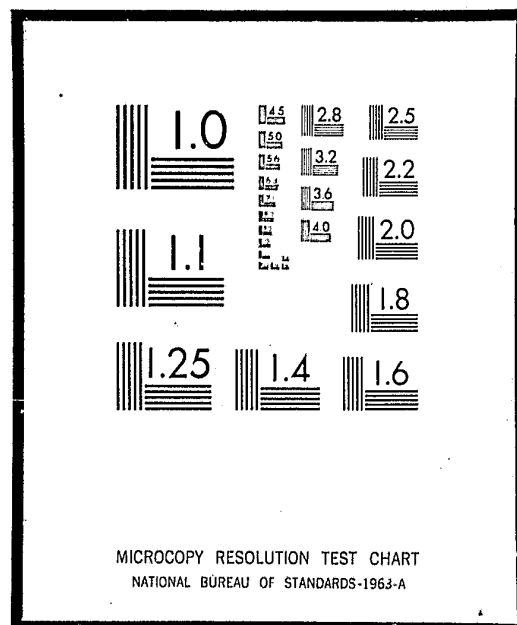


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LAW ENFORCEMENT ASSISTANCE ADMINISTRATION
NATIONAL CRIMINAL JUSTICE REFERENCE SERVICE
WASHINGTON, D.C. 20531

Date filmed

12/3/75

FINAL REPORT
NEW YORK STATE POLICE MANPOWER DEPLOYMENT SURVEY
November, 1974

Prepared by:

Organization and Management Unit of the Division of the Budget
Public Protection Unit of the Division of the Budget
Division of State Police

EXECUTIVE SUMMARY

1. Background

In the early 1960's the Division of State Police created a Statewide patrol post structure, as an outgrowth of an earlier study conducted by the Division of the Budget, which has, during the past fifteen years, been the essential premise upon which patrol manpower deployment and staffing decisions have been made.

Since that time, however, policing and population patterns in the State have changed substantially. The growth in the number and quality of local police agencies, increased crime rates, and major interstate highway construction activity, especially, have impacted the need for State Police patrol services.

In recognition of these changes and at the urging of the 1974 Legislature, the Divisions of the Budget and State Police have jointly undertaken this statewide survey of State Police patrol manpower and deployment methods. The objective of the Task Force, created to conduct the survey, has been to develop a system which would enable the Division of State Police to estimate patrol staff requirements more accurately for budgeting purposes and to deploy available patrol staff where they are most needed.

2. State Police Staffing and Deployment Standards

Although the State Police furnishes a variety of special services to local police agencies and to the public throughout the State, its patrol mission is essentially one of providing patrol coverage to sections of the State not adequately served by local forces. A rational staffing and deployment system for the State Police patrol function, therefore, must be based upon:

- Periodic evaluations of community needs for police patrol services, which are best expressed in terms of police workload, and
- Accurate inventories of State, county, and local patrol resources available to the public.

As a first step, the Task Force developed patrol staffing standards for both "area" posts, i.e., defined geographic areas designed to be the responsibility of one patrol unit, and "line" posts, sections of controlled access highways each of which is also designed for coverage by one unit.

ii.

For area posts the Task Force used a standard of eight hours of patrol coverage per day per 3200 town residents. Correlation analyses conducted by the Task Force found residential population to be a highly accurate predictor of police workload. The standard used by the Task Force was developed by computing the number of residents per available patrol (State, local, and county) in each of the 928 towns served by the State Police and determining the median service level -- 3200 residents per eight hours of patrol coverage.

Patrol information was gathered by means of a Task Force questionnaire mailed to 188 town, village, and county police agencies throughout the State and State Police data from Division work schedules and workload reports.

The line post standard used by the Task Force was based on traffic volume, measured in terms of vehicle miles traveled per day, on congested sections of controlled access highways, and road mileage on less congested sections.

Both area and line post staffing formulas include provisions for reduced patrol coverage at night based upon separate Task Force surveys of the time of day that police workload is likely to occur.

3. Summary of Recommendations

Task Force recommendations are underscored in the body of the report. The major recommendations are briefly summarized below.

a. Area Posts

- i. The design and staffing of State Police area posts should be based on achieving an equitable statewide patrol service standard of 3200 town residents per eight hours of patrol coverage per day and should consider the availability of local and county police resources.
- ii. Based on the recommended standard, the State Police should redeploy the equivalent of seventy-two of its present 571 area patrols, about thirteen percent, from towns which are above the standard to towns which are below the standard. This redeployment, the equivalent of the average amount of time which State Police spend patrolling, as opposed to actually responding to incidents, should be achieved by field commanders largely by revising area post boundaries.

iii.

iii. Beyond redeployment, it will be necessary to allocate an additional 149 eight-hour patrols to the area patrol function, the equivalent of 304 troopers to achieve the recommended service level statewide. For the most part these additional troopers will be assigned to areas not now served by local police agencies.

iv. Available State Police area patrol units should continue to be assigned to the three daily shifts so that night coverage, when calls for assistance are substantially fewer, is half the level of day coverage.

b. Line Posts

i. The Task Force recommends that a policy decision be made that the State Police have primary jurisdiction for most controlled access highways in the State, especially interstate highways. (A listing of the roads encompassed by this recommendation is included as an appendix to the report.) In the absence of such a decision, patrol coverage on many of these roads will continue to be fragmented and ineffective.

ii. Patrol posts on heavily used sections of controlled access highways should be based on traffic volume, rather than road miles. A standard of 250,000 vehicle miles per day is recommended for daytime patrols. Using this standard which would slightly reduce the size of present posts on the most congested portions of such roads as the Northway and Route 17.

iii. On uncongested sections of controlled access highways, posts should be established to provide a reasonable average response time to accidents and other incidents. During the day a standard post length of twenty miles is recommended. This recommendation would generally reduce patrol coverage on low volume highways which currently have established line posts.

iv. Because of the substantial reduction in traffic volume at night, "A" shift patrol coverage should be less than "B" and "C" shift coverage. The Task Force recommends that day posts created by the volume standard be tripled in length up to a maximum of thirty miles for night patrol. Twenty mile day posts should also be increased to thirty miles at night. Thirty mile posts would provide adequate, efficient nighttime coverage.

v. The Task Force also recommends that the shift hours for posts be moved forward from 7:00 a.m., 3:00 p.m., and 11:00 p.m. to 6:00 a.m., 2:00 p.m. and 10:00 p.m. respectively. This change would better accommodate the morning peak traffic period.

iv.

vi. Using these line post standards the Task Force recommends creating a total of seventy-one day posts and thirty-eight night posts to cover the State's controlled access highways. This is the equivalent of 180 eight-hour patrols. Currently, the State Police mount 72 eight-hour line post patrols -- 108 less than needed. To staff these posts 222 troopers, in addition to the present level of 147, should be allocated to the line post patrol function. A major portion of this increase is attributable to the extension of patrol coverage to highways for which line posts have never been established.

A summary of the staffing implications of these recommendations is included on page 43 of the report. The net additional staffing requirement, considering vacant trooper positions at the time of the survey, is 486 troopers.

c. Policy Analysis of Policing in New York State

New York has never systematically defined roles and missions for the many levels and types of police agencies that currently exist in the State. Rather, the roles of these agencies have developed through incremental budget decisions at all levels of government. As a result, police coverage in New York is uneven, highly fragmented, and poorly coordinated.

The system proposed in this report would help to rationalize State Police manpower and deployment decisions, but a more basic review of its mission, and that of other police agencies, is needed.

Accordingly, the Task Force recommends the creation of a high level temporary commission mandated to study policing in New York and to recommend to the Governor and the Legislature policies and programs by which public needs for police service can be met effectively with minimum jurisdictional overlap and duplication of service.

STATE POLICE MANPOWER AND DEPLOYMENT SURVEY

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STATE POLICE MANPOWER DEPLOYMENT SURVEY

I. INTRODUCTION

A. Background

In 1957 and 1958 the Division of the Budget conducted a comprehensive review of the Division of State Police staffing. Among other issues addressed, the study report recommended the staffing of patrols based upon a performance standard aimed at reducing highway accident fatalities.

As an outgrowth of the survey, the State Police developed an area post structure in the early 1960's. This post structure has been left largely unchanged to date and, although never fully staffed, it has, over the years, been the essential premise upon which patrol manpower deployment and budget decisions have been made.

Since the current post structure was developed, however, governments at all levels have instituted programs to improve the quality and quantity of police resources: entrance standards are more rigorous, training is more extensive, and available equipment is greatly improved. Substantial growth in local police forces, albeit uneven and uncoordinated, has significantly changed policing patterns in the State. Population shifts, increased crime rates, and a major interstate highway construction program have further impacted the need for police services.

In recognition of these changes the 1974 Legislature urged that a study of State Police patrolling be undertaken, prior to submission of the next budget request for the Division of State Police.

Before any significant new positions are created an analysis of necessary post coverage should be undertaken. The last study of State Police highway staffing was done in the late 1950's and is now out of date. County and local police have grown significantly in the past 15 years and need to be integrated into overall police staffing determinations. The Budget Division is urged to initiate a study that can be completed by January 1, 1975, to determine appropriate State and local highway staffing needs.*

Accordingly, the Division of the Budget and the Division of State Police have jointly undertaken this statewide survey of police patrol manpower and deployment methods. A six member Task Force created in April, 1974 and composed of representatives of the State Police and the Division of the Budget's Public Protection and Organization and Management Units has conducted the survey.

B. Study Objectives and Scope

The objective of the Task Force was to develop a State Police patrol manpower deployment system. At the outset the Task Force adopted the view that for such a system to enable the Division of State Police to estimate patrol requirements more accurately and to deploy available re-

sources more efficiently, it must be based upon periodic evaluations of community needs for policing and upon the availability of local police forces.

The study has focused on the police patrol function in areas of the State now served by the Division of State Police. It did not include the Division's administrative program, the Bureau of Criminal Investigation, or Troop "T" which serves the Thruway under a chargeback arrangement with the New York State Thruway Authority. In all, more than nine hundred towns in fifty-six counties were surveyed. The Task Force has analyzed both State Police patrolling and road patrols mounted by such local agencies as town police and county sheriffs. The Task Force excluded, however, scores of private and public special purpose police agencies which are not charged with routine highway patrol functions.

* Report of the Senate Finance and Assembly Ways and Means Committees on actions taken on the 1974-75 Executive Budget, page 67.

II. OVERVIEW OF STATE POLICE PATROLLING IN NEW YORK STATE

A. State Police Patrol Mission

Section 223 of the Executive Law charges the Superintendent and Members of the New York State Police " . . . to prevent and detect crime and apprehend criminals."

Although other State laws give the State Police specific functions (e.g., policing the State Fair), the Executive Law contains no more precise guidelines. The mission and role of the State Police has developed over the years into one of furnishing specialized police service to law enforcement agencies and the public and patrolling areas of the State which do not provide their own patrol service adequately. Such a role is supported by Section 226 of the Executive Law which authorizes a chargeback arrangement by which localities may contract for police service from the State Police. Although the Division of State Police patrol function has expanded since 1917 when this provision was enacted and many localities have come to rely on the State Police for patrol services, this chargeback provision has never been implemented. Therefore, the costs of State Police patrol operations, even in densely patrolled local areas, are borne by the State.

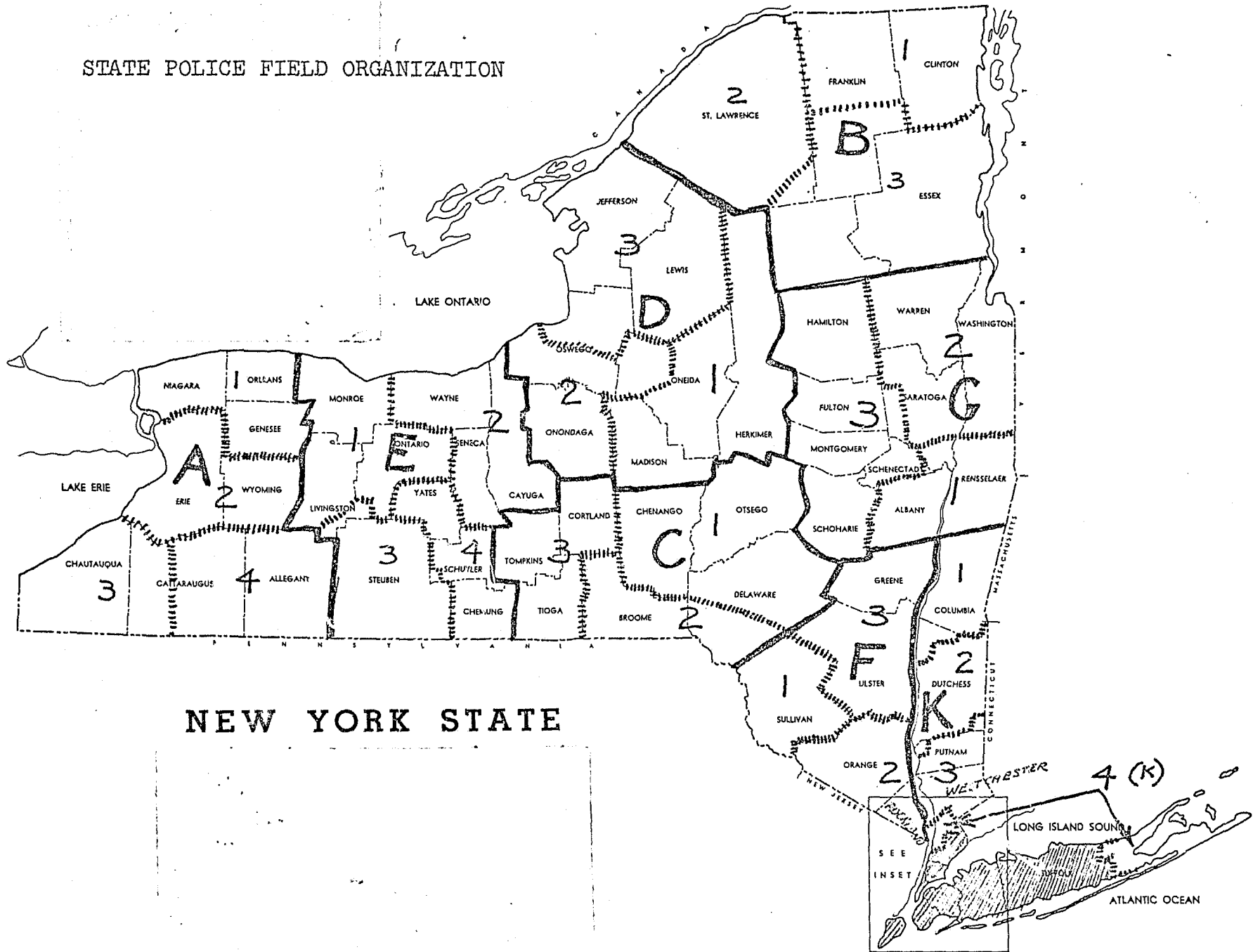
The State Police do not routinely patrol any cities, Nassau and western Suffolk counties, southern Westchester towns, and many villages throughout the State. For the most part, however, the State Police patrol routinely in the remainder of the State often in parallel with local and county agencies.

Although the Task Force was cognizant throughout the study of the problems of jurisdictional overlap, fragmentation of police authority and the competitive environment in which many police officers must function, it did not seek to change the role of the State Police. It viewed its job, rather, as one of assisting the State Police in carrying out its current role as effectively and efficiently as possible. However, a recommendation urging an analysis of New York State's policing policy is included in Section V of this report.



B. State Police Field Organization

The State Police field structure consists of troops, zones and stations. Each of the eight troop areas is subdivided into three or four zones. Located within each zone area are several stations where troopers report for duty and receive assignments. The map which follows on page 6 delineates the troop and zone areas across the State.

STATE POLICE FIELD ORGANIZATION



NEW YORK STATE

L-5167
6/74
TROOP BOUNDARIES 
ZONE BOUNDARIES 

The command structure in each troop headquarters consists of one Major, three Captains and one First Sergeant. In addition, administrative staff for the troop are located at the troop headquarters. Each zone headquarters is commanded by a Lieutenant with three Zone Sergeants as assistant commanders. The non-uniformed Bureau of Criminal Investigation also functions out of troop and zone headquarters buildings but under a somewhat separate chain of command. The table below shows the distribution of the uniformed force among the eight troops.

Authorized Uniformed Force (9/74)

<u>Troop</u>	<u>Officers 1/</u>	<u>Sergeants 2/</u>	<u>Troopers</u>	<u>Troop Total</u>
A	8	43	240	291
B	7	35	217	259
C	7	36	197	240
D	7	43	293	343
E	8	44	262	314
F	7	38	242	287
G	7	43	274	324
K	8	45	277	330
	<u>59</u>	<u>327</u>	<u>2002</u>	<u>2388</u>

1/ Includes ranks of Major, Captain and Lieutenant

2/ Includes ranks of 1st Sgt., Technical Sergeant, Zone Sergeant and Sergeant

Several different types of stations are located within each zone area. Across the State there are fifty-four stations which are open twenty-four hours a day and eight stations

open sixteen hours a day. A "twenty-four hour station" is open to the public at all times and has a uniformed trooper on duty to receive complaints or calls for assistance. These stations are also staffed and equipped to radio dispatch patrols and to receive and send teletype messages. Local police also rely upon station communications equipment and use other specialized equipment such as breathalyzer machines.

A "sixteen hour station" functions in much the same way as twenty-four hour stations, except that during the 11:00 p.m. to 7:00 a.m. period these stations are not manned and complaints, calls for assistance and patrol dispatches are serviced from adjoining twenty-four hour stations. The back-up twenty-four hour stations receive calls from the public via a telephone switching device.

In addition to these stations there are 36 "patrol stations." They are not open to the public but serve as patrol deployment points during shift changes in remote areas. Patrols operating in the vicinity of a patrol station are dispatched by a twenty-four hour station which receives complaints from within the station area.

C. Patrol Post Structure

There are two types of patrol posts. "Area posts" cover a defined geographic area which may encompass

several villages and towns, State and local roads, commercial and residential areas, and rural areas. An area patrol's primary service to the public is in responding to calls for assistance.

"Line post" patrols cover stretches of controlled access highways. Although the high concentrations of people traveling on such roads frequently place the line post trooper in crime control and criminal apprehension situations, such posts function primarily to prevent accidents and ensure the smooth flow of the traffic by enforcing traffic regulations and performing other traffic control functions.

Currently, there are 340 authorized State Police area and line posts covering, with the exceptions noted previously, virtually the entire State. Each post is designed to be the responsibility of one patrol unit, but in practice a unit is often assigned to two or more posts depending upon the number of troopers available in a station area on any given shift. Such daily post coverage decisions are made by station sergeants. The trooper himself determines his patrol pattern within the posts or post assigned to him.

Although the Task Force found the size of area posts to correlate generally with the size of the population served,

and the length of line posts with traffic volume, the present patrol post structure is not based on any agreed upon formula or standard. This problem has not only worked to the disadvantage of the Division of State Police in the annual budget process, but it has resulted in a rigid post structure that hampers efficient manpower deployment by troop commanders.

III. STATE POLICE PATROL DEPLOYMENT SYSTEM

An essential component of a manpower deployment system is the ability to identify existing levels of patrol service and to highlight areas of apparent overstaffing and serious understaffing. The Task Force approach was to conduct a "needs" and "resources" study encompassing all the State's towns now served by the State Police. In the first instance this approach allowed the Task Force to determine what level of patrol service is currently being provided to each town by State and local police agencies. By subsequent application of service standards -- developed by the Task Force -- patrol staffing problems would be apparent.

The sections which follow describe:

- The specific approaches taken in the evaluation of police workload and local and State patrol resources, and
- Findings and recommendations for area and controlled access highway patrolling.

A. Isolation of Police Workload Predictors

The first step in the study was to develop a reliable method for predicting the needs for police services in the State's communities. A literature search of related studies provided little guidance because these previous studies failed to directly address the question of need.

Instead, they assumed the need for service in a general sense and focused on the impact of specific patrolling strategies on such factors as patrol response time and the likelihood of apprehending criminals or reducing vehicle accidents. Such approaches were not adequate for the purposes of this project.

The Task Force viewed actual police workload, measured in terms of crime and vehicle accidents known to have occurred (the most reliable police statistics available) as the key element in any estimate of the need for police patrols.

Police workload data used in the survey included the most current available information on:

- Total felonies, misdemeanors, and violations by town, drawn from the files of the Department of Correctional Services, and
- Accidents of all types and vehicle and traffic infractions, by town, from the Department of Motor Vehicles.

From other available information the Task Force accumulated data on four hypothetical workload predictors:

- Residential population,
- Population density,
- Traffic density, and
- Total highway mileage.

To simplify the problem of accumulating and analyzing masses of Statewide crime and accident statistics from a variety of sources, the Task Force sought, through a pilot survey in the Troop "G" area, to isolate reliable predictors of workload which could be used to represent the need for police services. The method used to accomplish this was correlation analysis, a statistical technique which identifies the extent to which change in one variable is associated with change in one or more other variables.

There are ten counties and over 100 towns in the Troop "G" area, a sufficiently large sample for purposes of correlation analysis. The results of the analysis are shown in the table on page 14.

Troop G Pilot Survey

Correlation Analysis Results

<u>Predictor</u>	<u>Variables</u> <u>Workload Factor</u>	<u>Correlation</u> <u>Coefficient*</u>
Traffic Density	- Accidents	.947
	- V & T Felonies & Misdemeanors	.779
	- V & T Arrests	.923

Highway Mileage	- Accidents	.076
	- V & T Felonies & Misdemeanors	.076
	- V & T Arrests	.074

Residential Population	- Reported Offenses (Total)	.894
	- Reported Felonies & Misdemeanors	.889

Population Density	- Reported Offenses (Total)	.200
	- Reported Felonies & Misdemeanors	.201

* The coefficient of correlation ranges from +1 to -1. The higher the absolute value of the correlation coefficient -- whether positive or negative -- the greater the ability to predict.

The analysis clearly shows that residential population and traffic density are highly reliable predictors of crime and vehicle and traffic workload respectively.

Neither highway mileage nor population density, when aggregated on a township level, proved to be reliable predictors of the workload data.

In an effort to further simplify the method of predicting police workload, the Task Force correlated residential population with traffic density and found a coefficient of correlation of .95. Based upon these correlation analyses, the Task Force concluded that residential population is a reliable single predictor of police workload and is, therefore, a valid indicator in estimating community needs for police patrols.

A simplified correlation analysis, designed to test the conclusion of the Troop "G" pilot study in two other troop areas ("B" and "E", which have large seasonal influxes of migrant labor and tourists), produced the following results:

<u>Predictor</u>	<u>Variables</u>		<u>Correlation Coefficient</u>
		<u>Workload Factor</u>	
Residential Population	- Reported Offenses (Total)		.929
	- Accidents		.995
	- Reported Offenses & Accidents *		.995

B. Inventory of Police Patrol Resources

With the police needs indicator established, the next step in the survey was to determine how many police patrols -- State, county and local -- serve each of the State's towns which the State Police now patrol. For consistency, a "patrol" was defined as one patrol vehicle operating for one eight-hour shift. The Task Force excluded from the inventory special purpose police agencies and agencies which did not have the manpower to staff at least one twenty-four hour post seven days a week. Based on an analysis of workload and scheduling practices, the Task Force determined that a local agency required seven full time personnel to effectively staff such a post. Therefore, any agency with fewer than seven full time personnel was not included in the police resources inventory.

* Multiple regression using two independent variables.

In order to determine the average daily patrol coverage within a jurisdiction, local and county police agencies were surveyed by questionnaire. The questionnaire specifically asked the agency for the average daily number of eight-hour patrols mounted, and, as a reasonableness check, the number of patrolmen, the average number of patrols per shift and the personnel per patrol unit.

Questionnaires were sent to 188 agencies including 56 sheriff's departments, the Suffolk County Police Department, and all town or village forces of seven men or more which operate in areas that are serviced by the State Police.^{1/} Over 92% of the questionnaires were returned in usable form and patrols for the remaining agencies were estimated from their total known staff. All responses were checked for reasonableness.

Sheriff's patrols were allocated to townships within a county in the same proportion that the Sheriff departments responded to motor vehicle accidents in townships during a base year.

Where data from a village police agency was obtained, it was subtracted, along with the village population, from town data and analyzed separately. Similarly, county agency patrols were allocated to townships but not to villages that maintain a force of seven or more men.

^{1/} Appendix A provides a listing of all local police agencies surveyed.

State Police patrols were allocated to counties based on station assignments and actual work schedules for the month of May, 1974. (A review of annual statistics for the year 1973 showed this month to be typical in terms of State Police personnel assignments.) Subsequent estimates of State Police patrol time in each town were based on the proportionate amount of State Police work performed in the towns in such categories as crimes and accidents investigated and vehicle and traffic tickets issued. These workload categories were weighted by the average time required to complete the tasks. State Police patrolling on controlled access highways was determined from station work schedules.

C. Area Post Patrol Staffing and Deployment

In developing a staffing pattern for area post coverage, the Task Force considered not only State Police patrol activity but also the patrols mounted by local and county police agencies. As described above, the Task Force measured both the relative community need for service -- represented by residential population -- and the patrol resources currently available to meet these needs. The following section outlines the methods by which the Task Force:

- Used these needs and resources statistics to develop a police service standard;
- Developed a plan for State Police patrol manpower redeployment to help achieve the standard;
- Estimated additional resource needs;
- Proposed the allocation of patrol resources to shift assignments; and,
- Developed area post staffing requirements.

1. Development of a Police Service Standard

A review of other patrol deployment studies revealed a number of standards which are used in other states and certain metropolitan areas. However, in each case the standard recommended was subjective and unconvincing. A number of cities, for example, staff and deploy personnel to achieve a three minute response time to calls for assistance. However, it is never clear why three minutes is necessary instead of one or five and -- more importantly -- why the public needs this level of service. Other one dimensional standards have similar defects which limit their usefulness as guides to staffing, especially in non urban areas.

In order to make sound staffing and deployment decisions which consider not only the effectiveness of police service to the public but also the efficient use of available patrol resources, it is essential that a service standard be developed aimed at measuring each town's existing level of police service.

Chart 1 which follows on page 21 shows the frequency distribution of town patrol service, provided by both State and local police agencies, measured in terms of town population per eight hours of patrol coverage per day. A review of this chart reveals wide variations in patrol service among the State's towns. The service levels range between extremes of from below 500 population per patrol to over 100,000. Roughly 75% of the towns have service levels ranging between populations of 1000 and 5000 per patrol.

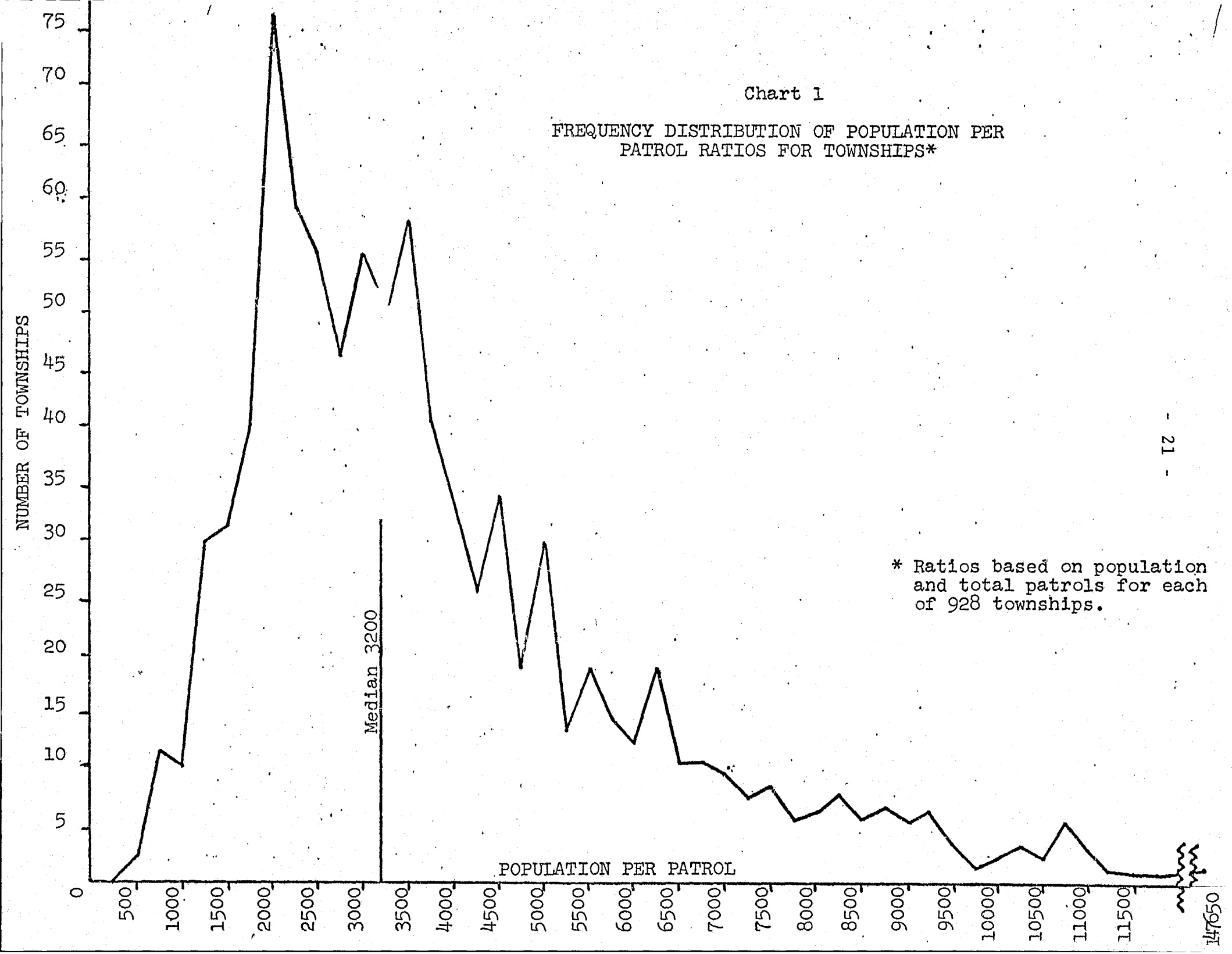
The Task Force sought to find a service standard which would reduce these wide variations in service and would assure citizens in all the State's towns of an equitable level of police service.

The Task Force has chosen a staffing standard of eight hours of patrol coverage per 3200 residents per day.

This is the median level of service provided in the State's townships by all patrolling agencies inventoried

Chart 1

FREQUENCY DISTRIBUTION OF POPULATION PER PATROL RATIOS FOR TOWNSHIPS*



* Ratios based on population and total patrols for each of 928 townships.

(State, local and county). According to the standard, a town with 9600 residents should be routinely provided with twenty-four hours of patrol coverage per day.

The use of this median level of police service as a standard has several advantages over other standards proposed in previous patrol deployment studies:

- It is an attainable standard since it is based on existing service levels and not on arbitrary goals.
- It is a level of service which the public has supported in half the towns of the State.
- It provides the State Police with a specific guideline by which it can carry out its role as a supplemental patrol force in the State.

2. Patrol Deployment Among the Towns

The principal reason that some towns are well served with police and others are not is the variation in communities' willingness or ability to support local police agencies. However, detailed analyses of police service levels show many instances where State Police deployment compounds the relative overstaffing in some towns to the detriment of other towns greatly needing additional service. Accordingly, some amount of State Police redeployment is necessary and desirable as a means of at least partially achieving the statewide standard of 3200 residents per eight hours of patrol coverage

Theoretically, all State Police in towns which are above the standard service level could be redeployed. Realistically, however, the deep slashes in police service that such a strategy would involve would be undesirable. In many towns which are above the service standard the State Police are now performing as much as fifty percent or more of current police workload and major cuts in the capability of the State Police to respond to calls for assistance in these areas would have an immediate and visible impact on the public now served. Moreover, it is unlikely that local forces could absorb the major workload increases which would be involved in the short term.

In recognition of these constraints and of the fact that the method used to statistically allocate State Police patrols to towns was based on actual workload (see page 18), redeployment should be restricted to the equivalent of that portion of State Police time devoted to "time on patrol" in towns which are above the standard. "Time on patrol" is that portion of trooper time devoted exclusively to preventive work. The equivalent of trooper time devoted to "hard" workload, e.g., responding to calls for assistance, criminal investigations,

and related work, should continue to be allocated to these towns.

According to State Police analyses of trooper monthly "Time and Activity" reports, the average time devoted to "time on patrol" is 33%. The Task Force recommends, therefore, that the equivalent of one-third of State Police patrols in excess of town service standards be redeployed. However, in any town where the State Police presence is less than .25 of a patrol (i.e., two hours per day) redeployment is not recommended because such presence is solely attributable to calls for assistance. The remaining patrols would continue to be available for deployment to these towns. Where possible, redeployment should be accomplished within counties and troop areas by making appropriate adjustments in area post boundaries.

Appendix C summarizes the amount of State Police patrol redeployment recommended by county and Troop area. In total the equivalent of seventy-two patrols should be redeployed to towns in need of additional police service -- about thirteen percent of present State Police patrols.

3. Achieving the Equitable Service Standard

The application of the State Police patrol redeployment plan described above reduces the number of inadequately

served towns. Many towns, however, would still fall short of the service standard. In order to achieve the service standard statewide the Task Force recommends the allocation of an additional 149 State Police patrols to area post coverage.

This component of the staffing plan would increase the total State Police patrol level to 720 on the average from the present level of about 571. The table below summarizes the recommended patrol allocations by troop area.

<u>Troop</u>	<u>Present Patrols</u>	<u>Recommended Patrol Level</u>
A	99.31	113.87
B	64.36	63.29
C	58.72	79.89
D	76.22	116.71
E	86.80	102.43
F	62.48	84.10
G	75.68	93.54
K	47.89	66.47
	<u>571.46</u>	<u>720.30</u>

Appendix B displays the recommendation on a county level. Troop D which surrounds the city of Syracuse and the Tug Hill Plateau region would receive the largest increase in patrols and troopers since that area -- particularly Madison County -- is so seriously short of police coverage.

Under the recommended staffing plan each town in the State would be provided at least an equitable level of

patrol service. Many other towns served by the State Police would enjoy better patrol service than the equitable standard as the result of a continued State Police presence justified, as noted above, on the basis of current workload.

4. Scheduling Patrol Coverage

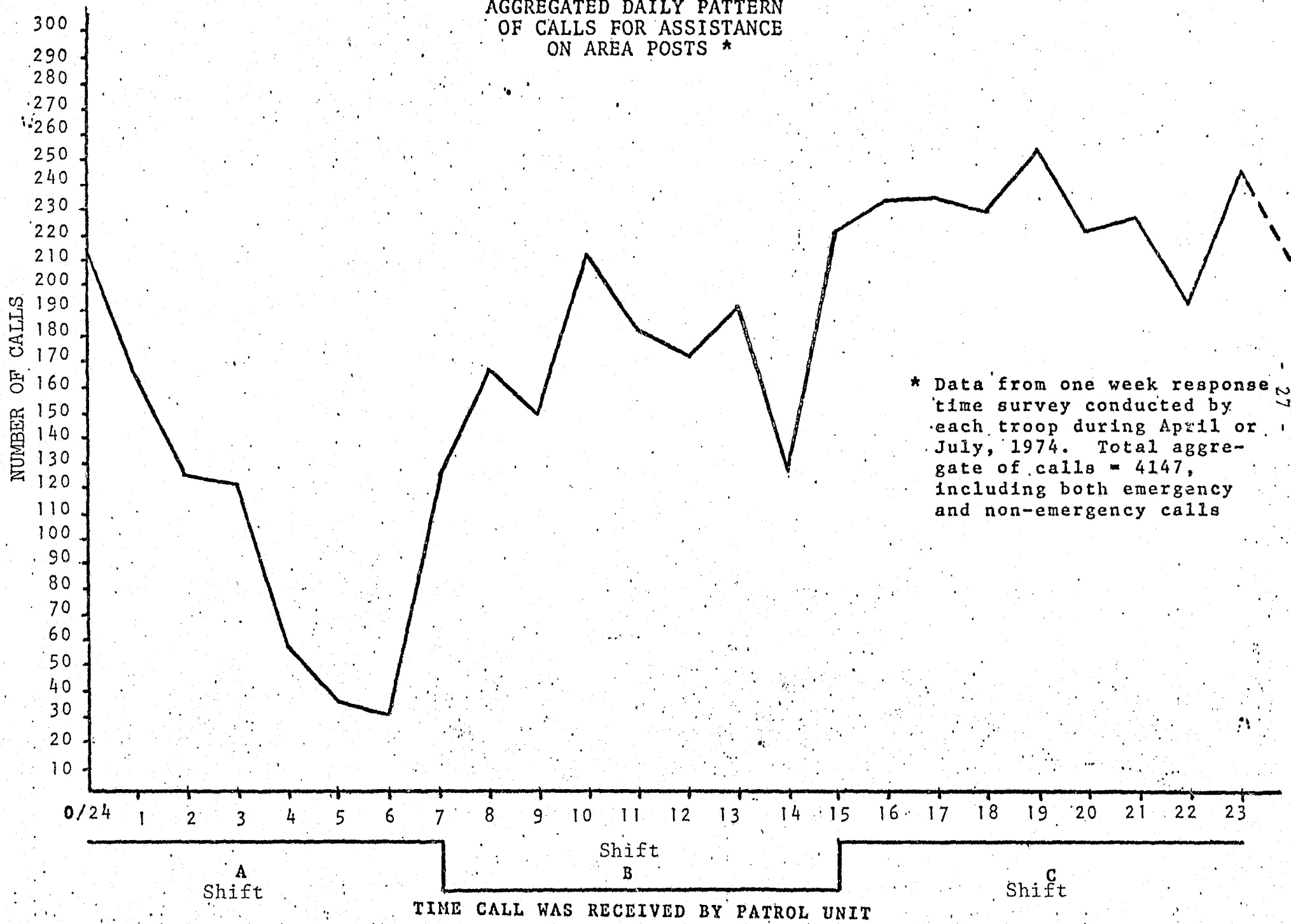
Beyond the question of overall staff and deployment requirements for area patrolling, the Task Force also analyzed the allocation of State Police patrols to the three eight-hour work shifts. The basic concern of the Task Force was the frequency and timing of calls for assistance during a day.

A one week Task Force survey of all calls for assistance on area posts was designed to reflect the daily, state-wide pattern of calls received by patrol units. During the survey the time that the patrol unit actually received the dispatcher's instruction to respond to a situation or complaint was recorded and reported to the Task Force. A tabulation of this data is reflected in the aggregated daily pattern graphed on page 27 .

Based on this survey the Task Force recommends that the bulk of State Police patrols be mounted during the two daylight hour shifts with reduced coverage during the late night and early morning hours.

Chart 2

AGGREGATED DAILY PATTERN
OF CALLS FOR ASSISTANCE
ON AREA POSTS *



The specific allocation of patrol resources would be as follows:

"A" Shift (11 p.m. - 7 a.m.) - Twenty percent of total patrols

"B" Shift (7 a.m. - 3 p.m.) - Forty percent of total patrols

"C" Shift (3 p.m. - 11 p.m.) - Forty percent of total patrols

This approach to resource allocation is based on the finding that there is a much lower volume of calls for assistance during the "A" shift, especially between the hours of 3 and 7 a.m. On the average, the survey indicated that the "A" shift represented 21.1%, the "B" shift 34.9% and the "C" shift 44.0% of the total calls for assistance received by patrol units on area post.

Under this approach each troop area would have twice as many day posts ("B" and "C" shifts) as night posts ("A" shift). However, due to the two man per car requirement in the current employee contract, the same number of troopers would be assigned to each of the three shifts even though only half as many patrols would operate during the late night and early morning hours.

Applying this patrol pattern to the 720 area patrols recommended above, there would be 144 "A" shift patrols (720 x .2) and 576 "B" and "C" shift patrols (720 x .8).

5. Staffing the Area Posts

The previous four sections explained the methods that the Task Force used to:

- Develop the recommended patrol service standard of 3200 residents per eight hours of patrol coverage,
- Develop a redeployment formula for existing State Police patrols,
- Calculate a recommended State and local patrol level based upon a comparison of existing service to required service, and
- Allocate the recommended State Police patrol level to the three eight-hour shifts.

The final step is the calculation of the number of State Police area posts and troopers required to fully staff these posts.

The daily distribution of required State Police patrols over the three work shifts -- as discussed on page 28 -- is accomplished through a system of "day" and "night" posts. The "day" post is covered during the "B" and "C" shifts while "A" shift patrols cover an expanded "night" post area. On a troop basis the allocation of eighty percent of the 720 recommended State Police patrols (see page 25), to the "B" and "C" shifts would

result in 289 "day" posts.

(Total Recommended Patrols by Troop x .8 = Troop "day" posts)
2

The remaining 144 patrols would staff the same number of night ("A" shift) posts.

In order to staff a patrol post twenty-four hours a day for an entire year, 6.79 troopers are required. On the average, troopers work 215 days, or 1720 hours, per year as follows:

365	Days per year
- 115	Pass days and paid holidays (average)
<u>250</u>	Days
- 21	Vacation days (average)
<u>229</u>	Days
- 5	Days personal leave (average)
<u>224</u>	Days
- 9	Days of sick leave (average)
<u>215</u>	Days (Trooper works)
x 8	Hours (Trooper work day)
<u>1720</u>	Hours Trooper works in one year

Post coverage for each of the "B" and "C" shifts requires 2920 shift hours.

365	Days
x 8	Hour per work shift
<u>2920</u>	

Since the average trooper works 1720 hours, continuous coverage for either the "B" or "C" shift requires 1.7 troopers.

(2920 ÷ 1720 = 1.7 troopers)

Thus coverage of a day post ("B" and "C" shifts) would require 3.4 troopers.

Covering a night post during the "A" shift requires 5840 shift hours and 3.4 troopers since two troopers are required in a car under the existing employee contract.

5840 ÷ 1720 = 3.4 Troopers required to staff a post during the "A" shift

In order to fully staff the area post plan, the Task Force recommends the allocation of an additional 304 troopers to road patrol duties. There are presently 1167 troopers allocated to area patrol coverage. A total of 1471 troopers would be required to staff the proposed 433 day and night posts.

The following table details the recommended day and night post configuration by troop area and the staffing requirements.

Troop	Recommended Posts			Patrol Staff	Present Patrol Staff
	Day	Night	Total		
A	46	23	69	234	204
B	25	13	38	129	133
C	32	16	48	163	122
D	47	23	70	238	153
E	41	20	61	207	177
F	34	17	51	173	126
G	38	19	57	194	153
K	26	13	39	133	99
	<u>289</u>	<u>144</u>	<u>433</u>	<u>1471</u>	<u>1167</u>

Chart 3 which follows on page 33 summarizes the area post staffing and deployment formulas and the computation processes used to develop these recommendations.

D. Controlled Access Highway Post Staffing and Deployment

The Task Force recognized early in its study that the controlled access highway patrol function of the State Police should be analyzed separately from the area policing function.

In its line post survey, the Task Force considered the aspects of the scope of the State Police responsibility for patrolling controlled access highways, the most appropriate measurements of line post patrol activity and the most effective means of providing adequate line post patrol service.

1. Jurisdiction and Responsibility

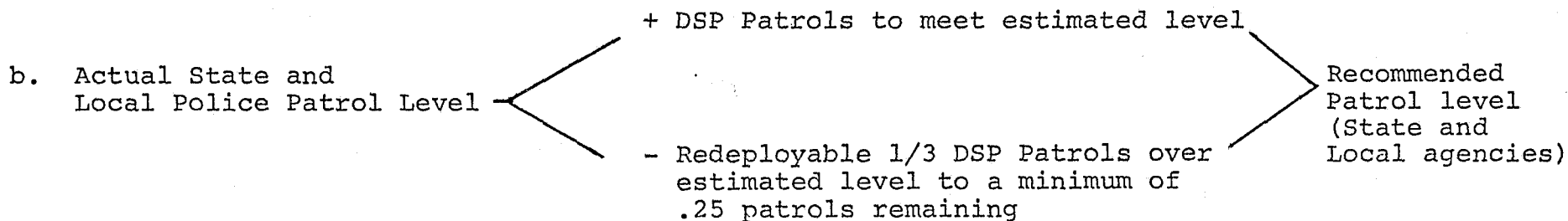
The Task Force recognized two aspects to the problem of jurisdiction over interstate and controlled access highways. The first aspect is the inability of local agencies to provide effective police service on many such roadways. The second aspect is the number of new interstate and controlled access highways for which no definite policing responsibility has been established and, in many cases to which no patrols have been assigned.

Chart 3

AREA POST STAFFING AND DEPLOYMENT FORMULA

1. Total Patrol Needs and Redeployment

a. Town Population ÷ 3,200 Population Per Patrol Standard = Estimated Patrol Requirements.



2. State Police Patrol Level - Recommended patrol level minus available local and county patrols.

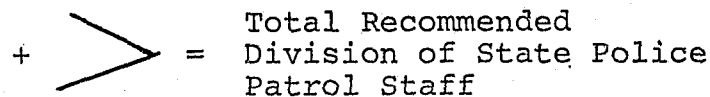
3. State Police Patrol Posts and Staffing

a. [Recommended DSP patrol level x .8] ÷ 2 = Number of Day Posts

[Recommended DSP patrol level x .2] = Number of Night Posts

b. Day Posts x 3.4 = Day Post Trooper Staffing

Night Posts x 3.4 = Night Post Trooper Staffing



The cross jurisdictional nature of these highways often makes comprehensive policing by local agencies impossible. Local police agencies hesitate to commit patrols to these highways except on portions which may enter and exit within their area of jurisdiction. (An important exception is the local agency policing of many controlled access highways in southern New York State where county police agencies have assumed full policing responsibilities, e.g. the Long Island Expressway.)

Relying on local police agencies to patrol controlled access highways would result in highly fragmented and uneven coverage. In the absence of a clearly articulated State policy on the issue, this is indeed the case on many of the State's most traveled roads. There are, in fact, stretches of highway, e.g., I-90 and 787 in the Albany area, which are not routinely patrolled at all.

Accordingly, the Task Force recommends that the State Police have primary jurisdiction for patrolling interstate and other controlled access highways with the exceptions of the Southern New York highways presently patrolled by county police agencies. An inventory of the highways at issue is contained in Appendix C. The discussion of line posts which follows is premised on the State Police having primary jurisdiction over these roads.

2. Controlled Access Highway Patrol Coverage

For controlled access highways the Task Force sought a staffing pattern which was responsive both to actual workload and to the need for a "reasonable" response time.

a. Day Line Posts

As discussed on page 15 of the report, traffic density, measured in terms of vehicle miles per day, is the most reliable predictor of typical highway workload such as accidents and traffic infractions. Based upon a comparison of some relatively congested and non congested sections of highway, and upon the experience of State troopers with present line posts on two main arteries in the State -- Route 17 and the Northway --, the Task Force recommends the use of the base standard of 250,000 vehicle miles per day in the establishment of line posts for relatively congested sections of highway. A factor of 250,000 vehicle miles per day would create posts sufficiently small in areas of high traffic congestion to ensure prompt police response where the likelihood of incidents is highest.

A second factor which should be used in the design of line posts is length of such posts which would balance both workload and response

time constraints in uncongested areas. The Task Force recommends that a maximum daytime post length should be established at twenty (20) miles. This maximum length of twenty miles should be used as a post design standard on sections of controlled access highways where the daily vehicle mileage does not reach 250,000.

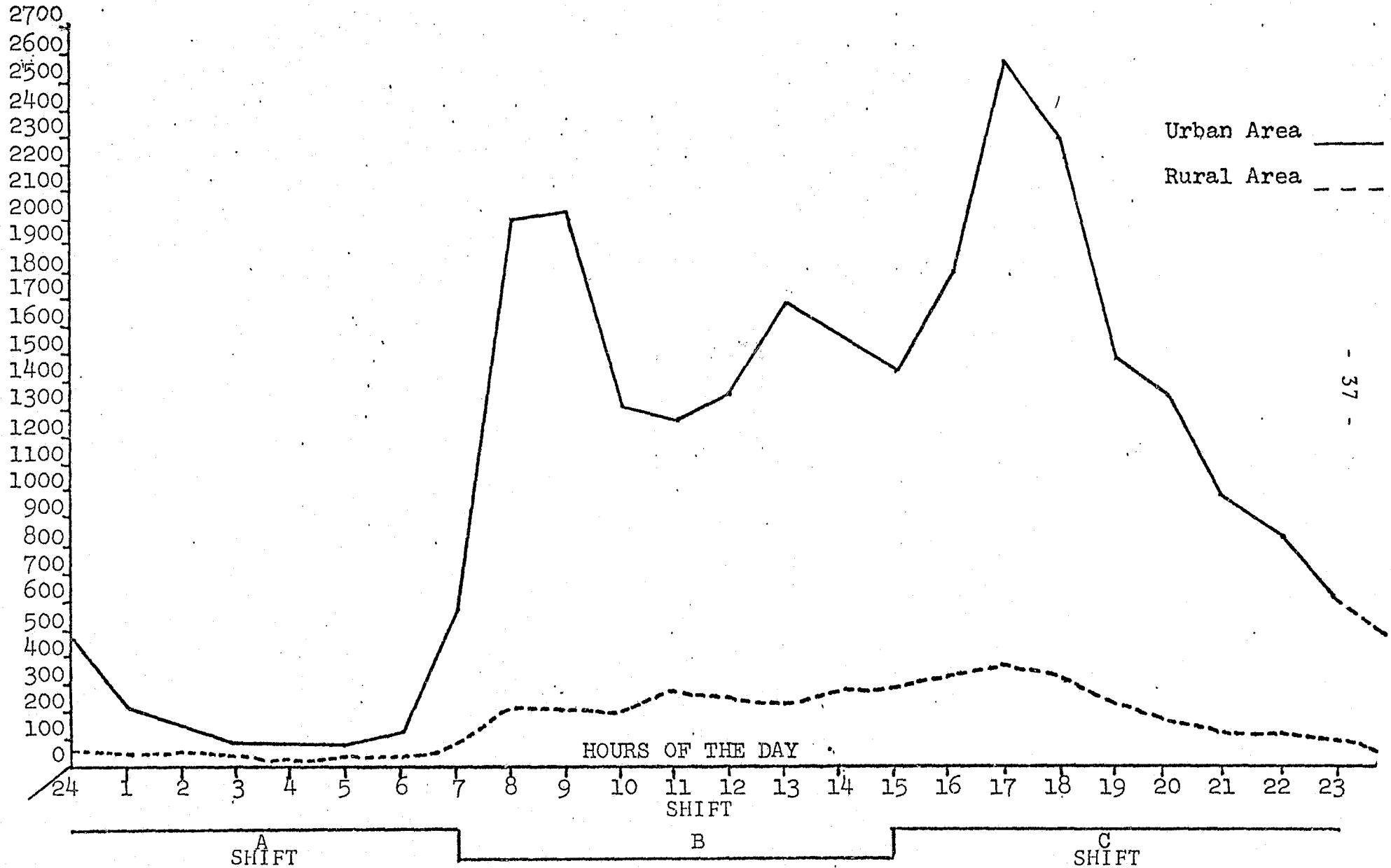
The effect of these recommended standards on highways which currently have State Police line posts would be to reduce coverage on uncongested sections, e.g., the northern part of the Northway, and slightly increase coverage on heavily traveled sections.

b. Night Line Posts

Based upon a contrast of daytime and nighttime workload (see chart on page 37), nighttime line posts should be somewhat longer than daytime posts. While relative roadway congestion is still a major factor in the designation of night posts, the proportionate difference in day versus night vehicle volume indicates that day posts in congested areas can be considerably lengthened for night patrol. A similar lengthening of maximum mileage night posts over day posts is warranted by a general decrease in vehicle volume.

Chart 4

INTERSTATE VEHICLE VOLUME PATTERNS
FOR A TYPICAL DAY*



* Data for Wednesday, April 18, 1973 on Interstate Route 87. These patterns are substantiated by data collected for several other randomly selected days during 1973.

The Task Force recommends that the nighttime reduction in vehicle volume should be accommodated by tripling the day post length up to a maximum of thirty (30) miles. A post length of thirty miles represents a post of considerable size; however, the relative low probability of nighttime incidents indicates that this post size provides a reasonable combination of adequate coverage and economy of resources. The chart which follows on page 39 summarizes the recommended line post formula.

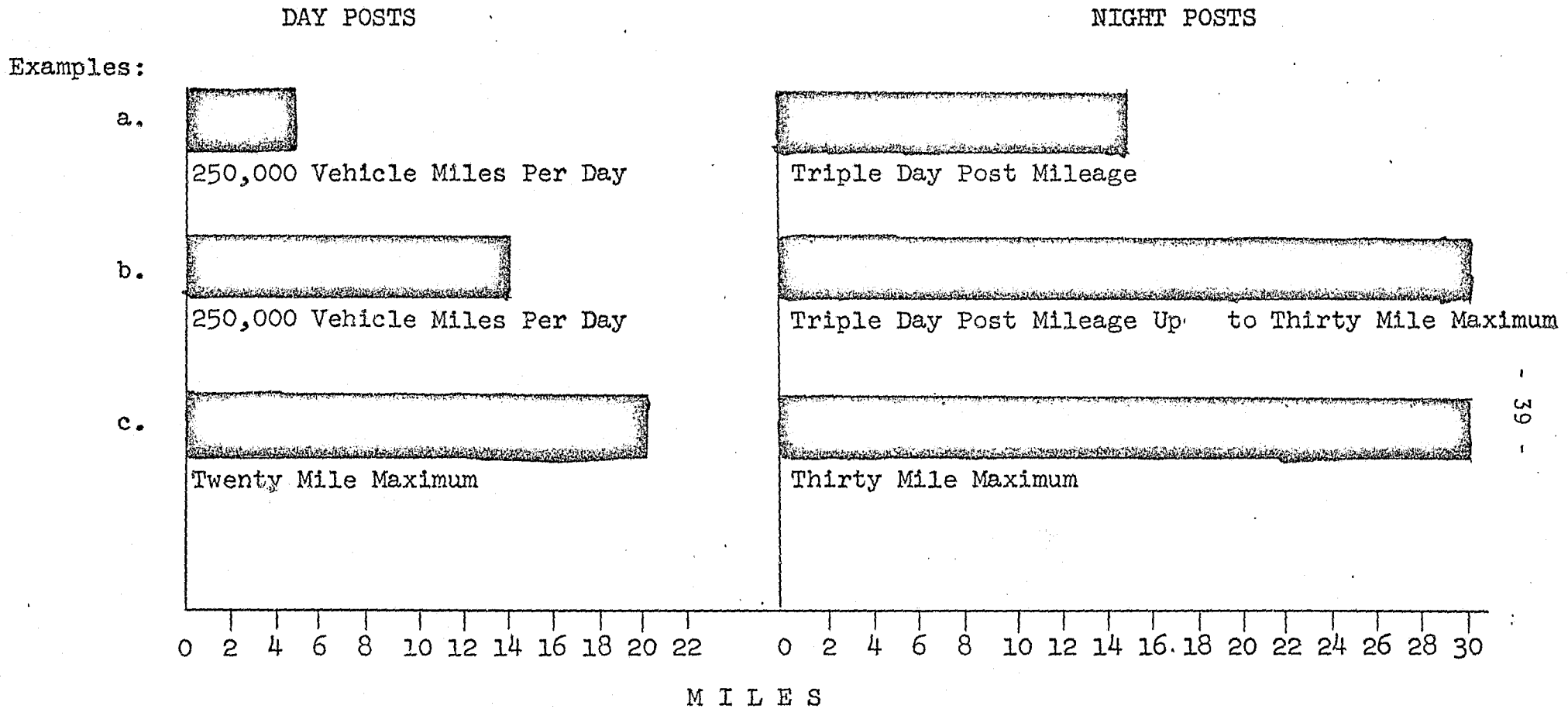
Appendix C applies the line post formula to traffic volume and highway mileage data by troop area. The Task Force recommends that the State Police create seventy-one day posts and thirty-eight night posts to cover the State's controlled access highways. This is the equivalent of 180 eight-hour patrols [38 night posts + (2 x 71 day posts)]. Currently the State Police mount about 72 eight-hour line post patrols.

3. Staffing Line Posts

To staff the recommended line post configuration 369 troopers would be required. Based on trooper "Time and Activity" reports, 3.4 troopers would be necessary to staff each of the "day" and "night" posts (see pages 30 through 31).

Chart 5

EXAMPLES OF THE APPLICATION OF THE FORMULA FOR LINE POST DESIGN



Staffing the line posts would require an additional allocation of 222 troopers. An average of 147 troopers are currently engaged in line post patrolling. The distribution of actual current and recommended line posts and troopers among the various troops is presented in the table on page 41.

Line Posts and Staffing

<u>Troop</u>	<u>Shift</u>	<u>Present Patrols</u>	<u>Staff</u>	<u>Required Patrols</u>	<u>Staff</u>
A	A	1.2		3	
	B	2.4		7	
	C	2.4		7	
			<u>12</u>		<u>34</u>
B	A	1.68		3	
	B	3.36		5	
	C	3.36		5	
			<u>17</u>		<u>27</u>
C	A	1.54		5	
	B	3.08		10	
	C	3.08		10	
			<u>16</u>		<u>51</u>
D	A	2.46		6	
	B	4.92		10	
	C	4.92		10	
			<u>25</u>		<u>54</u>
E	A	.8		6	
	B	1.6		11	
	C	1.6		11	
			<u>8</u>		<u>58</u>
F	A	.5		3	
	B	2.0		6	
	C	2.0		6	
			<u>8</u>		<u>30</u>
G	A	2.8		4	
	B	4.9		7	
	C	4.6		7	
			<u>26</u>		<u>37</u>
K	A	3.42		8	
	B	6.84		15	
	C	6.84		15	
			<u>35</u>		<u>78</u>
State Total					
		<u>72.3</u>	147	180	369

The net required staff increase is 222 troopers for highway patrol coverage.

4. Patrol Shift Schedules

The Task Force also reviewed the timing of traffic volumes to determine the appropriate allocation of patrols throughout the day. As mentioned above, the marked drop in traffic activity during the early morning hours warrants greatly increased line post length. In addition, the daily patterns of traffic volume impact the present patrol shift schedule.

The chart on page 37 shows two major traffic volume peaks at around 8:00 a.m. and 5:00 p.m. During these peak traffic hours a road patrol presence is most needed to ensure a safe flow of traffic and to clear the roadways of vehicles damaged in accidents. However, the present State Police shift schedule tends to reduce patrol availability particularly during the morning traffic volume peak.

Since the shift change occurs at 7:00 a.m. between the "A" and "B" shifts, the "A" car is returning to its station at around 6:30 a.m. while the "B" car may not reach its patrol area till 7:30 or 8:00 a.m. However, traffic volume begins to peak at 6:30 a.m. The result is a lack of adequate patrol coverage during an hour to an hour and a half of the morning commuter traffic peak.

To accommodate traffic volume peaks the Task Force recommends that the present line post shift schedule be modified as follows:

Shift	Shift Hours	
	Proposed	Present
A	10:00 pm - 6:00 am	11:00 pm - 7:00 am
B	6:00 am - 2:00 pm	7:00 am - 3:00 pm
C	2:00 pm - 10:00 pm	3:00 pm - 11:00 pm

The recommended shift schedule change would allow all patrol cars to be on their posts during the entire morning peak traffic period. This modification is permitted within the present employee contract which allows flexibility in shift starting times.

E. Summary of Staffing Implications

During the course of the survey, the Task Force identified 2024 trooper positions, as follows, based on a sample of actual work schedules for the month of May, 1974:

Troopers engaged in area patrol	1167*
Troopers engaged in line patrol	147*
Troopers performing ancillary functions	671**
Vacant trooper positions (May 1)	39
TOTAL	2024

* Representatives of the Division of State Police subsequently pointed out to the Task Force that 80 troopers originally authorized for radar assignments were, at the time of the survey, assigned to general patrol functions to help alleviate area and line post deficiencies.

** "Ancillary" functions include such activities as communications, desk duty, radar and loadometer teams. The Task Force has not evaluated the staffing levels for these functions but includes the 671 figure for completeness and as a check to ensure that all troopers engaged on patrol during the sample period were accounted for.

There are 2025 authorized trooper positions allocated to the State Police. The slight difference between the allocated and identified numbers of troopers is the result of minor sampling error.

The Task Force has recommended that the area patrol function should be staffed at a level of 1471 troopers and that line post staffing be increased to 369 troopers. When combined with the 671 troopers engaged in ancillary functions, a total of 2511 uniform troopers would be required to fully staff the recommended area and line post configuration. The net additional troopers required above the present authorized force would be 486.

IV. ONGOING STAFFING AND BUDGETING SYSTEM

At the present time the Division of State Police utilizes its patrol post structure as a base for budgeting and staffing the uniformed force. In the view of the Task Force, the Division should install the manpower deployment system herein described as a substitute for the present staffing and budgeting method. The essential advantages of the proposed system are that it recognizes local police forces and is responsive to changing policing needs and resources.

Implementation of the system would require the State Police to routinely collect information regarding policing "needs" and "resources." The "needs" side of this system is easily developed since police service needs are represented by each town's residential population. It may be useful, however, to explore the value of periodic updates of census data such as county population projections prepared annually by the Health Department.

A more difficult task will be the compilation of local and State patrol resources. The Task Force suggests that the State Police expand its local agency data gathering program -- presently a civil defense responsibility of the Division -- such that the average number of patrols mounted by local agencies may be determined. In addition, the State Police themselves should institute

an internal reporting method which provides the average time Division patrols spend in the various townships served. A general realignment of State Police reporting should be accomplished so that information may be aggregated on the basis of political subdivisions.

Once service needs and available resources have been determined, the process of calculating each town's existing level of service is achieved by simple division, resulting in a population per patrol ratio.

The Task Force recommends that the service standard of 3200 population per eight hours of patrol coverage for area posts recommended in this report be utilized in an ongoing system until it can be demonstrated that the crime and accident rates make it obsolete. It should be emphasized that the median service level will change as police forces grow and/or as population increases or shifts occur. Very likely the median ratio will decrease in the future below the standard level recommended in this report. However, if the standard is changed based on the realignments, the system will become merely cyclical. That is, the provision of staffing needs identified by the system would cause additional needs to appear upon the next statewide evaluation. This would destroy the utility and integrity of the system.

The line post staffing system may also be installed by the Division so that periodic reevaluations are possible. However,

such reevaluations would not be productive unless major traffic density increases are noted or when new controlled access highways are constructed. The key data elements would be the length of the roadway and the average traffic density at mileposts on the road. This data is available from the Department of Transportation.

The Division should also institute periodic time of day surveys for both area patrol and highway patrol activities. The thrust of these efforts would be to expand knowledge as to patterns of crime and traffic volume to provide a base for future decisions on trooper assignments. In addition, these surveys may identify local variations in the general pattern which should be considered by zone and troop commanders in designing post boundaries.

Finally, the manpower deployment system should be used by the State Police to evaluate the location of its field stations. The system highlights areas needing additional patrol service and other communities which are relatively overstaffed with police. As station leases expire the Division should use this information to relocate both patrol resources and the stations from which troopers receive assignments.

V. THE NEED FOR AN ANALYSIS OF NEW YORK STATE'S POLICING POLICY

As noted in Section II of this report, the recommendations of the Task Force are limited to improving the State Police patrol manpower and deployment system. The patrol function, is however, part of a much broader police system, the more basic failings of which were beyond the purview of the study mandate.

The mission and role of State, local and county police agencies have evolved over the years through incremental and uncoordinated budget decisions at all levels of government rather than through well articulated and rational policy guidelines. The fragmented growth of these agencies has resulted in inefficient jurisdictional overlaps, competition between agencies, and highly uneven police service to the public.

If implemented, the deployment system proposed by the Task Force would help the State Police to operate more efficiently within this irrational police structure. The proposals should be viewed, however, as interim pending a much broader policy survey of policing in New York State.

The Task Force recommends that a high level temporary commission, representative of all components of the State's law enforcement system as well as of the public being served, be appointed to conduct a comprehensive analysis of the police function in New York and to recommend to the Governor and the Legislature policies and programs designed to ensure efficient, effective police service in all areas of the State.

A. The Role of State and Local Police Agencies

A paramount issue in such a policy analysis should be the future direction of the State Police program. The Division of State Police performs many specialized activities to accomplish its general statutory mission, including patrolling of rural and suburban areas and the State's highways, conducting criminal investigations throughout the State, and operating a sophisticated criminalistics laboratory, a state-wide computerized communications system interfaced with a variety of State and Federal crime data banks and a training academy which is also available for local police agencies. The proposed policy study should seek to specify which of these services are appropriate State Police functions and which are also appropriate local functions.

The highest priority concern of the study group should be the patrol function as this is the most crucial, and therefore, the most sensitive, of all police services. An important consideration in this area should be the competence of local patrol forces. Local police resources were considered by the Task Force only quantitatively -- the quality of local agencies was not measured or incorporated into the manpower deployment system. Subsequent studies should focus on the issue of police force quality and attempt to develop appropriate measures. Discrete surveys of training programs, entrance requirements and productivity standards would be integral components of a study of the quality or effectiveness of police agencies.

The proposed study group should make specific recommendations as to where the State Police should perform patrol activities. As many of the State's formerly rural areas have become densely populated suburban communities, more and more local police agencies have been established. Many of these agencies are staffed with sufficiently qualified and trained individuals to adequately provide their communities with road patrol and other police services. As a result, in some areas, particularly in southern New York State, the State Police perform little or no road patrolling, while there may still be a need for many specialized State Police services such as criminal investigations. The process of local force improvement is a continuing one which impacts most suburban communities across the State. Although the patrol manpower deployment system described in this report includes mechanisms for periodically evaluating this process, additional study of the issue should be undertaken aimed at the development of an appropriate State Police policy on area patrolling and specialized activities particularly in suburban areas.

B. The Problem of Fragmentation

Through the exercise of local option, communities all across the State have established their own police agencies, each with a limited jurisdiction. In addition, most counties have a county sheriff or county police agency and the State Police

also provide community policing. This multi-level police structure results in interdepartmental competition which outweighs the countervailing forces for cooperation. The policy analysis, therefore, should explore:

- Cost benefit analyses of various local police agencies particularly small-town and village departments,
- The consolidation of local forces at the county or regional level,
- The dual role of the county sheriff as both jailor and police officer,
- Potential cooperative efforts between departments in such areas as communications, crime control, and disaster planning.

C. Police Funding Mechanisms

As mentioned earlier in the report, the State Police are funded by all the State's taxpayers although many communities receive little or no State Police patrol service. The residents of towns in which the State Police is the only police agency bear no special financial burden for the service. A chargeback arrangement which is provided in Law (Section 226 of the Executive Law) has never been utilized. A survey aimed at the development of a more equitable funding

arrangement than presently exists seems warranted. In addition, the development of an acceptable method of contracting for State Police patrol service should be explored.

A P P E N D I C E S

Appendix A

Local Police Agencies

The following agencies were contacted to obtain their average local patrols:

TROOP A

Albion Village P.D.
Allegany Co. Sheriff
Amherst Town P.D.
Aurora Town P.D.
Cattaraugus Co. Sheriff
Chautauqua Co. Sheriff
Cheektowaga Town P.D.
Depew Village P.D.
Erie Co. Sheriff
Evans Town P.D.
Fredonia Village P.D.
Genesee Co. Sheriff
Hamburg Town P.D.

Hamburg Village P.D.
Kenmore Village P.D.
Lancaster Town P.D.
Lancaster Village P.D.
Le Roy Village P.D.
Medina Village P.D.
Niagara Co. Sheriff
Orchard Park Town P.D.
Orleans Co. Sheriff
Tonawanda Town P.D.
Wellsville Village P.D.
West Seneca Town P.D.
Wyoming Co. Sheriff

TROOP B

Canton Village P.D.
Clinton Co. Sheriff
Essex Co. Sheriff
Franklin Co. Sheriff
Gouverneur Village P.D.
Hamilton Co. Sheriff
Lake Placid Village P.D.

Malone Village P.D.
Massena Village P.D.
Potsdam Village P.D.
St. Lawrence Co. Sheriff
Saranac Lake Village P.D.
Tupper Lake Village P.D.

TROOP C

Broome Co. Sheriff
Chenango Co. Sheriff
Cortland Co. Sheriff
Delaware Co. Sheriff
Endicott Village P.D.
Johnson City Village P.D.

Owego Village P.D.
Tioga Co. Sheriff
Tompkins Co. Sheriff
Vestal Town P.D.
Waverly Village P.D.

TROOP D

Camillus Town P.D.
Clay Town P.D.
DeWitt Town P.D.
Fayetteville Village P.D.
Herkimer Co. Sheriff
Herkimer Village P.D.
Ilion Village P.D.
Jefferson Co. Sheriff

Lewis County Sheriff
Madison Co. Sheriff
Manlius Village P.D.
North Syracuse Village P.D.
Oneida Co. Sheriff
Onondaga Co. Sheriff
Oswego Co. Sheriff
Solvay Village P.D.

TROOP E

Bath Village P.D.
Brighton Town P.D.
Brockport Town P.D.
Cayuga Co. Sheriff
Chemung Co. Sheriff
Dansville Village P.D.
East Rochester Village P.D.
Elmira Heights Village P.D.
Fairport Village P.D.
Gates Town P.D.
Greece Town P.D.
Horseheads Village P.D.
Irondequoit Town P.D.

Livingston Co. Sheriff
Monroe Co. Sheriff
Newark Village P.D.
Ontario Co. Sheriff
Penn Yan Village P.D.
Schuyler Co. Sheriff
Seneca Co. Sheriff
Seneca Falls Village P.D.
Steuben Co. Sheriff
Wayne Co. Sheriff
Webster Town P.D.
Yates Co. Sheriff

TROOP F

Catskill Village P.D.
Clarkstown Town P.D.
Ellenville Village P.D.
Fallsburg Town P.D.
Goshen Village P.D.
Greene Co. Sheriff
Haverstraw Town P.D.
Haverstraw Village P.D.
Highland Falls Village P.D.
Liberty Village P.D.
Monroe Village P.D.
Monticello Village P.D.
Newburgh Town P.D.
New Paltz Town P.D.
New Paltz Village P.D.

New Windsor Town P.D.
Nyack Village P.D.
Orange Co. Sheriff
Orangetown Town P.D.
Ramapo Town P.D.
Rockland Co. Sheriff
Saugerties Town P.D.
Saugerties Village P.D.
Spring Valley Village P.D.
Stonypoint Town P.D.
Suffern Village P.D.
Sullivan Co. Sheriff
Ulster Co. Sheriff
Warwick Village P.D.

TROOP G

Albany Co. Sheriff
Bethlehem Town P.D.
Cobleskill Town P.D.
Colonie Town P.D.
East Greenbush Town P.D.
Fort Edward Village P.D.
Fulton Co. Sheriff
Hamilton Co. Sheriff
Hudson Falls Village P.D.
Menands Village P.D.
Montgomery Co. Sheriff

Niskayuna Town P.D.
Queensbury Town P.D.
Rensselaer Co. Sheriff
Rotterdam Town P.D.
Saratoga Co. Sheriff
Schenectady Co. Sheriff
Schoharie Co. Sheriff
Scotia Village P.D.
Warren Co. Sheriff
Washington Co. Sheriff

TROOP K

Ardsey Village P.D.	New Castle Town P.D.
Bedford Town P.D.	North Castle Town P.D.
Briarcliff Manor Village P.D.	North Pelham Village P.D.
Bronxville Village P.D.	North Tarrytown Village P.D.
Carmel Town P.D.	Ossining Town P.D.
Columbia Co. Sheriff	Ossining Village P.D.
Croton-on-Hudson Village P.D.	Pelham Village P.D.
Dobbs Ferry Village P.D.	Pelham Manor Village P.D.
Dutchess Co. Sheriff	Pleasantville Village P.D.
Eastchester Town P.D.	Portchester Village P.D.
Easthampton Town P.D.	Poughkeepsie Town P.D.
Easthampton Village P.D.	Putnam Co. Sheriff
Elmsford Village P.D.	Riverhead Town P.D.
Greenburgh Town P.D.	Rye Town P.D.
Harrison Town P.D.	Scarsdale Village P.D.
Hastings Town P.D.	Southampton Town P.D.
Irvington Village P.D.	Southampton Village P.D.
Kent Town P.D.	Southold Town P.D.
Larchmont Village P.D.	Suffolk Co. P.D.
Mamaroneck Town P.D.	Suffolk Co. Sheriff
Mamaroneck Village P.D.	Tarrytown Village P.D.
Mount Kisco Village P.D.	Tuckahoe Village P.D.
Mount Pleasant Town P.D.	Westchester Co. Sheriff
	Westhampton Beach Village P.D.

Appendix B

STATE POLICE MANPOWER AND REDEPLOYMENT PLAN FOR AREA POSTS

This staffing plan for the State Police area posts is advanced in consideration of local and county policy agencies which also perform road patrol functions throughout the State. However, the patrol resources addressed in this plan are only those of the State Police.

A county and troop breakdown of recommended State Police redeployment and additional allocations of troopers to the patrol function appears below. This listing includes the following:

- The current State Police patrol level for area posts (May 1974);
- The number of State Police patrols to be redeployed either within the county or troop area;
- The net adjustment in area patrol coverage to achieve the service standard of one patrol per 3,200 town residents; and,
- The recommended level of State Police area post patrol.

Under this plan, some of the counties and troop areas will have reduced State Police area post patrol coverage. In many cases, however, these patrols would be available for reassignment to line post patrolling within the same county or troop area. Troop B is the only troop area which would lose area post patrol resources.

The level of patrol redeployment is indicated by "minus" figures in the third column of the listing. For example, Warren County in the Troop G area has about two State Police patrols available for redeployment from area post coverage. (See page 3.)

<u>Troop & County</u>	<u>Current State Police Patrols (May 1974)</u>	<u>Patrols Available for Redeployment</u>	<u>Patrol Adjustment to Achieve Service Standard</u>	<u>Recommended State Police Patrol Level</u>
<u>A</u>				
Allegany	8.21	.32	5.19	13.40
Cattaraugus	12.08	.98	1.94	14.02
Chautaugua	7.90	.44	7.07	14.97
Erie	14.26	2.96	9.04	23.30
Genesee	7.17	1.84	-1.84	5.33
Niagara	39.07	10.20	-10.08	28.99
Orleans	5.51	1.12	-.71	4.80
Wyoming	5.11	-0-	3.95	9.06
Total	99.31	17.86	14.56	113.87
<u>B</u>				
Clinton	14.10	.37	2.51	16.61
Essex	13.78	2.42	-.71	13.07
Franklin	12.87	1.74	-1.33	11.54
Hamilton	3.20	.81	-.81	2.39
St. Lawrence	20.41	3.04	-.73	19.68
Total	64.36	8.38	-1.07	63.29
<u>C</u>				
Broome	11.40	.51	13.75	25.15
Chenango	11.00	1.65	.33	11.33
Cortland	6.20	1.05	.22	6.42
Delaware	10.41	.94	2.46	12.87
Otsego	8.90	.35	4.37	13.27
Tioga	5.40	1.18	.60	4.80
Tompkins	5.41	.98	.64	6.05
Total	58.72	6.66	21.17	79.89
<u>D</u>				
Herkimer	8.31	.17	4.95	13.26
Jefferson	11.62	1.26	1.20	12.82
Lewis	4.30	.32	.91	5.21
Madison	.99	-0-	13.53	14.52
Oneida	19.79	1.25	5.11	24.90
Onondaga	19.22	1.36	13.65	32.87
Oswego	11.99	.91	1.14	13.13
Total	76.22	5.27	40.49	116.71

<u>Troop & County</u>	<u>Current State Police Patrols (May 1974)</u>	<u>Patrols Available for Redeployment</u>	<u>Patrol Adjustment to Achieve Service Standard</u>	<u>Recommended State Police Patrol Level</u>
<u>E</u>				
Cayuga	7.07	.61	1.53	8.60
Chemung	9.13	2.04	-1.72	7.41
Livingston	6.96	1.09	.02	6.98
Monroe	10.31	1.68	11.87	22.18
Ontario	8.59	1.20	.58	9.17
Schuyler	2.11	.22	.69	2.80
Seneca	7.80	1.31	-1.10	6.70
Steuben	16.07	1.00	4.39	20.46
Wayne	15.97	2.76	-.29	15.68
Yates	2.79	.47	-.34	2.45
Total	86.80	12.38	15.63	102.43
<u>F</u>				
Greene	5.77	.04	3.05	8.82
Orange	21.31	1.22	17.45	38.76
Rockland	4.99	1.63	-1.63	3.36
Sullivan	12.01	2.17	-.53	11.48
Ulster	18.04	2.27	3.28	21.68
Total	62.48	7.33	21.62	84.10
<u>G</u>				
Albany	13.26	.94	2.14	15.40
Fulton	5.01	.45	.36	5.37
Hamilton	.50	-0-	.29	.79
Montgomery	4.40	.42	1.98	6.38
Rensselaer	10.90	.61	5.16	16.06
Saratoga	12.00	.53	7.36	19.36
Schenectady	4.60	.81	3.52	8.12
Schoharie	5.10	.87	-.26	4.84
Warren	8.90	2.32	-2.32	6.58
Washington	11.01	1.38	-.37	10.64
Total	75.68	8.33	17.86	93.54

INTERSTATE AND CONTROLLED ACCESS HIGHWAYS-
POSTS BY TRAFFIC VOLUME AND MILEAGE

<u>Troop & County</u>	<u>Current State Police Patrols (May 1974)</u>	<u>Patrols Available for Redeployment</u>	<u>Patrol Adjustment to Achieve Service Standard</u>	<u>Recommended State Police Patrol Level</u>
<u>K</u>				
Columbia	6.45	.38	4.94	11.39
Dutchess	19.61	1.08	5.95	25.56
Putnam	7.70	1.34	.12	7.82
Westchester	7.89	.66	9.59	17.48
Suffolk	6.24	2.02	-2.02	4.22
Total	47.89	5.48	18.58	66.47
State Total	571.46	71.69	148.84	720.30

TROOP A - DAY POSTS

	<u>Route</u>	<u>Mileage</u>	<u>Traffic Volume</u>	<u>Excess*</u>
	I-190		78,129	6.50
(1)	I-290	6.40	250,000	-
	I-290		165,936	3.37
(2)	Rte. 33	5.05	250,000	
(3)	Rte. 33	5.13	250,000	
	Rte. 33		36,945	2.32
	Rte. 400		213,224	17.20
	Rte. 219		50,663	5.90
(4)	Rte. 17	20.00	51,256	
(5)	Rte. 17	20.00	48,580	
	Rte. 17		3,560	1.87
	LaSalle Expressway		30,100	3.10
		56.58		40.26

Troop A: Day Posts 5

(6) (7) Excess Miles 40.26

Total Day Posts 7 + .26 Miles Excess

*Excess miles are aggregated within each troop area to enable a more accurate determination of actual highway patrol needs. For example, in Troop A there are more than forty miles of controlled access highway left over after developing line posts using the Task Force formula. This is the excess mileage. The equivalent of two additional posts would be established, based on the maximum day post length criteria of twenty miles, to provide patrol coverage on these roads. These additional patrol resources should be used by Troop Commanders to establish additional line posts or to enrich coverage on area posts contiguous to under patrolled controlled access highways.

TROOP A - NIGHT PATROLS

<u>Route</u>	<u>Mileage</u>	<u>Excess</u>
I-190		6.50
I-290		9.77
Rte. 33		12.50
Rte. 400		17.20
Rte. 219		5.90
(1) Rte. 17	30.00	
Rte. 17		11.87
LaSalle Expressway		<u>3.10</u>
	30.00	66.84

Troop A: Night Posts 1

(2) (3) Excess Miles 66.84

Total Night Posts 3 + 6.84 Miles Excess

TROOP B - DAY POSTS

<u>Route</u>	<u>Mileage</u>	<u>Traffic Volume</u>	<u>Excess</u>
(1) I-87	20.00	82,850	
(2) I-87	20.00	109,115	
(3) I-87	20.00	96,557	
(4) I-87	20.00	139,407	
(5) I-87	20.00	136,095	
I-87		<u>5,727</u>	<u>1.01</u>
	100.00		1.01

Troop B: Day Posts 5

Excess Miles 1.01

Total Day Posts 5 + 1.01 Miles Excess

TROOP B - NIGHT POSTS

<u>Route</u>	<u>Mileage</u>	<u>Excess</u>
(1) I-87	30.00	
(2) I-87	30.00	
(3) I-87	30.00	
I-87 - (carried by Troop G)		
	90.00	

Troop B: Total Night Posts 3

TROOP C - DAY POSTS

	<u>Route</u>	<u>Mileage</u>	<u>Traffic Volume</u>	<u>Excess</u>
	I-81		35,442	3.54
(1)	I-81	9.84	250,000	
	I-81		215,924	19.05
(2)	I-81	18.39	250,000	
(3)	I-81	15.14	250,000	
(4)	Rte. 17	20.00	113,467	
	Rte. 17		98,650	11.98
(5)	Rte. 17	20.00	182,250	
(6)	Rte. 17	20.00	196,015	
(7)	Rte. 17	7.99	250,000	
(8)	Rte. 17	19.95	250,000	
	Rte. 17		71,744	7.37
	Rte. 7 (I-88)		37,278	4.79
		<u>131.31</u>		<u>46.73</u>

Troop C: Day Posts 8

(9) (10) Excess Miles 46.73

Total Day Posts 10 + 6.73 Miles Excess

TROOP C - NIGHT POSTS

	<u>Route</u>	<u>Mileage</u>	<u>Excess</u>
	I-81		23.14
(1)	I-81	30.00	
	Rte. 17		17.29
(2)	Rte. 17	30.00	
(3)	Rte. 17	30.00	
(4)	Rte. 17	30.00	
	Rte. 7 (I-88)		4.79
		<u>120.00</u>	<u>45.22</u>

Troop C: Night Posts 4

(5) Excess Miles 45.22

Total Night Posts 5 + 15.22 Miles Excess

TROOP D - DAY POSTS

	<u>Route</u>	<u>Mileage</u>	<u>Traffic Volume</u>	<u>Excess</u>
(1)	I-81	6.41	250,000	
(2)	I-81	6.41	250,000	
(3)	I-81	6.91	250,000	
(4)	I-81	16.12	250,000	
(5)	I-81	20.00	161,471	
(6)	I-81	20.00	171,273	
(7)	I-81	20.00	106,503	
(8)	I-81	20.00	95,021	
	I-81		13,016	2.43
(9)	I-690	8.47	250,000	
	I-690		145,845	4.04
(10)	I-481	12.80	250,000	
	Rte. 481		69,296	10.20
		<u>137.12</u>		<u>16.67</u>

Troop D: Day Posts 10

Excess Miles 16.67

Total Day Posts 10 + 16.67 Miles Excess

TROOP D - NIGHT POSTS

	<u>Route</u>	<u>Mileage</u>	<u>Excess</u>
(1)	I-81	19.23 (3 x 6.41)	
(2)	I-81	19.23 (3 x 6.41)	
(3)	I-81	30.00	
(4)	I-81	30.00	
(5)	I-81	30.00	
	I-81		2.64
	I-690		12.51
	I-481		12.80
	Rte. 481		10.20
		<u>128.46</u>	<u>38.15</u>

Troop D: Night Posts 5

(6) Excess Miles 38.15

Total Night Posts 6 + 8.15 Miles Excess

TROOP E - DAY POSTS

	<u>Route</u>	<u>Mileage</u>	<u>Traffic Volume</u>	<u>Excess</u>
	Rte. 17		35,073	4.01
(1)	Rte. 17	20.00	190,678	
(2)	Rte. 17 & 15	15.95	250,000	
(3)	Rte. 15	20.00	181,982	
(4)	Rte. 15 & 70	20.00	71,704	
	Rte. 70		2,739	4.00
	I-490		180,207	16.40
(5)	I-490	7.62	250,000	
(6)	I-490	4.59	250,000	
	I-490		203,361	9.07
	Rte. 47		77,939	2.33
(7)	Rte. 47	10.19	250,000	
(8)	Rte. 47	5.07	250,000	
	Rte. 204		51,000	1.20
(9)	Rte. 104	9.09	250,000	
	Rte. 104		32,646	1.80
	I-390		N/A	9.00
		<u>112.51</u>		<u>47.81</u>

Troop E: Day Posts 9

(10) (11) Excess Miles 47.81

Total Day Posts 11 + 7.81 Miles Excess

TROOP E - NIGHT POSTS

	<u>Route</u>	<u>Mileage</u>	<u>Excess</u>
(1)	Rte. 17	30.00	
(2)	Rte. 17 & 15	30.00	
	Rte. 15 & 70		23.96
(3)	I-490	13.77 (3 x 4.59)	
	I-490		23.91
(4)	Rte. 47	15.21 (3 x 5.07)	
	Rte. 47		2.38
	Rte. 204		1.20
	Rte. 104		10.89
	I-390		9.00
		<u>88.98</u>	<u>71.34</u>

Troop E: Night Posts 4

(5) (6) Excess Miles 71.34

Total Night Posts 6 + 11.34 Miles Excess

TROOP F - DAY POSTS

	<u>Route</u>	<u>Mileage</u>	<u>Traffic Volume</u>	<u>Excess</u>
(1)	Rte. 17	11.45	250,000	
(2)	Rte. 17	13.61	250,000	
(3)	Rte. 17	15.66	250,000	
(4)	Rte. 17	20.00	212,402	
	Rte. 17		98,716	10.60
(5)	I-84	14.55	250,000	
(6)	I-84	20.00	215,674	
		<u>95.27</u>		<u>10.60</u>

Troop F: Day Posts 6

Excess Mileage 10.60

Total Day Posts 6 + 10.60 Miles Excess

TROOP F - NIGHT POSTS

	<u>Route</u>	<u>Mileage</u>	<u>Excess</u>
(1)	Rte. 17	30.00	
(2)	Rte. 17	30.00	
	Rte. 17		11.32
(3)	I-84	30.00	
		<u>90.00</u>	<u>11.32</u>

Troop F: Night Posts 3

Excess Miles 11.32

Total Night Posts 3 + 11.32 Miles Excess

TROOP G - DAY POSTS

Route	Mileage	Traffic Volume	Excess
(1) I-87	6.06	250,000	
(2) I-87	9.34	250,000	
(3) I-87	12.71	250,000	
(4) I-87	14.25	250,000	
(5) I-87	13.63	250,000	
(6) I-87	20.00	156,895	
I-90		237,730	11.99
I-787		124,246	6.91
I-890		118,508	8.96
	<u>75.99</u>		<u>27.86</u>

Troop G: Day Posts 6

(7) Excess Miles 27.86

Total Day Posts 7 + 7.86 Miles Excess

TROOP G - NIGHT POSTS

Route	Mileage	Excess
(1) I-87	18.18 (3 x 6.06)	
(2) I-87	30.00	
(3) I-87	30.00	
I-87		8.82
I-90		11.99
I-787		6.91
I-890		8.96
	<u>78.18</u>	<u>36.68</u>

Troop G: Night Posts 3

(4) Excess Miles 36.68

Total Night Posts 4 + 6.68 Miles Excess

TROOP K - DAY POSTS

Route	Mileage	Traffic Volume	Excess
(1) I-84	13.98	250,000	
(2) I-84	14.18	250,000	
I-84		156,562	8.99
(3) Sprain Brook and	11.79	250,000	
(4) Taconic State	10.66	250,000	
(5) "	20.00	220,000	
(6) "	20.00	180,000	
(7) "	20.00	160,000	
(8) "	20.00	120,000	
			14.35
(9) I-287	3.76	250,000	
(10) I-287	5.29	250,000	
I-287		90,410	2.36
(11) I-684	10.92	250,000	
(12) I-684	13.40	250,000	
I-684		12,514	4.22
Rte. 9		154,660	7.03
Rte. 117		135,307	13.00
Rte. 27		142,500	15.00
	<u>163.98</u>		<u>64.95</u>

Troop K: Day Posts 12

(13) (14) (15) Excess Miles 64.95

Total Day Posts 15 + 4.95 Miles Excess

TROOP K - NIGHT POSTS

Route	Mileage	Excess
(1) I-84	30.00	
I-84		11.70
(2) S.B.P & T.S.P.	30.00	
(3) T.S.P.	30.00	
(4) T.S.P.	30.00	
T.S.P.		26.80
(5) I-287	11.28 (3 x 3.76)	
I-287		.13
I-684		28.54
Rte. 9		7.03
Rte. 117		13.00
Rte. 27		15.00
	<u>131.28</u>	<u>102.20</u>

Troop K: Night Posts 5

(6) (7) (8) Excess Miles 102.20

Total Night Posts 8 + 12.20 Miles Excess

END