

**LEGISLATIVE
RESEARCH COMMISSION**

**REPORT
TO THE
1977**

GENERAL ASSEMBLY OF NORTH CAROLINA



LAND RECORDS INFORMATION SYSTEMS

RALEIGH, NORTH CAROLINA

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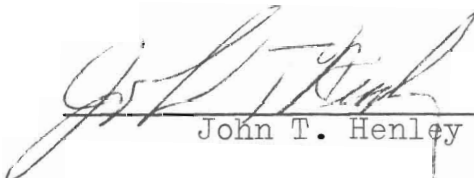
JANUARY 12, 1977

TO THE MEMBERS OF THE 1977 GENERAL ASSEMBLY:

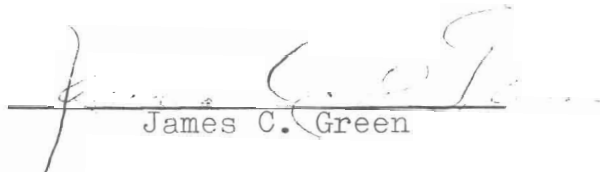
The Legislative Research Commission herewith reports to the 1977 General Assembly of North Carolina on the matter of Land Records Information Systems. The report is made pursuant to House Bill 296 of the 1975 General Assembly.

This report was prepared by the Legislative Research Commission Committee on Land Records Information Systems, and it is transmitted by the Legislative Research Commission to the members of the 1977 General Assembly for their consideration.

Respectively submitted,



John T. Henley



James C. Green

Co-Chairmen

Legislative Research Commission

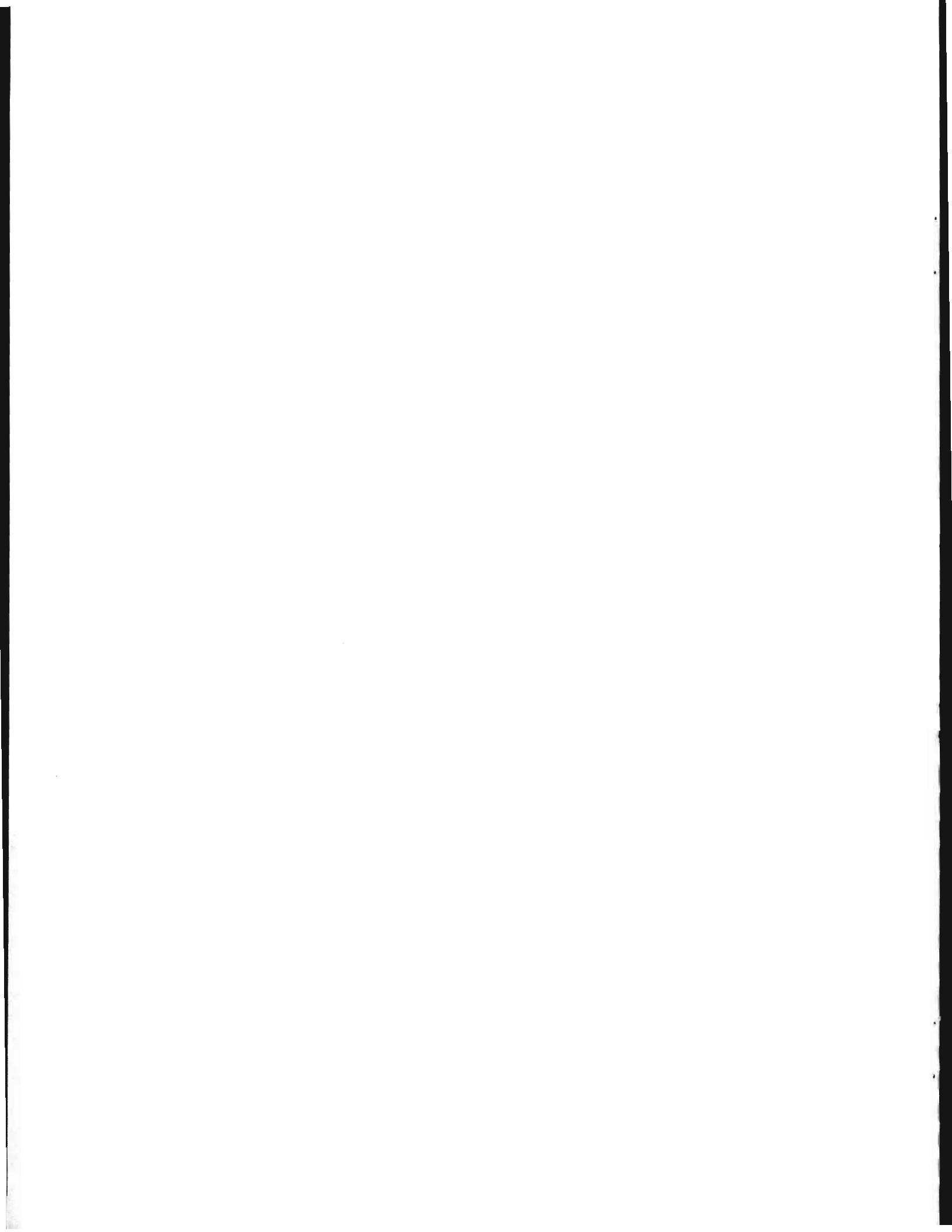


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INTRODUCTION

The Legislative Research Commission, created by Article 6B of Chapter 120 of the General Statutes, is authorized pursuant to the direction of the General Assembly "to make or cause to be made such studies of and investigations into governmental agencies and institutions and matters of public policy as will aid the General Assembly in performing its duties in the most efficient and effective manner" and "to report to the General Assembly the results of the studies made," which reports "may be accompanied by the recommendations of the Commission and bills suggested to effectuate the recommendations." G.S.120-30.17. The Commission is co-chaired by the Speaker of the House and the President Pro Tempore of the Senate and consists of five Representatives and five Senators, who are appointed respectively by the Co-Chairmen. G.S.120-30.10(a).

At the direction of the 1975 General Assembly, the Legislative Research Commission has undertaken studies of twenty-nine matters, which were arranged into ten groups according to related subject matter. See Appendix A for a list of the Commission members. Pursuant to G.S.120-30.10(b) and (c), the Commission Co-Chairmen appointed committees consisting of legislators and public members to conduct the studies. Each member of the Legislative Research Commission was delegated the responsibility of overseeing one group of studies and causing the findings and recommendations of the various committees to be reported to the Commission. In addition, one Senator and one Representative from each committee were designated Co-Chairmen. See Appendix B for a list of the committee members.

Section 4 of Chapter 851 of the 1975 Session Laws directed the Legislative Research Commission to "investigate and review the land records information systems of the State and make recommendations concerning ways of modernizing them and making them more uniform." The study directive further itemized ten issues for inclusion in the Commission's study effort. See Appendix C for a breakdown of these issues.

Much of the groundwork for this study had been completed in a 1975 report of a study of land records information systems in North Carolina conducted by the Institute of Governments of the University of North Carolina. The study was requested by the North Carolina Bar Association's Committee on Modernization of Land Records and funded by the North Carolina Bar Foundation. The findings of that study confirmed the reasons for the growing concern shared by many people who utilized land records information systems in the various counties of the State. Aside from the obvious lack of uniformity among the counties, the study identified four major characteristics of land records systems: decentralization, the use of name indexes, the absence of automated data processing, and a recent increase in both the numbers of records and the users of those records.

On the basis of the findings and recommendations of the Institute of Government's study report, the North Carolina Bar Association's Board of Governors strongly urged the General Assembly to create a legislative study commission to conduct a

comprehensive study and make recommendations for statutory changes that would improve the State's land records information systems. The legislative response was the introduction in 1975 of House Joint Resolution 785, which would have established a 12 member study commission. Because of the large projected cost of such a commission and the poor budgetary situation confronting the State, the study directives contained in HJR 785 were incorporated into Chapter 851, and the Legislative Research Commission was directed to conduct the study.

COMMITTEE PROCEEDINGS

The Legislative Research Commission's Committee on Land Records Information Systems held its organizational meeting on October 3, 1975. Mrs. Eunice Ayers, Register of Deeds of Forsyth County and a member of the Committee, related to the members the experience of her county's transition to a modernized system of land records, which included the implementation of automated data processing for record storage and retrieval. Discussion also focused on the study directives contained in Chapter 851 of the 1975 Session Laws, in order to establish the goals the Committee wished to attain. It was pointed out that the registers of deeds of the State had endorsed the creation of the Committee and that their input would be most valuable. Copies of the Institute's report, "Improving Land Records Systems in North Carolina," by

William A. Campbell and L. Lynn Hogue, were distributed to the members. It was decided that the Committee would seek input from the North Carolina Association of Registers of Deeds, the North Carolina Bar Association, persons and institutions involved in real estate transactions, planners from the local and State levels, persons involved in ad valorem property taxation, persons involved in mapping and surveying, and the Institute of Government.

The second meeting of the Committee was held on October 24, 1975. The entire meeting was devoted to discussion about the subject matters contained in the Institute's report: The problems of lack of uniformity from county to county and of decentralized storage of all recorded information pertaining to individual tracts of land; the advantages of indexing tracts of land by uniform parcel identifier numbers instead of or in addition to indexing the names of the parties to the transactions involving those tracts; the differences in effort and cost in creating geo-coded parcel identifier numbers, which are generated out of the rectangular coordinates which position the parcel on the face of the earth, and in creating arbitrary identifiers, which bear no relationship to the tract's geographical location; the costs of uniform and accurate planimetric (base) maps produced from aerial photographs; and the costs and benefits of the employment of automated data processing for record storage and retrieval.

On November 20, 1975, the Committee met at the Office of the Register of Deeds of Forsyth County in Winston-Salem. The Committee viewed a film on the Forsyth County Land Records Information System entitled "Tomorrow - Today," and then was presented with overviews of the project by Mr. Nicholas M. Meiszer, the Forsyth County Manager, Mr. Cam Easton, the Forsyth County Tax Administrator, and Mr. Charles Wray, project manager and contract administrator.

The next meeting took place on February 27, 1976, at the Mecklenburg County Office Building in Charlotte. Mr. Robert P. Alexander, Mecklenburg County Tax Supervisor, explained the county's mapping system, which was patterned after the property tax mapping system in California. He explained in detail Mecklenburg County's parcel identifier number system, which was designed primarily for the tax assessor's office, and noted its adaptability to other uses by highway engineers, planners, and public utilities. Following Mr. Alexander's presentation, Mrs. Ayers outlined the activities of the first Workshop on the Forsyth County Land Records Information System to be held on March 21, 22, and 23 in Winston-Salem, and extended an invitation to the Committee members. The Committee voted to meet at the Workshop on March 22 and 23. It was also pointed out that many nationally prominent persons involved in the modernization of land records would be participating in and attending the Workshop.

At its April 9, 1976, meeting the Committee met with representatives of the North Carolina Bar Association's Committee on Modernization of Land Records and discussed some possible alternative directions for the study effort to take. It was noted that the Committee would want to coordinate its activities with those of the Property Tax Study Committee, the Department of Administration's study of the feasibility of establishing State-operated computer centers to serve local governments, and the Land Policy Council, where those activities are found to overlap. The Committee also reviewed a survey of the State's registers of deeds that was compiled by the Institute of Government. The survey addressed information from each county office regarding financial support, personnel, number of filings, indexing procedures, filming methods, and office facilities. The Committee then discussed its schedule for future meetings. Factors such as the 1976 Session of the General Assembly and the primary and general election campaigns would curtail any definite meeting plans made at that time. It was resolved that the staff would carry on research regarding the issues outlined in Section 4 of Chapter 851 of the 1975 Session Laws, and that the next meeting would be held after the staff had enough time to complete the research effort.

The Committee met jointly with the Property Tax Study Committee on October 21, 1976, to discuss a common interest in the creation of a statewide mapping program wherein the counties could receive matching State funds if they prepared planimetric

(base) and cadastral maps in accordance with uniform standards promulgated by the State. Funds could further be available for the counties' adoption of uniform parcel identifiers and implementation of automated data processing of land records information. The Committees agreed to work together on recommended legislation to establish an assistance program of this nature. The Committee also discussed the possibility of creating in the Department of Administration a land records management program to provide technical assistance to local governments and to establish greater uniformity in local land records systems.

The Committee held its final meeting on December 17, 1976, at which time its tentative recommendations to the 1977 General Assembly were reviewed, analyzed, and given final approval.

FINDINGS

The creation and maintenance of land records systems in North Carolina is essentially a function of local government. The three public offices with the largest role in the creation and maintenance of land records and the production of information about land are the register of deeds, the clerk of superior court, and the tax supervisor. To a somewhat lesser extent, the offices of tax collector and municipal clerk also play an important role. The records filed and maintained in the office of the register of deeds are primarily those concerning land titles. Deeds, deeds of trust, mortgages, powers of attorney, option agreements, easements, maps and plats are

all recorded in the office of the register of deeds. That office is also the repository of birth and death certificates, marriage licenses, and corporate documents. The clerk of superior court maintains records of judgments, various kinds of liens, and probate proceedings. The tax supervisor (known in most states as the tax appraiser or assessor) has the tax abstracts and the tax scroll for all taxable property in the county. These records show, alphabetically by property owner, the appraised value of the property and the amount of taxes owed by any particular taxpayer. Of special importance to persons concerned with information about land are the property appraisal cards maintained by the tax supervisor. These cards typically show for each parcel of property in the county the name of the owner, the street address, number of acres or square feet, improvements on the property, and other information relevant to the appraised value of the property. If a county is fortunate enough to have tax maps, they are kept in the tax supervisor's office. Zoning and subdivision regulations and maps are kept in the municipal clerk's office. Special assessment rolls are maintained in the clerk's offices, and property tax receipts, or bills, showing records of payment are maintained in either the tax collector's or clerk's office.

One major feature of land records systems in North Carolina is the extent of decentralization. This decentralization has two aspects. First, records that contain information about land and that create and transfer interests in land are maintained in several different offices of State and local government, and

second, only one of those offices -- the clerk of superior court -- receives any substantial direction and guidance from a central State agency in the filing, indexing, and maintaining of records. The Administrative Office of the Courts has authority to prescribe indexing and recordkeeping methods and forms for the clerk's office and has done so. The Ad Valorem Tax Division of the Department of Revenue has more limited authority to prescribe certain records for the tax offices and has thus far confined itself, for the most part, to requiring approval of forms used in those offices. No office has authority to prescribe methods of indexing and recordkeeping for the registers of deeds. Within the typically broad requirements of the general statutes and the local constraints of money, personnel, and equipment, each county may devise the methods of indexing and recordkeeping that it deems satisfactory.

A consequence of this decentralization that is of great concern to many users of land records is the lack of uniformity in records systems when one goes from county to county. This lack of uniformity is costly in terms of the time and personnel needed to extract title and other information from different systems, and in many cases the accuracy of the land information extracted is impaired.

A second major characteristic of land records systems in North Carolina is the use of name indexes rather than parcel indexes. A parcel index is one that uses as the index key the number of the tract or parcel of real property, and all

instruments filed in the office that affect that parcel are indexed under the parcel number. North Carolina General Statute Section 161-22 requires that in the registers of deeds offices alphabetical indexes be kept of the parties to instruments filed for registration. A parallel parcel number index in addition to the name index is not prohibited, but financial realities being what they are, no office maintains such an index. The closest approximation in North Carolina to a parcel number index is the information kept by parcel number in the offices of tax supervisors of those counties having tax maps. The tax maps are divided into zones, and parcels are assigned numbers according to the zone and map on which they are shown. For example, a parcel identified as "32-M-5" would be parcel number 5 in Zone M on map 32. A property record card is maintained for each parcel. This card typically shows the block and lot number if the parcel is located in a subdivision, the appraised value of the parcel, zoning restrictions, and, sometimes, a list of previous owners and the dates of sale as well as the name of the current owner. Tax offices that are equipped with maps and record cards filed by parcel number have the rudiments of a modern land records information system.

A third major characteristic of North Carolina land records systems is the marked absence, with a few exceptions, of the use of automated data processing. The potential value of automated data processing in retrieving information relative to chain of title and other questions has been remarked by many

observers; yet, with certain exceptions, automated data processing is not used in North Carolina. One exception is the computerized indexing procedures available from several commercial firms in use in approximately 30 counties. Under these systems, index entries are typed daily onto special tapes that are forwarded to the headquarters of the firm, where periodically a print-out is produced of index pages and entries in alphabetical order. Automated data processing is also used in several tax offices in preparing tax records. Of the many possible reasons for this failure to take advantage of automated data processing the primary one is that most counties do not assign parcel numbers, and they do not assign parcel numbers because they do not have tax maps. Also, many units of government have no access to computer facilities, a major problem where some smaller and more rural units are concerned.

A fourth major characteristic of land records systems in North Carolina is the recent increase in users of land records and in the intensity of record use, conjoined with an increase in the number and variety of the records themselves. Traditionally the two primary groups creating and using land records have been conveyancers (lawyers and abstracters), on behalf of their clients, and tax officials. These two groups are still probably the major users of land records, but within the last ten years or so, they have been joined by what we may call the urban systems planners (including police and fire protection agencies and housing agencies, as well as land-use planners)

and by State planners. These planning officials seek much information about various parcels of land; some of this information is of the same sort required by conveyancers and tax officials -- location, ownership, status of taxes and other liens, and appraised value -- but much of it goes further to include type of neighborhood, crimes reported on or near the property, location of fire hydrants, soil types, and demographic information. The increase in the number of land records is in part a function of development: subdivision of a large tract into residential lots, the giving of deeds to those lots, and the taking of deeds of trust to secure payment of the purchase price. The creation of condominiums has also added to the number and variety of records. As cities and counties have enacted and amended their zoning and subdivision ordinances and environmental protection ordinances, the number of documents that must be filed, indexed and examined has increased. State environmental quality status and regulations have had a further impact on the number and variety of records.

The result of this increasing number and variety of records in combination with the reliance on name indexes and the absence of automated data processing is obvious: More and more time is required to gather information about individual parcels of land at greater and greater cost to the public.

Under the leadership of Robert P. Alexander, the Mecklenburg County Tax Supervisor, Mecklenburg County has developed a system for the computer-assisted appraisal of real property. In

developing this system, the county has computerized a great deal of land information. The basic building blocks for the Mecklenburg system are tax maps. Individual parcels of land are shown on the maps and are designated numerically according to the following nine digit code: The map book in which a given parcel is contained -- three digits; the page number of the map book containing the parcel -- two digits; the block where the parcel is located -- one digit; the number of the parcel itself -- two digits. A typical parcel code would look like this: 108 232 13. The parcel so numbered would be parcel 13 in block 2 on page 23 of book 108. Obviously, these parcel numbers do not indicate the parcel's geographic position, nor are they unique in the State; they do, however, serve very well in locating parcels in relation to each other and in entering information about the parcels in a computer.

Once a parcel has been numbered, the number is entered in the computer and all appraisal information relevant to that parcel is entered under the parcel number. The appraisal information collected includes location of the property, dimensions of the property, zoning, topography, description of improvements, utility connections, and sales prices of similar property. Retrieval of this stored information is available in many different forms. For example, inquiries can be made concerning comparative sales of property in any given price range, or according to zoning classification, or by ownership, or area, or even by number of bathrooms. The Mecklenburg County Tax

Collector's Office also enters in a computer the status of current and delinquent property taxes on each parcel of land. Thus, to determine the status of taxes on a particular parcel it is only necessary to enter the parcel number in the computer terminal and inquire of the status of taxes.

There is currently no way to trace land title information through the tax office's system, but it could be accomplished relatively easily. Under the authority of G.S. 161-30, the Mecklenburg County Commissioners could require that all deeds, deeds of trust, maps and other instruments affecting real property must carry the number of the parcel or parcels affected before they may be recorded in the office of the register of deeds. The register could then enter a brief description of the instrument, the names of the parties, and the book and page number where recorded under the parcel number; then a history of transactions involving that parcel would gradually be built up in the computer file, along with the appraisal information. A further requirement that parcel number reassignments by the tax office be entered in the computer would be necessary to keep the parcel information accurate and up to date when map conditions required alterations in tax parcel numbers.

Development of the Forsyth County system is being guided by Mrs. Eunice Ayers, the Forsyth County Register of Deeds, and Cam H. Easton, Jr., the Forsyth County Tax Administrator. The starting point for the system is the complete coverage of the county by high-quality ortho-photographic maps. Onto these maps

are plotted land ownership data taken from existing tax maps, recorded plats, and deed descriptions, and this information is entered in a computer from which line maps can be automatically plotted. Once the parcel boundaries are ascertained, unique parcel identifiers are assigned. The parcel identifier numbers reflect the geographic location of the approximate centroid of the parcel in terms of the State plane coordinates.

Once the map information is prepared and the parcel identifiers are assigned, all matters of physical, economic, and social information can be computerized for each parcel. Appraisal information, population trends, traffic patterns, soil types and flood plain hazards are only some of the types of information that can be developed from the system. Because of the geo-coding of the parcel identifiers, an important attribute of the Forsyth County system is the ability to produce maps by computer of areas, of possible rights-of-way, and of areas of environmental concern. All of this information will be available from computer terminals in the office of the register of deeds, the tax offices, planning offices, other county and municipal offices, and private businesses and law firms may rent computer terminals for their own use.

Of special interest to attorneys is the land title information that will be available from the computer. By entering the correct parcel number, the inquirer can receive a display and print-out of the status of current and delinquent taxes and special assessments on the property, the tax appraisal of the property, zoning, a chain of title for the last six owners of

the property -- including the names of the grantor and grantee, deed book and page, and date of transfer. Mortgage liens are entered in the computer after the system is in operation, but prior liens are not entered. At the present time there are no plans to enter judgment liens from the clerk of court's office in the computer.

Through the efforts of local registers of deeds and tax officials, State agencies and the North Carolina Bar Association, strong impetus is being given to a movement to modernize land records systems in North Carolina and to develop computerized land information systems that can be a major tool in sound state and local government. The pace and extent to which this program is carried out will depend in large measure on the allocation of scarce state and local funds to land records modernization programs, and this will depend in turn to a large degree on education of the public about the current and impending problems in land records systems and about the benefits of a modernized system.

It is now widely recognized that the first logical improvement to the record keeping process is the preparation and maintenance of accurate large scale maps. Such maps are of tremendous value to the services provided by the register of deeds as well as those provided by the tax office. Typically, these maps have been prepared and updated by the tax supervisor and therefore, they have acquired the general label of tax maps. In fact, when such maps are complete and accurate they become the basic element in a modern land record information system with many valuable uses far beyond the needs of the tax supervisor's office.

Maps for tax purposes have taken different forms in an evolutionary sequence since they were first used. Crude maps prepared in piecemeal fashion were a major improvement over having no maps at all. Nevertheless, many early tax mapping efforts left a great deal to be desired because of the lack of accuracy and completeness. A major improvement was achieved when aerial photography became generally available about 40 years ago. Property lines traced on the face of aerial photographs provided useful information for tax purposes but every aerial photograph is subject to considerable error particularly along its margins.

A truly adequate and accurate tax map (which has major value for a wide variety of other purposes as well) can be created only by the preparation of planimetric base maps upon which all properties can be plotted in their true dimensions without serious error. While this type of map is more expensive in the initial instance, it is essentially a permanent base map for land records and it has the potential of serving a wide range of additional purposes.

The other universally recognized essential element of a good land record system is the parcel identifier. In one sense, the owner's name is a parcel identifier and this can be used to locate recorded information through the grantor-grantee index. Such an identifier, however, has no relationship to geographic position. While there is an unlimited number of systems used to create parcel identifiers, the purpose of this report is served by recognizing two types of such systems.

Most everyone is aware of the map number, block number, lot number systems which are used in many well-organized tax map systems. This type of parcel identifier serves the purposes of the tax supervisor very well and it is also useful to others who understand the arbitrary characteristics of the mapping pattern. Otherwise, it has limited additional applications.

The second system that is important is the so-called geo-coding system. In this case the parcel identifier is generated out of the rectangular coordinates which position the parcel on the face of the earth. This is a completely regular system which has great advantages particularly for computer processing of parcel information. It is of comparatively recent origin because it does depend upon having the accurate planimetric base maps referred to earlier.

The subject of a geo-coded parcel identifier has been examined at great length by organizations and individuals interested in modernized land record systems. The conclusions to be drawn from these investigations strongly suggest that a geo-coded parcel identifier based upon the North Carolina State Plane Coordinate System will offer the greatest degree of utility of any system yet devised. The North Carolina State Plane Coordinate System is fully defined in Chapter 102 of the N. C. General Statutes as the official survey base for this state. It has been widely used for many years and all large modern mapping operations are carried out using this survey base.

In accordance with the directive in Chapter 851 to inquire into the ten enumerated issues, the Committee made the following findings:

1. Should there be created a State registrar's office to perform a role with regard to the registers of deeds similar to that performed by the Administrative Office of the Courts with regard to the clerks of superior court? The Administrative Office of the Courts (AOC) was established by Article 29 of General Statutes Chapter 7A (G.S. 7A-340 through G.S. 7A-346) in 1965. One of the functions of this office as proposed by the Courts Commission was to consult with the clerks of superior court and then "prescribe standardized forms and methods for transacting the routine business of the clerk's office, in an effort to promote efficiency and uniformity." Report of the Courts Commission, 1965. G.S. 7A-343(3) carries out this recommendation by requiring the Director of the AOC to "Prescribe uniform administrative and business methods, systems, forms and records to be used in the offices of the clerks of superior court."

The intent behind the suggestion of the possibility of creating an analogous state office for registers of deeds appears to be only for the purpose of (a) establishing record keeping standards, (b) advising and supervising local land records offices, (c) rendering binding opinions on such matters, (d) enforcing the maintenance of a uniform system, and (e) lending its expertise in assisting local governments with land records management. "Modernization of Land Records Systems in North Carolina," by William A. Campbell, Proceedings of the North American Conference on Modernization of Land Data Systems,

1975, p. 187. Other powers and duties that are exercised by the AOC under the auspices of G.S. 7A-343 through G.S. 7A-346 would be without the scope of modernizing and making uniform land records management and should not be considered.

2. Should the assignment of land parcel identifiers and the creation of land parcel identifier indexes be required? The necessity of such requirements is a foregone conclusion among proponents of reform, modernization, and uniformity of land records systems. The proliferation of land conveyances and other reasons for inquiry into land records have greatly increased the time-consuming burden of searching the traditional name indexes for information about any parcel of land. Land use planning and controlling authorities, taxing authorities, and other governmental as well as private entities are concerned about the present land record information systems, which systems were suitable in the days when tracts of land were larger and conveyances were relatively fewer. There appears to be a compelling need for a uniform and simple method for the designation of individual land parcels. The adoption and use of a single land parcel identifier or code number, according to Professor Paul E. Basye of the Hastings College of Law, would provide the following advantages:

(a) It would provide a sufficient substitute for the lengthy description of a tract of land, avoid the need for including descriptions in each instrument of conveyance and thereby eliminate the likelihood of error in transcribing long and complicated descriptions.

(b) It would avoid the repetitious examination of lengthy descriptions in a chain of title. Simple comparison of parcel identifiers in the instruments in the chain of title would be sufficient.

(c) It would increase accessibility to land records by shortening the time required to identify the instruments in the history of a title to any parcel of land. The only ready means of access in the present system is contained in an index which provides a history of land ownership by reference to all the particular instruments affecting the title.

(d) It would allow all information concerning a given parcel of land to be stored in a single index and a single office. Access to this information would be gained more easily and at greater speed. P. Basye, A Uniform Land Parcel Identifier -- Its Potential For All Our Land Records, 22 Am. U. L. Rev. 251, 270 (1973).

It is the consensus of the experts in the study of the modernization of land records that the creation of land parcel identifiers and parcel identifier indexes is the best way to simplify the present system of designating individual tracts of land. Further, parcel identifiers are an absolute prerequisite to computerization of any land records system.

3. What arrangements can be made to provide automated data processing services to counties that desire them but do not have them available? Resolution 112 of the 1975 General Assembly (H.R. 338) requested the Department of Administration to study the

feasibility (in terms of costs and other factors) of establishing a number of state-operated regional computer centers to serve county and city governments. The Office of State Management Systems conducted the study of local government electronic data processing needs and published a report on May 12, 1976. The study group found "that there is no strong interest in the state's operating regional data centers, either through cost-sharing or state financial participation," but rather a "local desire to provide for their own needs by utilizing newer micro/mini computer techniques, by sharing efforts with neighboring jurisdictions, or by using local resources -- whether governmental or privately operated." Further, the study group discerned, "particularly in smaller units and those less sophisticated in computing, a real desire for technical assistance and guidance from experienced and objective state personnel."

The focal point of this study was on the feasibility of storing information about tax administration, payroll, personnel, and financial systems. Mayors and chairmen of boards of county commissioners were contacted throughout the study and were polled to find out to what extent the state could be of assistance to local governments. The findings of the study group may indicate the attitudes and needs of the registers of deeds; at this time, however, these findings cannot be conclusive on the issue of computerization of land records for counties that desire it.

4. What should the role of land title registration be in a system of modernized land records? North Carolina's Torrens system can

be found in N. C. General Statutes Chapter 43. Under North Carolina's optional Torrens system, any person, firm, corporation, the state, or any local government may institute a special proceeding in the superior court to establish title to a given parcel of land, to determine all adverse claims, and have the title registered. G.S. 43-6. Notice of the proceeding is given to persons interested in the land and is published in the county in which the land is situated. G.S. 43-9 and 43-10. After a hearing a thorough title search of the land in question is made by a court-appointed title examiner. A decree is then rendered which establishes the nature and extent of the petitioner's title to the land. G.S. 43-12. The decree is reviewed and approved by the superior court judge. The decree of title is registered in the office of the register of deeds. For the purpose of conveyancing, the certificate of title is endorsed by the grantor much in the same way a motor vehicle title certificate is transferred.

The Torrens system is not employed in North Carolina as much as one would expect. Professor Dale A. Whitman cites reasons for the unpopularity of the Torrens system. Among them are the initial cost of registration, "the paucity of appellate decisions interpreting the Torrens statute, its unfamiliarity to lenders, and the obvious reluctance of attorneys and title companies to promote a system which seems ultimately to be against their interests." Whitman, Transferring North Carolina Real Estate Part I: How the Present System Functions, 49 N. C. L. Rev. 413, 461 (1971).

The advantages of the Torrens system should be considered in any discussion of the modernization of land records. In a Torrens registration, all information concerning the title to the registered parcel of land is centralized and located in the decree of title which can be found in the office of the register of deeds. The quality of title is improved because the title established in the registered owner is immune to attack at the time of the decree. The registered owner is protected against all claims or demands not noted on the book for the registration of titles. The Torrens system furnishes a complete and permanent record of the exact status of the title, and the certificate of registration shows on its face all liens, encumbrances, and claims against the title. State v. Johnson, 278 N. C. 126, 179 S. E. 2d 371 (1971).

Despite the advantages of the Torrens system, the lack of enthusiasm over land registration as experienced in this state would indicate the impracticality of requiring the Torrenizing of all land parcels. It may be possible, however, to require land to be registered before it may be developed or subdivided or before condominiums may be created. Unless the high cost of Torrenizing is reduced, owners of smaller tracts of land will be reluctant to employ North Carolina's system of land registration.

5. How should the modernization of land records be financed?

There are three sources of money for the attendant costs of modernizing land records: The State, the counties, and those

in the private sector who use and benefit from the land records information systems. One of the goals envisioned by proponents for land records reform is to lower the cost of the title search. With this in mind, it would be rather contradictory to place much of the burden on those who use the system, because any fee increase would be passed on to clients and consumers. Counties and other local governmental entities without adequate sources of revenue will probably not be eager to conduct any widespread land records reform if too much financial responsibility is placed on their shoulders.

There needs to be a careful fiscal investigation into the proper allocation of the costs for modernization, which should take into account financial resources, the short and long term benefits to be derived from a modernized land records system, and the budgetary policies and priorities of the state and local governments.

6. If a decision is made to establish a system of land records using parcel identifiers, parcel identifier indexes, and computerization, what statutory revisions must be made to facilitate conversion to this system? In order to achieve some degree of state-wide uniformity in the selection and use of parcel identifier numbers, legislation should be enacted to (a) require the Secretary of the Department of Administration to prepare standards for parcel identifier numbers and (b) set out certain minimum requirements that must be included in the standards. There should also be enacted legislation to authorize

counties to establish parcel identifier number indexes provided certain requirements are met. One of those requirements is that the indexing system must be approved by the Secretary of the Department of Administration before it can become the official real property index of the county.

7. In establishing a modernized land records system, what changes need to be made in records that make claims against land but are filed against persons rather than against particular parcels of land? Among these claims are judgment liens, tax liens, and other statutory liens that can be satisfied out of the debtor's real property assets. A person searching a title must ascertain if there are any outstanding liens against the grantor and must be sure that the person against whom the lien is outstanding is the same person as the grantor. Professor Basye suggests, "An ideal solution to this problem would be to refuse recognition to blanket liens against any and all property of a person and to recognize a lien only if the creditor specifies the particular piece of property owned by the debtor in his notice or levy, and causes it to be levied upon in the same manner as is now done in an execution or attachment lien. The creditor has remedies available to him to compel disclosure from the debtor. These remedies would eliminate many potentially unjust liens due to the similarity of names, and place the burden squarely on the creditor, which is where it justly belongs, rather than upon the general public or subsequent purchasers. Only in this way may the successful operation of a tract index

system be brought about." P. Basye, supra, at 266. G.S. 25-9-402(1) provides a similar remedy in that financing statements are required to sufficiently identify the collateral which is involved in secured transactions. Professor Basye is of the opinion that there is no justification for refusing to extend this Uniform Commercial Code concept to real property.

An alternative suggested by Professor Basye is to maintain a separate name index in each county solely for the purpose of recording liens. He doesn't think that examining one small alphabetical index will place too great an additional burden on the title searcher. "If it develops that the only solution available for dealing with judgment liens, tax liens and the like is the maintenance of a separate name index, then it may be suggested that no judgment lien or tax lien will be effective unless the creditor or taxing authority also identifies the debtor by means of some identifying number such as his social security number or internal revenue service number. This would solve the problem of identification presented when there is doubt concerning whether an individual with a similar name is also the specific debtor. In most cases this information would be available to the government and the creditor. Imposing this slight burden on the creditor is preferable to impairing the marketability of titles because of mistaken identity." Id., at 267.

8. Should land records and land information, whether stored in a computer, or microfilm, or in books, be available from a single

county office? The major premise of this subject is predicated upon an affirmative answer to the question of whether all information pertaining to a given parcel of land should be consolidated into one record source. This would entail indexing all records pertaining to and all claims against a tract of land under a land parcel identifier. If this is accomplished, the title searcher would not have to visit the three or four state and local government offices that store land records information. The title searcher's time would be saved not only by the fact that all pertinent records would be in one office, but by the fact that such consolidation of information would require much less time to construct the chain of title for the land in question. In the present procedure, the title searcher must check in the office of the clerk of the superior court for probate or intestacy proceedings which would explain any interruptions in the chain of title detected by the searcher. It seems to be the consensus of the proponents of land records reform that it would be desirable to consolidate and centralize all recorded documents affecting real property. Wunderlich, Public Costs of Land Records, 22 Am. U. L. Rev. 33, 356-361 (1973).

9. What statutory revisions are needed to improve land records systems exclusive of those necessary to implement a computerized system based upon parcel identifiers? See the response to Issue #10.

10. What statutory revisions are needed to increase statewide uniformity of land records systems? The Committee did not have the time to initiate and conduct an in-depth examination of the many statutes affecting land records systems for a determination of what revisions are needed. The North Carolina Association of Registers of Deeds, on its own volition, has recently taken great strides in establishing uniform procedures and forms. This commendable undertaking by the Association obviates the need at this time for any specific statutory amendments or additions by the General Assembly.

RECOMMENDATIONS

1. The Legislative Research Commission recommends the adoption of legislation to create a small, full-time staff in the Department of Administration. Research on methods, surveys of record keeping processes throughout North Carolina, and analysis of procedures in selected states across the country will be undertaken. This work will be closely coordinated with all departments and units of government represented in the membership of the Land Policy Council. Other organizations with a major interest in public records of land tenure will be consulted. A technical advisory committee will be formed to assist the staff in policy matters and give technical guidance to the programs. Membership of the committee will include representation from: the North Carolina Association of Assessing Officers, the North Carolina Association of Registers of

Deeds, the North Carolina Society of Land Surveyors, the North Carolina Section of the American Society of Photogrammetry, the North Carolina Chapter of the American Institute of Planners, the North Carolina Tax Collectors' Association, the North Carolina Section of the American Society of Civil Engineers, and the North Carolina Bar Association. In addition, four members from the public at large will be appointed. In addition to the research work and subject to the availability of funds, the programs to be undertaken are:

- A. Base Maps. A cooperative program for the preparation of county base maps under technical standards and specifications prepared and administered by the Department of Natural and Economic Resources.
- B. Cadastral Maps. A cooperative program for preparation of property line maps under the direction of qualified county surveyors in conformance with specifications and standards prepared jointly by the Department of Revenue and the Department of Natural and Economic Resources. Administration of the State's interest in this program shall be through the Department of Revenue, Ad Valorem Tax Division.
- C. Universal Parcel Identifier. A uniform parcel identifier for statewide use to be developed with the advice and assistance of an advisory committee on land records as defined above. Special attention will be given to features which will assist documentation of parcel subdivision, inventory, record of chain of title, geo-coding, and other similar possibilities.

- D. Automated Processing of Land Records. Technical assistance and established software programs provided to counties according to individual needs for computerized assistance in reappraisal, information retrieval, and interface compatibility with the Land Resource Information Service maintained by the Land Policy Council. Administrative responsibility for this program shall be managed through the Department of Revenue, Ad Valorem Tax Division.
- E. Records Managements Program. Technical assistance to county registers of deeds to achieve coordinated land records and improved records management in accordance with standards and guidelines prepared and administered by the Department of Cultural Resources cooperating with the Department of Administration Land Records Research Project.

The Legislative Research Commission further recommends an initial appropriation of \$75,000 to the Department of Administration for fiscal year 1977-1978 to fund this program. It is anticipated that the annual fiscal cost will not increase beyond this amount.

See Appendix D for recommended legislation.

2. The Legislative Research Commission recommends the adoption of legislation that would implement a system of land parcel identifier numbers and indexes. This legislation would direct the Secretary of the Department of Administration to prepare standards for land parcel identifier numbers in accordance with certain minimum requirements that must be included in the

standards. The purpose of the legislation is to achieve some degree of statewide uniformity in the selection and use of land parcel identifier numbers. The legislation would also authorize counties to establish land parcel identifier numbers provided certain requirements are met. One of those requirements is the prior approval of the indexing system by the Secretary of the Department of Administration before it can become the official real property index of the county. The legislation states that if the indexing system is approved, it can be used in lieu of the alphabetical (grantor-grantee) indexes already required by the General Statutes; it should be noted, however, that access to the information contained in the new index should be obtainable by the use of the name of a party to an instrument filed. Until the counties are equipped with electronic data processing capabilities that allow automated data searches by name, it is important to retain the ability to locate land records information by names as well as parcel identifier numbers. One very important reason for this retention is that in the probate of wills and the administration of decedents' estates it is necessary for the personal representative to examine real property records for any conveyances made during the life of the decedent and for any statutory dower rights of widows. Such examination can only be made using the name of the decedent.

See Appendix E for recommended legislation to implement land parcel identifier numbers and indexes; and see proposed

G.S. 161-22.2(d)(5) for the retention of access to land records by the names of the parties to land transactions.

3. The Legislative Research Commission recommends the adoption of legislation which encourages counties to improve their land records with State matching fund assistance. The legislation would give first emphasis to the completion of county-wide base maps. Work undertaken by a county under this program would be eligible for financial assistance from the Department of Administration on a dollar-for-dollar matching fund basis. The counties would be encouraged to prepare accurate planimetric or orthophoto maps with county-wide coverage suitable as a base for the development and maintenance of current cadastral maps. It is anticipated that these maps would have sufficient information so that they may be utilized for purposes such as property tax revaluations, land use planning, development, zoning, title examination, etc. The next step anticipated would be the preparation of cadastral maps based again on standards established by the Secretary of Administration on a state-wide basis. The third step would consist of the adoption of a system of parcel identifiers which would give a unique identification number to each parcel of land in the State. A number would be used for only one tract of land and would never be used to identify another tract. The system would then lead to a permanent historical record of change and chain of title by parcel of land which would make a better system for searching the history of land transactions. The ultimate step would

be the implementation of a system of automated record keeping and processing which would expedite the maintenance of accurate, up-to-date files.

The Legislative Research Commission further recommends an initial appropriation of \$950,000 to begin the project. It is anticipated that the mapping project would require ten years to complete at a total cost of \$20 million, with the State paying one-half the cost.

See Appendix F for recommended legislation.

APPENDIX A

MEMBERS OF THE LEGISLATIVE
RESEARCH COMMISSION: 1975-1976

Speaker James C. Green, Co-Chairman

President Pro Tempore John T. Henley, Co-Chairman

Senator Robert L. Barker

Senator Luther J. Britt, Jr.

Senator Cecil James Hill

Senator William D. (Billy) Mills

Representative Glenn A. Morris

Representative Liston B. Ramsey

Representative Hector E. Ray

Representative J. Guy Revelle

Representative Thomas B. Sawyer

Senator Willis P. Whichard

APPENDIX B

MEMBERS OF THE COMMITTEE ON LAND RECORDS INFORMATION SYSTEMS

Senator Cecil James Hill, Committee Chairman and Legislative
Research Commission Member Responsible for Studies

Representative Robert Z. Falls, Co-Chairman

Senator Thomas E. Strickland, Co-Chairman

Mr. Louis C. Allen, Jr.

Mrs. Eunice Ayers

Representative Judson D. DeRamus, Jr.

Representative Peter W. Hairston

Senator William K. Mauney

Representative Hugh C. Sandlin

APPENDIX C

H. B. 296

CHAPTER 851

AN ACT TO DIRECT THE LEGISLATIVE RESEARCH COMMISSION TO STUDY VARIOUS MATTERS.

The General Assembly of North Carolina enacts:

Section 1. The Legislative Research Commission is directed to study the following issues, designing the individual study efforts as described in the other sections of this act:

(3) Land records information systems (H. 785);

Sec. 4. In its study of land records information systems in North Carolina the Legislative Research Commission shall investigate and review the land records information systems of the State and make recommendations concerning ways of modernizing them and making them more uniform. The Legislative Research Commission shall include in its study an inquiry into the following issues: (1) Should there be created a State registrar's office to perform a role with regard to the registers of deeds similar to that performed by the Administrative Officer of the Court with regard to the clerks of superior court. (2) Should the assignment of land parcel identifiers and the creation of land parcel identifier indexes be required. (3) What arrangements can be made to provide automated data processing services to counties that desire them but do not have them available. (4) What should the role of land title registration be in a system of modernized land records. (5) How should the modernization of land records be financed. (6) If a decision is made to establish a system of land records using parcel identifiers, parcel identifier indexes, and computerization, what statutory revisions must be made to facilitate conversion to this system. (7) In establishing a modernized land records system, what changes need to be made in records that make claims against land but are filed against persons, rather than against particular parcels of land. (8) Should land records and land information, whether stored in a computer, on microfilm, or in books, be available from a single county office. (9) What statutory revisions are needed to improve land records systems exclusive of those necessary to implement a computerized system based upon parcel identifiers. (10) What statutory revisions are needed to increase statewide uniformity of land records systems.

APPENDIX D

A BILL TO BE ENTITLED

AN ACT TO ESTABLISH A LAND RECORDS MANAGEMENT PROGRAM IN THE
DEPARTMENT OF ADMINISTRATION

The General Assembly of North Carolina enacts:

Section 1. A new G.S. 143-345.6 is enacted to read
as follows:

"§143-345.6. Land records management program.--(a) The Secretary of Administration shall establish a land records management program for the purposes (1) of advising registers of deeds, local tax officials, local planning officials and other concerned agencies and officials about sound management practices, and (2) of establishing greater uniformity in local land records systems. The management program shall consist of the activities provided for in subsections (b), (c), (d), and (e) below, and other related activities essential to the effective conduct of the management program.

(b) The Secretary shall, in cooperation with the Secretary of Cultural Resources, develop standards and specifications for the reproduction of records by photography, microphotography, and by other means, and for the security of recorded documents. The standards and specifications developed shall take into account the needs of the users of public records, space requirements of local offices, the costs of various filming and recording technologies, and personnel available to staff local records offices, and the need for permanency of records affecting title to land. The standards and specifi-

cations shall be promulgated as joint regulations of the Departments of Administration and Cultural Resources and shall be binding upon the offices of local government to which they apply.

(c)(1) The Secretary shall, in cooperation with the Secretary of the Department of Natural and Economic Resources, conduct a program for the preparation of county base maps pursuant to technical standards prepared by the Department of Natural and Economic Resources.

(2) The Secretary shall, in cooperation with the Secretary of Revenue, conduct a program for the preparation of county property-line maps under the direction of qualified surveyors pursuant to technical standards prepared by the Departments of Revenue and Natural and Economic Resources.

(d) The Secretary shall, upon the joint request of any board of county commissioners and the register of deeds, make a management study of the office of register of deeds. At the conclusion of the study, the Secretary shall make recommendations to the board and to the register of deeds concerning the number and assignment of personnel in the office and the salary levels of the register of deeds and his office personnel.

(e) The Secretary shall undertake research and provide advice and technical assistance to local governments on the following aspects of land records management:

- (1) uniform indexing of land records;
- (2) uniform recording and indexing procedures for maps, plats, and condominiums;

- (3) centralized recording systems;
- (4) filming, filing, and recording techniques and equipment; and
- (5) computerized land records systems.

The Secretary shall from time to time submit to the General Assembly recommendations for new statutes and for statutory amendments that he considers necessary to implement a uniform and efficient land records system throughout the State.

(f) An Advisory Committee on Land Records is created to assist the Secretary in administering the land records management program. The Governor shall appoint twelve members to the Committee; one member shall be appointed from each of the organizations listed below from persons nominated by the organization: (1) the North Carolina Association of Assessing Officers; (2) the North Carolina Section of the American Society of Photogrammetry; (3) the North Carolina Chapter of the American Institute of Planners; (4) the North Carolina Section of the American Society of Civil Engineers; (5) the North Carolina Tax Collectors' Association; (6) the North Carolina Association of Registers of Deeds; (7) the North Carolina Bar Association; and (8) the North Carolina Society of Land Surveyors; and four members from the public at large shall be appointed. The members of the Committee shall be appointed for four-year terms, except that the initial terms for members listed in positions (1) through (4), above, and for two of the members-at-large shall be two years; thereafter all appointments shall be

for four years. The Governor shall appoint the chairman, and the committee shall meet at the call of the chairman. The members of the Committee shall receive per diem and subsistence and travel allowances as provided in G.S. 138-5.

Sec. 2. This act shall become effective upon ratification.

APPENDIX E

A BILL TO BE ENTITLED

AN ACT TO ESTABLISH STANDARDS FOR LAND PARCEL IDENTIFIER NUMBERS AND TO AUTHORIZE THE CREATION AND MAINTENANCE OF LAND RECORDS INDEXES BY PARCEL IDENTIFIER NUMBERS

The General Assembly of North Carolina enacts:

Section 1. A new G.S. 161-31 is enacted to read as follows:

"§161-31. Parcel identifier numbers.--(a) The Secretary of Administration is directed to develop and promulgate standards for the establishment of land parcel identifier numbers to be used in parcel identifier number indexes created pursuant to G.S. 161-22.2. The standards shall be promulgated in the form of regulations, and in developing such standards the Secretary of Administration shall consult with the Secretary of Cultural Resources, the Secretary of Revenue, and such other departments and agencies as he considers appropriate.

(b) In developing the standards required by this section, the Secretary of Administration shall take into account the needs of the users of county parcel identifier number indexes and county maps and shall incorporate the following requirements into the standards:

(1) The parcel identifier number must either reflect the state plane coordinates of some point in the parcel, or it must be keyed to a map of the parcel that shows the location of the parcel within

the county;

(2) The parcel identifier numbering system shall be designed so that no parcel will be assigned the same number as any other parcel within the county;

(3) The parcel identifier numbering system must show, for parcels of land created by subdivision, the number of the parcel of land subdivided in addition to the numbers of the newly-created parcels;

(4) The parcel identifier numbering system must show, for parcels of land created by the combining of separate parcels, the numbers of the land parcels that were combined in addition to the number of the newly-created parcel; and

(5) The parcel identifier numbering system must be capable of identifying condominium units and other separate legal interests that may be created in a single parcel of land.

(c) A county may not assign parcel identifier numbers to the parcels of land in the county until the Secretary of Administration has certified that the parcel identifier numbering system meets the standards promulgated pursuant to this section."

Sec. 2. A new G.S. 161-22.2 is enacted to read as follows:

"§161-22.2. Parcel identifier number indexes.--(a) In lieu of the alphabetical indexes required by G.S. 161-21, 161-22, and 161-22.1, the register of deeds of any county in which unique

parcel identifier numbers have been assigned to all parcels of real property may install an index by land parcel identifier numbers. For each instrument filed of record, the entry in a land parcel identifier number index must contain the following information:

(1) The parcel identifier number of the parcel or parcels affected;

(2) A brief description of the parcel or parcels, including subdivision block and lot number, if any;

(3) A description of the type of instrument recorded and the date the instrument was filed;

(4) The names of the parties to the instrument to the same extent as required by G.S. 161-22 and the legal status of the parties indexed;

(5) The book and page number, or film reel and frame number, or other file number where the instrument is recorded.

(b) Every instrument affecting real property filed for recording in the office of register of deeds shall be indexed under the parcel identifier number of the land parcel or parcels affected.

(c) The parcel identifier number index may be maintained in index books, on film, or in computers or other automated data-processing machines. If the parcel identifier number index is maintained in a computer or other automated data-processing machine, the register of deeds shall, at least once each month, obtain from the computer or other data-processing machine a printed copy on paper or film of all index entries made since the previous printed copy was obtained. The printed copies shall be retained as security copies and shall

not be altered or destroyed.

(d) Before a register of deeds may install a parcel identifier number index in lieu of the alphabetical indexes required by G.S. 161-22, the proposed index must be approved by the Secretary of the North Carolina Department of Administration. Before approving a parcel identifier number index, the Secretary must find that:

(1) The requirements of this section, G.S. 161-22, and all other indexing requirements of the North Carolina General Statutes and applicable judicial decisions will be met by the index;

(2) Measures for the protection of the indexed information are such that computer or other machine failure will not cause an irremediable loss of the information;

(3) Printed forms and index sheets used in the index permit a display of all information required by law and are otherwise adequate;

(4) Any computer or other data-processing machine used and the program for the use of such machines are adequate to perform the tasks assigned to them; and

(5) Access to the information contained in the index can be obtained by the use of both a parcel identifier number and the name of any party to an instrument filed of record.

The Secretary may require a register of deeds seeking approval of a parcel identifier number index to furnish him with any information concerning the index that is pertinent

to the findings required for approval.

(e)(1) An approved parcel identifier number index shall become effective as the official real property index of the county as of the first day of July following approval by the Secretary of Administration.

(2) In any county in which a parcel identifier index is the official index, the register of deeds shall post notices in the alphabetical index books and at other appropriate places in his office stating that the parcel identifier number index is the official index and the date when the change became effective."

Sec. 3. This act shall become effective upon ratification.

APPENDIX F

A BILL TO BE ENTITLED
AN ACT TO PROVIDE ASSISTANCE TO COUNTIES FOR IMPROVEMENT
OF LAND RECORDS.

The General Assembly of North Carolina enacts:

Section 1. Chapter 102 of the North Carolina General Statutes is amended by adding the following sections:

"§102-15. Improvement of land records.--There is hereby established a statewide program for improvement of county land records to be administered by the Secretary of the Department of Administration (hereafter called the Secretary). First emphasis shall be given to the completion of county-wide base maps. Counties with a base map system prepared to acceptable standards will be encouraged to undertake subsequent logical improvements in their respective land records systems. Work undertaken by any county under this program will be eligible for financial assistance out of funds appropriated for this purpose to the Department of Administration. The amount allotted to each project is to be determined by the Secretary, but in no case shall such allotments exceed one dollar for every dollar of local tax funds expended on the project by the county. Federal or other State funds available to the project will not be eligible as matching money under the State program.

"§102-16. Board of county commissioners to apply for assistance.--The board of county commissioners of each county

may apply to the Secretary, upon forms provided by him and in accordance with directives and requirements outlined in G.S. 102-17, for assistance in completing one or more projects. Such project or projects shall constitute one or more phases of a plan for the improvement of the county's land records. The work to be undertaken shall be described in relation to the county's revaluation schedule, and it shall be shown to be a part of a larger undertaking for achieving ultimate long-term improvements in the land records maintained by the county register of deeds, the county tax supervisor, or other county office.

"§102-17. County projects eligible for assistance.--All projects funded under this assistance program shall be described as conforming to one or more of the project outlines defined herein. All projects shall achieve a substantial measure of conformity with the objectives set forth in these project outlines such that a greater degree of statewide standardization of land records will result. The Secretary shall prepare and make available to all counties administrative regulations designed to assist the counties in preparing project plans and applications for assistance, and to assure compliance with the objectives and other requirements of G.S. 102-15, G.S. 102-16, and this section. County projects shall be eligible for assistance subject to availability of funds, compliance with administrative regulations, and conformity with one or more of the project outlines as follows:

(1) Base maps. Preparation of accurate planimetric or orthophoto maps with countywide coverage at one or more scale

ratios suitable as a base for the development and maintenance of current cadastral maps. These maps shall have additional information included where appropriate to increase their utility for other purposes. The formulation of technical standards and detailed specifications and the coordination of all such mapping projects with other State mapping programs shall be the responsibility of the Department of Natural and Economic Resources. Insofar as possible mapping projects funded under this assistance program shall utilize existing photography, geodetic control surveys, and previously mapped information, and be coordinated or combined with adjacent or related mapping projects to achieve the best efficiency and economy consistent with the maintenance of high quality map production.

(2) Cadastral maps. Preparation of accurate maps of all property boundaries together with other supporting information and based on up-to-date planimetric or orthophoto maps conforming to the specifications for base maps outlined in subsection (1) of this section. The formulation of specifications and standards for these cadastral maps shall be the responsibility of the Department of Revenue. These specifications and standards shall be designed to conform to the best acceptable practice for county land records in North Carolina. The cadastral maps shall be scheduled as nearly as possible to be completed and made available for the next revaluation cycle to be undertaken by each county and the maps shall include references to subdivision plat numbers, property codes, and other related information considered useful to the appraisal.

process or to the public generally.

(3) Standardized parcel identifiers. Adoption of a system of parcel identifiers which will serve to provide unique identification of each parcel of land, a permanent historical record of change and the chain of title, and any necessary cross-reference to other pre-existing parcel identifiers. The proposed system of parcel identifiers shall conform to such minimum specifications and standards as may be promulgated by the Secretary for the purpose of achieving consistency and compatibility among all counties throughout the State. Said minimum specifications and standards for parcel identifier systems shall be adopted and administered by the Secretary only after consultation with the recommendation from an advisory committee on land records with a membership representative of professional organizations concerned with public land records and map making.

(4) Automated processing of land parcel records. Preparation and implementation of a system of automated record keeping and processing which will expedite the maintenance of accurate up-to-date files, improve the appraisal process, and facilitate analytical operations needed to respond to requirements for current information. Technical standards and minimum specifications shall be the joint responsibility of the Department of Administration, the Department of Revenue, and the Department of Cultural Resources."

Sec. 2. This act shall become effective on July 1, 1977.