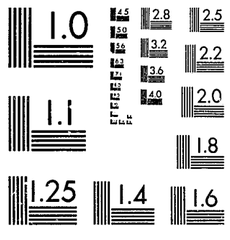

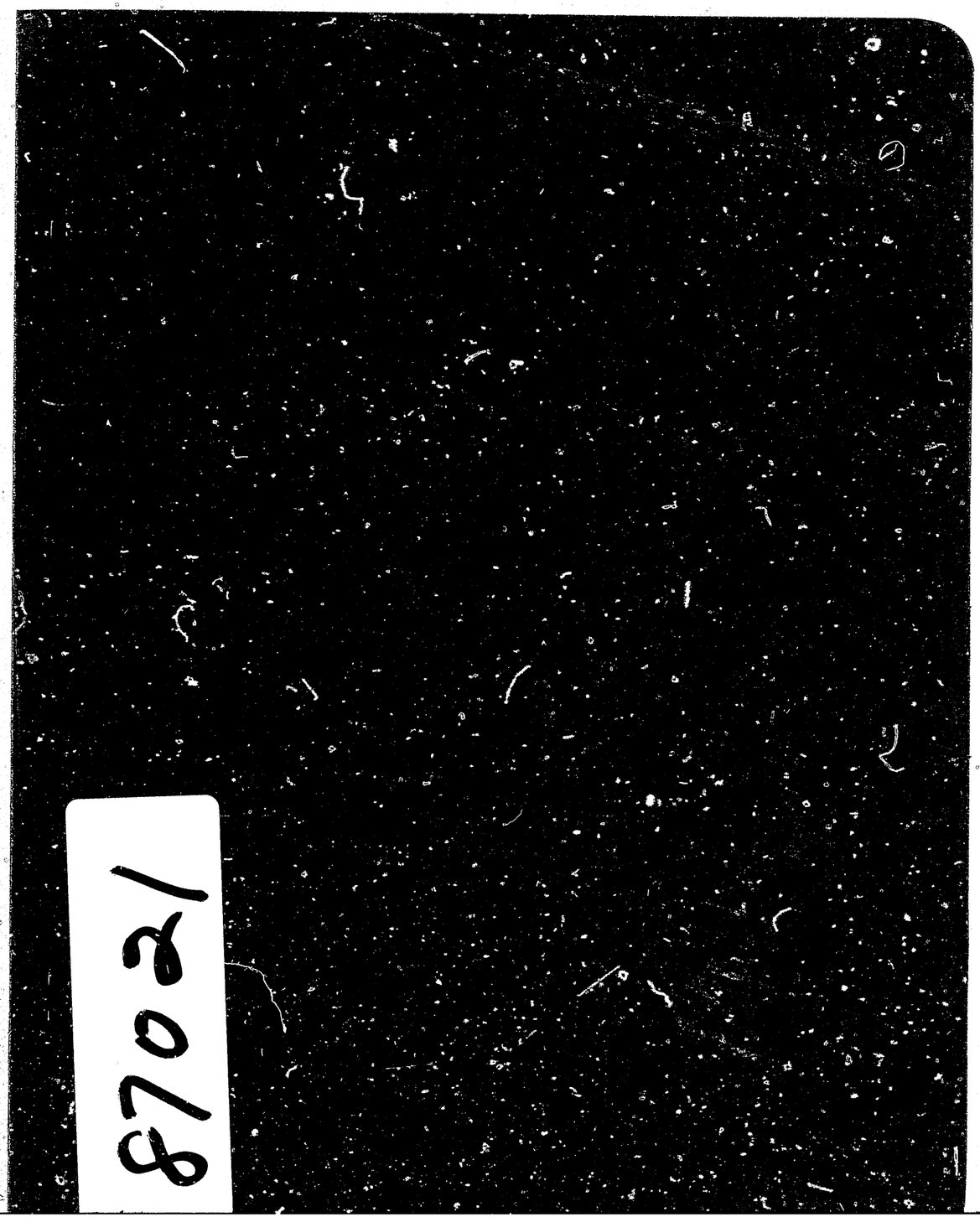

EVALUATION OF THE POLICE COMMUNICATIONS SYSTEM FOR THE CITY OF SARATOGA SPRINGS, NEW YORK

Task Number - 7800901

Task Advisor - George A. Praul

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by the

Associated Public-Safety Communications Officers, Inc.
Post Office Box 669
New Smyrna Beach, Florida 32069

INTRODUCTION

In October 1978, the office of the Director of Public-Safety for the City of Saratoga Springs, New York, determined that a need existed to have a professional evaluation of the communications function in the city police department.

The City of Saratoga Springs covers an area of 27 square miles, and has an estimated population of 26,000 residents. Situated in Northeastern New York State, the city is rich in historical background and has experienced both permanent and seasonal growth due to tourism, racing activities, and a major college campus.

The deputy commissioner of public safety is concerned about the capability of the present police communications function to continue to expand and maintain a high level of effective response to the increased requests for police services.

The Associated Public-Safety Communications Officers, Inc., New Smyrna Beach, Florida, under contract with the Law Enforcement Assistance Administration, undertook this task upon request, and assigned a task advisor to evaluate the system and present a feasibility report. This report is intended to offer considerations and guidance to the appropriate administrators for the City of Saratoga Springs, in their planning and future expenditures in the communications area.

The report is presented in five sections as follows:

I. Review of the Existing Communications Process

II. Problem(s) Identified by the Advisor

III. Problem Analysis

IV. Conclusions

V. Recommendations.

I. REVIEW OF THE EXISTING COMMUNICATIONS PROCESS

A. Equipment

The Saratoga Springs, New York, police department has a staff of 53 personnel and utilizes seventeen radio-equipped motor vehicles in the performance of their duties. This includes ten cars for 24 hour a day operations, five of which are marked patrol cars, and five are unmarked for criminal and juvenile units. The remaining seven include administrative vehicles, animal control, traffic signal maintenance and two motorcycles.

Additionally, the department owns and uses approximately 24 personal portable radios and 4 portapatch portables.

All of the vehicles are equipped with single frequency two-way radio units, and operate in the simplex mode on the assigned frequency of 155.535. The department currently holds an FCC license on this frequency identified as KEA-882 that is valid until 5/21/81.

Each of the mobile units is also equipped with a Citizen Band Radio and it is kept in the monitoring position on Channel nine, and a scrambler device with five selectable codes. A small number of mobile radio units (3) are less than two years old and the average age of all mobile radios is in excess of six years.

The police headquarters contains a small dispatch room that adjoins the duty officers' complaint desk, and is adjacent to the office of the police chief. This room houses a desk for the radio and telephone operator, two base stations, cavity filters, teletype terminal (keyboard, display tube and printer), private alarm panel with 46 terminations, a citizen band base station, three video monitors for the cell blocks, a scrambler encoder, and miscellaneous records and file cabinets.

The telephone equipment in this area consists of one desk set that is connected to the municipal building's newly purchased private telephone system, three standby wall phones connected directly to Bell of N.Y. as a backup to the private system, and direct line wall phones to the fire service.

The department utilizes three local trunk lines and one foreign exchange line from the state capitol at Albany, for all incoming and outgoing calls and can also make outgoing calls via the private equipment through the city switchboard.

The two base stations located in the dispatch room are connected by coaxial cable to antennas on the roof of the building approximately 60 feet above. These base stations are five years old and one serves the simplex system mentioned above. The other base station operates on a County-wide Civil Defense system and provides a simplex innerconnect base to base, with the county sheriff, State Park police, and eight other local surrounding departments. This transmitter is covered by FCC license KUP-310 and is valid until 11/25/82. The assigned frequency is 154.875mHz.

B. Procedures

All telephone calls to the police department come in on the seven digit number 584-1800 and will trunk seek up to handle three calls simultaneously. The calls are all answered in the dispatch center, but backup support for multiple calls is available from any other phone instrument in police headquarters. Backup is usually provided by the duty officer in an adjoining room. At most times, there is a police Lt., police Sgt. and one or two radio telephone operators on duty with all first call responsibility being handled by the radio-telephone operator(s).

Incoming telephone requests for police response are noted on a scratch pad and dispatched via radio to a patrol car assigned to the particular area. The radio-telephone operator then makes a written entry in the police ledger book (blotter) indicating all the particulars of the incident. The responding unit files separate reports of the incident with the duty officer on forms designed for the specific occurrence.

Vehicle assignment is handled by the duty officer at the beginning of each shift, and the radio-telephone operator notes the car numbers and officers' names on a piece of paper and tapes it to the microphone of the base station.

The police blotter is reviewed daily by the chief of police, and serves as a summary and permanent record of the department's activities.

Calls for fire service and ambulance service are handled separate and apart from the police department, and the information relayed via telephone hot line for assistance or mutual aid. Assistance calls from or to surrounding police agencies are processed through the radio-telephone operator and relayed to the mobile units. The calls are normally received via the Civil Defense base station or by telephone.

The city has just recently hired six civilian employees to serve as radio-telephone operators and assigned two to each of the three police patrol squads. These persons are currently undergoing on-the-job training as dispatchers. This program has only been in operation for approximately 60 days, and at least two of the original six were being replaced during the time of this survey.

II. PROBLEMS IDENTIFIED BY THE ADVISOR

This section is not intended to give the reader negative feelings regarding the competency of the department, but rather to honestly bring to light areas where improvement is possible.

Several specific problems were identified by the task advisor, and are detailed here without regard to ranking of importance.

A. Equipment

1. Generally the communications equipment is kept in fair to good repair, and functions reasonably well, however if the equipment continues to age without any formal replacement program, it will result in a major one-time replacement expenditure every several years. For the most part, the mobile and portable radio equipment is not capable of operation on the county-wide frequency which would be very beneficial during mutual aid instances.

2. The base stations and cavity filters are located a considerable distance from the antennas which results in excess line loss that could be avoided and would result in better radio coverage for the system.

3. The largest single problem regarding equipment relates to the disorganization existing in the Communications Center. This problem causes confusion and delays in processing calls. The disorganization results from adding different pieces of equipment over the years, physical location, internal traffic patterns, telephone system requirements, procedures in use, etc.

4. Additionally there is a lack of any type of recording equipment to serve the communications function that could be used to investigate problems and determine courses of action.

5. The use of the scrambler equipment is minimal and seriously degrades the radio system performance.

6. A problem exists with the new internal telephone system that requires the dispatchers to touch tone up a four number sequence every time the telephone rings, just so the call can be answered. Additionally, the automatic transfer of calls on hold to the main switchboard in city hall has caused important calls to be lost on numerous occasions.

B. Personnel

1. Until recently, the communications function was served by a patrol officer and desk sgt. In an effort to control cost and provide more officers on the street, six civilian dispatchers were hired and assigned to the patrol shifts. These persons received only on-the-job training which was provided by various uniformed personnel, and has resulted in as many variations in procedures as existed prior to the hiring of permanent dispatchers.

C. Procedures

The records keeping function of the communications system is incomplete, and does not provide data either accurately or in sufficient detail to permit any work load analysis to aid in expansion planning.

III. PROBLEM ANALYSIS

When considered independently, each of the identified problems appear to be minor and easily correctable. However, when considered as a whole, it is evident that considerable attention and expenditure will be necessary in order to upgrade and modernize the communications function.

As the police department grew in size over the past ten years, new functions and equipments were added, i.e., CB radio, scramblers, TV monitors, video terminals for the computer network, etc. All these things have increased the responsibilities of the communications system. The workload and request for services has also increased to such a point that the old methods and procedures for processing calls are no longer efficient or cost effective.

A collective analysis of the problems must begin with the proper placement of the communication function within the police department structure. Presently, the communications activities are viewed as a function of the uniform patrol division and an extension of the duty officer's command, but in fact communications is actually simply a service function to aid the department along with other service functions such as records keeping, training, purchasing, etc.

When viewed in this light, the administrator can more properly evaluate and address the problems identified.

The communications function presently has no particular supervisor to insure a single set of procedures and policies are utilized. One police lieutenant has the title of Communications Officer, but he is also a shift commander and not actually performing a supervisory role over the communications personnel and equipments.

The newly civilian dispatch personnel have been trained mostly by shift lieutenants, sergeants and officers. They have varying degrees of responsibilities and have rapidly become mere extensions of the individual patrol supervisors rather than professional telecommunicators trained to service the entire department equally.

The dispatch center is located directly in the hub of the department's activities, and there is continuous distractions caused by personnel moving in and out of the area. The equipment in the area is positioned in such a way that the dispatcher must continually move around the room to perform his or her duties. This causes considerable delay and wasted motion.

The lack of efficient message processing procedures makes it virtually impossible to accurately determine workloads for the dispatch personnel. A review of the police blotter indicated that approximately 16,000 entries will be made for the year 1978. There is presently no way to determine such valuable information as number of telephone calls received, radio messages processed, busy hours, telephone trunk loading, etc. All of this information is vital to the administrator that is trying to determine the proper and efficient staffing patterns for the communications center.

Additionally, the current procedures can not record data in any usable format for use in identifying incidents by type, high incident reporting zones, response times, busy hours, etc. This information would also aid department administrators in scheduling manpower needs of the entire department and staffing requirements based on actual workload potentials.

IV. CONCLUSIONS

A review of the problems identified and analysis of the causes of the problems leads this writer to the conclusion that the basic first step necessary for improvement is to consider the communications function as an administrative service of the department rather than a patrol function, and address the problems accordingly.

First, the communications function should be properly staffed with permanent, well-trained personnel. These personnel should be properly supervised and have standard and uniform operating procedures to follow. The procedures should be well documented and followed by all department personnel.

Efficient and modern equipment should be provided to aid the communications staff in performing their functions, and proper record-keeping formats should be established to aid the administrator in activities analysis.

V. RECOMMENDATIONS

A. Staffing

It is recommended that the administrative function of communications and ideally, records, be placed under the full-time supervision of one uniformed department member with the rank of sergeant. This supervisor should have under his command all of the civilian dispatch personnel and any other civilian or less rank personnel assigned to the records unit of the police department. It is further recommended that this supervisor be afforded the opportunity to receive training in communications and records supervision and further afforded the time and financial assistance to investigate modern and efficient telecommunications systems in other near-by police agencies.

The dispatch personnel should be assigned on a rotating basis and not necessarily in line with the patrol division squads. This procedure would help to develop a standard operating procedure for the communications function rather than separate procedures based on what patrol squad was on duty.

B. Equipment

It is highly recommended that this new communications supervisor be permitted to obtain the services of a consultant to design and implement a new communications dispatch center. This center should be equipped with a dispatch console that will permit all functions to be easily accessible to the dispatchers; recording equipment to permit long-term logging recordings of all telephone and radio traffic, and provide an instant recall to aid the dispatchers in identifying lost or confused incoming telephone calls; date/time stamping machines to permit the accurate recording of incidents and to identify actual times received, dispatched, unit arrival, and incident completion.

It is further recommended that the base station equipment now housed in the dispatch center be moved to a room in the top floor of the municipal building and properly secured. This equipment could then be remoted back to the dispatch console. This move would eliminate much of the line loss now caused by the extensive length of coaxial cable between the base station and the antennas.

It is also recommended that the department consider the elimination of all the scrambler equipment now in use. This equipment has very minimal use and for the most part is related to the delivery of personal messages that could easily be transferred via telephone line when necessary. The scrambler equipment causes serious degradation to the basic radio signal and offers the opportunity for confusion and lost messages due to the various codes. Further, the equipments has been costly to maintain and is viewed as unnecessary for the performance of the department's activities.

It is further recommended that the new communications supervisor establish a replacement schedule for mobile and portable radio units to assure that all of the equipment is kept for a period not to exceed six (6) years. This equipment, when purchased, should also be capable of two frequency simplex once in operation, utilizing both the department frequency and the county-wide mutual aid frequency in the simplex modes.

Regarding the telephone system in use by the police department, it is recommended that the department establish and maintain a single 7-digit emergency telephone number for citizen access to police services. It is further recommended that these incoming emergency lines be separate and apart from the internal private telephone system for city government, and that the lines be able to be answered by merely picking up the telephone instrument rather than the present system of code-dialing a 4-digit number in order to answer an in-coming emergency call.

C. Procedures

It is highly recommended that the new communications supervisor, after evaluation of other police communications systems, develop and publish a standard operating procedure manual for communications and/or records-keeping for the police department. This procedure manual should include but not be limited to radio procedures, telephone techniques, standard forms, major incident responses, etc. One example of a problem that can be solved with a simple standard procedure relates to the calling of a unit. The present procedure is for the dispatcher to give his own identifier and then the unit he is calling. However, by simply reversing the procedure and giving the called unit identifier first, it is possible to eliminate a lot of requests for repeat messages. It is recommended that APCO's Standard Operating Procedure manual be used as a tool in developing a departmental procedure manual. It is further recommended that the communications supervisor visit with other APCO members in his region for assistance in developing procedures and policies and for information regarding modern communications techniques.

D. Additional Considerations

In light of the city's responsibility for the communications needs of other services, including fire, ambulance, public works, etc., the city administrators should give serious consideration to the possibility of establishing a centralized communications center to serve all requests for citizen service, and then further consider the potential for the implementation of 911 telephone service. If the recommendation for the establishment of a communications supervisor in the police department is accepted and followed, the individual, after training, would be able to provide valuable input towards the establishment of such a combined service center.

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