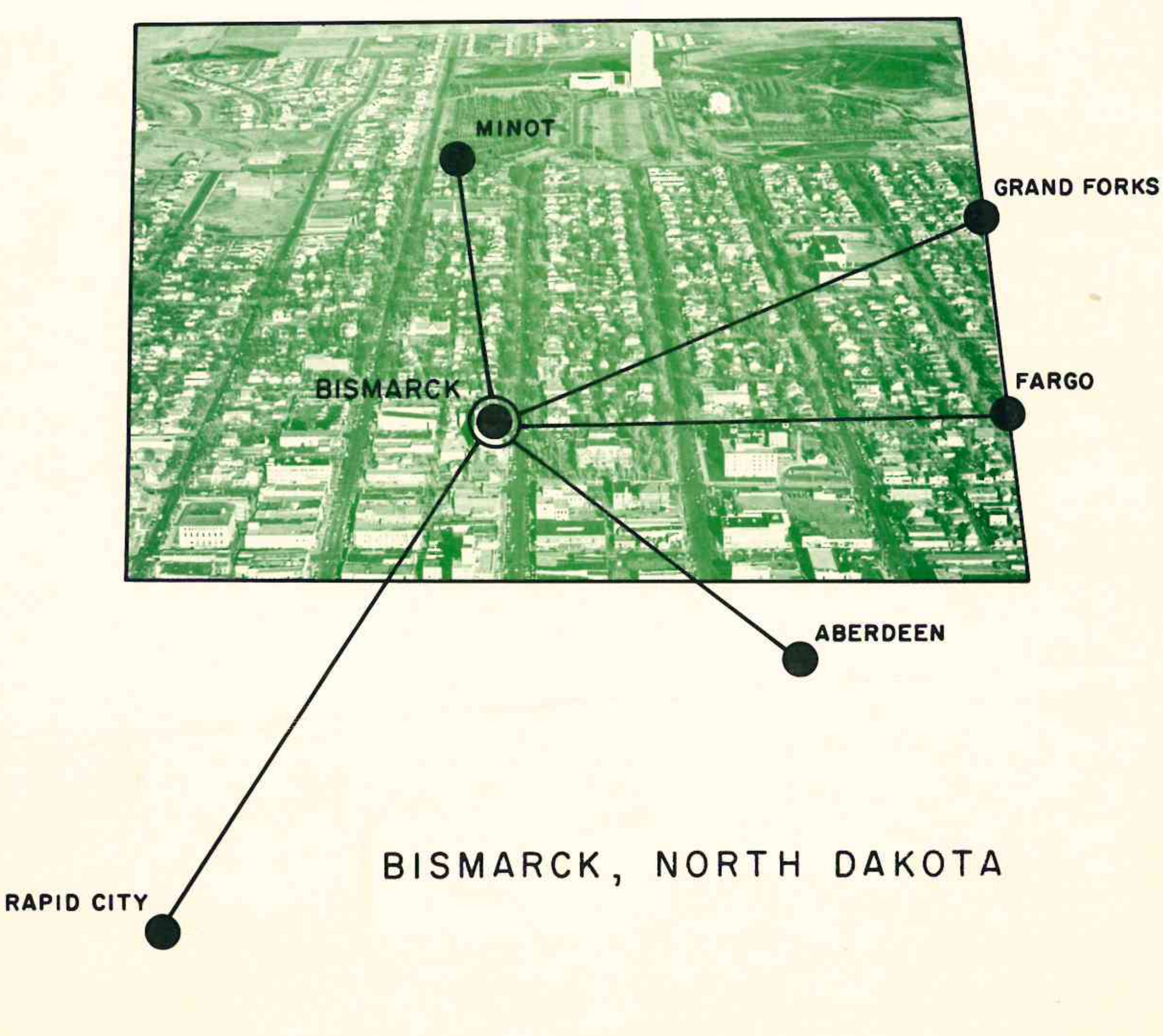
BISMARCK PLANS

SO THAT TODAY'S ACTIONS MAY BE SOUND
INVESTMENTS FOR TOMORROW'S NEEDS



BISMARCK, NORTH DAKOTA

BISMARCK PLANS

THE CITY OF BISMARCK

and the

BISMARCK REGION

within

BURLEIGH COUNTY, NORTH DAKOTA

Preparation of this report was financed and aided through the mutual cooperation of the following agencies and companies:

THE PLANNING COMMISSION OF THE CITY OF BISMARCK
THE CITY COMMISSION OF THE CITY OF BISMARCK
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COMPREHENSIVE LAND USE PLAN

(inside back cover)

INTRODUCTION

"Planning community development is not new in the Upper Midwest or in any other part of the nation. There has always been some kind of planning in virtually every community. An urban area is built by many people. Those who finance and build the community also plan their actions. The plans range from the hasty and crude to the careful and sophisticated.

The task of intelligent preparation for the future has become more difficult because of the increasing speed of change and the growing size and complexity of urban areas. As a result, there is a growing nationwide concern among business and civic leaders for more orderly community development." *

*Upper Midwest Research and Development Council and the University of Minnesota, "The Why and How of Community Planning," Urban Report No. 4, page 1, October, 1963.

Reasons for a Land Use Plan

This comprehensive land use plan, which indicates where future residential, business, and industrial areas are expected to locate in the Bismarck Region and where streets, highways, schools, parks, and other public facilities will be needed to serve the expanding areas, is believed to be essential for the following reasons:

1. Utility planning for public water, sewer, electricity and telephone services can be much more efficiently designed where the type and density of future growth has been anticipated as a part of a land use plan. In this manner, the size and location of major utility facilities can be directly related to the expected development of the region.

2. The location, type, and size of necessary public facilities such as streets, highways, schools, parks, fire stations, and libraries, can be logically projected as a part of the overall land use plan. Public expenditures for these essential services may thus be reduced and long-range economy of operation experienced. Although each of these public facilities may have special requirements, a correlation of public building programs with other elements of the land use plan should be helpful in avoiding unnecessary conflicts and in unifying public and private building programs.

3. Having a regional land use plan available for use by the Chamber of Commerce and industrial development groups should be helpful in encouraging new employment centers for the Bismarck Area. Ordinarily, outside investors are interested in reviewing local plans for business and industrial areas and in seeing whether or not proposed employment centers would be properly related to residential and public developments.

4. City and County zoning regulations can be applied on a much more reasonable basis when basic land use information is available, since the regulations can be properly oriented toward future directions of growth as well as toward protecting existing developments.

5. Subdivision regulations of the City and County, and annexation policies of the City can be guided by future land use trends, so that newly platted areas may be developed with assurance that they will be compatible with subsequent growth and that necessary public tracts are available.

In general, both private developers and public officials should benefit from the preparation of this comprehensive land use plan, since each new project can be designed and constructed as a part of the projected long-range growth guide. By this procedure, orderly development will be encouraged and public costs minimized.

Procedure

Development of this proposed plan has been based on a study of past trends, an analysis of factors influencing growth, and a series of preliminary studies analyzing various types of growth and their relationship to each other. Recent developments which have been used as a record of past growth include the following:

1. data regarding utility extensions,
2. building permit information,
3. school enrollment figures,
4. subdivision filings,
5. annexation petitions, and
6. assessed valuation figures.

The various growth indices and standards for expansion which were used in this study are described in more detail as a part of the different sections of this report. Throughout this study, the projections for expansion have been based as much as possible on "natural" or expected directions of growth, rather than being an idealistic proposal of what we might wish to see happen. This means that, in many instances, indications of future growth may prove to be more "realistic" than "desirable."

Public Reaction

The work in this report and the efforts of the various official boards and utility agencies should be supplemented by widespread community understanding and support in order for these plans to receive their maximum utilization. One of the main purposes of regional planning is to encourage the coordination of one development with another. In order to achieve this coordination, each of the proposals in this study should be considered by the many individuals and groups who are directly concerned with building in the Bismarck Region. New ideas can be incorporated into the plan, and individuals in key public and private positions may be more likely to assure that sound planning is accomplished.

Continuity

This plan is not intended to be a static document which will rigidly control future growth of Bismarck. Instead, it is intended as a guideline, reviewable on an annual basis, and sensitive to major changes in the ideas and land use patterns of the community. Thus, the work initiated through this study will need to be modified, amended, and strengthened by periodic review.

POPULATION

Planning for the Bismarck Region should be accomplished in two stages: "short range" to a total population of 40,000, expected within the next fifteen years; and, "long-range" to a total population of 58,000, which should not occur for at least twenty-five years. For the urban area these figures suggest approximately a one-third increase by 1980 over the 1960 population, and almost a doubling of the 1960 population by 1990.

General Setting

Since the number and characteristics of the population in Bismarck are directly related to the economic opportunities of the area, a brief understanding of the regional economy is a necessary starting point for future planning. In this regard, past population figures for Bismarck and current activities define the City's position as the primary retail, wholesale and services center for the south-central portion of North Dakota and for part of the north-central section of South Dakota. This function as a trading center has been further supported by the City's designation as the State Capitol, and, consequently, the site of numerous State and Federal offices. In addition, the discovery of oil and natural gas deposits in the area in the 1950's further strengthened the regional economy for processing, refining and distribution phases of the oil industry.

The unique architectural style of the State Capitol building expresses the advance thinking of the people of the State of North Dakota and City of Bismarck.

From the standpoint of agricultural activity, the nationwide trend of consolidating small farms into larger farms is evidenced in the south-central portion of North Dakota. This means that overall the agricultural production in the surrounding area is increasing, but the number of persons employed in agricultural pursuits has decreased. As a result, many former farm owners have moved into cities such as Bismarck looking for employment or have moved on to employment centers farther away. This fact is illustrated by census figures which show that the total population in North Dakota was smaller in 1960 than it was in 1930. Also, only 37% of the State's population was considered urban, as compared to a figure of 53% of the State's population rated as urban in 1960. This last figure is still, however, far below the national average, which indicates that approximately 70% of the United States population lives in urban areas.

While it is obvious that many unknown factors may enter into the future economy of the south-central part of the State of North Dakota, indications suggest a steady, gradual increase in employment. The decreases in total farm employment should be more than offset by the trend to live in urban areas and subsequent new job opportunities offered by such growth; the probable increase in employment at State offices; the economic pressures to provide new products, equipment and supplies; and, the attractiveness of the area for new industries.

Problems of a Medium Size City

The current population of Bismarck of slightly more than 30,000 people places the City in the population grouping of other cities which still retain some of the advantages and attractiveness of small communities, while changing to the characteristics of larger cities. In most towns of less than 10,000 population, public needs are handled somewhat informally on a "first name" basis. Ordinarily, pressures of growth are not too intense, and thus public agencies are able to provide needed improvements on an informal basis. In cities of more than 50,000 population, public actions usually are much less personalized and thus programs for improvement emphasize "efficiency" and less public involvement. Cities such as Bismarck (in between these two population groupings) frequently find themselves with the need for the larger cities technical "know how" without losing the smaller cities ability to retain personal contacts. For this reason, subdivision developments involve controversies; scheduling of new public utilities may be difficult; street improvements necessitate heated public hearings; and, established areas of the city may lack land use protection. In other words, the general requirements of larger cities are intensified, while the community still tries to hold its characteristics as a place where problems are not supposed to be too complicated. This intermediate city size might be likened to an adolescent trying to retain the advantages of childhood, while still being required to learn the complications of maturity.

U.S. Census Records for the City of Bismarck

	1950	1960	NUMERICAL INCREASE	PERCENTAGE INCREASE
Population	18,640	27,670	9,030	48
Total dwelling units	5,446	8,496	3,050	56
Total occupied dwelling units	5,314	8,120	2,806	53
Average population per occupied dwelling unit	3.5	3.4		
Percentage of population living in structures built between 1940 and 1950	23.6			
Percentage of population living in structures built between 1950 and 1960		41.3		

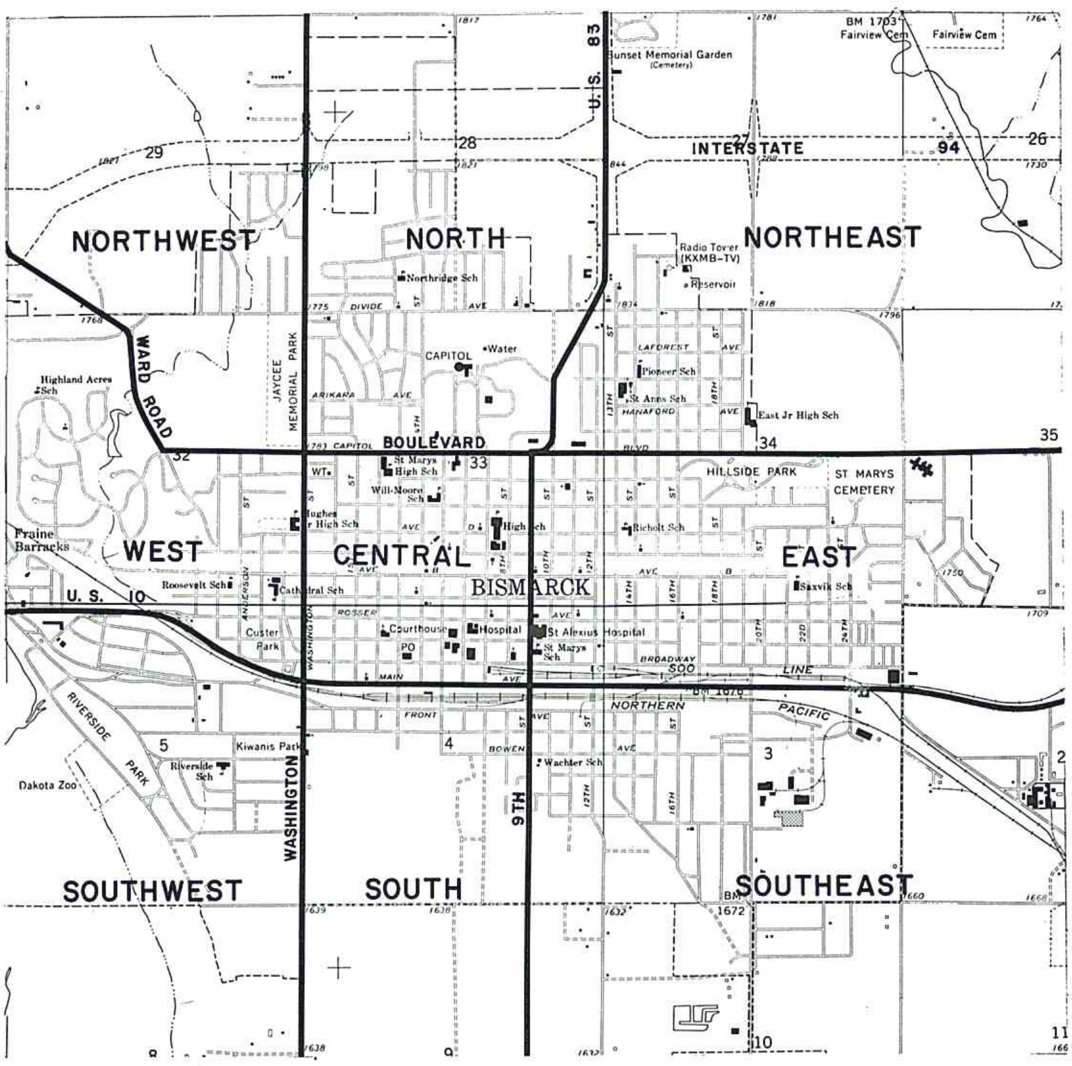
Population for Planning Purposes

Inasmuch as this study does not propose to contain a detailed, effective economic analysis of the Bismarck Region, we cannot expect to project future population increases with reliability. For the purpose of this plan though, our principal concern is to anticipate how much area will be required for fixed future populations, (in order to allow room for residential, business and industrial uses) is more important than knowing just exactly when these future populations may be reached. Following this thinking, we have used the population figures of 40,000 and 58,000 as being logical increments of growth for purposes of future planning. Compared to the urban area populations of 1960, the figure of 40,000 would be about a one-third increase, whereas the figures of 58,000 represents approximately a doubling of the 1960 urban population. As a general guide for timing, the 40,000 population figure should be reached some time between 1975 and 1980 with the figure of 58,000 for the total urban population attained after 1990. Thus, these population changes suggest the first stage of growth to 40,000 occurring during the next fifteen years, with the longer range forecasts to the 58,000 population not expected for at least twenty-five years. These two population totals therefore represent reasonable estimates for purposes of both "current planning" and for "long-range planning."

Neighborhoods

For the purpose of describing directions of growth in the Bismarck Region, the City and surrounding fringe area are divided into the following neighborhoods:

"northwest"	=	north of Boulevard, west of Washington, east of Ward Road;
"north"	=	north of Boulevard, east of Washington, west of U.S. 83;
"northeast"	=	north of Boulevard, east of U.S. 83;
"east"	=	south of Boulevard, north of U.S. 10, east of 9th Street;
"southeast"	=	south of U.S. 10, east of 9th Street;
"south"	=	south of U.S. 10, east of Washington, west of 9th Street;
"southwest"	=	south of U.S. 10, west of Washington;
"west"	=	north of U.S. 10, west of Washington, south of Boulevard, west of Ward Road;
"central"	=	north of U.S. 10, south of Boulevard, east of Washington Street, west of 9th Street.



REGIONAL POPULATION

YEAR	URBAN POPULATION	LOW ESTIMATE	HIGH ESTIMATE
1950	19,000		
1960	28,300		
1963	30,700		
1964	31,400		
1965	32,000		
1970		34,800	37,500
1980		40,500	47,200
1990		46,200	57,400

Distribution of Future Population Increases

Within these neighborhoods, the population increases to the 40,000 and 58,000 totals are expected to occur as follows:

NEIGHBORHOOD	NEW POPULATION TO 40,000	NEW POPULATION 40,000 TO 58,000	TOTAL NEW POPULATION
NW	2,260	5,250	7,510
N	1,550	3,040	4,590
NE	1,520	1,780	3,300
E	900	1,530	2,430
SE	70	1,000	1,070
S	680	2,120	2,800
SW	770	1,900	2,670
W	750	300	1,050
C	500	880	1,380
Total Urban	9,000	17,800	26,800
Fringe Area	300	200	500
Total Region	9,300	18,000	27,300

RESIDENTIAL

In the urban area the residential development will need to expand by 37% in order to provide space for a population of 40,000, and by almost 75% before the Regional population reaches 58,000. The greatest amount of new growth will be in a northwesterly direction with the second largest amount of expansion going directly north.

Existing Development

Within the City of Bismarck in 1963 there were 1061.4 acres used for residential purposes with 193 additional acres occupied for residential use in the fringe area. Adding the new residential developments of the past year, we realize that residential occupancy in the Bismarck Region now is in excess of two square miles of area. Of the total residential developments in the region in 1963, 1013 acres were used for single-family dwellings, thereby constituting approximately 80% of the total. Exact figures for residential occupancy in 1963 are shown by the following table:

TOTAL AREA (IN ACRES) OCCUPIED IN 1963 BY RESIDENTIAL DEVELOPMENT

	CITY	FRINGE	REGION
Single-family dwellings	820.1	193.0	1013.1
Two-family dwellings	179.1	0	179.1
Multiple-family dwellings	62.2	0	62.2
	1061.4	193.0	1254.4

Comparison With Other Small Cities

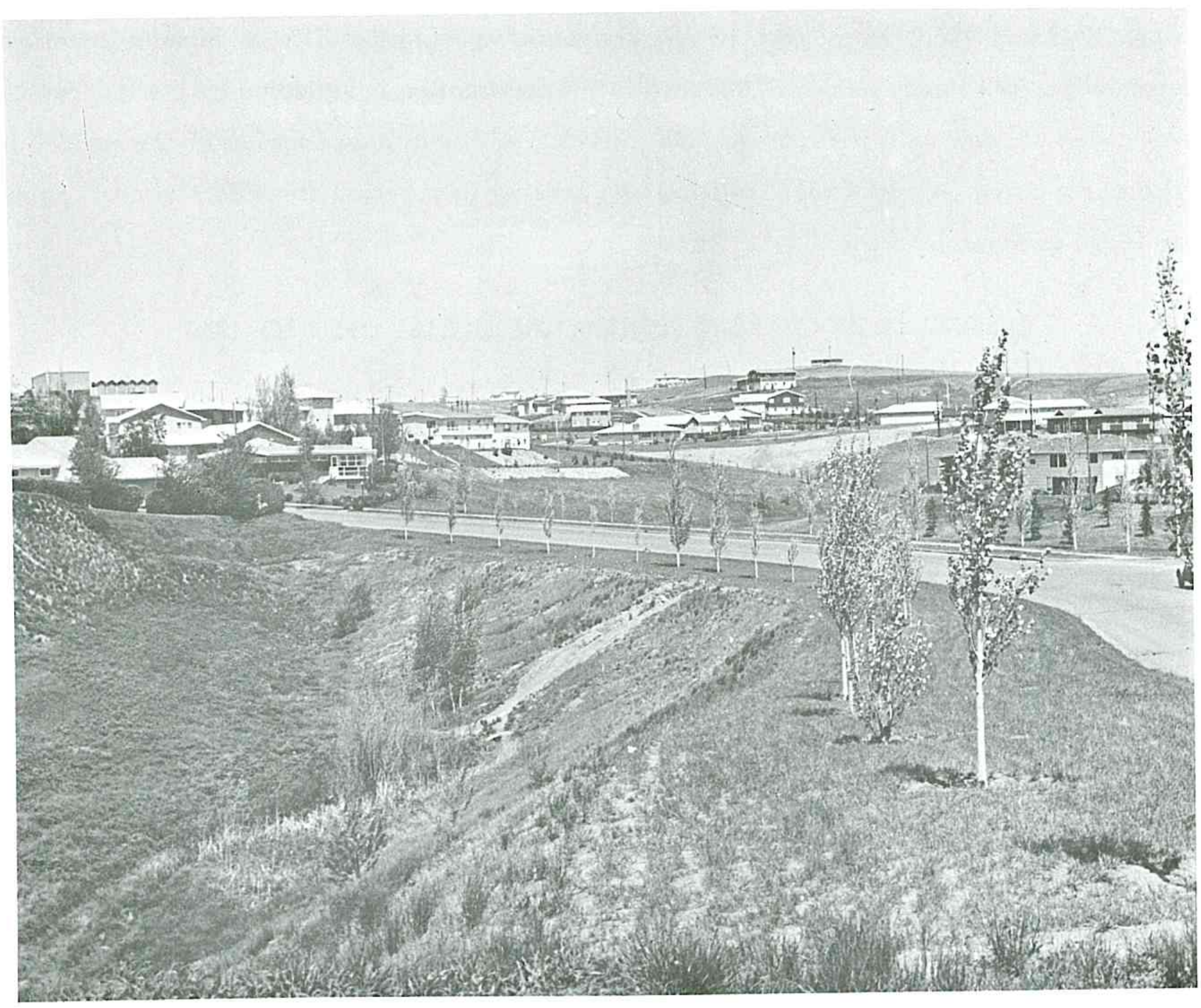
The City of Bismarck shows a smaller percentage of its total area in use for residential purposes than is found in other typical small cities. The percentage of the developed area used for single-family dwellings in Bismarck is almost one fourth less than the percentage of developed area noted for such use in other similar sized communities. These comparisons of residential use in Bismarck with other small cities are shown on the following tables:

PERCENTAGE COMPARISON

	% OF DEVELOPED AREA IN BISMARCK	% OF DEVELOPED AREA IN OTHER SMALL CITIES
Single-family dwellings	25.64	34.08
Two-family dwellings	5.60	3.75
Multiple-family dwellings	1.94	1.73
	33.18	39.56

PER CAPITA COMPARISON

	ACRES PER 1000 PERSONS IN BISMARCK	ACRES PER 1000 PERSONS IN OTHER SMALL CITIES
Single-family dwellings	27.3	34.0
Two-family dwellings	6.0	3.7
Multiple-family dwellings	2.1	1.7
	35.4	39.4



Tree lined street in new residential area denotes the community pride of Bismarck's citizens. Building at upper left is the new Bismarck Junior College complex.

General Location

The existing land use map shows the bulk of the residential area north of the central business district, about equally divided between the northeast and the northwest portions of the City. From the standpoint of population, more persons are located in residential areas to the northeast of the central business district due to the frequency of multiple-family uses in this area. The residential development in the south-central area is generally old and somewhat intermingled with business and industrial uses. The residential development in the west-central and southwest areas is primarily single-family of a moderate to low income type. In the fringe area surrounding the City, residential uses are scattered in all directions with the largest concentration found northwest, north and east.

Recent Residential Development

Between 1953 and 1963, the number of new residential units in the City of Bismarck averaged 245 annually. The steady nature of this residential construction is indicated by the fact that the fewest number of new units per year was 108 (in 1956) with the largest number of new residential units per year being 341 (in 1954). By locations, this ten year period of residential development was divided as shown by the following table:

DISTRIBUTION OF NEW RESIDENTIAL UNITS: 1953 TO 1963

AREA	NUMBER	% OF TOTAL	VALUE	% OF TOTAL
NW	266	10.9	$ 4,116,500	10.7
N	522	21.4	8,589,200	22.3
NE	479	19.6	7,760,450	20.2
E	455	18.6	6,340,820	16.6
SE	133	5.4	1,682,750	4.4
S	6	0.2	72,000	0.2
SW	63	2.6	752,500	2.0
W	482	19.7	7,943,495	20.7
Central	39	1.6	1,099,000	2.9
City	2445	100.0	$ 38,356,715	100.0

Factors Which Influence Residential Expansion

This summary statement does not include all specific local trends, but suggests certain basic incentives and deterrents for new residential growth.

The positive factors or incentives for new residential growth may be generalized as follows:

1. The growth of new residential areas usually follows past trends.
2. Nearness to major employment centers and to central city facilities in terms of travel time is most important.
3. Desirable topographic features, such as the rivers and high ground, may induce growth in directions where such natural surroundings are available.
4. Residential neighborhoods tend to grow around and toward the homes of the leaders of the community.
5. Residential districts usually expand more readily in open fringe areas, away from the "dead end" sections and blighted areas where mixed land uses and dilapidated homes exist.
6. The availability of large, vacant tracts of land at a reasonable cost is necessary in today's economy of tract housing construction.
7. Economical connections to water, sanitary sewer and electric and gas utilities systems serve as major inducements for new residential development.
8. Having public schools, parks, golf courses, and specialized recreational areas available for undeveloped tracts can be influential.
9. Governmental policies and regulations regarding taxation, zoning and subdivisions affect the pattern of growth.
10. Active promotional campaigns and good salesmanship may alter normal directions of residential expansion.

Taking the opposite or negative aspect of the preceding "plus" incentives for new growth, we are able to understand some of the obstacles or deterrents for new growth. In addition, the following restrictions on residential expansion need to be considered:

1. The presence of excessive noises, odors, high winds, and similar undesirable atmospheric features will ordinarily discourage new residential development.
2. Areas subject to flooding or unstable soils will prevent or deter new residential growth.
3. The presence of heavy, fast-moving traffic volumes, especially truck traffic, will create problems for homes immediately adjacent to these right of ways.
4. Nearness to an area where homes are not adequately maintained may discourage new residential units.

5. Very high land costs or the holding of tracts by individuals who have no desire to sell their land will naturally force residential developments in other directions.
6. The presence of undesirable appearing land uses, such as junk yards, commercial feed yards, or dumps, will tend to discourage new homes in the immediate vicinity.

Future Residential Fringe Area

By the time the Bismarck Region reaches a total population of 40,000, we might expect the fringe area to have a population of approximately 1,000 persons, compared to the 1963 fringe area population estimated to be 700. The residential population living on the outskirts of the City would probably be at least 1,200, when the area population totals 58,000. While the exact area occupied by each of these outlying residential units is difficult to measure, one acre is a reasonable average for planning purposes. Using this figure and making allowances for average family sizes the following fringe area development might be expected:

RESIDENTIAL FRINGE AREA DEVELOPMENT

TOTAL REGIONAL POPULATION	FRINGE AREA POPULATION	AREA (IN ACRES) OF FRINGE RESIDENTIAL
30,700	700	193
40,000	1,000	270
58,000	1,200	334

From the standpoint of location no one outer fringe area residential setting seems dominant. Sites near the existing golf course to the east and adjoining the proposed golf course in the southwest area appear good. The residential advantages northwest toward the river also would be expected to attract new homes in this direction. Other outlying fringe area residential units might locate in almost all directions out from the central city, especially in locations with good access to major roads and highways.

Future Residential Urban Area

In 1963 when the existing land use survey was completed, the City population of 30,000 persons occupied a total of 1061 acres or an average of about 35 acres for each 1,000 persons. In the future, with lower density residential sites being developed, the total urban area residential development is estimated as follows:

RESIDENTIAL URBAN AREA DEVELOPMENT

TOTAL REGIONAL POPULATION	URBAN AREA POPULATION	AREA (IN ACRES) OF URBAN RESIDENTIAL
30,700	30,000	1,061
40,000	39,000	1,450
58,000	56,800	2,220

Dividing this projected total urban residential development for the future into low density and high density areas and also estimating directions of new growth becomes somewhat involved, but is summarized as follows:

NEW URBAN AREA RESIDENTIAL GROWTH BY NEIGHBORHOODS

NEIGHBORHOOD	ACRES FROM 30,000 TO 39,000	ACRES FROM 39,000 TO 56,800
NW	124	290
N	78	130
NE	66	80
E	30	30
SE	0	50
S	20	80
SW	33	100
W	38	10
Central	0	0
	389	770

<u>Note</u>

Areas on the comprehensive Land Use Plan are increased proportionatly in order to allow space for streets, schools, parks, churches, other public and semi-public uses and for vacant tracts between developments.

BUSINESS

New business developments in Bismarck will involve an expansion of the central business district, the adding of commercial areas, the development of new tourist areas near interchanges on the interstate route, and the expansion and new construction of several neighborhood shopping centers. This will mean almost one third more business development than currently exists to reach the 40,000 population figure and close to twice as much business area as now exists to serve the 58,000 population figure.

Existing Developments

Bismarck is distinctive for a city of its size in having almost all of its business and commercial development located in the central area. Although two small neighborhood shopping centers exist to the north, no large shopping area competes with the central core and usual highway frontage, strip business areas are almost nonexistent. Part of the explanation for this latter point is the State ownership of land on both sides of the east highway approach and the location of the Missouri River on the west. The general dispersement of residential development in several directions apparently has discouraged the building of a large "community" sized shopping center to date.

TOTAL AREA (IN ACRES) OCCUPIED IN 1963 BY BUSINESS DEVELOPMENT

CITY	FRINGE	REGION
127.6	85.4	213.0

Comparison With Other Small Cities

Due to its position as a major trading center for a large rural area, Bismarck has a slightly higher percentage and per capita ratio of business development than other small cities, as follows:

% OF DEVELOPED AREA IN BISMARCK	% OF DEVELOPED AREA IN OTHER SMALL CITIES
3.99	3.14
ACRES PER 1,000 PERSONS IN BISMARCK	ACRES PER 1,000 PERSONS IN OTHER SMALL CITIES
4.2	3.1

Recent Business Development

During the past ten years the value of new business developments has averaged about three-quarters of a million dollars per year. The trend toward larger units is apparent by the fact that the number of new business buildings per year seems to be decreasing while the total valuation is increasing (more than by the cost of living index).

DISTRIBUTION OF NEW BUSINESS UNITS: 1953 TO 1963

AREA	NUMBER	% OF TOTAL	VALUE	% OF TOTAL
NW	1	1.1	$ 350,000	3.7
N	5	5.3	566,315	6.1
NE	3	3.2	105,000	1.2
E	21	22.4	668,530	7.1
SE	18	19.1	1,342,526	14.3
S	3	3.2	257,200	2.8
SW	4	4.2	60,000	0.1
W	5	5.3	801,600	8.5
Central	34	36.2	5,307,124	56.2
City	94	100.0	$ 9,458,295	100.0

FACTORS WHICH INFLUENCE BUSINESS EXPANSION

Probably the most important factor from the standpoint of business expansion is that of having a site which is easily accessible for a number of potential customers. This necessity, from the standpoint of successful business operation, indicates the importance of relating business expansion to the residential growth trends. If reasonable assumptions can be made concerning future residential expansion, the projection of business areas to serve these new homesites can be more readily determined. The trend of business developments to follow the residential expansion will be influenced by many other factors as follows:

1. The ease of travel from dwellings to business centers;
2. The degree of competition offered by established business units;
3. The adequacy of a business site in terms of having space for a grouping of business buildings, accompanying off-street parking, necessary off-street loading areas, and general appearance;
4. The potential purchasing power and shopping habits of the customers in the trade territory;
5. The existence of physical barriers which may limit travel from residential sections to proposed business tracts;
6. The cost of developing land and providing business buildings with necessary public utility services;
7. The presence of good police and fire protection services;

8. Governmental policies regarding tax rates, zoning, and building codes; and
9. Promotional activity, especially that related to a shopping center where each individual business may be influenced by the drawing power of the center.

The preceding outline of factors influencing business expansion and identifying the major types of business use is not intended to serve as a checklist for any particular business operation. However, being aware of these business location characteristics, we may be better prepared to anticipate the business needs of the Bismarck Region and the consequences of certain public actions.

In addition to the preceding general factors which affect business expansion, we must recognize that a variety of business needs must be served, as follows:

1. Neighborhood centers should be provided for daily business needs, such as foods, drugs and personal services close to all homes.
2. Community shopping centers containing variety stores, department stores, clothing stores, hardware stores and appliance outlets are needed.
3. Commercial areas are required for wholesale outlets, building supply yards, plumbing shops and similar non-retail business activities.
4. Highway frontage business areas may be required in certain sections to provide restaurants, motels and other services for the traveling public.

Future Business Areas

New business areas will occupy much more ground than corresponding existing businesses, due to the obvious need for accompanying off-street parking areas; however, this area increase will be somewhat offset by the fact that many existing business outlets can expand their operations without adding extra building space. Allowing for these variables, future business expansion is projected as follows:

TOTAL REGIONAL POPULATION	AREA (IN ACRES) OF BUSINESS USE
30,700	213
40,000	283
58,000	396

NEW BUSINESS GROWTH BY NEIGHBORHOODS

NEIGHBORHOOD	ACRES FROM 30,700 TO 40,000	ACRES FROM 40,000 TO 58,000
NW	5	25
N	16	8
NE	13	17
E	10	14
SE	2	9
S	9	12
SW	3	8
W	2	2
Central	10	18
Total	70	113

Note

Areas on the comprehensive land use plan are increased from 70% to 100% (depending upon the area) to allow space for undeveloped areas within each business center.

Shopping Centers

Due to the fact that shopping centers often are proposed prematurely without economic justification some of the general standards for this type of business use are included in the following table as a general guide for future official actions:

SHOPPING CENTER STANDARDS

N = Neighborhood Shopping Center

C = Community Shopping Center

Usual Location	N	Near the intersection of collector or secondary streets
	C	Near the intersection of major arterial streets and highways
Leading Tenant	N	Supermarket
	C	Department stores

SHOPPING CENTER STANDARDS

	MINIMUM	AVERAGE	MAXIMUM
Service radius	N 1/4 mile	1/2 mile	1 mile
	C 1 mile	3 miles	50 miles
Population required to support	N 3,000	5,000	7,000
	C 15,000	25,000	100,000
Site area	N 5 acres	7 1/2 acres	10 acres
	C 10 acres	30 acres	50 acres
Number of Stores	N 5	10	15
	C 20	40	50
Gross floor area	N 30,000 sq.ft.	40,000 sq.ft.	50,000 sq.ft.
	C 100,000 sq.ft.	300,000 sq.ft.	400,000 sq.ft.
Parking spaces	N 200	400	600
	C 1,000	3,000	5,000

INDUSTRIAL

New industrial development is urgently needed in Bismarck in order to broaden the local economic base and as a relief for the residential tax load. Obtaining new industries may prove to be most difficult, although excellent sites for industry are available to the north, east and southeast. The comprehensive plan shows areas for such industrial expansion about equal in area to land now used for industrial purposes.

Existing Development

The lack of industrial development in Bismarck is obviously one of the community's major problems. This shortage of industrial occupational centers places a heavier burden on business and public employment as the economic base for the Region. Also, from the standpoint of taxation, the shortage of industry causes a greater share of the tax load to be borne by residential areas than would be true in many other urban areas. Even with some general interpretations of "what is industry" in Bismarck, the total existing development is limited, as shown by the following figures:

TOTAL AREA (IN ACRES) OCCUPIED IN 1963 BY INDUSTRIAL DEVELOPMENT

CITY	FRINGE	REGION
66.5	32.8	99.3

PERCENTAGE COMPARISON

% OF DEVELOPED AREA IN BISMARCK	% OF DEVELOPED AREA IN OTHER SMALL CITIES
2.08	5.65

ACRES PER 1,000 PERSONS IN BISMARCK	ACRES PER 1,000 PERSONS IN OTHER SMALL CITIES
2.2	5.7

Recent Industrial Development

From 1953 to 1963, industrial building in the City was less than one-fifth the valuation of business construction for the same period; and less than one-twentieth the residential valuation for the same period. By location, the new industrial expansion was primarily east and southeast as shown in the following table:

DISTRIBUTION OF NEW INDUSTRIAL UNITS: 1953 TO 1963

AREA	NUMBER	% OF TOTAL	VALUE	% OF TOTAL
NW	1	1.6	$ 1,500	0.1
N	0	0.0	0	0.0
NE	0	0.0	0	0.0
E	15	24.6	672,000	38.4
SE	32	52.5	746,111	42.5
S	5	8.2	180,669	10.3
SW	6	9.9	132,005	7.4
W	1	1.6	4,500	0.3
Central	1	1.6	18,000	1.0
City	61	100.0	$1,754,785	100.0

Factors Which Influence Industrial Expansion

Industrialists no longer look just for sites with ready access to raw materials and to a sales market. In today's world of fast transportation systems and modern communications, other factors may be of equal importance. The desirability of a community for living is now of much more concern. Happy, satisfied workers who enjoy their jobs and the places where they live will normally be more productive and less likely to create an employee turnover problem. This means that satisfaction in living in a city may frequently be measured by the quality of schools, parks, public utility services, convenient travel routes, adequate shopping areas, cultural centers, and the many other features which create a healthful, desirable living environment.

In addition to the importance of locating industries in areas where families can enjoy living, other personnel problems and attitudes must be considered. The availability of skilled employees may be especially significant for certain types of industry. The existence and management of local unions also may be influential, and the lack of problems resulting from minority groups may affect certain industrial operations.

The municipal airport with modern terminal and jet service to major cities throughout the country will be an important factor in attracting new industries to Bismarck.

In addition to the preceding general comments about new industrial locations and their relation to certain social factors, within Bismarck the following specific determinants for industrial expansion should be considered:

1. Industrial sites should have convenient access to high-speed highways and, for certain industries, proximity to railroad tracks.
2. Industrial lands should be relatively flat with good drainage and stable soil conditions.
3. Raw land costs should be low and the cost of providing necessary public services minimized.
4. The attitude of local government should be favorable for industry as reflected by equitable tax rates and modern zoning practices.
5. The availability of well-planned industrial parks and local industrial development programs may serve as effective inducements for new industrial growth.
6. Tracts for industrial development should be large enough to allow normal expansion and the development of dependent industries in the same vicinity without conflict with residential and business expansion.
7. The visibility of sites for publicity and advertising may be important.

Bismarck, like every other community which hopes to encourage new industrial expansion within its boundaries, will have to actively solicit and encourage industrial development. Unless the preceding suggested factors which influence industrial growth are favorable, existing local industries may move away and potential industries will choose other communities.

Future Industrial Areas

The comprehensive land use plan indicates new industrial expansion primarily to the southeast in areas where such uses have already located. Also, one small, light industrial area is suggested in the north area west of U.S. Highway 83. To some extent, these projections for industrial use include some "wishful thinking," since the number of such future industries may vary considerably, depending on many variables. In particular, the promotional efforts of local persons may be most significant. The difficulty in securing new industries is emphasized by the fact that in 1963 in the entire nation there were only about 400 major industrial relocations, yet more than 15,000 industrial promotion organizations were working for such purposes. The proposals for in-
dustrial promotion organizations were working for such purposes. The proposals for industrial
expansion in the Bismarck Region are summarized, as follows:

TOTAL REGIONAL POPULATION	AREA (IN ACRES) OF INDUSTRIAL USE
30,700	99
40,000	129
58,000	214

NEW INDUSTRIAL GROWTH BY NEIGHBORHOODS

NEIGHBORHOOD	ACRES FROM 30,700 TO 40,000	ACRES FROM 40,000 TO 58,000
NW	0	0
N	4	10
NE	0	0
E	8	10
SE	18	65
S	0	0
SW	0	0
W	0	0
Central	0	0
Total	30	85

Note

Areas on the comprehensive land use plan are enlarged about 100% to indicate vacant areas between new industrial developments.

STREETS & HIGHWAYS

Streets and highways are the vital link between all regional activities. As such, they deserve careful study and will require extensive improvements in order to meet future demands. Whenever possible the plan attempts to provide for necessary traffic flow while still protecting local streets as much as possible from hazards and congestion.

Specific Purposes of the Street and Highway Plan

People are constantly driving, walking or riding throughout the Bismarck Region between residential areas, places of employment, schools, recreation areas and business locations. Goods must be transported from places of production to industrial sites, to commercial centers, to buyers' homes. As these people and materials move from one place to another, the following factors must be considered:

1. The combined loss of time and money (through salaries, tires, gas, etc.) caused by delay in travel can multiply to an imposing figure where people are forced to use inefficient street connections.
2. The only streets and roads now available for travel are those which were dedicated in the past with often little overall consideration for where people and merchandise would need to move. This means that many Bismarck "through" streets are too narrow, are not direct and will be costly to improve; yet, in some areas, valuable residential sites have been lost by dedications of unnecessarily wide "local" streets
3. Where residential blocks are short, the costs of street pavement, curbs, gutters, and sidewalks has been, or will be, excessive to the adjacent property owners and to the entire City for maintenance.
4. Schools and recreation areas should be located wherever possible away from major streets, so that children and adults may walk to these centers in safety.
5. Though business areas need direct connections with surrounding residential lands, "non-business" traffic should not be forced into shopping areas to congest the streets available for potential customers.
6. Whenever possible, streets entering business areas should lead directly to available parking areas where shoppers may drive to the stores, not just by them.
7. Heavy traffic volumes, especially where large trucks are involved, will depreciate abutting residential property if right of ways are narrow and building set backs are shallow.
8. Sewers, water mains, gas lines, electric and telephone wires and other utilities are usually forced to use street and highway right of ways for extensions, and thus the efficiency and cost of these services may be dependent upon street patterns.
9. The layout and setting of individual lots and buildings on these lots will be influenced to a marked degree by street design.

Description of Street and Highway Plan

The street and highway plan is shown on the land use plan. While the suggestions in this study and map are in schematic form, they have been prepared after a study of field conditions and many phases of existing and possible future developments influencing the Bismarck Region. In general, proposed right of ways indicate the need for joining areas without attempting to specify exact locations for each section of such travelways. Wherever possible, the various elements of the scheme have been arranged and coordinated so that all present and prospective urban areas will be served adequately; sufficient traffic capacity will exist within right of ways to carry normal volumes in future years without expensive later changes.

For purposes of this plan, right of ways are divided into the following four categories:

Expressways
Major Streets and Highways
Secondary Streets and Roads, and
Local Streets

Each of these types of right of way will be expected to carry different types of traffic at varying speeds, with the heaviest traffic volumes ordinarily using the "expressway" and "major" routes. Of principal importance is the effort to designate and develop streets for specific purposes so that moving traffic can be conveniently handled and, in reverse, all "local" streets will not be cluttered with hazardous traffic. Such a system of right of way classifications is necessary for reasons of safety, economy and convenience.

Definition of Streets and Highways

EXPRESSWAY

Expressways are designed for fast moving, long distance traffic, which generally will not be destined to stop in the Bismarck Region. Wide right of ways, center dividing strips, limited access features and service roads are usually found on expressways.

MAJOR STREETS AND HIGHWAYS

Major streets and highways have considerable continuity and carry large volumes of traffic from one section of the City to another. Ordinarily, these streets should allow for two lanes of traffic in each direction; should have extra strength pavements for considerable truck traffic; should be well lighted; and, should have synchronized signals for continuous traffic flow.

SECONDARY STREETS AND ROADS

These streets generally provide for traffic from a local street to a major street or from a local street to a school, recreation, or business center. Traffic volumes are moderate and do not create unusual problems of safety or noise.

LOCAL STREETS

Local streets are used principally for access to abutting residential, commercial, and industrial properties where through traffic is limited. Total traffic volume is light.

Street Cross-Sections

The following table indicates desirable development standards for major streets, secondary streets, and local streets:

STANDARD		MAJOR STREETS	SECONDARY STREETS	LOCAL STREETS
Right of Way:	minimum width	80'	66'	60'
Roadway:	minimum width	48'	44'	36'
Travel Lanes:	number	4	2	2
	minimum width	12'	12'	10'
Parking Lanes:	number	0	2	2
	minimum width	0	10'	8'
Sidewalks:	minimum width			
	non-residential	12'	10'	4'
	residential	4'	4'	4'
Curbcuts:	maximum width	24'	24'	24'
	maximum number	1/100'	1/50'	1/50'
Other Features:	minimum width			
	center divider	2'	--	--
	side planting strip	11'	6'	7'
	median strip with left turn lane	14'	--	--

EXPRESSWAY

1. Obtain a grade separation crossing for 19 1/2 Street on the interstate.

MAJOR STREETS AND HIGHWAYS

1. Develop a new north-south major street immediately west of The Highland Acres subdivision, and join this new street with a one-way street system connecting to U.S. 10 and Rosser Avenue.
2. Improve Washington Street throughout its length.
3. Improve 4th Street north of Divide Avenue.
4. Improve 19 1/2 Street north of Divide Avenue.
5. Improve the South 9th Street route to the Airport.
6. Extend the Riverside Park Road southeasterly to join Bismarck Avenue.
7. Open Bismarck Avenue between Washington Street and the Airport Road.
8. Improve Sweet Avenue between the Riverside Park Road and 15th Street as a major street and extend this right of way across the Northern Pacific Railway between 16th Street and 17th Street to join Main Street.
9. Improve Rosser Avenue throughout the City and join it with Avenue A east of 26th Street.
10. Extend Divide Avenue easterly to join the "East" Interchange on the interstate route.
11. Extend the east-west road south of the Airport westerly to eventually cross the Missouri River at a point near the Fort Lincoln State Park.
12. Improve the east-west right of way located one-half mile north of the interstate and curve this street southerly to join the Ward Road north of the interstate.
13. Develop other major streets as shown on the Street and Highway Plan.

SECONDARY STREETS AND ROADS

1. Develop secondary streets parallel to the interstate between the Ward Road and 19 1/2 Street.
2. Extend Broadway east of 26th Street to join U.S. 10.
3. Provide a usable extension of Boulevard Avenue east of 19th Street for about one mile.
4. Improve and extend other secondary streets and roads as shown on the plan.

SCHOOLS

School planning is an integral part of community planning, especially as elementary schools serve as centers for residential "neighborhoods." In the next fifteen years at least three elementary schools and both junior high schools will need to be enlarged, and two new elementary schools will have to be constructed. Also, school sites for future use should be purchased in advance of high land values.

Importance of Combined Planning

Schools in the Bismarck Region are operated by the Bismarck Public School District, entirely separate from the services of the City of Bismarck. In preparing a plan for future developments in Bismarck, however, residents must be aware of the importance of relating school planning with other city and county planning features. New residential areas will create new school enrollment problems; and, in reverse, new school buildings may encourage new homes to be built nearby. Improved through traffic arteries must be built away from school sites, yet utility services must be immediately available for new school facilities. Many other examples can be stated to show the close relationship between school planning and planning for recreational sites, new subdivisions, industrial tracts and new shopping centers. Thus, even though schools in Bismarck are not a part of the "city" government, close cooperation between the school district and the City is essential in working toward orderly future community growth.

This chapter attempts to correlate school planning with other local goals by outlining answers to the following questions:

What other community problems and needs relate to or are affected by schools?

How many school children may be expected to live in the Bismarck Region in the future?

Where will they live? and

Where should school facilities be in the future?

Neighborhoods

Neighborhoods are residential units in an urban area with the following distinctive elements:

1. An elementary school is located in the central portion of each neighborhood within easy and safe walking distance of every home in the neighborhood.
2. A small park should be located close to the elementary school in the central portion of each neighborhood.
3. A small shopping district providing convenience goods for daily use by residents in each neighborhood should be situated on the boundary.
4. The street system within each neighborhood should be designed to discourage fast through traffic. Adequate sidewalks should be located to provide safe access to the school, park, and shopping centers.
5. Neighborhoods are generally bounded on all sides by major streets, natural topographic breaks, large non-residential tracts, and similar natural or man-made divisions of land.

With such characteristics, neighborhoods become functional units for living where residents are able to obtain most of their daily educational, social, cultural, recreational and shopping services without hazardous travel and unnecessary conflict with non-residential uses and circulation.

From the point of view of providing necessary services, such as schools, small parks, and utilities, the development of neighborhood units involves an economical means of urban expansion. Of much greater importance though, is the fact that neighborhoods provide a physical framework which can increase human values. In particular, living in a small residential unit can create improved opportunities for the development of individual thinking and action, so necessary in a democracy. In contrast, modern life in large metropolitan areas where impersonal relations predominate may discourage individual responsibility and the feeling of personal dignity. The following quotation from a 1947, Russell Sage Foundation report by James Dahir states the importance of neighborhood planning, as follows:

> "The absence of a sense of . . . community in modern life poses a serious problem for the preservation of our American democracy. Individuality and social responsibility have developed, historically, in the neighborhoods where men lived and were best known. Modern life, based on an impersonal system of prices and mass production of goods, has created a way of life hostile to neighborliness, and has largely succeeded in isolating individuals, subjecting them to mass stimuli tending to create mass men in a mass culture--the raw material for a totalitarian society."

Since elementary schools are a focus for neighborhood development, the maintenance of existing neighborhoods and the logical development of each new neighborhood around an elementary school becomes of prime importance. While physical features and through traffic routes may destroy ideal neighborhood planning in many older sections of the Bismarck Region, much can still be accomplished in preserving the values of the neighborhood concept in these older areas. In new expanding areas of the Bismarck Region, the location of new elementary schools will determine to a marked degree the suitability of future neighborhood development, just as the location of future major traffic routes will establish boundaries for new neighborhood units. In addition, the location of large business areas, industrial areas, public sites, and the rough topographic features will be influential in forming boundaries for various neighborhoods. Obviously, then the construction of new school facilities should be very closely related to the plans for major street development and the location of other physical and man-made neighborhood boundaries.

Existing Schools

Elementary and secondary age students in Bismarck are educated in public schools which accounts for slightly less than three fourths of the total enrollment and in parochial schools which accommodate the balance of the community's children. Between 1958 and 1962, the enrollment in the parochial schools gained just a little more than one hundred (or 6%).

Most of the existing public school buildings are relatively new and rate better than other school districts from the standpoint of available facilities. The three oldest elementaries (Wachter, Richholt, and Roosevelt) have all received major additions and improvements during the past twelve years. The Bismarck Senior High building is less than thirty years old and both junior highs were constructed within the past six years.

Compared to usual site requirements for schools in other areas, the small size of school tracts in Bismarck is noticeable. Most elementary schools are on land less than five acres in size in Bismarck, whereas five acres is usually considered the absolute minimum for new elementary school sites. The junior high schools and senior high also are severely restricted in land area on tracts which are less than usual minimums, except that use of the Hughes athletic field for this junior high (only) would bring this school site closer to normal space requirements.

The location of schools in Bismarck generally is very good, with most buildings reasonably close to the center of their required attendance area. Hughes, Wachter, Will-Moore and Northridge are located adjacent to major streets, but other school sites are not damaged by "through" traffic volumes.

The new Bismarck Junior College campus is indicative of the civic interest of Bismarck's residents who want to insure the educational opportunities of young people throughout the region.

Principal problems at this time seem to involve the need for additional elementary space in the Northridge area, elementary facilities for the new residential growth east of Pioneer and northeast of Saxvik School, and a junior high facility area south of the railroad.

Desirable Standards

Although there are differences in the so-called school standards as suggested by various educational and planning sources, the following standards are considered minimum objectives for new school buildings and should be considered reasonable standards for use in Bismarck in evaluating existing school buildings:

LOCATION

Reached, where possible, without crossing major streets or railroads.

Accessible over good walks and roads.

Away from business and industrial centers.

Within 1/2 mile of elementary students; 1 mile of junior high students; and, 1 1/2 miles of senior high students.

Not subject to traffic noises.

LAND

Elevated and properly drained.

Access to necessary public utilities.

Provided with necessary walks and driveways.

Attractively landscaped.

Free from obstructions and hazards.

Adequate in size: 5 acres plus 1 acre for each 100 enrollment for elementary; 10 acres plus 1 acre for each 100 enrollment for junior high; and 20 acres plus 1 acre for each 100 enrollment for senior high.

BUILDING

Exterior and interior appearance satisfactory.

Can be extended for future needs - can be used in sections.

Exits properly marked - safe stairways - adequate corridor space.

Meets building construction codes - fire-resistant materials throughout.

Acoustically treated.

Adequate natural and artificial light.

Less than 50 years old.

Desirable enrollment: elementary, 300 - 600; junior high, 700 - 900; senior high school, 1000 - 1800.

Future School Enrollments

Relating school enrollment increases to the estimated expansion of new residential areas suggests that the following new enrollment will need to be accommodated:

NEW SCHOOL ENROLLMENT BY NEIGHBORHOODS

(30,700 POPULATION TO 40,000 POPULATION)

NEIGHBORHOOD	ELEMENTARY	JUNIOR HIGH	SENIOR HIGH
NW	280	135	105
N	195	90	75
NE	215	95	78
E	95	50	40
SE	15	7	5
S	120	50	36
SW	95	40	35
W	80	40	37
Central	(-125)	(-50)	(-40)
Total	970	457	371

(40,000 POPULATION TO 58,000 POPULATION)

NEIGHBORHOOD	ELEMENTARY	JUNIOR HIGH	SENIOR HIGH
NW	620	290	230
N	435	190	140
NE	220	100	85
E	160	75	65
SE	180	70	55
S	355	150	120
SW	240	105	85
W	30	15	15
Central	(-150)	(-65)	(-50)
Total	2090	930	745

School Building Needs

School officials are much better acquainted with various details regarding existing school buildings and the standards which are considered desirable for Bismarck than any other local group, and, therefore, should establish the exact plan for future school construction. As a general guide though for their consideration and for purposes of encouraging constructive suggestions, the following major building needs appear logical:

WITHIN THE NEXT FIFTEEN YEARS
(BEFORE THE 40,000 POPULATION IS REACHED)

1. Add space to the Grimsrud Elementary;
2. Add space to the Northridge Elementary;
3. Construct the first section of an elementary school north of the interstate;
4. Construct a new elementary school on a site north of St. Mary's Cemetery;
5. Add space to the Riverside Elementary;
6. Add space to the Hughes Junior High;
7. Add space to the Simle Junior High;
8. Develop a high school athletic field on land adjoining the junior college; and
9. Purhcase sites for schools in outlying areas as shown onthe land use plan.

FOR LONG RANGE PLANNING
(40,000 TO 58,000 POPULATION)

1. Expand the first elementary located north of the interstate;
2. Develop two other elementary schools north of the interstate;
3. Add space to the elementary north of St. Mary's Cemetery;
4. Construct a new elementary in the south area on a site north of Bismarck Avenue;
5. Construct a small new elementary west of Washington and south of the Southwood Terrace Addition;
6. Build a new junior high school west of Washington and north of the interstate;
7. Build a new junior high school east of Washington approximately one-half mile south of the Northern Pacific Railway;
8. Construct a new senior high school on land adjoining the present golf course;
9. Convert the existing high school into a trade school and building for special education classes.

PARKS

Bismarck now has excellent park facilities for a city of its size and will not be required to meet the park demands of future growth. Cooperation with school officials in joint use of school facilities for active play areas will be of major importance.

Standards for Park Development

Parks for a city the size of Bismarck are generally classified as playgrounds, playfields, neighborhood parks and major parks. The playgrounds and neighborhood parks are considered desirable within walking distance of residences in each neighborhood unit. The playfields and major parks are larger areas spaced at a greater distance and serving more than one distinctive neighborhood area.

PLAYGROUNDS

Playgrounds are usually from three to seven acres in size with five acres considered a desirable minimum in new areas. These areas are primarily developed for activities of elementary age school children but facilities should be provided for all age groups. Landscaped areas should be provided for sitting and other quiet recreation. An apparatus area for preschool age children and older children should be included along with a small shelter building, a wading pool or spray pool, and a quiet area for handicraft and games. The National Recreation Association recommends one acre of playground space for every 800 population. Playgrounds should be located with 1/2 mile of each home in the City and located so that children do not have to cross major streets, railroads, industrial or business areas, or other hazardous areas.

PLAYFIELDS

Playfields are usually located on a site of from 12 acres to 20 acres with one acre of playfield space for every 800 population. These larger active play sites are especially necessary for youth and young adult activities such as softball, baseball, football, tennis courts, and swimming. Picnic areas and facilities plus an outdoor theater are also desirable in a complete playfield development. These active play areas should be located within one mile of each home in the City, and, if possible, combined with junior or senior high school sites.

NEIGHBORHOOD PARKS

Neighborhood parks are small areas for quiet recreation. A maximum travel distance of 1/2 mile to a neighborhood park site of approximately 5 acres in size is considered the most desirable standard. Where neighborhood parks are combined with playgrounds or other active play areas, the neighborhood park section may be reduced to 2 acres in size. Facilities, including places for sitting, sunning and quiet relaxation, are important in neighborhood parks since these are especially useful for mothers with small children and for older people. Neighborhood parks should be located as a part of playground or playfield sites wherever possible. They are especially needed to serve neighborhoods that are located beyond a one half mile walking distance of larger parks. Neighborhood park areas should take advantage of natural or scenic features wherever possible.

Parks not only add beauty and open space to the cityscape but provide essential active and passive recreation areas for young and old alike.

MAJOR PARKS

Major parks or community parks are large areas of generally 50 acres or more which provide quiet and contact with nature away from the congestion and noise of the city. These areas frequently take advantage of natural features such as lakes, woods, and streams. They are used for picnic areas, as a winter sports center, and areas for active play. Standards suggest one major park for every 20,000 population (or 2 1/2 acres per thousand population).

Recommendations

IN THE NEAR FUTURE

1. Develop a playfield on the park property located west of the Airport Road south of Bowen Avenue;
2. Develop a playfield on the "land-fill" area north of the interstate;
3. Cooperate with school officials in the joint use of school areas as playgrounds and playfields;
4. Improve existing park areas, as possible; and
5. Obtain neighborhood park sites in outlying areas as shown on the land use plan.

FOR THE LONG RANGE

1. Secure neighborhood park areas adjoining new elementary schools where such schools are located more than a one-half mile distance from major parks;
2. Continue to make joint use of school areas for playgrounds and playfields; and
3. Modernize and improve park facilities in all areas, as funds may permit.

OTHER FACILITIES

Since other public facilities such as fire stations and libraries must be located to serve both the present population and anticipated growth, these public buildings will need to be carefully located as a part of the comprehensive land use plan.

Fire Stations

The strategic location of fire stations is a matter of prime concern in order to provide effective protection for properties and in order to minimize public expenditures. Since the future location of business and industrial areas is forecast as a part of the land use plan and the street and highway plan indicates where fast traffic may be accommodated, the location of fire stations needs to be closely correlated with other sections of the Bismarck Regional plan.

Although final site selection for new fire stations will necessarily need to be determined by officials of the Fire Department, as a means of anticipating certain fire station needs of the future, the following general criteria for site selection are presented:

1. In high valuation commercial and industrial areas, fire stations will ordinarily need to be within 3/4 of a mile of the area to be served.
2. In developed residential areas, fire stations will ordinarily be located within 1 1/2 miles of all homes.
3. In areas of scattered development, fire stations may have a service radius of 3 miles.
4. Fire houses should be located on streets close to and leading onto arterials or collector streets.
5. Fire houses should be located so that topographic barriers do not require time consuming detours within the primary service area of each fire house.
6. Usually, fire stations should not be located on the corner of two arterial streets, since difficulty might be encountered in making short radius turns out of the station house.
7. Fire trucks should run into an area of concentrated development, rather than to have a station located there.

Libraries

Standards for library service vary considerably from one community to another, but frequently range as follows:

Service Radius:	1 to 2 miles
Population needed to support:	20,000 to 30,000
Minimum book stock:	20,000 volumes
Land required:	one acre
Location:	near or adjacent to shopping centers
Circulation:	from 3 to 10 per capita

The new central library is a major asset to the educational and cultural advantages of Bismarck.

Other Facilities

Special studies either have been made or will be required for other public facilities such as a coliseum, City administrative offices, new land-fill dumping area, off-street parking areas, and armory. For that reason, these special public uses are not considered in detail as a part of this report.

Recommendations

1. Locate a new central fire station east of the central business district and north of the main industrial area on a site either on or close to the Broadway-16th Street intersection.
2. Construct an outlying sub-fire station for initial service of the west areas of the City at a location west of Washington Street, south of Divide Avenue;
3. When additional residential growth occurs, construct another sub-fire station at a location on the west side of Washington Street, north of Bismarck Avenue for better service of the southwest section of the urban development.
4. During the second stage of growth (from 40,000 to 58,000 population) develop a sub-library west of Washington Street one-half mile north of the interstate;
5. Consider purchase of land and construction of additional City administrative offices immediately north of the library; and
6. Plan for the eventual development of a coliseum on the south side of Sweet Avenue between 5th Street and 7th Street.

IMPLEMENTATION

To be successful a planning program must include various action procedures for carrying out the proposals for future development. Since the future growth of the Bismarck Region will be through both private and public actions, the tools for "getting the job done" must necessarily involve both regulation of private projects and guides for public expenditures.

Various Methods

The development regulations may be divided into the subheadings of annexation policies, subdivision regulations, and zoning. The guides for public expenditures may be classified principally under the headings of capital improvements programming. A final action program which is actually a part of all the other planning procedures is that of public relations. Highlights and recommendations regarding each of these action programs are outlined in this section.

Annexation Policies

Since the City of Bismarck can decide whether or not abutting properties should be brought within the City limits, City officials should be very careful to consider all the immediate and long-range implications of each annexation request. The following principles should be weighed for each annexation:

1. What will be the short term and long term costs of annexation? These costs would include the use of basic City services already financed by City taxpayers, plus the new capital outlays required for service to the area being annexed, and the continuing future costs for maintenance and operation.
2. From the standpoint of income what will the proposed area offer in the way of annexation fees, fees at the time of development, or annual revenues through property taxes, special assessments, or other general revenue measures?
3. Has the City Planning Commission provided a detailed recommendation relating the area proposed for annexation to the long-range plans of the Region, and have necessary standards for zoning and subdivision development been determined?
4. Have school officials had an opportunity to coordinate school facility needs with the plans for development prior to annexation?

Subdivision Regulations

While Bismarck and Burleigh County subdivision standards generally follow well accepted practices, very careful review of each new subdivision must be undertaken, in order to guarantee successful implementation of these long-range plans. In particular, the following sections of the subdivision regulations should be given special attention:

1. All through streets in new subdivisions shall conform to the street plan, both as to location and width.
2. The arrangement of local streets in new subdivisions shall be properly related to existing streets in adjoining subdivisions.
3. No subdivision shall be approved unless it is possible, without undue delay, to supply water, drainage, sewerage facilities, and other necessary public improvements.

City and County officials should be very cautious to give each new subdivision complete review prior to final action by the Planning Commissions. In no event should the apparent urgency on the part of the subdivider cause hasty action or overrule the need for thorough analysis and very careful checking prior to final approval.

Zoning

Zoning is a legal method for controlling land use and density within a city or county, according to its unique features and long-range program for development. Special distinctions must be made, however, between the plans showing possibilities for future growth for a period of 25 years and zoning regulations, which ordinarily should be based on more immediate needs. This fact is especially important in regard to business and industrial areas where further economic justification should be required before the tracts shown on the long-range plan are zoned for business or industrial uses. Premature zoning of these business and industrial properties could lead to the construction of temporary, inexpensive structures which could be damaging to surrounding property values and to the ultimate needs of the areas so zoned.

Due to the importance of maintaining the integrity of the zoning map by limiting the number of changes, officials must be very careful to make changes in the zoning maps only upon proof of one of the two following conditions:

1. The original zoning map is found to be faulty; or
2. Changing conditions within the region or neighborhood justify the rezoning.

Capital Improvement Programming

This comprehensive plan shows where various public facilities will be required in the future, but these ideas must be put into "cash" terms by a financial plan. The process of relating ideas for future development with financial action is known as the "long-range capital improvement program."

In considering the relative importance of various improvement projects, officials may be expected to ordinarily use the following criteria:

1. Protection of life,
2. Maintenance of public health,
3. Conservation of resources and property,
4. Improvement of public utility services,
5. Reduction of operating costs,
6. Increase of public convenience and comfort,
7. Improvement of recreational activities,
8. Additions of social, cultural or aesthetic value,
9. Expansions of promotional value.

Public Relations

Long-range planning programs must place a special emphasis on good public relations. If the programs are to be successfully undertaken, strong support of various segments of the community must be encouraged and made evident at times of decision. In order to accomplish this, various planning proposals should be given widespread publicity through all available means (newspaper, radio, presentation at special meetings, and the distribution of all major reports). Public hearings should be scheduled, so that all interested parties may have adequate opportunities to express their reactions. Planning can then become a properly coordinated effort with sound studies and action programs supported by public officials, private developers, and the general public.

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AND THE CITY OF BISMARCK

COMPREHENSIVE LAND USE PLAN
BISMARCK, NORTH DAKOTA
EXISTING
FUTURE
RESIDENTIAL: LOW DENSITY
RESIDENTIAL: HIGH DENSITY
BUSINESS
INDUSTRIAL
40,000 POPULATION DEVELOPMENT
58,000 POPULATION DEVELOPMENT
EXPRESSWAYS
MAJOR STREETS & HIGHWAYS
SECONDARY STREETS
EXISTING
FUTURE
ELEMENTARY SCHOOLS
JR. HIGH & SR. HIGH SCHOOLS
NEIGHBORHOOD PARKS
MAJOR PARKS
FIRE STATIONS
LIBRARIES
BISMARCK
CAPITOL
HILLSIDE PARK
ST MARYS CEMETERY
Sunset Memorial Garden
(Cemetery)
INTERSTATE
94
Bismarck Jr College
Armory
Reservoirs
Highland Acres Sch
Waterworks
Gaging Station
Fort Lincoln Barracks
Roosevelt Sch
Kiwanis Park
Riverside Sch
RIVERSIDE PARK
MEMORIAL BR
JAYCEE MEMORIAL PARK
Northridge Sch
Radio Tower
(KXMB-TV)
Reservoir
Pioneer Sch
St Anns Sch
East Jr High Sch
Richolt Sch
Saxvik Sch
Wachter Sch
St Alexius Hospital
Courthouse
PO
Cathedral Sch
Fairview Cem
STATE PENITENTIARY
Drive in Theater
Hay Creek
Indian Mounds
Pioneer Park
PACIFIC
PROPOSED
Cottonwood Lake
Gravel Pit
Ft Lincoln Cem
BISMARCK AIRPORT
Beacon
FORT LINCOLN MILITARY RESERVATION
Lincoln Sch No 2
40,000 POPULATION
58,000 POPULATION