING POLICE DEPARTMENT

LANSING POLICE DEPARTMENT

TRAFFIC DIVISION

MICHIGAN MOTOR VEHICLE REGISTRATION 1960 THRU 1964

1960	3,689,786	+15%
1961	3,758,010	+13%
1962	3,869,238	+10%
1963	4,025,493	+ 5%
1964	4,257,621	--

MICHIGAN LICENSED DRIVERS 1960 THRU 1961

1960	1,636,084	+ 1%
1961	1,491,443	+10%
1962	1,738,586	- 5%
1963	1,733,967	- 5%
1964	1,652,614	--

LANSING TRAFFIC LAW ENFORCEMENT 1960 THRU 1964

1960	20,924	+37%
1961	18,834	+52%
1962	22,178	+29%
1963	25,244	+13%
1964	28,757	--

LANSING ACCIDENT EXPERIENCE 1960 THRU 1964

1960	5,107	+37%
1961	5,094	+37%
1962	6,139	+14%
1963	6,559	+ 6%
1964	7,000	--

LANSING POLICE DEPARTMENT

TRAFFIC DIVISION

SELECTIVE ENFORCEMENT BULLETIN FOR APRIL 1965:

The accident experience for January and February 1965 for the City of Lansing was 1464 accidents. Of this total, 275 accidents resulted in injury.

During the same period in 1964, the City had 1191 accidents of which 232 were injury type accidents. The increase this year to date is 18.5% in total accidents and in increase of 15.6% in injury accidents.

The purpose of preparing an enforcement bulletin is to give the patrol officer an opportunity to study and evaluate the accident experience in his patrol district and to be able to determine the time, place, and the violations which are causing the accidents in his district.

IT IS WELL-KNOWN THAT 92% OF ALL TRAFFIC ACCIDENTS ARE CAUSED BY HUMAN BEHAVIOR, WHICH IN TURN BREAKS DOWN TO POOR DRIVING HABITS. THE BIG PROBLEM AND CHALLENGE IN TRAFFIC LAW ENFORCEMENT IS TO CHANGE THE MOTORISTS' POOR DRIVING HABITS. THIS BULLETIN IS INTENDED TO POINT OUT TO YOU, THE TIME, THE PLACE, AND THE SPECIFIC POOR HABITS OR VIOLATIONS THAT APPEAR FREQUENTLY IN ACCIDENT EXPERIENCE. ALL OFFICERS SHOULD CAREFULLY READ THIS BULLETIN AND FOLLOW THE INSTRUCTIONS FOR PATROL AS OFTEN AND AS CLOSELY AS PRACTICAL.

The following violations were responsible for the greatest percentage of accidents:

VIOLATION	CAUSE OF ACCIDENTS	TRAFFIC ARRESTS
SPEEDING	41.05%	45.73%
VIOL. RT. OF WAY	27.90%	8.83%
IMP. BACKING & START	9.47%	2.76%
IMP. TURNS	7.42%	12.30%

The enforcement effort on right of way violations should be increased. The percentage of speeding arrests may seem high; however, in this group, basic speed violations are figured and this tends to show a false picture. Additional enforcement on speeding is needed to reduce the number of injury accidents which we are experiencing.

A comparison of the accidents by day-of-week, as compared to the enforcement effort by day-of-week, indicates:

Day	Accidents	Enforcement
Monday	185 - 12.64%	577 - 14.17%
Tuesday	177 - 12.09%	735 - 18.06%
Wednesday	183 - 12.50%	658 - 16.16%
Thursday	289 - 19.74%	587 - 14.42%
Friday	296 - 20.22%	724 - 17.98%
Saturday	229 - 15.64%	415 - 10.18%
Sunday	105 - 7.17%	368 - 9.03%
	1,464 -100.00%	4,064 -100.00%

It is desirable to match the enforcement effort by day-of-week with the accident experience by day-of-week: therefore, enforcement should be increased on Thursday, Friday, and Saturday.

DISTRICT #1

44 property damage accidents and 12 injury accidents occured in this district. This represents 3.83% of the total accidents and 4.64% of the injury accidents. 5.15% of the enforcement occurred in this district. The number of injury accidents is high for the accident experience. Higher speed zones is perhaps the reason. Continue the present rate of enforcement.

High accident frequency periods for this district are: 6:00 a.m. to 8:00 a.m.; 3:00 p.m. to 6:00 p.m.; 9:00 p.m. to 11:00.

Suggestion for patrol: Line patrol Grand River Avenue during the above mentioned hours.
Violations to watch for: Improper passing and lane usage; following too close and red light violations. Turning movements are causing accidents at the intersection of Logan and Grand River.

LANSING POLICE DEPARTMENT

TRAFFIC DIVISION

SOLO MOTORCYCLE ASSIGNMENTS BY
HOUR AND AREA ON A PRIORITY BASIS

TIME: 6:00 A.M. to 8:00 A.M.

#1. Cedar St. from Michigan Ave. to Jolly Rd.
#2. W St. Joseph, W Main from river to W. City Limits.
#3. N Cedar and N Larch Sts. from Michigan Ave. to N City Limits

TIME: 10:00 A.M. to 1:00 P.M. and 3:00 P.M. to 6:00 P.M.

#4. Washington Ave., Capitol Ave., Grand Ave., between Oakland and Main St.
#5. Saginaw St., Oakland Ave., from River to W. City Limits.
#6. S Cedar St., from Jolly Rd. to Kalamazoo St.
#7. W St. Joseph and W Main from River to W. City Limits.

TIME: 3:00 P.M. to 6:00 P.M.

#8. Michigan Ave. from Cedar St. to E City Limits.
#9. Logan St., Grand River to Jolly Rd.
#10. N Cedar and N Larch Streets from Kalamazoo St. to N City Limits.
#11. Same as #4.

PATROL DISTRICTS:

There will be four (4) patrol districts. Each motorcycle officer will be assigned to a district plus a priority line patrol assignment. Each officer will be expected to know the priority area and the time he is expected to patrol the assigned area.

North Side: All area North of Main Street.
South Side: All area South of Main Street.
East Side: All area East of Washington Avenue.
West Side: All area West of Washington Avenue.

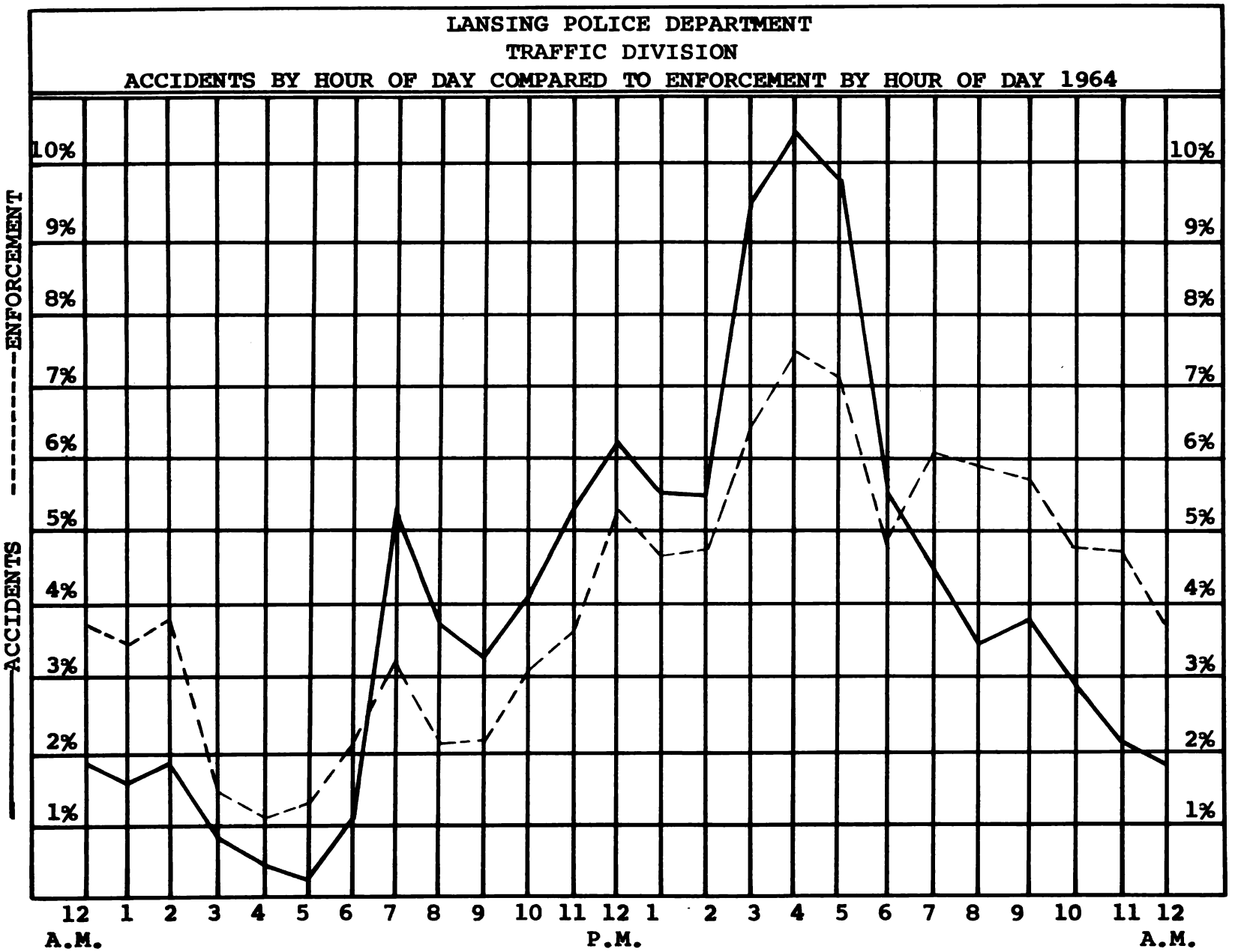
Assignment Example:

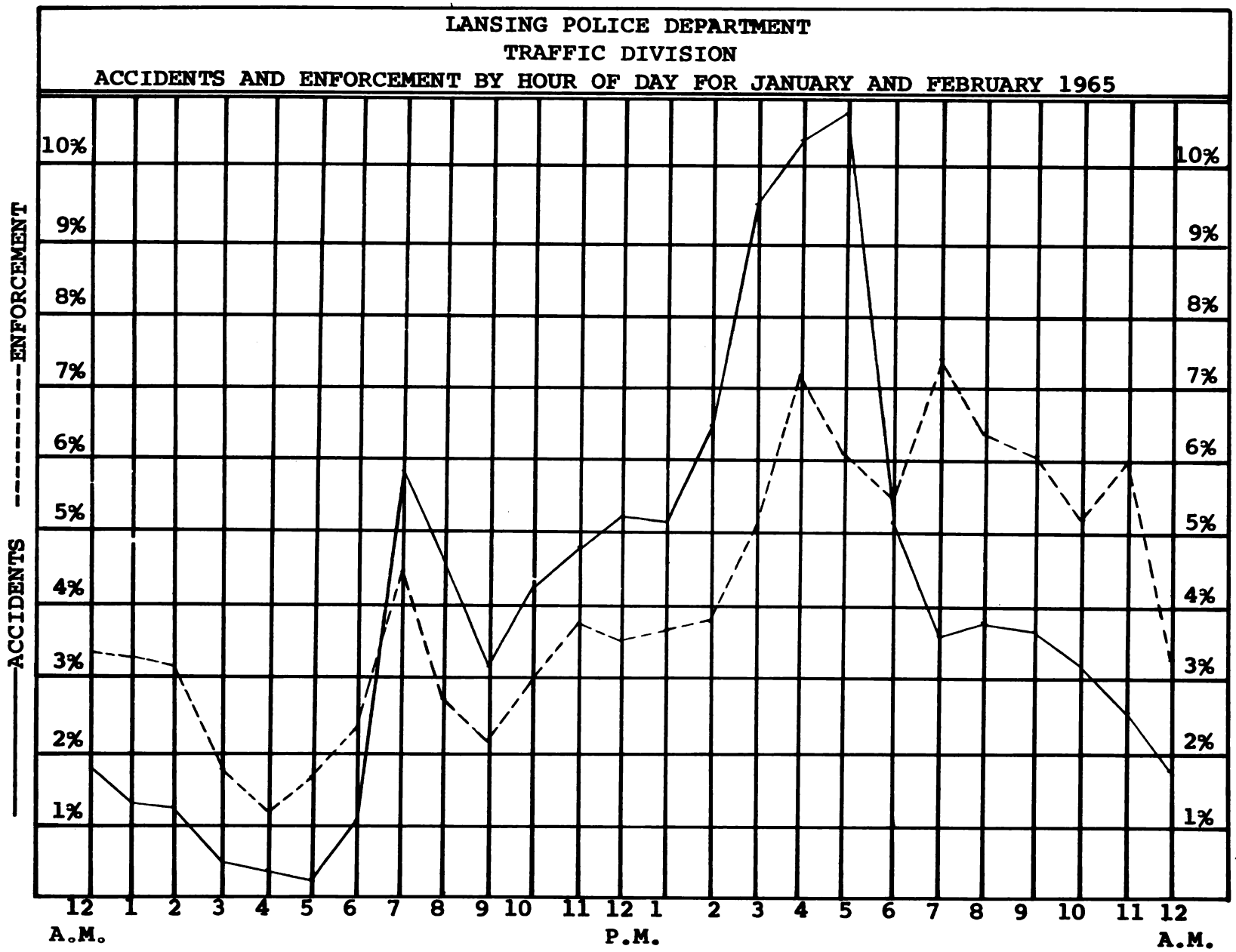
Officer Doe: W-3 W=district, and 3=the priority area.

LANSING POLICE DEPARTMENT
TRAFFIC DIVISION

Date _____ 19____ DAILY TALLY SHEET FOR ACCIDENTS Day of week_____

	INV.	A.P.B. ARREST	TOTAL ACC. ARRESTS	NOT INV.	TOTAL ACCS.
FATAL ACCIDENTS					
Pedestrians					
Others					
PERSONS KILLED					
Pedestrians					
Others					
PERSONAL INJURY					
Pedestrians					
Others					
PERSONS INJURED					
Pedestrians					
Others					
PROPERTY DAMAGE ACC'S.					
T O T A L S					


LANSING POLICE DEPARTMENT
TRAFFIC DIVISION
ACCIDENTS BY HOUR OF DAY COMPARED TO ENFORCEMENT BY HOUR OF DAY 1964
ACCIDENTS
ENFORCEMENT
10%
9%
8%
7%
6%
5%
4%
3%
2%
1%
12 1 2 3 4 5 6 7 8 9 10 11 12 1 2 3 4 5 6 7 8 9 10 11 12
A.M.
P.M.
A.M.


LANSING POLICE DEPARTMENT
TRAFFIC DIVISION
ACCIDENTS AND ENFORCEMENT BY HOUR OF DAY FOR JANUARY AND FEBRUARY 1965
ACCIDENTS ——— ENFORCEMENT - - - - -
10%
9%
8%
7%
6%
5%
4%
3%
2%
1%
12 1 2 3 4 5 6 7 8 9 10 11 12 1 2 3 4 5 6 7 8 9 10 11 12
A.M.
P.M.
A.M.

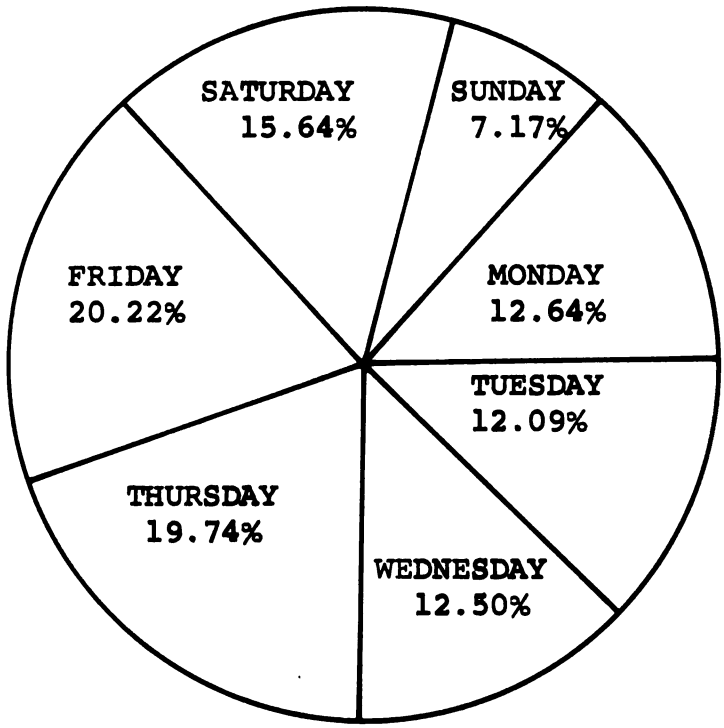
LANSING POLICE DEPARTMENT

TRAFFIC DIVISION

ACCIDENT EXPERIENCE FOR JANUARY AND FEBRUARY 1965

ACCIDENTS BY DAY OF WEEK

DAY OF WEEK	# OF ACC.	% OF TOTAL
MONDAY	185	12.64%
TUESDAY	177	12.09
WEDNESDAY	183	12.50
THURSDAY	289	19.74
FRIDAY	296	20.22
SATURDAY	229	15.64
SUNDAY	105	7.17
TOTAL	1,464	100.00%



A P P E N D I X C

DATA FORMS

GRAND RAPIDS POLICE DEPARTMENT

GRAND RAPIDS POLICE DEPARTMENT

Hazardous Violation by Hour of Day and Day of Week

Month:_____Year:____

Number and Percentage of Violations: Hour of Day	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Total	Per Cent Total
12:00-12:59AM									
1:00- 1:59									
2:00- 2:59									
3:00- 3:59									
4:00- 4:59									
5:00- 5:59									
6:00- 6:59									
7:00- 7:59									
8:00- 8:59									
9:00- 9:59									
10:00-10:59									
11:00-11:59									
12:00-12:59PM									
1:00- 1:59									
2:00- 2:59									
3:00- 3:59									
4:00- 4:59									
5:00- 5:59									
6:00- 6:59									
7:00- 7:59									
8:00- 8:59									
9:00- 9:59									
10:00-10:59									
11:00-11:59									
Not Stated									
TOTAL									
Percent Total									

GRAND RAPIDS POLICE DEPARTMENT

Accidents by Hour of Day and Day of Week

Month:_____Year:____

Number and Percentage of Violations: Hour of Day	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Total	Per Cent Total
12:00-12:59AM									
1:00- 1:59									
2:00- 2:59									
3:00- 3:59									
4:00- 4:59									
5:00- 5:59									
6:00- 6:59									
7:00- 7:59									
8:00- 8:59									
9:00- 9:59									
10:00-10:59									
11:00-11:59									
12:00-12:59PM									
1:00- 1:59									
2:00- 2:59									
3:00- 3:59									
4:00- 4:59									
5:00- 5:59									
6:00- 6:59									
7:00- 7:59									
8:00- 8:59									
9:00- 9:59									
10:00-10:59									
11:00-11:59									
Not Stated									
TOTAL									
Percent Total									

GRAND RAPIDS POLICE DEPARTMENT

Number and Percentages of Violations in Accidents and Comparable Traffic Arrests

Month-Year

	Non-Fatal Accidents		All Accidents		Non-Acc. Arrest		All Arrest	
	Number	Percentage	Number	Percent	Number	Percentage	Number	PC
Driving Under the Influence of Liquor								
Illegal Speed								
Right of Way								
Wrong Side Wrong Way								
Illegal Overtaking								
Passed Stop Sign								
Disregarded Traffic Sig.								
Followed Too Close								
Illegal Turns								
Failed to Signal								
Unsafe Starting								
Other Haz. Violations								
TOTAL								
Per Cent Total								

GRAND RAPIDS POLICE DEPARTMENT

Number and Percentages of Violations in Accidents and Comparable Arrest

Month:_____ Year:_____

Districts	Non-Fatal Number	Non-Fatal Percentages	All Accidents Number	All Accidents Percentages	Traffic Arrest Number	Traffic Arrest Percentages
1.						
2.						
3.						
4.						
5.						
6.						
7.						
8.						
9.						
10.						
11.						
12.						
13.						
14.						
15.						
Not-Stated						
TOTAL						
Per Cent Total						

GRAND RAPIDS POLICE DEPARTMENT
Selective Enforcement Report

_____
Month-Year

	THIS MONTH	SAME MONTH LAST YEAR	THIS YEAR TO DATE	SAME PERIOD LAST YEAR
INDEX				
TRAFFIC ACCIDENTS				
All Accidents				
Fatal				
Non-Fatal				
Property Damage				
TRAFFIC ENFORCEMENT				
Hazardous Violations				
Non-Hazardous Violations				
Total Violations				
Hazardous Parking				
Other Parking				
Total Parking				
_____				
TOTAL ENFORCEMENT				
_____				

GRAND RAPIDS POLICE TRAFFIC DIVISION DAILY REPORT
COMPILED FOR STATISTICAL DIVISION IBM

DATE_____

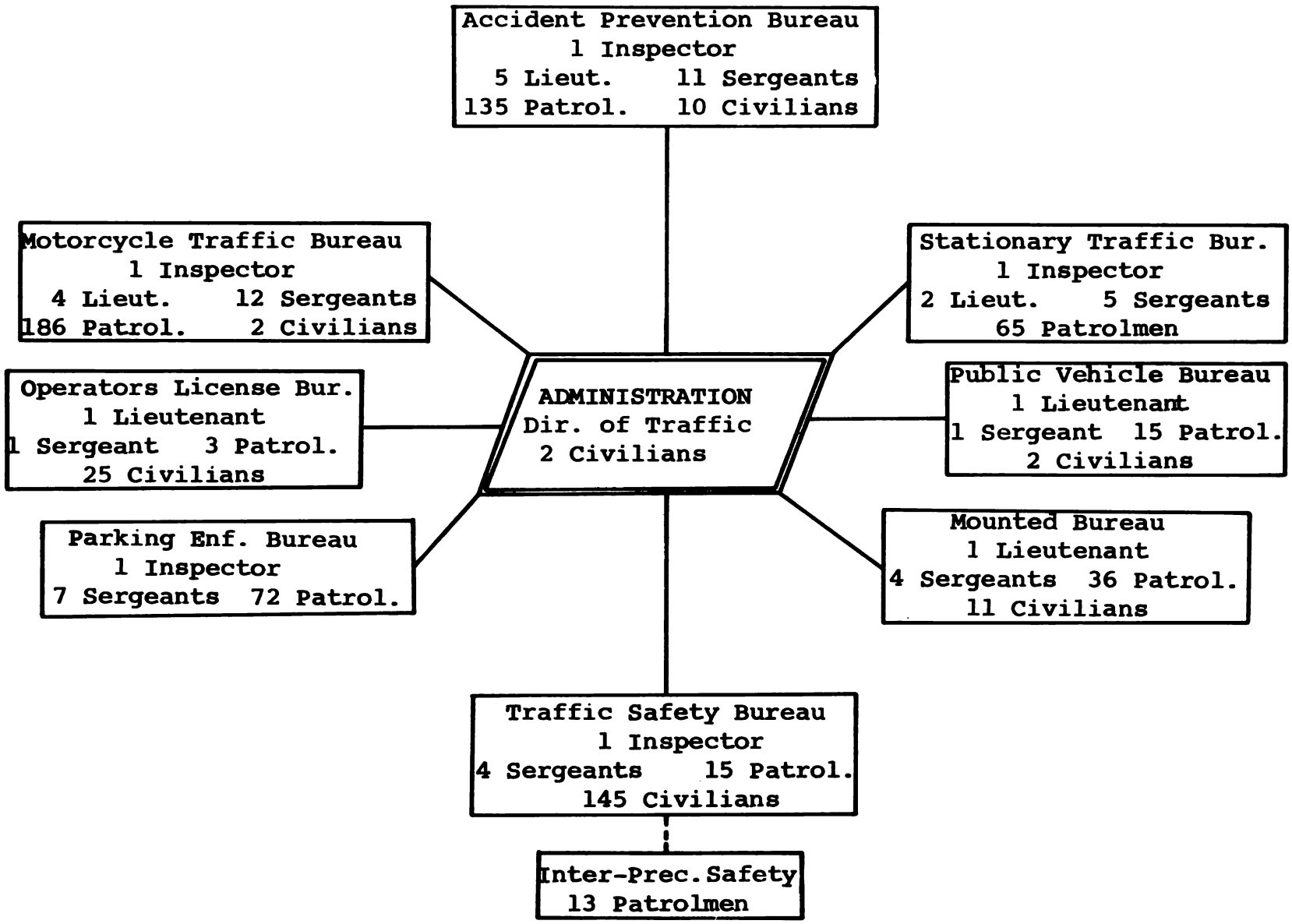
ACCIDENTS		1st RELIEF 7AM - 3PM	2nd RELIEF 3PM - 11PM	3rd RELIEF 11PM - 7AM
FATAL	At scene			
	Not at scene			
PERSONAL INJURY	At scene			
	Not at scene			
PROPERTY DAMAGE	At scene			
	Not at scene			
TOTAL	At scene			
	Not at scene			

PARKING VIOLATIONS	1st RELIEF 7AM - 3PM	2nd RELIEF 3PM - 11PM	3rd RELIEF 11PM - 7AM
HAZARDOUS			
NON HAZARDOUS			
TOTAL PARKING			

A P P E N D I X D

DATA FORMS

DETROIT POLICE DEPARTMENT


Accident Prevention Bureau
1 Inspector
5 Lieut. 11 Sergeants
135 Patrol. 10 Civilians
Motorcycle Traffic Bureau
1 Inspector
4 Lieut. 12 Sergeants
186 Patrol. 2 Civilians
Stationary Traffic Bur.
1 Inspector
2 Lieut. 5 Sergeants
65 Patrolmen
Operators License Bur.
1 Lieutenant
1 Sergeant 3 Patrol.
25 Civilians
ADMINISTRATION
Dir. of Traffic
2 Civilians
Public Vehicle Bureau
1 Lieutenant
1 Sergeant 15 Patrol.
2 Civilians
Parking Enf. Bureau
1 Inspector
7 Sergeants 72 Patrol.
Mounted Bureau
1 Lieutenant
4 Sergeants 36 Patrol.
11 Civilians
Traffic Safety Bureau
1 Inspector
4 Sergeants 15 Patrol.
145 Civilians
Inter-Prec. Safety
13 Patrolmen

DETROIT POLICE DEPARTMENT
ACCIDENT PREVENTION BUREAU

PRECINCT _____

MOTOR VEHICLE

MONTH OF:

ACC.	%	ACC.	%	CAUSE	ENF.	%	ENF.	%
				1. EXCEED SAFE SPEED				
				2. FOLLOW TO CLOSE				
				3. F/Y R/W TO VEHICLE				
				4. IGNORE TRAFFIC DEVICE				
				5. IMPROPER TURNS				
				6. VARY COURSE OF TRAVEL				
				7. IMPROPER BACKING				
				8. LEFT CENTER OF STREET				
				9. IGNORE RED SIGNAL				
				TOTALS				
				PEDESTRIAN				
				1. DRIVER INTERFERE WITH PEDESTRIAN				
				2. PEDESTRIAN INTERFERE WITH VEHICLE				
				TOTALS				
				GRAND TOTAL				

DETROIT POLICE DEPARTMENT
ACCIDENT PREVENTION BUREAU
Precinct_____Month_____19__

PLATOON-1	MOTOR VEHICLE Acc.	%	Mov.Enf.	%	PEDESTRIAN Acc.	%	Ped.Enf.	%
12 - 12:59								
1 - 1:59								
2 - 2:59								
3 - 3:59								
4 - 4:59								
5 - 5:59								
6 - 6:59								
7 - 7:59								
T O T A L								
PLATOON-2								
8 - 8:59								
9 - 9:59								
10 - 10:59								
11 - 11:59								
12 NOON								
1 - 1:59								
2 - 2:59								
3 - 3:59								
T O T A L								
PLATOON-3								
4 - 4:59								
5 - 5:59								
6 - 6:59								
7 - 7:59								
8 - 8:59								
9 - 9:59								
10 - 10:59								
11 - 11:59								
T O T A L								
GRAND TOTAL								

SELECTIVE ASSIGNMENT OF APB UNITS

AREA_____ PERIOD OF_____

HOUR OF	TOTAL ACC.	APB INV.	APB %	APB CARS ASSIGNED	%	REMARKS
12:00 A.M.						
1:00 A.M.						
2:00 A.M.						
3:00 A.M.						
4:00 A.M.						
5:00 A.M.						
6:00 A.M.						
7:00 A.M.						
8:00 A.M.						
9:00 A.M.						
10:00 A.M.						
11:00 A.M						
12:00 P.M.						
1:00 P.M.						
2:00 P.M						
3:00 P.M.						
4:00 P.M						
5:00 P.M.						
6:00 P.M.						
7:00 P.M.						
8:00 P.M.						
9:00 P.M.						
10:00 P.M.						
11:00 P.M.						
T O T A L						

DETROIT POLICE DEPARTMENT
ACCIDENT PREVENTION BUREAU

Precinct

Month of

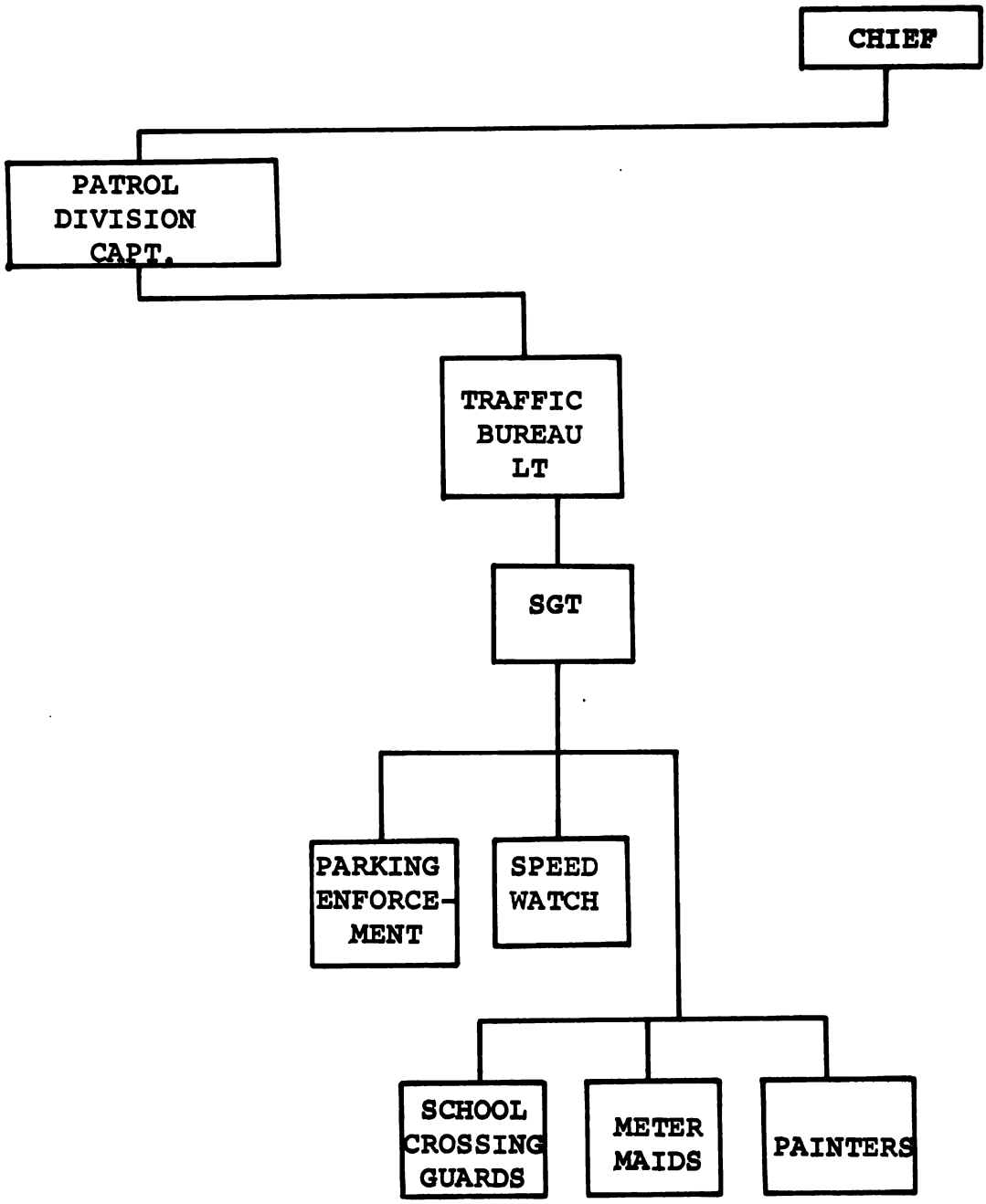
MOTOR VEHICLE ACC.	%	ENF.	%		PEDESTRIAN ACC.	%	ENF.	%
				MON				
				TUE				
				WED				
				THU				
				FRI				
				SAT				
				SUN				
				TOTALS				
SCOUT CAR AREA								
				1				
				2				
				3				
				4				
				5				
				6				
				7				
				8				
				9				
				10				
				11				
				12				
				13				
				14				
				15				
				16				
				17				
				18				
				TOTALS				

A P P E N D I X E

DATA FORMS

BATTLE CREEK POLICE DEPARTMENT

BATTLE CREEK POLICE DEPARTMENT
Traffic Division



UNIFORM PATROL CAPT.
FROM TRAFFIC BUREAU DATE (WEEKLY)

DATE	SHIFT	H.T.	%	ACC.	%	N.H.T.	COMMENTS
TOTAL							

	3-11					
TOTAL						

	11-7					
TOTAL						

Lieut.

Date

FROM TRAFFIC BUREAU

RADAR

DATE	H.T.	%	N.H.T.
TOTAL			

N.E.	N.W.	S.E.	S.W.	TOTAL	%

SUMMONS

ACCIDENTS

DATE	N.E.	N.W.	S.E.	S.W.	TOTAL	N.E.	N.W.	S.E.	S.W.	TOTAL	%
TOTAL											

COMMENTS

SHIFT COMMANDERS

BATTLE CREEK POLICE DEPARTMENT
(Accident and Enforcement Data by Hour of Day and Month)

MONTH YEAR	TOTAL ACC'S.	K	A	B	C	PD	PERSON K	PERSON INJ	% ACC'S	% TKT	HAZ. TKTS	NON-HAZ TKT'S	TKT'D ISSUED AT ACC'S
7-8 AM													
8-9													
9-10													
10-11													
11-12N													
12-1 PM													
1-2													
2-3													
3-4													
4-5													
5-6													
6-7													
7-8													
8-9													
9-10													
10-11													
11-12AM													
12-1													
1-2													
2-3													
3-4													
4-5													
5-6													
6-7													

DEPARTMENT ENFORCEMENT INDEX

7 A.M. - 3 P.M. " " _____

3 P.M. - 11 P.M. " " _____

11 P.M.- 7 A.M. " " _____

% of summons issued at accidents _____

BATTLE CREEK POLICE DEPARTMENT
SUMMONS

DATE SHIFT	HAZARDOUS	TOTAL	%	NON-HAZ.	TOTAL
7-3					
TOTAL					
3-11					
TOTAL					
11-7					
TOTAL					
3 SHIFT TOTAL					

BATTLE CREEK POLICE DEPARTMENT SUMMONS					
DATE SHIFT	NE	NW	SE	SW	TOTAL
7-3					
TOTAL					
3-11					
TOTAL					
11-7					
TOTAL					
3 SHIFT TOTAL					

BATTLE CREEK POLICE DEPARTMENT RADAR					
DATE SHIFT	NE	NW	SE	SW	TOTAL
TOTAL					
3-11					
TOTAL					
11-7					
TOTAL					
3 SHIFT TOTAL					

BATTLE CREEK POLICE DEPARTMENT ACCIDENTS						
DATE SHIFT	NE	NW	SE	SW	TOTAL	%
7-3						
TOTAL						
3-11						
TOTAL						
11-7						
TOTAL						
3 SHIFT TOTAL						

POLICE DEPARTMENT, City of Battle Creek, Michigan									
DATE								TOTAL THIS WEEK	TOTAL LAST WEEK
SPEEDING									
D.T.S.									
D.S.S.									
V.B.S.L.									
C.D.									
R.D.									
P.L.T.									
I.L.U.									
D.U.I.L.									
F.Y.R.W.									
I.L.T.									
I.R.T.									
W.W.S.									
IMP. START									
R.C.G.									
IMP. PASS:									
OTHER HAZ.									
FAL. BRK.									
U.N.N.									
D.W.L.S.									
IMP. LIG.									
IMP. LIC. D.									
N.O.L.O.P.									
N.O.L.									
E.O.L.									
L.S.PD.A.									
W.L.R.									
OTHER N.H.									
TOTAL									