Montgomery County Government

MONTGOMERY COUNTY COUNCIL
OFFICE OF LEGISLATIVE OVERSIGHT

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TITLE

An Evaluation of the 911 Emergency Service in the Police Communications Center of the Emergency Operating Center.

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I. SUMMARY AND MAJOR OBSERVATIONS

Summary

Since November 1974, the citizens of Montgomery County have used the nationally recognized "911" telephone number to call for police, fire and medical assistance. Except for an increase in the number of direct lines, the 911 service has remained essentially unchanged in the decade it has been in operation.

The 911 service is an integrated and dedicated system consisting of 91 lines from sixteen telephone company central offices located throughout Montgomery County wired directly into switchboards in the Emergency Operating Center (EOC) located in the Council Office Building in Rockville. Within the EOC, emergency calls are routed to either the Police Communications Center or the Fire/Rescue Communications Center depending on the type of assistance requested.

The Police Communications Center (the focal point of this report) is staffed around the clock by a staff of two sworn police officers and 74 Police Technicians. In CY 1983, the Police Communications Center processed over 680,000 calls, of which over 430,000 (63%) were received over the "911" lines and 250,000 (37%) were received over "other" seven-digit telephone lines.

This report reviewed the current status of the 911 service with emphasis on receiving and processing requests for police assistance in the Police Communications Center.

Major Observations

1. While there is no empirical evidence or knowledge either to refute or to support the allegation that 911 calls routinely go unanswered in the EOC, there are times, especially during periods of peak activity, when a caller will experience delays in reaching a police call taker.

2. There is a need to develop and implement a comprehensive plan to educate the public in the use of the 911 service for true police and fire/rescue emergencies.

3. There is a need for the Police Department to review and implement revised internal policies and procedures on the operation of the Police Communications Center.

4. Over the past decade, the authorized personnel complement of the Communications Division has not kept pace with the increase of activities in the Police Communications Center.

5. Installation of the Enhanced 911 service in mid-1985 will result in several improvements in emergency communications; however, Enhanced 911 will not eliminate several time consuming manual operations necessary for processing requests for police assistance.

II. AUTHORITY, SCOPE AND METHODOLOGY

1. Authority. Council Resolution 10-559, subject: CY 1984 Work Program of the Office of Legislative Oversight, adopted January 31, 1984.

2. Scope. The Office of Legislative Oversight should review the current status of the 911 Emergency Service with emphasis on processing 911 requests for police assistance and, if appropriate, make recommendations as to how the system can be improved.

3. Methodology. This evaluation was conducted during the months of February and March, 1983, using a variety of fact finding techniques to include a review of public documents (memoranda, studies and reports); interviews with management and staff of the Police and Fire/Rescue Communication Centers, police officials, police officers assigned to police districts, and telephone company officials; and visits to the Emergency Operating Centers for Baltimore, Prince Georges and Fairfax Counties.

III. INTRODUCTION.

1. For the past decade, the citizens of Montgomery County have used the nationally recognized three-digit telephone number "911" to call for police, fire and medical assistance. When the 911 service became operational in November 1974, the Emergency Operating Center (EOC)located under the Council Office Building was reconfigured to accomodate the equipment and personnel necessary to process the 911 calls and dispatch the appropriate police, fire or ambulance units.

2. Recently, there have been articles in the newspapers, various newspaper and television editorials, letters to the editor and calls to the Council Office which allege that some 911 calls to the EOC for police assistance are either taking an excessive amount of time to be answered or are not being answered at all. One newspaper article reported that "...one of four calls to Montgomery County's emergency number goes unanswered during daily busy periods."

3. To determine the validity of these allegations, the Council directed the Office of Legislative Oversight to review the current procedures for receiving, processing and responding to 911 calls for police assistance in the Police Communications element of the EOC and, where appropriate, comment on areas where improvements in the procedures could be made. This report responds to that request.

4. The report is organized into the following major sections:

.Background information on the 911 service.

.A description of the present 911 service in the Police Communications Center (PCC) with emphasis on the equipment and operating procedures for processing 911 calls;

.A description of the organization and staffing of the Police Communications Center;

.An analysis of calls processed in CY 1983;

.An analysis of the present 911 equipment in the Police Communications Center;

.An analysis of the organization, personnel and staffing of the Police Communications Center;

.An analysis of the Enhanced 911 Service to be operational in mid-1985.

.Concluding observations and comments on the above.

.Recommendations

IV. BACKGROUND

1. Prior to late 1974, Montgomery County citizens who needed police, fire or medical assistance had to call a seven-digit telephone number for the police and a different seven-digit number for fire/medical. Beginning in November 1974, Montgomery County introduced a single, three-digit telephone number, "911", to request either police, fire or medical assistance. The telephone company installed specially dedicated 911 telephone lines from its 16 telephone wire centers located throughout the County to route the 911 calls directly to an underground facility, which was designated as a public safety answering point (PSAP) or Emergency Operating Center (EOC).*

2. Publicity at the time described this new service as the "911 Assistance Service." This theme was repeated on stickers affixed to telephones, in news releases, telephone bill inserts, and the inside cover of telephone directories. In addition, prominently affixed to all marked police vehicles and on other public safety vehicles were large decals which announced to County residents: "Assistance-Dial 911."

3. In the 10 years that the 911 service has been in operation, the number of telephone subscribers has grown and with it the number of 911 direct lines between the 16 telephone company wire centers and the EOC. During that same period, the EOC has undergone a modest remodeling, additional equipment has been installed and activities have been added; however, it has remained essentially as originally configured in three major elements:

*Note: Through the years the underground facility constructed in the 1950's as part of a national defense program has gone by many names, such as the Emergency Operating Center (EOC), Emergency Communications Center (ECC), or, for a particular element in the EOC, the Police Communications Center or the Fire/Rescue Communications Center. For the purpose of this report, EOC will refer to the underground facility itself, and the Police Communication Center will refer to that element of the EOC operated by the Police Department's Communications Division.

.Police Communications Center where all 911 requests for emergency assistance are received and where requests for police assistance are processed and dispatched;

.Fire/Rescue Communications Center where requests for fire and medical assistance are processed and dispatched; and

.Common areas for the equipment and necessary facilities to support the two communication centers.

V. DESCRIPTION OF THE PRESENT 911 SERVICE IN THE POLICE COMMUNICATIONS CENTER

General

1. The official nomenclature of the present 911 service in Montgomery County is the "basic system." When installed in November 1974, this basic system consisted of 57 dedicated 911 lines from 16 separate telephone company wire centers routed directly through the Rockville Telephone Center into the Emergency Operating Center (EOC). There the calls were received at the EOC switchboards and transferred to the separate police and fire/rescue communication centers for processing and dispatching.

2. In the decade that the 911 service has been in operation, minor improvements in the facility and equipment have occurred and the number of direct 911 lines to the EOC have increased 60% to accommodate the steady increase in County telephone subscribers. However, staffing and procedures for receiving and processing 911 calls are essentially the same.

Police Communications Center: Equipment and Operating Procedures for Processing 911 Calls

3. Overview. The Emergency Operating Center is located in an underground facility under the south wing of the Stella B. Werner Council Office Building on Maryland Avenue in Rockville, Maryland. The facility consists of separate Police and Fire/Rescue communications and operations areas. Each call over the 911 system for police, fire or medical assistance initially come to an EOC switchboard where it is answered by a Police Technician assigned to the Police Communications Center. The Police Technician first determines what type assistance is needed and then transfers the call to either the Police Communications Center or to the Fire/Rescue Communications Center. In the Police Communcations Center, a police call taker receives the call, records pertinent information about the caller and the event, determines the police beat and police reporting area where the event is located and sends the information to a police dispatcher who directs a specific police unit (or units) to respond. This procedure is discussed in more detail in subsequent paragraphs of this section.

4. EOC switchboard positions. All calls to 911 terminate at four identical EOC switchboards. Currently, 91 direct 911 lines emanating from 16 separate telephone company wire centers located throughout the County

terminate at these switchboards. (See, Exhibit A). In addition to the 91 direct 911 lines, the following nine additional lines are serviced through the EOC switchboards:

.One Direct line to the Andrews Air Force Base Linguistics Bank which provides the EOC assistance in Spanish and Portugese translation.

.One Direct line to the METRO Transit Police.

.Three unadvertised seven-digit 279 numbers which are used to transfer emergency calls from Montgomery County subscribers who live adjacent in Prince Georges County but are wired into the P.G. County EOC. (Because the original installation of the 911 telephone service did not consider political or jurisdictional boundaries, many Montgomery County subscribers who border Prince Georges County were serviced by wire centers located in that County. Thus, when these subscribers dial 911, the P.G. County EOC answers; and, after determining that the call is from a subscriber living in Montgomery County, must transfer the 911 call to our EOC over one of these three 279 numbers.)

.Four unadvertised seven-digit 762 numbers. These numbers, part of the original block of Montgomery County Police numbers, are used primarily by telephone company operators in relaying requests which they receive when a subscriber dials "0" and asks for Montgomery County police, fire or medical assistance.

At all times a Police Technician is on duty at one of the four EOC switchboards. When a call is received at the switchboard, the operator answers with the question, "Police, Fire or Ambulance?" The operator then transfers the calling party to either the Police Communications Center over one of twelve direct lines or to the Fire/Rescue Communications Center over one of six direct lines. If the operator, through experience, identifies the call for police assistance as an "immediate" emergency, the call is transferred over one of the two "Red" 911 lines. Conversely, if the calling party indicates to the EOC operator that the 911 call is not an emergency (such as a request for information on school closings, report an interruption in utility service, report a storm drain overflowing, request information concerning the Department of Motor Vehicles, etc.), the switchboard operator terminates the call promptly with instructions for the calling party that 911 is an emergency line and the party should look up the seven-digit number for the appropriate agency.

As stated earlier, once a 911 call is identified as a request for fire or ambulance assistance, that call is routed directly into the Fire/Rescue Communications Center where it is processed and dispatched to the appropriate fire and/or rescue organization. As procedures in the Fire/Rescue Communications Center are not within the scope of this evaluation, this report will concentrate on the Police Communications Center. (See Exhibit B for a schematic of the County's 911 phone system.)

5. Police Call Taker Positions. When the EOC switchboard operator transfers a call over one of the 12 direct lines to the Police Communications Center an audible ring is generated and the appropriate

button lights on each Call Directory located at the seven call taker positions. Each police call taker position has an identical Call Directory (telephone) with access to the following twenty-nine lines (See Exhibit C for a schematic of the Call Directory):

12 - 911 direct lines from the EOC switchboard (two of which, marked A and B, are red "immediate" emergency lines).

1 - Direct line to the Fire/Rescue Communications Center

5 - Direct lines to the five Police District Stations (Rockville, Bethesda, Silver Spring, Wheaton-Glenmont and Germantown)

1 - Direct line to the Rockville State Police Barracks

1 - Direct line to the Rockville City Police

1 - Direct line to the M-NCPPC Park Police

1 - Direct line to Board of Education/MCPS Security Office

1 - Direct line to the American Automobile Association operations center

4 - Seven digit lines for general calls

1 - Special line for the exclusive use of Police and County officials

1 - Police Communications Center Intercom.
29 - TOTAL

In addition to one Call Directory at each of the seven police call taker positions, there is an identical Call Directory at the Supervisor's, the Sorter's and the MILES Computer operator's positions (discussed below).

Information from the caller is recorded by a police call taker on a Communications/Records (C/R) card on which is also recorded the essential information required to process a call. (See Exhibit D for an example of a C/R Card). The information received from the caller usually includes the location, nature and status of the event; the name, address and phone number of the caller; and any other pertinent information which may assist the responding police unit, such as directions to the site of the event, description of persons or vehicles involved, etc.

After recording the above essential information, the call taker assigns the event one of two response codes. Response Code 1 is for routine events (vehicle blocking a driveway, strange car parked in the neighborhood, etc.); and Response Code 3 is for serious events which require the use of the red light or siren in responding (officer in trouble, murder or rape in progress or just occurred, assault, etc.). (Note, Response Code 2 is no longer used.)

The call taker must next refer to a microfische reader which lists all roads and streets in the County, significant buildings and

complexes (shopping centers, schools, housing developments) and the corporate limits of municipalities. From the microfische reader the call taker must obtain the police beat, the Police Reporting Area (PRA), and the corporate limits (if applicable) where the event occurred. County police responsibility is divided into five districts, with a total of 40 beats and 697 PRAs. Each police district is responsible for eight beats and a proportionate number of PRAs. The corporate limit information affects police response to events occurring in any of the four municipalities which have their own police: Rockville, Takoma Park, Gaithersburg and Chevy Chase Village. At Exhibit E is a summary of the procedures for processing calls for municipalities, M-NCPPC Park Police, Maryland State Police and Federal Reservations.

After the call taker has recorded the above information the C/R card is placed on a conveyor "track" which physically transports the card to one of five police dispatchers in an adjoining room.

6. Police Dispatcher Positions. There are five police dispatchers in the Police Communcations Center, one for each of the five police districts. When the C/R card is received via the conveyor track by the dispatcher, a call is placed over the radio to the police unit assigned responsibility for the particular beat and PRA where the event is located. If the responsible police unit is already engaged with another event or is otherwise unable to respond, the dispatcher directs a back-up police unit to respond.

The activities within the Police Communications Center in support of police units in the field go beyond simply radio dispatching. The overall responsibility of the Police Communications Center is two fold: to serve the public by receiving and processing 911 calls, and to support the police officers in the field. Those Police Communications Center activities which support the police officers in the field are discussed briefly in the following paragraphs.

7. MILES Computer Operator Position. Located in the Police Communications Center are two of the three police access terminals to the State of Maryland MILES data bank. (The other is in the Informational Services Division at Police Headquarters). MILES is an acronym for the Maryland-Interagency Law Enforcement System, a data bank of information maintained by the Maryland State Police on stolen property (motor vehicles, weapons; etc.); Maryland vehicle listings (registration and tags), Maryland drivers licenses; and wanted and missing persons. Information on non-local wanted persons, stolen property and vehicle registrations is available through a MILES link with the data bank at the National Crime Information Center (NCIC).

The MILES computer operator responds to radio and telephone requests from field units and district stations for the above information, and is also responsible for entering information on wanted and missing persons and stolen vehicles and vehicle tags. A review of the MILES records for 1983 discloses that the Police Communications Center MILES computer is the second busiest in the State, averaging almost 100,000 inquiries per month. Located at the MILES computer position is a Call Director exactly like those at the call taker positions to back-up and assist call takers in answering 911 calls.

8. Sorter Position. The Sorter is responsible for receiving, verifying for accuracy and completeness, and processing C/R cards. As indicated earlier, the C/R card is the basic document for recording information relating to events for which a police unit was dispatched; for processing requests for verification on stolen property, wanted persons, vehicle registration tags and drivers licenses; for recording information on lookouts; and for a myriad of other activities which occur in the Police Communications Center. Like the MILES position, a call taker Call Directory is located at the Sorter position as a back-up.

9. Message Routing Position. The myriad of reports, information and miscellaneous police and crime-related data which are generated in, or are routed through, the Police Communications Center must be sent to the proper County and/or external agency. This function is performed by the Police Technician assigned Message Routing duties. In addition, this person is responsible for other activities to include operating the deaf teletype phone and the Police "Four-Phase" computer terminal and printer.

10. Supervisor Position. Each of the three shifts in the Police Communications Center is under the direct supervision of a Police Technician Supervisor who has responsibility for overseeing four distinct activities located in four separate areas: EOC switchboards, message routing, dispatching and call taker/sorter/MILES computer operations. To assist the Police Technician Supervisor, each shift has an Operations Supervisor who directly oversees the call takers, the sorter, and the MILES computer operator. The Operations Supervisor also has a Call Directory at his desk which is available to back-up the call takers.

Police Communications Center: Organization and Staffing for Processing 911 Calls

11. Communications Division. The Police Communications Center is staffed by the Communications Division, a sub-element of the Management Services Bureau. For FY 84, the Communications Division is authorized a Police Captain as the Division Director, a Police Sergeant as deputy, 74 Police Technicians and one Administrative Aide. The Police Technicians and Aide are non-sworn.

12. Police Technicians. The 74 Police Technicians are organized into three 8-hour shifts for 24 hours per day coverage, every day of the year. The shifts change at 0000 (midnight), 0800 (8:00 a.m.) and 1600 (4:00 p.m.). The two shifts from 0800 to 1600 and 1600 to 0000 are each assigned approximately 25 Police Technicians. The remaining shift (000-0800), historically a less active period, is assigned approximately 20 technicians. Police Technicians are assigned to a particular shift for a five-week period, after which approximately three or four Police Technicians change between shifts. In addition to shift personnel, two Police Technician Supervisors are assigned permanently to the 0800 to 1600 shift as the training coordinator and geographical coding coordinator (updates microfische and data maps and performs other essential functions).

13. Augmentation. The Police Communications Center is often augmented with police officers who are on light duty or for some administrative reason are unable to perform their sworn duties. These

officers are assigned to a specific shift and usually perform call taker and sorter duties.

14. Telephone Reporting Unit. Also located in the Police Communications Center is the Police Telephone Reporting Unit (TRU) which is staffed by sworn officers from 6:00 a.m. to 10:00 p.m., Monday through Friday. The TRU complement is not part of the assigned strength of the Communications Division, but is attached organizationally to that division. The primary function of the TRU is to receive citizen complaints and take reports of burglaries, larcenies, auto theft, vandalism, lost property and similar "occurred earlier" events which can be documented by telephone without requiring a police unit to be dispatched. Establishment of the TRU has increased the availability of patrol units to respond to "in progress" calls; however, the citizen reserves the option of having a police officer dispatched rather than making a telephone report.

Police Communication Center: Calls Processed in CY 1983

15. Overview. Essentially, all calls received in the EOC can be classified as "911" or "other" calls. 911 calls are those received over the 91 direct 911 lines and the seven lines which are used by the P.G. County EOC and the telephone company operators to transfer emergency calls. Other calls are those which are received over the other direct and seven-digit lines which service the EOC. The data presented in this section of the report are for calendar year 1983, with some selective data for early 1984. At the outset, it should be noted that the EOC is severly limited in equipment to record call data. The equipment in service only records consecutively the number of 911 calls which are answered at the EOC switchboard and the number of other calls (direct and seven digit) which are answered at phones located throughout the Police Communications Center. There is presently no equipment in the Police Communications Center to record: the number of 911 and other calls placed to the EOC and not answered; the time a call reached the EOC switchboard or Call Directory; the number of rings before a call was answered or the calling party hung up; the number of calls which received a busy signal because all available lines were in use; or the time spent on each call. (Note: At the time of this evaluation, the County has requested bids on a traffic recorder which will be capable of monitoring the 911 and other incoming lines and provide a print out of most of the above information. This traffic recorder is programmed to be available in the fall of 1984.)

16. Calls Received in 1983. When the 911 service was initiated in 1974, counters were installed only on the 911 direct lines to record actual calls answered at the EOC switchboard. It was not until July 1983, that the telephone company installed counters on the other lines. Consequently, an actual count of calls received on each 911 and other lines is only available for the period since July 1983. At TABLE I is a record of the number of 911 and other calls received in the Police Communications Center, by shift, for the 184 day period from July 1, 1983 to December 31, 1983.

TABLE I

911 and Other Calls by Shift
July 1, 1983 - December 31, 1983

	SHIFT			
Type Call	Midnight--8:00 A.M.	8:00 A.M.--4:00 P.M.	4:00 P.M.--Midnight	Total (%)
911	37,738	83,839	95,966	217,543 (63%)
Other	23,636	54,680	47,841	126,157 (37%)
Total (%)	61,374 (18%)	138,519 (40%)	143,807 (42%)	343,700 (100%)

17. The daily average of the 911 and other calls, by shift, for the six month, 184 day period, is at TABLE II.

TABLE II

911 and Other Calls
Daily Average By Shift
July 1, 1983 - December 31, 1983

	SHIFT			
Type Call	Midnight--8:00 A.M.	8:00 A.M.--4:00 P.M.	4:00 P.M.--Midnight	Total (%)
911	205	456	521	1,182 (63%)
Other	129	297	260	686 (37%)
Total (%)	334 (18%)	753 (40%)	781 (42%)	1,868 (100%)

18. Using the daily average of 911 and other calls for the period July 1, 1983 to December 31, 1983, the total calls received in the Police Communications Center for all of calendar year 1983 can be extrapolated as indicated at TABLE III.

TABLE III

Total 911 and Other Calls
January 1, 1983 - December 31, 1983

Type Call	Total (%)
911	431,430 (63%)
Other	250,390 (37%)
TOTAL	681,820 (100%)

19. Analysis of 911 Calls in CY 1983. Each of the estimated 431,430 calls received at the EOC switchboards over the 911 lines and transferred to the Police Communications Center did not result in the dispatch of a police unit. An analysis of 1983 police report data discloses that less than half, or 201,686 calls resulted in instances where either a police unit was dispatched or some other police reaction occurred, such as a TRU report was completed. An analysis of these same police data discloses that of the 201,686 calls, only 8,124 or 4% were dispatched as a CODE 3 incident; that is, one warranting quick police response because of the seriousness of the crime (murder, rape, robbery, aggravated assault, arson, etc.). Of the remaining 193,562 calls, 168,590 or 87% were dispatched as CODE 1 and 24,972 or 13% fell into that category of events which were handled by TRU or which were discovered by a police officer in the field who, after handling the event, called the EOC to make a report on the disposition of the event.

20. Analysis of 911 calls for two one-month periods. In an attempt to perform a more thorough analysis of 911 calls received at the EOC switchboards, all 911 calls for two months (60 days), were recorded and an analysis was made on the disposition of each call. At TABLE IV is the data for December 1983 (31 days) and February 1984 (29 days).

TABLE IV

911 Calls Received in the EOC
in December 1983 and February 1984

911 Calls	December 1983 Total Number [Daily Average]	February 1984 Total Number [Daily Average]
Calls Received at EOC 911 Switchboard	45,461 (100%) [1,466]	34,095 (100%) [1,176]
Calls Relayed to Call Takers:	36,249 (80%) [1,169]	25,343 (74%) [874]
To Police Call Takers	29,252 (81%) [943]	21,205 (84%) [731]
To Fire/Rescue Call Takers	6,997 (19%) [226]	4,138 (16%) [143]
Calls Not Relayed to Any Call Takers	9,212 (20%) [297]	8,752 (26%) [302]

An analysis of TABLE IV discloses:

.The average daily number of 911 calls received at the EOC switchboards for the 60 day period was 1,326 (45,461 + 34,095 ÷ 60). The average number of calls relayed to either a police call taker or a fire/rescue call taker was 1,027; and the average number of 911 calls which were not transferred to either a Police or Fire/Rescue call taker was 299. These non-transferred

calls included mis-dialed numbers, especially to "411"; instances where the calling party told the EOC switchboard operator that the call was not an emergency; or instances where the calling party simply hung up when the operator asked whether the caller wanted police, fire or ambulance assistance.

.Of the daily average of 1,027 calls transferred to the police and fire/rescue call takers for the 60 day period, 841 (82%) were transferred to the police call takers and 186 (18%) were transferred to the fire/rescue call takers.

21. Analysis of Other Calls. In this category are all calls received in the Police Communications Center over the many direct and seven-digit lines "other" than 911. In 1983, an estimated 250,390 calls, or 37% of all calls received, fell into this other category (see TABLE III). The nature and purpose of these calls are almost as varied as their number. A large percentage of these calls relate to legitimate police business (requests for information on wanted persons, stolen goods, vehicle registrations and other information available from the MILES data bank; numerous reports from the police district stations; and calls generated by the after-hours responsibilities assigned to personnel in the Police Communications Center such as requests for emergency food parcels). Another large percentage are administrative calls relating to the personnel and operations of the Police Communications Center and also personal calls to the staff. Finally, included in this broad category of other calls are numerous requests for information from citizens who either do not know where else to go for the information or are spoiled because the Police Technicians have a reputation of "knowing" the County.

22. County Police Communications Center calls compared to three other jurisdictions. At Exhibit F is a comparison of three jurisdictions with characteristics similar to Montgomery County. These jurisidctions have various levels of the 911 system installed.

VI. AN ANALYSIS OF THE PRESENT 911 EQUIPMENT IN THE POLICE COMMUNICATIONS CENTER

1. Current Telephone Service. The 911 lines and equipment available in the Police Communications Center to process 911 calls was discussed earlier in this report. From that description and the information contained at Exhibits A, B and C, the following observations can be made concerning the present 911 equipment:

.Only a finite number of 911 lines are installed in each of the County's 16 telephone areas. Silver Spring Center has the most with 12 lines, and five areas (Northwood, Colesville, Poolesville, Damascus and Oakdale) have the least with three lines each;

.The total number of 911 lines from the 16 area telephone centers to the EOC switchboard is 91;

.There are nine additional lines terminating at the EOC switchboard, all of which are unpublished and are used for either direct contact between the EOC switchboard and other EOCs (Metro Transit Police and P.G. County) or are used by the telephone company to connect parties

who call the Montgomery County EOC from outside the County or dial "0" in an emergency.

.There are a finite number of direct lines from the EOC switchboard to the Police and Fire/Rescue Communications Centers: twelve lines to Police call takers and six lines to Fire/Rescue call takers; and

.Although there are twelve 911 lines to the Police call takers, there are only 10 terminal points in the Police Communications Center: one Call Directory at each of the seven call taker positions, and one at each of three additional positions where other primary functions are performed (MILES Computer, Sorter and Supevisor).

2. With the equipment currently installed in the Police Communications Center, situations can occur where a person dialing 911 may receive a busy signal, may be put on hold, or may not even receive an answer from an EOC switchboard. In each case, someone unfamiliar with the technical limitations of the equipment could erroneously conclude that the Police Technicians were not performing their duties. However, that may not be the case, as the following examples illustrate:

Situation. A person dials 911 and gets a busy signal.

Technical Reason. First, the busy signal is coming from the telephone company wire center serving the area where the calling party phone is located and not from an EOC switchboard. Equipment at an area telehone center will generate a busy signal for all 911 calls in excess of the finite member of 911 lines between that area wire center and the EOC. For example, if the call is originating from Damascus and three 911 calls are already in progress when this forth call is placed, equipment at the Damascus telephone center will generate a busy signal for the fourth call and all subsequent calls made while there are three calls in service.

Situation. A person dials 911 and reaches an EOC switchboard, requests Police assistance and is put on "Hold" by the EOC switchboard operator.

Technical Reason. There are 91 direct lines over which 911 calls can come to the EOC switchboard. However, there are only 12 lines from the EOC switchboards to the Police call takers. Should the EOC receive more than 12 calls for Police assistance, all calls over 12 would have to be placed on "Hold" by the EOC switchboard.

Situation. A person dials 911 and reaches an EOC switchboard, requests Police assistance, and is plugged into one of the 12 lines to the Police Communications Center. The calling party hears a "ring," but the call is not answered in a reasonable time.

Technical Reason. Current staffing authorizations do not provide for manning all seven police call taker positions. However, even if all seven police call taker positions were manned, if all were busy with a call, the eighth call would go unanswered until one of the call takers was free. Even if the Police Technicians at the three other positions (MILES Computer, Sorter and Supervisor) started answering 911 calls, a maximum of only 10 of the 12 incoming 911 lines could be answered.

VII. AN ANALYSIS OF THE ORGANIZATION, PERSONNEL AND STAFFING OF THE POLICE COMMUNICATIONS CENTER

1. Overview. The authorized personnel complement for the Communications Division has increased slightly in the decade that the 911 service has been in operation. These personnel increases have been primarily the result of functions being added to the Police Communications Center; for example, 911 call taker positions and two radio channels. Over this same period, there has been a change in the mix of sworn and civilian personnel, with the sworn complement reduced from a high of 14 to the present authorization of two; and the number of authorized civilian Police Technicians have increased from 59 to the current authorization of 74.

2. Internal Police Department documents relating to the Personnel Complement of the Communications Division. Early in this evaluation of the 911 service it became apparent that the personnel strength of the Communications Division, and hence the staffing of the Police Communications Center, has been the subject of numerous internal Police Department memoranda, studies and reports. After reviewing these documents, especially those produced in the past two years, and interviewing several Police Technicians it was apparent that there is a strong consensus for an increase in the authorized complement of Police Technicians. During this period when these arguments were being made for a personnel increase, the number of authorized Police Technicians have remained consistant at 74 full-time positions, plus an additional fund authorization equivalent to 4.1 work years to pay for overtime and holidays.

3. Document synopsis. A synopsis of some of the memoranda and reports written in the past two years relating to the personnel strength of the Communications Division disclose the following:

.A February 2, 1982, analysis of a department-wide stress survey by the Police Department's Office of Stress Management disclosed that, of the major classifications of department employees (sworn, non-sworn, and Police Technicians), the highest reported consequences of stress (headaches, upset stomach/nausea, tension, etc.) were reported by Police Technicians. The circumstance or event most cited by Police Technicians as causing this stress was "insufficient manpower to adequately handle a job."

.In an April 13, 1983, memorandum through the chain of command to the Chief of Police, the Director, Communications Division, highlighted

personnel shortages, stressful working conditions and related problem areas, concluding with a recommendation that the staffing level be increased to between 85 and 90 Police Technicians.

.In May 1983, an inhouse study of the staffing requirements of the Communications Division by the Police Department's Planning Division recommended that, to provide adequate coverage for the three shifts in the Police Communications Center, the authorized number of Police Technicians should be increased to 90 positions .

.An August 11, 1983, memorandum from the Police Department's Office of Stress Management highlighted the stressful conditions associated with duty in the EOC and opined that low staffing levels contributed to the stress-related symptoms of EOC personnel. This report also concluded that the high EOC employee turnover rate (1980-30%; 1981 and 1982-27%) was stress related.

.A November 1983, internal Communications Division memorandum concluded that the minimum number of Police Technicians needed to cover all positions in the Police Communications Center for a 24-hour period was 52. To provide this level of staffing day after day and allow for regular days off, leave (annual, compensatory and sick), and other regularly occurring absences, the memorandum recommended an authorized staffing level of 87 Police Technicians.

.Finally, a March 14, 1984, internal Police Department memorandum to the Chief, Field Services Bureau, subject: EOC/911 Improvements, included among its findings that manpower shortages in the EOC was a problem and that the EOC "is presently authorized 23 less positions than are needed to function under the present [EOC] workload."

4. Apparently, the above information did not persuaded top Police Department management, for the authorized level of Police Technicians has remained constant for the past three fiscal years (and there is no proposed increase in FY 85). I was unable to find any official Police Department document responding to the above recommendations for an increase in the level of authorized Police Technician positions.

5. An attempt to develop additional empirical data with which to support a judgment on the matter of staffing is thwarted by the absence of specific management information. For instance, the ability to count the thousands of "other" calls which are received over the direct and seven-digit lines has only been available since July 1983. In addition, equipment is not currently on hand to record traffic management data on the 911 service, such as: the time a call is received at the EOC, the person responsible for answering the call, the number of rings before the call is answered, the number of calls not answered, the number of calls which receive a busy signal when all incoming lines are in use, and the time spent on each call. Unless recording equipment is purchased sooner, it will not be available until the Enhanced 911 service is operational in the summer of 1985.

6. Data has been collected, however, on assigned and present-for-duty strength in the Police Communications Center for 1983 and an analysis has

been conducted. The information presented at Exhibit G includes the present-for-duty strength in the Police Communications Center for all three shifts for the same 24-hour date for each month in 1983. An analysis of that data disclosed that actual present-for-duty strength as a percentage of assigned strength for the shifts varied widely from a low of 47% to a high of 77%. The monthly average for each shift was:

.midnight to 0800 - 59%;

.0800 to 1600 - 62%; and

.1600 to midnight - 65%

The daily average for the year was 62%. The two primary reasons for the reduced present-for-duty strength were leave (annual, sick, compensatory) and regular days off.

7. From a review of the Police Department documents outlined above and the data presented at Exhibit G, it appears that the assigned strength of the Communications Division fails to take into considertion that employees have two regular days off per week and take advantage of earned leave. Even if the employees only took off their regular two days per week, the present-for-duty strength would never exceed 71% except for those shifts which are augmented by police officers. From personal observations, confirmed by Police Technician Supervisors, whenever there are personnel shortages for a particular shift, the "slack" is usually taken up by reducing the Police Technicians assigned at the call taker positions. The one exception is on the midnight to 0800 shift when two of the five dispatcher channels occasionally are doubled up.

VIII. ANALYSIS OF THE ENHANCED 911 SERVICE (E911)

1. Overview. Scheduled for installation by mid-1985 is the Enhanced 911 service, the first major improvement of the 911 system in Montgomery county in over a decade. This section of the report will briefly describe what is included in the Enhanced 911 (E911) service and will evaluate its impact on the processing of emergency calls in the Police Communications Center.

2. Improvements Provided by the Enhanced 911 Service. The Enhanced 911 service will provide the following improvements over the Basic 911 service:

.Automatic Number Identification (ANI). This feature will, through the introduction of computers, provide a visual display of the telephone number of the phone from which the 911 call is being made to the call taker. The ANI is a marked improvement over the basic system in that the call taker does not have to ask for the phone number from the calling party. Also, should the calling party hang up (even before the call taker answers) the telephone number remains displayed so the call taker is able to call back and verify information from the caller.

.Automatic Location Identification (ALI). Just as the telephone number of the telephone from which the 911 call is being made is displayed

on a screen before the call taker, the steet address of where the telephone is located is displayed on an adjacent screen. Displayed with the address will be critical information which relates that address to the appropriate Police beat and Fire service area. The display will also identify those corporate limits which have their own police force. The electronic display of address and response data will be a marked improvement over the present system which requires the call taker to refer to a microfische reader, map or book to locate the beat, reporting area, fire box, etc. There are other advantages of the ALI display. Should the calling party be unable to communicate (young child, stroke, heart attack or seizure victim, etc.) the telephone's street address location is displayed so the call taker will be able to dispatch police and/or medical assistance. Also, if the call is disconnected before sufficient information is given to the call taker, the location of the telephone remains displayed. Finally, another advantage discovered by jurisdictions which have ANI and ALI is a reduction of false and crank calls once the public knows that the caller's phone number and address are displayed.

.Selective Routing (SR). As stated earlier in this report, when the telephone company installed the Basic 911 service in 1974, the differences between the telephone company's physical wire line boundaries and the political or jurisdictional boundaries were not considered. As a result, when several thousand Montgomery County subscribers dialed 911, the telephone company lines routed the call to an EOC in another jurisdiction. Over the past ten years, the telephone company has reduced the number of subscribers whose 911 calls go to an EOC in another jurisidiction. As of this writing, there remain approximately 13,000 Montgomery County residents living along the eastern border of the County who, when dialing 911, reach a call taker in the P.G. County EOC. The call taker in the P.G. County EOC must transfer the call back to our EOC switchboards by one of four direct lines. Selective Routing under E911 will eliminate this situation through sophisticated electronic switching equipment which is able to identify an 911 call as coming from a telephone located in Montgomery County and automatically route the call to the Montgomery County EOC.

.Automatic Call Distribution (ACD). The present EOC switchboards will be eliminated and in their place will be an electronic call distributor which will automatically route an incoming 911 call to the next available call taker. If more calls are received into the E911 system than there are available call takers, the ACD will "stack" the calls so that each is answered in turn by the next free call taker. This feature will also give the EOC the capability, through pre-recorded messages, to alert a caller that all 911 lines are busy, but not to hang up as the call will be answered in turn.

.Management Information. Currently, line counters in the Police Communications Center provide managers with a count of: each call as it is received at the EOC switchboard (911 and direct); each call transferred over the 12 lines to the Police Communications Center and the six lines to the Fire/Rescue Communications Center; and, since July 1983, each call received over the other seven-digit and direct lines. By reading these counters at specified time intervals (currently at the beginning of each shift) a manager can determine the number of calls which have been

received in the period since the last reading. However, that information has very limited utility. With Enhanced 911, managers will have recorded information on the following: the time each call reaches the EOC; the number of rings before the call is answered, or before the calling party hangs up; the time the call is answered; the call taker (or other position) answering the call; the time the call was terminated; and the length of the call. With this information, management will be able to determine how much time is involved in each stage of processing a call; to identify the peak call periods; to identify instances where an excessive number of rings occurred before the call was answered; to identify the call taker responsible for answering each call; and to calculate the optimum staffing level for specific periods of the day.

2. Current Status of the Enhanced 911 Service. Present plans call for installation of the E911 service to be completed by mid-1985. The majority of the funds necessary to purchase and install the E911 equipment will be provided by the State Emergency Number Systems Board (ENSB). The ENSB has approved the County's application for $800,000, the maximum amount available to Montgomery County based on its population. The source of ENSB funds is the 10 cents monthly "911 Fee" which has been added to the telephone bills of Montgomery County subscribers since July 1980. Any additional costs associated with the installation of the E911 service, and all costs associated with construction of the facility where E911 equipment will be installed, are the responsibility of the County.

3. Funding the Enhanced 911 Service. Beginning in July 1983, the 10 cents per month "911 Fee" has been collected by the telephone company on a County basis and deposited (less a service charge) in an account maintained by the State Comptroller. The Comptroller in turn remits the funds to the Counties on a periodic basis. The amount of the remittal to Montgomery County approximates $25,000 per month based on 10 cents per month collected from approximately 260,000 subscribers. These funds may be used to offset costs associated with operating and maintaining the E911 service once it is installed. Under the State law, the County is authorized to impose an additional fee, not to exceed 30 cents per month, to help defray maintenance and operational costs of the County's Enhanced 911 service. (As of February 1984, seven Maryland counties have added fees over the State mandated 10 cents, with Charles and Dorchester County adding 30 cents and P.G. County adding 15 cents.)

4. Limitations on What the Enhanced 911 Service Can Do. The above improvements which the Enhanced 911 service brings to the County are impressive and necessary. However, E911 will not improve several operating procedures in the Police Communications Center which currently add to the time of processing an emergency call.

.E911 service will not eliminate the requirement for the call taker to fill out a record card on the event. Although the caller's phone number and telephone location is electrontically displayed to the call taker, both must still be copied onto a Communications/Records (C/R) card. The call taker will still be required to solicit other information from the caller, such as the nature and status of the event; the location of the event if different from the telephone's location; and other information which will help the police, fire or medical unit locate the event and better deal with the incident.

.Once the C/R card is completed with as much essential information as is available from the caller, it must be manually sent over the conveyor track to one of the police dispatchers. Currently, it can take up to 20 seconds for the C/R card to travel from a call taker to a police dispatcher position. While the length of the conveyer track may be shortened when the Police Communications Center is reconfigured to accomodate the equipment associated with the E911 service, there are no current plans to eliminate the conveyor track.

.Finally, there is nothing in the E911 service which will enable the call taker to identify a true emergency call from a non-emergency call when both are received over the 911 lines. The Automatic Call Distributor currently designed for the E911 system will route 911 calls to the next free call taker, but only in the order which each call reaches the EOC; and when all call takers are busy with calls, the sophisticated E911 electronic equipment will "stack and hold" additional incoming 911 calls until a call taker is free. However, it will still be necessary to initially answer each 911 call in-turn and determine whether the call is an emergency or a non-emergency.

5. Computer Assisted Dispatch. The next opportunity for improvement in processing E911 calls will be with some form of computer assisted dispatch (CAD). Currently, the County has authorized funds for planning and design of a CAD system (Capital Improvement Project 792226). While the final configuration of a CAD system is still in the planning stage, most CAD systems, as a minimum, provide for the electronic transfer from the call taker to the police dispatcher of all information currently manually copied on the C/R card and sent to the dispatcher over the conveyor track.

IX. CONCLUDING OBSERVATIONS AND COMMENTS

1. Observation. While there is no empirical evidence or knowledge either to refute or to support the allegation that 911 calls routinely go unanswered in the EOC, there are times, especially during periods of peak activity, when a caller will experience delays in reaching a police call taker.

Comment. The EOC currently does not have telephone traffic management equipment which can record 911 calls placed to the EOC that go unanswered. Personal interviews with many Police Technicians do not support the assertion that one out of four 911 calls are not answered. However, because of minimum staffing levels, there are times when calls are not answered promptly, especially, during periods of peak activity. At the time of this writing, the County is planning to purchase traffic management equipment as soon as possible so as to capture data on delayed and lost calls. Finally, because of limitations in the telephone equipment presently installed and the availability of 911 telephone lines, there is also the possibility that during periods of peak activity citizens who dial 911 may get a busy signal.

2. Observation. There is a need to inform, develop and implement a comprehensive plan to educate the public to use the 911 service for true police and fire/rescue emergencies.

Comment. While there has been much lip service to this need, little has actually been done to execute a program of public education. Some areas requiring immediate attention include:

.Changing decals on police vehicles from "Assistance - Dial 911" to "Emergency - Dial 911." The current program of replacing the "Assistance" decals only on newly acquired police vehicles will take almost five years to implement. However, if decals were replaced at the next scheduled quarterly service of each police vehicle, the program could be completed in three to four months. (Note: The cost to replace two decals on each vehicle is estimated by the Department of Transportation at under $20 per vehicle, which includes the $8.00 cost for the two decals.)

.The inside cover of the Maryland telephone directories display an array of emergency numbers. They should also display non-emergency police and fire/rescue numbers as is found in the Virginia telephone directories (See Exhibit H). If a non-emergency police telephone number was prominently displayed, the public would probably use it instead of the 911 number to call the public safety agency for information which is not an emergency. This probability is illustrated by records from a 16 hour period on March 8-9, 1984, when a snow and ice storm hit the area. During that period, 34 calls were received in the EOC over the Deaf TTY/TDD number (762-7619). That number is the only number associated with Montgomery County displayed in the inside cover of the Maryland Suburban telephone directories other than the Emergency 911 number. Not one of the calls was an emergency, nor was any of the calls from a deaf person. All the calls requested information related to the severe weather (road conditions, closings, plowing operations, etc.). (Note: During the conduct of this evaluation, the Director, Communications Division requested the County's telephone service manager to ask Atlantic Bell to add non-emergency numbers to the inside cover of the next edition of the telephone directories.)

3. Observation. Current internal Police Department policies and procedures do not clearly delineate the mission and operational responsibilities of the Communications Division. It is not clear whether the Police Communications Center is a "command and control center" or a "communications and message routing center?"

Comment. The distinction between "command and control" and "communications and message routing" is important. The current prescribed mission of the Communications Division is "to serve the public and to support officers in the field" (DD 82-54). The first half of that mission--to serve the public--is accomplished by responding to all calls, emergency and non-emergency, over the 911 and other telephone lines which terminate in the EOC. There is currently no effort to educate the public that the mission of the Communications Division is to respond to emergency calls, if that is in fact the mission of the EOC in supporting the public. Currently, it is Police Department policy that when a person calls a Police District station on a non-emergency matter, the person is told to call the EOC on 911. Also, until recently, other County agencies were told to place a notice on their answering machines to call 911 for after-hours assistance.

The support of officers in the field by the Communications Division has also been broadly interpreted. Police officers call the EOC on 911 for MILES information even though there is a special seven-digit number for that service. Recently, terminals were installed in each Police District station so that police officers can query the MILES data bank without the assistance of the MILES computer operator in the Police Communications Center. However, it has been a slow and difficult process to get the officers to use the station terminal and not call the EOC.

To summarize, the Police Communications Center is used primarily as a message routing center and secondarily as a command and control center by the public, officers in the field and the police department as a whole. Two operational realities of the Police Communications Center contribute to this situation. First, the EOC is the only fully staffed and 24 hour functioning operation center of the County government; and second, the personnel in the Police Communications Center are knowledgeable of the County and have a reputation of being responsive to both citizen and police requests.

What appears to be needed are clear Police Department policies and procedures which delineate responsibilities of the Communications Division, Police District stations, and police units in the field in responding to emergency and routine matters; and that policy should be widely published.

4. Observation. Over the past decade, the authorized personnel complement of the Communications Division has not kept pace with the increase in assigned activities in the Police Communications Center.

Comment. In the ten years that the 911 service has been in operation, the increase in telephone subscribers and Police District stations have necessitated a 60% increase in the 911 lines servicing the County and a 67% increase in police dispatch channels. During this same period, the authorized personnel complement of the Communications Division has increased 4%, from 73 to 76 positions.

5. Observation. There is considerable evidence from recent internal Police Department memoranda, studies and reports that top Police Department management is aware that stress, high turnover and personnel shortages are serious problems in the Communications Division. However, there is a lack of documented evidence of top management's reaction to the problems.

Comment. Detailed information on the number, frequency and disposition of all 911 calls placed to the EOC is not adequate either to refute or to support a specific increase in the authorized complement of Police Technicians. However, there is a lack of documented evidence that top management has addressed the assumptions, claims and conclusions presented in recent internal Police Department documents concerning the shortage of personnel in the Police Communications Center.

6. Observation. While the morale of a group is difficult to measure with any degree of certainty, there are convincing signs that the general feeling of a large portion of the Police Technicians is that they are "second class" employees.

Comment. Admittedly, this is a highly subjective observation. However, there are simply too many signs supporting this observation to be ignored, such as a history of high personnel turnover, employee grievances, excessive use of sick leave and feelings expressed during personal interviews. (In CY 1983, the average number of hours of sick leave used by the Police Technicians exceeded the average number of hours of sick leave earned: 148 hours used vs 129 hours earned). Police Technicians, like the citizens they serve, are highly concerned that a call for a true emergency may be delayed because of understaffing or because the call taker is servicing a non-emergency call. This sense of stress and frustration on the part of the Police Technicians is manifested in complaints over staff shortages, poor working environment, old and out-dated communications equipment, publicity which unfavorably reflects on their sense of duty, and a lack of appreciation from top Police Management. At the same time, however, there appears to be no evidence that their frustration and dissatisfaction has manifested itself in any deliberate neglect of duty in responding to 911 calls and processing requests for police assistance. What is most apparent is that the Police Technicians would like to see top Management of the Police Department respond to their concerns for an increase in staff, improvement in working conditions and recognition and acceptance as professionals.

7. Observation. There is no alternate EOC to back-up the present facility in the Council Office Building.

Comment. The only alternate command and control capability presently available is the Command Bus which is equipped with emergency radio communications. The Command Bus, garaged at a nearby fire station, is periodically activated to test the communications equipment and rehearse the personnel. There is, however, no alternate public safety answering point (PSAP) for the 911 and other emergency telephone lines which presently terminate at the EOC. Should any natural or human event interrupt 911 service to or within the EOC, there is no pre-wired alternate site where 911 communications can be re-established. The Administration is aware of the gravity of this situation and has two interdepartmental committees addressing the problem: the E911/CAD Committee which is overseeing the planning and installation of the E911 Emergency Service and the Emergency Management Group. The E911/CAD Committee has as a member a representative from the Chief Administrator's Office; and the Emergency Management Group is chaired by an Assistant CAO. Present plans for converting to the E911 service include the establishment of an alternate EOC with capabilities paralleling those of the main EOC, albeit, on a reduced scale.

8. Observation. With the possible exception of Spanish and Portuguese, the EOC does not have a reliable arrangement for translating many foreign languages spoken by Montgomery County residents.

Comment. The direct line to the Andrews Air Force Base Linquistics Bank provides translating services for Spanish and Portuguese. However, the recent influx of refugees from South East Asia and the Middle East has increased the requirement to translate other foreign languages. The EOC has contingency plans for obtaining translating assistance if the foreign language is identified, such as

calling the appropriate Embassy or contacting a known bi-lingual individual (many are County employees). However, these alternatives are limited in that the call taker must first be able to identify the language and then either contact the proper Embassy or locate the individual who is on the EOC roster as understanding that language. Another limitation is that these alternatives are usually available only during day time hours.

A suggested alternative which is currently in use in other emergency centers is to have reference cards prepared on which are printed several key questions in foreign languages most common to the jurisdiction; in Montgomery County these would be Vietnamese, Cambodian, Laotian, Korean, Spanish, etc. Typical questions would include: Do you want the Police? Are you hurt? Is there a fire? Where do you live? The experience of other EOCs which have used these cards is that even if the callers do not speak English, they do understand the meaning of "yes" and "no" and numbers. With these cards, the call taker can determine if police, fire or an ambulance is needed and, if the caller can give the call taker the telephone number, the address can be obtained from a special directory available in the EOC.

9. Observation. The Council approved an FY 81 CIP communications upgrade which provided the Police Communications Center with the frequency and communications equipment to open a "data channel." To date, that computer data inquiry and service channel remains non-operational.

Comment. The addition of another frequency, the installation of the simulcast system (UHP radio repeaters) and the purchase of an additional console gave the Police Communications Center the capability of operating a data channel; that is, a separate radio channel for police units in the field to use when making computer inquiries and requesting services. The data channel was justified on the basis that it would provide field units with direct access to the MILES computer operator, thereby removing this category of traffic from the dispatch channels and reducing inquiry response time. In addition, use of this channel would remove service requests from the dispatch channels (tow trucks, traffic light malfunctions, etc.). While the frequency and the equipment have been available for some time, Police Technicians to operate this data channel have not been authorized.

10. Observation. Installation of the Enhanced 911 Emergency Service in mid-1985 will result in several major improvements; however, E911 will neither eliminate several time consuming manual operations necessary for processing requests for police assistance, nor will it reduce the number of non-emergency calls placed on the system.

Comment. As discussed in detail earlier in this report, the Enhanced 911 service will be a major improvement over the Basic 911 service; however, the call takers will still be required to manually complete a Communications/Record C/R card for each event and mechanically transport the card over a conveyor track to the police dispatchers. Improvements in these two manual/mechanical operations must wait until some form of Computer Assisted Dispatch (CAD) is installed. Furthermore, there is nothing in the E911 service or CAD which will enable a call taker to distinquish whether an incoming call is a true emergency or routine

until the call is actually answered. To reduce the instances of non-emergency calls being placed over the E911 service will require the education and cooperation of the public and all police elements which are supported by the Police Communications Center.

X. RECOMMENDATIONS

It is recommended that:

1. The Administration expeditiously acquire telephone management equipment which can monitor incoming calls and record appropriate traffic management statistics to enable management to staff the Police Communications Center to efficiently handle all 911 calls during periods of high demand.

2. The Administration continue its current activities to prepare an adequate facility and procure communication equipment for the installation of the Enhanced 911 Emergency Service by mid-1985. In addition, the Administration continue the parallel effort to establish an alternate Emergency Operating Center with the capability of augmenting the primary EOC.

3. The Administration expeditiously develop and implement a comprehensive program to educate the public on the appropriate purpose and use of the 911 Emergency Service so as to reduce the use of 911 for non-emergency and routine matters.

4. The Police Department review and implement revised internal policies and procedures on the operation of the Police Communications Center (PCC) to include specific responsibilities for the Communications Division and the other police units and activities.

5. The Police Department, making use of telephone traffic statistics hopefully to be collected over the next few months, utilize the occasion of the conversion to the Enhanced 911 Emergency Service and the relocation to new facilities in the spring of 1985 as an opportunity to adequately staff the Police Communications Center for optimal efficient service to the public and police units in the field.

6. The Police Department initiate a major effort to isolate those factors which adversely affect the morale and optimum operating efficiency of the Police Technicians and initiate corrective measures.

XI. DEPARTMENT COMMENTS AND OLO RESPONSE

Comments were received from the following:

1. Comments from Lewis T. Roberts, Chief Administrative Officer, May 17, 1984.

MEMORANDUM

May 17, 1984

TO: Andrew Mansinne, Director, Office of Legislative Oversight

FROM: Lewis T. Roberts, Chief Administrative Officer

RE: Comments on OLO Report - #84-1 Regarding 911 Service

Thank you for the opportunity to comment on your draft report #84-1 regarding 911 service. Comments from Chief Crooke, Mr. Granados, and Mr. Abraham are attached for your information. (Chief Crooke will be supplying some additional thoughts to you under separate cover regarding internal Department of Police procedures.)

I have found your draft report thorough and perceptive and, as usual, very useful to promoting an understanding by the Council of a complex subject. With regard to your recommendations, I offer the following on behalf of the Administration:

1. We have assigned very high priority to activities necessary to the installation of Enhanced 911 by mid-1985. In addition, we are completing additional analysis regarding the nature and location of the Emergency Operations Center for review by the County Executive shortly. Included in that analysis are alternatives for an alternate, or backup, EOC.

2. We began development of a public education program regarding 911 sometime ago, but we deliberately postponed implementation of that program to await the results of the COG study. We now intend to join with other jurisdictions in the area in a public education program aimed at limiting 911 to emergency calls only.

3. I have asked Chief Crooke to examine internal police department policies and procedures as you have recommended in your report.

4. We believe it appropriate to postpone changes in the staffing of the EOC until we have collected additional data this Fall and until we have made decisions regarding the nature and location of the EOC itself. We will, however, carefully examine the staffing of the EOC in advance of the next budget submission to determine if complement changes are in order.

5. While I believe that some of the employee concerns over working conditions in the EOC would be alleviated by renovations now being considered, I have also asked Chief Crooke to explore additional steps that he and his senior departmental staff might take to ensure the optimum operating efficiency of our police technicians and to communicate to them the importance we do attach to their work.

2. Comments from Bernard D. Crooke, Chief of Police, May 8, 1984 and May 17, 1984.

May 8, 1984

MEMORANDUM

TO : Robert K. Kendal, Assistant Chief Administrative Officer

FROM : Bernard D. Crooke, Chief of Police B.D. Crooke

SUBJECT: 911 Report

The paramount concern of our county leaders and citizens that perpetuated this report is the ability of the 911 telephone system to handle emergency requests. Mr. Mansinne's investigation did not find "emperical evidence to support the allegation that 911 calls routinely go unanswered in EOC." I agree there is a need to modify the current 911 system from an assistance mode to emergency use only.

The following is in response to several issues raised in Mr. Mansinne's report:

Personnel Complement

The police administration has effectively managed its resources in the Communications Division, such as the scheduling of personnel according to workload demands, and the assignment of light-duty police officers to EOC on a temporary basis. Other than 911 calls, information as to the number of incoming telephone requests at EOC was not available until last year when counters were placed on the centrex lines. Even with the additional workload information, I do not currently perceive a need to increase the authorized Police Technician positions without further empirical data.

The Enhanced 911 (E911) System scheduled for July 1985 will provide management with improved information for making rational decisions in assessing any possible increase in personnel needs.

High Turnover

The high turnover rate is not unique to Montgomery County; it is found in all metropolitan police jurisdictions. At a recent Council of Governments meeting, the Select Working Group on 911 made an observation that dispatcher work mostly attracts females who are frequently second salary-earners in families. Often, they resign not to take a similar job with another police department, but for a totally unrelated position that offers greater compensation or benefits. In this department, the attrition rate of resignation has shown a significant reduction of 75% since 1982:

Resignations of Police Technicians

1981	1982	1983	1984 (To Date)
20	20	5	4

Stress

Although there is a certain amount of stress in any job, Police Technicians do not have any more stress than others in the department. Top management has been very sensitive to many issues raised by Communications personnel, and we have addressed most of these issues. The department's psychologist was assigned to work with our personnel in the Communications Division, which resulted in my staff's and my meeting with the Police Technicians on at least two occasions this year. Management pursued the renovation of the present EOC complex, and we endorsed the relocation of the Communications Center to another floor of the Stella B. Werner Council Office Building.

911 System

The department was formulating plans for educating the public in the use of "911" as an emergency system; however, our decision has been delayed pending the report and the COG subcommittee's findings.

Non-emergency lines are planned for the EOC facility, and the public education program should be initiated during the summer months of this year. Overall, I agree with the recommendations in Section X of the report.

May 17, 1984

MEMORANDUM

TO : Andrew J. Mansinne, Jr., Director
Office of Legislative Oversight

FROM : Bernard D. Crooke
Chief of Police

SUBJECT: 911 Report

On May 8, 1984, I submitted my comments regarding your draft report on the 911 system.

There is one additional comment that my office did not fully address concerning your recommendations in Section X of the report in reference to "...review and implement revised internal policies and procedures on the operation of the Police Communications Center..."

The Department of Police will fully explore this recommendation in conjunction with our current policies. I have requested Captain Michael B. Blasher to confer with you regarding the specifics of your recommendation and to prepare a draft for my review.

BDC:shw
cc: Mr. Robert K. Kendal
Captain Michael B. Blasher

3. Comments from Ramon F. Granados, Director, Department of Fire and Rescue Services, May 14, 1984.

M E M O R A N D U M

May 14, 1984

TO: Robert K. Kendal
Assistant Chief Administrative Officer

FROM: Ramon F. Granados, Director
Department of Fire and Rescue Services

SUBJECT: 911 Report Comments

I have reviewed the Office of Legislative Oversight's Report 84-1 titled An Evaluation of the 911 Emergency Service in the Police Communications Center of the Emergency Operations Center, dated April 27, 1984. Since the Montgomery County Police Department is responsible for the administration of the 911 system, the report dealt primarily with matters relating to the management and operation of the 911 system by that department. To the extent that the report covered observations, comments and recommendations regarding the internal management of the 911 system by the Police Department, I have no comments since my staff and I are not that knowledgeable and involved with internal Police Department operations.

In those areas where the report makes observations, comments and recommendations that indirectly or directly impacts the handling of 911 calls by the Department of Fire and Rescue Services, I agree with the points addressed within the report. I believe that the involvement of the Council staff in preparing this report will have a positive benefit. The Council will become more knowledgeable and understanding of the problems that we and the Police Department are facing, as we attempt to deal with the increasing work load within the budgetary restrictions that have existed over the past few years.

RFG:lh

4. Comments from Thomas S. Abraham, Director, Department of Facilities and Services, May 11, 1984.

M E M O R A N D U M

May 11, 1984

TO: Robert K. Kendal, Assistant Chief Administrative Officer

FROM: Thomas S. Abraham, Director
Department of Facilities and Services

RE: OLO Report 84-1 on 911 Emergency Service

The OLO report is a thorough, objective and professional evaluation of the recent public allegations concerning a possible deficiency in Montgomery County's 911 Emergency Service operations. There are, however, a few minor details that require explanation so that no erroneous impressions are left with the casual reader of the report.

With reference to the management-data recording of "other" calls to the Call-Takers in Section VII-Paragraph 5, page 15; this recorder is presently programmed to be available for use by September, 1984. Funds have been made available from Telecommunications Division Capital Outlay Budget for this purpose and an RFP was forwarded to Purchasing in April.

On page 18, Section VIII-Paragraph 2, funding is available to fully implement and operate E911 through the $800,000 and funds provided by continuing telephone surtax. This continuing surtax is currently 10 cents per month and may be increased to a maximum of 40 cents by the County. The County may either supplement the initial $800,000 grant from the County General Funds, or through a higher 911 fee on monthly telephone bills.

The back-up EOC operation referred to in Section X, Paragraph 1, in reality is part of the TRIAD concept developed and approved by the E911/CAD Committee and the Emergency Management Group. This concept, yet to be approved by the County Executive, should significantly improve employee morale, relieve overcrowding, provide a back-up capability, increase physical security of EOC and Dispatch Operations Room, and improve overall operations of the EOC. The TRIAD concept involves three levels of EOC response to external forces:

1. Normal operations - all Public Safety Answering Point (PSAP) functions in operation, personnel working normally within second floor, COB: most equipment contained in present EOC below ground.

2. First response to external situations; personnel move down to old EOC, operating with reduced capability equipment and functions, but all necessary PSAP requirements met. Disaster Operations Room in the EOC.

3. Second response to a situation involving the EOC itself, such as fire in the building, interruption of telephone cables, etc; all personnel move to a remotely located back-up PSAP, with operation of essential services only, no enhancement to manual operations.

TSA/[illegible]h

EOC SWITCHBOARD

Incoming Direct Lines (Total 100)

"911" Through 16 County Telephone Centers	
1. Wildwood	5
2. Woodacres	4
3. Norbeck	5
4. Northwood	3
5. Bethesda	8
6. Bradley	5
7. Silver Spring	12
8. Colesville	3
9. Poolesville	3
10. Damascus	3
11. Oakdale	3
12. Rockville	8
13. Gaithersburg	9
14. Wheaton	9
15. Montrose	6
16. Germantown	5
Total 911	91

Pre "911" Police Emergency Numbers	
762-1007 - 762-1010	4
TOTAL	4

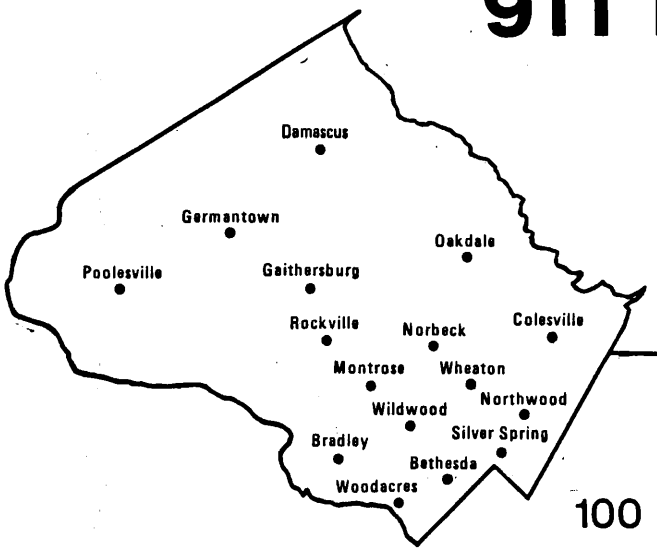
Other Services	
Andrews Air Force Base Linguistics Bank (Spanish/Portugese)	1
METRO Transit Police	1
279-7807 - 279-7809 (P. G. Direct)	3
TOTAL	5

Outgoing Direct Lines

To Police Communications	
"911"	12
Supervisor	1
TOTAL	13

To Fire/Rescue Communications	
"911"	6
TOTAL	6

911 PHONE SYSTEM



91 Direct 911 Lines

1 Andrews AFB
1 Metro Police
3 279
4 762

Rockville Telephone Center

9 Direct Lines

100 Direct Lines In (91-911/9-Other)

E.O.C. Switch-board

19 Lines Out

Fire/ Rescue

6 Lines

13 Lines

Police

12	12	12	13
CALL TAKER	SORTER	MILES	SUPER-VISOR
7 Positions	1 Position	1 Position	1 Position

EXHIBIT B

POLICE CALL TAKER

CALL DIRECTORY

Ring back to switchboard who can ring back to calling party

Clear Button

911 A	911 F	911 L	GERM STA	340-7880	Outside—to call out.
911 B	911 G	F/R	STATE POL	340-7881	
911 C	911 H	ROCK STA	ROCK CITY	279-1501	Centrex
911 D	911 I	BETH STA	PARK POL	279-1502	
911 E	911 J	SS STA	BD ED	SPEC	No. Unknown—HQ can call in Chief, County Executive, etc.
HOLD	911 K	WHEAT STA	AAA	DI-P 29	Intercom

1	2	3
4	5	6
7	8	9
*	0	#

To alert one of 5 dispatchers that hot call is coming

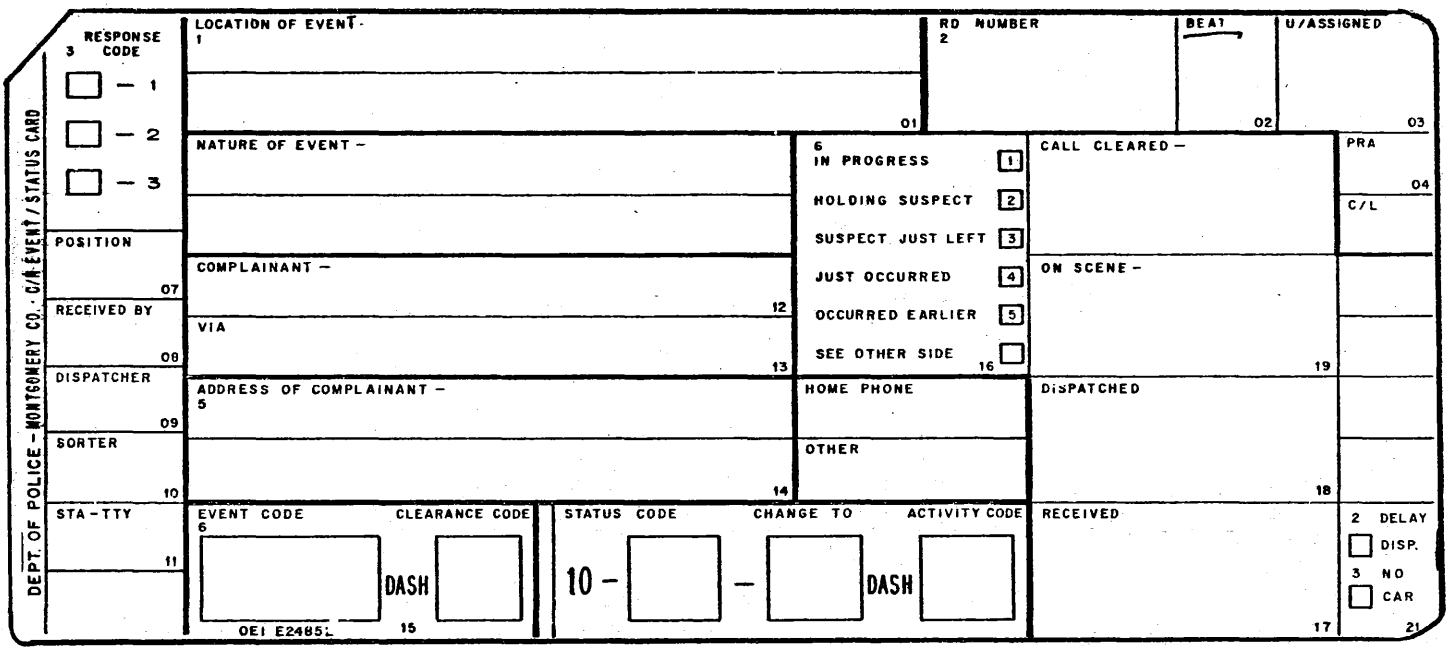
C-1

EXHIBIT C

EXHIBIT C

Police Communications Center

COMMUNICATIONS/RECORDS/(C/R) CARD



Note: The reverse side of the C/R card is blank and is used for recording data which will not fit on the front or for recording messages, lineups, etc.

EXHIBIT D