

Bismarck·Burleigh County COMPREHENSIVE PLAN

PART 2: GROWTH MANAGEMENT TECHNIQUES

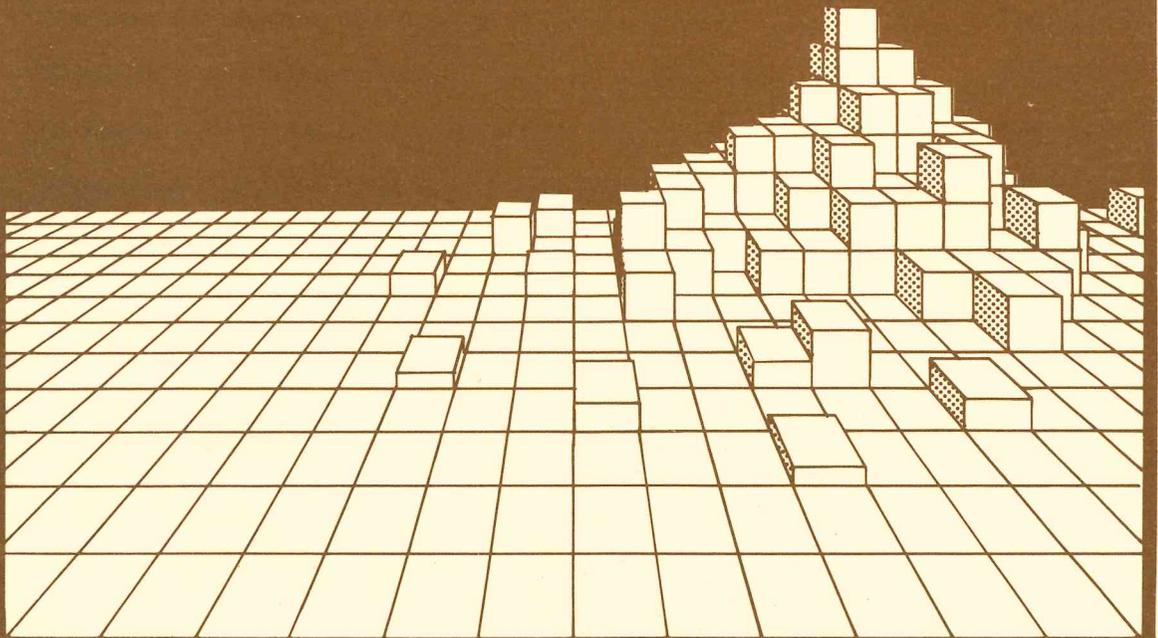
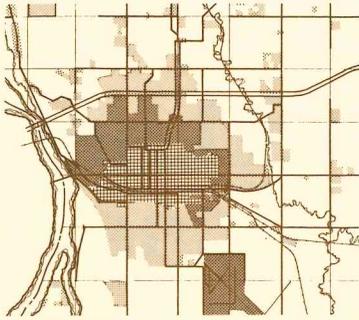


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CHAPTER 1

Introduction

Bismarck and Burleigh County have been growing rapidly for the past thirty years, and that growth will likely be maintained, or even accelerate in the years ahead. Bismarck's nearness to energy development in Western North Dakota, as well as continued rural-to-urban migration and state government growth will all contribute to an expanding population in Bismarck and Burleigh County.

This booklet, together with a booklet printed in January 1980 and a set of goals and policies adopted in late 1980 and early 1981, constitute the Comprehensive Plan for Bismarck and Burleigh County. In the first brochure, "Growth Management Considerations," existing and historical growth statistics, growth limiting factors, and alternative future city patterns were discussed. In this brochure, new growth projections, methods of managing that growth, and future planning are presented. The purpose of the Bismarck/Burleigh

The legal authority for comprehensive planning is set forth in Sections 40-47-03 and 11-33 of the North Dakota Century Code. These sections state that zoning in cities and counties shall be done in accordance with a comprehensive plan which "... shall be a statement in documented text

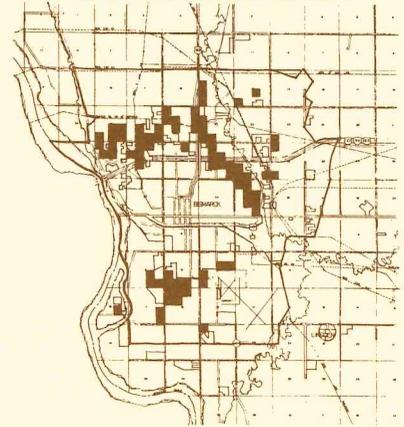
County Comprehensive Plan is to manage future growth, determine public investment priorities, and maintain the high quality of life enjoyed by area residents.

Since the publication of the first booklet, a general pattern for the Bismarck of the future has been chosen. This alternative would attempt to guide growth into areas that are relatively near the city. 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. The goals and policies for the city and county have been written to reflect this choice.

The format of this booklet, following the introduction, contains four sections. First, the most recent growth statistics for Bismarck are presented. Included are population and land use projections for the next twenty years and updated growth information. Following the presentation of growth projections

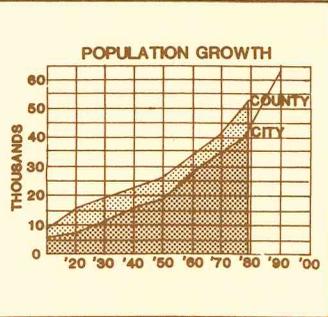
setting forth explicit goals, objectives, policies, and standards of the jurisdiction to guide public and private development within its control." The adopted goals and policies fulfill this requirement, with the two booklets serving to condense and explain the policies in narrative and graphic form.

ALTERNATIVE 'B' - GUIDE GROWTH INTO THE URBAN SERVICE AREA



is a section describing the six planning areas and how each could handle future growth. The third section deals with the possible future form of planning for Bismarck and Burleigh County, including the possibility of metropolitan planning. Finally, there is an appendix which complements the text material in the brochure, including a list of reports and studies of the area, a proposed capital improvement plan, and a composite land use plan for the Bismarck area.

It is hoped that the two booklets and the goals and policies which comprise the Bismarck/Burleigh County Comprehensive Plan will serve as a chart for future public works and public investments, as well as general guidelines for private investment and land use.



CHAPTER 2 Population & Land Use Projections

The previous booklet "Growth Management Considerations" discussed historical growth statistics for Bismarck and Burleigh County, including population, building permits, employment, and number of housing units. Updated information, taken from the 1980 census, has been added to these growth statistics. Generally, growth has continued at a rapid pace through the late

1970's.

Population in the city has grown by 9,782 people since 1970 for an average annual increase of 2.8%. However, growth accelerated in the last half of the decade. An average annual increase of 1.8% was recorded for the years 1970-1975, with population increasing at an annual rate of 3.7% from 1975 to 1980. The

county as a whole gained 14,097 people during the 1970's for an average annual increase of 3.5%. Growth also accelerated from 1975-1980, with an annual rate of 5.1% compared to the average annual increase of 2.4% during the 1970-1975 time period.

The building permits issued in the city and county have shown a steady increase in value during the

**GROWTH IN BISMARCK-BURLEIGH COUNTY
1940-1980**

	1940	1950	1960	1970	1975	1980
County Population	22,736 (32%)	25,673 (28%)	34,016 (19%)	40,714 (15%)	46,079 (18%)	54,811 (19%)
City Population	15,466 (68%)	18,640 (72%)	27,670 (81%)	34,703 (85%)	38,123 (82%)	44,485 (81%)
Value of						
County/2-Mile Area Building Permits	--	--	\$81,300	\$826,162	\$4,181,135	\$4,610,795
City Building Permits	--	--	\$8,857,988	\$7,629,178	\$41,080,023	\$35,895,275
County/2-Mile Area						
Plats Approved	0	0	0	1	15	12
City						
Plats Approved	1	2	2	6	13	17
County Employment						
	--	2,482	2,096	1,938	2,878	2,251
City Employment						
	--	7,657	10,782	13,928	19,180	23,840
County Housing Units						
	--	--	2,945	1,145	--	3,445
City Housing Units						
	--	--	7,366	11,484	14,768	17,393
County Population Density (Persons Per Square Mile)						
	13.8	15.6	20.6	24.7	27.9	33.3
City - Average Number of Persons per Housing Unit						
	--	--	3.76	3.02	2.58	2.56

PROJECTED POPULATION INCREASES - CITY OF BISMARCK, NORTH DAKOTA

	1980	1985			1990			1995			2000		
GROWTH RATE	--	2.7%	3.1%	3.6%	2.8%	3.3%	3.8%	2.5%	3.0%	3.5%	2.2%	2.7%	3.2%
POPULATION INCREASE (from 1980)	--	6,339	7,336	8,605	13,864	16,470	19,488	21,532	26,178	31,495	29,121	36,247	44,456
TOTAL POPULATION	44,485	50,824	51,821	53,090	58,349	60,955	63,973	66,017	70,663	75,980	73,606	80,732	88,941
ACREAGE REQUIRED		959	1110	1303	2097	2492	2950	3257	3962	4766	4408	5485	6727

1970's. Burleigh County registered more than a five-fold increase since 1970, with Bismarck permits increasing in value by over four times. However, the city values in 1980, as shown on the table, reflect the general turndown in economic conditions.

The number of plats approved, employment levels, and housing units all registered major gains since 1970. Another measurement that indicates the growth in the

area is the population density in the county, or the number of persons per square mile. Burleigh County as a whole contained an average of 24.7 persons per square mile in 1970, increasing to 33.3 persons per square mile by 1980. The last statistic on the table is the average number of persons per housing unit in the city. A steady decline in household size can be discerned, with 2.56 persons per unit compared to 3.76 persons in 1960. This decline is reflected in

the national trend toward smaller families and the greater proportion of single-person households.

The accompanying table contains population and land use projections from 1980 to the year 2000, in 5-year increments. Three different levels of population increases are used for each 5-year period, ranging from a low of 2.2% to a high of 3.8%. Generally the projections assume an accelerated growth rate from

BISMARCK - EMPLOYMENT Category	1950		1960		1970		1980*	
	No.	%	No.	%	No.	%	No.	%
Agriculture, Forestry & Fisheries	117	1.5	144	1.3	188	1.4	--	--
Mining	36	.5	154	1.4	30	.2	160	.7
Construction	704	9.2	989	9.2	1,454	10.4	1,700	7.1
Manufacturing	424	5.6	712	6.6	797	5.7	1,280	5.4
Transportation, Communication & Utilities	830	10.8	743	6.9	1,086	7.8	1,840	7.7
Wholesale Trade	499	6.5	592	5.5	696	5.0	1,370	5.7
Retail Trade	1,735	22.7	2,290	21.2	2,823	20.3	4,910	20.6
Finance Insurance & Real Estate	346	4.5	760	7.1	793	5.7	1,100	4.6
Services	1,718	22.4	2,502	23.2	3,891	27.9	5,690	23.9
Government	1,248	16.3	1,896	17.6	2,170	15.6	5,790	24.3
TOTAL	7,657	100%	10,782	100%	13,928	100%	23,840	100%
BURLEIGH COUNTY - EMPLOYMENT								
Agriculture, Forestry & Fisheries	1,795	72.3	1,274	60.8	754	38.9	114	5.1
Mining	5	.2	4	.2	15	.7	120	5.3
Construction	127	5.1	101	4.8	146	7.6	216	9.6
Manufacturing	13	.5	36	1.7	44	2.3	76	3.3
Transportation, Communication & Utilities	86	3.5	43	2.1	35	1.8	141	6.3
Wholesale Trade	41	1.7	47	2.2	57	2.9	419	18.6
Retail Trade	182	7.3	218	10.4	268	13.8	582	25.9
Finance, Insurance & Real Estate	11	.4	36	1.7	42	2.2	175	7.8
Services	84	3.4	160	7.6	393	20.3	323	14.3
Government	138	5.6	177	8.5	184	9.5	85	3.8
TOTAL	2,482	100%	2,096	100%	1,938	100%	2,251	100%
GRAND TOTAL (CITY & COUNTY)	10,139	--	12,878	--	15,866	--	26,091	--

*Job Service annual employment data

1985-1990 due to energy development, and a slowly declining percentage rate to the year 2000 because of an increasing population base.

The land use projections, or the land that will be required for new homes, commercial and industrial facilities, streets, and parks are directly related to the population figures. To determine the amount of land required for a particular population increase, an average of the latest Bismarck land use figures and federal government guidelines was arrived at. The average, expressed in terms of acreage required per 1,000-person increase, was then multiplied by the population number to arrive at the final estimation. As shown on the table, a total of 4,408 to 6,727 additional acres of land will be needed by the year 2000 if Bismarck grows at the rates indicated.

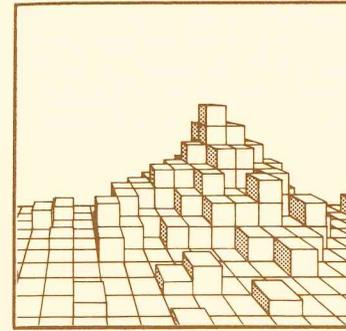
In January 1983, an inventory of the vacant residential, commercial, and industrial lots was completed. The results, which are illustrated on the accompanying table, indicate that Bismarck has an ample supply of vacant lots which should provide for several years of development. Additional annexations of undeveloped property, or land that has not been platted, provide even more land to accommodate the growth of the city. For example, the 2,042 residential vacant lots in the survey could handle a minimum of 9,400 additional people based on the 1980 average household size and the various residential zoning densities. In other words, the existing supply of vacant residential lots, added to the 1980 population, could accommodate a total city population of 53,885. This total exceeds the highest population level projected for the year 1985.

JANUARY 1983 VACANT LOT INVENTORY

PUBLIC IMPROVEMENTS IN PLACE

LOT ZONING	VACANT LOTS	WATER	SEWER	CURB & GUTTER	PAVING
RR	2	X	X	X	X
Total	2				
R5	6	X	X		X
R5	722	X	X	X	X
R5	48	X	X		
R5	522				
R5	24		X		
R5	6				X
Total	1328				
R10	106	X	X	X	X
R10	44				
R10	5	X			
R10	3	X	X		
Total	158				
RM	145	X	X	X	X
RM	221				
RM	24	X	X		
RM	1	X	X		X
RM	6		X		
RM	1	X			
Total	398				
RMHC	64				
Total	64				
RT	37	X	X	X	X
RT	6	X	X		
RT	49				
Total	92				
MA	175	X	X	X	X
MA	38	X	X		
MA	21		X		
MA	14	X			
MA	167				
Total	415				
CG	137	X	X	X	X
CG	15	X	X		
CG	8	X			
CG	52				
Total	212				
CA	6	X	X	X	X
CA	4	X	X		
CA	1	X		X	X
CA	5				
Total	16				
PUD	31	X	X	X	X
Total	31				

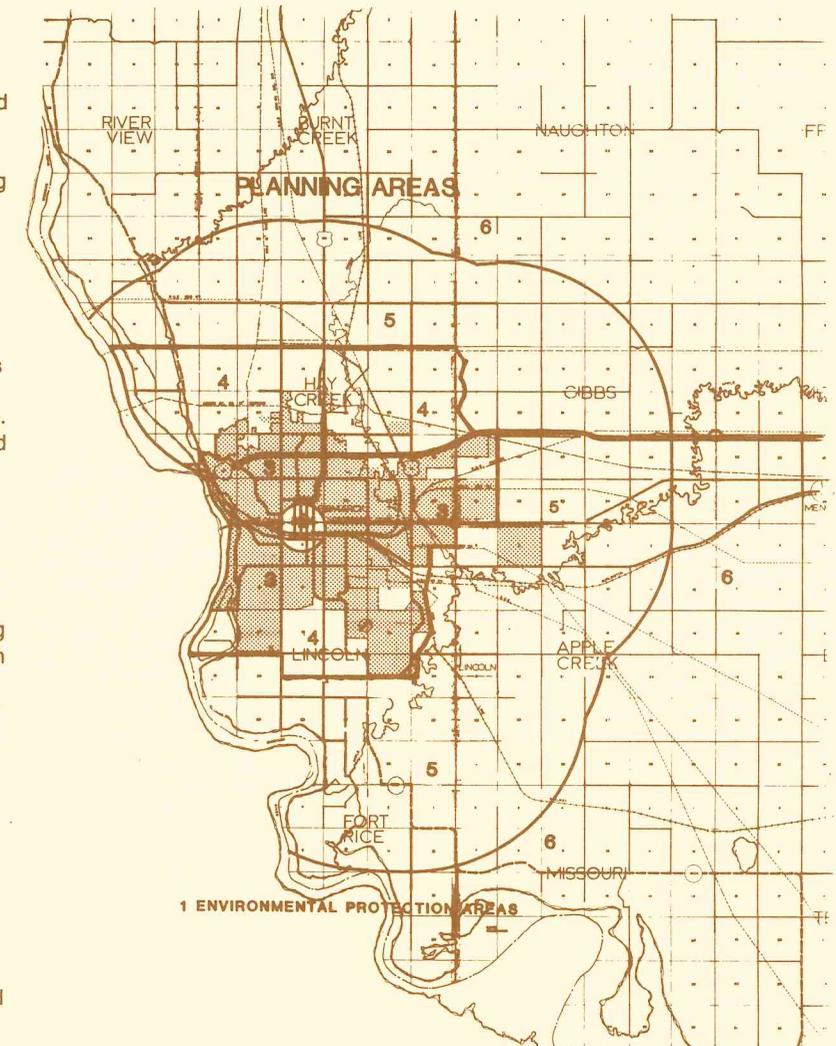
TOTALS:	
Residential	2042 Lots
Commercial	228 Lots
Industrial	415 Lots
Planned Unit Development	31 Lots
Total	2716 Total Lots



CHAPTER 3 Planning Areas

With estimates of Bismarck and Burleigh County's future growth made, the next step in the planning process is to identify and describe functional and geographic areas. The identification of separate planning areas allows the use of different growth management techniques. Taken together, these management techniques can be used to achieve the goals and policies of the Comprehensive Plan. The approach which follows is a framework within which the Comprehensive Plan is structured. Since comprehensive planning and growth management is an ever changing process, the areas suggested can be increased or decreased in number, size and characteristics as Bismarck and Burleigh County conditions change. City and county governing boards may implement changes in the Comprehensive Plan through suggestions from city and county staff and area residents.

By using the following management techniques within each area, growth can be accommodated in an efficient manner. Without guidelines for development, expanding urban sprawl and increasingly scattered development can result in costly provisions for public facilities and services, loss of productive agricultural lands, inefficient use of public investment in built-up



areas, loss of open space and environmentally sensitive land, and increased rates of taxation.

Growth management strategies can be most effective if it is recognized that Bismarck and its environs are not a homogenous area. Rather, a total of six distinct functional and geographic areas have been identified for planning purposes. These are:

- Area One - Environmental Protection Areas
- Area Two - Central City
- Area Three - Developed Urban Area
- Area Four - Urbanizing Fringe/ Urban Service Area
- Area Five - Rural Residential/ Urban Transition Area
- Area Six - Rural Areas

Within each of these planning areas, to varying degrees, two types of constraints will affect the intensity and location of development. Environmental constraints include such factors as airport noise, floodplains and floodways, topography, and soil suitability. The second type of constraint is economic. The construction of utility extensions — water reservoirs and treatment plant additions, pump stations, and sewer and water lines will determine whether a particular area can develop at urban densities. Also, the city and county have to consider the costs of road construction and maintenance, police and fire protection, schools, and recreational facilities. Costs for these services must be balanced against the increased tax base for potential development locations.

AREA ONE— ENVIRONMENTAL PROTECTION AREAS

Environmental protection areas can be found in all the planning

areas, i.e. they overlay all the other districts. These areas contain special considerations which require careful development or even prohibit further development. Airport noise, floodplains, topography, soil suitability, and unique or historical sites are the major considerations in this category.

Airport noise, or Ldn level, is the amount of noise created by aircraft landings and takeoffs at the Bismarck Municipal Airport. At a certain distance from the airport runways, the noise level becomes a great enough nuisance to require controls in the type of land use in high noise zones. Generally, residential development is prohibited in these areas although commercial and industrial development is allowed. Airport noise zones mainly impact the southeastern part of Bismarck.

Floodplains are areas that may be covered by water if rivers or streams overflow their banks. Floodplain regulations in Bismarck and Burleigh County use the term 100-year flood, which is the maximum water coverage of a flood that has a chance of happening once in 100 years. Floodways are areas that will actually carry the increased flow of the river or stream when it floods, and thus would be more hazardous than a floodplain. Generally, no construction is allowed in a floodway and construction in floodplains must be elevated above the flood level. Areas in south and east Bismarck are affected by the Missouri River, as well as Apple Creek and Hay Creek.

Topography, or the severity of the terrain, can be a less restrictive environmental factor if it is considered in the design of the development. Obviously as land

becomes more hilly, it is more difficult to develop. Often-times, higher density housing is constructed on difficult terrain because of higher improvement costs and the scarcity of buildable land. High elevations also require construction of additional water reservoirs in order to provide sufficient water pressure. North and northwest Bismarck are the areas most affected by varied topography. The flat terrain of south Bismarck makes it difficult and expensive to provide an effective urban drainage system.

Soil suitability is the ability of different soil types to support development. The amount and quality of underground water, and the ability of the soil to absorb storm water runoff and septic tank waste are the major considerations in Bismarck and Burleigh County regulations. Soil suitability is mainly a factor in rural areas that will be developed with individual water and sewer service on-site, i.e. Area Five - Urban Transition Area, and Area Six - Rural Area. Soil types vary from location to location and should be tested prior to any development.

Other considerations include the Oahe game preserve and reservoir area south of Bismarck. The area has been acquired by the federal government and private development is prohibited. The Cathedral Area Historic District is an area near downtown Bismarck which contains many fine examples of older homes. The area is recognized by the federal and state governments as a unique area within which historic features should be preserved.

AREA TWO — CENTRAL CITY

The central city planning area is the oldest part of the city — the

downtown and its surrounding residential area. This area is both a challenge and an opportunity. Urban facilities such as sewer, water, paved streets, and street lights are already in place. However, recent economic trends have led to a loss of much retail activity, and the age and condition of many structures require rehabilitation and redevelopment. Since the urban services are in place and travel distances are minimal, it is recommended that where feasible, structures be reused or developed at higher densities and that any vacant parcels be developed as infill property. The available buildings and vacant parcels offer opportunities for office and retail development, and the conversion or creation of housing opportunities in the area could accommodate additional population growth.

AREA THREE — DEVELOPED URBAN AREA

The developed urban area is the remainder of the city limits beyond the central core area. It is similar to the central city in that urban services are in place and urban densities have been achieved. The area is dissimilar in that densities are comparatively lower, age of structures is not as high, and economic growth has been faster. However, the redevelopment and infill recommendations are the same as in the central city area. It is estimated that there are over 1,000 fully serviced residential lots in the city, which could handle approximately 4,250 additional people. Also, there are many additional platted lots which have partial services or could be serviced in the near future. There are over 2,000 total platted lots (serviced and unserviced) within the city limits which could

acomodate a minimum of 9,400 additional people.

AREA FOUR — URBANIZING FRINGE

The urbanizing fringe, or the urban service area, is an area near the city (ranging from one-half to two miles from city limits) that has been master planned for water and sewer lines and major streets. The Board of City Commissioners approved the urban service area boundaries in 1979. It is an area that will accommodate much of the urban growth of Bismarck and will gradually be extended the full range of urban services. Because of its potential urban nature, rural water service has not been allowed, plats must show the future resubdivision of lots, and development in general is encouraged. Large-lot rural subdivisions will be allowed in this area, as long as conversion to urban lots is possible. It is estimated that the vacant acreage in the urban service area will, even at a low density, accommodate at least an additional 30,000 persons. Adding 30,000 people to 1980's population of 44,485 would result in a total population of approximately 75,000, which is projected for the 1995-2000 time period.

AREA FIVE — RURAL RESIDENTIAL

The rural residential, or urban transition area, extends beyond the urban service area, generally to a distance of four (4) miles from the city limits. This is an area that is in transition from a rural area to a developing residential area. Approximately 80% of Bismarck's large-lot residential satellite subdivisions are found here. The Comprehensive Plan has designated this area for persons who wish a rural residential lifestyle, as well as land for urban growth in the distant future. As

in the urban service area, rural subdivisions are allowed in the area. In addition, because of the rural nature of the area, rural water service is allowed. There are over 50,000 acres of land in the urban transition area — if only one-half of the acreage is developed at one person per acre, 25,000 additional persons could be accommodated.

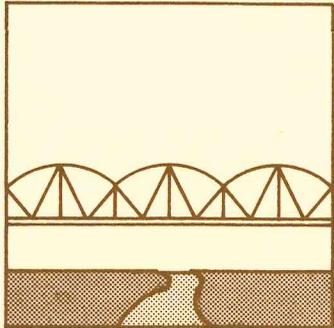
AREA SIX — RURAL AREA

The rural area encompasses the rest of Burleigh County beyond the urban transition area and outside the other cities and villages of the county. This area has been, and will continue to be a predominately agricultural and open area with scattered pockets of residential development. It is recommended that subdivisions be allowed only in special cases, with the rural and farming nature of the area preserved. Development within or near the other cities and villages of Burleigh County is encouraged, as it is in the Bismarck area.

The growth management strategies in the six planning areas exemplify the major goal of the Comprehensive Plan — to encourage development to locate near the cities and villages of Burleigh County and to discourage urban sprawl. Care should be taken to preserve the rural areas of the county, with periodic adjustments made to the urban service and transition areas as Bismarck expands. As seen in the descriptions of the planning areas, at least twenty (20) years of Bismarck growth can be accommodated within the corporate limits and the urban service area. An ultimate population of 88,000 could be achieved if the most rapid projections are realized.

PLANNING AREAS SUMMARY

AREA	DESCRIPTION	OBJECTIVES	STUDIES/DATA	GROWTH MANAGEMENT TECHNIQUES
I - Environmental Protection Areas	Overlays all other areas and delineates land unsuited for development or that requires special studies for development such as flood plains, steep slopes, airport noise zones, soil conditions, etc.	<ol style="list-style-type: none"> 1. Identify restricted development lands to protect health and safety, provide parks and recreation areas, and preserve natural and unique resources of the Bismarck area 	<ol style="list-style-type: none"> 1. Soils survey 2. Floodplain study 3. Airport noise study 4. Storm sewer master plan 5. Park plan 6. Zoning Ordinance 	<ol style="list-style-type: none"> 1. Floodplain zoning 2. P.U.D.'s 3. Grading permits 4. Airport noise study 5. Zoning 6. Site plan approvals 7. Subdivision regulations
II - Central City and III - Developed Urban Area	The central business district and surrounding mixed housing - receives all urban services The built-up area within the city limits, primarily residential - receives all urban services	<ol style="list-style-type: none"> 1. Encourage reinvestment, redevelopment and infill of vacant, bypassed parcels 2. Create new housing opportunities 3. Reduce fiscal pressure on the city by developing where public facilities and services are already available 	<ol style="list-style-type: none"> 1. Identify vacant and underutilized land available for development 2. Determine capacities of public facilities and utility systems 3. Urban renewal plan 4. Traffic study 5. Sanitary Landfill Master Plan 6. Zoning Ordinance 	<ol style="list-style-type: none"> 1. Capital improvements programming 2. Housing and redevelopment plans 3. Incentive zoning 4. Housing and commercial rehabilitation and expansion 5. Zoning 6. Subdivision regulations 7. Park redevelopment and improvements 8. School redevelopment and improvements
IV - Urban Service Area	The urbanizing fringe, contiguous with city boundaries - will be extended urban services	<ol style="list-style-type: none"> 1. Open up land for development near the city 2. Provide for the short term expansion of Bismarck 3. Extend facilities and services in a staged, contiguous manner 4. Provide for balanced housing and land use 	<ol style="list-style-type: none"> 1. Sewer and Water Master Plan 2. Street and Highway Master Plan 3. Zoning Ordinance 	<ol style="list-style-type: none"> 1. Capital improvements programming 2. Zoning 3. Subdivision regulations 4. Master street planning 5. Park and open space master planning 6. School property planning/acquisition
V - Urban Transition Area	The rural residential area, generally within four (4) miles of city limits - may be extended urban services	<ol style="list-style-type: none"> 1. Provide for medium long-range expansion of Bismarck 2. Provide for large-lot, rural residential life-style 3. Encourage development within an area relatively near the city 4. Plan for eventual extension of city facilities and services 	<ol style="list-style-type: none"> 1. Land use 2. Street and Highway Master Plan 3. Sewer and Water Master Plan 4. Zoning Ordinance 	<ol style="list-style-type: none"> 1. Zoning 2. Subdivision regulations 3. Master street planning 4. Park and open space master planning 5. School property planning/acquisition
VI - Rural Area	Agricultural, open space lands beyond the urban transition area	<ol style="list-style-type: none"> 1. Prevent premature development 2. Limit sprawl and leapfrog development which would fiscally strain the city and county's ability to provide services 3. Protect productive agricultural land 4. Protect rural life-style 	<ol style="list-style-type: none"> 1. Soils survey 2. Water availability/quality 3. Ownership/acreage data 4. Land use 5. Zoning Ordinance 	<ol style="list-style-type: none"> 1. Zoning 2. Subdivision regulations 3. Preferential tax assessments



CHAPTER 4

Conclusion

The Bismarck/Burleigh County Comprehensive Plan is comprised of goals and policies which set forth the kind of community desired in the future. The plan is intended to be used as a framework for community needs that cannot be provided for on an individual basis. The Comprehensive Plan can be carried out in two ways: the provision of public services and the regulation of land use. The provision of public services includes such things as: police and fire protection, schools, recreational areas, sewer and water utilities, and street and highway construction and maintenance. In order to provide efficiently for public services to serve a growing population, the City of Bismarck has adopted a capital improvements program. This program is essentially a financial plan for certain public physical improvements which allows the city to budget its capital expenditures over a period of time. A copy of the capital improvements program for Bismarck, covering the years 1983-1986, is included in the appendix to this booklet. It is recommended that the capital improvement plan be updated periodically and used by the city to coordinate its financial planning with the policies of the Comprehensive Plan.

The other method of implementing the Comprehensive Plan is through the regulation of land use. By limiting the actions of individuals, comprehensive planning protects established areas. The plan should promote the broad interests of the citizens in Bismarck and Burleigh County. Methods of regulating property include: zoning, subdivision controls, health regulations, building permits, and housing codes. Bismarck and Burleigh County, through the efforts of a combined city-county planning department and building inspector, utilize the following planning methods: a recently rewritten zoning and subdivision ordinance, sewer and water master plans, capital improvements program, and master street and highway plans. A listing of these and other studies is included in the appendix of this booklet.

In 1978, the combined population of Burleigh and Morton Counties reached 75,993, which qualified the area to be considered a Standard Metropolitan Statistical Area (SMSA). As the Bismarck-Mandan area continues to grow, it will become important to handle common problems on a metropolitan basis, rather than on an individual basis. Areas of potential planning cooperation between Burleigh and Morton Counties include transportation

improvements, shared services, and combined law enforcement capabilities.

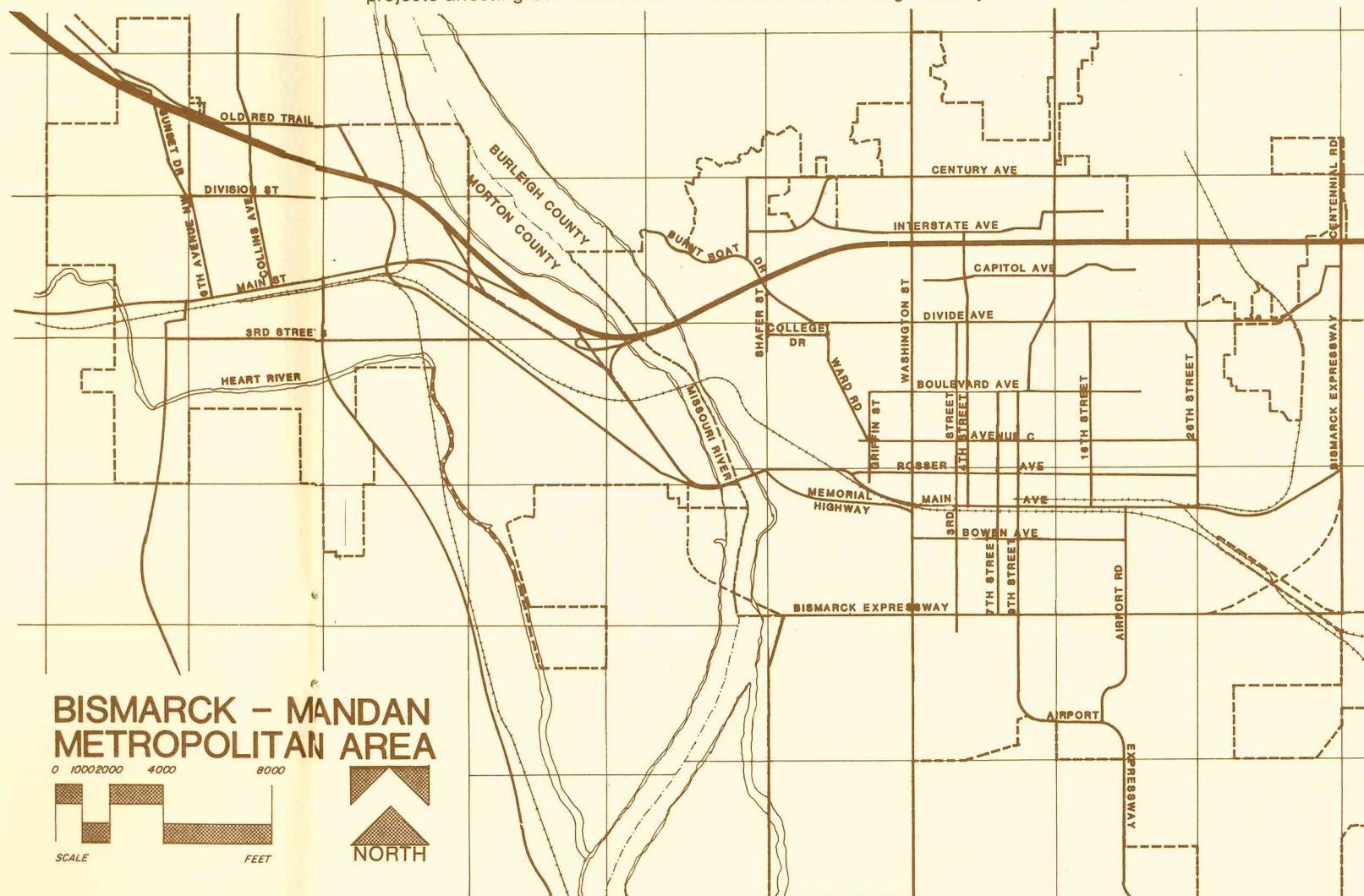
In 1982, preliminary efforts were made to form a Metropolitan Planning Organization (MPO). The MPO will basically consist of an agreement between the Cities of Bismarck and Mandan to cooperate in the application for and administration of federal grants. The planning and construction of bridges, highways and other regional transportation projects affecting both cities will

be the initial major concerns of the organization.

This booklet has discussed how the Bismarck area may grow in the next 20 years, the amount of land that will be needed to accommodate the growth, and the methods of managing the growth efficiently. This booklet, together with that printed in 1980, serves as a background and explanation of the goals and policies previously adopted. The package completes the Comprehensive Plan for Bismarck and Burleigh County. It

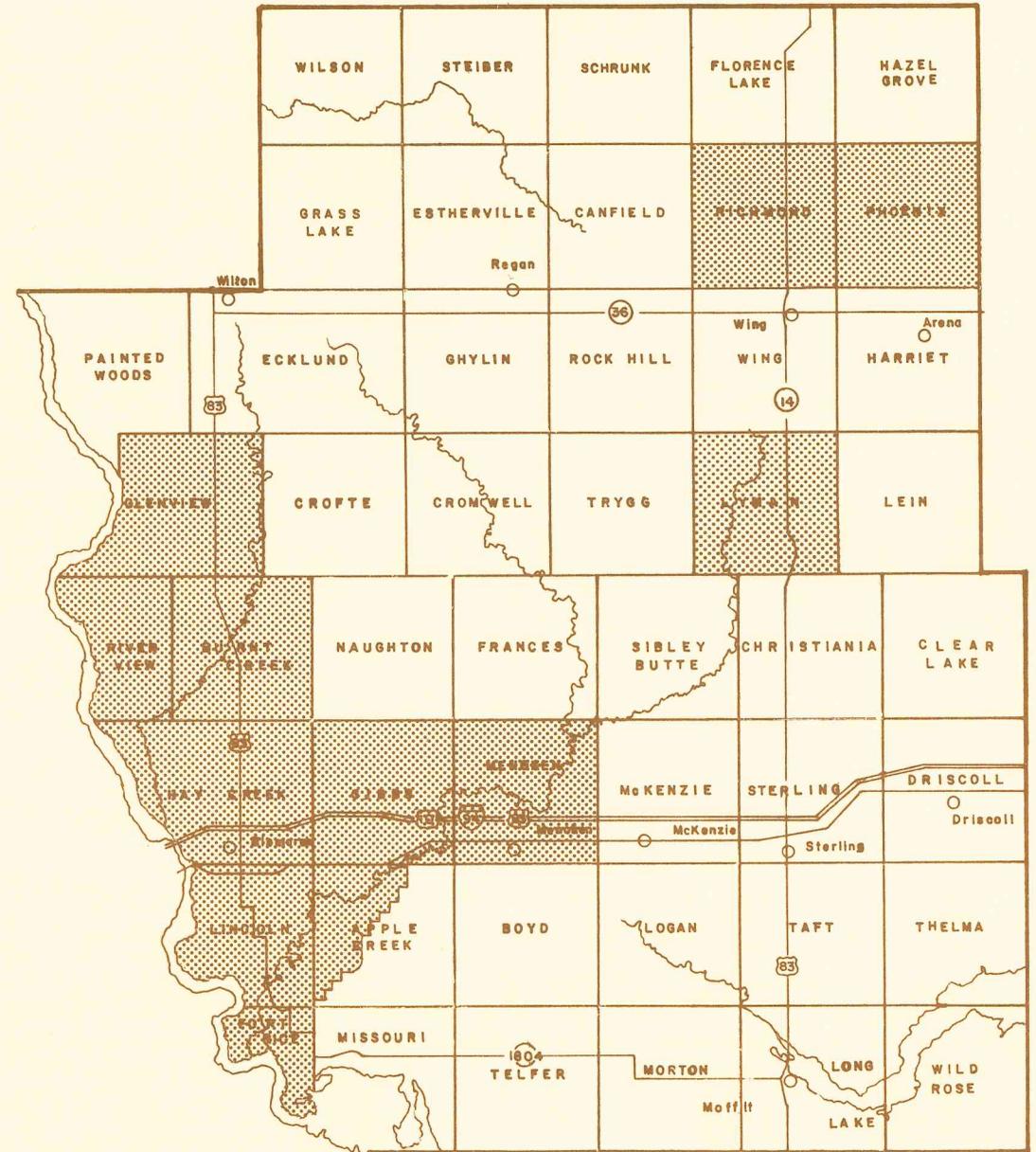
is recommended that the Comprehensive Plan be updated on a regular schedule, or as circumstances change. It is a flexible guide to making planning decisions rather than a static master plan document.

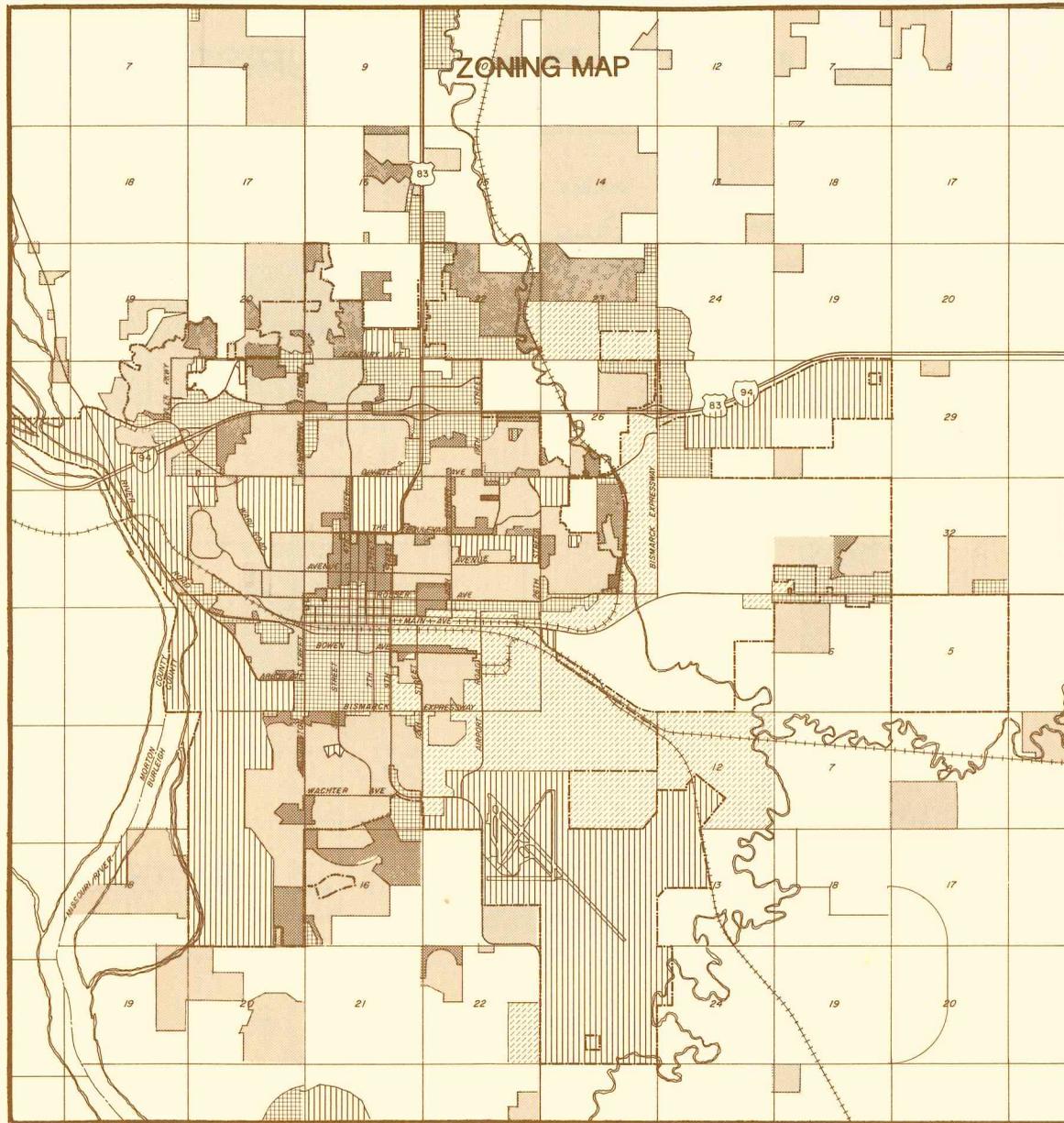
We would like your comments on this and future reports. Copies of this booklet will be available at various public places as well as the Bismarck/Burleigh County Planning Department at 209 North 7th Street in Bismarck. Our phone number is 222-6447.



Appendix

BURLEIGH COUNTY PLANNING JURISDICTION



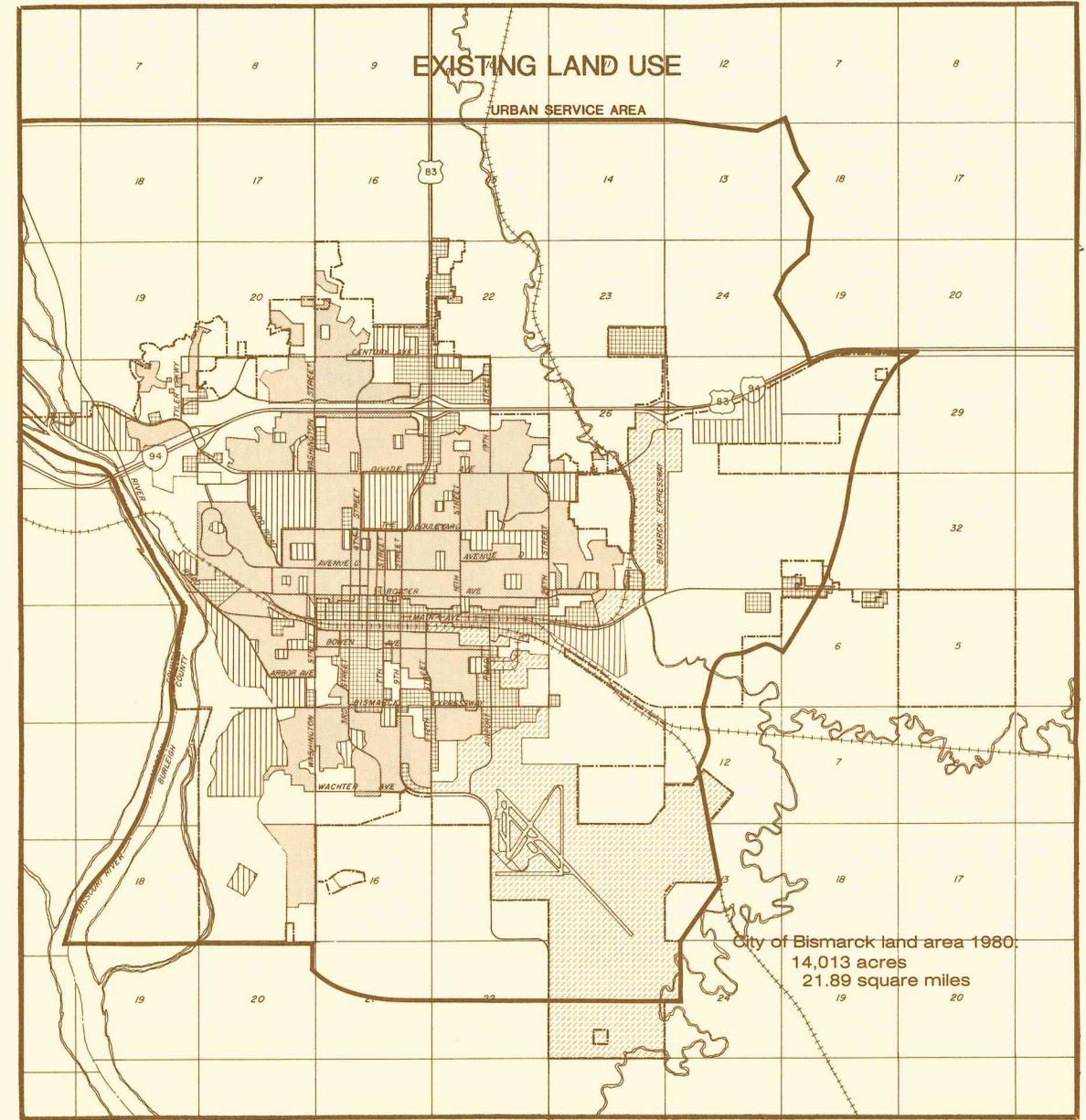


LEGEND

0 1/4 1/2 1 2		
SCALE	MILES	NORTH

	SINGLE & TWO-FAMILY RESIDENTIAL		PUBLIC
	MULTI-FAMILY RESIDENTIAL		AGRICULTURAL
	COMMERCIAL		
	INDUSTRIAL		

SOURCE: OFFICIAL ZONING MAP OF THE CITY OF BISMARCK - 1982



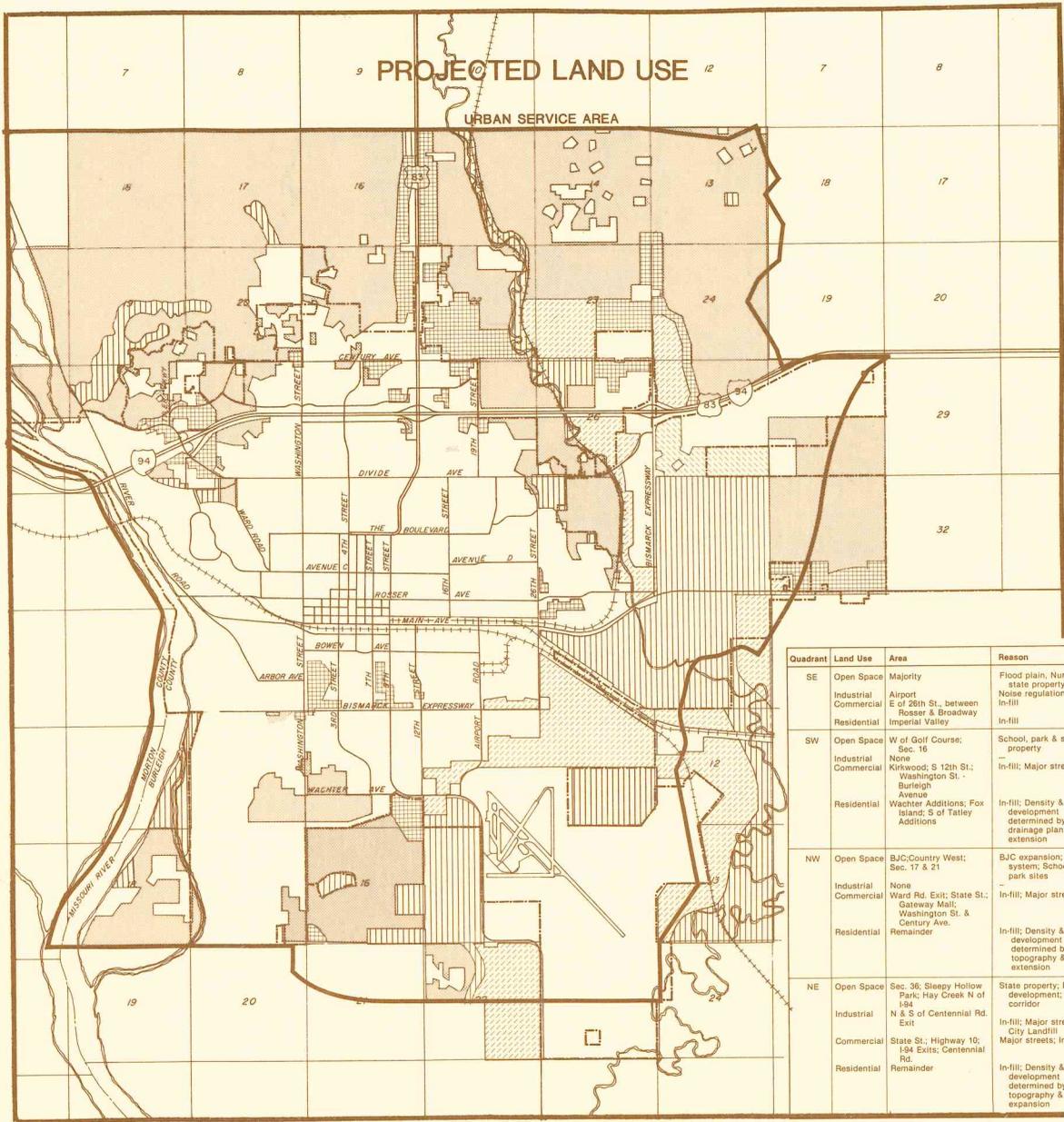
LEGEND

0 1/4 1/2 1 2		
SCALE	MILES	NORTH

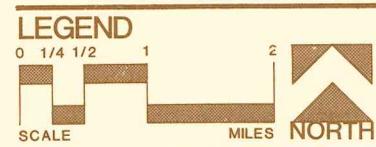
	RESIDENTIAL	4112 ACRES
	COMMERCIAL	754 ACRES
	INDUSTRIAL/TRANSPORTATION	1773 ACRES
	PARK/PUBLIC	1717 ACRES
	OPEN SPACE/UNDEVELOPED	4304 ACRES

City of Bismarck land area 1980:
14,013 acres
21.89 square miles

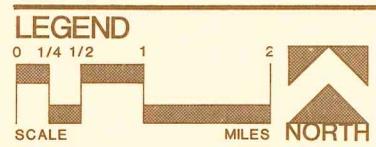
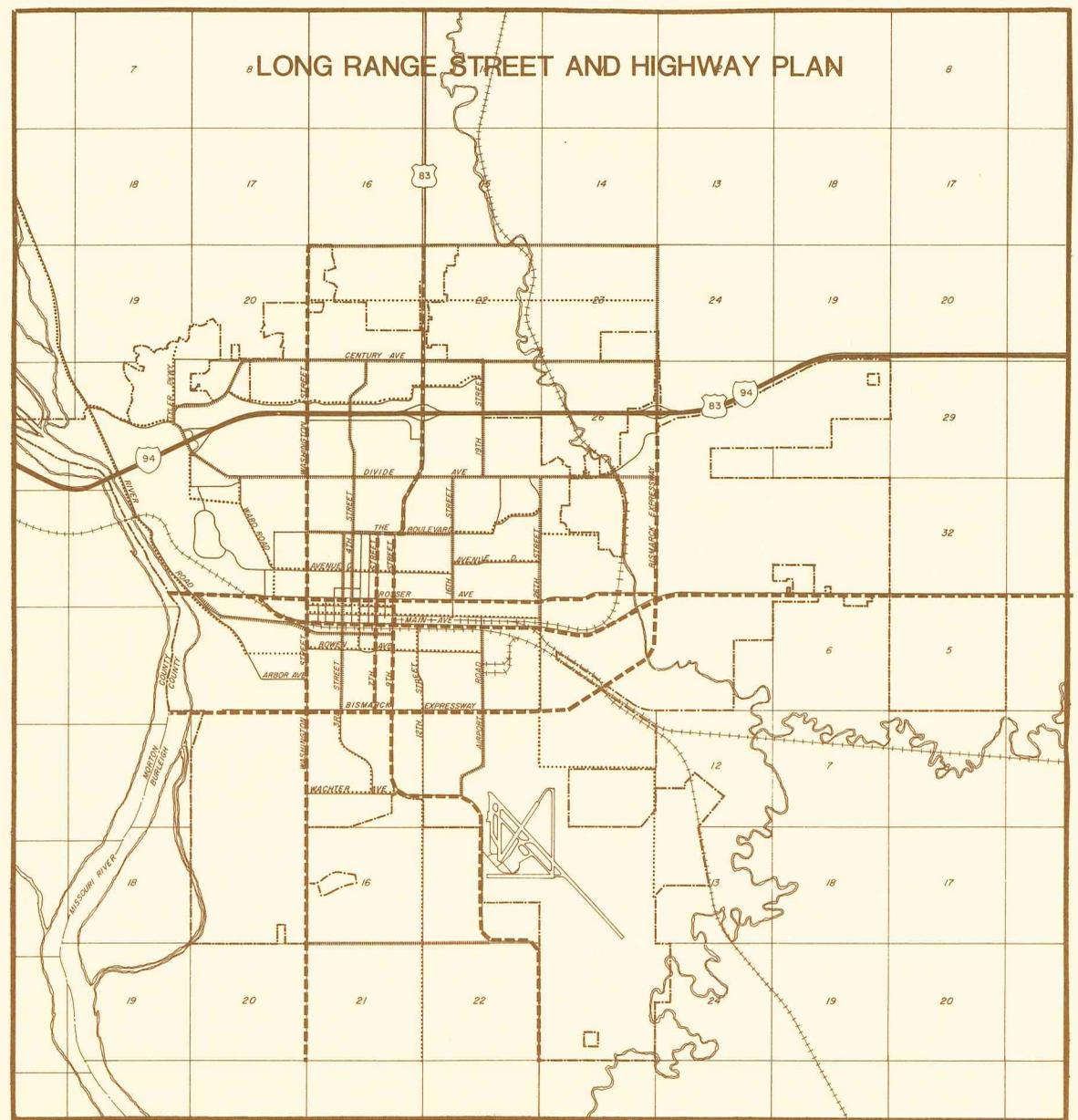
SOURCE: BISMARCK-BURLEIGH COUNTY PLANNING DEPARTMENT - 1982



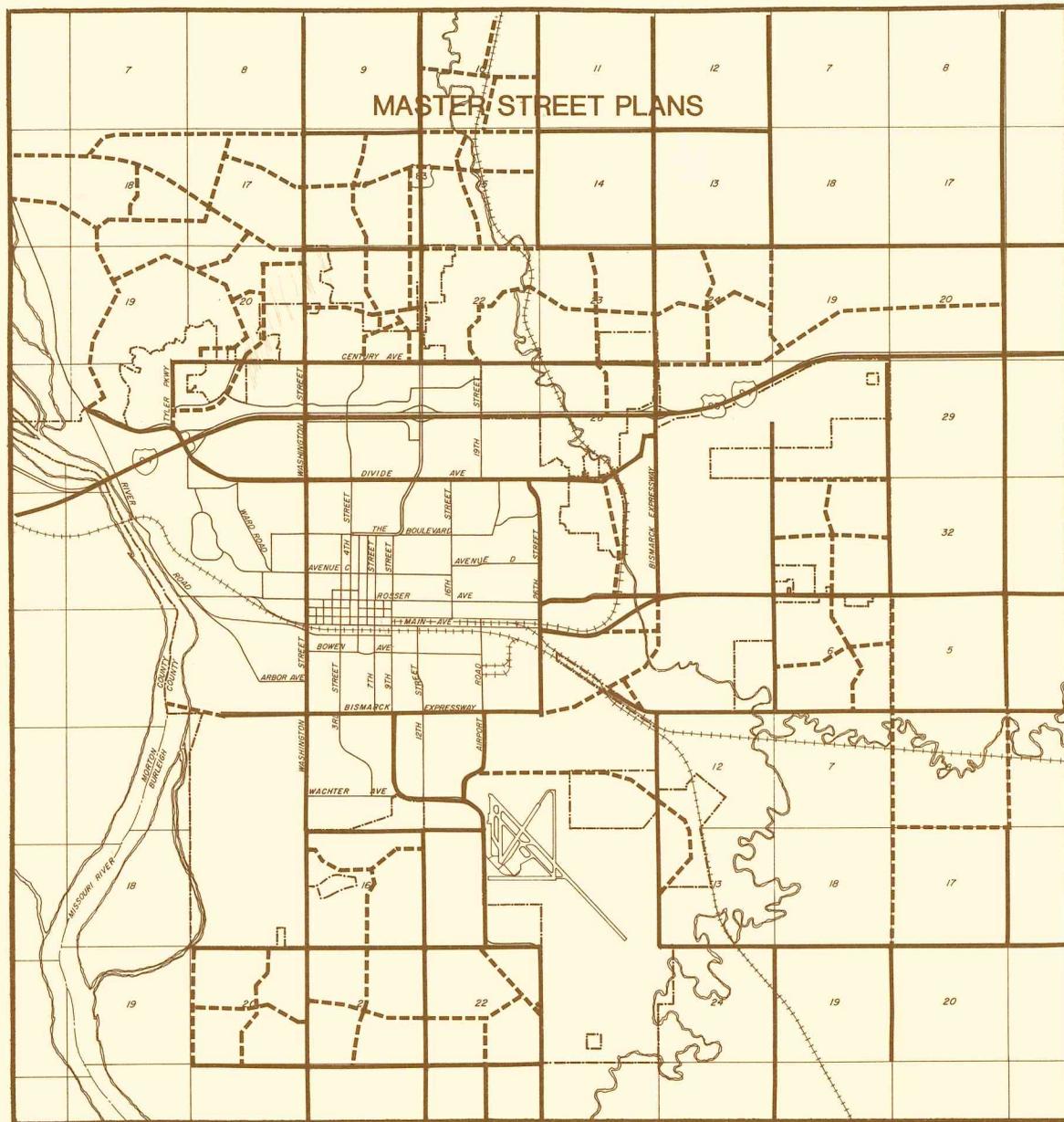
Quadrant	Land Use	Area	Reason
SE	Open Space	Majority	Flood plain, Nursery State property
	Industrial	Airport	Noise regulations; In-fill
	Commercial	E of 28th St., between Rossar & Broadway	Imperial Valley In-fill
SW	Open Space	W of Golf Course; Sec. 16	School, park & state property
	Industrial	None	
	Commercial	Kirkwood; S 12th St.; Washington St. - Burleigh Avenue	In-fill; Major streets
NW	Open Space	Wachter Additions; Fox Island; S of Tatley Additions	In-fill; Density & development determined by drainage plan & utility extension
	Industrial	None	
	Commercial	B/C Country West; Sec. 17 & 21	In-fill; Major streets
NE	Open Space	Ward Rd. Exit; State St.; Gateway Mall; Washington St. & Century Ave.	In-fill; Major streets
	Industrial	None	
	Commercial	State St.; Highway 10; I-94 Exits; Centennial Rd.	In-fill; Density & development determined by topography & utility expansion
Residential	None		
	None		
	None		



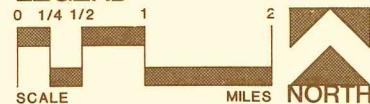
RESIDENTIAL
 COMMERCIAL
 INDUSTRIAL/TRANSPORTATION
 PARK / PUBLIC
 OPEN SPACE / UNDEVELOPED
 SOURCE: BISMARCK-BURLEIGH COUNTY PLANNING DEPARTMENT - 1982



INTERSTATE
 PRINCIPAL ARTERIAL
 MINOR ARTERIAL
 COLLECTORS
 SOURCE: STREET AND HIGHWAY PLAN UPDATE - 1981

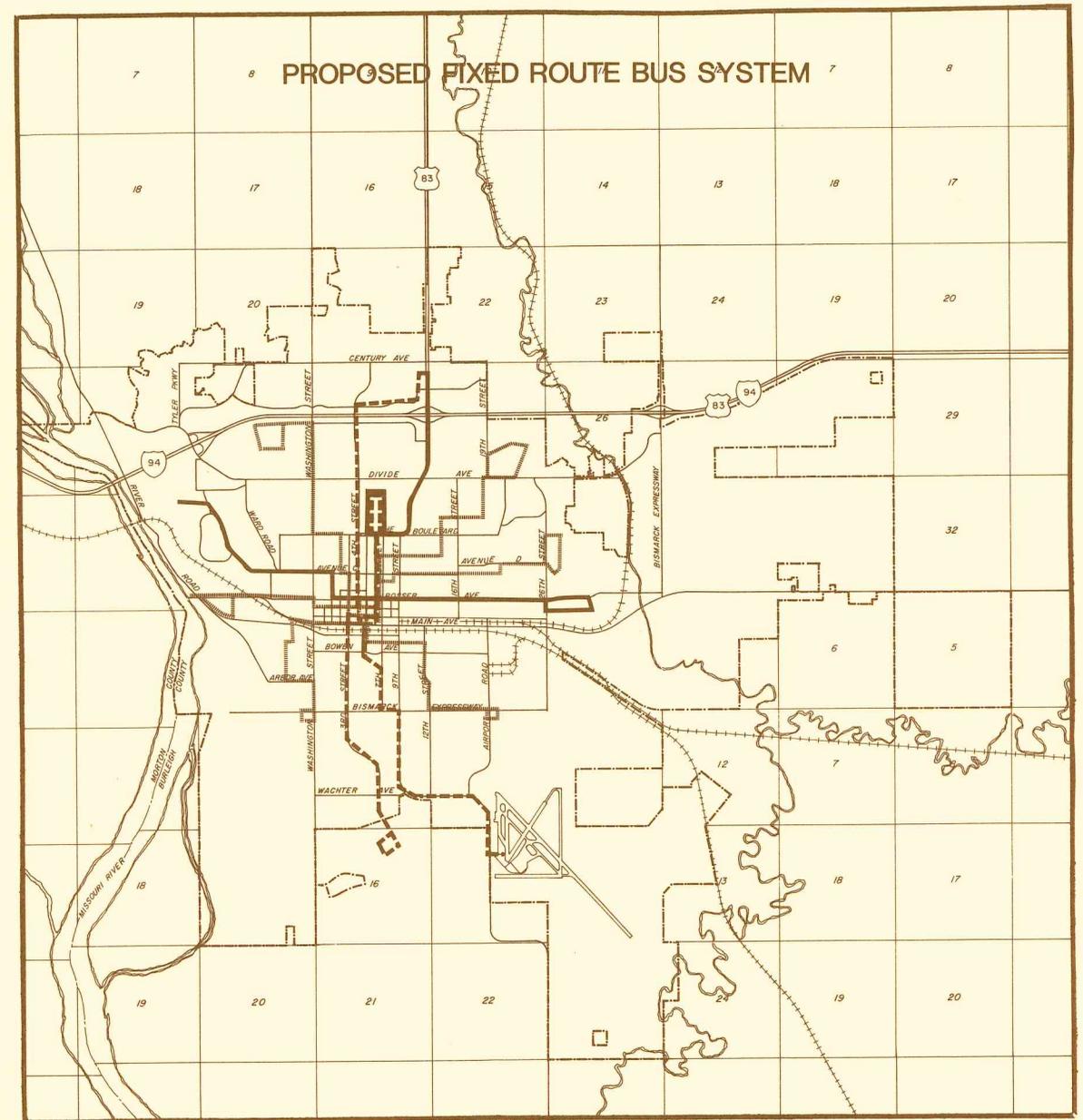


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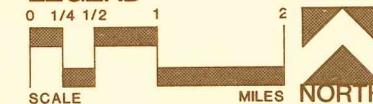


- EXISTING MAJOR STREETS
- - - PROPOSED MAJOR STREETS

SOURCE: BISMARCK ENGINEERING DEPARTMENT - 1982

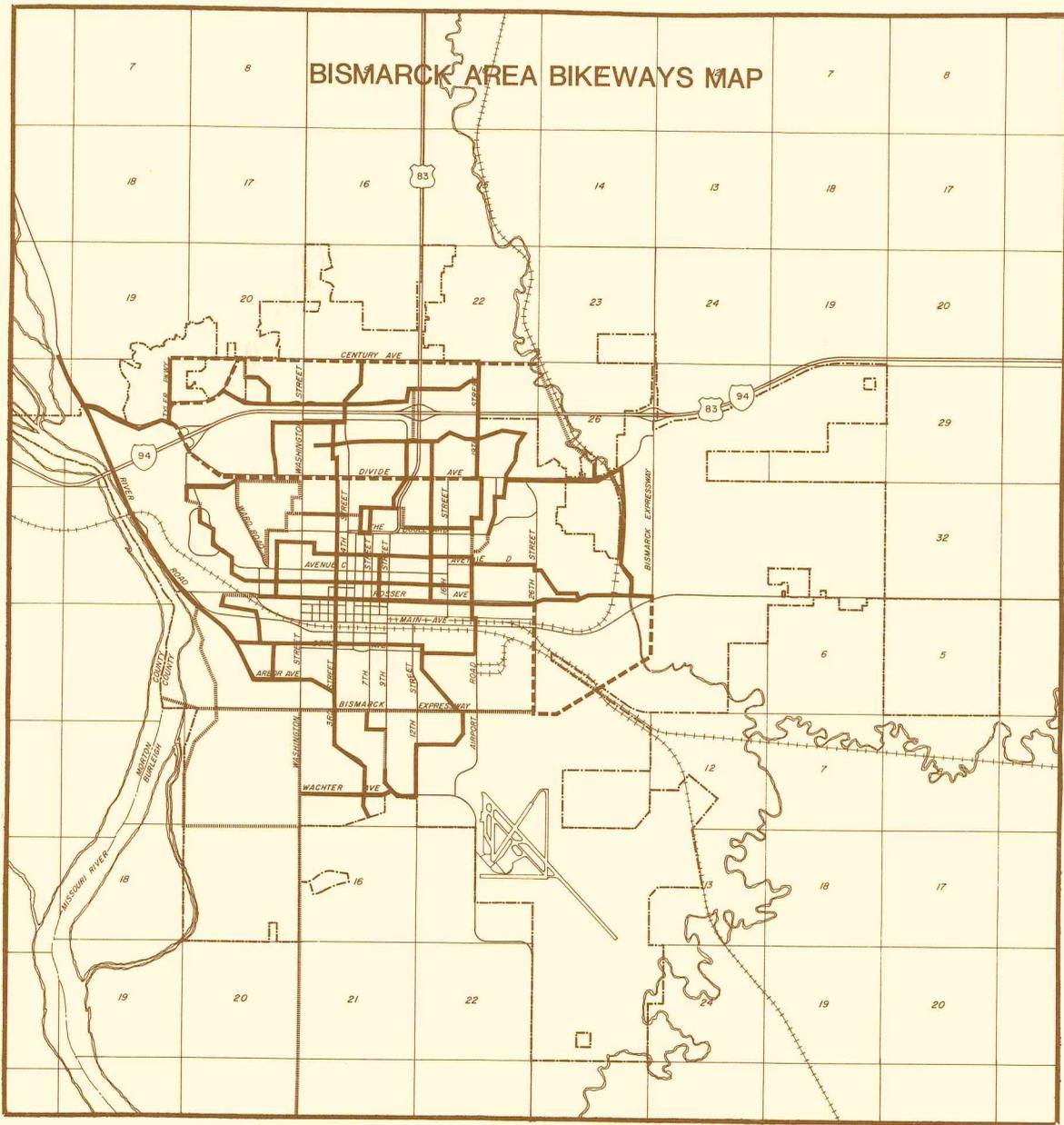


LEGEND



- PHASE I, A-B ROUTES
- - - PHASE II, C-D-E ROUTES
- · · PHASE III, F-G ROUTES

SOURCE: TRANSIT DEVELOPMENT PROGRAM - 1980

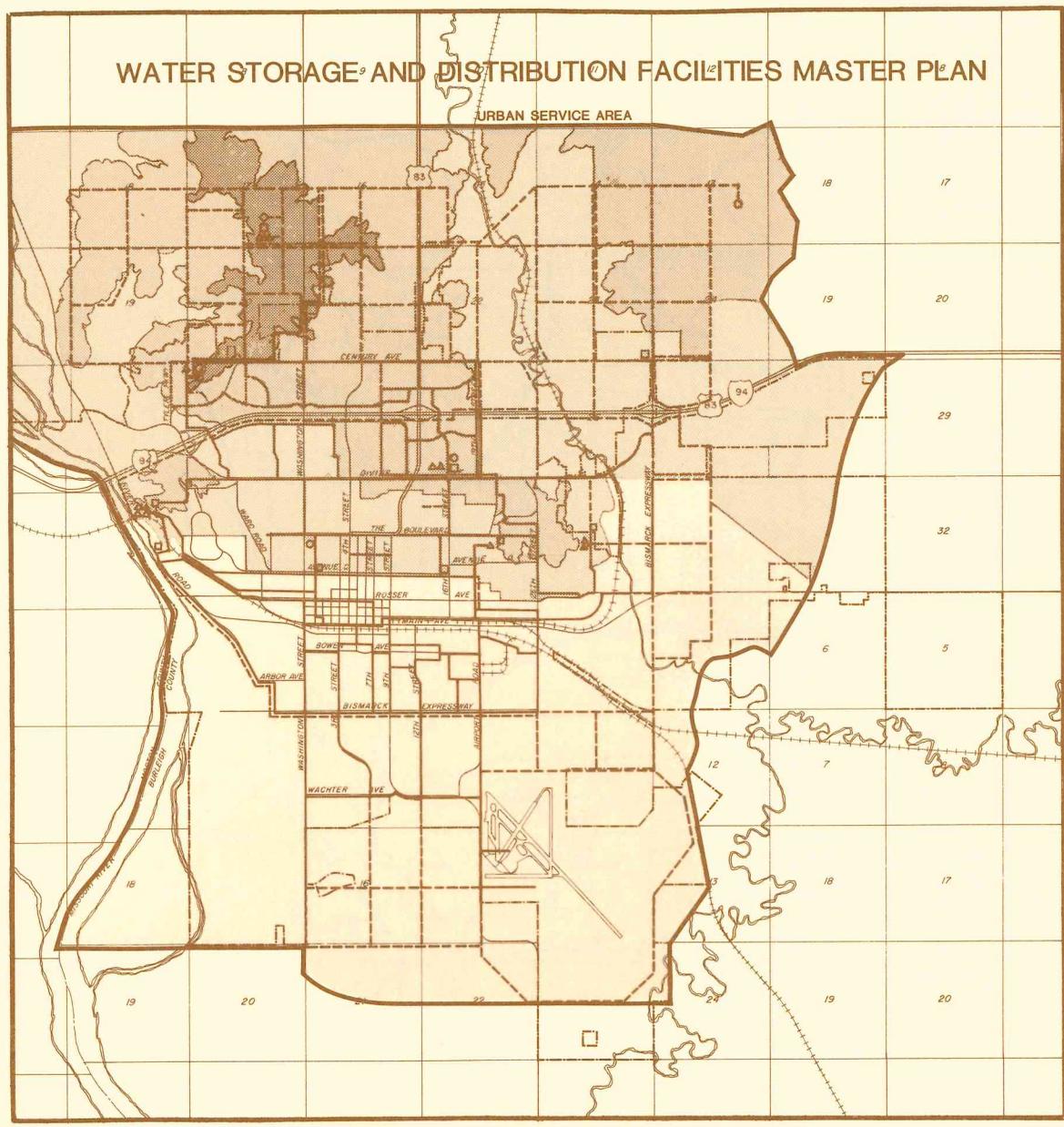


LEGEND

0 1/4 1/2 1 2
SCALE MILES NORTH

- PROPOSED BIKE ROUTE
- - - PROPOSED BIKE LANE
- PROPOSED BIKE PATH

SOURCE: BICYCLE PLAN AND PROGRAM FOR BISMARCK - 1978

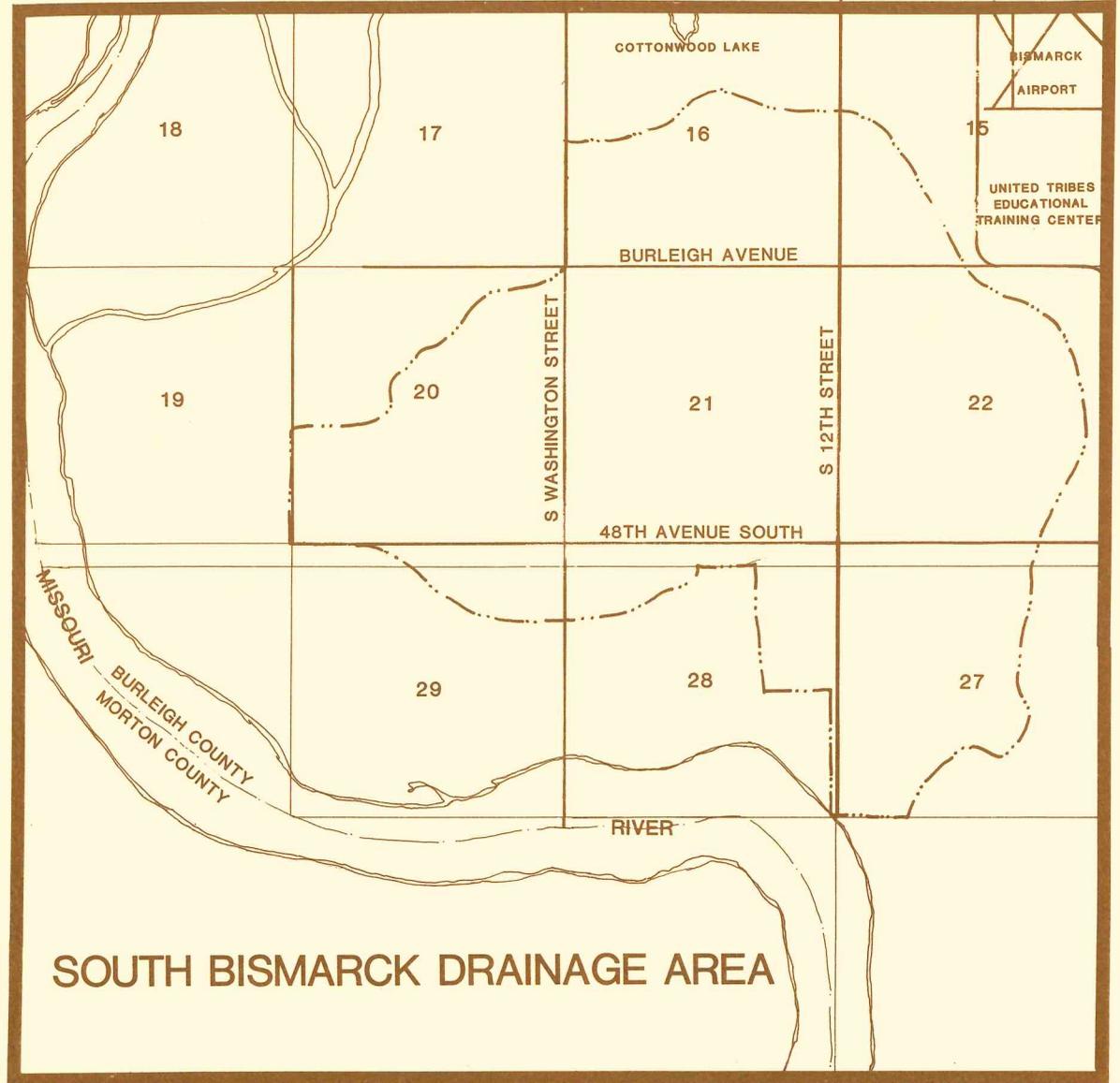
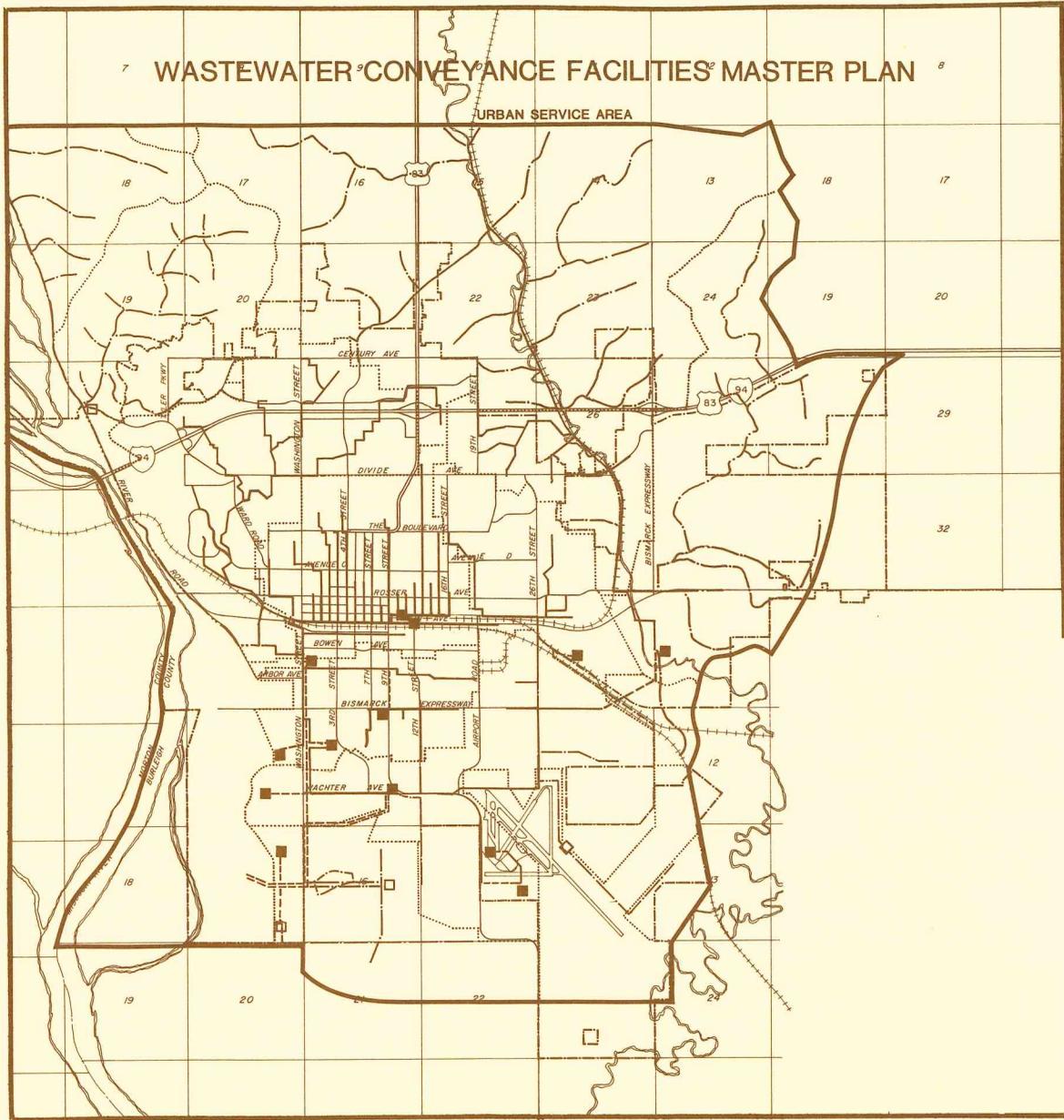


LEGEND

0 1/4 1/2 1 2
SCALE MILES NORTH

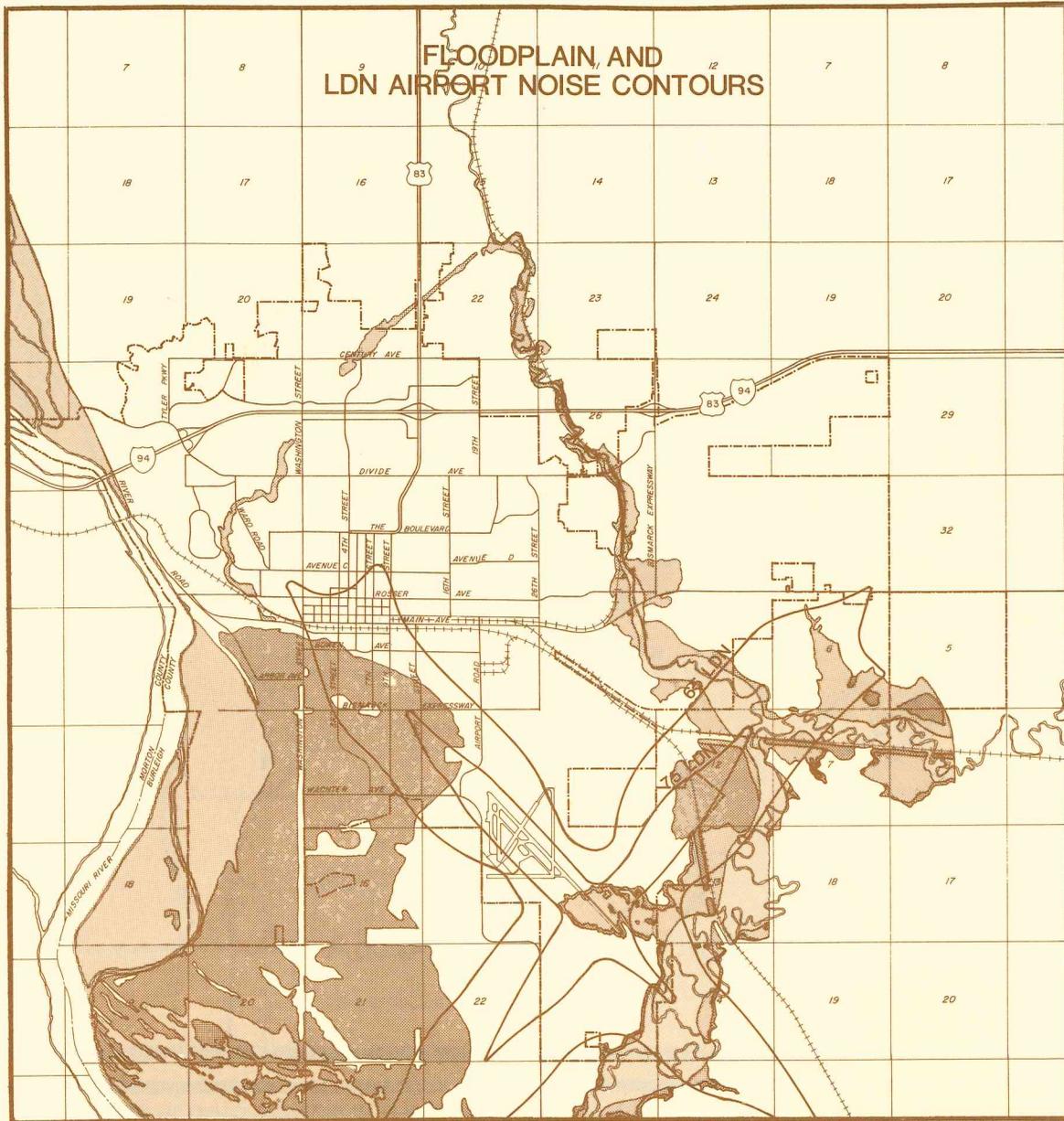
- EXISTING MAINS
- - - PROPOSED MAINS
- ▲ RESERVOIR
- ELEVATED STORAGE TANK
- BOOSTER PUMPING STATION
- LOW SERVICE
- ▨ INTERMEDIATE SERVICE
- ▩ HIGH SERVICE
- VERY HIGH SERVICE

SOURCE: MASTER PLAN FOR WATER STORAGE AND DISTRIBUTION FACILITIES - 1978

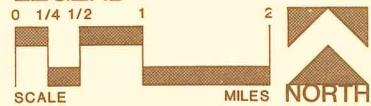


Until such time as an adequate storm sewer system is constructed in the above area, only rural residential development will be allowed. All plats in this area will allow for eventual subdivision of lots to urban size but no property will be so subdivided, served with city utilities, or annexed to the city until an adequate storm sewer system is provided. Holding ponds with no outlet, of a temporary or permanent nature, will not be permitted under any circumstance.

FLOODPLAIN, AND LDN AIRPORT NOISE CONTOURS



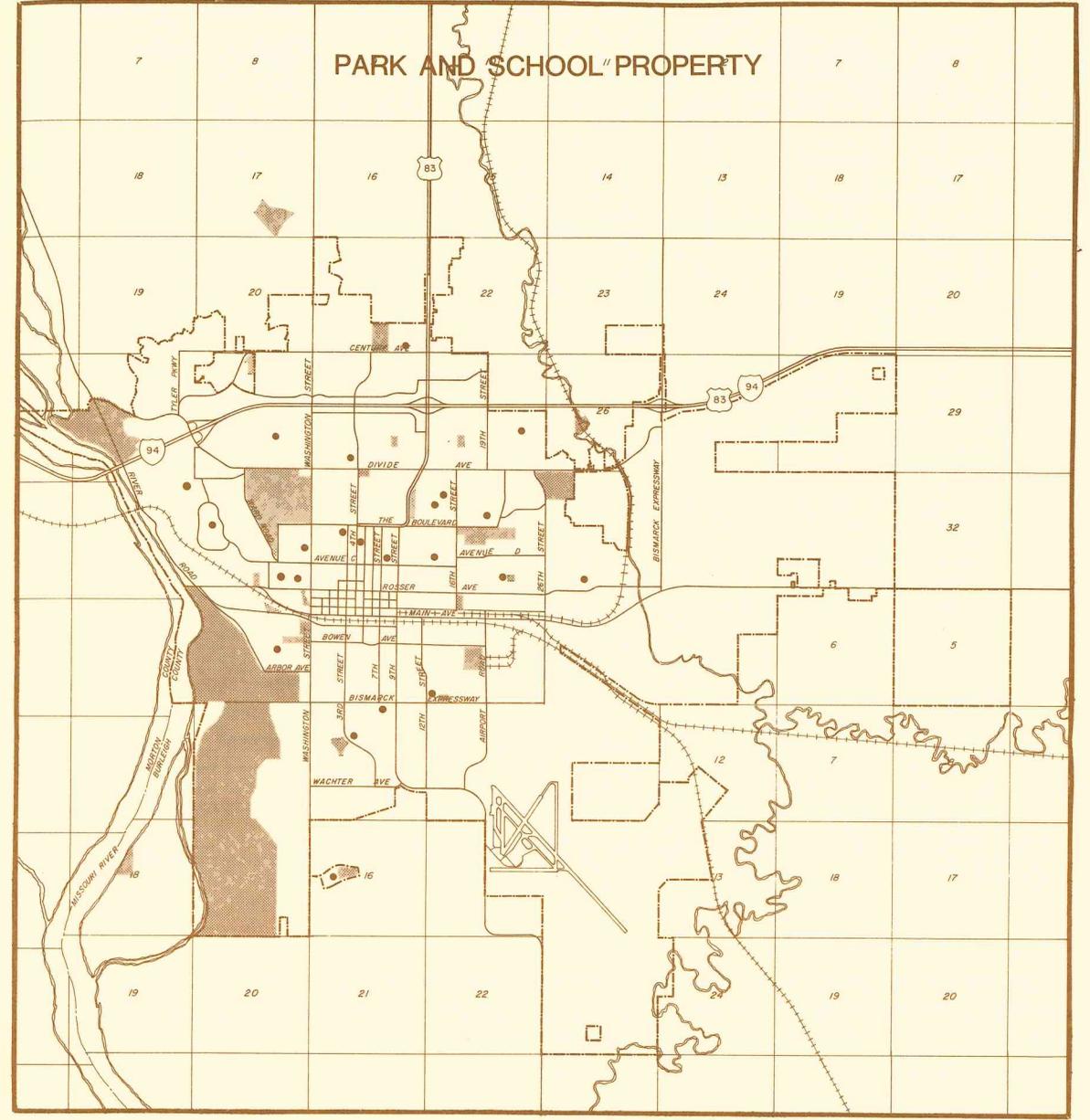
LEGEND



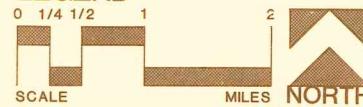
- 500 YEAR FLOOD BOUNDARY
- 100 YEAR FLOOD BOUNDARY
- FLOODWAY

SOURCE: FLOOD INSURANCE STUDY - 1981 AND AIRCRAFT NOISE AND IMPACT ANALYSIS - 1979

PARK AND SCHOOL PROPERTY



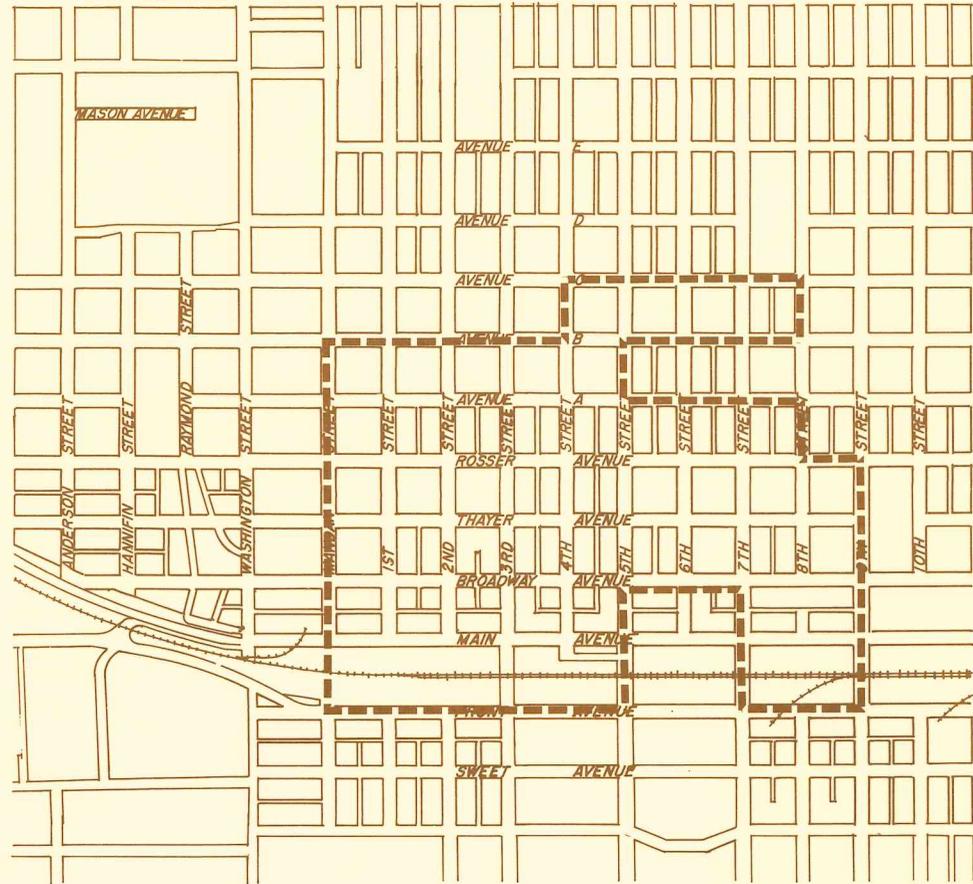
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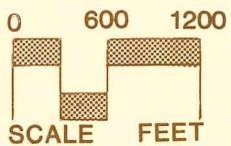
- SCHOOLS
- PARKS

SOURCE: BISMARCK PARK BOARD AND BISMARCK SCHOOL BOARD - 1982

URBAN RENEWAL BOUNDARIES



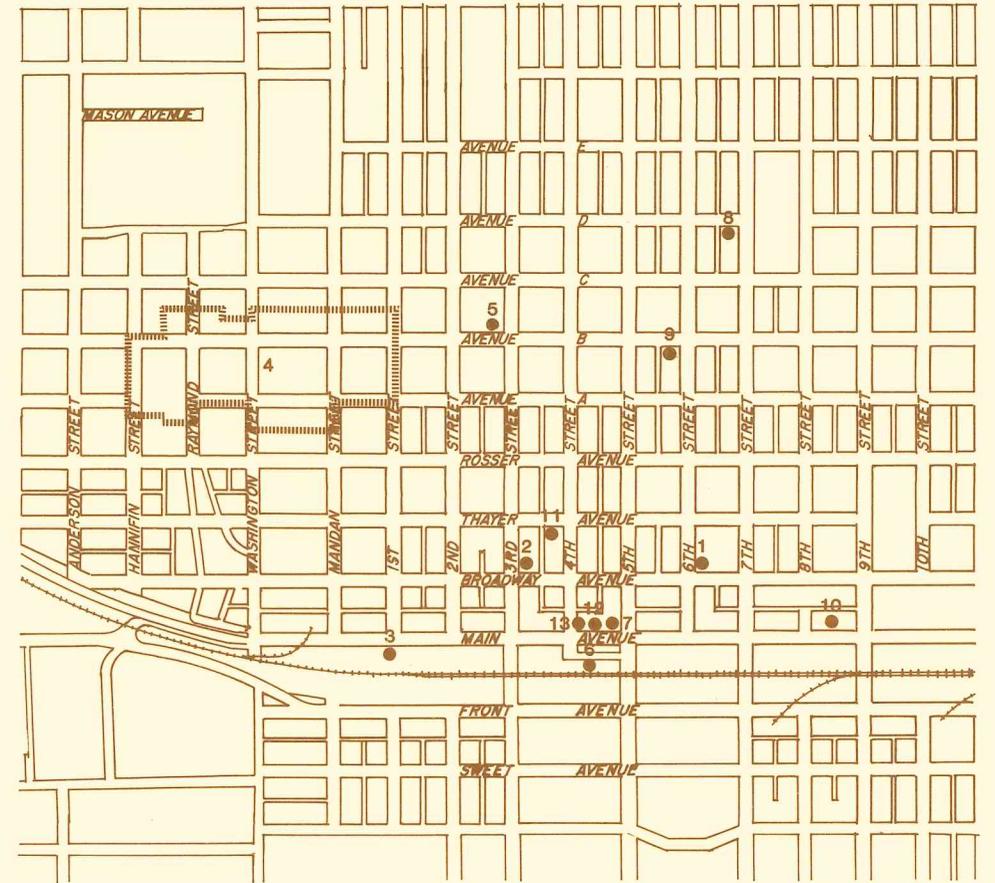
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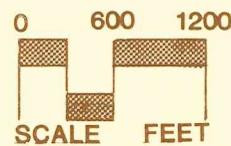
--- URBAN RENEWAL
AREA BOUNDARY

SOURCE: BISMARCK-BURLEIGH COUNTY PLANNING DEPARTMENT - 1979

PROPERTIES ON HISTORIC REGISTER

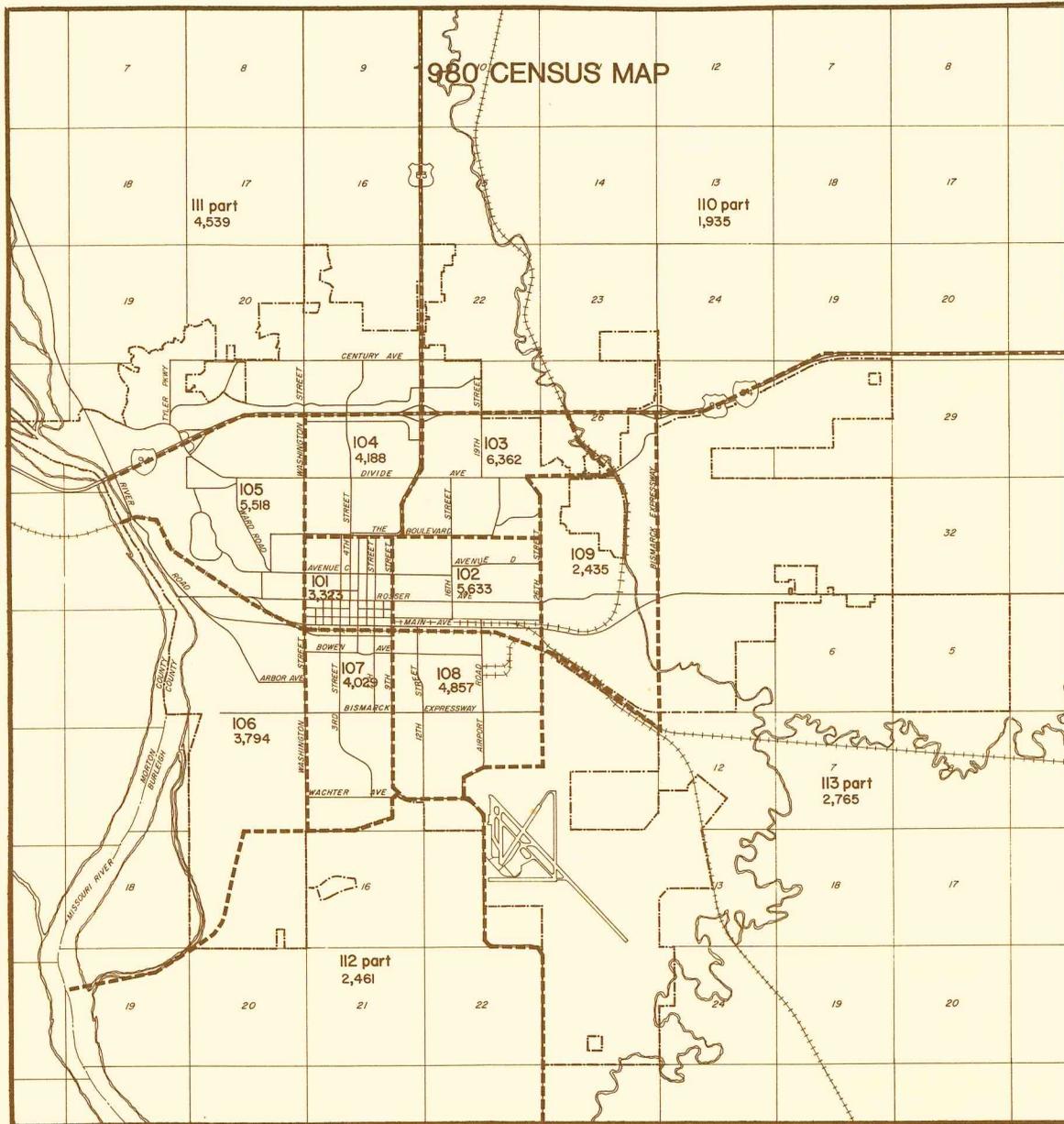


LEGEND



SOURCE: STATE HISTORICAL
SOCIETY - 1982

- | | |
|-------------------------|-------------------------|
| 1. CIVIC AUDITORIUM | 8. TOWNE-WILLIAMS HOUSE |
| 2. U.S. POST OFFICE | 9. FOLEY HOUSE |
| 3. CAMP HANCOCK | 10. YEGEN HOUSE |
| 4. CATHEDRAL AREA DIST. | 11. TRIBUNE BUILDING |
| 5. FORMER EXEC. MANSION | 12. PATTERSON BUILDING |
| 6. NP DEPOT | 13. REMINGTON BLOCK |
| 7. PATTERSON HOTEL | |



Capital Improvement Program

The intent of the capital improvement program is a realistic estimate of costs of planned improvements for the City of Bismarck. The most important factor of a program of this type is its flexibility in anticipating the needs and priorities of the community. Consideration of each capital improvement for efficiency as to its need, the ability to serve the people and the effect of it on the contingent costs is of utmost importance. Capital improvements affect the economy

of the area and stimulate the growth of the community. All of the methods of financing will be utilized, including federal-aid, state-aid, local taxes, fees, and services that are collected by the City of Bismarck for special functions and services to the public. The improvements and the figures set forth in this report are supplied by the heads of the departments and it is to be understood that these figures are estimates only.

Department Heads of the City of Bismarck are responsible for a yearly review and up-date of the report which involves adjustment of the figures, changing the probable years of some of the improvements, and adding the last year of the 5-year program. Only projects and departments relevant to the Comprehensive Plan have been included in this section.

Improvement	Fiscal Year	Estimated Costs
Airport Department		
Terminal building construction (partial)	1983	\$ 1,500,000
General aviation ramp	1983	29,000
Streets/parking	1983	625,000
Stabilized shoulder surfacing - runway 13/31	1983	250,000
Relocation N/S county road	1984	600,000
Terminal building construction	1984-85	2,000,000
Construct runway 3/21	1983-84-85	3,910,000
Police Department		
New police precinct	1985	200,000
Fire Department		
Land for 2 new stations	1983	60,000
New station NE (Landfill)	1985	325,000
New station NW	1986	350,000

<u>Improvement</u>	<u>Fiscal Year</u>	<u>Estimated Cost</u>
Water and Sewer Department		
Water plant addition	1983	\$1,500,000
Acquire reservoir site (Sec. 13, T139N-R80W)	1983	25,000
Wastewater sludge disposal	1983	500,000
Water plant addition	1984	3,300,000
Bismarck Avenue watermain	1985	1,000,000
Water plant addition	1985	2,100,000
Watermain (plant to Bismarck Avenue)	1985	1,000,000
Water plant addition	1986	2,000,000
Feeder main (plant to I-94)	1986	500,000
Riverside interceptor and lift station	1986	1,750,000
Roads and Streets Department		
Traffic signal installation - Boulevard Ave. & 3rd St. \$25,000 - 70% Federal	1983	7,500
Signal control system - \$500,000	1983	150,000
Reconstruct Airport Expy. - Bismarck Expy. to the airport 25% of \$3,000,000	1983	750,000
W. Divide Ave. - Xavier St. to I-94 Interchange	1983	200,000
E. Rosser Ave. - Enterprise St. to Centennial Rd.	1983	150,000
Washington St. - Broadway Ave. to Front Ave. - includes BN RR underpass & traffic signals at Broadway and Front Ave.	1983	100,000
Bismarck Expy. - Missouri River bridge \$21,500,000	1983	0
Bismarck Expy. - Bridge to Washington St. - \$500,000	1983	0
E. Divide Ave. - 23rd St. east ¾ mile	1983	300,000
Construct Bismarck Expy. - 26th St. to Centennial Rd. - includes BN overpass - \$2,700,000	1984	290,000
Upgrade all traffic signals	1985	160,000
Divide Ave. - widening 13th St. to 16th St.	1985	100,000
Reconstruct Washington St. - Rosser Ave. to Ave. D - 25% of \$300,000	1986	75,000

Bibliography

<u>TITLE</u>	<u>DATE</u>
1. Aircraft Noise Impact Analysis - Bismarck Municipal Airport	1979
2. Bicycle Plan and Program for Bismarck	1978
3. Bismarck-Burleigh County Comprehensive Plan	1980, 1982
4. Bismarck 2000 Study	1981
5. Capital Improvements Plan 1982-1986 - Bismarck	1982
6. Central Business District Needs Analysis - Bismarck	1980
7. Flood Insurance Study - Bismarck and Burleigh County	1981
8. Master Plan for Wastewater Conveyance Facilities	1978
9. Master Plan for Water Storage and Distribution Facilities	1978
10. Sanitary Landfill Master Plan	1980
11. Soil Interpretation - Bismarck Area	1974
12. Soil Survey of Burleigh County	1974
13. South Bismarck Drainage Plan	1981
14. Street and Highway Plan Update for the Bismarck-Mandan Metropolitan Area	1981
15. Transit Development Program 1980-1984 for Bismarck	1980

These reports and studies are available for review at the Planning Department.