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ALUATION OF INTERGOVERNMENTAL RESPONSIBILITIES FOR MAINTENANCE

May 1979
Final Report

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Prepared for
FEDERAL HIGHWAY ADMINISTRATION
Offices of Research & Development
Implementation Division
Washington, D.C. 20590

FOREWORD

The 1975 'Highway Maintenance Research Needs" study identified the high priority research needs for highway maintenance. This report presents the results of a contract initiated with the National Institute for Community Development in response to one of those needs.

The study concludes that there are many instances where roads are being maintained by political entities which are too small to adequately support a full modern maintenance operation. The surrender of responsibility for street maintenance by one jurisdiction to another, even under circumstances which might lead to a more efficient operation, is not normally a popular action. In such cases the most appropriate administrative alternative, as well as the most feasible politically, is to encourage contracting of maintenance services (service agreements) out to another road department which is better equipped to meet the maintenance needs of a smaller jurisdiction. However, there does exist a lack of knowledge among the smaller jurisdiction road departments about the nature and full potential of service agreements as an operational tool.

This report should be of interest to those individuals involved in maintenance and local aid programs within the State highway agency.

G.D. Love
Associate Administrator
for Research and Development

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16. Abstract

This report presents the results of a project to identify and review the practices and relationships in performing street and highway maintenance within defined political and geographical boundries.

The study consists of a literature review, the development of summary issues that affect maintenance organizational structure in performing street and highway maintenance and field visits to nine states for intensive survey and analysis.

The study found that there are many instances where roads are being maintained by political entities which are too small to adequately support a full modern maintenance operation. However, the surrender of responsibility for street maintenance by one jurisdiction to another, even under circumstances which might lead to a more efficient operation, is not normally a popular action. The contracting of maintenance services out to another road department (service agreements) which is better equipped to meet the maintenance needs of a smaller jurisdiction is an appropriate administrative, as well as politically feasible alternative.

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A. STUDY PURPOSE

As developed in the Federal Highway Administration (FHWA) study entitled "Highway Maintenance Research Needs Report No. FHWA-RD-75-511", a "new Concepts" project was designated to evaluate "Intergovernmental Responsibility for Highway Maintenance". Four specific objectives were identified:

1. Survey the State and local organizations to determine practices and relationships.
2. Select up to 10 study cases of different techniques, structure practices and distribution of authority.
3. Conduct an analysis of information obtained.
4. Prepare a final report that will evaluate significant alternative characteristics.

In June 1977, the National Institute for Community Development (NICD) was selected to carry out this research program. This report reflects the results of this effort. Four specific tasks included:

1. Identify, through literature review, a survey of practices and relationships (including organizational structure) in performing street and highway maintenance within defined political and geographical boundaries.
2. Develop primary issues that affect maintenance organizational structure in performing street and highway maintenance within defined political or geographical boundaries.
3. Select up to 9 States for intensive survey and analysis of information obtainable from field visitations to State, county and municipal organizations.
4. Document the analyses and identify conclusions and recommendations regarding the identified issues and factors that impact upon maintenance effectiveness.

The results of this study are being distributed by FHWA's Office of Development, Implementation Division to state and local officials, so that a dialogue and reaction can be developed. Issued primarily for informational exchange, this report is not intended to promulgate policy or to suggest that individual approaches within the states may not be most effective for them.

In the course of the study three basic more or less distinct study issues were identified as follows:

A. Alternative structuring of maintenance responsibilities in metropolitan regions. The potential for government consolidation and other major reorganizational efforts was studied.

B. Alternative structuring of responsibilities between the states and their counties in the maintenance of local, non-primary roads. The state was viewed as a complete system.

C. The application and potential for contractual agreements for maintenance services between highway departments, without any transfering of responsibility.

The original study was intended to emphasize the first issue. This is indicated by the fact that in the previously noted Research Needs Report published in 1975, of the suggested 9 case study sites, 6 were of metropolitan regions and one was of a rural substate region, while only two were for entire state systems. Issue C, was not clearly stated as a study objective in the original study purpose, which emphasized alternative arrangements for structuring maintenance responsibilities. It was however identified as a related but

distinct subject for study, although treatment of this issue was not handled on as rigorously a fashion as the first two issues.

After identification and study of these basic issues, case study sites were selected for further investigation of these issues as shown on the following table:

Table I-1
Sites and Issues Investigated

Case Study States	A. Metropolitan and Regional Alternatives	B. Rural State-Local Issues	C. Service Agreement Concept
Pennsylvania	*	*	
North Carolina		*	
South Carolina		*	
Alabama		*	
California	*		**
Oregon	*		*
Minnesota	*	(*)	*
Illinois		*	*

* indicates subject of primary interest at each site visited.

** signifies that experience with service agreement concept was studied under two very different and not truly comparable circumstances, i.e., through the state DOT and with an urban county.

(*) refers to the fact that although a visit was not made with this issue primarily in mind, data collected revealed promising research work was scheduled on this subject.

B. RESEARCH APPROACH

Emphasis was place on the issues development through the literature search and annotated bibliography. An interim report identified over 100 reports, articles and other sources of information and provided the framework for Case Study Evaluation. Section II presents a National Profile of Organizational Practices, Responsibilities, and Financial Arrangements.

Issues/Case Study Selection

Following a review of the Interim Report, in coordination with the FHWA contract manager, NICD developed the framework for investigating in the case study analysis three major issues described on the preceding pages. The purpose of this issue identification was to identify which objectives would be focused on in the state site investigations.

After addressing a letter and announcement to each of the 50 states, (Appendix C, Exhibit 1), replies were received from 13 states. Each state responding to the study was either selected as fulfilling one of the objective evaluation issues or as exhibiting some potential of doing so.

Sections III (Rural) and IV (Metropolitan) contain synopsis of the intensive case study evaluations conducted in each of the eight states visited.

The discussions on "service agreement", are included in the sections, covering those cases where such arrangements exist.

On-site Visitations and Documented Appendices

Each of the field trips is outlined in Appendix B, Field Visitation Data, which lists persons, agencies, and materials obtained in accordance with our Interview Plan. Since FHWA felt that a minimum of seven visits (eight were done) should be made to different states, the available time and resources had to be carefully allocated. Exhibits related to materials collected in the field trips are contained in Appendix C, and are referenced as appropriate.

II. NATIONAL PROFILE, ORGANIZATIONAL PRACTICES, RESPONSIBILITIES AND FINANCIAL ACTIVITIES

As indicated by the research approach, a survey of current practices in all 50 states was considered necessary. This consisted of:

1. Literature Review--based on an annotated bibliography (Appendix D) designed to identify issues and maintenance organizational alternatives for possible case study analysis.

2. Statistical Analysis Supplement--which identifies maintenance responsibility, disbursement activity, organizational and highway characteristics of the 50 states (Appendix C).

First, this information will be essential in verifying that the conclusions and recommendations, based on the case studies selections, can be applied to other locations, if desired. Second, this approach identifies issues which, because of study limitations, can not be examined within the selected states. Third, the knowledge gained during the literature review provided a means by which issues and useful guidelines for selection of case study location and methodology could be developed.

A. OVERVIEW OF ORGANIZATIONS AND PRACTICES

The literature search of over 100 reports, articles and other items has been condensed and organized into five general areas (Appendix D). These are as follows:

- State Highway Departments
- Local Governmental Structure and Highway Organizations
- Maintenance Definition/Management Techniques
- State and Local Legislative/Fiscal Policy
- Federal Legislative and Fiscal Policy.

This review had indicated that considerable amounts of dated material exist on the general subject of highway policy and its relationship to maintenance organizations at the state and local levels. Selected exhibits and those references considered most-relevant are discussed below to provide a national profile on the subject areas and indicates a partial basis for the framework of the case study selection and approach.

1. State Highway Departments

State highway departments, in recent years, have been most-heavily influenced by the trend towards multi-mode objectives and the development of state Departments of Transportation. A comprehensive Advisory Commission on Inter-governmental Relations (ACIR) review in 1972 discussed the national trends in this area and concluded that transportation planning was most-directly affected by the A-95 process. The impact on highway operations, however, was minimal. Only three states (New York, Ohio, and Illinois) had adopted (in 1972) a functional orientation for all activities within the various modes.

All states except Rhode Island established divisions (districts) to direct activities at the sub-state level for construction and maintenance. Approximately 375 geographical areas in the 50 states

are designed to serve, on the average, 8.9 counties each.* These units direct construction and maintenance activities for state systems within their defined boundaries.

A directory of state highway officials was reviewed to identify persons and their titles at both districts and county levels responsible for highways. However, as indicated by the Case Study Analysis, some state highway departments assign county level professionals to supervise maintenance activities within the political unit, but their authority is vested with the District or Division Engineer.*

2. Local Governmental Structure & Highway Organizations

All states, except those which have "strong" town/township (New England) government, have chartered counties to perform general services. Most states have provided cities with independent status, whereas county government varies considerably with respect to local autonomy. ACIR, in several documents, provides extensive research on the structure of these governments and the services they perform, but highway maintenance issues are not specifically identified. Four issues do emerge from this literature:

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* Divisions and districts are formulated in some states.

- City/County Consolidation Efforts
- Annexation by Cities of Counties
- Regional Councils of Governments (COGs)
- Intergovernmental Agreements/Service Contracting

The first two issues are metropolitan only whereas the last two are both rural and urban.

The internal structure of counties and the political relationships to highway activities were emphasized by Burch as having a direct impact in the 1950's on their ability to assume highway maintenance responsibility. The most common problem relates to the establishment of county commissioner districts, where direct highway administration of county roads was delegated to four or more officials, generally elected. Prevalent in rural areas, the ACIR identified four basic emerging types of county government: (1) plural executive or commision (2) county administrator (3) county manager and (4) county executive, each of which represents a move towards traditional city type governments.

Highway organizations within local governments are more closely related to public works and/or general transportation matters. Responsibility for highways was limited to local roads, excluding the state primary and sometimes the secondary roads.

Within cities, the pattern is generally reversed, with a small number of state highways being the only systems not delegated to these units for administrative responsibility.

3. Maintenance Defined/Management Techniques

The literature sources established that the concept of maintenance must be clearly defined. AASHTO has published a basic manual on this subject. The trade-offs between a geographical vs. functional organization is mentioned, and the various maintenance activities are described. Most management activity reports suggest including the following categories:

- Roadway surface
- Shoulder and approaches
- Drainage
- Roadside maintenance
- Major structure
- Snow and Ice
- Traffic service
- Extraordinary
- Service Functions and Overhead

But when cost reports are made to other authorities, considerable consolidation occurs. Work units also are used to estimate the amount of activity and associated cost of materials and manpower. Equipment

acquisition or depreciation costs, however, are usually identified separately as a major budget item. Such equipment may serve construction activities within the same unit, and be allocated to different functional objectives in the maintenance area.

Recent studies in computerized maintenance management techniques were reviewed and used to identify various types of maintenance reporting formats and data that might be useful for case study review. The relationship of these procedures to inter-governmental responsibilities is, however, indirect - with the possible exception of service contracting and agreements. The local governmental implementation of such agreements should agree with functional objectives and maintain contract reporting procedures so that information for the management system is provided to the unit responsible for the objective.

The National Association of Counties (NACO), in their efforts to get counties to implement management systems, have documented the process in one of their Action Guide Series. NICD determined that some of the larger governments have implemented these systems.

Another example of intergovernmental activity in the management area includes communication of

technology and training of personnel. An FHWA study on traffic services, generally a major element of maintenance, indicated that 35 states provide localities with some form of training in traffic engineering and maintenance.

4. State and Local Legislative/Fiscal Policy

A comprehensive review of state highway laws in 1965 described the impact of legislation on classification of systems, responsibilities for maintenance and fiscal relationships in the 50 states. In 1961, 29 states had established primary and secondary systems not identified with political units within the states (e.g., towns/counties). County and town level systems were established in other states to classify the local roads, and a few states had all three level of highway systems established by law (See Appendix C, Exhibit 3).

When responsibility for maintenance is assigned, set amounts of funds almost always are distributed to each system. When necessary, funds are allocated to specific political jurisdictions (or districts if the state controls local roads) on the basis of various formulas. Within these units of responsibility, priorities on an annual basis usually are

established by professional and management techniques.* The state, if systems are maintained by localities, may set certain standards. If state gas tax funds are insufficient, local funds are raised from general budgets within the locality to achieve desired maintenance and/or construction objectives.

State laws also are written to authorize local governments to contract with each other and their states for various governmental services. A Highway Research Board (HRB) report examined the 1958 provisions in state law and indicated that up to 45 states could deal with local counties (See Table II-1, on following page), but that provisions for county to municipality agreements existed in only 36 states at that time.

Another ACIR document (Appendix D) provides an excellent current (1976) summary of the state legislative and administrative policy concerning local government cooperation for all functions of government. (See Appendix C, Exhibit 4).

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* As noted above, the county district system may not be organized to follow administrative procedures but use a "political" approach to local priorities.

TABLE II-1

SUMMARY OF COOPERATIVE PROVISIONS FOR HIGHWAY ACTIVITIES - GENERALLY a/

Combination	Number of States
State - County	45
- Municipality	50
- Township	19
- District	4
County - County	25
- Municipality	36
- Township	17
- District	3
Municipality - Municipality	22
- Township	7
- District	3
Township - Township	8
- District	-
District - District	2

Source: Intergovernmental Relations in State Highway Legislation, HRB, Special Report 49, Table 17, pg. 45.

5. Federal Legislative and Fiscal Policy

An extensive background on federal highway research and fiscal analysis was compiled for this study. Federal policy delegates highway maintenance responsibility to the states and local governments.

There are two Federal incentives, however, that have had an indirect influence on organizations and classification of highways at the local level:

- The A-95 Review Process Funding and Planning activities.
- Federal Highway Classification System for Federal Aid Construction Assistance.

A 1959 study by HRB (Appendix D) and several ACIR efforts noted in the bibliography deal with these subjects extensively. These reports and others were examined by the study team and used to provide reference material as needed.

With respect to fiscal influence several references (Appendix D) indicated that Federal legislation has impacted all highway development issues through the allocation of construction aid funds.

Federal Revenue Sharing Acts of 1972 and subsequent allocations, with their emphasis on direct aid to sub-state localities, have made additional funds available for highway maintenance at the local level. Because these funds are distributed without specific procedural requirements, their impact on intergovernmental responsibility appears minimal.

The impact of the A-95 review process has, of course, emphasized the structural development of regional bodies in metropolitan and sub-state areas. In some cases, these agencies are uniquely qualified to establish and exchange intergovernmental cooperation. Another ACIR report (Appendix D) dealt with such agencies and their transportation policies and procedures. An extensive review of their characteristics was done, but emphasized the planning and metropolitan nature of their orientation. In the 1973 analysis, this report identified 218 of these "Section 134 Planning Areas" in the nations metropolitan regions (See Appendix C, Exhibit 5). No review of their involvement with highway maintenance activity has been undertaken.

B. RURAL AND MUNICIPAL MILEAGE ALLOCATIONS

Identification of the national profile with respect to mileage responsibility is available in Highway Statistics and summarized in the following table.

TABLE II-2

Mileage Responsibility - All States - 1972
(Thousands of Miles)

State		Local		
Rural	Municipal	Rural	Municipal	TOTAL
694	66	2,332	510	3,605
19.2%	1.8%	64.5%	14.2%	100%

Source: Highway Statistics, 1972, Table M-1

1 mile = 1.61 km

As indicated, a state-by-state, statistical supplement has been prepared so that selected case study areas can be compared to the national average and other unselected states (Appendix C, Exhibit 6). These data reveal that between 4% (New Jersey) and 79% (Virginia) of total mileage is rural and administered by the states. Within municipal areas, the local government mileage constitutes between 2% (North Dakota) and 100% (Maryland) of the total. The selected states are discussed in Sections III and IV.

C. MAINTENANCE ACTIVITY/CHARACTERISTICS

Further comparisons of other statistics, as provided by the extensive information in Highway Statistics, required that a limited selection be made. Since the level of maintenance activity and its functional breakdown would be descriptive of local and state efforts, tables were prepared to show:

- Maintenance Disbursements/Miles - State and Local Roads (Appendix C, Exhibit 7).
- State Maintenance Cost Distribution Among Reported Functions (Appendix C, Exhibit 8).
- Surface Type Distribution for: Rural State Highway (Appendix C, Exhibit 9).
- Rural Local Highway (Appendix C, Exhibit 10).

Each of these exhibits provides a listing of the state-by-state statistics, ranked from the highest per-mile costs to the lowest. Naturally, it is recognized that many factors contribute to costs, and no other implications are intended.*

Another element of intergovernmental relationships concerns the amount of local fiscal resources tranferred to other units of government for highway purposes. Although such data by function is not available on a national basis in Highway Statistics, two exhibits were developed for state-by-state transfers of:

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* Reporting procedures, footnotes and definitions as documented in Highway Statistics apply. Local reports of agencies and governments may not agree.

Municipal Disbursements: (Appendix C, Exhibit 11)

- to State for State Highways
- to States for Municipal Extension
- to County/Towns for Roads

County/Town Disbursements: (Appendix C, Exhibit 12)

- to State for State Highways
- to State for County/Town Roads
- to Municipalities for Streets

It is recognized that these data are not all that could be considered relevant to maintenance responsibility and characteristics of activity by various levels of government. Since the case studies are discussed in Sections III and IV, and conclusions are drawn, this statistic supplement should provide an important source of information in a format that is more revealing than the raw data tables contained in Highway Statistics.

III. RURAL ROAD SYSTEMS STATEWIDE/LOCAL CASE STUDIES

As discussed, some state highway agencies are administered on a centralized basis, while others rely on their sub-state units to carry out the day-to-day maintenance functions. Still, other states we examined operate through a combined approach of central authority and delegated responsibilities vested in state sub-units with varying degrees of maintenance functions performed. Five rural states were selected based upon the unique organizational frameworks within which their highway maintenance takes place. These states and the impact of their techniques on highway maintenance in local areas are reviewed below. The states are:

- North Carolina
- South Carolina
- Alabama
- Illinois
- Pennsylvania

The administration of highway maintenance within the states presented in our field studies varies in structure, relationship and in the allocation of day-to-day maintenance operations extending from the state level down through the local level. The maintenance responsibilities for some states, as pointed out in our field studies, are vested in Highway Departments which are part of the overall state governing bodies. North Carolina is one example of this type of organizational structure. Policies and procedures are generally centralized at the state level and are delegated to the maintenance divisions or districts throughout the state.

In some states, maintenance responsibilities are handled in part by counties. Within this context some counties are subdivided into "Maintenance districts". There are also counties not subdivided for purposes of road maintenance, but administered instead by one elected county resident.

Illinois, although similar to South Carolina, has several types of organizational structures through which maintenance activities take place, although at the state level the Department establishes the rules and regulations of the methods of road construction and maintenance. The Department assists the county superintendants in carrying out the prescribed regulations relating to highway activities. The same type of assistance is provided to the Highway Commissioner within a county whether it has authority over road related activities under township districts, road districts, or county unit road districts.

The Alabama Highway Department has the same type of overall policy regulatory power as other states cited. The maintenance of highways and county roads in ten (10) counties, however, are the Department's responsibility. Road and highway maintenance in the remaining counties are under either a "district" or "unit" system. Those counties not under state maintenance authority are referred to as "non-captive", and counties under its direct authority are referred to as "captive" counties.

THE UNIFIED NORTH CAROLINA APPROACH

The State of North Carolina road maintenance responsibilities are carried out under a system known as the "Central Maintenance Unit." Under this system the central office, in this case the state Department of Transportation, is responsible for the development and administration of maintenance policies and procedures to be used in the statewide maintenance operations. The authority of the Maintenance Unit can be considered a centralized function in this state. (See Figure III-1 thru 6). In general, the overall responsibilities of the Unit are as follows:

1. Coordinate the establishment of field personnel.
2. Procure, replace and allocate equipment.
3. Prepare maintenance appropriation request commensurate with the established statewide maintenance goals.
4. Develop recommended maintenance allocation formulas by which maintenance appropriations are allocated to the field divisions.
5. Develop, update, evaluate and analyze the total highway system within the state.
6. Develop and administer, on a statewide basis, Maintenance Municipal Agreements.

Under this type of system, all road maintenance is performed by the state except in the incorporated areas. This unit system is based on the law entitled the "Powell Bill", which uses a formula for the allocation of funds to each maintenance district within the system.

Figure III-1

TYPICAL TRAFFIC SERVICE ORGANIZATION

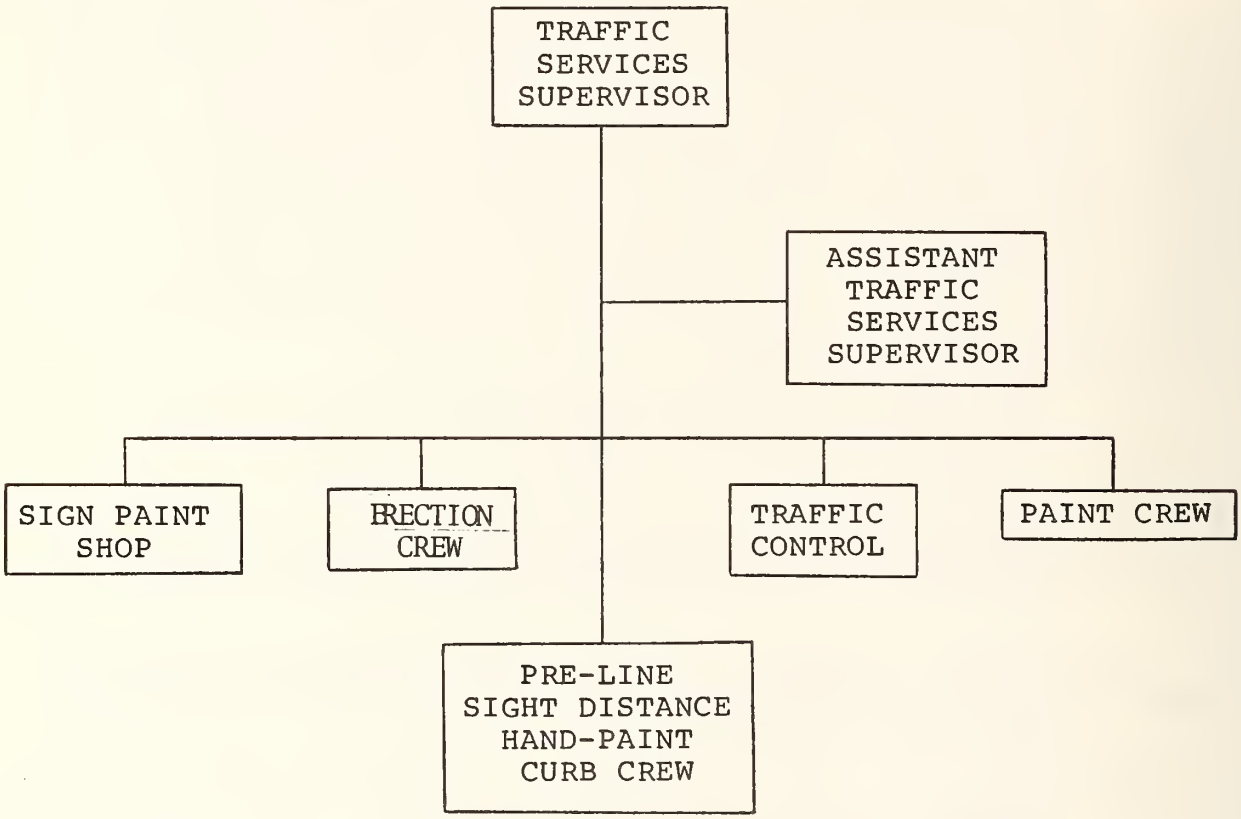


FIGURE III-2

TYPICAL ROAD OIL CREW

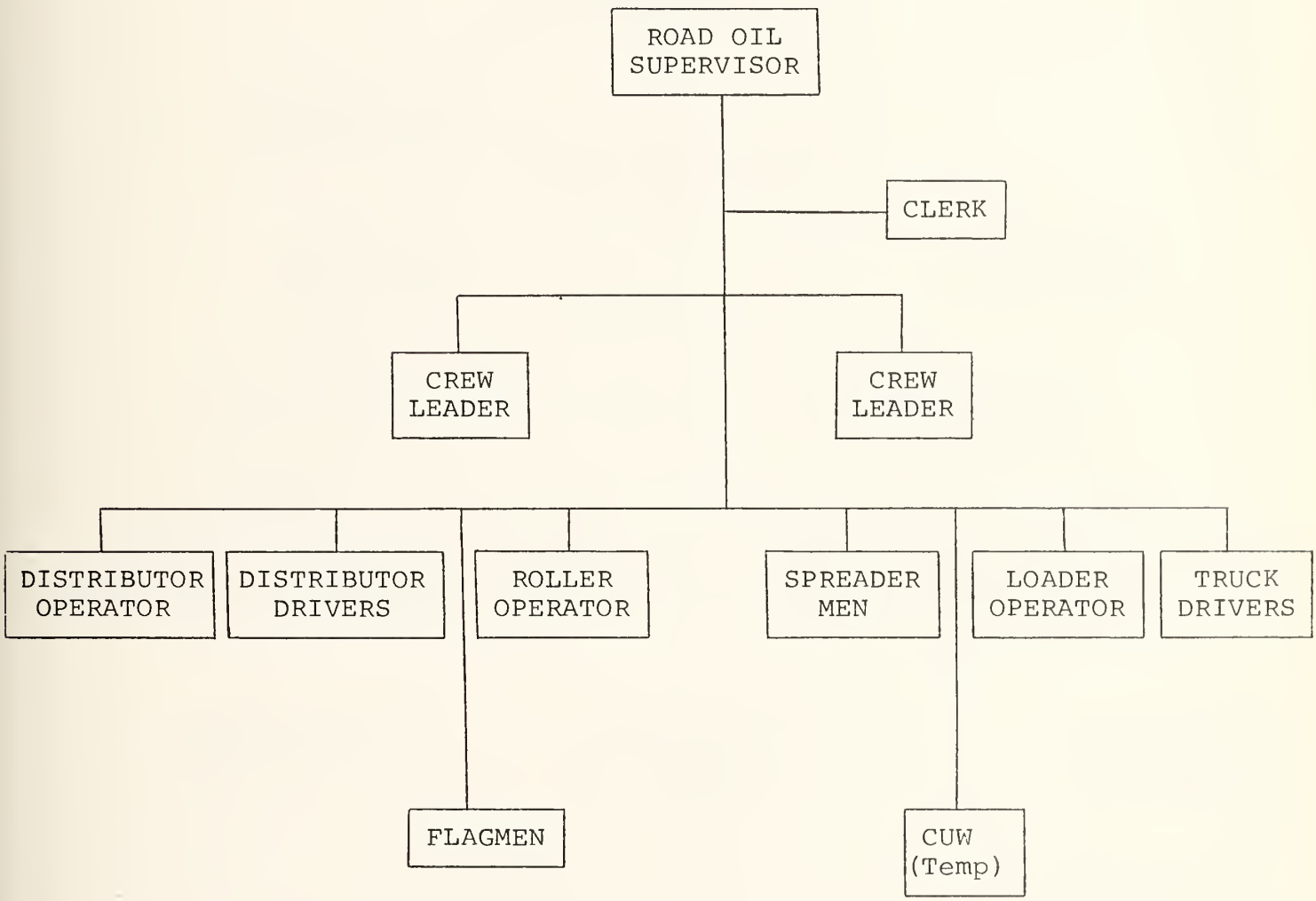


FIGURE III-3

TYPICAL COUNTY MAINTENANCE ORGANIZATION

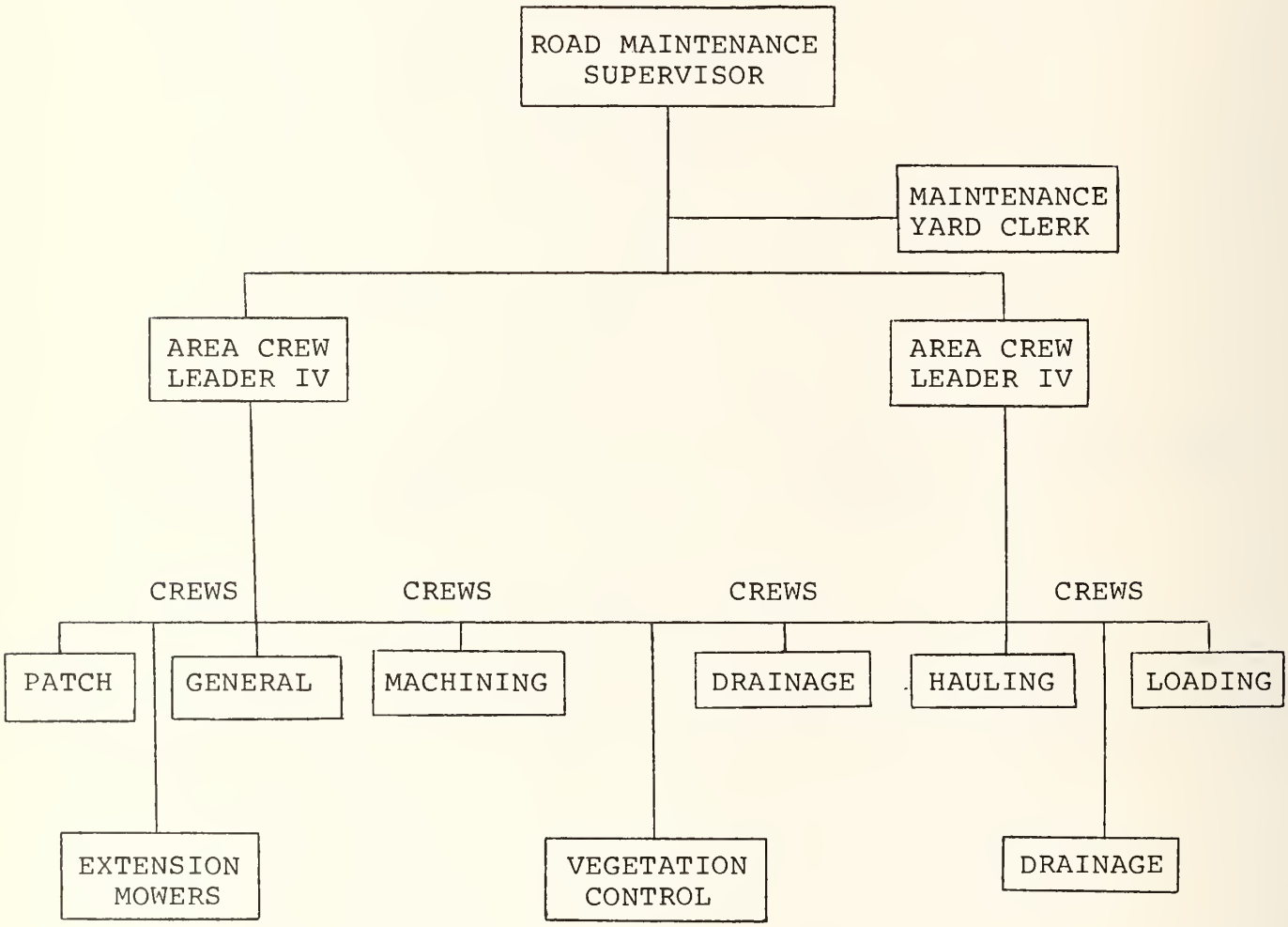


FIGURE III-4

TYPICAL DISTRICT MAINTENANCE ORGANIZATION

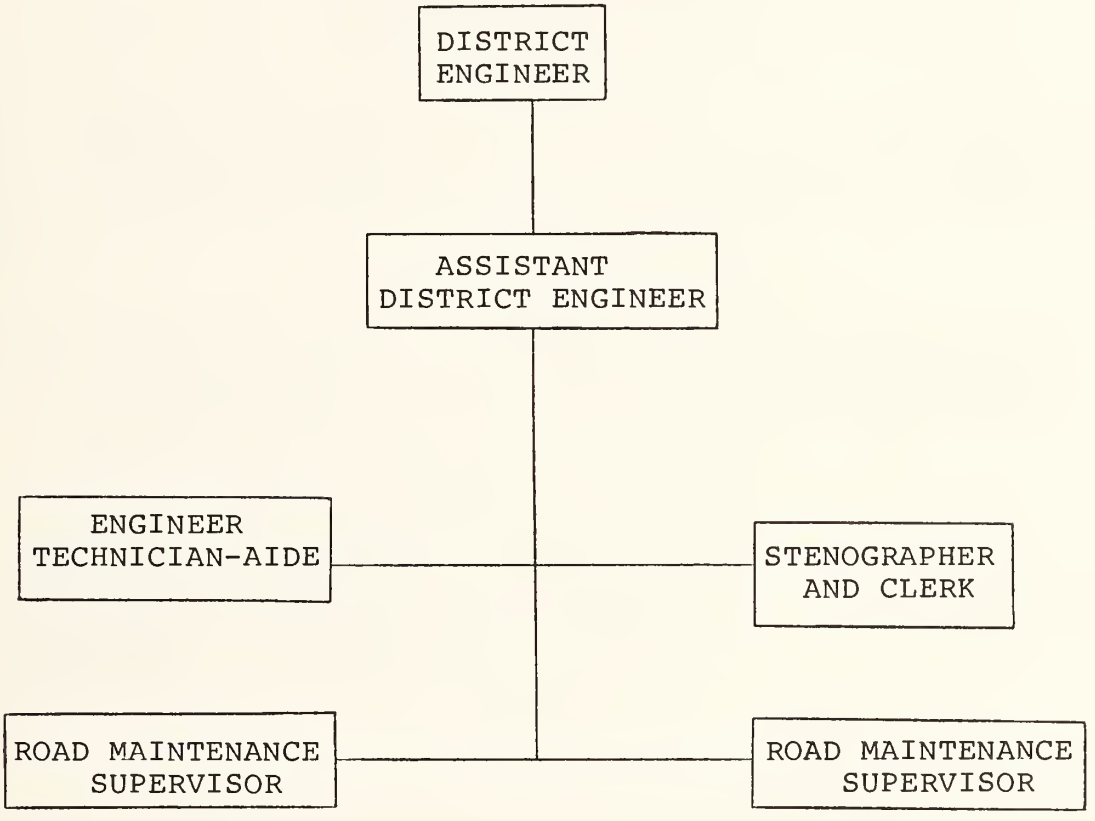


FIGURE III-5

MAINTENANCE UNIT STAFF AND ORGANIZATION

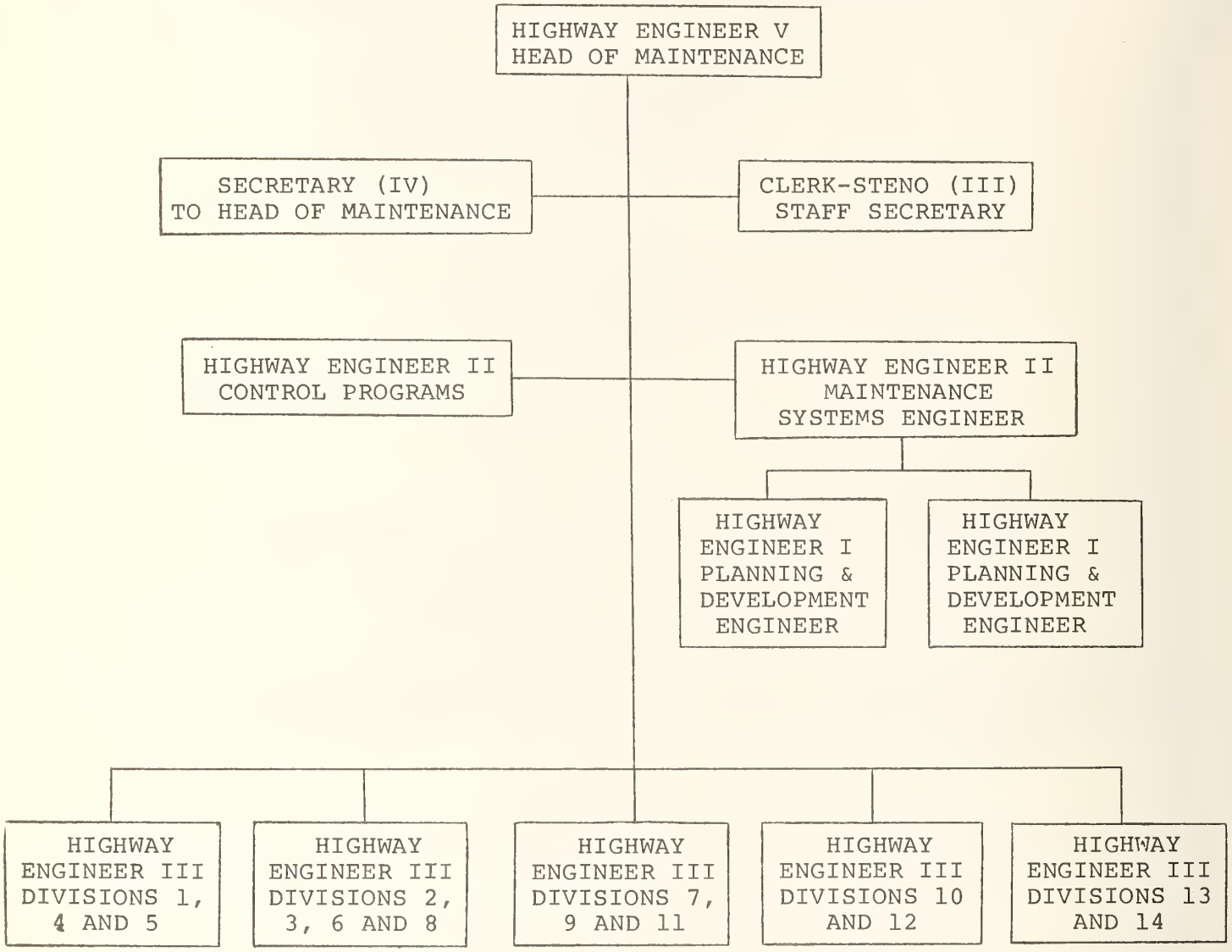
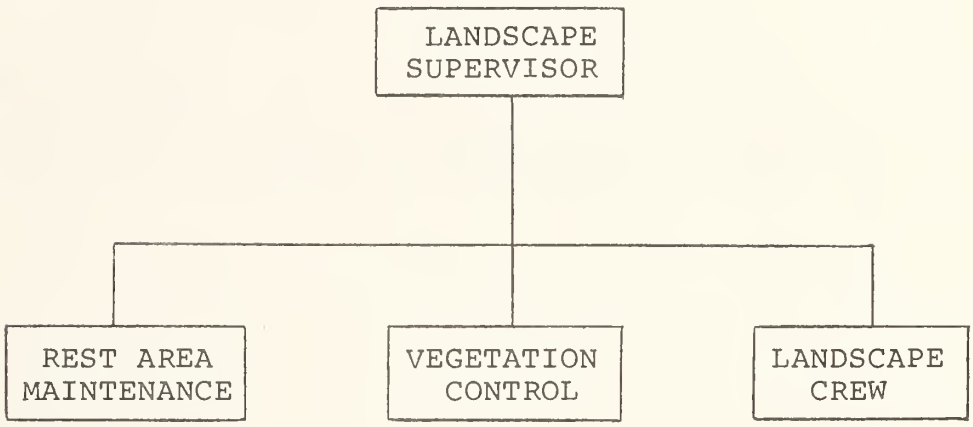


FIGURE III-6

TYPICAL LANDSCAPE ORGANIZATION



This formula is based on the miles of road and the number of persons residing in each county. The municipal governments receive their allotments directly from the state. These allotments are distinct from those of the county.

Financial Allocation System

The budget appropriations for the highway maintenance programs are derived from the "Budget Appropriations Bill" for the state of North Carolina. Provisions are made in the bill by the General Assembly for separate appropriations for construction and maintenance. The funds earmarked for maintenance can be used on primary, secondary and urban systems.

B. INDEPENDENT COUNTY APPROACH (SOUTH CAROLINA, ILLINOIS, ALABAMA)

As agents of the state at the local level of governments, counties differ in their administrative practices in the performance of maintenance activities. These three states contain a range of counties with unique administrative setups responding to the county's maintenance operations. The section summarizing the state and counties' responsibilities should be read with the field survey of each local area in the Appendices.

State of Alabama

The State of Alabama Highway Department was selected to participate in our phase-two case study of the evaluation of the effectiveness of alternative intergovernmental relationships in highway maintenance. This selection was based on the fact that all local roads in ten of the state's 67 counties are maintained by the state highway department, with the remaining road systems maintained by their respective county road departments. The administrative relationships between the state and various county governing bodies with respect to local road construction and maintenance under both the "district" and the "unit" system in one state, is a unique situation for study purposes.

Cullman and Randolph counties for purposes of highway maintenance operate under two distinct systems. State Law provides for a county commission form of local government where a county has the option of selecting the status of

"captive" or "non-captive" for local road administration purposes. Appendix C, Exhibit 13, displays the ten counties that are administrated under the "captive" system whereby the state assumes the role of highway maintenance on behalf of the county. The remaining 57 counties are "non-captive" and maintain their own roads, under one of the following forms of county government: the District System or the Unit System. Both "systems" bring another layer of government into the maintenance operations of roads and highways in the state. Appendix B discusses these two systems based on our field trip to both Cullman and Randolph counties this past summer. Two research studies were also done in 1976 under the direction of Auburn University which attempted to contrast the two systems in terms of cost efficiency and operational problems related to county road construction and maintenance.*

The following are the highlights of the history and responsibilities of the State Highway Department and its relationship to the county governments in the area of maintenance management:

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* a) Policy-related Information for the Baldwin County Legislative Delegation and Road Study Committee: Report I.

b) Lauderdale County Road System Survey for Lauderdale County Citizens Road Committee, Lauderdale County Commission, Lauderdale County Legislative Delegation.

- The Legislative Act of 1911 created the State Highway Department and its various divisions (see Appendix B).

- The Act provided that the department would be under the control of a commission of five members. Three members of the commission were appointed by the Governor, with the Senior Professor of Civil Engineering at the Alabama Polytechnic Institute and the State Geologist at the University of Alabama serving as ex-officio members. The commission appointed a State Highway Engineer to act as the Executive Officer of the department.

- In 1939 the Legislature provided for a single executive, the Director of Highways, appointed by the Governor, as the head of the agency. This organizational approach is still in operation. (Appendix B).

- State aid to counties is distributed from the gasoline tax as follows: 45% is retained for the state, and 55% is shared by the counties. Tnese funds are apportioned based on the county's population, with 10% of each county's share distributed among the municipalities using population counts as a basis also.

- Federal Aid (secondary) funds are allocated to the counties on an equal basis, with the State Highway Department retaining half of their funds. In addition to the above allotments, each county levies its own property tax of 2 1/2 mills for roads and bridge improvements.

State of Illinois

The State Highway Department has the overall function of setting the policy and standards for the construction and maintenance of all roads and highways in the state. (See Figures III-7 – III-11 for organizational structure). This relationship is characterized by a three tiered maintenance organizational structure (Appendix B) which adheres to the state legislation. With the exception of the State Highway Department as the first tier of authority, the County Board

FIGURE III-7

ILLINOIS DEPARTMENT OF TRANSPORTATION
HIGHWAY DISTRICTS

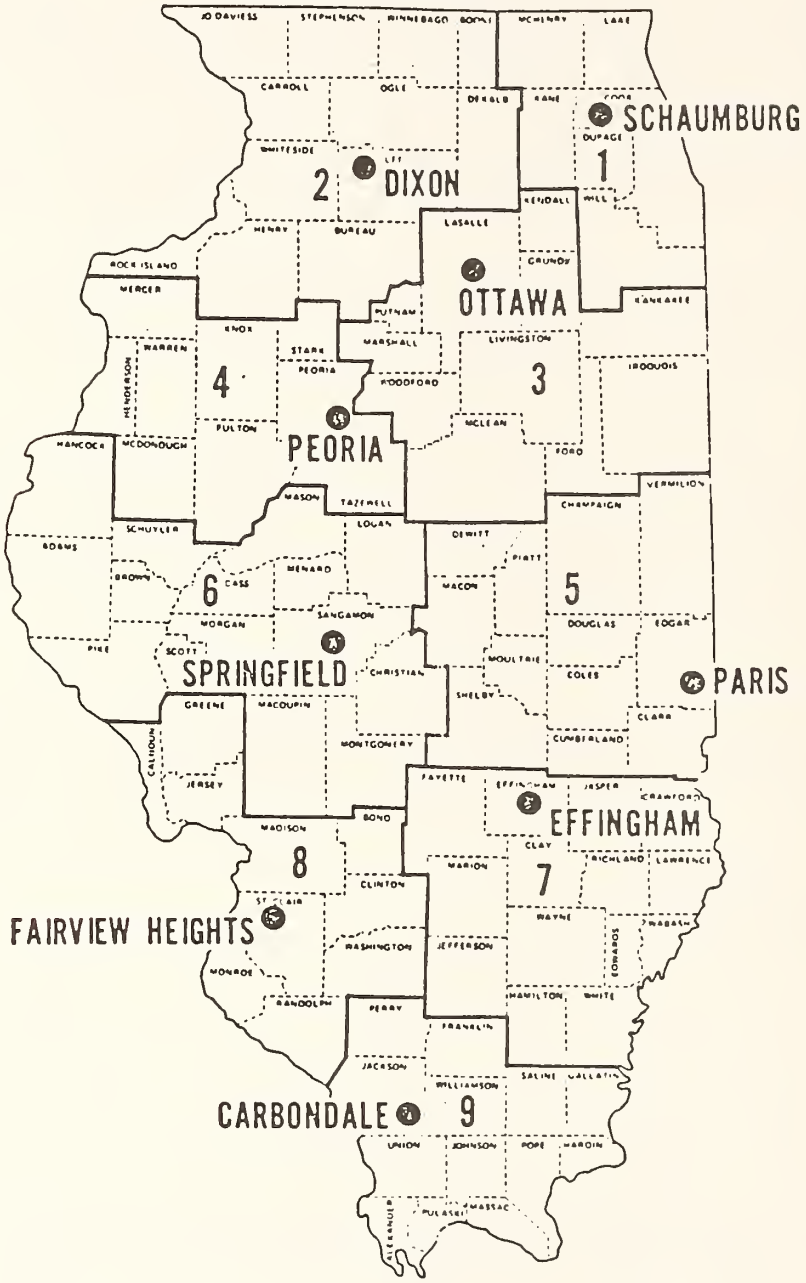


FIGURE III-8

ILLINOIS DEPARTMENT OF TRANSPORTATION

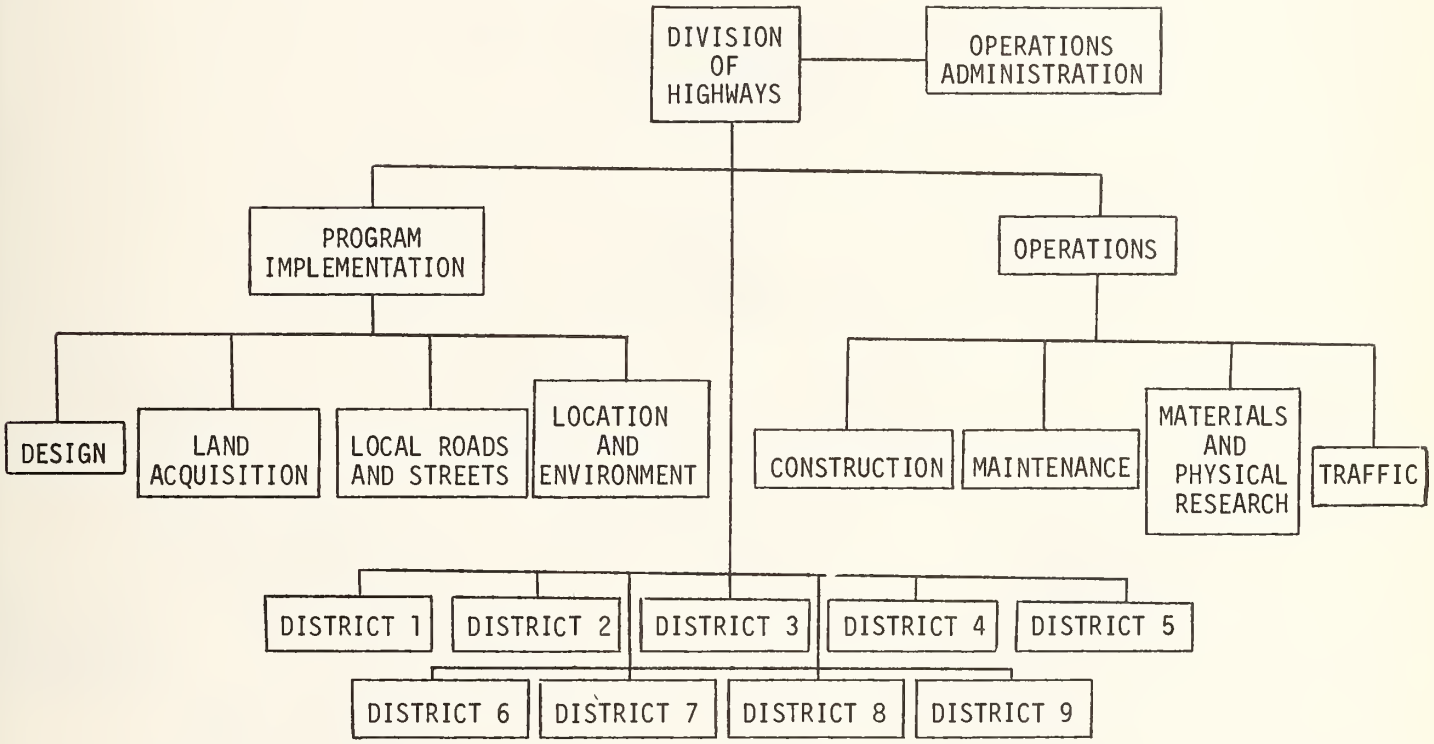


FIGURE III-9

ILLINOIS DEPARTMENT OF TRANSPORTATION

DIVISION OF HIGHWAYS

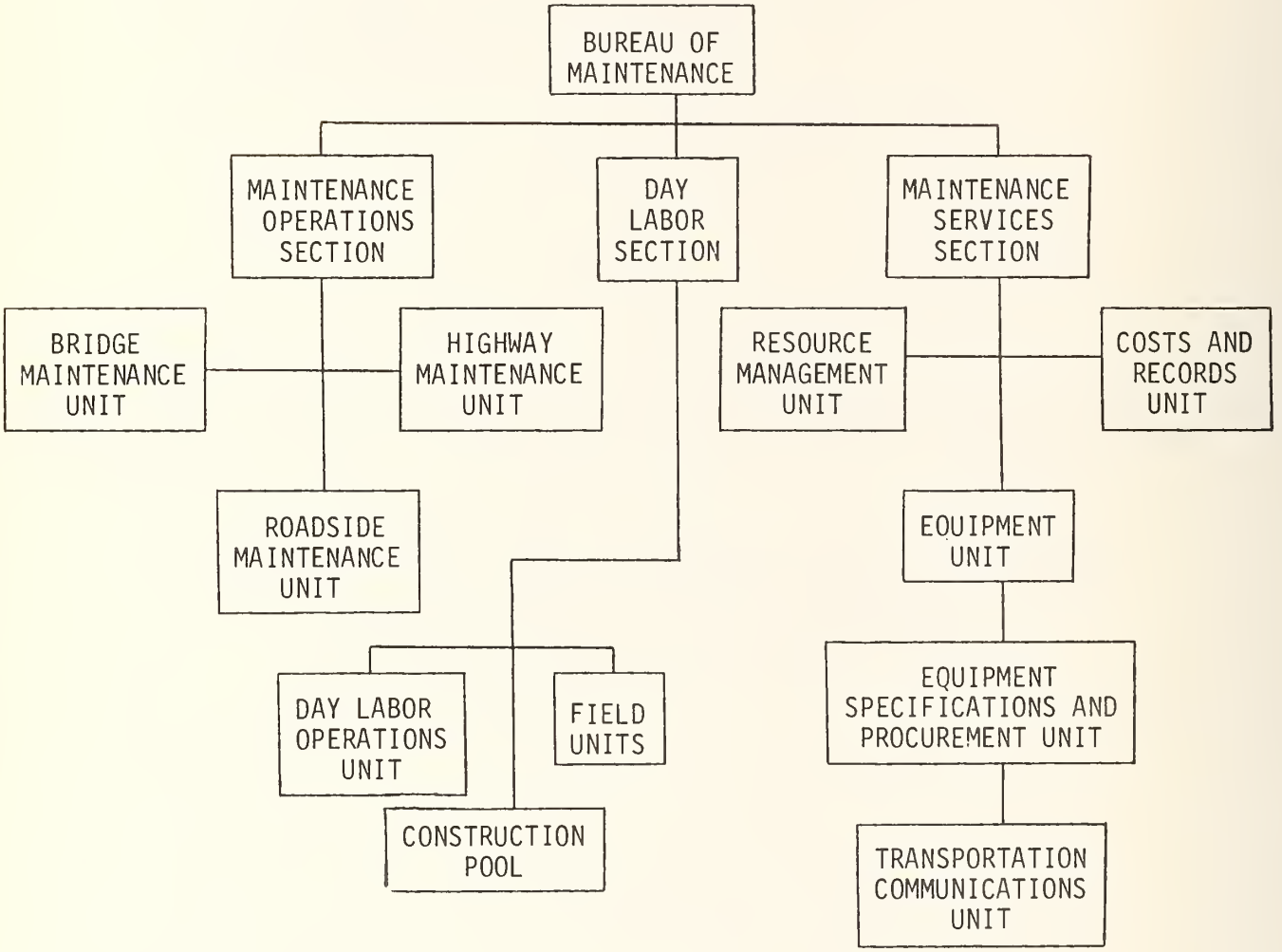


FIGURE III-10

ILLINOIS DEPARTMENT OF TRANSPORTATION

DIVISION OF HIGHWAYS

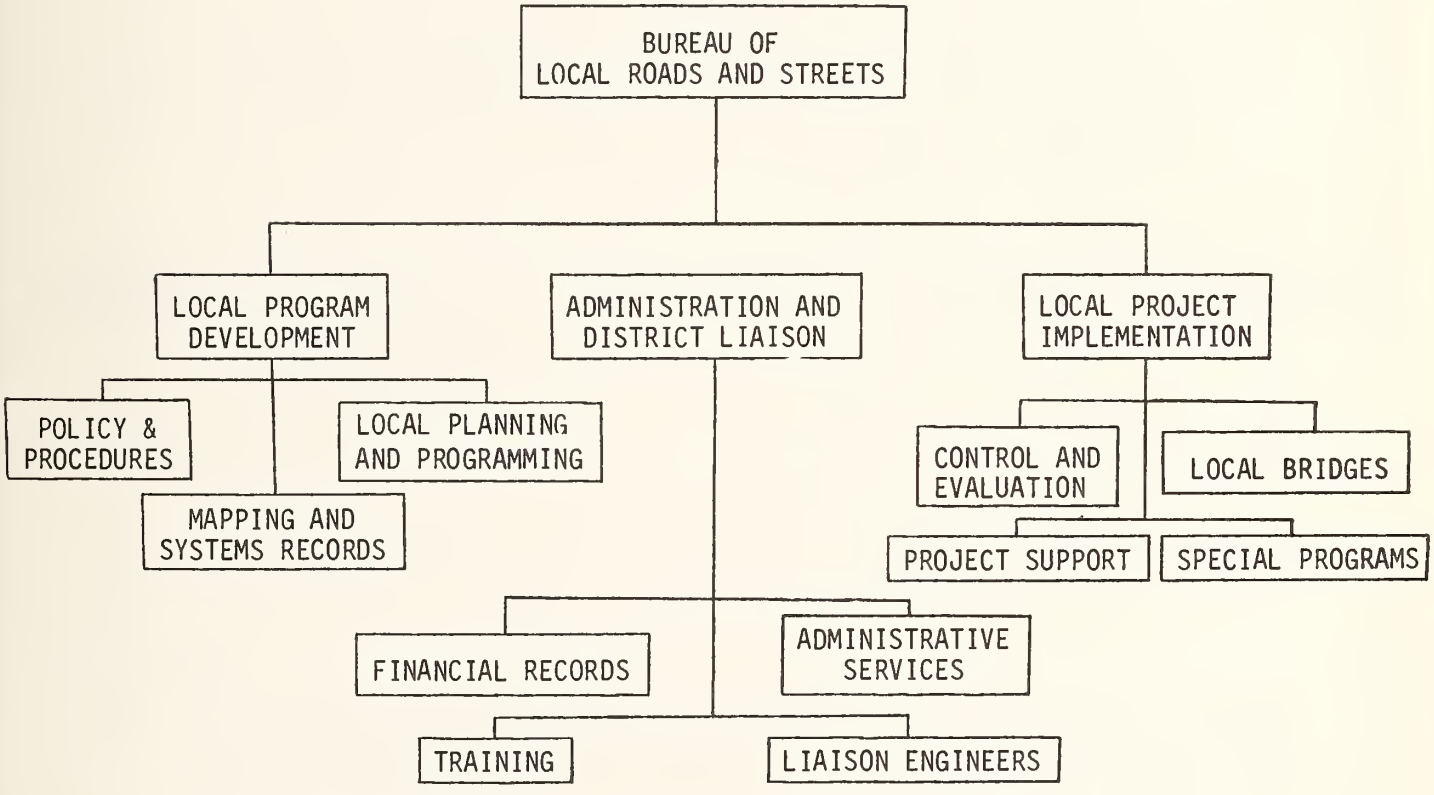
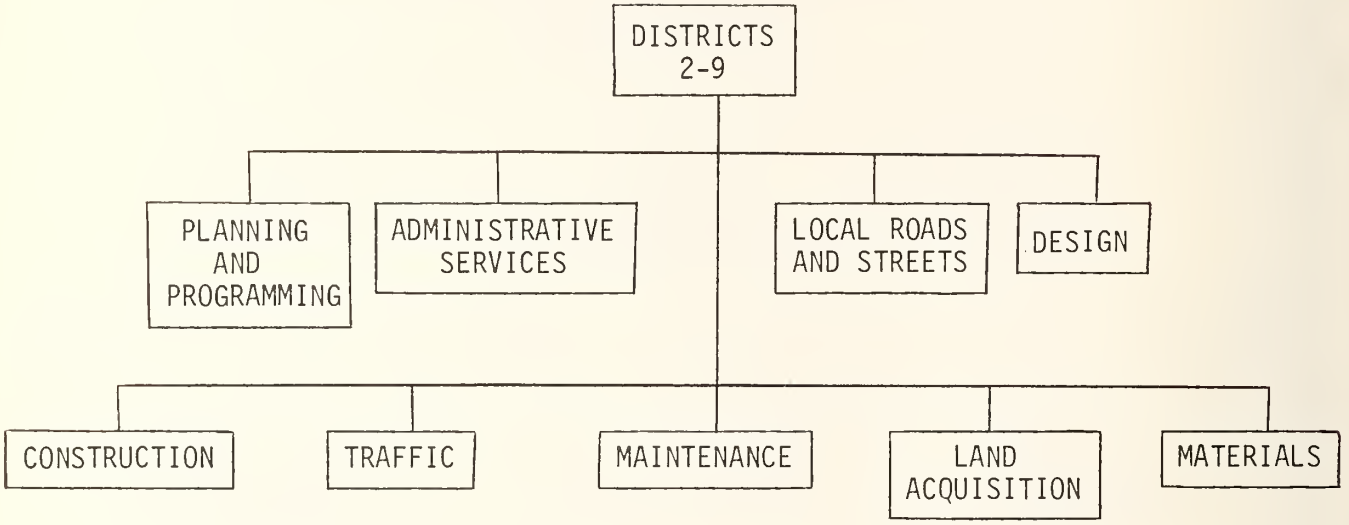


FIGURE III-11

ILLINOIS DEPARTMENT OF TRANSPORTATION

TYPICAL HIGHWAY DISTRICT ORGANIZATION



of local highways in the county. Their basic responsibilities are in the areas of road construction and repair in addition to the maintenance function are limited to designated county roads.

Some counties in the state are further divided into units called Road District or Township. These road districts are governed by either a township organization or they exist without an organization in which case the County Board acts as the legal agent in matters relating to road maintenance. (See Appendix B). A third system of township roads is designated for administration by these sub-county units.

In the state of Illinois, at the county level of government, the County Board must submit a list of five names of residents of the county to the Department of Transportation for the position of County Superintendent of Highways. Each person must hold a currently valid certificate of registration as a professional engineer or a valid certificate of registration as a land surveyor. Other qualifications desired are as follows:

a) A baccalaureate degree in engineering with two (2) years of experience in civil and highway engineering in the construction and maintenance of streets or highways.

and/or

b) 10 years practical experience in the above areas, two which must be in administrative experience.

Each candidate meeting either of the above qualifications is given an examination, and the qualifying candidates are

recommended to the County Board for appointment by the Department of Transportation. Preference for the position is given to residents of the county.

The term of office of the superintendent is six years and is reappointable. The tasks of the County Superintendent are as follows:

- Supervise construction or maintenance of all county highway within the county.
- Advise commissioners of the road districts as to the best methods of construction, repair, or maintenance of townships and district roads.
- Prepare maps, plans, specifications and estimates of costs to be expended on all highway matters.
- Act as county agent in matters relating to construction and maintenance involving county funds.

The county board also has been given the power by the State Transportation Department to enter into service agreements with any municipal corporation within the county limits. The service agreements can cover any county highway or section for the purpose of maintenance within the municipal corporation. All activities related to the maintenance of highways under such an agreement fall within the jurisdiction of the County Superintendent of Highways. We have attached service agreements from the City of Sterling located in district two and the other from the City of Alton located in district eight. The agreements entitled "Agreements for Maintenance of Municipal Streets" describes in detail all of the streets contracted for and the various services that the City will perform on behalf of the state. (See Appendix B).

South Carolina (Georgetown and Spartanburg Counties)

Highway Maintenance responsibilities in the state are shared by the state, which maintains the state system and the county which assumes the maintenance responsibilities for county roads not under the jurisdiction of the state. The State Highway Commission through its several statewide district engineers maintains both county and state system highways not administered by a municipality or a county maintenance supervisor. (See Figure III-12 and 13 for both state and districts organizations). There are sixteen elected highway commissioners which constitute the state highway commission who determines all highway related policies throughout the state. The commission districts and the engineering districts do not have common boundaries. The latter district has six sub-divisions, while the former has sixteen sub-divisions as shown in the table cited above.

The state can assume the maintenance responsibility for county roads only after facilities qualify under the state standards for paved roads. In brief, the road must be paved to standards and connect with an existing state highway system on at least one end. Planned unit developments also must meet the same state standards before maintenance work is assumed by the division.

Each state maintenance district receives an allotment of funds with which to support its maintenance operations. State law requires, however, that no district can exceed its annual allotment, but districts can trade off over-runs with districts with surpluses for that fiscal period.

FIGURE III-12

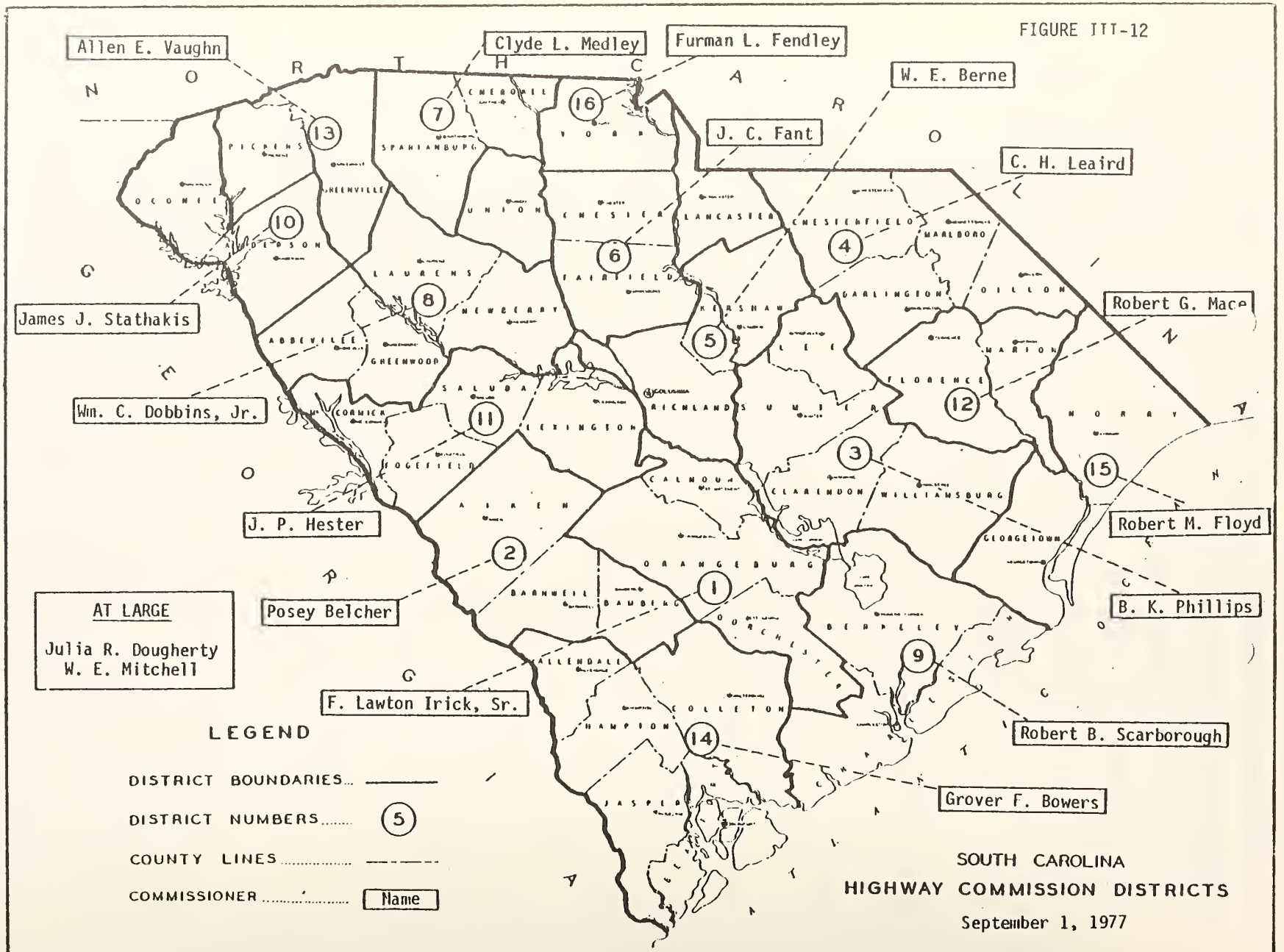
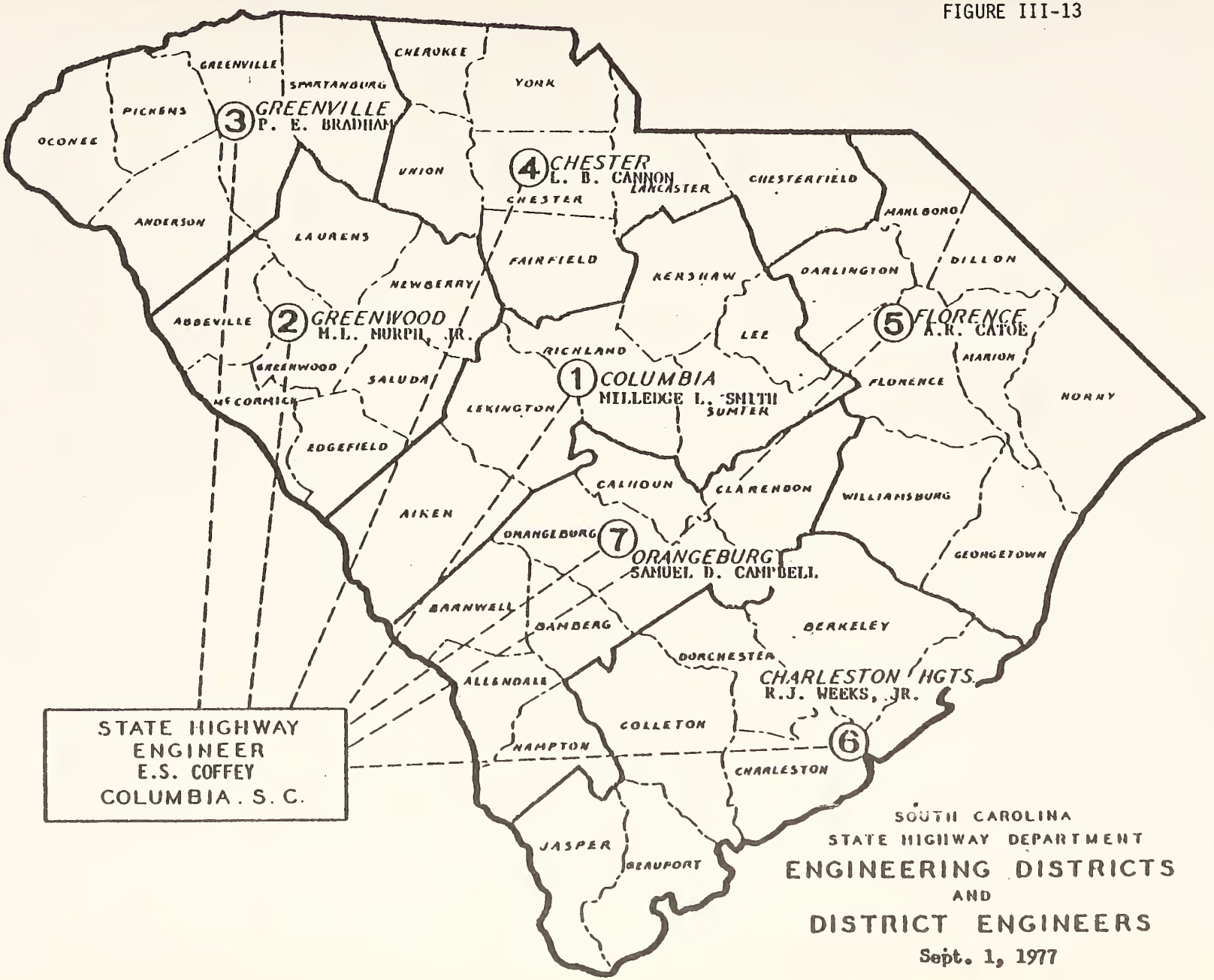


FIGURE III-13



The maintenance districts have nearly 60 pieces of equipment, used exclusively for maintenance operations. There is some intergovernmental coordination of maintenance activities between both the county and some municipalities within the county. Such activities, although mutual, are limited in scope.

The two selected counties, Georgetown and Spartanburg, were examined on the basis of their geographic location and general characteristics. Georgetown County for purposes of maintenance is divided into four (4) Maintenance Management Districts under the jurisdictions of a four member elected County Board. The County of Spartanburg, however, elects one Supervisor countywide who is responsible for maintenance of the county road system.

Georgetown County was selected as a case study because of its location near a major water body and its lowland elevation, as opposed to its sister county in the western part of the state. The state maintenance division for the County of Georgetown is responsible for some 600 miles (965 km) for rural roads. This includes the interstate system, primary system, secondary system and the county system as well. With a district maintenance management operations within the county is somewhat limited.

On the other hand, the state maintained system in the County of Spartanburg is limited to U.S. 221, S.C. 417 and S. 42. All maintenance activities on these routes are assumed

by the state. The fiscal budget is estimated at about 1.5 million dollars, with a total county staff of 106 persons. The state operates approximately 65 pieces of equipment for Spartanburg County alone. Although there are no formal written agreements, the state district does place its resources at the county's and city's disposal during times of emergencies.

REGIONAL COOPERATION-RURAL (Pennsylvania)

Informal conversations were held at the Pennsylvania Association of Councils of Government Annual Conference in Gettysburg on September 16 with selected members of the state and local governments on the nature of Pennsylvania's COGs and their possible role in highway maintenance.

Councils of Government in this state differ from the more common function in that they are almost entirely non-metropolitan, small city or rural in character. Pennsylvania is notable for its very large number of municpalities (2,566, which includes 52 cities, 963 boroughs, and 1,551 townships) and a weak system of county governments. Thus, many basic services which would otherwise be provided by the county, are provided instead at the muncipal level.

For our purposes, this means that there is almost no county road administration. Most local roads outside of the state system (42,645 miles) (68615 km) are township, or city- maintained. There are 639.3 (1029.6 km) miles maintained by counties, of which more than half is in Allegheny County. The large number of separate township road systems, averaging less than 30 miles (48.3 km) each, is of some interest. For the past ten years a proposal to turnback 12,000 miles (19308 km) of low-volume state roads to the townships and muncipalities has been under consideration, but has not had any real legislative support. This proposal however has been given recent impetus as one of the possible solutions to Penn DOT's fiscal problems. This proposed "turnback" would increase

the average number of miles of road per township to close to 40 miles, (64.4 km) which is still below the acceptable size of a rural road system to achieve economies of scale, which some authorities have estimated to be around 500 miles (805 km), a mileage more typical of a county system.* Because of the inefficiencies experienced by these jurisdications (townships, boroughs, smaller cities) trying to maintain a road system of limited mileage, some efforts have begun recently to jointly provide certain road maintenance services. Seven of the 43 councils of government currently organized in the state now are providing some kind of maintenance service to the muncipalities on some kind of joint basis. Of the 7 COG's providing joint services, the most common is the making of traffic signs (with signal maintenance, pavement marking, snow removal and equipment management also included).**

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* See Burchm Phillip H. Highway Revenue and Expenditure Policy, P. 87

** Sources:

Pennsylvania, Commonwealth of 1977 Pennsylvania Statistical Abtract, Bureau of Statistics, Research and Planning Commonwealth of Pennsylvania, Department of Commerce.

Interim index of Pennsylvania Councils of Government mimeographed August 1978, Pennsylvania Department of Community Affairs, 23 pp.

Automotive Safety Foundation, Arterial Transportation Systems for Pennsylvania, Washington, 1965.

Larson, Thomas and Rao, Sprikanth. Rationalizing the State Highway System: A Study of Transfering Some Roads to Local Governments, Pennsylvania State University, 1977.

D. CONCLUSIONS AND RECOMMENDATIONS

The information obtained from the national survey of practices, local case studies and other sources has provided sufficient information to enable several conclusions to be drawn on this research effort. They have been organized with emphasis in two major areas (rural and urban) and subdivided into specific subject areas.

Rural Area Road Maintenance Alternatives

1. The organizational structure of rural road system administration can be classified into four basic approaches, three of which are in practice today.
   a. Unified State System--evaluated in the North Carolina where the state maintains all local roads, with no separate county systems. Within incorporated towns and small municipalities maintenance is accomplished by the localities, but some exchange of functions were achieved through inter local agreements.
   b. Independent County System -- evaluated in South Carolina, Illinois and Alabama designates a county level system of local roads to be administered entirely by the county. State primary systems are always retained by the state for administration, and state secondary systems sometimes retained. A sub-alternative to this approach is represented by the Pennsylvania case study, where the township government is used in lieu of counties. Illinois was the

only state examined which uses all three governments for classifying and administering roads.

c. County Contracting System -- was identified in only one state, Wisconsin, which permits counties to assume the function of maintenance by contracts with the state on all roads within its political boundaries. In Michigan, 62 of the 83 counties have implemented this option. Again the primary state system remains under state jurisdiction. The contracting procedure also retains responsibility for meeting objectives with the state.

d. State Contracting System--although not identified in actual practice, case study analysis indicated California counties were interested in contracting with the DOT to do maintenance on their facilities. Legislation, required to permit such contracting by the state, is now being reviewed for possible implementation.

Table III-1 summarizes the four alternatives and several variations not fully examined by the selected case studies.

2. Small municipalities, within rural counties, have assumed both responsibility and maintenance functions for city streets. Within two of the four states examined for rural issues, some contracting (i.e., service agreements) with the state occurs, for performance of general or specific

TABLE III-1

INTERGOVERNMENTAL RESPONSIBILITY VERSUS MAINTENANCE AGENCY
RURAL AREA CONCEPTS

Responsibility (Highway Classification)	Maintained by State	County	Township
State			
Primary	a,b,c,d		
Secondary	a,(b),d	d	#
County	d	b,c	
Township		(X)	X

Key: Letters a,b,c, and d refer to approaches described in paragraphs above. "X" indicates that this arrangement of road responsibilities does exist, although not discussed in this paper. For # see the Pennsylvania "turnback" issue, discussed on page III-24. Parenthesis ( ) indicates arrangement exists, but to a limited extent.

maintenance tasks on state facilities within the jurisdiction.

3. States with strong town/township government exhibit a clear pattern on the allocation of local rural roads between counties and the towns. Among the case study states, Pennsylvania is 100% town, Illinois 80% town. Clearly, these states are more highly developed within their 'defined' rural areas than are southern state rural areas, where township government does not exist.
4. Two case studies, Alabama and Pennsylvania were examined where serious consideration is being made to revise existing maintenance responsibility arrangements. The rural areas were those involved in a "turn-back" to localities (towns in Pennsylvania and one county in Alabama) from existing state responsibility.
5. The cooperative government concept in rural areas was identified in Pennsylvania as accomplishing some functions that are related to maintenance.
6. Highway maintenance officials in the several states visited expressed interest in developing service contracting (agreement) arrangements, especially within municipalities.

Rural Regional Cooperation

The large number of very small units of government, in combination with a weak county government, makes Pennsylvania a very untypical case. For this state it appears that there may be some opportunity for increased cooperative provisions of services, and if so the Council of Government mechanism is an appropriate vehicle. Pennsylvania COGs are a growing institution, all but two of the current 43 having been established in the past eight years, and thereby may be a solution to finding more economical provision of road maintenance services in politically fragmented rural areas. This may especially become more significant if the proposed "turnback" of 12,000 miles (19,308 km) of low-volume state roads to the townships becomes a reality.

However, the relevance to other states' rural roads services is not clear. Even in rural areas in other states where counties are active in road maintenance, there may be occasions for improved alternative organization in the providing of maintenance services. Through the Appalachian Regional Commission several cases were found where regional groupings of counties, through so-called "Local Development Districts", served as the unit for provision of some road maintenance services. Although large in area, these counties were too small in population and fiscal base to support some desired maintenance services alone, and joint-provision was necessary.

The four approaches to state-county relations, noted earlier is also of relevance here. In the case of California,

a number of sparsely populated counties found that providing road maintenance services was putting a strain on their financial resources. Instead of pooling resources in parallel, as in the two examples above, these counties appealed to the state Department of Transportation to contract for maintenance services.

From each of these three cases it can only be concluded that finding the appropriate organizational structure for providing maintenance services in any situation depends very much on the circumstances: that there is no single answer for every state's maintenance problems.

IV. METROPOLITAN CASE STUDIES

In contrast to the state-wide issues discussed in Section III, this section discusses some alternative approaches to organizing road maintenance responsibilities on a regional basis, with special emphasis on metropolitan urban regions. This issue is of particular importance in that the 1974 Highway Maintenance Research Needs workshop did emphasize urban regional cooperation and indeed seven of the nine suggested case study sites were of metropolitan areas. A clearly-stated goal was to determine alternative means for structuring highway maintenance responsibilities, particularly in urban areas, which might effect savings in: personnel costs and maintenance facilities and equipment needs - while possibly bringing an increased level of service, and hopefully finding ways to effectively meet emergency maintenance needs.

This section is intended to answer the question of whether this goal is attainable, and if so under what circumstances.

A. STANDARD APPROACH--TYPICAL METROPOLITAN REGION

The pattern found in most major metropolitan areas, is that of many independent local governments (counties, municipalities, cities and townships) maintaining their own road systems with little opportunity for cooperation or responsibility to each other in matters of road maintenance. Superimposed on these local systems is another independent system of state maintained highways running through the whole metropolitan region. No single region of this type was examined in depth as a case study. However, literature review

and discussion with numerous professionals revealed that highway maintenance is not a function normally handled on a regional basis.

Metropolitan regions now are commonly organized by federal law into Councils of Governments for purposes of regional planning and federal funding coordination. In this capacity, regional COGs play a very active role in matters of transportation planning. However, in the field of highway maintenance, COGs appear to play very little direct role.

Alternatively, special service districts have been established in many metropolitan regions to provide such services as water supply, sewerage and solid waste disposal, and public transit. These special districts often have independent taxing powers and may be linked to the metropolitan COGs. However, street maintenance did not appear to be a function commonly undertaken by these special districts, at least in the metropolitan areas.

Although final responsibility for the roads may remain with the jurisdiction (state, county, or municipality) our case studies revealed a significant amount of contracting of maintenance work between road departments in several of these metropolitan areas. Our study did not permit survey of this issue sufficiently to establish any patterns or to draw conclusions. However, from our case studies we discovered:

1. A program in North Carolina whereby eight of the largest cities have contracts with the state to undertake most or all maintenance responsibilities

for state roads (other than Interstate) inside of the city limites, and

2. In one of the suburban counties in the Minneapolis-St. Paul region, there is an extension program of maintenance agreements between a county (Hennepin) and several townships and smaller cities within the county.

An example similar to the Hennepin County (Minneapolis) contractual agreement program is Los Angeles County's Lakewood Plan. This establishes, as a formal program, a system of service agreements between metropolitan counties and the cities within them. The Lakewood Plan is described as a separate case study and model.

B. STRONG METROPOLITAN GOVERNMENT

In an attempt to discover the feasibility of the regional approach to highway maintenance responsibilities, our field work included visits to two of the strongest regional governments in the country. These were the Metropolitan Council of the Minneapolis-St. Paul area, and the Metropolitan Service District (MSD) of Portland, Oregon (the latter scheduled to begin operation next January).

Both of these have considerably stronger powers than the typical metropolitan planning organization, where functions generally are limited to regional planning and A-95 fund coordination. These two regional bodies are unique and made stronger in their administrative powers in that:

1. Representation to the governing boards is by district rather than by local governmental jurisdiction (i.e.,

they are not councils of government).*

2. They have independent taxing powers (or in the Portland case, will have this power, subject to approval by a special referendum after the establishment of the MSD next January).

Although the Minneapolis-St. Paul government is primarily a planning and fund-coordinating body, the State Legislature has given it the responsibility for administering several service programs, including a regional park system, a rental assistance and housing rehabilitation program. In the field of surface transportation, however, the Metropolitan Council's responsibilities are limited to planning and the coordination of federally-funded projects. A separate body, the Metropolitan Transit Commission, is responsible for administering the region's public transit.

Portland's Metropolitan Service District will have the authority to own and operate sewers, solid waste disposal systems and public transit facilities (after transferring from Tri-Met, the present regional transit body). Also, after approval of the necessary tax referendum by the

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* Of related interest is an indication that these regional governments represent people rather than local governments, is the fact that Portland's 12-member district council will be elected directly by the voters - a first in the nation. Minnesota's 16-member Metropolitan Council is appointed by the state governor. However, there was an indication that some serious consideration is being given to having these become directly elected positions.

voters, MSD will be able to own and operate a waste distribution system, parks, cultural and sports facilities, and other services. However, after reviewing the law establishing the MSD it was not clear if it would have the authority to take on road maintenance responsibilities, since this was not explicitly listed as were the above services. Furthermore, from various conversations it appeared that even if it were a legal possibility, consideration of having road maintenance provided as a service through the new regional body has a very low priority.

OTHER ADMINISTRATIVE PRACTICES - LOS ANGELES COUNTY'S "LAKEWOOD PLAN"

One of the more unique systems for the provision of government services in an urban area exists in Los Angeles County. There the county has established and formalized a program for contracting of public services to the cities within the county, commonly known as the "Lakewood Plan". Each of the 80 cities, (ranging in size from under 300 population to almost 3 million in the city of Los Angeles) has the option of contracting from a full range of municipal services, of which regular street maintenance (26 cities) and traffic signal maintenance (38 cities) are but a portion of the total. In addition, agreements to contract with private companies is an option.

This program permits cities to provide a high quality of urban service without the expense of equipment purchase and maintenance, or of training specialized personnel. This is probably of special benefit to the smaller cities, where heavy investments in only partially-utilized equipment would be uneconomical. It is notable that the City of Lakewood itself (pop. 83,9000 is the largest one contracting for street maintenance--with 11 larger cities in the county ranging from Downey (pop. 88,600) to Long Beach (pop. 362,000) and Los Angeles (pop. 2,838,000)--choosing to provide all maintenance services with their own resources.

The smaller cities tend to contract for street maintenance services. This is indicated by the fact that the average contracting city had a population of 27,000, in contrast to an average of almost 80,000 for all of the cities in the county. Even after eliminating the City of Los Angeles because of its strong skewing effect, the average city in the county would still be about 44,000 (about 2/3 over the size of the average contract city). (See Table IV-1).

Additional analysis, however, might depict some significant patterns between the kinds of road maintenance services contracted for and significant characteristics of the cities (population, road mileage, tax base, etc.). Such an effort could produce useful information to help us better understand the service agreement as an operational tool and clarify what types of maintenance functions are most suitably contracted instead of being provided internally, and under what circumstances either would be the case.

Table IV-1

Cities with street maintenance agreements, Los Angeles County

City	Population (1977)
Artesia	15,200
Bradbury	900
*Carson	81,300
*Cerritos	46,900
Commerce	10,600
*Cudahy	17,000
Hawaiian Co.	9,900
Industry	700
*Irwindale	800
La Canada - Flintridge	40,500
Lakewood	83,900
Lancaster	?
La Mirada	41,200
La Puente	31,500
Lawndale	24,800
*Lomita	19,800
Palmdale	20,700
*Pico Rivera	54,200
Rancho Palos Verdes	59,900
*Rolling Hills	2,000
*Rolling Hills Estates	7,600
Rosemead	41,000
*San Dimas	18,000
South El Monte	17,300
Temple City	31,000
Walnut	9,900

* partial service agreement, others are full service

27,064 average population, contract cities;

79,396 average population of all (80) cities in Lost Angeles county.

It thus appears that the usefulness of the Lakewood Plan is limited to large urban counties having sufficient technical and administrative resources to offer such services without taxing their own resources. And it could be instituted only under appropriate conditions, such as the existance of a large number of smaller independent municipalities for which consolidation or annexation into larger, more efficient political units is not appropriate or politically possible.

D. CONCLUSIONS

For many political, administrative and economic reasons the idea of operating highway maintenance on a regional basis--either coordinating the operations of several independent local governmental road departments or establishment of a single regional road maintenance unit--does not appear to be a common practice, or one easily achieved. The original purpose of the study, as developed in the 1974 Highway Maintenance Research Needs workshop, was to identify the "opportunities to combine some forces to maintain city streets county roads and state highways and thus effect economies..." Of the examples proposed at that workshop as possible case studies, to determine where economies might be so achieved, six of the nine suggested were of metropolitan regions. Clearly, it was hoped that this might be the area where an intergovernmental approach to highway maintenance could be an effective way to achieve economies. Our findings indicate in general this is not the case.

Our field visits, which included the two of the strongest metropolitan regional governments in the country, indicated that street maintenance is not a function normally undertaken by a regional body. The only cases where consolidation of maintenance operations in a metropolitan region into a larger governmental unit occurred were the annexation by a city of surrounding unincorporated areas (several cases identified in North Carolina), and in the examples of city-county consolidation. In these two types of consolidation (annexation and city-county consolidation) reorganization of street maintenance was secondary to other political and fiscal factors. A third model exists in the single county metropolitan regions, such as Miami-Dade County or Indianapolis-Marion County, whereby certain urban functions are transferred from the municipalities to the county government for regional administration.

Indeed the whole idea of regional government as an effective means for providing services, as opposed to planning and fund-coordination, was brought into serious question by one spokesman closely identified with the Minneapolis-St. Paul experiment in regional government stating that:

> "The argument for creating a regional structure never rested on the expectation that it would reduce service costs. Rather it was advanced with the recognition that the regional agencies would undertake activities not being performed, and that costs previously absorbed by the environment or appearing as sub-optimal development would, in the future, be expressed in public budgets"*

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* Ted Kolderie, Executive Director of the Citizens League, Minneapolis in ACIR, Substate Regionalism and the Federal System: Regional Governance--Promise and Performance, Vol.II Case Studies, Washington, 1973, pp. 131.

In other words, the role of regional councils as direct providers of services is limited to:

1. subsidized provision of socially desired services which might not otherwise be produced if the local governments were responsible alone and independently, and

2. absorbing the social costs of externalities through the proper public mechanisms.

It would be difficult to find a situation that would justify regional governmental operation of street maintenance on the basis of either of these points.

Additional Sources:

A. Standard Approach--Typical Metropolitan Region

Advisory Commission on Intergovernmental Relations Substate Regionalism and the Federal System: Vol. I "Regional Decision Making: New Strategies for Substate Districts", Washington, 1973.

B. Strong Metropolitan Government

Minneapolis-St. Paul

Kolderie, Ted
"Governance in the Twin Cities Area of Minnesota", Chapter 4 in Volume II of Substate Regionalism and the Federal System. Advisory Commission on Intergovernmental Relations, Washington, 1973.

Metropolitan Council of the Twin Cities Area
Metropolitan Council 1977 Annual Report to the Minnesota State Legislature. St. Paul, 1978.

_____
"Legislation: Metropolitan Council of the Twin Cities Area" mimeographed compendium of laws passed by the Minnesota Legislature regarding the Metropolitan Council during the period 1967-76, St. Paul, 1977.

Portland, Oregon

Oregon Legislature - 1977 regular session
"House Bill 2070: Relating to metropolitan service districts".

Oregonian
selected newspaper articles from the (Portland) Oregonian during the week May 20-26, 1978 (May 23 was the date of the CRAG-MSD referendum).

V. CONCLUSIONS AND RECOMMENDATIONS

The original intent of this study, as approved at the 1974 Highway Maintenance Research Needs Workshop, was directed towards the studying of basic organizational alternatives--an effort which it was hoped might lead towards more efficient maintenance administration and operations. It was noted that:

> "Street and highway systems in a given area use three political organizations: state, county, and city. Some activity is presently taking place towards the merger of city and county governments in the hope of effecting some savings for the taxpayers of the political subdivisions involved. There may be an opportunity to combine some forces to maintain city streets, county roads, state highways, and thus effect economies..."

This intent was formalized in the Statement of Work for this study, which stated as its objective the provision of:

> "...a documented set of alternative organizational structures for conducting the street and highway maintenance function within defined geographic and political areas."

Its scope included the making of "...a survey to determine the practices and intergovernmental relationships being utilized..." as well as "...a report documenting the significant characteristics of the different systems, techniques or practices."

The results of this study have revealed that attempts in recent decades to reorganize and consolidate urban government regionally, which includes organizing the provision of public service of which road maintenance is but one, has generally met with mixed results. For example, of the twenty attempts to effect city-county consolidation between 1962 and 1974 discussed by ACIR,

only seven met with voter approval through the necessary referendums. 1/ In the case of two efforts to establish by superimposing from an above regional government over the existing local governments, the subject of two of our case studies, while in these cases the provision of a number of public services has been undertaken on a regional basis, street maintenance was not one of these.

In the general area of surface transportation, however, it is to be noted that public transit--bus or rail--is most generally provided by a single regional public or semi-public body. This can be explained for a number of political and administrative reasons. Street maintenance, however, does not seem to operate under the same rules. Surrender of responsibility for street maintenance by one jurisdiction to another, even under circumstances which might lead to a more efficient operation, is not normally a popular action.

However, in townships dominated rurally and in politically fragmented urban regions, there are many instances where roads are being maintained by political entities which are too small to adequately support a full modern maintenance operation. In such cases the most appropriate administrative alternative, as well as the most feasible politically, is to encourage contracting of

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1/ Advisory Committee on Intergovernmental Relations The Challenge of Local Governmental Reorganization, vol. III of the series on Substate Regionalism and the Federal System, Washington 1974, p. 91. See also Bollens and Schmandt, pp. 250-7.

maintenance services out to another road department which is better equipped to meet the maintenance needs of the smaller jurisdiction. The fact that there is no permanent transfer of responsibility makes this approach more politically feasible.

However, there does exist lack of knowledge among the smaller jurisdiction road departments, about the nature and full potential of service agreements as an operational tool. This need for further study of this concept is further discussed in the recommendations section of this report immediately following.

Recommendations

That future research resources be directed towards understanding the concept and application of service agreements between different roads departments.

The potential exists through expanded and more judicious use of the maintenance agreement for expanding the capabilities of highway departments' maintenance programs at little additional cost, or on the other hand continuing existing levels of service at a lower rate of expenditure.

More specifically, service agreements can serve to:

- permit many smaller roads departments to provide better maintenance services without the necessity of purchasing expensive, but little used equipment, or developing extensive programs which might overextend their limited financial resources; and,

- permit larger road departments to better utilize unused equipment and programs during periods of unavoidable idleness, by making them available to other road departments for which they can be expected to receive appropriate financial reimbursement.

The first step of this research would be to more fully review the current practice of this management tool. It is suggested that a national inventory to identify the use of service agreements in highway maintenance be undertaken, with the help of current statistical sampling techniques. As a starting point we would suggest reviewing and using as a guide the 1973 national inventory of service agreement usage in all municipal services, undertaken by the Advisory Commission for

Intergovernmental Relations and the International City Management Association.

This proposed inventory would identify as variables the types of agreements and the occasions of their occurance (levels of government involved, miles of road maintained by agency, equipment and manpower capabilities; and the type of maintenance services contracted for, the amount and manner of payment, short-term emergency vs. continuing long-term contracts, etc.).

A second stage of this research would attempt: 1) an evaluation of under what circumstances the contracting out of maintenance services is most likely to be an effective and cost-saving measure; and if possible, 2) quantify the cost-savings that can be achieved in each of these circumstances.

While the national inventory would reveal useful information of general interest to the highway maintenance profession, the second level of research is intended to develop this information into a form for use by the maintenance engineer as decision-maker. This stage of research would answer such questions as: When is a maintenance function most suitably contracted out, and What exactly are the benefits likely to occur.

APPENDIX A

GLOSSARY OF TERMS

1. State Highway Organizations and Their Responsibility

Maintenance District - a defined geographical unit which has direct responsibility for a state highway system's maintenance with its boundaries. Established by administrative procedure, they are usually sub-units with construction districts/divisions.

Highway Division - a sub-state administrative unit of the state highway organization. Smaller states will organize direct responsibility for construction/maintenance within these areas, others generally utilize districts as second level structure.

Commissions - a group of appointed or elected officials organized to oversee highway activities within the state. Similar units are organized at county and city levels in some states. Members are almost always unassociated with the highway profession and are citizen volunteers. They usually represent the highway division in which they reside with additional at-large members being represented.

County Engineer - an official appointed to professionally supervise maintenance (and sometimes construction) activities within these defined political units. He usually reports to the District Maintenance Engineer. Some states use the term "resident engineer" for this position.

2. Local Governmental Structure

County Unit System - a form of county government which uses an "at-large" approach to services and in most cases the election of supervisors to the county board.

An alternative "County District System" uses some form of election districts (i.e. defined geographical sub-units) to administer county services. The names and terminology used by the several states may vary, but this report will use these terms in discussing alternatives.

Townships - a third alternative to sub-dividing a county, used primarily in the Midwest and New England. Towns are usually formed to incorporate small communities within a county, but unincorporated areas will remain in the county. Most townships and some towns are chartered by counties in accordance with general law of the state.

Municipality - a term used to define an incorporated town or city which has usually been chartered directly by the state with home rule powers to perform most community services. Since terms and legal definitions vary from state to state, this term is very confusing unless clarified.

Metropolitan - used to classify either a county or city which has been included within an SMSA as defined by OMB. Metropolitan areas, therefore constitute either one or more counties (and cities) meeting the population density and commuting pattern criteria. All other areas are considered rural.

Urbanized Areas - used to define that portion of a metropolitan area which meets population density criteria established by the Bureau of Census.

Regional Government - generally used to identify a single body or coopprative Board which is composed of county and city representatives from a metropolitan area. The concept also applies to similar groups in rural areas.

3. Maintenance Defined/Management Techniques

Physical Maintenance - that portion which applies to work on the roadway, shoulders, erosion controls and structures, excluding all projects classified as "betterments".

Traffic Services - placement and replacement of painting stripe repair and routine maintenance of signal devices and other signs related to traffic control. Snow removal is classified as a traffic service, but is identified as a major item in most reports of disbursements separately.

Maintenance Activity - an element of work performed to meet a specific objective, usually classified such that a work crew is assigned this task. Work measurement units are used to describe the level of effort accomplishment.

Equipment Management Unit - a unit which is (a) part of the maintenance organization or (b) a separate division with the Highway Department under an equipment superintendant, which would "rent" the equipment to other divisions. Thirty-six states have the former.

4. Local Legislative and Fiscal Policy

Administrative System - that portion of the public highways assigned responsibility for construction and for

maintenance by either the state, county, city or local government. Several states utilize a wide variety of terms to define systems. For purposes of this report the following were utilized:

State Primary, secondary and/or county roads, are administered by the states.

County roads, are administered by the county.

Town/Township roads are administered by counties or townships

Municipal Streets - all facilities administered by municipalities.

Municipal Extensions - state roads extending into cities, administration varies.

Highway Allocation/Grants-in-aid - a system of gas tax transfers which provide funds to local units of government or state districts to perform con struction and/or maintenance. Local governments in most states can raise additional funds, if permitted by law to perform maintenance or draw upon the general fund.

B. FIELD VISITATION DATA

UNIFIED STATE SYSTEM
(State of North Carolina)

The Department of Highways and Public Transportation is the state agency authorized with the responsibility for planning, construction and maintenance of the State Highway System in North Carolina. The total number of employees statewide currently numbers 6,268 and are engaged in a diverse range of activities related to highway services. Some 3,096 employees are working on maintenance and direct labor projects.

Traffic Law Enforcement, Motor Vehicle, and the Engineering Division are the three basic divisions. The governing authority of the Department of Highways is vested in an 18-member commission which represents the state's 16 commission districts. Two members are appointed by the Governor serving in an at-large capacity and not representing a district. The day-to-day affairs of the department are conducted by three commission elected officers entitled, Chief Highway Commissioner, State Highway Engineer and Secretary-Treasurer.

Statewide maintenance programs are administered through seven highway districts each of which contains at least five counties. A district engineer supervises the construction and maintenance activities for the commission. The revenues that make up the highway dollar are derived from the following services: license fees, motor fuel tax, federal aid, and miscellaneous.

Each operating division is staffed with a professional engineer certified by the state, who has his own staff to carry out the functions of road maintenance as follows: resurfacing of roads, patching, sealing of cracks, removal of snow and ice, cutting unpaved shoulders, drainage and clean-out, maintenance of traffic services, erosion and vegetable growth controls, and roadway cleanup.

The divisional recipients of maintenance funds for secondary roads are further broken down for the purpose of fund allocation on a county basis. County secondary road allocations are determined by "the number of miles of unpaved, state-maintained secondary roads in the county, divided by the total number of miles of unpaved state-maintained secondary roads in the state. In the case of paved roads in the state, there is a uniformly applicable formula considering the number of paved and unpaved miles and other needs as reported by each district engineer in his annual report on maintenance needs.

Municipal extensions of state highways are the only facilities assigned to the district engineer for maintenance responsibility within the incorporated areas.

The "C" program, sometimes referred to as the farm-to-market program, is financed entirely with state funds from a special one cent fuel tax which is dedicated specifically to this program. Under the Act providing for this program, funds are apportioned among the counties on the basis of area, population, and road mileage, and ordinarily, commissioners respect the recommendations of the delegations in programming roads for paving under this program, although they are not legally required to do so.

Vance County

The State Highway Commission through its system of Division Engineers has the maintenance and repair responsibilities of all highway and road work outside of municipal areas where a maintenance agreement for maintenance of the state road system within a corporate area is not in existence.

The Division Engineer has the authority to enter into maintenance agreements with any corporatge municipality in his division on behalf of the State of North Carolina. Each maintenance division has its own work force and is allocated a budget based upon a priority system of needs. Manpower and equipment can be shifted among the counties within each division on a priority basis as the workload changes. This is done at the discretion of the Division Engineer.

The total road mileage that is within the State Highway System located in Vance County could be classified as follows:

Primary	Secondary	Road Within Municipalities
Paved--71 miles	Paved--281 miles	Paved--21 miles
Unpaved--0 miles	Unpaved--84 miles	Unpaved--1 mile
		1 mile = 1.61 km

The total road mileage in the county that is in the state system is 459 miles. (738.6 km)

City of Henderson

The City of Henderson, an incorporated municipality, is located in the central section of Vance County, which is situated in the north-central part of the State of North Carolina. Henderson, a City of nearly 14,000 people, is allocated $177,000 a year for road maintenance under the state Budget Appropriations Bill. The above appropriations are used in the following areas listed below:

- salaries
- purchase and repair of materials
- general street cleaning and drainage work

- maintenance of traffic services
- light roadway improvements

The Budget Appropriations Bill often referred to as the "Powell Bill" after its author is awarded to the municipality in a lump sum and has no restrictions on its allocation within the area of maintenance services. The municipality has earmarked its funds from the Powell Bill for the current fiscal year for road maintenance services in the following activity areas:

- curbs and gutters paving--19.92 miles (32.07 km)
- paving only--37.60 miles (60.54 km)
- unpaved roads--2.81 miles (4.52 km)

Actual work to be performed in the above cited maintenance areas in terms of service mileage are as follows:

- repair of curbs and gutters--11.60 miles (18.68 km)
- repaving of streets--5.71 miles (9.19 km)
- paving of dirt roads--.67 miles (1.08 km)

Maintenance and repair activities on the State Highway System within the municipality of Henderson are carried out by the municipality. A document entitled " Municipal Maintenance Agreement for Maintenance of System Streets" vest in the municipality the legal authority to undertake the above activity.

The municipality receives from the state a sum of $22,000 for the fiscal year to carry out the terms of the agreement. The following maintenance activities fall within the scope of the agreement: taffic light repair, cross-walk lane markers, cross bars, traffic stop bars, traffic dividers, spot patch paving, flushing and sweeping, and snow removal.

The city itself is limited in the number of man-hours and equipment allocation it can provide on the state system. No city maintenance work is done on the interstate system. However, the city does do work on the U.S. Route 1, a major bypass running through the eastern section of the city.

The maintenance agreement provides for payment to the city on a reimbursable basis. The reimbursable forms filled out by the city are displayed in Exhibits B-1 to B-5.

FORM MC-1 (Municipal Forces)
Revised 8-1-71

NORTH CAROLINA

Page _____ of _____

EXHIBIT B-1

STATE HIGHWAY COMMISSION

SYSTEMS STREETS

REIMBURSEMENT TO MUNICIPALITIES FOR MAINTENANCE

Pay To _____
(NAME OF MUNICIPALITY)

Address _____
(NO. AND STREET)

Date _____
For Quarter Ending _____
County _____
Total Quarterly Payment $ _____

COST DISTRIBUTION

(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)
NAME OF STREET OR HIGHWAY RT.	CITY'S ACCOUNT NO. OR PROJECT NO.	LABOR	PAYROLL ADDITIVES COL.(C)X(%)	MATERIALS	SUBTOTALS COLS.(C)+(D)+(E)	ADMINISTRATIVE CHARGE COL.(F)X(10%)	EQUIPMENT RENTALS	TOTAL COLS.(F)+

WE CERTIFY THAT THESE COSTS ARE CORRECT AND REQUEST THAT REIMBURSEMENT BE MADE OUT OF THE APPROPRIATION FOR MAINTENANCE IN CITIES AND TOWNS.

HIGHWAY COMMISSION APPROVAL:

_____
DISTRICT ENGINEER

MUNICIPALITY APPROVAL:

_____
FINANCE OFFICER

EXHIBIT B-2

PAGE _____ OF _____

MUNICIPAL FUND CHARGES

TRAFFIC CONTROL DEVICES - MARKINGS

PERIOD BEGINNING _____ 19___ THROUGH _____ 19___

NAME OF CITY OR TOWN _____; COUNTY _____; CODE NO. _____

DATE	ROUTE NO.	LOCATION		TYPE OF MARKING	UNIT OF MEASURE	NO. OF UNITS	UNIT COST	TOTAL AMOUNT
		FROM	TO					
						TOTAL		

CERTIFIED BY: _____

NAME & TITLE

EXHIBIT B-3

PAGE _____ OF _____

MUNICIPAL FUND CHARGES

TRAFFIC CONTROL DEVICES - SIGNALS

PERIOD BEGINNING _____ 19___ THROUGH _____ 19___

NAME OF CITY OR TOWN _____; COUNTY _____; CODE NO. _____

ROUTE NO.	INTERSECTION		NO. OF SIGNAL HEADS	UNIT COST PER HEAD PER YEAR	TIME FACTOR	SUB-TOTAL COST	TYPE OF CONTROL EQUIPMENT	UNIT COST PER YEAR	TIME FACTOR	SUB-TOTAL COST	TOTAL AMOUNT
	OF	AND									
							TOTAL				

CERTIFIED BY: _____

NAME & TITLE

EXHIBIT B-4

PAGE _____ OF _____

MUNICIPAL FUND CHARGES

TRAFFIC CONTROL DEVICES - COST OF ELECTRICAL POWER

NAME OF POWER COMPANY - _____

PERIOD BEGINNING _____ 19___ THROUGH _____ 19___

NAME OF CITY OR TOWN _____; COUNTY _____; CODE NO. _____

DIVISION OF HIGHWAYS SIGNAL NO.	ROUTE NO.	INTERSECTION		MONTHS			REMARKS
		OF	AND				
			TOTALS				

*QUARTERLY TOTAL $ _____

CERTIFIED BY: _____
NAME & TITLE

*COST OF ELECTRICAL POWER TO OPERATE EQUIPMENT

-10-

8-28-73

MUNICIPAL FUND CHARGES

TRAFFIC CONTROL DEVICES - SUMMARY

NAME OF CITY OR TOWN _____; COUNTY _____; CODE NO. _____

SIGNS: FROM FORM TE 73-25-1	$	
MARKINGS: FROM FORM TE 73-25-2		
SIGNALS: FROM FORM TE 73-25-3		
ELECTRICAL POWER: FROM FORM TE 73-25-4		
TOTAL		

CERTIFIED BY: _____
NAME & TITLE
CITY OR TOWN OFFICAL

FOR DEPARTMENT OF TRANSPORTATION USE ONLY

WORK CERTIFIED BY: _____ AUTHORIZED BY: _____
TRAFFIC SERVICES SUPERVISOR DIVISION ENGINEER

_____ _____
DATE DATE

The Public Works Department, which is responsible for maintenance operations throughout the municipality, has a fulltime staff of 55 employees of which 16 are employed directly as street work crews. The organizational chart, Exhibit B-6, displays the actual number and activities in which the employees are engaged.

In order to carry out this maintenance function the City of Henderson has the following equipment:

Equipment	Activity
Three Motor Graders	Road Grading
Two Trucks	Hauling
Two Tractors with Attachments	Dirt Moving
Two Front-end Loaders	Scarifying and Shaping Snow Removal, Back Filling

Buncombe County

As part of the same state system Buncombe County is not unlike Vance County in its organizational structure.

The number of state system miles within the County of Buncombe can be broken down into the following road classifications:

Secondary	Road Within Municipalities	Primary
paved--584 miles	Paved--86 miles	Paved--171 miles
Unpaved--360 miles	Unpaved--2 miles	Unpaved--11 miles
		1 mile = 1.61 km

The total number of state highway roads within Buncombe County of all classifications are 1,216 miles. (1957 km)

City of Asheville

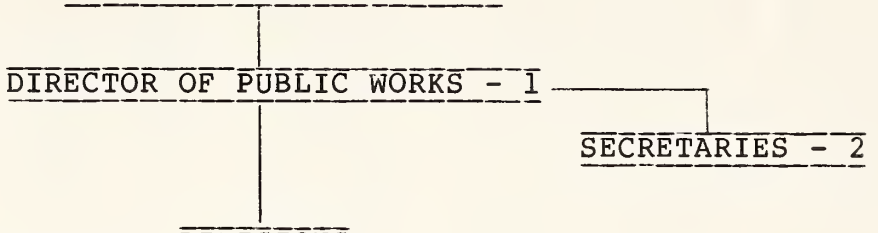
The City of Asheville is located in Buncombe County which is situated in the extreme western section of the State of North Carolina. The population of Asheville is approximately 57,681 persons. The maintenance activities of this municipality are divided between two city divisions. The Traffic Engineering Division has the responsibility of preparing traffic control plans within the corporate limits. In addition,

EXHIBIT B-6

PUBLIC WORKS DEPARTMENT

ORGANIZATIONAL

CHART



STREET		GARAGE		CEMETARY		SANITATION	
SUPERINTENDENT	1	SUPERINTENDENT	1	SUPERINTENDENT	1	SUPERINTENDENT	1
HEAVY EQUIP. OPR.	3	STOCK CLERK	1	SKILLED LABORERS	1	TRUCK DRIVERS	6
LT. EQUIP. OPR.	4	MECHANICS	3	UNSKILLED LABORERS	2	SKILLED LABORERS	4
TRUCK DRIVERS	4	SKILLED LABORERS	2	TOTAL	4	UNSKILLED LABORERS	15
SKILLED LABORERS	4	TOTAL	7			TOTAL	26
TOTAL	16						

55--FULL TIME - 1 - PART TIME

it must maintain all traffic control devices and coordinate these activities with the state where they will affect the state system within the municipality. The Street Division is responsible for the following maintenance functions: street and sidewalks, street marker name signs, mowing and cleaning, snow removal, and light paving. The total requested funding for operation of the two divisions for the fiscal year 1977-78 is approximately $1.4 million. The staff of both divisions consist of 70 employees.

The municipality has entered into a recent agreement which would bring some portion of the state system under its maintenance operations. On November 28, 1977, Resolution No. 78-8 was introduced and passed by the Asheville City Council to enter into an agreement with the State of North Carolina, County of Buncombe's Board of Transportation. This agreement entitled "Municipal Agreement on Street and Highway System Responsibilities: became active on April 21, 1978. (See Exhibit B-7). Following are the basic areas of the system's responsibilities:

- that the state shall be responsible for the maintenance, repair, improvement, widening, construction and reconstruction of portions of all streets and highways designated as follows: SR1319, SR1318, SR1345, SR1348, SR2032, SR3412, US 74, and parts of Merrimon Avenue and Brevard Road; and

- that the city shall be responsible for the maintenance, construction, reconstruction, and right-of-way acquisition of all streets inside the corporate limits of the city not designated as a board responsibility. Portions of the system listed that fall within the city's domain include: SR3083, SR1348, US74 and parts of Merrimon Avenue.

This contract is a direct result of the adoption of the Asheville Thoroughfare Plan by the city and the State Department of Transportation. The agreement defines the areas of responsibilities for both existing and proposed systems and outlines those systems falling under municipal authority and those falling under state authority.

Additionally, the city maintains (and owns) the following: 6-frontend loaders, 4-pneumatic rollers, 3-rotary sweepers, 3-air compressors, 28-dump trucks (multi-use), 2-passenger cars, 1-bull dozer (tractor attachments), 2-scrapers (drawn), 1-paver (Bituminous), 1-crane (crawler), 2-backhoes, 4-flashers, 2-loaders (scoop and crawler), 3-bushhoggers, and 1-loader (chain bucket).

EXHIBIT B-7

RESOLUTION NO. 78-8

RESOLUTION AUTHORIZING THE MAYOR TO EXECUTE AN AGREEMENT FOR STREET AND HIGHWAY SYSTEM RESPONSIBILITIES BETWEEN THE CITY OF ASHEVILLE AND THE NORTH CAROLINA BOARD OF TRANSPORTATION

WHEREAS, the City of Asheville with the cooperation of the Board of Transportation has developed a plan known as the Asheville Thoroughfare Plan for a street system that will serve present and anticipated volumes of vehicular traffic in and around the City;

WHEREAS, the City of Asheville and the Board of Transportation have previously adopted the Asheville Thoroughfare Plan as the basis for future street and highway improvements in and around the City of Asheville; and

WHEREAS, the respective responsibilities of the Board of Transportation and municipalities for streets and highways inside the municipal corporate limits are set forth in General Statutes 136-66.1: and

WHEREAS, the City and the Board of Transportation are directed by General Statutes 136-66.2 to reach an agreement as to which of the existing and proposed streets and highways included in the comprehensive street plan will be a part of the State Highway System and which streets will be a part of the City Street System.

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF ASHEVILLE:

That the Mayor is authorized to execute an agreement between the City of Asheville and the Board of Transportation known as MUNICIPAL AGREEMENT ON STREET AND HIGHWAY SYSTEM RESPONSIBILITIES DATED 11-28-77.

BE IT FURTHER RESOLVED:

That upon completion of the Tunnel Connector by the Board of Transportation the City of Asheville reserves the right to request that an evaluation be made as to the amount of local and through traffic on U.S. 74 between Swannanoa River Road and Tunnel Road and based upon this evaluation, the Board of Transportation and the City shall mutually decide as to whether U.S. 74 between Tunnel Road and Swannanoa River Road should remain a local or state responsibility.

I move the adoption of the foregoing resolution.

_____
COUNCILPERSON

SECONDED BY: _____
COUNCILPERSON

EXHIBIT B-7 continued

CERTIFICATE

I, WILLIAM F. WOLCOTT, JR., City Clerk of the City of Asheville do herey certify that the foregoing is a true and accurate copy of Resolution No. 78-8, which was passed by the Council of the City of Asheville at its regular meeting held on the 26th day of January, 1978, to become effective the 26th day of January, 1978, and that said Resolution No. 78-8 has been duly recorded in Resolution Book No. 10 at page 136.

_____

City Clerk

STATE OF NORTH CAROLINA
COUNTY OF BUNCOMBE

I, Margaret S. Messer, a Notary Public of the aforesaid County and State, do hereby acknowledge that William F. Wolcott, Jr., City Clerk, personally appeared before me this day and acknowledged the due execution by him of the foregoing certificate.

WITNESS my hand and Notarial seal, this 6th day of March, 1978.

_____

Notary Public

My Commission Expires:

February 27, 1982

EXHIBIT B-7 continued

Resolution No. 78-8

Page 2

Read, approved and adopted this 26th day of January, 1978.

_____

MAYOR

_____

CITY CLERK

APPROVED AS TO FORM:

_____

CORPORATION COUNSEL

EXHIBIT B-7 continued

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

BOARD OF TRANSPORTATION MEETING

APRIL 21, 1978

Chairman Bradshaw called the meeting of the Board of Transportation to order at 10:05 a.m., Friday, April 21, 1978, at the Edgecombe Technical Institute, near Tarboro, North Carolina, with the following Members present:

Board Members Joyner, Basnight, Harper,
Thomas, Garrett, Herring, Ray, Dean,
Williamson, Carl, Fleming, Little,
Hollers, Gallaher, Garrison, Burnette,
Jonas, Phillips, Hoyle, Bumgardner,
Gilkey, Ledford and Bryant.

* * *

Asst. Administrator Clegg advised the Asheville Thoroughfare Plan was adopted by the City of Asheville and the Department of Transportation in 1975. Further, in accordance with the General Statutes, Section 136-66.2, a municipal agreement has been prepared, through the mutual efforts of the City of Asheville and the Planning and Research Branch, outlining which of the existing and proposed streets and highways included in the plan will be a part of the State Highway System and which will be a part of the municipal street system. Also, the Agreement has been approved by the Legal Department, and by the City of Asheville on January 26, 1978. Mr. Clegg recommended the Board concur in this Agreement, noting the immediate changes in system responsibilities are:
Secondary Roads to be deleted from State System:

EXHIBIT B-7 continued

1. SR 3083 (Carribou Road) between Sweeten Creek Road and Interstate 40.

2. NC 191 (Riverside Drive) between Hall Street and Pearson Bridge Road (SR 1348).

There are no roads to be added to the State System initially.

Accordingly, on a motion by Board Member Garrett, seconded by Board Member Bumgardner, and the vote was unanimous that the Board concur in Mr. Clegg's recommendation.

STATE OF NORTH CAROLINA
WAKE COUNTY

I, Myrtle R. Wall, secretary to the Board of Transportation, being first duly sworn, do hereby certify the foregoing is a true and correct excerpt of the minutes of the regular meeting of the said Board on April 21, 1978, as recorded on Pages 1008-1009, Minute book 15, on file in my office and in my custody.

IN WITNESS THEREOF, I have hereunto set my hand and seal this 16th day of May 1978.

_____

EXHIBIT B-7 continued

STATE OF NORTH CAROLINA
COUNTY OF BUNCOMBE
BOARD OF TRANSPORTATION
AND
CITY OF ASHEVILLE

MUNICIPAL AGREEMENT
ON STREET AND HIGHWAY
SYSTEM RESPONSIBILITIES
11-28-77

THIS AGREEMENT; made and entered into this the 21 day of April, 1978, between the North Carolina Board of Transportation, a State agency hereinafter referred to as the Board, and the City of Asheville, a municipal corporation hereinafter referred to as the City:

THAT WHEREAS, the City with the cooperation of the Board has developed a plan known as the Asheville Thoroughfare Plan for a street system that will serve present and anticipated volumes of vehicular traffic in and around the City; and

WHEREAS, the City and the Board have previously adopted the Asheville Thoroughfare Plan as the basis for future street and highway improvements in and around the City; and

WHEREAS, the respective responsibilities of the Board and Municipalities for streets and highways inside the Municipal Corporate Limits are set forth in General Statutes § 136-66.1; and

WHEREAS, the City and the Board are directed by General Statutes § 136-66.2 to reach an agreement as to which of the existing and proposed streets and highways included in the comprehensive street plan will be a part of the State Highway System and which streets will be a part of the City Street System.

NOW, THEREFORE, IT IS MUTUALLY AGREED AS FOLLOWS:

1. That the Board shall remain responsible for Johnson Boulevard (SR 1319) between US 19-23 and SR 1263 as long as any part thereof remains outside the Corporate Limits and as long as any portion of SR 1327 remains outside the Corporate Limit.

2. That the Board shall remain responsible for Eliada Road (SR 1318) between Leicester Road (NC 63) and Dryman Mountain Road (SR 1338) as long as any portion thereof remains outside the Corporate Limit and as long as any portion of SR 1356 remains outside the Corporate Limit.

3. That the Board shall remain responsible for Louisiana Avenue (SR 1332) between Haywood Road and SR 1338 as long as any portion thereof remains outside the Corporate Limit, and as long as any portion of SR 1337 remains outside the Corporate Limit.

4. That the Board shall remain responsible for SR 1345 as long as any portion thereof remains outside the Corporate Limit.

5. That the Board shall remain responsible for Pearson Bridge Road (SR 1348) between Riverside Drive and Richmond Hill Drive so long as any portion thereof remains outside the Corporate Limits.

6. That the Board shall remain responsible for Riverside Drive between Pearson Bridge Road (SR 1348) and Broadway Avenue so long as any portion of Pearson Bridge Road between Riverside Drive and Richmond Hill Drive remains outside the Corporate Limits.

7. That the Board shall remain responsible for Merrimon Avenue between Broadway Avenue and Murdock Avenue until such time as the Valley Street-Charlotte Street-Murdock Avenue facility is completed by the Board as shown on Map #1.

8. That the Board shall remain responsible for New Hawcreek Road (SR 2032) as long as any portion thereof remains outside the Corporate Limit.

9. That the Board shall remain responsible for US 74 between Swannanoa River Road and Interstate 40 until the Tunnel Connector Freeway and the connector from the Freeway to Swannanoa River Road is constructed by the Board as shown on Map #1.

10. That the Board shall remain responsible for that portion of Brevard Road between Haywood Road and the NC 191 Freeway so long as any portion of NC 191 between the NC 191 Freeway and Interstate 26 remains outside the Corporate Limits of the City of Asheville.

11. That the Board shall remain responsible for Sand Hill Road (SR 3412) as long as any portion thereof remains outside the Corporate Limits.

12. That the City shall, upon the signing of the Agreement by the Highway Administrator, become responsible for Caribou Road (SR 3083) between Sweeten Creek Road and Interstate 40.

13. That the City shall, upon the signing of the Agreement by the Highway Administrator, become responsible for Riverside Drive between Hall Street and Pearson Bridge Road (SR 1348).

14. That the City shall become responsible for the following described roads and portions of roads at the time specified.

(a) Merrimon Avenue (US 70-25-19-23) between Broadway Avenue and Murdock Avenue upon construction of Valley Street-Charlotte Street-Murdock Avenue facility by Board of Transportation. (See Map #1).

(b) US 74 between Swannanoa River Road and Tunnel Road at such time as the Tunnel Connector Freeway is constructed as shown on Map #1. The pavement of said road shall be placed in a good state of repair before being transferred to City responsibility.

15. That each time the Corporate Limits are altered the Board and the City shall reach a supplemental agreement as to the responsibility for any road or highway on the State Highway System which has any part of it still remaining outside the new Corporate Limits, unless said street is shown on the attached System Responsibilities Plan, Map No. 1 as a Board responsibility, or unless said street is particularized in one of the aforementioned items. That it shall be the responsibility of the City to notify the Board of any effective annexation within a reasonable time prior to July 1 of any year in order for the City to be eligible for

funds appropriated out of the State Highway Fund for the forthcoming year as provided in North Carolina General Statutes § 136-41.1 for those streets included wholly within the annexation that were previously on the State Highway System.

16. That the proposed ultimate respective responsibilities after the transition from the now existing street and highway system to the ultimate Thoroughfare Plan previously adopted, are indicated on the attached System Responsibilities Plan entitled "Ultimate State-Municipal Highway and Street Systems within the Asheville Urban Area, Map No. 1", dated July 21, 1977. That the responsibilities as indicated on the aforesaid System Responsibilities Plan shall be effective after the transition from the existing street and highway system to the system shown on the said System Responsibilities Plan. That the foregoing Agreements as set out in Paragraphs 1 through 15 are for the purpose of effecting the transition in an orderly manner. That the Board's and City's immediate responsibilities after the mutual adoption of this Agreement shall be as delineated on the attached Map No. 2 dated November 23, 1977.

17. That the Board shall be responsible for the maintenance, repair, improvement, widening, construction and reconstruction of all streets and highways designated as Board responsibilities on the aforementioned System Responsibilities Plan as same become part of the State Highway System as set out hereinbefore. As directed by North Carolina General Statutes § 136-66.3, the Board and the City shall reach an agreement as to the respective costs of rights-of-way for that portion of a facility inside the Corporate Limits of the City designated as a Board responsibility prior to construction or improvement of the facility. That the City shall be responsible for the maintenance, construction, reconstruction, and right-of-way acquisition of all streets inside the Corporate Limits of the City not designated a Board responsibility and not particularized in the aforementioned items.

18. That either the City or Board may propose changes in these system responsibilities at any time by giving notice to the other party, but no change shall be effective until it is adopted by both the Board and the Municipal Governing Body.

IN WITNESS WHEREOF, this agreement has been executed this the 21 day of April, 1978, in triplicate on the part of the Board and the City of Asheville by authority duly given, as evidencd by attached certified copy of municipal resolution, authorizing the same on the 26 day of January, 1978, and as evidenced by attached certified copy of resolution by the Baord authorizing the same on the 21 day of April 1978.

ATTEST (Seal)

_____
Clerk

CITY OF ASHEVILLE

By: _____
Mayor

BOARD OF TRANSPORTATION

By: _____
State Highway Administrator

APPROVED AS TO FORM
Rufus Edmiston, Attorney General

By: _____
Staff Attorney

Durham County

Durham County, along with its sister counties of Buncombe and Vance is structured for the purpose of highway maintenance within the divisional context of the State Highway System. The division has the responsibility for maintenance on all road systems not within any corporate municipality. The state system in Durham is composed of the following road classifications:

Primary	Secondary	Roads Within Municipalities
Paved--68 miles	Paved--335 miles	Paved--110 miles
Unpaved--0 miles	Unpaved--217 miles	Unpaved--5 miles

1 mile = 1.61 km

The total state system in Durham County is composed of 736 miles. (1184 km)

City of Durham

The City of Durham has a population of 100,520. The municipality is allocated $140,000 from the state "Powell Bill" funds for maintenance of its street system.

The Central Engineering Department of the Transportation and Utilities Division is the authority over street maintenance. (See Exhibit B-8) With a staff of 90 employees, the department's major maintenance efforts are: light paving, drainage activities, pot hole filling, mowing grass, snow removal and traffic service.

The city and state road mileage system at the present time consist of the following road classifications:

City System	State Roads in Municipality
Paved--292 miles	Paved--128 miles
Unpaved--30 miles	Unpaved--5 miles

1 mile = 1.61 km

The total mileage of both systems represent 464 miles (747 km) of road within the City of Durham. Maintenance on some portions of the State System and the Municipality date back to November 5, 1971 when the State Highway Commission entered into a Municipal Maintenance Agreement with the City. (See Exhibit B-9) The City Council, by resolution, requested general maintenance responsibilities of the State System within its corporate limits. This resolution was adopted in October 1971.

EXHIBIT B-8

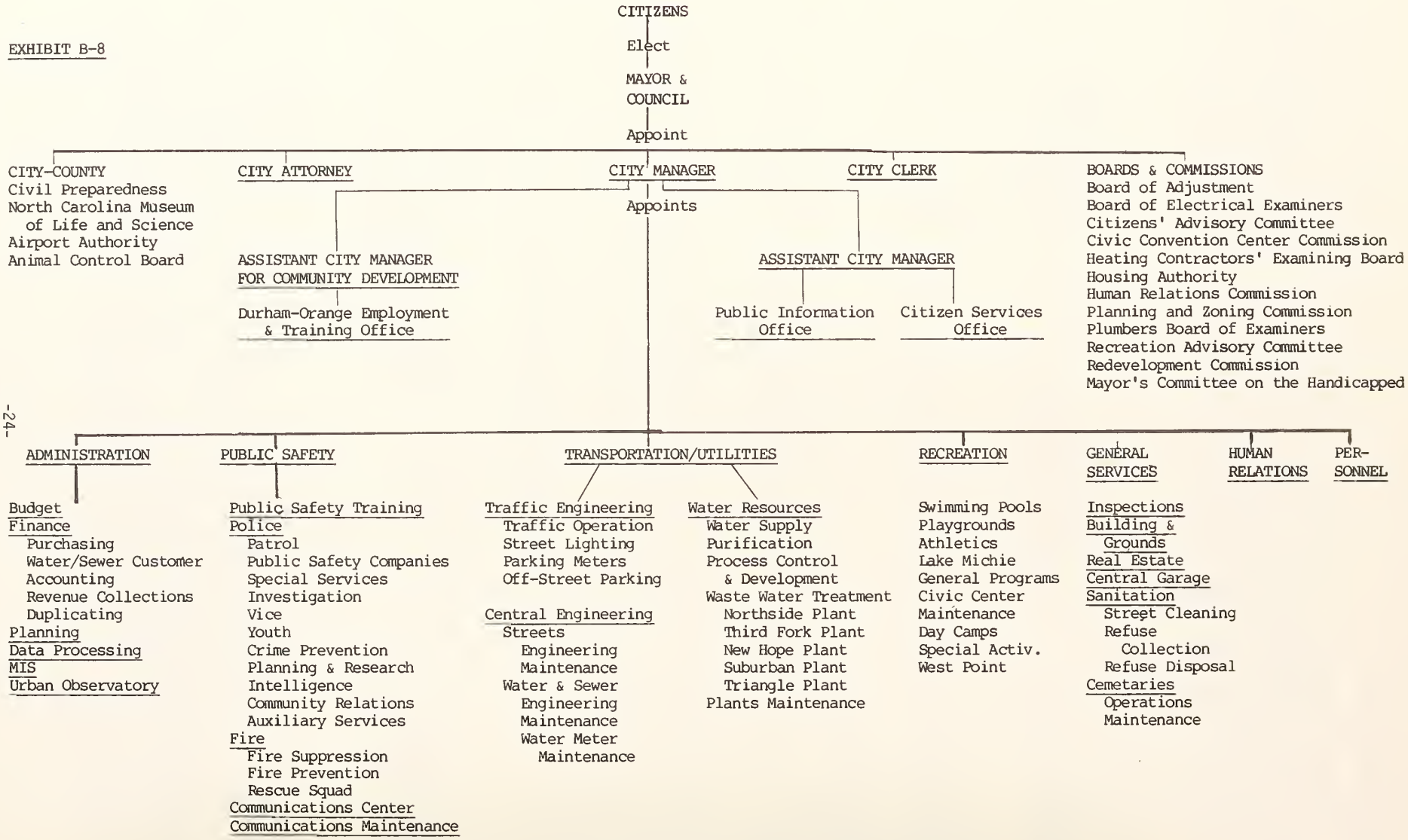

CITIZENS
Elect
MAYOR & COUNCIL
Appoint
CITY-COUNTY
Civil Preparedness
North Carolina Museum of Life and Science
Airport Authority
Animal Control Board
CITY ATTORNEY
CITY MANAGER
CITY CLERK
BOARDS & COMMISSIONS
Board of Adjustment
Board of Electrical Examiners
Citizens' Advisory Committee
Civic Convention Center Commission
Heating Contractors' Examining Board
Housing Authority
Human Relations Commission
Planning and Zoning Commission
Plumbers Board of Examiners
Recreation Advisory Committee
Redevelopment Commission
Mayor's Committee on the Handicapped
Appoints
ASSISTANT CITY MANAGER FOR COMMUNITY DEVELOPMENT
Durham-Orange Employment & Training Office
ASSISTANT CITY MANAGER
Public Information Office
Citizen Services Office
ADMINISTRATION
Budget
Finance
Purchasing
Water/Sewer Customer Accounting
Revenue Collections
Duplicating
Planning
Data Processing
MIS
Urban Observatory
PUBLIC SAFETY
Public Safety Training
Police
Patrol
Public Safety Companies
Special Services
Investigation
Vice
Youth
Crime Prevention
Planning & Research
Intelligence
Community Relations
Auxiliary Services
Fire
Fire Suppression
Fire Prevention
Rescue Squad
Communications Center
Communications Maintenance
TRANSPORTATION/UTILITIES
Traffic Engineering
Traffic Operation
Street Lighting
Parking Meters
Off-Street Parking
Central Engineering
Streets
Engineering
Maintenance
Water & Sewer
Engineering
Maintenance
Water Meter Maintenance
Water Resources
Water Supply
Purification
Process Control & Development
Waste Water Treatment
Northside Plant
Third Fork Plant
New Hope Plant
Suburban Plant
Triangle Plant
Plants Maintenance
RECREATION
Swimming Pools
Playgrounds
Athletics
Lake Michie
General Programs
Civic Center
Maintenance
Day Camps
Special Activ.
West Point
GENERAL SERVICES
Inspections
Building & Grounds
Real Estate
Central Garage
Sanitation
Street Cleaning
Refuse Collection
Refuse Disposal
Cemetaries
Operations
Maintenance
HUMAN RELATIONS
PER-SONNEL

EXHIBIT B-9

NORTH CAROLINA)	
DURHAM COUNTY)	
STATE HIGHWAY COMMISSION)	MUNICIPAL MAINTENANCE
AND)	AGREEMENT FOR MAINTENANCE OF
MUNICIPALITY OF DURHAM)	SYSTEM STREETS

THIS AGREEMENT, made and entered into this the 4th day of October, 1971, between the STATE HIGHWAY COMMISSION, an agency of the State of North Carolina, hereinafter referred to as the Commission and Municipality of Durham, hereinafter referred to as the Municipality;

W I T N E S S E T H: THAT

WHEREAS, the Commission and the Municipality are authorized by the provisions of North Carolina General Statutes 136-41.3 to enter into contracts for the purpose of maintenance and repair of State Highway System streets within the Municipality.

NOW, THEREFORE, in consideration of the premises and the benefits accruing to the Commission and the Municipality, it is agreed as follows:

1. The Municipality shall provide for the routine maintenance, upkeep and repair of the State Highway System streets within the Municipality in accordance with the requirements of the Commission under the general administrative control of the Commission's Division Engineer. Provided, however, the maintenance, repair and replacement of street lighting and the furnishing of

electric current will be the responsibility of the Municipality with their own funds, except on freeways which the Commission will maintain, repair, replace and furnish electric power for lighting on freeways. Routine maintenance of Traffic Control Devices not included under this Agreement shall be covered by a Municipal Maintenance Agreement for Traffic Control Devices.

(a) Space for specific System streets excluded.

(1) 15-501 Western By-Pass; 15-501 Business (Chapel Hill Blvd.);

(2) I-85-U.S. 70 Bypass; East-West Expressway; N.C. Highway 751-From Old Chapel Hill Road north to 15-501 Western Bypass.

2. The corporate limits of the Municipality as determined at the time of the execution of this Agreement are to be used in determining the duties, responsibilities, rights and legal obligations of the parties hereto for the purpose of this Agreement. If the Municipality desires to bring System streets in annexed areas under the provisions of this Agreement, written notice shall be given to the Division Engineer at least thirty (30) days prior to actual annexation by the Municipality. Work performed on System streets in areas annexed to the Municipality after the execution of this Agreement will not be eligible for reimbursement unless the Municipality has given written notice to the State Highway Commission for such annexation at least thirty (30) days prior to the performance of the work.

3. The Division Engineer shall notify the Municipality in writing at the beginning of each fiscal year or as soon thereafter as possible, of the amount of money estimated to be available to the Municipality for the maintenance and repair of the State Highway system streets within the Municipality. The Division Engineer shall also notify the Municipality in writing at the beginning of each quarter or as soon thereafter as possible of the amount allocated for that quarter.

4. If the Municipality desires to subcontract a particular job and upon completion of that job, terminate the contract, the Municipality shall forward the plans, specifications, proposals and other bid documents for any work covered by this Agreement to be performed by subcontract to said Division Engineer FOR APPROVAL PRIOR TO ADVERTISING FOR BIDS. Further, the Municipality shall submit the tabulation of bids to said Division Engineer, who upon recommending the award of the contract, shall forward the information to the Commission in Raleigh, North Carolina, and thereafter be presented to the Commission in official session for the concurrence in the Municipality's award of bids to the lowest qualified bidder.

The hiring of special equipment from outside sources for emergency purposes should be kept to a minimum. This is a subcontract item and as such must receive the prior approval of the Division Engineer and subsequently confirmed in writing. The Division Engineer may determine that the desired equipment is available within the Commission and eliminate the need for outside equipment rental.

5. If the Municipality desires to subcontract on an annual or continuing basis, the contract, in three copies, must be forwarded each year to the Chief Engineer for his approval. If, during the year, a new annual contract is entered into between a Municipality and a contractor, it must also receive the approval of the Chief Engineer.

6. The municipality shall submit to the Commission a quarterly invoice in the form approved by the State Highway Controller, for work completed under the terms of this Agreement. The Commission shall reimburse the Municipality within thirty (30) days after receipt of the invoice for the costs incurred in furnishing personnel, labor, equipment and materials for the work performed. The State Highway Commission shall reimburse the Municipality

for the costs incurred in accordance with the following schedule:

(a) Labor costs shall be the gross payroll wages earned by the personnel furnished and for work completed by the terms of this Agreement; the rate for the said wages to be paid shall be the same as if the personnel were engaged in work for the sole purpose of the Municipality. The labor costs shall include such costs as are incurred by the Municipality for the time required for the movement of personnel and equipment to and from the place where the work is to be performed under the terms of this Agreement.

(b) To the actual labor costs (as hereinabove provided) may be added a per cent to cover payroll additives; the rate for the said payroll additives to be paid shall be the current payroll additive rate developed and used by the Finance Department of the Commission to account for this type cost on the Commission's records. The rate will be subject to change periodically based upon audit of the Commission's records, and the Commission will notify the Municipality of each change.

(c) The equipment costs shall be the rental cost in accordance with regular rental rates established and published by the Equipment Department of the Commission, said rental rates shall include all costs of equipment repairs, maintenance and fuel. Any rate for equipment not included in the regular rental rate established and published by the Equipment Department will cause the Municipality to request a rate to be used from the Equipment Department. The cost of any equipment subcontracted shall be invoiced at the contract price of the item or items involved and must have written prior approval of the Division Engineer of the Commission. The equipment costs shall include such costs as are incurred by the Municipality for the time required for the

movement of equipment to and from the place where the work is to be performed under the terms of this Agreement.

(d) Cost of materials purchased and applied directly to the maintenance work shall be billed at the actual net cost of materials purchased after deduction of all discounts, rebates and refundable State and Local Sales Tax. Materials issued from inventory on hand must be billed at a proper inventory issue price as would be charged the maintenance work had the work been a municipal project and supported by perpetual inventory records which are in conformance with commonly accepted accounting principles.

(e) To the actual labor, payroll additives and material costs (as hereinabove provided) shall be added ten (10) per cent to cover administrative costs.

(f) The cost of any work subcontracted shall be at the contract price of the item or items involved.

(g) The Municipality shall not be entitled to the reimbursement of any costs which it cannot support by accounting records, other than the payroll additive and equipment rental rates developed by the Commission and the administrative cost rate, and the Commission shall be entitled to a refund of any amounts paid for which the Municipality cannot document.

7. The Municipality shall maintain all books, documents, papers, accounting records and other evidence pertaining to cost incurred for a period of not less than three years after payment. Such records shall be made available for inspection and audit by the Commission.

8. This Agreement shall continue in full force and effect for such period of time as the Commission and the Municipality

deem necessary and may be terminated by either the Commission or the Municipality upon thirty (30) days written notice.

9. This Agreement is for the maintenance, upkeep and repair of the streets on the State Highway System only. Any construction, reconstruction, widening or improving of State Highway System streets shall be accomplished by separate agreement. Where the terms "Construction" or "Maintenance" are used in this Agreement, they are defined as outlined in the two-page document entitled "State Construction and Maintenance" dated May 1971, a copy of which is attached and made a part of this Agreement.

IN WITNESS WHEREOF, this Agreement has been executed by the Commission and the Municipality by authority duly given, as evidenced by the attached certified copy of resolution of the Municipality authorizing same.

Executed this the 15th day of October, 1971, by the Municipality.

ATTEST: (SEAL)

_____
CLERK OR MANAGER

MUNICIPALITY OF Durham

BY: _____
MAYOR

DATE EXECUTED
BY MUNICIPALITY October 15, 1971

ATTEST: (SEAL)

_____
SECRETARY

STATE HIGHWAY COMMISSION

BY: _____
ADMINISTRATOR

DATE EXECUTED
BY COMMISSION November 5, 1971

Executed this the 5th day of November, 1971, by the State Highway Commission.

APPROVED AS TO FORM AND LEGALITY:
ROBERT MORGAN
ATTORNEY GENERAL

BY _____
TRIAL ATTORNEY

Copy of a Resolution Passed by the City Council of the City of Durham, North Carolina.

The following resolution was offered by Councilman Alford and seconded by Councilman Boulware and upon being put to a vote was duly carried;

WHEREAS, it is hereby determined that it will be in the best interest of this Municipality to enter into a contract with the State Highway Commission pursuant to the provisions of G.S. 136-41.3 to provide for the work of maintaining and repairing the State Highway System streets within the Municipality on a reimbursement basis and that the Municipality should enter into the attached agreement with the State Highway Commission concerning such work entitled "Municipal Maintenance Agreement For Maintenance of System Streets" and labeled Exhibit "A".

NOW, THEREFORE, BE IT RESOLVED that the contract for maintaining and repairing the State Highway System streets within the corporate limits of this Municipality be and it is hereby formally approved and the Mayor and Manager (or Clerk) of this Municipality are hereby empowered and directed to sign and execute the Agreement between this Municipality and the State Highway Commission attached hereto and labeled Exhibit "A".

I, Margaret W. Carrington, Clerk of the City of Durham, North Carolina, do hereby certify that the foregoing is a true and correct copy of excerpts from the minutes of the City Council Meeting of October 4, 1971 of this Municipality;

WITNESS, my hand and the official seal of the City of Durham on this 15th day of October, 1971.

_____
CLERK (OR MANAGER)
MUNICIPALITY OF Durham

INDEPENDENT COUNTY SYSTEM
(State of Alabama)

The County Organization

The Act of 1823 established an elective county board with jurisdiction over the establishment and maintenance of the county road system. In 1970 this body was by law designated the "County Commission". The Commission is composed of four members plus the Judge of Probate who is the ex-officio Chairman. A commissioner must reside in the county of election and post a bond in the prescribed amount. About one-half of the counties are structured in this manner. Counties are usually divided into road and/or commissioner districts with each electing its own members. There are at least ten counties that elect their members on an at-large countywide basis. Their term of office is four years. Refer to Exhibit B-10 for authority conferred upon by the County Commissioner(s).

The Commission, by law, must employ a fulltime, registered professional engineer and/or land surveyor in the State of Alabama who possesses a minimum of at least three year's experience which includes the following supervisory functions: employ, supervise and direct employees, perform engineering and survey services, maintain county highway accounting records, and perform other related highway duties. The State Highway Director has the authority to pay 70 percent of a county's professional engineer and/or land surveyor's annual salary.

Maintenance Organizational Structure

Two counties were selected as case studies for this project because of their "district" administration and maintenance relationship to the State Highway Department, as well as their local internal operation in highway administration. The concept of "captive" versus "non-captive" counties offers two different and significant views of maintenance management in the State of Alabama. (See Exhibit B-11)

Cullman County, one of the selected case studies, is a "captive" county and thus has no local jurisdiction over its county road system. Funds, equipment, planning and manpower are under the direction of the State Division of Highways.

Randolph County, however, is a "non-captive" county and its road construction and maintenance responsibilities is under the direction of the county government. These responsibilities are performed within one of the following organizational systems:

- District System--whereby the county is divided into small road districts, each being independently operated and supervised by an elected District

EXHIBIT B-10*

A Manual for Alabama County Commissioners

Section 12, Title 12, defines the general authority conferred upon county commissions. Under this section the commission has authority:

1. To direct and control the property of the county as it may deem expedient according to law, and in this direction and control it has the sole power to locate the courts in the rooms of the courthouse and to designate the rooms to be occupied by the officers entitled to rooms therein, including the circuit judge, if resident in the county, and to change the location of the courts, and the designation of the rooms for officers, as it may deem best and most expedient, and this shall be done by order of the court entered upon the minutes of the court at a regular term of court. In the event the courthouse is inadequate to supply office rooms for such officers, the court may lease such office rooms in a convenient location in the county site and to pay the rental from the county fund.

2. It shall be the duty of the court to provide a janitor for the courthouse and to see that the janitor keeps clean and in a sanitary condition all courtrooms, corridors, halls and offices in the courthouses of their respective counties.

3. To levy a general tax, for general, and a special tax, for special county purposes, according to this Code.

4. To examine, settle, and allow all accounts and claims chargeable against the county.

5. To examine and audit the accounts of all officers having the care, management, collection, or disbursement of money belonging to the county, or appropriated for its use and benefit.

6. To make such rules and regulations for the support of of the poor in the county as are not inconsistent with any law of the state.

7. To punish for contempt by fine, not exceeding ten dollars, and imprisonment not exceeding six hours.

8. To subpoena, examine and compel the attendance of witnesses, and the production of books and papers before the court, in the same manner as the probate court.

*Reproduced from The Organization of Alabama County Government

9. To contract for and have made map or plat books showing all subdivisions of land that have been heretofore or that may hereafter be made in their respective counties.

10. To compromise on such terms as they deem just, all doubtful claims in favor of counties when such claims arise on account of moneys, heretofore paid in good faith, by order of such courts, or in any case where they deem it to the best interest of the county.

11. To make an appropriation, in no case to exceed seven hundred and fifty dollars per year, to install and maintain an exhibit of the agricultural and mineral resources of their respective counties.

12. In all counties in this state, where there are no poor-houses, organized or established in accordance with the laws of this state, courts of county commissioners, or boards of revenue in such counties, may make such appropriation in behalf of paupers or indigent persons entitled to relief from the county, not exceeding six dollars per calendar month for each person to meet the needs and expenses of such paupers or indigent persons, and it shall not be lawful for any court of county commissioners or board of revenue to let to the lowest bidder the maintenance of the poor.

13. To pay, at the regular legal rate, for the advertising of notice and substance of local bills, which may be introduced in the legislature for the benefit of their respective counties, or in reference to subjects or matters exclusively relating to county business or affairs.

14. To appropriate in each calendar year, such sums of money as they may deem proper or expedient, toward defraying the necessary expenses of the operation, support, upkeep and maintenance of each division of the naval militia of the state that may be located in such county.

15. To procure and provide telephones for the offices of the circuit judge, the clerk and register of the circuit court, the offices of the sheriff and jailer, tax assessor and tax collector, and the judge of probate in their respective counties, and to pay for the same out of the general funds of the county; and said court of county commissioners or boards of revenue, or like body may, in like manner and for the same officer, establish telephones in both court-houses where the said officers maintain two offices in the county; and must install such telephone upon the request of the officer entitled thereto.

16. To make appropriations out of the county treasury to pay premiums on livestock that may be exhibited in livestock shows held in the county.

17. Where the state or federal authorities have taken up the works of farm demonstration, or the organization of farm life clubs for the promotion of agriculture, to appropriate for aiding in such work such sum or sums as the county commissioners or board of revenue may deem adequate and necessary.

18. To expend money for the purpose of improving the sanitary conditions of their counties by laying trunk lines of sewers and constructing sewage disposal plants in localities contiguous to thickly populated communities and to prescribe the terms on which the owners of houses or householders may connect with such lines of sewers; but no such lines of sewers shall be laid without the written approval of the executive officer of the state board of health, such approval to be based on the belief that the laying of any proposed line will materially improve health conditions.

19. To appropriate money to promote or enforce the health and quarantine laws of the state for the benefit of the county and its inhabitants, when requested to do so by the state board of health.

20. To pay out of any funds in the county treasury, all the expenses, including a reasonable attorney's fee, incurred by the county treasurer in resisting the payment of any warrant, where said resistence on the part of the county treasurer is successful.

21. To set aside such part of the revenue of the county as may be deemed expedient for the purpose of creating a sinking fund for the payment of bonds or other indebtedness and to invest such sinking fund in such interest-bearing securities, or deposoit the same on interest-bearing account, within the state, as said court may deem wise.

22. To set aside, appropriate and use county funds or revenues for the purpose of developing, advertising and promoting the agricultural, mineral, timber, water, labor, and all other resources of every kind of their respective counties, and for the purpose of locating and promoting agricultural, industrial, and manufacturing plants, factories and other industries in their respective counties. The court is authorized to enter into contracts with any person, firm, corporation or association to carry out the purposes set forth in this subdivision.

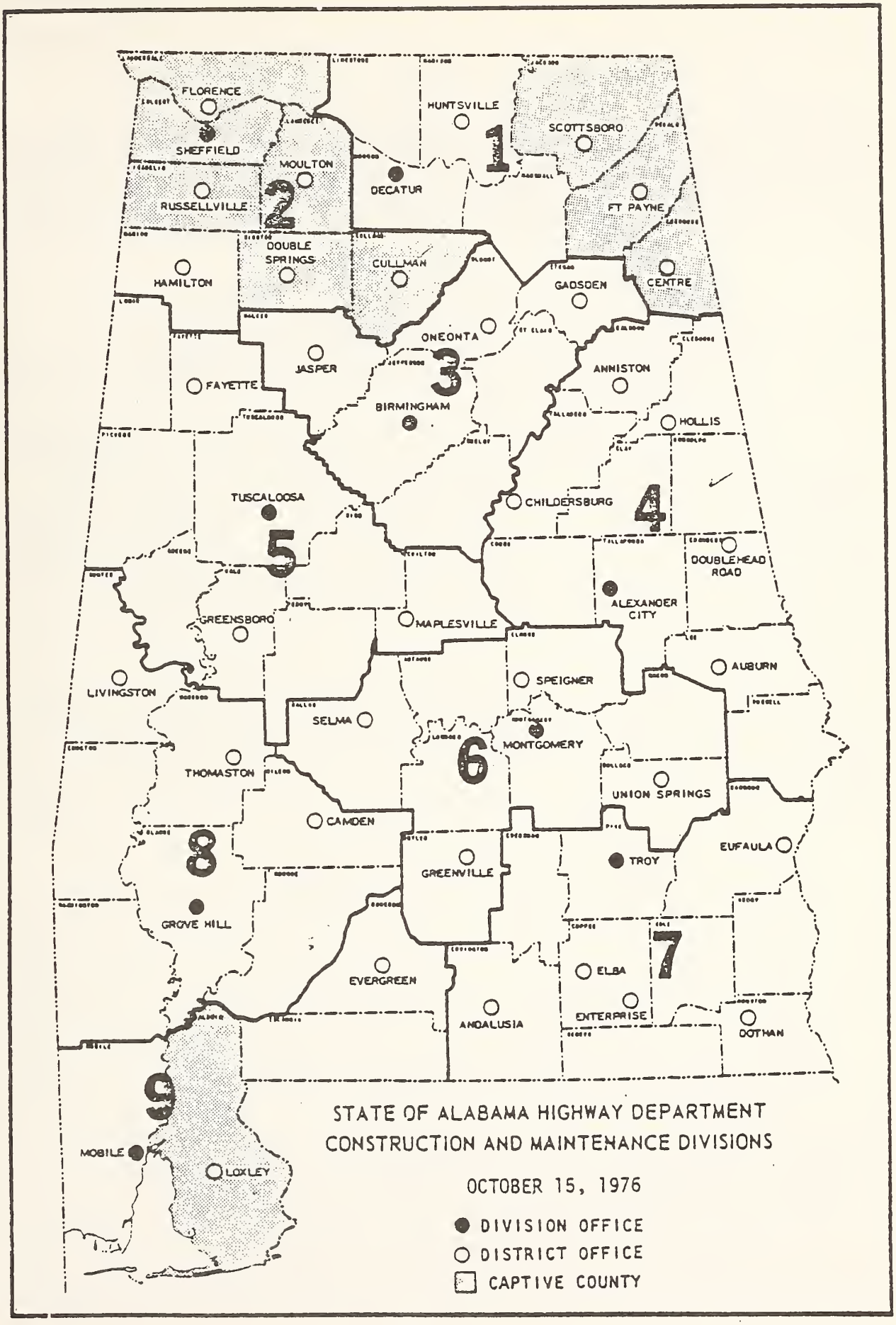
23. To insure in solvent companies the courthouse, jail, machine shops and other buildings of the county against loss of fire and storm, and the trucks, tractors, machines, shovels, graders, equipment, vehicles and other personal property of the county against loss by fire and theft and against liability for damages to persons and property. Payment of premium on such insurance coverage shall be made from the

general fund of the county, except that payments of premiums on insurance coverage on vehicles, items of equipment or other personal property used and employed exclusively in connection with the establishment, construction, repair and maintenance of the public roads and bridges of the county may be made from the gasoline funds of the county, and payments of premiums on insurance coverage on the courthouse, jail, machine shops and other buildings of the county may be made from the proceeds of special taxes levied for erection, repairing, furnishing or maintenance of public buildings, bridges or roads. `Payments heretofore made for these purposes are validated.

24. To use convict labor, and any county equipment or machinery or expend any necessary sum of money for the improvement, beautification or decoration of the grounds, campus or premises of any county school and schools under the control of boards of education in such counties.

25. To exercise such other powers as are, or may be given by law.

EXHIBIT B-11


FLORENCE
SHEFFIELD
MOULTON
RUSSELLVILLE
DECATUR
HUNTSVILLE
SCOTTSBORO
FT PAYNE
DOUBLE SPRINGS
CULLMAN
HAMILTON
GADSDEN
CENTRE
ONEONTA
JASPER
FAYETTE
BIRMINGHAM
ANNISTON
HOLLIS
TUSCALOOSA
CHILDERSBURG
DOUBLEHEAD ROAD
ALEXANDER CITY
GREENSBORO
MAPLESVILLE
AUBURN
LIVINGSTON
SPEIGNER
SELMA
MONTGOMERY
THOMASTON
UNION SPRINGS
CAMDEN
EUFAULA
GREENVILLE
TROY
GROVE HILL
EVERGREEN
ELBA
ENTERPRISE
ANDALUSIA
DOTHAN
MOBILE
LOXLEY
1
2
3
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6
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9
STATE OF ALABAMA HIGHWAY DEPARTMENT
CONSTRUCTION AND MAINTENANCE DIVISIONS
OCTOBER 15, 1976
DIVISION OFFICE
DISTRICT OFFICE
CAPTIVE COUNTY

Commissioner. A county engineer is usually employed to supervise the technicalities of design and construction (especially for projects involving state and federal funds). Maintenance activities also come under his direct supervision.

- Unit System--whereby the county highway department is supervised by a county engineer and/or a Director of Public Works in conjunction with the county commission with all members acting as a unit to establish priorities on a countywide basis.

Cullman and Randolph are at the present time in a transitional stage with respect to their overall county maintenance management operations. Cullman must decide in a general referendum on September 5, 1978 whether it wishes to change its relationship from "captive" to "non-captive". The State Legislature through "Act No. 13 of 1975" (see Exhibit B-12) provides for a county's change of status through a general referendum approved by the county's residents (see Exhibit B-13).

Cullman County

Cullman County, a part of the second Maintenance Division,[1] estimated to reach 61,400 population by the year 1980, has the largest budget of all "captive" counties in the state. The county's annual maintenance budget for all highway systems are listed below:

SYSTEM	BUDGET
Interstate	$ 75,778
State	249,653
County(Captive)	$1,245,470

[1] Hamilton County is the only non-captive county in the Second Division.

EXHIBIT B-12

Act No. 13 H.5--Davis

AN ACT

To reorganize the government of Cullman County to promote economy and efficiency, abolishing the Board of Commissioners and Control, creating in lieu thereof a county commission, transferring certain county functions in relation to the construction, repair, and maintenance of public roads and bridges to the State Highway Department.

Be It Enacted By the Legislature of Alabama:

Section 1. There is created and established a commission form of government for Cullman County. The Board of Commissioners and Control provided for by Act No. 449, H. 670, approved August 17, 1951 (1951 Acts 801) is hereby abolished. Hereafter, the governing body of Cullman County shall be a county commission, consisting of a president and two associate commissioners, to be elected or appointed as provided in this Act.

Section 2. A president of the Cullman County Commission shall be elected at the general election in 1956, and every four years thereafter. Two associate commissioners shall be elected at the general election in 1958, and every four years thereafter. The term of office of the president and associate commissioners shall commence on the first Monday after the second Tuesday in January next succeeding their election. Members of the commission shall be qualified electors of the county at the time of their election or appointment, and during their continuance in office, and shall be at the time of election or appointment high school graduates and not less than 35 nor more than 65 years of age. Any vacancy occurring shall be filled by appointment by the Governor, and the appointee shall hold office for the unexpired term. The Governor shall appoint a president of the Cullman County Commission and two associate commissioners immediately upon the enactment of this Act, and such appointees shall serve until their successors are elected and qualified as herein provided.

Section 3. Except as is otherwise provided in this Act, the Cullman County Commission shall have and exercise all the jurisdiction, power, and authority vested in or conferred on the Board of Commissioners and Control, and on courts of county commissioners, boards of revenue, or like county governing bodies under general laws, and shall perform the same duties. The president of the commission shall be its chief executive officer, and shall devote full time to the performance of his duties. He shall receive an annual salary of four thousand eight hundred dollars ($4,800), payable in equal monthly installments, and shall be reimbursed all necessary expenses incurred in traveling on official business for the county. The president of the commission shall have charge of the financial affairs of the county, the preparation of the budget, the disbursement of county funds, the management of county buildings and property, and the accounting records of the county, subject to approval of the commission. He shall have such authority to employ clerical assistants as the commission may prescribe. The President must make a bond to the county in the sum of twenty thousand ($20,000) dollars, the preminum on said bond to be paid out of general fund of county.

Section 4. The Cullman County Commission shall hold regular meetings on the second and fourth Mondays of each month, and may hold special meetings upon call of the president or the two associate commissioners; provided that not more than two special meetings may be held in any one month. The commission shall keep, or cause to be kept complete and accurate minutes of all meetings, and the vote of each member of the commission on every question shall be recorded therein. The minutes of commission meetings shall be open to public inspection at all reasonable times.

Section 5. Associate members of the Cullman County Commission shall not be required to give full time to the performance of official duties. They shall attend all meetings of the commission, however, and shall be entitled to ten dollars for each meeting attended, plus mileage at the rate of eight cents per mile traveled in going to and from such meetings.

Section 6. The Cullman County Commission shall have and exercise only the powers, authority, and functions relative to the construction, maintenance, and repair of roads and bridges as are herein conferred upon it, as follows:

1. To levy road and bridge taxes and to appropriate money for the construction, maintenance, and repair of county roads and bridges, as prescribed by law.

2. To borrow money and issue bonds or other evidence of indebtedness for the purpose of constructing, maintaining, and repairing roads and bridges, subject to the approval of the State Highway Department.

3. To determine the location of new roads and bridges within the county which may be established as an addition to or change in the existing county road system, subject to the approval of the State Highway Department.

4. To exercise the right of eminent domain for the purpose of acquiring rights-of-way for the establishment and changing of county roads and bridges, subject to the approval of the State Highway Department.

The commission shall have no authority to employ or discharge or regulate or control in any manner any personnel used in and about the construction, maintenance, or repair of roads and bridges; to contract for or purchase any services, supplies, equipment, machinery or materials used or to be used in the construction, maintenance or repair of roads and bridges; to pay, or order payments to be made to, any person, firm or corporation for services rendered or supplies, equipment, machinery, or materials provided for the construction, maintenance, or repair of county roads or bridges.

As soon as practicable after the effective date of this Act, the commission and officials of Cullman County shall transfer or turn over to the State Highway Department all funds, supplies, equipment, machinery, and materials held, owned, leased, or controlled by it or them for the construction, maintenance, and repair of county roads and bridges. Thereafter, on or before the tenth day of each month, the commission, and all other county officials shall pay over to the State Highway Department all funds collected or received by it or them from any source whatsoever during the preceding month which are designated or to be used for the purpose of constructing, maintaining or

repairing county roads or bridges. Such funds shall be maintained in a separate account by the State Highway Department and shall be used by it solely for the purpose of constructing, maintaining, and repairing roads and bridges in Cullman County, subject to the provisions of this Act.

Section 7. Persons employed by Cullman County for road and bridge work who are in service on the effective date of this Act may be continued in service by the State Highway Department, in its discretion, until January 1, 1957, without regard to the State's Merit System Act or rules and regulations promulgated under its authority. All other persons employed by the department in the administration of this Act shall be employed subject to the Merit System Law, after January 1, 1957.

Section 8. After the effective date of this Act, the State Highway Department shall pay all of the outstanding financial obligations of Cullman County which were incurred prior to the enactment of this Act for the construction, maintenance or repair of county roads and bridges, out of the funds to be paid over to the Highway Department under the provisions of Section 6 of this Act. Nothing contained in this Act, however, shall be construed so as to relieve Cullman County of the liability for paying any of its financial obligations now existing or hereafter incurred under the provisions of Section 6 hereof in the event the funds paid over to the State Highway Department are insufficient to do so, or to require that any of the financial obligations of the county presently existing or hereafter incurred under the provisions of Section 6 hereof shall be paid from highway department funds.

Section 9. The State Highway Department shall construct, maintain and repair the county roads and bridges of Cullman County with the funds paid over to it pursuant to Section 6 of this Act, and with funds which would otherwise accrue to Cullman County for road and bridge work from any source whatsoever. The State Highway Department shall retain, and the appropriate state official is authorized to pay over to it, any funds or amounts to which Cullman County shall be entitled from the proceeds of the state gasoline tax, the motor vehicle license tax allocated to the county, or any other state tax, and such sums and amounts shall be used in addition to the sums and amounts turned over to the State Highway Department under the provisions of Section 6 of this Act for the construction, maintenance and repair of county roads and bridges in said county. Gasoline tax money and the proceeds of any other tax to which Cullman County is entitled which is received by the State Highway Department for road and bridge work in Cullman County shall be kept in the separate account referred to in Section 6 of this Act.

EXHIBIT B-12 continued

Section 10. Any contract for the construction, maintenance and repair of county roads and bridges entered into by or on behalf of Cullman County prior to the adoption of this Act shall remain in full force and effect until the terms thereof have been complied with.

Section 11. At the time the county transfers to the department county-owned road equipment, machinery, and supplies, under the provisions of this Act, an inventory thereof shall be made, a copy to be kept on file by the commission and by the department, and in the event this Act is repealed or becomes inoperative, the department shall return to the county road equipment, machinery, and supplies of like kind and of equal value.

Section 12. All laws or parts of laws in conflict with this Act are hereby repealed.

Section 13. The provisions of this Act are declared to be severable. Should any section or other portion thereof be declared unconstitutional or invalid such adjudication shall not affect the portion, or portions, of said Act remaining.

Section 14. This Act to become effective upon its passage and approval by the Governor or its otherwise becoming a law.

Approved February 14, 1955
Time: 9:10 A.M.

EXHIBIT B-13

S. 346

By: Mr. St. John

Enrolled, An Act,

Relating to Cullman County; providing for and regulating county purchasing and the custody and use of certain county property; divesting the highway department of certain county functions and duties in relation to roads and bridges in such county, heretofore transferred to it, and revesting such functions in the Cullman County governing body; providing for the construciton, maintenance and repair of county roads on the unit basis; providing for the transfer of certain funds, equipment, material and personnel from the state highway department to the county governing body; providing for the payment of salaries of certain county employees; providing that this act shall become effective only upon approval at a referendum election.

BE IT ENACTED BY THE LEGISLATURE OF ALABAMA:

Section 1. The provisions of this act shall become operative only if approved by a majority of the electors of Cullman County as hereinafter provided voting in a referendum, which shall be held on the date of the first state-wide election held after adjournment of the 1978 Regular Session of the legislature for the purpose of voting on amendments to the Constitution. The governing body of Cullman County shall order and provide for the holding of the referendum on such date, and for canvassing the results thereof. On the ballot to be used at the election the questions shall be stated substantially as follows:

EXHIBIT B-13 continued

"Do you favor having the county commission or like governing body of Cullman Cuonty exercising jurisdiction over the construction, repair and maintenance of county roads and bridges instead of the state highway department? Yes ( ) No ( )." If a majority of the votes cast at the election are "Yes," the provisions of this act shall become effective on January 15, 1979 of the year following the election. If a majority are "No," this act shall have no further force and effect. The result of the election shall be certified to the Secretary of State and to the State Highway Director within ten days.

Section 2. The Cullman County commission or like governing body of Cullman County shall be solely responsible for the construction, repair and maintenance of the roads and bridges in the county; but all such construction, repair and maintenance shall be done on the basis of the county as a unit, without regard to district or quadrant lines, and under supervision of an engineer or other qualified road supervisor. The county governing body shall have all the powers and jurisdiction with respect to county roads and bridges which are or which hereafter may be vested in or required of county governing bodies by the general laws of this state, or vested in or required of the governing body of Cullman County by local law; and except as may be otherwise provided herein members of the county governing body of Cullman County shall perform all the duties and services and shall exercise all the powers and authority with respect to the construction, repair and maintenance of county roads and bridges which are or hereafter may be provided by law for members of county governing bodies.

Section 3. Any unexpended monies remaining in the fund required by law to be maintained by the state highway department for use in the construction, repair and maintenance of county roads and bridges in Cullman County shall be paid over to the county governing body of Cullman County except as otherwise provided by this Act. Thereafter, all funds and monies designated by law for use in the construction, repair and maintenance of

county roads and bridges in Cullman County to which Cullman County may be entitled, whether from the proceeds of the state gasoline tax, the motor vehicle license tax, or other state tax, or any federal aid accruals, or from any other source whatsoever, shall be paid to the county governing body of Cullman County by the appropriate county or state official.

Section 4. The state highway department shall transfer and turn over to the governing body of Cullman County road equipment, machinery and supplies of like kind and equal in value to the road equipment, machinery and supplies which Cullman County was required to transfer and turn over to the state highway department in accordance with legislation enacted prior to the adoption of this Act, which legislation required the state highway department to construct, repair and maintain roads and bridges in Cullman County.

Section 5. All persons employed by the state highway department in the construction, repair and maintenance of county roads and bridges in Cullman County, upon adoption of this Act shall cease to be employees of the state highway department, shall no longer be subject to the state merit system law, and shall continue to be employed by the county in the construction, repair and maintenance of county roads and bridges in the county, subject to approval of the county governing body.

Section 6. Any contract for the construction, repair or maintenance of county roads and bridges in Cullman County entered into by the state highway department prior to the adoption of this Act shall remain in full force and effect until the returns thereof shall have been complied with.

Section 7. All outstanding financial obligations which were incurred prior to the adoption of this Act for the construction, repair, or maintenance of county roads and bridges in Cullman County, shall, upon adoption of this Act, become outstanding

financial obligations of Cullman County, and shall be retired or paid in accordance with the terms under which such indebtedness was incurred.

Section 8. The Cullman County governing body shall employ a county engineer, who shall be a thoroughly qualified and competent civil engineer, possessing all of the qualifications specified for county engineers under the general laws of the State of Alabama; and such engineer shall devote his entire time and attention to the maintenance and construction of the Cullman County public roads, highways, bridges and ferries, and he shall, during his employment, reside in Cullman County, Alabama.

Section 9. The county engineer shall be appointed by the county governing body from a nomination made by the state highway director. If a nomination is not acceptable to the county governing body the state highway director shall be requested to make additional nominations. Should the state highway director refuse or fail to make nominations, the Cullman County governing body may fill the position of county engineer with any person who has the qualifications herein set out.

Section 10. It shall be duty of the county engineer: (1) To employ, supervise and direct all such assistants as are necessary to properly maintain and construct and public roads, highways, bridges and ferries of Cullman County, and he shall have authority to prescribe their duties, and to discharge said employees for cause, or when not needed; (2) to perform such engineering and surveying services as may be required, and to repair and maintain the necessary maps and records; (3) to maintain the necessary accounting records to reflect the cost of the county highway system; (4) to build, or construct any roads, or change old roads, but only when ordered to do so by proper order of the Cullman County governing body; (5) it shall be his further duty, insofar

as it is feasible, to construct and maintain all county roads on the basis of the county as a unit, without regard to any district, quadrant or beat lines.

Section 11. The county engineer is hereby designated as the person authorized to make written requisitions upon the county governing body of Cullman County or its duly designated purchasing agent for all articles, materials, supplies, and equipment necessary for the maintenance and construction of roads, bridges and ferries in Cullman County.

Section 12. It shall be the duty of the Cullman County governing body to fix, from time to time, in accordance with prevailing economic conditions, the various scales of wages or salaries to be paid for labor necessary in the maintenance and construction of said roads, bridges and ferries and said wage or salary scale shall not be exceeded by said engineer in the employment of labor and assistance. Provided, however, that should the county governing body of Cullman County refuse or fail to fix said scale of wages or salaries, the engineer shall request the state highway director to fix the same, and the wages or salaries so fixed by the state highway director shall not be exceeded in the employment of labor and assistance.

Section 13. The Cullman County governing body shall fix the amount of the salary of the county engineer, payable in equal monthly installments from the road and highway funds of Cullman County.

Section 14. Before entering upon his duties the Cullman County engineer shall make and enter into a surety bond in the amount of five thousand dollars ($5,000.00) payable Cullman County, conditioned for the faithful discharge and performance of his duties as such engineer, and for the faithful accounting of all monies or property of the county, which may come into his possession or custody. The bond shall be executed by a surety

company authorized and qualified to do business in Alabama, and shall be approved by the chairman of the Cullman County governing body. The premiums on the bonds shall be paid by the county.

Section 15. The Cullman County governing body shall furnish the county engineer with an office at the courthouse, or elsewhere, at the county seat, and all necessary office supplies, and shall furnish him with necessary transportation in connection with his duties under this Act.

Section 16. The county engineer shall be the custodian of all road tools, machinery, supplies and equipment of Cullman County; and he shall be accountable for the same, at all times. The Cullman County governing body shall furnish the necessary storage facilities in which to keep said tools, machinery, supplies and equipment, and the county engineer shall keep on file in his office, at all times, an up-to-date inventory, containing a list of all said tools, machinery, equipment and supplies belonging to Cullman County.

Section 17. The authority of the county engineer shall be limited to the expenditure of such funds for the purpose of construction, maintenance or repair of public roads, bridges, and ferries of Cullman County as may be set aside and appropriated by the county governing body, as hereinafter provided. It shall also be the duty of the county governing body at some meeting in September of each calendar year, or not later than the first meeting in October following, by order or resolution spread upon the minutes, to fix and determine the amount of funds which will be available for the purpose of building, maintaining and constructing public roads, bridges and ferries of Cullman County for the current fiscal year, beginning on October 1, which said amount; other than the salary of the county engineer and his necessary

expenses, shall not be exceeded by him in building, maintaining and constructing public roads, bridges and ferries in Cullman County during said period. The county governing body, however, is authorized from time to time within such period to increase the amount so allowed to be expended by the county engineer during the period, when such authorization will not conflict with provisions of the general law under the Budget Act, Title 12, Section 74 of the Code of Alabama 1940, and provided, further that if such funds are presently available, and have not heretofore been set aside by the highway department or by the present county commission of Cullman County, immediately upon the effective date of this Act, it shall be the duty of the county governing body to set aside a sufficient portion of said funds for the maintenance of said roads, bridges and ferries until after the first meeting October of the year following approval of this act at a referendum election as hereinabove provided for.

Section 18. The county engineer shall make written requisitions to the chairman of the county governing body for all materials, machinery, equipment, and necessary supplies needed for the construction, maintenance and repair of the public roads, bridges and ferries of Cullman County. Said requisitions shall be filed and presented to the chairman of the county governing body at its next meeting for the approval of the governing body. Provided, however, that the chairman shall have full power and authority to make purchases without first obtaining the approval of the whole commission if the delay caused by the hereinabove procedure, might, in his judgment, cause an unnecessary and harmful interruption in the operation of the county road system.

Section 19. It shall be the further duty of the county engineer to inspect all materials, machinery, equipment, and supplies purchased by Cullman County for use on public roads, bridges and ferries, when the same is delivered, and the same shall not be accepted and paid for without first having been approved by him.

Section 20. In the event an emergency should arise, in which it would be impossible for the Cullman County governing body to employ an engineer, as hereinabove provided for, then, in that event, the county governing body shall employ a competent road supervisor who need not be an engineer, but, when so employed, he shall have all the duties and authority of said engineer, and be subject to the provisions of this Act; but an emergency shall not exist so long as the state highway director can nominate an engineer who would accept employment by the governing body of Cullman County under the terms of this Act, it being the intention of this Act to provide that when county roads are to be maintained or constructed in said county, the supervision thereof shall be either under a county engineer, as hereinabove provided for, or a road supervisor, who is not a member of the county governing body.

Section 21. Nothing herein shall preclude the Cullman County governing body from entering into contracts with private individuals or entities pursuant to Alabama bid law for the repair, maintenance and construction of roads and bridges in Cullman County, and said governing body is hereby empowered to so contract if in its judgment such action would be in the best interests of the County.

Section 22. The provisions of this act are severable. If any part of this act is declared invalid or unconstitutional, such declaration shall not affect the part which remains.

Section 23. All laws or parts of laws which conflict with this act are hereby repealed.

Section 24. Substantive provisions of this act shall become effective as provided in Section 1 hereof; however, the provisions of this act authorizing the calling of the referendum and providing therefor shall become effective immediately upon this act becoming a law.

_____

President and Presiding Officer of the Senate

_____

Speaker of the House of Representatives

EXHIBIT B-13 continued

S. 346

Senate 2-9-78
I hereby certify that the within Act originated in and passed the Senate.

McDowell Lee,
Secretary

House of Representatives
Passes 4-6-78

By: Mr. St. John

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City of Cullman

The City of Cullman's (est. 1980 pop. 16,000) maintenance functions are under the authority of the Street Department. The Department has the maintenance responsibility of 157 miles of streets of which 143 miles are city streets and 47 miles are highways that are maintained by the state. There are 47 miles of unpaved city streets and 96 miles of paved city streets. The Street Department employs approximately 30 persons.

The municipality received $75,000 from the State for fiscal year 1977-78, as its alloted share of funds received from the gasoline tax. The City, although it has no formal agreement with the State, maintains one state road, "Old Hancerviller Highway" since it passes through the municipality. Thusly, the municipality supplies all maintenance materials and the state provides the manpower and equipment. Additionally, the City owns (and maintains) the following equipment: 2-two ton trucks, 2-motor graders, 1-frontend loader and 1-steam generator (tar pot).

Randolph County

District Five (in Maintenance Division #Four) is made up of Chambers and Randolph Counties. The two counties, for the purpose of maintenance and construction, are managed under two distinct systems. Chambers County (which is not included in our case study) adheres to the "Unit" system while its sister county, Randolph, adheres to the "District" system. Both counties are non-captive as defined by the state law.

Randolph County has a population of 20,000. The state highway system within the county consists of 93 miles of road as opposed to the county's 999 miles of road system. The district is allocated $125,000 from the county's gasoline fund for carrying out its maintenance activities. The county engineer has the overall responsibility for maintenance and construction work performed in the four districts.

City of Roanoke

The municipality of Roanoke has a population of approximately 6,000. The maintenance responsibilities are under the direction of the Department of Street and Sanitation, which employes a staff of nineteen. The maintenance crew engages in the layout of dirt streets, i.e., push-out of future streets, that will be paved under a private contract since the city does not have the equipment nor resources to perform this function.

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1 mile = 1.61 km

Out of a budget of approximately $560,000 for the current fiscal year, the following expenses are in the area of street maintenance: 1) Street and Sanitation Department (labor and salaries)--$124,000, 2) Street lights--$22,000, and 3) Other expenses--$30,000.

The Municipality has the following equipment to maintain its street system: 1-motor grader, 1-loader-scoop, 1-bush-hog, 1-tractor-wheel, 1-frontend loader, 4-dump trucks, and 1-roller-flat wheel.

STATE OF ILLINOIS

County Highway Authority

The county board has direct control and supervision of all highways in the county system. The areas of responsibility are repair, maintenance and construction of its highways by contract and/or with its own forces. The above task could be performed without the supervision and/or approval of the State Highway Department. This is done only if no motor fuel tax funds, federal and road funds, or other funds received from the state are used to finance such construction work.

The county, through a resolution, could specify the particular section of highway needing attention, submit the resolution to the State Department of Highways for its approval whereupon funds could be assigned to this particular section. Work on any highway section is advertised for bid and/or done through the county highway department if the proper staff and equipment are available.

County Superintendent of Highways (Exhibit B-14)

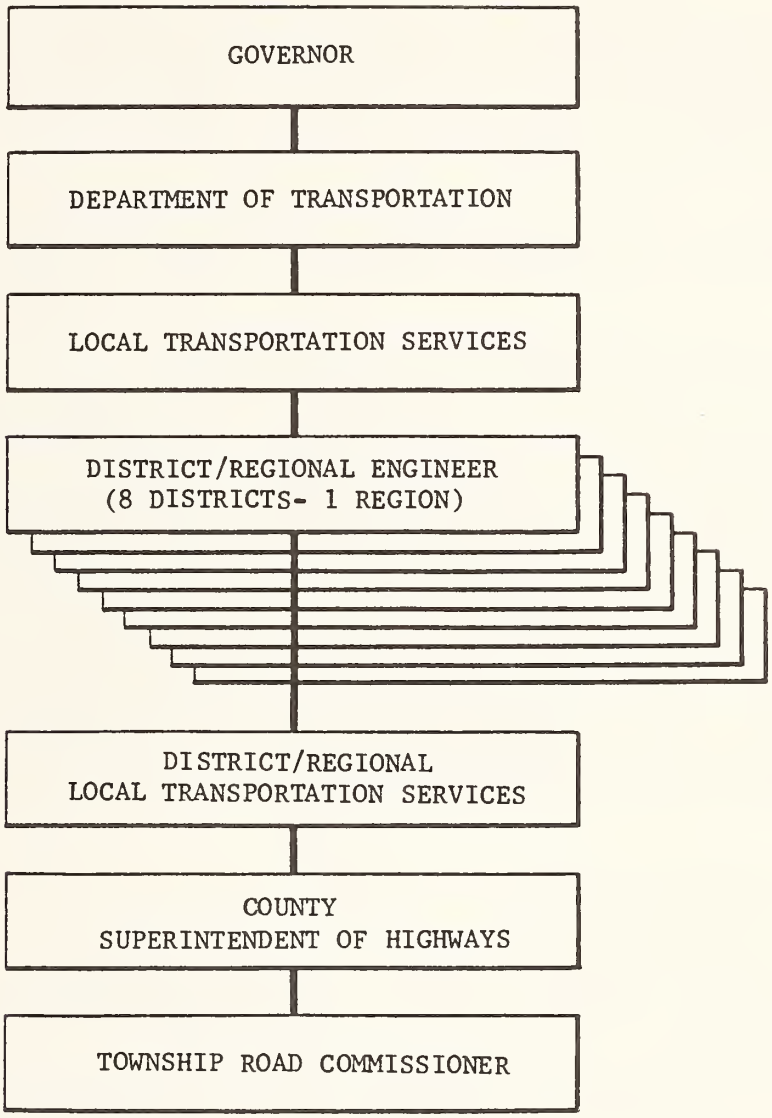
In the State of Illinois, at the county government level, the county board must submit a list of five names of state residents who wish to apply for the position of county superintendent of highways to the Department of Transportation. Each person must hold a valid certificate of registration and/or be a registered professional engineer, or land surveyor. Other qualifications include:

- baccalaureate degree in engineering with two years of experience in civil-highway engineering in the construction and maintenance of streets or highways: or
- ten years' practical experience in the above areas with two years' administrative experience.

Each candidate meeting either of the above-reference qualifications is given an examination and the candidates meeting satisfactory grades are recommended to the county board for appointment by the Department of Transportation. Preference for the position is given to county residents. The term of office is six years and is reappointable. County superintendent tasks include:

- supervision of construction-maintenance of all county highways
- provide advice as to the best methods of construction, repair, and/or maintenance of township and district roads

EXHIBIT B-14



MOTOR FUEL TAX
ADMINISTRATIVE ORGANIZATION CHART

- prepare maps, plans, specifications and estimates of associated highway expenditures
- act as county agent in matters relating to construction and maintenance involving county funds
- recordkeeping functions for all contracts and material purchases
- act on behalf of the county in all matters relating to the construction and maintenance of county unit district roads

County and Municipal Cooperation Agreements

The county board has the authority, via the State Transportation Department, to enter into service agreements with any municipal corporation within the county limits. The service agreements may cover any county highway and/or section for the purpose of maintenance that is located within the municipal corporation. All activities related to the maintenance of highways under such an agreement must fall within the jurisdiction of the County Superintendent. Attached is one service agreement (Exhibit B-15) from the City of Alton located in district eight. The agreements entitled "Agreements for Maintenance of Municipal Streets" describe in detail all of the streets contracted for and the various services that the city will perform on behalf of the state.

Highway Tax Funds--County

The county board has the authority to levy its own tax for all highway purposes, and is called a "county highway tax." These tax funds are earmarked for the purposes listed below:

- improve, maintain, repair, construction and reconstruction
- payment for lands, quarries, pits
- acquiring-maintaining machinery and equipment
- providing housing for highway offices and equipment

County highway tax funds are levied exclusive of principal and interest on outstanding road bonds at a rate of and not exceeding ten percent, or the rate limit in effect on July 1, 1967, whichever is greater of the value of the taxable property.

EXHIBIT B-15

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

AGREEMENT FOR MAINTEANCE
OF
MUNICIPAL STREETS

THIS AGREEMENT, made and entered into this 1st day of July A.D. 1977, by and between the State of Illinois, acting by and through its Department of Transportation, hereinafter referred to as the "Department" and the City of Alton, Illinois a municipal corporation organized and existing under and by virtue of the laws of the State of Illinois, hereinafter referred to as the "Corporation."

WITNESSETH, that for and in consideration of the convenants hereinafter mentioned, the Corporation agrees to operate and maintain for the period beginning July 1 1977, and ending June 30 1978, in a manner satisfactory to the Department, portions of certain streets being used as extensions or parts of State highways lying within the boundaries of the Corporation.

It is understood and agreed that this agreement will be extended to cover the twelve month period ending June 30 1979, under the same terms, conditions and amounts stipulated herein unless the Department or the Corporation gives written notice to the other party of termination or adjustment as hereinafter stipulated.

It is further understood that the terms of this agreement may be adjusted by addendum during the agreement's tenure to compensate for the addition or deduction of lane-miles of streets to be maintained. Rates of compensation will not be adjusted during the time period covered by the agreement.

Operation and maintenance includes but is not limited to all routine surface and pothole repairs, temporary full-depth patches, expansion bump removal on bituminous surfaces, crack and joint sealing, cleaning and litter pickup, snow and ice control and all other routine operational services.

The Corporation agrees to operate and maintain the streets covered by this agreement in the best interests of the people of the State of Illinois. The portions of streets to be maintained are described on the Computation Sheet (Form Mai. 411) attached hereto and made a part hereof.

The Corporation agrees to permit no cuts or openings in the curbs or pavements of the streets covered by this agreement without the written approval of the Department. Pavement cuts, curb openings, utility frames and municipal frames and grates or covers are to be restored, repaired, adjusted and maintained to the satisfaction of the Department at no expense to the State.

The Corporation agrees that, except in extreme emergencies, it will not undertake or authorize repairs not covered by this agreement, at the expense of the State, without securing the approval of the Department.

The Department, in contracting with the Corporation for the maintenance and operation of the effected streets, has curtailed procurement of tools, equipment and personnel. Reversion to maintenance by State forces could entail time-consuming reallocation of resources. The Corporation therefore agrees that it will not terminate this agreement nor refuse to enter into subsequent agreements without giving the Department written notice at least

90 days prior to such termination. If the Corporation gives the Department written notice of intent to enter into no future agreements, the current agreement will remain in force for 90 days from the receipt of such notice or until the termination date of the current agreement, whichever date is the later. The Department may at its discretion, release the Corporation from the agreement before the expiration of the 90 days required by the above stipulation.

In consideration of the satisfactory maintenance and operation of streets covered by this agreement, the Department will pay the Corporation a total sum of $11,603.65 dollars ($11,603.65), for the twelve month period covered by the agreement, payable as described below.

On or about March 31, June 30, September 30, and December 31, of each year, subject to an inspection by the Department, the Department will authorize the Corporation to invoice the Department in an amount equal to approximately one-fourth of the total annual allowance stated above.

It is further understood and agreed that the Department, when in its judgement it is expedient to do so, and at its discretion, shall have the right to terminate this agreement by giving written notice to the Corporation of not less than thirty (30) days in advance of the date of such termination.

IN WITNESS WHEREOF the parties hereto have caused this agreement to be executed by thir proper officials thereto duly authorized on the date first above set out.

City (or Village) of

Alton

By _____
Mayor or President

Attest:

_____
City (or Village) Clerk

(Seal)

State of Illinois
Department of Transportation

By _____
Secretary

Attest:

_____
Director of Highways

Recommended:

_____
Engineer of Maintenance

Recommended:

_____
District Engineer

STATE OF ILLINOIS
COUNTY OF Madison
CITY (OR VILLAGE) OF Alton

I, Paul A. Price, Clerk of the City (or Village) of Alton, do hereby certify that the foregoing is one of the original copies of an agreement which was executed on behalf of the City (or Village) of Alton by Paul A. Lenz, Mayor (or President) and Paul A. Price, Clerk, who were duly authorized to execute said agreement by a resolution, duly adopted by the City Council (or Board of Trustees) of such City (or Village) on the 8th day of June, A.D. 1977.

Given under my hand and the official seal of the City of Alton, this 15th day of June, A.D. 1977.

(Seal)

_____
Clerk

Form Mai.411(Rev.6-75)

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
Sheet 1 of 3
COMPUTATION SHEET - MUNICIPAL MAINTENANCE

District No. 8
City or Village Alton, Illinois
For the Period
Beginning July 1 1977 Ending June 30 1978

Route	Section	Street Name	INTERSECTING STREETS From	To	Total Width	Built By	PORTIONS UNDER AGREEMENT No. Width	Lanes	Location	Length in Feet	Lane Miles	Adt/ Lane	Source	Rate La/Mi	Adj Factor	MAINT. ALLOWANCE Route Sub-totals	Totals
US 67		Godfrey Road	Delmar St.	Rozier & Belle Streets	42'	City	33'	2	Ctr. 33'	1321	0.50	6450	S-75	629	1.19	374.26	
		Belle Street	Rozier Street	Piasa Street	20'	City	20'	2	All	4488	1.70	6450	S-75	629	1.19	1272.47	
		Piasa Street	Belle Street	17th Street	20'	City	20'	2	All	2015	0.76	6450	S-75	629	1.19	568.87	
		Piasa Street	W. 17th Street	W. 16th Street	36'	City	24'	2	Ctr. 24'	300	0.11	6450	S-75	629	1.19	82.34	
		Belle Street	W. 16th Street	W. 15th Street	40'	City& State	24'	2	Ctr. 24'	264	0.10	6450	S-75	629	1.19	74.85	
			W. 15th Street	W. 13th Street	40'	City& State	24'	2	Ctr. 24'	317	0.12	6450	S-75	629	1.19	89.82	
US 67 South Bound			W. 13th Street	W. 9th Street	40'	City	12'	1 1	12' Lane	1320	0.25	6450	S-75	629	1.19	187.13	
			W. 9th Street	W. 4th Street	40'	City& State	12'	1 1	12' Lane	1267	0.24	6450	S-75	629	1.19	179.64	
		Piasa Street	Third Street	Fifth Street	46'	City	12'	1	Ctr. 33' (9' out for R.R.)	600	0.11	6450	S-75	629	1.19	82.34	
		4th Street	Belle Street	State Street	30'	City	9'	1 1	9'Lane	264	0.05	6450	S-75	629	1.19	37.43	
		State Street	Fourth Street	Third Street	52'	City	12'	1 1	12'Lane	264	0.05	6450	S-75	629	1.19	37.43	
		State Street	Third Street	Broadway	52'	City& State	12'	1 1	12'Lane	264	0.05	6450	S-75	629	1.19	37.43	
		Piasa Street	Broadway	Third Street	48'	City& State	12'	1 1	12' Lane	283	0.05	6450	S-75	629	1.19	37.43	
		Broadway	State Street	Piasa Street	36'	City& State	12'	1 1	-E.B. Lane	528	0.10	6450	S-75	629	1.19	74.85	
US 67 North Bound		Piasa	5th Street	Belle Street	36'	City	12'	1 1	Lane North Bound 12'	2693	0.51	6450	S-75	629	1.19	381.74	

Form Mai.411(Rev.6-75)

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
Sheet 2 of 3
COMPUTATION SHEET - MUNICIPAL MAINTENANCE

District No. 8
City or Village Alton, Illinois
For the Period
Beginning July 1 1977 Ending June 30 1978

Route	Section	Street Name	INTERSECTING STREETS From	To	Total Width	PORTIONS UNDER AGREEMENT Built By	Width	No. Lanes	Location	Length in Feet	Lane Miles	Adt/ Lane	Source	Rate La/Mi	Adj Factor	MAINT. ALLOWANCE Sub-totals	Route Totals
US 67		Broadway	Piasa Street	Market Street	58'	City& State	36'	2	2-E.B. Lanes	264	0.10	6450	S-75	629	1.19	74.85	
			Market Street	Langdon St.	59'	City& State	36'	2	2-E.B. Lanes	2040	0.77	6450	S-75	629	1.19	576.35	
		Henry Street	Broadway St.	Front Street	67'	City	12'	1	1-W.B. Lane	264	0.05	6450	S-75	629	1.19	37.43	
		Front Street	Henry Street	Market Street	32'	City	12'	1	1-W.B. Lane	2376	0.45	6450	S-75	629	1.19	336.83	
			Market	Broadway	18'	City	9'	1	1-W.B. Lane	475	0.09	6450	S-75	629	1.19	67.37	
		Broadway	Langdon	Henry	59'	City& State	12'	1	1-E.B. Lane	600	0.11	6450	S-75	629	1.19	82.34	4693.20
Ill. 140			Langdon	Henry	59'	City& State	36'	2	Ctr. 2 Lanes	600	0.23	8225	S-75	665	1.19	182.01	
		Broadway	Henry Street	Ridge Street	48'	City& State	36'	2	Ctr. 36'	528	0.20	8225	S-75	665	1.19	158.27	
			Ridge Street	Cherry Street	56'	City& State	36'	2	Ctr. 36'	1848	0.70	8225	S-75	665	1.19	553.95	
			Cherry Street	4th Street	56'	City& State	36'	2	Ctr. 36'	1848	0.70	8225	S-75	665	1.19	553.95	
			4th Street	Washington St.	56'	State	36'	2	Ctr. 36'	600	0.23	8225	S-75	665	1.19	182.01	1630.19
Ill. 3		Broadway	Wash. Street	1250' East	47'	State	36'	2	Ctr. 36'	1250	0.47	16450	S-75	829	1.19	463.66	
			1250' East of Washington St.	Cut Street	54'	State	36'	2	Ctr. 36'	1873	0.71	16450	S-75	829	1.19	700.42	
			Cut Street	Sering Street	56'	State	48'	4	Ctr. 48'	1140	0.86	8250	S-75	665	1.19	680.56	1844.64

Form Mai.411(Rev.6-75)

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
Sheet 3 of 3
COMPUTATION SHEET - MUNICIPAL MAINTENANCE

District No. 8
City or Village Alton, Illinois
For the Period
Beginning July 1 1977 Ending June 30 1978

Route	Section	Street Name	INTERSECTING STREETS From	To	Total Width	Built By	PORTIONS UNDER AGREEMENT Width	No. Lanes	Location	Length in Feet	Lane Miles	Adt/ Lane	Source	Rate La/Mi	Adj Factor	MAINT. ALLOWANCE Sub-totals	Route Totals
Ill. 140		College Ave.	GM&O R.R.	Lucile Ave.	36'	City	24'	2	Ctr. 24'	528	0.20	6400	S-75	628	1.19	149.46	
			Lucile Ave.	Main St.	36'	City& State	24'	2	Ctr. 24'	3240	1.23	6400	S-75	628	1.19	919.20	
			Main Street	Washington St.	51'	State	36'	2	Ctr. 36'	394	0.15	6400	S-75	628	1.19	112.10	
		Washington St.	College Ave.	373' South	49'	City& State	36'	2	Ctr. 36'	373	0.14	6400	S-75	628	1.19	104.62	
			373' South of College Ave.	Broadway	42'	City& State	24'	2	Ctr. 24'	6574	2.49	6400	S-75	628	1.19	1860.83	
																	3146.21
Ill. 3		Ridge Street	Broadway	F.A.P. 155 Great River Rd.	24'	City	24'	2	Ctr. 24'	1003	0.38	7000	S-75	640	1.19	289.41	289.4
											Totals 14.96						11,603.65

1 foot = 0.3 m
1 mile = 1.61 km

The Revenue Act provides that eleven percent of the motor fuel tax funds available for allocation shall be distributed to counties of one million or more. The Act, also provides that twelve percent of the available motor fuel tax funds shall be allocated to counties of less than one million. The unit allotment for a county is in proportion to the motor vehicle license fees received from the residents of the county during the preceding calendar year.

Counties with a population of one million (or more) need not expend its total budget in a single fiscal year, but, must in the second fiscal year operate to reduce in like amount any subsequent levy. All funds collected from a levy shall be placed in a "county highway fund" and used for highway purposes only. An additional annual tax can be levied in counties having less than one million inhabitants at the rate not to exceed .05 percent of the value of the taxable property in a county. The funds are placed in a "county bridge fund" and are used for the administration of all highway improvement functions.

County Motor Fuel Tax Funds

The eleven percent revenue funds received by the county might be employed by the county in one or more of the following ways:

- county highway construction
- state highway construction*
- general maintenance for state and county highways*
- retiring bonds and paying obligations incurred for highway construction on state and county highways*
- paying bonds and interest for the purpose of constructing super highways*
- research and investigations connected with highway usage (i.e., future impact studies)*
- to pay county's share of the cost of projects under federal aid urban-secondary highway system*
- allocate parts of funds to a Local Mass Transit District*
- garage its construction and/or maintenance equipment-materials*

*--Subject to approval by the State Transportation Department.

- auxiliary office space--construction and/or maintenance
- paying any and all expenditures resulting from activities conducted by the circuit court and departments having any relationship to highways**
- paying principal and interest on bonds issued for highway improvements*
- construction and maintenance of leased office space related to highway activities**
- designating signs and surface markings for bicycle routes along county highways
- construction and maintenance of grade separations and approaches for highways and railroads

Township and District Roads (Exhibit B-16)

All roads which are part of the township and district road system are under the jurisdiction of the several road districts in which they are located.[2] A road district is comprised of either a township, township district, road district, or county unit road district.

There are two basic types of county organizations that function within the concept of a road district. The first type of road district exists in a county that has a unit of government called a "township organization". In this framework each road district is responsible for activities relating to the construction, repair, maintenance, financing and supervision of township roads. The second type of road district exists in a county where there is no township organization. Residents by resolution of its municipal body can request the county board to organize it into a separate road district. All powers are then vested in a municipal body to levy a tax for the proper construction, maintenance, and repair of roads in that district.

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*--Subject to approval by the State Transportation Department.

**--Having a population of one million or more.

[2]--Subject to such supervision by the county and department as is provided in the code.

EXHIBIT B-16

PERMISSABLE USES OF
MOTOR FUEL TAX FUNDS BY
TOWNSHIP HIGHWAY COMMISSIONERS

6-701.1 "Construction of township or district roads within road district". In cooperation with the County Superintendent of Highways, Highway Commissioners may select roads to be constructed with motor fuel tax funds. Preference shall be given to public school bus routes and rural free delivery mail routes.

6-701.2 "Maintenance of certain township and district roads". Any road constructed under Section 6-701.1 or any road removed from the county highway system, when the road was eligible for maintenance under Sections 5-701.1 to 5-701.7, may be maintained by the Township Highway Commissioner with motor fuel tax funds. In addition to the above, any road constructed or reconstructed by the Department and any road constructed with funds derived by creating an indebtedness which is retired partially or wholly with motor fuel tax funds. In addition to the above, any road constructed or reconstructed by the Department and any road constructed with funds derived by creating an indebtedness which is retired partially or wholly with motor fuel tax funds is also eligible for maintenance.

The township may, with the approval of the County Superintendent of Highways and the Department, allocate not more than 25% of their motor fuel tax monies to purchase materials only, for the maintenance of any other township or road district road.

6-701.4 "Indebtedness incurred on motor fuel tax road - engineering costs". With the approval of the Department, indebtedness incurred in the engineering and construction of any road selected under Section 6-701.1 may be paid with motor fuel tax funds.

6-701.5 "Allocation of money to local mass transit districts". A township may turn over a portion of its motor fuel tax monies to a mass transit district if the township is a participating member of the District.

6-701.6 "Payment of principle and interest of road bonds". With the approval of the Department motor fuel tax funds may be used to pay principle and interest on bonds issued for construction or improvement of road within district.

Note: 6-701.1, etc. are statutory references to the Illinois Highway Code.

Although the statutes do not spell out that motor fuel tax funds can be used to purchase R.O.W. for MFT improvement, the Department has interpreted that these costs are a part of construction costs and are eligible for MFT expenditures. Motor fuel tax funds may also be used for traffic signs, equipment rental, railroad signal protection, railroad crossing work, and cost of utility adjustments.

In addition, under this non-township organization form, a county board has full and complete authority and jurisdiction to alter the boundries of road districts, create new road districts and to consolidate road districts in their respective counties. The board, however, must be petitioned before action is taken on the above cited changes. The Highway Commissioner requires that a person must be a legal voter within the road district and have resided in the area for at least one year. The term of office is four years and the functions of the Highway Commissioner include:

- layout, alter, widen and/or vacate townships or district roads
- dedicate roads and streets for public use
- record dedicated streets and roads
- determine the taxes necessary to be levied on property within the Commissioner's road district for road purposes and to state separately the amounts to be levied for the construction and maintenance of such roads (bridges), including associated purchases, repair of machinery, oiling of roads and the prevention-exterpation of weeds.
- initiates warrants from the county treasurer for road purposes
- lets contracts, employes labor, purchase materials and machinery
- performs road repair and improvements as required
- stores and shelters all machinery, equipment, and other properties
- initiates agreements with other highway district commissioners for lease and/or exchange of idle machinery
- erects, repairs, maintains traffic control devices and signs
- provides lighting of public roads
- provides county superintendent of highways with all warrants for work performed and amount expended
- builds sidewalks in unincorporated communities
- prepares annual report of road district expenditures

Municipalities

The municipalities as a whole receive 32 percent of the funds available for distribution out of the Motor Fuel Tax Fund. Allotments for each municipality are disbursed proportionately to each as a percentage of the state's total municipal population.

The State Department of Transportation vest in each municipality the authority to construct and maintain all highways-streets within its incorporated limits subject to any agreements that would authorize either party to undertake any responsibilities not spelled out in the provision of the State Code. There are three important areas of responsibility that the State Transportation Department requires of the municipalities for them to receive their Motor Fuel Tax Fund allotment. The first requirement (limited to municipalities over 5,000 people) is the development of a long-range highway transportation plan based on a twenty year planning period. The plan will make estimates of both expected future revenues for this period, and road expenditures for construciton, maintenance and other related expenditures which can be expected during the planning period. Other features of the plan include:

- existing municipal streets
- future highways (planned/programmed/proposed) by corridor
- projected twenty year traffic volumes
- geometric design features and standards for different levels of traffic flow
- major street improvements expected within the first five years of the plan

The second requirement of a fulltime city or public engineer meeting the state's professional and education standards.

The third requirement is the existance of an adequately organized, staffed, equipped and financed engineering office, so as to satisfactorily carry out the tasks of construction and maintenance of the municipality's street system.

Uses of the motor fuel tax funds permitted by the municipalities are listed as follows:

- construction and maintenance of municipal streets

- county road extensions within the municipal limits --Federal-Aid Primary, Type 2, and Fedaral-Aid Urban System Highway within the municipality
- streets within corporate limits of any park district
- official traffic control signals
- street lighting systems, including those on state highways
- storm sewers, sanitary sewers
- pedestrian crossings (underground and overhead)

In addition, funds can be expended for the following:

- fifty percent matching costs for Federal-aid system construction costs
- highway research and planning
- planning of engineering costs
- debt servicing
- fund transfer to local Mass Transit District
- toll bridge(s) planning and construction
- off-street parking property purchases

STATE OF SOUTH CAROLINA

Georgetown County Maintenance System

Georgetown County is divided into four maintenance management districts. Each district has one elected member who is a member of the County Board which has jurisdiction over all county matters. The County Board Chairman is also elected. The County Representative in the State Legislature has a large impact on the selection of roads that will receive increased maintenance allocations on an annual basis.

The maintenance management system for the county highways is built around 500 miles (805 km) of improved roads. The maintenance work crew operates on a monthly rotation basis which means that each of the four districts can undertake its general maintenance functions only once every four months. The State of South Carolina still makes use of the chain gang system by employing any person who has been sentenced for a period of more than 90 days. The process of preparation of a county road for the state maintenance management system begins with the district councilman and state senator who opens bids for construction and winds up with the state accepting or rejecting authority for the road segment in question if it does not meet the state pre-determined standards. Planned Unit Development roads are taken over by the county for maintenance management as soon as the developer "pushes out" a path to his development. The county maintenance management system consists of only 35 persons operating 36 pieces of equipment on an annual budget of $350,000. Funds for highway maintenance are generated from various taxes levied by the county and from the "C" fund divided up among the four districts. Some federal grant funds are used for new construction, but not for general highway maintenance. The county has no maintenance jurisdiction in municipal areas or on state system.

District Five, which includes Georgetown County, received an allotment of $763,000 for maintenance during the current fiscal year. The county received from the "C" funding programs $467,000 for construction purposes. Road mileage in the county falls within the following systems:

State Primary Systems	State Secondary Systems	Interstate Systems
148 miles	452 miles	0 miles

1 mile = 1.61 km

City of Georgetown

The City of Georgetown has a very limited maintenance management system. Ninety-five percent of its street system is under the authority of the State Maintenance District. Under the direction of the Street and Sanitation Department, the City is responsible for cleaning and drainage operations only. The city does, when necessary, a limited amount of patch work on both state and county roads, but there are no formal agreements to do so. Major maintenance work is done by the county and state highway agencies. Georgetown does receive and use community development funds for resurfacing some streets and areas designated for redevelopment. In addition, it requests "C" funds through the county delegation to be used for resurfacing and general paving minor streets.

Spartanburg County

Spartanburg County has the largest road system (1,266 miles (2037 km) - 55% is unpaved. As in Georgetown County all road systems must meet state standards before they are brought into the state maintenance management system. Spartanburg County's maintenance system differs from that of Georgetown in that the responsibilities of highway maintenance are under the direction of one elected county supervisor. The county is allocated a portion of the state gasoline tax in addition to its share of the "C" fund allotment. A bond issue of several million dollars is in the planning stage for highway resurfacing on a priority basis throughout the county.

Spartanburg falls under District Three maintenance supervision. The county was allocated $1.6 million in maintenance funds for the current fiscal year. For construction purposes the District was allocated $1.2 million which it received as its "C" funding program. The highway mileage system within the county is classified as follows:

State Primary Systems	State Secondary Systems	Interstate Systems
372 miles	819 miles	75 miles* (*completed)
1 mile = 1.61 km		

The county supervisor is the only elected official who is responsible to the electorate in Spartanburg County.

City of Spartanburg

The City of Spartanburg maintains 165 miles (215.5 km) of its own city streets. In addition, there are nearly 50 miles (80.5 km) of the state highway system within the municipal limits over which the City has no legal maintenance responsibilities. There is, however, some limited intergovernmental cooperation between the state highway department and the City on state roads within the city limits. The City will provide equipment and labor to make repairs on state roads within city limits if the state agency supplies the materials for such work. There exist no formal agreements between the parties for this joint effort. The City, like the county can request of the state to adopt into its system any road segment that meets the state standards. There are no county roads that fall within the maintenance jurisdiction of the City. Local residents by a two-thirds majority signed a petition to have the City upgrade a street section and thereafter continue its maintenance function. Fifty percent of the costs are assumed by the City with the remainder being equally allocated among the property owners fronting the improved streets.

The Public Works Department, through its five divisions, are responsible for all maintenance functions in the municipality. (See Exhibit B-17). The Department, for the current fiscal year, was allocated $2.5 million for all maintenance activities which was distributed among the various activities necessary to carry out the Department's functions (see Exhibit-B-18).

EXHIBIT B-17

PUBLIC WORKS

CITY MANAGER

PUBLIC WORKS DIRECTOR

SECRETARY

INSPECTION	ENGINEERING	STREET, PARKING AND SEWER	TRAFFIC ENGINEERING	SANITATION AND STREET CLEANING
1 Permit Clerk	1 Director Engr.	1 Superintendent	1 Engineer	1 Superintendent
1 Zoning Admin./ Heating Inspect.	1 Asst. Engineer	1 Foreman/Assistant Superintendent	1 Traffic Signal Supervisor	1 Assistant Superintendent
1 Electrical Insp.	2 Inspectors	3 Foreman I	1 Traffic Signal Technician II	1 Labor Foreman II
1 Plumbing Insp.	2 Party Chiefs	1 Maint. Clerk II	1 Traffic Signal Technician I	2 Labor Foreman I
1 Building Insp.	1 Draftsman	1 Maint. Clerk I	1 Traffic Maintenance Man II	4 M.E.O. III
	2 Instrument Men	1 Chain Gang Foreman	1 Traffic Maintenance Man I	6 M.E.O. II
	4 Rodmen	1 Street Cut Insp.		19 M.E.O. I
		1 Brick Layer		2 Laborer II
		1 M.E.O. IV		41 Laborer I
		3 M.E.O. III		
		2 M.E.O. II		
		4 M.E.O. I		
		6 Laborer II		
		10 Laborer I		
		2 Laborer III		

EXHIBIT B-18

PUBLIC WORKS

Appropriations by Fund Source

	General Fund 01	Sewer Operation Fund 26	Total
Inspections - General	$ 78,525	$ -0-	$ 78,525
Administration	47,922	-0-	47,922
Street Cleaning	512,393	-0-	512,393
Sanitation	647,242	-0-	647,242
Sewer Maintenance	86,761	86,761	173,522
Engineering	213,828	-0-	213,828
Traffic Engineering	150,365	-0-	150,365
Street Maintenance	549,376	-0-	549,376
Street Lights	169,500	-0-	169,500
Parking Lot Maintenance	7,217	-0-	7,217
TOTAL	$2,463,129	$ 86,761	$2,549,890

Oregon State Department of Transportation

Meetings held on September 1 and 6, 1978 with maintenance staff of the Highway Division indicated a very strong interest in the concept of service agreements between different highway departments, and the desire to extend and/or refine their application through further study.

Following are two documents of immediate relevance to this exchange:

- a sample listing of service agreements currently in operation in one of the State's maintenance divisions; and

- a letter received from the State Department of Transportation following the meeting noted above.

EXHIBIT B-19

OREGON STATE HIGHWAY DIVISION
INTER-OFFICE CORRESPONDENCE
Sylvan, OR 97221
May 22, 1978

FILE:

FROM: W.W. Geibel
DISTRICT ENGINEER - 2A

TO: Mike Stovall
REGION MAINTENANCE ENGINEER

SUBJECT: Documentation of Maintenance Arrangements with Local Governments
Maintenance Exchange Study

Per John Sheldrake's request I will outline in narrative form our existing formal, semi-formal and informal agreements with local governments that I have dealt with in recent history.

Formal Agreements

1) City of Portland Maintenance Agreement - This agreement outlines shared maintenance responsibility on State highways within the City of Portland. Basically the agreement calls for us to maintain the roadway surface between the curbs or the ditch slopes. Our responsibilities include maintenance of the surface, cross culverts, structures, plowing and sanding. City duties include maintenance of curbs, sidewalks, pedestrian facilities, landscaped areas behind the curbs, brush, storm sewers, snow berm removal and sweeping of the roadway. In addition, the City maintains all signals on the highway system and all illumination on non-interstate highways.

2) Signal Agreements - We have formal agreements with cities, counties, school districts, fire districts and recreation districts. These agreements cover shared responsibilities for construction, maintenance and power costs. The responsibilities vary in all different combinations of these duties. Construction is covered both by contract and State force work.

3) Our Cost Sharing Agreements with League of Oregon Cities and Association of Oregon Counties - These broad agreements are our general guideline for cost sharing for many types of traffic controlled facilities. If this list goes to Mr. Coulter he should become familiar with these agreements.

4) Zoo Interchange Agreement - The City of Portland maintains the landscaping within this interchange on the Sunset Highway.

5) Bike Path, City of Wilsonville - Clackamas County and the State Highway Divisions entered a formal agreement whereby the County would build a bike path, and widen Wilsonville Road through our interchange right-of-way. The State would contribute $60,000.00 toward that cost.

6) Use with Columbia County for Oak Ranch Pit - This is covered by the original property transfer deed.

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TO REGION 1

Semi-Formal Agreements (covered by letter)

1) Maintenance of City and County Maintained Signals Both on On and Off System Roads - This includes between 30 and 40 signals within the cities of Beaverton, Hillsboro, Tigard, St. Helens, Clatskanie, Lake Oswego and Washington County. Our cost and manpower efforts in this endeavor is mammoth compared to our other agreements. This is the most significant item on the list.

2) Equipment Rental From Other Counties - An example would be our rental of Multnomah County's pavement planer.

3) Participation in Mutual Drainage Problems - We have entered into two of these with the City of Tigard via letter of agreement betterment order and billing from the City which will have amounted from $2,000 to $3,000 in the next few years.

4) Channelization, City of Hillsboro - What started out to be a formal agreement for placing an additional lane at the intersection of T.V. Highway and 10th Street became a more informal cost sharing program. The City installed the widening and the State supplied the necessary signal modifications. The signal modifications amounted to over $11,000.00.

5) Landscape Installation and Maintenance, City of Tigard - This involved a letter of agreement whereby the City and State and local garden clubs participated in a beautification project. Each city now maintains these projects.

6) Target Range, West Linn City Police - This agreement authorizes the West Linn City Police to utilize Highway Division property for a target practice range.

Informal Agreements

1) Up until recently the City of Beaverton has swept the State highways within the city limits. Their budget restrictions have caused them to cease this operation.

2) Mutual Trading of Equipment Between Our Section Foremen and City Maintenance Supervisors - An example would be when we asked the City of Hillsboro to assist us in clearing several hundred feet of our storm sewer line on 10th Street in Hillsboro. We reciprocated by using our backhoe to clean the outfall off our system.

3) Informal Arrangements Between Supervisors for Parking of Equipment on a Temporary Basis - We plow and sand Scholls Ferry Road between Beaverton-Hillsdale Highway and Sunset Highway. This portion of the highway is under the jurisdiction of Multnomah and Washington counties. This is strictly for our own use in going to and from our maintenance shed but it does serve the public as well.

EXHIBIT B-20

ROBERT W. STRAUB
GOVERNOR

Department of Transportation

TRANSPORTATION BUILDING, SALEM, OREGON 97310

September 6, 1978

Joel Eiger
National Institute for
Community Development, Inc.
1815 N. Lynn St., Suite 1000
Arlington, VA 22290

Dear Joel:

It was a pleasure meeting you in the Salem Maintenance Office this morning. Your study, "Evaluating Intergovernmental Responsibilities for Highway Maintenance" is rather intriguing. There certainly is a place for cooperation between governmental agencies in the maintenance of their various highway systems.

Your current study, like most first approaches to research problems, identifies issues, identifies past writings on the subject and prepares everyone for phase 2, which usually undertakes specific studies and develops criteria for future use. I would expect your first product would not be of particular value to maintenance operations people. By the same token, it is very evident that there would be value in carrying on the research into a phase which would:

1) Identify maintenance activities most suitable for cooperative agreements.

2) Develop criteria for determining when cooperative agreements should be entered into:

   Examples:

   a) Idle equipment use.
   b) Unscheduled manpower use.
   c) Remoteness of work from headquarters.
   d) Specialized activities.
   e) Cost savings.

As I mentioned in our meeting, perhaps a logical approach to determining when additional work can be performed by one agency for another would result from an examination of the work load of the agency's personnel and the idle equipment time of an agency's equipment fleet. Any time equipment is idle, it is not paying its way and work should, logically, be solicited to keep it busy.

This approach is, perhaps, an extension of Maintenance Management, as that system is aimed at leveling the work load of an agency.

A certain amount of emergency work, overtime and outside work is normally programmed into maintenance management but it is somewhat speculative and not a certainty.

If your research can produce a system which develops criteria for taking on work for other agencies which is mutually beneficial economically, then the research is worthwhile.

My best wishes to you in your work.

Very truly yours,

D. H. Moehring, Manager
Office of Project Management

DHM:lml

MINNESOTA STATE DEPARTMENT OF TRANSPORTATION

Telephone conversations were held September 7 and 8, 1978 with the Chief, Maintenance Division of the Hennepin County Department of Transportation. A similar interest was expressed in seeing further study of the service agreement concept, and is reflected in the following two documents:

- Letter of October 4th, 1978 from the Chief, Maintenance Division
- Summary table of maintenance agreements currently in operation

EXHIBIT B-21

HENNEPIN

DEPARTMENT OF TRANSPORTATION
320 Washington Av. South
Hopkins, Minnesota 55343

935-3381

October 4, 1978

Mr. Joel Eigen
Principal Investigator
National Institute for Community Development, Inc.
1815 North Lynn Street
Suite 1000
Arlington, Virginia 22209

Dear Mr. Eigen:

First of all, may I thank you for your nice letter of September 22nd. I certainly would be interested in reviewing your report on service agreements. I am presently considering the feasibility of entering into agreements for snow and ice control on certain, selected county highways within some five or six communities beginning in 1980. Therefore, your findings could prove very timely and worthwhile for us.

Per your request, I am sending an inventory of the present agreements we have with other agencies. I am also enclosing for your review, a copy of the routine maintenance agreement with the City of Minneapolis. Through negotiations with the city, the unit costs are established from costs experienced by the county on certain, selected highways. I hope this information may be of some value toward your present or future project studies.

If I can be of further assistance, please feel free to call.

Very truly yours,

J. M. Kirtland
Chief, Maintenance Division

JMK:vj
Encl.

EXHIBIT B-22

MAINTENANCE AGREEMENTS

ACCOUNTS PAYABLE

Agreement No.	Agency	Type	Description
PW 38-20-77	City of Minneapolis	Routine Maintenance	Maintenance of County State Aid Highways, traffic control signals, and selected bridges in the City of Minneapolis
PW 15-20-78	City of Minneapolis	Extraordinary Maintenance	Sealcoating of selected highways in Minneapolis
PW 45-10-77	City of St. Anthony	Snow and Ice Control	Winter maintenance of Hennepin County highways by City of St. Anthony.

ACCOUNTS RECEIVABLE

MHD Agreement No. 1546 Supplement No. 5	State of Minnesota	Routine Maintenance	Maintenance of the common alignment of TH 169 and CSAH 62.
PW 12-73-74	Wright County	Bridge Maintenance	Maintenance of Hennepin County bridges - 5000003, 5027532 and 5027554.
PW 11-72-74	Scott County	Bridge Maintenance	Maintenance on Hennepin County Bridge 5000007.

9/29/78

FIELD TRIP INTERVIEWEES AND DOCUMENTATION

INTRODUCTION

The following list of personnel were contacted and interviewed in the field by one of NICD's staff members. The interviews were conducted in order that we might get first-hand information related to the maintenance management operations of the state, county and municipal agencies. All persons contacted were in some respect responsible for and/or involved in the maintenance administration of the highway system in their area. Where possible site visits to actual road segments were made in order to enhance NICD's knowledge of the local area's responsibilities within the framework of maintenance management.

STATE OF SOUTH CAROLINA

State-related

- Lewis Edwards, Assistant Maintenance Engineer, State Highway Department
- James L. Walker, Jr., Director of Public Relations, State Highway Department

Engineering District No. 3

- P.E. Bradham, District Engineer, Greenville
- C.L. Hunnicutt, Resident Maintenance Engineer, Greenville
- M.A. Fleming, Resident Maintenance Engineer, Spartanburg

Engineering District No. 5

- A.R. Catoe, District Engineer, Florence
- E.A. Bethea, District Maintenance Engineer, Florence
- Simon Forbes, Associated Resident Maintenance Engineer, Georgetown

County and Municipal-related

- Alfred P. Seitter, County Engineer, Georgetown
- David Treme, City Manager, Georgetown
- K.E. Ballard, Director of Public Works, Georgetown
- Levonne Campbell, Chief Planner, Waccamaw Regional Planning and Development Council, Georgetown
- Bill Lonon, Deputy Director, Planning and Development Commission, Spartanburg
- Emory J. Price, Director of Planning, Planning and Development Commission, Spartanburg
- Duddy Womick, Director, Public Information Office, Spartanburg
- Ben D. Driver, Finance Director, Spartanburg (County)
- Avery Hunguitt, Director of Engineering, Spartanburg (City)
- Lynwood Edwards, Public Works Coordinator, Spartanburg (City)
- Kenneth S. Gray, Director of Planning Spartanburg (City)
- Jack L. West, Supervisor Spartanburg (County)

STATE OF NORTH CAROLINA

State-related

- Charles D. Adkins, P.E., Department of Transportation, Raleigh
- Tom Newman, P.E., Department of Transportation, Raleigh
- Carl C. Painter, Division Engineer, Department of Transportation, Durham
- Q.L. Sorrell, Division of Highways, Durham
- William D. Smart, Division of Highways, Durham
- Harold C. Rhudy, Division of Highways, Raleigh

County and Municipal-related

- Larry S. Kerr, P.E. Assistant City Engineer, Durham (City)
- Michael A. Evans, Assistant Superintendent of Streets, Asheville (City)
- Larry P. Ward, Transportation Planner, Division of Planning, Asheville (City)
- Charlotte Tell, City Accountant, Asheville (City)

STATE OF ALABAMA

State-related

- Randall Estes, Alabama Highway Department, Montgomery
- Robert W. Pickett, Jr., Chief Accountant, Montgomery
- Jack F. Norton, Chief Accountant, Montgomery

Second Division

- J.B. Vinson, Division of Maintenance Engineer, Sheffield
- E.H. Dismukes, Maintenance Engineer, Cullman (County)
- Ward Filyaw, Maintenance Tech. II, Cullman (County)

Fourth Division

- F.L. Blankenship, Division of Maintenance Engineer, Alexander (City)
- W.H. Vinson, Maintenance Engineer, Randolph and Chambers (County)

County and Municipal-related

- Stell Benefield, Judge of Probate, Randolph (County)
- Ray Edwards, Chief County Engineer, Randolph (County)
- Gary Spears, Assistant to Chief, Randolph (County)
- Lucille Galin, Chief Clerk, Cullman
- Buck Norred, Superintendent of Streets and Sanitation, Randolph
- Randall Shedd, Chairman, County Board Cullman
- R.T. Bailey, Sr., Commissioner Pl. No. 2, Baileyton
- Kenneth Speegle, Director, Public Works Department, Cullman (City)
- Leon Compton, Superintendent of Streets, Cullman (City)
- O.H. Sharpless, Executive Director, Association of County Commissions of Alabama, Montgomery
- David Stevenson, The Randolph Press, Roanoke (City)
- Fowler Dugger, Jr., Assistant Director, Auburn University, Auburn

STATE OF ILLINOIS

State-related

- Honorable Charles Chew, Jr., Senator, Senate Committee on Utility and Highways (Contact: Judith A. Johnson)
- Harold W. Monroney, Director, Division of Highways
- Russell R. Davis, Jr., Liaison Engineer, Bureau of Local Roads and Streets

- Ron Houska, Deputy Director, Division of Highways
- Nile Blood, Engineer, Maintenance Operation Section
- Robert L. McCracken, Engineer, Maintenance Service Section

County and Municipal-related

No interviews were conducted with county and municipal-related persons.

STATE OF CALIFORNIA

State-related

- Gerald L. Russell, Chief of Maintenance Operations, Department of Transportation, Sacramento
- Richard L. Friedman, Information Officer, Department of Transportation, Sacramento
- Elvin L. Mullen, Chief, Bureau of City and County Financial Reporting, Sacramento
- Walter J. Quinn, Senior Consultant, Assembly Transportation Committee, Sacramento

County and Municipal-related

- *Michael J. Arnold, Legislative Representative, League of California Cities, Sacramento

STATE OF OREGON

State-related

- John W. Sheldrake, Maintenance Operations Engineer, Department of Transportation, Salem
- D.H. Moehring, Project Management Engineer, Department of Transportation, Salem
- Bob Schroeder, Maintenance Engineer, Department of Transportation, Salem

*--Met with individual's representative.

Other-related

- Cathy Canty, Workshop Coordinator, Institute for Policy Studies, Portland State University Portland
- Rick Gustafson, State Representative, Oregon State Legislature, Salem
- Samuel Moment, Economic Consultant and Community Leader, Portland
- Peter Steinberger, Associate Professor, Reed College Portland

STATE OF MINNESOTA

State-related

- Robert J. McDonald, Director, Department of Transportation, St. Paul
- Marvin Bates, Operations Coordinator, Department of Transportation, St. Paul
- *E.J. Heinen, Director of Field Operations, Department of Transportation, St. Paul
- John Kirtland, Chief of Maintenance Division, Department of Transportation, Hopkins
- Steven M. Chapman, Administrative Assistant, State Capitol, St. Paul

County and Municipal-related

- Stephen R. Alderson, Transportation Planner, Metropolitan Council, St. Paul

STATE OF PENNSYLVANIA

State-related

- Harold E. Myers, Director, Bureau of Municipal Services, Department of Transportation, Harrisburg

*--Met with individual's representative.

County and Municipal-related

- Daniel P. Olpere, Co-Chairman, 1978 Pennsylvania COG Annual Conference, Camp Hill
- Greg Williams, Consultant, Department of Community Affairs, Harrisburg

FIELD TRIP DOCUMENTATION

The following list of documents were obtained by our field staff and indepth analysis of their contents in relation to maintenance management was undertaken:

State of South Carolina

Georgetown

"Materials Budget Expenditure Report, 1978-79"

"Annual Appropriations, General Fund Public Works Roads and Bridges"

"Road Equipment List", October 1971

"City of Georgetown Land Use Plan and Housing Element", Waccamaw Regional Planning and Development Council, May 1978

"Population and Economic Study, Waccamaw Region", Waccamaw Regional Planning and Development Council, June 1977

Spartanburg

"Unified Planning Work Program, Spartanburg Area Transportation Study", September 1977

"SPATS, Spartanburg Area Transportation Study: Summary Report, Recommended Street and Highway Plan", South Carolina State Highway Department, June 1971

"Neighborhood Analysis for Spartanburg County", Spartanburg County Planning and Development Commission, May 1977

"CITYSCALE: An Urban Design Component of the Comprehensive Plan for the City of Spartanburg, South Carolina", City of Spartanburg Planning Department, 1977

"Street Maintenance Budget", City of Spartanburg, FY 1978-79

"Public Works Budget Summary by Activity", City/County of Spartanburg, Fiscal Year 1978-79

"Annual Budget Summary", County of Spartanburg, Fiscal Year 1978-79

"Spartanburg County Government Organization Chart"

"City of Spartanburg Government Organization Chart"

"Department of Highways Organizational Chart", State of South Carolina"

"South Carolina: Department of Highways and Public Transportation Reports"

"State Department of Highways Maintenance Personnel Report", July 1, 1978

"State Highway Maintenance Ordinary Status of Allotments, May 31, 1978"

"Minimum Street Improvement Standards Chart"

"Annual Report of the South Carolina Department of Highways and Public Transportation", Fiscal Year 1976-77

"State Secondary 'C' Program Apportionment of Funds for Fiscal Year 1978-79"

"Fact Sheet", prepared by the South Carolina Highway Department

"Report to Commission", prepared by Chief Highway Commissioner, Mr. Silas N. Pearman

"State Code, Sections 65-1051 through 65-1075 from Chapter 13, on Gasoline Taxes"

"Amendments to the preceding passed by the General Assembly, June 2, 1977"

State Highway System (Map)

Engineering Districts and District Engineers (Map)

Highway Commission Districts (Map)

Patrol Districts (Map)

Judicial Districts (Map)

Congressional Districts (Map)

State of Alabama

"65th Annual Report of the State of Alabama Highway Department"

"Captive County Budget Work Sheets"

"Maintenance Cost Distribution Report"

"Maintenance Cost Analysis Report"

"State of Alabama Highway Department Budget Statement FY 1977-78"

"City of Roanoke Budget FY 1977-78 Randolph County, Alabama

"Alabama Highway Department Maintenance Performance Standards and Feature Inventory Form"

"Equipment Transfer--Cullman County" (Letter)

"Act No. 13" (Legislature of Alabama)

"Senate Bill S. 346" (Legislature of Alabama)

"Alabama County" (area, population, mileage by counties)

"Budget" (Randolph County)

"Comprehensive Plan" (City of Cullman)

"Lauderdale County Road System Survey"

"Association of County Commissions of Alabama" (Directory)

"A Manual for Alabama County Commissioners, 1975"

"Maintenance Transing Administrative Guide, 1976 (State of Alabama State Highway Department"

"The Roanoke Leader, July 12, 1978"

"The Roanoke Leader, July 26, 1978"

"The Roanoke Press, July 26, 1978"

"A Supplement to the City Directory" (Roanoke)

"Alabama Highway Department: Maintenance Crew Day Card, January 1973"

The Official Alabama Highway, may 19778-78 (Map)

Alabama Highway Patrol Districts (Map)

Maintenance District (Map)

Randolph County (Map)

Cullman County (Map)

City of Cullman (Map)

Chambers County (Map)

State of Illinois

"Road and Bridge and Other Related Laws of Illinois", 1977 Edition, Illinois Department of Transportation

"1978 Illinois Vehicle Code", issued by Office of Secretary of State

"Director", Illinois Department of Transportation, January 1978

"Motor Fuel Tax Funds", Bureau of Local Roads and Streets, Department of Transportation

"Proposed Improvements for Illinois Highways, FY 1979", State Department of Transportation, April 1978

"1978 Spring Road Repair Program", State Department of Transportation, May 1978

Illinois 1977-78 Highway (Map)

General Highway (Map)

National Institute for Community Development, Inc.

1815 N. Lynn Street, Suite 1000 • Arlington, Virginia 22209 • (703) 522-1461

EXHIBIT C-1

December 12, 1977

A N N O U N C E M E N T

The National Institute for Community Development, Inc. is currently undertaking an FHWA-funded study entitled the "Evaluation of Intergovernmental Responsibilities for [Highway] Maintenance".

The study began in June 1977, with an 18 month project life span, and is funded for $87,000. The study is being pursued in two broad phases. The first is to identify and study the issues, and will include some analysis of national statistical data. From this will emerge a second phase, that of making actual case studies at selected sites to evaluate the effectiveness of alternative intergovernmental relationships in highway maintenance. These will include evaluation of state-county and of county-municipal relationships. Because of the nature of highway maintenance funding, federal-state and federal-local relations will get much less emphasis. We are at the present time closing the first stage and moving into the second.

Examples of some of the specific issues we are considering pursuing for more detailed study include:

1. Alternative funding and administrative relationships between state highway departments and the counties. Issues of shared responsibilities of secondary state and of local roads.

2. The feasibility and effectiveness of service agreements for highway maintenance between state and local highway departments, between county and municipalities, or between adjacent counties. The possibility of contracts with private firms will also be considered.

3. A look into alternative metropolitan and regional governmental structures that might encourage more efficient and economical highway maintenance, particularly in the more densely populated, but politically fragmented urban areas.

For further information about the study, contact either Ed Herlihy, Contract Manager, or Joel Eigen, Principal Investigator, at 522-1461.

EXHIBIT C-2

EXHIBIT

SUMMARY OF STATE ORGANIZATIONAL CHARACTERISTICS AND LOCAL RESPONSIBILITY OF RURAL HIGHWAYS

STATE	MULTI-COUNTY UNIT OF STATE HIGHWAY DEPT. Type	Number	NUMBER OF COUNTIES #	/Dis.	Yes/No	COUNTY HIGHWAY OFFICIALS' TITLE 1/	COMMENTS LOCAL % RURAL	RATIO OF COUNTY/TOWN		COUNTY/TOWN AUTHORITY
Alabama	Div.	9	67	7.4	Y	Hwy. Eng.	52	*		
Alaska	Div.	5	8	1.6	N		19			No
Arizona	Dist.	7	14	2	Y	Eng. & Rd. Supt.	62	*		
Arkansas	Dist.	10	75	7.5	N	Hwy. Comm.	69	*		
California	Dist.	11	57	5.2	Y	Hwy. Comm.	50	*		
Colorado	Dist.	6	62	10.3	N		19	*		
Connecticut	Dist.	4	8		N		18		*	No
Delaware	Dist.	3	3	1	N					No
Dist. of Col.					N			*		
Florida	Dist.	5	66	13.2	Y	Engineers	52	*		
Georgia	Dist.	7	158	22.5	N		68	*		
Hawaii	Dist.	4	3	.75	N		46	*		
Idaho	Dist.	6	44	7.3	Y	Engineers	75	*		
Illinois	Dist.	9	102		Y		62	1:	4.5	
Indiana	Dist.	6	91	11.3	N		71	*		
Iowa	Dist.	6	99	16.5	Y	Engineers	81	*		
Kansas	Dist.	6	105	17.5	Y	Engineers	79	*		
Kentucky	Dist.	12	120	10.	Y	Road Eng. (*)	55	*		
Louisiana	Dist.	9	62	6.9	N		50		*	
Maine	Dist.	7	16	2.3	N		35	*		No
Maryland	Dist.	7	23	3.3	Y	Engineers	64	*		
Massachusetts	Dist.	8	12	1.5	N		15		*	No
Michigan	Dist.	8	83	10.4	Y	Comm./Engr. Dir.	78	*		
Minnesota	Dist.	9	81	9.6	Y	Engineers	77	1:	1.4	
Mississippi	Dist.	6	82	13.7	Y	Engineers	74			
Missouri	Dist.	17	114	6.7	N		62	*		
Montana	Dist.	11	13	1.2	Y	Engr. & Surv.	80	*		
Nebraska	Dist.	7	93	13.2	Y	Engr. & Super.	81	3.5:	1	
Nevada	Dist.	6	16	2.7	Y	Engr. & Super.	83	*		
New Hampshire	Div.	8	10	1.2	N		43		*	No

EXHIBIT C-2 continued

EXHIBIT

SUMMARY OF STATE ORGANIZATIONAL CHARACTERISTICS AND LOCAL RESPONSIBILITY OF RURAL HIGHWAYS

STATE	MULTI-COUNTY UNIT OF STATE HIGHWAY DEPT. Type	Number	NUMBER OF COUNTIES #	/Dis.	Yes	No	COUNTY HIGHWAY OFFICIALS' TITLE 1/	COMMENTS	LOCAL % RURAL	RATIO OF COUNTY/TOWN		COUNTY/TOWN AUTHORITY
New Jersey	Region	4	21	3	Y		Engineers		36	1.3:	1	
New Mexico	Dist.	5	32	6.4	Y		Commissioners		72	*		
New York	Region	10	57	5.7	Y		Superintendants		48	1:	2.4	
North Carolina	Dist.	14	102	7.6		N						No
North Dakota	Dist.	8	53	6.6	Y		Engineers	(**)	85	1:	4.5	
Ohio	Dist.	12	88	7.3	Y		Engineers		61	1:	1.3	
Oklahoma	Div.	8	77	9.6		N			73	*		
Oregon	Region	5	36	7.2	Y		Eng. & Surv.		66	*		
Pennsylvania	Dist.	11	66	6		N			37		*	
Rhode Island			18						8			No
South Carolina	Dist.	7	46	6.6		N			33	*		
South Dakota	Dist.	5	64	12.8	Y		Hwy. Sup't		83	1:	2.5	
Tennessee	Region	4	94	23.5	Y		Supervisors		70	*		
Texas	Dist.	25	254	10.1		N			54	*		
Utah	Dist.	6	18	3	Y				68	*		
Vermont	Dist.	9	14	1.6		N			23	*		
Virginia	Dist.	8	96	12.0		N						
Washington	Dist.	6	39	6.5	Y		Engineers		63	*		
West Virginia	Dist.	10	55	5.5	Y							No
Wisconsin	Dist.	9	72	8	Y				70	*		
Wyoming	Dist.	5	23	4.6		N			75			

1/ Source: AASHTO Directory of State Officials, 1976
(*) Only 65 Counties
(**)Only 26 Counties

EXHIBIT C-3

SUMMARY OF STATE CLASSIFICATION SYSTEMS - 1961

State primary only	/Ala./Del./Ga./Hawaii/Mass./Mont./N.J./N.M./R.I./Tex./Utah/Wyo./	12
State primary, county primary and secondary	* * * * /Cal./Colo./Iowa/Kan./Mich./Minn./Miss./Neb./Neb./	9
State primary, state secondary	/Ariz./Conn./Ky./Md./N.C./S.C./Tenn./Va./W.Va./	9
State primary, state secondary, one county	* * * /Alaska/Fla./La./Mo./N.D./Ore./Pa./	7
State primary, one county	* * /Idaho/Ind./Okla./Wis./	4
State primary, one county, one town or township	* * * * /Ill./N.Y./Ohio/S.D./	4
State primary, state secondary, county primary, county	* /Ark./Wash./	2
State primary, state secondary, one town or township	* * /Me./N.H./	2
State primary, one town	/Vt./	1/50

Source: Highway Classification System, HRB-S.R.#85, Figure 2, page 7.

Note: These states which were considered to account for all local roads and thus have a "comprehensive" system are marked by*.

EXHIBIT C-4

General Intergovernmental Cooperation Authorization, 1976

States	General Law Citation or Code Reference	Co-operation Power*	Contract Power**	Across State Lines	Local Unit With Home St.	Local Unit With U.S.	Power of Only One Unit Necessary	Requires Action of Governmental Bodies	Approval of Attorney General	Other Statutes Unaffected	Renovation or Termination	Responsibility Clause
Alabama												
Alaska	29.48.010(4)	X			X	X	X					
Arizona	Sec. 11-951	X	X	X	X	X		X	X	X	X	X
Arkansas	Sec. 14-901	X	X[2]	X	X	X		X	X		X[4]	X
California	Gov. 6500	X	X[2]	X	X	X		X			X[4]	
Colorado	Title 29, Art.1	X[1]	X[1]	X	X	X		X		X		X
Connecticut	Sec. 7-339a	X[1]	X[1]	X	X			X	X	X		X
Delaware												
District of Columbia												
Florida	Sec. 163.01	X	X	X	X	X			X	X	X[4]	X
Georgia	Sec. 2-5901	X			X			X				
Hawaii												
Idaho	67-2326	X	X	X	X	X		X	X		X	
Illinois	127 Sec. 741-48	X	X	X	X	X		X				
Indiana	Sec. 53-1104	X	X	X	X	X		X	X			X
Iowa	Sec. 28E.1	X	X	X	X	X	X[3]	X		X	X	X
Kansas	12-2901	X		X	X	X	X	X	X		X	X
Kentucky	65.210	X	X	X	X	X		X	X		X	X
Louisiana	33 Sec. 1321	X					X	X				
Maine	30 Sec. 1951	X			X	X	X	X	X		X	X
Maryland												
Massachusetts	Ch. 40 Sec. 4a	X	X					X			X[4]	
Michigan	124.501	X	X	X	X	X			X[9]	X	X[4]	
Minnesota	Sec. 471.59	X	X	X	X	X		X		X	X	
Mississippi												
Missouri	Sec. 70.210	X	X	X	X			X			X[4]	
Montana	16-4901	X	X		X		X	X	X		X	
Nebraska	Sec. 23-2201	X	X	X	X	X		X			X	X
Nevada	277.080	X	X	X	X	X	X[3]	X	X		X	X
New Hampshire	Ch. 53-A	X	X				X					

EXHIBIT C-4 continued

General Intergovernmental Cooperation Authorization, 1976

States	General Law Citation or Code Reference	Co-operation Power*	Contract Power**	Across State Lines	Local Unit With Home St.	Local Unit With U.S.	Power of Only One Unit Necessary	Requires Action of Governmental Bodies	Approval of Attorney General	Other Statutes Unaffected	Renovation or Termination	Responsibility Clause
New Jersey	40:48B-1	X						X		X	X[4]	
New Mexico	4-22-1	X		X	X	X		X			X[4]	
New York	Gen. Munic. Law Art. 5G and 14G	X	X	X	X			X	X		X[4]	
North Carolina	Sec. 160A-461	X	X	X			X	X			X[4]	
North Dakota	54-40-01	X		X	X	X	X	X		X	X[4]	
Ohio												
Oklahoma	74 Sec. 1001	X	X	X	X	X	X	X	X		X	X
Oregon	Sec. 190.003	X	X	X	X	X	X				X	
Pennsylvania	53 Sec. 481	X	X	X	X	X		X	X[10]			
Rhode Island	45-43-1											
South Carolina	Sec. 1-75	X						X				
South Dakota	1-24-1	X	X	X	X	X		X			X	X
Tennessee	12-801	X	X	X	X	X		X	X	X	X	X
Texas	Art. 4413(32c)	X	X		X			X		X		
Utah	Sec. 11-13-1	X	X	X	X	X		X[8]	X		X	X
Vermont	24 Sec.-4801	X	X					X	X			
Virginia	Sec. 15.1-21	X						X			X	X
Washington	39.34.010	X	X	X	X	X		X		X	X	X
West Virginia	Sec. 8-23-1	X	X					X	X	X	X	X
Wisconsin	66.30	X	X	X	X				X			
Wyoming	Sec. 9-18.7	X		X	X	X	X	X			X[4]	

*Power to undertake joint or cooperative provision of services.
**Power of one unit to provide services for another.

1The functions are limited--seem to include everything but general government
2Cities and counties only
3Only for contracting
4May be provided for, but is not mandated
5May be perpetual

EXHIBIT C-4 continued

7Binding for specified time
8Requires concurrent voter majorities
9Requires approval of governor when state money is used. When state U.S., another state or subdivision are party to the agreement
10Requires approval of local government commission if agreement is with any unit except Pennsylvania municipality

* ACIR, Pragmatic Federalism, Washington, D.C., July 1976, Table II, page 11-12.

EXHIBIT C-5

GOVERNMENTAL UNITS WITHIN SECTION 134 TRANSPORTATION PLANNING AREAS, STATE BY STATE: 1973

State	Total Number Of Section 134 Areas (A)	Number Of Counties[3]			Number Of States[4]			Number Of Municipalities[5]							
		One	More Than One		One		More Than One		2-5		6-10		Over 10		
			Number	Percent Of A		Number	Percent Of A		Number	Percent Of A	Number	Percent Of A	Number	Percent Of A
Alabama	6	2	4	66.7	6	0	0	2	3	50.0	0	0	1	16.7
Arizona	2	2	0	0	2	0	0	0	1	50.0	1	50.0	0	0
Arkansas	3	1	2	66.7	2	1	33.3	0	3	100.0	0	0	0	0
California	10	7	3	30.0	10	0	0	4	3	30.0	1	10.0	2	20.0
Colorado	4	2	2[1]	50.0	4	0	0	2	1	25.0	0	0	1	25.0
Connecticut	1	0	1[1]	100.0	1	0	0	0	1	100.0	0	0	0	0
Delaware	1	0	1	100.0	0	1	100.0	0	0	0	1	100.0	0	0
Dist. of Col.	1	0	1	100.0	0	1	100.0	0	0	0	0	0	1	100.0
Florida	10	5	5	50.0	10	0	0	4	1	10.0	1	10.0	4	40.0
Georgia	6	0	6	100.0	4	2	33.3	2	3	50.0	0	0	1	16.7
Hawaii	1	1	0	0	1	0	0	0	0	0	0	0	1	100.0
Idaho	1	1	0	0	1	0	0	0	1	100.0	0	0	0	0
Illinois	9	3	6	66.7	6	3	33.3	2	4	44.4	2	22.2	1	11.1
Indiana	8	3	5	62.5	7	1	12.5	1	4	50.0	3	37.5	0	0
Iowa	5	3	2	40.0	4	1	20.0	0	5	100.0	0	0	0	0
Kansas	2	0	2	100.0	2	0	0	1	1	50.0	0	0	0	0
Kentucky	3	1	2	66.7	2	1	33.3	2	0	0	0	0	1	33.3
Louisiana	6	3[1]	3[1]	50.0	6	0	0	1	5	83.3	0	0	0	0
Maine	2	1[1]	1[1]	50.0	2	0	0	1	1	50.0	0	0	0	0
Maryland	1	0[1]	1[1]	100.0	1	0	0	1	0	0	0	0	0	0
Massachusetts	9	1[1]	8[1]	88.9	6	3	33.3	5	2	22.2	1	11.1	1	11.1
Michigan	10	4	6	60.0	10	0	0	1	7	70.0	1	10.0	1	10.0
Minnesota	3	1	2	66.7	2	1	33.3	1	1	33.3	0	0	1	33.3
Mississippi	2	0	2	100.0	2	0	0	0	2	100.0	0	0	0	0

EXHIBIT C-5 continued

GOVERNMENTAL UNITS WITHIN SECTION 134 TRANSPORTATION PLANNING AREAS, STATE BY STATE: 1973

State	Total Number Of Section 134 Areas (A)	Number Of Counties[3]			Number Of States[4]			Number Of Municipalities[5]							
		One	More Than One		One	More Than One		One	2-5		6-10		Over 10		
			Number	Percent Of A		Number	Percent Of A		Number	Percent Of A	Number	Percent Of A	Number	Percent Of A	
Missouri	5	1	4	80.0	2	3	60.0	2	1	20.0	0	0	2	40.0	
Montana	2	2	0	0	2	0	0	2	0	0	0	0	0	0	
Nebraska	2	1	1	50.0	1	1	50.0	1	1	50.0	0	0	0	0	
Nevada	2	2	0	0	2	0	0	0	2	100.0	0	0	0	0	
New Hampshire	2	1[1]	1[1]	50.0	2	0	0	2	0	0	0	0	0	0	
New Jersey	2	2	0	0	2	0	0	2	0	0	0	0	0	0	
New Mexico	1	0	1	100.0	1	0	0	0	1	100.0	0	0	0	0	
New York	7	0	7	100.0	5	2	28.6	0	3	42.9	2	28.6	2	28.6	
North Carolina	9	3	8	66.7	9	0	0	5	4	44.4	0	0	0	0	
North Dakota	1	0	1	100.0	0	1	100.0	0	1	100.0	0	0	0	0	
Ohio	12	1	11	91.7	9	3	25.0	1	4	33.3	1	8.3	6	50.0	
Oklahoma	3	1	2	66.7	3	0	0	1	1	33.3	0	0	1	33.3	
Oregon	3	1	2	66.7	2	1	33.3	1	1	33.3	0	0	1	33.3	
Pennsylvania	11	4	7[1]	63.6	9	2	18.2	0	3	27.3	1	9.1	7	63.6	
Rhode Island	1	0	1[1]	100.0	0	1	100.0	0	0	0	1	100.0	0	0	
South Carolina	3	0	3	100.0	3	0	0	0	2	66.7	1	33.3	0	0	
South Dakota	1	1	0	0	1	0	0	1	0	0	0	0	0	0	
Tennessee	4	0	4	100.0	2	2	50.0	2	1	25.0	1	25.0	0	0	
Texas	22	11	11	50.0	21	1	4.5	9	8	36.4	2	9.0	3	13.6	
Utah	3	1	2	66.7	3	0	0	0	0	0	2	66.7	1	33.3	
Virginia	6	0	5	83.3	6	0	0	2	4	66.7	0	0	0	0	
Washington	2	1	1	50.0	2	0	0	0	1	50.0	0	0	1	50.0	
West Virginia	3	0	3	100.0	1	2	66.7	0	0	0	2	66.7	1	33.3	
Wisconsin	5	3	2	40.0	5	0	0	0	2	40.0	2	40.0	1	20.0	
Totals	218	77	140	64.2	184	34	15.6	61	89	40.8	26	11.9	42	19.3	

EXHIBIT C-5 continuted

1The counties in the New England states are partial counties since Section 134 Transportation Planning areas are designed to conform to town boundaries rather than county.
2The Southeastern Virginia Regional Transportation Study has no counties within its boundaries.
3The average (mean) number of counties per Section 134 area is 2.92, while the range is from 0-24.
4The average (mean) number of states per Section 134 area is 1.18, while the range is from one to three.
5The average (mean) number of municipalities per Section 134 area is 11.17, while the range is from one to 381.

SOURCES: U.S. Department of Transportatoin, Directory of Urbanized Area Transportation Planning Program; 1972 [Washington, D.C.; U.S. Government Printing Office, 1972]. U.S. Bureau of the Census. Census of Governments, Volume 1 [Washington, D.C.; U.S. Government Printing Office, 1972]. U.S. Bureau of the Census, 1970 Census of Population, Volume 1 [Washington D.C.; U.S. Government Printing Office, 1972].

* Source: ACIR, Towards More Balanced Transportation New Intergovermental Proposals, Washington, D.C. July 1976

EXHIBIT C-6

MILEAGE FOR 1972

STATE NAME	STATE PCT RURAL MILEAGE	STATE PCT MUNICIPAL MILEAGE	LOCAL PCT RURAL MILEAGE	LOCAL PCT MUNICIPAL MILEAGE	TOTAL STATE AND LOCAL MILEAGE
Nevada	12	0	83	3	49885
Hawaii	24	2	46	27	3715
*California	9	1	50	31	133751
Arizona	17	1	62	20	31691
Wyoming	20	0	73	4	28276
Utah	14	2	68	13	32040
South Dakota	10	0	83	3	81426
North Dakota	5	0	85	2	105285
Montana	18	0	80	3	68672
Colorado	10	0	79	9	82520
Nebraska	9	0	81	6	98628
Missouri	27	1	62	13	116784
Kansas	7	0	79	7	135337
Iowa	8	1	81	12	114088
Texas	24	2	54	20	256763
Oklahoma	10	1	73	12	109122
New Mexico	18	1	72	7	62889
Louisiana	25	3	50	20	55100
Arkansas	16	2	69	12	77869
Wisconsin	9	1	70	12	105477
Ohio	15	2	61	21	112594
*Minnesota	9	1	77	13	128184
Michigan	7	1	78	18	116677
Indiana	11	1	71	17	92119
*Illinois	9	2	62	19	133745
Tennessee	9	1	70	14	81000
*South Carolina	50	7	33	11	64401
*North Carolina	78	4	0	15	88915
Mississippi	14	1	74	10	67562
Kentucky	33	1	55	8	70138
Georgia	15	2	68	15	101667
Florida	17	2	52	25	97871
*Alabama	21	2	52	19	87074
West Virginia	89	2	0	10	36259
Virginia	79	4	1	14	62266
*Pennsylvania	33	4	37	19	119188
Maryland	18	1	64	15	26948
Dist. of Col.	0	0	0	100	1099
Delaware	80	4	0	14	5379

* --Case Study State

EXHIBIT C-6 continued

MILEAGE FOR 1972

STATE NAME	STATE PCT RURAL MILEAGE	STATE PCT MUNICIPAL MILEAGE	LOCAL PCT RURAL MILEAGE	LOCAL PCT MUNICIPAL MILEAGE	TOTAL STATE AND LOCAL MILEAGE
Vermont	17	1	73	6	14613
Rhode Island	7	12	8	71	6238
New York	11	3	48	36	111608
New Jersey	4	4	36	56	33694
New Hampshire	18	8	43	30	16192
Massachusetts	3	6	15	75	31657
Maine	49	3	35	11	22150
Connecticut	7	11	18	63	20975
Washington	22	1	63	15	84259
*Oregon	17	1	66	12	51711
Idaho	13	0	75	9	34158
Alaska	55	7	19	17	7849

1 mile = 1.61 km

* --Case Study State

Source: Highway Statistics, 1972, Selected Tables on Mileage and Disbursement by State and Local Governments

EXHIBIT C-7

MAINTENANCE DISBURSEMENTS PER MILE FOR
RURAL AND MUNICIPAL MILEAGE
AT THE STATE AND LOCAL LEVEL

FOR 1972

STATE NAME	STATE ADMIN.	LOCAL RURAL	LOCAL MUNICIPAL
New Jersey	25,892	2,360	4,563
Massachusetts	14,183	1,885	3,531
New York	13,381	2,840	4,922
Connecticut	9,481	1,981	3,003
Rhode Island	7,826	804	1,590
*California	6,472	1,162	2,814
Maryland	5,582	1,849	4,370
*Pennsylvania	5,553	1,275	2,873
*Illinois	5,498	1,058	3,276
Michigan	5,353	980	2,832
Hawaii	4,893	4,239	1,361
Vermont	4,590	948	3,421
New Hampshire	4,545	993	2,490
Alaska	4,519	0	3,550
Ohio	4,009	1,532	3,435
Arizona	3,957	614	1,666
Indiana	3,832	662	1,793
Kansas	3,311	368	1,211
*Minnesota	3,203	583	2,247
Washington	3,156	1,106	2,005
Maine	3,118	713	5,871
Iowa	2,881	696	1,967
Tennessee	2,646	650	1,799
Idaho	2,593	494	1,474
*Oregon	2,580	733	1,321
Colorado	2,475	365	2,522
Wisconsin	2,471	1,005	3,566
Georgia	2,405	567	1,740
Louisiana	2,356	1,476	1,341
Florida	2,289	942	1,222
Delaware	2,267	N/A	2,184
Kentucky	2,266	461	1,225
Oklahoma	2,251	371	999
Missouri	1,987	457	1,936
New Mexico	1,851	123	1,446
Utah	1,744	199	1,015
Virginia	1,515	2,832	2,558
West Virginia	1,463	N/A	1,869
Nevada	1,451	100	1,769

* --Case Study State

EXHIBIT C-7 continued

MAINTENANCE DISBURSEMENTS PER MILE FOR
RURAL AND MUNICIPAL MILEAGE
AT THE STATE AND LOCAL LEVEL

FOR 1972

STATE NAME	STATE ADMIN.	LOCAL RURAL	LOCAL MUNICIPAL
Mississippi	1,418	1,059	1,864
Nebraska	1,414	352	2,217
Wyoming	1,395	149	2,169
*North Carolina	1,242	N/A	1,269
*Alabama	1,233	789	1,394
South Dakota	1,186	228	1,847
Arkansas	1,163	418	1,669
*South Carolina	1,072	474	789
North Dakota	1,019	114	1,112
Montana	886	249	2,069
Texas	189	482	1,122
Dist. of Col.	N/A	N/A	9,121

1 mile = 1.61 km

* --Case Study State

Source: Highway Statistics, 1972, Selected Tables on Mileage and Disbursement by State and Local Governments

EXHIBIT C-8

STATE MAINTENANCE COST DISTRIBUTION
AMONG REPORTED FUNCTIONS

FOR 1972

STATE NAME	STATE DISBURSEMENTS PER MILE	PCT ON ROADS AND STRUCTURES	PCT FOR SNOW REMOVAL	PCT FOR TRAFFIC CONTROL	PCT FOR GENERAL ADMIN.	TOTAL DISB.
New Jersey	25893	49.43	3.11	15.38	32.08	83414
Massachusetts	14183	23.42	14.15	7.20	55.22	91873
New York	13381	46.05	29.26	9.93	14.75	136521
Connecticut	9482	36.25	10.89	1.31	51.56	62849
Rhode Island	7826	59.38	15.91	10.42	14.29	10848
*California	6472	42.83	5.22	27.16	24.80	133664
Maryland	5582	42.02	10.54	6.53	40.91	42164
*Pennsylvania	5554	56.57	24.10	8.41	10.92	289082
*Illinois	5498	52.16	8.26	15.67	23.90	111126
Michigan	5354	42.12	29.37	5.09	23.42	63892
Hawaii	4893	65.58	0.00	16.43	17.98	5823
Vermont	4590	40.16	33.28	7.28	19.27	15912
New Hampshire	4546	44.61	27.67	4.45	23.26	24989
Alaska	4520	13.77	12.66	3.56	70.01	39988
Ohio	4009	52.23	6.49	5.81	35.47	119529
Arizona	3957	49.74	1.45	16.12	32.70	34173
Indiana	3833	47.14	5.83	8.63	38.40	68620
Kansas	3312	61.12	3.71	7.65	27.51	46673
*Minnesota	3204	52.98	25.92	17.93	3.16	44346
Washington	3157	32.88	12.85	11.71	42.55	50747
Maine	3119	55.83	25.72	4.30	14.15	35409
Iowa	2882	41.50	24.26	10.82	23.42	38022
Tennessee	2647	60.98	5.90	6.79	26.33	35680
Idaho	2593	48.79	13.47	10.03	27.70	18117
*Oregon	2581	46.63	22.40	10.50	20.48	31590
Colorado	2476	33.73	28.47	20.21	17.60	26996
Wisconsin	2472	48.00	20.89	4.65	26.45	38991
Georgia	2405	77.93	0.00	4.30	17.77	52721
Louisiana	2357	51.69	0.05	16.86	31.40	54000
Florida	2290	52.30	4.27	14.71	28.72	53131
Delaware	2268	34.78	3.77	2.40	59.05	13455
Kentucky	2266	66.01	2.02	7.12	24.85	69612
Oklahoma	2251	70.08	1.52	5.07	23.34	33611
Missouri	1987	63.08	8.90	8.62	19.39	78174
New Mexico	1852	78.63	2.77	6.73	11.86	26636
Utah	1745	41.54	13.04	8.74	36.67	15102
Virginia	1516	70.48	4.42	2.63	22.47	96153
West Virginia	1464	56.40	10.57	0.00	33.03	70312
Nevada	1451	31.41	10.85	8.25	49.50	18325

* --Case Study State

EXHIBIT C-8 continued

STATE MAINTENANCE COST DISTRIBUTION
AMONG REPORTED FUNCTIONS

FOR 1972

STATE NAME	STATE DISBURSEMENTS PER MILE	PCT ON ROADS AND STRUCTURES	PCT FOR SNOW REMOVAL	PCT FOR TRAFFIC CONTROL	PCT FOR GENERAL ADMIN.	TOTAL DISB.
Mississippi	1419	66.03	1.09	10.83	22.04	18342
Nebraska	1415	49.93	9.08	12.24	28.74	19730
Wyoming	1396	36.30	18.54	14.47	30.70	12164
*North Carolina	1213	66.81	0.00	8.77	24.41	119396
*Alabama	1234	81.81	0.87	3.48	13.84	30877
South Dakota	1187	49.47	6.84	7.92	35.77	16614
Arkansas	1164	52.11	4.40	6.69	36.80	26843
*South Carolina	1073	54.00	0.70	16.99	28.31	26904
North Dakota	1019	46.58	15.43	10.19	27.80	9221
Montana	886	43.78	21.02	13.50	21.70	13790
Texas	139	53.27	1.87	19.01	25.85	150964

1 mile = 1.61 km

* --Case Study State

Source: Highway Statistics, 1972, Selected Tables on Mileage and Disbursement by State and Local Governments

EXHIBIT C-9

SURFACE TYPE DISTRIBUTION FOR
RURAL STATE HIGHWAYS. . . 1972

STATE NAME	MAINT. COST PER MILE	PCT SOIL	PCT BITUM. LOW	PCT BITUM. HIGH	PCT CONCRETE
Connecticut	18880	0.00	53.90	33.87	12.24
Massachusetts	17993	0.00	9.10	88.89	2.01
New Jersey	8575	0.00	0.00	51.51	48.49
Maryland	5980	0.10	3.11	80.59	16.20
New Hampshire	5854	1.20	79.71	16.60	2.50
*Illinois	5700	0.11	3.33	60.56	35.99
New York	5046	0.00	2.41	82.69	14.90
Vermont	4943	1.47	4.53	93.62	0.38
Michigan	4886	0.00	34.05	40.84	25.11
Alaska	4721	35.94	45.84	18.22	0.00
*Pennsylvania	4701	7.60	21.04	63.25	8.11
Hawaii	4583	0.00	11.00	88.36	0.65
*California	4573	4.43	17.37	65.30	12.91
Ohio	4559	0.00	1.55	88.10	10.35
Rhode Island	4230	0.00	28.67	57.34	13.99
Arizona	3823	2.42	30.58	66.34	0.66
Indiana	3333	0.00	3.76	77.73	18.52
*Minnesota	3151	0.87	9.80	69.55	19.77
Kansas	3000	0.00	52.60	38.49	8.91
Iowa	2784	0.62	3.03	55.05	41.29
Washington	2740	0.66	47.61	44.68	7.05
Idaho	2590	2.47	23.75	72.42	1.37
Wisconsin	2588	0.10	8.38	72.52	19.01
Tennessee	2542	0.10	8.10	89.88	1.92
*Oregon	2512	0.55	12.52	83.66	3.28
Oklahoma	2481	2.93	35.87	47.02	14.18
Maine	2478	9.01	68.59	22.03	0.37
Georgia	2440	0.53	14.04	80.12	5.31
Louisiana	2384	4.86	0.00	87.94	7.20
Colorado	2321	2.45	0.20	92.22	5.12
Kentucky	2293	4.96	18.70	71.66	4.68
Florida	2121	0.12	33.92	64.42	1.54
New Mexico	2005	12.88	32.82	52.48	1.82
Missouri	1931	0.70	80.92	10.25	8.13
Virginia	1499	30.96	49.27	18.85	0.92
Texas	1472	0.00	68.80	28.86	2.34
Wyoming	1414	0.73	14.21	83.06	1.99
West Virginia	1395	39.01	21.50	37.01	2.48
Nebraska	1371	6.78	58.20	19.83	15.20
Mississippi	1339	7.50	45.82	31.69	14.98
Utah	1287	6.13	7.92	85.06	0.89

* --Case Study State

EXHIBIT C-9 continued

SURFACE TYPE DISTRIBUTION FOR
RURAL STATE HIGHWAYS. . . 1972

STATE NAME	MAINT. COST PER MILE	PCT SOIL	PCT BITUM. LOW	PCT BITUM. HIGH	PCT CONCRETE
South Dakota	1216	13.46	23.16	55.21	8.17
*North Carolina	1196	25.08	36.31	37.27	1.33
*Alabama	1182	22.70	45.83	29.78	1.69
*South Carolina	1113	0.24	86.70	11.86	1.20
Arkansas	1095	10.50	39.92	45.06	4.52
Nevada	1086	16.72	11.31	71.60	0.37
Delaware	1062	8.16	57.82	28.15	5.87
North Dakota	999	3.90	25.15	62.21	8.74
Montana	869	20.86	14.96	63.30	0.88
Dist. of Col.	N/A	N/A	N/A	N/A	N/A

1 mile = 1.61 km

* --Case Study State

Source: Highway Statistics, 1972, Selected Tables on Mileage and Disbursement by State and Local Governments

EXHIBIT C-10

SURFACE TYPE DISTRIBUTION FOR
RURAL LOCAL HIGHWAYS. . . 1972

STATE NAME	MAINT. COST PER MILE	PCT SOIL	PCT BITUM. LOW	PCT BITUM. HIGH	PCT CONCRETE
Hawaii	4239	20.70	21.01	58.16	0.12
New York	2840	38.40	51.50	9.53	0.57
Virginia	2832	0.70	72.91	26.40	0.00
New Jersey	2360	5.21	77.24	11.12	6.43
Connecticut	1981	11.20	75.34	13.40	0.05
Massachusetts	1885	28.32	51.03	20.54	0.11
Maryland	1849	20.77	29.28	48.79	1.16
Ohio	1532	31.71	20.14	47.56	0.59
Louisiana	1476	66.43	0.00	32.85	0.72
*Pennsylvania	1275	51.49	45.73	1.56	1.22
*California	1162	23.40	50.27	25.40	0.94
Washington	1106	42.31	45.93	10.60	1.16
Mississippi	1059	68.56	30.71	0.43	0.30
*Illinois	1058	75.83	23.67	0.20	0.29
Wisconsin	1005	38.40	33.31	27.99	0.30
New Hampshire	993	41.02	58.04	0.80	0.14
Michigan	980	52.85	43.89	2.02	1.24
Vermont	948	74.63	23.36	1.98	0.03
Florida	942	33.86	41.51	24.13	0.49
Rhode Island	804	34.57	64.11	1.31	0.00
*Alabama	789	45.91	53.64	0.38	0.06
*Oregon	733	51.91	21.78	25.99	0.33
Maine	713	56.78	42.39	0.78	0.05
Iowa	696	84.83	2.15	9.18	3.84
Indiana	662	58.58	39.33	1.22	0.87
Tennessee	650	53.40	39.04	7.39	0.17
Arizona	614	46.09	39.77	13.83	0.30
*Minnesota	583	79.11	2.27	18.37	0.25
Georgia	567	44.17	46.36	9.27	0.21
Idaho	494	62.83	33.11	3.95	0.11
Texas	482	76.48	22.40	0.50	0.63
*South Carolina	474	6.42	93.21	0.38	0.00
Kentucky	461	68.62	29.15	2.10	0.13
Missouri	457	91.10	7.14	0.45	1.32
Arkansas	418	90.55	8.47	0.83	0.15
Oklahoma	371	77.88	20.61	0.93	0.58
Kansas	368	86.15	12.99	0.57	0.30
Colorado	365	82.87	0.69	16.33	0.11
Nebraska	352	93.81	4.76	0.98	0.45
Montana	249	94.07	5.72	0.21	0.00
South Dakota	228	88.70	9.21	1.90	0.19

* --Case Study State

EXHIBIT C-10 continued

SURFACE TYPE DISTRIBUTION FOR
RURAL LOCAL HIGHWAYS. . . 1972

STATE NAME	MAINT. COST PER MILE	PCT SOIL	PCT BITUM. LOW	PCT BITUM. HIGH	PCT CONCRETE
Utah	199	69.97	23.96	5.99	0.08
Wyoming	149	82.25	9.32	8.42	0.00
New Mexico	123	80.56	12.02	7.42	0.00
North Dakota	114	95.58	2.82	1.52	0.07
Nevada	100	85.69	10.82	3.48	0.01
Alaska	0	98.44	1.56	0.00	0.00
Delaware	N/A	N/A	N/A	N/A	N/A
Dist. of Col.	N/A	N/A	N/A	N/A	N/A
West Virginia	N/A	N/A	N/A	N/A	N/A
*North Carolina	N/A	N/A	N/A	N/A	N/A

1 mile = 1.61 km

* --Case Study State

Source: Highway Statistics, 1972, Selected Tables on Mileage and Disbursement by State and Local Governments

EXHIBIT C-11

MUNICIPAL DISBURSEMENTS FOR INTERGOVERNMENTAL TRANSFERS

FOR 1972

STATE NAME	TOTAL TRANSFERS FROM MUNICIPALITIES IN THOUSANDS	PCT TO STATES FOR HIGHWAYS	PCT TO STATES FOR MUN. EXT.	PCT TO CNTY-TWNS FOR ROADS
Texas	5381	100.00	0.00	0.00
Washington	5072	100.00	0.00	0.00
*Illinois	1894	100.00	0.00	0.00
Maine	944	100.00	0.00	0.00
New Mexico	836	100.00	0.00	0.00
California	725	100.00	0.00	0.00
Florida	680	100.00	0.00	0.00
*Pennsylvania	434	100.00	0.00	0.00
Alabama	432	100.00	0.00	0.00
Idaho	313	100.00	0.00	0.00
Louisiana	272	100.00	0.00	0.00
Kansas	195	100.00	0.00	0.00
*South Carolina	189	100.00	0.00	0.00
Kentucky	164	100.00	0.00	0.00
Wyoming	76	100.00	0.00	0.00
Connecticut	70	100.00	0.00	0.00
Missouri	323	95.36	4.64	0.00
Iowa	262	90.08	0.00	9.92
*North Carolina	2780	88.99	11.01	0.00
Virginia	6351	81.18	18.82	0.00
North Dakota	2073	71.30	23.44	5.26
Mississippi	425	69.41	0.00	30.59
Nebraska	1878	56.28	43.29	0.43
New Hampshire	787	50.83	49.17	0.00
Michigan	11179	48.72	51.28	0.00
Alaska	673	12.93	87.07	0.00
Ohio	12060	0.00	99.97	0.00
Maryland	7259	0.00	100.00	0.00
Wisconsin	6230	0.00	96.98	3.02
Minnesota	2754	0.00	54.47	45.53
New Jersey	1865	0.00	100.00	0.00
Arizona	1443	0.00	100.00	0.00
Tennessee	764	0.00	100.00	0.00
*Oregon	544	0.00	100.00	0.00
Indiana	136	0.00	100.00	0.00
Utah	127	0.00	31.50	68.50
Georgia	25	0.00	100.00	0.00

* --Case Study State

Sources: Highway Statistics, 1972, Selected Tables on Mileage and Disbursement by State and Local Governments

EXHIBIT C-12

COUNTY AND TOWNSHIP DISBURSEMENTS
FOR INTERGOVERNMENTAL TRANSFERS

FOR 1972

STATE NAME	TOTAL TRANSFERS FROM CNTY-TWNS IN THOUSANDS	PCT TO STATES FOR STATE HIGHWAYS	PCT TO STATES FOR CNTY-TWN ROADS	PCT TO MUNIC. FOR STREETS
*Alabama	835	100.00	0.00	0.00
Georgia	3	100.00	0.00	0.00
Louisiana	1890	100.00	0.00	0.00
New Mexico	9	100.00	0.00	0.00
Iowa	434	100.00	0.00	0.00
Missouri	1196	99.50	0.50	0.00
Oklahoma	4508	85.80	14.20	0.00
Maryland	828	81.04	0.00	18.96
Texas	4394	78.86	0.00	21.14
Florida	8970	71.18	0.00	28.82
*Illinois	8079	56.97	42.74	0.23
Kansas	36	55.56	0.00	44.44
Indiana	5713	44.09	55.91	0.00
*Pennsylvania	12521	42.97	0.00	57.03
Hawaii	104	42.31	57.69	0.00
*South Carolina	182	20.33	0.00	79.67
North Dakota	3983	3.39	90.89	5.72
Idaho	1217	0.00	0.00	100.00
*Oregon	331	0.00	0.00	100.00
Washington	365	0.00	0.00	100.00
Connecticut	247	0.00	100.00	0.00
Maine	804	0.00	100.00	0.00
New Hampshire	449	0.00	32.07	67.93
New Jersey	2432	0.00	100.00	0.00
Kentucky	866	0.00	100.00	0.00
Mississippi	670	0.00	61.19	38.81
Tennessee	2724	0.00	0.00	100.00
Michigan	6807	0.00	96.96	3.04
*Minnesota	3839	0.00	13.88	86.12
Ohio	737	0.00	0.00	100.00
Wisconsin	4927	0.00	73.55	26.45
Arkansas	483	0.00	0.00	100.00
Nebraska	2169	0.00	3.14	96.86
South Dakota	2296	0.00	78.35	21.65
Utah	53	0.00	100.00	0.00

* --Case Study State

EXHIBIT C-12 continued

COUNTY AND TOWNSHIP DISBURSEMENTS
FOR INTERGOVERNMENTAL TRANSFERS

FOR 1972

STATE NAME	TOTAL TRANSFERS FROM CNTY-TWNS IN THOUSANDS	PCT TO STATES FOR STATE HIGHWAYS	PCT TO STATES FOR CNTY-TWN ROADS	PCT TO MUNIC. FOR STREETS
Wyoming	259	0.00	100.00	0.00
Arizona	1039	0.00	100.00	0.00
*California	24556	0.00	18.18	81.82
Nevada	160	0.00	0.00	100.00
Alaska	0	N/A	N/A	N/A
Massachusetts	0	N/A	N/A	N/A
New York	0	N/A	N/A	N/A
Rhode Island	0	N/A	N/A	N/A
Vermont	0	N/A	N/A	N/A
Delaware	0	N/A	N/A	N/A
Virginia	0	N/A	N/A	N/A
West Virginia	0	N/A	N/A	N/A
*North Carolina	0	N/A	N/A	N/A
Colorado	0	N/A	N/A	N/A
Montana	0	N/A	N/A	N/A

* --Case Study State

Sources: Highway Statistics, 1972, Selected Tables on Mileage and Disbursement by State and Local Governments

EXHIBIT C-13

SUMMARY OF ALABAMA COUNTY ORGANIZATIONAL CHARACTERISTICS

Name of County	Captive	Non-captive	County Engineer Yes	County Engineer No	District	Place	Both	Number of Districts/Places	Commissioner Chairman type
Autauga		X	X		X			4	J.P.
Ballwin	X			X	X			4	CHAIRMAN
Barbour		X	X		X			4	CHAIRMAN
Bibb		X	X		X			4	J.P.
Blount		X	X		X			4	J.P.
Bullock		X	X		X			4	J.P.
Butler		X	X		X			4	J.P.
Calhoun		X	X		X			2	CHAIRMAN
Chambers		X	X		X			4	CHAIRMAN
Cherokee	X			X	X			4	CHAIRMAN
Chilton		X	X		X			4	J.P.
Choctaw		X	X		X			4	J.P.
Clarke		X	X		X			4	J.P.
Clay		X	X		X			4	J.P.
Cleburne		X	X		X			4	J.P.
Coffee		X	X				X	4 Dist/3 Places	J.P.
Colbert	X			X	X			4	CHAIRMAN
Conecuh		X	X				X	2 Dist/4 Places	CHAIRMAN
Coosh		X	X		X			4	J.P.
Covington		X	X		X			4	PRESIDENT
Crenshaw		X	X		X			4	J.P.
Cullman	X			X		X		2	CHAIRMAN
Dale		X	X		X			3	CHAIRMAN
Dallas		X	X		X			4	CHAIRMAN
DeKalb	X			X	X			4	PRESIDENT
Elmore		X	X		X			4	J.P.
Escambia		X	X		X			4	CHAIRMAN
Etowah		X	X		X			4	CHAIRMAN
Fayette		X	X		X			4	CHAIRMAN
Franklin	X			X	X			4	CHAIRMAN
Geneva		X	X		X			4	J.P.
Greene		X	X		X			4	J.P.
Hale		X	X		X			4	J.P.
Henry		X	X		X			4	CHAIRMAN
Houston		X	X			X		4	CHAIRMAN

EXHIBIT C-13 continued

SUMMARY OF ALABAMA COUNTY ORGANIZATIONAL CHARACTERISTICS

Name of County	Captive	Non-captive	County Engineer Yes	County Engineer No	District	Place	Both	Number of Districts/Places	Commissioner Chairman type
Jackson	X			X	X			4	CHAIRMAN
Jefferson		X	X		None			None	PRESIDENT
Lamar		X	X		X			4	CHAIRMAN
Lauderdale	X			X	X			(2D1; 2 D2)*	J.P.
Lawrence	X			X	X			4	J.P.
Lee		X	X		X			4	CHAIRMAN
Limestone		X	X		X			5	CHAIRMAN
Lowndes		X	X		X			4	CHAIRMAN
Macon		X	X		X			4	CHAIRMAN
Madison		X	X		X			4	CHAIRMAN
Marengo		X	X		X			4	PRESIDENT
Marion		X	X		X			5	CHAIRMAN
Marshall		X	X		X			4	CHAIRMAN
Mobile		X	X			X		3	PRESIDENT
Monroe		X	X				X	2 Dist/4 Places	J.P.
Montgomery		X	X		X			4	CHAIRMAN
Morgan		X	X		X			4	CHAIRMAN
Perry		X	X			X		4	CHAIRMAN
Pickens		X	X		X			4	J.P.
Pike		X	X		X			4	CHAIRMAN
Randolph		X	X		X			4	CHAIRMAN
Russell		X	X				X	4 Dist/2 Places	CHAIRMAN
St. Clair		X	X		X			4	CHAIRMAN
Shelby		X	X		X			4	J.P.
Sumter		X	X		X			2	CHAIRMAN
Talladoga		X	X		X	X		4	J.P.
Tallapousa		X	X					5	CHAIRMAN
Tuscaloosh		X	X		X			3	J.P.
Walker		X	X		X			4	CHAIRMAN
Washington		X	X		X			4	J.P.
Wilcox		X	X		X			4	J.P.
Winston	X			X	X			2	CHAIRMAN

J.P. JUDGE OF PROBATE

*2 District 1; 2 District 2

Source: Alabama Directory of County Officials

D. CONDENSED ANNOTATED BIBLIOGRAPHY

STATE HIGHWAY ORGANIZATIONS AND RESPONSIBILITY

American Association of State Highway and Transportation Officials Organization Charts of State Highway and Transportation Departments, 1974. AASHTO, Washington, D.C., 1974.

Provides "box chart" descriptions of headquarters and field offices of fifty state DOT's. Internal organization and district office charts are not included.

Advisory Commission on Intergovernmental Relations. Toward More Balanced Transportation: New Intergovernmental Proposals; ACIR, Washington, D.C., 1975.

This study which developed out of the series on Sub-state Regionalism and the Federal System is ACIR's most useful contribution to this summary, covering intergovernmental relations in all modes of transportation. Includes much tabular data comparing transportatin organization and expenditures by state and by function, using U.S. Census data through 1972. The report concludes with a set of policy recommendations with background discussions for each, directed to the federal and state governments. Of special interest are those recommendations involving reorganization of regular transportation delivery services and those regarding federal and state-local transportation financing policy recommendations.

Advisory Commission on Intergovernmental Relations. Pragmatic Federalism: A Reassignment of Functional Responsibility; ACIR, Washington, D.C., July, 1976.

Discusses in detail the results of the ACIR survey of municipalities and other counties in metropolitan areas generally regarding transfer of function. Although an excellent reference document for general transfer of functions, the review deals with legislative issues and constraints and the survey grouped transportation services generally by name. The study suggests that any further analysis would attempt to (1) identify the nature and direction of service agreements, (2) define specific objectives desired by category of (a) ongoing maintenance service agreements and (b) capitol investment or improvement projects.

Burch, Phillip H. Jr., Highway Revenue and Expenditure Policy in the United States. Rutgers University Press, New Brunswick, New Jersey, 1962, 315 pp.

Although somewhat dated now, this study has considerable value as a comprehensive study of fiscal and administrative responsibilities at the state and local levels. Conclusions are drawn from a thorough review of practices across the country with many specific examples of alternative state, county and township arrangements of responsibilities given. Discusses problems and weaknesses of county highway management, but sees this unit as better equipped than the smaller township or road districts to maintain local roads. State highway department organization and state funding of local roads programs given extensive discussion. The book has a strong rural emphasis and does not treat municipal highway administration as a separate topic.

Friedman, Robert S. "State Politics and Highways", Chapter 1 in Politics in the American States: A Comparative Analysis, Herbert Jacob & Kenneth Vines, Eds., Little Brown & Co., Boston, 1965.

Dated, but worth consulting. Non-technical discussion of highway policy issues, state highway department organizations and their internal and external relationships.

Gomez, Rosendo A. Intergovernmental Relations in Highways, The Univeristy of Minnesota Press, Minnesota, 1950.

By now quite dated. Includes historical background, including development of Federal-state relations, before getting into analysis of then-current conditions in Minnesota.

Advisory Commission on Intergovernmental Relations

The ACIR was established by Congress in 1959 to continually monitor the operation of the American Political System. The Advisory Commission on Intergovernmental Relations has been publishing comprehensive studies on all aspects of intergovernmental relations. ACIR is a basic source for work in the field of intergovernmental relations. Those reports having special interest for our subject are listed below.

Substate Regionalism and the Federal System:

Vol. I — Regional Decision Making: New Strategies for Substate Districts, 1973, 433 pp.

Vol. II — Regional Governance: Promise and Performance - Case Studies, 1973, 356 pp.

Vol. III — The Challenge of Local Government Reorganization, 1974, 356 pp.

Vol. IV — Governmental Functions and Process: Local and Areawide, 1974, 168 pp.

Regionalism Revised: Recent Areawide and Local Responses, 1977, 58 pp.

These first four volumes of a six volume series give an exhaustive analysis of metropolitan and regional governmental structures and their alternatives and are discussed in the pages ahead. The first report, Regionalism Revisited, discusses progress that has occurred in reaching the goals set out in the earlier series.

Bollens, John C. and Henry J. Schamndt. The Metropolis: Its People, Politics and Economic Life, 3rd Ed., Harper & Row, New York, 1975, 401 pp.

Extensive textbook on urban and metropolitan government. Includes current developments and is drawn from a thorough review of the literature. Citing ACIR studies, the authors see urban transportation as one service which particularly benefits from larger, areawide administrative units.

Burns, James MacGregor and J.W. Peltason, with Thomas E. Cromin. State and Local Politics: Government by the People, Prentice-Hall, Englewood Cliffs, New Jersey, 1976.

A reference textbook on state and local governments, designed for college entry level familiarization with political structures in America.

Mogulof, Melvin B., Five Metropolitan Governments, The Urban Institute, Washington, D.C., 145 pp., 1972.

A broad discussion of alternative metropolitan governmental forms: the urban county, transfer of functions to state government, special districts, two-tiered Federation, and city-county consolidation. This work grew out of the author's 1971 study of the council of governments from of government, and seeks alternatives stronger and more effective than the COG's.

Murphy, Thomas and Charlers Warren, Organizing Public Services in Metropolitan America, Lexington Books, Lexington, Massachusetts, 1974.

Essays on metropolitan government reorganization with special emphasis on the issue of centralizatin vs. decentralization of services.

National Association of Counties, Consolidation: Partial or Total-- An Edited Transcript of the National Conference. Naco, Washington, D.C., 1973, 93 pp.

Edited Transcript of a NACO-sponsored national conference on the subject of city-county consolidation. Working experiences with such government reorganization related by participants coming from Jacksonville and Miami, Florida, Indianapolis, Lexington, Kentucky, Baton Rouge, Louisiana, St. Louis, Missouri, Rochester, New York, Mecklenburg County, North Carolina, and Nashville, Tennessee. Emphasis is thus on consolidation of medium to large-- 200,000 to 1 million population. Some doubts on the advantages of city-county consolidation especially for the very largest regions are expressed (i.e., through diseconomies of scale).

MAINTENANCE ACTIVITIES AND MANAGEMENT TECHNIQUES

American Association of State Highway and Transportation Officials, AASHTO Maintenance Manual, AASHTO, Washington, D.C., 1976, 319 pp.

Describes all basic aspects of maintenance procedures. Used as a reference document for organization and definitional elements in this study.

American Association of State Highway and Transportation Officials, Committee on Maintenance, Maintenance Aid Digest. "Resurfacing, restoration and rehabilitation (R-R-R), impact on maintenance budgets". Includes a detailed analysis of maintenance budgets.

Advisory Commission on Intergovernmental Relations, The Challenge of Local Government Reorganization, Vol. III of Substate Regionalism and the Federal System, ACIR, Washington, D.C., 1974.

One entire chapter, pp. 29-52, is written on the subject of "Intergovernmental Service Agreements and Transfer of Functions". Distinctions between these two related but distinct tools is made. Data presented, based on 1971 ACIR-ICMA survey of 3,000 local governments. Goes into detail with one tool of intergovernmental cooperation which was covered in the earlier (1974) ACIR study on The Challenge of Local Governmental Reorganization, namely transfers of functions. The report includes a survey of constitutional and legal requirements for permitting functional transfers in all the states. It should be noted that transferring of functions can be both vertical (between different governments at the same level).

Jorgensen, Roy E., Federal Aid for Maintenance and/or All-Modes Management System, TRB Record, 598.

This short paper is divided into several distinct sections. Of interest is a strongly presented case against an expansion of federal aid to state highway departments for highway maintenance with current legislation. Rather, if financial aid is to be extended for maintenance, less restrictive "block grants" would be more desirable than the project-specific "categorical" grants now associated with the Federal-Aid program. The paper also discusses the author's personal experiences comparing rural maintenance organizational structures.

Jorgenson, Roy E., National Cooperative Research Program Report #131, Performance Budgeting System for Highway Maintenance Management, Highway Research Board, Washington, D.C., 1972.

A thorough discussion of the research into management tools applicable to highway maintenance. Included is the development of a highway department maintenance model, which was tested with the Georgia State Highway Department.

However, it should be noted that it is limited to internal management and allocation of resources. It is not concerned with relations with highway systems outside the states'--hence no intergovernmental relations. Also there is nothing directly concerning budgeting and finance aspects of management. But it is an excellent, representative study of management techniques as far as it goes.

National Association of Counties Research Foundation, National Association of County Engineers Action Guide Services: Vol. VIII Maintenance Management, NACO, Washington, D.C., 1972, 84 pp.

National Association of Counties Research Foundation, Interlocal Service Delivery: A Practical Guide to Intergovernmental Agreements/Contracts for Local Officials, National Association of Counties Research Foundation, Washington, D.C., 1977, 84 pp.

As indicated, this is designed as a very practical guide on the subject and is intended for the administrator who is considering implementing a service agreement. Information includes points to consider in deciding whether to do so: the legal requirements and constitutional limitations; estimating costs and benefits, and political feasibility. Also included are sample contracts for a number of kinds of service, including one traffic signal maintenance agreement.

U.S. Department of Transportation, FHWA, Offices of Research and Development, Implementation Division (American Public Works Association Research Foundation), Traffic Engineering Services for Small Political Jurisdictions, 1977, 133 pp.

Reviews the status of local government traffic services as related to engineering and maintenance of signals, signs and other paint striping measures to improve streets and intersections. The Highway Safety Program Standard 13 is discussed and alternative methods of delivery among 18 visited locations across the country. The phase I effort was highlighted by a questionnaire survey of 1350 cities and

counties to obtain general status of the problem.

U.S. Department of Transportation, Federal Highway Administration, Highway Maintenance Research Needs, Washington, D.C., 1975.

This document reports on the results of a four-day workshop held in 1974 under FHWA auspices, in which highway research needs for the next five years were discussed and priorities among alternative studies were established. This study (on intergovernmental relations and highway maintenance) developed as a direct result of this conference.

STATE AND LOCAL LEGISLATIVE AND FISCAL POLICY

Advisory Commission on Integovernmental Relations, ACIR State Legislative Program: Vol. 7--Transportation, ACIR, Washington, D.C., 1975, 44 pp.

Highway Research Board Special Report 49, Intergovernmental Relations in State Highway Legislation, National Academy of Sciences, 1959.

Dated now but good as a review and compilation of the legal basis for the relationships between state and local governments. Some of the sections of some interest are: "Agreements to share cost of construction and maintenance, Local government contracts to do state highway work, Construction and maintenance standards." This report does not get into actual operational or even administrative experience of such contractual arrangements.

Highway Research Board Special Report 84, Highway Maintenance: A Survey of State Laws, National Academy of Sciences, Washington, D.C., 1965.

Highway Research Board Special Report 85, Highway System Classification: A Legal Analysis, Part II, HRB, Washington, D.C., 1965.

Although there have been some recent changes in the Federal Aid laws regarding highway classification (e.g. last year's functional reclassification mandated by the 1973 Federal-Aid Act), this study is still of value as a comprehensive review of each of the states' Federal-Aid Secondary systems, and of the county and municipal roads systems within the states. Provides the legal framework for each system. The earlier companion study Special Report #42, Highway System Classification: A Legal Analysis, Part I, dealt with the states' primary systems, which being entirely under state control, are not an intergovernmental issue and not of direct interest to our subject.

Maxwell, James A. and J. Richard Avonson, Financing State and Local Governments, Third Edition, the Brookings Institute, Washington, D.C., 1977

A recently updated edition of a basic text on the subject. Valuable as a good technical introduction to state and local finance, putting highways in proper perspective against the other governmental functions.

FEDERAL LEGISLATIVE AND FISCAL POLICY

Dearing, Charles L., American Highway Policy, The Brookings Institute, Washington, D.C., 1941.

Both well researched and well written reports. These are probably the best treatment of the evolution of U.S. Highway policy. All levels of government are considered and integrated in this treatment which develops U.S. Highway policy beginning of World War II.

Highway Research Board, Special Report 48, Federal-Aid Provisions in State Highway Laws - An Analysis, National Academy of Sciences, Washington, D.C., 1959.

A dated document that reviews the emerging provisions of state law in the 1950's concerning classification systems and responsibilities of the state, and local government that would improve the use of Federal Aid construction funds.

National Association of County Engineers--National Association of Counties Research Foundation, Communications with County Governments, 1976.

This report is the result of an effort to find ways to improve communications between the FHWA and the county road administrations, and is largely limited to being a set of policy recommendations. Intergovernmental relations section (pp. 29-34) is concerned almost entirely with planning matters. One specific recommendation of interest was to improve or create in those states not having them, secondary roads divisions in state highway departments. (p. 40).

State Government: The Journal of State Affairs, Vol. 50., No. 2, Spring 1977, special issue, "Intergovernmental Relations: The Federal Influence", Council of State Governments, Lexington, Kentucky.

This issue features a number of essays by specialists in intergovernmental relations. Main emphasis is on the Federal role, primarily on Federal financial aid policies to state governments.

U.S. Department of Transportation, FHWA, Office of Program and Policy Planning Program Coordination Division/Office of Public Affairs, America on the Move! The Story of the

Federal-Aid Highway Program and the Federal-State Relationship, Department of Transportation, Washington, D.C., 1977, p. 38.

This report has value as a brief introduction to the federal aid program, its various components and the relationships to the state governments. State-local relationships are of course ignored, this being outside the federal aid program's responsibility. A brief historical review of development of the federal role in highway is given.

U.S. Department of Transportation, FHWA Office of Program and Policy Planning, Financing Federal-Aid Highways Revisited, (by Barry Felrice) 70 pp.

U.S. Congress, 95th, 1st Session, The Status of the Nation's Highways: Conditions and Performance, GPO, 1977, 483 pp.

This is the most recent of the highway needs studies done every two years by the Department of Transportation by Congressional mandate. Highway needs for the year 1990 are projected and present conditions and past expenditures (since 1962) are reviewed. State by state estimates of highway performance characteristics and pavement sufficiency are given.

Expenditures by level of government since 1962 show maintenance as the largest part of county and municipal highway disbursements. At the state level, construction is the largest expenditure. For the states, capital investments as a percentage of total outlays has declined steadily for the past thirteen years while maintenance costs have increased sharply since 1972.

Road expenditures and needs were presented in the report by functional classification rather than administrative category.

U.S. House of Representative, 94th Congress, 2nd Session, The State and Local Fiscal Assistance Amendments of 1976: Conference Report, to accompany H.R. 13367.

U.S. Senate, 93rd Congress, 2nd Session, Subcommittee on Intergovernmental Relations of the Committee on Government Operations. Committee Print: How 45 Selected Jurisdictions View Revenue Sharing.

U.S Senate, 94th Congress, 1st Session, Subcommittee on Intergovernmental Relations of the committee on Government Operations. Hearings On Revenue Sharing, July 23, 1975.

These documents present the results of recent public hearings on the Revenue Sharing Act. Generally, however, the material does not present comprehensive impacts or indicate that transportation has been significantly impacted in any way.

☆ U.S. GOVERNMENT PRINTING OFFICE: 1979 -629-848/2407

FEDERALLY COORDINATED PROGRAM OF HIGHWAY RESEARCH AND DEVELOPMENT (FCP)

The Offices of Research and Development of the Federal Highway Administration are responsible for a broad program of research with resources including its own staff, contract programs, and a Federal-Aid program which is conducted by or through the State highway departments and which also finances the National Cooperative Highway Research Program managed by the Transportation Research Board. The Federally Coordinated Program of Highway Research and Development (FCP) is a carefully selected group of projects aimed at urgent, national problems, which concentrates these resources on these problems to obtain timely solutions. Virtually all of the available funds and staff resources are a part of the FCP, together with as much of the Federal-aid research funds of the States and the NCHRP resources as the States agree to devote to these projects.*

FCP Category Descriptions

1. Improved Highway Design and Operation for Safety

Safety R&D addresses problems connected with the responsibilities of the Federal Highway Administration under the Highway Safety Act and includes investigation of appropriate design standards, roadside hardware, signing, and physical and scientific data for the formulation of improved safety regulations.

2. Reduction of Traffic Congestion and Improved Operational Efficiency

Traffic R&D is concerned with increasing the operational efficiency of existing highways by advancing technology, by improving designs for existing as well as new facilities, and by keeping the demand-capacity relationship in better balance through traffic management techniques such as bus and carpool preferential treatment, motorist information, and rerouting of traffic.

3. Environmental Considerations in Highway Design, Location, Construction, and Operation

Environmental R&D is directed toward identifying and evaluating highway elements which affect the quality of the human environment. The ultimate goals are reduction of adverse highway and traffic impacts, and protection and enhancement of the environment.

4. Improved Materials Utilization and Durability

Materials R&D is concerned with expanding the knowledge of materials properties and technology to fully utilize available naturally occurring materials, to develop extender or substitute materials for materials in short supply, and to devise procedures for converting industrial and other wastes into useful highway products. These activities are all directed toward the common goals of lowering the cost of highway construction and extending the period of maintenance-free operation.

5. Improved Design to Reduce Costs, Extend Life Expectancy, and Insure Structural Safety

Structural R&D is concerned with furthering the latest technological advances in structural designs, fabrication processes, and construction techniques, to provide safe, efficient highways at reasonable cost.

6. Prototype Development and Implementation of Research

This category is concerned with developing and transferring research and technology into practice, or, as it has been commonly identified, "technology transfer."

7. Improved Technology for Highway Maintenance

Maintenance R&D objectives include the development and application of new technology to improve management, to augment the utilization of resources, and to increase operational efficiency and safety in the maintenance of highway facilities.

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* The complete 7-volume official statement of the FCP is available from the National Technical Information Service (NTIS), Springfield, Virginia 22161 (Order No. PB 242057, price $45 postpaid). Single copies of the introductory volume are obtainable without charge from Program Analysis (HRD-2), Offices of Research and Development, Federal Highway Administration, Washington, D.C. 20590.