STERLING 1980 COMPREHENSIVE PLAN

BACKGROUND INFORMATION

DRAFT

The Old West Partnership

PLANNING & COMMUNITY DEVELOPMENT CONSULTANTS

BACKGROUND INFORMATION REPORT
prepared for
STERLING CITY PLANNING COMMISSION

REPORT OVERVIEW

This Background Information Report presents data and general facts on current and expected conditions which are related to the future growth of Sterling. Information on population, the economy, housing, environmental conditions, community facilities, and existing land use have been studied to identify basic considerations which will affect the future growth and development of Sterling. Information on city utilities (sewer, water, and electric) will be presented in future reports as studies presently underway are completed. The background information in this report is designed to assist the Planning Commission in assessing future needs of the City and in formulating planning objectives and ways in which to achieve those objectives. As the Planning Commission undertakes the process of preparing Sterling for efficient and orderly growth, this information will assist in identifying the guidelines by which to develop practical solutions to the various aspects of community progress and change.

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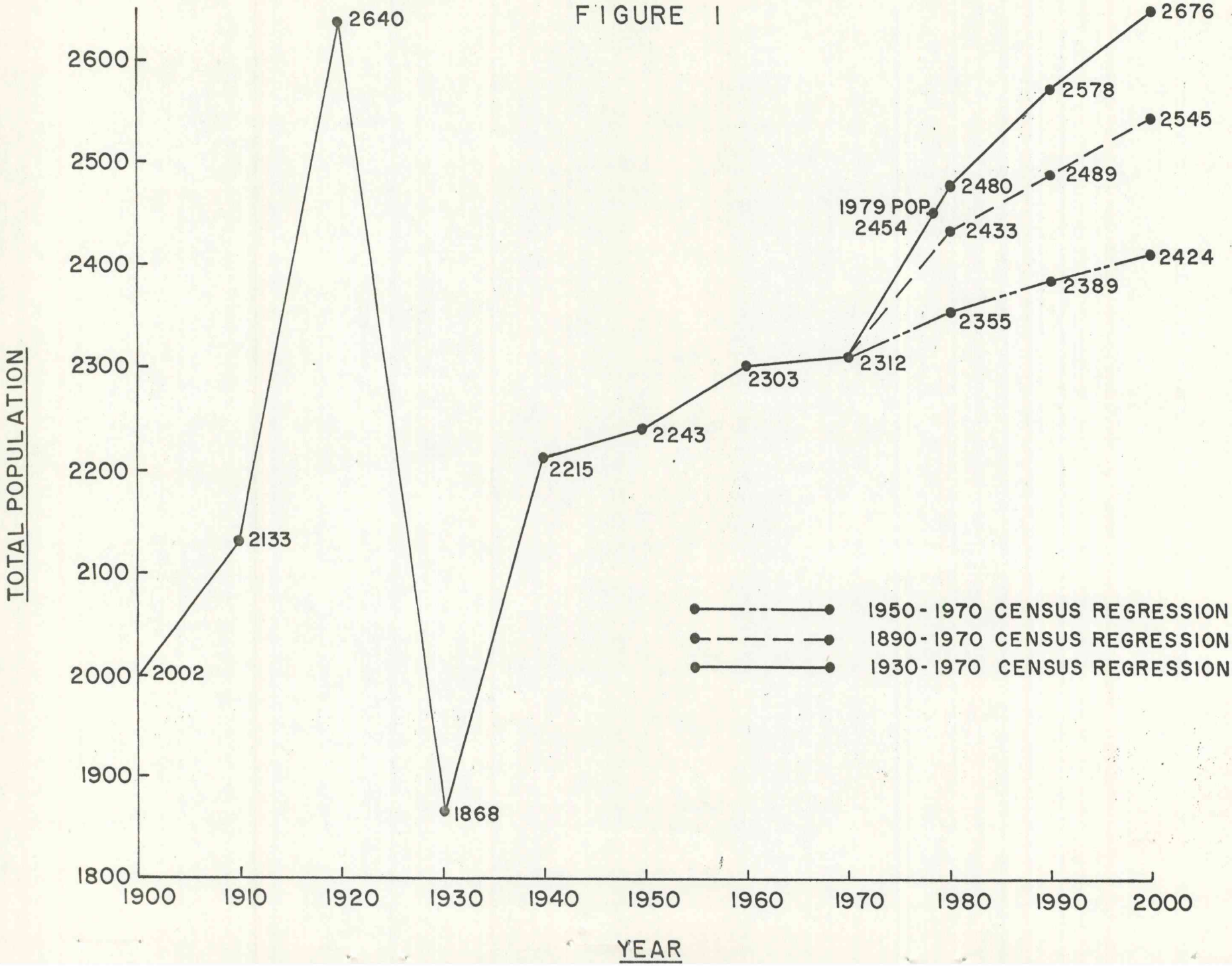
POPULATION

In the compilation of data upon which to base a Comprehensive Plan one of the major variables to be studied is the population and its composition. Population study and projection identifies past and present conditions which can be expected to influence the future population size. Subsequently, the understanding of local population trends will assist in identifying the types of services and facilities which will be required to serve the future residents of the community. An understanding of the expected population and its composition identifies important factors which must be considered in the development of the Comprehensive Plan. Sterling's past and present population has been studied to determine future population changes which will affect the demand for City services and facilities. The information from this population analysis will play an important part in the study of other plan elements as each element is directly related and expected population change.

Past Population Trends

The graph on page 2 indicates that for the last forty years Sterling has experienced a stable population base which has grown slowly. The 1970 U.S. Census population of 2,312 showed an increase of 4.4% over the 1940 population. Prior to 1940, Sterling's population rose and fell sharply, primarily as a reflection of the events leading into and out of the depression. Increased farming activity followed by the "Dust Bowl" and depression attracted people to the farm and then returned them to communities such as Sterling when the economic disaster occurred. By 1940 Sterling had recovered from the unstable condition of the previous twenty years and since then has maintained its stable population base. In 1979, based upon estimates from the Rice County Assessor's office, the population was 1,963. When students at Sterling College are added to this, the 1979 population is estimated to be 2,454, a significant increase from 1970. It should be noted that the procedures for census enumeration used by the U.S. Census and the County Assessor's office are quite different. Because of this, it is important to recognize that the significant population increase between 1970 and 1979 is in large part due to census enumeration methodology.

PAST AND PROJECTED POPULATION TRENDS
STERLING, KANSAS
FIGURE 1



The high projection, based on 1930-1970 census data, should be regarded cautiously because it includes the effects of a rapid population growth from 1930 to 1940, the social and economic trends of which are not likely to be repeated. The low projection reflects the slow growth experienced since 1950 and provides a projection which, while acceptable, does not make allowances for possible growth related to expansion of the industrial or commercial economic base. The medium projection indicates the possibility of a moderate increase in the past growth rate, based upon the various influences on population experience over an extended period of time. While the effects of past unstable population changes are included in this projection, it does provide a projection which allows for the preparation of a comprehensive plan flexible enough to deal with potential rapid growth in the future.

Based upon analysis of the various population projections for the City of Sterling it has been determined that for the purpose of this Plan, the medium projection is best suited as the growth indicator for the future of Sterling. The medium projection indicates a 10% increase in population over the next twenty years, somewhat higher than previous growth rates. However, utilization of an expected population size of 2,545 by the year 2000 provides for the flexibility needed in the preparation of a workable Comprehensive Plan. As the Plan is periodically reviewed it can be updated to adjust plan recommendations to prevailing population change. It is better to have a plan which may make assumptions and recommendations which are never implemented than it is to underestimate the demands which future changes may place upon the structure of a community. Accordingly, a planning population of 2,545 will be utilized for the purposes of the Comprehensive Plan in order to allow the development of proposals for implementation which may be delayed or advanced depending upon future population change. In any event, use of the medium projection will provide a Comprehensive Plan which will assist Sterling to maintain its stable population base as well as deal with any unforseen impacts upon that stable base.

Additionally, while student enrollment is excluded by County enumeration and included by the U.S. Census, the margin of difference is increased. Because enrollment at Sterling College is an important part of the community and because the methodology of the U.S. Census is more detailed, it is found that U.S. Census data, which includes college enrollment, provides the best data base from which to study Sterling's future population change. The 1979 population estimate provides a good indicator from which to judge future population estimates needed in determining the types of service and facility changes required during the next twenty years.

Future Population Change

It has been shown that Sterling has experienced a stable population base during the past forty years and this stability provides for continued growth of the community. In order to determine the future demand for public services and facilities, a sense of population projections have been completed. These projections utilize the linear regression methodology for statistical projection. This methodology assumes that historical trends in social and economic variables affecting the population will similarly affect future population change.

Table I below shows the projected population figures for Sterling which are based on different time spans and population figures reported by the U.S. Census. These different data base time spans allow the identification of a projection which is determined to most closely reflect historical trends and circumstances which have provided Sterling with its stable population of the last forty years, while at the same ti e making it possible to obtain a planning projection which will allow preparation of a Comprehensive Plan flexible enough to deal with unexpected changes in population growth.

Table I: Sterling Population Projections

Year	1890-1970 Census Data	1930-1970 Census Data	1950-1970 Census Data
1975	2,405	2,432	2,338
1980	2,433	2,480	2,355
1985	2,461	2,530	2,372
1990	2,489	2,578	2,389
1995	2,518	2,627	2,407
2000	2,545	2,676	2,424

Comparison of the medium population projection to expected change in Rice County's population shows that Sterling has and will continue to be an important center of population in the County. In 1950 Rice County's population was 15,635 and 14% of the population was located in Sterling. By 1970, as a result of changing employment patterns in rural areas, Sterling's population represented 19% of Rice County's population of 12,320. As shown in the above discussion of Sterling's population base, the stability in growth since 1940 has made Sterling an important factor in Rice County's social and economic systems. Sterling's importance in Rice County's future population change is shown by the comparison of past and projected population in Table 2 below. The medium preojection of Sterling is compared to

Table 2. Comparison of Population Change, Sterling and Rice County

Year	Sterling	Rice County
1950	2,243	15,635
1960	2,303	13,909
1970	2,312	12,320
1980	2,433	11,802
1990	2,489	11,130
2000	2,545	10,546

population projection figures for Rice County prepared by the Mid-State Regional Planning Commission in the July, 1976, "Population and Economic Report". This comparison shows that Sterling's population will represent an increasing percentage of the County's population. As a result of population and economic changes expected over the next twenty years, primarily as they relate to agriculture employment trends, it is anticipated that Sterling's population will represent 24% of the County's population, compared to 19% in 1970. This information indicates that development of a Comprehensive Plan based upon a moderate growth rate for Sterling is necessary to provide the basis for orderly and economical of public services and facilities for future residents of Sterling.

Population Composition

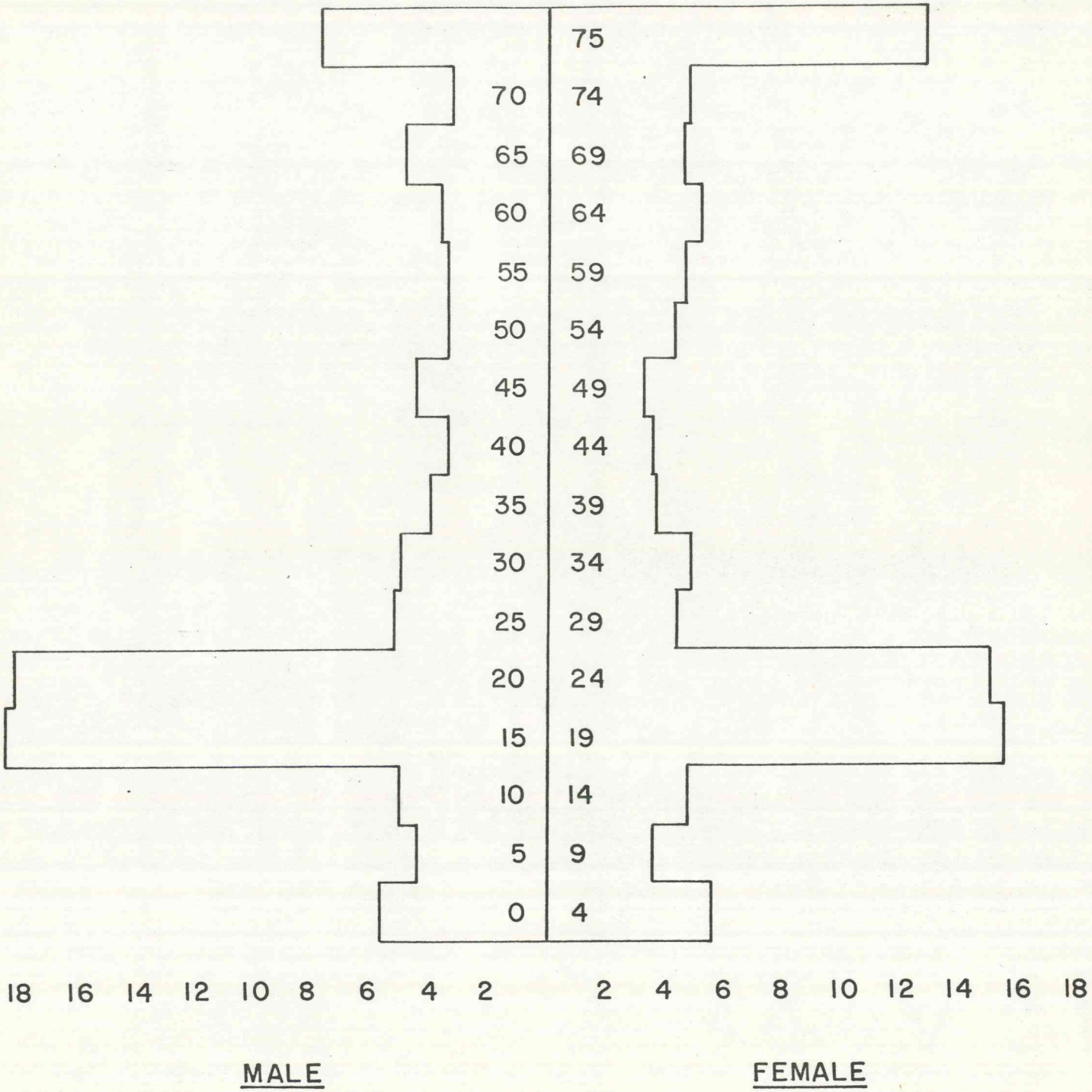
Having determined that a stable population base has developed since the rapid changes of the early 1900's, and with the possibility of an increased growth rate during the next twenty years, the composition of Sterling's population has been studied to further the understanding of the population which will affect Sterling's future growth and development.

The population pyramids on page 7 provide a graphic representation of what various factors are causing change in Sterling's population. These population pyramids are essentially bar graphs representing the percentage of male and female population totals in each age group. The data for these pyramids is based on U.S. Census data, Rice County Assessor's data, and Sterling College enrollment figures. These bar graphs are placed together to form the "pyramid" and when 1970 and 1979 pyramids are compared as shown it is possible to determine the factors affecting Sterling's population.

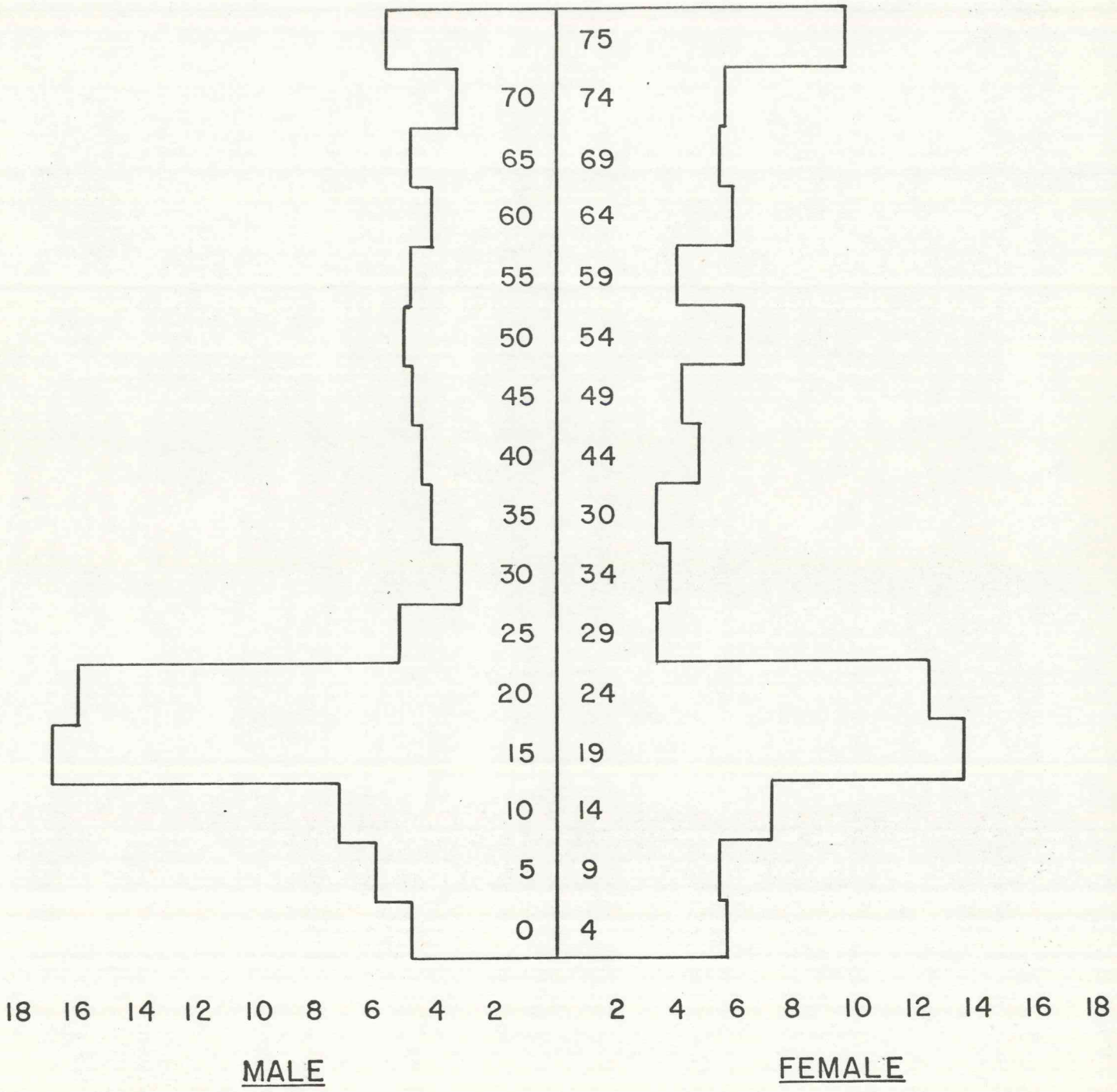
The most notable aspect of these population pyramids is that the enrollment of Sterling College plays an important part in Sterling's social and economic patterns. The high percentage of the population in the 15-24 age groups reflects this fact. Through the sixties and earsly seventies there was a nationwide rural to urban population shift which caused much population decline among small rural communities. This trend has reversed in recent years and Sterling's population has benefitted from this reversal. The 1979 pyramid indicates that there has been an overall increase in the population between the ages of 25 and 39. This indicates that there has been an in-migration of younger persons as well as the retention of local youth, providing the stable base from which Sterling can grow into the future.

Additionally, the pyramids show that the percent of the population in older age groups is smaller in 1979. In the 5-14 age groups the effects of the nation-wide decline in birth rate is reflected. However, during the past five years there has been a slight increase in the number of children in the 0-4 age group, primarily as a result of the in-migration of adults in the 25 to 39 age group. This increase in younger children assists in providing the stable population base from which Sterling will grow.

POPULATION PYRAMID
STERLING, KANSAS
1979 POPULATION
FIGURE 3



POPULATION PYRAMID
STERLING, KANSAS
1970 POPULATION
FIGURE 2



Dependency ratios for 1970 and 1979 were calculated for the City of Sterling. This ratio provides the community with a statistic which indicates the available work force in relation to dependent residents and a means of measuring population shifts between the two groups over a certain period of years. The available work force is defined as those residents between the ages of 20 and 65. The dependent residents are defined as those citizens under 20 years of age and over 65 years of age. Table III below shows the dependency ratios for 1970 and 1979.

Table III: Sterling Dependency Ratios

	1970	1979
Dependency Ratio	101.1	99.6

As Table III indicates, the number of citizens in Sterling who can be classified as dependents has declined since 1970. This confirms the population pyramids presented earlier in this section which indicated an increasing number of senior citizens between 1970 and 1979 which has been offset by a decline of citizens under twenty years of age.

Analysis of Sterling's population composition shows that two major factors contribute to the continuation of a stable population base for the community. In-migration has led to a younger general population and the percentage of children under 5 has increased. These factors indicate a growing trend for families to settle in smaller communities and it can be expected that Sterling will continue to have stable, younger population.

Summary

The study of Sterling's population has shown that continued growth is expected over the next twenty years and that the population will tend towards a younger median age. The median age of Sterling in 1979, excluding Sterling College enrollment, was Continued growth and a younger general population provide the most important factors for consideration of future planning requirements for Sterling. The continued growth requires that public services and facilities be maintained and upgraded as the population increases. The needs of a younger community population must be dealt with positively through improved social and recreational activities and facilities, and the local education system will continue to be important. At the same time, as people continue to live longer, the special needs of senior citizens must also be considered. This is particularly important since the percentage of persons over 75 years of age has increased since 1970 and this increase can be expected to continue.

The information from this population study provides the basis from which all other elements of the Comprehensive Plan will be studied. As Sterling continues to grow, the community must be prepared to serve its citizens and the use of the population data will insure that plan recommendations are implemented in a manner beneficial to the citizens of Sterling.

ECONOMIC CONDITIONS

The analysis of Sterling's population history has shown that a stable base exists from which the community is expected to grow at a moderate rate. Continued growth of Sterling relies upon such factors as migration patterns, energy availability, and economic change. Sterling plays an important part in Rice County's economic system and the relative strength of the County's economic base will affect the future growth and development of Sterling. In 1970, the total employment in Sterling was 372, representing 8.1% of the total employment in Rice County. In order to obtain an understanding of the economic factors which have affected Sterling in the past and will affect its growth in the future, economic data on Rice County has been studied to identify the economic trends of the area. Due to the availability of data and because Sterling is viewed as a vital part of the County economic system, Rice County economic data has been utilized for the study of economic conditions. The results of this study will identify the economic conditions affecting the County and Sterling and will assist in the development of public policy and plans necessary to maintain the strength of Sterling's economy.

ECONOMIC BASE

Table 4 shows employment by industry category for 1960 and 1970 and identifies those categories which are considered basic, or export, industries in the County economic system as identified by an Economic Base Study. The export industries provide the basis of the local economy through the sale of goods and services outside of Rice County. The income from these export industries provides the revenue which is used to purchase goods and services from the other support, or local, industries.

TABLE 4. RICE COUNTY EMPLOYMENT BY INDUSTRY, 1960 - 1970

INDUSTRY GROUP	TOTAL EMPLOYMENT* 1960	1970	CHANGE 1960-1970	EXPORT EMPLOYMENT 1960	1970	CHANGE 1960-1970
Agriculture, forestry and fisheries	987	729	-258	316	324	+8
Mining & Construction	923	600	-323	519	266	-253
Manufacturing	223	489	+266			
Transportation, Communication & Utilities	369	278	- 91			
Wholesale Trade	146	102	- 44			
Retail Trade	779	919	+140		116	+116
Financial Insurance & Real Estate	175	92	- 83			
Personal and Business Services	1,189	1,219	+ 30	88		- 88
Public Administration	160	191	+ 31			
Net Reported	88	-	- 88			
TOTAL	5,039	4,619	-420	923	706	-217

*Source: U.S. Census Bureau

Table 4 shows that export employment in Rice County decreased 24% to a 1970 export base of 706. While employment in agriculture, mining and construction decreased, employment in the retail trade sector helped offset these losses. Although export employment has decreased, the number of local (non-basic) jobs supported by export employment has increased. This increase results from an increase in value of export products, such as agicultural products. With more disposable income available to export industry employees and firms, the demand for local goods and services is increased. This is evidenced by employment gains in retail trade and the service sectors of economy. In 1970 the export to local employment ratio was 1:5.5 compared to 1:4.5 in 1960. This means that every new export industry job creates 5.5 local industry jobs in retail stores, car dealerships, gas stations, etc.

The Economic Base of Rice County relies upon wholesale and retail trade and the agricultural, manufacturing, and mining industries. While Table 4 shows that export employment was in a decreasing trend in 1970, recent economic trends show that the County has experienced positive economic change since 1970.

ECONOMIC TRENDS

Discussed below are economic trends obtained from the most recently published data available, the "1978 Kansas Statistical Abstract" and the U.S. Census Bureau report "1977 County Business Patterns for Kansas," issued May, 1979. This information shows that wholesale trade, agriculture, and manufacturing are strong factors in Rice County's economy.

*Retail and Wholesale Trade - Table 5 shows that while the number of retail and wholesale establishments has been decreasing, the value of sales has been increasing, particularly in wholesale trade. While inflation has had an effect on sales, wholesale trade has made strong gains.

TABLE 5. WHOLESALE AND RETAIL TRADE IN RICE COUNTY, 1958 - 1972*

	1958	1963	1967	1972
Retail Establishments	186	161	181	162
Total Retail Sales	$15,872,000	$15,275,000	$16,454,00	$16,631,000
Wholesale Establishments	41	31	22	26
Total Wholesale Sales	$13,304,000	$17,656,000	$12,433,000	$24,219,000

*Source: Kansas Statistical Abstract, 1978

*AGRICULTURE - As with most rural County economic systems, Rice County's economy relies upon agriculture as its major employer and income producer. While there has been a decrease in the number of farms and an associated decrease in agricultural employment, the value of agricultural land has increased significantly. From 1969 to 1974 there was an 8.8% decrease in the number of farms in Rice County (814 in 1969 to 742 farms in 1974). During this same period the average value of farms in Rice County rose from $107,805 to $214,840, an increase of 99%. This indicates that the agricultural economy has made strong gains and continues to be the major impetus for the County's economy.

*MINING AND MANUFACTURING - Table 4 shows that employment in the mining category was declining by 1970 while manufacturing employment was increasing. These trends have continued as evidenced by information on annual payroll statistics for various industry categories. Mining employment has continued to decline as the 1975 annual payroll was $5,541,000 compared to $3,904,000 in 1977. At the same time, however, manufacturing employment showed gains from $3,552,000 annual payroll in 1975 to a 1977 payroll of $5,214,000. Wholesale trade, agriculture, and manufacturing have shown considerable gains since 1970, helping to offset the declining export employment trend evident in 1970. Personal income and bank deposits have increased since 1970 providing additional indications of a strong economic situation in Rice County. Per capita income has increased from $4,660 in 1973 to $5,650 in 1976, a 21% increase.

Deposits in banks have also increased as shown below, a positive trend in view of recent inflationary conditions. Bank deposits in Rice County have been as follows:

1973 - $33,683,000	1976 - $47,803,000
1974 - $39,624,000	1977 - $51,888,000
1975 - $42,978,000	1978 - $57,421,000

Deposits in banks increased 41% from 1973 to 1976 when per capita income was increasing by 21%. Bank deposits increased 20% from 1976 to 1978.

SUMMARY OF ECONOMIC TRENDS

Analysis of the available economic trend data have shown that while employment was in a decline in 1970, the total stability of the local economic system has allowed continued economic improvements. Although inflation affects the statistical trends, in most cases the gains have been ahead of inflationary factors. Agriculture continues to be the mainstay of Rice County's economy into the mid seventies, reflecting the findings of the Economic Base Study. Additionally, manufacturing & wholesale trade has shown significant gains since 1970. The economic trend data has been on a countywide basis because of reporting methods, but the stability of Rice County's economy reflects upon local economic activity in Sterling. Discussed below is an economic indicator which applies directly to Sterling, and when compared with the above information, completes the economic profile of the City.

TRADE AREA

The economic changes in Rice County as a whole affect the economic well-being of Sterling. The strong agricultural and manufacturing industries provide the basis for the County economic system, of which Sterling is a part. The Economic Trend data has shown that Rice County is experiencing a stable economy. To gain a better understanding of the local economic situation, an analysis of local business activity has been completed to identify Sterling's trade area. The 1969 Comprehensive Plan showed the trade area to be located in south central Rice County and northwest Reno County. In January, 1980, a check survey of local businesses was completed by the First National Bank and Farmers State Bank. Through this check survey, which catalogued the address of consumers in various local businesses, a primary and secondary trade area has been identified. The map on page_____ identifies the primary and secondary trade areas for Sterling based on the recent survey. The primary trade area represents the area from which a significant amount of outside buying occurs for food, pharmaceuticals, auto supplies, and other basic daily needs. The secondary trade area represents the area from which outside buying occurs for major items such as automobiles, lumber, appliances, clothing, and other major consumer items.

The Primary Trade Area (see map) extends northwest from Sterling to Alden and Raymond. Some primary trade comes from the direction of Nickerson. The Primary Trade Area represents the area from which routine daily consumer buying occurs. It is interesting to note that a significant amount of primary trade comes from Raymond and Alden when their proximity to Lyons is seen on the map.

The Secondary Trade Area extends southwest from Sterling to the Stafford area as well as towards Nickerson. This trade area is influenced by Hutchinson and Great Bend. One positive point is that there appears to be considerable business from the Lyons and Little River areas, showing that Sterling businesses do well in competition with Lyon's commerce.

The total trade area, Primary and Secondary, is found to be larger than in 1969, and now includes the southwest quarter of Rice County as well as parts of Barton, Reno, and Stafford counties. This expansion is evidenced in part by the increasing trade sales presented earlier in this section.

While the accuracy of this survey of Primary and Secondary Trade Areas is affected by the date of survey, weather, and other variables, the resulting information does provide an indication of the part Sterling's local businesses play in the economic system of Rice County. Compared to the 1969 trade area, it is found that Sterling's present trade area has grown considerably in the last eleven years. Local businesses can benefit from this information by identifying those communities which are within the total trade area.

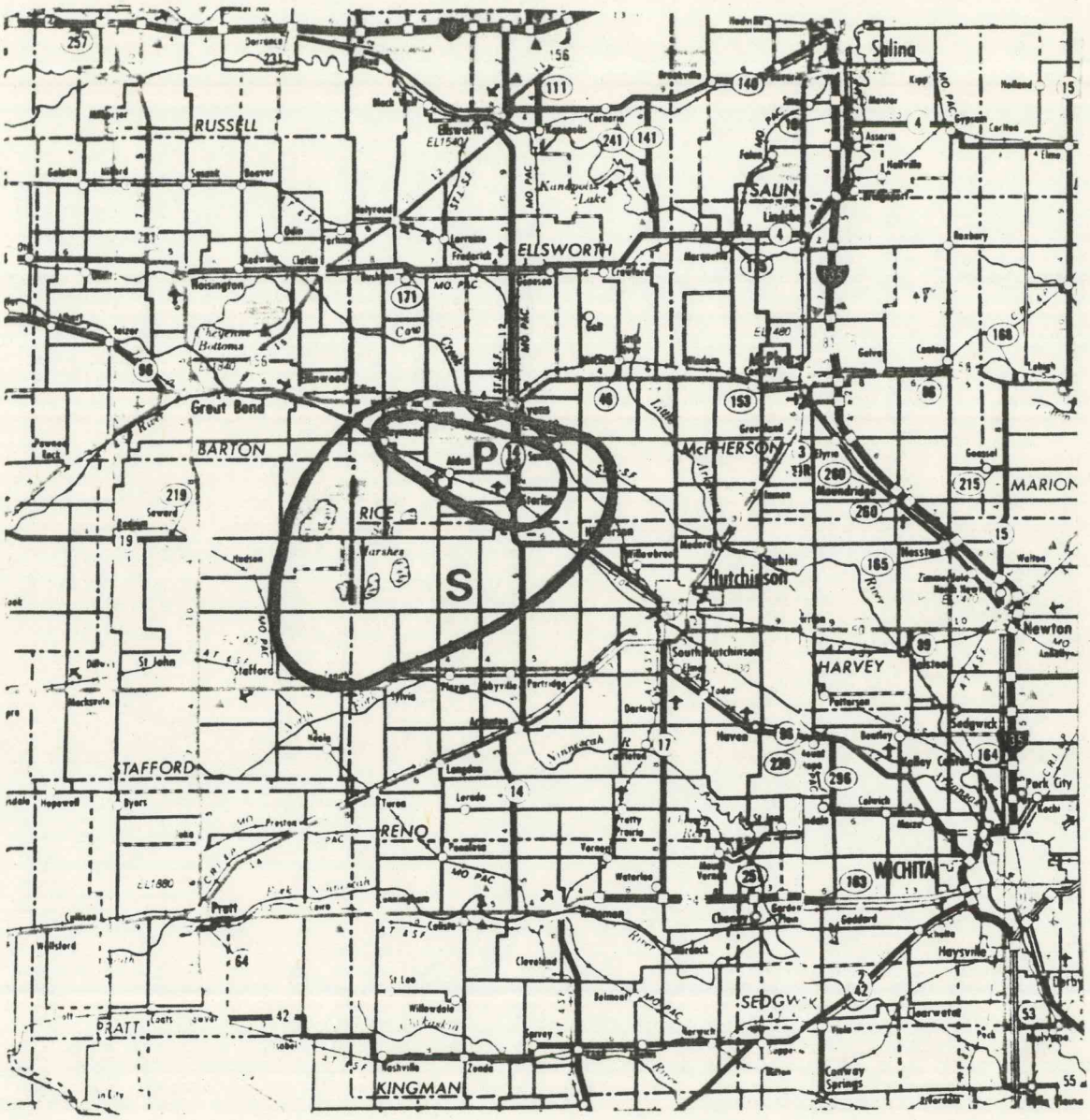
SUMMARY OF ECONOMIC CONDITIONS

The methods of reporting and recording economic data through the U.S. and State agencies related to commerce and industry make it difficult to obtain data specifically for Sterling. However, available data on Rice County has shown that the economic conditions affecting Sterling have experienced positive trends since 1970. While total employment was declining in 1970, recent growth in agriculture and manufacturing have stabilized the economy of Rice County. Based upon 1970 data, every new export employment job would create over 5 new support industry jobs, contributing to growth in the county and subsequently in Sterling. While the findings of this study do not identify specific measures needed to enhance Sterling's economy, several general observations should be considered in assessing the future growth of the City. They are:

1. Support of industrial growth and expansion is necessary for continued growth of Sterling.

2. A balanced relationship between urban and agricultural uses is necessary to allow the agricultural sector to remain as a basic contributor to the economic system.

STERLING TRADE AREA



P PRIMARY TRADE AREA

S SECONDARY TRADE AREA

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3. Maintenance of the central business district is needed to support continued use of Sterling's local businesses by residents in the Primary and Secondary Trade Areas.

As future land use and growth policies for Sterling ~~is~~ are formulated, inclusion of the above general points will allow the City to continue to grow from the present stable economic conditions affecting Rice County and the City of Sterling.

HOUSING

Housing should be one of the key concerns for future planning efforts in Sterling. The local, state and national economies will have a tremendous impact on the demand for housing and the ability to secure financing for new construction in the future.

Existing and future housing problems will be centered on two issues: quality of existing housing and quantity of new housing construction. The provision of adequate housing for all citizens in the community is of highest priority. The importance of a solid housing stock is reflected in the fact that residential areas are the largest users of developed land and are a major source for a community's tax revenue. Housing also affects many local businesses including builders, lumber yards, hardware, plumbers and bankers. The exchange of money due to new construction or rehabilitation and additions creates a multiplier effect throughout the local economy. Another important factor is that an adequate housing supply increases the ability to attract new business and their employees. The geographic location of Sterling provides it with the opportunity to attract small progressive industries that will be looking for a community with an adequate housing supply which can absorb additional demand or which can expand it's housing supply through new construction.

The responsibility for maintaining and expanding the local housing situation should be assumed by both the public and private sectors on a continuing basis. Cooperation and patience on the part of both sectors will be needed in providing an adequate housing supply for existing and future residents of the city.

In this section data related to existing housing conditions, types of housing and future housing needs will be presented. This section also outlines a housing strategy for maintaining and expanding the existing housing stock.

HOUSING CONDITIONS

In November of 1979 a windshield survey of housing conditions in Sterling was conducted. The survey results were used in assessing the overall quality of housing in Sterling and trends in housing construction during the past decade.

Every housing unit in the city was placed in one of four rating classifications based on exterior conditions. A unit was placed in one of the classifications after assessing factors such as cracked or sagging foundations, substandard roofs, poor general maintenance, deteriorated porches, etc. The four rating classifications are explained below:

Standard Condition - This classification is mostly newer homes and apartments that exhibit no visible structural deficiencies.

Substandard, Minor - This classification is more wide ranging and includes houses that are basically sound but are usually older homes that have a minor structural defect or are in need of maintenance.

Substandard, Major - This classification includes housing units that are deteriorating, have several structural deficiencies and exhibit inadequate maintenance over a period of years.

Dilapidated - Housing units placed in this classification are usually vacant structures that are not suitable for habitation. These structures cannot be rehabilitated in an economically feasible manner to a standard condition.

In all of the classifications, age of the structure was not considered in itself to be an important factor since the status of it's repair was the prevailing factor. The survey results are based on the assumption that exterior conditions reflect the overall condition of a specific housing unit. Another factor which should be considered when reviewing the survey results is that a certain degree of subjectivity is inherent in a survey of this type. A number of individuals viewing the same structure might make different observations drawing different conclusions. The final point to be made is that mobile homes were classified as a separate category.

For analysis purposes, the City of Sterling was divided into four areas. The area boundaries utilized the major streets within the community.

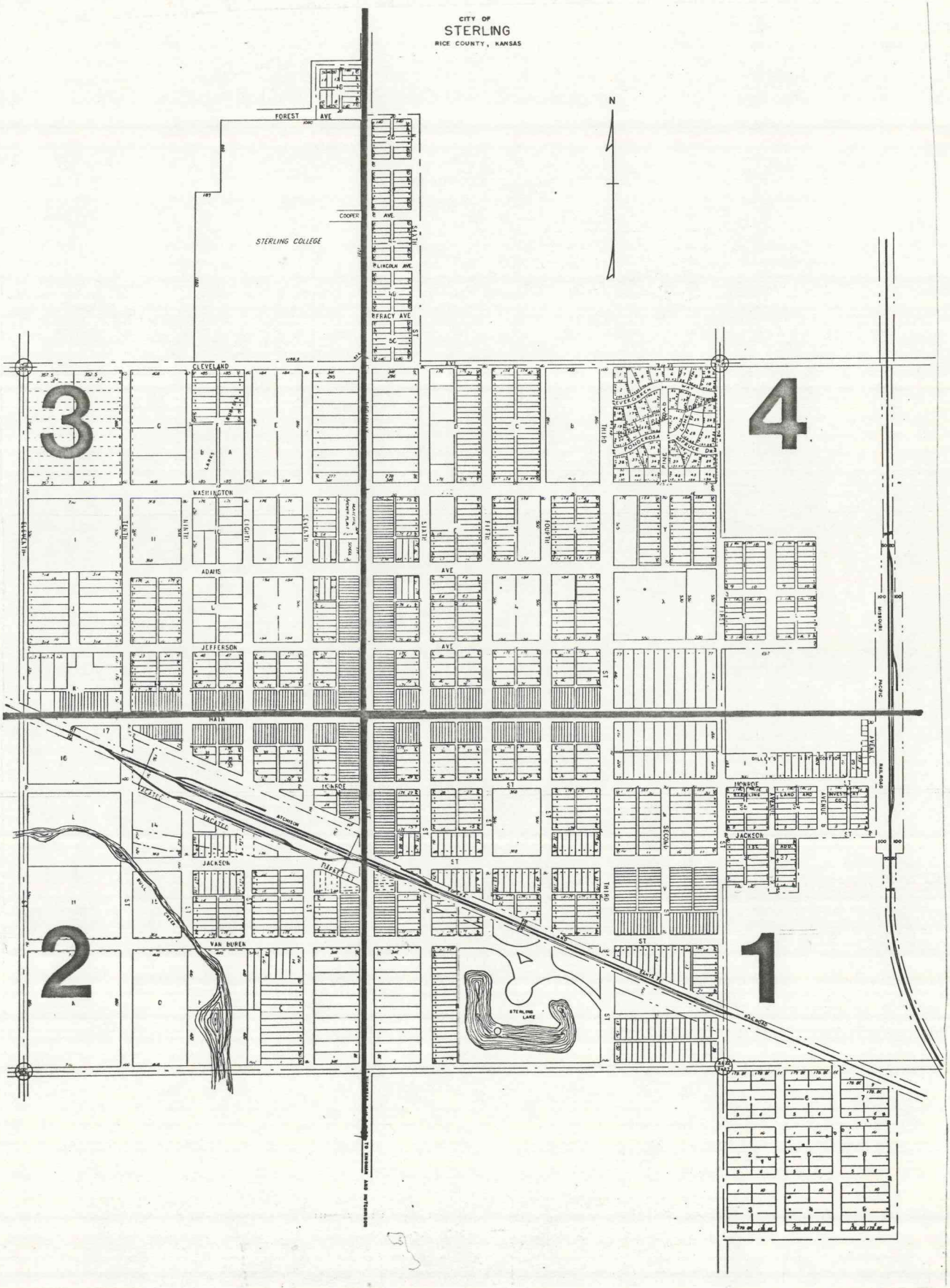
AREA #1 - Consists of properties located east of Broadway Street and South of Main Street. This area includes Sterling Lake and the elementary school.

AREA #2 - Is comprised of properties located west of Broadway Street and South of Main. The area contains a significant amount of agricultural land.

AREA #3 - This area includes properties located west of Broadway Street and north of Main Street to the city limits.

AREA #4 - Consists of properties located east of Broadway and north of Main Street to the city limits.

HOUSING STUDY AREAS



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AREA CONDITIONS

Area #1 - This area is comprised almost entirely of traditional single family residential units. There is no concentration of mobile homes and very little new construction. Specific units have undergone substantial rehabilitation in recent years.

TABLE 6
Existing Conditions
Area #1
November, 1979

Classification	Number	% of Area Total
Standard	86	41%
Substandard-Minor	84	40%
Substandard-Major	24	2%
Dilapidated	7	3%
Mobile Homes	9	4%
Total	210	100%

This area does contain a significant amount of structures that have been classified as dilapidated or substandard major. The City of Sterling has sought to stabilize the southeast area through the implementation of a HUD funded Community Development Program.

Area #2 - The area contains significant amounts of vacant land. It is composed almost entirely of single family residential units. There is no intensive residential development west of Bull Creek. There is a significant concentration of substandard residential units between Jackson and Van Buren Streets east of Bull Creek.

TABLE 7
Existing Conditions
Area #2
November, 1979

Classification	Number	% of Area Total
Standard	34	44%
Substandard-Minor	23	30%
Substandard-Major	8	10%
Dilapidated	5	6%
Mobile Homes	8	10%
Total	78	100%

In general, the housing stock in this area is in sound condition. Expansion of the housing stock in the area is limited by the presence of Bull Creek.

Area #3 - This northeast area contains almost all of the recently constructed residential units in the community. The North Pine Addition is the newest subdivision in the community. The area also contains the Sterling Housing Authority's residential complex for senior citizens. This 32 unit complex is well maintained and aesthetically attractive. It is an asset to the community's housing stock. The complex is located between Jefferson and Adams on the east side of Third Street. The Housing Authority is in the process of developing a 16 unit family complex immediately east of the existing senior citizen site. It is anticipated that construction of this complex will begin in the Fall of 1980.

The area contains a substantial number of older homes in the sub-standard minor classification. These units are primarily located adjacent or in close proximity to the Central Business District.

Table 8
Existing Conditions
Area #3
November, 1979

Classification	Number	% of Area Total
Standard	215	65%
Substandard-Minor	84	26%
Substandard-Major	17	5%
Dilapidated	3	1%
Mobile Homes	11	3%
Total	330	100%

The area also contains a small mobile home park located on North First Street just south of the North Pine Addition. In general this area has the best supply of standard housing. Yet new construction opportunities are limited due to a lack of vacant land and the cost of vacant lots in the area which are higher than in the southern sector of the community.

Area #4 - This area is comprised of two distinct components. The northern part of the area is adjacent to Sterling College and is comprised primarily of single family units in standard condition. Yet south of Adams there is a mixed pattern of housing conditions. The most concentrated area of substandard conditions is located between Adams and Jefferson Avenues and Eighth and Tenth Streets.

Table 9
Existing Conditions
Area #4
November, 1979

Classification	Number	% of Area Total
Standard	105	52.5%
Substandard-Minor	72	36%
Substandard-Major	15	7.5%
Dilapidated	4	2%
Mobile Homes	4	2%
Total	200	100%

There is no concentration of mobile homes in the area and only 1 structure being utilized as multi-family housing.

CONDITION ANALYSIS

The citywide survey results are shown in Table 10. For the most part, Sterling's existing housing stock is in sound condition. 86% of the units were classified as being in standard of substandard minor condition. Yet this still leaves 10% of the total housing stock in substandard major or dilapidated condition.

Table 10
Existing Conditions
City Wide
November, 1979

Classification	Number	% of Total
Standard	440	54%
Substandard-Minor	263	32%
Substandard-Major	64	8%
Dilapidated	19	2%
Mobile Homes	32	4%
Total	818	100%

Efforts aimed towards rehabilitation and preservation will eliminate some of the units from the substandard major class. Those units which have been classified as dilapidated should be demolished as soon as possible since they are health and safety hazards. Under Kansas law, the City of Sterling has a number of statutes which can be utilized to remove unsafe or dangerous structures.

Housing quality varies from block to block within the city. Yet there are a significant number of substandard units in the southeast section of the community. Thirty-one of the structures in this area are substandard or dilapidated. This amounts to 14% of the total structures in the area. Only the far northeast

corner of the city and the area north of Cleveland Avenue between Broadway and Sixth Street do not have a pattern of intermixed housing conditions. This is a potentially serious problem because blighted housing conditions within a neighborhood or on a particular block can easily spread to engulf an entire area over an extended length of time. Also the problem of scattered substandard or dilapidated housing is difficult to remedy since a geographically concentrated effort is not possible and visual progress, as perceived by citizens of Sterling, is diluted.

Also the trend of abandoning older homes for newly developed areas has not, at this time, become a critical concern for Sterling. In many communities the size of Sterling, moderate cost of new housing units have attracted middle income families to turn their back on older homes which need substantial rehabilitation. For a new home, which might not be as aesthetically attractive as an existing unit, does provide the buyer with some assurances in terms of immediate occupancy and quality of construction.

CONSTRUCTION CODES

An important factor in Sterling's efforts to expand and improve the quality of it's housing is through the implementation of proper construction codes. The over all purpose of the codes is to protect the health, safety, property and welfare of existing and future residents of Sterling. The codes set standards for materials and workmanship; establish administrative procedures for issuing construction permits and provide for an enforcement mechanism for inspection and appeals.

The City of Sterling presently has three adopted construction codes. They are the 1967 National Building Code, the 1971 National Electrical Code and the 1955 National Plumbing Code.

The City of Sterling presently has no mechanical or housing code. The mechanical code would serve to protect residents by controlling the design, construction, installation, quality of materials, location, operation, and maintenance of heating, ventilating, cooling, refrigeration systems, incinerators and other heat producing equipment. The housing code will affect the upkeep and maintenance of existing residential structures. It can be a very valuable legal tool in the city's efforts to "clean up" substandard residential structures.

In order to provide for effective implementation of construction codes in the City of Sterling, an annual review of codes should be held in December of each year by the City Commission. The commission should at this time adopt amendments to the existing codes or an updated national model code. For a community such as Sterling it is felt that the national code would fulfill the objective of protecting the health, safety and property of residents. The national codes prescribe the objective to be accomplished and allow broad leeway in selecting materials and methods that achieve the required results.

The national codes also have other advantages such as, they are free from local prejudices; they are available at less cost than the probable expense of drafting a local code; they keep abreast of advancements in construction technology, and they are uniform in content and are familiar to builders, architects and engineers throughout the country.

There are a number of national codes. Some of the most popular are: the Uniform Building Code (UBC); the National Building Code (NBC); the Southern Building Code (SBC) and the Building Officials Code Administrations Code (BOCA). In recent years all of the national codes have developed regional strongholds in terms of adoption. The UBC and NBC are widely used in the Midwest and Western States. The SBC is used in the Southern and some border States. The BOCA code is primarily a Eastern State code. In Kansas the majority of larger communities utilize the Uniform Building Code. A number of smaller communities in Southeast Kansas utilize the Southern Building Code.

Due to the fact that the present construction codes of the City of Sterling are outdated, it is recommended that the Uniform Building Code series be adopted in the near future and updated and amended on a regular basis to coincide with local needs.

HOUSING TYPES

As discussed earlier in this section, the Sterling housing stock is primarily single family residential structures. The only concentration of multi-family residences in the Housing Authority development is on North Third Street. Mobile Homes are scattered throughout the community on individual lots. The only concentration of mobile homes is in the Northeast sector of the city at the corner of First Street and Washington Avenue. This area is a "semi-established" mobile home park which can accomodate six mobile homes.

In the future, housing demand in Sterling should continue to focus on the single family residence. New demand will be generated by the expansion of existing commercial or industrial ventures. In the past, Sterling has been in a limited extent, a "bedroom" community for commercial and industrial ventures in surrounding communities. The present energy situation will negate the expansion of the number of residents who will reside in Sterling, yet work in neighboring communities.

If the present "tight money" situation continues, the demand for mobile homes will increase. The City of Sterling should insure that single mobile homes on individual lots do not begin to appear throughout the community. Mobile homes should be placed in well designed and maintained parks. If they are allowed within traditional residential neighborhoods it should be on a conditional use basis. This provision will insure case by case review of all mobile home requests by the Board of Zoning Appeals.

In the area of multi-family development, the Sterling Housing Authority will develop a 16 unit addition to the present site in 1980. The proposed addition will include two 1 bedroom units, seven 2 bedroom units, six 3 bedroom units and one 4 bedroom unit.

Also there are a number of vacant residential lots available throughout the city. These lots are presently served by city utilities and services. The city commission, planning commission and administration should encourage development on these lots if at all possible.

HOUSING DEMAND

The projected population for the City of Sterling in the year 2000 is 2545. This figure includes enrollment at Sterling College. The projected enrollment at the college is expected to remain stable at approximately 500 students for the rest of this century.

Presently there are 2.4 persons per dwelling unit in the City of Sterling. As birth rates continue to decline and family size also decreases, the persons per dwelling unit figure will also decline. It is estimated that by the year 2000 the persons per dwelling unit could decline to 2.2. Therefore by the year 2000 an additional 113 residential units will be needed if the 2.2 persons per dwelling unit factor is used.

If there is a significant increase in enrollment at Sterling College before the year 2000 the possibility of off campus student housing will have a significant affect on housing demand in both numbers and type.

Yet the single family residential unit should continue to be the residential unit of the future in Sterling. Multi-family residential units will be provided for by the Housing Authority unless events at Sterling College dictate the expansion of multi-family type development.

SUMMARY

1. In general the housing stock is in good condition. Even though many of the single family residential units are forty years old or older they have been well maintained.

2. Substandard conditions are concentrated in the southeast sector of the community. Yet there are also substandard units scattered throughout the city. A home rehabilitation program funded by the Department of Housing and Urban Development will enable many homeowners in the area to correct existing sub-standard conditions. The City of Sterling should continue to develop an ongoing Community Development Program.

3. The present City of Sterling construction codes are outdated. A national code should be adopted as soon as possible.

4. Vacant lots throughout the community are a valuable asset in terms of potential building sites. These lots are presently served by city utilities and services and will not require the substantial investment which is involved in developing a new subdivision.

5. Mobile homes should not be allowed to proliferate throughout the community. The optimum solution would be to confine mobile home placement to mobile home parks. If this cannot be achieved, they should be allowed as conditional uses in a specific zoning district.

COMMUNITY FACILITIES

The community facilities of Sterling have been inventoried to aid in the identification of future needs related to expected growth. While a moderate growth in population is expected, it is nevertheless important to insure that community facilities are capable of adequately serving the present population as well as the future residents of Sterling. Discussed below are the various community facilities serving the citizens of Sterling. The information from this section will assist in determining future growth requirements for the City.

PUBLIC BUILDINGS

There are five publicly owned and operated buildings in Sterling. All are in good condition requiring only routine building maintenance to insure their continued useability. The table below summarizes the available space and usage of the public buildings.

PUBLIC BUILDINGS IN STERLING

Title	Location	Area	Function	Year Built	Condition
City Hall	114 N. Broadway	3,600 SF	City Administration	1914	Good
Fire Station	116 N. Broadway	2,100 SF	Fire Department	1914	Good
Police Sta.	117 N. Broadway	435 SF	Police Department	1927	Good
City Library	138 N. Broadway	(-)	Library	1917	Good
Service Building	121 N. Broadway	7,500 SF	Storage and Maintenance	1927	Good

In addition to the storage and maintenance facilities available at the Service Building, equipment storage space is located at the Sewer Plant. The Sterling City Library has a meeting room available for public use, seating up to 100 people. The City Library is supplemented by library facilities at the grade and high schools and the Kelsey Library at Sterling College is open for use by the public as well as college students and faculty.

There are currently no plans for additional construction of public buildings. This does not appear to be required as the present buildings have been well maintained and they can provide adequate space for the operation of the City functions now and in the future. Continued maintenance of these public buildings will preserve their good condition and will eliminate the need for public expenditures for new buildings.

POLICE PROTECTION

The Sterling Police Department provides 24 hours a day law enforcement services with four full time officers and two radio dispatchers administered by the Police Chief. The full time police department is supplemented by five reserve police officers. Radio dispatch is provided at the Police Station from 8:00 A.M. to midnight. The dispatch desk is manned on weekends by reserve officers. After midnight local calls to

the police department are automatically switched to the Rice County Sheriff's Office which maintains radio contact with Sterling patrol cars. Radio equipment consists of a ten year old motorola in the patrol car. The patrol car radio has two transmission frequencies and one receiving frequency. The dispatcher base station consists of a portable 20 watt radio. The Police Department maintains one patrol car which is replaced annually and supplements the Police Chief for half the cost of his vehicle.

The present manpower of the Police Department is adequate to serve the present and expected population. Improvements are needed in the police communications system. A fixed base radio for the dispatchers is needed. A multi-frequency, 50 watt fixed base radio is recommended. Financial assistance for the purchase of this radio may be obtained through the grant programs of the Law Enforcement Assistance Administration. The ten year old patrol radio should be replaced with a new mobile radio compatible with the proposed new fixed base radio. Purchase of the mobile radio is not eligible for grant assistance and must be financed locally.

FIRE PROTECTION

The Sterling Fire Department serves the City of Sterling and Rice County Fire District #1. There are presently fourteen volunteer firemen in the all volunteer fire department. City fire protection is provided by a 1973 Ford American LaFrance truck with a 500 gallon tank capacity and a 750 gallon/minute pump. This is supplemented by a 500 gpm pump truck purchased before 1950. Rice County Fire District #1 supports the operation and maintenance of a 1978 Chevrolet truck with a 500 gallon tank capacity and a 500 gpm pump. There is no need at the present time for new fire protection equipment. However, the Department of State and Extension Forestry specifications for rural fire protection indicates that a minimum of two units should be available for fire protection. There should be one four wheel drive vehicle with a 200 - 300 gallon capacity and one with 1,000 gallon capacity. These standards should be reviewed prior to any future equipment acquisition by the City or Fire District #1.

STREET MAINTENANCE

Street maintenance is provided by the City with the following equipment:

1976 International tractor w/backhoe and front end loader, good condition
1975 John Deere 750 motor grader in good condition
1965 Ford tractor w/blade for alley grading, good condition with recent overhaul to transmission and differential

The above equipment is presently in good condition and provides for routine street and alley maintenance.

The map on the following page shows the condition of streets in Sterling. A majority of the city streets are improved and in stable condition. There is a need for a regular street sealing program to prevent deterioration of the improved streets. The street sealing program should be a priority objective of the overall plan for Sterling. There are several places where the improved streets are in need of patching. Streets which require patching and repair are:

- Intersection of 5th and Washington
- Sixth Street between Main and Jackson
- Intersection of 4th and Monroe
- Intersection of 9th and Jefferson
- Intersection of 9th and Main

Completion of the above repairs combined with a street sealing program will assist in maintaining existing improved streets.

While there are a number of unimproved (unpaved) streets in the city, there is not an urgent need for the paving of these streets until development and traffic demand require upgrading. Depending upon future growth, the following streets should be given priority consideration for curb, gutter, and paving:

- Sixth Street North of Cleveland
- Third Street North of Ponderosa
- Jefferson West of Tenth Street
- Jackson East Third Street
- First Street South of Main and North of Jefferson

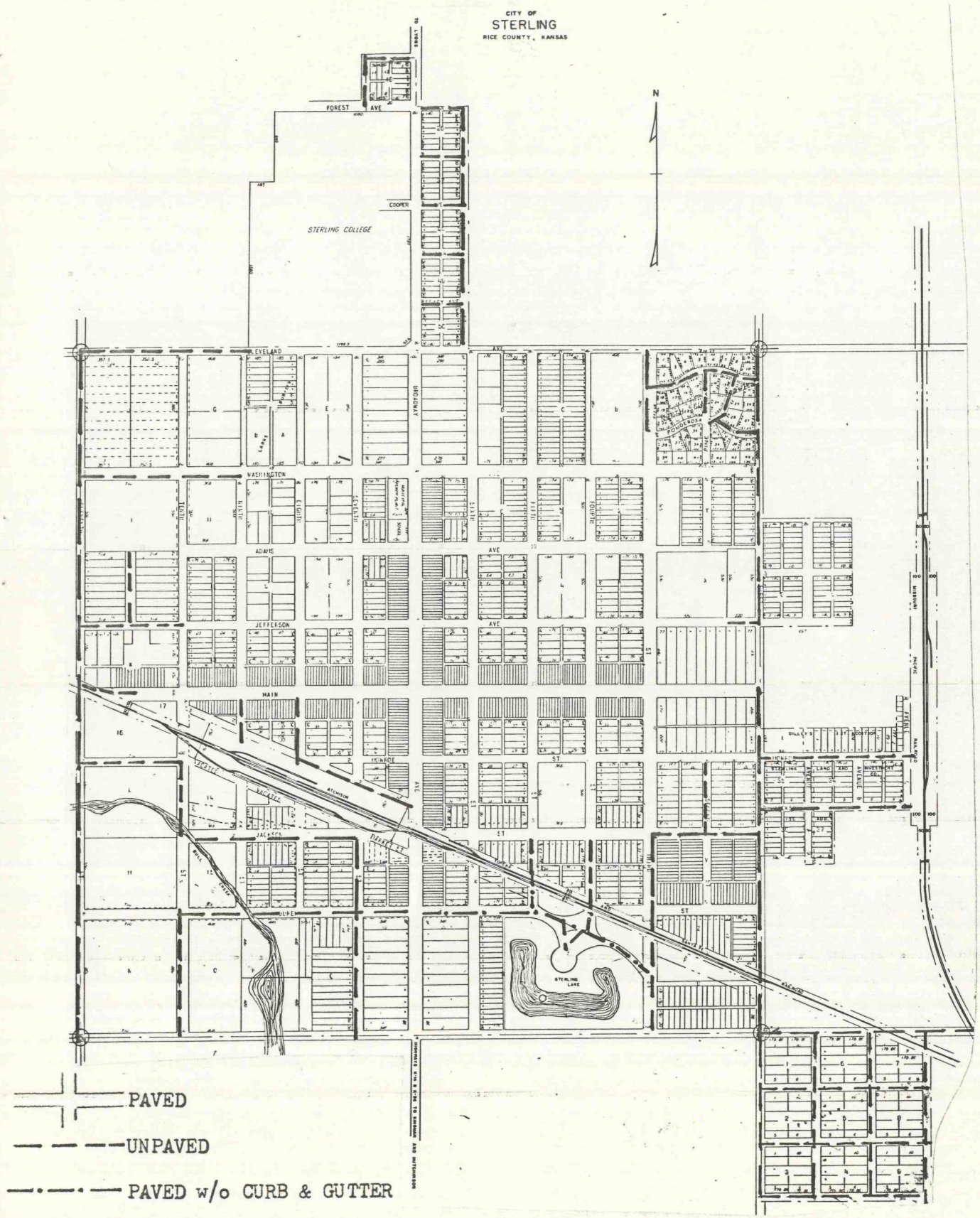
The major needs for maintenance of the street system include development of a street sealing program and continued maintenance of street department equipment. It can be anticipated that the 1965 Ford tractor will need replacement in the next five years.

SCHOOLS

While the operation and maintenance of the school system is not a responsibility of the City, it is important to be aware of any limitations or problems which may be related to future growth of Sterling. School District #376 serves a 158 square mile area in the Sterling - Alden area of Rice County. Upon consolidation, three education centers were established for the school district. The Sterling Grade School has grades K - 4 and 7 - 8. Alden School has grades 5 - 6, and Sterling High School has grades 9 - 12. The three education centers are all in good condition and the School District does not foresee the need for any new construction. The school district has 72 regular employees of which 45 are certified teachers. Sixty-four of the school district's employees work in Sterling. Current enrollment in the district is approximately 535 students as follows:

K-4 - 200 - Sterling Grade
5-6 - 70 - Alden
7-8 - 80 - Sterling Grade
9-12 -185 - Sterling High

STREET CONDITIONS



CF 3A

Based upon district enrollment figures, the school district anticipates a steady enrollment in the area of 500 students annually. Based upon this figure and the condition of the three education centers, there is no projected need for new facilities.

The above general information on the school system indicates that there is no need for major capital expenditures by the School District. Present facilities are in good condition and provide adequate services for present and expected populations in the Sterling area. The City of Sterling should continue its cooperative support of the School District to insure that the school system continues to operate in an effective and economical manner.

Although completely separate from the local School District, Sterling College is a important aspect of the local educational system. By cooperative agreement, the School District is able to utilize the auditorium in Spencer Hall on the campus. High School dramatic and musical productions as well as annual commencement exercises take place in Spencer Hall. The School District has assisted with track improvements at McCracken Field and is able to use the field for school athletic events. The Kelsey Library at Sterling College is open to citizens of Sterling area, providing supplemental educational materials for students in the School District. During the past decade, enrollment at Sterling College has remained at or near 500 students. The Fall, 1978 enrollment was 493 while the highest enrollment in the past ten years was 568 in 1970.

Sterling College supplements the local school system with educational, athletic, and cultural activities and facilities. The college student enrollment represents a significant aspect of the local population and contributes to the local economic base through student expenditures for supplies, clothing and entertainment. Additionally, current employment at Sterling College is 170, representing the largest employer in the City. Continued support and cooperation with Sterling College is important to the City as the student enrollment and total employment at the College play an important part in the local educational and economic system.

SUMMARY

The discussion of community facilities has shown that future growth will not require extensive capital investment to meet future demands. Maintenance of existing facilities provides the most economical way of dealing with the growth of Sterling. Listed below are the areas which have been identified as major considerations for continued provision of necessary public facilities.

ENVIRONMENTAL ASSESSMENT

In this section of the plan, the environmental characteristics of the Sterling area will be reviewed. In recent years the importance of knowing the environmental limitations of an area has increased. Previous land planning problems involving the construction of a residential subdivision in a floodplain or the pollution of an underground aquifer due to an inadequate sewage disposal system has made us more aware of the environmental limitations of the area in which we live.

A realistic plan for Sterling must not be based solely on socio-economic and public facility data. It must also include sound physical data which serves as a tool in future decision making.

In this section of the report, soils, groundwater and floodplain information will be presented and analyzed in terms of it's impact on future development in the fringe area surrounding the City of Sterling.

SOILS

Within Rice County there are eight major soil associations. Three of these associations are included in the Sterling planning area. A soil association is comprised of several soils in a distinctive pattern. A association usually consists of one major soil and a number of minor soils.

The three soil associations within the Sterling planning area are:

1) Naron - Pratt - Carwile;
2) Carwile - Farnum - Tabler;
3) Canadian - Kaski - Platte.

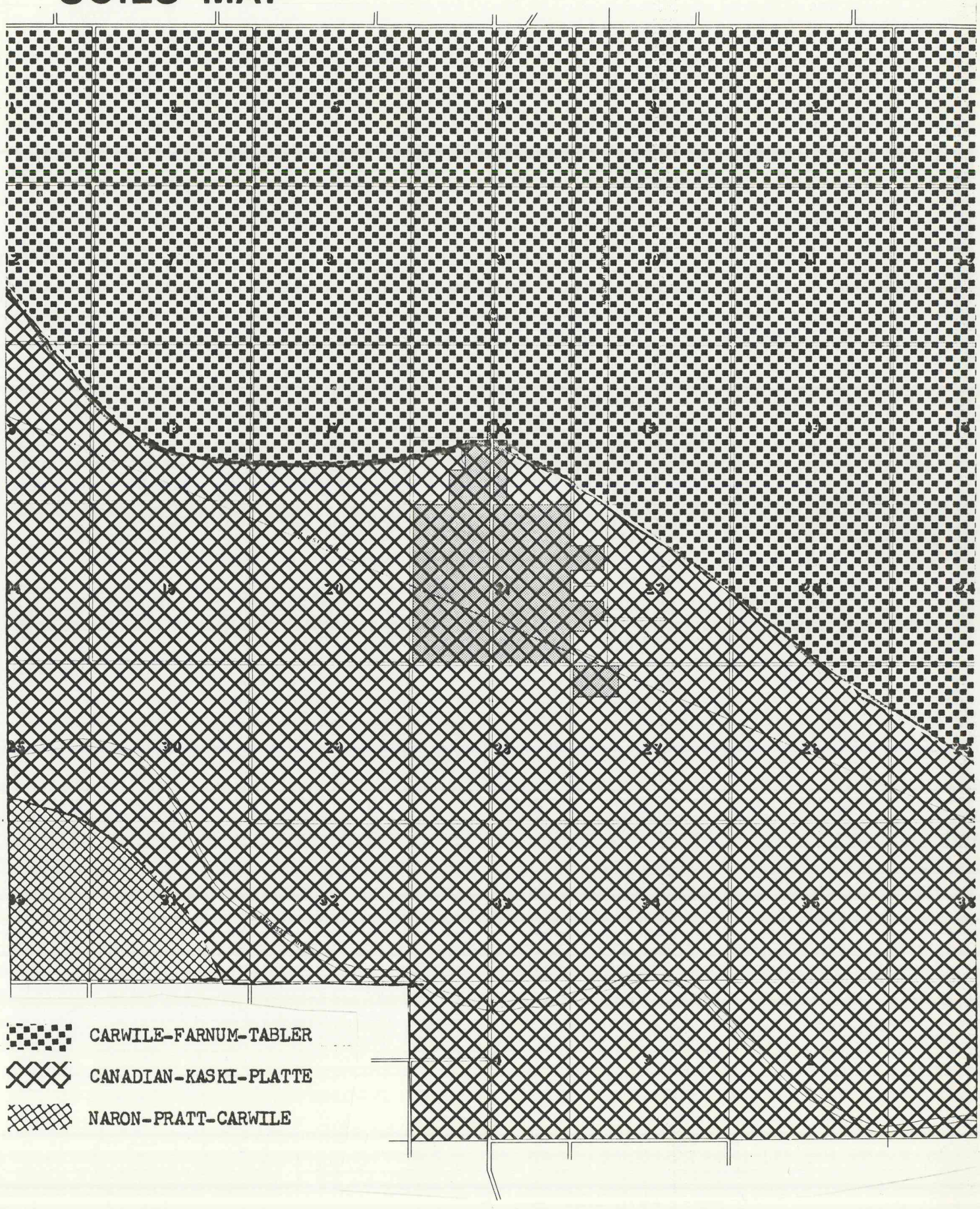
The Naron - Pratt - Carwile soils are located southwest of Sterling. It is the smallest association, in terms of land, within the Sterling planning area. The carwile - Farnum - Tabler soils are the dominant soils in the Sterling area. The City of Sterling is located within this association and a majority of the planning area to the south, east and west. The canadian - Kaski - Platte soils are found to the north of Sterling. (See Soils Map).

Each of the soils within the Sterling planning area is unique. There are eight major soils within the three associations. A short synopsis of each soils general characteristics will provide a basic understanding of it's environmental limitations.

Some of the key terms used in following soil descriptions are permeability and shrink-swell potential.

Permeability is the quality that enables a particular soil to transmit either water or air. There are varying degrees of

SOILS MAP


CARWILE-FARNUM-TABLER
CANADIAN-KASKI-PLATTE
NARON-PRATT-CARWILE

permeability ranging from very slow to very rapid.

Shrink-swell potential is a term which is used to describe the volume change to be expected of the soil material with a change in moisture content. A soil with a high shrink-swell potential commonly presents a hazard to structures constructed in or on the soil if precautions are not taken.

1) Naron Soils - These soils are generally deep, nearly level to gently sloping and well drained. They have moderate to moderately rapid permeability and a low shrink-swell potential.

2) Pratt Soils - These are deep and well drained soils. They also have a rapid permeability and a low shrink-swell potential.

3) Carwile Soils - These are deep but poorly drained soils usually found in areas of slight depressions. They have a slow permeability rate and a low shrink-swell potential up to 17 inches deep. Beyond 17 inches this soil has a high shrink-swell potential.

4) Farnum Soils - These soils are deep, well drained soils. They have a moderately slow permeability and a low-moderate shrink-swell potential. Generally below twelve inches the shrink-swell potential is moderate.

5) Tabler Soils - These are deep and moderately well drained soils. They have a very slow permeability and a moderate shrink-swell potential up to ten inches from the surface. Below ten inches the shrink-swell potential for this soil is high.

6) Canadian Soils - These soils are deep well drained soils usually found along the terraces of the Arkansas River. They have a moderately rapid permeability and a low shrink-swell potential.

7) Kaski Soils - These soils can be found along streams and creeks in Rice County and are generally deep and well drained. They have a moderate permeability and a low permeability.

8) Platte Soils - These are shallow poorly drained soils usually found in the floodplain of the Arkansas River. They have a moderate to rapid permeability and a low shrink-swell potential. Generally the land area in which these soils are located has a high water table.

The Soil Conservation Service has developed a suitability matrix for each soil in the county in relation to various types of construction. Table____ describes the suitability of each soil within the Sterling planning area in relation to various land uses.

TABLE
SOIL SUITABILITY
STERLING PLANNING AREA

SOIL SERIES	HIGHWAY LOCATION	FOUNDATIONS	SEPTIC TANK FIELD	SEWAGE LAGOONS
1. Naron	Erodible	Generally Favorable	Slight Limitations	Severe Limitations: High Water Table
2. Pratt	Erodible	Generally Favorable	Slight	Severe due to rapid permeability
3. Carwile	Poorly Drained	High shrink-swell potential and possible high water table.	Severe due to high water table and rapid permeability.	Moderate to severe due t seasonal hig water table.
4. Farnum	Generally Favorable.	Moderate shrink-swell potential.	Severe slow permeability.	Slight
5. Tabler	Generally Favorable.	High Shrink-swell potential.	Severe:very slow permeability.	Slight
6. Canadian	Well drained: erodible on slopes.	Generally Favorable.	Slight	Severe due to mod.-rapid permeability.
7. Kaski	Subject to Flooding.	Subject to Flooding.	Severe subject to Flooding.	Moderate to severe: subject to flooding.
8. Platte	Erodible	High Water Table	Severe: frequently flooded.	Severe: mod.-rapid permeability

Source: USDA, Soil Survey of Rice County, December, 1974.

ER4

FLOODPLAIN

The City of Sterling has a significant amount of land area within an identified 100 year floodplain. The primary cause of flooding is Bull Creek. Bull Creek is responsible for intensive flooding south of the A.T.&S.F tracks and west of 7th Street. Flooding north of the A.T.&S.F. tracks is also caused by Bull Creek but due to the gently sloping terrain depths of the inundation usually do not exceed three feet. The flood hazard area north of the A.T.&S.F. tracks encompasses almost the entire Central Business District.

In February of 1978 the Corps of Engineers published a Flood Insurance Study for the City of Sterling. The study indicated that flooding south of the A.T.&S.F. tracks generally exceeded seven feet in depth in areas immediately adjacent to Bull Creek.

The flood hazard pattern in Sterling forces development to the southeast and northeast sectors of the community. Much of the land within the flood hazard areas west of 9th Street is undeveloped and will probably never be intensely developed.

The Flood Area Map indicates the flood prone areas within the city limits of Sterling. The map contains three district floodplain boundaries. The first is the floodway fringe. This is the area where the most intense flooding will occur and where the water will flow the fastest and have it's greatest depth. The 100 year flood plain is the regulatory flood boundary allowed under State law. The frequency of a flood of this magnitude occuring is once every 100 years. The final boundary on the map is the 500 year floodplain. A flood of this magnitude should occur only once every 500 years. The 500 year floodplain boundary is presented only for informational purposes.

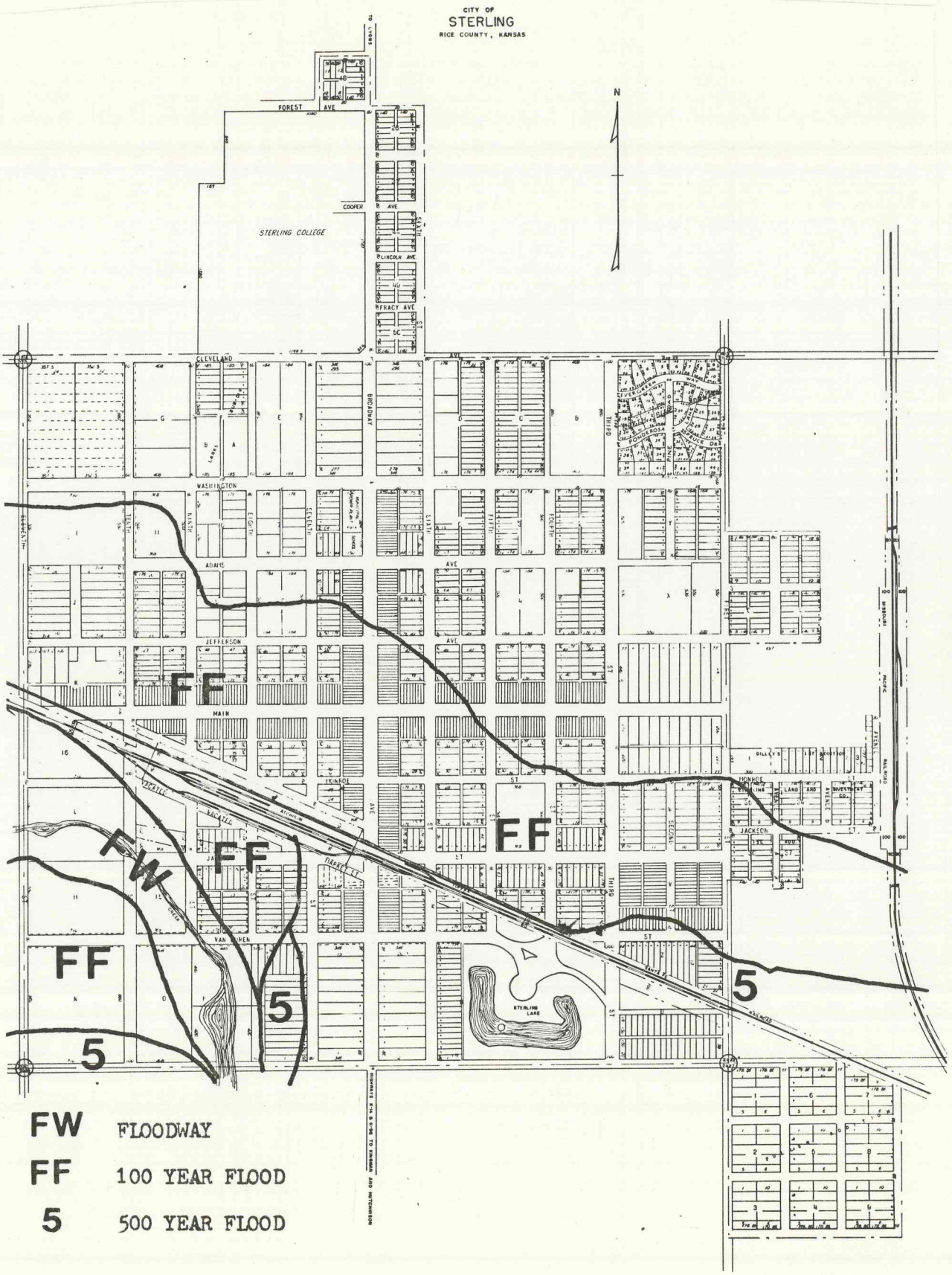
No residential, commercial or industrial development should be permitted within the floodway. Any permanent construction within this area will cause an expansion of the 100 year floodplain boundaries. Intensive development within the 100 year floodplain should also be discouraged. The construction of residential, commercial or industrial structures should be allowed only if proper floodproofing measures are followed.

GROUNDWATER

Groundwater has played an integral role in the development of Sterling and Rice County. The City of Sterling is dependent on groundwater as a source for it's municipal supply system.

There is an adequate supply of groundwater in the southern one-third of Rice County to accomodate projected development. Yet, if irrigation increases at a substantial level during the next twenty years, the residents of the area could be confronted with water shortage problems similar to those of Southwest Kansas.

FLOOD AREA MAP



EAG

Intensive development should be discouraged in areas where proper sewage disposal systems are not available. The problem of groundwater pollution due to malfunctioning septic field systems has increased in the State in recent years, and should be a primary concern in Sterling due to the area's dependency on groundwater.

LAND USE CAPABILITY MATRIX

The land use capability matrix is a tool through which local planning commissions can review development proposals in relation to the environmental characteristics of the area.

Six types of potential land uses are evaluated in relation to the environmental characteristics of the Sterling area. The six are:

1. Urban Residential - development with public water and sewer systems.

2. Suburban Residential - development on tracts 2 acres or larger with individual water and sewer systems.

3. Rural Intensive Residential - development on lots under 2 acres or less without a public water or sewer system.

4. Industrial - Development of any size which provides it's own water supply and sewage disposal system.

5. Commercial - Development of any size which provides it's own water supply and sewage disposal system.

6. Parks - A recreational area containing small structures, such as a restroom or concession stand, playfields, ball diamonds and playground equipment.

Each use is rated as being compatible (C), Moderately Compatible (M) or Incompatible (I) with the individual environmental characteristics.

LAND USE CAPABILITY MATRIX
STERLING PLANNING AREA

ENVIRONMENTAL CHARACTERISTICS	LAND USES					
	URBAN RESIDENTIAL	SUBURBAN RESIDENTIAL	INTENSIVE RURAL RES.	INDUST.	COMM.	PARKS
Soil Series						
Naron	C	C	MC	I	MC	C
Pratt	C	C	MC	I	MC	C
Carwile	MC-I	I	I	I	I	I
Farnum	MC	I	I	C	I	MC
Tabler	MC-I	I	I	MC	I	I
Canadian	C	C	MC	I	C	C
Kaski	MC	MC	I	I	I	I
Platte	MC	I	I	I	I	I
Flood Plain						
Floodway	I	I	I	I	I	C
100 Year Floodplain	I	MC	I	I	I	C
Depth to Groundwater						
0-10	C	MC	I	I	MC	C
10-25	C	C	I	I	MC	C
25 +	C	C	MC	MC	C	C

SUMMARY

The environment plays an integral part in the development pattern of a community. Intensive development in an area with negative environmental factors, such as within a floodway, promotes disaster. The preceding information will allow local decision makers to review future development proposals in a manner which will insure their compatability with the environment.

EAS

EXISTING LAND USE

An integral element of the comprehensive planning process is an understanding of existing land uses and their relationship to population change, public facility availability, and the definition of policies for orderly growth and development. Analysis of existing land uses assists in identifying desirable locations for various types and intensities of land use and also aids in alleviating or preventing potential land use conflicts. This section of the Sterling Comprehensive Plan presents a review of existing land use and identifies key issues which, when compared to information from other plan elements, will play an important part in the development of future growth policy.

LAND USE CATEGORIES

Analysis of existing land use requires that different types of development be compared in order to gain an understanding of present problems and future needs. The interrelationships among the various land use types can be identified and future land needs can be accomodated consistent with these interrelationships and policies for orderly growth. Nine land use categories have been identified for study. These categories are:

RESIDENTIAL

One and Two Family: This category includes land uses of lower residential density, consisting of one and two family dwelling units on individual lots.

Multiple Family: Higher density residential uses for apartments and public housing are included in this category.

COMMERCIAL

General Commercial: Wholesale and retail trade land uses are included in the general commercial land use category.

Service Commercial: Land uses dedicated to business, repair, and personal services comprise this category.

INDUSTRIAL

Industrial: This category encompasses all non-commercial and non-residential uses for manufacturing, processing, and storage including the bulk storage of petroleum and agricultural products.

PUBLIC AND QUAZI PUBLIC

PUBLIC: This category identifies all lands and buildings owned, operated, and maintained by a unit of government.

Quazi-Public: Non-commercial land uses by churches, clubs, and organizations are included in this category.

ELI

FUTURE LAND USE NEEDS

Comparison of existing land uses to present and expected future population can provide a guideline to be used in the development of the future land use plan. While economic and technical considerations will affect future land use demand, the relationship between population size and land use requirements does provide a general indication of future growth patterns. Presented in the table below is a comparison of present land use acreage per capita applied to the projected population for the year 2000. This table provides a general indication of the types and intensities of future land uses for Sterling during the next twenty years. The 1980 and 2000 population figures from Table 2 of the Population section are used for this land use need projection.

FUTURE LAND USE NEEDS

LAND USE CATEGORY	1980 DEVELOPED ACRES	1980 DEVELOPED ACRES PER CAPITA	PROJECTED LAND USE NEED - 2000	INCREASE IN DEVELOPED ACRES
Residential	275.55	.113	287.59	12.04
Commercial	20.26	.008	20.36	.10
Industrial	10.41	.0043	10.94	.53
Public & Quazi-Public	116.75	.048	122.16	5.41
Streets & ROW	243.93	.100	254.50	10.57
TOTAL	666.90		695.55	28.65

The above table shows that approximately thirty acres of additional developed land will be required to meet the projected population growth of Sterling. When this figure is compared to the present amount of platted vacant land it becomes clear that future expansion of the City Limits through annexation should be carefully considered. While this projection is only a guide, subject to many factors whose future change cannot be predicted, it does show that adequate land exists within the City to meet future growth demand. It should be noted that the developability of existing vacant land depends upon many factors such as public facilities, the flood plain, etc. In the future land use section of this plan all of these factors will be combined to provide a comprehensive guide to future growth.

SUMMARY

The section of existing land use has shown that past development has occurred in an orderly manner which has not created serious land use conflicts. Future growth can be maintained in an efficient manner if residential areas are protected from encroachment and if commercial and industrial expansion is centralized. Land availability should not be a problem for future development as adequate land is available. Careful use of land use regulations and annexation policy will insure the future growth of Sterling occurs in an efficient and orderly manner.