

COMPREHENSIVE **D**EVELOPMENT **P**LAN

1975
CITY OF
HANAHAN
SOUTH CAROLINA

Berkeley Charleston Dorchester

Regional Planning Council

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16. Abstracts This document discusses both existing and future policies regarding the growth of Hanahan. Existing factors inclusive of physical features, population characteristics, land use relationships, community facilities and transportation systems are analyzed and projected to serve as the base for future development policies and anticipated land/facility patterns. Projected plans utilize the year 1995 as the target period. Implementation tools are identified and discussed in terms of their impact on development practices.				
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COMPREHENSIVE
DEVELOPMENT
PLAN

1975

CITY OF HANAHAN
South Carolina

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INTRODUCTION

The term plan is dynamic in meaning and suggests looking ahead to see what the future might bring. To plan for community development requires the anticipation of growth trends and the identification of which trends are desirable and which are not. This identification requires the establishment of the desires and objectives of the community as a whole.

The Hanahan Comprehensive Development Plan, as expressed in this document, represents a statement of growth policy. This policy is based upon an identification of what is, what may be and what should be in terms of community development.

This plan has been prepared by the Hanahan Planning Commission for the purpose of protecting the public convenience, safety and welfare by avoiding the consequences of illogical development patterns and unanticipated service demands. Additionally, this plan is designed to serve as the basic guide for reviewing development proposals and for applying community development controls, such as zoning and subdivision regulations. The ultimate purpose is that of providing a community environment which is attractive, efficient and desirable to those who choose to reside in Hanahan.

DOCUMENT SUMMARY

This document is divided into two major sections - Existing Situation and Future Development. The Existing Situation section deals with Hanahan as it is today while the Future Development section projects growth trends and identifies development policies. Following is a brief summary of these sections.

The City of Hanahan contains some 11,518 people (1974) and encompasses about nine square miles of land located in the southern part of Berkeley County (adjacent to the City of North Charleston). Goose Creek and its reservoir divide the City into two major land areas.

About one-half of the total land area in Hanahan may be considered developed. This developed area is basically in the southern portion of the City and contains a variety of land use activities. Yeamans Hall Country Club, the National Guard Military Installation (old Army Transportation Depot) and residential activities are the largest land users in the southern area. (see page 29)

Three public schools provide educational services to the community. These schools consist of one high school, one middle school and one elementary school. (see page 35)

The City provides fire and police protection, solid waste collection and wastewater treatment. Water is supplied by the Charleston Commissioners of Public Works. (see page 44)

Yeamans Hall Road, Murray Avenue, North Rhett Avenue, Remount Road and Defense Access Road are the major highways providing access to and within the Hanahan community. Transit service is

provided to portions of the City by the South Carolina Electric and Gas Company. (see page 52)

Major development issues in Hanahan include: protection of natural resources, provision and upgrading of essential services, provision of additional recreational opportunities and improving accessibility within the community. (see page 63)

Future development is projected over a twenty year period (to the year 1995) during which the City is expected to realize total development. This development is anticipated to support some 18,000 persons. (see pages 68 and 75)

The projected plan is actually an extension of land uses presently occurring within the City. Residential and industrial land uses represent two areas of major expansion activity.

Basic development policies for major land uses and community facilities are identified for purposes of promoting coordinated and compatible growth patterns. Selected policies include:

- Residential development should not be located within areas which present hazards to the safety and health of residents.
- Each residential area should be adequately served by such facilities as schools, parks and recreational areas, utilities, shopping centers and churches.
- Related and compatible business should be grouped together and located in areas offering economic opportunity with minimum conflict with other land uses.
- Industrial parks with attractive site planning, landscaping and building setback and coverage controls should be provided to accommodate high quality industrial development.
- A system of public recreational facilities should be developed which reflects a variety of recreational desires.

- Frontage roads should be used whenever possible in commercial areas which abut major trafficways.
- Residential subdivisions should be backed upon major thoroughfares to reduce traffic congestion.

Implementation tools considered essential to guide development include zoning, subdivision regulations and capital improvements programming. (see page 102) The City presently has an adopted zoning ordinance and is now preparing a set of proposed subdivision regulations.

EXISTING SITUATION

EXISTING SITUATION

Planning for future development requires an understanding of present conditions. Each community has problems, resources, and specific needs which make it unique in terms of development potential. Hanahan presents no exception to this rule.

In part, the recognition of community development potentials and limitations is based upon an identification of the existing situation, particularly in regard to land use patterns, community services and the transportation network. These major elements combine to form a basic framework and, with the addition of characteristics relating to natural features, population, housing and economics, a comprehensive overview of Hanahan as a community can be achieved.

This section identifies primary characteristics associated with existing development patterns and related services. The future development portion of this document utilizes the observations contained in this section as the basis for anticipating growth trends, development problems, and resource potentials as they pertain to the future of Hanahan.

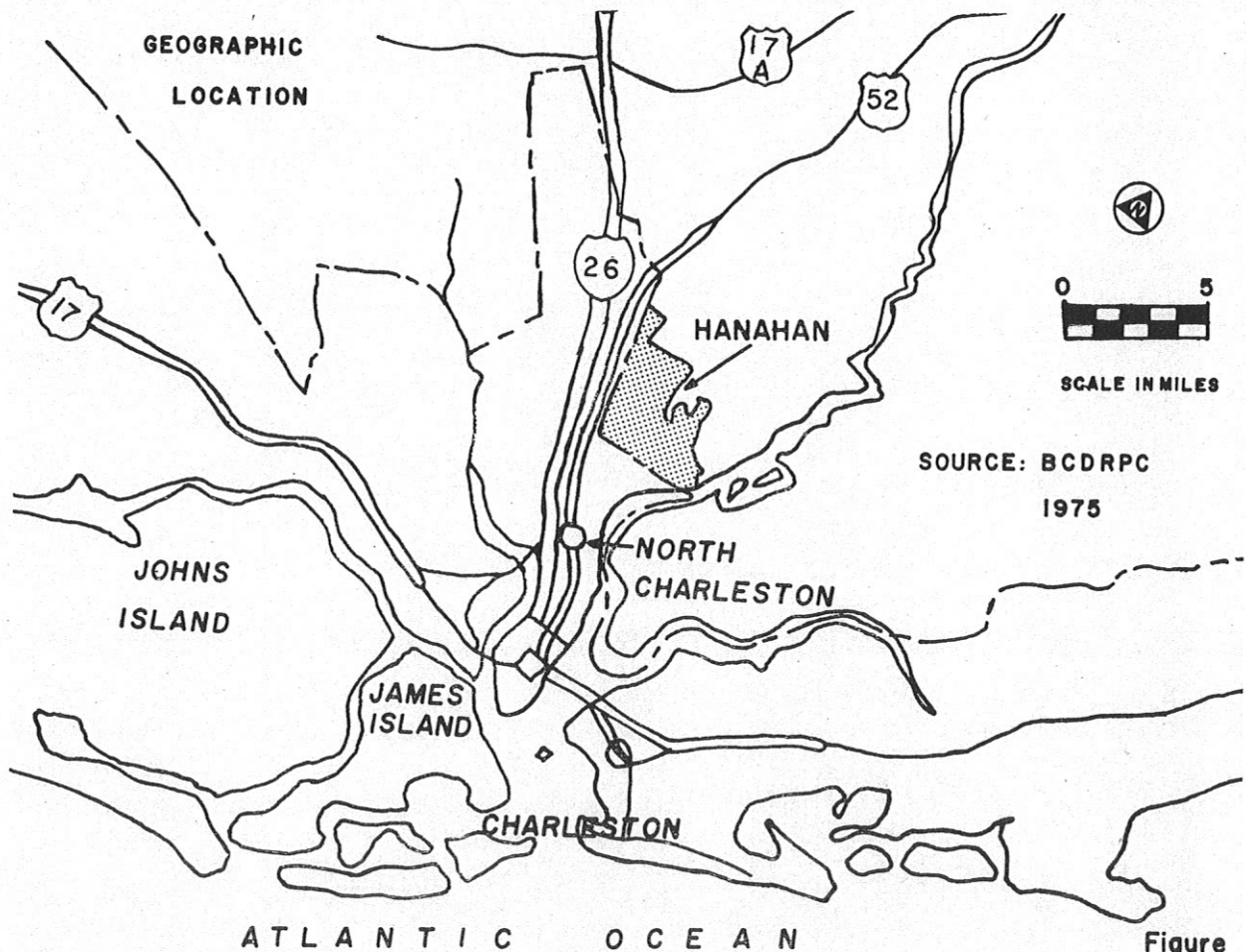
PHYSICAL FEATURES

The identification of the physical setting assists planning efforts in Hanahan by pointing out physical features which may influence the manner in which growth will be promoted or constrained. Considerations relating to location, climate, topography, soils, drainage, minerals, and

basic environmental concerns, are identified in terms of their relationship to the future of Hanahan.

Location

The City of Hanahan is located in the southern portion of Berkeley County immediately north of the City of North Charleston (Charleston County). Figure 1 shows the geographic location of the City in respect to both the region and to the Charleston Metropolitan area. Hanahan, as may be observed, is inherently linked to the physical and social influences created by the metropolitan area of which it is a part.



Figure

Climate

The climate in the Hanahan area is temperate and rainy. Summers are warm (temperatures above 100 degrees are infrequent) and humid with 41 percent of the annual rainfall occurring during this period. The rain, aside from occasional tropical storms, is generally of a shower or thunder shower nature. Winter months, December through February, are mild (temperatures 20 degrees or less along the coast are very unusual) with rainfall averaging 18 percent of the annual total. Prevailing winds are northerly in the fall and winter - southerly in the spring and summer.

Topography

Topography in the Hanahan area generally slopes inward from the City limits to Goose Creek (except those areas where the City limits are defined within the water body). Figure 2 graphically illustrates this relationship. The highest area of land occurs in the southwest corner of the City near the intersection of Remount Road and the Berkeley County Line. This area is 49 feet above mean sea level. Lower elevations occur along Goose Creek south of the reservoir. In most areas gentle slopes are characteristic of Hanahan, providing few constraints on development as far as topography is concerned.

Soils

Soil conditions present a major concern for development in Hanahan. Figure 3 generalizes soil drainage characteristics in Hanahan as it pertains to development. Three

categories of drainage characteristics are identified for the purpose of analysis:

- | | |
|--------------|---|
| Category I | Soils that are generally well-drained and require fewest man-made improvements. |
| Category II | Soils that are generally developable but require varying degrees of drainage improvements. |
| Category III | Soils which should not be developed because of very severe drainage problems (marshes, etc.). |

As may be noted in Figure 3, a majority of the well-drained soils exist in areas already developed. Also, development exists in soil areas which indicate the need for drainage improvements. Much, if not most, of the land undeveloped in Hanahan falls within the soil categories which either are prohibitive to development or require drainage management measures (e.g. storm drains, basins, etc).

Water Resources and Drainage Patterns

The predominate water resource in Hanahan is Goose Creek, particularly that portion included in the Goose Creek Reservoir. This reservoir represents the largest area of surface water in Hanahan and serves as a reserve water supply basin much of the metropolitan area.

Drainage patterns are oriented to the Goose Creek basin. Goose Creek is the primary collector of water within Hanahan. Water collected in Goose Creek moves to the Cooper River and eventually to the Atlantic Ocean.

Flood Areas

Figure 4 illustrates flood prone areas in Hanahan as identified by the United States Department of Interior

TOPOGRAPHY

SOURCE: U.S.G.S. - 1958

DATUM IS MEAN SEA LEVEL

(NUMBER INDICATED IS FEET

ABOVE M.S.L.)

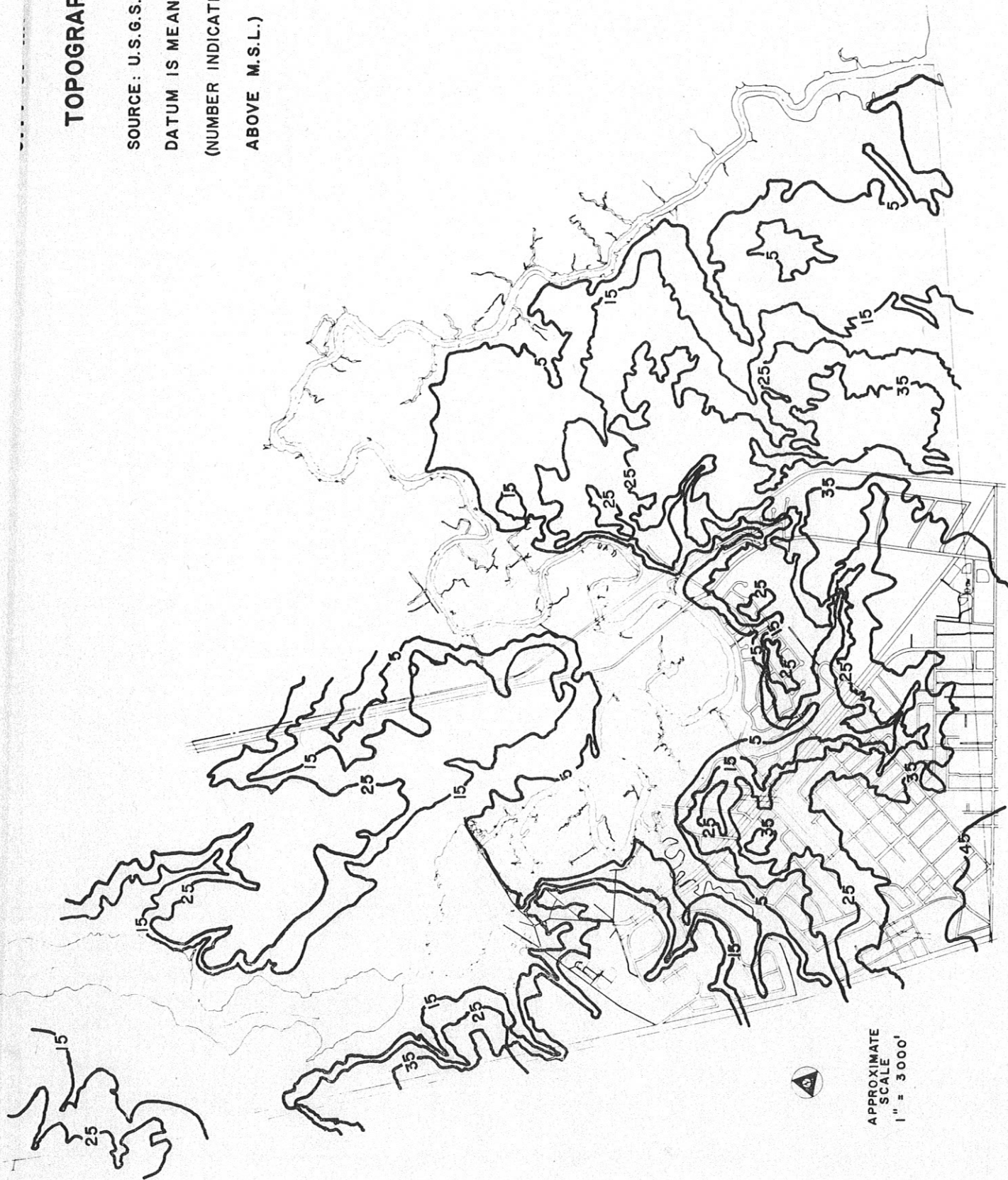


Figure 2

SOIL DRAINAGE

CHARACTERISTICS



Soils that are generally well-drained and require fewest man-made improvements.



Soils that are generally developable but require varying degrees of drainage improvements.



Soils which should not be developed because of very severe drainage problems.

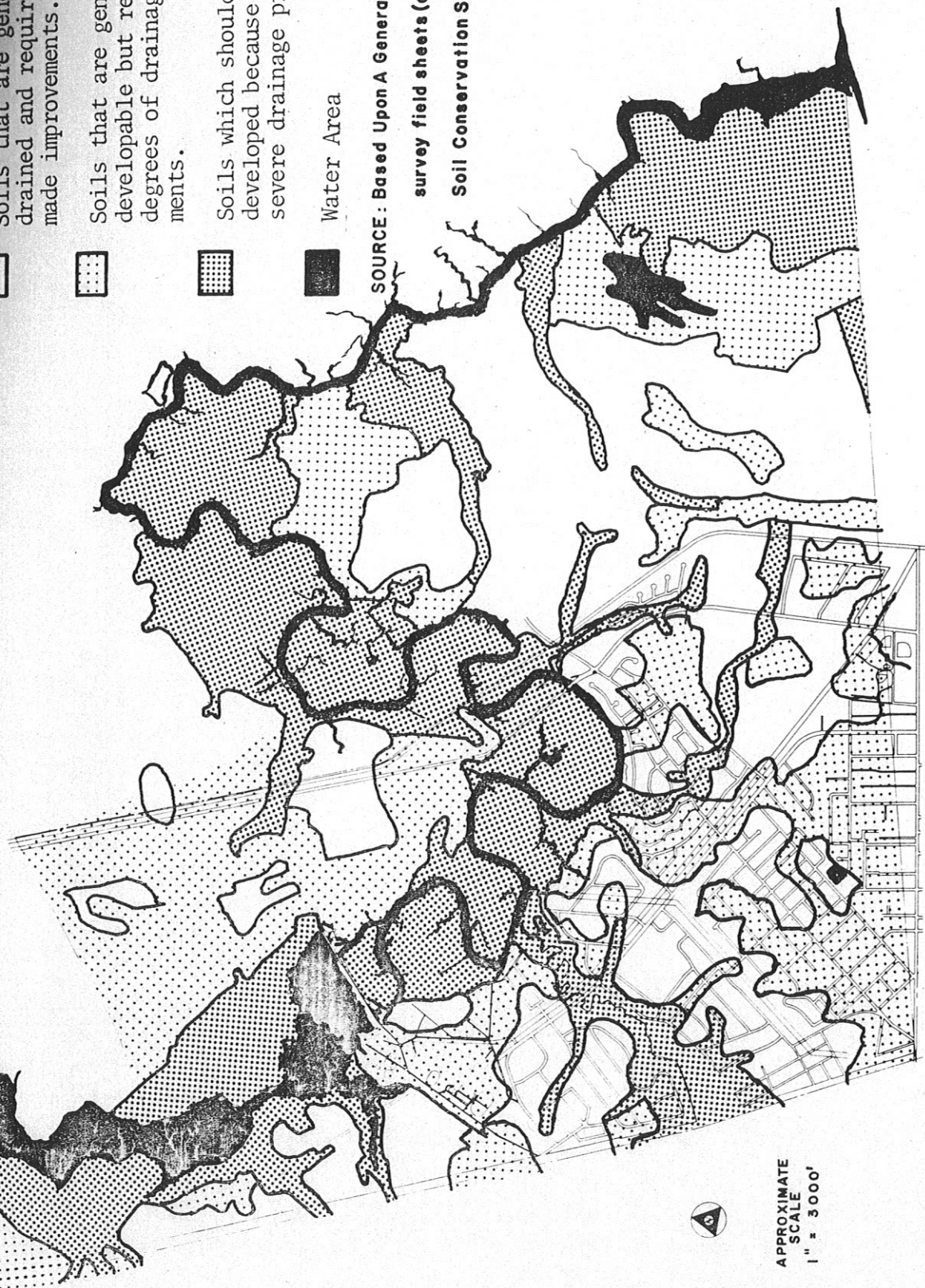


Water Area

SOURCE: Based Upon A Generalization of soil

survey field sheets (advance copies)-

Soil Conservation Service - 1974



APPROXIMATE
SCALE
1" = 3000'

Figure 3

FLOOD PRONE AREA

SOURCE: U.S. Dept. of Interior / U.S.
Dept. of Housing and Urban Develop-
ment.

1973

FLOOD PRONE AREA

FLOOD PRONE
AREA

APPROXIMATE
SCALE
1" = 3000'

Figure 4

Geological Survey. As shown, much of the area along Goose Creek and its related marsh areas is identified as being flood prone. These are approximate areas where on the average there is about one chance in 100 that flooding will occur in any year.

Flood prone areas must be recognized as a limiting factor when locating development if flood losses are to be minimized. Any development or construction in these areas, which alters the natural capability to handle flood waters, may cause severe problems, not only for Hanahan, but also for other communities.

Minerals

Natural resource production, specifically in reference to minerals, has not been a characteristic within the City of Hanahan. Areas near Hanahan, however, have been mined for phosphate. Any potential mineral production in the immediate Hanahan area, especially in the Goose Creek drainage basin, would require special consideration and caution because of the importance of the Goose Creek Reservoir as a water supply facility.

Areas of Environmental Concern

The City of Hanahan and its direct relationship with the Goose Creek drainage basin, points out the need for special concern regarding the maintenance of water quality. Not only are the waters of Goose Creek utilized for supply - they also provide aquatic and wildlife habitat. Existing, as well as future development, should recognize the importance

of these functions and thus be located and serviced in a manner which protects these assets.

The importance of prohibiting extensive urban development of flood prone areas cannot be overstressed, both from the standpoint of minimizing physical loss, and from maintaining the natural capability of the area to handle flood waters. Alteration of the natural holding capability, as previously noted, could result in severe flood problems in areas not normally considered flood prone. This may result in unexpected and undue losses, which could have been avoided by sound flood area management practices.

Located near Hanahan is the Charleston Municipal Airport. The projected expansion and operation of this facility has a direct bearing on the environment of Hanahan, in that one of the runway approach/departure air lanes is oriented over the City. Projected noise exposure zones (see Figure 5) cross much of the City area, and as such, require safety and noise management practices. These practices may take the form of special construction techniques, (e.g. sound proofing) and/or controlled development areas (e.g. not allowing certain uses to occur in the air lanes). Without a concerted effort to recognize and deal with this situation, it is most probable that the general environment of the area will decline and that unnecessary safety problems will be encountered.

CHARLESTON AIR FORCE BASE/MUNICIPAL AIRPORT EXPANSION

NOISE CONTOUR CHARACTERISTICS

- 40 - INTENSE
- 30 TO 40 - TRANSITIONAL
- OUTSIDE 30 - ACCEPTABLE

SOURCE:
GREINER ENVIRONMENTAL SCIENCES, INC.
TAMPA, FLORIDA
1975

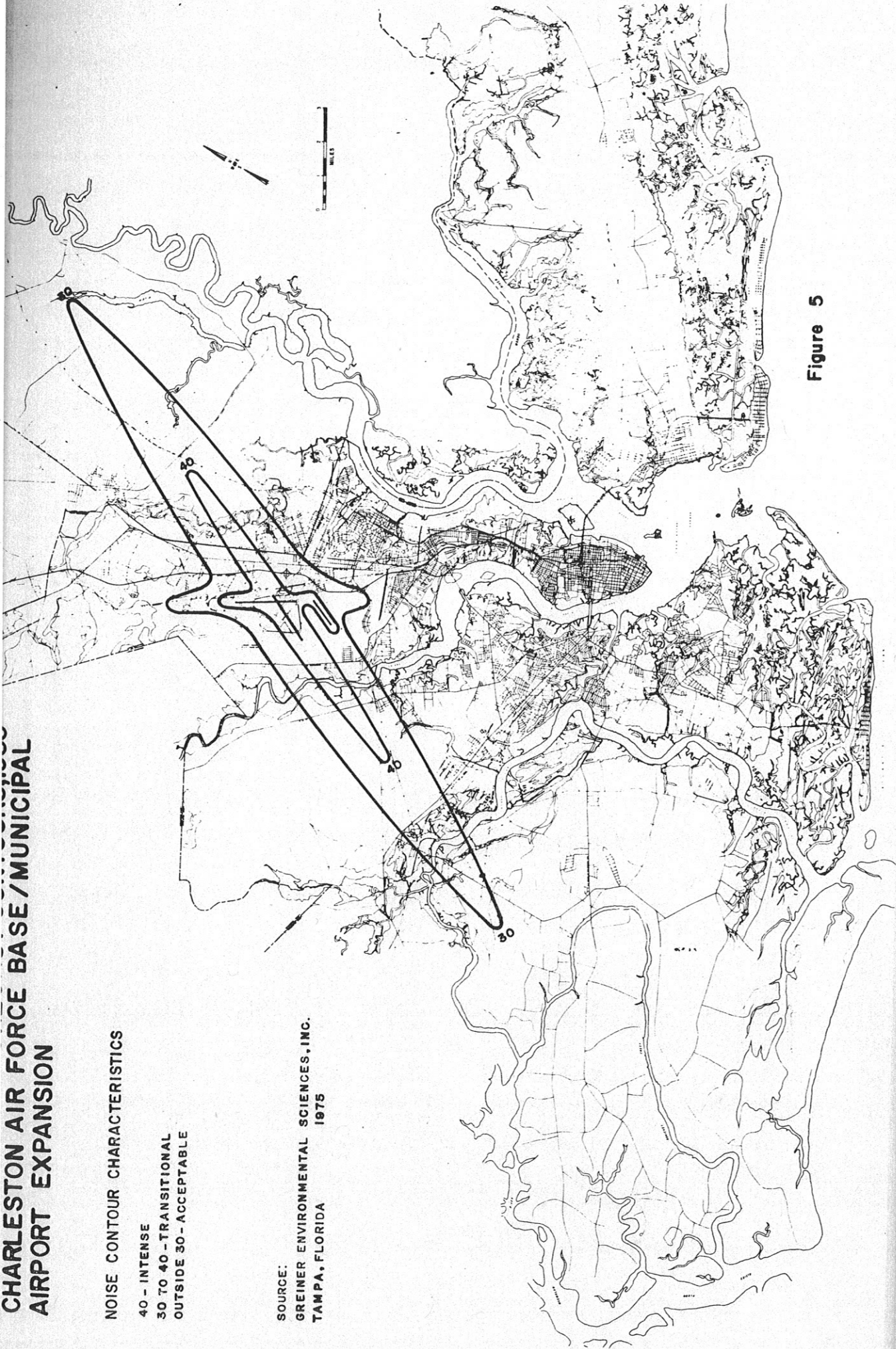


Figure 5

POPULATION CHARACTERISTICS

Changes in the size and composition of a population within a given area, and its economic status, serve as most important indicators of the potential need for public services. Such indicators also serve to provide guidelines and constraints upon approaches to the provision of public services.

Information required for a comprehensive analysis of the general population and economy of the City of Hanahan is, unfortunately, incomplete at this time. The most reliable source of information for a study of this type is the U.S. Census, last completed in 1970. The City of Hanahan, incorporated in 1973, was generally omitted from the last census as well as prior census periods. Information was compiled for the Hanahan urban area and Census Tracts 209 and 210 within Berkeley County in 1970. These areas include most of what is now the City and the general distribution of data is assumed to accurately reflect the character of that population now residing within the incorporated limits. During 1974, a special census was completed for the entire City. Information derived from the latter census is included within this study.

Resident Population

Hanahan is a rapidly growing city with a 1974 population of 11,518, located near the center of population for a metropolitan area which has a population of approximately 360,000. Information as to past growth rates within what is now the

City is incomplete, however, the general census division within which Hanahan is located, grew by over 300 percent during the 1960's. Data for Census Tracts 209 and 210, indicates that over half the area's 1970 population lived elsewhere in 1965. Of the 4,975 persons who moved into tracts 209 and 210, 2,075 came from outside Berkeley or Charleston Counties.

The effects of this in-migration of individuals into Hanahan is reflected within data describing other aspects of the population such as its age, income, educational attainment, etc. Typically, high mobility rates such as those occurring in Hanahan, reflect the movement of younger families and families who have a higher than average level of educational attainment. Thus, the types and extent of public services, as well as the willingness to finance those services, may be expected to differ from other political entities within this region.

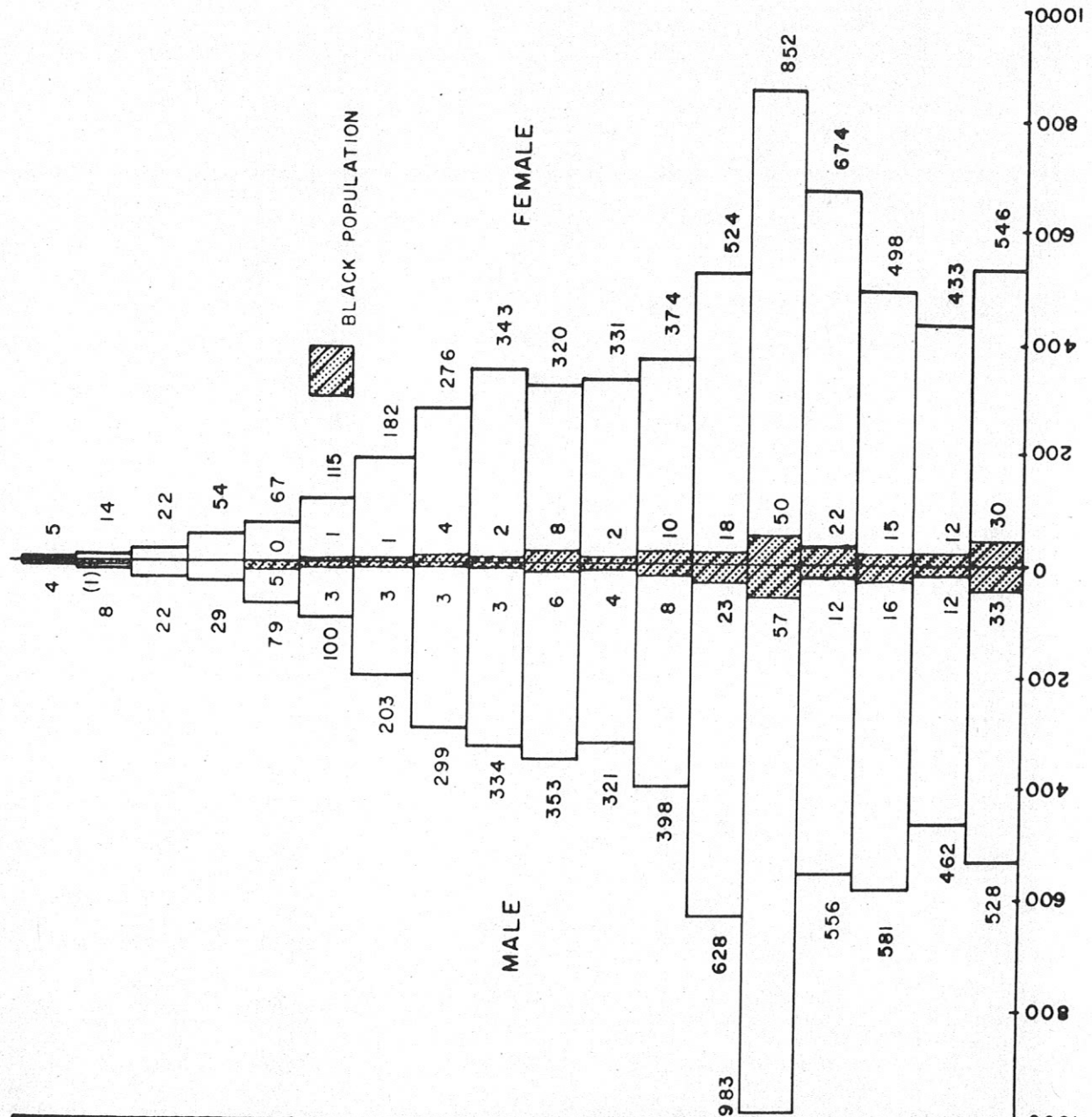
Age Composition

Age statistics reflect trends in birth and death rates, migration rates, and the economic burdens upon active members of the labor force. Additionally, education, employment and retirement represent simplified examples of roles which society has associated with various age groups.

The population pyramid on the following page portrays the general age composition of the population of the City of Hanahan in 1974. It reflects:

AGE COMPOSITION

	TOTAL POPULATION	PERCENT OF TOTAL	BLACK POPULATION	PERCENT BLACK
85 YRS & OVER	9	0.08	—	0
80-84	22	0.19	1	0
75-79	44	0.38	—	0
70-74	83	0.72	—	0
65-69	146	1.27	5	0.04
60-64	215	1.87	4	0.03
55-59	385	3.34	4	0.03
50-54	575	4.99	7	0.06
45-49	677	5.88	5	0.04
40-44	673	5.84	14	0.12
35-39	652	5.66	6	0.05
30-34	772	6.70	18	0.16
25-29	1152	10.00	41	0.36
20-24	1835	15.93	107	0.93
15-19	1230	10.68	34	0.30
10-14	1079	9.37	31	0.27
5-9	895	7.77	24	0.21
UNDER 5 YRS.	1074	9.32	63	0.55
TOTAL	11,518		364	3.15



- a) the number of births occurring each year is at a lower rate than in other areas in Berkeley County, and this rate may be relatively stable in Hanahan;
- b) the population of the City is generally fairly young (median age of 24.0 years) with very few elderly individuals;
- c) large numbers of individuals from 20 through 29 years of age have moved into Hanahan from other areas;
- d) non-whites are a very small minority within all age groups. Only slightly more than 3 percent of the total population is Black. Block data from the census shows that minorities are not concentrated within any specific areas.

Table 1
Percent Distribution of Major Age Groups

	% under 18 years (education)	% 18-64 years (employment)	% 65 years and over (retirement)
Hanahan-1974	32.5	64.9	2.6
Berkeley Co.-1970	45.3	50.6	4.1
Charleston Co.-1970	37.1	57.3	5.6
Dorchester Co.-1970	41.4	52.3	6.3
B-C-D Region-1970	38.7	56.0	5.3
State of SC-1970	37.1	55.5	7.4
United States-1970	34.2	56.0	9.8

Source: U.S. Census 1970

The impact of an area's age composition on its population is often measured by "the dependency ratio" which assumes that the age group 18 to 64 years of age is the "productive" segment of the population and the youths under 18 and persons aged 65 and over are "dependents". The ratio gives an approximate indication of how many dependents each 100 persons in the productive years must support.

Table 2

Dependency Ratio - City of Hanahan and Selected Areas

	Dependents/100 persons (18-64 years of age)
Hanahan-1974	54.1
Berkeley Co.-1970	97.6
Charleston Co.-1970	74.5
B-C-D Region-1970	78.6
State of SC-1970	80.2
United States-1970	78.6

Source: BCDRPC based on U.S. Census 1970

Educational Status

The population of the Hanahan area is better educated than the County as a whole. The median number of years of school completed by the population, 25 years of age and over, was about 12.0 years in 1970, the same as in Charleston County. This compared to a Berkeley County median of 10.7 years. More than 54 percent of the area's residents in this age group were high school graduates and 6.3 percent were college graduates. Only 1.9 percent of the area's residents are classified as being functionally illiterate, i.e., had completed no more than four years of schooling.

Households and Family Status

A household, simply put, consists of all those persons who occupy a housing unit. The total number of households is equal to the number of occupied housing units and to the number of household heads.

The 1970 Census enumerated 2,754 households within the Hanahan area (Tracts 209 and 210), conventional families

where the head is a married man whose wife is also present within the household, comprised more than 81 percent of the total. Nearly two-thirds of these families included children under 18 years of age, accounting for approximately 85 percent of those under 18 years of age in the area.

Table 3

Percent of All Persons Under 18 Years of Age
Residing with Both Parents, 1970

	Percent
Hanahan Area (Tracts 209 and 210)	85.0
Berkeley Co.	72.6
B-C-D Region	73.0
State of SC	74.9
United States	82.1

Source: U.S. Census 1970

Approximately 9.2 percent of the households in the Hanahan area in 1970 were occupied by incomplete families, the head not having a spouse present. Over 82 percent of the incomplete families had a female head of household and included nearly 9 percent of all the persons under 18 years of age in the area, a relatively low proportion when compared with other areas.

Table 4

Percent of All Persons Under 18 Years of Age
in Families With a Female Head of Household, 1970

	Percent
Hanahan (Tracts 209 and 210)	8.9
Berkeley Co.	15.8
B-C-D Region	15.0
State of SC	11.0
United States	10.0

Source: U.S. Census, 1970

The remaining 9.6 percent of the area's households were of a non-family type. Nearly 85 percent of these consisted of persons living alone, the remainder being heads living with non-relatives. Less than 5 percent of the persons under 18 years in the area lived with neither parent.

Not all persons, of course, live within household units, however, the proportion of such persons in the Hanahan area was very small, only 0.2 percent of the total population. This figure includes persons residing in institutions, large boarding houses, etc.

The average household in the Hanahan area in 1970 contained 3.4 persons, somewhat below the Berkeley County average.

Table 5
Persons Per Household, 1970

	Percent
Hanahan (Tracts 209 and 210)	3.4
Berkeley Co.	3.8
B-C-D Region	3.5
State of SC	3.5
United States	3.2

Source: U.S. Census 1970

Employment

At the time of the 1970 Census, approximately 3.5 out of every ten persons living in the area, which in 1973 became the City of Hanahan, were employed. At that time the Hanahan labor force totalled 3,828 persons, and the employment rate was a low 2.6 percent. Women made up over

34 percent of the Hanahan labor force.

More than half of the employed persons in Hanahan (54.4 percent) worked in professional, managerial, sales, or clerical occupations, normally considered "white collar" occupations.

Table 6

1970 Occupational Distribution of Employed Labor Force,
Hanahan Area (Census Tracts 209 and 210)

	Percent of Total Labor Force
Professional, technical and kindred workers	13.7
Managers and administrators, except farm	10.7
Sales workers	6.5
Clerical and kindred workers	23.5
Craftsmen, foremen, and kindred workers	19.8
Operatives, except transport	12.3
Transport equipment operatives	3.6
Laborers except farm	3.2
Farm workers	---
Service workers	6.7
Private household workers	.1

Source: U.S. Census 1970

Table 7 shows employment of persons living in Hanahan by industry. Almost one-third are employed in manufacturing. This contrasts with the Berkeley-Charleston-Dorchester Region as a whole which, according to the 1970 Census, had only 22 percent of its total workers employed in the manufacturing field. Retail trade and public administration were the only other categories within which a substantial number of the City's residents were employed.

Table 7

1970 Industry Distribution by Total Employed
(Census Tracts 209 and 210)

Industry	Percent of Total Employed
TOTAL EMPLOYED, 16 YRS. OLD & OVER	100.0
Construction	6.2
Manufacturing	32.9
Transportation	3.5
Communications, utilities & sanitary services	2.5
Wholesale trade	3.1
Retail trade	16.4
Finance, insurance & real estate	4.4
Business & repair services	1.9
Personal services	2.0
Health services	2.8
Educational services	6.6
Other professional & related services	2.7
Public administration	13.4
Other industries	1.6

Source: U.S. Census 1970

Data by traffic zone prepared for the 1971 update to the Charleston Area Transportation Study (CHATS) shows that while 3,161 persons living within the traffic zones located in Hanahan are employed, only 1,107 persons work within these zones.¹ Therefore, it can be concluded that at least 65 percent of employed persons living in the City of Hanahan work outside the City.

There is no large industry located within Hanahan; however,

1. CHATS employment data differs from 1970 Census figures since the referenced traffic zones do not correspond with Census Tracts 209 and 210, and neither exactly reflect the Hanahan City limits, as incorporated in 1973.

the Navy Yard, the Naval Weapons Station, and Westvaco are major employers located in the area. In addition, there are several other manufacturers within the surrounding Berkeley and Charleston Counties area outside of Hanahan providing employment opportunities.

A new 200 acre industrial complex, Trident Industrial Park, located off North Rhett Boulevard in Hanahan, will increase both the City's employment base and tax base. As of February 1975, there were seven tenants in the park occupying approximately 80 acres, with firm plans by two more industries to locate within the complex. The present tenants are mainly engaged in non-manufacturing activities such as warehousing and distributing which are not labor intensive.

Income

The only statistics which adequately reflect the level of material comfort of a population are those which involve the amounts of income families and individuals receive. Family income includes the income received from all sources, by all persons in the family.

In 1970, the Hanahan Area had a median income of \$9,366, about \$2,454 above the Berkeley median and \$1,548 above the three-county Regional median. The relatively high median income for Hanahan reflects the comparatively large percentage of families in the middle income levels. Further analysis shows that the Hanahan median income level was very close to the national median.

Table 8

1969 Mean and Median Income
for Families, Hanahan.

	Mean	Median
Hanahan Area (Census Tract 209 and 210)	\$ 9,997	\$9,366
Berkeley County	7,695	6,912
South Carolina	8,577	7,621
United States	10,999	9,590

Source: U.S. Census 1970

According to the 1970 Census, only nine percent of the families in the Hanahan area had incomes below the 1969 poverty level, whereas, 26 percent of all Berkeley County families fall within this category.

Table 9

1969 Families with Incomes Below
the Poverty Level, Hanahan

	Percent of Families	Percent of unrelated individuals	Percent of households	Percent of all persons
Hanahan Area (Census Tracts 209 and 210)	9	33	10	10
Berkeley County	26	52	28	30
South Carolina	19	50	22	24
United States	11	37	15	14

Source: U.S. Census 1970

In Summary, the residents of Hanahan as a whole, fare better financially than the average resident of Berkeley County or the Tri-County Region.

LAND USE

One important step in developing a community profile is the identification of existing land use characteristics. Identifications of land use activity, area relationships, development patterns, and growth potentials combine to provide valuable insight into Hanahan as a community today.

Each community has its own distinctive pattern of land uses according to its geographic location, physical features, and its individual economic and social character. The early location of a mill, the routing of a railroad or highway, and other historical factors often have an important affect on the shape of the existing land use pattern.

This section discusses land use categories, area relationships, basic development patterns and growth potentials as they relate to the City of Hanahan.

Land Use Categories

In order to understand and analyze land use characteristics, it is necessary to separate land activities into specific categories. Six major categories were utilized in Hanahan for identifying basic land use area relationships and development patterns. The categories utilized include Residential, Commercial, Industrial, Public/Semi-Public, Park and vacant. Public/Semi-Public includes such uses as schools, municipal buildings and churches.

Detailed analysis required further sub-category divisions, particularly in the residential category (division by density type). These divisions are referenced in the tables included in this section and are basically self-explanatory. Additional

information regarding these categories, related sub-categories and the methodology used in analyzing their relationships is provided in Appendix A.

Area Relationships

The identification of existing land area relationships provides insight in terms of how land is used. This insight defines the community character regarding the amount of land area being used by each major land activity. Further, it gives an indication of the amount of land open for development expansion.

Slightly over half (53%) of the total land in Hanahan is currently developed. Developed, as referenced here, includes building areas, paved surfaces, and areas committed for specific uses, such as the Yeamans Hall Country Club and park land. Approximately 3,058 acres fall into the developed category.

Some 2,763 acres (47% of the total area) are undeveloped. This category includes major open spaces like water bodies/ marshes and vacant land.

Table 10 contains the major land category relationships as derived from the existing land use survey conducted in the latter part of 1974. It must be noted that the percentage relationships are influenced significantly by the presence of two large tracts of land listed as "Special" which account for 54 percent of the developed land area. These tracts include the Yeaman's Hall Country Club and the National Guard Military Installation (previously the Army Transportation

Table 10

Land Area Relationships - 1974

<u>Land Use Category</u>	<u>(% of Developed Area)</u>	<u>Approximate Acres</u>
<u>DEVELOPED LAND</u>		
Residential	26	787
Commercial	1	25
Industrial	4	131
Public/Semi Public ²	5	136
Recreation ³	1	35
Transportation ⁴	9	281
Special ⁵	54	1,663
Total Developed Area	(100%)	3,058
<u>UNDEVELOPED LAND</u>		
Unusable (Marshes, water & poor soils)		1,658
Useable/Vacant		1,105
Total Undeveloped Area		2,763
TOTAL LAND AREA		5,821

1. Areas were derived by measurement of the Existing Land Use Map - 1974, prepared by BCDRPC. (This map contained various inherent inaccuracies and as such, the area information should be considered as approximate estimates.)
2. This category includes municipal, school, church and related land areas.
3. The total recreational figure noted here differs from the acreage cited in Table 15 (54 acres). Table 15 includes the total area of a park which is located in both Hanahan and North Charleston.
4. The total transportation figure includes minor streets, collectors, arterials and railroad rights-of-way.
5. Special includes the Yeaman's Hall Country Club and the National Guard Military Installation.

Depot) and combined, represent the largest developed land category.

Residential activity is the second largest developed land category. Single-family uses are the predominate form of

residential activity and utilizes some 614 acres of the total residential category.

Marshes, water bodies and poor soils account for most of the undeveloped land area. Approximately 60 percent of the undeveloped land has one of these physical characteristics. The remaining land is considered vacant in terms of present use and has development potential.

Land Use Patterns

In addition to land areas, it is also important to consider the physical arrangement or pattern of land activity. The identification of the land use pattern indicates the impact of past and present development trends.

Figure 7 shows the generalized land use pattern as it exists in the City of Hanahan. As may be observed, the predominate occurrence of urban development has been in the southern portion of the City. This area reflects a mixture of land activity and contains most of the City's population.

Residential uses range in dwelling character from large lot, single-family units, to apartments. Mobile homes occur both in mobile home parks and on individual lots. In 1974, the City contained a total of 4,312 housing units. Some 2,447 units were single-family while 1,164 were multiple family. Two-family units were 61 in number and mobile homes were 640.

Table 11

Residential Densities - Unit Types

<u>Density Type</u>	<u>Number of Units</u>	<u>Percentage</u>
Single-family	2,447	56.8
Multiple-family	1,164	27.0
Two-family	61	1.4
Mobile Home	640	14.8
TOTAL	4,312	100.0

Source: City of Hanahan - 1974

Generally, when assessed from the viewpoint of density, the City of Hanahan is divided into two residential areas: The older, southern section of the City which averages 5.4 dwelling units per acre and the remaining, recently developed, north-central section which has a density range of approximately 1.6 to 3.4 dwelling units per acre. The older platted subdivisions of Avalon-in-the-Pines, Port Park and Charleston Farms are characterized by small lots and Hanahan's "less expensive" housing stock; the newer and larger subdivisions of Berkeley Hills and Dominion Hills, in the north-central section, symbolize the development trend of large and varying size lots with large, relatively expensive homes.

Commercial activities are primarily concentrated in the southernmost part of the City, near the intersection of Yeaman's Hall Road and Remount Road. Although not in the City, Remount Road supports a variety of commercial activities which serve the residents in Hanahan.

Most industrial activities are concentrated along North

Rhett Avenue in the Trident Industrial Park. The Air Force maintains a fuel storage facility immediately north of the industrial park.

Figure 7 details the basic arrangement of land use activities in Hanahan. Major land use categories are identified for comparison purposes.

Development Potentials

Development potential basically falls into categories - development of vacant land and redevelopment of presently built-up areas. Usually, growth is a combination of these development characteristics.

Table 10 indicates that some 1,105 acres of land are presently undeveloped in terms of land suitable for development purposes. Most of this land is in the northern and eastern (across Goose Creek) portion of the City. The greatest concern regarding the intensive use of this land is that of providing water, sewerage and drainage facilities.

Redevelopment of the older housing/commercial areas will probably be feasible in the future. Land redevelopment will require the combination of various small lots to obtain the acreage needed for increased space needs. This trend will likely occur after much of the vacant land is developed and the demand for land justifies redevelopment practices.

GENERALIZED EXISTING LAND USE

RESIDENTIAL

LOW DENSITY

HIGH DENSITY

COMMERCIAL

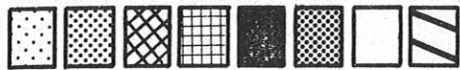
INDUSTRIAL

INSTITUTIONAL (Public / Semi - Public)

RECREATION

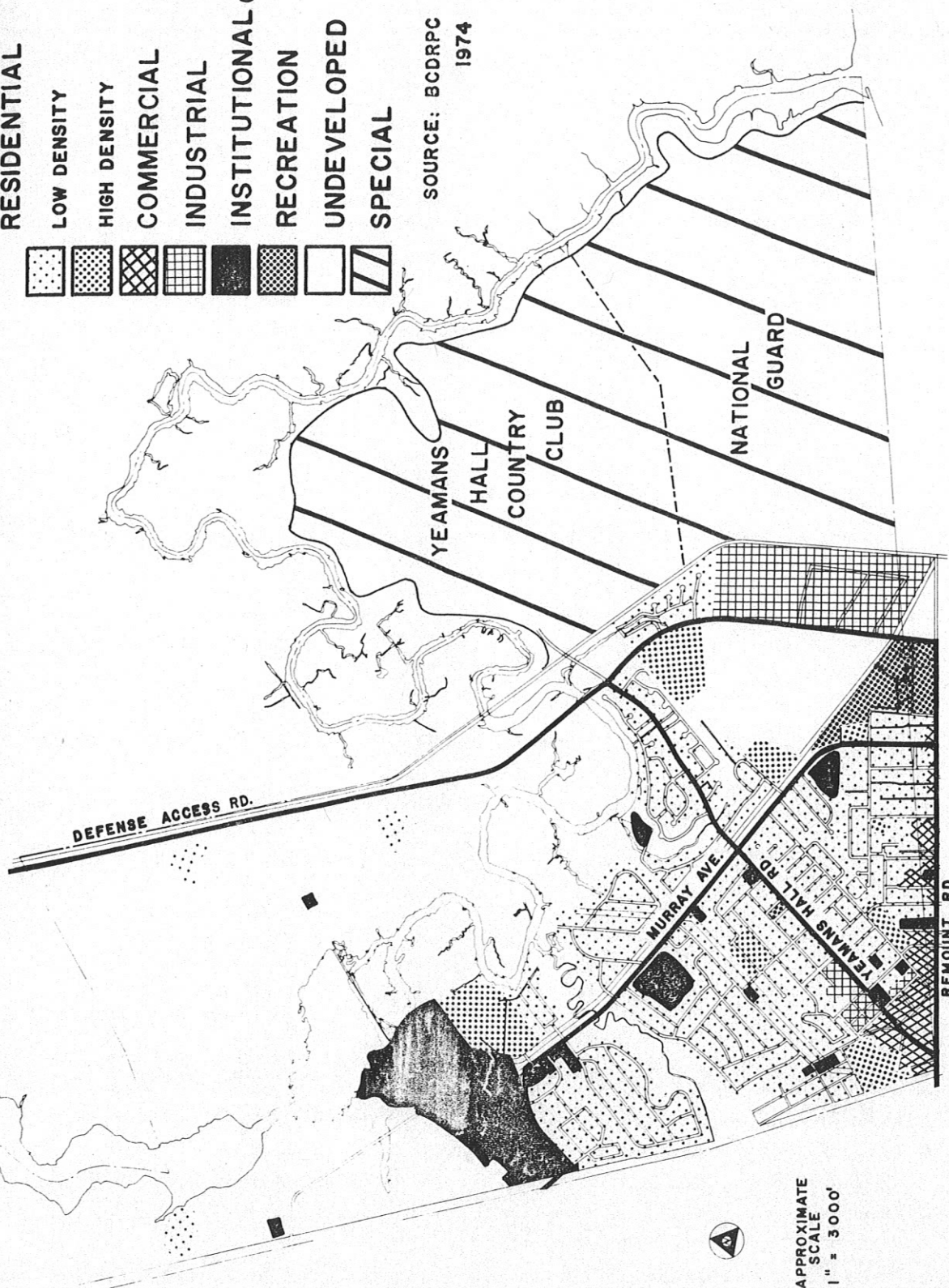
UNDEVELOPED

SPECIAL



SOURCE: BCDRPC

1974



APPROXIMATE
SCALE
1" = 3000'

Figure 7

COMMUNITY FACILITIES AND UTILITIES

Community facilities and related services form an integral part of existing and future development. Without necessary services, communities would prove undesirable in terms of a quality living environment. As such, considerations regarding the provision and improvement of facilities and services must be a basic element of the planning process.

Not only must existing facilities be assessed in terms of their ability to serve today's population, they must also be reviewed in terms of meeting future demands. The quality of a community's environment is often proportioned to the quality of the facilities serving the primary needs.

This section looks at the facilities now serving the Hanahan Community. Factors relating to education, recreation, public buildings, protection services, utilities and social services are identified and reviewed with respect to their ability to cope with community needs.

Education

The Hanahan area is part of the Berkeley County Consolidated School System, however, it has its own board and superintendent. (This is the only separate district in the County). School facilities in the City of Hanahan actually service an area larger than the City limits.

There are three public schools in Hanahan - one elementary, one middle and one high school. All are located on Murray Drive within a two mile area. (see figure 9)

Table 12 summarizes the basic characteristics for each school

in terms of grades, site size, classrooms, enrollment and capacity

Table 12

School Facility Characteristics

NAME	GRADES	SITE ACREAGE	NO. OF CLASSROOMS	NO. OF* PUPILS	PUPIL CAPACITY	Yes No
Fishburne Elementary	K-4	6	29	819	870	195
Hanahan Middle	5-8	10	33	925	990	196
Hanahan High	9-12	25	35	920	1050	1956

*Based on 1974-75 enrollment

Source: BCDRPC

All school facilities are of brick construction with the exception of the elementary school, which is concrete block. School representatives indicate that the facilities are structurally in good condition. The block exterior of the elementary school was painted in the summer of 1974.

All three schools have access to playgrounds with varying types of facilities. The most significant problem with this access is with the middle school. Presently, this school utilizes leased land across Murray Drive for recreation and physical education. In addition to not having sufficient recreational land area, the yearly leasing arrangement indicates a potentially temporary availability of this land.

Based upon the standards in the City zoning ordinance, off-street parking is sufficient for all school facilities except the elementary school which has no paved off-street spaces.

Construction is planned at the middle school to provide expanded capabilities. Anticipated features include: a gymnasium/multipurpose area, home arts room, industrial arts room and dressing facilities.

In addition to the public schools, there are two private

facilities - Divine Redeemer Catholic Church School and the Hanahan Academy (non-denominational). The Catholic school serves grades one through eight and has a capacity of 200 - presently the enrollment is 183 children. Grades Kindergarten through fourth are provided by the Hanahan Academy. This facility is presently at enrollment capacity with 56 children.

Table 13 presents recommended school standards. By comparing these standards to the existing situation, it is possible to ascertain current or potential facility problems. It must be cautioned that recommended standards often portray the ideal situation which, for various reasons, are sometimes difficult to achieve. However, when used as guidelines for comparison with existing facilities, standards prove useful in determining problem areas.

Table 13

RECOMMENDED SCHOOL STANDARDS*

	ELEMENTARY SCHOOL	MIDDLE SCHOOL	HIGH SCHOOL
GRADES:	K-5	6-8	9-12
LOCATION STANDARDS:**			
Service Radius	1/4-1 mile	1-1 1/2 mile	1 1/2-2 miles
Service Area	A neighborhood	3 neighborhoods	6 neighborhoods
Street Location	Collector	Major Arterial	Major Arterial
DEVELOPMENT STANDARDS:			
Capacity (Pupils)	500-1,000	600-1,400	1,000-2,000
Desirable Capacity	675	1,000	1,600
Classroom Size (pupils)	30	28	25
No. of Classrooms	17-33	22-50	40-80
SITE STANDARDS:			
Site Acreage	10+1 per 100	20+1 per 100	30+1 per 100
(including play areas & landscaped areas)	Pupils (maximum capacity)	Pupils (maximum capacity)	Pupils (maximum capacity)

*These standards are derived from the Regional School Facilities Plan, 1973, prepared by the Berkeley-Charleston-Dorchester Regional Planning Council.
 **Pertains to urban areas.

Comparison between the standards in Table 13 and the school characteristics noted in Table 12 indicates that the most significant differences occur in regards to site land areas. Standards indicate that some 87 acres are recommended for the total land requirements of the existing school facilities. Presently, the schools have some 41 acres of land area which, according to the standards, indicates a need for additional land. This situation appears particularly evident in the case of the middle school which utilizes leased land for recreation/physical education purposes.

The future adequacy of existing school facilities will depend largely on the amount of residential development that will occur in the Hanahan area. The land use plan provides one tool which anticipates future patterns of development and can be used to assess the potential impact on the school system.

Preliminary projections indicate that approximately 18,000 people will live in Hanahan by the year 1995. (Projections will be discussed in greater detail when the land use plan is detailed and described.) Utilizing this preliminary projection of 18,000 persons, it is possible to estimate the number of school age children.

National projections have been prepared by the Census Bureau which assume various birth rates and which project age group characteristics². By comparing the projected

2. Current Population Report, 1971, U.S. Bureau of the Census.

population of Hanahan with the national projections, the following estimates were derived:

Table 14
Projected School Age Children

Grade	Age Group	Estimated School Age Children*	
		1985	1995
K-4	5-9	1200	1400
5-8	10-13	1000	1200
9-12	14-17	1000	1200

*Age group totals were rounded off Source: BCDRPC

The national projections utilized various assumptions and produced several estimates of population. The derived Hanahan estimate was based on the lowest national birth rate assumption (Series E projections) and thus the figures shown represent minimum school facility impacts. If higher birth rates occur more school school age children can be expected.

If the age group projections hold true, school improvements and/or expansions will be necessary to accomodate increased school attendance. The middle school and high school appear reasonably adequate in terms of capacity through 1985, however, by 1995 expansion may prove necessary. Elementary school facilities seem to be in the most need of expansion. By 1995 a second facility appears needed to accomodate increased elementary school enrollments.

Close coordination between the City of Hanahan and the school district is required to insure that land is available

in the proper location to meet school expansion/construction requirements. Immediate coordination and joint planning efforts would help to avoid future conflicts and insure well placed school facilities.

Parks and Recreation

The Hanahan Recreation and Park Commission is responsible for recreational programs in the City. A full-time director operates the programs under the direction of the Commission.

Existing recreational facilities and their related characteristics are identified in Table 15 and are located in Figure 8 .

Table 15

RECREATIONAL FACILITIES - 1975*

FACILITY CHARACTERISTICS	Murray Ave. Park	Yeamans Hall Rd. Park	Threlkeld Field	PaperMill Field**	Memorial Building
Softball/Baseball	+		+	+	
Football	+				
Tennis/Multipurpose Cts.	+				
Tot Lot	+				
Picnic Area	+	+			
Playground Equip.		+			
Gymnasium					+
Ownership***	L	O	L	L	O
Acreage	4.5	3	.5	46	-

* Non-School facilities

** Shared facility - Hanahan & North Charleston

*** Cityowned or leased

O=Owned

L=Leased

Source: BCDRPC

RECREATIONAL FACILITIES

1. MURRAY AVE. PARK
2. THRELKELD FIELD
3. YEAMANS HALL RD. PARK
4. PAPER MILL FIELD
5. MEMORIAL BUILDING GYMNASIUM

SOURCE: BCDRPC

1975

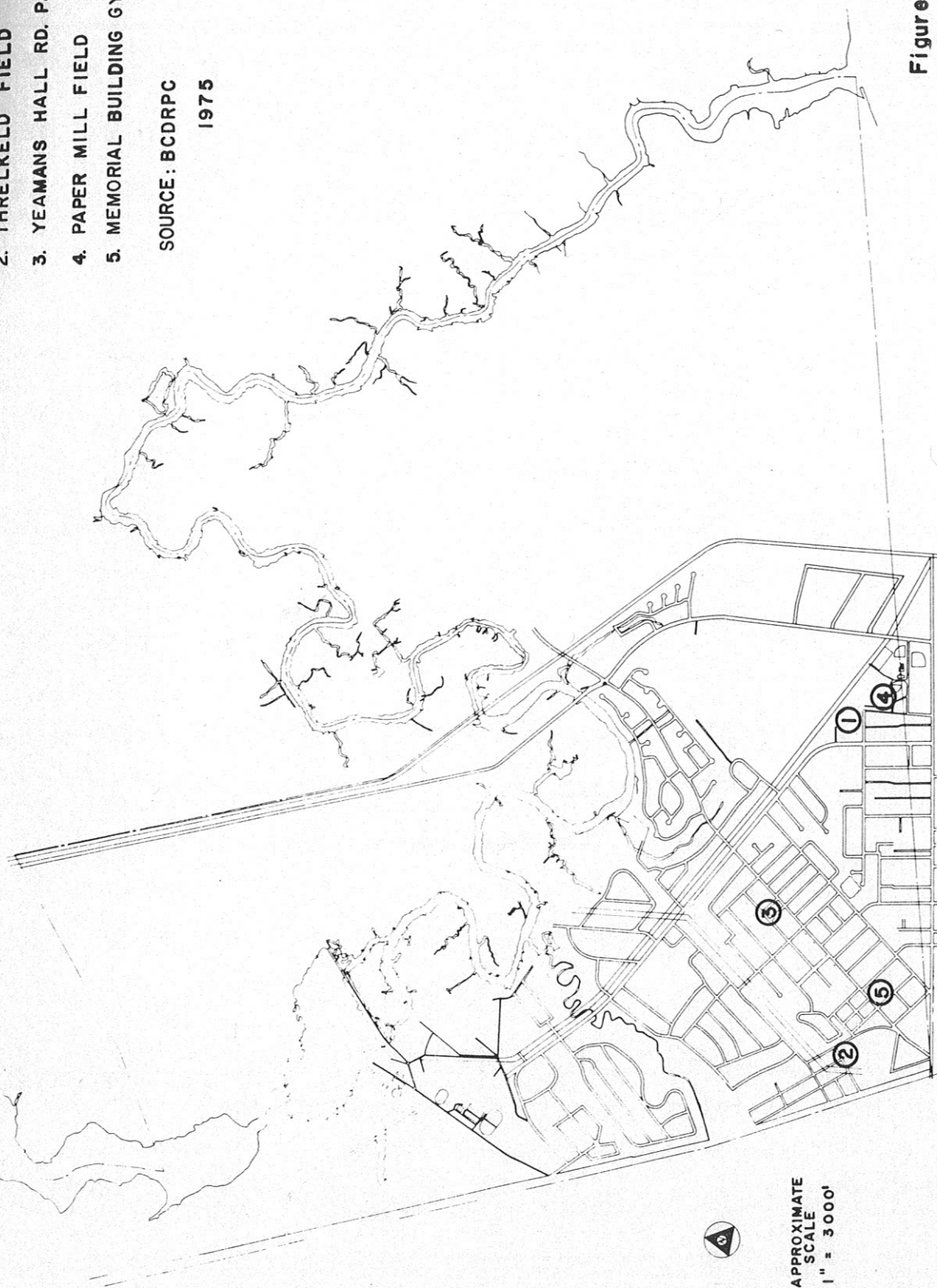


Figure 8

Programs operated by the City include such activities as softball, football and basketball. The gymnasium is utilized for basketball, table tennis and boxing programs. Church leagues also use this facility for indoor activities.

As previously noted in the Education Section, the Hanahan Middle School uses Murray Field for activities during school hours. These activities pertain to the school's physical education program and include volleyball, soccer and football. Additionally, all school playground facilities are open to the public after school hours.

Current plans for park improvements pertain mainly to on-site improvements such as fencing, landscaping and additional equipment. The fact that much of Hanahan's park acreage is based on an annual basis poses a potential problem in terms of seeking federal funds for on-site improvements. Federal funds may not be obtained to improve leased land unless a minimum fifteen year lease is obtained.

Table 15 indicates that some 54 acres of recreational land exist in the City. National standards generally denote a need for ten acres of land for every 1000 people. The 1974 Hanahan Special Census pointed out that 11,518 persons resided in the City, and using the national recreational guidelines, this indicates a need for some 115 acres of recreational land. This comparison indicates a definite need to acquire or lease land at every practical opportunity to provide increased recreational opportunities, especially if future demands and needs are to be met.

Public Buildings

The City of Hanahan owns two municipal buildings (excluding the sewerage treatment facility) - the Memorial Building and the Public Safety Building. Both buildings are of brick construction and modern appearance and are adjacent to each other on Yeam Hall Road. (See Figure 9)

The Memorial Building contains several municipal activities including administrative offices, a courtroom/public meeting room, a library (County branch facility) and a gymnasium. This facility was occupied in 1969 and is presently overcrowded. Expansion is possible on the present site.

Although existing parking spaces accommodate basic administrative needs, City officials cite a need for additional parking to handle gymnasium and library requirements. The present site has room for parking expansion for both the Memorial Building and the Public Safety Building.

The Public Safety Building houses both the police and fire protection services. This building is overcrowded, however, plans to enlarge are presently being pursued.

Protection Services

The City of Hanahan has a Public Safety Department which functions as two basic divisions - fire and police. A public safety director acts as the administrative head of both divisions. This person serves as both a fire chief and police chief.

Fire protection is provided by a full-time force of eight men (an additional man will be added shortly) and a volunteer

CITY OF HANAHAN
PUBLIC BUILDINGS

1. HANAHAN HIGH SCHOOL
2. HANAHAN MIDDLE SCHOOL
3. FISHBURNE ELEMENTARY SCHOOL
4. MEMORIAL BUILDING
5. PUBLIC SAFETY BUILDING
6. CHARLESTON WATER WORKS

SOURCE: BCDRPC
1974



Figure 9

force of some 20 men. The City presently has three pumper trucks and one first aid vehicle.

The existing equipment and manpower provides services adequate to meet present community needs. Average response time is 3-5 minutes. Most services requested pertain to the use of the first aid vehicle.

Police protection is provided by a force of five officers. The City presently has four patrol cars, one of which is unmarked. A new radio system is currently being sought to improve communications.

No formal mutual aid agreement regarding fire or police services exists between Hanahan and surrounding communities, however, cooperation has been termed excellent when need arises.

Utilities

Water: Water is supplied to Hanahan by the Charleston Commissioners of Public Works. The City has no administrative role in the provision of water. Water lines and related facilities are owned by the public works. Hanahan does lease hydrants for fire protection purposes.

No problems were indicated during discussions with City personnel in terms of water supply, pressure or quality. Aside from distribution line upgrading as needed, the present system functions well in meeting community needs.

Wastewater: The City owns and operates a system for wastewater collection and treatment. Figure 10 shows the location of the treatment plant and the area presently

served by the collection lines.

The wastewater facility provides primary treatment and has a capacity of 1,250,000 gallons per day. Present operations utilize about 900,000 gallons per day. A significant infiltration problem exists due to mud, sand and water leaking into the sewer and hookup lines. It is estimated that about one third of the daily flow is due to this problem. During rainy periods, the treatment plant reaches its designed capacity in trying to cope with the infiltration condition.

Thirteen lift stations operate to move untreated material to the treatment plant. Four of these stations do not work well due to pumps designed for the movement of water only. Particulate matter causes foul-ups which decrease the efficiency of the system.

Plans are now being pursued which will improve the collection system and expand the wastewater facility to include secondary treatment.

Solid Waste: The City provides solid waste collection services and utilizes the Berkeley County land fill for disposal. Presently, five garbage trucks are operated to provide this service.

Storm Drainage: Drainage poses a severe problem in Hanahan. The City does not have an engineered drainage system and this is viewed as a primary need. Open ditches comprise the majority of drainage improvements, however, these were mostly constructed as part of the road construction and do not function well as an overall drainage system.

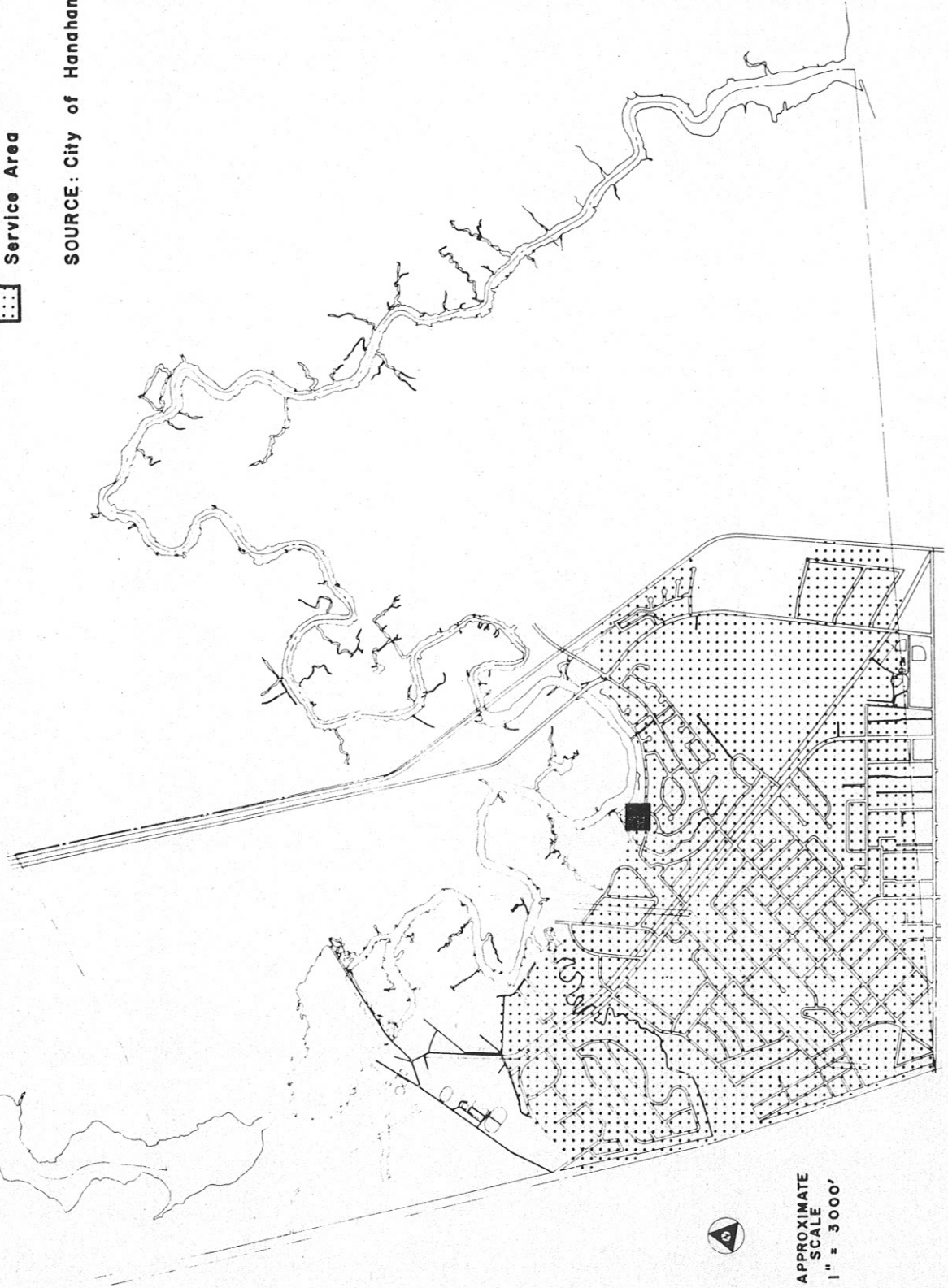
CITY OF HANAHAN

WASTEWATER SERVICE AREAS

Wastewater Treatment Plant

Service Area

SOURCE: City of Hanahan · 1975



APPROXIMATE
SCALE
1" = 3000'

Figure 10

Social Services

Health Facilities: The City of Hanahan does not operate hospital or clinic facilities of its own. The Trident Regional Hospital, under construction and to be completed in 1976, will serve private patient needs in the Hanahan area.

The Berkeley County division of the Trident Health Department conducts an immunization clinic once each month in a mobile unit located on the Hanahan Middle School property.

Hanahan has a City Board of Health which deals with nuisances and environmental complaints, however, no full-time staff is maintained.

Emergency Medical Services: City fire department personnel are trained emergency medical technicians. One first aid vehicle is owned by the City and is used for City emergencies.

Herbert's Ambulance Service, a privately owned business, provides emergency transportation to hospitals in Charleston. Herbert's operates under a contract with Berkeley County guaranteeing reimbursement for any nonpayment losses incurred.

Mental Health: The Charleston Area Mental Health Center operates a branch office in Moncks Corner, the County seat.

Alcoholism/Substance Abuse: A program recently initiated in Berkeley County is the Berkeley County Alcohol and Drug Commission. The Commission has two offices - one in Moncks Corner and one in Goose Creek. This program provides education and information/referral on substance abuse.

Public Welfare/Social Services: The Berkeley County Department of Social Services is located in Moncks Corner.

Welfare certification, food stamps and other related social services are provided to residents through this agency.

Elderly: The Hanahan Chapter of the Charleston Area Senior Citizens Services, Inc. meets monthly in the Exchange Club building. There are approximately forty members. A County office on aging is located in Moncks Corner and provides information/referral and other outreach services to all elderly residents in Berkeley County.

TRANSPORTATION FACILITIES

Basic Determinants

The street system in Hanahan is formed by a large number of factors, each contributing to shape the transportation system of the entire area. Among the most important of these are the physical features that predominate. Goose Creek and its marsh areas have long provided a barrier necessitating lengthy travel from the Hanahan area to the Naval Weapons Station and the Polaris Missile Facility. The opening of Defense Access Road has altered travel patterns in Hanahan and many other areas of North Charleston.

Population and housing characteristics are also significant in shaping the transportation system. Much of Hanahan is predominately low density, single-family residential development with scattered multi-family complexes. The relatively even population distribution has caused much of the highway system to act as a collector, providing movement from residential streets to higher capacity roadways for through movement.

Another factor influencing the highway system is the close proximity to a number of major generators of traffic. Although many are not within the political boundaries of Hanahan, their effects are significant and well known. Some of the larger, major generators include the Westvaco Pulp and Paper Company, employing approximately 1500 workers and the Polaris Missile Base and U.S. Naval Weapons Station employing the same amount. North Charleston Terminal of the State Ports Authority also contributes to traffic generation. The cities of North Charleston and Charleston add to Hanahan's traffic concerns.

Generators within the City of Hanahan are much smaller by comparison. The school complex on Murray Avenue and the Hanahan Central Business District add to large traffic volumes occurring in the morning and afternoon peak hours.

The total traffic volume generated by all of these complexes is not detrimental to the highway system when considered on a total twenty-four hour basis, however, most facilities place their traffic burdens upon the street system simultaneously. Thus, morning and afternoon peak hours occur as workers and students travel to and from home together. Commercial establishments tend to create more constant traffic flows throughout the day. They do experience increased activity at certain periods of the day, however, not to the extremes experienced by other types of employers. Generally, the most severe traffic congestion occurs when commercial development is allowed to occur

along major roadways serving large employers. This situation is developing to some degree in Hanahan near Yeaman's Hall Road, Loftis Road, and Remount Road. Each day, large number of workers traveling from Hanahan to Charleston and North Charleston through the Hanahan Business District, create congested conditions near these intersections. Such congestion is undesirable from an economic, environmental and public safety standpoint.

Traffic Volumes

The number of vehicles which can be accommodated by a street is affected by many factors, such as the composition of traffic (for instance, percentage of large trucks), speed limits, number and timing of traffic lights, number and width of lanes, the effects of marginal frictions, road conditions, etc. Most roadways in Hanahan are carrying less traffic than they were designed to serve with few exceptions.

Representative traffic volumes in and near Hanahan can be seen in Figure 11. The highway with the greatest impact upon Hanahan is Remount Road. Traffic volumes have steadily increased on this roadway for a number of years. Each day over 27,000 autos traversed Remount Road in 1974. Traffic counts taken at the same location in 1963, revealed that about 17,000 vehicles used the road daily. Remount Road serves the Westvaco Plant, the South Carolina Ports Authority, North Charleston Terminal, as well as providing movement from U.S. 52 and I-26 into North Charleston and the Naval

CITY OF HANAHAN

TRAFFIC VOLUMES

000 - 1963 AVERAGE DAILY TRAFFIC

(000) - 1972 AVERAGE DAILY TRAFFIC

[000] - 1974 AVERAGE DAILY TRAFFIC

SOURCE: South Carolina State Highway Dept.
Compiled by BCDRPC - 1975

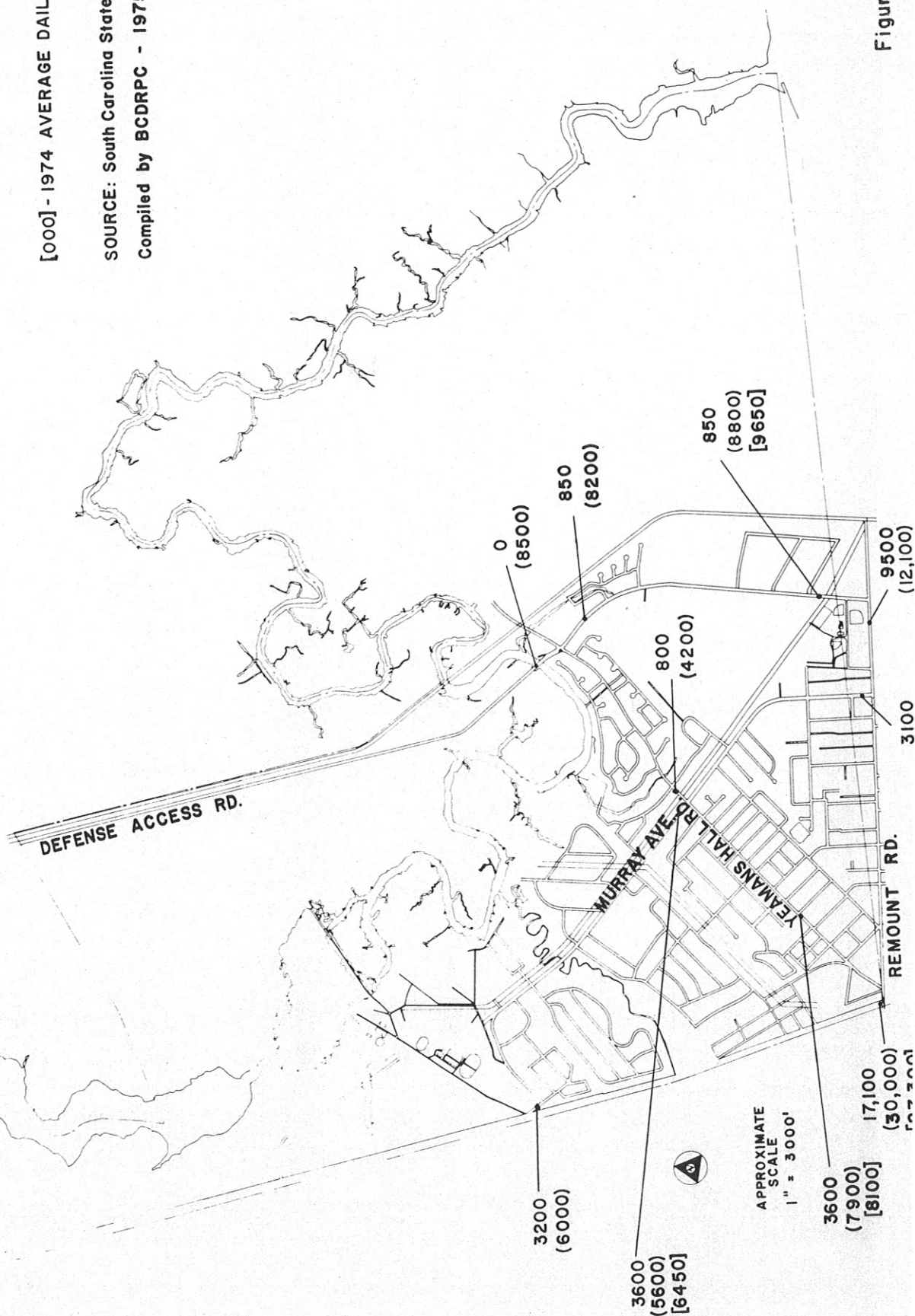


Figure 11

Complex at the Weapons Station and Polaris Missile Facility via North Rhett Avenue and Defense Access Road. North Rhett Avenue and Defense Access Road are vital links between North Charleston and the Naval Facilities just mentioned. Less than 900 cars used North Rhett Avenue in 1963, however, since the opening of Defense Access Road well over 9,000 autos use it daily. The same development has created similar increases on other roadways in the City. The traffic on Yeaman's Hall Road has increased steadily since the opening of Defense Access Road as can be seen on Figure 11. Murray Avenue experienced a more constant growth in traffic since 1963 primarily due to population increases in Hanahan.

Street Classifications

Streets can be grouped according to function into one of four types of streets. Those being expressways, arterials, collectors, and minor streets. Existing street classification in Hanahan can be seen in Figure 12. By definition, each of these classes of streets perform a different function in comprising the transportation system. A brief definition of each is provided below.

Expressways: These traffic ways provide for the high speed movement of large volumes of traffic, primarily over relatively long distances. They are characterized by absence of access from abutting property. Access to them can be gained only at controlled access interchanges and at grade separations from all crossing traffic. Interstate Highway 26 is an example of an expressway in the Charleston area.

Arterials: These streets interconnect principal traffic generators and also link collector streets and other arterials with other expressways. They are characterized usually by relatively heavy traffic, having average trip lengths in excess of 1½ miles, and normally have some restrictions on parking on the roadway and access to and from abutting property. The primary function of these streets is to move traffic, with the provision of access to adjacent property occupying a very subordinate role.

North Rhett Avenue/Defense Access Road are arterial highways providing for through movement of traffic from the Westvaco-Ports facilities and North Charleston to Red Bank Road and the Polaris Base/Weapons Station complex. Remount Road also functions as an arterial highway. It is the only major direct route from I-26 to the Ports area as well as to North Rhett Avenue.

Collectors: These streets convey traffic from minor streets to arterials and sometimes to expressways. They normally do not accomodate long through trips and they are not usually of great length in urbanized areas. The functions of moving traffic and providing access to abutting property are of about equal importance.

Yeaman's Hall Road serves as a collector between the many minor streets serving Hanahan's residential areas and North Rhett Avenue and Remount Road. Murray Avenue also performs much the same function in carrying residential traffic to Remount Road and Yeaman's Hall Road.

STREET CLASSIFICATIONS

- ARTERIAL
- COLLECTOR
- MINOR

SOURCE: BCDRPC

1975



Figure 12

Minor Streets: The prime function of this class of streets is to furnish access to adjacent property. They are designed to accomodate low speed traffic at low volumes, and often are arranged so as to discourage their use by through traffic. All other streets in Hanahan fall into this category.

Major Accident Areas

Although Hanahan has experienced significant traffic increases in the past ten years, the roadway system is adequate to handle existing traffic burdens in most areas. An exception to this lies at the intersection of Loftis Road and Yeaman's Hall Road. Growth in commercial and residential activity near this intersection have rendered it dangerous for traffic entering and passing through. The number of accidents occurring warrent its detailed redesign to make it safer for all who must traverse it daily.

North Rhett Avenue poses a potential accident threat from vehicles traveling at unreasonably high rates of speed. Several accidents have occurred south of Yeaman's Hall Road where North Rhett Avenue curves northwest. In each case, drivers were traveling too fast for conditions and accidents resulted. By strict enforcement and possibly improved signing, this accident area can be made safer.

Transit Service

Presently, transit service is provided to the residents of Hanahan by the South Carolina Electric and Gas Company, operators of the transit system in Charleston.

The Transit system in Charleston is slow and inconvenient and consequently attracts a small number of riders, especially in middle and upper income areas prevalent in Hanahan. However, should the system be improved, a significant contribution toward delaying or reducing the need for future highways and highway widening projects can be made. This is true because of the fact that transit systems reduce the effects of peak hour travel. On well established lines, large numbers of workers are attracted away from their autos to transit, thus reducing the need for roadway facilities in the peak hour.

Busses operate from Market Street in Downtown Charleston through North Charleston to Hanahan via Remount Road, Yeaman's Hall Road and Murray Avenue, to the Port Facilities and the Westvaco Plant. The return for this trip is from the end of Remount Road directly to U.S. 52. Headways are once each hour with a bus leaving the Port Terminal five minutes after each hour. Service is provided from 6:05 a.m. until 12:05 a.m., seven days per week. The time required for one round trip is two hours. Transit service from Hanahan is quite slow, indirect, and inconvenient should one desire to travel anywhere other than North Charleston or the Peninsula.

DEVELOPMENT ISSUES AND PROBLEMS

Prior to considering the preparation of a future plan for development, it is essential that basic issues and problems (whether existing or potential) be identified. This identification insures that the development plan will reflect the sensitivity necessary to recognize and cope with undesirable growth situations. GROWTH IS NOT NECESSARILY PROGRESS and it is often progress that determines whether or not a community continues as a desirable place to live.

The following issue and problem identifications should not be considered all inclusive, rather, they should be viewed as basic concerns which surfaced during the survey of the existing situations.

Natural Resource Protection: The Hanahan area contains natural resources critical not only to the City, but also the entire metropolitan region. The Goose Creek Reservoir provides a water supply source for much of the Charleston area and as such must be protected from contamination. Development planning must recognize this resource and strive to insure the maintenance of its quality.

Service Facilities: Development without adequate service facilities (schools, water and wastewater systems, drainage facilities and protection services) tends to create undesirable living conditions, and is particularly prone to degrading natural and cultural environments. Never should future development be considered without also

considering the impacts and demands on service facilities.

In Hanahan, as has been noted earlier, improvements are needed both in terms of drainage systems and wastewater treatment/collection facilities. While both these problems have been recognized by City officials, it remains imperative that basic improvements be implemented prior to the encouragement of large scale development projects.

Recreation and Open Space: Recreation facilities and the appreciation of open space are receiving increased importance in terms of creating desirable community environments. Hanahan presently needs additional recreational land to meet existing demands. This need will continue to increase as development occurs and more people join the community. Immediate and concentrated effort is needed to insure the provision of recreational facilities and the preservation of open space resources.

Access: Accessibility will be a major determinant in shaping Hanahan's future development pattern. The City presently has little problem in terms of circulation in the urbanized area, however, the northern area and that area east of Goose Creek, require special consideration before development can be effectively accommodated.

Of these two areas, the northern area presents the most significant problem of linkage to the existing City street system. Presently access to this area is achieved by Rivers Avenue, which is not within the City limits and does not provide direct connections to City fire and police

protection services.

The most direct access to that area east of Goose Creek, is provided by a bridge on Defense Access Road, just north of its intersection with Yeaman's Hall Road. Provision of emergency services to this area must take into account the limitations created by a single access point.

Airport Noise Exposure Zone: The fact that portions of the City lie within a Charleston Municipal Airport flight path, (more importantly, a noise exposure zone), requires consideration in terms of discouraging the location of incompatible land uses (noise sensitive) in intensive noise zones. Future residential developments and related special uses such as schools should be located in a manner which avoids conflict with aircraft noise.

FUTURE DEVELOPMENT

FUTURE DEVELOPMENT

The Comprehensive Development Plan presented in this document has been prepared to assist decision-makers in shaping the physical growth of Hanahan. It is based on the assumption that changes will occur in the City's development pattern as a result of increased urbanization and that this change can be channeled into an orderly, economical, aesthetic and healthy environment if given proper guidance.

Of course, if no plans are developed, Hanahan will continue to grow - but what will the City look like after years of relatively uncoordinated development? Perhaps public services would not be adequate; strip commercial development may prevail; and major streets might be clogged.

To accept unplanned development as a reasonable future has been discounted by the Hanahan City Council and the Planning Commission. The following sections discuss dimensions of future change, development policies and plan concepts as they relate to the future of Hanahan.

DIMENSIONS OF FUTURE CHANGE

When attempting to anticipate and project into the future, it is necessary to presuppose those conditions and events which may impact future development trends. This section addresses the primary assumptions utilized in developing the plan concept, the anticipated population and land needs, and the major development policies as recommended by the Hanahan Planning Commission.

Growth Assumptions

The following assumptions serve as the foundation upon which the development plan has been based. It must be noted that if any one, or a combination, of these assumptions over time proves invalid, then the projected plan may require modification.

- a. That there will be a continuing and increased demand by people to live in the Hanahan area.
- b. That development densities in the future will reflect characteristics similar to the existing pattern (in terms of households per acre).
- c. That there will be a general decrease in the number of persons per household as birth rates decline.
- d. That public services and utilities, especially in terms of essential services and the provision of power, are provided and are able to meet future demands.
- e. That the automobile will continue as the principal means of personal transportation. However, there will be increased emphasis on the use of mass transit facilities.
- f. That Hanahan will continue to be a part of the total Charleston metropolitan area, sharing in both employment, commercial and cultural opportunities.
- g. That the general economy will support continued expansion of employment and commercial activities.

Population Projections

Population estimates for a specific community depend upon three basic factors: (1) natural increase and decrease, (2) migration and (3) annexation. Natural increase and decrease encompasses the number of live births and the number of deaths that occur within a community. Migration is the movement of people into or out of the community. Lastly, a gain in population may occur through the annexation

of adjacent areas.

Traditionally, population projections are based upon historical trends, present characteristics and anticipated growth demands. The projection process used for Hanahan differs from this traditional approach for two reasons.

First, the City was recently incorporated (1973) and as such, does not have a historical base from which past trends can be accurately derived. Portions of the City were identified as census tracts in the 1970 Census, however, they do not conform to the political boundaries sufficiently to justify precise historical analysis.

Secondly, it appears likely that Hanahan will experience total development during the planning period (20 years). This suggests that it is more reasonable to calculate population based on land capability and desired location, as determined by the development plan concept. That is, measure the residential land areas shown in the development plan and apply a density standard to determine the anticipated population.

It becomes obvious that the accuracy of the projected population will be directly linked to the accuracy of the land use allocations. In Hanahan, unlike many other communities, the existing land use pattern and the presence of both man-made and natural limitations (e.g. airport noise zone and marsh areas along Goose Creek) defines fairly well the land capabilities for urban development. This allows the use of the previously described future population

determination technique.

Measurement of the residential land area displayed on the plan map indicates that some 18,000 persons will reside in Hanahan at the end of the planning period - year 1995.

(Appendix B describes the measurement results and density factors utilized.) The anticipated 1995 population represents a 57 percent increase over the 1974 population of 11,518 persons. By comparison, Berkeley County is expected to increase some 64 percent over the same period.³

Major Development Policies

Policies are statements setting forth the basic principles used by the Hanahan Planning Commission in developing the development plan. The policies serve as guidelines for identifying desirable development patterns which promote the orderly and efficient use of land.

Residential Land Use Policy: PRESERVE AND ENHANCE THE QUALITY OF EXISTING AND FUTURE NEIGHBORHOODS.

- a) Residential development should not be located within areas which present hazards to the safety and health of residents, i.e. flood plains, industrial centers. (Zoning and subdivision regulations should be utilized to prohibit residential development in such areas.)
- b) Each residential area should be adequately served by such facilities as schools, parks and recreational areas, utilities, shopping centers and churches. (essential and other services may be provided to residential areas by (1) measuring existing and future service needs, (2) by ensuring serviceable residential areas through zoning and (3) the development and implementation of a community facilities plan.)

3. The 1974 population of Berkeley County was estimated as 60,400 persons by the State Division of Research and Statistical Services (February 1975) while the 1995 estimate of 99,000 was projected by the Environmental Protection Agency (July 1972).

- c) All types of residential development should be provided, ranging from low density residential estates to high density apartments, to satisfy different needs and desires. (Zoning, in conjunction with the application of compatible neighborhood concepts, may be utilized to ensure a variety of housing types.)
- d) Residential areas should be protected against activities which produce excessive noise, dirt and odors or which generate heavy traffic. (Buffer areas should be provided in areas of potential conflict, in addition to the establishment of nuisance regulations and cooperation in the enforcement of laws aimed at reducing excessive pollution.)
- e) Premature development of vacant lands should be discouraged unless a specific need is evident. (Utilization of land use control tools, such as zoning, in accordance with a predetermined growth plan can aid in preventing premature development.)
- f) Residential development should be established in serviceable neighborhoods where necessary community services, including police protection, fire protection, water, sewer and schools, can be most economically provided. (Residential development may be encouraged through application of the neighborhood concept as supported by the zoning ordinance and a well-specified community facilities plan.)

Commercial Land Use Policy: COMMERCIAL USES SHOULD COMPLEMENT ESSENTIAL AND IMMEDIATE NEIGHBORHOOD NEEDS

- a) Related and compatible business should be grouped together and located in areas offering economic opportunity with minimum conflict with other land uses. (zoning provides one method of ensuring compatible commercial groupings in specified geographical areas.)
- b) Incompatible, noncommercial uses should be eliminated from commercial areas.
- c) Commercial developments along major streets should be compatible with community development. (Utilization of zoning and the application of the neighborhood development concept can be used to coordinate commercial activities with other land uses.)
- e) Higher density development should be encouraged around shopping centers. (Zoning may be utilized to locate high density residences near commercial centers to provide for increased pedestrian accessibility and reduction of vehicular traffic.)

- f) Highway service areas should be located so as to serve motorists without creating traffic congestion or negatively affecting adjacent properties. (Utilization of the land use plan designating service areas, and supported by zoning and good highway design standards, may assist in avoiding potential nuisances created by highway service activities.
- g) Commercial groups should be encouraged to initiate improvement programs to make their shopping facilities more attractive and more efficient.
- h) Commercial development should not be located within potentially detrimental areas, i.e. floodplains.

Industrial Land Use Policy: INDUSTRIAL ACTIVITIES SHOULD BE LOCATED SO AS TO MINIMIZE CONFLICT WITH OTHER LAND USES AND TO MAXIMIZE THE USE OF TRANSPORTATION FACILITIES.

- a) Industrial parks with attractive site planning, landscaping and building setback and coverage controls should be provided to accomodate high quality industrial development.
- b) Buffer areas should separate industrial areas from residential areas.
- c) Non-industrial land uses should not be allowed to develop within industrial districts.
- d) Regulations should be established against industrial nuisances such as smoke, dust, odors and noise. (Cooperation in the enforcement of state regulations or the development of local performance standards may aid in avoiding these problems.)
- e) Adequate utility services and transportation facilities should be provided for all industrial areas. (Implementation of capital improvement programs based upon a land use plan can assist in the timely provision of these needs.)
- f) The provision of adequate space for off street parking and loading should be required.
- g) Industrial land uses should not be located within potentially detrimental areas, (e.g. floodplains).

Community Facilities Policy: REALIZATION OF PUBLIC FACILITIES CAPABLE OF PROVIDING EDUCATIONAL, CIVIC, RECREATIONAL AND ESSENTIAL SERVICES IN ACCORDANCE WITH THE DESIRES AND NEEDS OF THE COMMUNITY.

- a) Public facility investments should be utilized as a

method through which private development may be guided.

- b) Financial programs should reflect the principles set forth in the community facilities plan.
- c) Coordination with adjacent communities should be made to facilitate the efficient and economical provision of essential services (e.g. fire and police protection).
- d) Efforts to ascertain the future impact of development on community essential services should be made to assist in identifying potential problem situations.
- e) Coordination with other governmental groups for the provision of regional recreational facilities should be encouraged.
- f) Neighborhood parks in conjunction with public schools should be developed wherever possible.
- g) A system of public recreational facilities should be developed which reflects a variety of recreational desires (e.g. bike paths, tot lots, play fields, etc.)
- h) Open space areas should be created which would preserve scenic or historic sites, protect natural resources and provide recreational opportunities.
- i) Recreation sites should be acquired or reserved well in advance of development.
- j) Floodplain areas should be considered for recreational or open space utilization.
- k) Elementary schools, where possible, should be located so that children can conveniently walk to school without crossing major arteries. Junior and senior high schools should be conveniently accessible by automobile or mass transit facilities.
- l) School sites should be acquired or reserved well in advance of the development of an area (Future site location should be identified in the land use plan and reservation policies made in cooperation with representatives of the school system and local government officials).

Transportation Policy: TRANSPORTATION FACILITIES SHOULD BE DESIGNED TO ACCOMMODATE ANTICIPATED MOVEMENTS OF PEOPLE AND GOODS WITHIN AND THROUGH THE COMMUNITY.

- a) The transportation system should be coordinated with those adjacent communities to ensure an economical and functional system.
- b) Streets and highways should be organized into a functional system. Local streets should principally provide access to abutting property, and, therefore, be used only by local traffic; collector streets should gather traffic from local streets and channel it to an arterial street; arterial streets should carry traffic from collectors to local destinations or to expressways; and expressways should carry heavy traffic volumes between major destinations.
- c) Insofar as possible provision should be made for the separation of vehicles from pedestrian traffic.
- d) Major streets should be so located as to bound rather than cut through residential neighborhoods.
- e) Intersections and railroad crossings on major thoroughfares should be minimized for safety and efficiency.
- f) Frontage roads should be used whenever possible in commercial areas which abut major trafficways.
- g) Curb cuts for driveways along arterial streets should be minimized.
- h) Residential subdivisions should be backed upon major thoroughfares to reduce traffic congestion.
- i) Local residential streets should be designed so as to discourage heavy through traffic.
- j) Mass transit facilities which increase metropolitan accessibility should be encouraged.
- k) A system of bicycle paths should be developed to allow safe movements utilizing this mode of travel and recreation.

LAND USE PLAN

The Land Use Plan represents a development concept for future growth and is based upon community policies, anticipated land demands and land capabilities. Further, the plan provides a framework for integrating new developments into the existing land use pattern while maintaining a high quality community environment.

This section discusses the characteristics of the Land Use Plan as prepared by the Hanahan Planning Commission. It addresses the basic development concept, projected land use relationships and the staging of implementation.

Basic Development Concept

For purposes of description, the City may be divided into three geographical areas - southern, northern and eastern. The southern area includes all the area south of Goose Creek starting at the Goose Creek Reservoir Dam. This area basically contains the existing development and presently accomodates the bulk of the City's population. The northern area covers that land north of the Goose Creek Reservoir Dam and west of Goose Creek. This area abuts Charleston County and ends just south of Otranto. The eastern area includes that area east of Goose Creek along Defense Access Road.

The basic plan concept assumes total area development over the 20 year planning period. This, at first, may seem unrealistic, however, when one considers that the southern area is near development capacity and that a significant portion of the City is not suited for development (marshes

water and poor soils) then this total development assumption appears feasible.

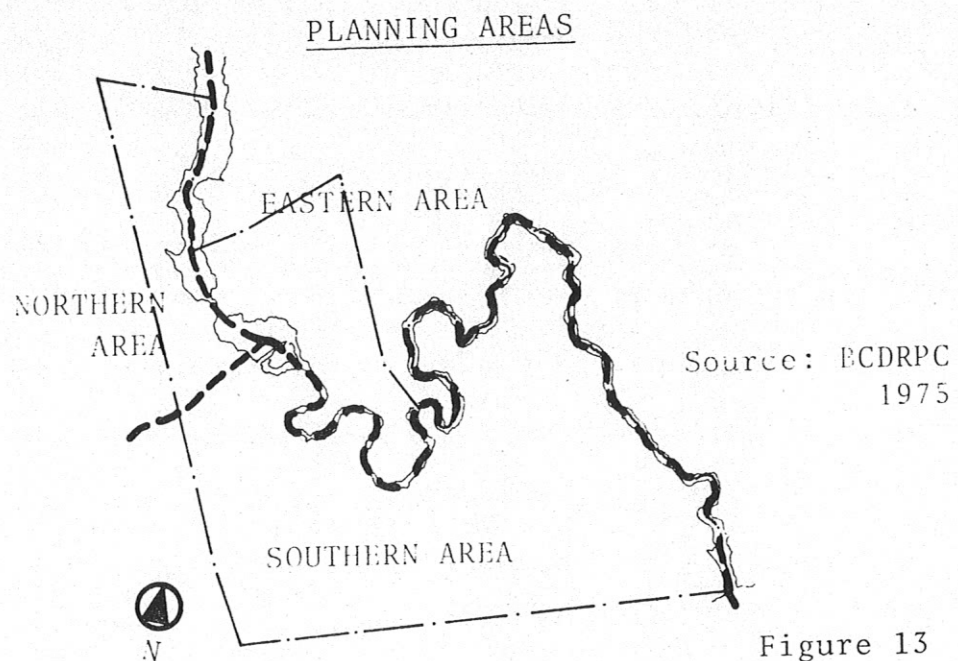


Figure 14 provides a generalized graphic of the Future Land Use Plan for the City of Hanahan. This graphic shows Hanahan as it is anticipated to be in the year 1995. (It must be noted that the City Planning Commission maintains a detailed and updated plan map - this map should be consulted for additional and current information regarding the City's development policy.) Briefly, the plan reflects a mixture of different land uses occurring in areas which conform to the policies developed by the City Planning Commission. Summarized:

The southern area is actually a stabilization and extension of land uses presently in existence. A majority of the residential, commercial, institutional (school, municipal buildings, etc.) and industrial areas shown are either presently developed as such or are committed to be developed in the near future. The Charleston Water Works, Yeaman's Hall Country Club and the National Guard Military Installation (Old Army Transportation Depot)

are expected to remain basically unchanged over the planning period in terms of their impact on land development areas. The latter two land activities have been noted as special categories on the Plan map because of their projected stability.

For the most part, in the southern area, the pattern has been established and is considered desirable in terms of maintaining the present community environment. The improvement of the older housing stock and the increase of recreational opportunities in this area represent the most significant changes anticipated during the planning period.

The northern area is now beginning to experience demands for residential development. This form of development is accommodated in the Plan for this area. That area north of the waterworks is indicated for industrial utilization. A major factor of this location pertains to the presence of an aircraft noise zone which limits the suitability of the area for residential and related uses. Further, industrial uses as located are compatible with existing industrial activities adjacent to this area in Charleston County.

The eastern area of the plan indicates both industrial and residential land uses. Development in this area is largely dependent upon gaining access from Defense Access Road and the extension of Ashley Phosphate Road, (Discussed in the Transportation Plan Section). Industrial activities are located with respect to the aircraft noise zones. Residential uses are concentrated near the intersection of the Defense Access Road bridge and Goose Creek. Neighborhood commercial facilities are also indicated in this general area.

Detailed review of the patterns shown in Figure 14 will indicate the compatibility of this development concept with the policy statements discussed earlier. It should be emphasized that the open space designation shown on the plan map reflects the policies oriented to the preservation of open space as well as those which suggest that development should not occur in hazardous areas (flood prone areas, poor soils, etc.). The open space categories includes those areas which are considered undesirable for development.

Projected Land Use Area Relationships

The City of Hanahan contains some 5,821 acres or approximately nine square miles of land area. By 1995, about 70 percent of this land area is expected to be utilized for urban development. Approximately 30 percent of the area will be open space/undevelopable land. (Appendix C summarizes land use acreage relationships)

Residential land is anticipated to be about 1,219 acres or 21 percent of the total land area. Some 1,082 acres are denoted as low-density residential while 137 acres are high-density. (Appendix D provides more detailed information regarding density distribution and dwelling unit totals.)

Commercial activities are anticipated to utilize some 91 acres of land area. This represents about 2 percent of the total land area. The majority of this land area will be devoted to existing commercial activities with limited expansion being necessary for neighborhood oriented services.

Industrial land uses as shown on the plan map occupy some 753 acres, which is about 13 percent of the total land area. The greatest concentration of industrial acreage is located adjacent to Defense Access Road and east of the Goose Creek Reservoir.

Institutional uses include schools and municipal related activities. Approximately 113 acres are indicated on the plan to accommodate these activities. This land requirement is about 2 percent of the total land area.

Recreation and Open Space uses represent 31 percent of the

CITY OF HANAHAN

LAND USE PLAN

1995

RESIDENTIAL

LOW DENSITY

HIGH DENSITY

COMMERCIAL

INDUSTRIAL

INSTITUTIONAL

RECREATION & OPEN SPAC

SPECIAL



SOURCE: HANAHAN PLANNING COMM.

1975

NOTE: The Hanahan Planning Comm.

maintains a detailed Land Use Plan Map.

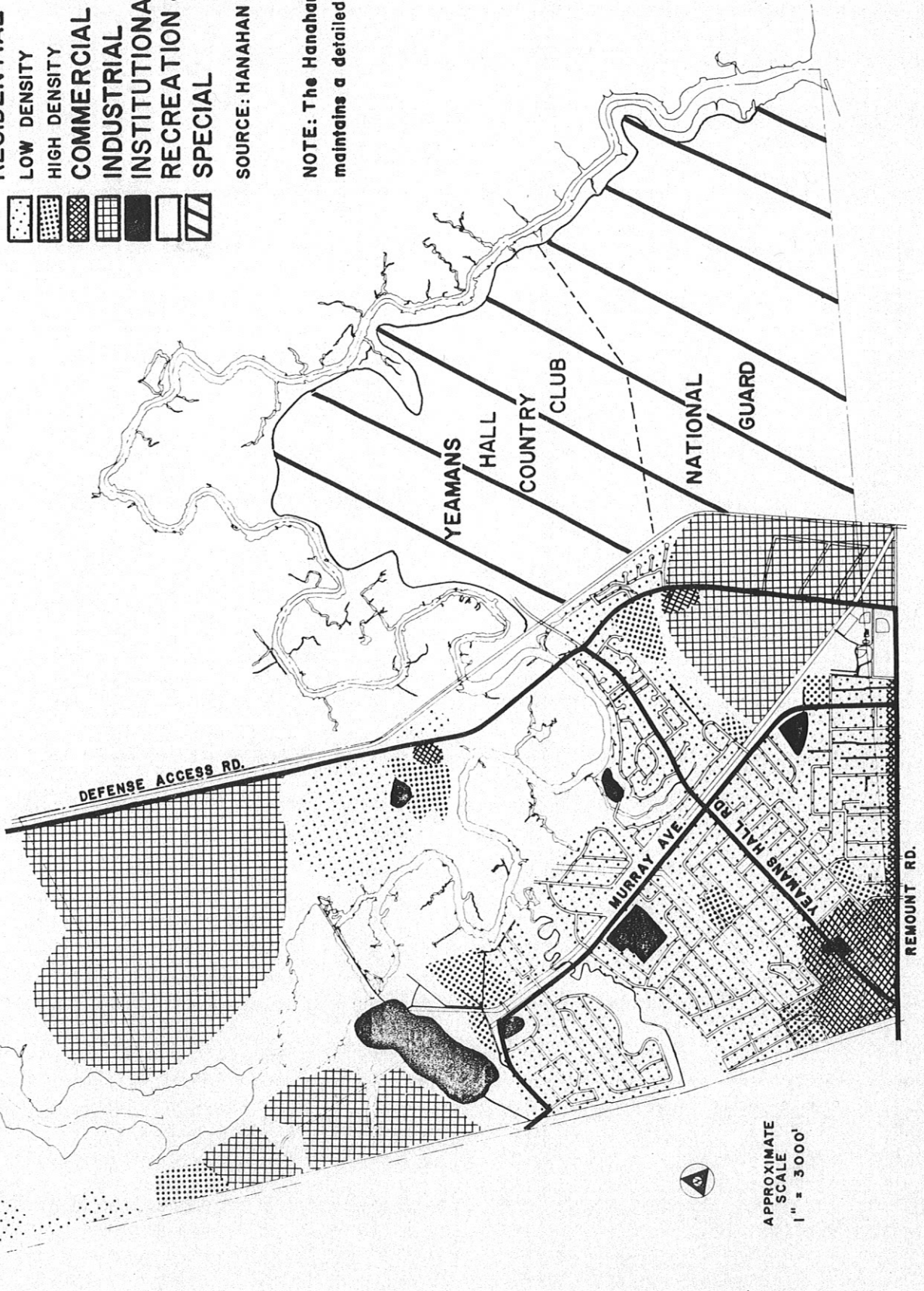


Figure 14

total area with some 1,791 acres. The majority of this acreage is devoted to marsh and water areas. Approximately 133 acres are specifically identified as parks and bicycle paths.

Special Categories include two special land uses - Yeaman's Hall Country Club and the National Guard Military Installation. Combined, these uses account for some 1,663 acres or 28 percent of the total land area.

Major transportation facilities as shown on the plan utilize some 191 acres of land. This figure is misleading since minor streets are not included in this estimation. (The inclusion of minor streets would increase the total land area to some 580 acres.) Minor streets were calculated in the land use category that they were located in and are represented as part of the gross acreage figure of each particular category. Major facilities such as railroads, collectors and arterials were separated and are represented in the 191 acre figure which accounts for some 3 percent of the total land area.

Development Standards

A brief reference regarding development standards is necessary to understand the limitations of their application. Standards provide a mathematical reference for projecting land use needs and are often expressed in acres per population, (e.g. a community should provide 3 acres of commercial land for every 1000 residents). For the most part, standards work reasonably for projecting at large geographic

levels or for isolated communities. When applied to a community such as Hanahan their value decreases because of the metropolitan influences, particularly as they impact commercial and industrial land locations.

Various standards were applied to the projected Hanahan population (18,000 persons - 1995) with unrealistic results. It was determined that because of Hanahan's total development characteristics, a more intuitive approach would yield superior results than would the application of standards. This approach is inherent in the description of the basic development concept as presented earlier in this section.

Land Use Plan Staging

The staging of plan implementation is essential if development is to proceed in a logical and preconceived manner. Staging ensures that appropriate improvements (e.g. utilities and roads) can be provided in time to meet demands and needs. Allowing development to prematurely locate in areas without essential services, not only violates the basic principles of planning, but simply does not make good sense.

In describing the basic development concept, the City was divided into three geographical areas - southern, northern and eastern. These areas conform logically to three stages of development encompassing short, middle and long range development areas.

The southern portion of the City - that part containing the majority of existing development - represents the immediate/short-range stage. Actually, this stage is a process

COMMUNITY FACILITIES PLAN

Community facilities and related services represent one of the most critical elements of future community structure. The presence or absence of quality physical plants and services will dictate to a large degree, the desirability of living in Hanahan.

Hanahan is a new city. However, long before it incorporated, it operated as a public service district. The early creation of this service function (1940's) indicates the relatively important priority of service systems.

Four basic facility concerns are identified within the scope of the Community Facilities Plan. These concerns are: Educational Facilities, Recreation and Open Space, Public Buildings, and Utilities/Services. A brief description of implementation considerations provides the basis of the Community Facilities Plan.

Educational Facilities

The discussion relating to education provided in the Existing Situation portion (under Community Facilities and Utilities) of this document deals with school conditions, standards and projections. Presently, facilities do not exceed their enrollment and it's anticipated that these facilities will serve adequately over a short-term period (5-6 years) without experiencing undue space hardships. Emphasis during this period should be devoted to upgrading existing facilities in terms of classroom space, supporting programs and recreational areas.

Possibly by 1985, and certainly by 1995, considerations must be made regarding the need for facility construction, particularly as it pertains to elementary facilities. Projections (if realized as anticipated) indicate a need for an additional elementary facility. The Community Facilities Plan designates a possible site location east of Goose Creek near Defense Access Road (see Figure 15). This location is based upon the anticipated development shown in the Land Use Plan for this area.

While it is difficult to project specific long-range needs with accuracy, it remains important that they be considered, especially in terms of advance land reservation. Short and middle-range objectives must relate to a continuing process of coordination between school representatives and City officials to ensure the timely provision of educational facilities.

Recreation and Open Space

Recreation is perhaps one of the most significant areas of facility need in Hanahan today, and in the future. The existing inventory noted that approximately 54 acres of recreational land now exist in the City. National standards indicate a need for some 115 acres. By 1995, some 180 acres will be required to satisfy the needs generated by residents.

Since recreational lands never seem to become cheaper in terms of acquisition, it is imperative that an active program of purchase and/or long-term leasing be considered as a short-range objective. This area of concern should be

reflected in Capital Improvements Programming, both in terms of site procurement and improvement.

Figure 15 shows the recreational elements as projected in the Community Facilities Plan. Of particular note is the provision of a bicycle path system (major corridors) within the developed areas.

A note should be made regarding the projected acreage needs (180 acres) and the acreage referenced under Projected Land Use Area Relationships (133 acres). The projected land area appears less than the projected needs. The projected acreage assumes that portions of the area denoted as open space will provide various benefits for recreation (nature walks, etc.) and thus must be considered as part of the basic recreational acreage.

Hanahan contains a natural system of open space as dictated by Goose Creek and its related marsh areas. This situation is recognized as a natural system and is maintained as such in the Land Use Plan.

Appendix E contains standards for urban recreational development. These standards are useful in locating and designing park and special recreational facilities.

Public Buildings

The City of Hanahan is in a relatively good position regarding public buildings. While existing facilities do present some space availability problems, their design and site location do allow expansion inclusive of parking area. City Hall for example, was designed to two story specifications.

COMMUNITY FACILITIES PLAN

1995

● PUBLIC BUILDINGS

- E.S. Elementary School
- M.S. Middle School
- H.S. High School
- F. Fire Station
- P. Police Station
- C.S. Community Services
- C.H. City Hall
- T. Waste Water Treatment Plant
- G. Gymnasium

RECREATION and OPEN SPACE

- ▲ Parks
- ||||| Bicycle Trails

SOURCE: Hanahan Planning Commission
1975

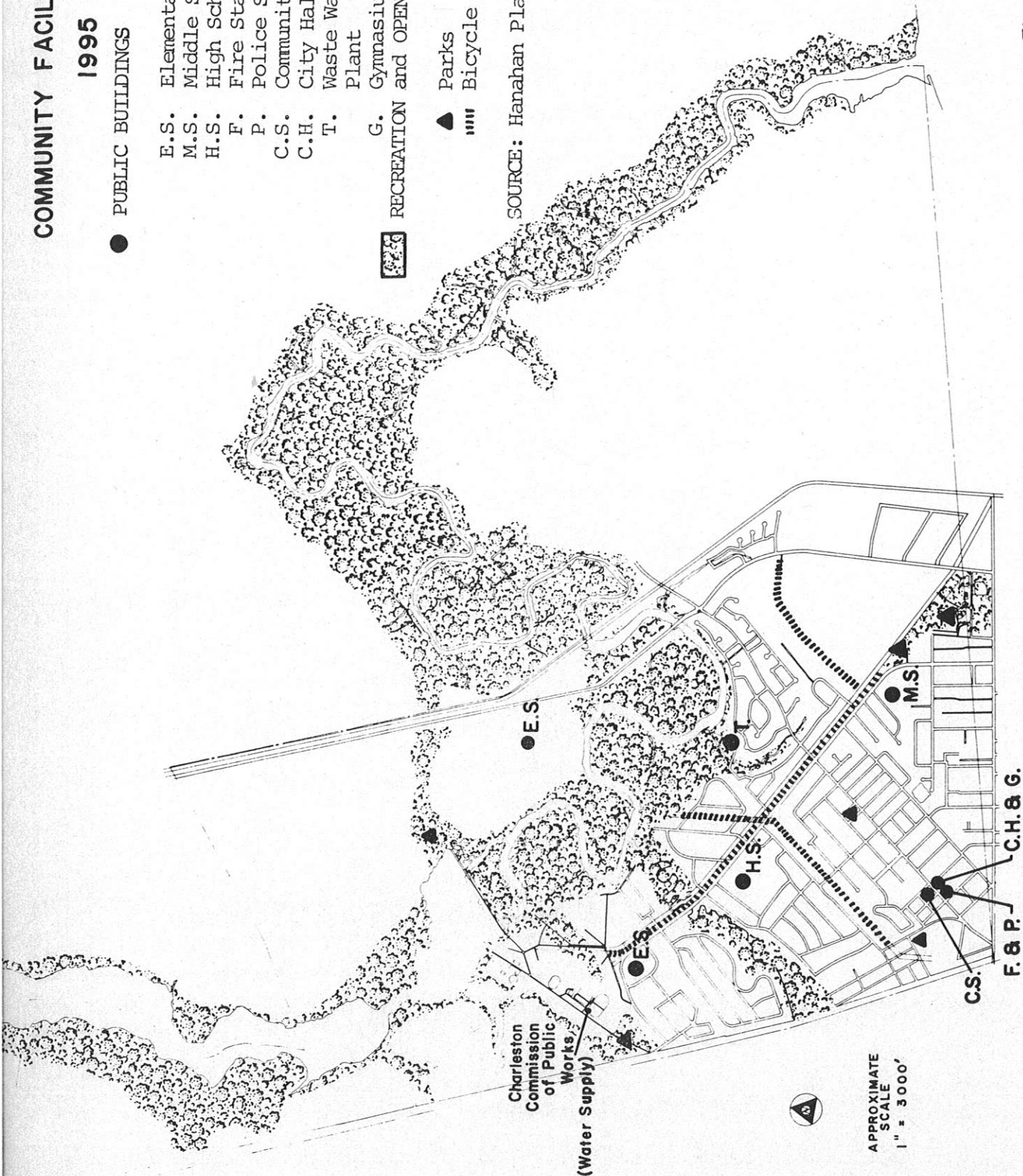


Figure 15

It presently has one floor. Programs to expand the Public Safety Building are well under way and will result in additional space within a relatively short time period.

One area in need of consideration for new construction, pertains to the establishment of a multi-purpose community service building. Ideally, this might be a joint City-County effort and should house social service activities for the southern County area, (inclusive of the Hanahan and Goose Creek areas). Because of the increasing need for social service delivery programs, the establishment of this facility must be considered as a short-range objective.

The Community Facilities Plan shows this facility located adjacent to the existing municipal building concentration. This location supports a centralized location concept for governmental services.

Utilities/Services

The provision of utilities such as water supply and wastewater treatment is a short, middle and long-range program. Emphasis on the provision of utilities should correspond to the basic land development stages described in the Land Use Plan section.

Special studies are necessary to detail utility locations, sizes and other such characteristics. These studies should be scheduled to anticipate needs and should reflect total area (stage) development requirements.

Short-term priorities need to be devoted to upgrading facilities in the southern urban area. Programs are now in

process for improvements in this area and should be pursued until implemented. Particular emphasis must be placed on increasing the effective capacity of the wastewater treatment plant.

The total Hanahan urbanized area is in need of a drainage system designed to handle water movement throughout the City. This is definitely a short-range priority for the urbanized southern area.

Provisions for solid waste collection and related service activities must be considered in terms of development characteristics as urbanization occurs. Since these are flexible systems (limited in-ground improvements) they can be adjusted accordingly to area needs.

The construction of sidewalks in selected areas along major streets should be viewed as a short-range priority. Facilities of this nature increase the public safety by reducing pedestrian/automobile conflicts. Particular consideration should be given to locating sidewalks in respect to school sites.

Implementation Considerations

Facility plans are of little value unless they are implemented and implementation requires both policy and monetary commitments on the part of the governing body. Decisions made by the governing body directly influence the type and extent of facilities provided to the community. Because of this influence, it is imperative that decisions reflect those improvement projects that are most needed by the community in

order of their relative importance.

The identification and ranking of projects can be accomplished by preparing a capital improvements program. This program seeks to accomplish three basic objectives:

- a. Identify necessary public improvements;
- b. establish relative priorities of need, and;
- c. assess the financial ability of the community to fund the needed project over a projected period of time.

These basic objectives actually represent the steps necessary to identify, rank, and determine the financial feasibility of facility projects.

Appendix F (page A-6) provides an illustration of project identification, priority and implementation scheduling. (It must be noted that this assignment of priorities and schedule of implementation is subject to modification and should not be viewed as final in content.) This implementation schedule requires more detail in terms of project costs and Hanahan's revenue generating capability before it would prove useful as a decision-making tool. It does, however, provide an example of the approach required in establishing project priorities and timing. (The capital improvements program is discussed further on page 104.)

Today, communities often fund projects using federal and state grant/assistance programs. These programs offer invaluable assistance in providing facilities for those communities with demonstrated needs. Appendix F makes a cursory identification of potential funding sources which

includes local, state and federal levels.

The basic nature of state and federal programs is one of continuous change and as such, each intended facility improvement must be assessed in terms of the funding programs available at that time. Communities must actively seek to stay informed if they expect to maximize the use of outside funding sources.

The Community Facilities Plan, in conjunction with the Major Development Policies as expressed in this document, provide the basic objectives of facility programming. Hanahan officials must next strive to develop a realistic facility implementation schedule which recognizes priority needs in light of the City's ability to finance.

TRANSPORTATION PLAN

The transportation system is one of the most influential factors governing the development of Hanahan. The private automobile today is almost the exclusive form of transportation available to residents of the City. Roadways allow for the swift movement of persons and cargo between any two points, as well as provide access to abutting land. Generally, commercial businessmen desire to locate at some point on the roadway system where both of these functions (access to abutting property and point-to-point travel) are served most efficiently, thereby enabling potential customers to patronize business while making one of the routine trips that must be made on a regular basis, such as the home-to-work trip. The commercial development adjacent to Remount Road and Rivers Avenue has occurred because these roadways serve large numbers of work trips, as well as provide access to commercial establishments adjacent to the road. Residential and industrial roadways are designed primarily to serve adjacent property owners, with provision for through travel generally of secondary importance.

Changes in the supply and demand for energy and resultant impacts upon the automotive and entire transportation industry, as well as uncertain national policies governing the use of energy, make travel projections particularly difficult at present. Recent reductions in fuel availability have forced more people onto mass transportation facilities and reduced vehicular traffic in many areas. However, even in

light of these pressures, past and present development trends, as well as social and economic considerations, indicate that the automobile will remain the prime mode of travel in Hanahan for the next twenty years.

CHATS Proposals

The Charleston Area Transportation Study (CHATS) is charged with continually monitoring transportation activity and land use developments, planning for future facilities to satisfy expected travel demands, and the implementation of planned improvements in the highway system. Hanahan, because of its proximity to Charleston and its inclusion in the Charleston Urban Area, comes under the purvey of CHATS technicians and Committee Members. As a result, highway plans are continually being developed and reviewed for Hanahan and its vicinity.

The most notable CHATS proposal affecting Hanahan is the extension of Ashley Phosphate Road across Goose Creek Reservoir to Defense Access Road. This roadway will create a high capacity arterial from the Polaris Missile Facility, and the Naval Weapons Station to I-26, thereby reducing the amount of peak hour through traffic on North Rhett Avenue and Yeamans Hall Road in Hanahan. It will also facilitate access to areas of the City between the Goose Creek Reservoir and Defense Access Road which are presently undeveloped.

The improvement of the Remount Road interchange on I-26 is another CHATS project which will be beneficial to residents of Hanahan. Presently access to and from I-26 is limited to those traveling to and from southerly destinations. Travel

from Remount Road to I-26 West and from I-26 West to Remount Road is presently prohibited. This improvement will naturally provide smoother traffic flows between employment centers such as Westvaco, the State Ports Authority Docks and I-26 West. More traffic will be encouraged to utilize I-26 and Remount Road, thereby potentially reducing traffic on Defense Access Road and North Rhett Avenue.

A map indicating 1995 traffic projections based upon implementation of these, as well as other improvements elsewhere in the Charleston can be seen in Figure 16.

Other Roadway Modifications

Several other roadway improvements not included in CHATS are desirable to further enhance development in Hanahan. The growth in residential construction and industrial development between the Goose Creek Reservoir and the SCL Railroad Tracks, poses severe access problems for the City. Although a connecting roadway from the vicinity of Highland Park Road and Murray Avenue northward to these new developments is desirable, the expense, natural barriers, and disruption to existing land uses make such a facility impracticable. The utilization of U.S. 52, which is already operating as a high capacity arterial, appears more desirable as well as feasible. Several potential roadways are indicated in Figure 17. By providing connections to Rivers Avenue in this manner, access to those presently inaccessible areas of the City would be made as direct as possible and no undesirable impacts would be forced upon Hanahan's existing street system. This would

allow desirable development to occur in areas so designated without undesirable traffic impacts upon the City.

That section of the City east of the Reservoir and west of Defense Access Road should be allowed to grow in a similar manner. Defense Access Road is a controlled access roadway which enables it to carry significantly more vehicular traffic than a similar road without access control. The access control should continue on this roadway, however, one or two access points onto Defense Access Road should be provided to enable orderly development of the large portions of Hanahan now undevelopable due to lack of access. The provision of any other access than that onto Defense Access Road is impractical from environmental and economical standpoints. The extension of Ashley Phosphate Road will intersect with Defense Access Road, and roads will be allowed to intersect with Ashley Phosphate Extension. However, these will be insufficient to support development of the southern portion of the presently undeveloped area unless access is provided on Defense Access Road.

Improvements to Existing Streets

The most urgent improvement to the existing street system is that required at the intersection of Loftis Road and Yeamans Hall Road. The existing design of the intersection is both inefficient and unsafe. By redesign and signalization of the entrance of Loftis Road onto Yeamans Hall Road, traffic capacity and highway safety would be significantly improved. Since the intersection is within the Central

CITY OF HANAHAN

TRAFFIC VOLUME PROJECTIONS

000 - 1995 AVERAGE DAILY TRAFFIC

SOURCE: South Carolina State Highway Dept.

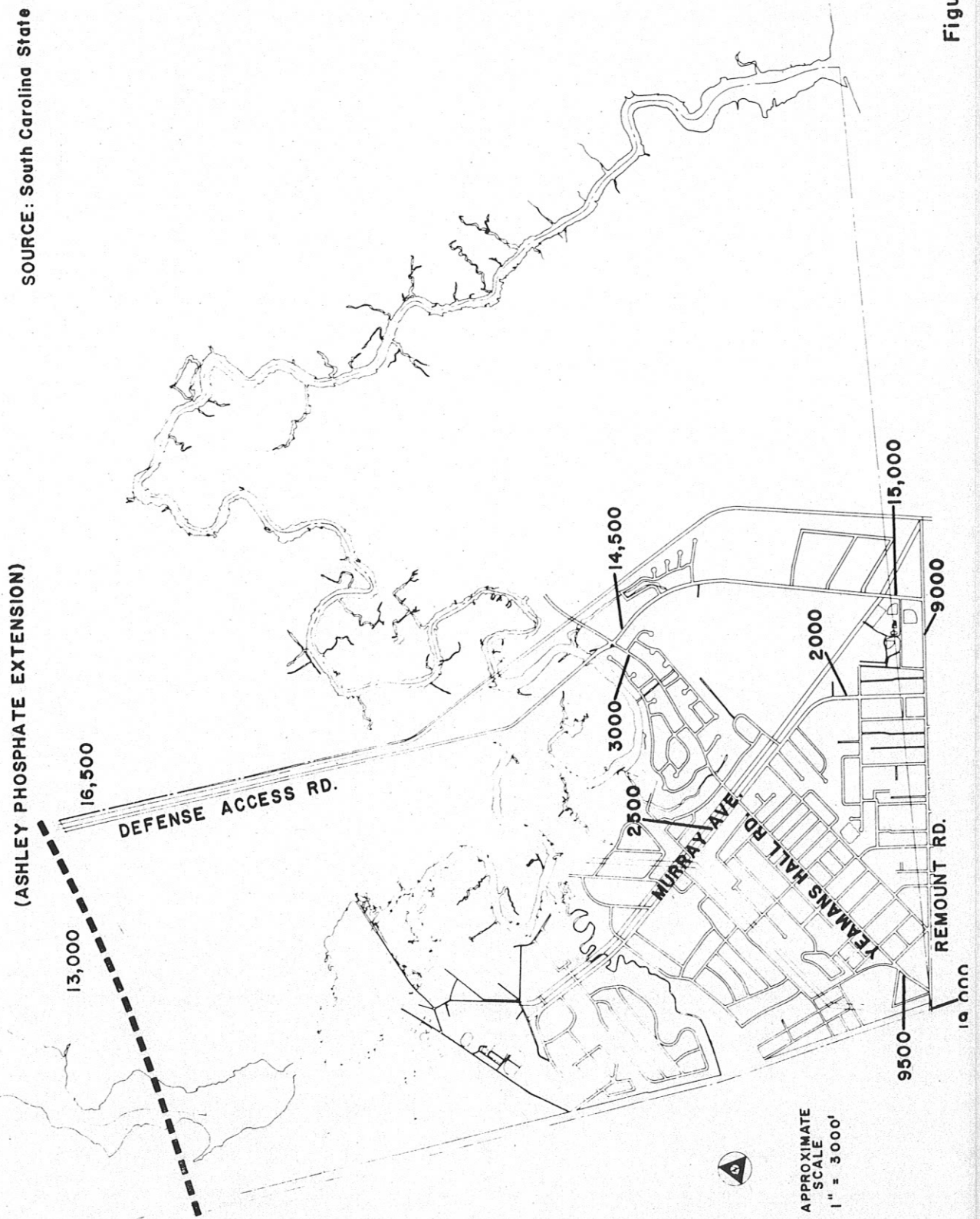


Figure 16

CITY OF HANAHAN

TRANSPORTATION PLAN

1995

ARTERIAL STREETS

— EXISTING

- - - PROPOSED

COLLECTOR STREETS

— EXISTING

- - - PROPOSED

MINOR STREETS

== EXISTING

===== PROPOSED

SOURCE: HANAHAN PLANNING COMMISSION

1975

NOTE: Proposed Collectors are shown for schematic purposes to indicate access needs rather than specific locations.

(ASHLEY PHOSPHATE EXTENSION)

DEFENSE ACCESS RD.

MURRAY AVE.

YEAMANS HALL RD.

REMOUNT RD.

APPROXIMATE
SCALE
1" = 3000'



Figure 17

Business District and large volumes of traffic pass through it daily, this improvement should receive a high priority.

Transit Service Improvements

As mentioned earlier, transit usage in Charleston, and across the United States, is likely to increase dramatically in the years to come. The "Charleston Transit Operations and Marketing Study" was undertaken in an effort to improve transit service in the Charleston Area. Early implementation of this study should provide a vastly improved transit system in Charleston. A number of the study recommendations would provide for easier movement to other areas of Charleston from Hanahan.

Minor changes not recommended in the study would improve service in Hanahan. The City's present transit service is slow and by-passes potential service areas. By rerouting buses from Murray Avenue to North Rhett Avenue, more employment centers could be served while modifying service only slightly. In addition to providing service to Hanahan's Industrial Park, the multi-family housing areas on North Rhett Avenue would be served. Transit patrons are characteristically more prevalent in multi-family housing areas. Headways also should be shortened, the number of stops reduced, and more direct service should be given between Hanahan, Charleston and North Charleston. This would reduce travel time between downtown Charleston and Hanahan, thereby making transit service a more viable alternative to the automobile.

PLAN IMPLEMENTATION TOOLS

The Comprehensive Development Plan is a statement of policy concerning the future development of the City of Hanahan. Positive actions are required on the part of both public and private interests so that plan proposals can be realized.

Private actions take the form of investments in homes, stores, and factories pursuant to the regulatory controls established by the municipality. Public action in implementing the plan generally follows five courses: adoption by the City Planning Commission to give the plan official recognition as the document for future developmental guidance; the adoption of zoning regulations (the City has already adopted a zoning ordinance); adoption of subdivision regulations; the development of a public improvements program; and citizen support and participation. The five public improvements (streets, schools, parks, sanitation facilities and protective services) requires the greatest direct investment of local monies for plan implementation.

Adoption of the Plan

State law grants planning commissions the power to draft and adopt comprehensive development plans. The Hanahan Planning Commission has so developed a Comprehensive Development Plan. It now remains for the Planning Commission to submit its plan for review and comment to its governing body and the public to receive suggestions. Final adoption thereafter will incorporate the Comprehensive Development Plan as a document of policy aimed at guiding decisions relating to

future growth.

Zoning

The Zoning Ordinance is a major tool available to local government to structure the land use element of the Comprehensive Development Plan. The plan indicates population densities for the residential areas and general locations of major commercial and industrial areas in the community. These policies are translated into precise, although short-range, land use patterns through the application of zoning regulations. The purpose of zoning is to regulate the use of land and building to protect areas of uniform development from the adverse effects of disruptive land uses which tend to lower the economic value, efficient operation, and the physical and social amenities of the surrounding properties.

The Comprehensive Plan and zoning should not be thought of as one, for they are distinct entities with markedly separate functions. The plan is a policy document, a guide and frame of reference for future land use, while zoning applies a specific district in the ordinance to a specific property. The zoning of a property may or may not reflect the existing use. The plan should act as a guide to the actions of the Planning Commission and the City Council in reviewing and acting on zoning changes. The elements of the Comprehensive Development Plan will be thrown out of balance if they are not coordinated in their implementation. Schools, major streets and community facilities will not be in proper relation to each other if the land associated with these

features is not zoned appropriately when the time for development occurs. The plan is comprehensive in a way no zoning map can be in relating all the elements of urban development, in ways that will allow for a well-planned community.

Subdivision Regulations

The second tool which is used to effectuate both land use and circulation elements is Subdivision Regulations. This regulatory device sets minimum standards for the division of land into parcels. It is designed to ensure that the value of sites is not impaired because of unwise land subdivision, design and street/utility construction. Well planned subdivisions with adequate lot sizes, street widths and utilities will increase in value over the years, allowing for greater benefits for the owners and lower maintenance costs for the community. The character of an area is set for years to come by the initial design and quality of a subdivision.

The Capital Improvements Program

Public improvements are investments made by the community in facilities which will benefit all citizens. These include schools, libraries, parks, fire and police stations, sanitary facilities, streets, and all of the many physical components which go into a balanced community area. It is for the Comprehensive Development Plan to relate these properly to each other in their location and distribution.

The Capital Improvements Program establishes a short-range priority schedule of needed public improvements in accordance with budgetary capabilities. This tool should be very

comprehensive in scope by assessing future needs and programming improvements for streets, storm and sanitary sewers, water service, recreational space, fire protection, and other community facility needs. It is actually a short-range plan which is utilized to effectuate the Comprehensive Development Plan in increments of five to six years. It outlines improvements which will be required and establishes the most desirable economic sequence required to fulfill plan objectives.

APPENDICES

APPENDIX A
LAND USE METHODOLOGY

Existing land use information was based upon a land use map prepared from a "windshield" survey of the City in conjunction with available aerial photographs. The map was color coded by major land use category with selected specific divisions where required for clarity. A copy of this survey map is maintained by the City.

Area relationships were identified by measuring the land use map and applying the appropriate scale conversion factor. The base map utilized contained several scale errors which could not be easily corrected. These errors are inherent in any information placed upon the map and as such, specific acreage figures should be considered as relative estimates. In spite of the measurement problems, the estimates are felt to be reflective of the general land use characteristics present in the City of Hanahan.

Map categories used on the land use map are outlined in Table 10, page 29. The residential category was expanded to include the following break downs: single-family, two-family, multiple family, mobile home and mobile home park.

APPENDIX B

POPULATION PROJECTION FACTORS

PROJECTED RESIDENTIAL LAND AREAS - 1995

Density Type	Projected Gross Acres ¹	Projected Net Acres ²
Low Density	1,082	812
High Density	137	103
Total Acres 1,219		915

1. Gross acreage was determined by measurement of the residential areas shown on the Development Plan Map.
2. Net Acres = Gross Acres - 25% (assumed deduction for local streets and related rights-of-way).

PROJECTED POPULATION - 1995

Density Type	D. U.'s/ Net Acre ¹	Net Acres	Total D.U.S.	Est. House- hold Size	Total Population ²
Low Density	5	812	4,060	3.0 persons	12,180
High Density	20	103	2,060	2.7 persons	5,562
					17,742 ³

1. Densities utilized were determined from the Hanahan Zoning Ordinance - in the case of high density an average was selected using the 3 story apartment building with 2 bedrooms as the representative dwelling type. (D.U. = Dwelling Unit)
2. Total Population was determined using the following method:

$$\text{D. U.'s/Net Acre} \times \text{Net Acres} = \text{Total D. U.'s}$$

$$\text{Total D. U.'s} \times \text{Household Size} = \text{Total Population}$$
3. The total population figure of 17,742 was rounded to 18,000 for planning purposes.

APPENDIX C

PROJECTED LAND USE ACREAGE RELATIONSHIPS

COMPREHENSIVE DEVELOPMENT PLAN LAND USE RELATIONSHIPS

Land Use Category	Projected Acreage ¹	% of Total
Residential ²	1219	21
Low Density	(1082)	
High Density	(137)	
Commercial	91	2
Industrial	753	13
Institutional	113	2
Recreation & Open Space ³	1791	31
Parks & Bicycle Paths	(133)	
Special Categories ⁴	1663	28
Yeamans Hall Country Club	(723)	
National Guard Military Installation	(940)	
Transportation ⁵	191	3
TOTAL ACREAGE		5821 (approximately 9 square miles)

1. Acreage was obtained by measurement of the Development Plan Map which assumed total development during the 20 year planning period.
2. Definitions of density are provided in the Projected Population portion of the Appendices.
3. Open space includes marshes, water bodies, and soil areas with severe limitations for development.
4. These categories were separated due to their unique and stable characteristics. It is doubtful that their present characteristics will change significantly during the planning period.
5. The acreage shown does not include minor streets-it does include collectors, arterials and railroad rights-of-way.

APPENDIX D

PROJECTED RESIDENTIAL DENSITY DISTRIBUTIONS

RESIDENTIAL DENSITY BY DEVELOPMENT AREA - 1995

Development Area ¹	Dwelling Units ²		Total D.U.'s	Total Population
	L.D.	H.D.		
Southern	3,095	1,420	4,515	13,379
Northern	514	334	848	2,442
Eastern	451	306	757	2,179
	4,060	2,060	6,120	18,000 ³

1. Area identifications are provided in Figure 13.
2. See Appendix B - PROJECTED POPULATION for density determinations (L.D. = Low Density. H.D. = High Density)
3. This population total is a rounded-off figure (Appendix B) - For planning purposes, the density distributions are based upon this estimate.

APPENDIX E

RECREATIONAL STANDARDS

PARK AND RECREATION — URBAN STANDARD

	Neighborhood Park-Playground	Sub-Community Park-Playfield	Community Park-Athletic Field	Town & City Park	Special Parks-Open Space
LOCATION STANDARD Service Radius (Miles)	$\frac{1}{2}$ -1	1-1 $\frac{1}{2}$	1 $\frac{1}{2}$ -2 or more	5-10	varies (10-20)
Service Area	Neighborhood	Sub-Community (3 Neighborchoods)	Community (6 Neighborchoods)	Town or City	Region (City, Town, Conty)
Location to Streets	Local Main Street (Collector)	Major Arterial	Major Arterial	Major Arterial	Freeway, Expressway, & Major Arterial
AREA STANDARD (Acres per 1,000 Population)					
Park	1.00	1.00	0.50	1.00	3.75
Playground	1.25				
Playfield		0.75			
Athletic Field			0.50		
Total	2.25	1.75	1.00	1.00	3.75
PRIMARY GROUP SERVED	Elementary School Children	Jr. & Sr. High School Children & Young Adults	All, Aiming at Sr. High School Children & Young Adults	All	All
SIZE DESIRABLE (acres)	10	25	35	50-100	Varies
Desirable Size for Development	Plygd.-5 Park-5	Playfd.-10 Park-15	Ath.Fd.-15 Park-20		
Minimum Size for Development (acres)	Plygd.-3 Park-2	Playfd.-8 Park-5	Ath.Fd.-10 Park-10	Varies	Varies

SPECIAL FACILITIES STANDARDS

	Unit/Population	Service Area	Unit Size	Others
Golf Course (public) Desirable	1/50,000 (18 hole)	Town or City	120 acres 160 acres	2.4 acres per 1,000 population
Swimming Pool (indoor)	1/50,000	Town or City	60'x165'	
(outdoor)	1/25,000	Community	40'x82'	
Tennis Court	1/2,000	Neighborhood	60'x120'	
Ballfields and Play Courts	Inherent in Neighborhood, Community, etc. facilities			
Community and/or Sub-community Center (structure)	1/20,000	Community	varies	Gym, meeting rooms, kitchen, game rooms, shops, and rest rooms

APPENDIX F

IMPLEMENTATION PROGRAMMING

PROJECT TITLE	PRIORITY ^(a)	FUNDING SOURCES	ESTIMATED COSTS AND IMPLEMENTATION SCHEDULE							
			1975	1976	1977	1978	1979	1980	1985	1995
Upgrade Wastewater System	1	EPA/Local	*	*					*	*
Expand Public Safety Building	1	Local	(\$1,250,000)							
Construct Drainage System	2	RS/HUD/USDA		*	*				*	*
Rembert Drive Extension	3	LD/Local			(c)	*		*		*
Park Acquisition & Improvements	4	RS/BOR/Local			(d)	*		*		*
Sidewalk Construction	5	LD/Local			*	*				
Community Service Building	6	RS/CD/Local			(estimate \$5.00/linear foot)	*				
Parking Expansion City Hall	7	Local			*	(estimate \$35.00/square foot)				
Bike Path & Open Space	8	RS/BOR/Local				(estimate \$135.00/parking space)	*	*	*	*
Elementary School Construction	9	State/Local							*	*

* indicates year in which project implementation is anticipated

Funding Source Abbreviations

- a. Both the wastewater system and public safety building are funded projects, and are currently being implemented - completion of both projects is considered to be of initial priority.
- b. Cost estimates for drainage facility construction are dependent upon the system design which is yet undetermined.
- c. The cost of constructing a Rembert Drive extension is dependent upon the severity of soil condition in the right-of-way. (General costs would approximate: \$1.50/cu. yd. for cutting, \$3.00/cu. yd. for filling and \$35.00/linear foot for paving.)
- d. There exists no general rule for acquisition costs - improvement/development cost per acre may be generalized as follows: playground - \$7,000, playfield - \$30,000, and neighborhood park - \$16,000. (Based on standards contained in the South Carolina Outdoor Recreation Plan, 1970/1984, published in 1970.)
- e. Due to the undefined nature of these facilities in terms of size and projected need, cost estimates were not completed.

EPA Environmental Protection Agency
 RS Revenue Sharing
 BOR Bureau of Outdoor Recreation
 LD Legislative Delegation (indicates cost to the County Legislative delegation for project funding assistance.)
 CD Community Development Funds (allocation of S.M.S.A. discretionary funds for 1975)
 HUD Department of Housing and Urban Development
 USDA United States Department of Agriculture
 Soil Conservation Service

MAY 19 1975

A meeting of the Hanahan Planning Commission was held this date in the Hanahan Memorial Building at 8:00 p.m. This meeting was a Public Hearing conducted by the Hanahan Planning Commission for consideration of adoption of a Comprehensive Plan for the City of Hanahan.

PRESENT: Chairman Frank A. Garvin, and Commissioners Smoak, Laidlaw, Martin, Skinner and Sheriff. Mr. Collette was unable to attend. Also present was Mack Canterbury, representing the Berkeley-Charleston-Dorchester Regional Planning Council, and Mrs. W. E. Skinner.

Chairman Garvin opened the meeting. He stated that the purpose of the meeting was to consider adoption of a Comprehensive Development Plan for the City of Hanahan for a span of twenty years. The plan was discussed, after which, Mrs. Smoak offered a motion that the Comprehensive Plan be adopted by the Planning Commission, seconded by Mr. Laidlaw, and carried.

There being no further business, meeting adjourned.