1980 GENERAL PLAN
THE PHYSICAL DEVELOPMENT PLAN
FOR THE CITY OF DES MOINES
1963
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Harry A. Winegar
September, 1963

The Honorable Mayor
and
Members of the City Council
City of Des Moines, Iowa

The City Plan and Zoning Commission takes considerable pride in presenting the 1960 General Plan for the City of Des Moines. This plan has been prepared by the City Plan and Zoning Commission in accordance with Section 373 of the Iowa State Code.

The Plan is a guide to the residents, public officials, private developers and all others who are interested in shaping the future of the City of Des Moines.

The Commission expresses its sincere appreciation to the various City departments, school administrators and the citizen planning committees for their invaluable assistance in the preparation of the Plan.

Respectfully submitted,

[Signature]

William N. Goreham
Chairman
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PURPOSE AND GOALS
The purpose of the General Plan is to guide the orderly future physical development of Des Moines through appropriate utilization of all public and private land. To fulfill the purpose of the General Plan the following specific goals must be achieved:

- Provision of residential neighborhoods that meet the essential needs of family living, including fresh air, quiet streets, protection from incompatible land uses, centrally located community facilities and in general possessing a pleasant and harmonious design.

- Provision of properly located, well designed neighborhood community and regional shopping facilities adequate to serve the expanding population.

- Provision of suitable land for industrial development conveniently available to employees, adequately protected from encroaching incompatible uses and readily accessible to interconnecting transportation systems and large-capacity public utilities.

- Provision of an efficient network of public streets to secure safer, faster and more pleasant travel through the extension of existing streets and the construction of new streets.

- Provision of well located school sites to conveniently serve the residential areas. School sites should be of sufficient size to permit expansion to meet anticipated future enrollment needs.

- Provision of an optimum park and recreation system properly located and of sufficient size to offer a diversification of recreation facilities.

- Recognition of municipal controls to assure compatibility among the various uses of urban land.
RECOMMENDATIONS
The 1980 General Plan has been developed on the basis of an estimated 1980 population of 251,000 persons for an increase of approximately 42,000 persons. New facilities will be required to serve this new growth as well as to replace present facilities that will become obsolete. Thus, new residential areas, schools, parks, streets, commercial facilities and industrial areas have been designated in the Plan. Major recommendations include the following:

- Residential areas will have to be provided for the estimated 42,000 additional persons. The major portion of the new growth should occur in the southern portion of the City.

- Nineteen new elementary schools should be constructed to provide adequate classroom space to house an increased enrollment of 10,000 students.

- Five new junior high schools and two new senior high schools should be constructed to provide classroom space for an increased enrollment of approximately 15,000 secondary school students.

- Fourteen elementary schools should be abandoned by 1980 because of structural obsolescence.

- Three major parks, nine community parks and 28 neighborhood parks will be required to serve the anticipated population increase and areas presently unserved.

- Industrial land totaling 4,220 acres should be provided to serve for industrial expansion to make possible a choice of sites.

- Approximately 43 miles of new streets, together with extensions and widenings of existing streets, will be necessary to adequately serve increased 1980 traffic needs.
DES MOINES
OF 1854

DES MOINES CITY PLAN
AND ZONING COMMISSION
The first pioneer settlers arrived in Iowa in 1821 after the United States Government signed a treaty with the Sac and Fox Indian tribes to protect these two tribes from the warlike Sioux and from encroachment by white settlers. As part of the treaty provisions, Fort Des Moines was established by Captain James Allen in 1843, on ground adjacent to the confluence of the Des Moines and Raccoon Rivers.

October 10, 1845 marked the end of Indian title to all lands in Polk County, the abandonment of the military post, and a rush to settle the lands surrounding the village of Des Moines. In April, 1846, the newly elected Polk County Board of Commissioners selected the abandoned Fort site and adjacent land to be the seat of justice for Polk County. A town site was ordered to be laid out and bounded by the River on the East, Elm Street on the south, Eighth Street on the west, and Locust Street on the north. The first sale of lots took place July 15, 1846.
By 1856, Fort Des Moines and East Des Moines had become one incorporated entity—the City of Des Moines. As early as 1857, Des Moines became an important governmental center, first as a United States District Land Office, seat of county government for Polk County, and finally, the capital for the State of Iowa.

The City of Des Moines grew steadily, not only as a seat of government, but also as a distribution point for trader-merchants dealing with Indians and immigrants passing through the City. Many of the immigrant families decided to settle in the City or nearby in the Des Moines Valley, creating a trade area radius of approximately 80 miles with a population of 7,500 persons. By 1865 the trade area extended into four adjacent counties representing a total of 25,000 population. The City contained 20,000 persons and had become a significant regional trading center.

By 1880 Des Moines with more than 22,000 residents was the largest city in the state—an honor it has held continuously to the present day. In the 1890's annexations raised the population to 50,000 and the incorporated area to 54 square miles, the area of which remained unchanged for more than half a century. By 1960, Des Moines had annexed an additional nine square miles, adding another 18,000 persons, and bringing the total population for the City to nearly 209,000 persons.

The arrival of the telegraph in 1861 and the railroads in 1866 and 1868 added the last two major elements necessary to the development of Des Moines as the political, trade and communications center for the entire state. Urban expansion of the City became significant about 20 years later when street cars were electrified and residential development began moving outward from the center of the City.
SUCCESSIVE CORPORATE LIMITS

LIMITS OF DES MOINES AT VARIOUS STAGES

AREAS FORMERLY INCORPORATED

DATES ARE THOSE OF INCORPORATION UNLESS OTHERWISE NOTED

JULY, 1962

DES MOINES CITY PLAN AND ZONING COMMISSION
LOCATION

Des Moines' geographical location has been and will continue to be an asset. It is most influential as a regional agricultural distribution center, state governmental center, and Midwest regional insurance center. Des Moines, the largest city in Iowa, is located midway between the Mississippi and Missouri Rivers, at the confluence of the Raccoon and Des Moines Rivers. This location, slightly southwest of the state geographical center, is the approximate geographical center of the Corn Belt.

The location of Des Moines, as a point of departure to the western lands, has retained its historical importance as a regional center serving an area of approximately 30,000 square miles. The City, located at a major intersection of the Interstate Highway System, is 350 miles west of Chicago, 250 miles south of Minneapolis, 135 miles east of Omaha-Council Bluffs, and 350 miles northwest of St. Louis.
TOPOGRAPHY AND LIMITING FEATURES

- RAILROADS
- AREAS SUBJECT TO FLOODING
- BLUFFS AND SLOPES OVER 15%

ELEVATION IN FEET
- ABOVE 950
- 900 - 950
- 850 - 900
- 800 - 850
- BELOW 800
- WATER

JANUARY, 1960

DES MOINES CITY PLAN AND ZONING COMMISSION
Knowledge of the effect of terrain, soil, and even subterranean characteristics is essential to understand the planning of the future growth of Des Moines since land features materially affect the type, rate and direction of growth. Among the most outstanding features of the City are the Des Moines and Raccoon Rivers, mature streams with relatively broad valley floors. As the rivers changed course, oxbow lakes such as Case's and Dean's Lakes were formed from water filled meanders (curves) which separated from the main channel.

Had the rivers not existed, Des Moines would undoubtedly not have been built, for the rivers provided protection, water supply and transportation as well as a strategic military site. The river areas remain today as outstanding advantages for recreational sites and potential metropolitan parkway systems.
TOPOGRAPHY

Des Moines is situated on a glacial plateau approximately 900 feet above sea level, on flat or gently sloping land, rising from the Des Moines and Raccoon River valleys (flood plains). Interspersed in the flat uplands which were leveled by glaciers are ravines and steep bluffs carved by glacial waterways. Prominent physical features created by glacial movement are Capitol Hill and Four Mile Ridge.

GEOLOGY

The uppermost layers of solid rock underlying Des Moines constitute slightly sloping strata of shales, sandstone, coal and limestone known as the Pennsylvanian System. Overlying the Pennsylvanian strata are thick deposits of mixed clays, sand and gravel deposited 50,000 to 1,000,000 years ago as glacial drift.

Following the last ice sheet, the Des Moines area was covered by a wind-blown dust, called loess, a yellowish soil, common in Iowa and other glaciated areas of the country. Unlike the glacial deposits, the wind-blown soils are uniformly fine-grained, ranging in depth from a few feet to more than 20 feet. These wind-blown (aeolian) soils and the soils deposited in the broad valleys by the rivers (alluvial soil) account for part of the world's most productive agricultural land.

CLIMATE

The climate is characterized by marked seasonal contrasts in temperature and precipitation. Cold winters and hot summers are the rule even though the mean temperature is 50 degrees. For individual months, the mean temperature ranges from 21 degrees in January to 76 degrees in July.
Mean annual precipitation is 31.0 inches, with intense seasonal variation. Of the total annual precipitation, 9.5 inches or 30 per cent fall within the months of October through March. 21.5 inches, or 70 per cent of the annual precipitation including 75 per cent of the thunderstorms, occur during the months of April through September.

Winter winds prevail from the northwest, normally at approximately two to three miles per hour faster than the humid summer winds which prevail from the south and southeast.

INFLUENCE ON THE CITY

The gently rising slopes and the relatively flat uplands of Des Moines lend themselves to economic, efficient construction of both buildings and streets. The ravines and bluffs interspersed in the upland areas offer visual relief and valuable recreational area within the concentrations of homes and businesses which dominate both the northeast and northwest sections of the City. The Des Moines and Raccoon Rivers have both positive and negative affects upon the growth of the City. They provide the City's water supply; they are natural corridors for rail transportation; they are valuable recreation areas; but, they also restrict free movement of automobile traffic.

The existence of the Pennsylvanian strata beneath Des Moines has had considerable economic influence on the development of the City. These are the strata from which coal was extracted. The glacial deposits likewise fostered an extractive economy in the form of sand and gravel mining for construction and paving aggregate.
ECONOMY

The economic vitality of Des Moines is dependent upon the production and distribution of its goods and services. Past industrial growth has introduced considerable diversification into the present economy. To understand and predict how industries have affected and will affect the City's development, it is necessary to understand the comparative relationships of their past and present economic characteristics.

Economic activity of Des Moines is based on an area much larger than the City itself: part of the City's labor force lives outside Des Moines; the majority of the industrial production is sold outside the City. Because of the interrelationships between the City and its surrounding area, the United States Census Bureau has defined the Des Moines Standard Metropolitan Statistical Area to include all of Polk County. Unless otherwise specified, the following economic discussion applies to the entire county.
HISTORY

Des Moines became a leading center for distribution of goods almost from its founding. Transportation routes from Keokuk and Iowa City were quickly opened and the City became a resting point for immigrants. As the area developed, Des Moines became the supply center for a distance of 80 miles. The introduction of business, manufacturing and governmental services assured Des Moines of the dominant role in the region's economic development. Des Moines' early economic development has placed the City in an enviable position as a major competing center for the whole Midwestern region.

<table>
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<th>LABOR FORCE DESCRIPTION</th>
<th>1940 Census</th>
<th>1950 Census</th>
<th>1959 Estimate</th>
<th>1980 ESTIMATE High</th>
<th>Middle</th>
<th>Low</th>
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LABOR FORCE

The labor force is the employable segment of the population over 14 years of age who are gainfully employed, with or without pay, or who are unemployed but actively looking for work. Since 1940, unemployment has decreased from 16 per cent to three per cent. In 1959 the number of gainfully employed members of the labor force for Polk County numbered approximately 117,800. By 1980 it is estimated that approximately 161,000 persons or about 95 per cent of the labor force will be employed in the Des Moines area.

Employment is one measure of the City's economic growth. By comparing the basic types of employment with other types for a period of years, it is possible to measure relative growth of the industrial economy.

EMPLOYMENT ACTIVITY

POLK COUNTY
1850 - 1959

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<th>TYPE OF EMPLOYMENT ACTIVITY</th>
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<th>1900</th>
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* Data Not Available
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<td>6.3</td>
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</table>
INDUSTRIAL ECONOMY

Manufacturing is one of the most important industrial categories because of its export activity. In 1959, 22,868 persons or 19.4 per cent of the labor force were engaged in manufacturing. By 1980 approximately 32,000 persons or 21 per cent will be employed in Manufacturing.

Retail and Wholesale Trade form the largest employer group at approximately 20 per cent of the total employed labor force. It is anticipated that employment within this group will remain about the same to 1980.

Governmental employment in Des Moines, on the local, state and federal levels, employs 11.3 per cent of the labor force. By 1980 it is expected that the number of employees will be reduced to ten per cent.

Insurance employment numbered 7,420 persons, or 6.3 per cent of the labor force in 1959. By 1980 it is expected that the insurance industry will employ about 13,800 persons or 8.3 per cent of the total labor force.

Finance and Real Estate account for 3.0 per cent of the labor force. Increased use of electronic business machines is expected to reduce the percentage to 2.4 per cent by 1980.

Service and Non-manufacturing personnel will remain at a level of about 11.4 per cent of the labor force.

Construction employment is expected to remain at about 4.7 per cent of the total labor force principally because of the need for housing the expected population increase.

Self-employed persons number 15,725 according to the Iowa Employment Security Commission. This group should include about the same per cent (13.3) of the total labor force by 1980.
POPULATION

The concept of the General Plan to guide the growth of Des Moines is that of a blueprint for streets, parks, buildings, and other land uses. The picture is one of trees, houses, parks, schools, factories—in short, a three-dimensional image of the City. This, of course, is what planning is. But, more basically, planning is concerned with the people who live in the City, and who use the planned facilities. Thus, basic to the preparation of the General Plan is knowledge of the people of the City.

Obviously, we must know for how many people we're planning. With a target date of 1980, population estimates have been made for that time. Information has been gathered pertinent to population estimates concerning expected general distribution of people in 1980, changes in age composition, and the size of families in the future. These data called population characteristics are used to help decide where such things as parks and schools should be located.
URBAN REGION

The General Plan is based on the physical characteristics of the City; however, consideration must be given to the effects upon Des Moines by the entire urban region—an area which extends beyond the City's corporate limits into the denser populated sections of Polk County. Included within the urban region beside Polk County are the upper halves of Linn, Greenfield and Allen Townships within Warren County.

Between 1960 and 1980 the population of the urban region is expected to increase by approximately 98,000 persons. More than one-half of the anticipated growth will occur beyond the corporate limits of Des Moines. While the City is expected to increase by approximately 42,000 persons to a total of 251,000 people by 1980, the area outside the corporate limits will increase from 52,000 to approximately 108,000 persons.

Estimated population increases beyond the City's corporate limits are based on principles of land use expectations and on established trends of residential development. An improved street and highway system coupled with the availability of land on the urban fringes and a pronounced desire for suburban living form the impetus for extensions of urbanized residential development.

Those areas showing the greatest change possess both desirable future residential sites plus sufficient existing urban base to warrant a logical extension of necessary urban services. For example, the area west of the corporate limits contains large areas of future residential land in or near five incorporated cities. The area to the south of Des Moines, though not heavily populated, contains rolling land suitable for urban expansion. North and east of the corporate limits are areas already showing signs of considerable urbanization.
POPULATION GROWTH

There are many factors affecting population growth. Population increases when births exceed deaths (called natural increase) and/or when in-migration exceeds out-migration. Migration is dependent upon the economic opportunities afforded the entire Metropolitan Area. The rate of natural increase has been rising due to increased medical facilities and a longer life span.

Since 1900 the City population has increased 235 per cent while the Polk County population increase has been 180 per cent. Since 1930 Polk County has experienced a population growth of 89 per cent, while the City's growth has been 47 per cent. This indicates the present trend toward suburban living.

<table>
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<th>Year</th>
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<th>Increase</th>
<th>Per Cent Increase</th>
<th>Population</th>
<th>Increase</th>
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POPULATION FORECAST

The City is expected to increase its population by 21 per cent within the next 20 years. The influx of an additional 42,000 persons within the corporate limits of Des Moines must be considered on the basis of the ability of the City to adequately serve this population increase.

In order to project a range of alternative population forecasts, three different estimates have been developed:

Low Estimate: assumed slight industrial growth in the Metropolitan Area. In this estimate, Des Moines would probably not maintain its expected natural increase of population (births minus deaths), and would suffer from population out-migration.

Medium Estimate: assumed that as a result of expansion in existing industries and services, the Des Moines Metropolitan Area employment would allow retention of natural increases in population.

High Estimate: assumed that the expansion of existing industries supplemented by the entry of new industries would not only provide increased employment for the natural increase but also make in-migration necessary to provide an adequate labor force.

As a general guide, the medium forecast, one with high probability of realization according to present indications, has been developed and applied as a basic control for an average population estimate. This estimate would anticipate a population increase of approximately 42,000 persons within the City of Des Moines for a total of 251,000 persons by 1980. Within the Metropolitan Area, a population of 359,000 persons can be anticipated.
POPULATION DISTRIBUTION

For purposes of a guide to population distribution, the City has been divided into three sections by using the three natural divisions formed by the Des Moines and Raccoon Rivers.

The northwest section has heretofore contained the majority of the City's population. This section is presently near saturation; therefore, little additional population is expected, although redevelopment of urban renewal areas will shift the population pattern slightly within the section itself.

The northeast section shows little anticipated net growth between 1960 and 1980. However, considerable change in population patterns will occur. Presently undeveloped land will be developed residentially but the anticipated residential increases will be offset by increased industrial expansion and Freeway construction. Urban redevelopment and construction of the Freeway will contribute to a change in residential distribution.

The south section will receive the greatest impact of anticipated growth between 1960 and 1980. This section is the only area within the corporate limits that contains large tracts of undeveloped land suitable for urban residential expansion. It is anticipated that approximately 80 per cent of all new growth will occur south of the rivers by 1980.

By 1980 the population residing within the present corporate limits of the City will occupy virtually all of the land planned for residential use. Vacant areas will become saturated, while the areas currently occupied will remain essentially the same. Some residential areas, however, will change due to urban redevelopment projects and planned conversions to other uses. By planned conversion, many areas will require specialized planning, which will bring them into conformance with the General Plan.