

Bismarck-Burleigh County COMPREHENSIVE PLAN

Part 1: Growth Management Considerations

INTRODUCTION

Since its formation in 1972, the Bismarck-Burleigh County Planning Department has been involved in a variety of activities: Subdivision and zoning review, short range planning, development recommendations, and federal grant programs. Because of the variety of activities, and the continued rapid growth of the Bismarck area, the decision was made to develop a comprehensive plan to guide growth in the city and county for the next ten years and beyond. A detailed set of goals and policies will form the basis of the plan. In addition, a series of maps and booklets will serve to present the policy document in a form that is concise and understandable. This comprehensive plan is designed to assist your governing boards and departments in assuring that future growth will continue to provide the high quality of life enjoyed by the residents of Bismarck and Burleigh County. Between now and 1990, the Bismarck area population is projected to increase by a minimum of 12,000 people. This growth means approxi-

mately 1700 acres of land added to the city, a maximum of 4150 additional housing units, and the commercial, recreational, and urban facilities needed to service the population increase. If this growth is not managed wisely, the city and county's ability to provide the necessary services will be severely strained. A reduction in the overall quality of life in Bismarck and Burleigh County could be the ultimate result. The Comprehensive Plan is designed to cope with the rapid growth expected in this area and to mitigate the problems which accompany growth. A review of existing conditions, growth rates, factors affecting future development, and an analysis of the alternative future growth patterns available to the city and county are included in this report. The overall purpose of the Bismarck/Burleigh County Comprehensive Plan will be to accommodate continued growth, determine public investment priorities, and protect the environment of Bismarck and Burleigh County.

EXISTING CONDITIONS

GENERAL OBSERVATIONS

Burleigh County is a thinly settled, largely rural area with most of its 52,195 people living in or near the City of Bismarck. Eighty-six percent of the total county population lives within 2 miles of Bismarck. The county contains five incorporated cities and seven other villages. Burleigh County is located in the southcentral portion of North Dakota. Agriculture is the economic base for the county.

Bismarck is a city of 42,405, lying along the Missouri River. It is relatively compact in form, with low density residential satellite areas developing within a few miles of the corporate limits. Bismarck-Burleigh County, together with Mandan-Morton County, is a metropolitan area of 76,000 people. The major economic activities in Bismarck include: regional trade and service center, government, manufacturing, and construction.

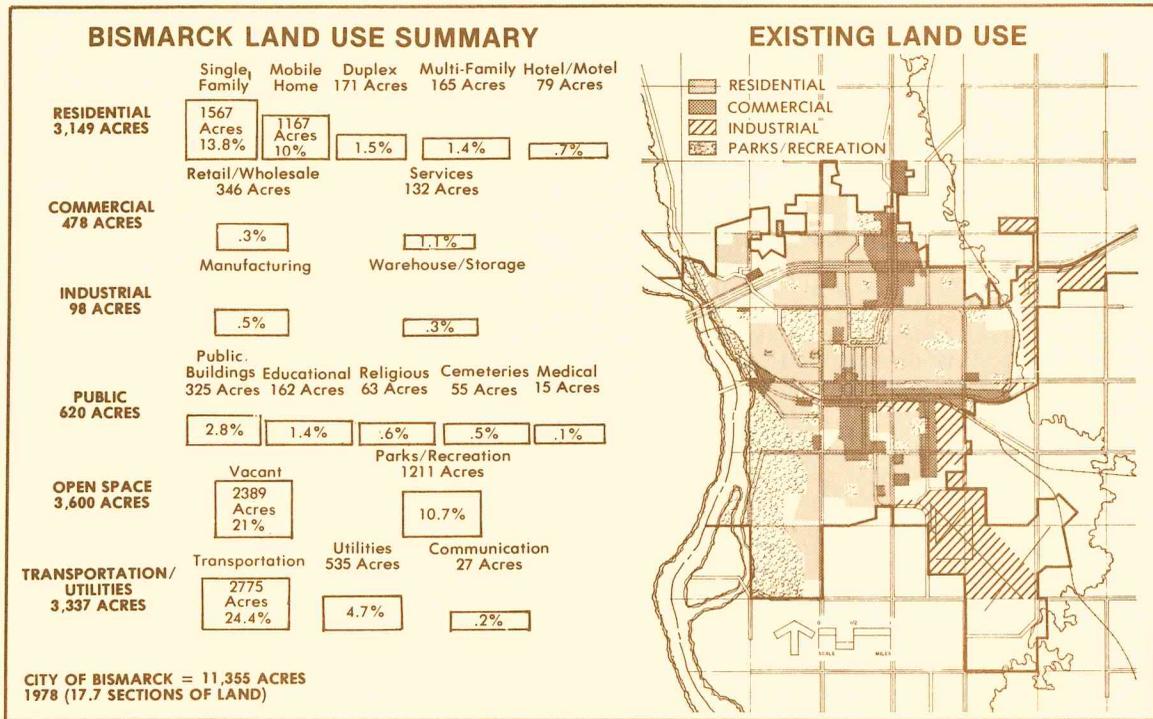
EXISTING LAND USE

In 1970, over 91% of the 1,054,720 acres in Burleigh County was used either for cropland or grazing purposes. Less than 3% of the total land area was being used for urban purposes. The present land use ratios are similar, with a slight increase in urban land use, due to city and fringe area growth over the past nine years.

In 1978, the Bismarck corporate limits contained approximately 11,355 acres, or 17.7 square miles of land area. The largest land use in the city was open space, which included parks and recreational facilities, vacant lots, river front property, and other undeveloped areas. Transportation was also a major land use because it included railroad and airport usage, as well as all highway and street acreages in the city. The other land use categories were residential, public (landfill, schools, public buildings, etc.), commercial, and industrial.

Several general observations can be made regarding land use in Bismarck:

Single-family homes are being built in the new areas of the city, with a transition to mixed-density residential in the more established areas, particularly around the downtown.



Multi-family dwellings are concentrated along major streets and intersections, and near the downtown.

Mobile home parks are generally concentrated in the southern portion of the city.

The downtown is changing from the retail center of the community to a bank, office, and medical complex with some shopping facilities.

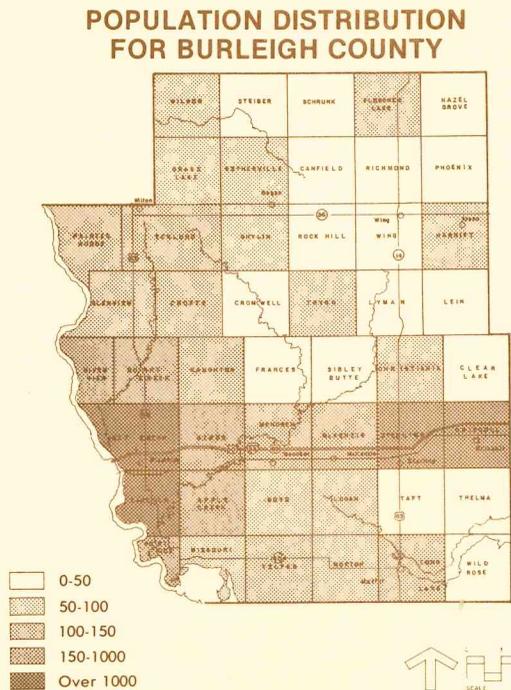
Major shopping centers have developed outside the downtown in the north and south portions of the city.

Bismarck has a good supply of parkland in most areas of the city, particularly along the Missouri River.

The older industrial uses along the railroad line are moving to larger sites in the fringe of the city, particularly the east and southeast portions of the city.

POPULATION DISTRIBUTION

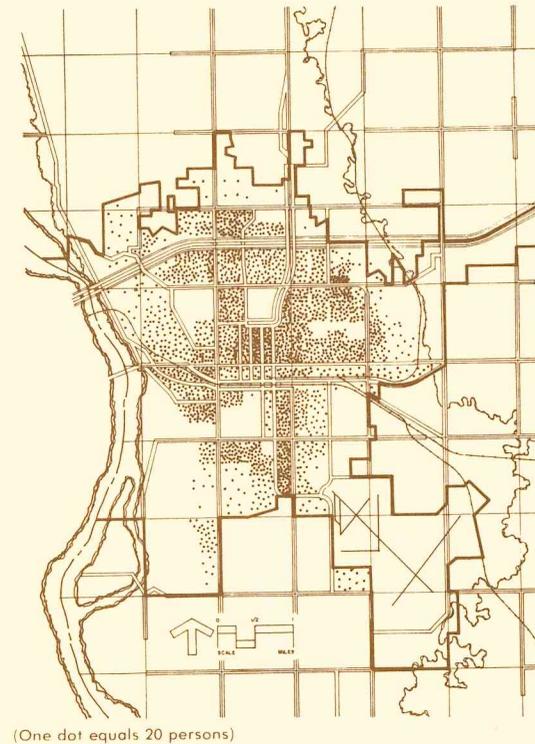
The population distribution map illustrates the number and location of people in Burleigh County.



Each dot represents 20 people. Eighty-one percent of the County population lies in the City of Bismarck. Another 2600 people live within 2 miles of Bismarck.

The population distribution map of Bismarck illustrates particular concentrations of people, such as mobile home parks and multi-family developments. Other areas of higher density outside the City of Bismarck include: the City of Lincoln, certain rural subdivisions, and Mary College.

POPULATION DISTRIBUTION FOR BISMARCK



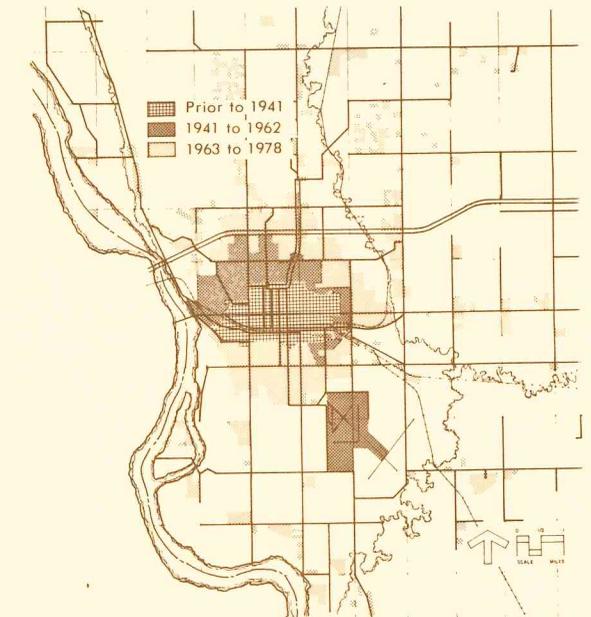
CITY/COUNTY GROWTH

HISTORICAL GROWTH PATTERN

Bismarck has experienced a steady growth rate for many years. The urban area growth map illustrates

several states of city growth. Prior to the year 1941, the built-up city was a compact area, roughly bounded by Boulevard Avenue on the north, 23rd Street on the east, Bowen Avenue on the south, and Riverside Park/Bell Street on the west. In the years 1941 to 1962, expansion occurred in a northwesterly and northerly direction. The limits of development by 1962 were extending toward what was to become Interstate 94. The pattern of growth since 1962 has changed dramatically. The southern portion of the city is experiencing substantial commercial and residential growth, while the north side of the city continues to grow. Bismarck is now approximately three times the size of the city in the 1940's. Although there has been some redevelopment in the central city, most of the growth has been in residential areas on the city's fringe. Growth is taking place to the north, south, and east, and spreading out into low density residential subdivisions outside the corporate limits. One of these rural subdivisions incorporated in 1977-the City of Lincoln.

URBAN AREA GROWTH MAP

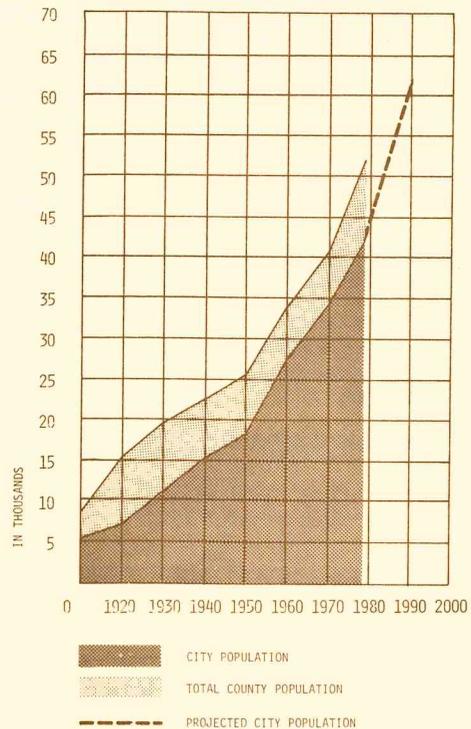


POPULATION GROWTH

During the past forty years, Bismarck has changed from a small city of 15,000 to an urban area of over 42,000 in population. Growth has, on the average, been quite steady - a low growth rate in the 1940's was followed by a 48% expansion in the decade 1950 to 1960, the highest rate in the forty year

period. Growth has averaged 2.5% per year since 1960, with a slight acceleration after 1975.

BISMARCK AND BURLEIGH COUNTY POPULATION GROWTH



Burleigh County is also growing at a steady rate, from 22,000 in 1940 to over 52,000 in 1978. Generally, the percentage of people living outside Bismarck in the county had been declining since 1940. However, the trend stabilized in the mid 1970's. In 1940, 32% of the population was non-Bismarck, declining to 15% in 1970. In 1978, the percentage climbed back to 19%. The total Burleigh County population has more than doubled in the last forty years.

URBAN DEVELOPMENT CONSIDERATIONS

GROWTH POLICIES

The City and County Comprehensive Plan contains a detailed set of policies to guide future development. These policies form the basis of the Comprehensive Plan. The Bismarck and Burleigh County policies are handled separately to reflect different concerns, but the two documents are well synchronized. The policies are organized under several headings. Included in the county policy plan are: government, residential subdivisions, parks and recreation, transportation, business and industry, facilities and services, urban fringe

growth, and environment. The city policy plan contains the same areas, with the addition of sections on the central business district and civic beauty. A single general goal is listed for each of these areas, followed by more specific policies and programs designed to implement the goal.

The urban fringe growth portion of the policy plan is being emphasized because the most rapid changes are taking place around the City of Bismarck. The fringe growth policies generally encourage growth near the city and discourage growth beyond a few miles from the corporate limits. This goal is also stated in both the City and County Subdivision Ordinances: "It will be the duty of the Planning Commission to discourage the subdividing of lands that are far in advance of the needs of the community; or that by their location cannot be efficiently served by public utilities, fire protection, police protection or other municipal services; or that are located in areas subject to flooding, or that are topographically unsuitable for development; or that for any other reason are being unwisely or prematurely subdivided." To achieve those goals, two specific planning areas are being proposed. One, the "Urban Service Area," is a boundary generally one mile beyond the city limits. The area contained within the Urban Service Area is designed to accommodate the short-range expansion of the city. Development is encouraged

to locate in the area, and urban services will be extended when feasible. The second planning area, "Urban Transition Area," is designed to accommodate the rural residential life style and the medium-range expansion of the city. The area encompasses land three to four miles beyond the Urban Service Area. Large-lot residential subdivisions are encouraged to locate in this area. Beyond the Urban Transition Area, the rural and agricultural way of life will be respected. Requirements for changes in zoning will be quite strict and development in general will be discouraged.

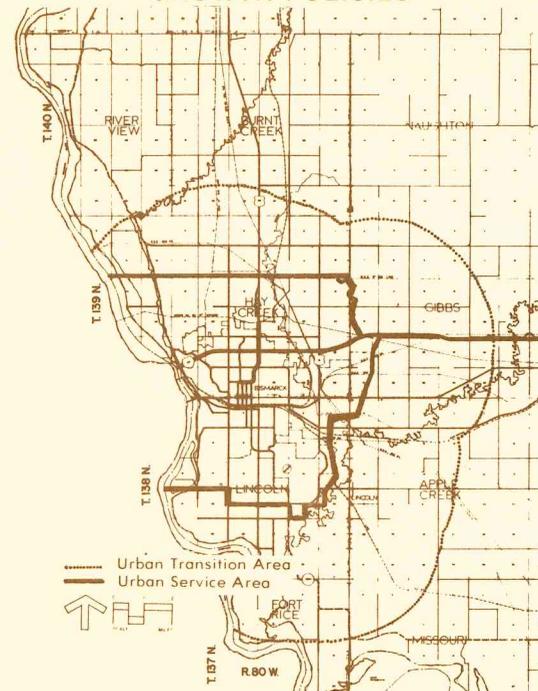
FLOOD PLAINS

In addition to growth policies, several other factors will influence the location of future development. Flood plains in the Bismarck area-Missouri River, Hay Creek, and Apple Creek have been mapped. The boundaries as described generally illustrate the limits of a flood that could be expected to occur once in a 100-year period. Flood plains influence development because of the flood insurance requirements to elevate the structure to or above the flood level. In general the south Bismarck area is affected by flood plains, particularly along the river bank.

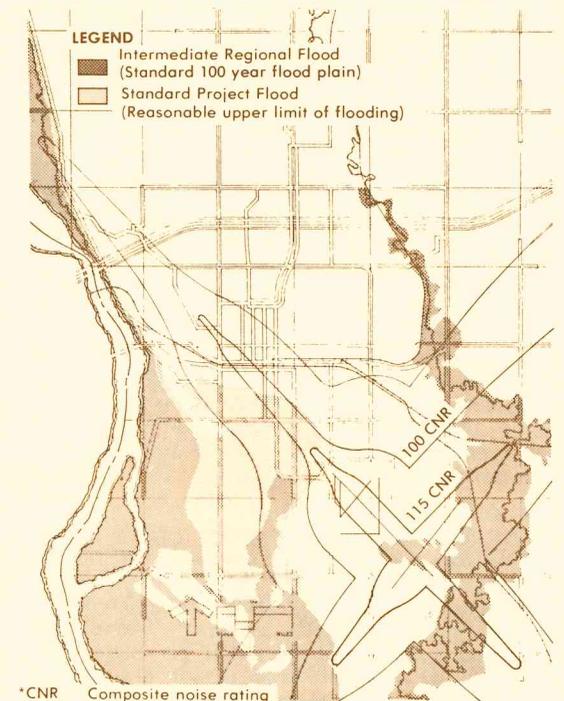
GROWTH IN BISMARCK — BURLEIGH COUNTY (Combined Growth Statistics)

	1940	1950	1960	1970	1975	1978
Co. Population	22,736 (32%)	25,673 (28%)	34,016 (19%)	40,714 (15%)	46,079 (18%)	52,195 (19%)
City Population	15,466 (68%)	18,640 (72%)	27,670 (81%)	34,703 (85%)	38,123 (82%)	42,405 (81%)
Value of City Building Permits	—	—	\$8,857,988	\$7,629,178	\$41,080,023	\$59,378,008
Co. Building Permits	—	—	\$ 81,300	\$ 826,162	\$ 4,042,135	\$ 3,988,008
Co./Extraterritorial Plats Approved	0	0	0	1	15	29
City Plats Approved	1	2	2	6	13	21
City Employment	—	7,657	9,396	14,378	19,543	23,885
Co. Employment	—	2,482	2,096	1,938	2,878	2,769
City Housing Units	—	—	7,366	11,484	14,768	16,824
Co. Housing Units	—	—	2,945	1,145	—	3,136
Co. Population Density (People per sq. mile)	13.8	15.6	20.6	24.7	27.9	31.7

GROWTH POLICIES



FLOOD PLAIN AND AIRPORT NOISE



*CNR Composite noise rating

AIRPORT NOISE

Airport noise also affects development location decisions. Studies have been made that map the various noise zones resulting from aircraft activity. In order to protect individuals from the noise, certain types of development near the airport have been restricted. The southeast portion of the Bismarck area is affected by the airport land use regulations.

SOIL SUITABILITY

The suitability of soil for agricultural purposes is a development factor. The various soil types and productivity data have been compiled by the U.S. Soil Conservation Service. The Comprehensive Plan policies consider productive agricultural soils more important as the distance from the City increases. For example, soil data will not be considered if the development proposal is located within the Urban Service Area, and, soil productivity will be given a great deal of emphasis if the proposed development is located beyond the Urban Transition Area.

TOPOGRAPHY

The topography of land, or how steep the slopes are in a particular area is another important location factor. Development in an area of rugged terrain may be difficult or impossible because of the expense involved. The additional lot preparation costs may also be reflected in higher housing costs for difficult topographic sites. The northern portion of the Bismarck area contains land that is characterized by rolling hills.

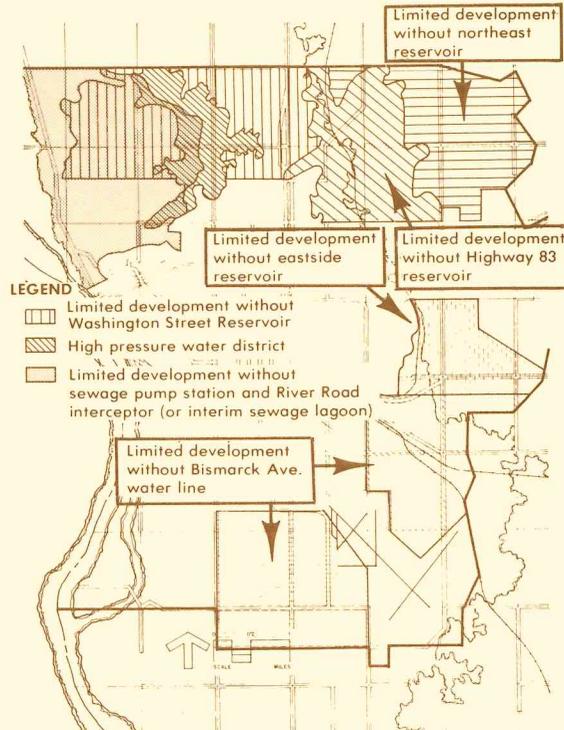
COSTS

The expense to government and individuals resulting from rapid growth is a very important development review consideration. The ability of the City of Bismarck to expand is directly related to the scheduling of public improvements. The construction of water reservoirs and treatment plant additions, pump stations, and sewer and water lines will determine whether a particular area can develop.

The ability of Burleigh County to provide services to rural residential subdivisions should be considered during the review process. The costs of road construction and maintenance, police and fire protection, and educational facilities for the increasing fringe area population should be balanced against the increased tax base. If the problems of rapid suburban growth are shown to outweigh the advantages, Burleigh County will

recognize that cities offer a form of government best able to handle rapid growth and urbanization. Therefore, the county will continue to emphasize its agricultural economic base and way of life, and will encourage future development to locate within or near existing cities.

GROWTH LIMITATIONS



FUTURE CITY PATTERN

This report has described the existing conditions in Bismarck and Burleigh County, growth statistics, and factors that will determine the location of future development. A set of alternate growth patterns for Bismarck can now be analyzed. Three different patterns have been formulated to accommodate Bismarck area growth for the near future. The following criteria were used to describe each of the three alternatives: development patterns, revenue, cost, energy conservation, shopping facilities, life style, and government growth management.

ALTERNATIVE "A"

This alternative assumes a continuation of the present growth pattern. There would be a considerable amount of scattered residential development five to six miles surrounding Bismarck, as well as growth adjacent to the corporate limits.

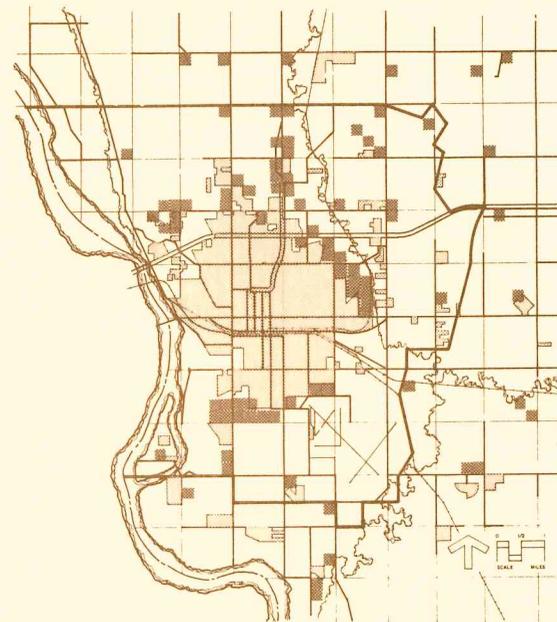
ALTERNATIVE "B"

This alternative would attempt to guide growth into areas that are relatively near the City of Bismarck. Development would be encouraged to locate within the Urban Service Area (one to two miles beyond the corporate limits) and discouraged from scattering beyond that area.

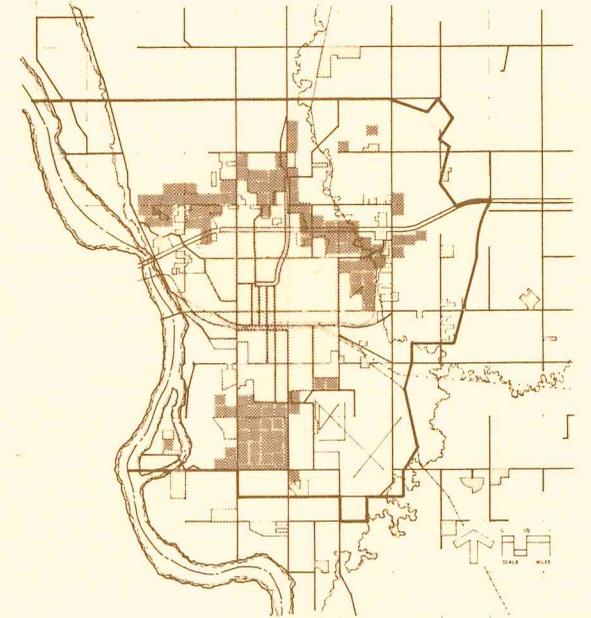
ALTERNATIVE "C"

This alternative would encourage development adjacent to Bismarck and also guide growth into centers beyond the city. For example, new growth would be encouraged to locate in existing concentrations of people such as, the City of Lincoln, the Mary College-Briardale area, the Grande Prairie Estates area northeast of Bismarck, and the Ponderosa Riverside Village area.

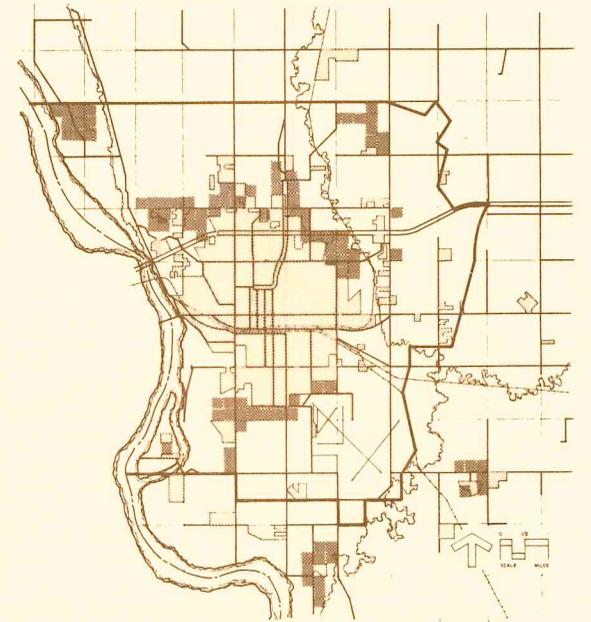
ALTERNATIVE "A"



ALTERNATIVE "B"



ALTERNATIVE "C"



ANALYSIS OF ALTERNATIVE GROWTH PATTERNS

	ALTERNATIVE 'A' CONTINUE PRESENT GROWTH PATTERN	ALTERNATIVE 'B' GUIDE GROWTH INTO THE URBAN SERVICE AREA	ALTERNATIVE 'C' GUIDE GROWTH INTO "GROWTH CENTERS"
DEVELOPMENT PATTERN	<ul style="list-style-type: none"> -Development scattered outside of Bismarck along all-weather roads. -Mixture of homes and businesses in agricultural areas. -Low density, need individual wells and septic system. -Low land costs. -Inefficient use of land. 	<ul style="list-style-type: none"> -Development contiguous to the City of Bismarck. -Promotes reinvestment in central city area. High land costs. -Urban density with city sewer, water, streets, etc. -Minimize impact on agricultural land. -Efficient use of land. 	<ul style="list-style-type: none"> -Development guided to designated growth centers. -Urban density with sewer, water, streets, etc. -High land costs. -Minimize impact on agricultural land. -Efficient use of land.
REVENUE	<ul style="list-style-type: none"> -More property tax to Burleigh Co. 	<ul style="list-style-type: none"> -More property tax to the City of Bismarck. 	<ul style="list-style-type: none"> -Reciprocal tax distribution between Bismarck and growth centers.
COST	<ul style="list-style-type: none"> -Low government sewer/water cost-private investment. Possible pollution -High police/fire protection costs. -High road costs for county. -High school busing costs. -Low general govt. costs—but increases for the county over time. 	<ul style="list-style-type: none"> -Higher government sewer/water cost—public investment. Good pollution control. -Police/fire protection costs are medium for added protection. -Medium costs for added streets. -Little or no school busing. -Increased general govt. costs for Bismarck 	<ul style="list-style-type: none"> -High government sewer/water investment required in growth centers. Good pollution control. -High police/fire protection costs for new service. -Medium street costs. -School busing required for grades 7-12. Growth centers would have elementary schools. -Increased general govt. cost for growth centers.
ENERGY CONSERVATION	<ul style="list-style-type: none"> -Low operating efficiency for transit/school busing. -Low potential for district heating. -Private auto travel wastes energy. 	<ul style="list-style-type: none"> -Higher operating efficiencies for bus system. School busing not necessary—or limited. -Medium potential for district heating. 	<ul style="list-style-type: none"> -Higher operating efficiencies for bus system. -Medium potential for district heating.
SHOPPING FACILITIES	<ul style="list-style-type: none"> -Long travel distances to shopping areas. 	<ul style="list-style-type: none"> -Short travel distances to shopping areas. Neighborhood centers within walking distance. 	<ul style="list-style-type: none"> -Long travel distances to major shopping areas. Neighborhood shopping centers located within growth centers.
LIFESTYLE	<ul style="list-style-type: none"> -Variety of living areas. -Large lots. -Horses, snowmobiling. -Lack of community identity. 	<ul style="list-style-type: none"> -Less variety of living areas. -Smaller urban lots. -No horses or snowmobiling in city. -Strong community identity. 	<ul style="list-style-type: none"> -Variety of living areas. -Larger lots. -Horses, snowmobiling. -Strong community identity.
GOVERNMENT GROWTH MANAGEMENT	<ul style="list-style-type: none"> -Minimal planning. -"Open zoning", but strict health standards for individual wells and septic systems. -Possible incorporation of suburban communities. 	<ul style="list-style-type: none"> -Requires concerted planning effort—difficult to implement. -Strong land use controls needed to guide growth within the Urban Service Area. -Promotes annexation to the City of Bismarck. 	<ul style="list-style-type: none"> -Requires concerted planning effort—difficult to implement. -Strong land use controls needed to guide growth into growth centers. -High risk of growth areas incorporating into separate communities.

CONCLUSION

It is very likely that Burleigh County, particularly the Bismarck area, will continue to grow rapidly during the next decade. This report has provided an introduction, and background for the growth plan. A detailed set of recommendations for the Bismarck area will be presented in a subsequent report. Before that report is prepared, the Planning Department would like your comments, criticisms,

and suggestions for this report and the policy plan. Your ideas will then be used in the preparation of the Comprehensive Plan for Bismarck and Burleigh County. Preliminary copies of this plan will be available at various public displays, and from the Bismarck-Burleigh County Planning Department at 209 North 7th Street in Bismarck. Our phone number is 222-6447.