

CHICAGO, ILLINOIS

22 W. MADISON ST.

DON C. SHAFER & ASSOCIATES

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1968

A COMPREHENSIVE PLAN FOR  
**FORT MADISON , IOWA**



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COMPREHENSIVE PLAN  
FORT MADISON, IOWA

Prepared For  
FORT MADISON PLANNING & ZONING COMMISSION

and

THE IOWA DEVELOPMENT COMMISSION  
(Official State Planning Agency)

Prepared By

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May 1968

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## ACKNOWLEDGEMENTS

Needless to say, with an undertaking that has extended over so long a time period as this, and has involved as many complex issues, the debts of the planner to others are quite extensive. In the first instance, much help was derived from the Fort Madison Chamber of Commerce. The staff has freely given their time and help in reviewing and analyzing various parts of the planning research and recommendations. In this regard we would especially like to thank the former director, Mr. Robert Humphreys, who cooperated in the distribution of the citizen and merchants survey. We are also grateful to Mr. Robert Hanson, Superintendent of Schools and Mr. Roy W. Deitchler, City Attorney for their assistance and cooperation in various phases of the planning program.

Included in this comprehensive plan is a research report which was previously published as part of the planning program. The Socio-Economic Factors for Planning, Part One of the report, was originally published in May 1966. This study was done by Dr. Karl W. Wolf of the North American Research Corporation under a special contract with the consultant. Transportation Planning for Fort Madison was published in September 1966, a part of which is included in this report. Mr. Paul C. Box, Traffic Engineering Consultant, prepared this study in cooperation with the consultant.

Special thanks is also due Mayor Robert D. Tibbets; Mr. George Luegering, City Clerk; and Mr. Walter A. Cooper, Deputy Clerk.



## INTRODUCTION

Fort Madison has been engaged in planning for a number of years. In 1947, the Mayor's Civic Planning Committee prepared a report entitled "Improvement and Development Program." This was a tangible evidence of excellent citizen cooperation.

A Comprehensive City Plan was prepared between 1958 and 1960, along with the adoption of the zoning ordinance and a building code in 1959. In 1965, due to new industry, anticipated local highway improvements and population increases, updating parts of the Comprehensive Plan became imperative.

To fulfill so many needs for a city requires visionary planning firmly based on the community's socio-economic needs, its physical assets, as well as its ability and willingness to move ahead.

The updating of the Comprehensive Plan for Fort Madison is a means of meeting the challenge of its future.

The updating of the Comprehensive Plan includes (1) physical factors for planning studies such as geographic base, existing land use, commercial and industrial; (2) community facilities including public utilities, schools and parks, public buildings, housing and neighborhood analysis; (3) socio-economic factors for planning; (4) street, thoroughfare and transportation; (5) public works program; (6) zoning and (7) housing code review.

The following reports were published separately and parts are included in this Comprehensive Plan report as a composite updating of the original Comprehensive Plan.

In 1965, a report was published entitled "The Importance of a Housing Code", in which the importance of such legislation to upgrade the condition of structures for the city was detailed.

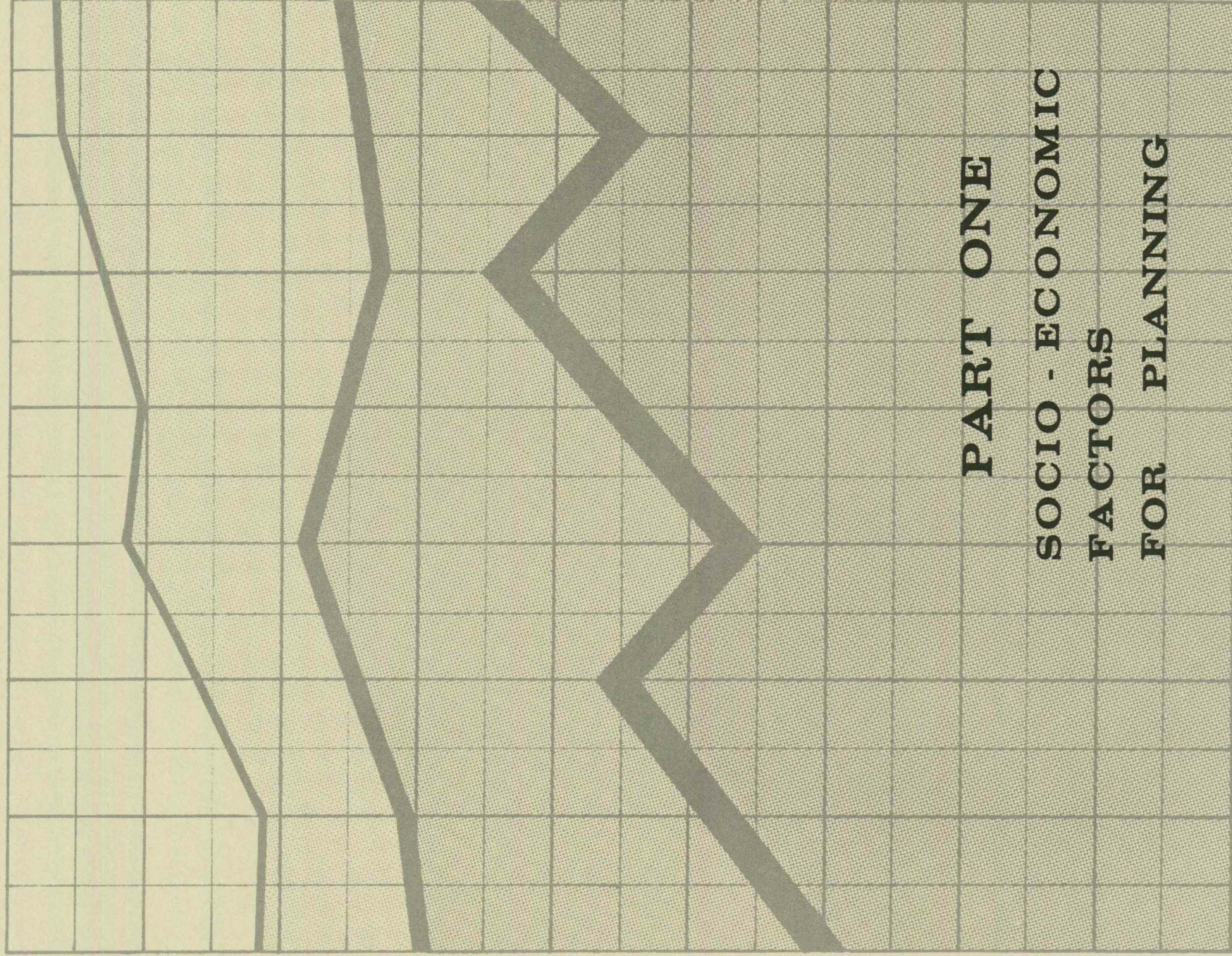
In May 1966, the Socio-Economic Factors for Planning analyzed the stability and potentiality of the economic base of the city, the present commercial economy and future requirements, and the future population, the age, composition, rate of family formation and housing needs.

The Transportation Planning Report published in September 1966, in brief analyzes major traffic movements including external and internal trips, major route systems and detailed street and road improvements.

Consideration of the planning proposals by the Planning and Zoning Commission, the City Council, the public and the press, as well as their active support and participation are vital to the future of Fort Madison. Only through civic commitment can planning hope to fulfill its function of making the city a better place to live.

FOR THE  
OFFICE OF THE  
ATTORNEY GENERAL  
STATE OF TEXAS

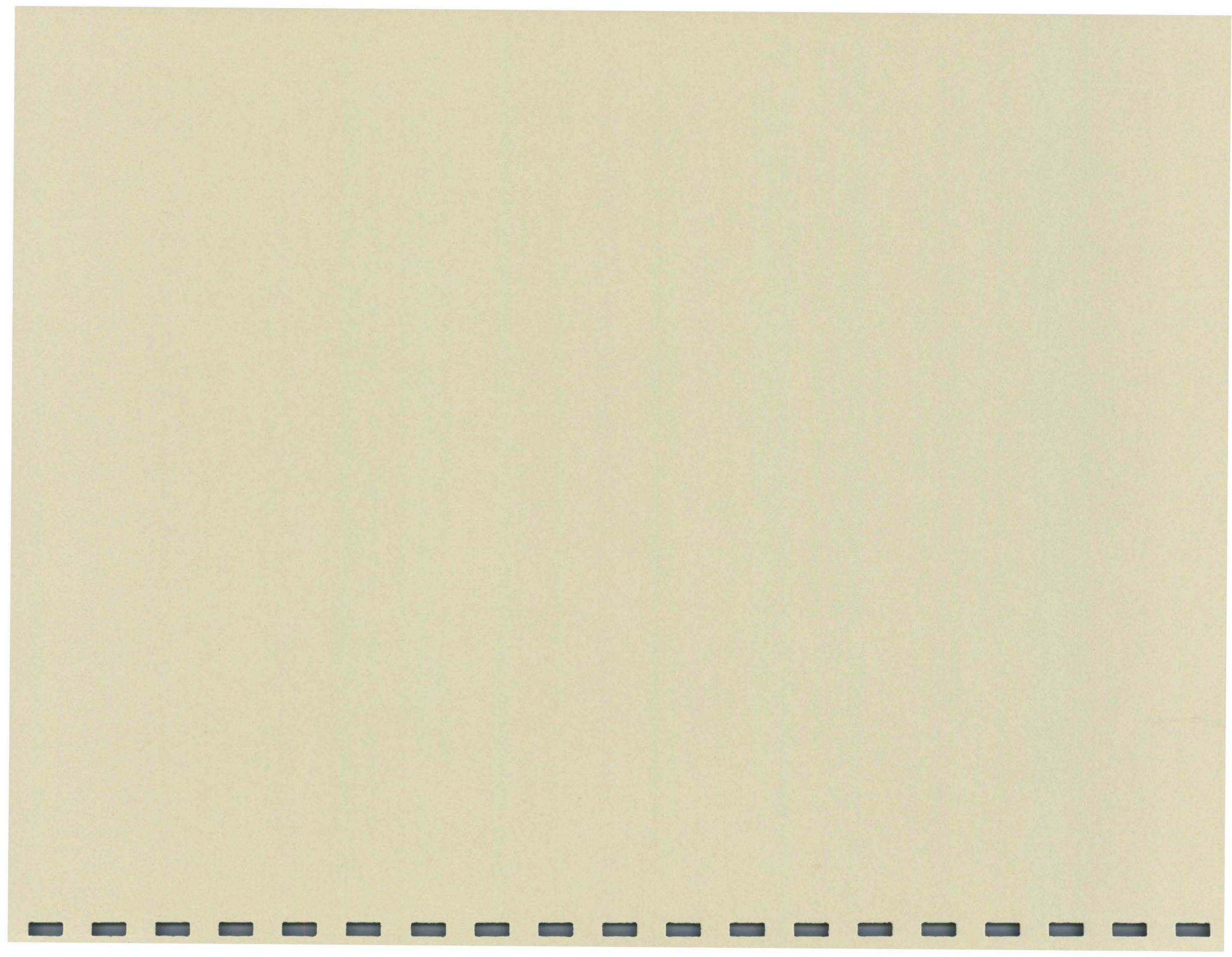




**PART ONE**

**SOCIO - ECONOMIC  
FACTORS  
FOR PLANNING**







## INTRODUCTION

The visible development of a community is the direct result of socio-economic activity in the community itself as well as in its hinterland. The purchase of a home requires employment, the development of a business requires customers, the success of an industry requires markets and advantages to operate in a given location, and the existence of a community requires revenue from residents, businesses and industries.

Since the total physical plant of a community is a reflection of its socio-economic vitality, it is necessary to analyze the underlying socio-economic forces to make possible tailor-made planning for future developments. The importance of tailor-made planning, in turn, is shown by the fact that the life span of a community's physical investments is measured in terms of generations. Buildings last 30 to 50 years, streets and utilities determine the spatial direction of expansion for a long time, and long-term over-building as well as under-building is almost equally as harmful.

This report presents the socio-economic foundation on which the physical plan for the City of Fort Madison, Iowa, can be built. Introducing this report, this chapter identifies in general the objectives of this study and the methodology used. This analysis of Fort Madison was performed by North American Research Corporation under assignment by Don C. Shafer and Associates, who is the prime contractor for the city's comprehensive planning effort.

### TO BETTER UTILIZE ITS LOCATIONAL ASSETS, THE CITY OF FORT MADISON DESIRES TO COORDINATE ITS COMPREHENSIVE PLANNING EFFORTS WITH SHORT AND LONG-TERM SOCIO-ECONOMIC TRENDS

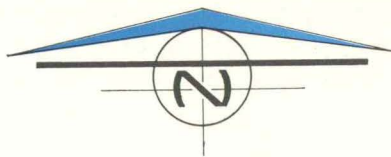
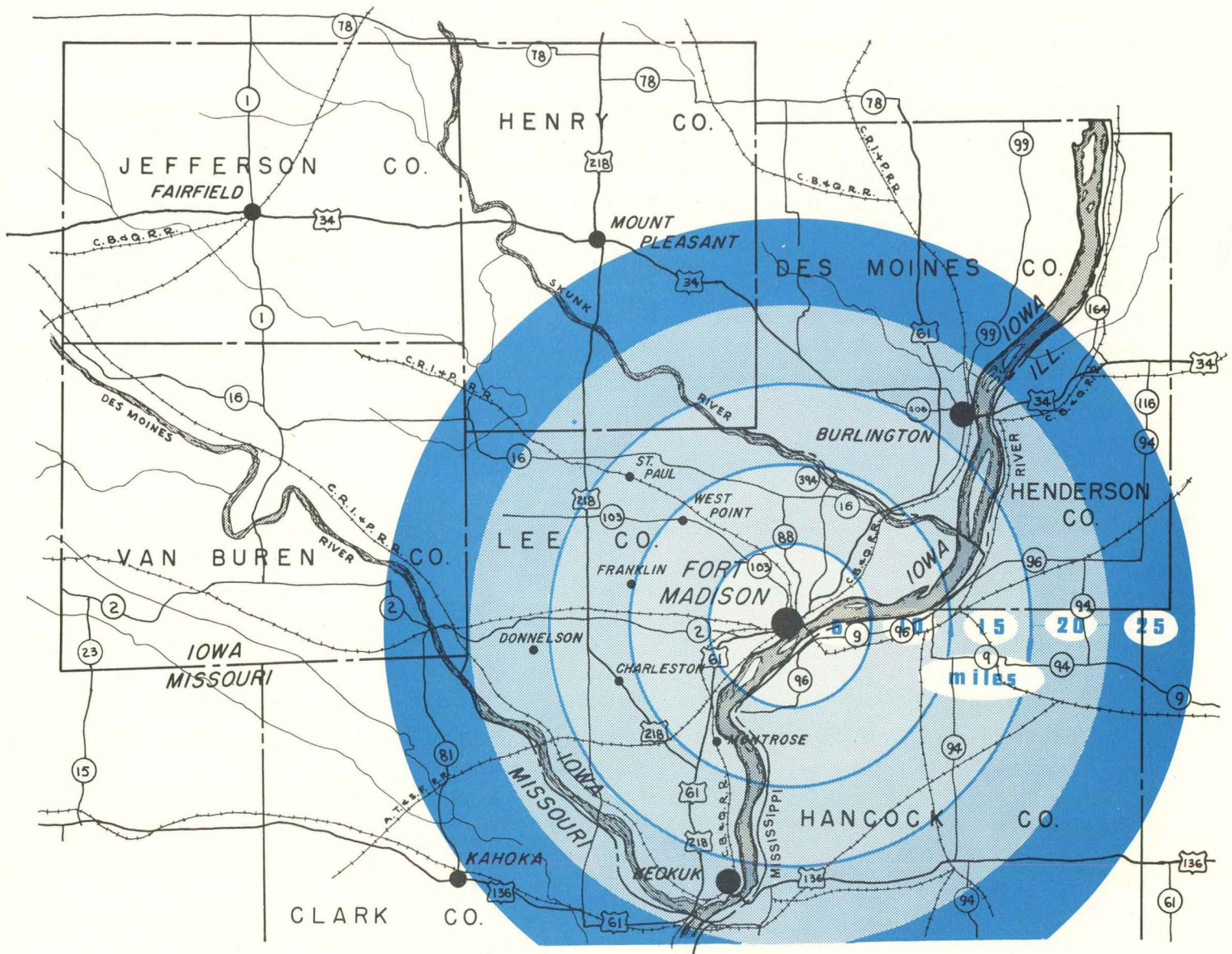
As shown on the next page, Fort Madison, the county seat of Lee County, is located in the extreme southeast portion of Iowa. The city stretches itself along the west bank of the Mississippi River at one of the river's widest and most picturesque points.

The topography of Fort Madison is similar to the one of other river communities adjoining the mighty Mississippi. This topography is characterized by relatively steep bluffs which rise from the flat ground along the river, and behind which the terrain is gently undulating.

In Fort Madison, the upland plain has an elevation of approximately 700 feet above sea level, while the low terrain on which most of the city is built, has an elevation from 525 to 550 feet.



# GEOGRAPHICAL LOCATION OF FORT MADISON, IOWA



URBAN PLANNING GRANT PROJECT NO. IOWA P-45  
 FORT MADISON, IOWA  
 THE PREPARATION OF THIS MAP WAS FINANCIALLY AIDED THROUGH  
 A FEDERAL GRANT FROM THE URBAN RENEWAL ADMINISTRATION OF  
 THE HOUSING AND HOME FINANCE AGENCY, UNDER THE URBAN  
 PLANNING ASSISTANCE PROGRAM AUTHORIZED BY SECTION 701 OF  
 THE HOUSING ACT OF 1954, AS AMENDED.

PREPARED UNDER CONTRACT FOR AND FINANCED IN PART BY THE  
 IOWA DEVELOPMENT COMMISSION UNDER THE PROVISIONS OF  
 CHAPTER 28, CODE OF THE STATE OF IOWA AS AMENDED



The City of Fort Madison is named after an old military post which was erected at that site in 1808, five years after the Louisiana Purchase, by a Lieutenant Kingsley. The Fort was built for the protection of early settlers and travelers and was named in honor of James Madison, then President of the United States. The Fort was the first structure erected by white men on the Iowa side of the Mississippi River.

In 1812, Fort Madison had to be abandoned when it was no longer able to withstand repeated attacks of hostile Indians. The soldiers burned all buildings; only a stone chimney remained. The place became known as "The Lone Chimney" and the Indians began calling it "Potowonok" meaning "Place of Fire." Now a monument marks the spot where the fort once stood.

Twenty years later, in 1832, General John H. Knapp, from New York State, became the first white man to settle permanently at Fort Madison. Having come up the Mississippi from New Orleans, he built a large frame house at the site and established a trading post. Other settlers followed and the community grew rapidly.

In July, 1836, Congress recognized the importance of the settlement and passed an act authorizing the layout of the Fort Madison site into town lots. The settlement incorporated as a town by an Act of the Wisconsin Territorial Legislature on January 18, 1838. During the same year, a group of Presbyterians organized the first church in Fort Madison and the first newspaper, the Fort Madison Patriot, began its publication. In 1839, the Iowa State Penitentiary was established at the site. It is the oldest penal institution west of the river and seven years older than the State of Iowa itself. Finally, in 1841, the Lee County Courthouse was built; it is the oldest courthouse in continuous use in Iowa.

As the years passed, Fort Madison grew steadily. The city acquired excellent rail and good highway transportation, diversified industries, and strong distributive trades. However, growth in the planning area has been restrained by Fort Madison's geographical location between Burlington and Keokuk. Not only is the city wedged in between these two strong urban centers which compete for business in the trade territory west of the Mississippi, it also has less favorable transportation connections to the common hinterland. The highway network in Lee County plus toll arrangements on the Mississippi River bridges make it easier for rural residents to reach Keokuk and Burlington than Fort Madison.

In addition, powerful forces are changing the allocation of economic resources in the United States today. The economy has shifted from agriculture to manufacturing, and more recently to a service-industry orientation. Increases in agricultural productivity deplete the countryside of people and consumers. Improvements in transportation and economic mobility allow factory goods to be shipped over long distances; and mechanization, automation and new mass production techniques frequently enable a single factory to supply a nationwide market advantageously.

These shifts have led to a concentration of socio-economic activity in urban centers and the degree of urbanization in an area correspondingly can be taken as an indicator for socio-economic well-being. As a consequence, rural communities have begun to feel a sometimes severe relative drain of socio-economic power. Some rural communities did not grow at all



during the recent past; others grew only slightly; and many communities have experienced repeated losses in their socio-economic activities despite significant increases in the nation.

The main forces causing this change are technology and the increasing availability of capital to substitute for labor. Both are characteristic of all mature and advanced economies and both are anticipated to make their influence felt with accelerating speed. But communities are not completely subject to trends they cannot control. They continue to be man-made by forward looking civic leaders and community authorities, who strive to take advantage of changes beyond their influence and work to shape the developments within their grasp.

In light of this situation, the City of Fort Madison wants to improve the things it can do to further the well-being of its residents, property owners, merchants, industrialists as well as of the people and farmers living in the area. Thus to enhance its own and the area's prospects for future growth, the city is undertaking a comprehensive community planning program of which this study comprises a major phase.

TO ASSIST FORT MADISON IN PLANNING FOR FUTURE EXPANSION, THE BASIC OBJECTIVE OF THIS STUDY WAS TO ANALYZE THE SOCIO-ECONOMIC FORCES WHICH AFFECT THE PLANNING AREA

For the purposes of this report, the term "socio-economic" describes both social factors such as population and family formation, and economic factors such as employment, retail sales and industrial activity. The connection of both adjectives by a hyphen indicates the inter-relation of both factors in community development.

Concerning the socio-economic forces that underlie developments in the planning area, the basic objective of this study was threefold:

- . To analyze the structure, stability and potentialities of the economic base in the city and the surrounding region;
- . To study the commercial and related economy in the planning area and estimate the spatial requirements of that economic sector to permit balanced zoning; and
- . To determine the future population, its age composition, family formation, and the corresponding housing needs.

To fulfill this threefold basic objective, a number of sub-objectives had to be pursued. These include: assessment of the city's business climate, a measurement of family earnings and consumer spending patterns, evaluation of the labor force, and its capabilities, and the identification of future housing needs.

The results of this study are to establish guidelines for planning the future of the Fort Madison area in terms of physical layout, zoning and community action. Conversely, the factors causing the city not to develop in the past as anticipated must be identified and analyzed.



## THIS REPORT DEALS ONLY WITH THE SOCIO-ECONOMIC PHASES OF THE PLANNING PROGRAM AND NOT WITH THEIR PHYSICAL IMPLEMENTATION

The basic aim of this study was to determine, from a socio-economic point of view, the potential as well as the capabilities of Fort Madison through 1980-1985. Accordingly, any concern with the city's physical plant and its arrangement was beyond the scope of the assignment. This aspect of city development will be analyzed in a later report, which will deal specifically with such considerations.

Within the framework of this approach the socio-economic phase of the area development deals with population factors and the economic forces active in the area. It develops quantitative planning benchmarks to guide in the subsequent phase of planning the physical plant. In a manner of speaking, it provides the idea of a house without furnishing the actual blueprints.

The physical planning phase on the other hand is concerned with converting the idea and benchmark data into the physical form for the planning area. It determines, for example, where what kind of housing should be built to serve anticipated needs, where retail outlets and shopping centers should be located, and where industrial operations would be performed most advantageously for the community as well as industry. It recommends the kind of zoning that best would accommodate desired future area developments.

## THIS ANALYSIS OF THE PLANNING AREA WAS PREPARED IN CONSIDERATION OF SOCIO-ECONOMIC DEVELOPMENTS IN THE GREATER FORT MADISON REGION

A socio-economic analysis of any planning area must consider socio-economic developments in the region to permit reasonable forecasts. The mobility of people, the rapid distribution of goods, and improving manufacturing techniques have begun to dissolve socio-economic boundaries and have increased the inter-dependence of communities and regions. Today it is easier for families to move in search of better opportunities; commuting 40 to 60 miles is no longer considered unusual; and the output of one or two factories can serve a complete national market.

Normally, if a cluster of cities, towns and villages has been developed, the communities can be grouped according to the functions they perform within the area. Smaller communities may provide for "dormitory" and some necessary retail requirements, while larger communities contain manufacturing, well-rounded medical facilities, education and full line department stores. The center city or cities usually take the lead in the area supplying banking, inter-regional transportation, warehousing and shipment breakpoints, and communications such as radio, TV, daily newspapers, etc.

This pattern is especially obvious in agricultural regions where the leading center community or communities combine governmental (county seat) with economic and commercial functions. Here, the general increase in mobility acts in two ways. On the one hand it increases the strength and operational span of active socio-economic centers and thus enhances their growth. On the other hand, it tends to make less important communities even more vulnerable and dependent. In the ideal case, a mutually beneficial relationship between the central place and its satellite communities can be established.



Thus, Fort Madison's future socio-economic function and potential must be seen and developed as one of the leading elements of the region rather than as an independent unit.

#### THE DEVELOPMENT OF FORT MADISON'S SOCIO-ECONOMIC POTENTIAL MUST BE MADE IN CORRESPONDENCE TO ITS COMPETITIVE POSITION.

Intra-state and intra-community competition for new industrial and commercial development has increased rapidly over the past 10 years. Governmental and municipal officials, especially those in so-called depressed areas, have become painfully aware of the necessity of keeping and adding to their inventory of industrial activities and employment opportunities.

The economic evaluation of a community must be made on the same basis as the economic evaluation of a business. Assets and liabilities must be ascertained in light of the competitive setting to identify and rank promising developments, and to decrease the vulnerability of any community undertaking. In this way, the available community resources can be channeled into those efforts which promise an optimum return.

Fort Madison's principal competitors in the fight for socio-economic improvements are the neighboring counties as well as municipal corporations in the socio-economic region. In area development as in industry, competition is carried out on many levels. Not only does a community compete with other communities of its own size, it also competes with other larger and smaller communities. Because of this competitive environment and the related strategies, the application of modern marketing principles could be a significant factor in promoting Fort Madison as an area in strong socio-economic demand.

#### THE FINDINGS OF THIS STUDY REPRESENT LONG-TERM ESTIMATES

Nobody, of course, can forecast the future exactly; no one can venture to predict specific economic movements of a long period ahead when one cannot even be sure what the stock market will do on Monday morning. With much work and painstaking research, however, one can indicate and measure broad future trends. Generally the course of future developments is estimated by analyzing past and present trends, by determining their inter-actions, and by assessing the numerous forces on the local as well as state and national levels which shape urban communities and metropolitan counties.

Unfortunately, estimates of future developments tend to lose in certainty in proportion to increases in the length of the projection time. Current conditions change as time goes by.

All long-term forecasts, therefore, should be reviewed periodically in order to reappraise their findings in the light of new developments. Since the planning period covered in this report requires such long term forecasts, regular reviews of the study results are recommended in order to keep Fort Madison development on a course most likely to best serve the ultimate goals of its citizens and communities.

## NATIONAL, REGIONAL AND LOCAL FACTORS INFLUENCING BASIC PLANNING AREA DEVELOPMENTS IN THE FUTURE

Men in business, government, education and science itself realize that they must look at least two decades ahead just to keep abreast. This is forced by the fact that technology has advanced more rapidly in the past 50 years than in the previous 500. It is then no surprise that gazing into the future has become a sizeable business, although forecasting is an art that still has few textbooks. The predictions made by the futurists, as they sometimes call themselves, are by no means all new, but taken together, they present a remarkable vision.

The most frequently used benchmark for that vision is the year 2000. It is a rounded date that is nearer than we realize. We are now within 34 years of the 21st century and 35 years past the election of Franklin D. Roosevelt in 1931. Some of the predictions made for the year 2000, of course, will come true at a much sooner date--perhaps within the planning period of this study, which has a 1985 forecasting benchmark. As with the objectives of this study, predictions made today influence the policies made today to shape the future. It was therefore considered necessary to incorporate the findings of future exploration studies as far as they pertain to the basic parameters of area development and as far as the scope of the present project would permit.

Within the context of this report, the basic parameters of development are concerned with the economic foundations of human life. In terms of economic sector analysis, they comprise agriculture, manufacturing industries and the resident labor force. In contrast to distributive and service economic functions, the basic economic parameters refer mostly to the actual physical creation of tangible goods and the directly related activities.

In mature economies such as the United States, however, all economic activities depend upon transportation and communications. Transportation and communications determine how efficiently the written and spoken word as well as goods, people and services can get in and out of a community. Transportation and communications set the framework within which an area and/or community is able to lock itself into the mainstreams of activity in a nation's economy. Without transportation and communications, there would be little room for diversification, for the division of labor, and for the utilization of all available resources which is a major factor in the growth of productivity and therewith the wealth of a nation.



## TRANSPORTATION IS THE KEY CHALLENGE AND OPPORTUNITY FOR FUTURE FORT MADISON DEVELOPMENTS

There is a definite relation between immobility and poverty. Transportation is an essential ingredient of almost everything man does to supply himself with the necessities of life. While food, shelter, health, education and useful jobs are the ultimate development goals, transport is the necessary catalyst to realize these objectives.

The City of Fort Madison fortunately enjoys strong assets in all fields of transportation. Thus the city will benefit from all transportation developments during the planning period regardless which way they will turn.

### The Federal Government is Beginning to Increase its Efforts Towards the Development of a Well-Balanced and Integrated National Transportation System

The U.S. government has become seriously concerned about the nation's transportation system. Today jets bring passengers from Los Angeles to New York in 4-1/2 hours; but it takes almost 2 hours to get by cab from the airport in New York to Manhattan during the rush hour. Commuting in metropolitan areas can add as much as 50% of the time a man works to his time away from home during the working day. Statisticians figure that for a dozen eggs which sell for 69¢, there is about 10¢ in transportation cost. The vast U.S. transportation activity currently absorbs one out of every five dollars of the gross national product.

These facts indicate how deeply transportation shapes the environment in which the U.S. lives and works. The federal government recognizes that it is not enough to prescribe what transport accommodations are needed to keep the nation growing. Industrial technology itself is dictated by transport potentials and limitations. Since the final objective is higher standards of living and not merely higher standards of moving, future technology may make ultimately more significant contributions to transport by eliminating the need for transport than by supplying more capacity.

However, according to Washington sources, the future of U.S. transportation during the next decade will depend upon the capability to choose from the transportation systems now already on the shelf and not from the development of a new transportation and/or industrial technology. The near term objectives include:

- . To keep the commuter services going;
- . To give the railroads more leeway in competing with rival forms of transportation; and
- . To finance research and development for all forms of private enterprise transportation as the government already does to a large degree for airlines and highways.

In turn, every effort to overcome or at least stabilize the tremendous cost in time and money that the movement of people and goods entails, will benefit the planning area by making it more accessible to the large concentration of socio-economic activity in the major urban areas.



## The Containerization of Cargo and Freight is Well on its Way to Tie Rail, River, Highway and Ocean Carriers Together into One Big Transportation System

When container ships are loaded or unloaded, it has been found possible for a crew of men to move 500 tons per hour as compared to 25 tons by conventional methods. To pump tallow into a bulk carrier costs 50¢ a ton; to put it aboard a cargo ship the old way in drums costs \$10.00 a ton. The technology is already tested and available, for improved freight and cargo handling. It goes all the way, including automatic handling equipment, all-container ships, special gantry cranes and conveyors, liquid cargo facilities, and the like.

Furthermore, the technology is already applied on a more or less limited basis. All major U.S. shipping lines have or are in the process of providing containership service to all European and many South American ports. On the other hand, the European counterpart of the U.S. container network is being built up rapidly. Ten years ago, the U.S. railroads carried only 168,000 carloads of piggyback freight; the 1965 total is estimated to have surpasses one million. Containerization is taking over with increasing speed.

Containerization as developed provides a new transportation system, not just a big box. Negotiations are under way to standardize the container size for the U.S. as well as all European countries. The system under consideration is intended to handle 8' x 8' containers ranging in length from 10' to 40' in intervals of 10'. Being interchangeable between barge, rail, ship, truck and the new air cargo carriers scheduled to fly in the late 1960's, containerization will benefit every form of freight transportation. It will reduce the need for berth capacity by speeding port operations, and it will stretch the supply of shipping space by shortening the turn-around time for cargo vessels, barges, railroad cars and trucks.

As a result, containerization will benefit locations such as Fort Madison which enjoy transportation assets encompassing all forms of inland cargo movements. But to take advantage of transportation developments, the city must plan now to set aside and provide space for facilities which enhance the integration and interchange of all kinds of freight movements.

### The Recommendation by the Army Corps of Engineers to Provide an Access Channel in the Mississippi to the Fort Madison-Port Lee Industrial Sites Should be Supported

An area of more than 15,000 acres adjoining the downstream limits of Fort Madison has been or could be made available by the city for industrial developments. Most of the area is relatively flat and all of it is above the stage of a 100 year frequency flood on the Mississippi River. The area currently is served by improved roads and highways, two major rail lines and four pipelines carrying petroleum, natural gas and liquified petroleum gases.

At the present time there are no facilities for handling water-borne freight at Fort Madison. Petroleum products were once received by pumping from barges moored a considerable distance from shore. But continued silting in the river has made this operation impractical.

On the other hand, shipments through Lock No. 19, approximately 20 miles downstream from Fort Madison, amounted to about 11,985,000 tons in 1964. Initial prospective commerce through the Fort Madison access channel is estimated by the Army Corps of Engineers at 82,600 tons annually, resulting in an estimated transportation cost savings of \$188,490. The Corps



estimates that the total prospective tonnage at the present time would amount to 107,913 tons annually.

But the development of an access channel at Fort Madison must not only be evaluated in terms of today's inland waterway transportation technology. Future developments promise to revolutionize the barge transportation industry. New types of vehicles, further mechanization, and the use of electronics for navigation are anticipated to expand the role of water transport throughout the world.

Two developments are of direct interest for the long term development of the planning area. A U.S. shipping company, Prudential Lines, proposed in 1965 to build 16 ships unto which fully loaded lighters or barges would be loaded directly at the rate of one every 15 minutes. The job would be done by a huge crane moving fore and aft on the ship's main deck. As presently suggested, a 700 foot, 22,100 ton ship would carry 50 barges each with a capacity of 16,000 cubic feet and over 350 tons. The faster turnaround in port would permit the new ships to make about 50% more voyages per year than a high-speed conventional ship. In addition, barges could be unloaded offshore and towed into port or inland waterways. This would expand the capacity of congested ports and also provide access to shallow draft ports in rivers and canals, which are off limits now. The line is applying at the U.S. Maritime Commission for 170 sailings per year from Atlantic, Gulf and Great Lakes ports to overseas.

The other development concerns the development of high speed cargo hydrofoil boats. Russia is reported by Industrial Research Magazine to be working on hydrofoil boats designed to carry 100 to 130 tons of cargo at speeds of 85 to 125 mph. Some of these boats are specifically developed for inland waterway travel while others are designed to travel at sea even in stormy weather. Barge traffic today in contrast moves in general at speeds of 6 to 12 mph. However, on the upper Mississippi River, barges also carry a lot of weight. They are up to 300 feet long with a capacity of up to 3,000 tons. Here single tows, moved by diesel towboats, may contain as many as 17 barges. But as indicated in statements from Washington, the federal government sees great possibilities in the new ships under development by the aero-space companies. These ships like the Russian hydrofoils, skim the water instead of plowing through it.

Finally, Litton Industries, Inc., which has made it a practice to anticipate new developments, is studying the feasibility of developing shipbuilding facilities on the Great Lakes. Although the company is better known for its aero space and defense efforts, it also operates one of the few major U.S. shipbuilding companies. Litton proposes to apply the systems concept, complete with intermediate stockpiling or warehousing, to inland waterway transportation. The ship designs under consideration include a power plant-payload approach calling for highspeed power units which can be separated from the payload while it is being unloaded or moved as a barge to the optimum unloading site.

As a result of these developments, inland waterway traffic will increase in terms of tonnage as well as the variety of goods moved. Present day traffic in barges will not be replaced but rather augmented by the new developments. In turn, the industrial potential of river locations such as Fort Madison will be strengthened considerably. Also, many new industrial processes need vast supplies of water which can be most economically supplied at a riverside location.



Thus, in long-term considerations as required by the present study, the importance of reserving adequate space and access to the river for future industrial developments cannot be over-emphasized.

### The Railroads Will Bring Increased Importance to Fort Madison Locations

Fort Madison is served east and west by the main line of the Santa Fe and is the division point between Chicago and Kansas City. The city is also served north and south by the Burlington to St. Louis and by the Burlington and Rock Island to Minneapolis and St. Paul. Switching operations are carried on in the planning area on a 24 hour a day basis due to the large-scale activities of the Santa Fe and the Burlington.

For decades, the railroads' share of the U.S. intercity freight has been falling, from 74% in 1930 to 50% 10 years ago, to approximately 43% in 1961/62. Since then the railroads have held that share steadily in a market that is growing. If they merely continue to hold their present share, shipments, measured in ton/miles, will increase 33% by 1975.

But this is not the whole story. Being car-happy, the U.S. in the past has done nothing for the railroad industry except to hobble it with rules and regulations written half a century ago. In addition, federal, state and local governments spent in 1964 about \$12 billion in tax money on highway programs while during the same period the railroads barely were able to invest about \$1.36 billion of their own money to improve their operations.

However, the railroads are now entering a period of intensive change which should lead to promising developments. In connection with the new federal transportation planning, serious attempts are made in Washington to de-regulate the industry and enhance its genuine competitive function and position. This means more freedom in rate making and the scheduling of trains. Furthermore, the merger movements currently under way promise to consolidate the industry during the planning period of this study.

The railroads on their side, of course, are doing many things to achieve their full future transportation potential. They are undergoing substantial management changes due to improvements in communications, the increased use of computers, and the application of existing as well as new technology. The average railway car, for example, is moving and loaded about 5% of the time. If that could be raised to 6%, it could save the railroads some \$100 million a year. Having a big, capital investment in plant facilities, that is, trackage, bridges, terminals and rolling stock, the railroads must achieve mass-production of transport services to be profitable. Because of the relatively large utilization of their existing plant facilities, the railroads are now in a position to handle a great increase in traffic at a small increase in cost.

The future of railroading, consequently, will be different from the operations as they are known today. Intercontinental passenger trains as well as passenger service outside the commuting sphere of metropolitan areas are expected to give room to the airplane, the bus and the car. Many carriers are already curtailing small freight services of less than a carload. The railroad thus will tend to assume a greater role in the fast, long distance moving of freight



between the major urban areas and, in turn, they will be more active in the industrial and socio-economic development of those areas.

In the long term, Fort Madison can only benefit from the future railroad developments. Its position is strengthened because of its existing railway network, its distance from existing metropolitan areas which prevent it from being swallowed up in the consolidation of railroad operations, and its other transportation assets. In the short term, the city must continue its efforts to industrialize with all determination in order to strengthen its attraction to future developments and minimize its intermediate vulnerability before the long term trends have an effect. The city is judged to be in an excellent position to do this.

#### Highway Developments Will Require Continued Attention by Fort Madison Authorities During the Planning Period

At the present time, the City of Fort Madison is served by U.S. Highway 61 and by three state roads, Iowa Routes 2, 88 and 103. The city also is served by twelve major truck lines. In 1963, about 21,800 vehicles were registered in Lee County--about 18,000 autos, 3,500 trucks and 270 motorcycles.

In the U.S., the automotive mobility is forecast to increase substantially. In 1964 there were about 71.8 million automobiles, 14.1 million trucks and 150,000 buses registered. By 1975, according to the Brookings Institution, an independent research organization working for the government, there will be 125 million automobiles, 24.5 million trucks and about 500,000 buses in the United States and Canada.

In the past the U.S. automotive mobility was aided by the Interstate Highway Program which has created the necessity for another program. The highway program made travel from city to city by auto or truck increasingly easy. But in doing so, it has created severe traffic problems for the cities. The highway program is scheduled to be completed in 1972, and there is substantial determination not to have a second interstate highway program. By 1972, according to the U.S. Bureau of Public Roads, the great need will be for secondary roads, city streets, county roads, special roads and beltways linking the outlying metropolitan areas and the suburbs.

This shift in emphasis on highway construction is prompted by the fact that downtown sections of major U.S. cities are already between 45% and 70% paved. In addition, surging land prices have raised the cost of building freeways in urban areas to between \$5 million and \$40 million per mile. Thus, the increasing need for intercity and intracity travel must be met through improvement of other modes of transport.

In conclusion, Fort Madison, with the support of Burlington and Keokuk, should do everything to get the region's Interstate Highway Program completed before 1972. This would provide improved highway transportation to other cities and round out the transportational assets.

As a result, it can be said that the region is rather rich and that the actual medium income of families might be in the \$6,000 annually category. For a comparison, the 1960 median income of families in Iowa's standard metropolitan areas ranged from \$5,539 annually in Sioux City to \$6,491 in the Tri-Cities. It is estimated that family incomes in all areas increased by about 3% annually since 1960.



ANALYSIS OF CONSUMER SPENDING PATTERNS INDICATES THAT A RETAIL SALES DEMAND OF APPROXIMATELY \$16.4 MILLION WAS GENERATED IN THE PLANNING AREA DURING 1965

A survey of consumer expenditure patterns in rural non-farm areas in 1961 indicates that about 86.7% of the total family income is spent on current consumption items. The survey was conducted by the U.S. Department of Labor, Bureau of Labor Statistics; current consumption expenditures, according to the Department, were calculated by deducting taxes, gifts, contributions and personal insurance from the total income.

On this basis, the 1965 current expenditures for consumption in the planning area can be calculated at approximately \$22.1 million. Since, however, about 18.8% of the expenditures for current consumption go for items such as rent, mortgages and utilities, and about 6.7% for non-retail effective doctor and hospital bills, education, recreation and other personal expenditures, the retail effective and related expenditures in the planning area can be calculated at \$16.4 million, 74.5% of the 22.1 million. In detail, the average spending patterns of expenditures for current consumption in rural non-farm areas of the Fort Madison income level break down as follows:

Breakdown of Retail Effective Consumer Spending

<u>Expenditures for Current Consumption</u>	<u>% of Total</u>
All Expenditures	100.0%
Food	25.2%
Tobacco	1.9%
Alcoholic beverages	1.8%
Household operations	4.9%
House furnishings and equipment	5.1%
Clothing, clothing materials, services	9.8%
Retail Effective:	
Personal Care	1.4%
Medical Care	3.1%
Recreation	1.7%
Reading	0.5%
Education	0.4%
Transportation	16.7%
Other expenditures	2.0%
	<u>74.5%</u>

Source: U.S. Department of Labor, Bureau of Labor Statistics, December, 1963. Data refers to 1961.

In evaluating the foregoing data, it should be noted that white collar workers are concentrated in urban areas where most of their employment opportunities are given.

Corresponding to the forces that shape the occupational demand and supply, the unemploy-

Table 1

PERCENT DISTRIBUTION OF THE WORKING POPULATION  
BY MAJOR OCCUPATION GROUPS - 1940, 1950 AND 1960

Major Occupational Group	1960	1950	1940	Unemployment Rates January, 1963
Total	100.00	100.00	100.00	6.6
<u>White Collar Workers</u>	<u>42.2</u>	<u>36.6</u>	<u>31.1</u>	-
Professional, technical and kindred workers	11.4	8.6	7.5	1.9
Managers, officials and proprietors, excluding farm	8.5	8.7	7.3	1.3
Clerical and kindred workers	15.0	12.3	9.6	4.0
Sales workers	7.4	7.0	6.7	5.7
<u>Manual and Service Workers</u>	<u>51.5</u>	<u>51.6</u>	<u>51.5</u>	-
<u>Manual Workers</u>	<u>39.7</u>	<u>41.1</u>	<u>39.8</u>	-
Craftsmen, foremen and kindred workers	14.3	14.1	12.0	8.0
Operatives and kindred workers	19.9	20.4	18.4	9.0
Laborers, except farm and mine	5.5	6.6	9.4	17.8
<u>Service Workers</u>	<u>11.8</u>	<u>10.5</u>	<u>11.7</u>	-
Private household workers	2.8	2.6	4.7	5.0
Service workers, except private household	9.0	7.9	7.1	6.8
<u>Farm Workers</u>	<u>6.3</u>	<u>11.8</u>	<u>17.4</u>	-
Farmers and farm managers	3.9	7.4	10.4	1.1
Farm laborers and foremen	2.4	4.4	7.0	10.4

Sources: U.S. Department of Commerce, Bureau of the Census;  
U.S. Department of Labor, Bureau of Labor Statistics.



ment rates shown reflect the pattern of a technologically advanced economy which typically requires more skill and less muscle to operate. The relatively low unemployment rates among amanagerial and professional people, whether in agriculture or industry, represent adjustment movements while the high rates among manual workers highlight definite structural economic defects.

As a result of these changes in the U.S. economy, rural areas not only experience employment decline in their key economic resource, they also find fewer opportunities to make up for this loss. In addition, most of the rural work experience is in occupations which are subject to rather high unemployment rates.

On the positive side, however, employment in rural areas is relatively inexpensive and usually is characterized by high productivity and quality output. Furthermore, education generally is highly stressed and training programs are available to adapt the labor force to the new industrial needs.

In response to these trends, Fort Madison and Lee County should set up a training program for the adult population in the surrounding rural area. Such an undertaking would help to increase earning power by improving labor force skills. Simultaneously, it would strengthen the city's industrialization endeavors by raising the quality of the labor price supply.

#### AGRICULTURE IN FORT MADISON'S HINTERLAND IS EXPECTED TO ADD MATERIALLY TO THE PLANNING AREA'S FUTURE DEVELOPMENT

The importance of agriculture in economic growth and development was rediscovered only recently. Though it is difficult to give credit to any single individual, a movement by British economists in the middle of the 1950's provided the starting point for renewed and intensive analysis. Though most of the discussion still centers on the development of less advanced countries, the findings appear to have application to the development of U.S. rural areas as well.

#### Anticipated Agricultural Developments in the U.S. Point to a Growing Emphasis on Business Management Methods, More Capital and Less Labor in Farm Operations

The corporate revolution that transformed manufacturing and commerce is now beginning to spread to agriculture. Like the corner grocer, the family farmer--historically an owner, manager and laborer all in one--is being challenged by farm corporations. By parceling out ownership, management and labor to separate specialists, corporations can profit from large capital assets, a staff of experts and efficient mass production. As a result, according to News Front Magazine, farmers have to become more and more businessmen, and the family farm is being rivaled by specialized, capitalized farm corporations.

The beginning of the trends toward this corporate type development is already clearly discernible. While competition is weeding out small farmers at a rate of 100,000 per year, with 2.2 million more still to go, large farms (\$10,000 plus in sales) have tripled in number during the past 30 years. The trend toward highly capitalized farming is truly breathtaking.

In 1941, according to News Front Magazine, a \$5,000 investment in land, livestock and equipment was sufficient to maintain a farm. By 1961, it took over \$25,000 for the average farmer, and the large pace-settlers were using \$75,000. Professor Timmons, Iowa State University, forecasts that farmers in the future will need as much as \$500,000 to \$1,000,000 to get off to a promising start. Since 1946, the investment in agriculture has doubled and in 1962 it was estimated at \$204 billion. At that time the farm investment was equal to about 70% of the current assets of all U.S. corporations.

The cost/price profit squeeze in U.S. agriculture, plus increased food exports under commercial as well as foreign aid programs, add to this development. Only large farmers can now afford and efficiently use all the equipment needed to cut costs and to compensate low margins with greater volume. Now, however, the competitive pressure for expansion appears to open the door to more and more outside venture and risk capital and therewith outside ownership.

The trends discussed above already are indicated in past developments, as shown in the table following:

Valuation or Production Assets Used in Agriculture, and  
Percentage Change in Value, 1940, 1950, and 1960<sup>1/</sup>

Kind of Asset	1940	1950	1960	Percent Change	
	Billion Dollars	Billion Dollars	Billion Dollars	1940-60 Percent	1950-60 Percent
Total Production	\$ 83.3	\$ 95.9	\$ 108.6	30	13
Assets:					
Farm real estate	58.2	63.4	71.1	22	12
Livestock	12.9	13.1	15.4	19	18
Machinery & motor vehicles	4.1	8.6	10.3	151	20
Other <sup>2/</sup>	8.1	10.8	11.8	46	9

1/ In 1947-1949 prices.

2/ Includes crop inventories held for livestock feed and the portion of demand deposits owned by farmers estimated as being held to meet farm production costs.

	1940	1950	1960	Percent Change	
	Dollars	Dollars	Dollars	1940-60	1950-60
Per Farm <sup>3/</sup>	\$13,118	\$16,979	\$23,921	82	41
Per Farm Worker	7,347	9,625	14,707	100	53

3/ Based on number of farms as reported by the Department of Agriculture, according to 1954 Census definition.

Source: U.S. Department of Agriculture, Economic Research Service, Report No. 28, March, 1963.



Corresponding to the challenge of large capital needs on family farm ownership is the pressure of the farm operator's managerial and entrepreneurial capabilities. To handle a large investment, to use complex equipment effectively and to operate in a tight and highly competitive market, a successful farm operator must be an expert in accounting, industrial economics, market analysis, mechanical engineering, maintenance, scheduling, agronomy and organization. Repeated failures in any one of these fields could easily lead to bankruptcy of the entire operation.

### Agriculture in Lee County is Strongly Owner-Operated

A comparison between the farm profile in Lee County with that of the southeast Iowa agricultural district shows that Lee County farmers allocate about 40% of their acreage to pasture. Specifically, the comparison is as follows:

Farm Profile in the Lee County Region - 1963

Farm Structure	Lee County	Southeast District
Number of farms, January, 1964	1,693	17,282
Average size of farms (acres)	182	188
Total land in farms (acres)	308,950	3,243,866
% of farm acreage owned by operator	71.8	62.4
% of farm acreage rented by operator	28.2	37.6
% of total acreage harvested for all purposes	25.6	25.7
% of total acreage all pasture	39.8	33.0
% of total acreage all hay	8.4	9.3
% of crop land not harvested or pastured	6.0	7.1
% of total land in lots, roads, buildings, woods & waste	6.0	7.8
% other land uses	14.2	17.1
	100.0	100.0

Source: Iowa Department of Agriculture, Division of Agricultural Statistics, Annual Farm Census, 1963.

The Southeast Iowa agricultural district includes the following eleven counties: Davis, Des Moines, Henry, Jefferson, Keokuk, Lee, Louisa, Mahaska, Van Buren, Wapello and Washington.

Although the anticipated consolidation in the number of farms will affect the rural farm population, it will not be disastrous for the county. Most of the county's population already lives in urban areas, as shown in the table following, or in the small communities:

According to the U.S. Bureau of the Census, the urban population is comprised of all persons living (a) in incorporated places of 2,500 inhabitants or more, or (b) in the densely settled urban fringe areas of major communities whether incorporated or not.

Table 2

## THE INDUSTRIAL AND INSTITUTIONAL ECONOMY IN FORT MADISON

Company	Products	Average No. of Employees	Average Annual Payroll
<u>Industry</u>			
Ajax Manufacturing Co.	Camping & utility trailers, tool stands, lawn spreaders	121	\$ 618,000
Aluminum Foil Packaging Co.	Pie plates, trays, frozen	5	16,000
American Paper Products	Ammunition containers	27	150,000
Anchor Metals Co.	Electrical transmission tow- ers, power switchyard structures	57	260,000
Boyles Galvanizing Co.	Hot dip galvanizing	37	85,000
California Chemical Co.	Anhydrous ammonia, nitric acid, carbon dioxide, com- plex fertilizers	234	1,390,000
Crandon Mill Co.	Paper corrugated medium	150	780,000
E. I. DuPont de Nemours	Decorative and protective finishes	291	2,029,000
Gleason Corporation	Wheels, handtrucks, auto- motive safety equipment	N. A.	500,000
Midwest Wax Paper Co.	Waxed paper products	115	530,000
Pilly Brush Co.	Industrial brushes and boiler scrapers	13	69,000
W. A. Sheaffer Pen Co.	Fountain pens, mechanical pencils, ballpoints, marketing instruments, writing accessories	1,240	6,972,000
	Subtotal	2,290	\$13,400,000
<u>Railroads</u>			
Santa Fe		575	\$ 4,238,000
Burlington		23	140,000
	Subtotal	598	\$ 4,378,000



Table 2--Continued

<u>Company</u>	<u>Products</u>	<u>Average No. of Employees</u>	<u>Average Annual Payroll</u>
<u>Utilities</u>			
Union Electric Co.	Electricity	46	\$ ,367,000
Northwest Bell Telephone	Telephone service	44	212,000
Municipal Water Company	Water	16	80,000
North Central Public Service Company	Gas	24	160,000
	Subtotal	130	\$ 819,000
<u>Communications</u>			
KXGI Radio	Broadcasting	10	N.A.
Evening Democrat	Newspaper	34	\$ 200,000
	Subtotal	44	\$ 200,000
<u>Governmental &amp; Similar</u>			
City Administration		75	\$ 332,000
Public Schools		276	1,220,000
Iowa State Penitentiary		330	1,619,000
Post Office		37	216,000
Sacred Heart Hospital		160	N.A.
	Subtotal	878	\$ 3,387,000
	GRAND TOTAL	3,940	\$22,183,000

Sources: City of Fort Madison, Iowa;  
Fort Madison Chamber of Commerce.

### Settlement Patterns in the Lee County Region

County	1960 Population	Population Density Per Square Mile, 1960	% of 1960 Population		% Change - 1950-1960		
			Urban	Rural	Total Population	Urban	Rural
Des Moines	44,605	109.1	78.4	21.6	6.1	14.3	-16.0
Henry	18,187	41.3	40.4	50.6	-2.8	25.6	-15.7
LEE	44,207	84.7	71.4	28.6	2.6	1.5	5.3
Louisa	10,209	25.5	0.0	100.0	-7.3	0.0	-7.3
Van Buren	9,778	20.1	0.0	100.0	-11.2	0.0	-11.2
State of Iowa	2,757,537	49.2	53.0	47.0	5.2	16.9	-5.5

#### Many Agricultural Changes Forecasted are Expected to Take Place During the Planning Period for Fort Madison

The time period for the current Fort Madison planning program extends to 1985, but many experts agree that technological advances will revolutionize farming in the U.S. within the next 15 years.

According to the agricultural experiment station at Iowa State University, crop and live-stock output are expected to increase 34% and 52%, respectively, by 1980. For the same time, farm labor is forecast to decrease 34% and the number of farms 50%. In contrast, the number of acres per farm is anticipated to increase by two-thirds and the investment per farm will double.

As a result of these trends, Fort Madison will continue to have an available labor force. The city also has every chance to become the center of significant agricultural production activities during the planning period. It should be mentioned in this regard that the Chicago metropolitan complex, the major market for the area, is forecast to have a population of 10 to 12 million people by 1980, and to include Elgin, Aurora and Joliet within its urbanized areas.

#### THE INDUSTRIAL AND INSTITUTIONAL ECONOMY IN THE PLANNING AREA IS STRONG AND DIVERSIFIED

The industrial and institutional economy in the planning area consists of manufacturing industries, the railroads, utilities and governmental and similar organizations. As shown in Table 2, they provide employment for more than 3,900 people.

The table shows that the industrial economic base of Fort Madison is well diversified. The list, however, is not quite representative of Fort Madison's total industrial development. Fruehauf Corporation, which manufactures trailers and a variety of other cargo transportation equipment, has begun to construct a factory in the city's industrial park located outside of the corporate limits, and plans to employ ultimately about 1,500 persons.

All the non-manufacturing organizations named in the list represent economic units which act as a genuine addition to Fort Madison's economy since they create incomes and business



demands. The outstanding economic feature of these organizations is that they are not subject to business fluctuations. They are relatively steady in employment over long periods of time. In this way they act as stabilizers to the area economy.

Overall, the industrial world in the 1980's will be as different from today as today is different from the 19th Century. The Gross National Product is forecast to reach the nearly incredible total of \$1.2 trillion by 1980, as compared to the \$670 billion expected for 1966. Products will be made with a reliability known today only in space undertakings. To a larger and larger extent, products or major sections of products will be made in one piece, often in one machining operation. The new production processes, of course, will require an increased amount of labor skill and unskilled and the semi-skilled worker will be in decreasing demand.

### THE EMPLOYMENT OF FORT MADISON RESIDENTS IS STRONG IN THE MANUFACTURING, TRANSPORTATION AND TRADE FIELDS

The employment profile of Fort Madison residents broken down by industry affiliation reflects the character of the area as a manufacturing, trade, transportation and service center. It shows how little the area depends directly on agricultural, forestry and fishery pursuits. A comparison to State of Iowa averages is as follows:

Comparison of the Industry Affiliation of Employed  
Fort Madison Residents with State of Iowa Averages, in Percent - 1960

Industry	Fort Madison	State of Iowa			
		Total	Urban	Rural Non-Farm	Rural Farm
Agriculture, forestry & fisheries	0.3	20.6	1.7	9.2	76.5
Mining	-	0.2	0.2	0.5	0.1
Construction	3.0	5.2	5.6	8.0	1.7
Durable goods manufacture	20.3	9.6	12.7	9.0	2.7
Non-durable goods manufacture	9.8	9.1	12.0	8.2	2.2
Transportation, communications and other public utilities	15.9	6.2	7.8	7.6	1.6
Wholesale and retail trade	19.5	19.4	23.1	25.6	5.2
Finance, insurance and real estate	2.4	3.6	5.0	3.0	0.8
Business and repair services	1.0	2.0	2.4	2.8	0.5
Personal services	6.6	4.8	6.0	5.2	1.6
Entertainment and recreation services	0.9	0.6	0.9	0.6	0.1
Professional and related services	10.6	12.8	15.6	14.6	4.1
Public administration	6.4	3.2	4.0	3.6	1.0
Industry not reported	3.2	2.5	3.0	2.1	1.7
	100.0	100.0	100.0	100.0	100.0

Source: U.S. Department of Commerce, Bureau of the Census, 1960.

Table 3

COMPARISON OF THE OCCUPATIONAL PROFILE OF  
FORT MADISON RESIDENTS WITH STATE OF IOWA AVERAGES, 1960

Male Employed	Fort Madison	Percent Distribution	State of Iowa	
			1950-60	1940-60
Professional, technical & kindred workers	7.1	7.7	35.4	70.4
Farmers and farm managers	0.2	21.6	-22.2	-24.8
Managers, officials, proprietors, excluding farm	13.4	9.7	-6.3	4.5
Clerical and kindred workers	8.7	5.1	2.7	35.6
Sales workers	6.7	6.6	3.9	8.8
Craftsmen, foremen and kindred workers	21.4	14.5	0.5	43.8
Operatives and kindred workers	21.2	16.2	11.4	54.5
Private household workers	0.2	-	-40.9	-32.3
Service workers, except private households	9.3	4.4	5.1	28.8
Farm laborers and foremen	0.1	5.0	-45.4	-62.7
Laborers excluding farm & mine	8.0	5.5	-17.5	-6.5
Occupation not reported	3.7	2.6	90.8	258.6
	100.0	100.0	-6.2	2.8
<u>Female Employed</u>				
Professional, technical & kindred workers	11.4	14.6	23.2	34.3
Farmers and farm managers	-	1.5	98.1	58.6
Managers, officials, proprietors, excluding farm	2.6	3.3	-	48.8
Clerical and kindred workers	30.2	28.3	38.7	141.3
Sales workers	8.8	8.8	9.3	78.4
Craftsmen, foremen & kindred workers	0.5	1.0	-	143.2
Operatives and kindred workers	20.7	9.9	16.5	114.9
Private household workers	6.4	6.8	33.7	-29.5
Service workers except private household	13.7	18.1	53.1	141.2
Farm laborers and foremen	-	3.4	-35.5	475.2
Laborers, excluding farm & mine	0.3	0.5	-33.7	-21.9
Occupations not reported	5.3	3.8	47.0	219.3
	100.0	100.0	25.9	81.0

Source: U.S. Department of Commerce, Bureau of the Census, 1960.



Particularly noteworthy is the strength of Fort Madison's resident employment in the durable goods manufacturing field. This represents a very desirable deviation from the State of Iowa averages which indicate the state's dependence on agriculturally-oriented industries. Fort Madison has the potential of becoming a strong industrial center in eastern Iowa.

**THE OCCUPATIONAL PROFILE OF FORT MADISON RESIDENTS IS STRONG IN OCCUPATIONS EXPERIENCING FAVORABLE GROWTH TRENDS**

The occupational profile of Fort Madison residents is strong in the managerial, clerical, craftsmen, operatives and service worker fields. Table 3 shows a comparison between the occupational structure of Fort Madison and State of Iowa averages. Furthermore, the future outlook for professional, managerial and skilled occupations is optimistic, while unemployment is and will remain high among the unskilled. A study by the U.S. Department of Labor indicates the strong relationship between occupational achievements and unemployment as well as occupational growth:

Employment Growth and Unemployment by Occupation

Occupational Group	Change Forecast 1960-1970	Unemployment 1963
Professional, technical and kindred workers	43%	1.9%
Managers, officials and proprietors, except farm	21%	1.3%
Clerical and kindred workers	31%	4.0%
Sales workers	23%	5.7%
Craftsmen, foremen and kindred workers	20%	8.0%
Operatives and kindred workers	13%	9.0%
Service workers	34%	5.9%
Laborers, except farm and mine	0%	17.8%

Sources: Forecast-U.S. Department of Labor, Bureau of Labor Statistics, Feb., 1963; Unemployment-U.S. Department of Labor, Monthly Report on the Labor Force, Feb., 1963.

In evaluating the foregoing data, it should be kept in mind that unemployment among the craftsmen and operative groups may be influenced by seasonal factors. Nevertheless, the Department of Labor data documents the generally anticipated trends very well. It must be remembered that technology is expected to reduce drastically the relative amount of assembly operations which are now the backbone of most manufacturing undertakings. This development is already here in many facets of the electronics industries where micro-miniature circuits, for example, are grown rather than made.

## EDUCATIONAL ATTAINMENTS OF A COMMUNITY'S ADULT POPULATION BECOME MORE AND MORE IMPORTANT FOR ENSURING FAVORABLE FUTURE DEVELOPMENTS.

Educational attainments of a community's adult population dictate an area's adjustment capabilities to technical and economic progress.

The dramatic technological changes since World War II must not be considered a one-time result from military research. Rather they signal a new stage of fundamental change that promises to accelerate more sharply as it progresses.

On a nationwide economic scale, technology has increased the labor force tremendously, although in certain individual jobs and factories, men were replaced by machines. Despite the unprecedented growth of technology after World War II, the labor force, personal income and standard of living have reached new highs every year.

To date, the social effects of the current technological revolution might be identified as follows:

- . Fewer and fewer people work in factories;
- . Less human effort is required for monotonous and tedious work;
- . The work week is shortened;
- . Leisure is becoming the center of life, rather than the fringe;
- . The individual is freer by having both the time and the means to truly develop himself;
- . Workers are quite likely to experience several occupational shifts during their working life; and
- . Special skills can become obsolete very quickly, and general capabilities have become the necessary foundation for acquiring new special skills.

Many of these effects, of course, are caused by automation, which is the backbone of mass-production technology. Automation seems to improve working conditions in several ways. For example, it increases safety and permits cleaner and more pleasant surroundings. Some foundry workers never touch the molding sand, many refinery workers could wear white gloves on the job, and automated grain mills have eliminated all dust.

However, automation does not upgrade workers, it upgrades the jobs and the job requirements. The traditional man/machine relationships have changed and will continue to do so as the need for physical exertion gives way to the growing amount of mental effort expected from operators. But the major impact of automation and technology most likely is found in their capacity to do entirely new things which are not possible today. To take advantage of these trends requires occupational mobility which appears to increase in correlation to an increase in the educational achievements.



The Educational Achievements of Fort Madison's Population 25 Years of Age and Older are Strong in the High School Category

The educational attainments of the Fort Madison adult population compare reasonably well with State of Iowa averages, as shown following:

Comparison of Educational Achievements of the Fort Madison Adult Population with State of Iowa Averages, 1960 (In Percent)

Persons 25 Yrs. Old and Over	Fort Madison	Total State	State of Iowa		
			Urban Area Residents	Non-Farm Residents	Farm Residents
No school years completed	0.7	0.5	0.6	0.6	0.2
Elementary: 1 to 4 years	3.1	2.5	2.5	3.3	1.7
5 & 6 years	4.2	4.6	4.4	5.7	4.0
7 years	5.2	6.1	5.3	7.3	6.5
8 years	24.4	24.3	20.3	26.7	31.1
High School: 1 to 3 years	7.6	9.6	10.8	8.5	8.0
4 years	32.1	30.3	30.1	27.5	33.6
College: 1 to 3 years	7.6	9.6	10.8	8.5	8.0
4 years or more	4.1	6.4	8.8	5.1	2.1
	100.0	100.0	100.0	100.0	100.0
Median School Years Completed	11.0	11.3	11.9	10.3	10.5

Source: U.S. Department of Commerce, Bureau of the Census, 1960.

Educational achievements of the adult population constitute, of course, an important labor force factor. Fort Madison in this regard appears to be in a favorable position, since many employers now require at least some high school education as a prerequisite for employment.

Economically, Education is a Very Good Investment

Although it is by no means certain that money invested in education will pay dividends, it usually does. Higher incomes, of course, are due to a variety of factors, including individual differences in intelligence, home environment, and family connections. However, for every year for which data can be presented, the completion of an additional period of schooling was regularly associated with a higher average income. The differences in income between elementary and high school graduates and between high school and college graduates were as follows:

## Correlation of Income to Educational Achievements

Year	Percent Elementary/High School Income Differential	Percent High School/College Income Differential
1946	35%	48%
1949	39%	62%
1956	41%	63%
1958	44%	70%

Source: U.S. Department of Commerce, Bureau of the Census, 1961.

The data compares the estimated incomes of men from 25 to 64 years of age. The increases in the differentials from 1946 to 1958, particularly between the high school and college graduates, reflect the impact of technology with its higher job requirements. This data correlates to those on unemployment, and stresses the value of college education.

Newer data on the monetary value of education help to present figures closer to today's economic conditions. Based upon 1960 census information, a college graduate, for example, can look forward to earning about \$417,000 during his lifetime, assuming no subsequent drastic change in the economic conditions. This would be about \$170,000 more than the average lifetime earnings of a high school graduate. Moreover, the value of an education can also be demonstrated for occupations in which one does not expect education to be of significance. According to the U.S. Department of Labor, craftsmen and foremen, if they completed high school, average about \$36,000 more during their lifetime, than grade school graduates. Even the semi-skilled, the operatives and kindred workers, stand to earn some \$24,000 extra during their working life, if they have a high school diploma.

## Estimated Lifetime Earnings by Education

Years of School Completed	Lifetime Earnings from Age 18 to 64
Elementary School: Less than 8 years	\$143,000
8 years	184,000
High School: 1 to 3 years	212,000
4 years	247,000
College: 1 to 3 years	293,000
4 years or more	417,000

Source: Testimony of Herman P. Miller before Subcommittee of Employment and Manpower, U.S. Senate Committee on Labor and Public Welfare (88th Congress, 1st Session), July, 1963.



The reasons for this are not hard to find. Occupational outlook information indicates that employers prefer high school graduates because of their better trainability and potentially higher productivity. Unlike the less educated and often also less trained person, the graduates are also the last to be laid off in slack times.

Again, it must be stressed that education is only one ingredient for success, even though it is a very important one. In 1961, about 2.6 million men--46% of all college-educated males--had annual incomes under \$7,000, whereas 3.3 million men--23% of the male high school graduates--earned more than that amount.

Nevertheless the implications of the foregoing data are obvious. The value of thorough schooling and also the potential of adult education cannot be stressed enough. Community emphasis upon education will not only aid the resident labor force and young people, it also will help to attract favorable socio-economic developments in competition with other communities.

#### THE FUTURE SOCIO-ECONOMIC EXPANSION OF FORT MADISON DEPENDS UPON A CONTINUATION OF ITS EXCELLENT INDUSTRIAL CLIMATE AND PROMOTIONAL EFFORTS

Thanks to the efforts of leading citizens, the city administration and the Chamber of Commerce, the industrial climate in Fort Madison is excellent. The citizens and officials pursue an active and systematic program to maintain an excellent community attitude towards industry.

Fort Madison has a number of assets to back its industrial development endeavors. These assets include available industrial sites and space for expansion, an outstanding education system, a good labor supply and harmonious labor relations, recreational resources in the community itself, as well as in the immediate vicinity, and an outstanding transportation base.

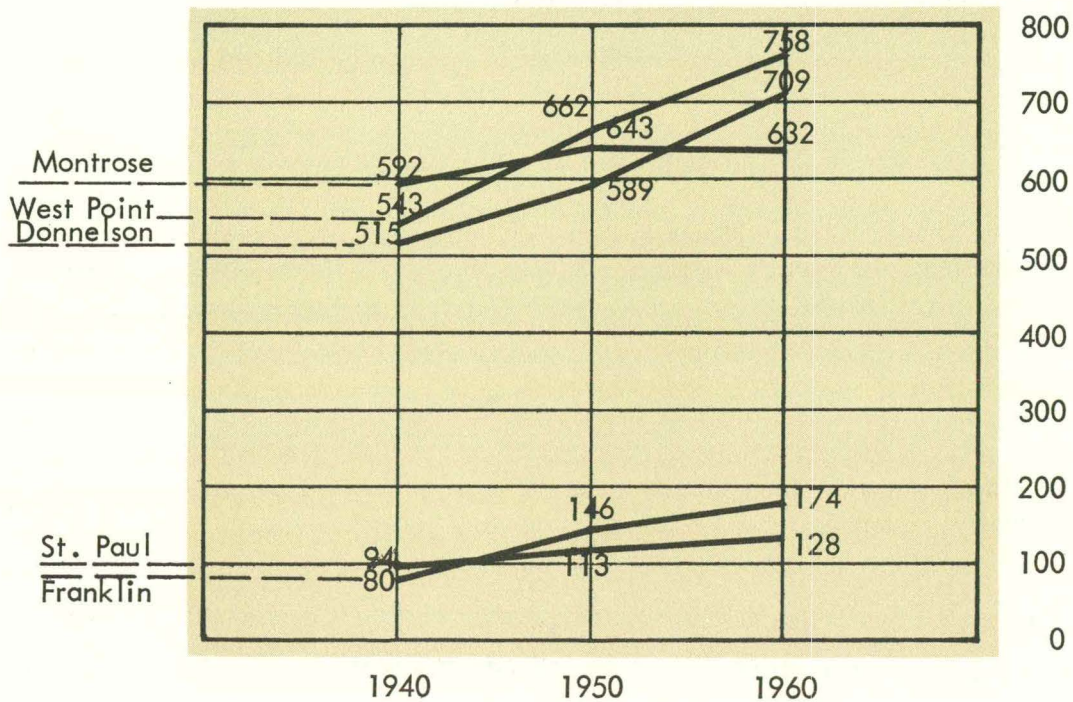
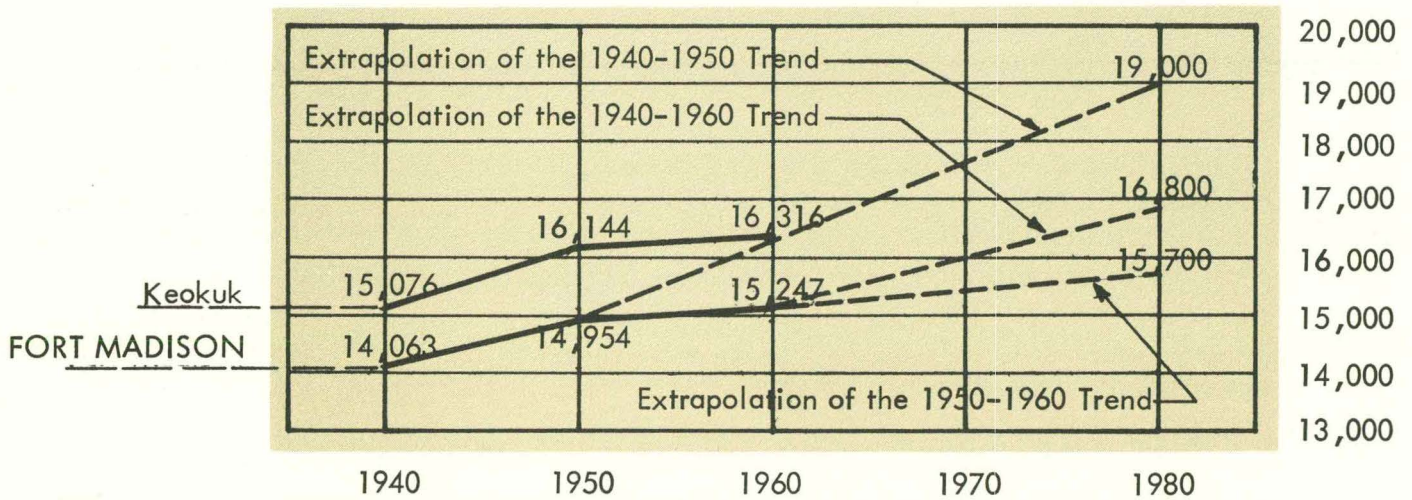
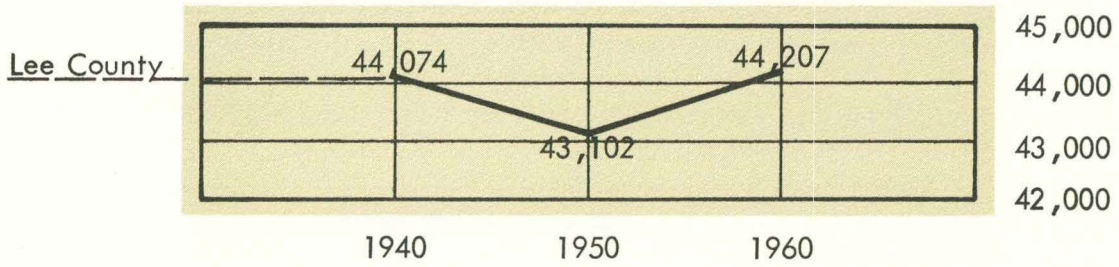
The implications of the foregoing analyses for community development are significant. They require that communities be developed as an attractive place for total living rather than just a locality for working, shopping, eating and sleeping. To realize its future potential, Fort Madison must undertake a number of basic economic development efforts simultaneously. These must include: (1) continued attention to enhance the excellent transportation base; (2) continuing industrialization efforts; and (3) continuing emphasis upon education developments. With these recommendations in mind, the future outlook for the community is judged to be very promising.

As history has shown, the days of the strictly local industries are over. As political boundaries have become more and more meaningless in relation to movements of economic supply and demand, business has gained greater freedom in location of its operations. Today, only few locations still enjoy exclusive economic advantages. Generally, numerous localities compete for a single business enterprise. Immediate development competition for Fort Madison will be found in neighboring counties, neighboring communities and even distant locations on the river as well as the city's railroad lines. Thus, Fort Madison must continue to be highly competitive in every respect.



EXHIBIT 1

POPULATION DEVELOPMENTS OF COMMUNITIES IN LEE COUNTY



Source: U.S. Department of Commerce, Bureau of the Census.  
 Extrapolations: North American Research Corporation.



## POPULATION, HOUSING AND RELATED FACTORS IN THE PLANNING AREA

This section deals with the analysis of Fort Madison's population, its structure and the city's housing situation. Because of their close inter-relationship, the analyses of population and housing are presented together.

### FORT MADISON'S FUTURE POPULATION DEVELOPMENTS DEPEND MAINLY UPON THE CITY'S CAPABILITY TO ATTRACT AND RETAIN INDUSTRY

Like many communities in predominantly rural areas, Fort Madison must anticipate slow growth or even a loss in its population without a successful program of industrial development.

#### Fort Madison is Located in a Region of Population Decline

Estimates by the Iowa State Department of Health, Division of Vital Statistics, show that with the exception of Des Moines County, all counties bordering on Lee County lost in population. The population change was as follows:

#### Population in the Lee County Region, 1950-1963

<u>County</u>	<u>% Change 1950-1960</u>	<u>Estimated Population** July 1, 1963</u>	<u>% Change 1960-63**</u>
Des Moines	5.1	44,800	0.29
Henry	-2.8	17,900	-1.51
LEE	2.6	44,100	-0.31
Louisa	-7.3	10,200	-0.68
Van Buren	-11.2	9,600	-1.51

Sources: \*U.S. Department of Commerce, Bureau of the Census, 1960;  
\*\*Iowa State Department of Health, Division of Vital Statistics,  
Annual Report, 1963.

It must be mentioned in this context that the county's population decline would have been sharper had the communities in the area not grown. Since for the future the farm and related population is forecast to continue its decline, the future population growth in Lee County depends upon success in the economic development of its major cities--Fort Madison and Keokuk--as well as population developments in the county's other cities and towns.

### In Contrast, the Population in the United States Continues to Grow Rapidly

In 1960, the U.S. Census reported a total population of just short of 180 million people in the nation. Recently, the Census stated that the U.S. population surpassed the 195 million persons mark. Between now and 1985, the total population in the United States is estimated to increase by some 72 million people and to reach a total of 267 million persons.

This large population increment is forecast despite the fact that the birth rate, which has been declining since the late 1950's, may continue to decline. The reason for expecting the continued growth is found in the fact that the number of persons in the reproductive ages will about double in the coming generation. Women 20 to 29 years of age do most of the child-bearing. They numbered 11 million in 1960, but their number will increase to about 20 million by 1980.

However, most of the population growth is indicated to take place in the urban population, that is the population living in places of 2,500 or more people. From 1900 to 1960, the increase in the urban population accounted for 92% of the total population growth. But the increase in the urban population during the 1950-1960 decade accounted for more than 100% of the total growth. Thus, for the first time in U.S. history, the rural population declined during a census decade. In 1960, the rural farm population was approximately half the absolute number it had in 1910.

Furthermore, the population growth is heavily concentrated in the metropolitan areas, while many smaller urban areas did not grow. From 1900 to 1960, the increase in the metropolitan area population accounted for 85% of the total U.S. population growth. Between 1950 and 1960, the increase in the metropolitan population made up 97% of the total.

But the concentration of the population and its growth does not end here. Among metropolitan areas growth is heavily concentrated in the larger ones. In 1900, there were only five metropolitan areas in the United States which had one million or more people. By 1960, their number had grown to 24. From 1900 to 1960, the large metropolitan areas accounted for 48% of the total population growth; between 1950 and 1960 their share exceeded 60%. Of course, this concentration of the population has been accompanied by a decentralization of the population within the large areas. More and more people have begun to live outside the central cities in the suburban rings of the metropolitan and large urban areas.

Consequently, the people for Fort Madison population growth are there, if Fort Madison can attract them. Fort Madison will get people, if it gets industry and provides an attractive community for living, education and leisure time pursuits.



Fortunately, the city has all the assets available that are needed. It is not too far away from major urban centers and improvements in transportation will continue to shrink that distance. On the other hand, the large urban areas have become rather unwieldy despite efforts to relieve the transportation disadvantages. Future improvements in urban transportation and the urban population growth are bound to find a balance where it becomes more attractive to locate into new centers of socio-economic activity such as Fort Madison. By that time, another metropolitan area comprising Fort Madison, Burlington and Keokuk might be in the making.

1980-1985  
FORT MADISON'S 1985 POPULATION IS FORECAST TO EXCEED 19,000 PEOPLE

Population forecasting requires the appraisal of the strength and future effect of all the factors that influence change. Also, every population projection is based upon certain assumptions. These assumptions anticipate that the trends derived from an analysis of past and current developments will also hold true for the future.

The population residing in an area changes in only three ways: (1) By births; (2) by deaths; and (3) by migration--in or out, the net result of which is called "net migration." The factors which cause these population changes are almost infinite in their variety. They depend upon the structure of the population as well as economic developments in the region.

Two population projections were established to gain benchmarks for estimating Fort Madison's future population developments. The two methods are the arithmetical and the geometrical projection methods. Both methods have the advantage that they are easy to use; both, however, assume that past population development factors will remain unchanged during the future planning period. Extrapolating past trends, arithmetical projections tend to give probable minimum figures, while geometrical projections tend to result in maximum figures. Exhibit 1 charts three Fort Madison population projections according to the geometrical forecasting method. The exhibit also shows the population developments for Lee County communities during the 1940-1960 Census periods.

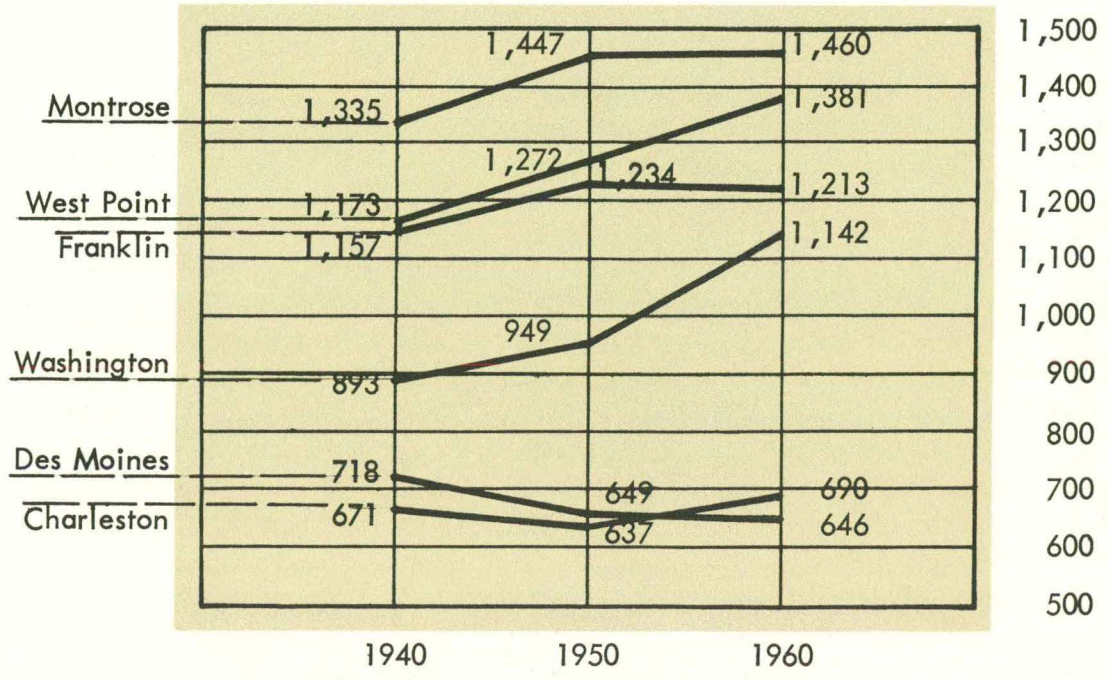
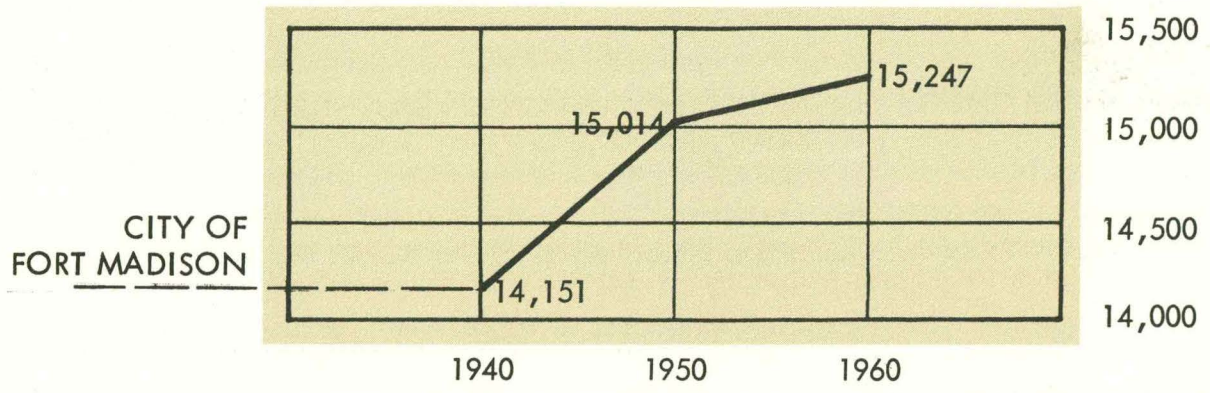
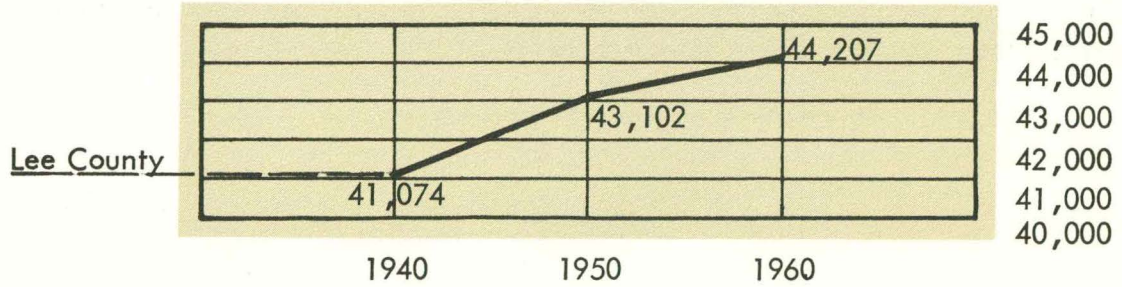
In making the Fort Madison population projections, it must be recognized that population factors other than in the past most likely will be active in the planning area in the future. This has been documented in the discussions in Chapter Three of this report as well as in the preceding section of this chapter. In addition, the State of Iowa industrial bond provisions will help to attract industry to a higher degree than has been possible in the past. This, too, is already demonstrated by a flood of recent announcements, where major companies chose Iowa communities for new plant locations. Finally, due to the work of the Army Corps of Engineers, the Mississippi River is becoming a waterway of rapidly increasing value for its adjacent areas.

It is difficult, of course, to measure exactly the impact of these trends and changes on the planning area population within the scope of a limited program. In addition, the future Fort Madison population will depend on actions taken by planning area residents and leaders, for example, how successful they will be in making living in the city socio-economically more attractive than commuting to the neighboring communities.



EXHIBIT 2

POPULATION DEVELOPMENTS IN TOWNSHIPS  
IN THE MADISON TOWNSHIP AREA



Source: U.S. Department of Commerce, Bureau of the Census.



In light of these conditions, it was judged reasonable to use the highest possible forecast for future Fort Madison population projections. In evaluating this forecast, it must be kept in mind that a significant share of the population growth caused by Fort Madison economic developments will undoubtedly take place outside the city limits. As shown in Exhibit I this has already been the case in the past. Thus, nearby communities more and more will be cast in the role of dormitory suburbs in the area.

Finally, in making the Fort Madison population forecast, it was assumed that the prison population, which currently accounts for about 10% of the city's total population, would remain constant during the forecasting period.

#### THE LACK OF POPULATION GROWTH IN FORT MADISON IN THE PAST SHOULD NOT CAUSE TOO MUCH CONCERN

Although the population growth in Fort Madison was not outstanding in the 1950-60 decade, it was not much below average either. Burlington grew by 5.9%, Keokuk by 1.1%, and Lee County grew by 2.6%. Exhibit II presents the population growth in the townships adjoining Madison Township, all of which have grown, with the exception of Des Moines Township.

Furthermore, as shown in Exhibit I, the smaller communities in Lee County, with the exception of Montrose, experienced population growth from 1940 to 1960. Because of relatively high land and building prices in the area, many people prefer to commute. This is not negative, inasmuch as it amounts to a selection of people who live in the planning area. As long as Fort Madison will get its share of the hinterland's retail sales, nothing is really lost. Commuting in the more rural areas always was and will be extensive. Data from Fort Madison industries indicate that as much as 35 to 50% of the employed labor forces do not live in the city.

Finally, five of the Fort Madison manufacturing companies began operations in the second half of the 1950-1960 decade. There is sometimes a time lag of 5 to 19 years before the full impact of new employment in an area is felt in corresponding population developments.

#### THE AGE STRUCTURE OF THE FORT MADISON POPULATION COMPARES WELL WITH THE STATE OF IOWA AVERAGES

Like many urban places within an agricultural region, the City of Fort Madison too serves as a retirement community for the surrounding area. Nevertheless, the planning area population appears to be remarkably young. The age structure for Fort Madison residents compared with State of Iowa averages, as shown in Table 4.

The data indicates that Fort Madison compares well with the averages for the State of Iowa, including the rural and larger urban areas. In evaluating this comparison it must be kept in mind that the city's age structure refers to the household population and thus excludes persons living in group quarters such as the state penitentiary.

Table 4

Comparison of the Age Structure of the Fort Madison Household Population  
with State of Iowa Averages, 1960

Age Structure	Fort Madison Household Population		State of Iowa		
	Male	Female	Total	Rural Areas	Places of 10,000 or More
Under 5 years	10.9	10.1	11.1	11.1	10.7
5 to 9 years	11.4	9.3	10.6	11.1	9.6
10 to 14 years	10.1	8.9	9.4	10.3	8.3
15 to 19 years	6.6	6.8	7.4	7.5	7.7
20 to 24 years	3.5	4.4	5.6	4.6	7.5
25 to 29 years	4.8	4.9	5.5	5.0	6.3
30 to 34 years	5.7	5.9	6.0	5.6	6.1
35 to 39 years	7.0	6.8	6.2	6.0	6.2
40 to 44 years	6.4	6.4	6.0	6.2	5.7
45 to 49 years	6.0	5.5	5.7	5.9	5.4
50 to 54 years	5.5	6.3	5.3	5.4	5.2
55 to 59 years	5.4	5.8	4.9	5.0	4.8
60 to 64 years	4.8	5.3	4.5	4.6	4.5
65 to 69 years	4.9	5.1	4.1	4.1	4.1
70 to 74 years	3.2	3.7	3.3	3.3	3.4
75 years and over	<u>3.8</u>	<u>4.8</u>	<u>4.4</u>	<u>4.4</u>	<u>4.5</u>
	100.0	100.0	100.0	100.0	100.0

Source: U.S. Department of Commerce, Bureau of the Census, 1960.



Since there is no reason to expect that retirement patterns and the age composition will change materially during the planning period, it is assumed that the age structure, as outlined in Table 4, will prevail through 1980. However, the study team is of the opinion that with the decline anticipated for the rural areas, the city will find a good opportunity to assume regional retirement leadership. Social Security and attractive federal assistance are already available and must be expected to expand during the planning period. The anticipated increase of senior citizens among population thus will bring challenge, opportunity and reward to alert communities.

The foregoing assumption is backed up by the population patterns found in the Greater Fort Madison region. The river communities and counties exhibit a significant similarity in the age structure of their populations. This is indicated as follows:

Structure of the Population in Urban Places and in Counties in  
the Fort Madison Region, 1960

Community	Population	% Change 1950-1960	Age Distribution in Percent			% of Total Population in Group Quarters
			Under 18 Yrs. Old	18 - 64 Yrs. Old	65 Yrs. & Over	
Burlington	32,430	5.9	33.3	53.7	12.9	1.2
Fairfield	8,054	10.3	28.4	56.7	14.9	6.3
Fort Madison	15,247	2.0	31.4	56.5	12.1	9.4
Keokuk	16,316	1.1	34.8	52.8	12.4	1.2
Mount Pleasant	7,339	25.6	24.9	56.2	18.8	21.3
West Burlington	2,560	58.6	37.6	53.0	9.4	-
<u>Counties</u>						
Des Moines	44,605	6.1	34.5	53.2	12.3	1.3
Henry	18,187	-2.8	30.9	52.7	16.4	9.0
Lee	44,207	2.6	34.8	53.0	12.2	4.1
Louisa	10,290	-7.3	35.7	51.0	13.4	0.7
Van Buren	9,778	-11.2	32.5	50.6	16.9	1.3

Source: U.S. Department of Commerce, Bureau of the Census.

It should be noted that both Fairfield and Mount Pleasant are college communities. However, the expansion of the Mount Pleasant population is not due to an expansion in that city's college population.

Table 5

## Fort Madison Housing Profile - 1960

Total Number of Housing Units	4,909
A. <u>Tenure and Vacancy Status</u>	
Owner occupied	65.2%
Renter occupied	28.3%
Vacant	6.5%
	<u>100.0%</u>
B. <u>Condition</u>	
Sound	78.9%
Deteriorating	16.4%
Dilapidated	4.7%
	<u>100.0%</u>
C. <u>Sanitary Conditions</u>	
Hot and cold water piped inside structure	93.5%
Flush toilet, exclusive use	90.0%
Bathtub or shower, exclusive use	89.1%
Public system or private company water source	91.5%
Public sewer service	91.5%
D. <u>Number of Rooms Per Unit</u>	
1 Room	3.0%
2 Rooms	2.8%
3 Rooms	11.3%
4 Rooms	19.9%
5 Rooms	29.3%
6 Rooms	19.0%
7 Rooms	7.2%
8 Rooms or more	7.5%
	<u>100.0%</u>
	Median number of rooms, all units
	4.9
	owner occupied
	5.3
	renter occupied
	4.0
E. <u>Units in Structure</u>	
1	79.0%
2	7.9%
3 and 4	5.9%
5 or more	5.2%
Trailers	2.0%



Table 5--Continued

F. <u>Year Structure Built</u>		
	1955 to March, 1960	6.7%
	1950 to 1954	7.0%
	1940 to 1949	7.3%
	1939 or earlier	79.0%
		<u>100.0%</u>
G. <u>Value</u>		
Owner Occupied - Number of Units		2,984
	Less than \$5,000	12.9%
	\$ 5,000 to \$ 7,400	20.6%
	\$ 7,500 to \$ 9,900	18.2%
	\$10,000 to \$12,400	17.5%
	\$12,500 to \$14,900	12.3%
	\$15,000 to \$19,900	9.3%
	\$20,000 to \$24,900	4.7%
	\$25,000 or more	4.5%
		<u>100.0%</u>
	Median value	\$9,800.
Renter Occupied - Number of Units		1,392
	Gross rent less than \$20.00	1.8%
	\$ 20 to \$ 39	11.2%
	\$ 40 to \$ 59	32.3%
	\$ 60 to \$ 79	29.9%
	\$ 80 to \$ 99	10.1%
	\$100 to \$119	4.3%
	\$120 or more	0.9%
	No cash rent	9.5%
		<u>100.0%</u>
	Median Gross Rent	\$60.

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Source: U.S. Department of Commerce, Bureau of the Census, 1960.

## THE NUMBER OF HOUSEHOLDS IN THE CITY OF FORT MADISON WILL INCREASE BY 27.5% BY 1985 OVER 1960

The average population per household in Fort Madison amounted to 3.00 persons in 1960. The number of households increased 3.3% from 1950 to 1960. In comparison, the number of persons per household for the state in 1960 was 3.19, and in urban places 3.07. In 1960, Fort Madison had a total of 4,601 households.

Fort Madison, of course, is expected to continue functioning as a retirement center for the surrounding population. Normally this would indicate a decline in the number of persons per household. In addition, a declining birth rate will reduce the number of persons per household although the number of households will increase in general. On the other hand, economic developments in the planning area will undoubtedly attract and retain more younger families with larger households. This, in turn, tends to increase the average household size. Balancing these two trends, it was found reasonable to assume that the average household size would remain constant during the planning period.

By 1985, about 17,600 people of the city's estimated 19,000 person population are forecast to live in households. This estimate assumes that the prison population and the population living in group quarters, such as retirement homes, by that time will amount to 1,400 persons. In 1965, the average prison population amounted to 1,245 persons. In evaluating this assumption it must be remembered that trends in penal processes point to greater emphasis on correction and rehabilitation. This, in turn, lessens the average time a prisoner spends in the penitentiary. In addition, increased efforts in crime prevention, crime detection and the general education will tend to decrease the incidence of serious crimes in the long run.

In view of the foregoing analysis, it is then estimated that by 1985 Fort Madison will have about 5,860 to 5,870 households vs. about 4,600 in 1960. This estimate was arrived at by dividing 17,600 by 3.00 (the average number of persons per household).

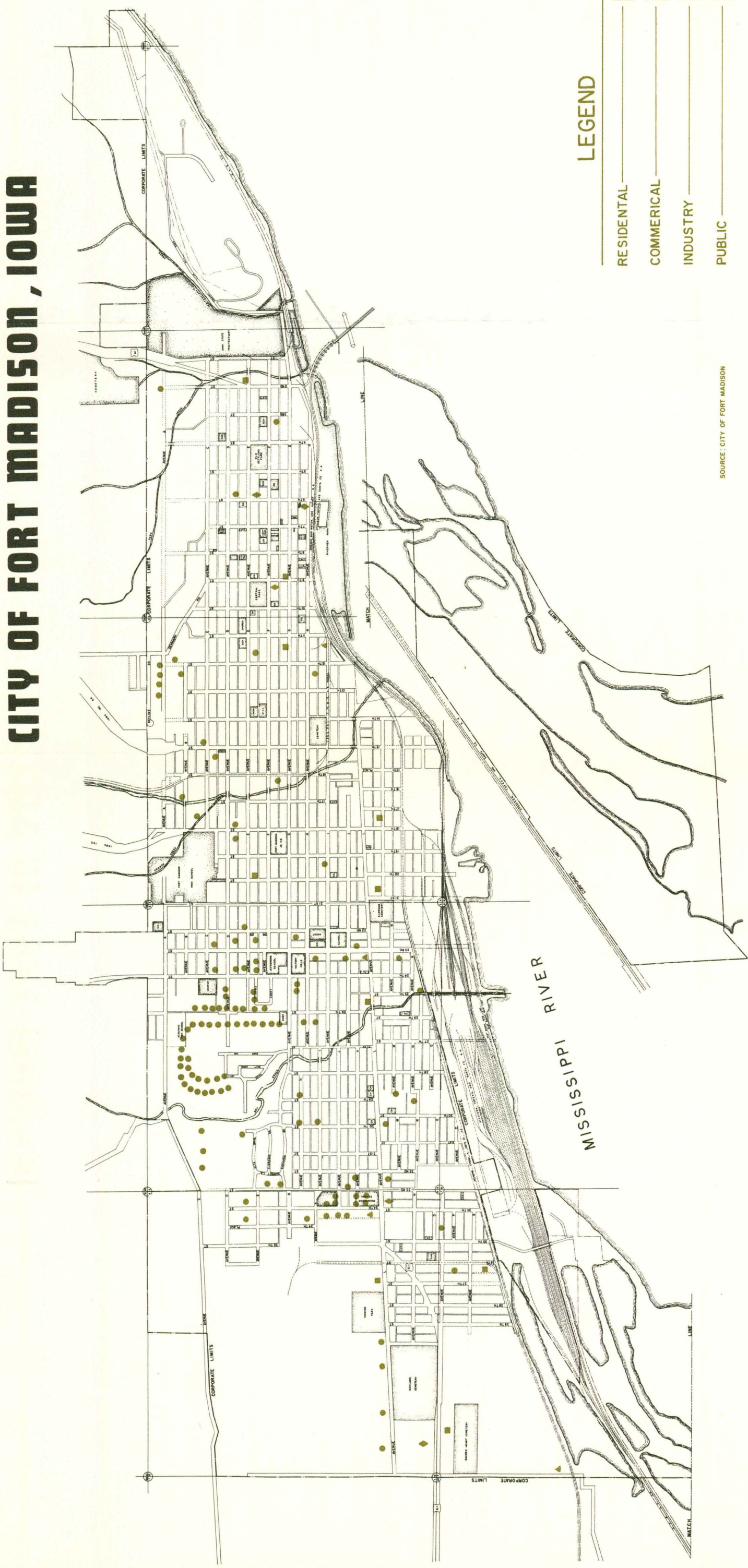
## THE CITY OF FORT MADISON HAS ATTRACTIVE HOUSING CONDITIONS

Housing in the United States is measured in terms of housing units. A "housing unit," according to the U.S. Census, is a house, an apartment, or other group of rooms occupied or intended for occupancy as separate living quarters. The Fort Madison housing profile is shown on Table 5.

The data on the value of the owner occupied housing units represent owner estimates, including both land and buildings. They indicate what the owners thought their property was worth in April, 1960. Since these estimates more or less are based upon the then market value, it will be in the best interest of the property owners to support vigorously the economic development efforts in the city. In this way they can contribute directly towards increasing the value of their own property.



# CITY OF FORT MADISON, IOWA



SOURCE: CITY OF FORT MADISON

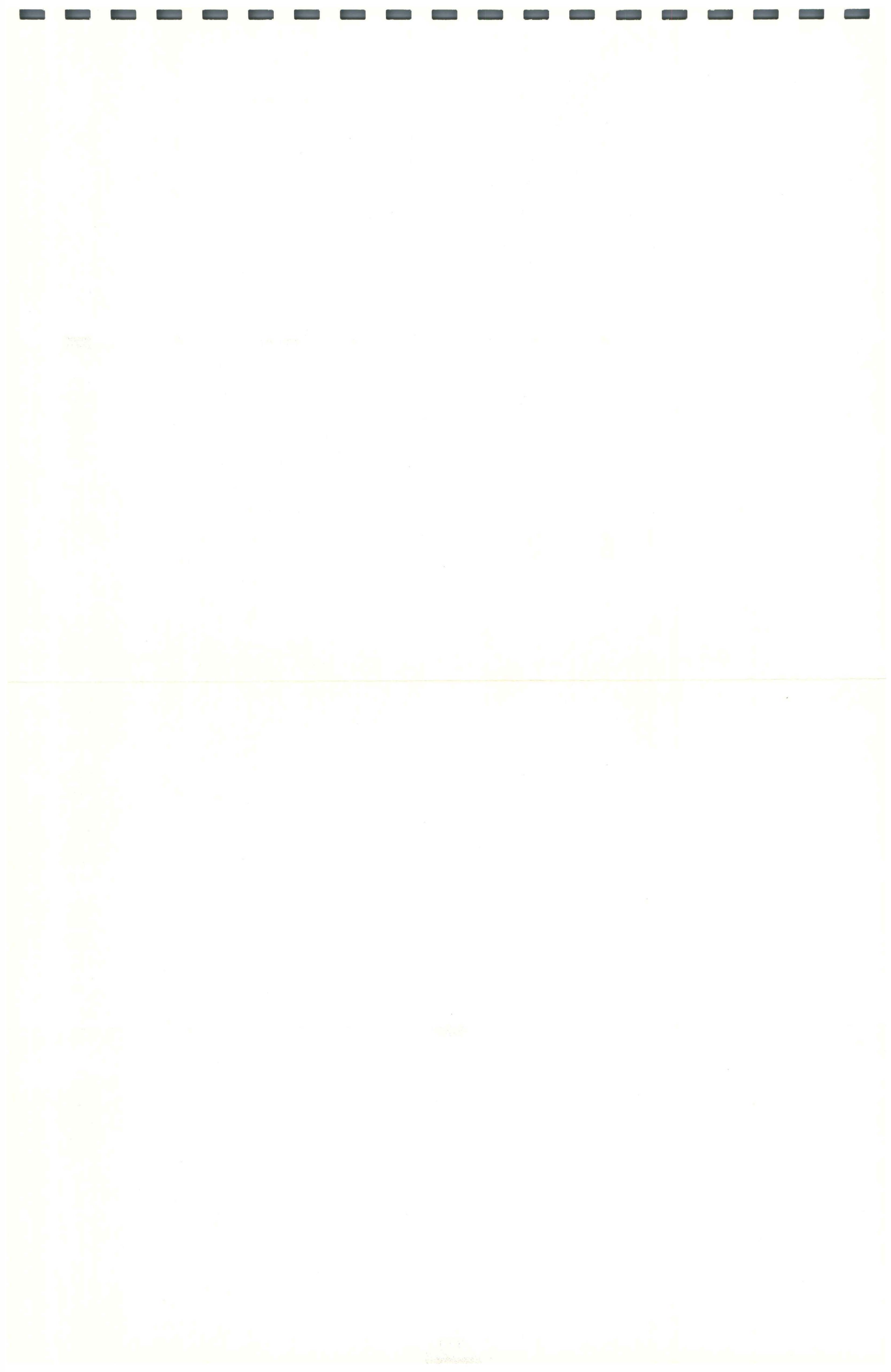
## LEGEND

- RESIDENTIAL — ● —
- COMMERCIAL — ■ —
- INDUSTRY — ▲ —
- PUBLIC — ◆ —

# NEW CONSTRUCTION 1958-1966

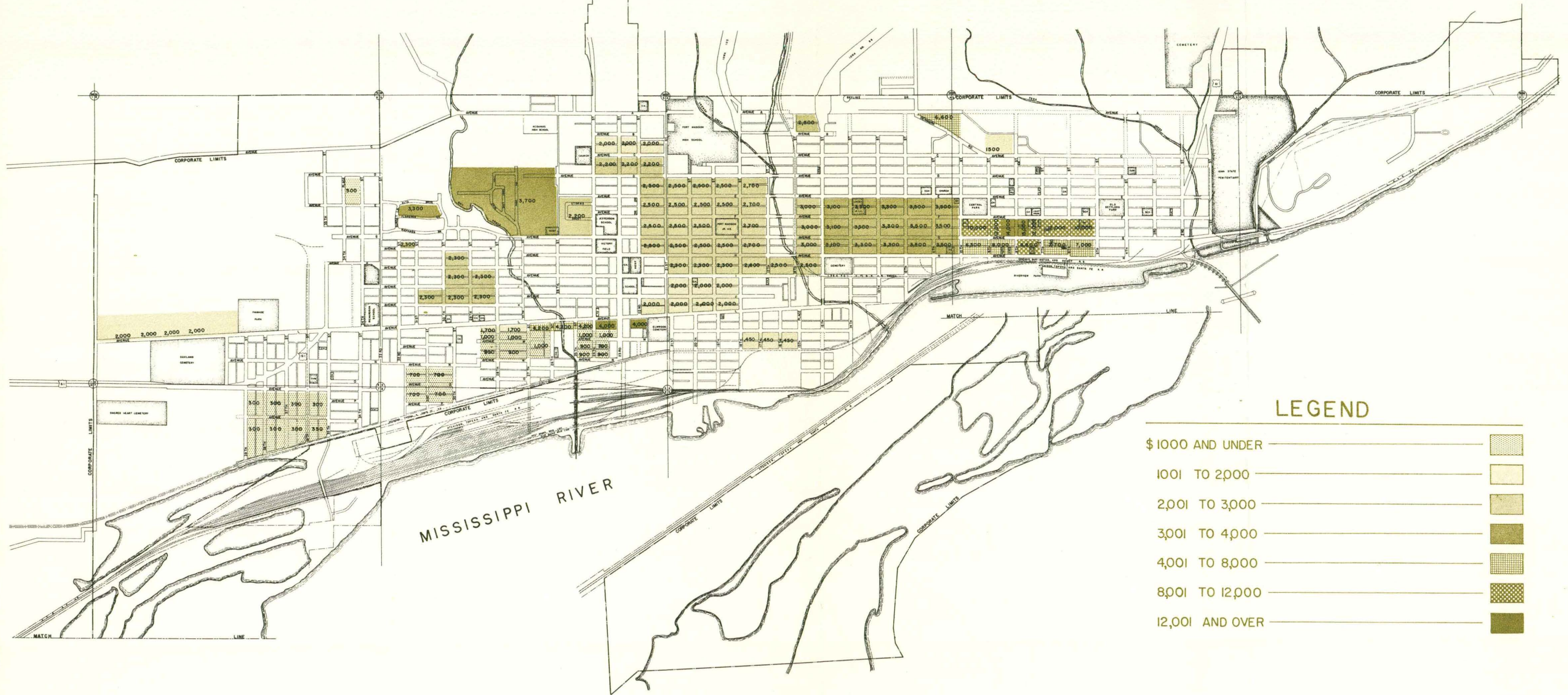
THIS PLAN WAS PREPARED BY THE CITY OF FORT MADISON, IOWA. THE INFORMATION ON THIS PLAN IS BASED ON THE RECORDS OF THE CITY ENGINEER AND THE RECORDS OF THE CITY ENGINEER. THE CITY ENGINEER HAS REVIEWED THE INFORMATION ON THIS PLAN AND HAS FOUND IT TO BE CORRECT AND COMPLETE. THE CITY ENGINEER HAS REVIEWED THE INFORMATION ON THIS PLAN AND HAS FOUND IT TO BE CORRECT AND COMPLETE. THE CITY ENGINEER HAS REVIEWED THE INFORMATION ON THIS PLAN AND HAS FOUND IT TO BE CORRECT AND COMPLETE.

DATE: MAY, 1966  
 DON C. SHAFER AND ASSOCIATES  
 PLANNERS  
 4328 CONCORD LANE - BLOOMINGTON, ILLINOIS





# CITY OF FORT MADISON, IOWA



## LEGEND

\$ 1000 AND UNDER	[Lightest shading pattern]
1001 TO 2000	[Light shading pattern]
2,001 TO 3,000	[Medium-light shading pattern]
3,001 TO 4,000	[Medium shading pattern]
4,001 TO 8,000	[Medium-dark shading pattern]
8,001 TO 12,000	[Dark shading pattern]
12,001 AND OVER	[Darkest shading pattern]

## DISTRIBUTION OF PROPERTY VALUES

FIGURES INDICATE, ESTIMATED MARKET VALUE PER 50' LOT

SOURCE: CITY OF FORT MADISON

URBAN PLANNING GRANT PROJECT NO. UMG 7-45  
 FORT MADISON, IOWA  
 THE PREPARATION OF THIS MAP WAS FINANCIALLY ASSISTED THROUGH  
 A FEDERAL GRANT FROM THE URBAN DESIGN ADMINISTRATION OF  
 THE HOUSING AND HOME FINANCE AGENCY, UNDER THE URBAN  
 PLANNING ASSISTANCE PROGRAM AUTHORIZED BY SECTION 104 OF  
 THE HOUSING ACT OF 1949, AS AMENDED.

FINANCED UNDER CONTRACT FOR AND FINANCED IN PART BY THE  
 OWN DEVELOPMENT COMPANIES UNDER THE PROVISIONS OF  
 CHAPTER 24, CODE OF THE STATE OF IOWA AS AMENDED.



BASE MAP JANUARY, 1948

DON C. SHAFER AND ASSOCIATES  
 planning consultants  
 4526 CONCORD LANE - SKOKIE, ILLINOIS





Gross rent, according to the Census, is computed to include the monthly contract rent plus the average monthly cost of utilities, if such items are paid for by the renter. The median 1960 contract rent, or cash rent, in the city amounted to \$47.00 per month.

Finally, in terms of the Census, deteriorating housing units are classified as needing major repairs to forestall dilapidation. A dilapidated housing unit is considered beyond repair and unfit for human occupancy. Since 79% of the housing units in the planning area were built prior to 1940, the city might prepare itself for a major urban renewal undertaking during the planning period.

In view of the household developments in the planning area and the fact that almost all Fort Madison households live in their own housing units and doubling up is negligible, it can be concluded that the city should need about 1,500 new housing units by 1985. Of course, these housing units can be contained in one-family or townhouses or apartment building structures.

This estimate was arrived at by assuming that about 25% of the existing 4,909 housing units need to be replaced by urban renewal and that their current space would be taken up by commercial, industrial and recreational developments. Previous calculations indicate that in addition, 1,265 new households will need housing by 1985.

#### THE PATTERN OF SETTLEMENT IN THE PLANNING AREA IS VERY FAVORABLE

According to building permits, 129 new residences were built in the planning area from 1960 to 1965. This new building activity represents a substantial upgrading for Fort Madison housing values since most of the permits fall into the \$15,000 to \$22,000 price category. In evaluating this conclusion, it must be taken into consideration that building permits do not include the value of the land while the data from the U.S. Census of Housing does.

As shown on the map on page 41, most of the new residential building activity took place in the north and northwest sections of the city. This corresponds well with the spatial distribution of property values in the community, which is indicated on page 43.

The existing spatial distribution of property values lends itself advantageously to a rational distribution of socio-economic activity in the planning area in the future. Values are comparatively low in the west and southwest sections, which promise to be most desirable for industrial developments. In contrast, Fort Madison's north, northeast and north-northwest areas appear to be prime prospects for future residential and recreational developments.

Property values in the planning area show a promising trend. Real property values increased from a total of \$11.7 million in 1959 to \$14.6 million in 1963, while personal property during the same period increased from \$2.9 million to about \$3.3 million. Thus, the future of the community's property valuations and tax base can be considered sound. This is the more the case as new industry adds more to the tax base than it takes out in service requirements.

Table 6

Comparison of the 1960 Income of Fort Madison Families with  
State of Iowa Averages - in Percent

Income Category	Fort Madison	State of Iowa			
		Total	Urban Area Families	Rural Non-Farm Families	Rural Farm Families
Under \$1,000	2.7	6.7	3.1	6.7	14.7
\$ 1,000 to \$ 1,999	5.8	8.5	5.5	10.2	13.5
\$ 2,000 to \$ 2,999	7.1	10.1	6.8	10.8	16.5
\$ 3,000 to \$ 3,999	10.1	11.2	8.8	13.0	14.8
\$ 4,000 to \$ 4,999	10.5	12.6	12.0	14.9	11.5
\$ 5,000 to \$ 5,999	16.3	12.9	14.4	13.8	8.6
\$ 6,000 to \$ 6,999	12.5	10.4	13.0	9.4	5.7
\$ 7,000 to \$ 7,999	10.0	7.7	10.0	6.2	4.0
\$ 8,000 to \$ 8,999	7.0	5.5	7.2	4.4	2.7
\$ 9,000 to \$ 9,999	5.2	3.8	5.1	2.8	1.8
\$10,000 and over	12.8	10.7	14.1	7.7	6.2
	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>
Median Income of Families	\$5,841	\$5,069	\$5,955	\$4,626	\$3,352

Source: U.S. Department of Commerce, Bureau of the Census, 1960.



## FORT MADISON'S COMMERCIAL & RELATED ECONOMY

According to the 1960 U. S. Census, the median income of Fort Madison families amounted to \$5,841 annually. This compares to the median of \$5,069 annually for the State of Iowa. The median income refers to the income of the family just in the middle of all families: 50% of the families have a smaller income than the median family and the other 50% have a larger income. As shown in Table 6, Fort Madison families concentrate in the lower-middle and middle-middle and in the higher income categories.

The data preceding refers to the 1959 calendar year. For that year a total family income of about \$21.4 million can be calculated for Fort Madison. The income for Lee County for the same year can be calculated at about \$58.7 million, having had at that time 11,121 families and a median family income of \$5,282 annually.

However, with 3,670 families, Fort Madison accounted for only 33% of the county's total number of families but for about 36.6% of the area's total family income. Roughly it can be said that the family income of an area equals the total income except if the area contains many family-unrelated individuals such as college students. Assuming then a 3% annual increase in family income from 1959 to 1965, would bring the Fort Madison 1965 area income to \$25.58 million.

Iowa tax data indicates the importance of urban vs. rural occupations in Lee County. According to the Iowa State Tax Commission, 86.2% of the county's 12,793 returns were classified as urban returns. A comparison between Lee County and the other counties in the region is shown as follows:

Distribution of Individual Tax Returns According to  
Urban or Rural Residence - 1964

County	Total Number of Returns	Percent Distribution	
		Urban Returns	Rural Returns
Des Moines	14,760	91.5	8.5
Henry	5,618	71.3	28.7
Jefferson	4,838	74.3	25.7
LEE	12,793	86.2	13.8
Louisa	3,079	64.1	35.9
Van Buren	2,626	57.0	43.0
Washington	6,255	66.8	33.2

Source: Division of Research and Statistics, Iowa State Tax Commission,  
Annual Statistical Report for the Fiscal Year ended June 30, 1964.

The table reflects the strong rural character of Louisa, Van Buren and Washington Counties vs. the strong urban character of Des Moines and Lee Counties. Jefferson and Henry Counties, so to speak, are in the middle in terms of the breakdown between urban and rural income generation.

The available data on socio-economic characteristics for leading communities in the Fort Madison region show Fort Madison as a significant manufacturing income center in the area. According to the U.S. Census, 31.8% of the city's employed residents work in manufacturing industries vs. 31.6% in Burlington and 37.2% in Keokuk.

It is then no surprise that Fort Madison's family income compares well with other communities in the region. This is shown in the table following:

Social and Economic Characteristics for Urban Places and Counties in the Fort Madison Region, 1960

Community	Population	% of Employed Persons Working in Mfg. Industries	Median Income	Families Percent With Incomes of	
				Under \$3,000	\$10,000 & Over
<u>Incorporated Places of More than 2,500 Inhabitants:</u>					
Burlington	32,430	31.6	\$5,848	14.6	13.7
Fairfield	8,054	25.7	5,461	17.0	9.3
FORT MADISON	15,247	31.8	5,841	15.7	12.8
Keokuk	16,316	37.2	5,458	19.1	11.7
Mount Pleasant	7,339	12.7	5,524	19.4	12.4
Washington	6,037	17.4	5,287	19.2	13.8
West Burlington	2,560	42.6	5,927	9.1	15.0
<u>Counties</u>					
Des Moines	44,605	30.0	\$5,733	16.1	13.4
Henry	18,187	12.9	4,639	29.5	9.6
Jefferson	15,818	21.8	4,708	26.8	7.4
LEE	44,207	30.6	5,282	21.7	10.7
Louisa	10,290	13.2	4,169	29.7	8.3
Van Buren	9,778	13.8	3,286	45.5	3.8
State of Iowa	2,757,537	18.6	\$5,069	25.3	10.7

Source: U.S. Department of Commerce, Bureau of the Census, 1960.

The income information of the area indicates the existence of significant pockets of poverty, if one accepts the definition of the federal government, according to which families with less than a \$3,000 annual income are considered poor. However, the Census enumerates only the regular monetary incomes of families, excluding income received in kind, such as food produced and consumed in the home, or free living quarters. Thus the real income of farm areas or its equivalent can be under-estimated by as much as 30% to 40%.



As a result, it can be said that the region is rather rich and that the actual medium income of families might be in the \$6,000 annually category. For a comparison, the 1960 median income of families in Iowa's standard metropolitan areas ranged from \$5,539 annually in Sioux City to \$6,491 in the Tri-Cities. It is estimated that family incomes in all areas increased by about 3% annually since 1960.

#### ANALYSIS OF CONSUMER SPENDING PATTERNS INDICATES THAT A RETAIL SALES DEMAND OF APPROXIMATELY \$16.4 MILLION WAS GENERATED IN THE PLANNING AREA DURING 1965

A survey of consumer expenditure patterns in rural non-farm areas in 1961 indicates that about 86.7% of the total family income is spent on current consumption items. The survey was conducted by the U.S. Department of Labor, Bureau of Labor Statistics; current consumption expenditures, according to the Department, were calculated by deducting taxes, gifts, contributions and personal insurance from the total income.

On this basis, the 1965 current expenditures for consumption in the planning area can be calculated at approximately \$22.1 million. Since, however, about 18.8% of the expenditures for current consumption go for items such as rent, mortgages and utilities, and about 6.7% for non-retail effective doctor and hospital bills, education, recreation and other personal expenditures, the retail effective and related expenditures in the planning area can be calculated at \$16.4 million, 74.5% of the 22.1 million. In detail, the average spending patterns of expenditures for current consumption in rural non-farm areas of the Fort Madison income level break down as follows:

#### Breakdown of Retail Effective Consumer Spending

Expenditures for Current Consumption	% of Total
All Expenditures	100.0%
Food	25.2%
Tobacco	1.9%
Alcoholic beverages	1.8%
Household operations	4.9%
House furnishings and equipment	5.1%
Clothing, clothing materials, services	9.8%
Retail Effective:	
Personal Care	1.4%
Medical Care	3.1%
Recreation	1.7%
Reading	0.5%
Education	0.4%
Transportation	16.7%
Other expenditures	2.0%
	<u>74.5%</u>

Source: U.S. Department of Labor, Bureau of Labor Statistics, December, 1963. Data refers to 1961.

The preceding data reflects the impact of the transportation mobility upon the average family budget. Almost all of the transportation expenditures indicated are spent on the automobile and related items.

#### FORT MADISON GAINED ABOUT 45% OF ITS RETAIL SALES FROM OUTSIDE THE PLANNING AREA

Retail sales calculated from information of the Iowa State Tax Commission indicates that Fort Madison's retail sales in fiscal year 1965 amounted to about \$21.0 million. Thus, the planning area, which generates \$16.4 million in retail sales demand, gains at least about 22% of its sales volume from customers living outside of the city.

The retail sales demand generated in the planning area is, of course, not totally satisfied by the planning area merchants. The Burlington, Iowa and Quincy, Illinois retail communities provide strong competition. Surveys by the Fort Madison Chamber of Commerce reveal that about \$4.5 million in retail dollars annually are spent outside the city by Fort Madison residents. This amounts to about 21.5% of the current Fort Madison annual retail volume. The data corresponds well to the results of local interviewing among Fort Madison residents and merchants. These interviews indicate that about 45% of the total retail sales come from outside the planning area.

A breakdown of retail sales by store category on the basis of Iowa State Tax Commission information, unfortunately, is only available on a county basis. For Lee County, the 1965 sales breakdown is as follows:

#### Structure of Retail Sales in Lee County

Store Category	% of Total County Retail Sales, 1965
Food stores	27.6
Apparel stores	5.0
General merchandise	22.7
Furniture and equipment	3.6
Motor vehicle	8.2
Lumber and materials	6.2
Service	2.3
Public utilities	11.2
All other	13.2
	100.0

Source: Iowa State Tax Commission, Division of Research and Statistics, Annual Tabulation of Collections for Fiscal Year ending June 30, 1964.



The Iowa State Tax Commission data and the results of the U.S. Department of Labor survey are not comparable because of differences in definitions, the type of area covered, and spatial spending habits and allocations. All the money earned in a given area seldom is spent completely within that area.

#### THE DISTRIBUTION OF SELECTED SERVICE ESTABLISHMENTS IN LEE COUNTY INDICATES CONSIDERABLE COMMERCIAL STRENGTH IN THE FORT MADISON AREA

Selected service establishments, according to U.S. Bureau of the Census, include hotels, motels, laundries, beauty and barber shops, funeral homes, business services, auto repair stations and garages, electrical, furniture and shoe repair shops, motion picture theaters, and other amusement and recreation services such as dance halls and bowling alleys, etc.

According to a 1963 survey by the U.S. Department of Commerce, Lee County had at that time 233 selected service establishments of which 48.5% were located in Fort Madison. A comparison of the distribution of selected service establishments within the five counties in the region shows the following:

Percent Distribution of Selected Service Establishments in Counties and Cities of More than 2,500 Inhabitants in the Lee County Region, 1963

County	Establishments		Receipts		
	Total Number	With Payroll Number	Total All Establishments (\$1,000s)	Establishments With Payroll (\$1,000s)	Payroll Entire Year (1,000s)
Des Moines	264	130	9,930	8,902	2,383
% in Burlington	88.1	91.7	96.0	97.0	98.0
% in West Burlington	2.7	2.3	0.7	0.5	0.6
Henry County	136	48	2,092	1,644	332
% in Mt. Pleasant	49.3	64.5	52.5	68.8	75.9
Lee County	233	109	4,967	4,149	1,250
% in Fort Madison	48.5	45.0	50.0	51.2	48.0
% in Keokuk	20.2	41.3	31.3	37.1	32.8
Louisa County	54	20	614	350	65
Van Buren County	61	13	435	247	55

Source: U.S. Department of Commerce, Bureau of the Census, 1963; Census of Business, Selected Services, Advance Report, 1965.

The preceding data indicates that Fort Madison enjoys a strong central place position in Lee County.

#### THE FORT MADISON TRADING AREA IS WEDGED IN BETWEEN THE BURLINGTON AND KEOKUK TRADING AREAS

The problem of defining a meaningful hinterland and/or trading area for a community is not an easy one. Hinterlands and trading areas usually are shared between various communities, depending upon the mix of socio-economic functions the given communities perform and offer.

Furthermore a community generally does not have a single well-defined trading area or hinterland. Rather it has numerous trading areas which vary in extent for each function the community performs. For example, the trading area for medical and other professional services may not coincide with that for the banking establishments, and the apparel store drawing area may differ from that for automobile dealers. Although varying in extent, intensity and depth of coverage, the various trading areas tend to strengthen or weaken each other, depending upon their relative importance.

Finally, trading areas and hinterlands do not have fixed limits. They are flexible and respond to factors operating both in time and in space. A store under new and more aggressive management, for example, will tend to expand and/or intensify the trading area coverage and a more efficient processor of goods from the hinterland most likely will enlarge that area too. Thus it becomes apparent that trading areas and hinterlands are man-made in a competitive setting.

In the case of Fort Madison, the problem of determining the city's trading area is particularly complicated. The larger urban center of Burlington makes strong retail sales inroads into Fort Madison's "natural" trading area hinterland. In addition, the toll arrangements on the Santa Fe Railroad and highway bridge, plus the location and direction of roads in Lee County, place considerable handicaps on an east-west expansion of the planning area trading reach. However, in competition with Keokuk, the Fort Madison retail community appears to be in a position to hold its own.

It is then no surprise to find through local interviews that the Fort Madison primary trading area covers the townships of Washington, West Point, Franklin, Charleston and Jefferson. However, within this trading area there are strong local retail centers. These include Donnelson, West Point and Montrose.

#### LOCAL TRAFFIC PATTERNS FAVOR THE FORT MADISON CENTRAL BUSINESS DISTRICT

A traffic survey conducted by the Traffic and Highway Planning Department of the Iowa State Highway Commission, indicates that Fort Madison traffic patterns favor the central busi-



ness district. The survey was made in August of 1962 in cooperation with the U.S. Bureau of Public Roads.

The survey indicates that about 64% of all the 30,411 trips in the City of Fort Madison went in or through the city's Central Business District. The detailed breakdown of all trips is as follows:

Traffic Movements in the Fort Madison Urban Area, August, 1962

% Breakdown	Origin & Destination of Trip
17.38%	between the Central Business District and other internal (City of Fort Madison) tracts;
30.40%	between internal tracts by way of the Central Business District;
7.80%	between external (outside Fort Madison) stations and the Central Business District;
8.53%	between external stations and internal tracts by way of the Central Business District;
12.64%	between internal tracts avoiding the Central Business District;
15.39%	between external stations also avoiding the Central Business District;
7.54%	external through trips with no desire in the Fort Madison area; and
0.23%	trips within the Central Business District.

Source: Iowa State Highway Commission.

The above data indicates that 25.27% of all trips most likely were made in connection with doing business in Fort Madison's Central Business District.

THE 1985 RETAIL SALES FOR THE CITY OF FORT MADISON ARE ESTIMATED TO REACH ABOUT \$36.4 MILLION

In estimating the future retail sales in the City of Fort Madison, it must be recognized that most of the changes result from a shift in the distribution of socio-economic activity in the area. The agricultural hinterland will decline while the city and its satellite communities will grow. Thus the share of sales the city gets from the outside might decline only slightly.

In a first approach to establish estimating benchmarks, a correlation of retail sales growth to anticipated population growth in the city would suggest a 21.2% sales increase from \$21.0 million in 1965 to \$25.45 million in 1985. The present Fort Madison population is estimated at 15,700 people and the 1985 population at 19,000 persons.

Calculations in a second approach on the basis of the 1985 number of families and households times the median family income ( $5,870 \times \$5,841 = \$34.3$  million) plus an adjustment for annual income increases of about 60% over the next 20 years, lead to an area income of about \$55.0 million. Then assuming roughly a continuation of current spending patterns and adjusting the deductions for tax increases, the following results can be calculated: \$55.0 million minus 20% gives \$44.0 million expenditures for current consumption, minus 25.5% for non-retail effective expenditures leads to a retail sales demand of \$32.7 million generated in 1985 in the city.

Assuming furthermore, under the second approach, that socio-economic activity in Fort Madison's hinterland will decline from the present level of about 25% in 1985, brings the subsequent assumption that only about 16.5% of the city's 1985 retail sales will come from the outside. Thus, the 1985 retail sales could be calculated at \$39.2 million (\$32.7 million would represent 83.5% of the total sales).

Assuming in a third approach, finally, that the retail sales development would follow the general rate of increase in wealth as it was experienced in the past, which would suggest that the 1985 sales increase by about 60% over their current level, the Fort Madison 1985 retail sales can be calculated at \$33.6 million.

Since it is unlikely that the city's retail sales are correlated to just the planning area's population developments, it was decided to average the results of the last two calculations. Both calculations accommodate in the making of the assumptions those figures which can be taken as a composite result of the area's development factors. Consequently, it is estimated that the 1985 retail sales in the planning area will amount to \$36.4 million.

However, in planning for future Fort Madison commercial developments, it must be remembered that retail sales do not include the total activities. Leisure is a growing industry. Not only is the national income rising steadily--just as important, the average work week is a 35 hour work week. Some union contracts already provide for a 25-hour week. While in 1952 about 50% of all union contracts provided for a maximum vacation of two weeks or less and only 4% for four weeks or more, the figures have been almost completely reversed today.

The statistics for leisure time developments are staggering. Attendance at the national forest, for example, jumped from 27.4 million in 1950 to 133.8 million in 1964; attendance at games of the National Football League from 2 million to 4.6 million; and attendance at race tracks from 29.3 million to 60.6 million. In 1950, the nation spent \$463 million for admission to swimming pools, skating rinks, bowling alleys and the like; in 1964 that figure exceeded \$1.2 billion. Finally, expenditures for toys and sports equipment went from \$1.4 billion to over \$3.0 billion.



Fort Madison enjoys many assets, particularly along the river, for capitalizing on the recreation boom. And leisure time facilities might bring sufficient business to the planning area in the future. It must be recommended that the city, in conjunction with the county, plan now to be prepared for this opportunity.

#### FORT MADISON'S 1985 RETAIL SPACE DEMANDS ARE ESTIMATED AT 520,000 SQUARE FEET WITH PARKING NEEDS FOR A MAXIMUM OF ABOUT 3,640 CARS

To relate retail sales volume to retail floor space, an overall conversion factor of \$100 sales volume per square foot of sales area frequently is used. Applying this factor to Fort Madison's estimated 1985 retail sales, a sales area need for 364,000 square feet can be calculated.

However, according to currently prevailing trends in the calculation of store space requirements, the sales area covers only about 70% of the total store area. The remaining 30% is used for storage, service and administration. Consequently, Fort Madison's total retail space requirements for 1985 are estimated at 520,000 square feet.

In computing the parking space required for serving a retail area adequately, ratios of from 2 to 5 square feet of parking per square foot of sales area are used. Five square feet generally is used for the outlying shopping centers. Thus, to allow Fort Madison the establishment of an efficient central business district which must be walkable in order to comply to the human scale, it was decided to use a conversion factor of three square feet per square foot of sales area.

Consequently, by 1985, Fort Madison should provide for about 1,092,000 square feet of parking space. Assuming finally about 300 square feet of parking space per parked car, this space would allow the parking of 3,640 automobiles for shopping purposes. Of course, these parking needs could be satisfied by on-street and off-street as well as private and public parking. It is judged that the estimated parking needs represent the maximum 1985 parking demands.

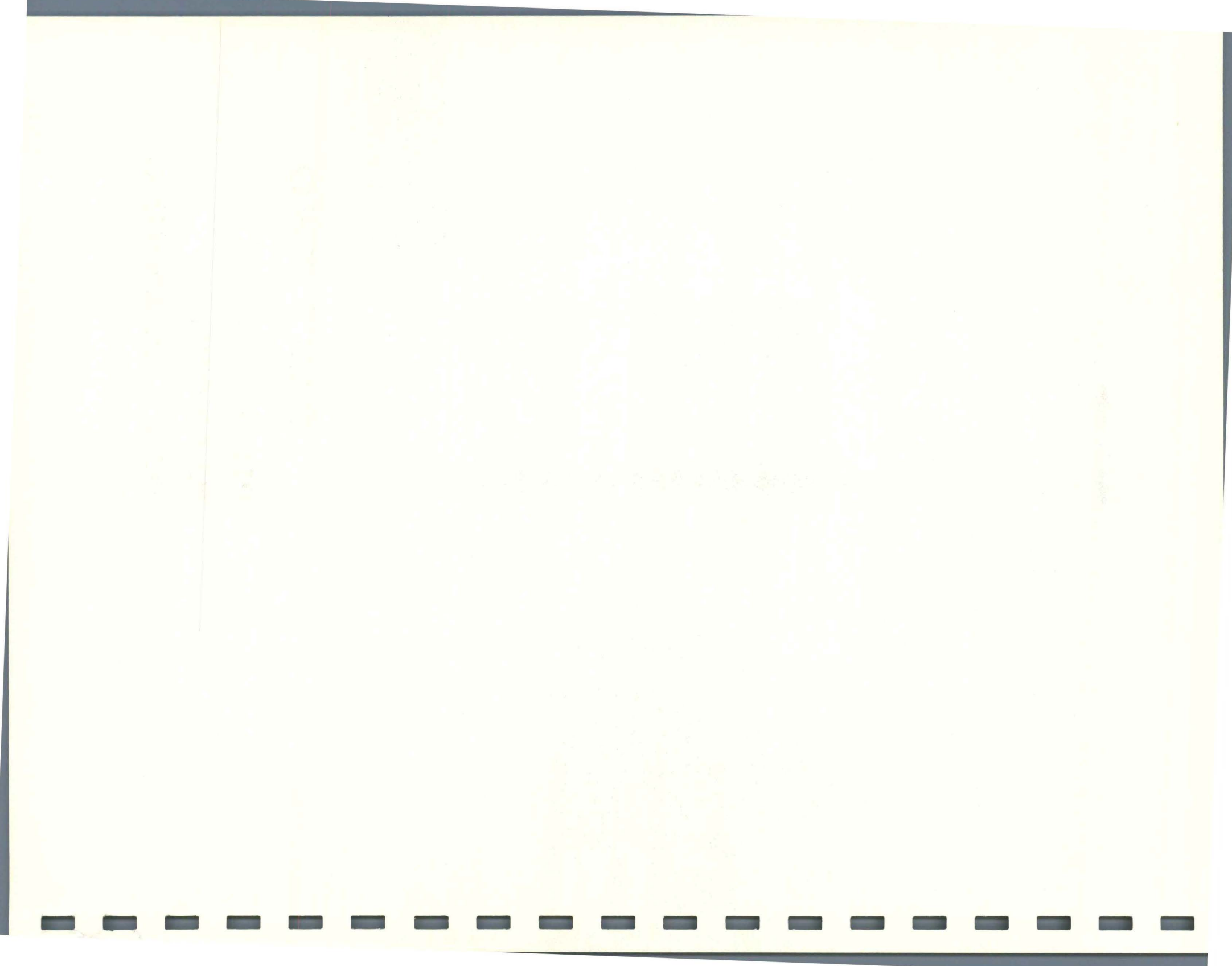
#### FORT MADISON IS WELL SERVED BY FINANCIAL INSTITUTIONS



Fort Madison has three banks and a savings and loan association. The 1965 assets of the banks amounted to \$23.4 million, and those of the savings and loan association to \$6.8 million.

The operations of the Fort Madison financial institution reflect the basic character of the planning area residents which may be described as industrious, conservative, and progressive. Defaults and delinquencies on loans are rather low or non-existent.

Finally, since money markets are rather fluid in the spatial allocation of funds, the Fort Madison financial institutions are in a position to make ample financial means available to finance any future growth contemplated in the planning area.

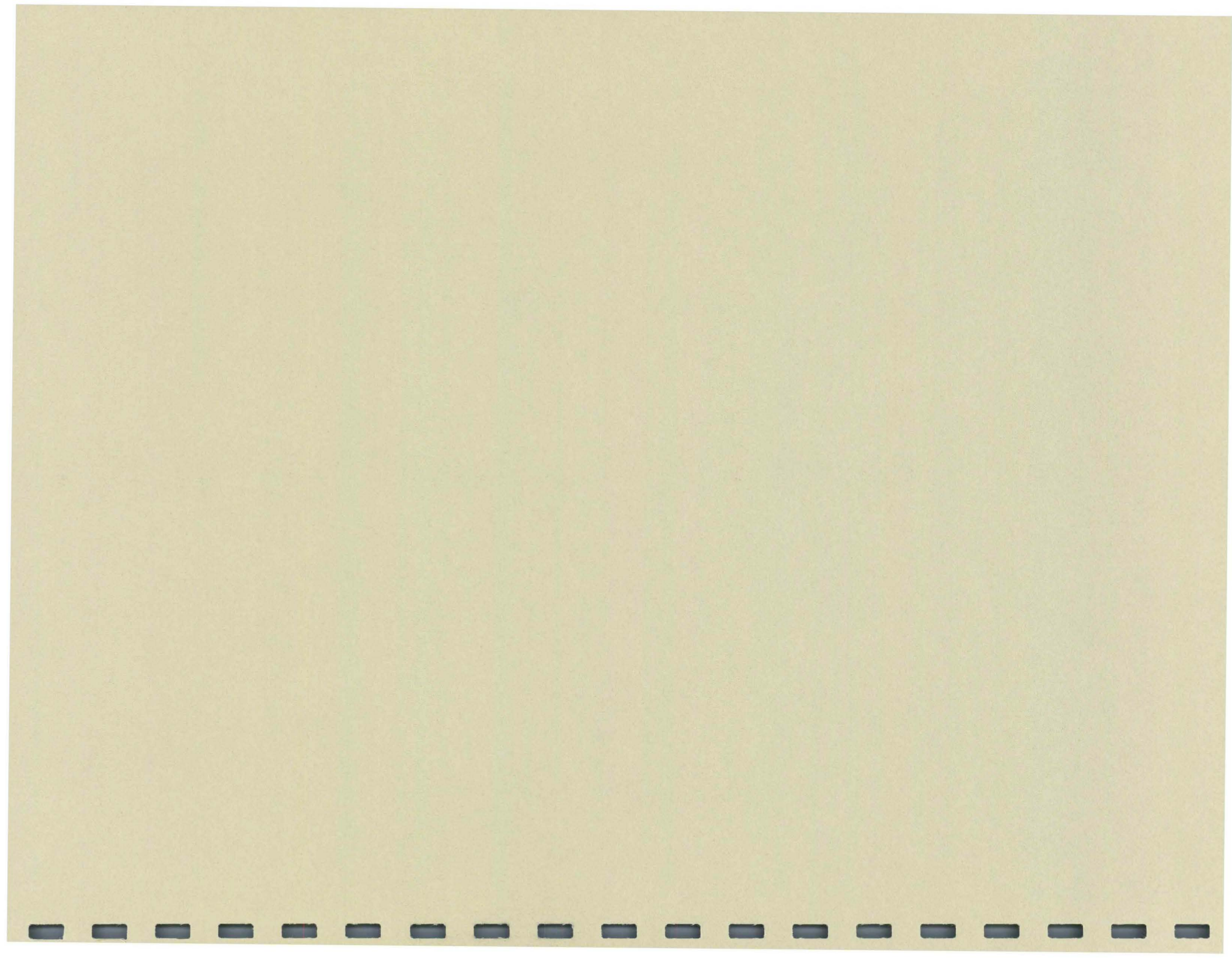






**PART TWO**  
**PHYSICAL**  
**FACTORS**  
**FOR PLANNING**







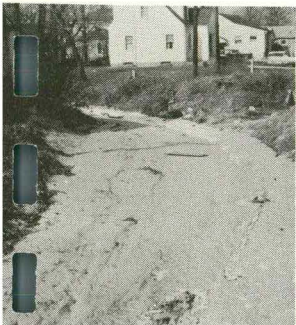
## GEOGRAPHIC BASE

The City of Fort Madison is located on the west bank of the Mississippi River at one of its widest and most picturesque points. The city is midway between Kansas City and Chicago, 200 miles north of St. Louis and about 175 miles southeast of Des Moines. Fort Madison is located almost midpoint between Burlington and Keokuk, or approximately 20 miles between both cities.

The topography of Fort Madison is similar to the other communities adjoining the Mississippi River. This topography is characterized by relatively steep bluffs which rise from the flat terrain along the river, and behind which the terrain is gently undulating.

In Fort Madison, the upland plain has an elevation of approximately 700 feet above sea level, while the low terrain on which most of the city is built, has an elevation of from 525 to 550 feet.

There are topographic features of the Fort Madison planning area which will affect future developments. Such features include high bluffs to the north and east and three stream valleys which traverse the city in a north-south direction. These creeks cut through bluffs and form natural drainage channels to the river. Big, French and Fork Creeks have their headwaters in relatively deep valleys approximately one mile into the bluff. These topographic features provide obstacles to development, but from the standpoint of protecting natural water courses they should be preserved and protected by public ownership.



### SOIL

The planning area around Fort Madison has been extensively mapped by the U. S. Department of Agriculture, Soil Conservation Service as to the condition of soils.

The condition of soils in the unincorporated but within the planning area, should be of particular importance to the city. If soils are not suitable to handle any building construction, then development should not be allowed. If permeability of the soil is poor, thus affecting the removal of effluent from septic tank filter fields, then such sewage disposal should not be permitted.

TABLE 7  
SOIL TYPES IN THE FORT MADISON AREA

Soil Number	Soil Name	Permeability	Other
132	Weller Silt Loam	Slow	
11	Colo-Gravity-Olmitz	Slow to moderate	Alluvium soil
11c	Colo-Gravity-Olmitz Complex	Slow to moderate	Possible flooding
283	Dickenson Sandy Loam	Rapid	
41	Haegner Sand or Loamy Sand	Very rapid	
105	Chariton Silt Loam	Slow to very slow	
152W-0-1	Unnamed Silt Loam	Moderate to moderately slow	Wet
65	Lindley Loam	Slow to very slow	
378	Rough Broken Land	Variable	
211	Edina Silt Loam	Very slow	
364	Grundy Silt Loam	Slow	
273	Olmitz Loam	Moderate	
187	Unnamed	Moderately slow	
130	Belinda Silt Loam	Slow to very slow	
260	Beckwith Wilt Loam	Very slow	
131	Pershing Silt Loam	Slow to very slow	
80	Clinton Silt Loam	Moderately slow	
208	Landes	Rapid to very rapid	



The type of soil found surrounding Fort Madison is listed on Table 7.

Soils are important for the required efficiency of the septic tank soil absorption system for sewage disposal through a subsurface tile system laid in such a way that effluent from the septic tank is distributed with reasonable uniformity into the natural soil. Criteria and standards used for rating soils are made on the basis of the soil limitations. Three groupings are made: slight, moderate and severe.

Some factors important in determining the suitability of a soil for a filter field are (1) local experience and records of performance of existing filter fields; (2) permeability of the soils; (3) depth to consolidate rock or other impervious layers; (4) flooding; (5) ground water level; and (6) slope.

Soils with moderate to very rapid permeability are rated as having a "slight" soil limitation. Soils with a permeability at the slower end of the moderate range (about 1.0 to 0.63 inches per hour) are rated as having a "moderate" soil limitation unless measured results or experience show a "slight" limitation. Soils with a permeability rate of less than 0.63 inches per hour are rated as having a "severe" soil limitation if used for a filter field.

Although soils with a rapid permeability have slight soil limitations, it should be noted that a contamination hazard exists if water supplies, streams, ponds, lakes or water courses are nearby. Very coarse textured soils with very rapid permeability have moderate or severe limitations.

Experience has shown that soils having percolation rates (1) faster than 45 minutes per inch function satisfactorily; (2) between 45 and 75 minutes per inch have moderate limitations; and (3) slower than 75 minutes per inch have severe limitations when used as filter fields for septic tanks.

A seasonal water level should be at least four feet below the soil surface for soils rated as having a slight limitation. Soils with water levels at one to four feet below the soil surface should be rated as having moderate or severe limitations, depending upon the frequency or duration of wetting. Well drained and most moderately well drained soils that are readily permeable have slight limitations. Somewhat poorly drained and some moderately well drained soils have moderate limitations. Poorly and very poorly drained soils have severe limitations.

Soils are also important from the standpoint of developing new roads and the location of various land uses.

In 1967, a complete soil survey was started for Lee County and this work will take three to four years to complete. When the survey is completed and the area is mapped, Fort Madison should acquire such a soil map, especially for the one mile planning area outside the corporate limits.

## FORT MADISON AND ITS ECONOMIC AND SOCIAL POSITION IN THE REGION

For the purpose of the report, the Fort Madison region is limited to Lee County, of which the city is located along the easterly limits of the county.

Fort Madison's future socio-economic function and potential must be seen and developed as one of the leading elements of the region rather than as an independent unit. Fort Madison's principal competition in the fight for socio-economic improvements are the neighboring counties as well as municipal corporations in the socio-economic region. In area development as in industry, competition is carried out on many levels. Not only does a community compete with other communities of its own size, it also competes with other larger and smaller communities. Because of this competitive environment and the related strategies, the application of modern marketing principles could be a significant factor in promoting Fort Madison as an area in strong socio-economic demand.

The future socio-economic expansion of Fort Madison depends upon a continuation of its excellent industrial climate and promotional efforts. Fort Madison depends upon a continuation of its excellent industrial climate and promotional efforts. Fort Madison has a number of assets to back its industrial development endeavors. These assets include available industrial sites and space for expansion, an outstanding education system, a good labor supply and harmonious labor relations, recreational resources in the community itself as well as in the immediate vicinity and an outstanding transportation base.

Communities like Fort Madison should be developed as an attractive place for total living rather than just a locality for working, shopping, eating and sleeping. To realize its future potential, Fort Madison must undertake a number of basic economic development efforts simultaneously. These must include: (1) strengthening of the already excellent transportation base; (2) continuation of industrialization efforts; and (3) even further emphasis upon education developments. With these recommendations in mind, the future outlook for the community is judged to be promising.

As history has shown, the days of the strictly local industries are over. As political boundaries have become more and more meaningless in relation to movements of economic supply and demand, business has gained greater freedom in location of its operation. Today, only few locations still enjoy exclusive economic advantages. Generally, numerous localities compete for a single business enterprise. Immediate development competition for Fort Madison will be found in neighboring counties, neighboring communities and even distant locations on the river as well as the city's railroad lines. Thus, Fort Madison must continue to be highly competitive in every respect.



## EXISTING LAND USE

### PURPOSE OF LAND USE SURVEY

A land use survey is an inventory of land, classifying like uses into groups, such as residential, commercial, industrial, vacant and community facilities. The purpose of a land use survey is to establish current accurate data on the use, location and amount of land in the community. These data can then be utilized in analytical studies that can help in formulating community goals, establishing planning alternatives and be used in the comprehensive plan process for the community.

The land use survey is the most important compilation of facts available to public agencies. Its application to both short and long-range planning projects serves the needs of city planners, public works officials, fire, police and engineering departments. The land use report should be a continuous process--being constantly reviewed, revised and updated to help municipal officials and the public arrive at better decisions on all land use questions.

Listed below are some of the specific ways in which the land use survey data may be utilized:

1. Provide data and background for the preparation and revision of the long-range comprehensive plan;
2. Provide data for population and economic base studies;
3. Provide data for transportation studies;
4. Provide data for an evaluation of present and future public utility needs.
5. Provide data for locating and improving community facilities.

### RESIDENTIAL

Presently 679.5 acres or 19.3 percent of the total corporate area is devoted to single-family homes. The largest concentration of single-family homes is in the north, northwest and west sections of Fort Madison. Elsewhere single-family homes are scattered throughout the city and mixed with multiple-family, commercial and industrial uses.

Vacant land zoned for single-family use is located in the far northwest and west sections of the city. Large areas are available but the existing

Table 8

## EXISTING LAND USE

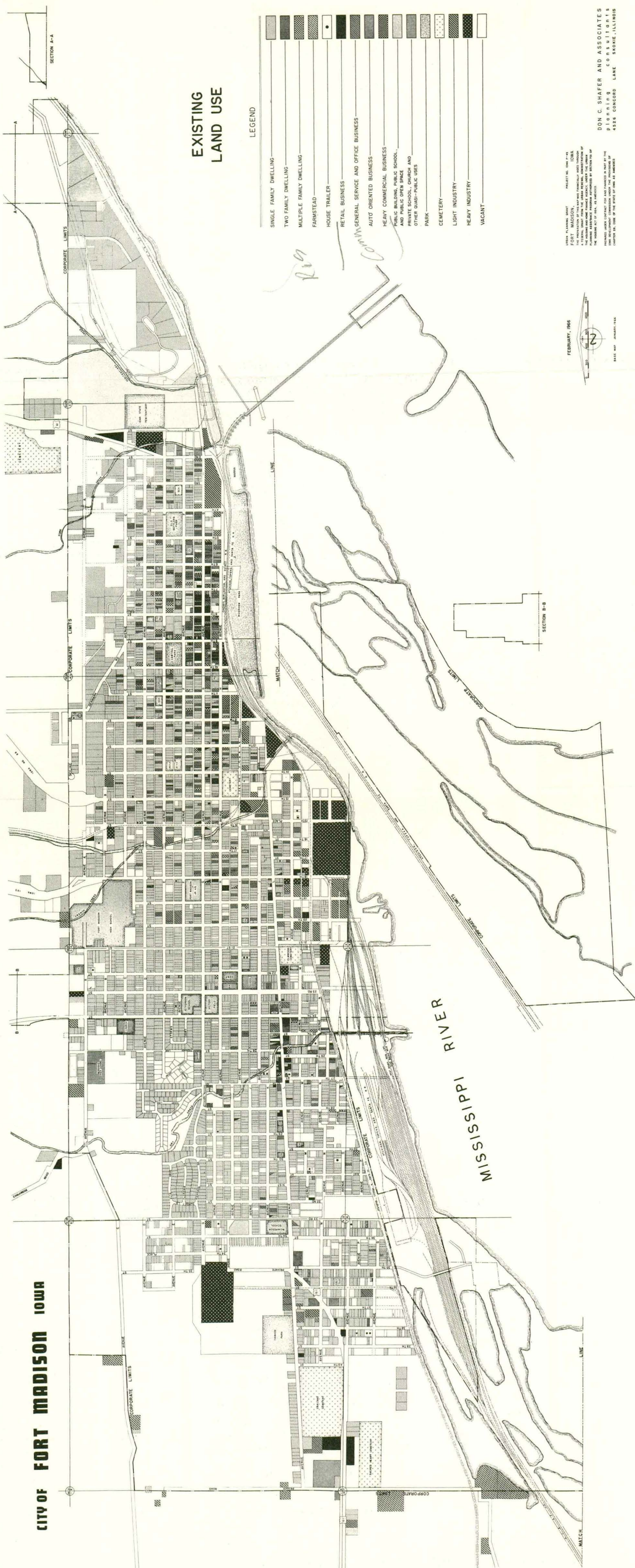
Fort Madison, Iowa

Use of Land	City Square Feet	C B D Square Feet	Total Square Feet	Total Acres	% of Developed Area	% of Total Area
Single-family	28,870,650	728,100	29,598,750	679.5	37.1%	19.3%
Two-family	1,693,000	401,900	2,094,900	48.1	2.6	1.4
Multiple-family	306,000	160,800	466,800	10.7	0.6	0.3
Farmsteads	477,000	-	477,000	11.0	0.6	0.3
House trailer	174,000	-	174,000	4.0	0.2	0.1
Retail business	684,000	321,240	1,005,240	23.1	1.3	0.6
General service	699,000	238,300	937,300	21.5	1.2	0.6
Auto oriented	618,400	108,310	726,710	16.7	0.9	0.5
Heavy commercial	223,650	44,020	267,670	6.1	0.3	0.2
Public use	4,828,400	169,260	4,997,660	114.7	6.3	3.2
Quasi-public	2,037,889	175,200	2,213,089	50.8	2.8	1.4
Park	2,078,053	283,140	2,361,193	54.2	3.0	1.5
Cemetery	1,389,805	-	1,389,805	31.9	1.7	0.9
Light industry	1,032,000	124,300	1,156,300	26.5	1.4	0.8
Heavy industry	6,540,600	-	6,540,600	150.2	8.2	4.2
Railroads	5,061,672	-	5,061,672	116.2	6.3	3.3
Streets	18,931,575	1,475,000	20,406,575	468.5	25.5	13.3
Water area	15,560,100	-	15,560,100	357.2	-	10.1
Vacant land	58,164,960	75,000	58,239,960	1,337.0	-	38.0
Totals	149,370,754	4,304,570	153,675,324	3,527.9	100.0%	100.0%
			Total Developed Area	1,833.7		

Source: Don C. Shafer and Associates, Skokie, Illinois, August 1966.



CITY OF FORT MADISON IOWA



EXISTING LAND USE

LEGEND

- SINGLE FAMILY DWELLING
- TWO FAMILY DWELLING
- MULTIPLE FAMILY DWELLING
- FARMSTEAD
- HOUSE TRAILER
- RETAIL BUSINESS
- GENERAL SERVICE AND OFFICE BUSINESS
- AUTO ORIENTED BUSINESS
- HEAVY COMMERCIAL BUSINESS
- PUBLIC BUILDINGS, PUBLIC SCHOOL, AND PUBLIC OPEN SPACE
- PRIVATE SCHOOL, CHURCH AND OTHER QUASI-PUBLIC USES
- PARK
- CEMETERY
- LIGHT INDUSTRY
- HEAVY INDUSTRY
- VACANT

FEBRUARY, 1966

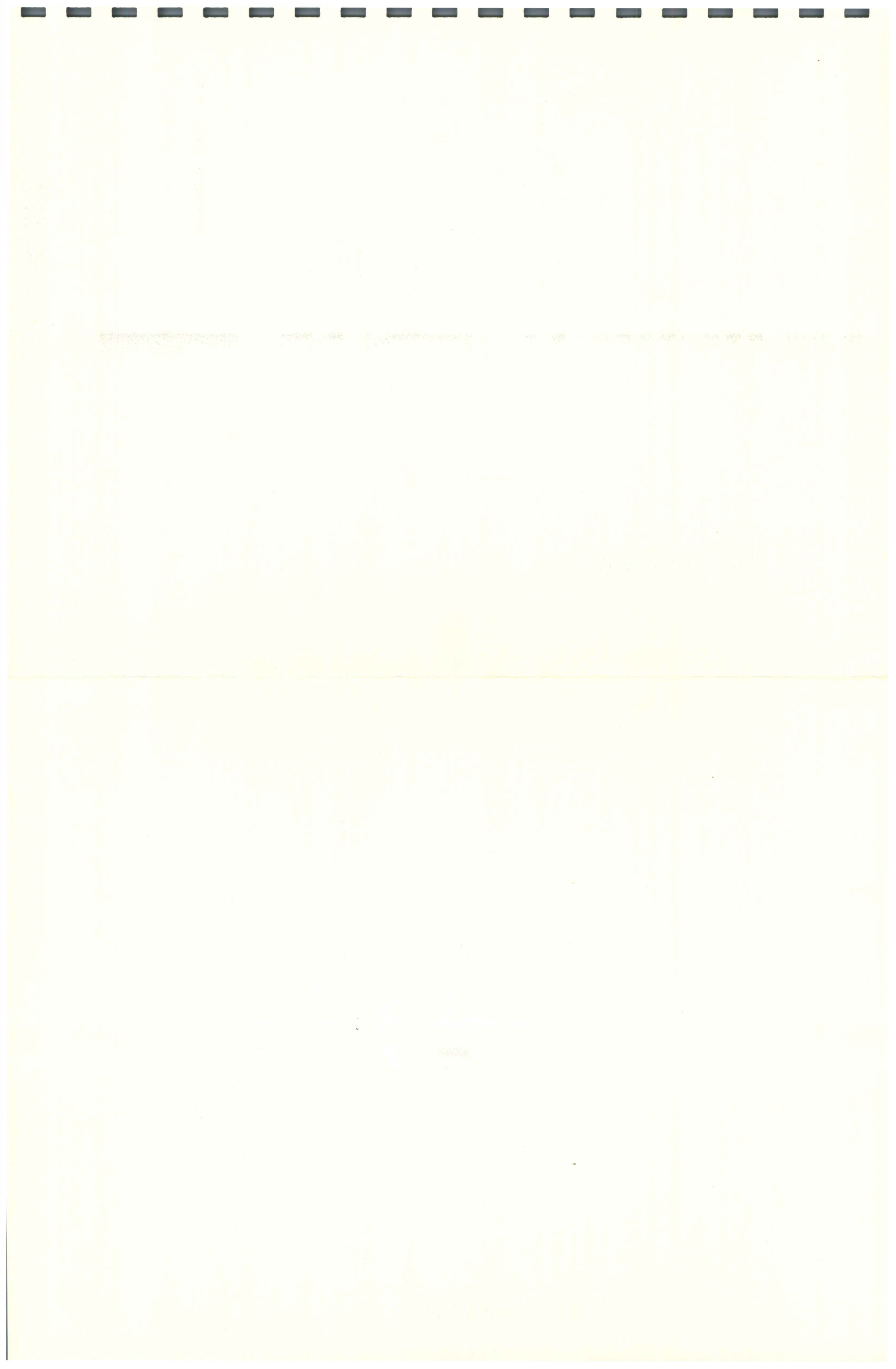


DATE MAY JANUARY 1966

WORK BY LANDMARK SURVEY  
 FORT MADISON, IOWA  
 PROJECT NO. 1064  
 THIS PLAN IS A PRELIMINARY PLAN AND IS NOT TO BE USED FOR CONSTRUCTION OF ANY STRUCTURE OR FOR ANY OTHER PURPOSE WITHOUT THE WRITTEN APPROVAL OF THE ENGINEER.  
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DON C. SHAFER AND ASSOCIATES  
 ENGINEERS  
 4555 CONCORD LANE  
 SKOKIE, ILLINOIS

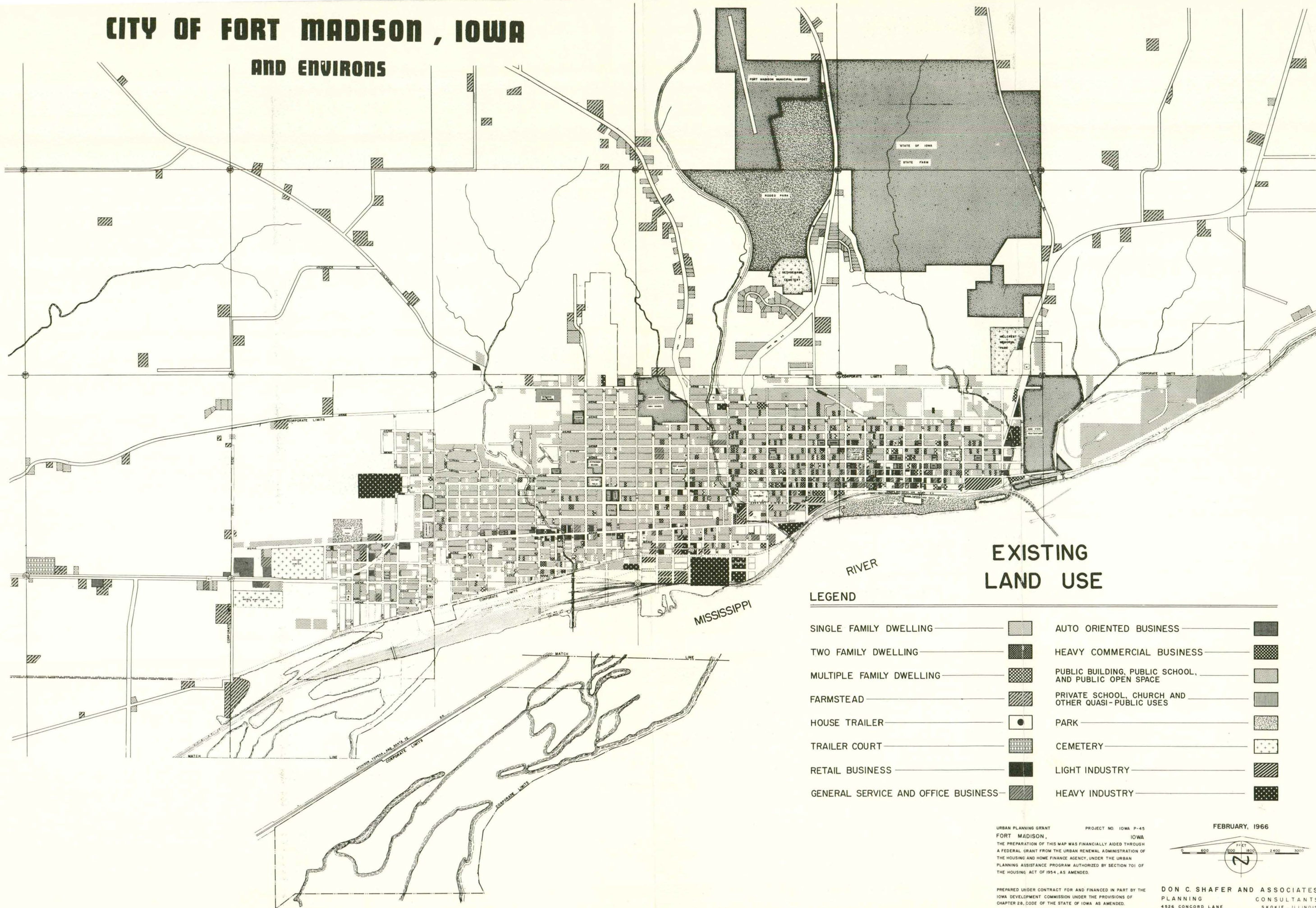






# CITY OF FORT MADISON, IOWA

## AND ENVIRONS

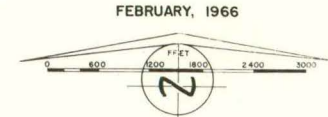


### EXISTING LAND USE

#### LEGEND

SINGLE FAMILY DWELLING		AUTO ORIENTED BUSINESS	
TWO FAMILY DWELLING		HEAVY COMMERCIAL BUSINESS	
MULTIPLE FAMILY DWELLING		PUBLIC BUILDING, PUBLIC SCHOOL, AND PUBLIC OPEN SPACE	
FARMSTEAD		PRIVATE SCHOOL, CHURCH AND OTHER QUASI-PUBLIC USES	
HOUSE TRAILER		PARK	
TRAILER COURT		CEMETERY	
RETAIL BUSINESS		LIGHT INDUSTRY	
GENERAL SERVICE AND OFFICE BUSINESS		HEAVY INDUSTRY	

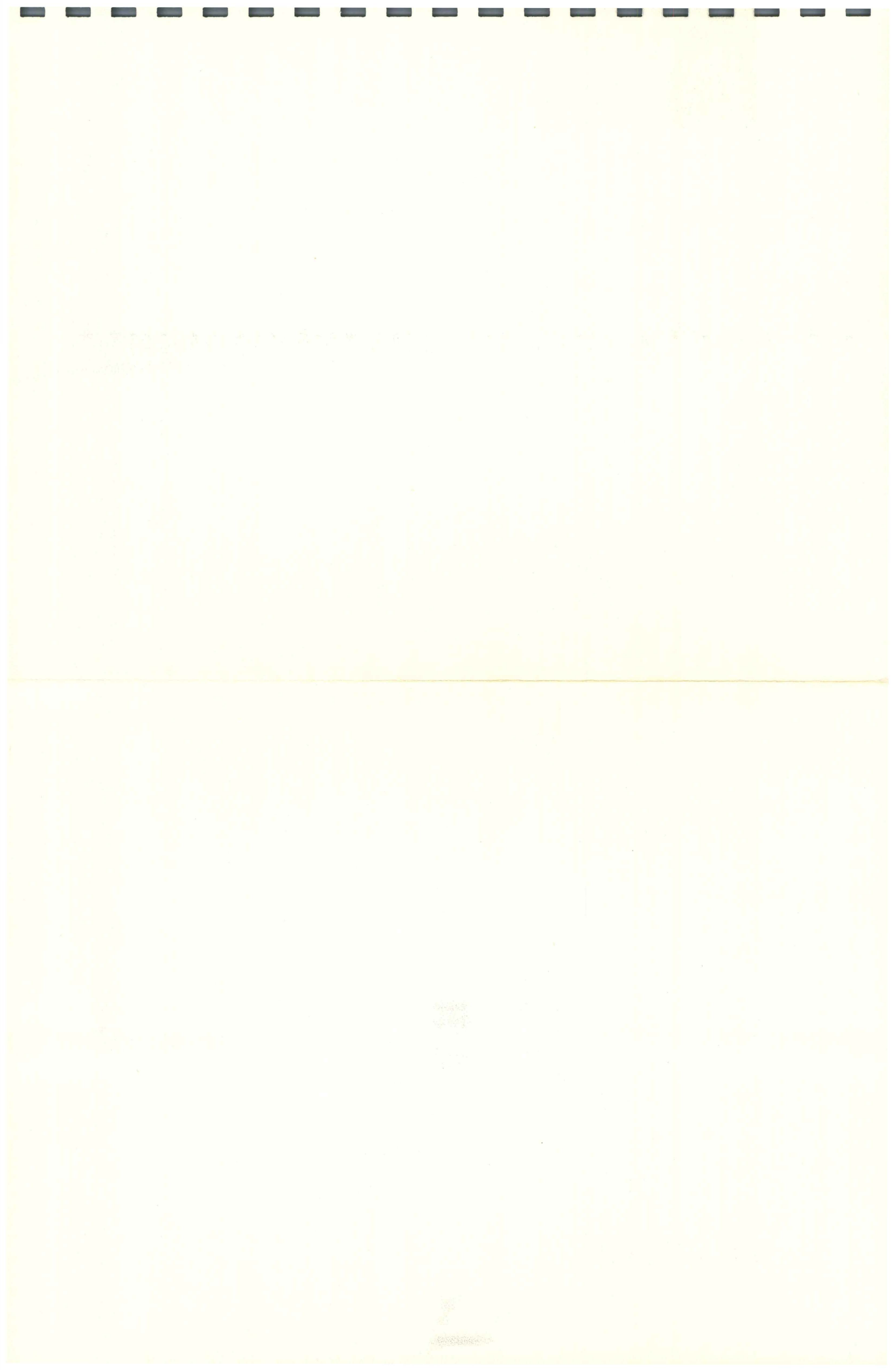
URBAN PLANNING GRANT PROJECT NO. IOWA P-45  
 FORT MADISON, IOWA  
 THE PREPARATION OF THIS MAP WAS FINANCIALLY AIDED THROUGH A FEDERAL GRANT FROM THE URBAN RENEWAL ADMINISTRATION OF THE HOUSING AND HOME FINANCE AGENCY, UNDER THE URBAN PLANNING ASSISTANCE PROGRAM AUTHORIZED BY SECTION 701 OF THE HOUSING ACT OF 1954, AS AMENDED.



PREPARED UNDER CONTRACT FOR AND FINANCED IN PART BY THE IOWA DEVELOPMENT COMMISSION UNDER THE PROVISIONS OF CHAPTER 28, CODE OF THE STATE OF IOWA AS AMENDED.

DON C. SHAFER AND ASSOCIATES  
 PLANNING CONSULTANTS  
 4526 CONCORD LANE  
 SKOKIE, ILLINOIS







terrain may affect any development.

The total amount of land devoted to two-family use, including two flats and duplex units, is 48.1 acres, or 1.4 percent of the total corporate area. These figures reflect a low percentage of land generally used for two-family dwellings, even though a large area of the city is zoned for such use.

Land used for multiple-family structures, containing three or more housing units, totals 10.7 acres, or 0.3 percent of the total corporate area.

In comparing multiple-family land use with the official zoning map, such a land use has not been retained within the zoned district, therefore, non-conforming uses have been created.

Multiple-family uses are generally located east of 18th Street and south of Avenue C. There is not an established area where multiple-family uses are predominant; they appear to have been located any place where land was available or where large single-family residences could be converted.

In surveying the land uses in Fort Madison, there were 11 acres of farmsteads, or 0.3 percent of the total corporate area recorded. A farmstead includes only the land on a farm where the residence and farm buildings are located. This area is included within the residential land use calculations.

Fort Madison, like most communities, has a number of house trailers. At the time of the land use survey, there were four acres, or 0.1 percent of the total corporate area, used for house trailers. This land use was also included in the residential calculations.

## COMMERCIAL

The commercial land use includes retail, general service, auto oriented and heavy commercial uses. The location of such uses, with the exception of the central business district, does not follow any set pattern of past development.

The retail uses amount to 23.1 acres, or 0.6 percent, of the total corporate area;

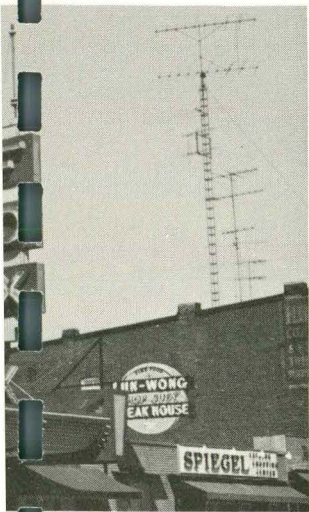
The general service area includes 21.5 acres, or 0.6 percent of the total corporate area;

Auto oriented land uses comprise 16.7 acres, or 0.5 percent of the total corporate area;

Heavy commercial uses cover 6.1 acres, or 0.2 percent of the total corporate area;

All together, the commercial area occupies 1.9 percent of the total corporate area.

Service commercial uses include professional and financial offices,



service and repair stores, and entertainment and recreation establishments. Auto oriented commercial uses include gasoline filling stations and allied uses associated with the automobile user.

Some of the commercial uses located in strips along major thoroughfares are representative of neighborhood shopping such as drugs, hardware, beauty, barber, foods, bakery, dry cleaning, laundry and shoe repair.

## INDUSTRY

Industrial uses as surveyed in February 1966 covered 176.7 acres, or five percent of the total corporate area.

The largest developed industrial area is located south of Avenue L between 15th and 20th Avenues. The next largest area is located north of Avenue L and west of 34th Street.

The third general industrial area is located between 1st and 2nd Streets and U. S. Route 61 and between 1st and 4th Streets south of Avenue G. Other smaller industrial uses are spotted elsewhere in the city.

The city is developing an industrial park west of the city which included a fertilizing plant and an allied use at the time of the land use survey. Since the land use survey the city has a large new industry located in the industrial park area.

## COMMUNITY FACILITIES

There are 251.6 acres of land, or seven percent of the total corporate area in community facilities. These facilities include parks, playgrounds, cemeteries, schools, churches, libraries, hospitals and municipal buildings.

Parks and playgrounds account for 54.2 acres, or 1.5 percent of the total corporate area. The parks within the city are Riverview, Old Settlers, Central, Ivanhoe and Victory Field.

Rodeo Park, the largest, consists of 240 acres and is located north of the corporate area.

All of the parks have some type of equipment and, with the exception of Central Park, all have shelter houses.

Three cemeteries account for 31.9 acres, or 0.9 percent of the total corporate area. These are Oakland, Elmwood and the third cemetery located at Avenue H and 15th Street.

Public and quasi-public buildings occupy 165.5 acres, or 4.6 percent



of the total corporate area. Among those land uses included in this category are public and parochial schools (only non-recreational areas), churches, fraternal orders, the library and hospital, fire and police station and the municipal building.

The Fort Madison Community School District presently maintains a high school, a junior high school and four elementary schools within the city. The schools are located on the existing land use map.

There is one parochial high school and three parochial elementary schools in Fort Madison.

## TRANSPORTATION

Thoroughfares and transportation facilities total 941.9 acres. The rights-of-way of streets, alleys, railroads and water courses are in this category. This represents 26.7 percent of the total corporate area and is second in quantity only to the amount of land used for residential purposes.

The street pattern in Fort Madison, for the most part, follows a strict rectilinear pattern. Variations in the pattern are found east and west of the Dry Creek and north of Avenue H.

Currently 468.5 acres are devoted to street and alley right-of-way; this accounts for 13.3 percent of the total corporate area.

Railroad rights-of-way total 116.2 acres, or 3.3 percent of the total corporate limits.

The Chicago, Burlington and Quincy Railroad and the Atchison, Topeka and Santa Fe Railroad follow the shore line of the Mississippi River. This land use separates the river from other land uses.

There are 357.2 acres covered by water within the city, or 10.1 percent of the ground area.

## VACANT LAND

Vacant land totals 1,337.0 acres, or 38 percent of the total corporate area--more than two square miles.

The largest vacant areas are located to the northwest and west sections of the city. Within the developed portion of the city there are very few scattered lots. This clearly shows a growth pattern from the center or the core area to the city toward the corporate limits.

A comparison of the land use map with the present zoning maps

Table 9  
CENTRAL BUSINESS DISTRICT  
LAND USE  
Fort Madison, Iowa

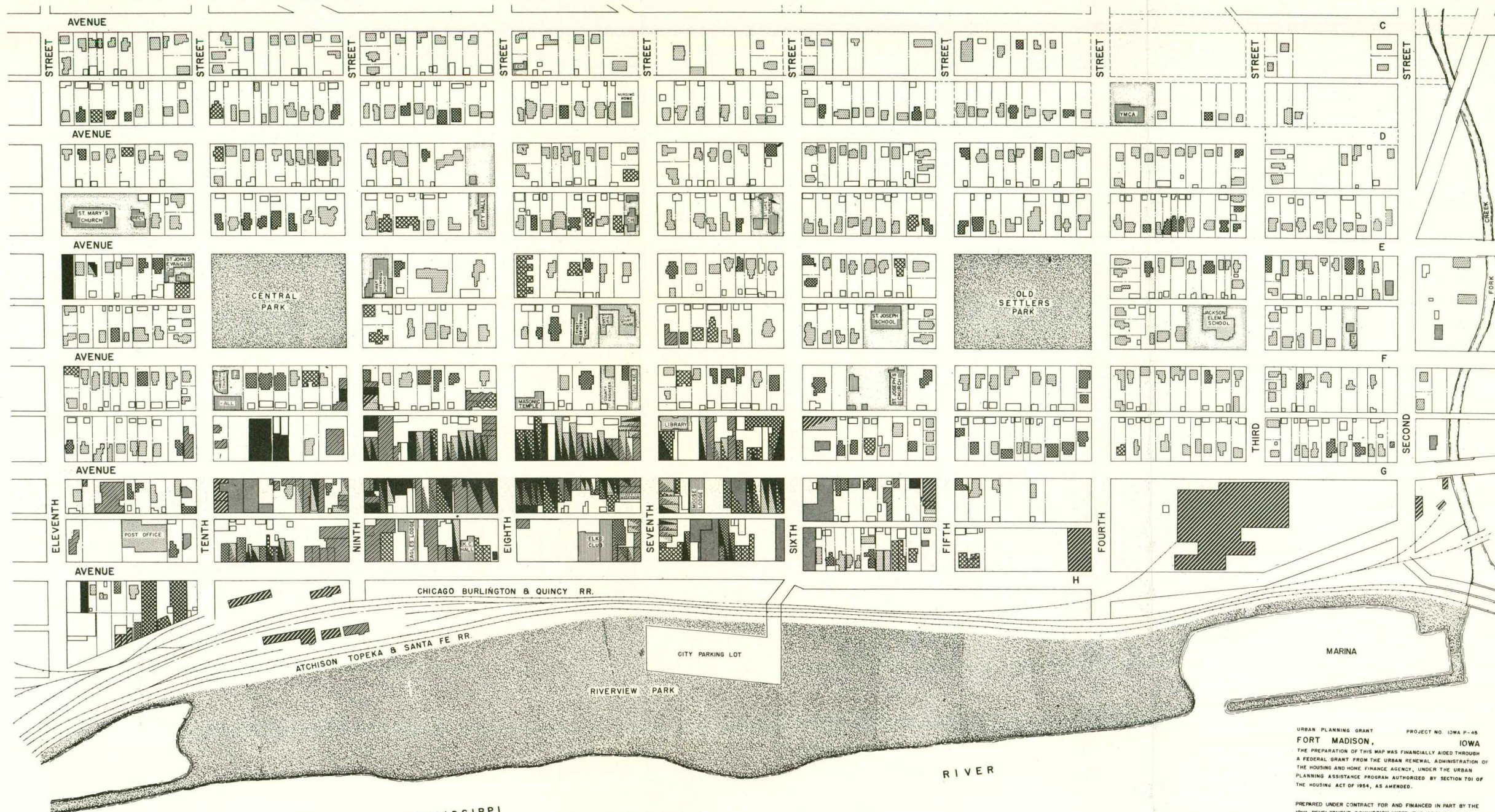
Use	Acres	Lot Area Square Feet	Building Area Square Feet	Non-Structural Area Square Feet
Single-family	16.7	728,100	264,170	463,930
Two-family	9.2	401,900	216,400	185,500
Multiple-family	3.7	160,800	126,600	34,200
Retail business	7.4	321,240	204,400	116,840
General service	5.5	238,300	260,330	22,030
Auto oriented	2.5	108,310	42,050	66,260
Heavy commercial	1.0	44,020	101,050	57,030
Public	3.9	169,260	44,160	125,100
Quasi-public	4.0	175,200	129,200	171,100
Parks	6.5	283,140	-	275,900
Light industry	2.9	124,300	36,000	88,300
Streets	33.9	1,475,000	-	1,475,000
Vacant land	<u>1.7</u>	<u>75,000</u>	-	75,000
	98.9	4,304,570		

Source: Don C. Shafer & Associates, Skokie, Illinois  
August 1966



# CITY OF FORT MADISON IOWA

## CENTRAL BUSINESS DISTRICT



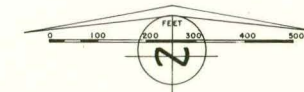
### EXISTING LAND USE

#### LEGEND

SINGLE FAMILY DWELLING		GENERAL SERVICE AND OFFICE BUSINESS		PRIVATE SCHOOLS, CHURCHES, AND OTHER QUASI-PUBLIC USES	
TWO FAMILY DWELLING		AUTO ORIENTED BUSINESS		PARKS	
MULTIPLE FAMILY DWELLING		HEAVY COMMERCIAL BUSINESS		LIGHT INDUSTRY	
RETAIL BUSINESS		PUBLIC BUILDINGS, PUBLIC SCHOOLS, AND PUBLIC OPEN SPACE			

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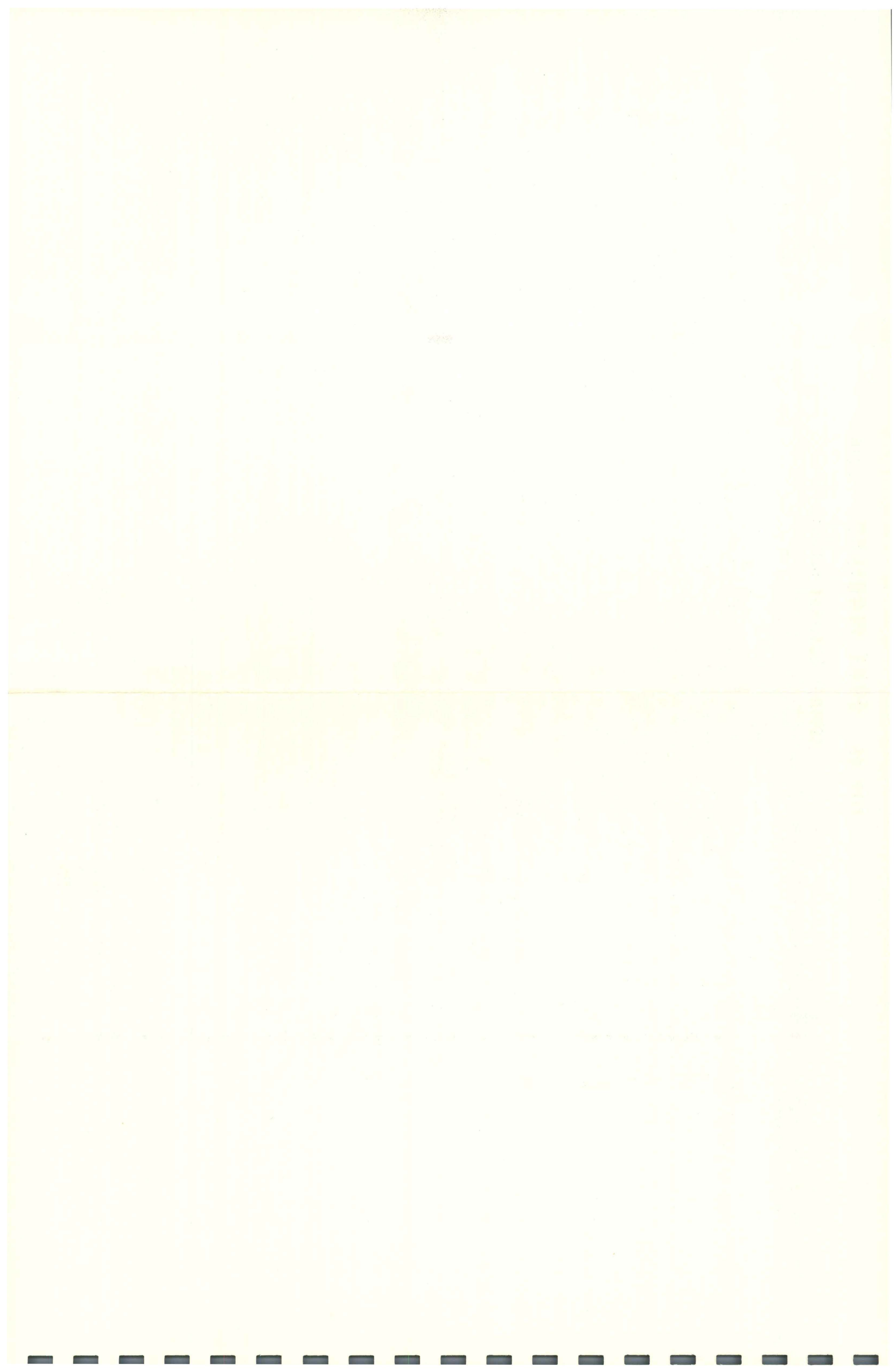
PREPARED UNDER CONTRACT FOR AND FINANCED IN PART BY THE IOWA DEVELOPMENT COMMISSION UNDER THE PROVISIONS OF CHAPTER 28, CODE OF THE STATE OF IOWA AS AMENDED.



FEBRUARY, 1966

DON C. SHAFER AND ASSOCIATES  
 planning consultants  
 4526 CONCORD LANE SKOKIE, ILLINOIS







indicates that a sizable amount of land is available for residential and industrial development.

## CENTRAL BUSINESS DISTRICT LAND USE

The central business district in Fort Madison is located in an east-west corridor along Avenues G and H. The CBD reflects a pattern of unplanned development with little thought of inter-relating commercial uses.

There have been few new buildings constructed in the CBD and most of the buildings are marked by age. Some of the buildings have new fronts but almost in every case the facial improvements extends only to the second floor. New fronts without revitalizing the interior provides little affect to continuously inducing customers into such stores.

The CBD occupies 98.9 acres, as delineated on the map following. The area is larger than the existing CBD in order to provide space for future development of commercial uses. Of this area, 16.4 acres include retail, general service, auto oriented business and heavy commercial land use.

At the time of the land use survey there were 67.4 acres of commercial land uses in the total corporate area of the city. This represents 1.9 percent of the land uses in the total corporate area. Of this total, 23.8 percent of the commercial land uses were located in the CBD.

In the CBD as delineated there are various land use which range from single-family to light industry.

The table on page 76 lists the types of land uses; total acres, lot area, building and non-structural areas.

Commercial land use located within the CBD total 16.4 acres, this represents uses located on all floors of each building where it existed at the time of the survey.

In the general services classification, 22,030 square feet of this use was located above the first floor. Heavy commercial uses occupied 57,030 square feet of building area above the first floor.

Public and quasi-public uses occupied 18.4 acres of the projected CBD area. This includes such uses as city hall, parks, churches, etc.

In the CBD as delineated contains 2.9 acres of light industrial and 29.6 acres of residential land uses. There is only 1.7 acres of vacant land in the CBD area.

Table 10

## AREAS OF EXISTING LAND USE

1958<sup>1</sup>/<sub>-</sub> - 1966<sup>2</sup>/<sub>-</sub>

Fort Madison, Iowa

Land Use	Area in Acres			% of Change	Developed Area		% of Total Incorporated Area	
	1958	1966	Change Acres		1958	1966	1958	1962
Single-family	638.5	694.5	+ 56.0	8.8%	37.3%	37.9%	22.1%	19.7%
Two-family	40.7	48.1	+ 7.4	18.2	2.4	2.6	1.4	1.4
Multiple-family	7.7	10.7	+ 3.0	39.0	0.5	0.6	0.3	0.3
Commercial	52.7	67.4	+ 14.7	27.9	3.1	3.7	1.8	1.9
Light industry	50.7	26.5	- 24.2	-47.7	2.9	1.4	1.7	0.8
Heavy industry	112.9	150.2	+ 37.3	33.0	6.5	8.2	3.9	4.2
Railroads	116.2	116.2	-	6.8	6.3	4.1	3.3	
Public and semi-public	174.6	197.4	+ 22.8	13.0	10.1	10.8	6.1	5.5
Parks and playgrounds	57.5	54.2	- 3.3	- 5.7	3.3	3.0	2.0	1.5
Streets and alleys	<u>463.2</u>	<u>468.5</u>	<u>+ 5.3</u>	1.1	27.1	25.5	16.0	13.3
<u>Total Developed Area</u>	1,714.7	1,833.7	+119.0	<u>6.9</u>				
Vacant land	1,052.7	1,337.0	+284.3	27.0%			36.3	38.0
Water area	<u>129.3</u>	<u>357.2</u>	<u>+227.9</u>	<u>176.3</u>			<u>4.3</u>	<u>10.1</u>
Total City Area	2,896.9	3,527.9	+631.2	21.8%	100.0%	100.0%	100.0%	100.0%

Sources: 1/ The Comprehensive Plan, Fort Madison, Iowa, prepared by Harland Bartholomew and Associates, St. Louis, Missouri  
 2/ Don C. Shafer & Associates, Skokie, Illinois



## COMPARATIVE LAND USES, 1958 AND 1966

In 1958, Harland Bartholomew and Associates, city planners, were commissioned by the City of Fort Madison to prepare a comprehensive plan for the community. In the plan preparations the land uses of the city were recorded and measured in 1958.

Table 3 shows the comparative land uses during 1958 and 1966. The figures are presented in acres, percent of developed area, percent of total incorporated area and percentage of change. A graphic presentation on the next page shows the changes in land use in all categories from 1958 to 1966.

From 1958 to 1966 the total incorporated area increased 21.8 percent, or from 2,896.9 acres to 3,527.9 acres.

The total developed area of the city from 1958 to 1966 increased 6.9 percent, or from 1,714.7 to 1,833.7 acres. Approximately 30 percent of the area annexed to the city between 1958 and 1966 has been developed.

In the residential classification the multiple-family land use reflected the largest percent of change or in particular, 39 percent. In the total the percentage of change in residential uses amounted to 66 percent.

Commercial uses for the same period increased by 27.9 percent, or 14.7 acres.

Industrial uses and in particular light industry decreased in percent although this may be because of the difference in definitions of such uses between consultants. The percentage of decrease is 47.7. Heavy industry increased 33 percent during this period.

The area of public and semi-public uses increased 13 percent, or 72.8 acres. Parks and playgrounds reflect a 3.3 percent decrease, here again definition of uses undoubtedly varies.

The amount of land devoted to streets and alleys between 1958 and 1966 increased 1.1 percent.

The area in vacant land and water increased 27 and 176.3 percent, respectively. As of the time the land use survey, the city has more than two square miles of vacant land for future development.

Not all of the vacant land may have buildable sites. This can only be determined at the time of a vacant land survey.

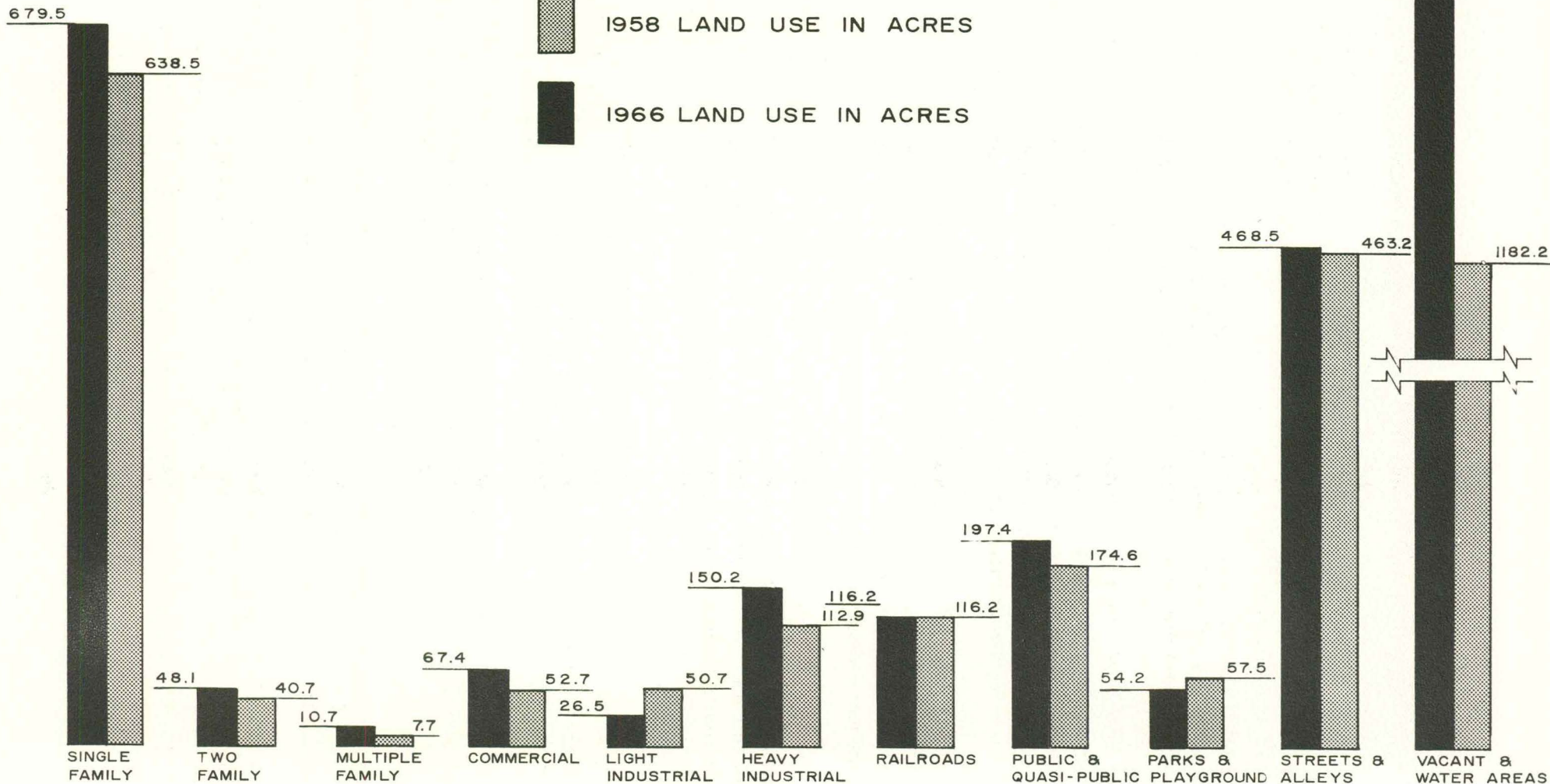
LEGEND



1958 LAND USE IN ACRES



1966 LAND USE IN ACRES



COMPARATIVE LAND USE

1958 - 1966

FORT MADISON, IOWA

SOURCE: 1958 HARLAND BARTHOLOMEW & ASSOCIATES  
1966 DON C. SHAFER & ASSOCIATES

URBAN PLANNING GRANT PROJECT NO. IOWA P-45  
FORT MADISON, IOWA  
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PLANNING ASSISTANCE PROGRAM AUTHORIZED BY SECTION 701 OF  
THE HOUSING ACT OF 1954, AS AMENDED.

PREPARED UNDER CONTRACT FOR AND FINANCED IN PART BY THE  
IOWA DEVELOPMENT COMMISSION UNDER THE PROVISIONS OF  
CHAPTER 26, CODE OF THE STATE OF IOWA AS AMENDED.



## COMMERCIAL SURVEY

The Chamber of Commerce in the past has conducted two shoppers surveys to determine the feeling of the shoppers toward the CBD of Fort Madison. One of the surveys was to determine what night of the week the shoppers desired the stores in the CBD to remain open. In both of these surveys, comments by the shoppers were included and even though there was several months lapse between surveys, there was similarity of general comments.

In the conclusion of the results of the shoppers survey conducted in May 1961, the following was stated in part:

"...urge every Fort Madison firm to take a critical and objective look at its business operations on the basis of these survey results. They show what Fort Madison's shopping shortcomings are. The survey has absolutely no value unless corrective action is taken. Many criticisms have been directed at all Fort Madison business firms and can be remedied only by the individual initiative of local businessmen. Study subcommittees will be appointed soon to work at receiving those undesirable shopping characteristics requiring a consolidated effort."

In the fall of 1966, a shoppers survey was conducted through the cooperation of the Chamber of Commerce and the Fort Madison Evening Democrat. The survey was conducted with the use of a questionnaire printed in the Evening Democrat in order to reach as many shoppers within the Fort Madison trade area as possible to attempt to appraise the commercial trade position of the CBD of Fort Madison.

The questionnaire was run twice in the newspaper and the total response was the receipt of 23 returns. This response can only be classified as extremely poor since the daily circulation of the newspaper is 7100 within a 50 mile area, with a mail subscription of 1850.

The 23 questionnaires returned have been evaluated to attempt to determine if the CBD is being fully utilized as the prime retail area. If it has not been fully utilized then some of the reasons for only a partial utilization of the CBD must be considered.

Since the response to the questionnaire was low it will be necessary to advance certain assumptions in analyzing the information obtained.

Eighty-three percent of the returns were from the shoppers that live in Fort Madison, 13 percent live in the rural area of Lee County, and four percent live in Wever, Iowa. Therefore, the intent of the questionnaire to obtain shopping information from the rural area surrounding Fort Madison is not available because of the failure of shoppers to comply with the request to complete the survey.

Eighty-seven percent of the respondents to the questionnaire were females and the remaining 13 percent were males. All of the male respondents are residents of the City of Fort Madison.

According to information obtained from the questionnaire the percentage of shopper visits to the CBD of Fort Madison are as follows:

	<u>% Shoppers</u>
Daily	17.3%
Weekly	52.3
Semi-monthly	17.3
Monthly	8.7
Special sales	4.4
Total Percent	<u>100.0%</u>

From the question, "What percentage of your home budget is spent in the CBD of Donnellson, West Point, Fort Madison, Burlington, Keokuk, Chicago, and any other principal business locations, assumptions have to be ascertained due to the poor receipt of returns.

If it can be assumed that answers to the questionnaires are representative of the shoppers in the trade area of Fort Madison, then the merchants of the CBD should be concerned. The results to this question as answered shows a relationship of shoppers preference for geographical location of retail business. The preference is either by voluntary choice or by forced choice due to lack of availability of merchandise requested by the shopper.

There was a high percentage of "no answers" to this questionnaire with the exception of where groceries are purchased.

The percentage of "no answers" in the questionnaire ran as high as 26 percent. If it could be assumed that the no answer percentage would favor Fort Madison, then the city's CBD captured more than 60 percent of the gross sales. The CBD of Burlington, according to the questionnaire received less than 30 percent of the retail trade from the Fort Madison trade area. The other ten percent of purchases are made in CBDs of West Point, Keokuk, Chicago and others. As to other CBDs, there were no localities identified by name.

According to the respondents of the questionnaire, approximately 70 percent of the shoppers' furniture is purchased in the CBD of Fort Madison. The remaining 30 percent is from Burlington, Keokuk and other CBDs not specified.

If "no answers" percentages can be surmised to favor Fort Madison's CBD then almost eighty percent of all appliances are purchased in this retail district. Burlington, West Point and other CBDs received 20 percent of this type of business.



From the standpoint of grocery purchases, the CBD of Fort Madison captured over 90 percent of this business. The remaining 10 percent of the purchases were made in West Point and Burlington. Purchasing groceries from Burlington is undoubtedly done when the shopper is in the city for some other purpose.

The shopper answering the questionnaire was requested to indicate by location where other types of merchandise was purchased. In this case, the CBE of Fort Madison received approximately 40 percent of the gross sales and Burlington's CBD almost 60 percent. Such listed items purchased varied from yard goods to music.

Twenty-one of the 23 returns indicated that they drove to the CBD. Two shoppers walked and no one indicated they used public transportation.

As to the question "Where did you last purchase \$5.00 or more in groceries?" over 65 percent responded that they purchased their groceries from the neighborhood. Thirty-five percent purchased their five dollars worth of groceries from the CBD and other areas equally.

Sixty percent of the shoppers answering the questionnaire indicated that they did more than shop when they were in the CBD. Of the percentage answering "yes" the respondents indicated such activities as their attendance at work, religious and/or civic or professional services, entertainment and/or recreation.

As to when was the most recent purchase made in the CBD of Fort Madison, indications varied from one day to two weeks prior to answering the questionnaire. Such items purchased varied from groceries to hardware and from apparel to appliances.

The most recent purchases made in the CBD of Burlington according to the responding shoppers ranged from one day to seven months with the average about seven days. Such items purchased included BB pistols, yarn, glasses, music, mens suits, clothing, yard goods, etc.

The Keokuk CBD is used for such items as stationary, yard goods, ladies clothes and the frequency of such shopping visits to this CBD ranged from two months to several years previous to the survey. Therefore, the Keokuk CBD does not provide commercial competition to Fort Madison.

Following are some of the comments made by the respondent shoppers:

1. More complete facilities for mens work clothing and more parking;

2. More selection in sizes, items and more competitive prices. We need a shopping center, more parking space - No parking meters in center.
3. They need a shopping center or something to stimulate the present store owners to get on the ball.
4. Department store (large) (discount).
5. Need coordinated redecorating of store fronts (not complete remodeling) maybe just window boxes to signs or something with flowers. Places to sit in summer, public rest rooms. Parking to rear of stores, new signs. Make CBD like a shopping center.
6. We need some department stores to get people to shop in Fort Madison and some parking lots where you don't have to pay to spend your money.
7. There isn't much down there - I have to go out of town for most everything, except essentials and I can't always find those here.
8. Poor - besides the amazingly small selection, high prices, I think the attitudes of the shop owners, etc. is BAD, as a rule, they usually act as if they could care less if you're there!!! Never very helpful!!!!
9. Parking - stores to carry a full line, not come back next day or will order it for you. What a lot of bull. Go to Burlington and just pick it up.
10. More parking, shopping center, cafeteria, better department store, ladies ready-to-wear, fill up empty business places, more active police, less riding around.
11. Parking isn't my problem, its the stores which don't satisfy me enough - But its the midwest that usually get the latest fashion and several things - we need a shoe store. We are getting too many beauty salons - we need better quality stores to satisfy our growing town.
12. More parking - public rest rooms - stores open Wednesday afternoons.
13. Poor selection of clothing. I practically never find any clothing, except shoes for myself. I am going to buy new furniture but I will have to buy out-of-town.



14. Definitely needs department (good) stores and open longer than 5:00 p.m.. What about working women?
15. A good large department store and shopping mall.
16. I do much of my shopping at Sears or Wards in Burlington so it is my opinion that if we had a large department store similar to theirs, then I would be happy to stay in town and shop. Fort Madison merchants are so afraid of being overstocked that they have a tendency to understock on everything, mostly clothing in popular sizes.
17. We are tall and can rarely find our size range in clothing; otherwise find merchants very eager to please.
18. We need a large quality department store - don't merchants realize this would increase business? Large stocks - wider selection so things don't have to be ordered.
19. Can't find merchandise wanted - merchants need to change their ways, clerks mostly and merchandise at a price ordinary people can afford.
20. Parking facilities are needed - a center mall - no parking in it with ice skating, trees and flowers.
21. I think shopping is very good in Fort Madison. I always find the things I want and it seems strange that other people can't. They just don't look.
22. There has been quite a bit of improvement here in the last five years.
23. Fort Madison is still lacking a lot of things you can get in Keokuk and Burlington and Burlington Shopping Center.

In conjunction with the same shoppers survey, parking information was requested in an attempt to be acquainted with parking problems the users of the CBD actually experienced. Only 4.3 percent of the shopper respondents to the questionnaire are employed regularly in the CBD of Fort Madison.

There appears to be a strong correlation between the percentage of shoppers parking on the street and those preferring to park on the street. Sixty-five percent of the shoppers parked on the street and 70 percent of the respondents indicated that they preferred to park on the public street.

Sometimes parking conditions prevent shoppers from remaining in the CBD as long as they would like, but 52 percent in this case stated that parking did not prevent a long stay in the prime retail area.

The time that was involved in locating a parking space ranged from no time to 15 minutes to no available space. Most of the recorded time was either five or 10 minutes.

Turn over rates of parked cars of the shoppers parked on the street varied from 15 minutes to all day with most of the stays being from 15 minutes to one hour.

Shoppers have always complained about the distance they have to walk after parking. In Fort Madison the distance varied from "none" to four blocks with the average distance being about one and a quarter blocks.

According to the survey 35 percent of the parkers paid five cents for parking, 26 percent did not pay any fee, 4.3 percent paid over time parking fines.

In ascertaining whether new off-street parking facilities would be recommended in the Central Business District Development Plan, a question was included to attempt to see what shoppers would pay for parking for three hours and all day parking. To this question the shopper indicated that an average of 13 cents for a three hour limit would be paid and 29 cents for all day parking. Most of the respondents indicated 10 cents for a three hour parking period and 25 cents for all day parking.

The answers supplied to the questionnaire, even though the response was poor, clearly pointed out and agreed with other studies and shoppers surveys conducted in the past. Even on a small scale, it indicated that the CBD was not capturing most of the gross sales on merchandise, furniture and appliances that are requested by the shoppers.

It was strongly, indicated in the survey that the consumer would shop in the CBD of Fort Madison if they could purchase what they are looking for. This means that the merchant should provide full lines of merchandise, modern apparel, furniture and appliances, popular sizes and prices that are right for Fort Madison. Almost every respondent to the questionnaire indicated that a shopping center is needed, therefore, they are looking for conveniences including availability of merchandise, parking, etc. that is associated with shopping centers.

If the CBD of Fort Madison is to function as a prime facility and if the greatest amount of gross sales receipts are to be captured, it must function as a regional shopping center. Merchandise, parking, circulation, comfort, convenience and overall appeal should be provided. If the negative approach is taken as to building a strong CBD in Fort Madison and a shopping center is developed in the city, then the present prime retail area could become a wholesale district with all the disadvantages, including the loss of tax revenue either through gross sales or in property tax returns.



## BUSINESS SURVEY

A representative commercial survey of all types of businesses maintaining a business address in the CBD was undertaken at the same time as the shoppers survey was conducted. Answers provided by the merchants reflect similarity to those of the shoppers.

The sample survey was represented by over half of the business in the delineated CBD.

After an appeal to the merchants for their cooperation in returning the completed questionnaire the percentage of return was 70 percent.

It was anticipated that there would be more response from the chain stores conducting business in the CBD of Fort Madison than there actually was.

Most of the merchants are not owners of their buildings, as is the case in most CBD's. Over 57 percent of the businesses responding to the survey stated that the premises were leased, 32.6 percent were owned and over 10 percent did not comment.

As stated in the shoppers survey conducted in Fort Madison, the need for more parking was indicated. By answers provided by the merchants, only 10.2 percent provide off-street parking for their customers with a total of 59 parking stalls. As to employee off-street parking, 34.6 percent of the respondents provide 53 stalls for employee parking. From comparing percentages it appears that the employers give more attention to employee instead of customer parking. This comparison provides brief answers to comments made by shoppers. It also means that any improvement of the existing parking conditions will be the responsibility of the city.

There is very little vacant land in the CBD for any expansion of existing buildings and 69.3 percent of the respondents verified the lack of availability of vacant property.

To the question, "If additional facilities were available, would you consider expansion?", almost 31 percent of the respondents answered that they would consider expansion of their businesses. A "no answer" amounting to 41 percent was recorded for this question. This high percentage appears to reflect uncertainty as to expansion or a determined "no answer" approach to the question.

It is felt by more than 71 percent of the respondents to the commercial survey that they have potential for growth under present conditions where they are now doing business. If some of the suggestions made by the businessmen were undertaken and completed a fuller business potential could be realized.

It was noted by 75.6 percent of the respondents that they felt they could do more business under present conditions. To bring this to reality it will be necessary to develop more customer traffic to the CBD.

According to the merchants their customers come from Fort Madison, Donnellson, Burlington, West Point, Nauvoo and other localities not identified.

There is a strong similarity between comments made about the CBD and possible recommendations for improvement of the city's prime retail area by shoppers and merchants.

Example of such direct comments are as follows:

1. Too many small stores - more large stores;
2. Modernize the CBD;
3. Increase parking;
4. Lack of certain lines of consumer goods;
5. Shopping center located elsewhere in the city;
6. More traffic in stores;
7. General cleaning;
8. More appealing to the customers;
9. Cooperation among businesses;
10. Beautification;
11. Large department store;
12. Wider streets;
13. Enlarge trade area;
14. Tear down old buildings;
15. Large cleaner and better stocked stores;
16. Long range plan for development for 20 years;

Since the merchants reflect apparent problems and needs for the area in which they maintain their business, then it should be a composite agreement of the CBD businessmen to correct and improve any drawbacks that curtail customer traffic in the prime business area.



## CONDITION OF STRUCTURES

In January 1966, a survey was conducted in the central business district to determine the general condition of all structures. Many buildings in the CBD are old and beyond investing large sums of money to rehabilitate or completely modernize. Some of the older buildings have had new fronts constructed, but this improvement extends only eight to 10 feet above the sidewalk. Some stores have undertaken interior remodeling, but have left the rest of the building in a deteriorating condition.

The Condition of Structures map for the CBD shows the condition of each building in this area based on a exterior survey. Each building was evaluated from the exterior and placed in one of the following categories:

Standard--Structures not in need of outside improvements at the time of the survey.

Conservation--Structures having slight defects which are usually corrected during the course of regular maintenance.

Examples of slight defects are: lack of paint, damage to stairs; wearing away of mortar between bricks or other masonry; small cracks in walls or chimney; wear on doorsills, doorframes, window sills or frames; broken gutters and downspouts. Remedial and preventive conservation techniques include the enforcement of building and related codes.

Rehabilitation--Deteriorating structures which demand more repairs than would be provided over a regular course of maintenance. These structures contain defects of an intermediate nature which must be corrected.

Examples of intermediate defects are: open cracks, loose or missing materials over a small area of the foundation, walls or roof, stairs or railings.

Such defects are signs of continued neglect which may lead to serious structural deterioration or damage if not corrected. Rehabilitation is necessary to restore such buildings to good condition. This may involve repairs, renovation, conversion, expansion, remodeling or reconstruction.

Dilapidation-- Structures which are not safe and adequate in their present condition, and which endanger the health, safety and well being of occupants (both merchants and customers) and adjacent buildings. Such structures have one or more critical defects or a combination of intermediate defects in considerable number to require considerable repair or rebuilding; or are of inadequate original construction.

Table 11

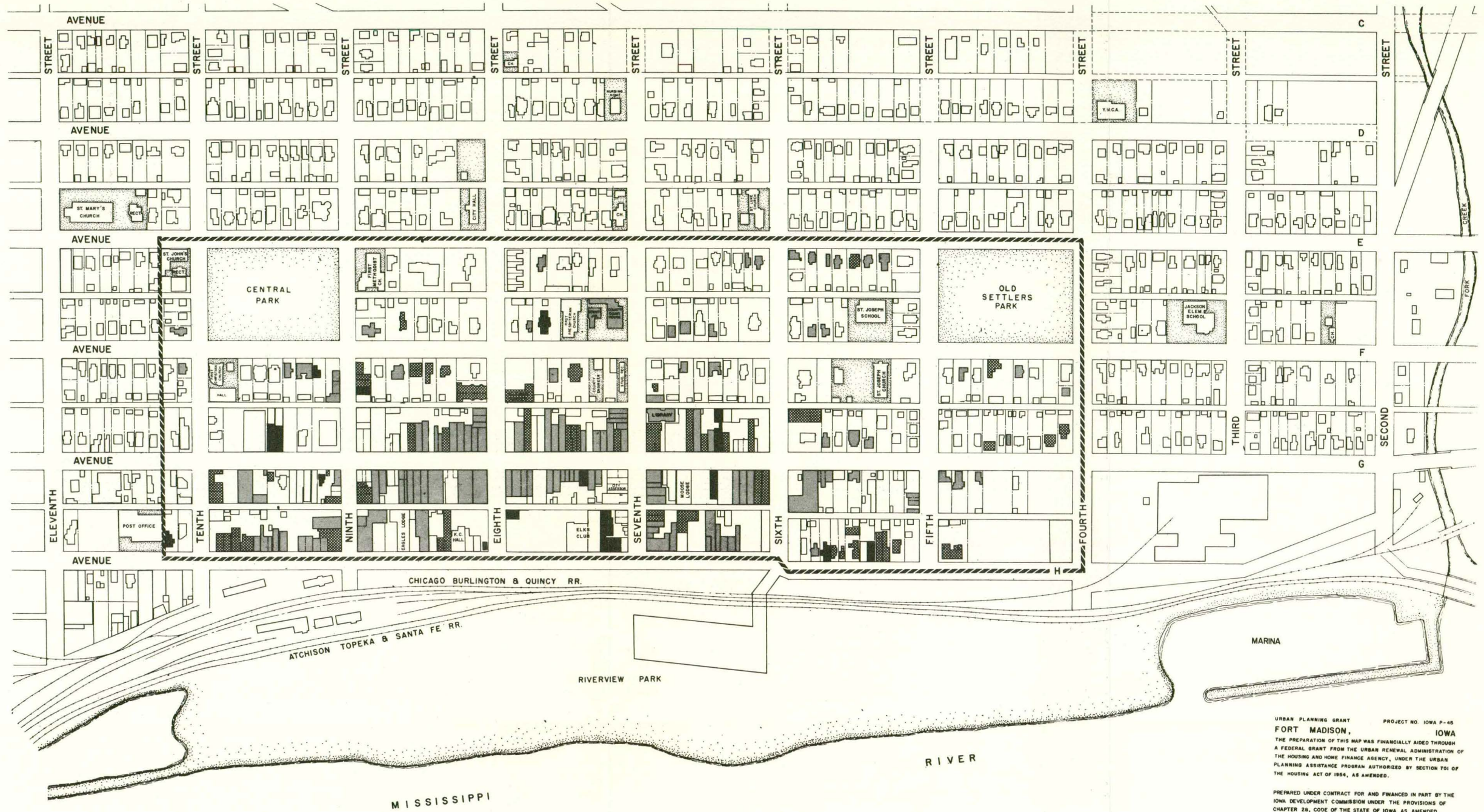
RESIDENTIAL STRUCTURES WITHIN CBD

	Single Family	Two Family	Multiple Family	Number of Structures	Percent of Total
Standard	29	20	9	58	56.2%
Conservation	16	9	4	29	28.2
Deteriorating	10	2	-	12	11.7
Dilapidated	<u>3</u>	<u>1</u>	<u>-</u>	<u>4</u>	<u>3.9</u>
TOTAL	58	32	13	103	100.0%



# CITY OF FORT MADISON IOWA

## CENTRAL BUSINESS DISTRICT



### C.B.D. CONDITION OF STRUCTURES

**LEGEND**

- STANDARD
- CONSERVATION
- DILAPIDATED STRUCTURE
- DETERIORATING STRUCTURE
- BUSINESS DISTRICT LIMITS

URBAN PLANNING GRANT PROJECT NO. IOWA P-45  
**FORT MADISON, IOWA**  
 THE PREPARATION OF THIS MAP WAS FINANCIALLY AIDED THROUGH A FEDERAL GRANT FROM THE URBAN RENEWAL ADMINISTRATION OF THE HOUSING AND HOME FINANCE AGENCY, UNDER THE URBAN PLANNING ASSISTANCE PROGRAM AUTHORIZED BY SECTION 701 OF THE HOUSING ACT OF 1949, AS AMENDED.

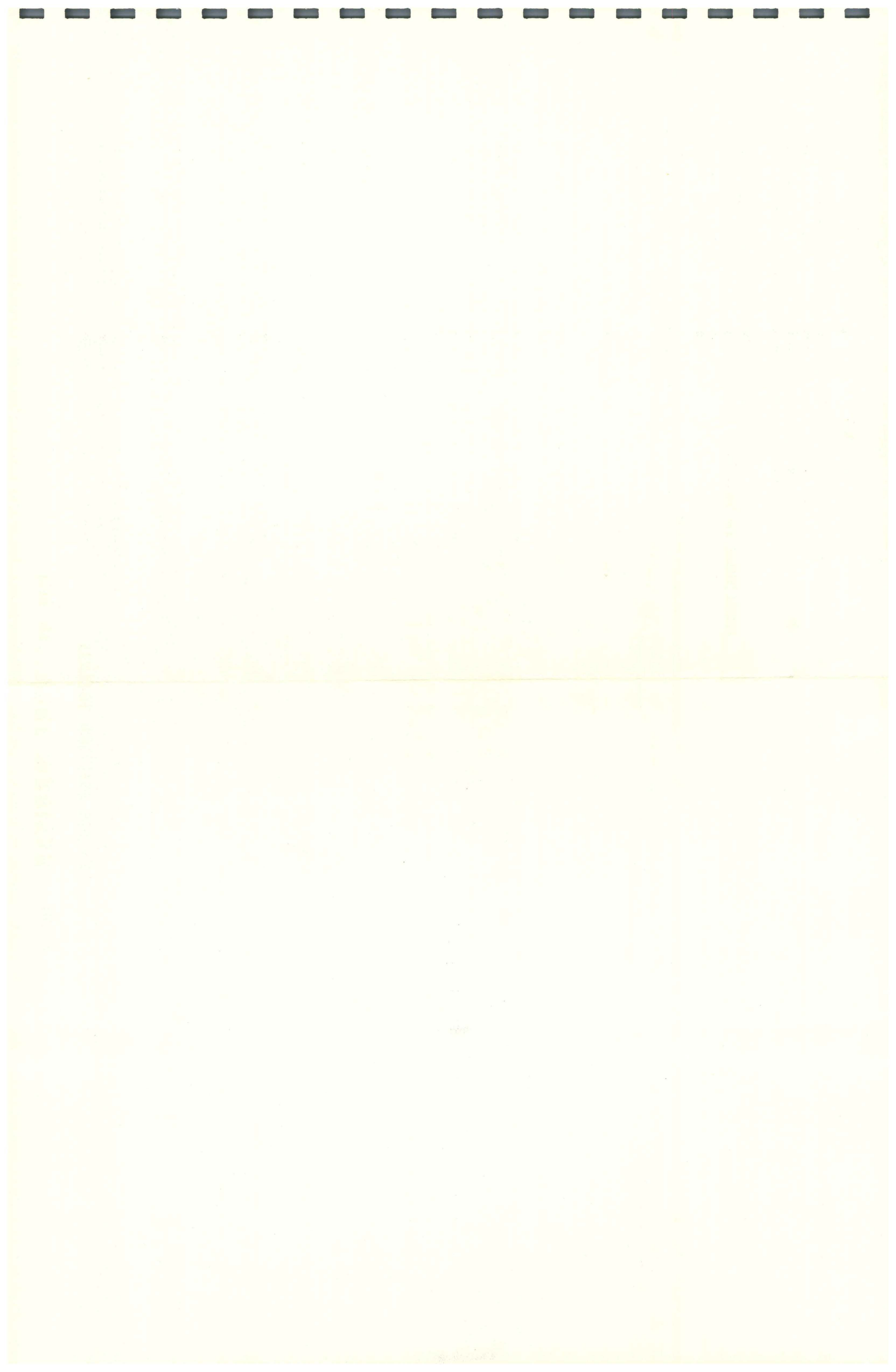
PREPARED UNDER CONTRACT FOR AND FINANCED IN PART BY THE IOWA DEVELOPMENT COMMISSION UNDER THE PROVISIONS OF CHAPTER 28, CODE OF THE STATE OF IOWA AS AMENDED.



MARCH, 1966

**DON C. SHAFER AND ASSOCIATES**  
 planning consultants  
 4526 CONCORD LANE - SKOKIE, ILLINOIS







Examples of critical defects are: holes, open cracks, loose and missing material (siding, bricks, concrete or tile) over a large area of the foundation, outside walls, roof or chimney; substantial sagging of walls or roof.

The condition of business structures in the CBD is statistically presented in the following table:

	Number of Structures	Percent of Total	Ground Floor Area (Square Feet)	Percent of Total
Standard	50	31.3%	158,354	38.0%
Conservation	70	43.4	175,275	42.2
Deteriorating	32	19.8	66,685	16.0
Dilapidated	9	5.5	16,370	3.8
Total	161	100.0%	416,684	100.0%

The results of the exterior survey accounts for 62 percent of the business structures that are in need of minor, major and clearance treatment. This does not mean that the other 38 percent of the structures do not need modernization, improvements, or improved merchandising. Almost 20 percent of the existing business structures are in need of drastic attention because of the deterioration and dilapidated conditions.

Building heights in the CBD are one, two and three stories. Third floor walk-ups are difficult to rent -- which is the dominant reason for the large percentage of vacancies.

Some downtown buildings have had very little physical maintenance for many years. These are the buildings where complete rehabilitation would be economically sound.

In addition to business structures there are approximately 103 residential structures in the CBD consisting of single family, two family and multiple family. From the standpoint of the exterior structural survey, 56 percent of the residential structures are standard and 44 percent are in some stage of needing improvement. Over 16 percent of the residential structures in the CBD are either deteriorating or dilapidated.

From the standpoint of condition of structures of both business and residential type within the CBD there are many that could be removed for expansion or a complete modernization program including adequate and well located and organized off-street parking.

## I N D U S T R Y

In January 1967, a questionnaire survey was conducted covering 15 industries in Fort Madison. Response to the survey was excellent with a 66.6 percent return.

The purpose of the survey was to attempt to evaluate significant industrial problems, expansion needs, any conflicts, transportation problems, etc.

The executives were asked if they had any industrial problems. To this question, 26.6 percent of the respondents stated there were no significant operating industrial problems. The remaining stated the main problem was, in the order most frequently mentioned, labor supply and labor skills.

Other significant industrial problems of equal concern are parking, local transportation, utilities and housing. Local financing does not appear to be a problem, as it was not mentioned.

Labor supply, skills and financing are extremely important to the future industrial outlook for Fort Madison. Should the labor market become inadequate to the point where industry begins to look elsewhere for help, it would create many problems for Fort Madison. If a decision has been made by the community to encourage industrial development within the Fort Madison planning area, it is the responsibility of the community as a whole to assist industry in meeting the demand for labor supply and skills.

Another question asked pertained to expansion plans. To this question 53.4 percent of the answering industries did not answer this question. Twenty percent of the industries responding to the question have expansion plans for Fort Madison. Expansion estimates range from five to 50 percent. The estimated time for expansion is in 1967 and 1968.

The percentage of anticipated industrial expansion is further reason for the full cooperation of the community to assist in meeting the labor supply and skills needed by such industry. A strong industrial tax base will result in many public improvements for Fort Madison and a faster realization of the intent of the comprehensive long-range community plan.

Over 12 percent of the industries answering the questionnaire stipulated that "labor supply" is a significant problem which, for the present time, leaves expansion plans open to questions. One question asked of the industrial executives was to express an opinion as to whether or not they could operate more profitably elsewhere. To this question the answers were "no", with a noticeable lack of no answers provided.



When no answers were provided for this question, this could indicate indecision or reluctance to express an opinion at the time of the survey. Indecision to the question could reflect the problem of labor supply and the availability of labor skills.

Industry located in the planning area of Fort Madison has all the physical improvements needed to meet its demands--from receiving the raw materials to shipping the furnished products to market.

Rail facilities are available with the Atchison, Topeka and Santa Fe Railroad mainline. The Chicago, Burlington and Quincy Railroad also provides service to Fort Madison. Major highways are both in an east-west and north-south direction. These are U. S. Route 61 and Iowa Routes 88 and 103.

Fort Madison operates its own municipal airport equipped with an all-weather asphalt strip, landing lights, automatic beacon, wind cone and other necessary instruments. The airport is located a mile and a half from the downtown business district.

The airport is available to industry and a study is underway to determine the need for direct air travel from Fort Madison to Chicago O'Hare Airport. Three daily non-stop round trips are contemplated or equivalent in air freight between Fort Madison and Chicago.

To establish such a freight schedule it is necessary to have a minimum of 10,000 passengers a year. Also, each daily flight must have not less than three passengers or the equivalent in air freight. Planes to be used will have a capacity for 11 passengers.

At the present time there are no facilities for handling water-borne freight at Fort Madison. Petroleum products were once received by pumping from barges moored a considerable distance from shore. But continued silting in the river has made this operation impractical.

The U. S. Army Corps of Engineers have recommended and supported an access channel to the Mississippi River. Initial prospective commerce through the proposed Fort Madison access channel is estimated by the Army Corps of Engineers at 82,600 tons annually. The Corps estimates that the total prospective tonnage at the present time would amount to 107,913 tons annually.

Recently, large industries have located in or near to the city and in time the city will realize economic benefits because of new families and the increased gross sales reflected from spending spendable incomes in the city.

The aggressiveness of the citizens of the city through local guidance will see that any existing industrial problems will be improved and corrected. The city is aware of the economic results of having high type industries locate in the planning area.

Table 12  
FORT MADISON SCHOOLS WITHIN THE PLANNING AREA

Name of School	Grades	Student <sup>1/</sup> Population 1966-1967	Estimated 1967-1968	Existing Size of Site in Acres	Recommended <sup>2/</sup> Minimum Size of Site in Acres
High school	10-12	769	800	27.0	38.0
Junior high	7-9	866	882	2.9	28.0
Jackson	K-6	215	210	.5	12.0
Jefferson	K-6	509	531	3.5	15.0
Lincoln	K-6	439	444	1.0	14.0
Richardson	K-6	414	430	2.8	14.0
Total Acreage				37.7	121.0

<sup>1/</sup> Fort Madison Community School District

<sup>2/</sup> NCSC Guide for Planning School Plants, Published by the National Council  
on Schoolhouse Construction, 2nd Printing, 1965.



## COMMUNITY FACILITIES

### SCHOOLS

The Fort Madison Independent School District as known at the time of the 1959 plan report on schools was changed in 1960 to the Fort Madison Community School District. Another reorganization enlarging the area of the district took place on July 1962. The third reorganization of the Fort Madison Community School District during July 1966. The Community School District covers approximately 240 square miles, thus extending travel distance from the City of Fort Madison.

The district has operated under a 6-3-3 school plan since 1957 providing for kindergarten, six year elementary school, a three year junior high school and a three year senior high school. This form of organization is recognized as best suited for separating the various age groups into functional divisions that can be taught effectively and efficiently.

The standards for the size of school site have changed over the past years for several reasons but principally because of the single story rambling structures and the importance of recreation.

The following paragraphs are quoted from the 1965 issue of the NCSC Guide for Planning School Plants, published by the National Council on Schoolhouse construction.

"The size of any school site should be determined largely by the nature and scope of the contemplated educational program. Actual layouts of the spaces needed by the various phases of the program should be made. While it is recognized that for many schools much larger areas are preferred, the acceptance of the following suggestions will be an improvement for many of the schools throughout the country.

1. For elementary schools, it is suggested that there be provided a minimum site of 10 acres plus an additional acre for each 100 pupils of projected ultimate maximum enrollment. Thus a site of minimum size for an elementary school for 200 pupils would be 12 acres.
2. For junior high schools, it is suggested that there be provided a minimum site of 20 acres, plus an additional acre for each 100 pupils of projected ultimate maximum enrollment. Thus a site of minimum size for a junior high school of 500 pupils would be 25 acres.

TABLE 13  
 PAST TRENDS IN PUBLIC SCHOOL ENROLLMENTS  
 Fort Madison, Iowa

Year	Kindergarten	1 to 6	7 to 9	10 to 12	Total K to 12	1/
1946-47	154	769	430	417	1770	
1947-48	197	799	444	413	1853	
1948-49	174	841	430	366	1811	
1949-50	163	925	398	396	1882	
1950-51	149	993	395	419	1956	
1951-52	226	988	407	373	1994	
1952-53	265	1026	441	335	2067	
1953-54	245	1128	468	348	2189	
1954-55	260	1055	487	358	2160	
1955-56	274	1128	481	407	2290	
1956-57	251	1065	470	426	2212	
1957-58	246	1120	432	472	2270	
1958-59	221	1132	463	483	2300	
1959-60	210	1133	535	490	2368	
<u>2/</u> 1960-61	209	1200	649	455	2513	
1961-62	345	1258	693	472	2768	
1962-63	320	1348	805	614	3087	
1963-64	279	1207	785	730	3001	
1964-65	331	1186	795	783	3095	
1965-66	295	1203	813	769	3080	
1966-67	302	1275	866	769	3212	
1967-68	284	1355	889	811	3339	

1/ Does not include special education enrollment.

2/ Updating of Public School Enrollment - 1960 through 1967



3. For senior high schools, it is suggested that there be provided a minimum site of 30 acres, plus an additional acres for each 100 pupils of projected ultimate maximum enrollment. Thus a site of minimum size for a senior high school of 1,000 pupils would be 40 acres.

"The site size problem varies with the needs of the type of school organization and in terms of the age and development status of the particular community or school district. Therefore, the recommended site size must be interpreted as minimum to which all should strive but most should exceed. It must be recognized that each type of situation has its own specific variations and conditions which must be studied before sites are chosen.

#### PAST TRENDS IN ENROLLMENT

The trend of enrollment in the Fort Madison Community School District over the past 21 years is shown on Table 13. Total enrollment since the 1946-47 school year has shown a steady increase with only minor interruptions in 1948-49 and 1963-64. In the 1948-49 school year, the loss in total school enrollment was 42 students which was reflected in the kindergarten, 7 through 9 and 10 through 12 grades, but not in the first through sixth grades. In the 1963-64 school year the loss in the total school enrollment was 86 students which was reflected in kindergarten and the first nine grades. Although slight decreases occurred, the present enrollment is 3,212, compared with 1,770 in 1946. The estimated enrollment for the 1967-68 school year is 3,297. It should be remembered that students population include a larger geographic area than in 1946.

These figures do not include Denmark Elementary School because their facility is not included in the planning area. Although in the 1967-68 school year it is estimated that 73 students from this school will attend junior high in the 1968-69 school year. Therefore, the student enrollment becomes important at this point.

The kindergarten enrollment presents a more fluctuating picture than other grades. There is no set pattern of annual increases or decreases. The 1961-62 school year shows the largest kindergarten class of 345 children. The second largest class was in 1964-65 with 331 children.

Elementary school enrollment has steadily increased since 1946 as shown on Table 14. There have been decreases of students but this has been slight. Both senior and junior high school enrollments have followed similar trends with pronounced increases taking place since 1955-56 school year.

Table 14

ESTIMATED FUTURE PUBLIC SCHOOL ENROLLMENTS  
Fort Madison, Iowa

Year	Population	Total K-12		Kindergarten		Grades 1-6		Grades 7-9		Grades 10-12	
		Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
1946-47	14,598*	1,770	12.1 %	154	1.1 %	769	5.3 %	430	2.9 %	417	2.9 %
1948-49	14,776*	1,811	12.3	174	1.2	841	5.7	430	2.9	366	2.5
1950-51	14,954*	1,956	13.0	149	1.0	993	6.6	395	2.6	419	2.8
1952-53	15,159*	2,067	13.6	265	1.7	1,026	6.8	441	2.9	335	2.2
1954-55	15,364*	2,160	13.9	260	1.7	1,055	6.9	387	3.2	358	2.3
1956-57	15,569*	2,212	14.2	251	1.6	1,065	6.8	470	3.0	426	2.7
1958-59	15,776*	2,300	14.5	221	1.4	1,132	7.2	463	2.9	484	3.1
1959-60	15,979*	2,368	15.5	210	1.3	1,133	7.1	535	3.3	490	3.1
1960 Census	15,247										
1960-61	15,500**	2,513	16.2	209		1,200		649		455	
1961-62	15,700**	2,768	17.5	345		1,258		693		472	
1962-63	15,900**	3,087	19.4	320		1,348		805		614	
1963-64	16,100**	3,001	18.6	279		1,207		785		730	
1964-65	16,400**	3,094	18.8	331		1,185		795		783	
1965-66	16,600**	3,080	18.5	295		1,203		813		769	
1966-67	16,900**	3,212	19.0	302		1,275		866		769	
1967-68	17,200**	3,339	19.4	284		1,355		889		811	
1970	17,500**	3,900	22.6								
1980	19,000**										

\* Estimated October 1959.

\*\* Estimated May 1966, Don C. Shafer & Associates.



## EXISTING SCHOOL FACILITIES

The four elementary schools are all located approximately equal distance from the river and the bluff to the north and their original service areas show remarkably little overlapping, indicating that when originally located, their sites were chosen with considerable wisdom.

With the enlarging of the school service areas, there is more overlapping than previously discussed. The school service areas for elementary school has increased from one half mile to three quarters of a mile, for junior high one mile to one and a half miles, and for the high school to two miles.

Table 15 shows certain information about the existing schools. A brief description of the present schools follows:

Jackson Elementary School, located at the northwest corner of Third Street and Avenue F occupies a site containing only six-tenths of an acre and is located in a completely developed residential block. The school was originally built in 1893, was rebuilt in 1932, enlarged in 1949 and again in 1954. The site of the present school is only one-half area which is substantially undersized as compared with present school site sizes of 12 acres for elementary schools. The present building is not expandable and it is recommended that it not be remodeled.

The student enrollment at the time of the survey was 215 and the capacity of the building is 178. The capacity of the school was exceeded more than 68 percent of the school years from 1950 to 1965-66. The specific school years in which the student capacity was exceeded are 1952-53, 1953-54, 1954-55, 1955-56, 1957-58, 1958-59, 1960-61, 1961-62, 1962-63, 1963-64, 1964-65 and 1965-66. The 1962-63 school year had a total of 241 students. The student enrollment estimate for 1967-68 is 210.

A review of the preliminary survey shows that steps should be taken by the citizens and the school district to relieve overcrowding of this school. Good education also includes the provision of adequate space within the classrooms for the student as well as open space for active recreation.

Jefferson School, which occupies the greater part of the block bounded by Avenue F, Avenue G, 23rd Street and 24th Street was originally constructed in 1914 and was enlarged in 1949 to add eight more classrooms for a total of 18. The site of the Jefferson School is the largest of any of the elementary schools and contains 3.5 acres.

The capacity of the school is 400 and the 1966-67 enrollment was

Table 15

PUBLIC SCHOOL DATA  
Fort Madison, Iowa

## Type of Rooms

Schools	Date Built	Date of Additions	Kinder- garten	Classrooms	Special Use	Other	Area of Site in Acres	Grades Taught
<u>Elementary</u>								
Jackson	1893	1949 1954	1	7	1		0.50	K-6
Jefferson	1914	1949	1	18	1	1	3.50	K-6
Lincoln	1936	1954	2	12	1	1	1.00	K-6
Richardson	1917	1949	1	14		4	2.80	K-6
Junior High	1923	1959		15	15	4	2.90	7-9
Senior High	1957			32	1		27.00	10-12

100

Source: Data provided by the Fort Madison Community School District, 1966.



509 students. The capacity has been exceeded each school year since 1957. The 1962-63 school year enrollment of 515 was the largest recorded from 1950 to 1967. The estimated enrollment for 1967-68 school year is 531. This school has two portable classrooms.

Lincoln School, located on a site lying between Avenue E and Avenue F east of 14th Street, was built in 1936 consisting of six classrooms. It was enlarged by adding eight classrooms in 1954. The capacity of the school is 436 students and the 1966-67 enrollment was 439. The present school site consists of one acre which is far below today's school site standards. The estimated enrollment for the 1967-68 school year is 444. This school has two portable classrooms. The building is expandable and it is recommended that the building be remodeled.

Richardson School, located on the north side of Avenue L between 33rd and 34th Streets, occupies a 2.8 acre site. The school was built in 1918 and enlarged in 1949. The school faces Avenue L which is State Highway 61, a very heavily traveled thoroughfare.

The 1966-67 capacity of the school was 414 with an estimated enrollment in 1967-68 of 430 students. The capacity has been exceeded for many years. In fact, the student enrollment has been decreasing starting with the 1963-64 school year. In the 1953-54 school year the student enrollment was 487, or 73 students more than in the 1966-67 school year. This school has one portable classroom.

The Junior High School, occupies the block bounded by Avenue F, Avenue G, 18th Street and 19th Street. The 2.9 acre site is almost completely occupied by the building. The original building consisting of 32 classrooms was constructed in 1923 as the Senior High School. In 1959 an additional classroom was added. Within the 1959-60 school year the Junior High School plan changed from a two grade to a three grade system, thus the enrollment increased from 276 to 535 students. The capacity of the building is 600 with a 1966-67 enrollment of 866, thus far exceeding the capacity. The 1967-68 estimate is 882 students. The school has one seven-room relocatable building.

The building is not expandable and it is recommended that it should be remodeled. Twenty acres are recommended for junior high school sites which is 9.1 acres larger than what now exists.

The Senior High School was constructed in 1957 consisting of 32 classrooms on a 27 acre site. The school has athletic and playfields and a fully developed football stadium, as well as a large outdoor swimming pool. The capacity of 700 students has been surpassed ever since (excluding the 1963-64 school year). The enrollment was 769 during the 1966-67 school year. The building is expandable and should be remodeled. This facility has three portable classrooms.

Table 16  
ENROLLMENT IN PAROCHIAL SCHOOLS

Year	Scared Heart	Grades	St. Mary	Grades	St. Joseph	Grades	Total Elementary	Aquinas High School	Grades	Total all Schools
1951-52	406	K-8	-	-	134	K-8	540	-	-	-
1952-53	432	K-8	-	-	123	K-8	555	-	-	-
1953-54	456	K-8	-	-	149	K-8	605	-	-	-
1954-55	466	K-8	-	-	134	1-8	600	-	-	-
1955-56	491	K-8	-	-	133	1-8	624	195	9-12	819
1956-57	500	K-8	-	-	141	1-8	641	206	9-12	847
1957-58	532	K-8	-	-	135	1-8	667	234	9-12	901
1958-59	543	K-8	-	-	133	1-8	676	228	9-12	904
1959-60	536	K-8	-	-	147	1-8	683	251	9-12	934
1960-61	538	K-8	320	K-8	140	1-8	998	258	9-12	1256
1961-62	479	1-8	280	1-8	135	1-8	894	274	9-12	1168
1962-63	430	1-8	299	1-8	148	1-8	877	309	9-12	1186
1963-64	440	1-8	297	1-8	150	1-8	887	319	9-12	1206
1964-65	424	1-8	284	1-8	129	1-8	837	342	9-12	1179
1965-66	428	1-8	286	1-8	117	1-8	831	346	9-12	1177
1966-67	335	1-6	221	1-6	187	7-8	743	-	-	-



## PAROCHIAL SCHOOLS

Over 38 percent of the school age children in Fort Madison attend parochial schools including a high school that was constructed in 1957.

Table 16 shows the grades taught, number of students by school year and enrollments starting with the 1951-52 school year.

Kindergarten grades were not taught in the Sacred Heart school in 1961-62, St. Mary's in 1961-62 and St. Joseph's in 1954-55. This change was the reason for the largest kindergarten class in the public schools in the 21 years of recorded enrollments.

In the 1966-67 school year, the parochial elementary schools system changed to a 6-2-4 school plan. A junior high school system including the seventh and eighth grades is located at St. Joseph's Parochial school.

## PROJECTION OF FUTURE ENROLLMENTS

It is difficult to project enrollments in the public schools of the Fort Madison Community School District as there are many variable factors influencing the number of pupils enrolled in the public schools. One of the variables is the population growth of the city as well as increases in population in the communities in the district outside of the Fort Madison. Naturally, considerable increase in population will tend to affect school enrollment. Another variable factor may be a change in the rate of transfers from parochial schools into public schools. As yet, there is no indication of what this will be in the future.

The following table attempts to indicate realistic figures for the enrollment during the next 10 years. It should be remembered that variables of population growth, change of birth rate, and transfers between public and parochial schools may change these figures. This table also anticipates the enrollment in September of each year.

In order to make these predictions, the following factors were used:

1. The kindergarten enrollment from 1967 to 1977 were estimated as 400. The figures on children under the age of four are not accurate, and an estimate of 400 each year seemed reasonable. It may be higher, but likely to be much lower.
2. Using enrollment figures for the past 10 years and making some adjustment for enrollment characteristics for the past two years, a "mean survival ratio" was established for each grade. For example, a mean survival ratio of 70 was used for the first

Table 17  
FUTURE ENROLLMENTS

FORT MADISON COMMUNITY SCHOOL DISTRICT

	K	1	2	3	4	5	6	S.E.	Total Elem.	7	8	9	J H Tot.	10	11	12	H S Tot.	Grand Total
1966-67	437	286	269	265	266	268	272	26	2089	280	289	288	866	276	244	249	769	3724
1967-68	401	307	286	276	268	285	292	29	2138	293	288	308	889	302	265	244	811	3838
1968-69	411	283	299	274	266	270	274	28	2105	281	297	317	895	319	270	242	831	3831
1969-70	400	290	275	296	274	271	273	28	2107	284	295	315	894	317	296	261	874	3875
1970-71	400	282	281	272	296	280	274	28	2113	283	298	313	894	315	294	287	896	3903
1971-72	400	283	274	278	272	302	283	28	2120	284	297	316	897	313	292	285	890	3907
1972-73	400	282	275	272	278	278	305	28	2118	294	298	312	904	316	291	283	890	3912
1973-74	400	283	274	273	272	284	281	28	2095	317	308	313	948	312	293	282	887	3930
1974-75	400	282	275	272	273	277	287	28	2094	292	330	326	948	313	290	284	887	3929
1975-76	400	283	274	273	272	278	280	28	2088	298	306	344	953	326	292	281	899	3940
1976-77	400	282	275	272	273	277	281	28	2088	291	312	324	927	349	303	285	937	3952

Source: 1966-1967 Annual Report

Fort Madison Community School District



grade. This means that 70 percent of the children enrolled in kindergarten will enroll in first grade the next school year. The mean survival ratios used for each grade is as follows:

1st	.70	7th	1.04
2nd	.97	8th	1.05
3rd	.99	9th	1.06
4th	1.00	10th	1.00
5th	1.02	11th	.93
6th	1.01	12th	.97

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Source: 1966-67 Annual Report  
Fort Madison Community School District

## RECOMMENDATIONS

The following recommendations are included in the 1966-67 Annual Report of the Fort Madison Community School District.

The need for classroom space in this school district is a critical issue. This is evident in the previous tables showing enrollment and capacities of a school facilities. In December 1966, a junior high school bond issue was defeated.

The school district has and is renting relocable classrooms because of the lack of space in some of the facilities. At this period of time, the school district is paying over \$42,000 a year on lease rental. Classroom needs are present in elementary schools, junior high school and high school. It is entirely possible to have 1,500 more people enrolled in public schools in 1977-1978.

Following are recommendations for specific school facilities made in the Fort Madison Community School District 1966-67 Annual Report.

Junior High: The most critical current need for space is at the Junior High School, but in four years the high school enrollment will reach the point where there will be more than 890 pupils enrolled in grades 10-11-12. A new junior high school to accomodate up to 1,250 students is recommended to relieve the over-capacity student conditions.

Another solution would be to construct a second junior high school for about 500 students and operate two junior high schools.

Senior High School: Additions are needed to take care of immediate as well as future needs. Following are some special areas that need more room.

- a. Special education.
- b. Science. The next five years will show that four good science rooms will be needed. There are only two at the present.
- c. Library and Instructional Materials Center: The present room is used for a study hall and is too small to be adequate for an instructional materials center for an enrollment of 900 students.
- d. Art Room. The room used at present is inadequate. It appears that two rooms will be needed in the future.
- e. Auditorium and Stage. Neither the high school nor the entire community has an adequate auditorium. It is recommended that an auditorium seating 1000 to 1200 is a serious need.
- f. Classrooms. Five or six regular classrooms, plus classrooms for special areas of science, auto mechanics, special education, art, etc. should be added.
- g. Elementary. The needs for space in the elementary school continues to increase. The district should try to buy land as soon as possible for a new elementary school to take care of increased enrollments. Elementary schools must have central libraries, small rooms for remedial reading, speech and hearing therapy, psychological testing, and other special services. Class sizes should be kept at 25 or less, especially in primary grades.

## PARKS

The comprehensive plan is concerned with the location, size and adaptability of sites for parks and recreational uses rather than with the precise details of development or with the kind of recreational programs carried on within them. When properly located and adequate park sites are acquired, the use to which such areas may be put can be determined in accordance with the needs of the community and its financial ability to meet these needs. The primary function of the comprehensive plan is to



provide a guide to be followed in setting aside adequate recreational areas in the proper location and before urban development increases prohibitively the cost of acquiring the sites.

Plans proposed for the parks are long range and are to be developed over a period of several years in order to provide the population of the future with an adequate system of park and recreational facilities. The primary need is to be sure that as the city expands and new residential neighborhoods are created, each neighborhood will have a park designed primarily for use of the people living nearby.

For a well rounded community life, it is essential to have adequate park and recreational areas for all citizens of all ages. The residents of Fort Madison are fortunate in having about 292 acres of city owned parks. This acreage comprises three percent of the total developed land area within the corporate limits.

A well balanced park system, composed of playgrounds, playfields, athletic fields, play lots (tot lots) and naturalistic areas, should contain approximately one acre of open space for each 100 persons of population. Using this rule of thumb, Fort Madison with its present estimated population of 15,600 should have at least 156 acres of park and outdoor recreational area. The present park acreage theoretically would accommodate a city with a population of 29,200 people.

Not only should a park system provide year-round recreational facilities for all age groups, but it should be integrated with other elements of the comprehensive plan in terms of proper locations and size of families, ease and safety of access, and development.

The play lots (tot lots), or small children's play areas, are one of the facilities most frequently recommended by park and recreation specialists for built-up urban areas, yet it is the facility least often provided. The answer to the paradox is the simple fact that from an administrative, operational, and maintenance point of view, the larger recreation areas are much more efficiently managed. There is the typical tendency among operational staff to discourage these tot lots as being a "nuisance", "too difficult to maintain", "an unnecessary expense", etc. Actually, if properly designed, there is no reason why the tot lot should be any sort of maintenance or operational problem. From a neighborhood point of view they offer a wonderful facility where the small children with their mothers may gather and play on simple equipment such as wading pool, sand box, teeter-totters and swings.

The neighborhood park or playground serves a broader range of age and activity levels and naturally requires a larger area and more elaborate development. These areas are intended to provide both passive and active

Table 18

## EXISTING PARK FACILITIES

Facility	Rodeo Park	Old Settlers Park	Central Park	Victory Field	Ivanhoe Park	Riverview Park	Total
Acreage	240.0	3.2	3.2	2.4	10.4	33.0	292.2
Playground equip.	X	X	X	X	X		
Baseball diamonds		X	X	X	X		
Picnic areas	X	X	X	X	X	X	
Tennis courts				X(2)*	X (2)		
Shelters	X (7)	X		X	X (2)	X	
Band stand			X		X		
Small boat harbor						X	
Camping	X				X		
Ice skating rink				X			
Hiking trails	X						

\* Facilities are lighted.

( ) Indicates number of facilities in each park.

Source: City of Fort Madison 1966.



recreation as well as to add beauty and interest to the neighborhood environment. Frequently these can be combined with school sites to provide an ideal combination of playground and park area serving a dual function. While the type of facility provided can vary depending upon the natural potential and character of the site, the facilities should be basically oriented to serving the immediate neighborhood and not to attract visitors from other areas. While various size standards have been set by recreational and planning experts, it is actually a matter of local conditions and unique specific circumstances which dictate in each instance. Generally, such areas are recommended to be at least five acres and ideally 10 acres in size.

The community park and playfield are sometimes combined and sometimes developed separately, but both serve a broader community function than a neighborhood park. Typical standard for such areas recommend 40 acres minimum for a community park and 100 acres as ideal. The community park will typically include special facilities which serve unique community wide functions such as swimming pool and major athletic fields. These areas also require adequate parking facilities if they are not to become nuisances to the neighborhood.

As the neighborhood areas further develop, the need for such park and recreational areas will become even more acute unless vigorous action is taken now to provide for such facilities.

Existing Park Facilities: The present park system of Fort Madison consists of six areas, containing a total 292.2 acres. This is an increase of 52.2 acres over what was recorded in 1959. The increase in acreage was at Rodeo Park. The increase at this park was from 190 to 240 acres.

The parks in Fort Madison are under the jurisdiction of three individual commissions. Riverview Park, consisting of 33 acres, is under the jurisdiction of the Dock Commission; Victory Field consisting of 2.4 acres is under the supervision of the Recreation Commission; the remaining four parks consisting of 256.8 acres are under the supervision of the Fort Madison Park Commission.

Fort Madison's 1960 population of 15,247 would require 152.5 acres of park. The projected population of around 16,000 by 1970 and 19,000 by 1985, would require 160 and 190 acres respectively. From the standpoint of population versus existing acres of park for Fort Madison, the standard is more than met. Otherwise, 292.2 acres of park should be sufficient for a population of approximately 29,200.

Even though there appears to be an excess of park acreage there actually is a shortage of parks from the standpoint of neighborhood parks and tot lots. Rodeo Park would be classified as a regional park due to location, size and existing facilities. It is also only accessible from the neighborhoods by automobile and not normally reached by walking. It is an outstanding facility and it is a tremendous asset to the city.

Riverview Park consisting of 33 acres provides a green front yard to the central business district and, here again, the city is very fortunate in having such a facility. This park provides passive not active recreation and because of its location and function should continue to be used this way. This then leaves 19.2 acres of active parks within the city, which would be considered adequate for a population of 1,900. Therefore, the city needs neighborhood parks and tot lots, which can be reached by walking or other means than mainly by automobile.

Areas along the tributaries are recommended for flood plain planning and therefore should be developed for walking and riding (not vehicular) trails. These tributaries should be cleaned up to allow for the natural flow of storm water drainage. Along these tributaries where available additional land should be acquired for open space and additional protection as flood plains.

Such area is recommended along both sides of Dry Creek north of Richard Drive. This area is land locked as to residential development, but could be used for neighborhood open space.

## PUBLIC BUILDINGS

The planning of public building involves a determination of the community's future needs for such structure and their proper location in relation to the other elements of the Comprehensive Plan, such as present and future population distribution, existing land acres, zoning, major streets and topography.

## PUBLIC BUILDING LOCATION FACTORS

No absolute criteria can be established to determine the need for public buildings and their proper location, as particular needs and existing conditions vary greatly in different communities. There are certain basic factors, however, that should be considered in public building planning.

Basic Considerations: The following five factors should be given consideration in the development of long-range plan for all types of public buildings:

1. Convenient location. Every public building should be conveniently located to the citizens who use it and to the employees working within it.
2. Adequate site. The site for each building should be ample to provide for: (a) the space needs of the building and any probable future additions or enlargements, (b) parking space for vehicles



of both visitors and employees, and (c) sufficient open landscaped areas necessary for a satisfactory appearance of the building.

3. Grouping of buildings. There are many advantages to grouping public buildings where such plans can be feasibly accomplished. Convenience to the public is enhanced; less land is needed for a group than for a number of separate structures; and a better and more imposing appearance is possible. Such groupings of centralized public buildings have been carried out in many cities and are ordinarily termed "civic centers."
4. Relation to commercial development. A central location within or adjoining the business district will insure the greatest convenience to the public. The public buildings should not be located in the heart of the commercial areas, as such a building interrupts the continuity and retards the development of the business district. In addition, a site in the heart of the business district is expensive. Therefore, it is preferable to locate the buildings on the edge of the central area.
5. Relation to traffic and parking. Removal of public buildings to a location near but not within the central business area will relieve this areas of some parking demand and traffic.

## CENTRALIZED PUBLIC BUILDINGS

There are numerous advantages in the grouping of centralized public buildings. This is not always possible, but when it can be accomplished, it adds to public convenience, improves efficiency and economy, and enhances the attractiveness of the community.

Obviously, the grouping of these structures can be a great convenience to the citizens. It facilitates the transaction of public business and the coordination of the activities of public agencies. Where public buildings are scattered, some of them invariably are found in locations which are inconvenient, if not actually inaccessible.

While public buildings are usually well designed architecturally, their appearance is substantially enhanced if a properly landscaped site of ample size is provided. A group of well-planned public buildings will be more impressive and attractive than several individually located buildings, particularly if arranged in a spacious setting. Such groups also will permit the provision of combined parking areas and other joint facilities that might otherwise be unjustified for a single structure.

## LOCAL PUBLIC BUILDINGS

The selection of a site for a public building serving a local neighborhood involves consideration of factors that are dependent upon the particular use of the structure. In this classification are branch libraries and fire stations.

Branch Libraries. Cities having a population of 25,000 or more often require branch libraries to serve outlying areas of the city. Such auxiliary facilities are an integral part of the library system which is centered in the main library where all of the service facilities, such as classifying, cataloguing, and binding, are usually carried on. A branch library should serve the surrounding area within one and a quarter mile radius and be located in or adjacent to a neighborhood commercial center, where the greatest number of persons in the neighborhood will have access to it in the course of their every day activities.

Fire Stations. The location of fire stations is based primarily upon the character of districts to be protected and upon the need for speed and dependability in answering alarms. Major commercial or industrial areas should be within three-fourths of a mile of a fire station, and residential areas within one and one-fourth miles of a station. Narrow streets and traffic congestion produce adverse factors. Fire stations should be located near the intersections of major streets and so spaced as to be able to cover a neighboring fire station's area, while the neighboring equipment and men answer an alarm. The number of companies and type of equipment placed at each station is determined by the character of the area served.

## EXISTING PUBLIC BUILDINGS AND FUTURE NEEDS

Fort Madison possesses the usual complement of public buildings and, as in many cities, they have been built individually with no coordination or planning. Some are relatively new and will be adequate for many years, while others are entirely obsolete. Most of Fort Madison's public buildings, other than the school buildings, are located in the central area of the city. The locations of these buildings are shown on the Existing Land Use maps.

City Hall. This building is located on a small site at the corner of Avenue E and Eighth Street. The original building was erected in 1873, enlarged in 1928, and extensively remodeled in 1956. The administrative wing of this building provides a council chamber, administrative office, city clerk's office, engineer's office, mayor's office and a vault. The police department is housed in the City Hall with offices and space for three squad cars. The City Hall also serves as the main fire station, with space for two fire trucks and the fire chief's car.

Much of the present building is almost 90 years old and is structurally



obsolete. The present administrative offices and police and fire department operations are woefully overcrowded. Although the building is not too convenient to the central business area, it is well located for fire protection to the central part of the city. It is desirable from the standpoint of public convenience that the municipal and county offices be in close proximity. The city assessor's office is not located in the City Hall.

In the spring of 1967, steps were taken to remedy the crowded space problem in the ground floor of City Hall. The proposed plan is to double the present 4,900 square feet of ground floor area.

The property to the north of the City Hall has been improved to provide off-street parking for employees and patrons of City Hall.

Library. The Cattermole Memorial Library was erected in 1893, a gift to the city by the Cattermole family. While the site is small, its location on Seventh Street between F and G Avenues is convenient to the general public, especially those persons having business to transact in the central business district. The building was extensively remodeled and enlarged in 1954 in accordance with recommendations of the Mayor's Civic Planning Commission in 1947.

The library's collection in 1958 consisted of 31,056 volumes or approximately two books per capita, which at this time was substantially higher than found in many cities. In 1958, the per capita number of books met the standards of the American Library Association.

During a survey in the fall of 1967, the library had a basic book collection of 45,000 which is a substantial increase over 1958. The increase in number of books per capita now amounts to more than two books per capita which is less than recommended by the American Library Association. There are also 500 books that are available from changing collections. There are 2,700 books purchased annually with 30 percent allotted for children and young adults. In addition, the library now receives 92 magazines and newspapers.

The total floor space of the library amount to 6,720 square feet with 60 percent used for reading space with the staff occupying eight percent. There are 2,565 linear feet of shelves or just 75 feet less than a half mile.

The library site is completely occupied by the present building, thus precluding the provision of off-street parking and adequate landscaping. However, the building is in excellent condition and should be adequate for many years. Expansion of the present site would be desirable but surrounding development would be extremely expensive to acquire.

Lee County Courthouse. Located at Seventh Street and Avenue F, the Courthouse occupies a small site conveniently located in relation to

the central business district. The original courthouse was built in 1841. This building burned and was reconstructed in 1873, making the present structure 94 years old.

The first floor is occupied by offices of the County Recorder, Clerk, Auditor and Treasurer. The second floor contains the courtroom and the County Judge's chamber, while the third floor is used for storage. The County Assessor's office occupies a wing of the main building, while the County Jail and the Sheriff's office are in an adjoining building to the west.

The County Annex is a remodeled residence on the south side of Seventh Street across from the Courthouse. This building provides space for the County Welfare Office, the County Superintendent of Schools, the County Engineer, and the Fort Madison City Assessor.

While the present County Courthouse has some historical significance and architectural charm, it is completely inadequate for the efficient transaction of public business and presents a constant fire hazard. Its site is too small to provide off-street parking and cannot economically be enlarged. Serious consideration should be given to its replacement by a modern structure in the near future. The old Courthouse might be preserved for use as a museum or some other public purpose.

Post Office. The new Post Office located in the 1000 block of Avenue H was constructed in 1962 and is of modern design. Land is available for any future expansion of the present facilities. This could be both in an east and west direction.

In a recent survey the Post Office has 36 employees. This facility will be able to provide services for a future population of 25,000. The service also includes two rural routes in addition to the city.

Additional Post Office service is provided through substations located in the East and West ends of the city.

Fire Stations. As previously mentioned, the main fire station occupies part of the City Hall. A second fire station is located in the western part of the city at the corner of 24th Street and Avenue L.

The main fire station was constructed about 1873, and the second station was constructed in 1959. Both structures are in fair to good condition. The main station has two pieces of equipment and the second station houses four pieces of equipment. The equipment is modern and adequate to meet any foreseeable demands.

These two stations are well located to serve the entire city, no part of which would be more than one and a half mile from a fire station.



## STREETS AND THOROUGHFARES

The Transportation Planning Report for Fort Madison was published in September 1966. Pertinent details are included in this section.

The existing facilities for the movement of traffic in the city of Fort Madison are illustrated in the street width, pavement width and pavement type maps. These maps contain the basic information about the characteristics of streets throughout the community.

### RIGHT-OF-WAY WIDTH

The city street system is laid out on a typical gridiron patterns with blocks varying in length from 400 to 1,000 feet. Block widths vary from 250 feet without alleys to 375 feet with alleys. Such a street pattern always appears to encourage the formulation of short blocks and is a reflection of no street planning but merely an add-on of streets or subdivisions as they are developed.

Short blocks cost the city additional monies by requiring more maintenance and snow removal. Short blocks are located between 31st and 33rd Streets, and from Avenue L to Avenue H, in addition to other sections of the city.

Curvilinear streets provide the same function, but with efficient design, taking into account topography, the amount of lineal footage of streets would be less.

The following right-of-way data is measured by neighborhoods. The neighborhoods are delineated on the General Development Plan.

<u>Right-of-Way Width</u>					
<u>Neighborhood</u>	<u>50 Ft. or less</u>	<u>50 to 60 Ft.</u>	<u>66 Ft.</u>	<u>67 to 79 Ft.</u>	<u>80 Ft. or more</u>
A	3,150	6,030	6,780	700	540
B	2,640	3,420	82,470	2,430	1,260
C	3,660	13,800	79,350	300	6,450
D	<u>2,820</u>	<u>15,180</u>	<u>64,620</u>	<u>-</u>	<u>10,500</u>
Total Feet	12,270	38,430	233,220	3,630	18,750

The largest amount of street right-of-way is 66 feet, of which the city is fortunate in having 233,200 lineal feet or over 48 miles of such right-of-way.

#### PAVEMENT WIDTH

The width of the city streets vary from less than 21 feet to more than 46 feet. Three miles or more of the local streets are 21 feet or less with the largest amount of pavement width falling into the 28 to 35 feet category.

Neighborhood	Pavement Width					
	21 Ft. or less	22 to 27 Ft.	28 to 33 Ft.	34 to 39 Ft.	40 to 45 Ft.	46 Ft. or more
A	9,360	4,620	1,380	180	-	-
B	2,340	19,830	25,260	13,380	9,930	3,480
C	1,860	27,300	42,270	6,840	2,280	-
D	4,320	9,690	41,870	-	3,300	-
Total Feet	17,880	61,440	110,730	20,400	15,510	3,480

The Institute of Traffic Engineers recommends in low density developments that 27 foot curbed streets be provided. Parking would be prohibited on one side of the street under certain conditions. This is based upon the assumption that the community has provided for mandatory off-street parking at each dwelling unit.

For medium density developments pavement widths of 32 to 34 feet with curbs are recommended. In high density areas, frequently comprising apartment developments, curb parking is more prevalent. Parking may be found on both sides of the street. Traffic volumes are also higher, with greater likelihood of two opposing vehicles meeting one another adjacent to the curb parked vehicles. Therefore, 36 feet widths provide for continuous movement at reasonable rates of speed.

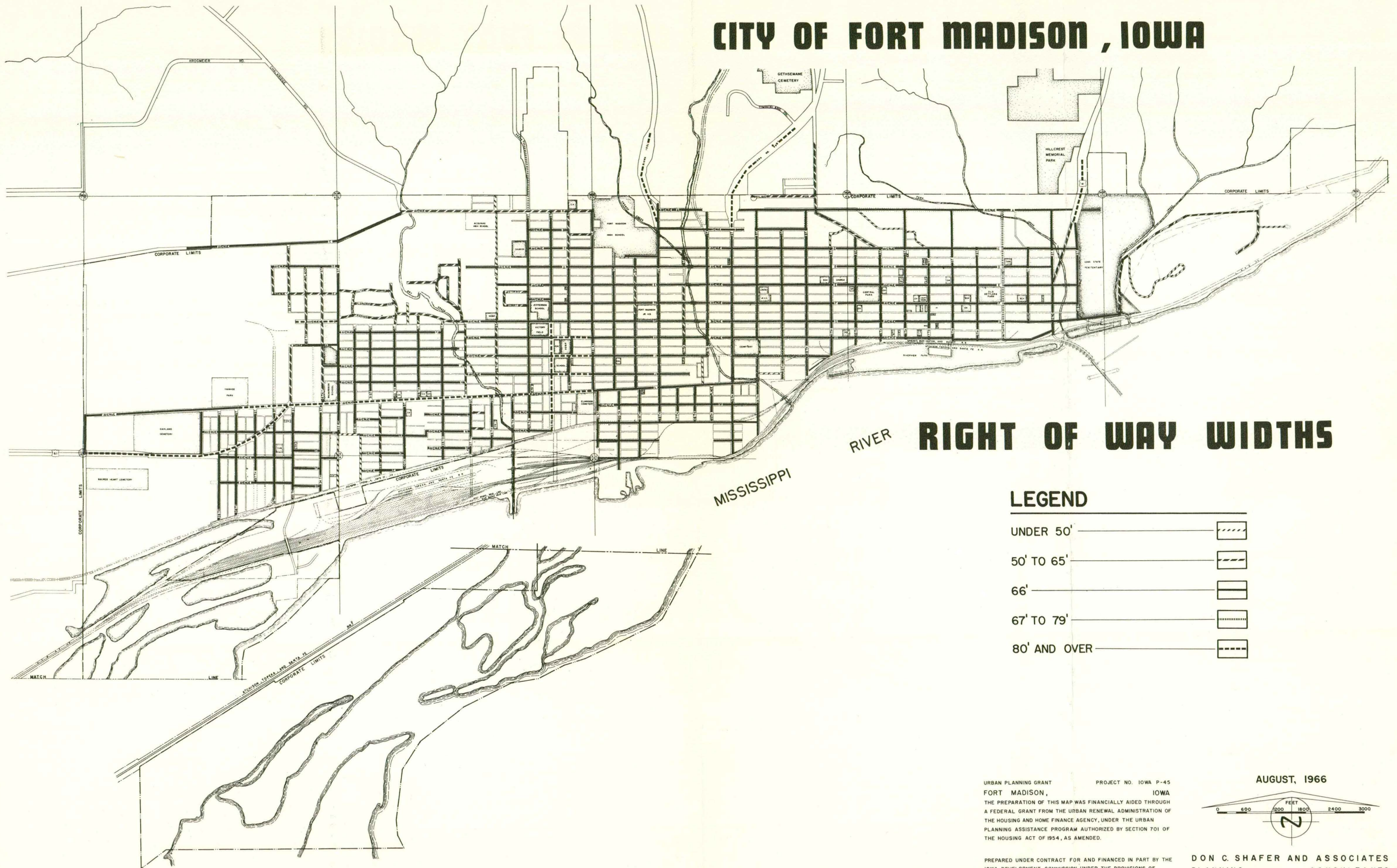
Based on the above recommended standards, over 79,000 lineal feet or 14.9 miles of pavement widths within the community should have wider pavements.

#### PAVEMENT TYPES

There are approximately 43 miles of improved streets within the corporate limits of Fort Madison. The estimated amount of unimproved streets amounts to 18,780 lineal feet or over 3.5 miles. There is over 79,500 lineal feet or 15 miles of streets that do not have hard surface.



# CITY OF FORT MADISON, IOWA



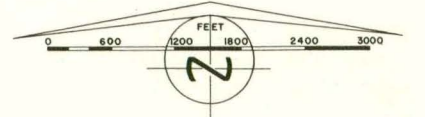
## RIVER RIGHT OF WAY WIDTHS

### LEGEND

UNDER 50'	
50' TO 65'	
66'	
67' TO 79'	
80' AND OVER	

URBAN PLANNING GRANT PROJECT NO. IOWA P-45  
 FORT MADISON, IOWA  
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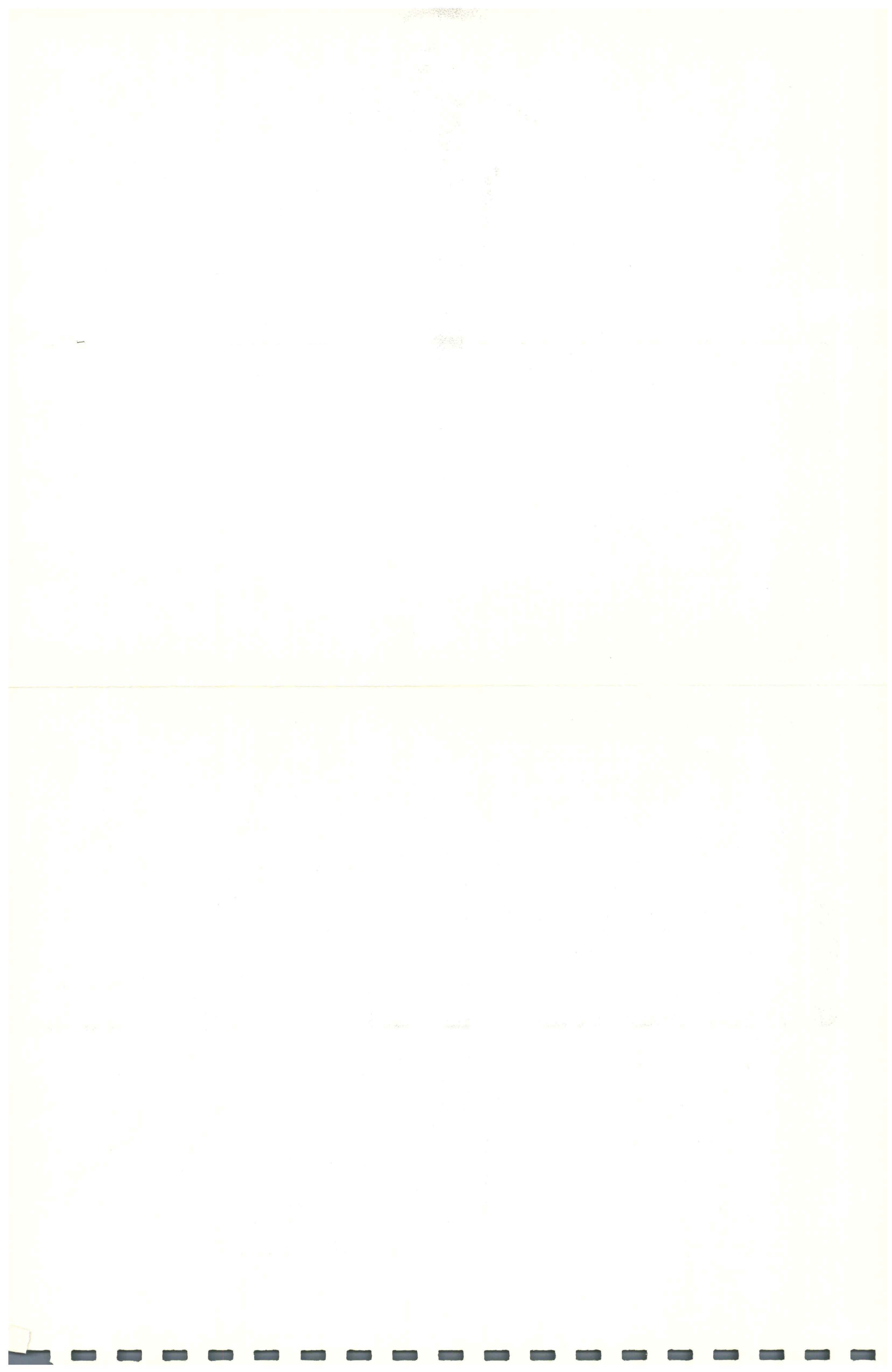
AUGUST, 1966



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 IOWA DEVELOPMENT COMMISSION UNDER THE PROVISIONS OF  
 CHAPTER 28, CODE OF THE STATE OF IOWA, AS AMENDED.

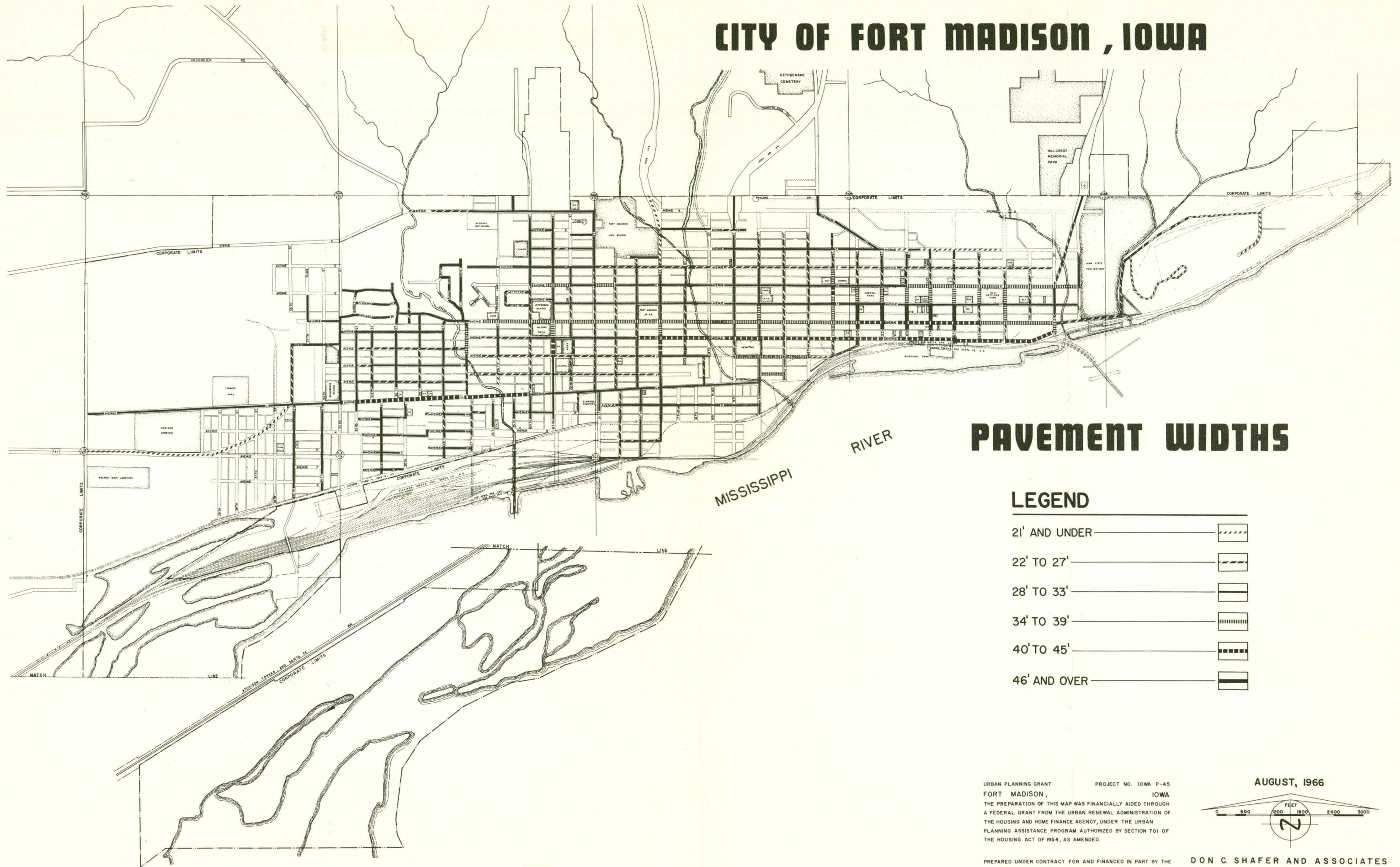
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# CITY OF FORT MADISON, IOWA



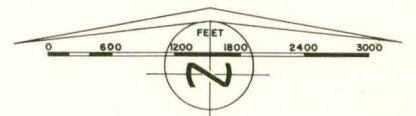
## PAVEMENT WIDTHS

### LEGEND

21' AND UNDER	
22' TO 27'	
28' TO 33'	
34' TO 39'	
40' TO 45'	
46' AND OVER	

URBAN PLANNING GRANT PROJECT NO. IOWA P-45  
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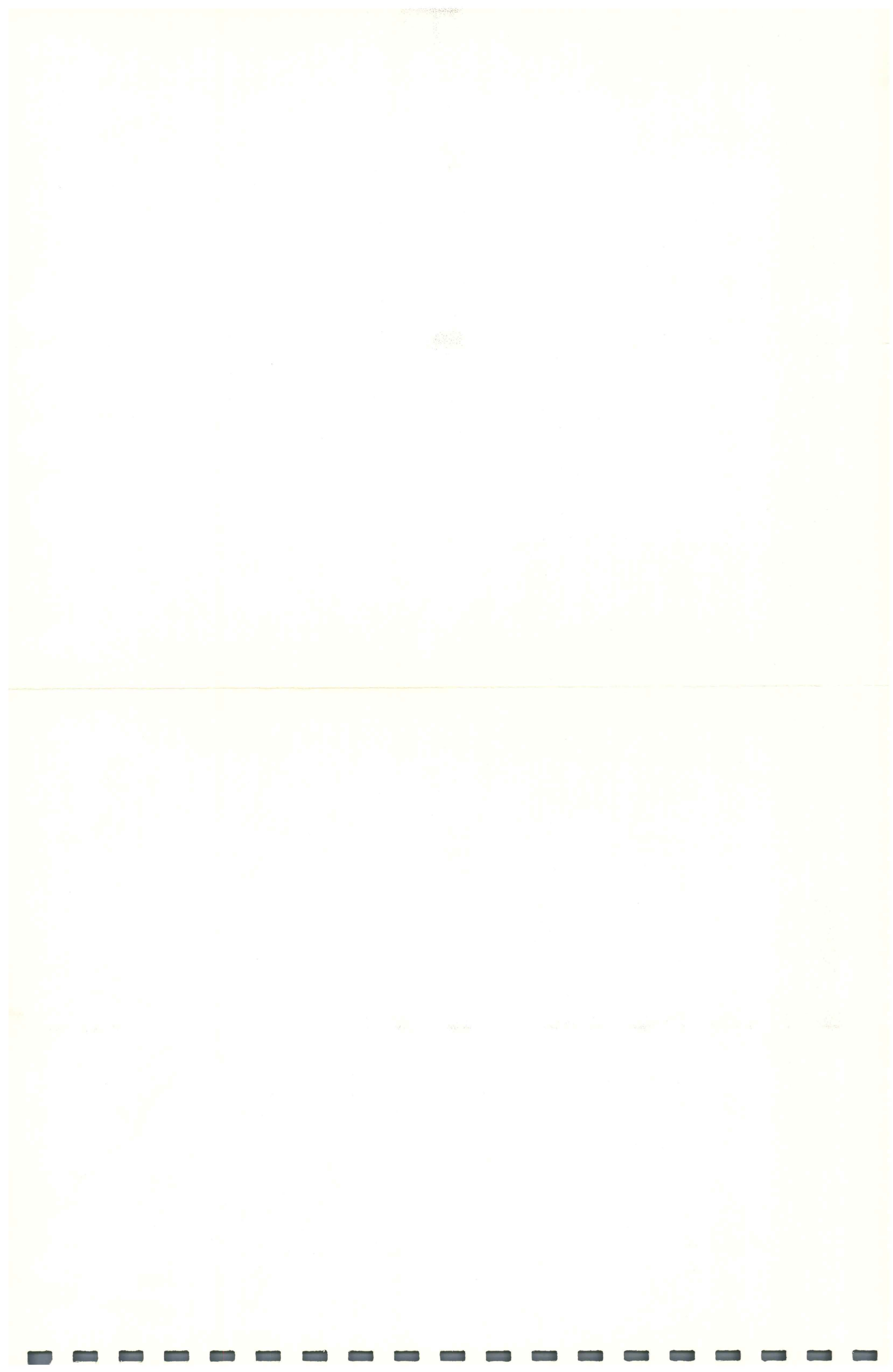
AUGUST, 1966



PREPARED UNDER CONTRACT FOR AND FINANCED IN PART BY THE IOWA DEVELOPMENT COMMISSION UNDER THE PROVISIONS OF CHAPTER 28, CODE OF THE STATE OF IOWA AS AMENDED.

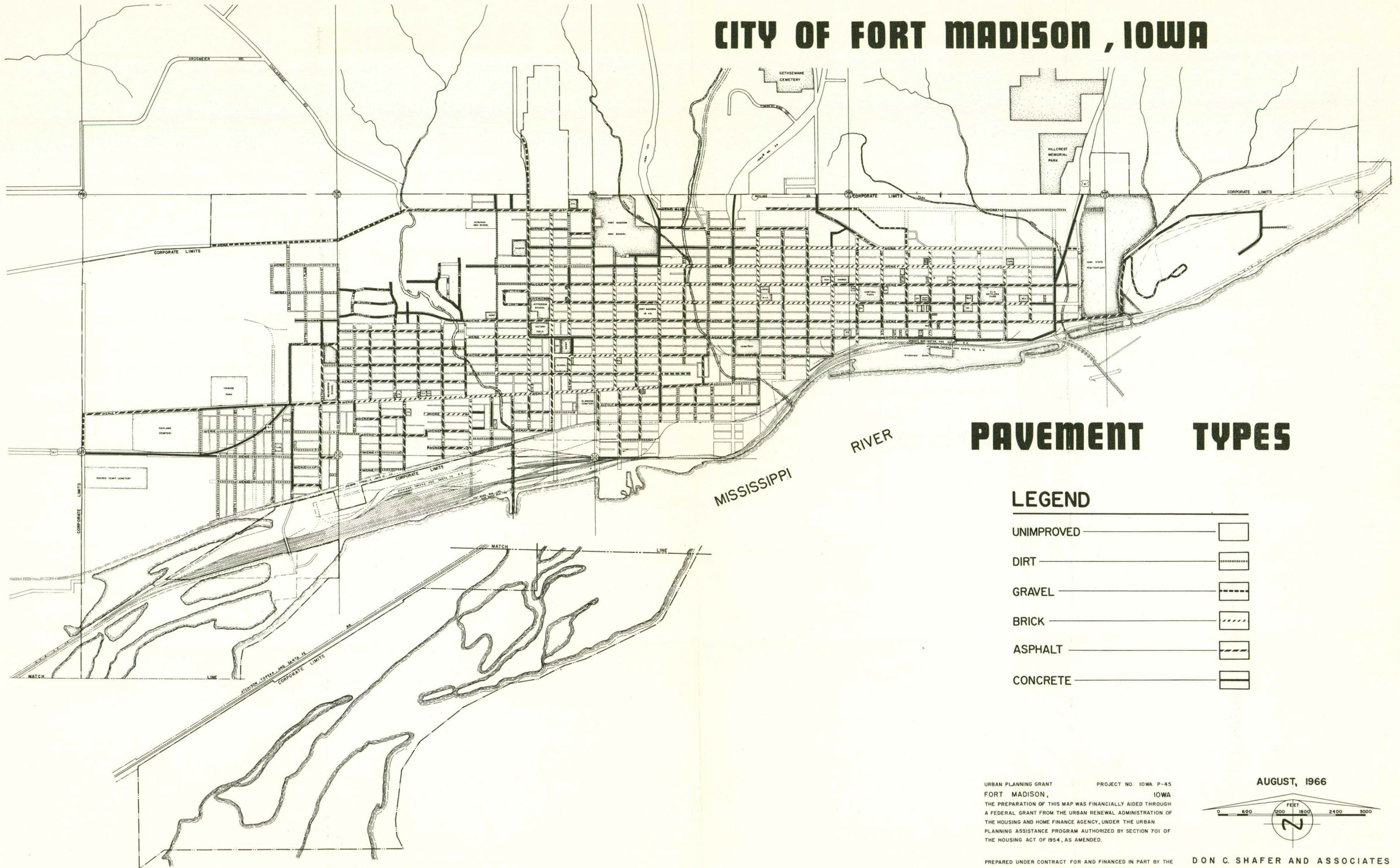
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







# CITY OF FORT MADISON, IOWA



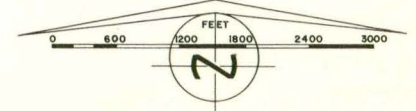
## PAVEMENT TYPES

### LEGEND

UNIMPROVED	
DIRT	
GRAVEL	
BRICK	
ASPHALT	
CONCRETE	

URBAN PLANNING GRANT PROJECT NO. IOWA P-45  
 FORT MADISON, IOWA  
 THE PREPARATION OF THIS MAP WAS FINANCIALLY AIDED THROUGH A FEDERAL GRANT FROM THE URBAN RENEWAL ADMINISTRATION OF THE HOUSING AND HOME FINANCE AGENCY, UNDER THE URBAN PLANNING ASSISTANCE PROGRAM AUTHORIZED BY SECTION 701 OF THE HOUSING ACT OF 1954, AS AMENDED.

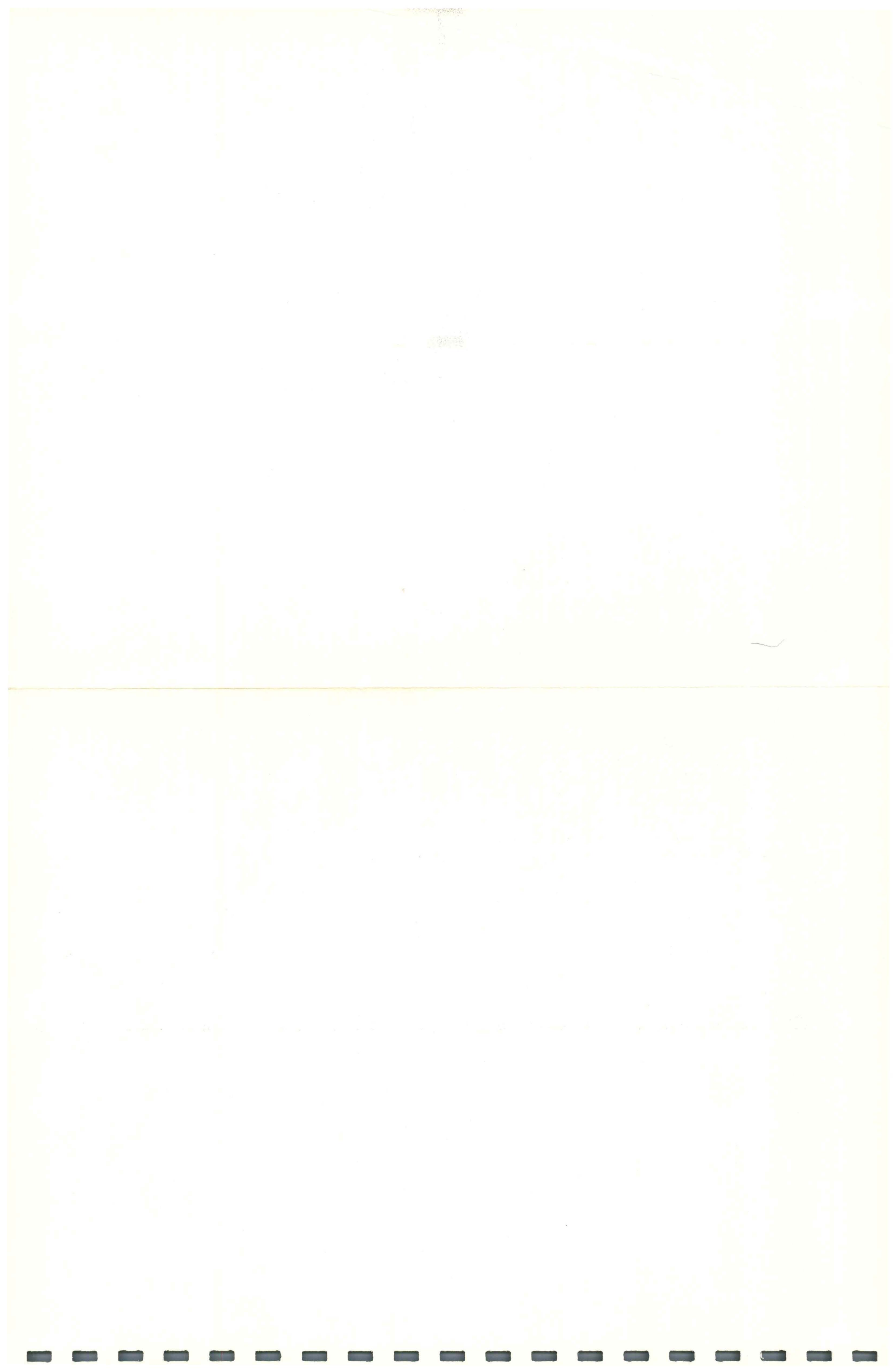
AUGUST, 1966



PREPARED UNDER CONTRACT FOR AND FINANCED IN PART BY THE IOWA DEVELOPMENT COMMISSION UNDER THE PROVISIONS OF CHAPTER 28, CODE OF THE STATE OF IOWA AS AMENDED.

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Pavement Type in (Linear Feet)

Neighborhood	Unimproved	Dirt	Gravel	Brick	Asphalt	Concrete
A	2,880	2,580	240	-	5,130	5,550
B	8,910	4,650	5,880	32,520	39,060	11,100
C	4,350	10,710	3,180	18,090	48,750	12,510
D	<u>2,640</u>	<u>28,830</u>	<u>4,740</u>	<u>4,380</u>	<u>32,520</u>	<u>17,400</u>
Total Feet	18,780	46,770	14,040	54,990	125,460	46,560

Such streets that do not have hard surfaces create problems of snow removal and increases maintenance costs during the winter months from the standpoint of replacing gravel removed by snow removal, oiling, etc..

EXISTING TRAFFIC VOLUMES

A traffic flow map, graphically illustrating 1963 daily volumes, is shown on the following page. The highest count found at any location in Fort Madison was 11,900 vehicles on Avenue H at 10th Street.

The volumes have been compared with State counts taken in 1958, at key entry points to the City. The growth in traffic, during the five-year period, is shown in Table 17.

The percent annual rate is a relatively rapid growth, as compared with other cities. For example, the average annual growth found in eight Iowa cities in the population range of 10,000 to 25,000 persons is 2.2 percent. If sustained, the Fort Madison traffic volume rate would double in only 25 years.

The growth has also been checked on other streets within the city. Traffic on Avenue E, west of 2nd Street, has increased by 1000 vehicles per day, which is over 50 percent. Traffic on Avenue F, west of 18th Street, has increased by nearly 200 percent, but this is an exceptional case.

During the five-year period of traffic comparison, relatively little change has occurred in Fort Madison population. In all of Lee County, the total 20-year growth in population was 7.5 percent between 1940 and 1960, as compared with 8.3 percent for Fort Madison. Lee County vehicular registration has, however, grown at an average rate of 3 percent per year between 1958 and 1963. From these figures, it is clear that population growth is not a reliable measure for traffic projection. Even vehicle registration does not fully reflect the general increase in travel.

## PROPOSED IMPROVEMENT AND RELOCATION OF U. S. 61

The Iowa Highway Commission in December 1967 presented a new concept for routing Highway through Fort Madison which would utilize the highways present routing between the city limits at the top of the Prison Hill to the area of the intersection of Twelfth and Thirteenth Streets and Avenue H.

From Thirteenth Street, the highway would be relocated south of Avenue H and L. It has been estimated by the Iowa Highway Commission that a new route would carry between 7,000 and 10,000 vehicles per day.

Under the new concept, parking would be prohibited on both sides of Avenue H between Twelfth and Second Streets as well as on Second Street north.

Twelfth and Thirteenth Streets south of Avenue H would be reconstructed to handle one-way Highway 61 traffic. Thirteenth Street would take westbound traffic and Twelfth Street would handle eastbound traffic. The Twelfth and Thirteenth Street intersections with Avenue H would be equipped with automatic signals.

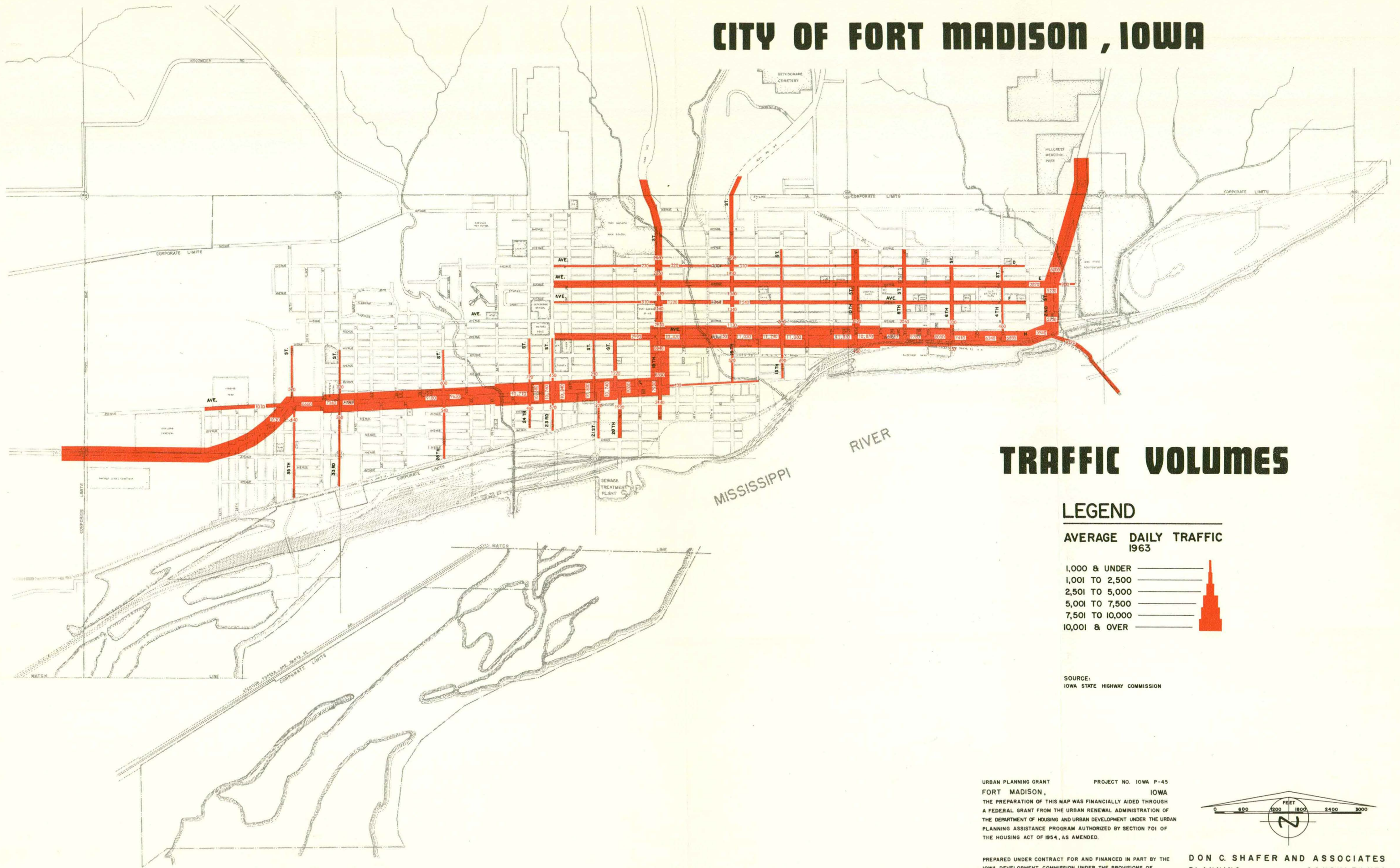
At a point near Fourteenth Street and Avenue M, the two one-way routes would converge into a four-lane relocated highway with a four foot median. The highway would run in the vicinity of Avenue M, O and P westward until it joined with present Highway 61 in the vicinity of Thirty-ninth Street. Much of the relocation west of Thirteenth Street would be along the C. B. and Q. railroad tracks.

In May 1968, the Iowa State Highway Commission approved the relocating of Highway 61. Approval of the Federal Bureau of Public Roads is awaited. The total estimated cost of the project is \$3,752,450 including right-of-way purchases which according to the present timetable will begin in 1971.

A breakdown of the estimates would include \$121,900 for earthwork, \$1,059,050 for pavement, \$2,312,000 for right-of-way, and \$259,500 for structures. The highway commission has programed \$1,700,000 for right-of-way purchases in 1971 and 1972.



# CITY OF FORT MADISON, IOWA



## TRAFFIC VOLUMES

### LEGEND

AVERAGE DAILY TRAFFIC 1963

1,000 & UNDER	Thin red line
1,001 TO 2,500	Medium-thin red line
2,501 TO 5,000	Medium red line
5,001 TO 7,500	Thick red line
7,501 TO 10,000	Very thick red line
10,001 & OVER	Thickest red line

SOURCE:  
IOWA STATE HIGHWAY COMMISSION

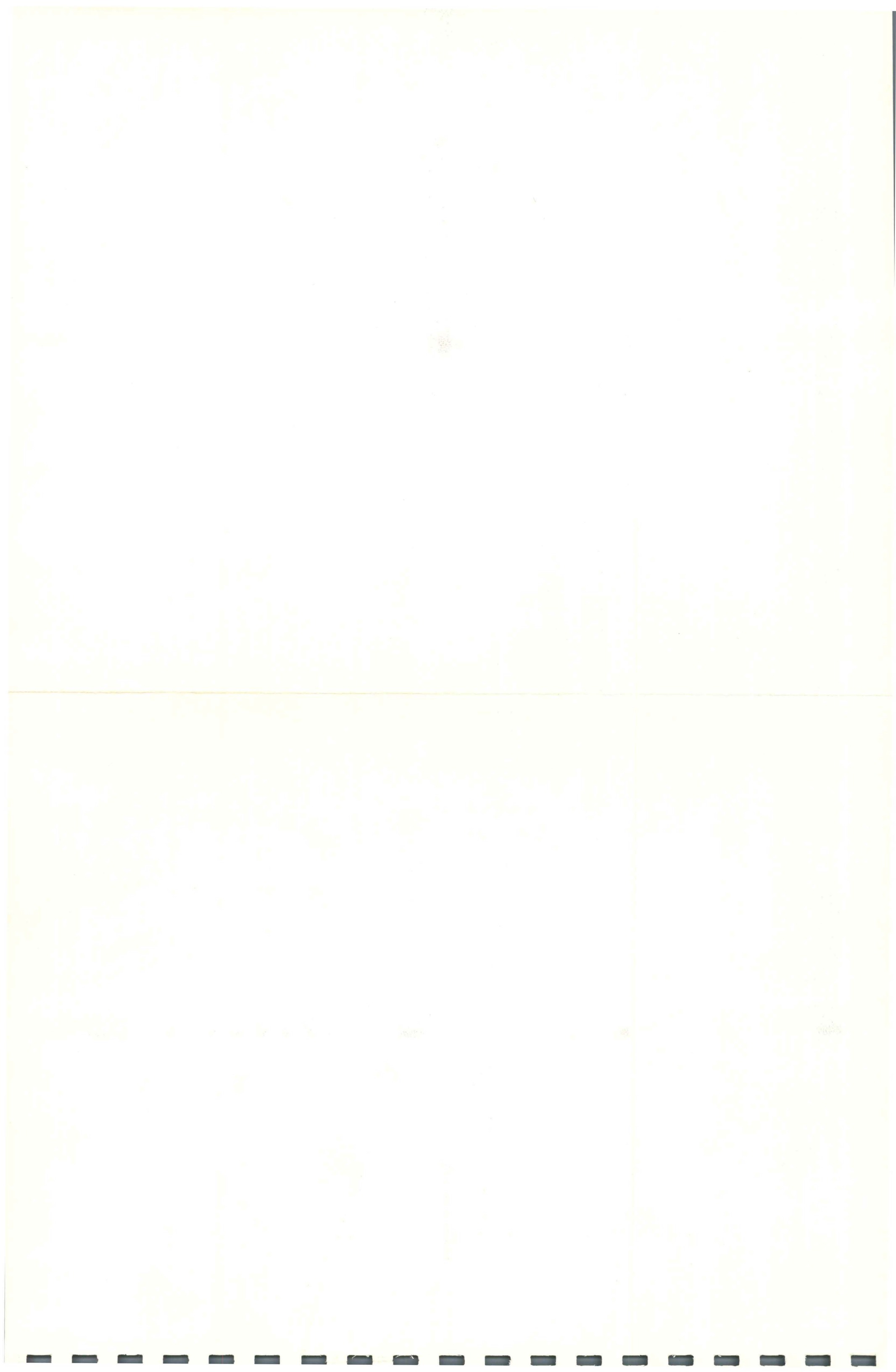
URBAN PLANNING GRANT PROJECT NO. IOWA P-45  
FORT MADISON, IOWA  
THE PREPARATION OF THIS MAP WAS FINANCIALLY AIDED THROUGH A FEDERAL GRANT FROM THE URBAN RENEWAL ADMINISTRATION OF THE DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT UNDER THE URBAN PLANNING ASSISTANCE PROGRAM AUTHORIZED BY SECTION 701 OF THE HOUSING ACT OF 1954, AS AMENDED.



PREPARED UNDER CONTRACT FOR AND FINANCED IN PART BY THE IOWA DEVELOPMENT COMMISSION UNDER THE PROVISIONS OF CHAPTER 28, CODE OF THE STATE OF IOWA AS AMENDED.

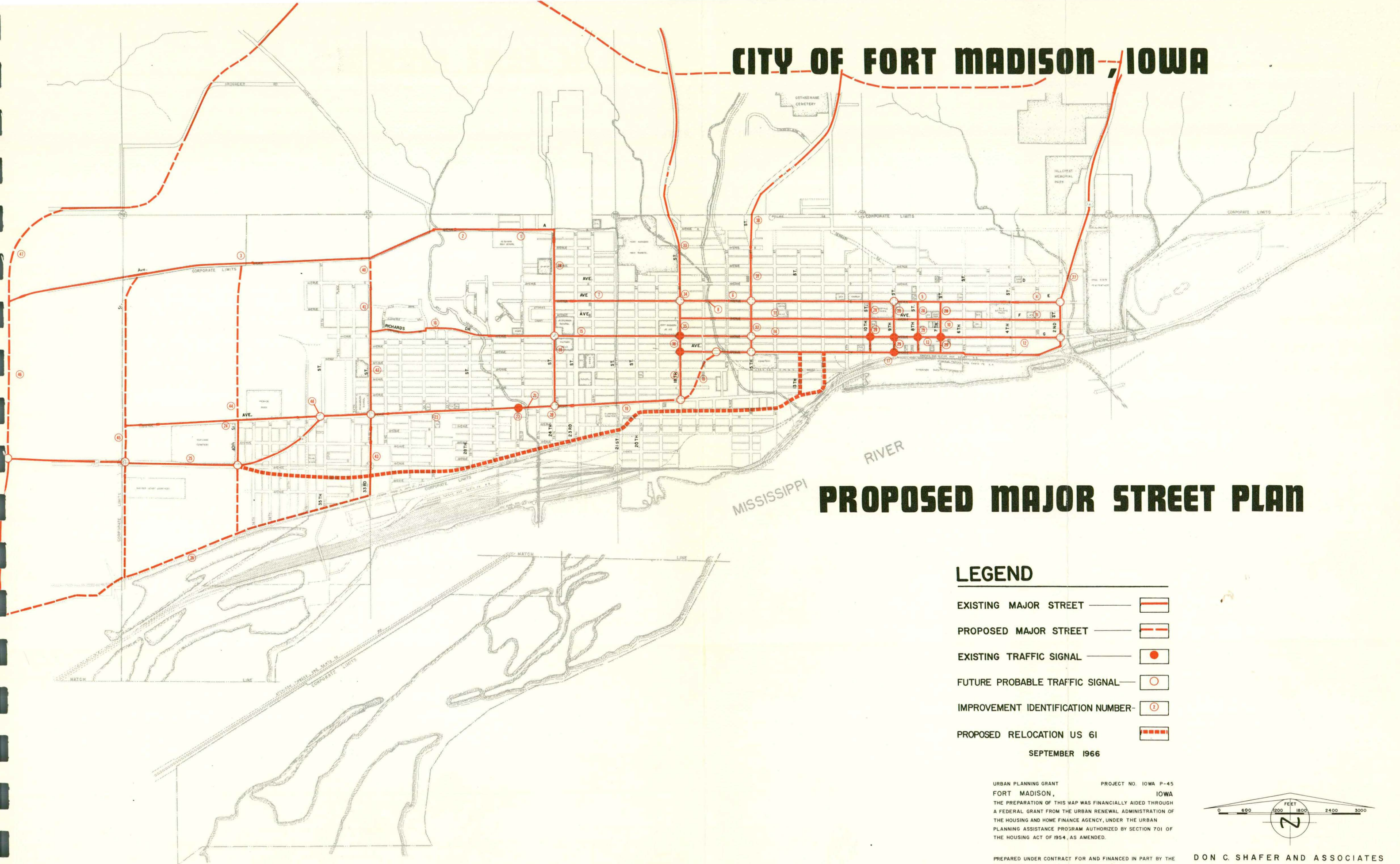
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# CITY OF FORT MADISON, IOWA



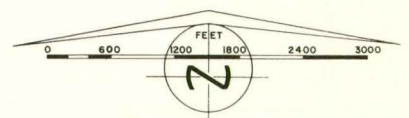
## PROPOSED MAJOR STREET PLAN

### LEGEND

- EXISTING MAJOR STREET ————
- PROPOSED MAJOR STREET ————
- EXISTING TRAFFIC SIGNAL ————
- FUTURE PROBABLE TRAFFIC SIGNAL ————
- IMPROVEMENT IDENTIFICATION NUMBER ————
- PROPOSED RELOCATION US 61

SEPTEMBER 1966

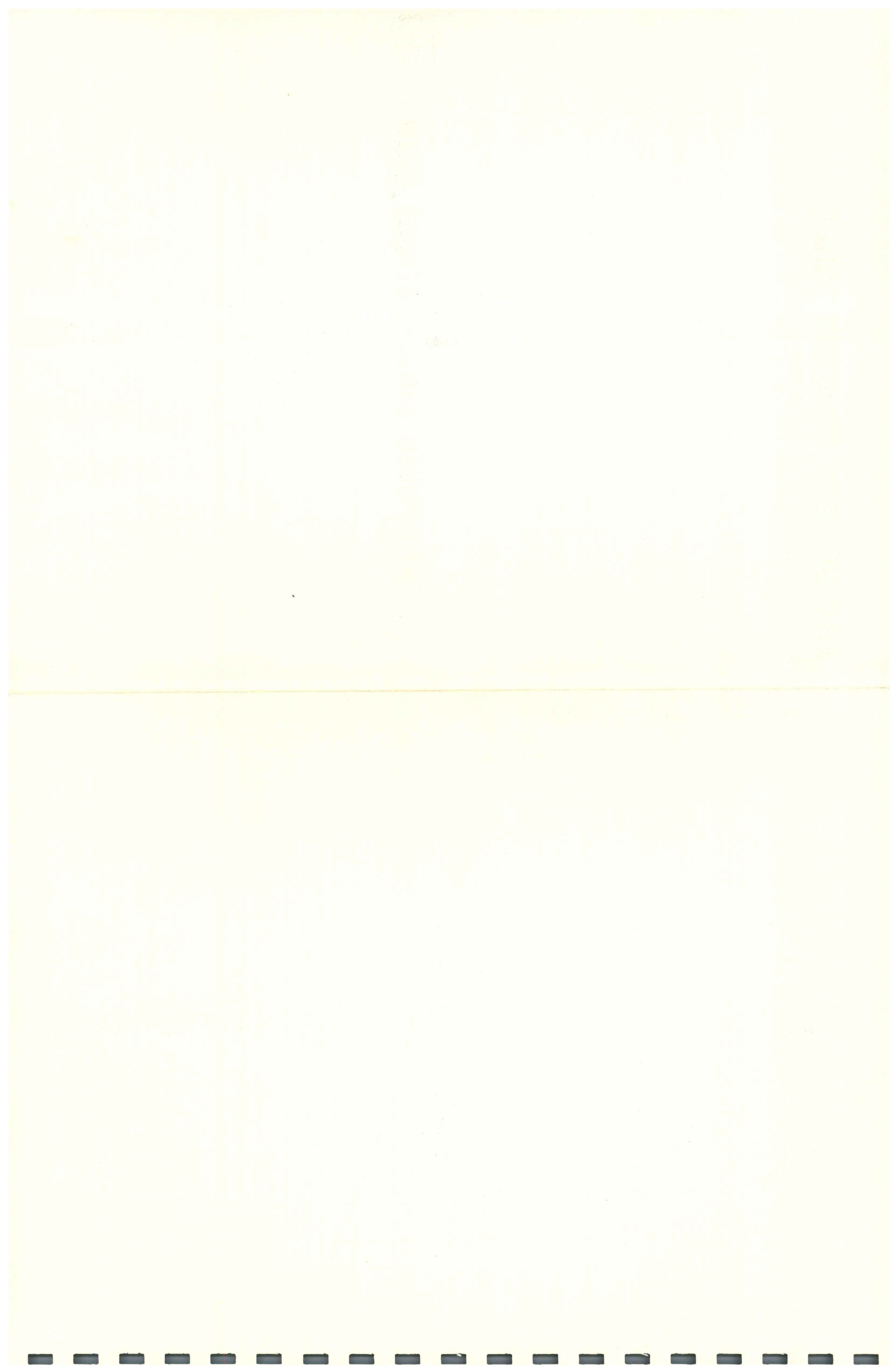
URBAN PLANNING GRANT PROJECT NO. IOWA P-45  
 FORT MADISON, IOWA  
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## HOUSING AND NEIGHBORHOOD ANALYSIS

### INTRODUCTION

Every American community has an unique image which is reflected by its people and its public and private leadership. Fort Madison has shown itself to be a community bent upon improving its social and economic status, and its civic character is progressive and determined in spirit. These characteristics are important for a community which is in competition with other cities throughout the state and nation for the attraction of new industries, businesses and residents. Unfortunately, many of these civic attitudes are abstract in nature and not readily apparent to those who might be interested in locating in Fort Madison.

Since there are so many cities and towns attempting to attract new industry and quality residents and since many of them have the same locational amenities as Fort Madison, this city must endeavor to offer potential locators more than its competitors. One tangible factor which can evidence the progressive attitudes of the community and translate them from the abstract to reality, is the attractive physical appearance of the city. The composition and quality of the structures in a city can either enhance or deter the fulfillment of civic aspirations and the attainment of the community goals.

Fort Madison is, on the whole, a clean and charming city, but like any community it does have areas which need improvement. In some cases, these are private properties and require private action; in others, public action is demanded to rectify these conditions. This section of the report is an analysis of the various neighborhoods in Fort Madison, and the structures therein, and includes suggested programs to improve those in need and to conserve those of quality.

## HOUSING CONDITIONS

The condition of housing in Fort Madison ranges from sound to dilapidated. The existence of these variants in housing is evident in each neighborhood in the city.

According to the enumerations of the 1960 Census of Housing, there were 4,909 housing units in Fort Madison and of these units more than 65 percent were owner occupied and over 28 percent were renter occupied. The remainder were vacant.

	Number	Percent
All housing units	4,909	100.0
Owner occupied	3,209	65.2
Renter occupied	1,392	28.3
Vacant	308	6.5

Housing unit, by definition of the Bureau of Census, refers to any house, apartment, flat, trailer or room in a hotel, which constitutes a singular and separate living accommodation for any person or household. It was found that in the last census, 79.6 percent of these housing units were sound; 17.4 percent were in the process of deterioration, and three percent were dilapidated. Therefore, over 20 percent of the housing in Fort Madison was considered substandard. The census statistics also, pointed out that nine percent of all housing units lacked proper plumbing facilities of this amount 28.3 percent were rented housing. In addition, as of 1960, eight percent of Fort Madison housing units were overcrowded, that is more than one person per room per unit.

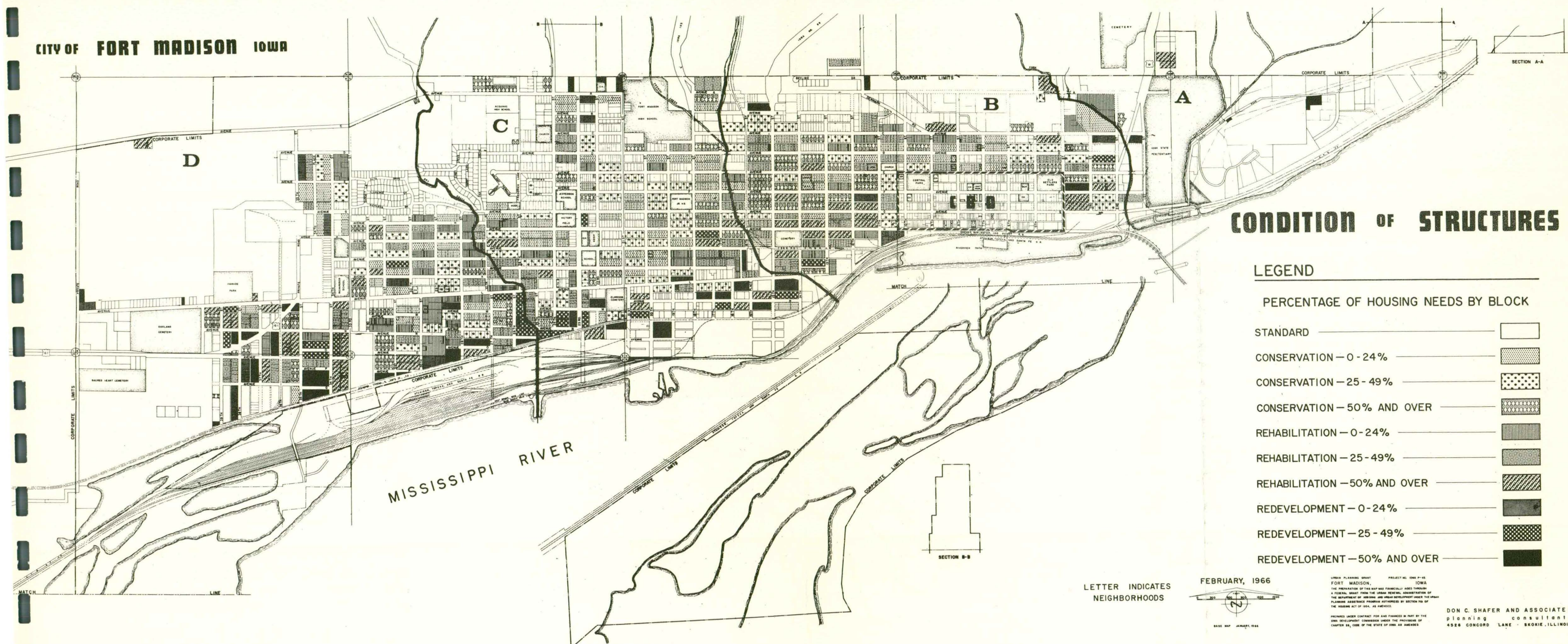
In February 1966, a condition of structure survey was undertaken in more detail than the previous surveys made during 1958-60. The 1966 survey shows the condition of structures on a block basis as illustrated on the map following. It was found that over 35 percent of the housing structures in the city to various degrees are substandard. This statistic does not take into consideration housing units in the central business district which are in commercial structures. The condition of structures in the central business district will be reviewed in this report.

## STRUCTURAL CHARACTERISTICS

In the survey previously mentioned, each structure within the community



CITY OF FORT MADISON IOWA



# CONDITION OF STRUCTURES

## LEGEND

### PERCENTAGE OF HOUSING NEEDS BY BLOCK

STANDARD	—	
CONSERVATION - 0 - 24%	—	
CONSERVATION - 25 - 49%	—	
CONSERVATION - 50% AND OVER	—	
REHABILITATION - 0 - 24%	—	
REHABILITATION - 25 - 49%	—	
REHABILITATION - 50% AND OVER	—	
REDEVELOPMENT - 0 - 24%	—	
REDEVELOPMENT - 25 - 49%	—	
REDEVELOPMENT - 50% AND OVER	—	

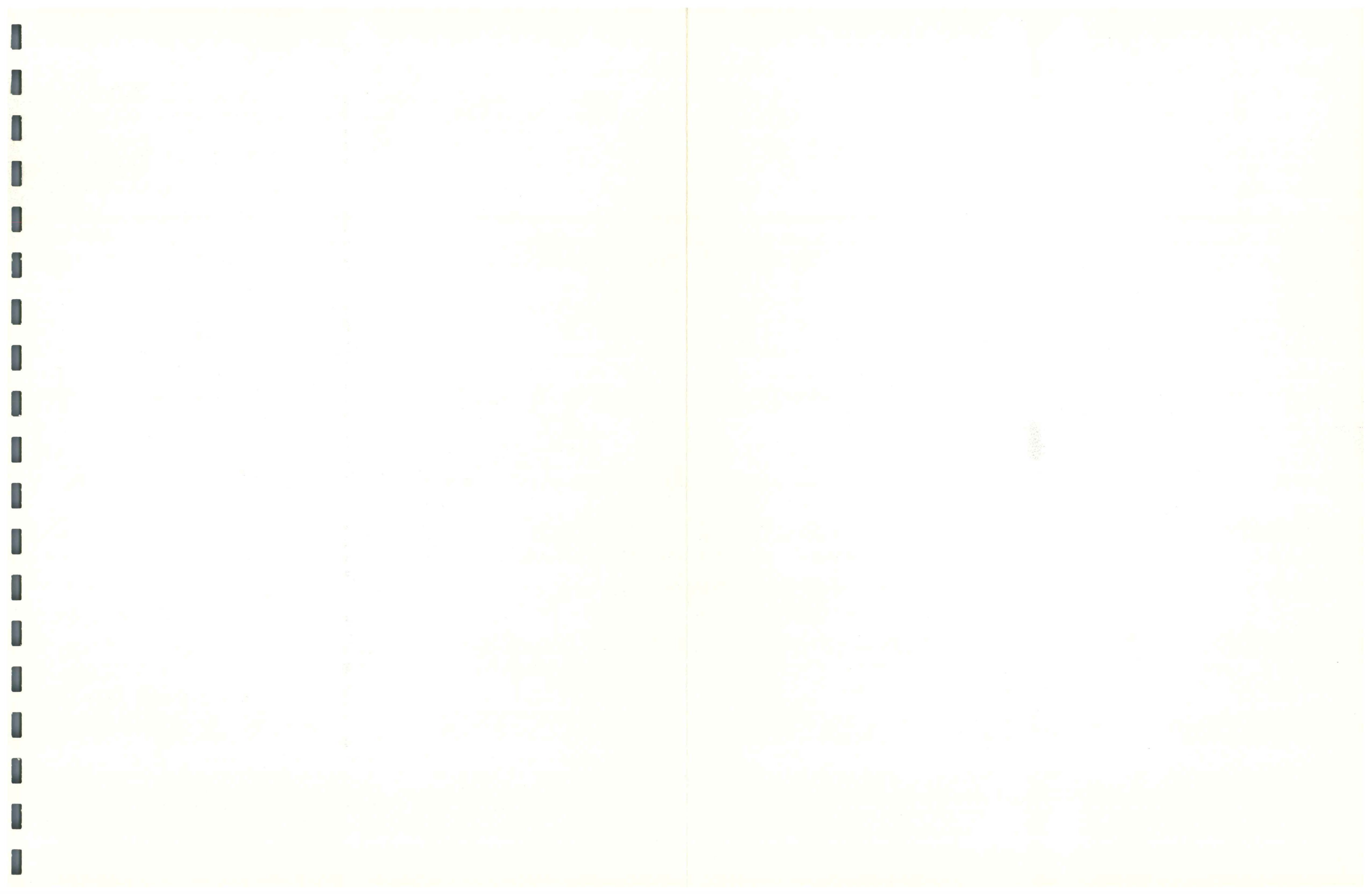
LETTER INDICATES NEIGHBORHOODS

FEBRUARY, 1966

URBAN PLANNING GRANT PROJECT NO. 1066 P-102  
 FORT MADISON, IOWA  
 FOR THE PURPOSES OF THIS MAP THE FOLLOWING ARE THE SOURCE OF THE DATA:  
 A FEDERAL GRANT FROM THE URBAN REDEVELOPMENT ADMINISTRATION OF THE DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT UNDER THE URBAN PLANNING ASSISTANCE PROGRAM AUTHORIZED BY SECTION 104 OF THE HOUSING ACT OF 1954, AS AMENDED.  
 PREPARED UNDER CONTRACT FOR AND FINANCED IN PART BY THE URBAN REDEVELOPMENT ADMINISTRATION UNDER THE PROVISIONS OF CHAPTER 24, CODE OF THE STATE OF IOWA, AS AMENDED.

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was evaluated from the exterior and placed in one of the following categories according to apparent need:

Standard: Structures not in need of outside improvements at the time of the survey.

Conservation: Structures having slight defects which are usually corrected during the course of regular maintenance.

Examples of slight defects are: lack of paint, damage to the porch or stairs, wearing away of mortar between bricks or other masonry, small cracks in walls or chimney, cracked windows, wear on doorsills, doorframes, window sills or frames, broken gutters and downspouts.

Remedial and preventive conservation techniques include the improvement of building, housing and related codes. Other measures that might be used to conserve a neighborhood are the removal of buildings that have a deterring effect on the area and the establishment of city neighborhood or block clean-up fix-up campaigns.

Rehabilitation - Deteriorating housing structures which demand more repairs than would be provided over a regular course of maintenance. These structures contain defects of an intermediate nature which must be corrected if the unit is to provide safe and adequate shelter. Examples of intermediate defects are: holes, open cracks, rotted, loose or missing materials over a small area of the foundation, walls or roof; shaky or unsafe porch, stairs, or railings; several broken or missing windowpanes; some rotted or loose window frames or sashes that no longer are rainproof or windproof; broken or missing stair treads, or broken loose or missing risers, balusters or railings of outside stair cases; deep wear on doorsills, doorframes, or porches missing bricks or cracks in a chimney; a makeshift chimney such as a stovepipe or other uninsulated pipe leading directly from the stove to the outside through a hole in the roof, wall or window.

Such defects are signs of continued neglect which may lead to serious structural deterioration or damage if not corrected. Rehabilitation is necessary to restore such buildings to good condition. This may involve repair, renovation, conversion, expansion, remodeling or reconstruction.

Dilapidation -- Structures which do not provide safe and adequate shelter; moreover in their present condition endanger the health, safety or wellbeing of occupants and surrounding areas. Such housing has one or more critical defects; or, has a combination of intermediate defects in sufficient number to require considerable repair or rebuilding; or is of inadequate original construction.

Examples of critical defects are: holes, open cracks or rotted, loose or missing material (clapboard siding, shingles, bricks, concrete, tile or floorboards) over a large area of the foundation, outside walls, roof or chimney; substantial sagging of the porch, walls or roof; extensive damage by storm, fire or flood. Examples of inadequate original construction are: Shacks and huts, or structures with makeshift walls or roofs or built of packing boxes, scrap lumber or tin; structures lacking foundations (walls rest directly on the ground); cellars, sheds, barns, garages or other places not originally intended for living quarters and inadequately covered to such use.

Redevelopment is necessary for structures of this nature. The defects are so critical or so widespread that the structure should be extensively repaired, rebuilt or removed.

The table following summarizes the condition of structures containing housing units on a block basis within each of the delineated neighborhoods.

Neighborhood	Sound Units	Conservation - (Minor)			Major Repairs & Redevelopment		
		0%-24%	25%-49%	50% & Over	0%-24%	25%-49%	50% & Over
A	9.00			.50	1.00	.50	2.00
B	24.25	9.25	9.00	13.00	7.25	12.00	12.25
C	50.00	16.50	16.25	8.50	9.75	16.00	8.75
D	30.00	14.50	6.75	8.00	17.50	15.25	15.00
Total	113.00	40.25	32.00	30.00	35.50	43.75	38.00

In calculating the results of the conditions of structures survey only platted blocks or small areas could readily be estimated as blocks were counted. Any acreage was not estimated.

From the results of this survey it is clearly pointed out that there is a need for improving dwelling structures in the city. The calculations made by blocks or portions thereof undoubtedly include structures that may be sound or in need of minor repair.

As determined by the survey, 34 percent of the blocks have sound structures 30.7 percent are in need of conservation or minor repairs and 35.3 percent need major repairs or redevelopment. Such a survey also indicates age of structures since years of time are needed for deterioration to take place to the extent that a structure becomes dilapidated.



## NEIGHBORHOOD ANALYSIS

A neighborhood analysis is the first step in establishing a program for providing decent living conditions in a suitable environment. Such an analysis consists of an examination and assessment of the housing and environmental conditions of each neighborhood within the community. This study records the type and extent of housing deterioration on a neighborhood basis and attempts to reveal the underlying causes of such deterioration. Structural deterioration and dilapidation are symptoms of blight and may influence its spread; however, they are not necessarily its cause.

Some of the major causes leading to blighting of a neighborhood are: excessive land coverage; dense population in improperly designed structures; convergence of heavy traffic; inadequate park and playground facilities; over abundance of short blocks; major routes of transport and traffic; mixture of incompatible and, at times, illegal land uses; unpaved streets; inadequate supplies of improved streets and lack of public utilities. Conditions such as these must first be eliminated if the spread of blight is to be controlled.

There are several acceptable methods available for delineating neighborhoods in a community. A neighborhood may be composed of inhabitants with similar ethnic, social and economic traits. It may come into existence because of geographic barriers such as rivers or railroad gradings which set an area aside from other parts of the community. A neighborhood might be bound together by the contiguity of physical patterns, that is, age, condition and utilization of structures linkage of this nature is most evident in the central business district. Yet another type of neighborhood might be established within artificial political boundaries such as ward lines.

For the purpose of this survey, the neighborhood boundaries in Fort Madison other than the corporate limits or the river are the three tributaries as indicated on the Condition of Structures map. With the exception of Neighborhood A, the other three are almost equal in size.

### HOUSING NEEDS

Over the next 20 years, the demand for housing in Fort Madison will increase in proportion to the community's economic and population expansion. Moreover, housing units will be needed to replace those structures which are no longer suitable for habitation. In order to take complete advantage of the area's spiralling economy and favorable labor market, additional rental and purchase housing must be made available at both the moderate and higher income levels. All new housing should be designed and constructed according to code standards.

In 1960, there were 4,090 housing units in Fort Madison with 4,601

EXHIBIT 4

A NEIGHBORHOOD

	Sound	Conservation (Minor Repairs)	Rehabilitation and Redevelopment (Major Repairs and Clearance)
<u>Structural Condition by Block</u>	69.2%	3.9%	26.9%
<u>Sanitary Sewer Storm Sewers</u>	Information not available		
<u>Water</u>	No problem: Improvements to the distribution system have been recommended by a consulting engineer		
<u>Pavement Type</u>	Equal amount of concrete and asphalt No affect on neighborhood		
<u>Pavement Width</u>	No affect on neighborhood		
<u>Through Traffic</u>	None: A transportation plan and report has been prepared for Fort Madison with improved recommendations by a consulting traffic engineer.		

OTHER USES OR CONDITIONS IN THE NEIGHBORHOODS

<u>Schools</u>	None
<u>Parks</u>	None
<u>Symptoms of Blight</u>	Small pocket of poorly maintained structures.
<u>Causes of Blight</u>	None
<u>Recommendations</u>	<ol style="list-style-type: none"> <li>1. Rehabilitate buildings that are deteriorating and remove all dilapidated structures.</li> <li>2. Parks will be needed.</li> <li>3. Adopt and enforce housing, building and other necessary codes to best maintain proper housing structures.</li> </ol>



EXHIBIT 5

B NEIGHBORHOOD

	Sound	Conservation (Minor Repairs)	Rehabilitation and Redevelopment (Major Repairs and Clearance)
<u>Structural Condition by Block</u>	27.8%	35.8%	36.4%
<u>Sanitary Sewer Storm Sewers</u>	Information not available		
<u>Water</u>	Improvements to the distribution system have been recommended by a consulting engineer.		
<u>Pavement Type</u>	Brick, asphalt, dirt, gravel, concrete. Smallest amount of hard surface is concrete. Where no hard surface streets exist are structures classified as rehabilitation and redevelopment.		
<u>Pavement Width</u>	No affect		
<u>Through Traffic</u>	Yes: Traffic is heavy on some streets. A transportation plan has been prepared for Fort Madison with improvements recommended by a consulting traffic engineer.		

OTHER USES OR CONDITIONS IN THE NEIGHBORHOODS

<u>Schools</u>	Neighborhood has two schools - elementary and a junior high (see School Section in this Report)
<u>Parks</u>	Lack of active recreational area (see Park Section in this report)
<u>Symptoms of Blight</u>	Substandard structures. Poorly maintained tributaries.
<u>Causes of Blight</u>	Aged structures in need of repair, mixture of land uses, unpaved streets.
<u>Recommendations</u>	<ol style="list-style-type: none"> <li>1. Improve those streets in need.</li> <li>2. Adopt and enforce housing, building and other necessary codes to best maintain proper housing standards.</li> <li>3. Rehabilitate buildings that are deteriorating and remove all dilapidated structures.</li> </ol>

EXHIBIT 6

C NEIGHBORHOOD

	Sound	Conservation (Minor Repairs)	Rehabilitation and Redevelopment (Major Repairs and Clearance)
<u>Structural Condition by Block</u>	40.8%	30.5%	28.7%
<u>Sanitary Sewer Storm Sewers</u>	Information not available		
<u>Water</u>	Improvements to the distribution system have been recommended by a consulting engineer.		
<u>Pavement Type</u>	Asphalt, concrete, brick, dirt and gravel No affect on neighborhood conditions		
<u>Pavement Width</u>	No affect on neighborhood.		
<u>Through Traffic</u>	Yes: Throught traffic is heavy on some streets. A transportation plan and report has been prepared for Fort Madison with improvement recommendations by a consulting traffic engineer.		

OTHER USES OR CONDITIONS IN THE NEIGHBORHOOD

<u>Schools</u>	Neighborhood has three shcools--junior high, high school, elementary (see School Section of the report):
<u>Parks</u>	Victory Field--small for neighborhood (see Park Section in this report).
<u>Symptoms of Blight</u>	Substandard structures
<u>Causes of Blight</u>	Mixture of land uses. Also non-residential uses within residential structures. Aged structures in need of repair.
<u>Recommendations</u>	<ol style="list-style-type: none"> <li>1. Rehabilitate buildings that are deteriorating and remove dilapidated structures.</li> <li>2. Adopt and enforce housing, building and other necessary codes to best maintain proper housing standards.</li> </ol>



EXHIBIT 7

D NEIGHBORHOOD

	Sound	Conservation (Minor Repairs)	Rehabilitation and Redevelopment (Major Repairs and Clearance)
<u>Structural Condition by Block</u>	28.0%	27.1%	44.9%
<u>Sanitary Sewer Storm Sewers</u>	Information not available		
<u>Water</u>	Some areas do not have sewers. Improvements to the distributor system have been recommended by a consulting engineer.		
<u>Pavement Type</u>	Dirt, gravel, concrete, asphalt, unimproved.		
<u>Pavement Width</u>	No affect on neighborhood.		
<u>Through Traffic</u>	Yes: A transportation plan and report has been prepared for Fort Madison with improvement recommendations by a consulting traffic engineer.		

OTHER USES OR CONDITIONS IN THE NEIGHBORHOOD

<u>Schools</u>	One elementary school.
<u>Parks</u>	The largest city park is located in this neighborhood.
<u>Symptoms of Blight</u>	Some substandard structures. Aged structures in need of repair.
<u>Causes of Blight</u>	Aged structures in need of repair, mixture of land uses, some unpaved streets.
<u>Recommendations</u>	<ol style="list-style-type: none"> <li>1. Improve streets and sidewalks.</li> <li>2. Improve local utilities.</li> <li>3. Adopt and enforce housing, building and other necessary codes to best maintain proper housing standards.</li> <li>4. Rehabilitate buildings that are deteriorating and remove all dilapidated structures.</li> </ol>

being occupied through housing 14,072 people. Therefore, 1,175 were living in group quarters when the 1960 decennial census was taken. By 1965, there were an estimated 14,500 people living in approximately 4,730 housing units.

By 1965, there was an estimated 14,500 people living in approximately 4,730 housing units. Group quarters population are not included in the housing inventory. Group quarters are considered as institutions, hospitals, nursing homes, rooming and boarding houses, military and other types of barracks, college dormitories, fraternity and sorority houses, convents and monasteries. Group quarters are also located in a house or apartment in which the living quarters are shared by the head and five or more persons unrelated to him.

Approximately 79 percent of the housing inventory was built prior to 1940. Within the next 20 years or less, much of that housing will have to be replaced. However, disregarding this fact, and retaining the existing 4,909 housing units as an estimate base, an additional 1,265 residential units will be necessary to satisfy the housing demands of 1985. The vacancy of 308 housing units in 1960 which was high undoubtedly included a percentage of non livable household units. This would mean a minimum rate of construction of 63 housing units per year. The average construction rate for the five year period 1960-65 was about 26 housing units per year. Action at the community level must be taken to stimulate an increased rate of residential development if the city wishes to avert an impending housing shortage.

In assessing the types of future housing units that will be required, the existing housing inventory was examined in an attempt to identify present occupancy preferences. As of 1960, 69.7 percent of all housing units were owner-occupied and 30.3 percent were rental units. The median value of a home was 9,800 dollars and the median gross rent was 60 dollars per month. This preference for owner-occupied units was overwhelming through 1965 as the majority of residential units constructed were single-family detached dwellings. However, in the future, the demand for rental units will increase. This market demand will be precipitated by a sizeable addition of senior citizens and young couples to Fort Madison's population composition. On a national average, these segments of society have an affinity for the convenience type living afforded by apartment living.

There are two guidelines used by developers in assessing the amount of money a person is willing to spend on a home or an apartment. Traditionally, it has been estimated that a potential home owner is willing to pay from two to two and a half times his yearly wage for a house of his choice. The National Housing Conference recommended a ratio for purchase of housing of 1.6 to 1.7 times the annual income. This latter ratio agrees with the actual market performance in Fort Madison. For rental units, it is estimated that a person is willing to have one week's salary pay for a month's gross rent.



In Fort Madison, 25.7 percent of the population made 3,999 dollars or less in 1960. Housing this income group will present the community with its greatest problem. It will be the responsibility of the private developers of the area to construct standard housing units for these people who are obviously limited in the disposition of their incomes.

#### SUMMARY

1. Fort Madison will need a total of about 5,860 to 5,870 units by 1985 to meet its housing demands.
2. The increase in housing will have to account for new dwellings and the replacement of dilapidated ones.
3. There will be a marked increase in the demand for rental units.
4. The community will have to meet the demands for low cost housing.

#### SUGGESTED REDEVELOPMENT AND FINANCING PROGRAMS

There are a number of methods which can be utilized in establishing a redevelopment program. Two of the ways which have proven most successful are as follows:

1. The organization and establishment of a private or municipally sponsored corporation which purchases, clears and rebuilds an area earmarked for redevelopment.
2. An urban renewal project which is financially assisted by the Federal government and executed by a local government authority. The cost of this program is shared on a three-fourths-one-fourth bases, with the city's share (one-fourth) payable in non-cash grants-in-aid. This would include any public improvements which would serve to enhance and upgrade the project area. The fact that Fort Madison is in the process of developing a comprehensive plan tends to qualify it for such Federal assistance.

Though there are pockets of dilapidation throughout the city, the D Neighborhood has the greatest amount of concentrated deterioration in the area delineated by the corporate limits on the north, Santa Fe Railroad on the south, corporate limits on the west, and Dry Creek on the east. It is the consultants recommendation that consideration be given to redevelop-

ment of this area under the Federal Housing Administration Insured 221 (d) (3) below market interest rate, low and moderate income housing program to provide for rental housing.

Section 221 (d) (3) of the National Housing Act of 1961, as amended, provides a method whereby below market interest rate financing and insurance are made available to certain eligible sponsors for the development of moderate income rental housing. Eligible sponsors may be public agencies (except local housing authorities which obtain their funds exclusively for public housing from the Federal Government); a cooperative mortgagor (a non-profit cooperative ownership housing corporation approved by the FHA Commissioners); a limited dividend corporation formed exclusively for the purpose of providing housing and regulated as to rents, charges, rates of return and operating methods by the FHA; an investor sponsor mortgagor, which is a special type of limited dividend corporation organized to build or rehabilitate a project and transfer it to a cooperative. Through the liberalized financing allowed under this program, the cost of rental housing is reduced for the occupant. This is accomplished by the extension of the mortgage period to, in some cases, a maximum of 40 years and reducing the interest rate.

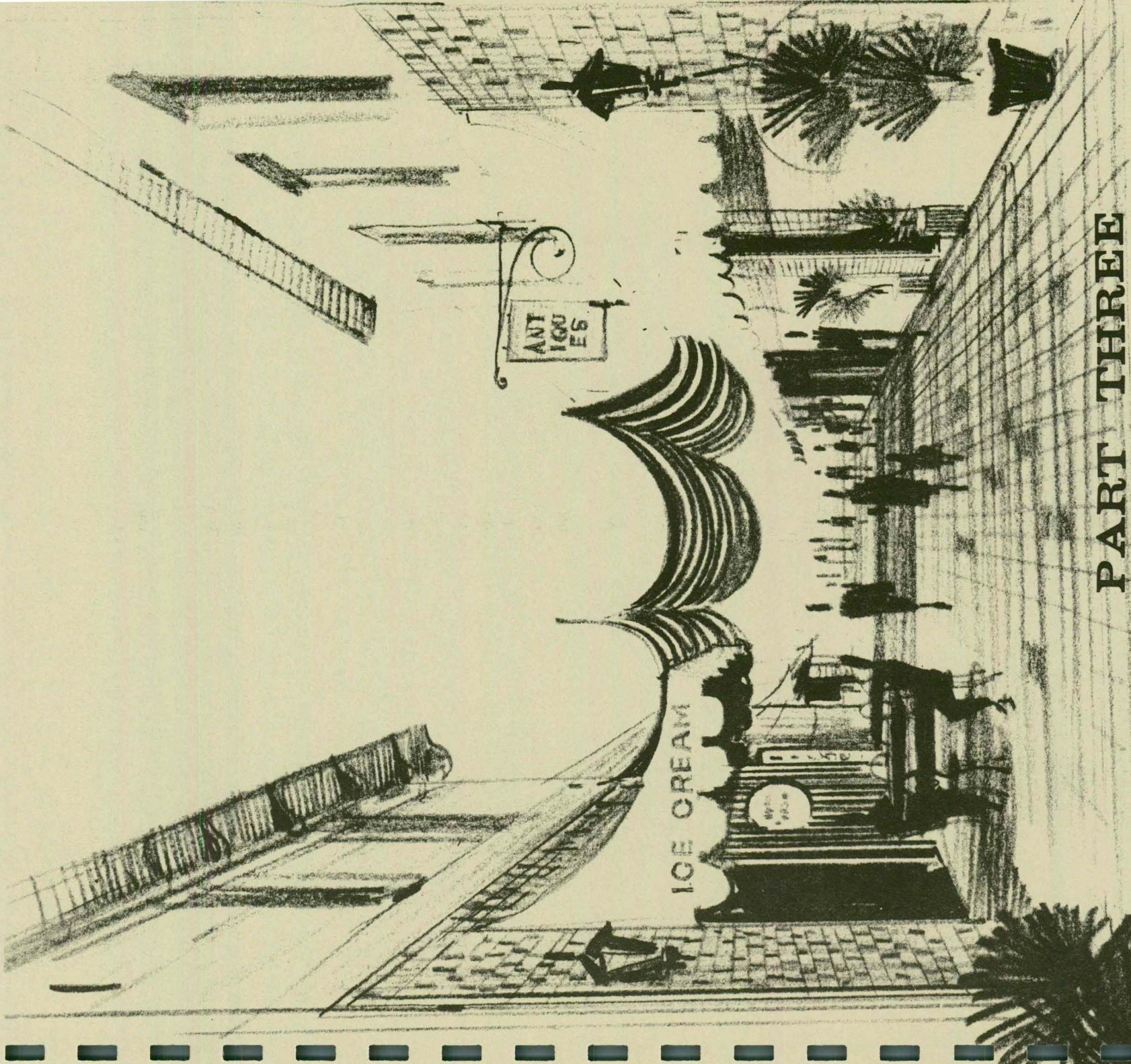
Priorities for prospective tenants for such housing would be those:

1. Displaced by government action;
2. Sixty-two years of age or older in the case of an individual. In the case of a family, the head who is, or whose spouse is, 62 years of age or older;
3. Physically handicapped;
4. Occupying substandard housing.

The execution of this program would accomplish two things for Fort Madison; first, the deteriorated structures would be removed; and second, it would provide the community with low and moderate housing which it needs. Further particulars on this program may be obtained by contacting the regional office of the Federal Housing Administration, located in Chicago, Illinois.

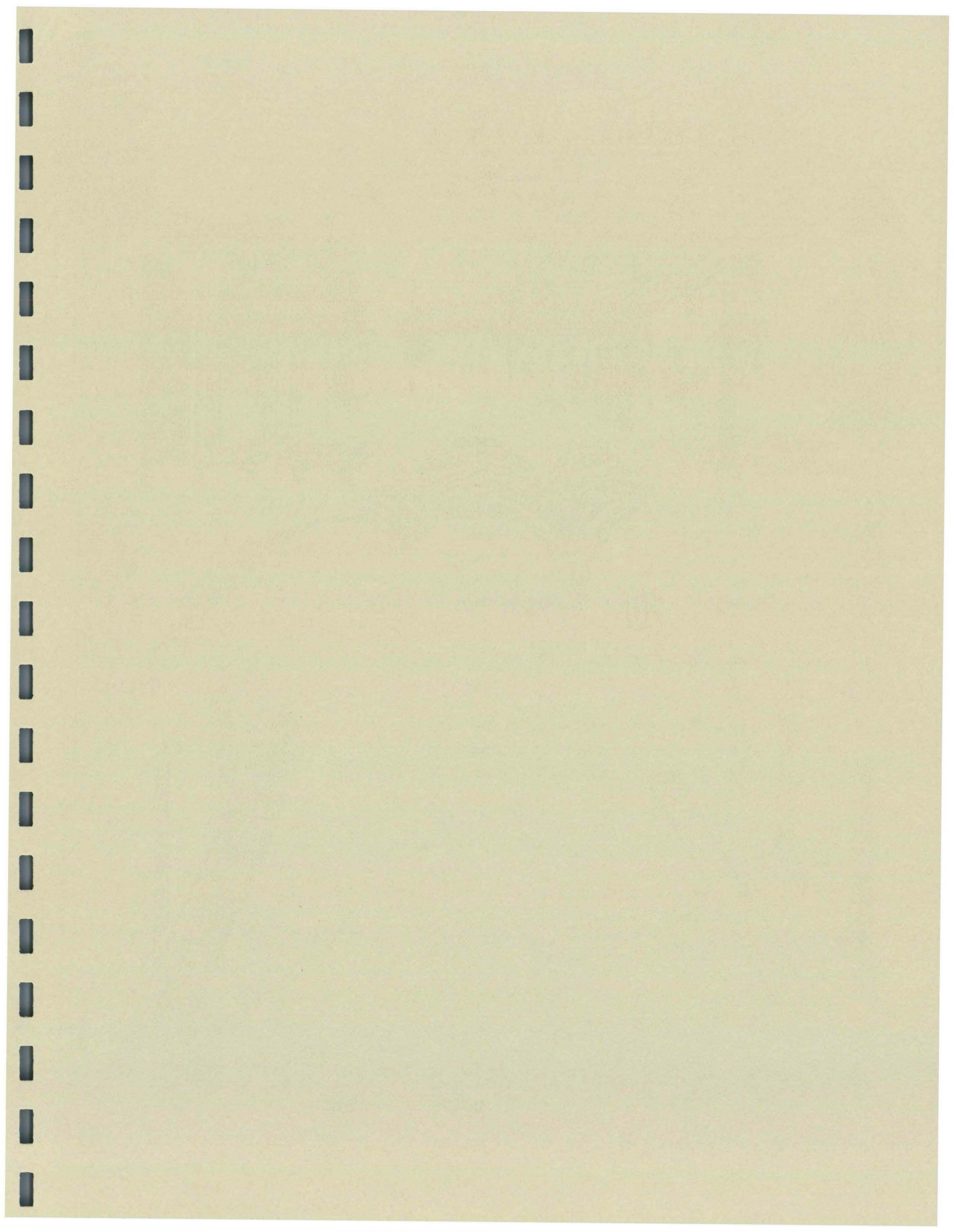
In dealing with the problems associated with poor quality or aging and deteriorating structures in the community at large, the following course of action for rehabilitation and conservation should be pursued. A program of intensive housing code inspection and enforcement should be instituted. A community action program with citizen involvement aimed at encouraging property owners to upgrade their structures should be begun. Ultimately, what a city is and what it hopes to become rests in the hands of its inhabitants and their commitment to the goals of the community. For without active participation by the citizens, no comprehensive plan could be accomplished.





**PART THREE**  
**PLANNING**  
**RECOMMENDATIONS**







## PLANNING RECOMMENDATIONS

### INTRODUCTION

The way in which the land in a community has been used provides the basis for understanding the past development and projecting the future needs and requirements. The relationships between residential, commercial, public and industrial land uses have given the community its present form. Fort Madison is dependent upon its central business district to offer its residents needed goods and services; on its industry to provide jobs for its residents; and on its residential areas to provide good, standard housing and a pleasant living environment.

If the community is to grow and prosper, its value and economic health must be protected and promoted. If an industry, business or residence is not protected from encroachment by non-compatible uses, then the entire community suffers. Residential properties are devaluated, business becomes marginal and industries have no room for expansion.

The General Development Plan for the city is intended to serve as a guide for the redevelopment of these areas of the community which have deteriorated because of age or neglect and for the development of those areas in and around the community where growth will take place.

Before the elements of the land use plan are discussed certain basic assumptions must be noted. These are the historical or environment factors which form the basic ground rules of the land use plan. They are:

1. Most forms of land use have begun to utilize larger areas-- larger residential lots, expanded industrial plant sites and shopping areas with off-street parking are becoming accepted standards of land development.
2. The city's population, industrial, and commercial economic base will continue to grow during the planning period. This is evidenced by the continuing population increase (even though slow it is steady), expansion of existing industries and

acquisition of new ones, and recent commercial improvements.

3. Fort Madison's central business district and some of the older residential areas are in need of redevelopment.
4. The excellent transportation facilities existing in Fort Madison will enhance its strategic geographic position in relation to regional and national markets.
5. Intensification of usage of land within Fort Madison is desirable because it improves the tax base of the city without requiring costly extension of all types of community services.

An estimate of the general increase in land area devoted to the various use categories during the planning period is summarized as follows:

Use	Existing Land Area in Acres	Proposed Land Area in Acres	Increase or Decrease in Acres
Residential	753.0	1,412.3	+659.0
Commercial (Excluding CBD)	51.1	105.8	+ 54.7
Industrial	292.9	2,748.0 <sup>1/</sup>	+2,455.1
Streets and Alleys	468.5	505.2	+ 36.7
Public and Quasi-Public	219.7	274.1	+ 54.4

<sup>1/</sup> Includes 1,920 acres of industrial area in the corporate area west of the principal corporate area of the city.

As these changes in area allocations take place the land use pattern will achieve the most advantageous balance for the community. These acreages should provide more than adequate area for growth during the next 20 years.

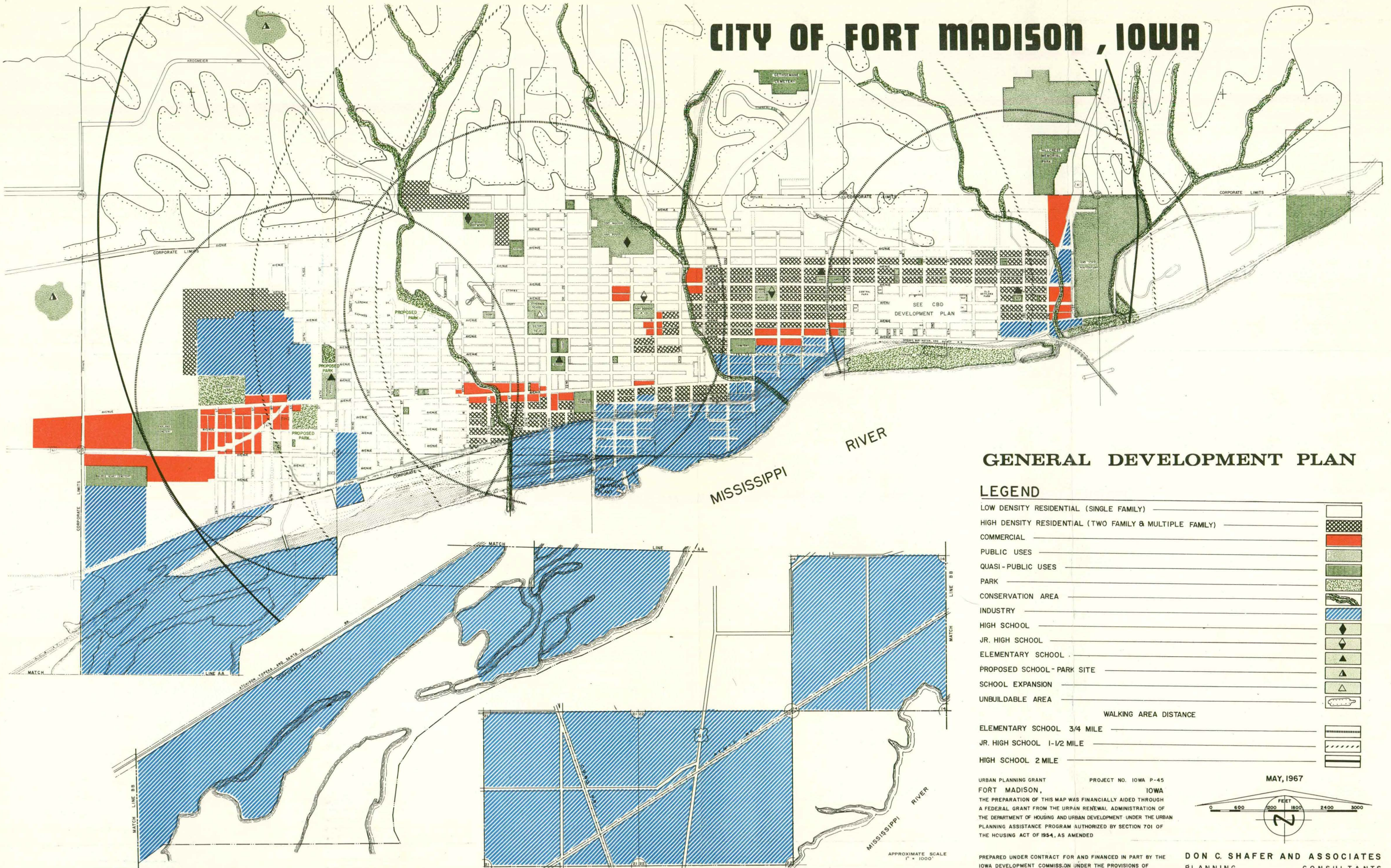
The projections contained in the Socio-Economic Factors for Planning report have been used in projecting the changes in land areas.

## RESIDENTIAL DEVELOPMENT

The Socio-Economic Factors of Planning report recommends a 1985 population to exceed 19,000 of which 17,600 people are estimated to live in households. It is estimated that the prison populations and the populations living in group quarters, such as retirement homes, by that time will amount



# CITY OF FORT MADISON, IOWA



## GENERAL DEVELOPMENT PLAN

### LEGEND

LOW DENSITY RESIDENTIAL (SINGLE FAMILY)	
HIGH DENSITY RESIDENTIAL (TWO FAMILY & MULTIPLE FAMILY)	
COMMERCIAL	
PUBLIC USES	
QUASI-PUBLIC USES	
PARK	
CONSERVATION AREA	
INDUSTRY	
HIGH SCHOOL	
JR. HIGH SCHOOL	
ELEMENTARY SCHOOL	
PROPOSED SCHOOL-PARK SITE	
SCHOOL EXPANSION	
UNBUILDABLE AREA	

WALKING AREA DISTANCE	
ELEMENTARY SCHOOL 3/4 MILE	
JR. HIGH SCHOOL 1-1/2 MILE	
HIGH SCHOOL 2 MILE	

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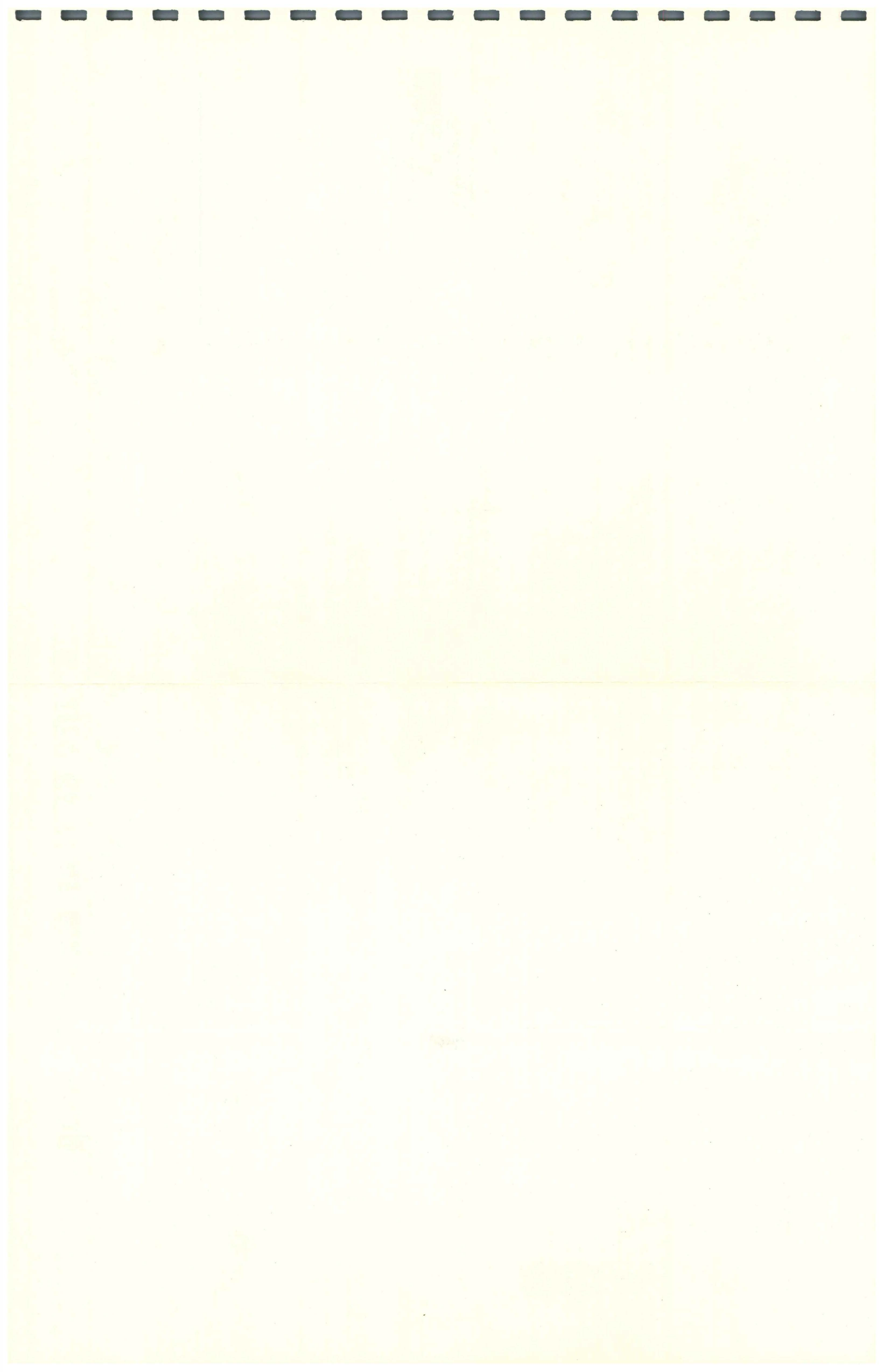


PREPARED UNDER CONTRACT FOR AND FINANCED IN PART BY THE IOWA DEVELOPMENT COMMISSION UNDER THE PROVISIONS OF CHAPTER 28, CODE OF THE STATE OF IOWA AS AMENDED.

**DON C. SHAFER AND ASSOCIATES**  
 PLANNING CONSULTANTS  
 4526 CONCORD LANE  
 SKOKIE, ILLINOIS

APPROXIMATE SCALE 1" = 1000'  
 SOURCE: PLAT MAP - CITY MARCH, 1968







to 1,400 persons .

In view of the foregoing analysis, it is estimated that by 1985 Fort Madison will have about 5,860 to 5,870 households vs. about 4,600 in 1960.

In the Comprehensive Plan prepared for the city in 1960, it was estimated that the population of Fort Madison would reach 25,000 in 1980. A more conservative estimate for 1980 was 18,000 however, it was thought that the 25,000 projection may be more nearly correct.

Low Density Residential Areas: The predominant residential land use in Fort Madison, as in most cities, is in single-family homes or low density residential land in Fort Madison was devoted to residential use. This represents 679.5 acres or 19.3 percent of the total developed area of the city.

The direction of growth and development of Fort Madison as indicated in the comprehensive plan would be to the west, northwest and north. Any growth to the north or northwest would be limited due to extreme topographic conditions. Growth on higher elevation to the north of the city may have to have a separate water and sewer systems.

The predominant growth area will be to the west stringing along the Mississippi River as has been the past trends.

The future residential developments should be uninterrupted except for areas where grades are too steep to be economically developed and for intervening public and semi-public.

Medium Density Residential Areas: The areas shown on the General Development Plan for Medium Density Residential development are generally located westerly from the central business district, between Avenues D and H on the north and south respectively and 11th to 15th Streets. Other medium density areas are proposed near industry or areas that have been previously zoned for their residential use.

The medium density residential areas would include two-family housing units, although from a zoning standpoint single-family structures are a permitted use in such areas.

The medium residential areas would provide transitional land use as buffers between the CBD and also between single-family and industrial area. Future development in the area will consist of the conversion of older larger single-family structures into two-family dwellings and in the construction of new two-family housing units. New two-family construction on vacant lots and on lots left vacant by the removal of substandard residences can be expected to increase during the planning period to fulfill the demand for rental housing.



SCALE IN FEET  
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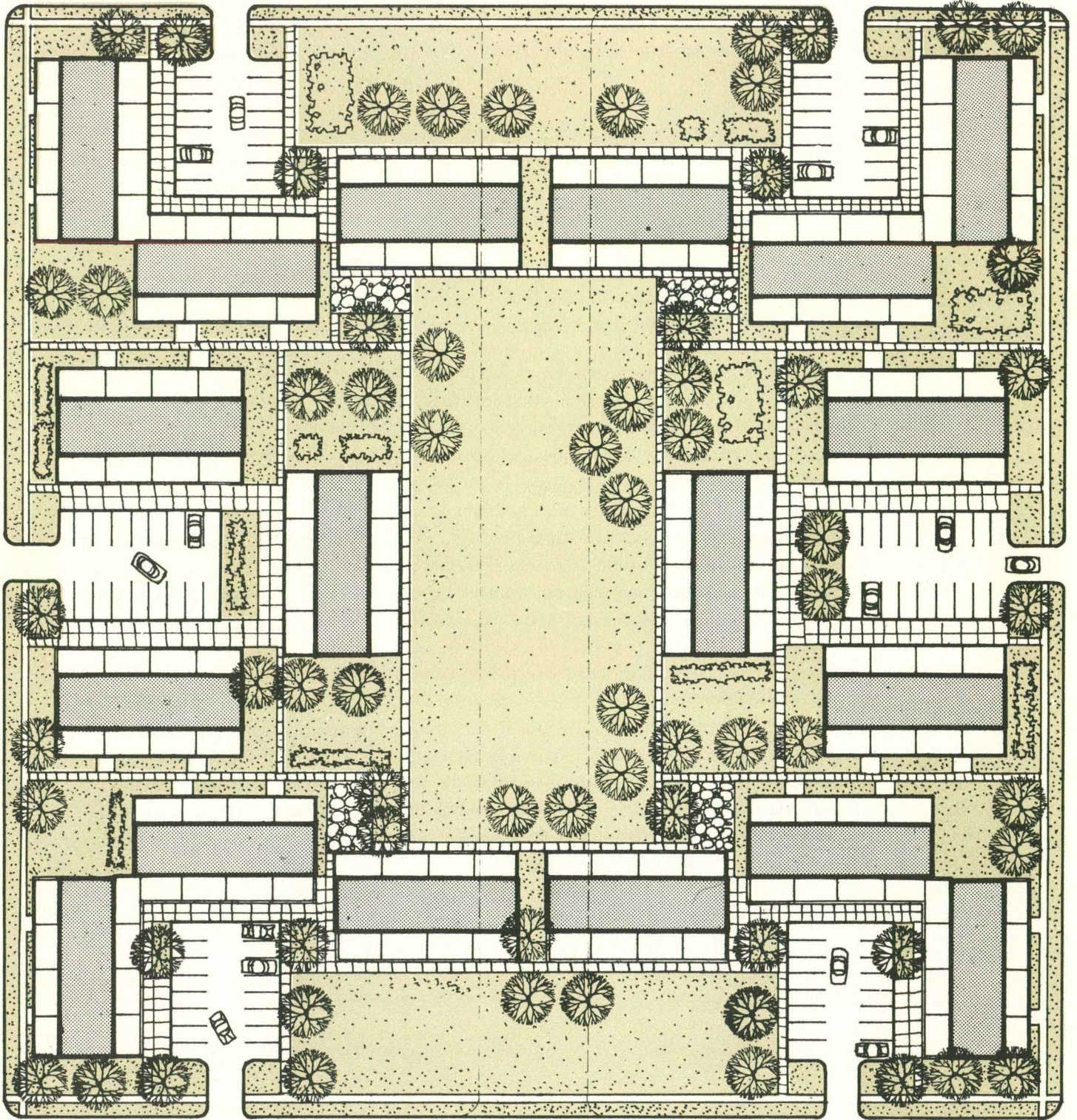
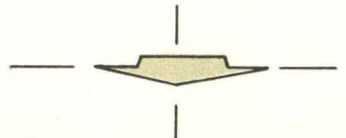


EXHIBIT 8

# TOWNHOUSE DEVELOPMENT

SUGGESTED



High Density Residential Areas: High density residential development can be expected to take place in Fort Madison. The increase in the demand for multiple-family development will be the result of a number of factors -- the need for retirement housing, the demand from single persons such as school teachers and nurses for suitable housing, and from young married couples who can not yet afford homes.

Multiple-family development are an important asset to the community in that they provide the highest per acres income, including returns from real estate tax, motor fuel tax and sales tax. Multiple-family developments require less city services per capita than other residential developments.

The prime high density area surrounds the central business district on the north, east and west which acts as a buffer to the central business district.

Other high density areas are located between Avenue L and M and 14th and 21st Streets as a buffer area near existing industry.

The medium and high density land uses, in addition to providing a buffer or transitional land use between the central business district and the low density residential uses, will also increase the gross sales of the trade center and further assist in developing its core area.

## COMMERCIAL DEVELOPMENT

The commercial uses as shown on the General Development Plan for Fort Madison have been divided into four general categories:

- Primary retail and service business, including the central business district and a variety of uses normally associated with it
- General Business, including retail and service
- Service and wholesale uses, including such uses as agricultural implement sales and services, book binding, building materials sales, etc.
- Highway oriented business, including those uses normally found along primary and secondary thoroughfares, such as automobile service stations, motels, garages, building equipment sales, farm implement stores and garden supply stores

Uses outside the central business district must be limited to highway oriented types providing special services or goods to the customers, except in some instances where neighborhood convenience centers have their role in providing local residents with daily incidental goods and services. Any new

retail outlets in the peripheral areas along U.S. Routes 61 and Iowa Routes 88 and 103 should be discouraged because they would only inhibit the proper development of the central business district.

The retail business picture of Fort Madison looks good for the years to come. The estimated 1985 population of 19,000 and projected gross retail sales volume of 36.4 million dollars will set the stage for a healthy business climate. To meet this increase in retail sales, an estimated 605,000 square feet will be required by 1985.

At the time of the land use survey the city had 1,005,240 square feet (15.7 acres) in the city and 321,240 square feet (7.3 acres) concentrated in the central business district.

The sales area covers about 70 percent of the total store area, therefore, the city had 703,668 square feet of retail space at the time of the land use survey. There is a difference of 183,668 square feet difference between existing and recommended for 1985. The difference between existing and recommended amount of retail space including vacant space and the over amount of retail space not needed to accommodate the projected population. There are also small non-conforming retail uses and structures within the city which have been in existence for many years, prior to the adoption of the zoning ordinance and district map.

Based on a comparison of existing floor area the central business district accounts for approximately 47 percent of all the retail sales volumes of the city. Efforts should be made to increase this ratio. If the central business district is improved, with emphasis on adequate parking and sound modernized structures, the main business district can capture a minimum of 55 percent or more of the retail business.

The General Development Plan shows the location of all business areas. The main business areas other than the CBD are located on Avenue L between 23rd and 27th Streets, also between Avenue L and U.S. Route 61 and 40th Street and between Avenue L and the Sacred Heart Cemetery south of U.S. Route 61. The business areas other than the CBD are general, highway oriented, service and wholesale uses.

Future convenience centers are not shown except where they now exist. These existing centers are old and not complete as to the truly neighborhood uses located along U.S. Route 61. As the city develops and the need arises for such convenience shopping uses, they can be included in the designated highway oriented area because they are actually a part of a suggested neighborhood. Proposals for development of the neighborhood convenience areas should be presented to the Planning and Zoning Commission with supporting data as to its needs.

The areas shown on the General Development Plan should be more



than adequate for the commercial need of Fort Madison through the planning period.

## INDUSTRIAL DEVELOPMENT

The industrial climate in Fort Madison has been greatly improved in recent years through the development of an industrial park located approximately five miles west of the principal corporate limits.

The industrial economy in the planning area consists of manufacturing industries, railroads, utilities and similiar organizations. As pointed out in the Socio-Economic Factors for Planning report such organizations employ more than 3,900 people.

State legislation permitting municipalities to issue revenue bonds for construction of facilities for corporations, large and small, greatly helped the city in the location of a large industry within the corporate limit. There are 40 states that have much legislation so this will not be the stimulus for communities within Iowa to be the recipient of new or expanded industry.

According to the plan that was prepared during 1958-60, a 50.8 percent increase in industrial area including railroads was projected to be reached by 1980, assuming an estimated population of 25,000.

The surveyed and up-dated plan projects an increase of industrial area of 89 percent by 1985 based on a projected population of 19,000. The projected industry should be of both the light and heavy classification.

The land projected for industrial use is served by various types of product carriers such as water, rail and highway.

## UTILITIES

Over the past several years the city has had prepared studies of the water system.

As the result of studies of the Fort Madison water system made over the past 11 years, the following conclusions are drawn:

1. Peak daily demand will reach 4.0 m.g.d. by about 1975.
2. The present treatment plant is not able to supply this demand due to inadequate electric supply and inadequate treatment prior to filtration.

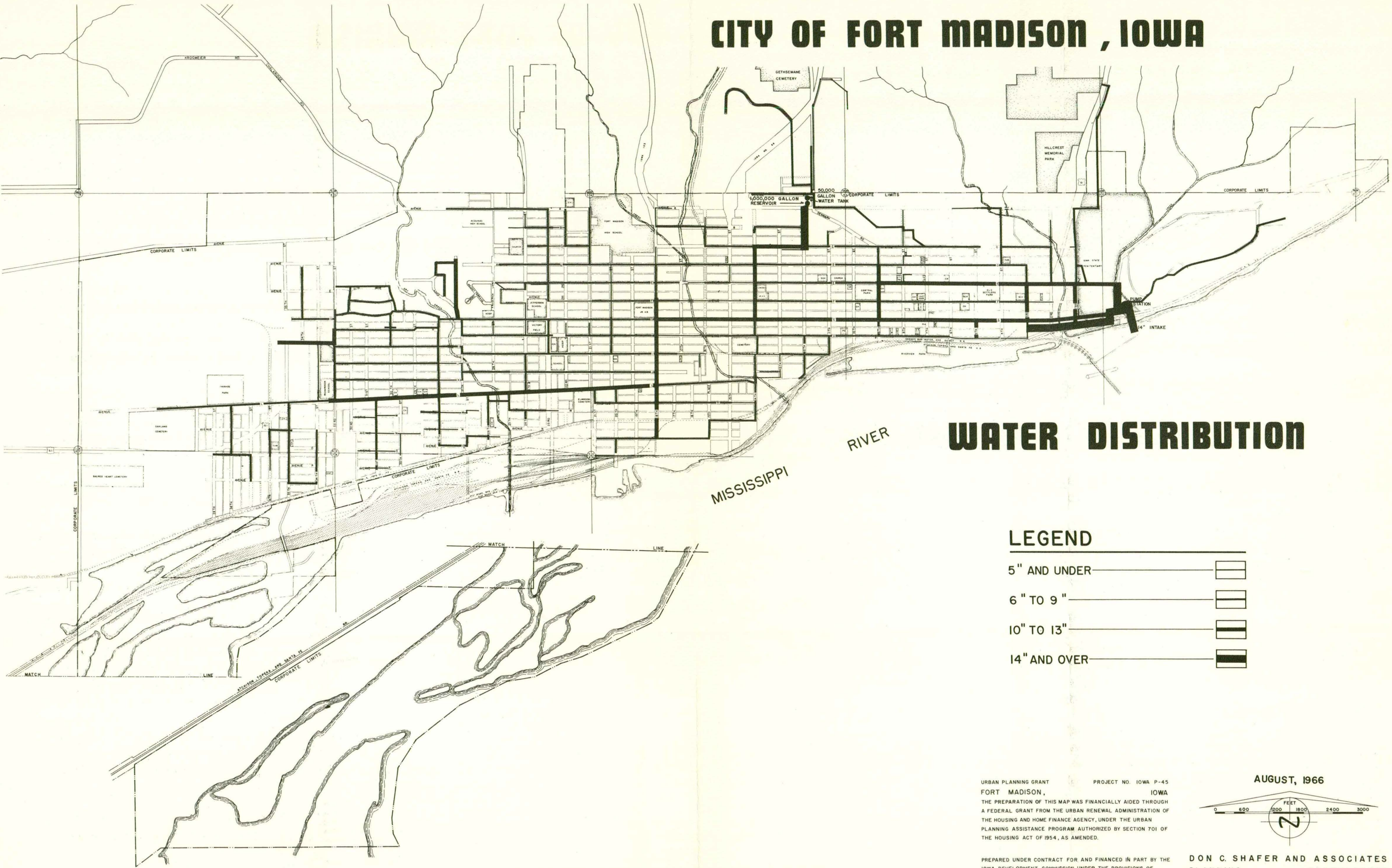
3. The existing settling basin is in unsatisfactory structural condition and is in urgent need of repair.
4. Clear well storage is sufficient for a 45 minute supply at a demand rate of 4.0 m.g.d. This is inadequate.
5. High service pumps have inadequate standby capacity and cannot rapidly be reprimed. There is no high service supply in the event of a power failure.
6. Failure of the suction line between the river and the river and the treatment plant would put the supply out of service for a considerable time.
7. The treatment plant is located on or near the edge of extensive sand and gravel deposits which underly Fort Madison. Water from this source may contain iron and manganese which would require treatment. Provision of a well close to the existing plant would facilitate treatment, afford a standby supply and provide better water quality at times when river water is difficult to treat.
8. The existing distribution system cannot supply water for fire fighting to the western half of the city at adequate residual pressure.
9. Existing high storage capacity is less than that recommended by American Insurance Association standards.
10. The total estimated project cost of all improvements required to establish an assured 4.0 m.g.d. supply is \$774,000.

Projected recommendations are as follows:

1. A new treatment plant containing two up-flow basins having a capacity of 3 m.g.d. each with new chemical feeders and bulk chemical storage equipment will be in a new building to be built immediately north of the existing basins with provisions made to utilize the existing rapid sand filters. This will provide the city with a capacity of 6 m.g.d.
2. A 500,000 gallon above ground storage tank will be built north of the new treatment facilities and will serve the dual purpose of providing filter wash water and a clear well for the high service pumps.
3. A new 1,200 g.p.m. high service pump will probably be installed but the gasoline auxiliary drive will be put on



# CITY OF FORT MADISON, IOWA

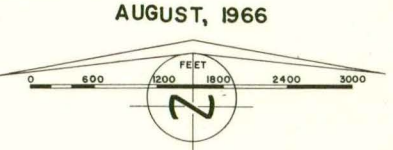


## WATER DISTRIBUTION

### LEGEND

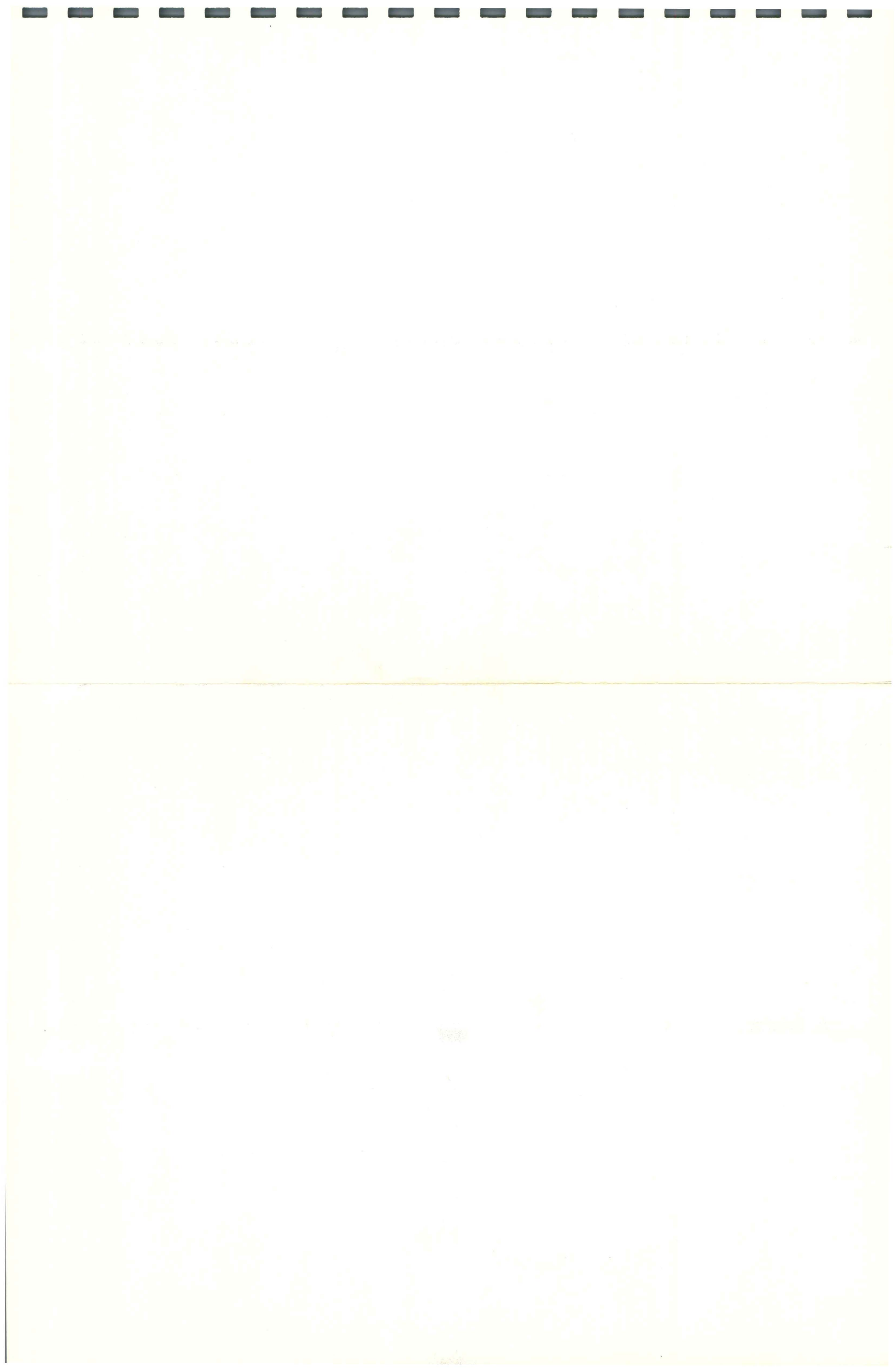
5" AND UNDER	
6" TO 9"	
10" TO 13"	
14" AND OVER	

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 SKOKIE, ILLINOIS





one of the existing high service pumps which has provisions for such a connection .

4. Extensive additions to the distribution system west of 14th Street in adequate size to serve the present and also the future, and a two million gallon storage reservoir will be built on the hills north of the west part of the city .
5. The above improvements are to be started in 1968 and operative in part by the summer of 1969 and completed by the end of this calendar year .

Source: Fort Madison Municipal Water Works, May, 1968 .

## CENTRAL BUSINESS DISTRICT

### INTRODUCTION

The central business district has been the concern of the city for many years. In 1947, a report entitled "Improvement and Development Program Recommended for the City of Fort Madison by the Mayor's Civic Planning Committee" pointed out the problem of the CBD and made recommendations as to remedies that should be undertaken .

The report stated, " It is highly important that every town be kept abreast of the times and reflect the true aspects of the community and the people within it...We are also desirous of keeping our facilities at the highest possible standard, which will go far toward influencing our local people to spend their time and money at home. This is only good business. It is also a responsibility we have to the people of Fort Madison and to the community, for a city or town is often judged by the appearance of its business district ."

As to remodeling store fronts the following was noted: "We cannot overemphasize the importance of remodeling or dressing up store fronts where needed. This is probably the finest and most profitable type of advertising that a business firm can do in addition to being a real contribution toward making a more attractive business district. A clean, good-looking modern store front will induce many more people to come into a place of business. In short, the merchant's store front portrays the type of establishment he operates ."

"In summarizing we make the following recommendations, all of which we classify as "urgent":

1. Rebuild store fronts where needed to reflect a harmony in

modern architecture;

2. Clean and repaint those buildings needing same;
3. Rebuild lighting systems;
4. Improve the parking condition by clearing alleys;
5. Provide waste paper receptacles;
6. Establish a permanent business district planning committee in the Chamber of Commerce."

## PARKING

The central business district is the focal point for much of the traffic generated within the city and its environs. It is usually necessary for this traffic to stop for some period of time after reaching the central business district. Therefore, in addition to making the central area accessible to this traffic, it is also necessary to provide adequate parking facilities.

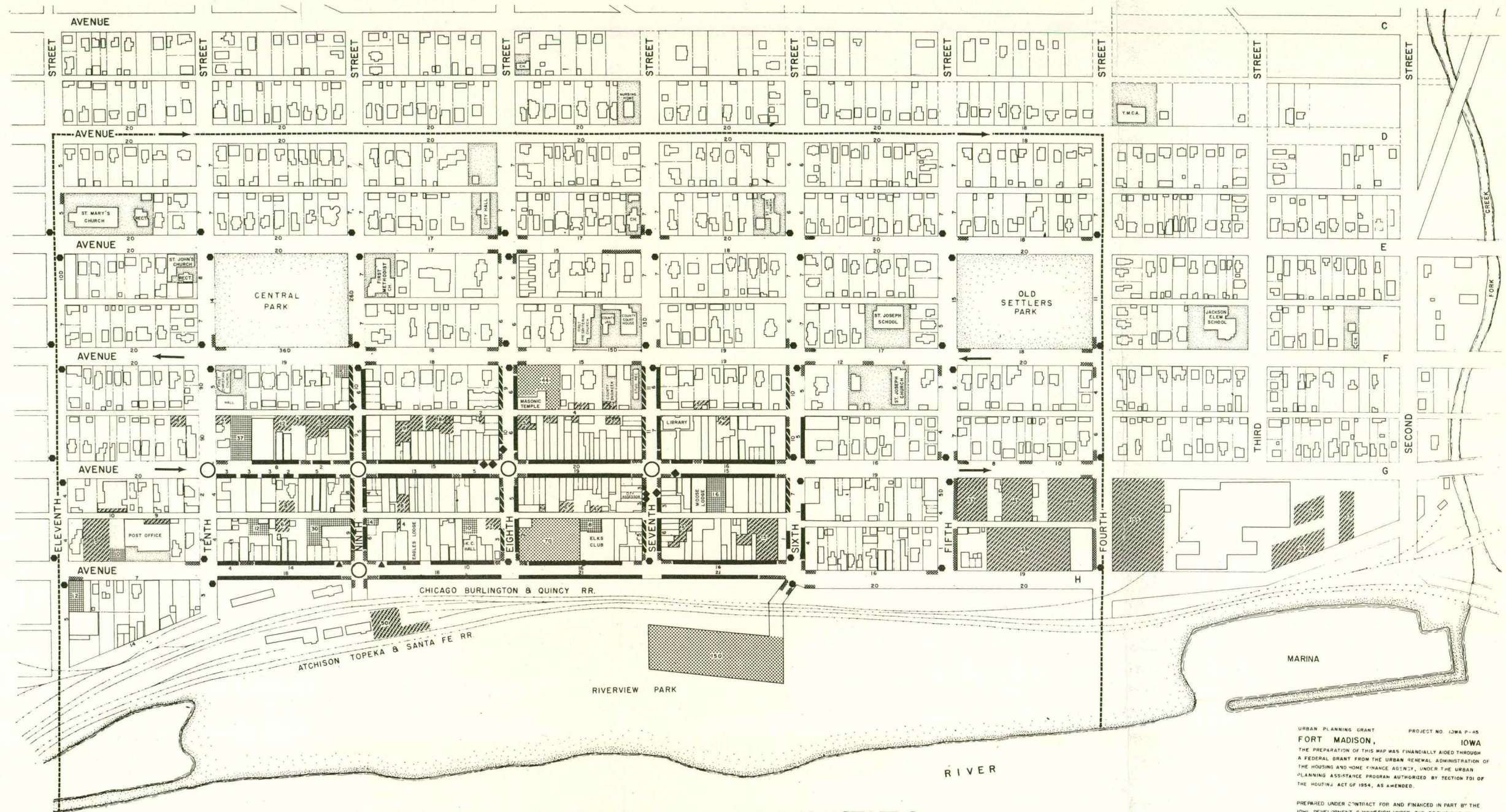
Three general types of parking needs must be satisfied. Parking space must be provided for the short-time parker, or brief stop customers, typically parked for only a few minutes to purchase one or two articles or to avail himself of some simple service. He may not stop if he must walk more than one block. To attract this customer, parking space must be provided either off or on-street close to his destination. The medium time parker, or the average shopper, requires from one to two hours of parking time to make his purchases, which very likely constitute the bulk of the business district sales. He may seek a competitive business center if he must walk more than 400 to 500 feet from any parking facility to his destination. These shoppers must be provided with conveniently located parking space preferably not more than two blocks from the main shopping area. The long-term parker, or all-day parker, is usually an employee in the central business area. He desires convenient parking space and prefers to pay little or nothing for the privilege of parking in the central business district. This parker should be positively kept out of the spaces provided for both the short and medium time parkers. To accommodate him, attractive parking facilities must be provided on the fringe areas of the central business district with little or no fee for eight to 10 hours of parking.

A parking problem exists when customers or employees are unable to find parking space sufficiently near their destinations to suit their convenience. This parking problem may be caused by the lack of adequate space, or by inconvenient space. Thus, in providing parking space in the central business district, it is necessary not only to provide the space but also to educate the parker so that the space may be efficiently utilized.



# CITY OF FORT MADISON IOWA

## CENTRAL BUSINESS DISTRICT



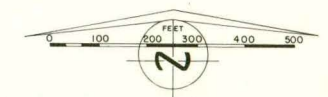
### EXISTING PARKING FACILITIES

#### LEGEND

FOUR WAY TRAFFIC LIGHT		2 HOUR METERED PARKING	
STOP SIGN		2 HOUR METERED DIAGONAL PARKING	
NO PARK ZONE		EMPLOYEE PARKING	
10 MINUTE METERED PARKING		CUSTOMER PARKING	
12 MINUTE METERED PARKING		PUBLIC PARKING	
ONE-WAY STREET		STUDY AREA BOUNDARY	

URBAN PLANNING GRANT PROJECT NO. IOWA P-45  
 FORT MADISON, IOWA  
 THE PREPARATION OF THIS MAP WAS FINANCIALLY AIDED THROUGH A FEDERAL GRANT FROM THE URBAN RENEWAL ADMINISTRATION OF THE HOUSING AND HOME FINANCE AGENCY, UNDER THE URBAN PLANNING ASSISTANCE PROGRAM AUTHORIZED BY SECTION 701 OF THE HOUSING ACT OF 1954, AS AMENDED.

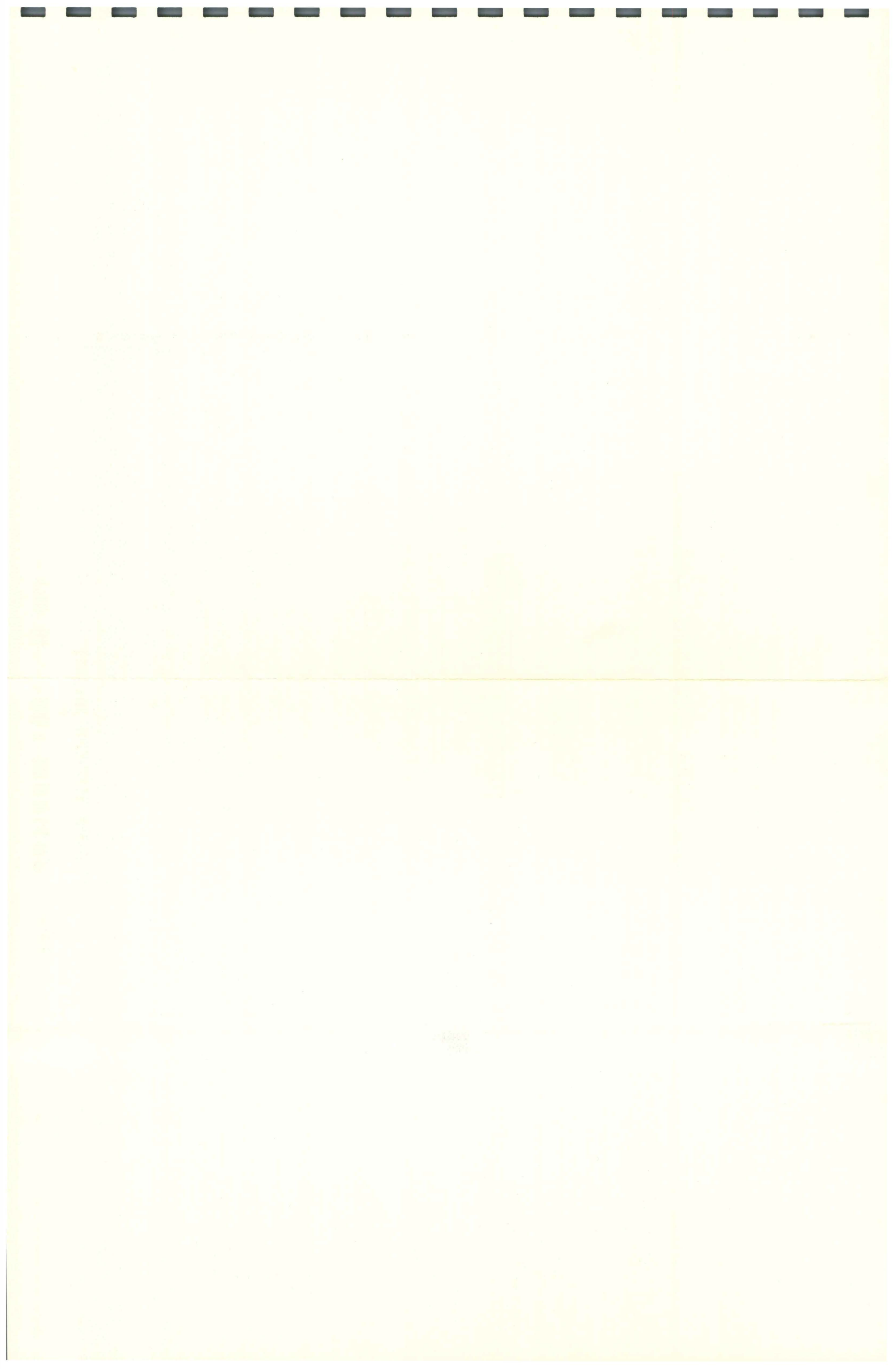
PREPARED UNDER CONTRACT FOR AND FINANCED IN PART BY THE IOWA DEVELOPMENT COMMISSION UNDER THE PROVISIONS OF CHAPTER 24, CODE OF THE STATE OF IOWA AS AMENDED.



MARCH 1966

DON C. SHAFER AND ASSOCIATES  
 planning consultants  
 4526 CONCORD LANE SKOKIE, ILLINOIS







An inventory of the existing parking facilities in the Central Business District was taken in March 1966. This information is shown on the Central Business District Land Use and Parking map and is summarized on page 106. The total number of on-street spaces in the CBD is 1,802 of which more than 70 percent are unmetered. The number of off-street parking, both private and public spaces, is 971, with the total for both categories being 2,581.

In estimating the number of spaces necessary in the CBD by 1985, a ratio of car spaces to floor area was used. The following ratios were used: for retail business - a ratio of four cars per 1,000 square feet of floor area; for personal services - a ratio of three cars per 1,000 square feet; and for office space - a ratio of two cars per 1,000 square feet. Based on these ratios and in order to maintain a healthy business district, it is estimated that a total of approximately 2,000 to 2,300 parking spaces will be needed in the CBD by 1985.

#### CENTRAL BUSINESS DISTRICT EXISTING PARKING

Type of Space	No. of Spaces	Percentage
On-street metered:		
10 minute	2	.1%
12 minute	8	.3
2 hour	458	16.4
Unrestricted	<u>1,334</u>	<u>48.1</u>
Total on-street	1,802	64.9
Off-street parking:		
Private customer and employee	707	25.5
Municipal	<u>264</u>	<u>9.6</u>
Total off-street	<u>971</u>	<u>35.1</u>
Total All Spaces	2,773	100.0%

Source: Don C. Shafer & Associates  
Parking Survey, March 1966.

The total 1985 requirement includes both public and private on-street parking. A portion of the estimated space needed by 1985 for parking will be provided by individual office or retail development, but a majority of the space needed will require increased effort on the part of the city in pursuit of their off-street parking program.

## CENTRAL BUSINESS DISTRICT DEVELOPMENT PLAN

The Central Business Development Plan for Fort Madison reflects a planned principal business area which it does not have at this time. This lack of a planned central business district is not unique in many other cities and villages the size of this city and larger and/or smaller.

It is the horizontal spread of old, small front, unuseable buildings that makes the CBD look so "run down" and unattractive.

The Central Business District Development Plan may appear extreme, as it must be if the city is to retain and attempt to capture the retail dollars that are being lost elsewhere. The city has not had a comprehensive plan of redevelopment prepared for the CBD, therefore, any plan of the future may appear extreme because nothing exists in order to make an adequate comparison of extremes.

The plan is designed to consolidate business land uses such as retail, office and service into fewer buildings with structures to be verticle instead of horizontally spread out with a mass of small front stores.

Perhaps one of the most pressing problems in the downtown area is its dispersion of land uses. This lack of compactness not only tends to discourage pedestrian movements but also creates visual unattractiveness.

The importance of compactness cannot be over-emphasized. Concentrated locations of functionally similar uses permit shorter walking distances. This is significantly important in the "Retail Core." The location of numerous non-retail uses in the "Core" interrupts the continuity of shopping frontages and lengthens walking distances.

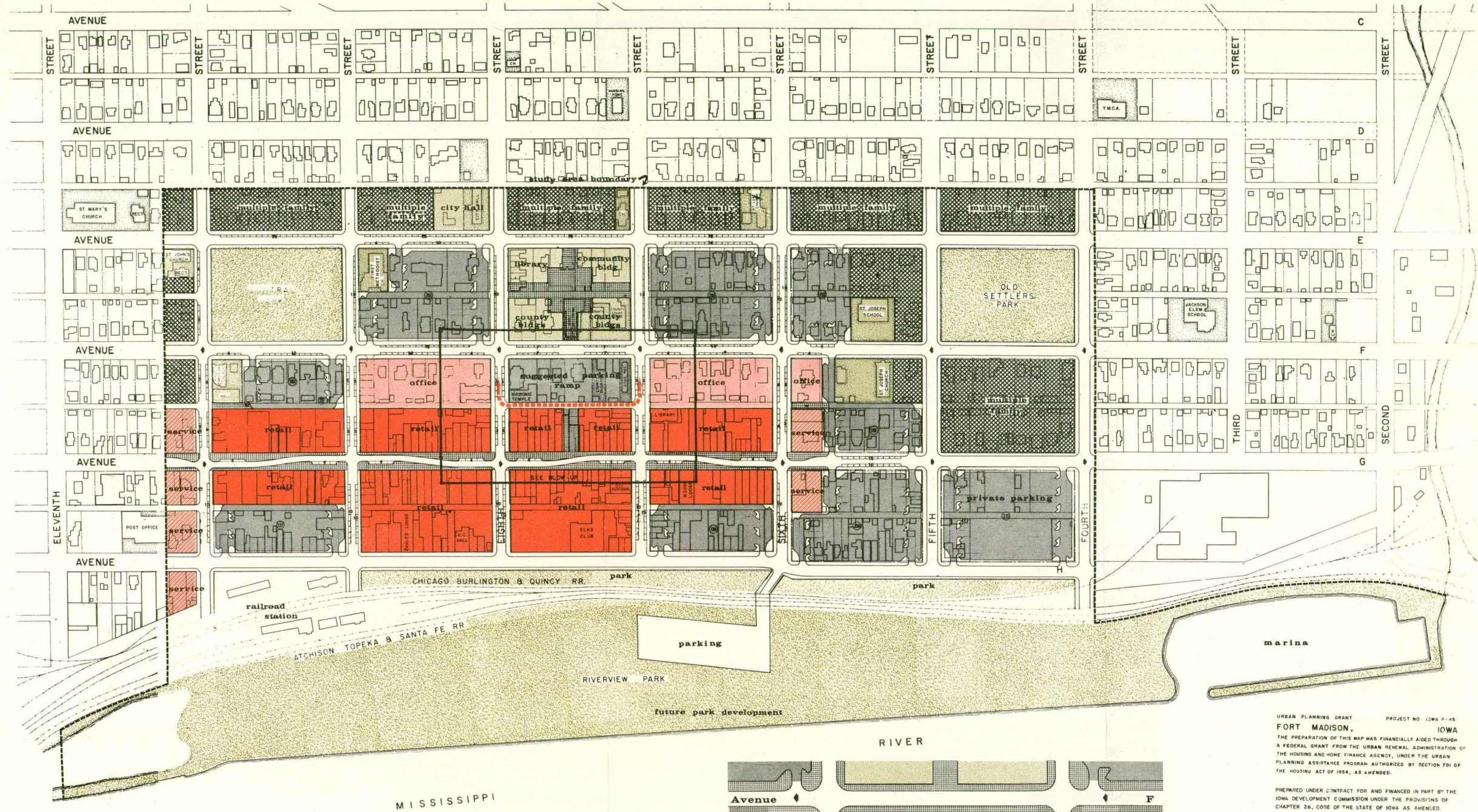
Compactness encourages the development of centralized transportation facilities. Similarly, centralizing features should be encouraged to maintain compactness. Major retail and office buildings serve as centralizing features.

In consolidating land uses many square feet of land area can be put to greater retail sales space because of the removal of all the unnecessary



# CITY OF FORT MADISON IOWA

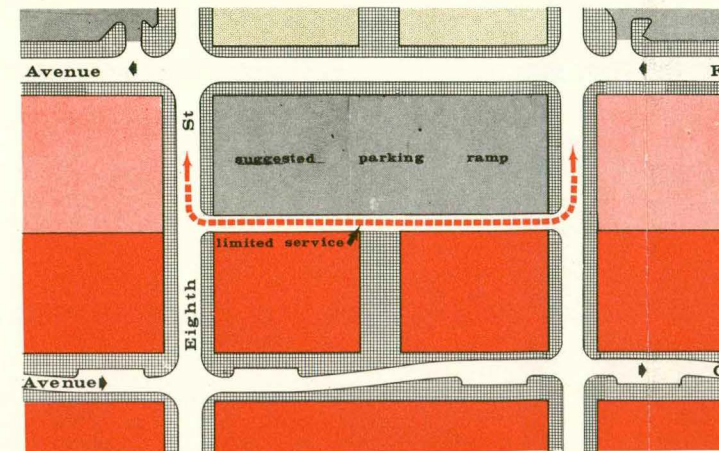
## CENTRAL BUSINESS DISTRICT



### DEVELOPMENT PLAN

#### LEGEND

MULTIPLE FAMILY		QUASI-PUBLIC USE	
RETAIL BUSINESS		ON STREET PARKING	
OFFICES		OFF STREET PARKING	
SERVICE BUSINESS		ONE-WAY TRAFFIC	
PUBLIC BUILDINGS		MALL	
PARKS		SPECIAL STUDY AREA BOUNDARY	



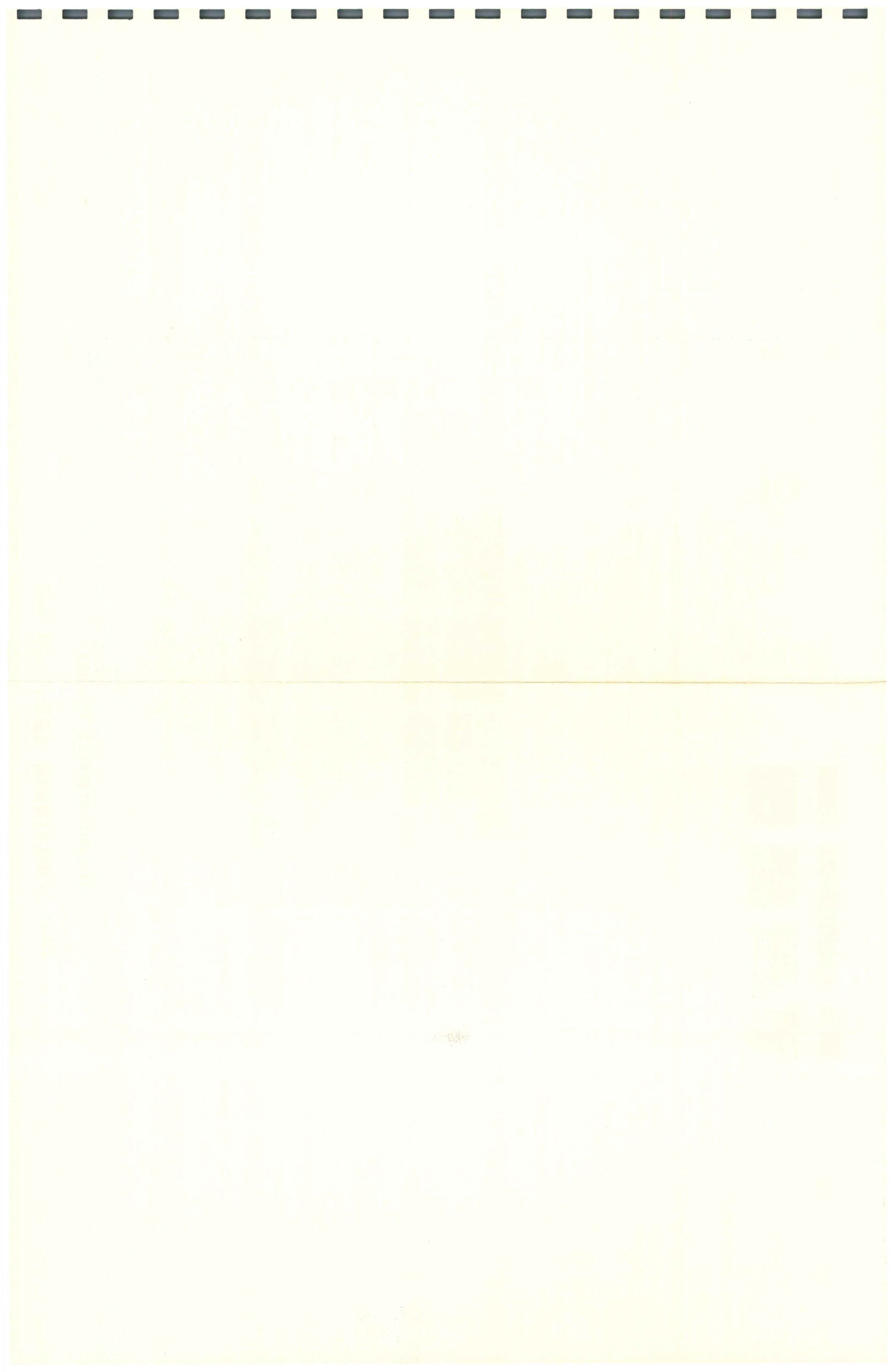
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PREPARED UNDER CONTRACT FOR AND FINANCED IN PART BY THE IOWA DEVELOPMENT COMMISSION UNDER THE PROVISIONS OF CHAPTER 26, CODE OF THE STATE OF IOWA AS AMENDED.



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 4526 CONCORD LANE SKOKIE, ILLINOIS







walls supporting small store fronts. This concept is followed in the development of regional shopping centers.

This is a plan that can be envisioned if leadership and fortitude is expressed by the city of Fort Madison. It must be a united effort, not something that attempted by only a few. This requires the development of an action program with enough local enthusiasm and vision to ultimately accomplish the plan.

More than any other portion of the city, the CBD will demand re-development in order to maintain its position as the primary business and financial center of the area. More than any other specific project, the successful revitalization and stabilization of the CBD will contribute to the economic well being and continued identity of the city of Fort Madison.

The Central Business District Development Plan shows generally the proposed redevelopment of this area to provide a better and more compact arrangement of space, improved circulation, increased attractiveness, and additional parking. Future expansion of retail and service business activities in the CBD should be promoted in the existing core area of the city through clearance of existing substandard retail structures and the rehabilitation of those that are deteriorating. Rehabilitation of buildings should not be limited to just remodeling the front. The entire structure should be improved, including the rear of the building with provisions made for walkways, service drivers, and rear entrances.

Fort Madison as recognized is a river town therefore, the redevelopment plan should reiterate this and the redesign and redevelopment could be undertaken using this concept. This may be a novelty but such novelties are being used elsewhere and are profitable. The use of gas lamps for public streets and in Riverview Park would fit with such a river town concept and could replace electric street lights.

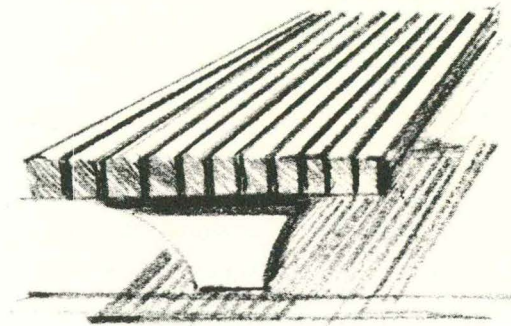
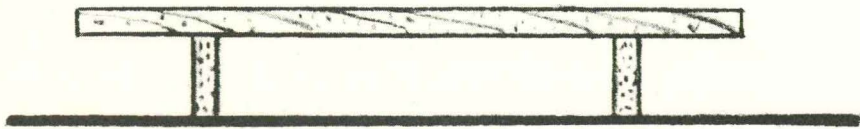
Prime retail outlets are not the only uses in the CBD. Other uses are government buildings both city, county and federal, commercial recreation, some service business and high density residential land uses. Fort Madison fortunate in having two public parks within the delineated CBD. These are passive, not active recreational parks, and they should remain so. Future development in the CBD will make these parks even more useful.

Since the city is anticipating improvements of the city hall to make it more efficient and useful for this present population and for future government uses a new area is not recommended. The city hall will expand to the west and utilize land area that presently has a old structure on it. Therefore, the city hall is northwesterly and across the street from the proposed public service land use block consisting of a new library, county buildings and a community center.



EXHIBIT 9

SUGGESTED  
STREET  
FURNITURE





Riverview Park which parallels the Mississippi River is considered the front yard and the aesthetic green belt of the CBD.

With the exception of a build-up of freight trains parallel to Avenue H the park and river is always visible as one travels south on the north-south streets from 5th to 9th Streets inclusive.

The build-up of freight trains in the front yard of the CBD may be changed by the anticipated construction of new facilities by the Santa Fe Railroad in the near future which will be further west of the passenger station.

## CIRCULATION

The city initiated a one way street system as a recommendation made in the Comprehensive Plan for the city prepared during 1958-60. In preparing the General Development Plan for the central business district the vehicular circulation patterns were studied in conjunction with the Transportation Plan report published in September 1966.

Revitalization of the retail function in the business district requires a startling and dramatic treatment, completely changing the character of the present area. Consequently, the plan recommends a "Pedestrian Plaza" along Avenue G between 6th and 10th streets. This would not be a complete mall however, the one way traffic would continue and there would be a limited amount of parking, and turnouts to pick-up and discharge passengers.

The sidewalks would be widened to handle the plaza affect including street trees, benches and planting areas, to provide an aesthetic experience so the shopper has a feeling of being wanted.

Development of a plaza separates the vehicular and pedestrian circulation thus providing a more leisure shopping atmosphere and creating an incentive for the property owners to improve their commercial structures.

Any specific plan would have to be designed for Fort Madison.

## COMMERCIAL

The retail area as shown on the General Development Plan is generally located between 6th and 10th Streets and Avenue H and the first alley north of Avenue G. This would be the planned prime retail core area.

The principal thoroughfare through the core area is Avenue G that is proposed for the development of a pedestrian plaza as previously discussed.

This street would become the magnificent avenue with new buildings and completely rehabilitated existing structures so improved to reflect a "New Orleans" gas light business area.

The improvement of aesthetic features in the downtown area will encourage investments and new construction. Improved appearance and a better selection of goods will encourage still more shoppers and the return of the shoppers now being lost to other cities, which in turn will stimulate business. Tax incentives given to owners improving their properties would help to develop a uniform agreed upon design. Future planning should encourage homogeneity of architecture and design.

Other possible improvements measures include the clearance of obsolete buildings and the stimulation of new construction and remodeling projects; new store facades, and the design of street furniture, litter receptacles, street and directional signs and lighting facilities.

Amenities such as plazas for relaxation and sidewalk cafes could be encouraged. These focal points of interest would serve to develop a distinctive personality for downtown Fort Madison.

#### OFFICE AND SERVICE COMMERCIAL

The planned office area is generally located between the retail core area and the public governmental service area. Such locations insure walk in trade for the retail core and adequate and close-in parking for occupants of the office area.

A community malled walkway between the governmental service area and the retail core provides for adequate and efficient pedestrian circulation between land uses and facilities. This also provides directness and protection as well for the pedestrian.

#### PARKS

The city and particularly the central business district is gifted by having public green space generally located at the three outside points of the principal business area.

The Old Settlers and Central Parks provide mainly for passive recreation and this should continue with concentrated physical improvements.

Riverview Park, which has a long history of development, is the grassed front yard to the central business district. The city should be duly



proud of what has been accomplished to date.

It is recommended that a landscape development plan be prepared for Riverview Park and that a full beautification treatment be provided to focus on the exciting aesthetic value which the park brings to the central business district and to the community as a whole. This park should only be utilized for passive recreation.

Federal money is available for the preparation of landscape plans and landscape improvements. Since partial financial assistance is available the city should file application for such assistance.

### ACTION PROGRAM

The following three point program is recommended as a point of beginning to carry out the plan for the central business district.

1. Adopt the Plan.

The General Development Plan of the Central Business District should be adopted by the Board of the Chamber of Commerce and by the Planning and Zoning Commissions and the City Council so that the plan becomes official. The plan would be a part of the updated Comprehensive Plan of the city which in total represents the official development plan for the city. This would give official recognition to the plan and establish it as the generally agreed upon objective for the redevelopment of the downtown area.

2. Code Enforcement.

Fort Madison should undertake building inspection in order that it may progressively inspect all of the downtown buildings and notify property owners of all instances in which existing buildings do not conform to the code, and instances in which remedial action is required. Some of the buildings are in such a poor condition that enforcement of the code should bring about their removal.

An adequate code enforcement program will require city personnel. This will necessitate an increase in the city's budget for this department. Enforcement of the code provisions and removal of dilapidated buildings would have the further effect of reducing the cost of redevelopment of these areas. It will make it easier to assemble sites for new buildings at a reasonable cost.

### 3. Function as a Shopping Center.

A central business district must be operated like a shopping center in order to develop and maintain the necessary commercial vitality. This requires that:

- Small land holdings be consolidated into larger ones in order to meet modern store operating needs;
- The central business district area be compact to better accommodate the pedestrian shopper or visitor; and
- It be hospitable in order to serve as the focal point not only for the community's center functions, but also for regular leisure time pursuits.

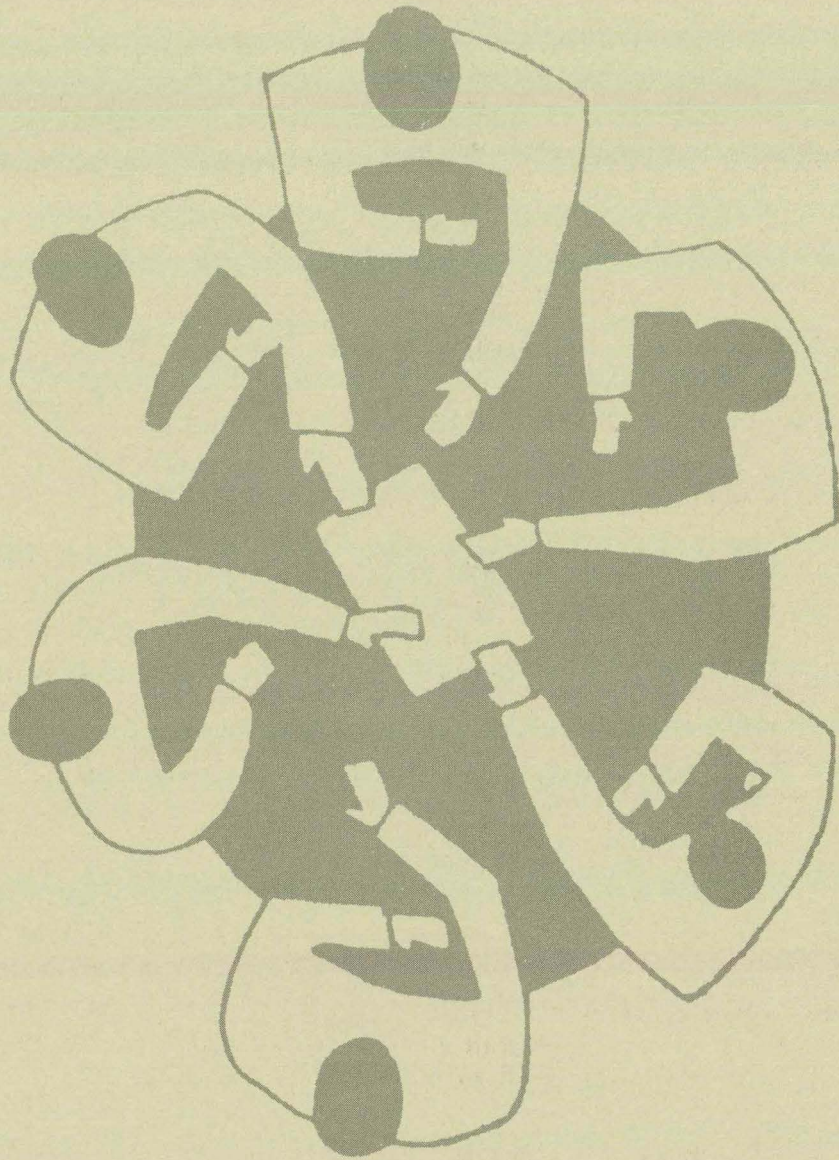
If the question of revitalizing downtown Fort Madison can be discussed in terms of dollars and cents or in terms of benefits, quality, and prosperity. The price for the improvement program is high, although not as high as the cost will be in five or 10 or more years. The benefits of a downtown improvement program are not just to the interests in the downtown area--a merchants land, land owners - but to the entire community. A revitalized, healthy, prosperous downtown Fort Madison, developed with imagination, will attract new growth from a considerable distance away from Fort Madison and this will benefit the entire community.

The plan calls for numerous improvements that should be made over the next few years. Key elements that will stimulate these activities are the program to improve the parking situation and the construction of the pedestrian plaza on Avenue G. Once these projects are implemented, rejuvenation of the area will follow.

As growth takes place and the areas redevelop various portions of the plan suggested herein will undoubtedly be changed and modified. The downtown plan, as a part of the overall planning of the community, should not be looked upon as a one-time activity but as representing only the latest and best thinking that we now have to apply to this area. Succeeding groups, individuals and generations will contribute new ideas and will be able to improve the plan and program. But a start must be made now to reverse the cycle of deterioration and decline.

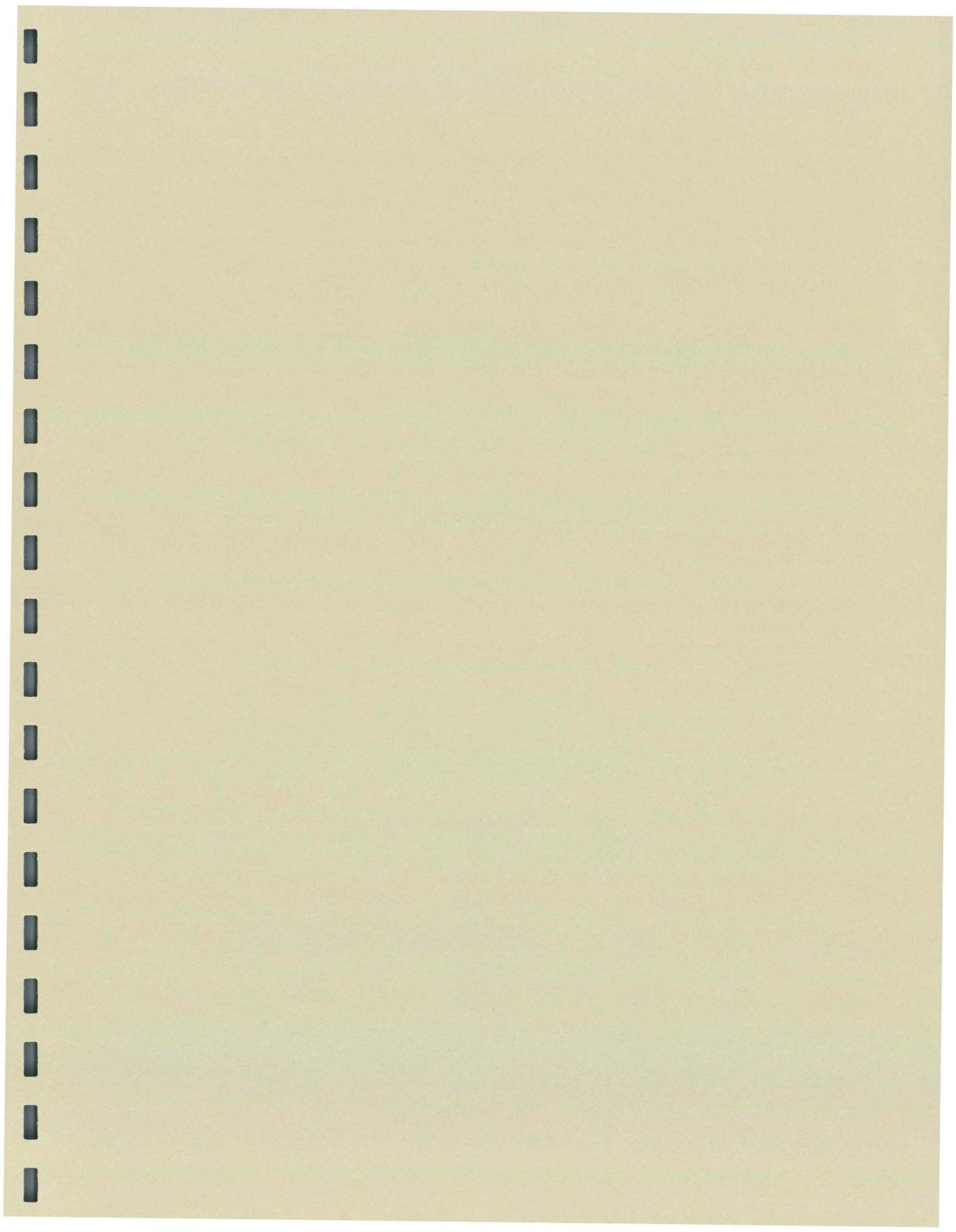
If the downtown plan is to have meaning, its policies must be continuously followed. It is not the exact detail of every recommendation that must be carried out, but attainment of the plans general objective is essential to the development of an improved downtown Fort Madison. The plan suggests ideas and concepts rather than rigid specifications, and portrays a practical design, requiring implementation by both private developers and public agencies.





**PART FOUR**  
**IMPLEMENTATION**  
**AND**  
**ADMINISTRATION**







## IMPLEMENTATION AND ADMINISTRATION

Planning is a benefit to a community in that it enhances the aesthetic values and protects property values through progressive regulations of physical development. It establishes desirable standards for such basic community amenities as public utilities and schools as well as recreational and cultural facilities. It minimizes friction between the residential and economic functions of the community through guidance and control of land use and traffic circulation, thus promoting a more healthy, safe and enjoyable community environment. It can aid in stabilizing and stimulating the economic base by providing an inventory of strengths and weaknesses in the local economic and physical structure. Most important, it sets out a comprehensive but flexible blueprint of feasible and desirable goals, thus helping to organize and concentrate the drives for betterment which are present in every community.

### THE OFFICIAL PLAN

The basic tools for the guidance of physical development in Fort Madison are the General Development Plan and the Cental Business District Development Plan and the Transportation Plan. These plans outline the proposed thoroughfare systems and the general pattern of land use. They include all planning proposals considered in relation to present and anticipated future conditions and organize them into a logical, coherent plan for the future growth and development of the community.

The development plans, though serving as a guide for future development of the community, have no binding force in accomplishing the planning proposals. They must be supplemented by regulatory ordinances and local initiative in construction and developmental activity, both public and private. If such forces influence and direct the evolution of the community in accord with the basic concepts of the development plans, a compatible and complementary arrangement of land uses, an efficient thoroughfare and traffic control system, and a generally better community environment can be achieved.

The first step towards realizing these goals must be taken by the City Council. The plans and text included herein shall be adopted as the Official Development Plan of the City of Fort Madison, Iowa. This action gives legal status to the development plans and recognizes them as a proper basis on which other legislation and public action relating to city development should be predicated. The development plans have already been used as the basis for the implementing recommendation prepared as part of the planning program--the land use recommendations. This report is a integral and essential part of the updated comprehensive planning program.

## LAND USE RECOMMENDATIONS

The land use recommendations provide standards for the use of land within the corporate limits of Fort Madison. The designation of the various districts and the division of the community into these districts was based on the land use planning presented in the development plans. This is the principle means for guiding the orderly and compatible development of the city. Its existence, however, does not guarantee proper use of land. It must be administered and enforced judiciously and reasonably in the best interests of the community.

The specific purpose of the land use recommendations is to designate the character of change of land use within the city so as to protect existing development and to effect the most proper location of future land uses. Among the many recommendations are standards for off-street parking and loading; building height; bulk and lot coverage, specifications of minimum lot dimensions and are and signs.

To accomplish a proper distribution of compatible land uses within the city, the corporate area has been divided into 12 districts. Listed below are the districts provided by the land use recommendations:

R-1	One-Family Dwelling District
R-2	One-Family Dwelling District
R-3	One-Family Dwelling District
R-4	One-Family Dwelling District
R-5	Two-Family Dwelling District
R-6	Multiple-Family Dwelling District

B-1	Business District, Limited Retail
B-2	Business District, General
B-3	Service and Wholesale District
B-4	Highway Business District

I-1	Industrial District, Limited
I-2	Industrial District, General

Two additional single-family districts have been established to meet the varying demands for residential lots and home sizes. The main reason for recommending this variation in minimum lot size in single-family districts as well as all residential districts, is to limit residential densities-- families per acre--in accordance with the demand for different kinds of residential accommodations, and in conformity with decent minimum housing standards.

There is a recognized need in Fort Madison for multiple-family housing. Therefore, two-family and multiple-family areas are recommended within the city. These two and multiple-family areas are for medium and high density residential uses, respectively.



The proposed recommendation for four business districts is based on the element of economic compatibility between various business uses. Intensive studies have shown that certain business uses are mutually complementary. That is, there is a natural tendency to interchange customers--thus benefitting the businessman in terms of increased patronage and the customer in terms of shopping convenience.

Industrial uses have been limited to areas currently occupied by this type of use adjacent to existing industrial uses. The principal industrial districts are located along the railroad tracks paralleling the Mississippi River. An industrial park is developing in a corporate area westerly from the principle city limit.

## ADMINISTRATION

The updating of the long range comprehensive plan marks the beginning of another phase of guiding the continued planning process in Fort Madison. The plan, of course, is of little or no value unless it is followed and its recommendations are carried out.

The preparation of the updated plan has required a period of over two years. The amount of benefit that may be obtained from the Fort Madison comprehensive plan is almost incalculable. The degree of benefit, however, will depend almost entirely upon the success the community will have in administering the plan and seeing that its recommendations are followed and carried out.

The city plan provides a carefully worked out "blueprint" or picture of the city as it might be 20 years from now with a population of 19,000 persons. The plan has been based upon recognized planning and engineering principles. It does not include proposals for elaborate and unnecessary improvements but, rather, represents a scheme for the provision of that minimum standard of public services and facilities deemed reasonably necessary to serve a future community of this population. The plan calls for a step-by-step, gradual evolution of the city of the future out of the city of today. The plan is practical and in sufficient detail to be put to work as a guide for both the public and private improvements as each occur--starting today.

Each new house, each sewer or water main, each new land use is to be coordinated with this overall diagram for the city of the future. The problem is twofold: (1) to coordinate the public improvements to be built by the several local, state and federal agencies, and (2) to guide and direct the use of private property and the construction of buildings by private individuals, corporations and agencies.



Throughout the next 20 years, countless decisions of this type will be made. No single group of men at a given time can possibly foresee the ramifications of all these many decisions. Many will, in effect, be improvements, on the recommendations of the comprehensive plan. The comprehensive plan, consequently, will require changes and modifications in the future in order that it always represents the latest and best thinking for the future development of the city. Nevertheless the basic principles remain; both public and private improvements must be coordinated with some single, overall scheme if a satisfactory community is to be built, even though this scheme be changed or modified from time to time.

## COORDINATION OF PUBLIC IMPROVEMENTS

For many years the State of Iowa has had legislation providing for the creation of a Planning and Zoning Commission, outlining powers and duties of such commission, and enabling the preparation and adoption of comprehensive city plans. The City Council of Fort Madison created a Planning and Zoning Commission by ordinance and provided for its powers and duties in accordance with state legislation.

The state act (Chapter 373 of the State Code) gives the Planning and Zoning Commission wide powers to make recommendations in connection with all public improvements. The agency erecting the public improvement, whether it be the city itself, the county, the school board, etc., can, of course, override an adverse recommendation of the Commission. However, the requirement that all these improvements be reviewed before they are built gives an opportunity for the Planning and Zoning Commission to call the attention of the appropriate public officials to the need for conformity to the comprehensive plan. It also gives a period of time wherein public opinion can be brought to bear upon this point. It is the only method that has been found where official agencies can be kept advised of the city plan. It assures the public that the city plan is taken into consideration in the design of all public improvements.

The state planning law provides that the comprehensive plan is to be adopted by the Planning and Zoning Commission by a vote of not less than two-thirds of the members of the Commission. Prior to such adoption, the Commission must hold at least one public hearing. Not less than 10, nor more than 20 days notice must be given of this hearing. After the plan is adopted by the Planning and Zoning Commission, an attested copy is certified to the City Council after which the Council approves the plan and the plan becomes the official city plan of the municipality. (See Sections 373.18, 373.19 and 373.20 of the State Code). The comprehensive plan of Fort Madison should be adopted by this process and become the official plan of the city as soon as possible.



## DIRECTION OF PRIVATE DEVELOPMENT

By and large, our cities are collections of private buildings. Public improvements such as schools, sewers, streets, etc. are service facilities designed to serve the private development. Fundamental to carrying out a comprehensive plan are regulatory measures that will direct the development of private lands in accordance with the comprehensive plan.

Regulatory measures have been dealt with extensively during the preparation of the comprehensive plan. A new comprehensive zoning ordinance has been submitted to the Planning and Zoning Commission and public hearing will be held. All of these measures are essential to the coordinated control of private development in accordance with the comprehensive plan.

It is the enforcement of these regulations that is particularly important, however. None of them means a thing unless accompanied by equitable and thorough enforcement. Admittedly, good enforcement is difficult. It requires a vigorous and conscientious official. In addition to the zoning administrator, the police department should be alert to the general nature of these regulations, at least to the extent that they can inform the zoning administrator's office of any apparent violations or of any building that they find taking place without a building permit.

One of the major tasks of the Planning and Zoning Commission is the administration of these regulatory measures and particularly the administration of the zoning and subdivision control ordinances. There will be numerous petitions and requests for changes in the zoning ordinance in the future. Each of these must be studied. Where there is merit in the petition, a public hearing must be held. Amendments to the ordinance must receive the same careful consideration in much the same manner as did the original preparation of the ordinance. Control of land subdivision should receive equally careful consideration. Once recorded it is not likely that a subdivision plat will be changed for many years. It is worth a little time to see that it is as correct as possible in the first instance.

In all of these matters, however, the Planning and Zoning Commission should not become a body that apparently is just saying "no" to every request. The Commission should work with private groups and individuals cooperatively and sympathetically, recognizing the basic fact that these are the persons that are actually building the city.



## PLANNING AS A DAY-TO-DAY OPERATION

The members of the Planning and Zoning Commission are busy persons who have little time to devote to the technical aspects of city planning. In a city the size of Fort Madison, a full-time city planner cannot be justified although highly desirable. Under the circumstances the services of a planning consultant should be made available whenever necessary to assist the Commission. In some cities arrangements are made for consulting services on an annual retainer basis.

With some technical assistance, the members of the Planning and Zoning Commission can determine a general, overall policy and make decisions on questions coming before them in much the same manner as the board of directors of a corporation.

A major task of the Commission should be to keep the city plan up-to-date. Basic data, such as traffic volumes and land use, need to be brought up-to-date periodically, as growth of the city demands. However, copies of up-to-date plans and the zoning district map should be made available to the public. In addition, the comprehensive report, when officially adopted, should be published and given wide distribution. One of the greatest impediments to carrying out a comprehensive plan is ignorance of the proposals on the part of the general public.

In many communities, experience has indicated that other public agencies are quite likely to resent activities of an active planning commission. This is only natural as, on the surface, it would appear that the planning commission is endeavoring to usurp powers and responsibilities placed in the hands of other officials. Diplomacy and tact can do much to overcome this resentment. Frequent consultation with other public officials on the part of the planning commission itself will also be of great assistance in this regard.

The Planning and Zoning Commission should occupy a position of leadership in relation to the general public. It should be the first to be aware of important trends affecting the city; of the needs of new industry; of the fact that the central business district is in difficulty, and of other important trends of this type. Measures that should be undertaken right away to overcome any difficulties, or to obtain a marked economic advantage for the community should be recommended. Attendance on the part of members of the Commission at national conferences or meetings on planning and urban development will be helpful to keep the character. It is also important that the Planning and Zoning Commission be a service organization and wherever possible be of assistance to both private and public agencies in their dealing with current problems.



## PUBLIC UNDERSTANDING AND SUPPORT

It is essential that the citizens understand the many problems confronting the city as revealed by the planning program, how the plan can assist in solving these problems, and the many advantages that all citizens will derive therefrom. No matter how effective the legal procedures that are made available for carrying out the plan, the administration cannot be completely successful unless the plan is understood by and has the support of, the public.

Publication and distribution of the comprehensive plan is the first important means of familiarizing the public with the Commission's activities. The mere printing of the comprehensive plan, however, will not be an adequate means of securing proper public understanding. Many people will not read such a report and many will not remember the large amount of data and recommendations contained therein. It is essential that the educational program be more of a visual nature with pictures, cartoons and simple drawings used to tell the planning story. Displays in downtown retail stores, talks over the radio and before audiences, and newspaper stories are all effective means of appraising the public of the facts and advantages of the plan. It is particularly desirable that someone experienced in advertising and public relations assist in the educational program.

The Planning and Zoning Commission should inaugurate an educational program within the near future and such program must be continued long enough to afford the public a thorough understanding of what has been done and what can be accomplished. Educational activities must be continuous, for a single program, even though intensive, is quickly forgotten. The Planning and Zoning Commission should publish annual reports as well as any special studies of city-wide interest, and these should be thoroughly publicized. In addition, it should summarize and publish annually the accomplishments that have been made under the comprehensive plan.

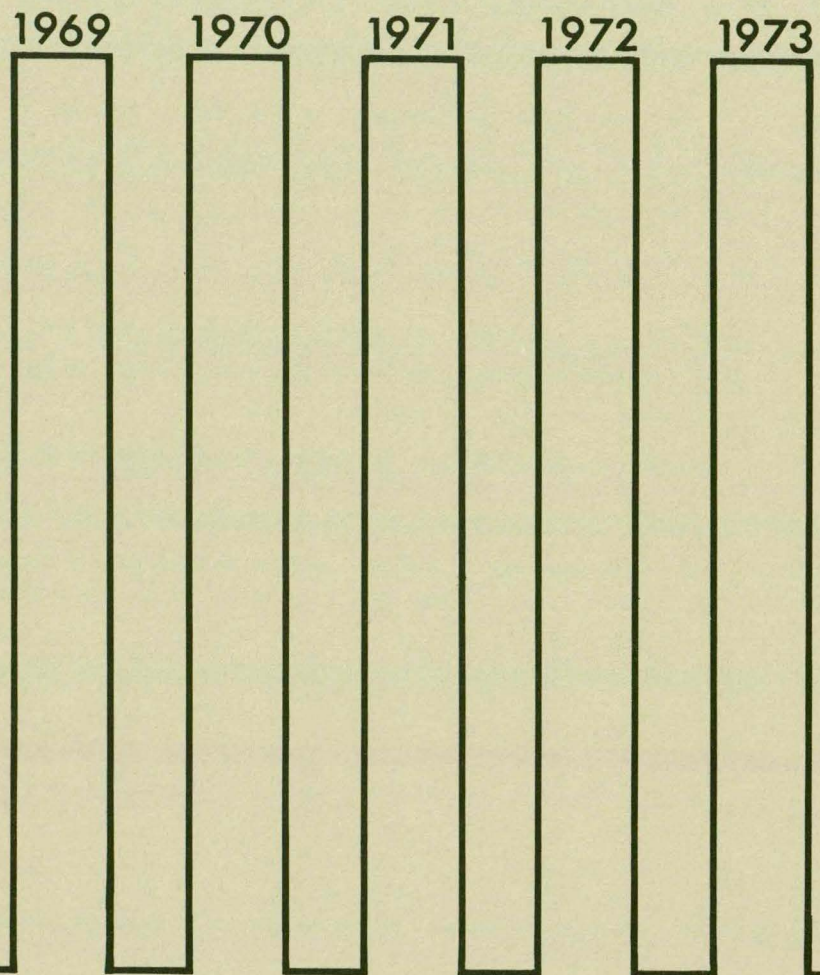
Finally, a strong and active citizens' planning committee should be organized. Such a committee should be representative of all sections and groups in the city, but without domination by any. An association of this type should be directly under the direction of the Planning and Zoning Commission in continually presenting the planning program to the citizens of Fort Madison.

LETTERS

OF THE

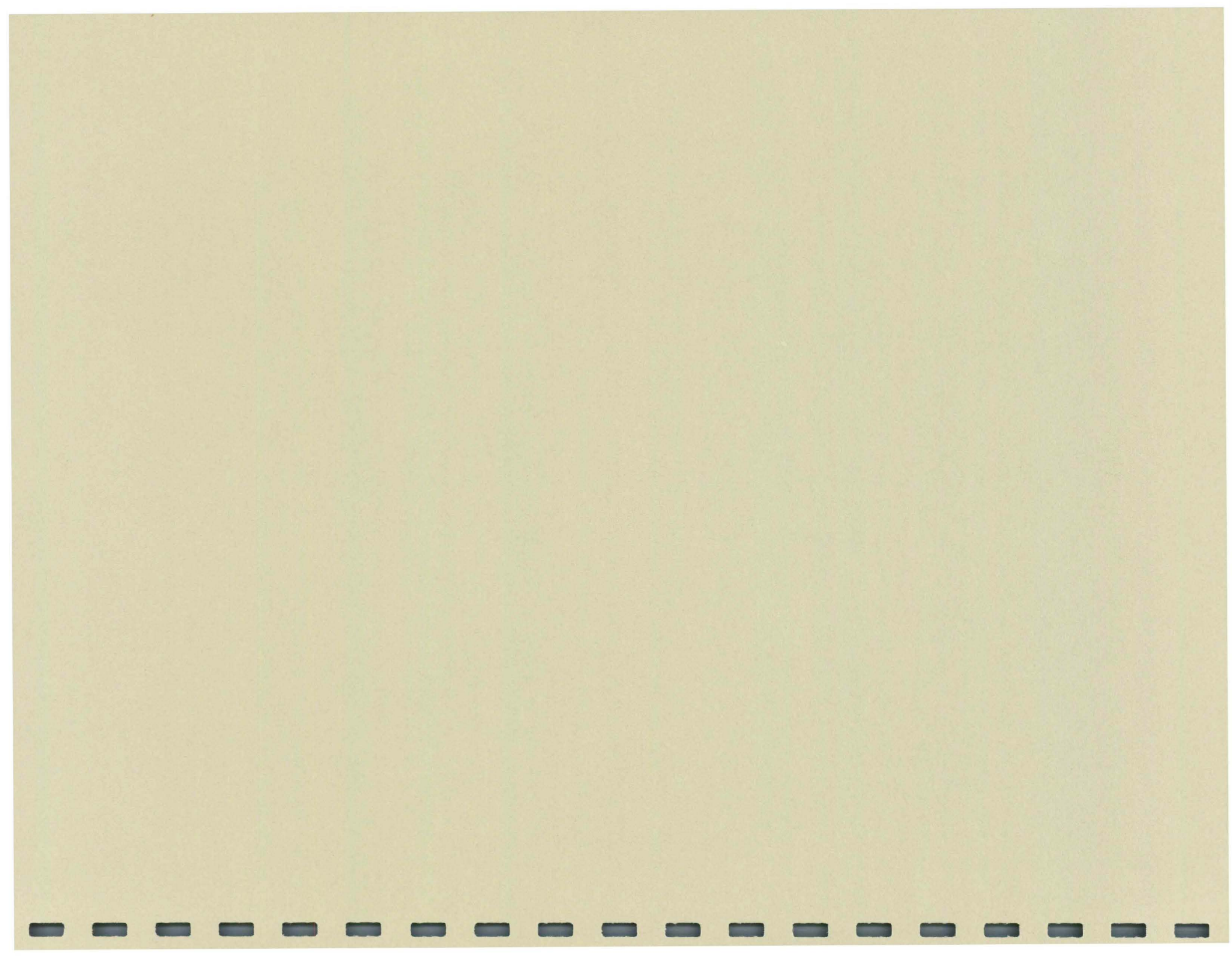
AMERICAN





**PART FIVE**  
**CAPITAL WORKS**  
**PROGRAM**







## CAPITAL IMPROVEMENTS PROGRAM

The most direct results of the city planning program are seen in the initiation and completion of capital works. In order to successfully bring about such public works, it is necessary to formulate an orderly program of improvement projects, with priorities given to those either most needed or easiest for the community to accomplish. The program should be planned and coordinated with programs of other public agencies - such as federal, state and county programs. Individual projects should be so designed and organized to take advantage of funds available from cooperating agencies.

One of the major considerations in formulating a program of capital works is the financial ability of the community to pay for the proposed projects. This ability is affected in part by the amount of present debts and other commitments or liabilities, the amount of income which the city expects to receive in the future, and the possibility of obtaining capital from other sources such as participating agencies or organizations, private land developers and government grants.

The principal means of financing needed public works - other than through the use of general taxes, license fees and revenue from community facilities - is through the issuance of general obligation bonds, revenue bonds or special assessment bonds. Receipts from road use tax funds are another important source of revenue.

In establishing a program for capital improvements, especially as it applies to financing the improvements, Fort Madison should adopt a financial policy which is suitable to the type of improvement included in the program. For example a capital improvement such as the expansion of water and sewer facilities is revenue-producing and should, therefore, be financed by means of revenue bonds. Such bonds are paid for out of revenue received from the consumers of the services provided by the facilities.

When improvements benefit only certain persons or certain areas, they can be financed through special assessment bonds, whereby the persons benefitting are liable for the payments on the bonds.

If the improvements are to be installed in a newly developed area and serve only that area, the improvements should be installed by the land developer.

Table 19 clearly indicate the ability of Fort Madison to finance the capital improvements which have been recommended. The table relates growth potential of the city in terms of assessed valuation and the dollar amounts which could be obtained through issuance of general corporate obligation bonds.

Fort Madison receives annual financial aid and shared taxes from the State of Iowa. These include Road Use Tax Refund and Liquor Profits. The total amount received from the state for these aids and shared taxes for 1965 was \$159,004 and for 1966 was \$168,643. These funds are presently used for general community expenses including capital works improvements.

Table 19

ASSESSED VALUATION, BONDS, BONDING LIMITS AND AVAILABLE BONDING CAPACITY:  
PAST TRENDS AND FUTURE ESTIMATES  
Fort Madison, Iowa

	Year	Assessed Valuation (\$000's)	5% General Obligation Bond Limit	Bond		Available General Obligation Bonding Capacity (\$000's)	Revenue Bonds	
				General Obligation Due (\$000's)	Outstanding (\$000's)		Due (\$000's)	Outstanding (\$000's)
Past Trends	1962	28,326	1,416	38	618	798	25	200
	1963	29,110	1,455	38	698	757	25	175
	1964	30,500	1,525	43	655	870	25	150
	1965	34,484	1,724	41	614	1,110	25	125
	1966	36,379	1,818	40	574	1,244	25	100
Future Estimates	1967	38,140	1,907	40	534	1,373	25	75
	1968	39,900	1,995	46	488	1,507	25	50
	1969	41,660	2,089	46	442	1,647	25	25
	1970	43,320	2,166	44	398	1,768	25	-
	1971	45,080	2,254	46	352	1,902		
	1972	46,840	2,342	46	306	2,036		
	1973	48,600	2,430	51	255	2,175		
	1974	50,360	2,518	52	203	2,315		
	1975	52,120	2,606	47	156	2,450		
	1976	53,880	2,694	37	119	2,575		
	1977	55,640	2,782	42	77	2,705		
	1978	57,400	2,870	15	62	2,808		
	1979	59,160	2,958	20	42	2,916		
	1980	60,920	3,046	20	22	3,024		
	1981	62,680	3,134	22	22	3,112		
	1982	64,440	3,222			3,222		
	1983	66,200	3,316			3,316		
	1985	67,900	3,395			3,395		

\* Projected valuation based on average annual increase from 1962 to 1966

Sources: 1962-1964 Inclusive, Auditors Reports, Drish and Zimmerman, Ottumwa, Iowa  
1965-1966 Inclusive, Auditors Reports, Campbell and Hershberger, Fort Madison, Iowa  
1967-1985 Inclusive, Estimates by Don C. Shafer and Associates



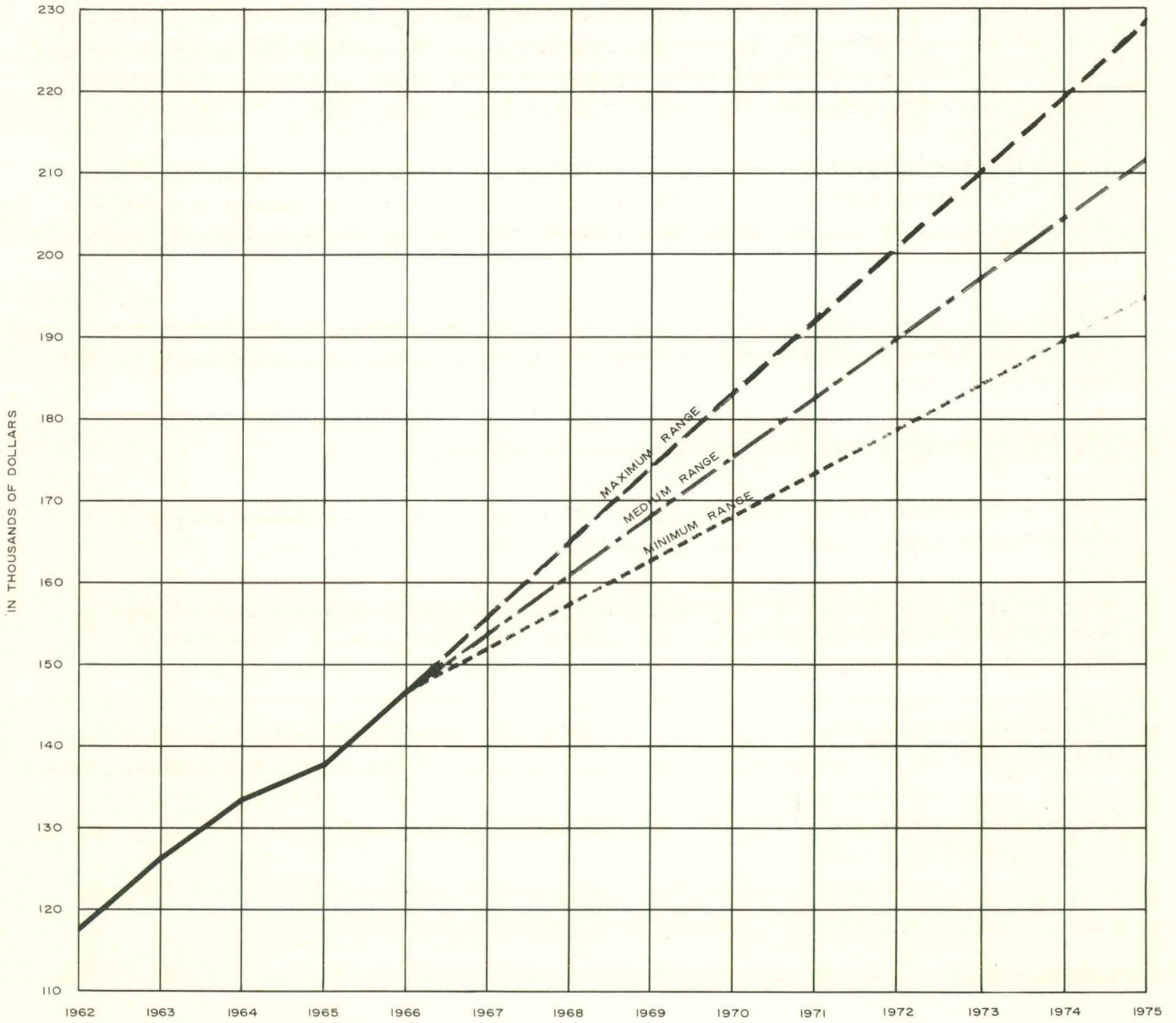
There are many advantages to be gained by a city when a capital works program is developed, adopted and adhered to by the community. To formulate a list of the advantages of a capital works program is useful not only to encourage programming, but to use as a guide and measuring device in the process itself. Following is a partial listing of some advantages to be gained from a capital works program.

- In conjunction with the comprehensive plan of the community, programming insures the functional utilization of public improvements and eliminates the possibility of expending public monies on "white elephant" projects, which have only a limited long range value and which must eventually be replaced or duplicated.
- Programming allows for stabilization of the tax rate over a period of years. It also allows for stabilization of personnel demands. Personnel requirements can be realistically planned and this, in turn, permits better training.
- Programming and advance planning call attention to the deficiencies of the community and stimulates the action necessary to correct them.
- Programming aids in assuring that projects are not undertaken before the need arises or after land costs are inflated.
- The very nature of the entire procedure protects the community against influence of pressure groups.
- It will enable the city to take better advantage of federal and state grants-in-aid. Plans can be prepared for in advance, and matching money made available to take advantage of anticipated and potential grants-in-aid.
- It will also enable the city to undertake additional projects scheduled for later years in a period of surplus revenues, should such a situation arise.
- Programming insures that funding can be organized in advance in a logical manner.

## VALUATION

Evaluating the financial status of Fort Madison is necessary for determining the city's ability to undertake physical improvements during the time the comprehensive plan is being carried out. For this purpose it was essential to review the last five annual audits between 1962 and 1966.

### PAST AND FUTURE ROAD USE TAX



SOURCE: 1962-1966 CITY ANNUAL AUDIT REPORTS  
1967-1975 PROJECTIONS BY DON C. SHAFER & ASSOCIATES



The five annual audits show a continued steady increase in assessed valuations. The increase in the assessed valuation rose from \$28,326,000 dollars in 1962 to \$36,379,000 dollars in 1966. The greatest boost in the actual valuation was between 1964 and 1965 which increased from 30,500,000 dollars to 34,484,000 dollars.

To determine an average assessed valuation for future estimates, the five annual audits were reviewed and evaluated. The projected assessed valuation in Table 19 is based on average annual increases of 1,762,000 dollars between 1962 and 1966. The money to be received by Fort Madison for Road Use Tax has been projected for each year to 1975. It is important to note that the amount of money to be received from the state is sizeable. This annual income could range from 194,500 dollars to 228,000 dollars by 1975.

From a review of the five annual audits, it appears that Fort Madison does not have any major financial problems. As the community continues to grow and develop, physical improvements which involve large amounts of capital will have to be made and will have to be financed by some type of bonds.

Prior to any contemplated large bond issues, the city should obtain the services of a municipal finance specialist in order to safeguard against creation of financial problems which could limit any future physical improvements.

#### SUGGESTED WORK SCHEDULE OF CAPITAL IMPROVEMENT ITEMS

Table 20 includes estimated costs of projects recommended for consideration during the five year period ending December 1973, with suggested methods of financing.

The program is divided into two categories according to the comprehensive plan items—Thoroughfare Plan and Community Facilities Plan. These two plans are all part of the General Development Plan.

The costs are estimated and can change, but they do provide the City Council with a measuring stick for the amount of money to be considered for any or all specific improvements.

The schedule of work projects is shown according to priority, based on when the items will be needed as the city develops.

#### FEDERAL GRANTS AVAILABLE TO ASSIST IN CAPITAL IMPROVEMENTS

##### Grants for Basic Water and Sewer Facilities

Federal grants are available to local public bodies to finance specific projects for basic public water facilities (including works for the storage, treatment, purification and distribution of water), and for basic public sewer facilities (other than "treatment works" as defined in the Federal Water Pollution Control Act).



The amount of any grant shall not exceed 50 percent of the development cost of the project. (Housing and Urban Development Act of 1965, Title VII - Community Facilities, Section 702).

#### Grants for Neighborhood Facilities

Grants are available to assist in financing specific projects for neighborhood facilities. The amount of any grant made under the authority of this section shall not exceed 66 2/3 percent of the development cost of the project for which the grant is made. (Housing and Urban Development Act of 1965, Title VII - Community Facilities, Section 703).

#### Advance Acquisition of Land

Grants are available to assist in financing the acquisition of land planned to be utilized in connection with the future construction of public works. (Housing and Urban Development Act of 1965, Title VII - Community Facilities, Section 703).

### CAPITAL WORKS PROGRAMMING

Long-range capital works programs are developed by specialists on the basis of technical criteria. The capital budget, however, must be decided by top management on the basis of policy criteria concerning not only the relative urgency of public works, but also consideration of tax and debt limitations. A carefully prepared long-range capital works program should take into consideration the level of resources that would be made available by management revenue policies. A realistic capital improvements program can, therefore, be of considerable help to management in capital budgeting.

The capital budget cannot be formulated and enacted without considering it in conjunction with the operating budget as part of the complete governmental financial plan. Capital investments must not only be weighed against operating costs in allocating limited financial resources; the demands that new facilities will make upon future operating and maintenance costs must also be considered.

To assist city officials in realistically looking at a capital works program, the following exhibits are submitted as examples that may be studied and reviewed by the city officials and formulated to provide assistance in actually detailing a capital works program.

Budget Form A is to be used for recording capital projects, i.e., construction projects and their equipment, including purchases of land, major alterations and major repairs to existing buildings, or grading and development of land. For a building construction project, equipment and furniture may be included, if required. Ordinary repairs to a structure are not to be recorded as a capital project.

Each department within the city administration that is associated with the capital works program should complete these forms.



Each project described in Budget Form B should be listed in Budget Form A. All columns should be filled out and any supporting remarks should be added. Each project should be given a priority number. The major criteria for considering each project in order of importance are:

1. Protection of life;
2. Maintenance of public health;
3. Protection of property;
4. Provision of public services, including convenience and comfort;
5. Reduction of operating costs.

Only projects required during the next five years should be included, with the expenditures entered in the appropriate year.

Column K, Additional Annual Operation Cost for Completion, should show the amount of money needed for the project after the five year period shown, provided the project is begun or approved and the financing extends beyond 1973. It is important to complete this column whenever a project extends beyond 1973. Any continuing annual expense may constitute a serious burden on the city and must be carefully considered.

Budget Form B is for recording the more detailed information as to costs and the supporting reasons for each project entered on Form A. Each item should be fully completed, but the descriptions and supporting reasons should be as brief as possible.

Pictures, drawings, or both, of the project or of similar projects, should accompany Form B on a loan basis if necessary.

TABLE 20

## ESTIMATED COST OF PROJECTS RECOMMENDED FOR CONSIDERATION DURING THE FIVE YEAR PERIOD ENDING DECEMBER 1973 AND SUGGESTED METHODS OF FINANCING

Project	Location	Suggested Financing	Total Estimated Cost	Year of Expenditure				
				1969	1970	1971	1972	1973
<u>THOROUGHFARE PLAN:</u> (According to Priority)								
Widen Pavement 6' 34' to 40'	7th Street, Avenue E to F	Road Use Tax	6,000	6,000				
Widen Pavement 6' 34' to 40'	8th Street, Avenue E to F	Road Use Tax	6,000		6,000			
Widen Pavement 6' 34' to 40'	9th Street, Avenue E to F	Road Use Tax	6,000			6,000		
Widen Pavement 6' 34' to 40'	10th Street, Avenue E to F	Road Use Tax	6,000				6,000	
Widen Pavement 11' 37' to 48'	Avenue E, 2nd to 4th Street	Road Use Tax	12,000	12,000				
Widen Pavement 15' 33' to 48'	Avenue E, 4th to 11th Street	Road Use Tax	32,000		32,000			
Widen Pavement 15' 33' to 48'	Avenue E, 11th to 12th Street	Road Use Tax	8,400			8,400		
Widen Pavement 34' to 48'	Avenue E, 20th to 24th Street	Road Use Tax	25,000				25,000	
Widen Pavement 10' 32' to 42'	Avenue E, French Creek Bridge	Road Use Tax	10,000				10,000	



Project	Location	Suggested Financing	Total Estimated Cost	Year of Expenditure				
				1969	1970	1971	1972	1973
Resurface Street	Avenue G, 2nd to 5th Street	Road Use Tax	8,000	8,000				
Widen Pavement 13' 31' to 44'	Avenue L, 17th to 23rd Street	Road Use Tax	37,800			37,000		
Resurfacing	Avenue F, 10th to 18th Street	Road Use Tax	24,000	24,000				
Widen Pavement 12' 18' to 30'	Avenue L, 36th to 46th Street	State Funds	67,200					67,200
Acquisition of 70' Right-of-Way	40th Street, Avenue C to L	Road Use Tax Special Assessment	10,000				10,000	
Street Construction 44' Pavement	40th Street, Avenue C to L	Road Use Tax Special Assessment	47,000				20,000	27,000
Acquisition of 70' Right-of-Way	40th Street, Avenue O to River Road	Road Use Tax Special Assessment	4,800	AWAIT U.S. 61 IMPROVEMENTS				
Street Construction 44' Pavement	40th Street Avenue O to River Road	Road Use Tax Special Assessment	20,300	AWAIT U.S. 61 IMPROVEMENTS				
Acquisition of 70' Right-of-Way	46th Street, Avenue C to L	Road Use Tax Special Assessment	12,000	PRIOR TO ANTICIPATED DEVELOPMENT TO AREA				
Street Construction 44' Pavement	46th Street Avenue C to L	Road Use Tax Special Assessment	160,000	PRIOR TO ANTICIPATED DEVELOPMENT TO AREA				
Acquisition of Additional Right-of Way to 70'	46th Street, Avenue L to U.S.Route 61	Road Use Tax Special Assessment	3,000	PRIOR TO ANTICIPATED DEVELOPMENT TO AREA				
Street Construction 44' Pavement	46th Street, Avenue L to U.S.Route 61	Road Use Tax Special Assessment	28,000	PRIOR TO ANTICIPATED DEVELOPMENT TO AREA				

Project	Location	Suggested Financing	Total Estimated Cost	Year of Expenditure				
				1969	1970	1971	1972	1973
Acquisition of 70' Right-of-Way	46th Street, U.S.Route 61 to River Road	Road Use Tax Special Assessment	6,000	PRIOR TO ANTICIPATED DEVELOPMENT TO AREA				
Street Construction 44' Pavement	46th Street, U.S.Route 61 to River Road	Road Use Tax Special Assessment	96,000	PRIOR TO ANTICIPATED DEVELOPMENT TO AREA				
Widen Pavement to 30' & Resurface	Avenue A and C Chalk Ridge Road to West	Road Use Tax Special Assessment	29,000	PRIOR TO ANTICIPATED DEVELOPMENT TO AREA				
Widen Pavement 30' 18' to 48'	Iowa Route 103 North of Avenue D	State Funds	45,000			45,000		
Widen Pavement 14' 30' to 44'	18th Street, Avenue D to F	State Funds	9,800	9,800				
Widen Pavement 10' 34' to 44'	18th Street, Avenue F to G	State Funds Road Use Tax	5,000		5,000			
Widen Pavement 6' 38' to 44'	18th Street, Avenue G to H	State Funds Road Use Tax	5,000				5,000	
Widen Pavement 26' 22' to 48'	Iowa Route 88 North of Avenue B	State Funds	18,000				18,000	
Widen Pavement 14' 30' to 44'	15th Street Avenue B to E	State Funds Road Use Tax	16,800		16,800			
Widen Pavement 17' 27' to 44'	15th Street, Avenue E to H	State Funds Road Use Tax	16,800				16,800	
Acquisition of 60' Right-of-Way	33rd Street, Avenue C to D	Special Assessment	3,000	3,000				
Street Construction 30' Pavement	33rd Street, Avenue C to D	Special Assessment	20,000		20,000			



Project	Location	Suggested Financing	Total Estimated Cost	Year of Expenditure				
				1969	1970	1971	1972	1973
Street Reconstruction 30' Pavement with Curb	33rd Street, Avenue D to G	Special Assessment	36,000			36,000		
Street Reconstruction 30' Pavement with Curb	33rd Street Avenue L to Q	Special Assessment	51,000					
Widen Pavement to 44'	River Road Route 33rd Street to City Limits	Road Use Tax <sup>2)</sup> Special Assessment						
Street Construction 44' Pavement	River Road Route from City Limits to 1/2 mile west of Corporate Limits	Road Use Tax <sup>2)</sup> Special Assessment						
Street Construction 44' Pavement	River Road Route 46th to City Limits	Road Use Tax <sup>2)</sup> Special Assessment						
Comprehensive Speed Zone Studies	West City Limits to 10th Street	General Funds	300	300				
Comprehensive Speed Zone Studies	10th to 6th Streets	General Funds	300	300				
Comprehensive Speed Zone Studies	6th to 2nd Streets North to E Street	General Funds	300	300				
Convert Traffic Signals to Semi-Actuated Type	Avenue L at 33rd Street Avenue E at 23rd Street	General Funds						
Comprehensive Need for Four-Way Stop Sign Study	Avenue G of 23rd	General Funds	300	300				
	Avenue I at 23rd	General Funds	300	300				
	Avenue E at 24th	General Funds	300	300				
	Avenue F at 4th	General Funds	300	300				

Project	Location	Suggested Financing	Total Estimated Cost	Year of Expenditure				
				1969	1970	1971	1972	1973

COMMUNITY FACILITY PLAN:

Utilities - Water

500,000 gallons above ground storage tank also 1,200 g.p.m. high service pump.	North of Treatment Plant	Water Funds Revenue Bonds	651,000 <sup>3)</sup>	651,000				
Extensive additions to the distribution system for present & future.	West of 14th Street	Water Funds Revenue Bonds	510,000	510,000				
Two million gallon water storage reservoir.	Bluff area north of west section of City.	Water Funds Revenue Bonds	155,000	155,000				

Utilities - Sewers

Comprehensive existing sewer study and analysis including mapping all sanitary and storm sewers.	Entire City	General Funds	2,000	1,000	1,000			
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Parks

Improve Landscaping in Old Settlers Park	Between 4th and 5th Streets and Avenues E and F	General Funds Federal Beautification Program	3,000 <sup>4)</sup>		750	750		
Improve Landscaping in Central Park	Between Avenues E and F and 9th and 10th Streets	General Funds Federal Beautification Program	3,000 <sup>4)</sup>			750	750	
Landscape Development Plan for Riverview Park	Between the Mississippi River and Avenue H	General Funds Federal Beautification Program	2,000 <sup>4)</sup>	2,000				



Project	Location	Suggested Financing	Total Estimated Cost	Year of Expenditure				
				1969	1970	1971	1972	1973
Landscape Improvement for Riverview Park	Between the Mississippi River and Avenue H	General Funds Federal Beautification Program	6,000 <sup>4)</sup>	2,000		1,000		
Acquisition to increase Ivanhoe Park	Avenue L and 40th Street	Federal Open Space Program	12,000 <sup>4)</sup>		3,000	3,000		
Acquire Park Land	Bordering Dry Creek at Richards Drive	Federal Open Space Program	10,000 <sup>4)</sup>			2,500	2,500	
Acquire Park Land	Between Avenues L & N and 34th and 35th Streets	Federal Open Space Program School Funds	40,000 <sup>4)</sup>	4,000	4,000	4,000	4,000	4,000
Acquire V.F.W. Park	Between 33rd Street and Avenue I	Federal Open Space Program	20,000 <sup>4)</sup>	2,000	2,000	2,000	2,000	2,000
<u>Public Building</u>								
City Hall	8th Street and Avenue E	G.O. Bonds General Funds	300,000 <sup>5)</sup>			15,000	15,000	15,000
Parking Ramp	Avenue F Between 7th and 8th Streets	G.O. Bonds Public Parking Facilities (Act of 61st General Assembly).	600,000 <sup>6)</sup>			30,900	30,900	30,900
TOTALS			<u>3,548,200</u>	<u>1,391,900</u>	<u>90,550</u>	<u>232,100</u>	<u>126,150</u>	<u>146,100</u>

1) "Transportation Planning Report" prepared for Don C. Shafer and Associates as part of the updated Comprehensive Plan by Paul C. Box, Traffic Engineer Consultant, Skokie, Illinois, September, 1966.

Comprehensive improvements of U.S. Route 61 is not included because of the anticipated complete state route improvement. At the preparation of this report the Iowa State Highway Commission has approved their recommendations. Approval of project by the U.S. Bureau of Roads is awaited prior to scheduling the improvements.

- 2) Future recommendations for this proposed thoroughfare is based on final relocation and construction of U.S.Route 61.
- 3) Estimated costs do not include engineering, financing costs, resident engineers fees and legal fees.
- 4) The federal government will contribute 50 percent of the cost through the open space and/or beautification program.
- 5) If a new city hall is constructed the G. O. Bonds would mature in 20 years at about 15,000 annually. This estimated cost does not include acquisition of additional land, architects and legal fees or razing of present city hall and any additional aged structures. Therefore, the following 17 years would be included in future capital works programs.
- 6) If general obligation bonds were used to finance this proposed structure they would mature in 20 years at approximately 30,900 annually. Therefore, the following 17 years would be included in future capital work programs.



BUDGET FORM A

FIVE YEAR PROGRAM OF CAPITAL IMPROVEMENTS

Code--Recommended Financing

Code Status of Plans

- GR General Revenue
- SC Service Charge
- AB Special Assessment Bonds
- GO General Obligation Bonds
- RB Revenue Bond
- FA Federal Aid
- SA State Aid
- RA Road Aids
- SR Special Reserve for Cap. Exp.
- WC Working Capital or Revolving Fund

- 0 Plans Not Needed
- 1 The Report Only
- 2 Surveys Completed
- 3 Work on Plans Scheduled
- 4 Sketch Plan in Preparation
- 5 Sketch Plan Completed
- 6 Detail Plans in Preparation
- 7 Detail Plans and Specifications

		Year in Which Expenditure is Needed								
A		B	C	D	E	F	G	H	I	J
Name and Location of Project	Priority Number	19__ -19__	Method of Financing	19__ to 19__	19__ to 19__	19__ to 19__	19__ to 19__	19__ to 19__	Status of Plans	Additional Annual Operation Cost After Completion

List in order of priority for each year.

BUDGET FORM B

INDIVIDUAL PROJECT ESTIMATE  
FIVE YEAR CAPITAL IMPROVEMENTS

Date: \_\_\_\_\_ 19 \_\_\_\_\_

1. Department \_\_\_\_\_

2. Division of \_\_\_\_\_

3. Description of Project:  
a. Name, physical description, location: \_\_\_\_\_  
  
b. Purpose: \_\_\_\_\_  
  
c. Shown on map attached \_\_\_\_\_  
(Yes or No)

9. Estimated Construction Period: \_\_\_\_\_

4. Need for project (Use separate sheet if necessary): \_\_\_\_\_

10. Status of Plans and Specifications (place check mark opposite proper status):

_____ 0	Plans not needed
_____ 1	Nothing done except this report
_____ 2	Surveys completed
_____ 3	Work on plans scheduled
_____ 4	Sketch plans in preparation
_____ 5	Sketch plans completed
_____ 6	Detail plans in preparation
_____ 7	Detail plans and specifications completed

5. Relation to Other Projects, where applicable: \_\_\_\_\_

11. Proposed Manner of Construction (contract or day labor): \_\_\_\_\_

6. Estimated Cost:

a. Planning (Totals (1), (2): \_\_\_\_\_  
(1) Architects services \_\_\_\_\_  
(2) Engineering \_\_\_\_\_

b. Land \_\_\_\_\_  
(1) Site is secured \_\_\_\_\_  
(2) To be secured \_\_\_\_\_

c. Construction (Totals (1), (2), (3): \_\_\_\_\_  
(1) Labor \_\_\_\_\_  
(2) Non-labor \_\_\_\_\_  
(3) Inspection \_\_\_\_\_

d. Miscellaneous Equipment (Totals (1), (2): \_\_\_\_\_  
(1) Equipment \_\_\_\_\_  
(2) Furniture \_\_\_\_\_

e. Other \_\_\_\_\_

Total Estimated Cost: \_\_\_\_\_

12. Project Expenditures by Years:

_____ 19	_____ 19
_____ 19	_____ 19
_____ 19	_____ 19
_____ 19	_____ 19

13. Priority Rating: \_\_\_\_\_

14. Year Recommended for Construction: \_\_\_\_\_

7. Future Burden Resulting from Project:

a. Annual cost: Maintenance, repair & Operation \_\_\_\_\_

b. Annual estimated cost of new staff required \_\_\_\_\_

c. Future Expenditure for additional equipment not included in project cost \_\_\_\_\_

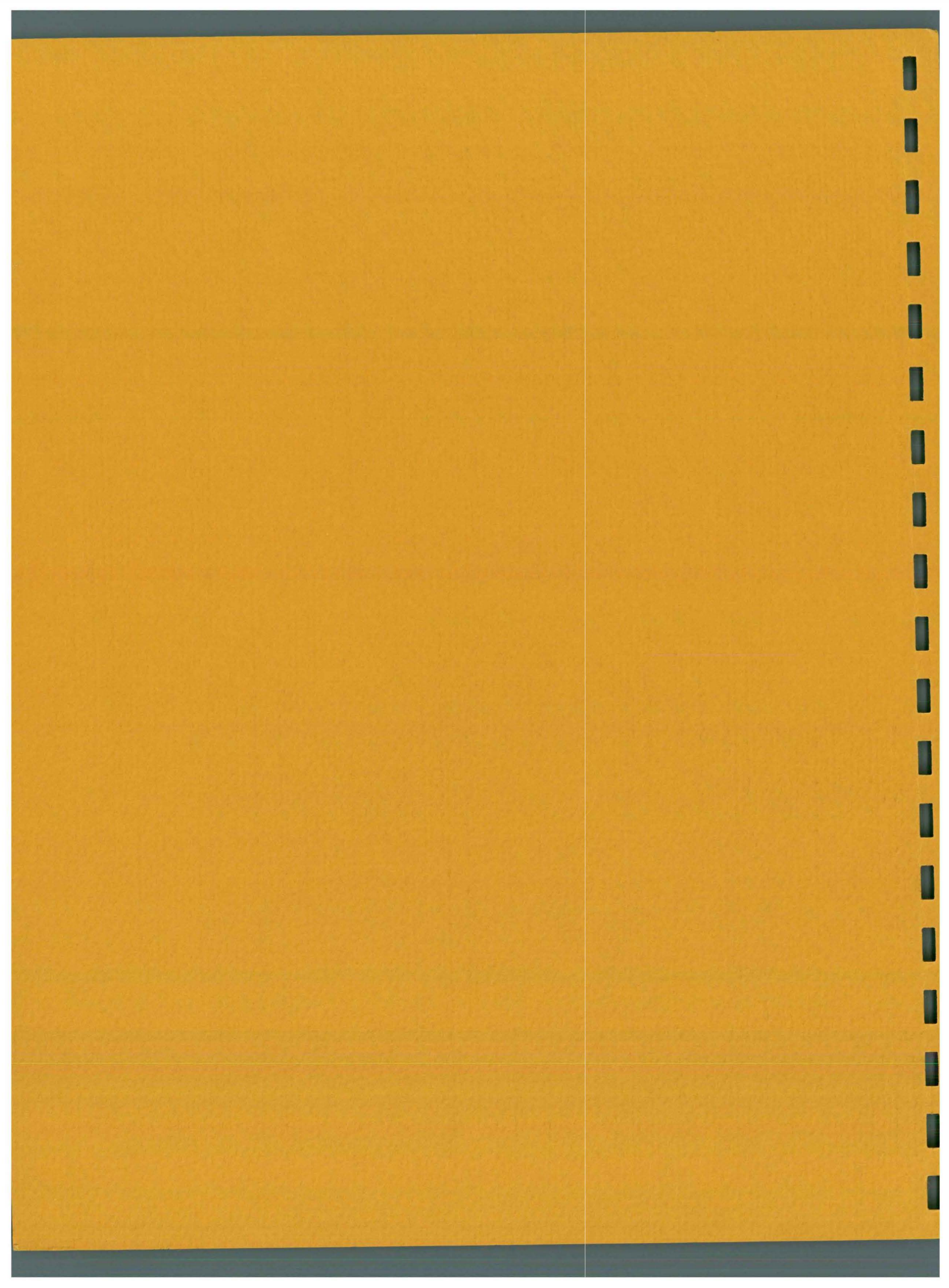
15. Recommended Financing:

General Revenue	GR	_____
Service Charges	SC	_____
Utility Revenues	UR	_____
General Obligation Bonds	GOB	_____
Federal Aid	FA	_____
State Aid	SA	_____
Revenue Bonds	RB	_____
Special Reserves for Capital Expenditures	SR	_____
Working Capital or Revolving Fund	WC	_____

8. Income for Project (estimated annual, direct & indirect) \_\_\_\_\_

TOTAL \_\_\_\_\_







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