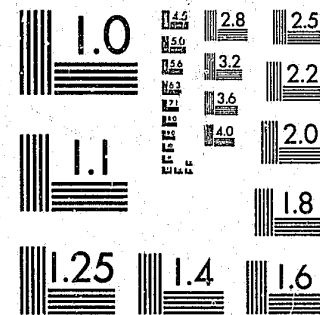


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United States Department of Justice  
Washington, D. C. 20531

Date Filmed

2/23/81

# planning for 911



North Carolina Department of  
**CRIME CONTROL  
& PUBLIC SAFETY**



J. Phil Carlton, Secretary

**DIVISION OF CRIME CONTROL**

Gordon Smith III, Director

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The guide was prepared by the Crime Control Division, North Carolina Department of Crime Control and Public Safety.

North Carolina Department of  
**CRIME CONTROL  
& PUBLIC SAFETY**



State Highway Patrol · Alcohol Law Enforcement · Crime Control · National Guard · Civil Preparedness · Civil Air Patrol

**DIVISION OF CRIME CONTROL**

James B. Hunt, Jr., Governor  
J. Phil Carlton, Secretary

December 8, 1978

Gordon Smith III  
Director

MEMORANDUM

TO: Chairmen, Boards of County  
Commissioners and County Managers

FROM: Gordon Smith, III, Director *Gordon Smith III*  
Division of Crime Control

SUBJECT: Planning for 911

On February 3, 1978, Ron Aycock, Executive Director, N. C. Association of County Commissioners, and I jointly addressed a memorandum to you concerning a preliminary survey of those counties interested in the 911 concept, which was briefly outlined in the memorandum.

Eighty counties responded to the survey, with seventy five expressing an interest in adopting the concept. As of this writing, approximately half of the interested counties have been visited by Crime Control Division staff members, and copies of a draft Planning Guide For 911 were left with interested parties.

This draft planning guide was reviewed by a 911 Advisory Committee consisting of representatives from various state and local government agencies and telephone companies. The Law Enforcement Committee of the Governor's Crime Commission has also reviewed and endorsed this Guide.

The Crime Commission, which originally authorized the funding for this effort, has formally approved the Guide, which we are now distributing for your use in planning for implementation of 911 systems.

The Guide was developed by Division staff members based upon a handbook prepared by the Office of Telecommunication Policy, Executive Office of the President, and includes material from various studies and plans prepared for this and several other states, notably Florida, California, Illinois and Minnesota.

We hope that this Guide will prove a useful tool to those who are interested in improving citizens access to emergency services through use of the 911-common answering center concept. For further information, please call Bill Lynch or Susan Harris, (919) 733-5013.

GS/cc

NCJRS

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ACQUISITIONS

P.O. Box 27687 · 430 N. Salisbury Street · Raleigh, NC 27611 · (919) 733-4000

## PLANNING GUIDE FOR 911

### Improved Citizens Access to Emergency Services

This document is a planning guide for 911, that outlines the steps necessary to implement a 911 system.

911 is the three-digit telephone number that has been designated for public use throughout the United States in reporting an emergency and requesting emergency assistance. It is intended as a nationwide telephone number giving the public direct access to an emergency answering center.

This answering center, called a Public Safety Answering Point, or PSAP, (also sometimes called ERCC for Emergency Resources Coordinating Center) is an essential element to provision of quick access to emergency services. There should be a single PSAP for each area to be served. Generally the area served would be a county, and the center would receive all calls for emergency services, such as City Police, Sheriff's Department, Fire, Rescue, Emergency Medical Services, or whatever is available within the County. The PSAP may be equipped directly to dispatch some or all of these services, it may be equipped to transfer calls for certain services, or it may relay a message to the servicing agency. (In some cases this may involve relay across County lines. See the description of the Durham system). The manner of handling calls and dispatching services must be worked out among the agencies and units of local government involved.

Some telephone companies operating in North Carolina are not able to offer 911 because of equipment problems. In these cases a special seven-digit number may be used, preferably ending in 911, such as 829-1911 used in Wake County for most such services. (the Anson County system, description attached, uses a special seven-digit number countywide for all emergency services). As telephone companies upgrade their Central Office equipment, they should be required to commit themselves to providing 911 services.

The planning guide is intended to identify some of the issues involved and to suggest items that will require mutual agreements among the parties involved early in the planning stages, such as location of the center, responsibility for its operation, the method of handling calls for emergency assistance, consideration of the problems presented where telephone exchanges cross county lines, and where more than one telephone company is concerned.

The following history and graph are adapted from "Nine-one-one, The Emergency Telephone Number", a handbook prepared by the Office of Telecommunications Policy, Executive Office of the President, now the National Telecommunications and Information Administration.

Copies of the handbook are for sale by the Superintendent <sup>of</sup> Documents, United States Government Printing Office, Washington, DC 20402. Price \$1.80, stock number 2205-0003.

The North Carolina Planning Guide for 911 is based on this guide and includes material condensed from a number of studies and plans that were provided by several other states.



## 911 HISTORY AND STATUS

NINE-ONE-ONE (911) IS THE THREE-DIGIT TELEPHONE NUMBER THAT HAS BEEN DESIGNATED FOR PUBLIC USE THROUGHOUT THE UNITED STATES IN REPORTING AN EMERGENCY AND REQUESTING EMERGENCY ASSISTANCE. IT IS INTENDED AS A NATIONWIDE TELEPHONE NUMBER GIVING THE PUBLIC DIRECT ACCESS TO AN EMERGENCY ANSWERING CENTER.

THE CONCEPT OF A NATIONWIDE TELEPHONE NUMBER WAS FIRST REALIZED IN GREAT BRITAIN MORE THAN 30 YEARS AGO WITH THAT COUNTRY'S ESTABLISHMENT OF "999" ON A NATIONAL SCALE. OTHER COUNTRIES IN EUROPE AND ELSEWHERE HAVE SINCE PROVIDED THEIR CITIZENS WITH SIMILAR UNIFORM EMERGENCY TELEPHONE NUMBERS.

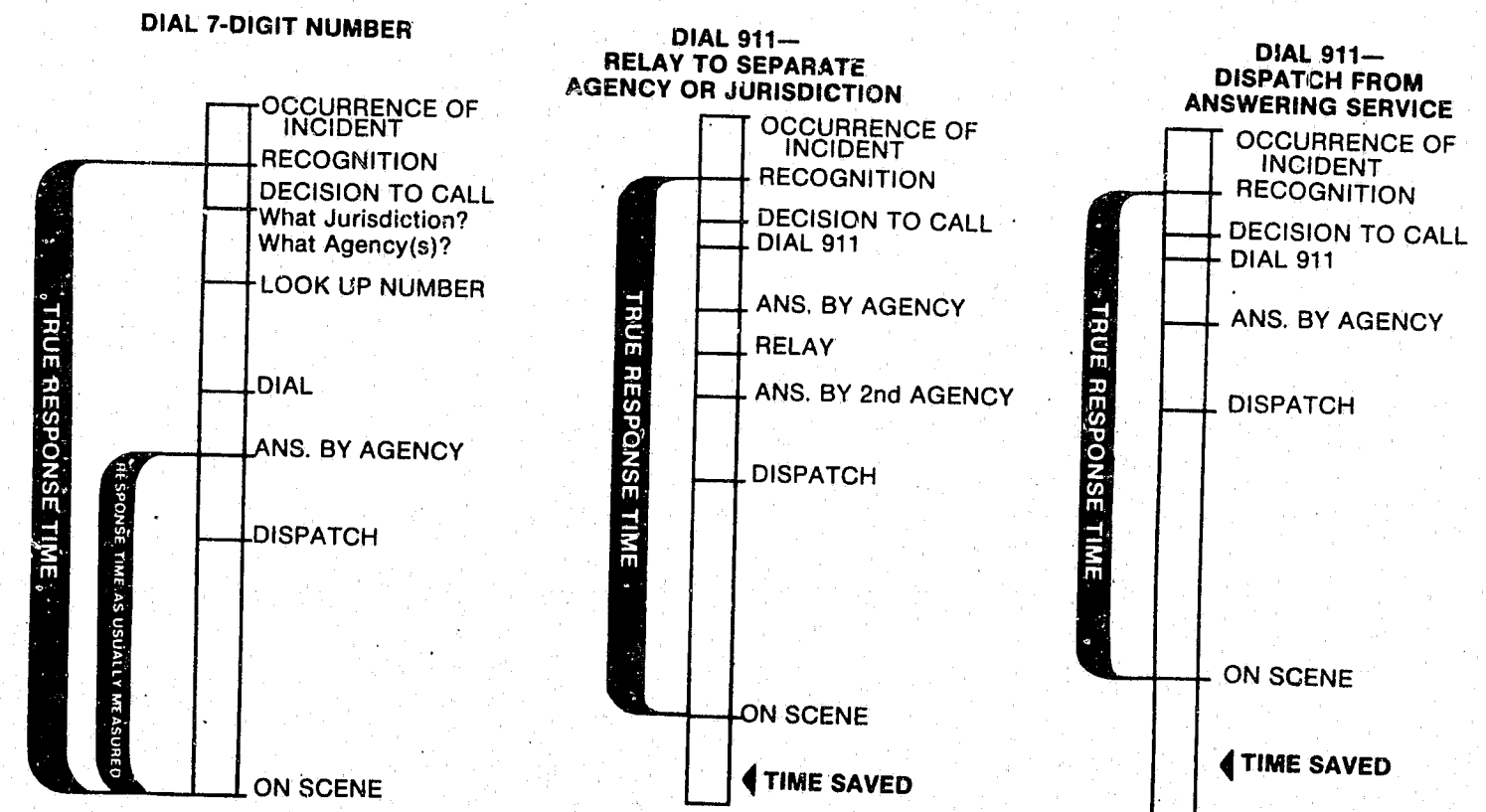
IN THIS COUNTRY, OFFICIAL IMPETUS FOR THE DEVELOPMENT OF A NATIONWIDE EMERGENCY TELEPHONE NUMBER WAS PROVIDED BY THE 1967 RECOMMENDATION OF THE PRESIDENT'S COMMISSION ON LAW ENFORCEMENT AND ADMINISTRATION OF JUSTICE THAT A "SINGLE NUMBER SHOULD BE ESTABLISHED" FOR REPORTING POLICE EMERGENCIES. OTHER FEDERAL GOVERNMENT AGENCIES AND VARIOUS GOVERNMENT OFFICIALS SUPPLIED FURTHER STIMULUS. IN 1968, THE AMERICAN TELEPHONE AND TELEGRAPH COMPANY ANNOUNCED THAT IT WOULD MAKE THE DIGITS 911 AVAILABLE FOR NATIONAL IMPLEMENTATION. THE INTENSE INTEREST IN THE CONCEPT ITSELF CAN BE ATTRIBUTED PRIMARILY TO THE RECOGNITION OF SEVERAL RELEVANT CHARACTERISTICS OF MODERN SOCIETY: INCREASED INCIDENCE OF CRIMES, ACCIDENTS, AND MEDICAL EMERGENCIES; INADEQUACY OF EXISTING EMERGENCY REPORTING METHODS; AND THE CONTINUED GROWTH AND MOBILITY OF THE POPULATION.

IN MARCH OF 1973, THE OFFICE OF TELECOMMUNICATIONS POLICY, EXECUTIVE OFFICE OF THE PRESIDENT, ISSUED A NATIONAL POLICY STATEMENT WHICH RECOGNIZED THE BENEFITS OF 911, ENCOURAGED THE NATIONWIDE ADOPTION OF 911, AND PROVIDED FOR THE ESTABLISHMENT OF A FEDERAL INFORMATION CENTER ON 911.

BY MID 1978, MORE THAN 750 COMMUNITIES IN THE UNITED STATES HAD 911 SERVICE, INCLUDING SIX IN NORTH CAROLINA. AT LEAST SEVEN STATES HAVE ALREADY ADOPTED LEGISLATION DESIGNED TO IMPLEMENT 911 ON A STATEWIDE BASIS. A NUMBER OF OTHER STATES ARE CURRENTLY CONSIDERING 911 LEGISLATION.

THE OVERWHELMING MAJORITY OF COMMUNITIES WHICH HAVE PROVIDED 911 REPORT POSITIVE EXPERIENCES AND CONSIDER 911 AN IMPORTANT COMPONENT OF THEIR TOTAL EMERGENCY RESPONSE CAPABILITY.

## TIME SAVED BY DIALING 911



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## Section I Steps to Implement 911 System

1. Form local committee or task force to be responsible for planning to include:
  - a. Public safety and other emergency services representatives
  - b. Civil Preparedness representative
  - c. Representatives from interested Citizens Organizations
  - d. Elected officials
  - e. Representatives from local telephone companies
2. Primary issues:
  - a. Area to be served
  - b. Number and types of existing emergency service agencies, their resources and jurisdictions
  - c. Scope of services
  - d. Location of answering center (make best use of existing resources)
    - (1) Within police or Sheriff's Dept.
    - (2) In fire department
    - (3) Independent agency serving as communications center
  - e. Service areas of telephone central office exchanges
3. Issues require:
  - a. Review of current emergency reporting system
  - b. Assessment of community's needs
  - c. Consideration of:
    - (1) Single or multijurisdictional
    - (2) What other communities will operate in system
    - (3) How resolve problems of non-coincidence of political boundaries and telephone central office areas
    - (4) Types of negotiations among participating agencies and communities
    - (5) Best time for implementation (the telephone companies suggest that implementation coincide with issue of a new directory)
4. Request formal proposal from telephone companies
  - a. Determine any additional mutual aid or interagency agreements
  - b. Review proposal, obtain concurrences from participating agencies (Modify as necessary, subject to mutual agreement)
  - c. Develop proposal into plan, and submit for review and possible funding
5. Plan for implementing 911 to include:
  - a. Location of answering center
  - b. Responsibility for operation of center
  - c. Method of operation of center (Relay, transfer, dispatch, or any combination)
  - d. Procedure for response to emergencies to include major incidents requiring police, fire and medical response (of particular importance where an answering center does not directly dispatch all emergency services)
  - e. Interagency agreements
  - f. Training for answering center personnel
  - g. Estimate of costs and budget (allocation of costs)
  - h. Publicity campaign (To begin about two weeks prior to implementation)

## Section I Steps to Implement 911 System

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## Section II Planning Data for 911

1. Minimum service level
  - a. Operator grade of service: 90% of calls answered within 10 seconds (about 2 rings) during busiest hour
  - b. Telephone grade of service: 1% busy signal - busy signal no more than 1 call per 100 during busiest hour.
2. Average call volume based on national experience: (85 percent of calls are for law enforcement)
  - a. A daily rate of 15 calls per 10,000 population for law enforcement, except high crime areas, 20 calls per 10,000
  - b. 1 call per day per 10,000 for emergency medical services
  - c. 2 calls per day per 10,000 for fire (possibly 3 per 10,000 for high crime areas)
3. Average call length about one minute
4. Minimum costs-per-call occur at a daily volume of between 600 and 700 (factors of scale economy and local control should be considered in determining the area to be served. i.e. in urban areas, scale economy might indicate a multi-county system, but control factors dictate a single-county system)
5. Changes in telephone company central office equipment and trunking may be required. Local agencies should contact their telephone companies early in the planning phase to determine their capability. To minimize cost of 911 to regulated companies their established schedule for central office upgrading must be considered.

## Section III Operational Standards for 911

1. Minimum
  - a. All law enforcement, fire protection, emergency medical, and rescue agencies within the boundaries of the 911 system must be included in the 911 system.
  - b. The 911 answering center will operate 24 hours a day, seven days a week.
  - c. All incoming 911 calls will be tape recorded on a master logging recorder equipped to record the date and time of receipt of each call.
  - d. The primary published emergency number will be "911."
  - e. Enough 911 lines and trained operators will be provided such that during the average busiest hour of the day at least 90 percent of the calls will be answered within 10 seconds (two or three rings). (See Section II, paragraph 1 a., operator grade of service)
  - f. Each operator position will have access to the incoming 911 lines and an outgoing line dedicated to that position.
2. Desirable
  - a. The 911 operators will be dedicated to answering 911 calls and will have no other simultaneous function such as clerk or other non-related function that will interfere with their duties as 911 operator or reduce the grade of service.
  - b. Each 911 operator position will be equipped with an instant playback type of recorder to record each incoming 911 call.

### Planning for 911

The following is to be added to Section IV Technical Standards (page 4)

#### 2. Desirable

- e. When employing the Transfer Method, the system should be so designed as to provide for transfer without placing the calling party on hold.
- f. Where possible (required if ACD is used, see par 1 g) when incoming PSAP positions are busy, the calls waiting should reach a recorded message informing the caller that:
  - (1) The 911 emergency number has been reached, and an operator will answer as soon as possible.
  - (2) The caller need not remain on the line if the call is related to a named major incident or incidents. (Once reported, major-incidents will be placed on the recorder to advise callers action has been taken and there is no need for an additional report.)

### Section IV Technical Standards

#### 1. Minimum

- a. There will be a minimum of two incoming 911 lines.
- b. If direct trunking (as opposed to tandem trunking) is used, there will be at least two 911 lines between the 911 center and each of the central offices in its service area.
- c. If tandem trunking is used the grade of service provided over the interoffice trunks will be at least one in 100 (see Section II Paragraph 1. b., telephone grade of service)
- d. Responsible agency will request traffic studies every 6 months to insure compliance with Section II, Paragraph 1.b.
- e. All exposed 911 circuit facilities will be protected and marked to prevent accidental contact.
- f. The 911 center will have standby emergency electrical power capability for use in the event of a commercial power failure.
- g. When an automatic call distributor (ACD) is used to terminate 911 calls, the recorded announcement option will be used.
- h. Circuits and equipment of the 911 system will not be taken out of service until permission is obtained from the 911 center supervisor.

#### 2. Desirable

- a. Call transfer, direct ringdown, message relay or direct radio relay for 911 calls originating outside 911 service area due to central office boundary extending beyond the area served.
- b. Fx or Wx (special toll-free number) for callers from the 911 service area whose telephone exchange is outside the area served or does not have 911 access to the PSAP, with a special vacant code announcement when a caller dials 911 instead. The announcement should provide the toll-free number, identifying the associated PSAP, and refer the caller to the directory if they live outside the identified area.
- c. Where possible diverse routing of incoming trunks should be used.
- d. An emergency contingency plan should be developed.



## Section V Personnel Qualifications and Training Standards

An essential requirement of a 911 system is capable operators trained to deal with citizens in a crisis situation.

### 1. Qualifications:

#### a. Minimum

Answering personnel should be able to:

- (1) Speak clearly and distinctly at all times
- (2) Think and act promptly in emergencies
- (3) Analyze a situation and take or suggest proper action

#### b. Desirable

- (1) Understand capabilities and limitations of telecommunications equipment and systems
- (2) Know FCC Rules and Regulations applying to operator's responsibilities

### 2. Standards

#### a. Minimum

Answering personnel should be proficient in at least the following basics:

- (1) Uniform answering procedures;
- (2) Proper citizen interrogation for gathering complaint information;
- (3) Conveying accurate and complete information to dispatchers in serviced agencies;
- (4) Knowledge of jurisdictional areas to preclude erroneous dispatch;
- (5) Keeping adequate records

#### b. Desirable

- (1) Training in basic Police, EMT and Fire procedures.
- (2) Maintaining circuit discipline (elimination of unnecessary conversation)
- (3) Knowledge of segments of law important to telecommunications
- (4) Basic maintenance procedures for communications equipment

Notes: 1. Uniform training requirements do not presently exist in North Carolina, nor are uniform training programs available.

2. The Association of Public Safety Communications Officers (APCO) is presently developing standard training procedures for complaint answering operators and dispatchers. These procedures should assist in developing a uniform training program for personnel operating answering centers and cooperative dispatch centers.

## Section VI Organizational Requirements

1. The 911 system is an organizational unit fitting in the government hierarchy. It is a part of some governmental agency. It must provide:
  - a. Effective resource management: The system must be so organized and managed as to make best use of available resources avoiding duplication of effort, ensuring cooperation of all user agencies, and having access to a revenue source that ensures its continuance at a high level of public service.
  - b. Maintenance of high level of service to the public: The system must be effective and responsive to the needs of the citizens at all times. It must be professionally manned and resistant to changes created by the local political climate.
  - c. Accountability: The system must be accountable to the state, the public service agencies serviced, and the public served. As yet, N. C. has established no official position. Adherence to the guidelines in this document should assist in securing accountability to the State. Accountability to the user public and emergency agencies can best be accomplished through a user board perhaps in the form of an administrative committee.
2. A user board or committee should include representation from each of the public safety agencies involved, the public, and the local governments served. Typical duties and responsibilities should include:
  - a. Determination of policies affecting operation
  - b. Establishment, control and maintenance of standards
  - c. Provision for adequate training
  - d. The establishment of procedures for resolving public and emergency operation grievances
  - e. Resolution of internal grievances by public agencies using 911

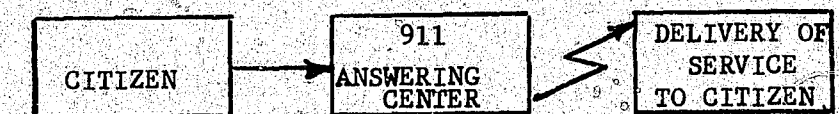
## Section VII Operational Methods

A comparison of 911 operational methods follows, with illustrations of the processes involved in each.

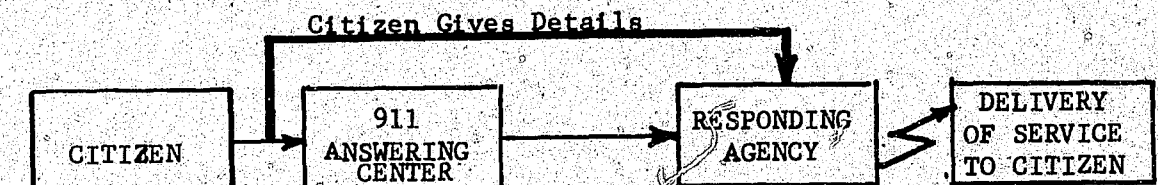


# COMPARISON OF 911 OPERATIONAL METHODS

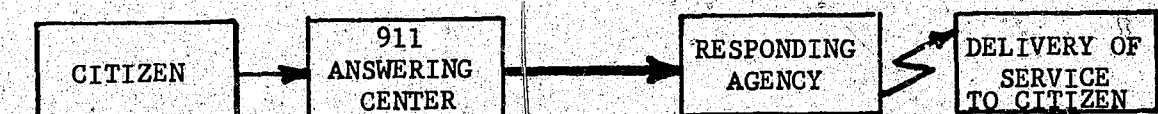
Method	Typical Applicability	Advantages	Disadvantages
Direct Dispatch	Large city law enforcement; small town and Sheriff law enforcement, EMS and county fire	Fast response time	Requires closest interagency cooperation to implement
Call transfer	Large city fire; small-city and sheriff law enforcement, EMS and fire	Minimum need for interagency cooperation	Increases response time to some agencies; more frustrating to citizen
Call relay	Cooperative public safety communications systems	Fast response time while preserving dispatch autonomy	Requires explicit call-answering policies to be established
Call referral	Discouragement of nonemergency calls to 911	Prevention of 911 overload by non-emergency calls	Requires citizen to redial 7-digit number



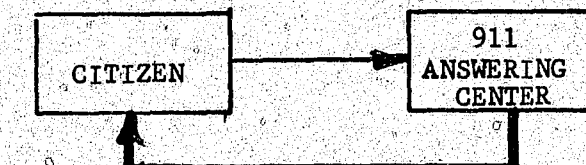
(a) DIRECT DISPATCH



(b) CALL TRANSFER



(c) CALL RELAY



(d) CALL REFERRAL

## 911 OPERATIONAL METHODS

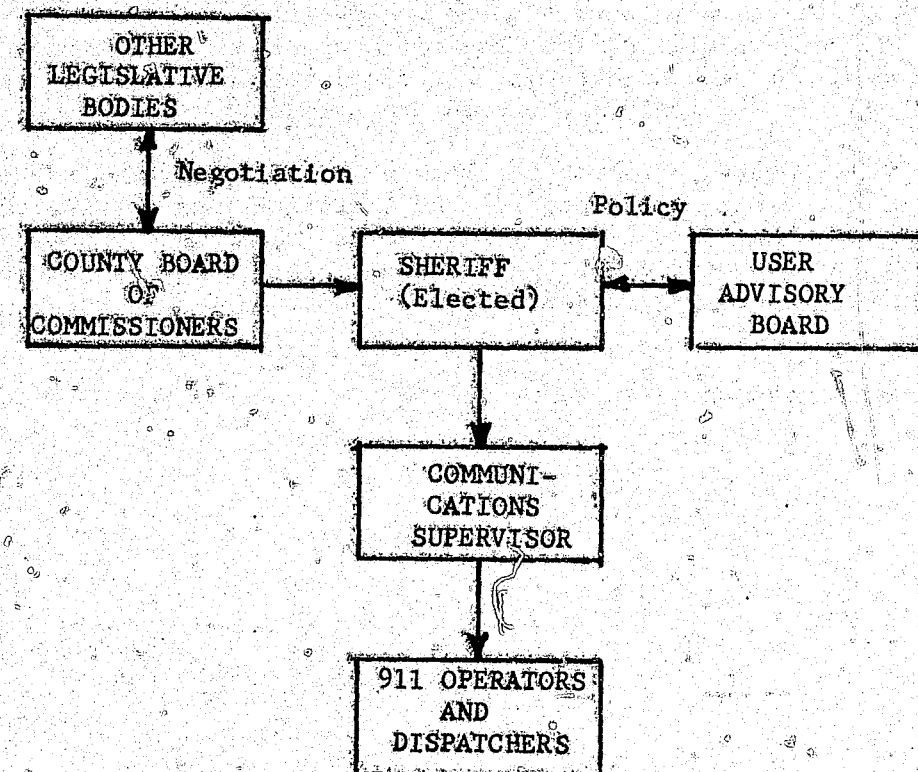
## Section VIII Management Structures

Throughout most of North Carolina the single county concept would appear as best for implementation of 911. More than one 911 answering center in a county does not appear to be cost effective, and likewise a center that provides services for only part of a county, or for one of the cities in a county, is not making best use of personnel and of telephone Company capabilities and services, even though telephone company boundaries do not generally follow county boundaries. Organizationally, centers will differ from one another due to variance in political approach, cost factors and various other reasons, but generally the rural counties will be similarly structured due primarily to cost considerations.

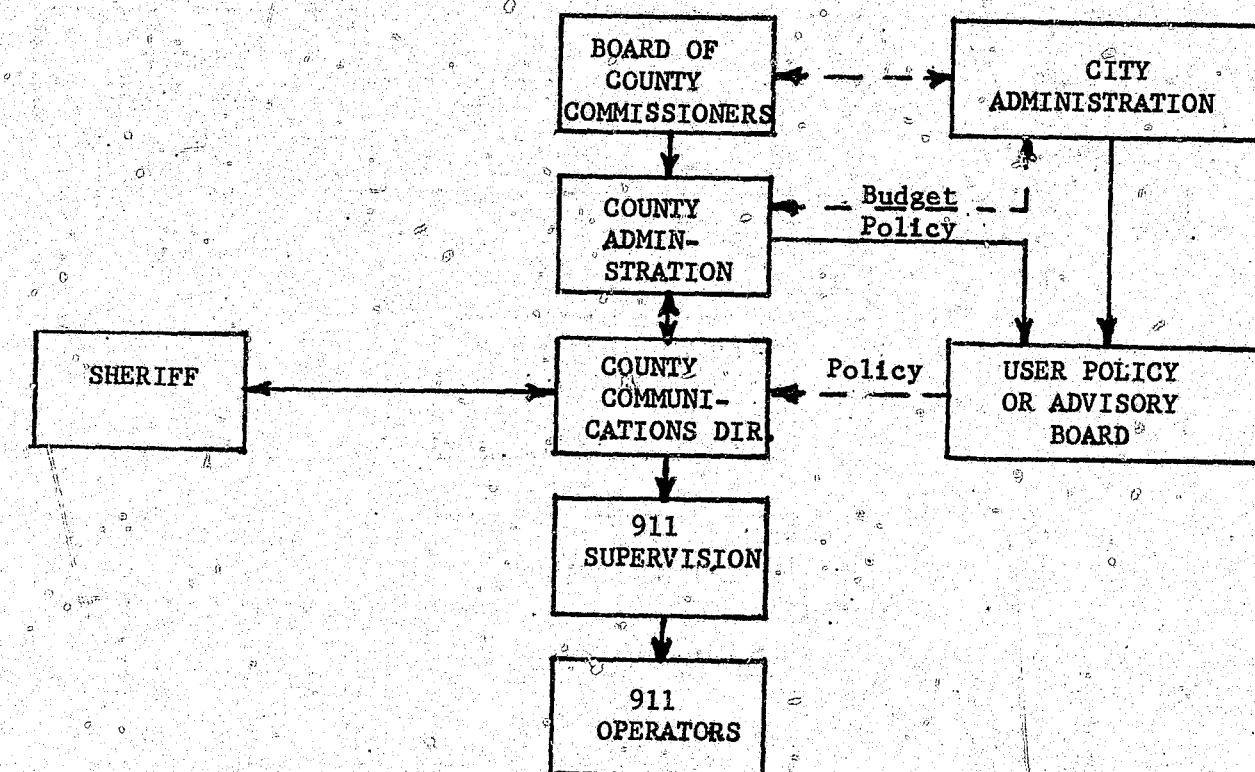
The user policy board, or committee with user representation is an integral part of the management process. The individual who carries out the administrative management of the 911 center also administers policies as determined by the board or committee, so that policy is determined by consensus, thereby guarding against possible domination of the operation by a single agency.

Some typical management structures follow:

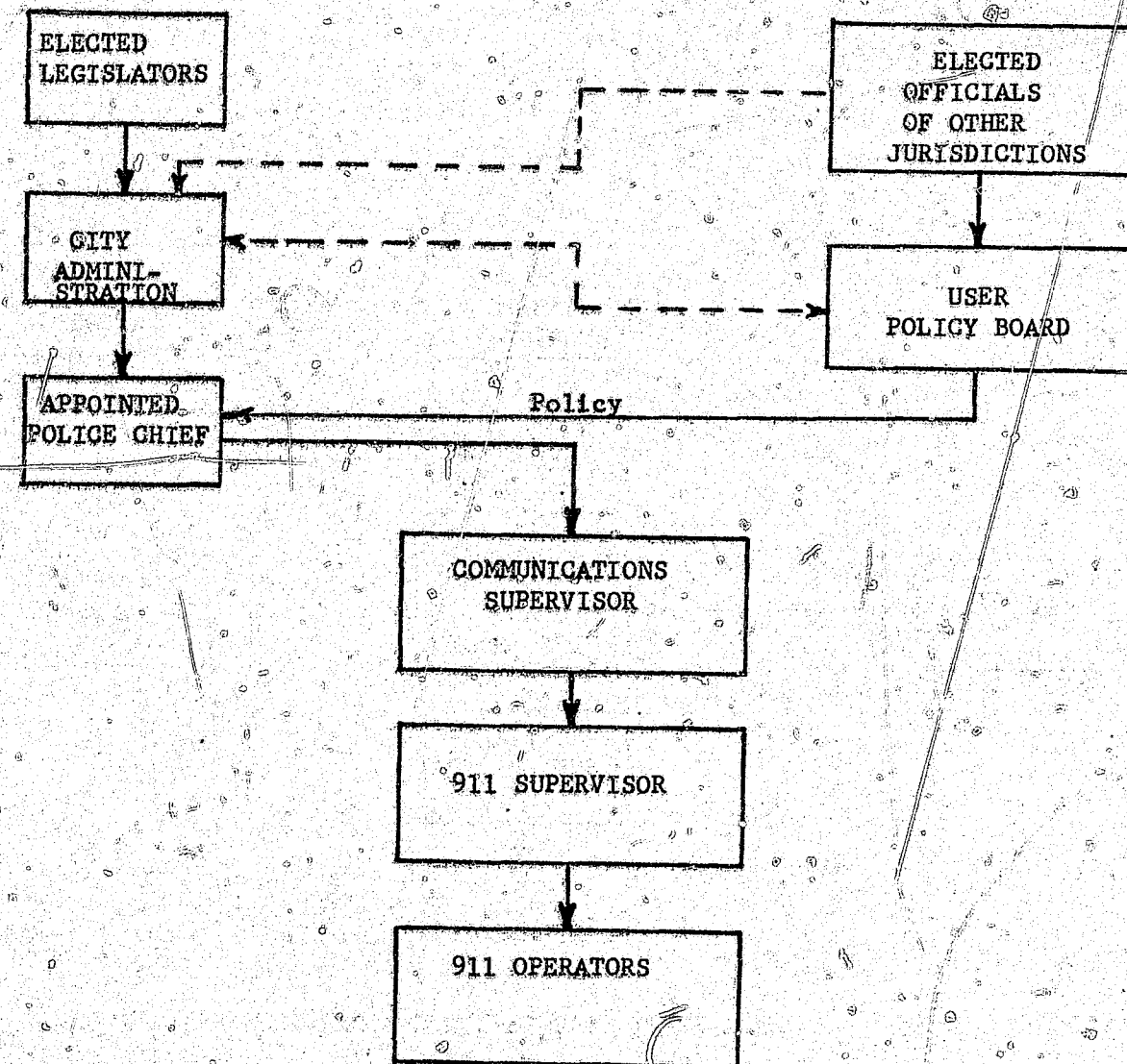




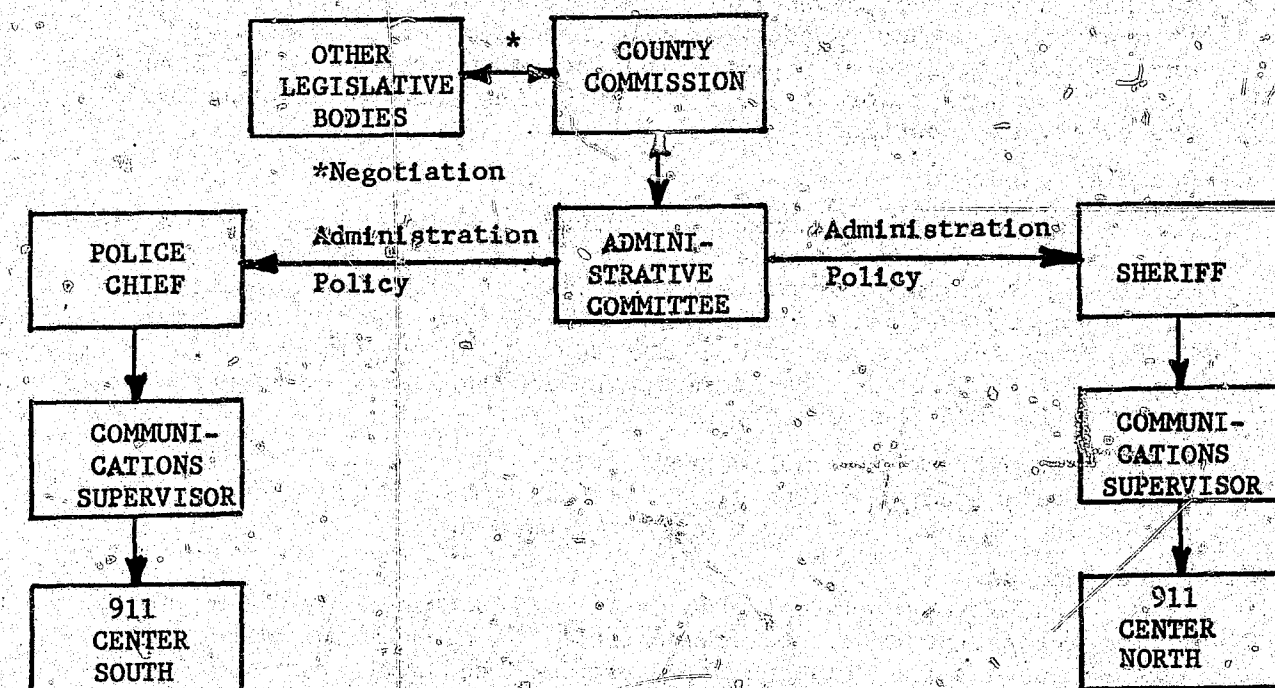
MANAGEMENT STRUCTURE FOR RURAL SINGLE-OR MULTI-COUNTY 911 SYSTEMS



MANAGEMENT STRUCTURE FOR URBAN COUNTY 911 SYSTEM



MANAGEMENT STRUCTURE FOR URBAN MULTI JURISDICTION  
911 SYSTEMS--LAW ENFORCEMENT ORIENTATION



TYPICAL MANAGEMENT STRUCTURE  
FOR TWO CENTER 911 SYSTEM  
(No need indicated for North Carolina)



## Section IX Costs

### 1. Non-recurring cost categories

#### a. Telephone Equipment costs

Installation of call answering equipment and 911 trunks from telephone central offices to a 911 answering center. One-time charges for installation of all incoming and outgoing lines and special recorder connections.

#### b. Recorder Equipment

Magnetic tape dual-track 24 hour logging recorders with time generator and reader, and 30 reels of tape. (Most North Carolina counties and a number of larger towns receiving LEAA funds in the past several years for radio communications systems have been provided either an adequate tape recorder for this use, or one that can be readily expanded to handle county-wide 911 traffic.) Instant playback recorders, one per answering position and one for the supervisor position.

#### c. Console Equipment

Where radio control equipment is required, one-time costs for consoles as needed to provide the necessary control features. (Most North Carolina Sheriff's Departments and the larger Police Departments have been provided LEAA funds for consoles, many of which may have sufficient unused capacity to handle additional 911 traffic. In some cases additional console equipment will probably be required, however, for EMS and possibly Fire traffic)

#### d. Facility Construction/Modification

Even where adequate housing exists, modifications will be necessary and emergency generator power must be provided.

#### e. Miscellaneous

Costs of additional control modules for existing consoles, console modifications, dedicated telephone lines, Wx numbers, alerting systems (pagers for fire and EMS personnel) and similar items.

### 2. Recurring cost categories

#### a. Trunk line rentals, including special toll free lines where required.

#### b. Terminal equipment rentals

#### c. Personnel costs

#### d. Equipment maintenance service

## Section X Interagency Agreements

The use of formalized, written mutual aid agreements is strongly recommended. Although the following background information and suggested formats are for law enforcement mutual aid, similar agreements should be considered for fire and emergency medical services agencies. In fact, in North Carolina a number of such agreements exist for fire and medical services. Some of these are unwritten, and should be formalized for reasons outlined below.

The primary purpose in adopting the Public Safety Answering Point concept of a 911 system is to improve citizens access to emergency services.

An important aspect of this improvement is an understanding that the first agency dispatched to attend to an emergency renders required assistance even though it may turn out that the scene is in another agency's jurisdiction. In other words, assistance must not be withheld because of an erroneous dispatch, whatever the reason. (This problem generally arises when there is overlap by telephone exchanges of political boundaries)

Written mutual aid agreements should prevent confusion as to authority, jurisdiction, command, control, and in particular liability.

The National Sheriff's Association ("Mutual Aid Planning", U.S. Department of Justice, September 1973) states that:

"By utilizing Mutual Aid, a higher degree of coordination of police functions can be achieved, confusion incident to an emergency situation is reduced, law enforcement efforts have been better supervised, response time has been lowered, and a great amount of personnel and equipment can be brought to bear on the situation. In addition, the increased costs of such operations are spread over a number of jurisdictions, thus lessening the financial burden that might fall on one jurisdiction."

One study that was conducted by the Association revealed three major problems that might possibly have an impact on the implementation of mutual aid agreements. These are apathy, jurisdictional rivalries, and lack of understanding concerning mutual aid. Perhaps the biggest mutual aid obstacle today is that of liability for actions of officers exercising their powers outside of their jurisdictions. Courts have, for the most part, been unwilling to extend to the police officer immunity benefits afforded other municipal officials. The effect on the officer's aggressive performance of his duties appears of little concern to the courts. Some recent court decisions as well as state statutes have seemed to partially remedy the condition of little to no immunity for the police. Many municipal governments have adopted programs indemnifying their police officers against suits.

The problem of liability for police within their jurisdiction is magnified when the officer takes action extra-territorially in response to a call for mutual aid. It is therefore necessary to have a written provision in the mutual aid agreement granting immunity from liability.

Written mutual aid agreements are usually between a limited group of contiguous municipalities and contain the following provisions:

Designation of an appropriate official empowered to request assistance and procedures to be followed in responding to a request for assistance.

A provision extending to the responding municipality all immunities from liability enjoyed by the requesting municipality.

A provision waiving any and all claims of the parties resulting from aid extended outside their jurisdictions.

A provision indemnifying and saving harmless parties to the agreement from a third party claim arising out of activities outside their respective jurisdictions.

A provision extending the "power of arrest to officers of the responding unit while operating in the jurisdiction of the requesting unit."

(International City Management Association, 1977. "Local Government Police Management")

In the March, 1978, issue of the Criminal Justice Bulletin, North Carolina's Attorney General addresses the issue of Mutual Aid and how it applies to North Carolina Law Enforcement Agencies. His comments are as follows:

" . . . General Statute 160A-288. This statute requires that requests for temporary assistance between law enforcement agencies must be made in writing . . . Those agencies that do not have such policies in writing are opening themselves to additional, potential civil liability. Without the agreements, problems also arise concerning jurisdictional limitations of authority and workmen's compensation. Although the statute requires that each request for temporary assistance must be in writing, it appears that an officer responding to a verbal request for assistance would be within his authority provided there was a written agreement between the jurisdictions which back up that request.

. . . The necessity for developing all of the necessary written guidelines, rules, and policies cannot be over-emphasized. A positive benefit to be obtained by writing such guidelines out is that each department knows under what circumstances it may provide assistance and what is expected of the officers when they in fact do respond to another department's request, whether the request is for immediate assistance or long-term assistance. . . "

# MODEL LOCAL INTER-GOVERNMENTAL MUTUAL AID AGREEMENT

This agreement, made and entered into this \_\_\_\_\_ day of \_\_\_\_\_, 1978 by and between the political subdivisions of the State of North Carolina, who are signatories hereto.

WHEREAS, the political subdivisions of the State of North Carolina have determined that the provision of law enforcement mutual aid across jurisdictional lines in emergencies will increase their ability to preserve the safety and welfare of the entire area; and

WHEREAS, the political subdivisions of the State of North Carolina are authorized by Public Law G.S. 160A-288 (or other statutory designation) to provide law enforcement mutual aid.

NOW, THEREFORE, the parties hereto do agree as follows:

1. When a state of emergency involving conditions of extreme peril to the safety of persons and property exists within the boundaries of any of the parties hereto, the party or parties shall notify the other party or parties to this agreement of such emergency and its need for law enforcement assistance. Such assistance shall be rendered according to the procedures established in the operational plans developed and agreed to by all of the parties to this agreement pursuant to the provisions in paragraph 2 herein. Each party shall designate an appropriate official within its jurisdiction who is empowered to request assistance under this agreement.

2. The mutual assistance to be rendered under this agreement shall be available upon the development and approval by the parties hereto of an operational plan. The plan shall outline the exact procedure to be followed in responding to a request for assistance. Upon execution of this agreement, the parties hereto shall designate an appropriate official in each jurisdiction to participate in the development of the operational plan. The parties shall meet at least annually to review and, if necessary, to propose amendments to the operational plan. Any proposed amendments shall not be effective until approved in writing by all the parties to this agreement.

3. The services performed and expenditures made under this agreement shall be deemed for public and governmental purposes. All immunities from liability enjoyed by the local political subdivision within its boundaries shall extend to its participation in rendering mutual aid under this agreement outside its boundaries unless otherwise provided by law.

Each party to this agreement shall waive any and all claims against all the other parties hereto which may arise out of their activities outside their respective jurisdictions while rendering aid under this agreement.

Each party shall indemnify and save harmless the other parties to this agreement from all claims by third parties for property damage or personal injury which may arise out of the activities of the other parties of this agreement outside their respective jurisdictions while rendering aid under this agreement.

4. All the immunities from liability and exemptions from laws, ordinances and regulations which law enforcement officers employed by the various parties hereto have in their own jurisdictions shall be effective in the jurisdiction in which they are giving assistance unless otherwise prohibited by law.

All compensation and other benefits enjoyed by law enforcement officers in their own jurisdictions shall extend to the services they perform under this agreement.

5. Law enforcement officers rendering assistance under this agreement shall do so under the direction and control of the appropriate official designated by the jurisdiction requesting the aid.



The parties shall notify each other of the name, address and telephone number of the official authorized to direct mutual aid activities within their jurisdiction.

6. This agreement shall remain in effect until terminated by all the parties hereto upon written notice setting forth the date of such termination. Withdrawal from this agreement by any one party hereto shall be made by thirty days' written notice to all parties but shall not terminate this agreement among the remaining parties.

IN WITNESS WHEREOF, the parties hereto have executed this agreement as of the date first above written.

(To be signed by the Mayor, County Manager or other appropriate official having government-wide jurisdiction in each political subdivision.)

From the National Sheriff's Association Manual on Mutual Aid Planning, page 87.

RESOLUTION AUTHORIZING COOPERATION BETWEEN THE CITY OF \_\_\_\_\_  
AND OTHER LAW ENFORCEMENT AGENCIES SUBJECT TO CERTAIN CONDITIONS

WHEREAS, G.S. 160A-288 has been rewritten by the 1977 General Assembly to allow increased mutual assistance between law enforcement agencies; and

WHEREAS, G.S. 160A-288 requires the provision of mutual assistance to be in accordance with policies adopted by the governing body; and

WHEREAS, the Mayor and Board of Commissioners of the city of \_\_\_\_\_ desire to establish policies under which the \_\_\_\_\_ may provide law enforcement assistance to neighboring local governmental law enforcement agencies;

NOW, THEREFORE, BE IT RESOLVED that the following rules and guidelines will constitute the policy under which the city of \_\_\_\_\_ will provide assistance to a requesting law enforcement agency:

1. The Chief of Police is authorized to provide temporary assistance to another law enforcement agency, if he receives a request in writing for such assistance from the head of the requesting agency. The Chief of Police may respond to the request if he determines that the request can be honored without impairing the capacity of the City to provide police protection to the property and citizens of the city of \_\_\_\_\_. The Chief may take such steps as necessary to furnish manpower, equipment, and such other assistance as he deems appropriate.
2. In a non-emergency situation, the Chief shall inform the Mayor and Board of Commissioners when he receives a request for assistance, and he shall obtain their approval before providing such assistance. In an emergency situation, the Chief shall notify either the Mayor or the Town Manager as soon as possible after receiving such a request, and shall obtain approval of the request before providing assistance. If the Chief receives an appropriate request, the Board may approve in advance a system of regular responses to emergencies by City police officers.
3. The City shall assume all liability and responsibility for the death of or injury to any City police officers responding to the request for assistance. The City will not assume any liability or responsibility for the death of or injury to any personnel of the requesting agency.
4. The City will assume all liability and responsibility for damage to its own supplies, materials, or equipment when responding to a request for assistance. The City will not assume any liability or responsibility for damage to the supplies, materials, or equipment of the requesting agency.
5. While working with the requesting agency, City police officers shall have the same jurisdiction, powers, rights, privileges, and immunities as the officers of the requesting agency, in addition to those that they normally possess.

6. While on duty with the requesting agency, City police officers shall be subject to the lawful operational commands of their superior officer in the requesting agency, but for personnel and administrative purposes (including the payment of salaries, wages, bonuses, and other compensation), they shall remain under the control and authority of the Town.
7. The specific provisions of this policy may be modified or amended in advance by agreement between the City and the requesting agency. By way of example, if assistance is to be provided over a long period of time, the requesting agency may wish to pay all or part of the compensation of the City police officers.

This resolution shall be in full force and effect from and after \_\_\_\_\_ . The mutual aid policy established herein shall govern all requests for assistance received after this date.

As Drafted By Frank Gray, Attorney,  
Director of Information Services  
North Carolina League of Municipalities

GENERAL STATUTES OF NORTH CAROLINA

ARTICLE 13.

Law Enforcement.

§ 160A-286. Extraterritorial jurisdiction of policemen.

Cited in State v. Mangum, 30 N.C. App. 311,  
226 S.E.2d 852 (1976); State v. Williams, 31 N.C.  
App. 237, 229 S.E.2d 63 (1976).

§ 160A-288. Cooperation between law-enforcement agencies. — (a) In accordance with rules, policies, or guidelines officially adopted by the governing body of the city or county by which he is employed, and subject to any conditions or restrictions included therein, the head of any law-enforcement agency may temporarily provide assistance to another agency in enforcing the laws of North Carolina if so requested in writing by the head of the requesting agency. The assistance may comprise allowing officers of the agency to work temporarily with officers of the requesting agency (including in an undercover capacity) and lending equipment and supplies. While working with the requesting agency under the authority of this section, an officer shall have the same jurisdiction, powers, rights, privileges and immunities as the officers of the requesting agency in addition to those he normally possesses. While on duty with the requesting agency, he shall be subject to the lawful operational commands of his superior officers in the requesting agency, but he shall for personnel and administrative purposes, remain under the control of his own agency, including for purposes of pay. He shall furthermore be entitled to workmen's compensation and the same benefits when acting pursuant to this section to the same extent as though he were functioning within the normal scope of his duties.

(b) As used in this section:

(1) "Head" means any director or chief officer of a law-enforcement agency including the chief of police of a local department, chief of police of county police department, and the sheriff of a county, or an officer of one of the above named agencies to whom the head of that agency has delegated authority to make or grant requests under this section, but only one officer in the agency shall have this delegated authority at any time.

(2) "Law-enforcement agency" means only a municipal police department, a county police department, or a sheriff's department. All other State and local agencies are exempted from the provisions of this section.

(c) This section in no way reduces the jurisdiction or authority of State law-enforcement officers. (1967, c. 846; 1971, c. 698, s. 1; c. 896, s. 4; 1977, c. 534.)

Editor's Note. —  
The 1977 amendment, effective July 1, 1977,  
rewrote this section.

Section XI Sample Data Collection Sheets

The following forms are suggested for collecting data needed to develop a plan for implementing a 911 system.

A. Agency: \_\_\_\_\_  
Address: \_\_\_\_\_  
Phone No.: \_\_\_\_\_

B. Contact Person: \_\_\_\_\_

C. Department Organization and Personnel by Function  
 (attach information)

D. Jurisdictional Boundaries (attach map indicating  
 jurisdiction served)

E. Population Served: \_\_\_\_\_ Source: \_\_\_\_\_

F. 1. A. Telephone Company Used: \_\_\_\_\_  
 B. Tel Co Representative: \_\_\_\_\_  
 C. Phone Number: \_\_\_\_\_

2. A. Telephone Company Used: \_\_\_\_\_  
 B. Tel Co Representative: \_\_\_\_\_  
 C. Phone Number: \_\_\_\_\_

3. A. Telephone Company Used: \_\_\_\_\_  
 B. Tel Co Representative: \_\_\_\_\_  
 C. Phone Number: \_\_\_\_\_

4. A. Telephone Company Used: \_\_\_\_\_  
 B. Tel Co Representative: \_\_\_\_\_  
 C. Phone Number: \_\_\_\_\_

G. Telephone Company Equipment\* (identify by type, i.e.,  
 Centrex, switchboard, call director, etc.)

	<u>Equipment Type</u>	<u>Location</u>
1.		
2.		
3.		
4.		
5.		

\*(used for complaint processing and requests for emergency service)



## H. Types of Calls Handled:

Type of Call	Average Number Of Calls Per Day	Average Time To Process In Seconds
Emergency		
Administrative		
Report Taking		
Other (Describe)		

## I. Telephone lines

1. Does your agency have separate emergency and administrative phone numbers?

Yes No

If no, how many incoming lines are there? \_\_\_\_\_

If yes, how many incoming lines are there for:

Emergency \_\_\_\_\_ Administrative \_\_\_\_\_

2. Are Emergency and Administrative calls answered at a central point? Yes No

If no, where are calls answered?

Emergency \_\_\_\_\_

Administrative \_\_\_\_\_

3. Are telephone messages or conversations recorded?

Yes No

If yes, describe recorder and what lines are recorded:

\_\_\_\_\_  
\_\_\_\_\_

## J. Emergency Answering Positions

Number of Operators per Shift: Shift 1 \_\_\_\_\_ (\_\_\_\_ to \_\_\_\_)\*

Shift 2 \_\_\_\_\_ (\_\_\_\_ to \_\_\_\_) Shift 3 \_\_\_\_\_ (\_\_\_\_ to \_\_\_\_)

Other Shift \_\_\_\_\_ (\_\_\_\_ to \_\_\_\_)

Location in Department \_\_\_\_\_

Does Operator perform other tasks? Yes No

If yes, describe other tasks operator performs:

\_\_\_\_\_  
\_\_\_\_\_

\* Hours of Shift in 24-hour Time



K. Phone Call Volumes\*

Check One

<input type="checkbox"/> Emergency Answering Position _____	Average Total # of Calls by hour of day			
<input type="checkbox"/> Telephone Number # _____				
Hour of Day	1975	1976	1977	to date
0100				
0200				
0300				
0400				
0500				
0600				
0700				
0800				
0900				
1000				
1100				
1200				
1300				
1400				
1500				
1600				
1700				
1800				
1900				
2000				
2400				

\*Add additional sheets for other answering positions

L. Weekly Telephone Survey

DAY OF WEEK \_\_\_\_\_

HOURS	# BUSINESS CALLS	# EMERGENCY CALLS	TOTAL # OF CALLS
0100			
0200			
0300			
0400			
0500			
0600			
0700			
0800			
0900			
1000			
1100			
1200			
1300			
1400			
1500			
1600			
1700			
1800			
1900			
2000			
2100			
2200			
2400			

## Section XII Existing 911 Systems

Descriptions of several existing North Carolina 911 systems follow.

## Durham 911

The City of Durham uses the Public Safety Officer concept.

The City and County of Durham Emergency Operations Center, which is the 911 Answering Point, is the responsibility of Mr. Ed Canady, (919) 688-8251, Durham Public Safety Department Communications Chief.

The EOC handles Police, Fire and Emergency medical calls, dispatching directly, and can extend calls or relay messages to the Durham Sheriff's Department. The center also handles service calls for other agencies such as State Highway Patrol, City Government, Public Works, and Highway Commission.

General Telephone Company provides service to most of Durham County, and parts of Granville, Wake, Orange and Chatham Counties. Their pay stations do not have dial-tone-first, therefore a caller must have 20¢ to place a 911 call. (Coins are returned) (GTE has recently announced that pay telephones will be modified by the end of 1979)

The City maintains about 240 emergency call boxes, for which the telephone company charges almost \$4000 per month. These will be removed once the pay phones are modified to allow coin-free 911 calls.

They use forced disconnect, but do not have called-party-hold, and do not favor any system that does not protect the anonymity of the caller.

Butner and Creedmore are in Granville County, but are served by one of the GTE central offices in the Durham system, hence residents who dial 911 get the Durham center. Similarly residents in a part of Orange County can dial 911, getting the Durham EOC, and some residents of Durham County served by the Chapel Hill exchange who dial 911 will get the Orange County center. Such calls are relayed to the Police Department of Butner or Creedmore by radio, or to the Orange County center by direct ringdown (dedicated line). This is a 2-way ring-down, and is used once or twice a day. Radio, phone, or for Orange County, PIN can be used, depending upon the situation.

For the Durham residents serviced by the Chapel Hill exchange a Wx number (non-toll call) has been provided and is listed in the phone books. If the callers cannot remember the number, they can dial 0, ask for the Durham Police (Fire or Sheriff) and the operator will dial the Wx number. (Although the system works and there have been no complaints, note that the operator is in a remote location not in Durham and it is possible that a look-up by the operator could impose some delay). Most calls are from Orange County residents, into the Durham Center. Durham is planning to attain the capability to extend these calls into the Orange County center rather than relay the message as is now done.

The Durham center normally uses 3 telecommunicators, one of whom is a working supervisor. During peak periods an additional telecommunicator is added.

Training is on-the-job, with a 2-hour weekly in-service classroom period. New operators attend a 2 day class, then are given on-the-job and weekly in-service classroom training.

Training includes Police, Fire and EMS procedures.

Durham has a direct ringdown line to the hospital emergency room that allows extension of 911 calls for emergency help directly to a Doctor or Nurse at the hospital.



## Lincoln 911

The City of Lincoln and County of Lincoln operate an Emergency Center, which is the 911 answering point, with costs shared equally by the City and County. The Communications Supervisor, Mr. W. W. Modlin, (704) 735-8202, works for a committee, no one of whom may fire him. The Committee consists of representatives of the city and county, but none of the serviced agencies have members on the committee.

The County Communications Center dispatches over direct ring-down lines to the Sheriff, Lincoln Police, City Fire, Hospital, Ambulance and Rescue Squads. There is a ring-down call box for the duty officer on the street in Lincoln, one in the Magistrate's office, and one is being placed in the detectives office at the jail. There are 10 County Rescue Squads.

All pay telephones have dial-tone first, so no coins are needed to dial 911.

The Center has 25 incoming lines, 13 of which are 911. Two of the 12 seven digit lines are Wx, i.e., incoming toll free lines from outside the telephone company central office providing 911 service.

There were no costs to the County by Southern Bell in implementing 911 except for \$94 for a line to Catawba County. (A combined dispatch operation had been started some months before cutting over to 911 in October, 1975)

Total monthly costs of telephone and radio control lines is about \$1,000.

Areas of Lincoln County served by the Maiden exchange in Catawba County, and Cherryville exchange in Gaston County each have 2 special lines to the center. These exchanges are not toll calls for normal traffic to Lincoln, but to avoid users having to call the center on the business number that could be tied up, these special numbers have been added.

The center has forced disconnect on 911 lines, and called party hold, which they feel has resulted in catching several pranksters, one making a bomb threat.

Two dispatchers/complaint answerers are normally on duty. Training is on-the-job.

## Winston Salem 911

The Winston-Salem Emergency Communications Center represents a city-only 911 system, and is under the supervision of Mr. B. G. Millikan, Communications Division Chief, Police Department, (019) 727-2295.

Changeover to 911 was effected in June, 1977, and all of the original 7 digit emergency lines have been retained. As of early November, 1977, only about 10% of the called-in complaints are on 911 lines.

The initial study leading to adoption of 911 was made about two years ago.

There are a total of 49 incoming 911 lines, 8 lines each for the exchanges with the highest population, and they terminate in eight 96 button call directors.

Twelve Telephone Central Offices are involved in the system, leading to some problems with the changeover, which was effected as Southern Bell upgraded these Centrals.

The Center dispatches City Police and Fire, and relays messages for the Sheriff, ambulance service, and county fire. 911 publicity informs citizens they are to call these agencies direct for service.

About 3/4 of the city pay phones have dial tone first, the remainder have stickers reminding users that coins must be deposited first even for a 911 call.

During a randomly picked week (Complaint Reports are compiled weekly, will at some later date be recorded by computer) 1661 calls were received. 173 were on 911 lines, 117 between the hours of 1600 and 2400. There were 39 referrals, 34 to city ambulance service, 3 to county ambulance service and 2 to the Sheriff's Department.

Six dispatchers are assigned to a shift, but are scheduled so that one is off days. All 6 are on duty at night. Training is conducted on-the-job, by the shift supervisor and the senior operators. Operators rotate consoles, including the senior operator, every two hours.

Calls from citizens in Davidson County who have access to Winston-Salem on 911 are referred to their Sheriff using the toll free Wx number Davidson County has provided for these citizens, or PIN.

Winston-Salem 911 lines have forced disconnect and called party hold. Mr. Millikan believes many nuisance type calls have been eliminated since implementation of 911.

Civil Preparedness funds were used in setting up the Communications center, and the EOC adjoins the center, but is separate from it.

The Communications Center has a 40 channel dual track tape recorder and 4 instant playback recorders. They are planning on adding three more to provide one for each dispatch position and one for the supervisor.

About 70% of the area of Forsyth County has access to the city center over 911 lines, a situation that appears to favor extension of coverage to the entire county.

### Anson Consolidated Communications Center

The Anson County consolidated communications system is operated by the Wadesboro Police Department, Chief W. K. Aubrey, (919) 694-2167. Anson County has been operating a consolidated communications system for approximately six years using a single seven-digit telephone number (919-694-2167) for all emergency calls. The agencies served are the Wadesboro Police Department and 4 other Police Department's, 3 rescue squads, 8 fire departments, 1 private ambulance service, and 1 Sheriff's department. All calls terminate in the Wadesboro Police Department, and all agencies are directly dispatched from the same location. In addition to dispatching, the Wadesboro police department handles central records for all law enforcement agencies in Anson County.

Mid-Carolina Telephone Company (a part of the Mid-Continent system) serves practically all of Anson County. A very small fringe area of the county around Marshville (near Union County) is served by Central Telco and is long distance to Wadesboro. That appears to be the only significant overlap or boundary mismatch.

Coordination and cooperation among emergency agencies appears to be excellent.

In addition to the equipment in the police department, the sheriff has a consolette and can monitor and intercept dispatches if necessary. Wadesboro has five dispatchers. Anson County pays \$5,000 toward the salary of one dispatcher and also pays one-half the cost of the PIN machine and maintenance of mutually shared equipment. Training of dispatchers is done on the job.

Anson County is an excellent example of consolidated communications and central dispatching in a small county. The communications room is kept in exceptionally good order, and the degree of professionalism exhibited by Chief Aubrey and Chief Dispatcher Purvis Walters was definitely a cut above average. Despite the lack of 911, Anson County's communications system is a model of what a small county can do with centralized communications.



System Type	Features Available	Cost	Pros	Cons
Basic 911 (tandem switching)	Forced disconnect, tone application		Less expensive than other systems	Few features available. Easily overloaded. No way to trace calls. No 911 system in North Carolina operates this way.
Basic 911 (direct trunking w/call director)	Forced disconnect, tone application, called-party hold (included in basic cost); transferring, automatic call distributor, ring-back available; later expansion to include call locator identification, visual displays		Less expensive than switch-board system with comparable call transferring feature, called-party hold automatically included in system, can be expanded	Dispatcher must stay on the line on calls that are transferred to another agency
Basic 911 (direct trunking w/PBX)	Same as Basic 911 System w/ call director		Dispatcher can transfer calls without having to stay on the line (and can therefore handle more calls)	Most expensive basic system
Expanded 911 service (available in only certain areas)	In addition to features available with basic system: Automatic number identification and display, calling number identification and location, selective routing	Installation: 15,000-20,000 Operating: to be determined	Enable telecommunicators to immediately know location of caller, to route call to proper jurisdiction if caller is outside area served by 911 emergency services	Expensive, may not be cost effective

System Type	What it Does	Cost	Pros	Cons
Forced disconnect	Enables telecommunicator to disconnect nuisance calls	NC	Helpful in dealing with prank callers	
Tone application	Enables telecommunicator to determine if calling party has hung up or is still on line	NC	Useful in determining if caller is injured and cannot speak (call can then be traced)	
Automatic call distributor (ACD)	Distributes incoming calls evenly among telecommunicators who are not busy		Eliminates delays in answering calls in large 911 answering centers by always routing a call to an open position	Useful primarily in large centers
Called-party hold	Enables answering point to hold line open after caller has hung up	NC	Useful in tracing prank calls, bomb threats, etc. or if calling party fails to give location of emergency	Tracing may take excessive time from some small central offices, does not protect anonymity of caller
Ring-back	Enables answering point to call back caller for additional information	Operating: 7.50-19.50 per month per line	Helpful in getting verification on information	Expensive, caller may have left vicinity of phone, most centers do not consider it cost-effective
Identification of incoming lines	Identifies which central office call is routed through	NC	Helpful in identifying location of caller	
Dial-tone first pay phones	Enables caller to get emergency help (911) without inserting money	NC (not available in all areas)	Reduces delays in notification, saves money from charges on emergency call boxes	

System Type	What it Does	Cost	Pros	Cons
Automatic number identification (ALI)	Automatically identifies and displays number from which caller is speaking	Expanded 911 feature-cost must be figured following engineering study	May reduce prank calls, enables dispatcher to call back or trace the call (Bell has one office that will give addresses of specific phone numbers on an emergency basis, so lengthy tracing is not needed)	Does not protect anonymity of caller
Calling number identification and location (CNIL or ANL)	Automatically identifies and displays number and location of caller	Expanded 911 feature-cost must be figured following engineering study	Eliminates need for traces, may improve response time	Will probably be very expensive, does not protect anonymity of caller
Selective routing	Automatically identifies jurisdiction from which call is coming and routes call to appropriate dispatch center for that jurisdiction	Expanded 911 feature-cost must be figured following engineering study	Eliminates need for hot lines to other jurisdictions, delays in transferring calls, etc.	
Multi-line conferencing	Allows dispatcher to connect caller directly with specific emergency service (such as suicide prevention service, etc.)	Installation: \$25 per 5 lines plus \$25 per answering position Operating: 2.30 per 5 lines per month plus \$1 per answering position per month	Enables caller who needs (on an emergency basis) to communicate with a specific agency to do so	Dispatcher must stay on line and cannot handle other calls



**END**