

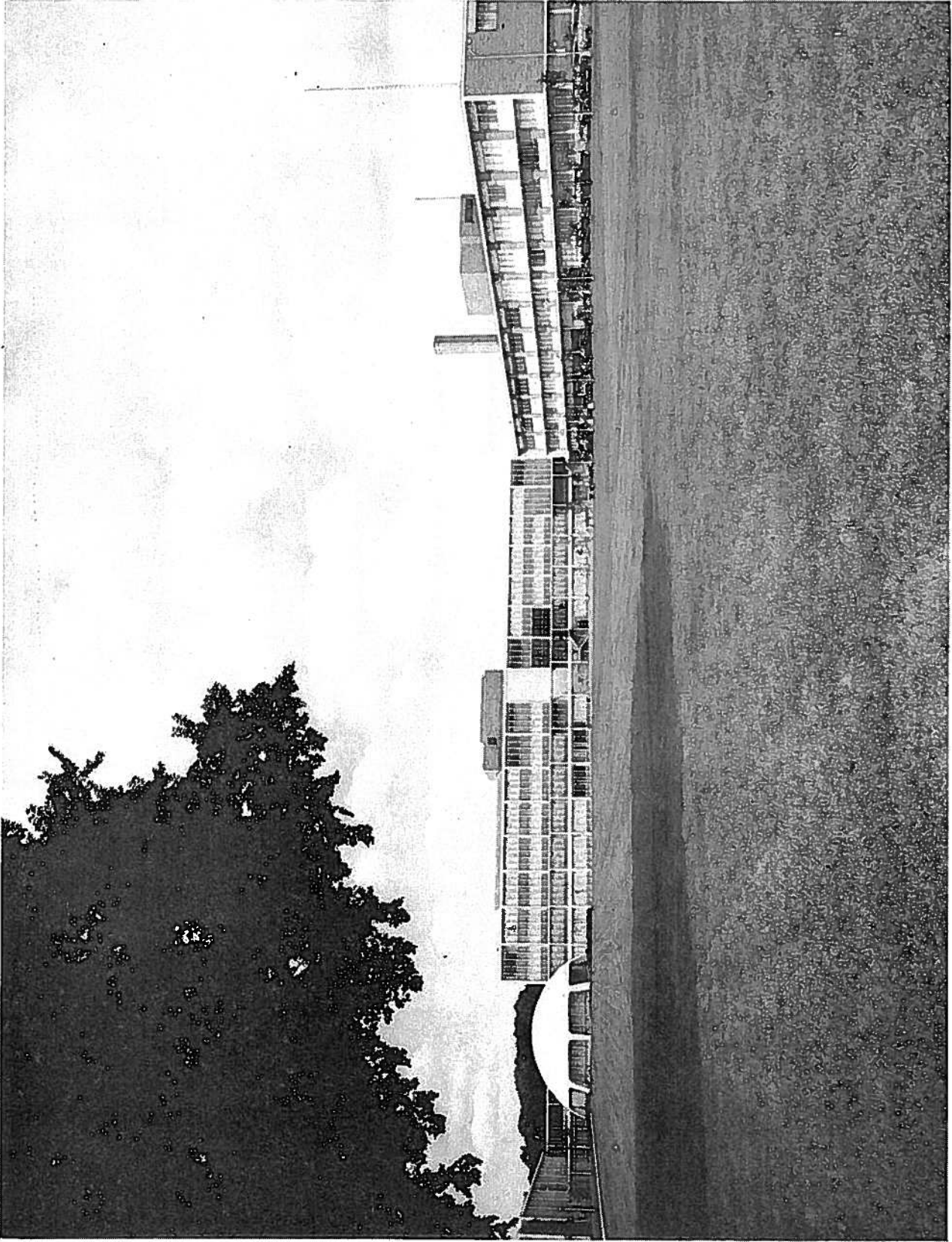


COMPREHENSIVE MASTER PLAN

FLINT · MICHIGAN 1960

Flint Planning Commission

LADISLAS SEGOE & ASSOCIATES
City Planners Consulting Engineers
Cincinnati Ohio



MUNICIPAL CENTER
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COMPREHENSIVE MASTER PLAN
of
FLINT, MICHIGAN, and ENVIRONS

1960

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CITY OF FLINT

City Commission 1960-1962

Charles A. Mobley, Mayor

T. Ray Johnson
James H. Darby, Vice-Mayor
Floyd J. McCree
William P. Polk

Robson G. Smith
Donald R. Seal
George R. Poulos
Harry T. Harrell

City Commission 1958-1960

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Michael Fuller
Floyd J. McCree
Ronald L. Craig, Vice-Mayor
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George M. Algoe
Paul Lake
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Joseph J. Adams
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Ward G. Dexel
Herman J. Heinemann, Secretary

Charles A. Mobley
Theodore D. Moss
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James Bolton, President

Merliss Brown, Secretary
Ralph Frazer
Zolton K. Papp

Nathaniel Turner
Charles White
Ben Woodard, Treasurer

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Olney L. Craft, Director of Finance

William J. Kane, City Attorney
Lloyd S. Hendon, City Clerk

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George P. Paul, Chief of Police
Elmer L. Pratt, Fire Chief
Emery A. Sherwood, City Treasurer
Joseph H. Arseneault, City Assessor
Herschel O. Self, Superintendent of Water Department
Donald F. Sinn, Superintendent of Recreation and Park Board
Dr. L. V. Burkett, Director of Health
James E. Northway, Civil Service Director
Albert C. Hull, Director of Purchases and Supplies
Charles R. Hampton, Secretary of Land Board
Capt. Harold L. Hickman, Traffic Engineer
Edward Gilbert, Building Inspector
James Mellus, Airport Manager
Stephen A. Lott, Superintendent of Hurley Hospital*

School Board Officials

Dr. Spencer W. Myers, Superintendent of Schools
James Allen, Business Manager

Frank Manley, Assistant Superintendent of Schools, and
Director of Mott Foundation Program

Dr. Clyde E. Blocker, Dean of Flint Junior College

Dr. David M. French, Dean of Flint College of the
University of Michigan

Ardell A. Henry, Superintendent of Flint Extension Center
of the University of Michigan

* Resigned; to be succeeded by Donald Walchenbach.

March 15, 1961

City Planning Commission
Flint, Michigan

Gentlemen:

We are pleased to submit herewith our final report on the Comprehensive Master Plan of Flint and Environs, prepared pursuant to our Contracts of January 2, 1958, and July 23, 1959. Reproduced separately are Revised Subdivision Regulations, New Zoning Ordinance, a Public Improvements Program and report on Administration of the Plan.

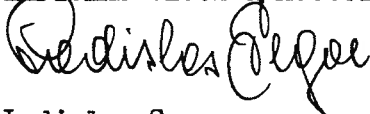
During the progress of our work, preliminary reports on surveys and research studies and the various elements of the Plan - containing quite fully and in considerable detail the findings, analyses, preliminary conclusion and proposals - were presented to your Commission and others for review and comments. Your comments and those received from others were given careful consideration in preparing this final summary report.

The comprehensive long-term plan for the desirable physical development of Flint and its environs presented in this volume is a fully integrated composite of the several functional studies and plans. All of these are founded on a common factual base of existing conditions and recent trends and are designed to accord with, and to facilitate and further the realization of future potentialities held to be reasonably attainable. The contribution which this Master Plan may be expected to make toward the realization of making greater Flint not only a larger but an increasingly better community will depend, most of all, however, on vigorous and enlightened civic leadership in the public interest, supported by an informed citizenry and progressive and efficient government.

We wish to take this opportunity to thank the many persons and agencies who assisted us, including members and officials of your Commission, the Board of Education, the Recreation and Park Board, the city administrative officials listed herein, and the Greater Flint Downtown Corporation. In addition, we wish to express our appreciation to the City Commissioners for the opportunities to report from time to time on progress of the work and for the benefit of their views. We are pleased to acknowledge our debt to all of them.

Sincerely yours,

LADISLAS SEGOE & ASSOCIATES



Ladislav Segoe
lt

FOREWORD

It is the purpose of the Master Plan to aid and to serve as a guide for the city government, public and semi-public agencies, institutions, private developers - all who have a part in building the community - in the planning and coordinating of buildings, facilities and services, with the view of producing an orderly, well functioning and attractive community in which to live and make a living and which can be operated and maintained efficiently and economically.

City planning endeavors, guided by the Master Plan, should accomplish a variety of objectives, among these:

- minimizing the cost of public facilities by coordinating these with private developments;
- avoiding ill-adapted location and size of public facilities and needless duplication of facilities and services;
- furthering the most appropriate use of land and minimizing conflicts between incompatible land uses;
- preventing haphazard, extravagant, wasteful urban sprawl and premature developments;
- guarding against overcrowding of land and buildings and against congestion;
- preventing untimely blight and deterioration;
- coordinating recreation planning with school planning, in furtherance of the local concept wherein maximum utility of buildings and grounds is secured;
- promoting systematic inter and intra-governmental public improvements programming and budgeting;
- furthering the provision of adequate thoroughfares and parking facilities;
- protecting residential sections from through traffic, noise, smoke, odor and other objectionable influences;
- guiding and coordinating the platting of new subdivisions with the view of promoting improved standards of design and improvements, thereby gaining sustained desirability of new developments, a sound tax base and lowest possible costs to the community;
- facilitating sound and economical utility planning on the basis of the urban service area concept;

- promoting an aesthetically enjoyable and stimulating urban environment.

Guided by the Master Plan - as revised from time to time to keep it current - it is the responsibility of the Planning Commission to advise the City Commission, City Manager, administrative and operating departments, as well as other public bodies and private enterprise, whether or not a given project or proposal, in its judgment, constitutes good planning. To be effective and of greatest benefit to the community, such judgment should, to the highest degree possible, be based on sound city planning principles and considerations in the public interest.

To make planning in Flint increasingly effective and fruitful, now that elements of the Master Plan have already been adopted by the Planning Commission, priority attention should be given, we believe, to the following:

1. Gradual development of precised plats of new, extended or widened thoroughfares and other public ways, and of parks, playgrounds or other public grounds, for adoption by the City Commission.
2. Adoption of the revised Subdivision Regulations.
3. Adoption of the proposed Zoning Ordinance.
4. Coordination of public and private improvements toward accomplishing the Central Business District refashioning envisioned herein.
5. Development of a community renewal program and specific renewal plans and programs toward effective conservation, rehabilitation or redevelopment of the various parts of the community - residential as well as non-residential.
6. Gaining closer cooperation in regard to planning between governmental agencies at various levels.

In all these and other development programs the Master Plan will serve as a guide. To be continually current, it should be particularized in the years ahead and revised periodically when necessary or desirable due to significant changes in developments or trends.

Charles W. Matthews

Charles W. Matthews
Head of Project Staff

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PHOTOGRAPHS

The Flint Journal

Kenneth C. Welch

* * *

Reproduced separately are Revised Subdivision Regulations, New Zoning Ordinance, a Public Improvements Program and report on Administration of the Plan.

INTRODUCTION

Flint, Michigan - builder of automobiles - has proved to be a bellwether of the national economy. The city's General Motors production lines have pointed the way in the development of manufacturing processes all over the world. Birthplace of the world's largest corporation, Flint's significant role is expected to continue.

In 1950, Flint's Urbanized Area population was about 198,000.¹ Today, the population of the Urbanized Area is estimated at 265,000. By conservative forecasts, the Urbanized Area population may exceed 380,000 by 1980, with an additional 50,000 persons living in Flint's related suburban centers and areas. Such attractive growth prospect is founded on past trends in the city and on Flint's demonstrated potential. The city's long-range future will depend mainly on its industry, but for the more immediate future, population and economic growth prospects may well depend upon the city's ability to develop at an accelerated pace the trade and services segment of its economy. Recent Area reports² indicate that while earnings are high from the goods the community manufactures for the national market, the Flint Area derives a relatively low proportion of its total earnings from goods and services which are consumed locally.

Related factors which stand to influence the population and economic growth of the community include the city's ability to play its part in supplying the market for urban land and in providing the social and cultural amenities requisite to the more advanced modern standards of living.

Background³

Historically, Flint - located in the southeastern part of Michigan's lower peninsula - began as a river crossing on the old Detroit-Saginaw fur-trading trail in the early part of the 19th century. The early settlement was platted as "Grand Traverse" and was made the judicial seat of Genesee County on August 25, 1835, just two years before Michigan became a state. Following the days of fur-trading, the lumber industry flourished and agriculture developed. Woolen mills, wagon works, and other manufacturing industries were set up to meet growing local needs.

Local wagon builders developed and manufactured the road cart, a two-wheeled, horse-drawn vehicle. From this beginning the carriage factories developed, serving a national, and even international market. Flint became known as "The Vehicle City," and was the world's largest vehicle manufacturing center. With

¹Map: Urbanized Area and Census Tracts, in section on Housing and Urban Renewal.

²U.S. Department of Labor study of 174 Metropolitan Labor Market Areas.

³Based on data compiled by the Flint Chamber of Commerce.

the turn of the 20th century, the city, already famous for its industry in general, was about to begin its role in revolutionizing the transportation industry - and the American way of life. Orders were placed for a new kind of carriage propelled by an internal combustion engine, and Flint's new period of expansion began. The Buick Motor Car Company was founded in 1903 and the city soon became the home of the General Motors Corporation. From 1900 to 1930, Flint's population increased from 13,000 to over 156,000 - a gain of better than 1,000 per cent and more than 17 times the national rate of increase for that period.

Following a leveling off of Flint's population and economic growth during the depression of the 30's, expansion has again accelerated during recent decades. The economy of the city depends upon the market success of the auto industry, with Flint now recognized, next to Detroit, as the most important motor vehicle manufacturing center in the world. The divisions of General Motors Corporation located in the Flint area are Buick, Chevrolet, Fisher Body, Ternstedt, and AC Spark Plug. Several factories - E. I. du Pont de Nemours, Standard Cotton Products, General Foundry and Manufacturing, and others - supply the motor plants.

In addition to its highway network - US-10-23 (Interstate 75), Michigan 21 and 78 - Flint is served by two railroads - the Grand Trunk Western and the Chesapeake and Ohio. Four bus lines provide inter-city transportation and local buses serve public transportation needs in all parts of the city. Bishop Airport, a municipally-owned facility, is located southwest of the city, with Capital Airlines and, recently, North Central Airlines providing service. The city has six radio stations; and seven television stations provide for reception in the area.

Flint is operated under the Commission-Manager form of government, with one commissioner elected from each of nine wards. The Police Department employs over 200 officers on the regular force and more than 100 school police; it operates over 100 pieces of motor equipment. The Fire Department employs more than 250 men, and operates eight stations and about 40 pieces of motor equipment. There are five hospitals in the city, with over 1,400 beds.

Economic Activities

Industry

Industry dominates Flint's economy to an unusually high degree, even for the highly industrialized state of Michigan. Manufacturing employs over 56 per cent of the city's residents, compared with 46 per cent in the industrial center of Detroit. A 1957 Labor Department study puts top manufacturing employment in recent years (1955) at over 90,000. Of Flint's resident industrial workers, more than 90 per cent are engaged in the manufacture of automobiles and automotive parts.

Proportionately high auto industry employment has paid Flint's citizens comparatively well. In 1950,¹ Flint's median family income was higher than the Detroit, Grand Rapids, Saginaw or average Michigan city medians. It was about 14 per cent higher than the median for the state of Michigan.

It has been reported that of every three persons employed in Flint, two work for the General Motors Corporation. Excluding only the interchange of goods and services within the city, 90 per cent of Flint's wage, salary, and shareholder earnings are estimated to derive from local General Motors' products. GM's largest single activity in Flint is the production of Buick automobiles. However, the various Chevrolet plants in the area are of almost equal importance to the city's economy. Buick, with its division headquarters in Flint, expanded its output of cars from 500,000 in 1950 to 750,000 in 1955. This rapid growth was a major factor in the city's accelerated population and economic expansion during this period.

The original Chevrolet plant in Flint was built before World War II near the center of the city. A new Chevrolet plant is located on Van Slyke Road just outside the city limits. A Chevrolet parts warehouse is located on Miller Road, three miles southwest of the city. The Fisher Body plants in Flint produce auto bodies for local assembly lines - Fisher No. 1 producing for Buick, and Fisher No. 2 for Chevrolet. In addition to these plants, Fisher Body has converted the World War II Grand Blanc Tank Plant - located in the suburban city of Grand Blanc to the south - to a stamping plant for auto parts.

In addition to the factories actually producing automobiles in Flint, two GM Divisions produce component parts and accessories - AC Spark Plug Division, with two plants located in the eastern part of the city; Ternstedt Division's plant, just north of the city limits. AC Spark Plug at first produced spark plugs only, but the GM Division has since diversified the production in its two Flint plants to air cleaners, gauges, oil filters, speedometers, pumps, and instrument panels. In contrast to employment characteristics in the auto divisions, more than half of AC's work force is female. The major production plant of Ternstedt Division - recently transferred from Detroit to Flint - produces most of the hardware and interior trim for GM cars.

Other industries in Flint do most of their business with GM: duPont's paint factory produces lacquer, auto waxes, polishes and cleaners; Standard Cotton Products makes bats and padding for automobile seating; General Foundry and Manufacturing produces gray iron castings and sells a large share of its product to GM.

Trade and Services

While industry dominates Flint's economy, employment in trade and services provides a livelihood for over one-fourth of Flint's labor force. The most recent Census of Business (1958) indicates over 25,000 persons employed in the

¹No comparable 1960 U.S. Census data were available at this writing.

Flint Metropolitan Area in retail and wholesale trade and in selected services. Of this total, over 15,000 people work in the Area's more than 3,000 retail stores. While trade and services provide employment for a large segment of Flint's labor force, proportionately fewer people are so employed in Flint than in the average Michigan city or in the three Michigan cities - Detroit, Grand Rapids, and Saginaw - selected for comparison. The more than 3,000 retail stores constitute the largest segment of the Metropolitan Area's business establishments. The Census of Business reveals that stores in Flint account for over 75 per cent of the retail sales in the Metropolitan Area. However, only about one-third of the Area's sales are made in Flint's central business district. The Metropolitan Area has over 330 wholesalers and more than 1,500 selected service establishments.

Flint is served by three banks - the Citizens Commercial and Savings Bank, the Genesee Merchants Bank and Trust Company, and the Michigan National Bank - with 31 branches. The Flint Journal is the one daily local newspaper.

Housing

Flint's generally high economic trends of the past apparently have not influenced appreciably the quality of residential housing in the community. As reported by the 1950 U. S. Census,¹ over 18 per cent of the dwelling units were found to be dilapidated - a proportion higher than the average for Michigan cities and double Detroit's nine per cent. Yet, only one out of every 10 Flint families earned less than \$2,000 per year at the time of the 1950 Census - compared with about one out of eight in Detroit.

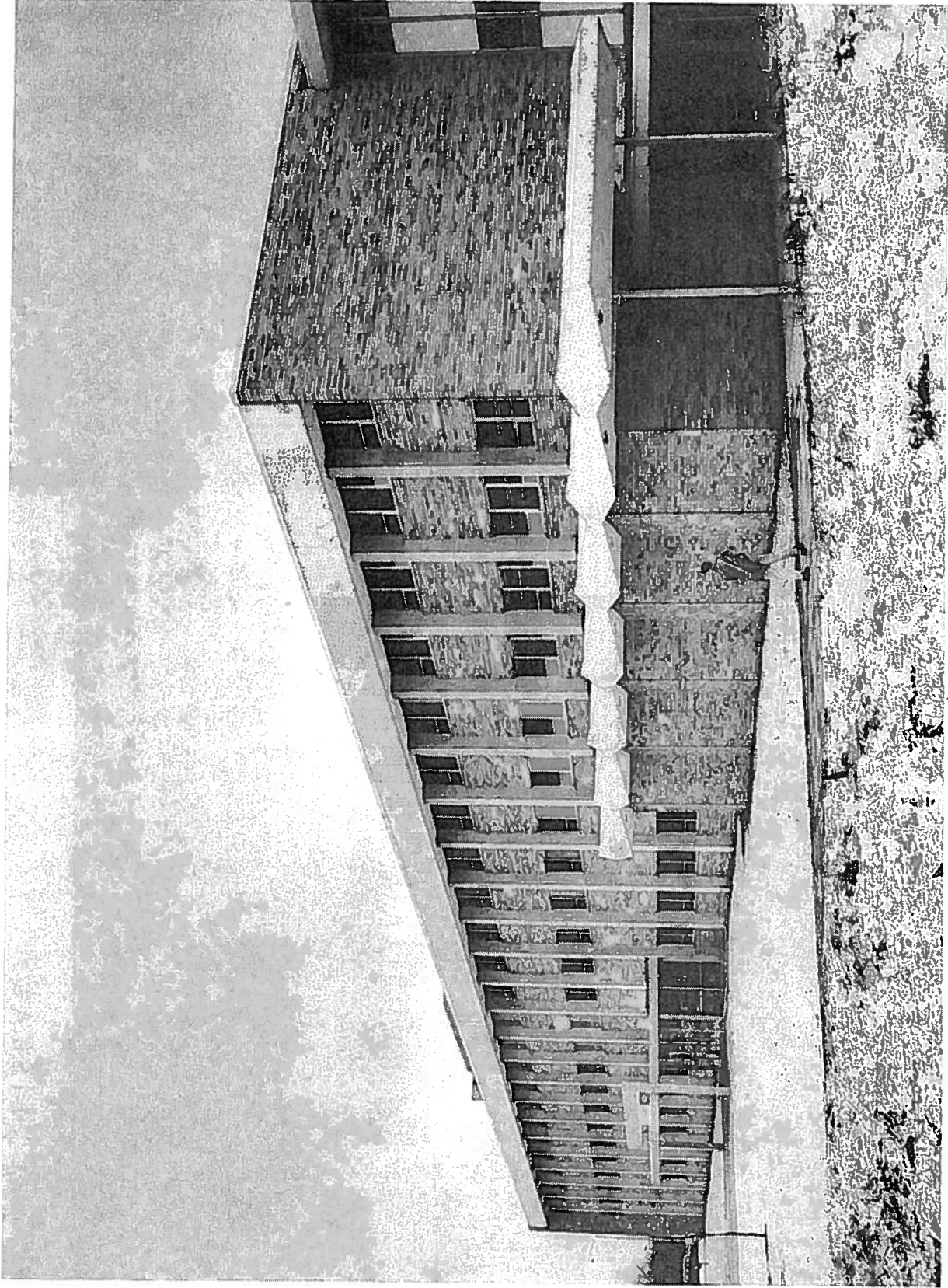
Of the total number of dwelling units in Flint, almost seven out of 10 are detached single-family houses, a higher proportion than in the average Michigan city or either of the comparison cities. Sixty-eight per cent of the city's dwellings are occupied by their owners. At \$6,970, as of 1950, Flint's owner-occupied dwelling units have a low median value - compared with a median of \$9,357 in Detroit, \$8,182 in the average Michigan city, and \$7,496 in Michigan as a whole.

Social and Cultural Amenities

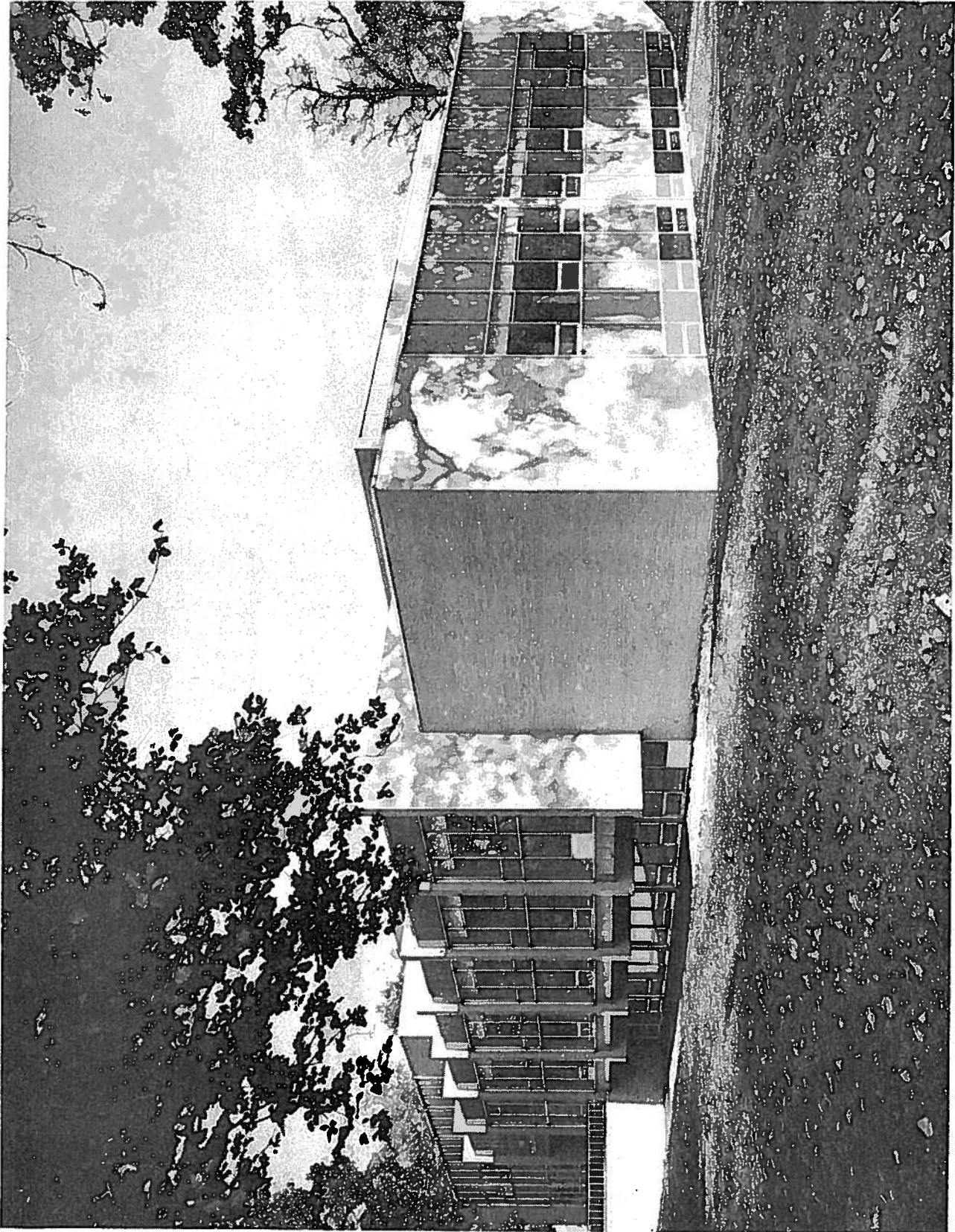
The College and Cultural Center development comprises a recent physical plant addition to Flint's nationally known program of community education and recreation. Built by a combination of public and private funds, the area is located about one-half mile to the east of the central business district.

Funds for construction and maintenance have been provided by the Ballenger Trust, the Mott Foundation, public tax monies, and the committee of Sponsors. Facilities are provided for a variety of educational activities - adult educational, collegiate, secondary, and elementary - under the sponsorship of the Flint Board of Education. Included are Mott Memorial U. of M. Building;

¹ No comparable 1960 Census data were available at this writing.



FLINT JUNIOR COLLEGE
MICHAEL GORMAN BUILDING
JOURNAL PHOTO



PUBLIC LIBRARY
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Cady B. Durham Natatorium; William S. Ballenger Field House; Harlow H. Curtice Academic Building; Charles Stewart Mott Science and Arts Building; Junior College Science Building. The Mott Library, the Michael Gorman Building and two additional Junior College buildings complete this building group.

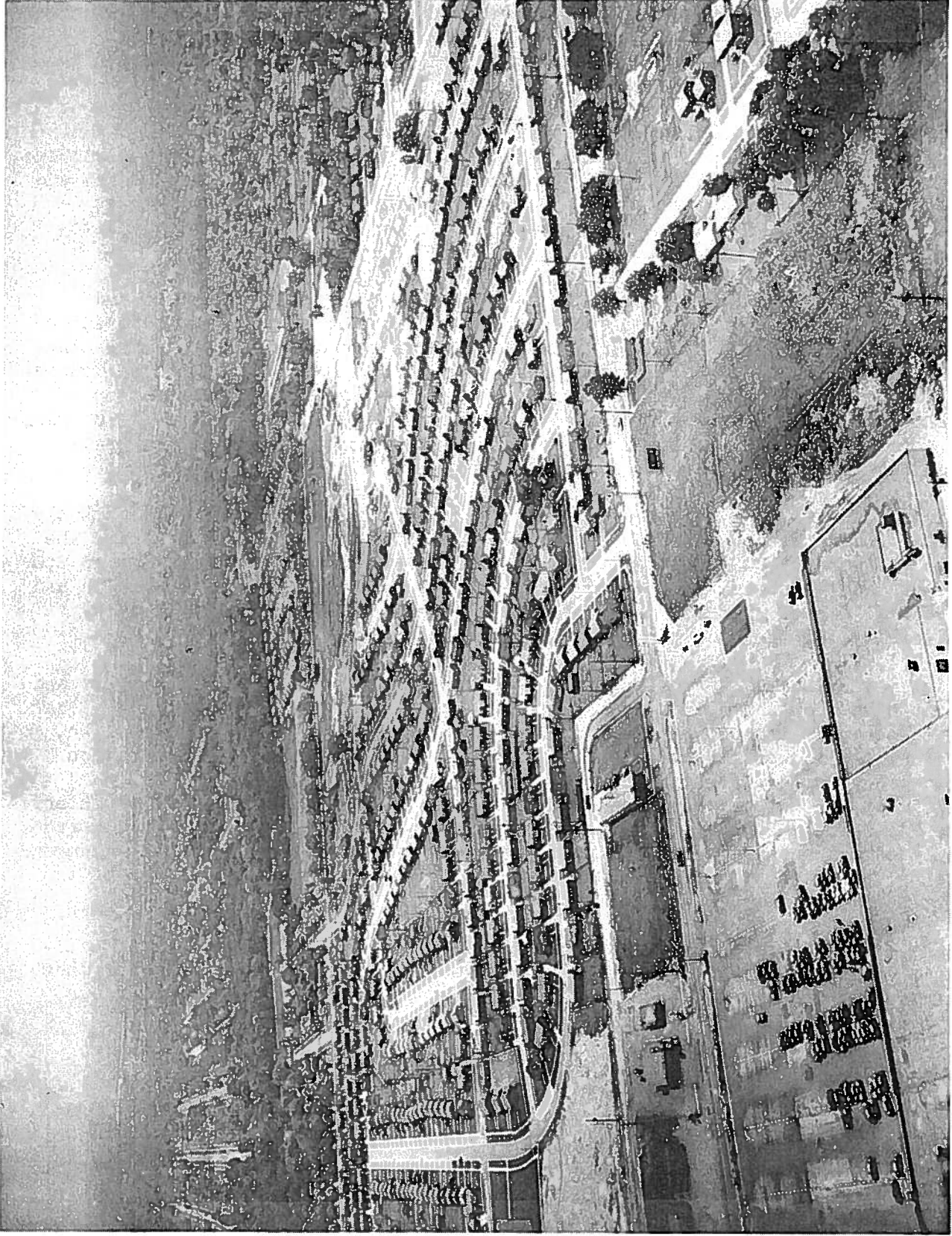
The buildings of the Cultural Center adjoin and delimit William Crapo Durant Plaza and the Sponsors' Mall with its Carillon Tower. These buildings include: Alfred P. Sloan, Jr. Panorama of Transportation (proposed); Gallery of Art and Historical Collections (proposed); F. A. Bower Theater; Robert T. Longway Planetarium; Enos A. and Sarah DeWaters Art Center; James H. Whiting Auditorium (proposed); J. Dallas Dort Music Center; Flint Public Library.

General Motors Institute attracts students from throughout the nation and around the world. Over 2,300 students are enrolled in courses in cooperative engineering, business administration and in dealer cooperative programs. The Institute further serves as a training center in Flint for thousands of General Motors Personnel in courses covering practically every phase of operation of the Corporation. Courses conducted here, in the plants, and in the field bring to more than 30,000 the total number participating in GM Institute programs each year.

Flint Junior College, three senior high schools, and seven junior high schools number among the more than 40 schools of the Flint public school system. The city has some 37,000 pupils in its public schools and over 8,000 pupils in its 17 parochial schools. More than 1,400 teachers are employed in the public and parochial school systems. Also located in the city are the Baker Business University and the Michigan School for the Deaf.

Flint is nationally known for its Mott Foundation program of child welfare and adult education and recreation. The Foundation, endowed by Mr. Charles Stewart Mott, conducts its program in cooperation with the Flint Board of Education, coordinating its work to make use of public school buildings. The Foundation sponsors a child health program; a visiting teacher and in-service program; the Mott camp for boys; a training program in homemaking for mothers and daughters; the Flint Youth Bureau (primarily for fatherless boys); an interracial program; adult education and recreation programs; tot-lots (summer recreation); teen-age groups; and the expanding community school program. The annual budget of the Mott Foundation exceeds one million dollars.

There are 47 parks and playgrounds in the city of Flint. Recreational facilities include Atwood Stadium (seating 16,000), 10 golf courses (three of them municipally owned), five community buildings, four municipal swimming pools, tennis courts, outdoor theaters, softball and baseball diamonds.



RESIDENTIAL DEVELOPMENT
JOURNAL PHOTO

POPULATION

Trends and Projections

Any sound plan for the future development of the community must be based on a thoroughgoing appraisal of its probable future growth and must be attuned to the distinctive functions the community is to perform. Consequently, an inquiry into and an understanding and appraisal of the social and economic structure of the metropolitan area and of its prospective development are prerequisites in the preparation of a sound community plan.

The results of such studies, along with those of available services, facilities and land utilization, represent the minimum of an adequate foundation for, as well as the major directives in planning for the community's desirable future development. They help to find rational answers to such questions: What is likely to be the growth of the community during the period for which the plan is to be prepared? What will be the desirable and attainable expansion in the different economic activities during this period? How much land should be allocated to these and other activities? What additional public and private facilities, housing, schools, parks and playgrounds, public buildings of all sorts, water supply facilities, sewers - will probably be necessary, how should these be financed, and where should they be located?

Population Growth Trends

Population growth trends in Flint have fluctuated greatly over the years. From the time of the lumber trade in the mid-19th century until the beginning of the 20th century, the city experienced steady growth, reaching a population of 13,103 in 1900. Flint's carriage factories were flourishing. During this period the city's population growth rate was about two and one-half times that of the nation as a whole.

POPULATION GROWTH TRENDS in FLINT 1860-1960

<u>Year</u>	<u>Population</u>	<u>% Inc.</u>
1960	194,958 ¹	19.5 ¹
1950	163,143	7.7
1940	151,543	(-) 3.2
1930	156,492	70.8
1920	91,599	137.6
1910	38,550	194.2
1900	13,103	33.7
1890	9,803	16.6
1880	8,409	56.1
1870	5,386	82.6
1860	2,950	-

¹ Preliminary Census Report.

Though it had maintained a very respectable rate of population increase, it was not until after the turn of the century that the city was to experience its era of spectacular growth.¹ The Buick Motor Car Company was founded in 1903, and by 1930 over 35,000 jobs had been created in manufacturing industries alone. The effect on population growth was, of course, tremendous. The rate of increase was greater than 17 times the national rate for the same period.

With a high proportion of its labor force engaged in the manufacture of durable goods, Flint proved to be notoriously vulnerable to fluctuations in the national economy. The city was hard hit by the depression of the 30's, and during this period its population declined 3.2 per cent. Genesee County, however, experienced a modest population increase during this period, paralleling a similar increase in the U.S. as a whole.

Certain related factors have exerted a continuing influence on Flint's population growth trends. These include: population growth in the state of Michigan, as compared with the United States; the rapid urbanization of southeast Michigan's industrial corridor; and the relationship of Genesee County to this industrial corridor. Among the more recent factors affecting Flint's population growth and distribution have been the evolving pattern of decentralized residential development within the city and its environs and a variety of economic conditions further discussed in the section on the Economic Base.

Prior to 1910, Michigan witnessed a steady decline in its share of the U.S. population.² The new auto industry then reversed the trend by increasing this proportion until, in 1930, 3.9 per cent of the U.S. population lived in Michigan. According to U.S. Census estimates, at present about 4.5 per cent of the U.S. population resides in the state of Michigan.

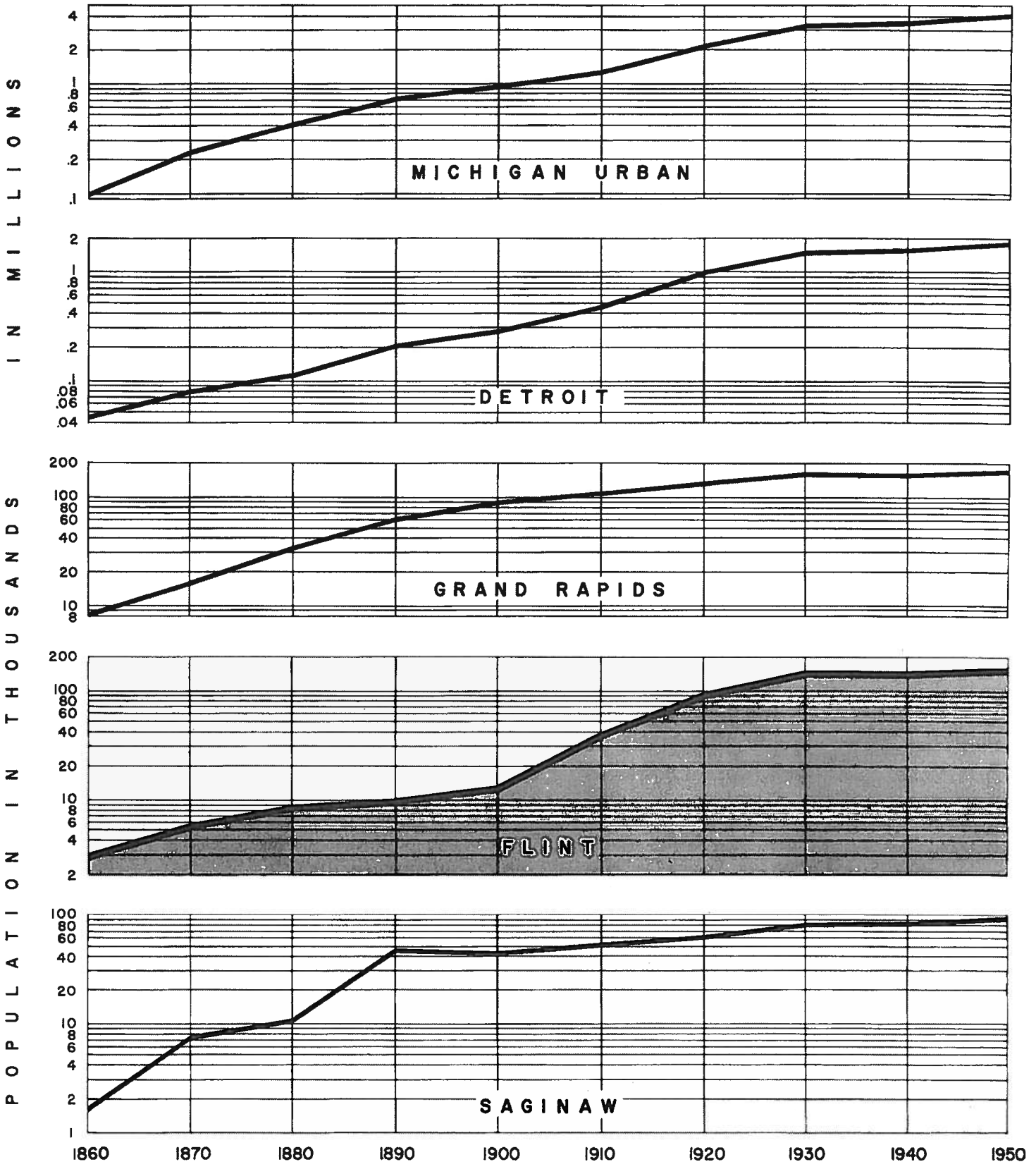
A high proportion of Michigan's population is concentrated in the state's southeastern 4-county area - Genesee, Macomb, Oakland, and Wayne counties - the state's industrial corridor. From 1910 to 1930, this 4-county area increased its share of Michigan's population significantly, going from about 24 per cent to almost 50 per cent. Since 1930, this proportion has shown a further slow but steady increase. The present 4-county area share of the Michigan population is estimated at about 53 per cent.

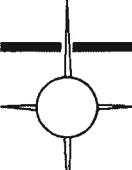
From 1910 to 1950 Genesee County has experienced a rather steady decline in its proportion of the 4-county area population, with indication that this trend has been reversed somewhat since 1950. Latest reports indicate that Genesee County now holds about nine per cent of the 4-county area population.

In recent decades, new patterns of residential development have been affecting population growth and distribution within city of Flint itself. Between 1890 and 1920, Flint's share of the Genesee County total rose from one-third to

1 Graph: Population Growth Trends, 1860-1950.

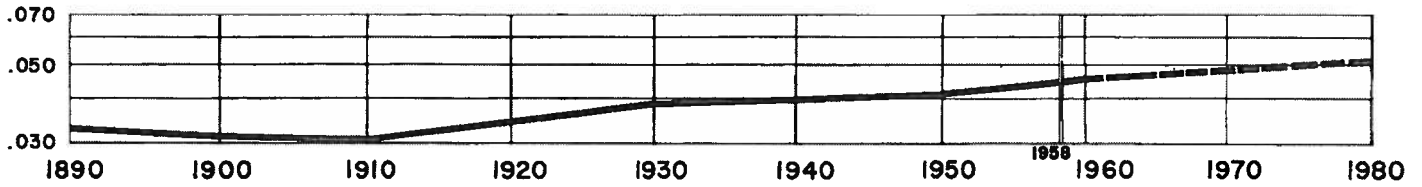
2 Graph: Population Ratio Trends and Projections, 1890-1980.



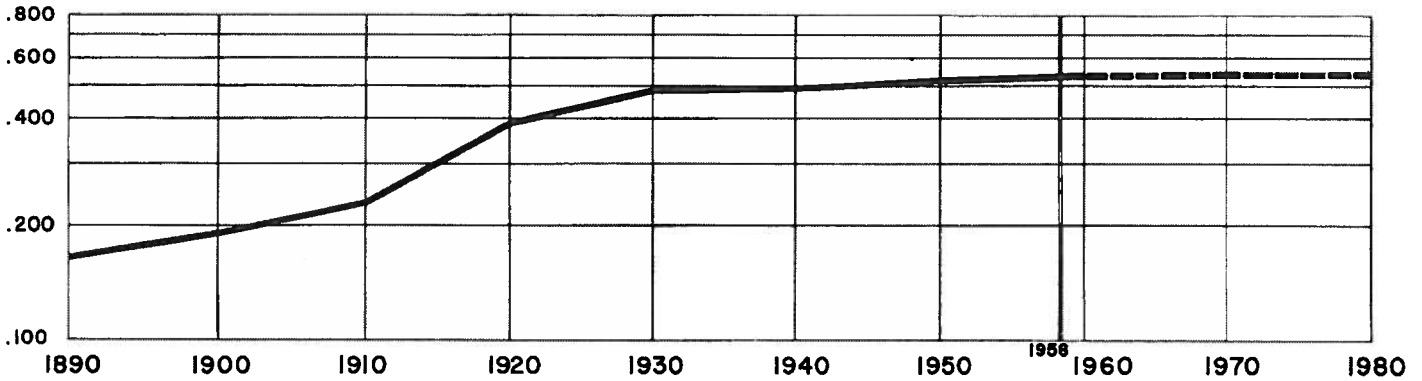

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**POPULATION GROWTH TRENDS:
1860 - 1950**

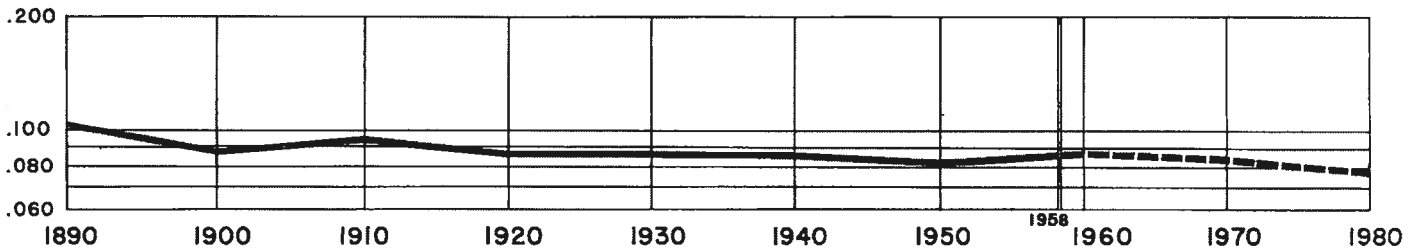
MICHIGAN URBAN, DETROIT,
 GRAND RAPIDS, FLINT, SAGINAW



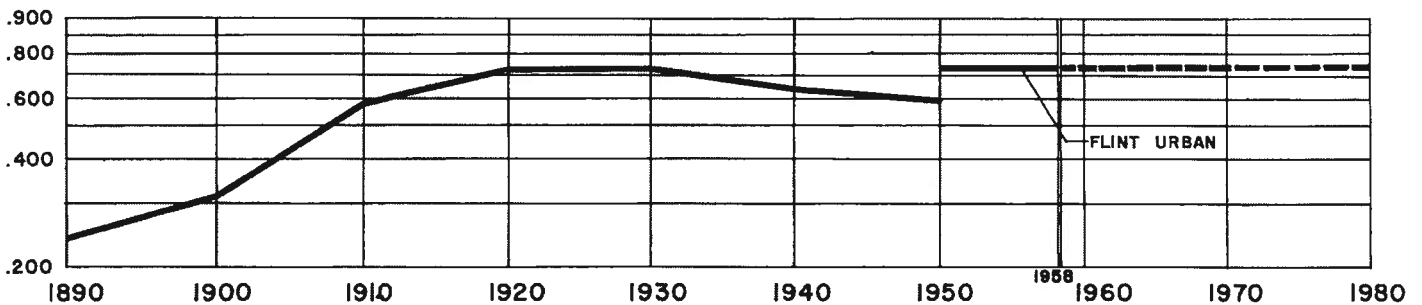
RATIO OF UNITED STATES POPULATION IN MICHIGAN



RATIO OF MICHIGAN POPULATION IN 4-COUNTY AREA¹

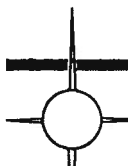


RATIO OF 4-COUNTY AREA¹ POPULATION IN GENESSEE COUNTY



RATIO OF GENESSEE COUNTY POPULATION IN FLINT

¹ GENESSEE · MACOMB · OAKLAND · WAYNE COUNTIES


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**POPULATION RATIO TRENDS
 AND PROJECTIONS: 1890-1980**

UNITED STATES, MICHIGAN, 4-COUNTY AREA,
 GENESSEE COUNTY, FLINT, FLINT URBANIZED AREA.

almost three-fourths. By 1930, the automobile which was revolutionizing American living habits was making a like impact on the development of the local community. During the 20's, the city's share of the county population held steady, but in 1930 this proportion began a decline which continues today, with growing residential development in the suburban fringes of the community. Of the total population of Genesee County, at the present time only little more than one-half live within the city limits of Flint. Significantly, however, Flint and its environs hold about the same proportion of the county population as in 1930, and in recent years - with rapid growth in the environs and inside the city along the perimeter - this proportion is showing evidence of increase.

The Flint Master Plan is meant to delineate a physical framework for the future urban growth of the community. In light of past population trends, the Plan is fashioned to include the city of Flint, its urban and urbanizing area, and, in some of its aspects, the Metropolitan Area (Genesee County) as well.

Population Distribution

Field survey data and other primary sources indicate that in the period since 1950 the Flint Urbanized Area has experienced population growth at a rate unmatched since the boom days of the 20's. An estimated 265,000 persons live within the delineated "Flint Urbanized Area"¹ - an increase of about 34 per cent over the 1950 urbanized area figure. Of the 1960 population, over 70 per cent - a total of nearly 195,000 - resided within the city.

In 10 years, Flint's population increased more than 19 per cent, from 163,143 in 1950 to nearly 195,000 in 1960, as above stated. Following the trend of recent decades, proportionate population increase within the city was greatest along the perimeter of the incorporated area, whereas a decelerated rate of growth or actual decrease in population has occurred toward the center. In Flint's environs, suburban and urban densities occur within platted subdivisions and along major thoroughfares. Within the suburban cities of Grand Blanc and Mt. Morris, comparable population densities are in evidence.

Within Flint, the population is more evenly distributed throughout the corporate area. Other than water areas and the few remaining larger tracts of vacant land, various non-residential land uses - industrial, commercial, school, park, and others - provide the only interruption to the city-wide dispersal of the population. Relatively high population densities are evidenced in several city areas.¹ Because Flint has relatively few multi-story apartment buildings, high population density usually indicates high land coverage and intensive residential land use at ground level.

¹ Map: Population Distribution, 1958

Population Projections

A city's population prospects constitute a most important consideration in the determination of future needs. Such forecasts are subject to many unforeseeable influences and must, therefore, be made with considerable care and accepted with some reservations. Numerous conditioning factors based on best available information were considered in making population projections for the Flint Urbanized Area.

Tables and graphs were developed depicting Census data of past population growth in Flint, in the three Michigan cities selected for comparison, and Michigan Urban.¹ Additional tabulation denotes past population growth of the United States, Michigan, the 4-county area, and Genesee County. Other graphs were drawn depicting the ratio of the population of each of these latter units resident in each next larger unit. These ratio trends and population trends were carefully extended.² Genesee County and Flint Urbanized Area projections were further checked against various regional and local factors. Despite the greater difficulty in making forecasts for smaller population units than larger ones, the prognostications made herein are considered reasonably reliable for working purposes.

As shown in the following table, the Flint urbanized area population is estimated to increase over the next two decades within a range of 77 to 107 per cent, with the medium series indicating 92 per cent. Thus by 1980 it is entirely probable that some 350,000 to 400,000 persons may be permanent residents of this metropolitan community.

POPULATION GROWTH PROJECTIONS: 1950 - 1980

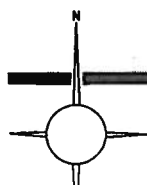
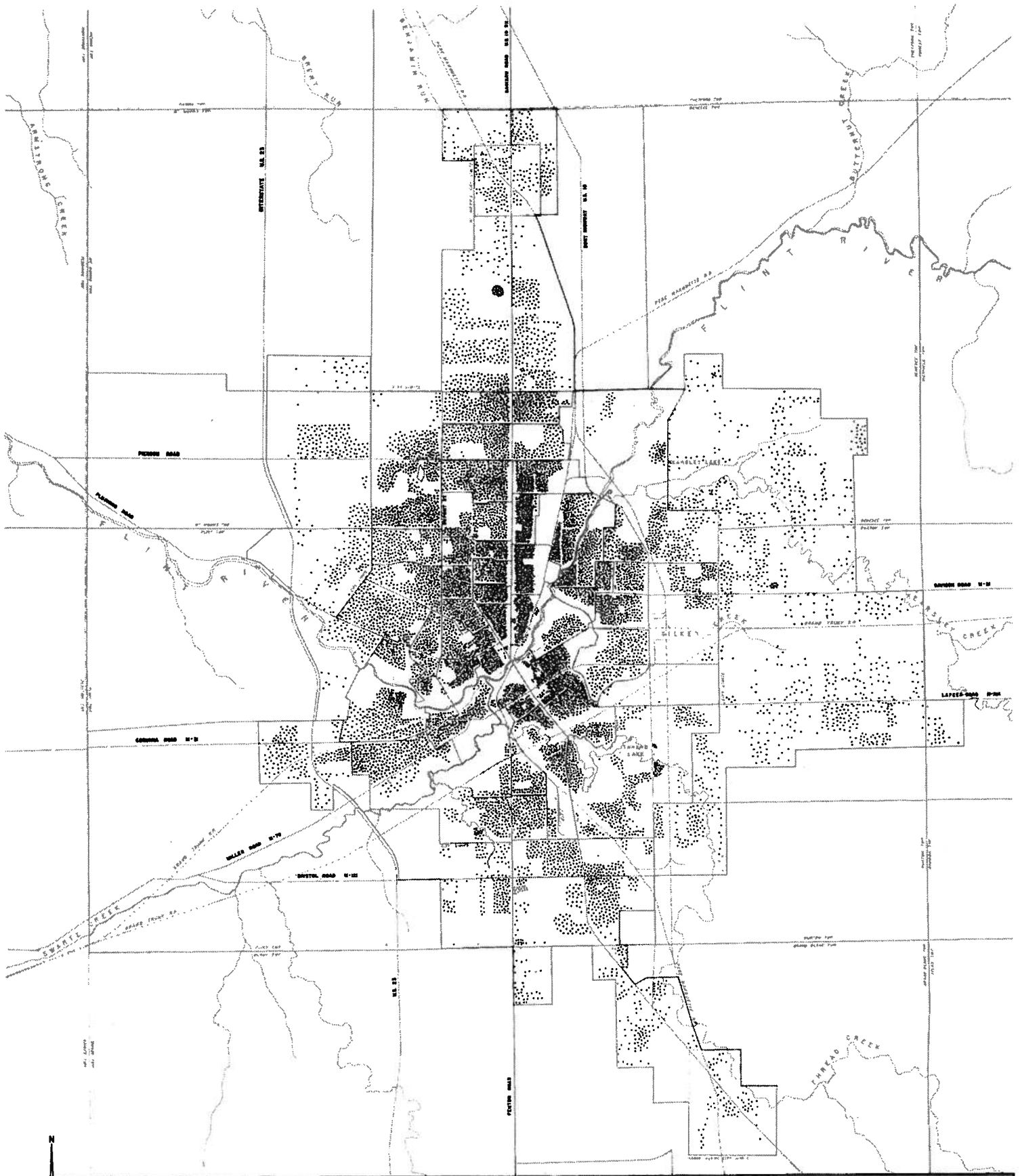
Flint Urbanized Area

<u>Year</u>	<u>Series</u>	<u>Total</u>	<u>Increase</u>	<u>Increase</u>	<u>% Increase</u> <u>10 Year Increments</u>
1980	High	410,000	64,000	-	18.5
	Medium	380,000	50,000	-	15.2
	Low	350,000	36,000	-	11.5
1970	High	346,000	68,000	-	24.4
	Medium	330,000	55,000	-	20.0
	Low	314,000	42,000	-	15.4
1960	High	278,000	80,369	-	40.6
	Medium	275,000	77,369	-	39.2
	Low	272,000	74,369	-	37.6

1 Graph: Population Growth Trends, 1860-1950.

2 Graph: Population Ratio Trends and Projections, 1890-1980.

Graph: Population Growth Trends and Projections, 1890-1980.



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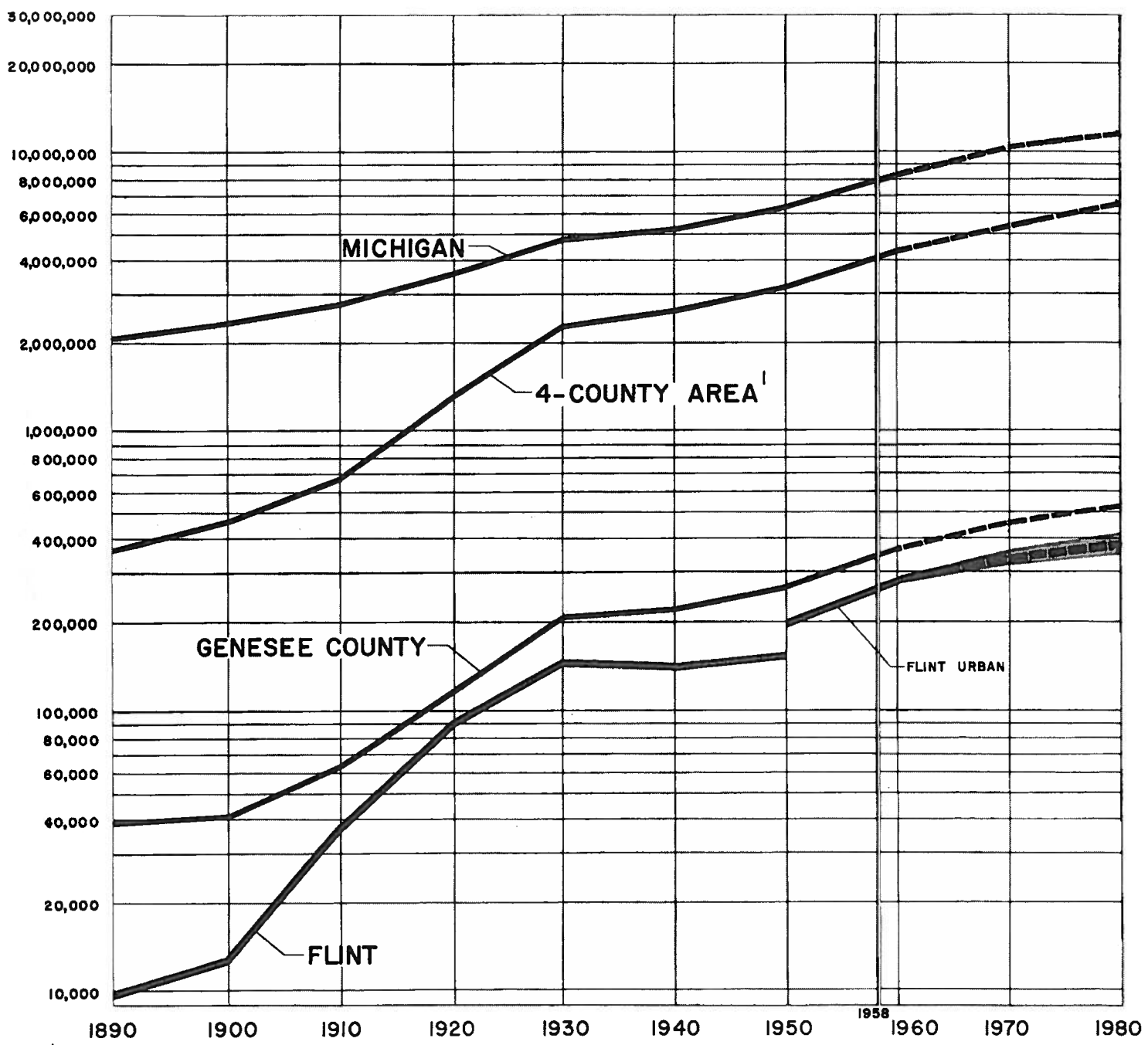
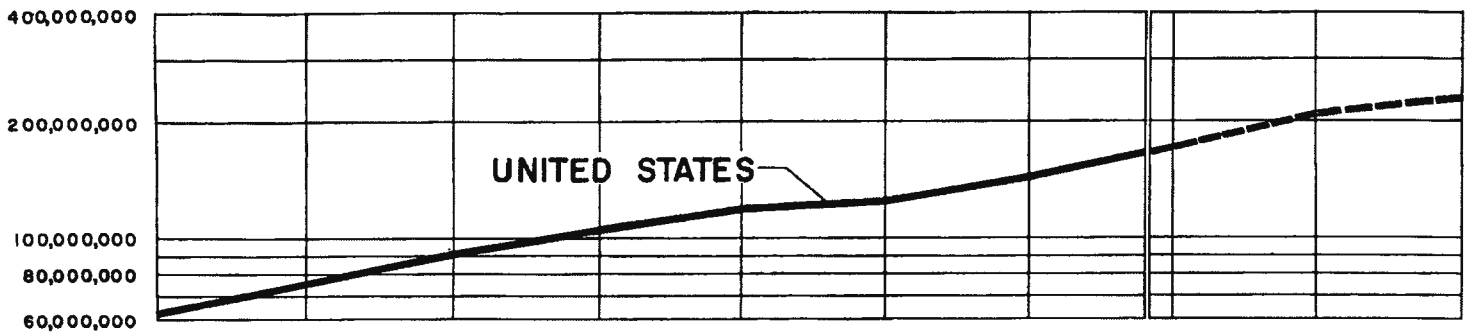


POPULATION DISTRIBUTION - 1958

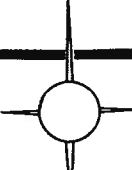
FLINT URBANIZED AREA

**ONE DOT EQUALS 20 PERSONS
CENSUS TRACT BOUNDARY**

**PERIMETER OF
FLINT URBANIZED AREA - 1958**



¹ GENESSEE · MACOMB · OAKLAND · WAYNE COUNTIES


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POPULATION GROWTH TRENDS AND PROJECTIONS: 1890-1980

UNITED STATES, MICHIGAN, 4-COUNTY AREA,
 GENESSEE COUNTY, FLINT, FLINT URBANIZED AREA.

POPULATION GROWTH PROJECTIONS: 1950 - 1980 (Contd.)

Flint Urbanized Area

<u>Year</u>	<u>Series</u>	<u>Total</u>	<u>Increase</u>	<u>Increase</u>	<u>% Increase 10 Year Increments</u>
1958	Estimated (City of Flint)	265,000 (190,000)	67,369 (26,857)	34.1 16.4	- -
1950	U.S. Census (Clity of Flint)	197,631 (163,143)	- (11,600)	- -	- (7.7)
<hr/>					
1950-1980	High		212,369	107.5	
	Medium		182,369	92.3	
	Low		152,369	77.1	

In 1950, the Flint Urbanized Area population comprised 72.9 per cent of the Genesee County total. While this proportion has held fairly steady for several decades, it has begun to increase somewhat in recent years. It is reasonably expected that nearly three-fourths of this population will reside in Flint's Urbanized Area by the time the County population reaches approximately 500,000.

Age Composition

Certain public facilities - such as schools, playgrounds and playfields - are intended for use by certain age groups. Their location and size should be in scale with the numbers in the particular age groups and related to their pattern of distribution within the community. It is, therefore, necessary to make studies of past trends and estimates concerning the future age composition of the population.

In terms of the age of its residents, Flint is a relatively young city. As determined by the 1950 Census, the median age was 29.5 years - less than that for the state as a whole, for the average Michigan city, or for any of the three comparison cities.

Adjustments have taken place in the age composition of the city since 1930, when 83.2 per cent of Flint residents were under 45 years of age, compared with 76.4 per cent in the United States as a whole.¹ Younger wage-earning groups have proportionately declined some 15 to 20 per cent since 1930. Approaching more nearly the national average in 1950 about 73 per cent of Flint's residents were less than 45 years old.²

1 Graph: Age Composition Trends and Projections, 1930-1980.

2 Comparable 1960 data were not available at this writing.

In respect to the various age groups, Flint tends to follow the trends in Michigan and in the United States as a whole; but in certain exceptions it does not. Flint's 0 - 4 age group decreased in proportion from 1930 to 1940, reflecting lower birth rates nationally during the depression. Local increases from 1940 to 1950 reflected the increased post-war birth rate. However, prior to 1950, this age groups' proportionate decline had been more severe and recovery less pronounced in Flint than in the United States. Records of Flint births since 1950, however, show an unusually strong upsurge in the local birth rate - resulting in a substantial recent increase in this age group.

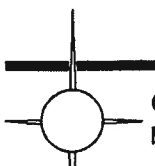
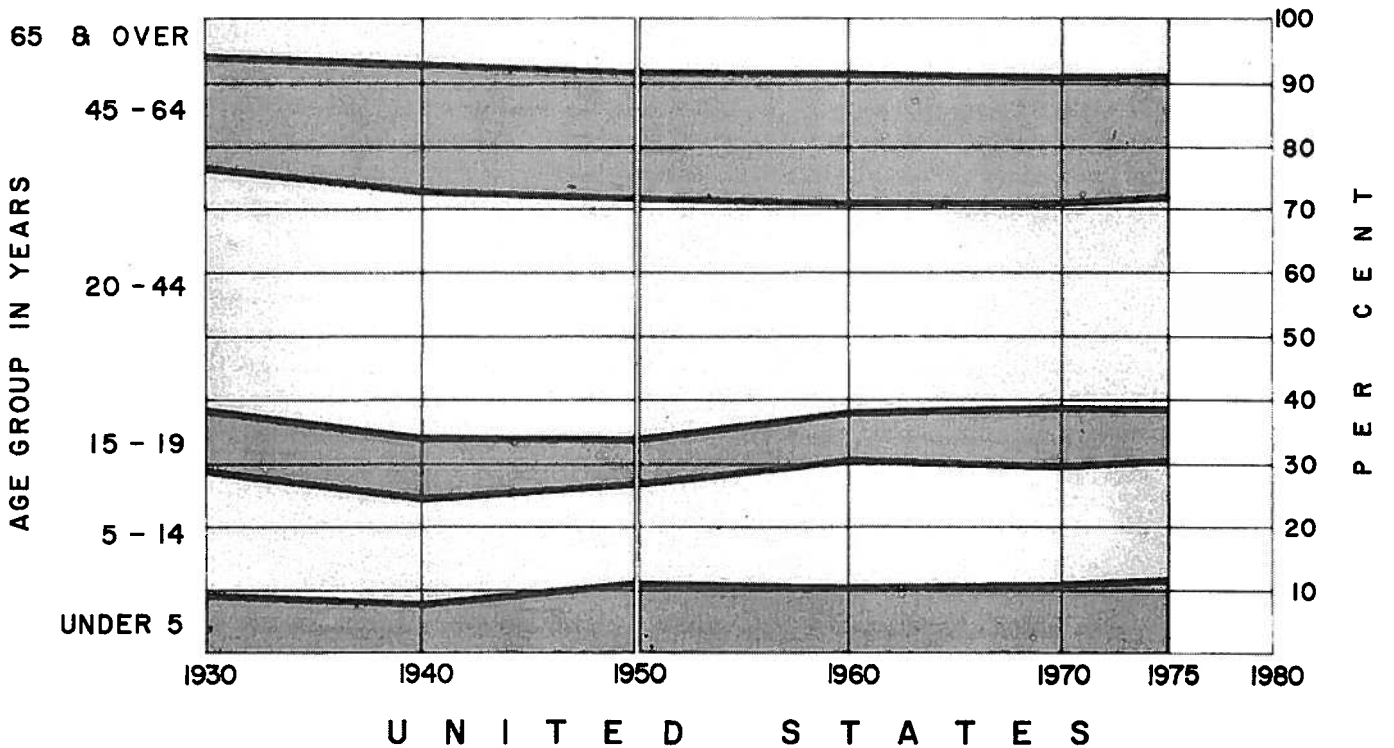
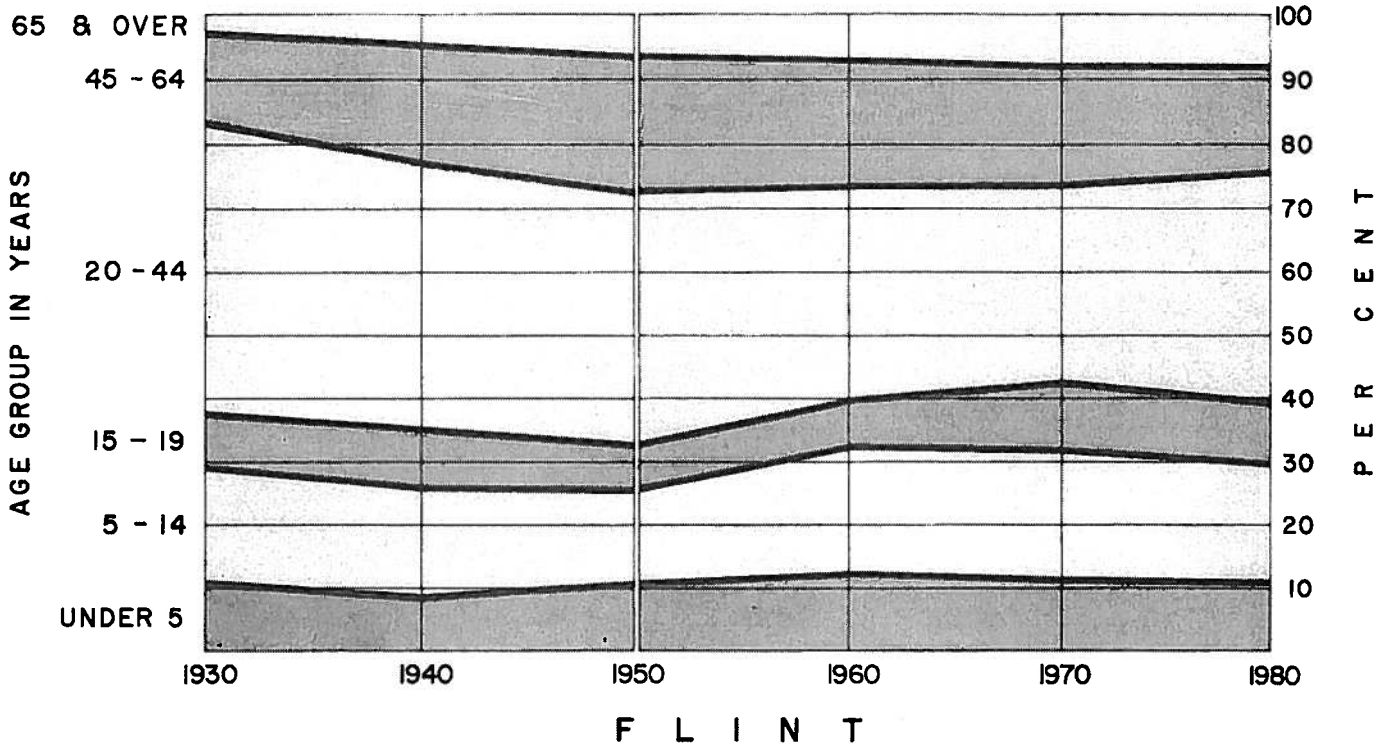
The decline in the proportion of the 5 - 14 age group from 1940 to 1950 was most pronounced in Flint, again reflecting the abrupt drop in the birth rate during the depression. Past birth and school enrollment records show that this elementary-junior high school age group, in more recent years, has increased its proportion significantly.

In 1950, the 15 - 19 age group had not yet felt the impact of the increased post-war birth rate. In Flint, in Michigan, and in the United States as well, this group showed a marked proportionate decline during the years 1940 to 1950. Census forecasts estimate that the 15 - 19 group will increase from 7.0 per cent of the population in 1950 to 9.4 per cent in 1970, and indications are that this increase will be even greater in Flint.

The local economy, based on manufacturing, has matured to some extent in recent decades. Reductions have resulted in the relatively high proportion of the population included in the 20 - 44 age group. This trend seems likely to continue in Flint in the near future, and, for the more distant future, it is anticipated that this age group will increase somewhat in proportion.

In Flint, the age groups 45 years and older comprise a proportion of the population smaller than in the United States as a whole but similar to that in the state of Michigan. However, this group generally has increased its proportion of the total population in Flint over the years. In the foreseeable future, the proportion is expected to remain fairly steady. National and local trends indicate the likelihood of considerable increase in the proportion of the 65 and older age group.

In making the overall area-wide population forecasts, increases and decreases in the proportions held by certain age groups were taken into consideration. As Flint's total population has, in the past, generally increased, age groups have likewise increased in numbers whether they increased or decreased in proportion to the total population. Thus, for example, although by 1950 the 20 - 44 age group had decreased in proportion to the total population - from about 42 per cent in 1940 to 40 per cent in 1950 - it increased in numbers during this period from 64,000 to 65,000. Actual or numerical increases are expected to occur in all age groups in the years to come.



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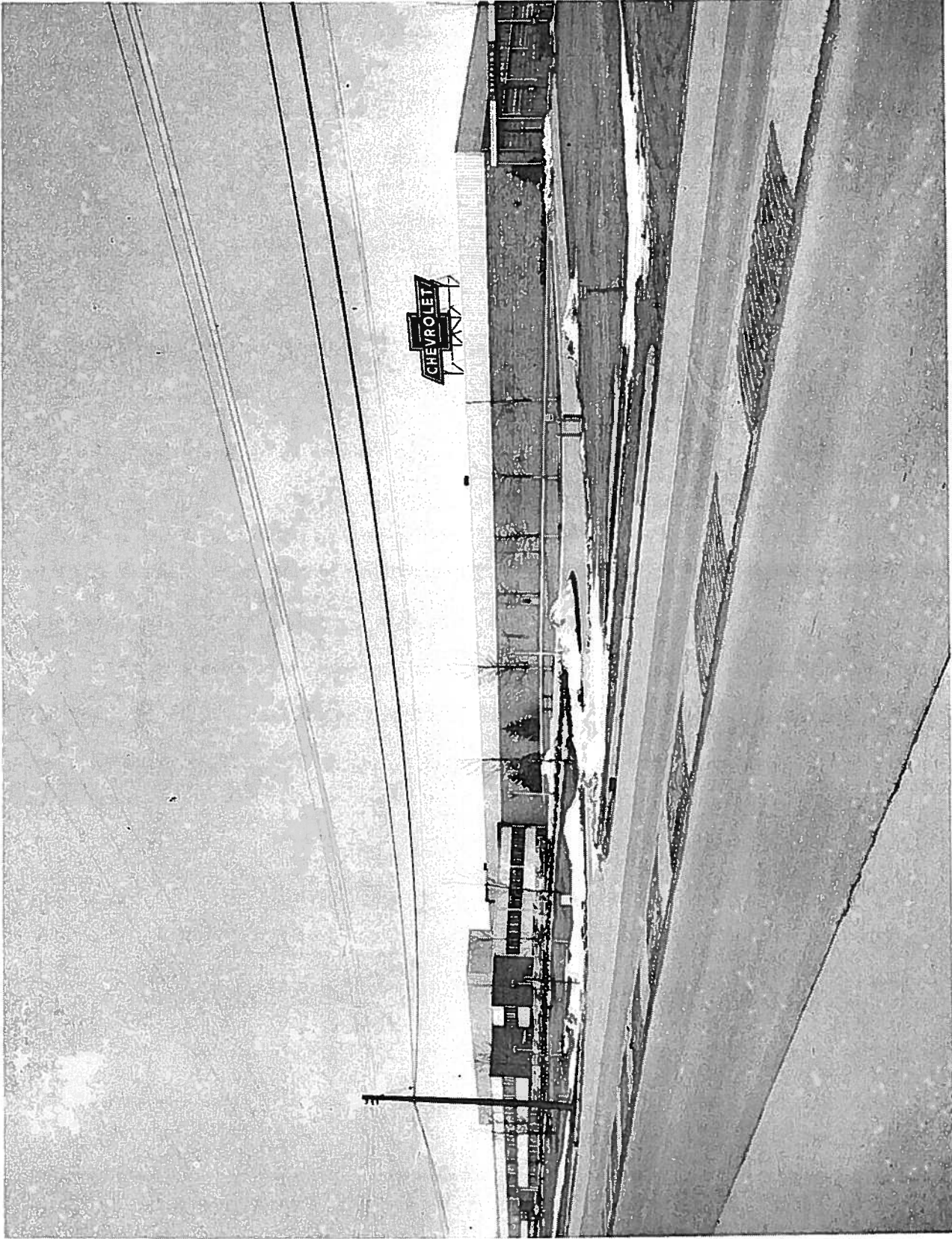
CITY OF FLINT · MICHIGAN
FLINT PLANNING COMMISSION

1958

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**AGE COMPOSITION TRENDS
& PROJECTIONS: 1930 - 1980**

FLINT · UNITED STATES



GENERAL MOTORS CORPORATION
CHEVROLET PLANT
JOURNAL PHOTO

ECONOMIC BASE

General Characteristics

Flint has achieved a world-wide reputation as a leading manufacturing center, with its trademark the automobile. It differs economically from most cities in the high degree of this specialization. But, like most cities, its economy comprises a variety of other important income-producing activities. These activities include all of the various local transactions in which money is exchanged for goods and services.

Family Income

The individual income level in the community provides one of the indicators of the strength of that community's economy. Flint's long-range income trends have tended generally upward since the start of the auto industry, and indications are that the rate of increase during the 1950's was one of the highest in the city's history. Comparison of Flint's major occupation groups with those in the average Michigan city further highlights the strong position of the highly-paid auto industry, as reflected in the large proportions of operatives and craftsmen and foremen in the local occupational structure.¹

At the time of the 1950 decennial Census, Flint's median family-income ranked number one among Michigan's Metropolitan Areas.² Among Michigan cities, Flint's was higher by five per cent than the average city. It was about 14 per cent higher than the median for the state of Michigan as a whole.

INCOME DISTRIBUTION

<u>1950 Income Groups</u>	<u>Flint (%)</u>	<u>Michigan Urban (%)</u>
Less than \$1,000	5.3)	7.5)
\$1,000 - \$1,999	5.4) 21.7	6.9) 29.3
\$2,000 - \$2,999	11.0)	14.9)
\$3,000 - \$3,999	28.4)	24.6)
\$4,000 - \$4,999	17.7) 65.6	16.2) 59.0
\$5,000 - \$5,999	11.7)	11.3)
\$6,000 - \$6,999	7.8)	6.9)
\$7,000 - \$9,999	8.8)	7.6)
\$10,000 and over	3.9) 12.7	4.1) 11.7

Flint's family income compared very favorably on a state-wide basis - and Michigan fared equally well in the national economy, with the Michigan median income

1 Diagram: Population by Major Occupation Groups.

2 Comparable 1960 data are not available at this writing.

the highest in the East North Central Division, and this Division's median income highest of all the nine geographic Divisions of the United States. Comparing median family income on a state-to-state basis, Michigan topped every state but New Jersey, where the median exceeded Michigan's by less than \$100. Michigan's median income was over 20 per cent higher than that in the United States as a whole. The Flint Urbanized Area median income was almost one-third higher than that in comparable U.S. urban areas. Flint's middle-income groups have fared best in the proportionate distribution of the community's gross income.

Compared with the average Michigan city, as shown in the foregoing table, relatively fewer Flint families are in the low or in the highest income groups. In 1950, for example, less than 22 per cent of all Flint families earned under \$3,000, whereas over 29 per cent were in this wage group in Michigan cities. Of all the families living in Michigan's cities, 59 per cent earned between \$3,000 and \$7,000. In Flint, with 65.6 per cent, this income group was 11 per cent larger than in the average Michigan city. Of Michigan Urban families 4.1 per cent earned more than \$10,000, compared with 3.9 per cent of Flint's families in this income category.

Composition of the Labor Force

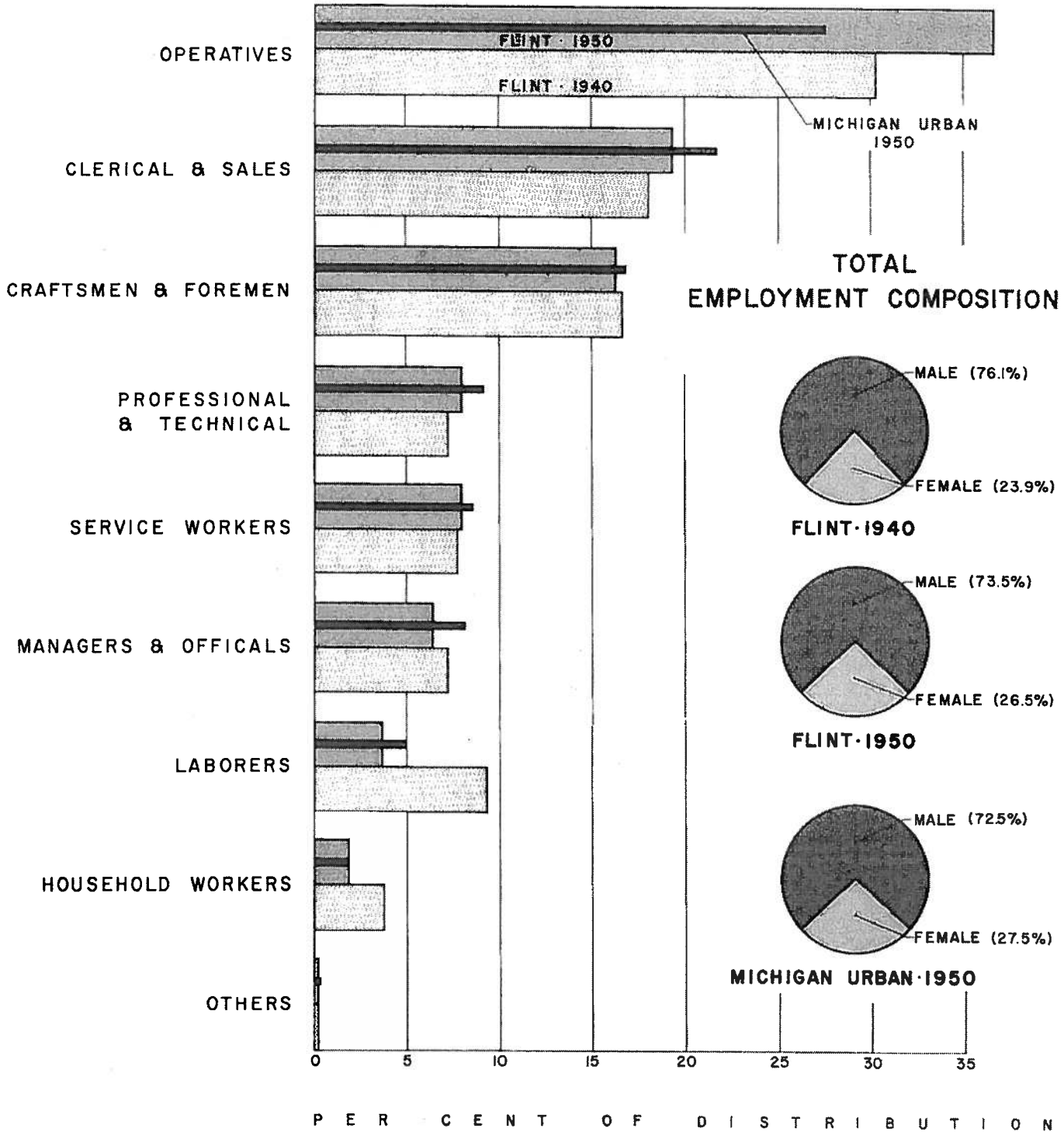
In 1950, the Metropolitan Area (Genesee County) residents constituted over 92 per cent of Flint's labor force. Over 70 per cent of the labor force lived in the Flint Urbanized Area and over 60 per cent in the city of Flint. Three-fourths of the city's population was 14 years old or older and nearly 60 per cent of this age group was in the labor force, as against 55.7 per cent in the average Michigan city (Michigan Urban). Flint's labor force was about 63 per cent male, close in this respect to the Michigan Urban average. In Flint, 85.9 per cent of the working-age men and 31.5 per cent of the working-age women were in the labor force, as against 81.9 and 30.2 per cent, respectively, in the average Michigan city.

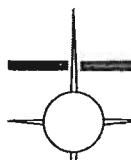
The composition by industry groups of employed Flint's residents points up, of course, its specialized economy. In 1950,¹ over 56 per cent of employment was in manufacturing, compared with the 44.3 per cent average in the highly industrialized Michigan cities as a group. This dominance of manufacturing was strengthened between 1940 and 1950 when employment in manufacturing had risen by about 30 per cent as against a 27 per cent in the total employment. By 1955, the best auto production year in history, Flint manufacturing employment had increased about one-third over the 1950 figure. Non-manufacturing employment likewise showed gains, although it did not match these accelerated increases in manufacturing employment. From 1955 to 1958, however, with manufacturing employment off some 35 per cent, non-manufacturing employment, although engaging a smaller proportion of the local labor force, declined by only two per cent.

Of Flint's manufacturing employees, in 1950 about 92 per cent worked in the auto and auto parts plants - making Buicks, Chevrolets, and automotive parts. Only 4.9 per cent of the manufacturing workers in Flint were employed in non-durable goods lines, while in the auto-producing Michigan cities the average

¹ Diagram: Population by Major Industry Groups.

M A J O R
O C C U P A T I O N
G R O U P S



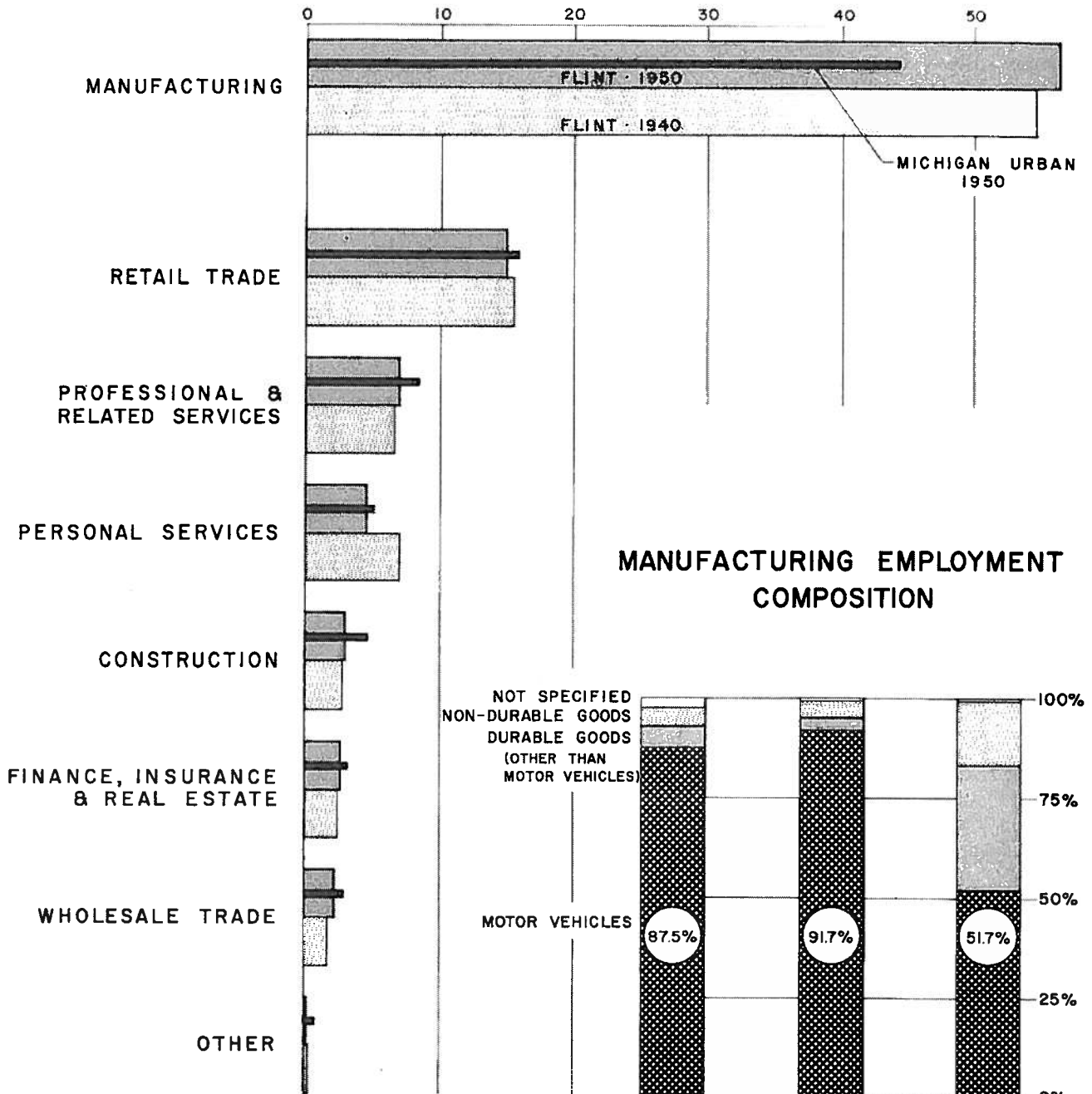

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POPULATION BY MAJOR OCCUPATION GROUPS: 1940 - 1950

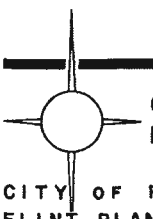
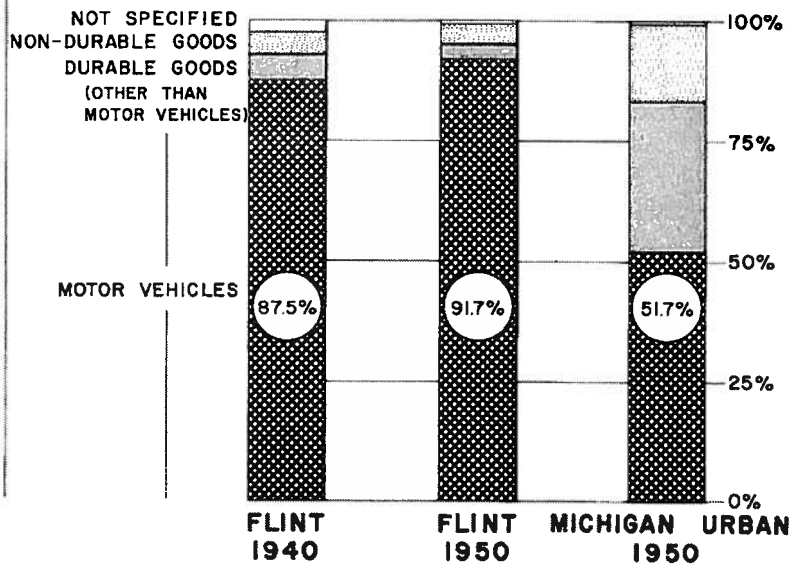
FLINT · MICHIGAN URBAN

P E R C E N T O F D I S T R I B U T I O N

M A J O R I N D U S T R Y G R O U P S



MANUFACTURING EMPLOYMENT COMPOSITION



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POPULATION BY MAJOR INDUSTRY GROUPS: 1940 - 1950

FLINT · MICHIGAN URBAN

was over 16 per cent. Since the founding of the motor car industry, Flint's non-manufacturing employment never has reached the potential in scale with its manufacturing employment.

In 1950, the Flint Metropolitan Area's manufacturing employment constituted 65.6 per cent of all wage and salary employment. By 1955, with large proportionate increases in both manufacturing and non-manufacturing industries, the manufacturing-non-manufacturing employment ratio was almost the same as in 1950. By 1958, after two years of a declining economy, the manufacturing proportion had decreased to 55.3 per cent of all wage and salary employment; and non-manufacturing employment, which proved to be much more stable during this period, had increased from 34.6 per cent, in 1955, to 44.7 per cent of all wage and salary employment.

According to the 1958 Census of Manufacturers there were employed by the manufacturing industry in the Flint Standard Metropolitan Area 57,623 persons, or 23.6 per cent less than in 1954. This low level reflects, of course, the general business recession of the latter part of the four-year period. According to current Michigan Employment Security Commission statistics that number has risen by 1960 to an average of approximately 70,000, which would suggest that the downward trend indicated by the Census figures was short-lived and should have no serious bearing on long-term developments, save for the impact of technological advances. These, of course, cannot be meaningfully appraised at this time.

Value Added by Manufacture

Value is added to a product as it is processed, and workers tend to add value to goods-in-process generally in direct proportion to the amount of capital investment required to produce or distribute the product involved. Influenced by this capital investment factor, value-added-per-employee varies considerably from one industrial employment category to the next (see table).

NET VALUE ADDED per EMPLOYEE: 1954

	<u>Value Added per Employee</u>
<u>All non-farm, non-mine industries</u>	\$ 5,766
Finance, insurance, real estate	13,243
Transportation equipment	7,200
Communication and public utilities	6,310
Contract construction	5,964
Wholesale trade	5,859
Other manufacturing	5,409
Government and government services	5,303
Services	5,264
Retail trade	4,449

Value-added-per-employee in Flint is about 10 to 15 per cent higher than the national average, because most of the community's employment is in transportation equipment manufacturing, a high value-added line. In 1950, 51.7 per cent of Flint's employed labor force was engaged in the manufacture of motor vehicles and parts.

The total value added by manufacture as reported for the Flint Metropolitan Area in the Census of Manufacturers of 1954 was \$713,846,000 - the highest in the Area's history. This represents a 120 per cent increase over 1947 when the total amounted to \$323,205,000. Even during the 1958 slump, Flint's value added by manufacture remained considerably above the 1947 level with \$589,962,000 - but some 17 per cent under 1954.

Economic Trends and Projections

Local Trends in Manufacturing

With 56.3 per cent of its 1950 resident working force employed in manufacturing, Flint's specialization in this field was over 27 per cent greater than that of the average city in this manufacturing state (see table).

Manufacturing employment in Flint - concentrated in its General Motors plants - was proportionately 22 per cent higher than in Detroit, 30 per cent higher than in Saginaw, and 42 per cent higher than in Grand Rapids. The proportion of Flint's manufacturing employment in the motor vehicle industries was more than double that of the average Michigan city. It out-ranked in this respect the auto center of Detroit by 85 per cent.

EMPLOYMENT in MANUFACTURING, 1950

by place of residence
(Per cent of total employment)

	<u>Total</u>	<u>1. Durable goods</u>	<u>2. Non-durable goods</u>	<u>Motor Vehicles, etc. (part of Col. 1)</u>
Flint	56.3	53.5	2.8	51.7
Michigan Urban	44.3	36.7	7.3	22.9
Detroit	46.0	39.5	6.2	27.9
Grand Rapids	39.7	31.0	8.6	5.7
Saginaw	43.4	38.4	4.7	14.6

With considerable additional capital investment in plants between 1939 and 1943, Flint Metropolitan Area manufacturing employment has consistently, since 1939, outgained population growth (see table). As a result, the ratio of manufacturing employment to total population has tended steadily upward -

MANUFACTURING EMPLOYMENT TRENDS

(Per cent increase per year)

	<u>Population</u>	<u>Manufacturing Employment</u>
1954	3.1%	5.4%
1947	1.9%	6.1%
1939	0.8%	0.3%

a further indication that due to rapid plant expansion, non-manufacturing employment hasn't had a chance to catch up with employment in manufacturing; also an indication of a widening zone of residence of plant employees.

Local Trends in Trade and Services

In view of Flint's exceptionally high employment rate in manufacturing industries, it is not surprising to find that employment in trade was about 10 per cent lower locally than in the average Michigan city (see table).

EMPLOYMENT in TRADE: 1950
by place of residence
(Per cent of total employment)

	<u>Total</u>	<u>Retail</u>	<u>Wholesale</u>
Flint	17.0	14.9	2.1
Michigan Urban	18.9	15.9	3.0
Detroit	19.0	15.7	3.3
Grand Rapids	22.2	17.1	5.1
Saginaw	21.3	16.7	4.6

Retail employment was proportionately lower in Flint than in any of the comparison cities: 5.1 per cent lower than Detroit; 10.8 per cent lower than Saginaw; and 12.9 lower than Grand Rapids. Flint's proportionate wholesale trade employment was markedly lower than the comparison cities: 36.4 per cent lower than Detroit; 54.4 per cent lower than Saginaw; and 58.8 per cent lower than Grand Rapids.

Retail Trade. From 1947 to 1954, in line with increasing manufacturing payrolls and at a similarly accelerated pace, retail trade in Flint expanded at a rate considerably faster than in the state as a whole. Employment in retail trade increased in Flint during this period at a rate nearly six times that in the state; and in the Flint Metropolitan Area over six times. (In the previous Business Census period, 1939-1947, Michigan's rate of increase had been about 40 per cent higher than Flint's.) Metropolitan Area retail sales during the 1947-1954 period increased at about double the average state-wide rate, as did those in the city of Flint, though at a somewhat lesser rate than the Metropolitan Area - 68.9 per cent as against 70.5 per cent.¹

Even during the period from 1954 to 1958 - which included a business slump - retail sales in the Metropolitan Area not only held their own but actually increased by one per cent from \$420,649,000 to \$425,226,000. Employment in retail trade, however, dropped five per cent, from 16,094 to 15,262. In the city of Flint proper, retail sales declined during the same period by three per cent. It is noted, however, that sales in certain lines - consisting generally of essentials - increased even in the city. Food, for example, rose from \$69,489,000 in 1954 to \$80,185,000 in 1958. Flint's outlying shopping centers

¹ Diagram: Retail Sales: 1954.

and business sections proved to be the principal gainers, increasing their share of the market at a rate $1\frac{1}{2}$ times greater than that of the Metropolitan Area. While some of these increased sales reflect inflationary trends, at the same time they would seem to support the theory advanced by some that Flint is no longer as severely affected by the downward swings of the economic cycle as it used to be and that these do not necessarily cause major out-migration of workers.¹

Among Flint's various retail groups automobiles were highest in sales in 1954, second in 1958. In 1954 almost \$77 million was spent for motor cars in Flint showrooms - \$64 million four years later. Auto sales made up nearly one-fourth of all retail sales in the city in 1954, and about one-fifth in 1958. Food sales made up about one-fifth of the total in Flint in 1954, one-fourth in 1958.

Like in manufacturing industries, payroll-per-employee in retail trade is higher in Flint than in the state as a whole, but not much higher - about two per cent in 1954.

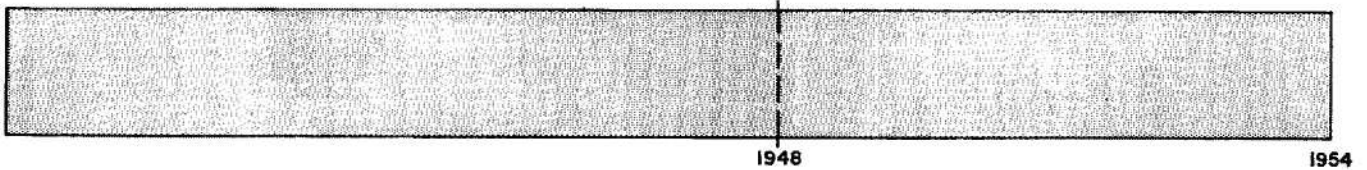
Flint's central business district contains by far the largest concentration of retailing facilities in the Metropolitan Area. In 1954, downtown Flint's 463 retail establishments made up about 25 per cent of the city's total. They accounted for 42.5 per cent of the total of retail sales in the city. Of all the retail stores in Flint's Metropolitan Area, about one out of six was located in downtown Flint. These downtown stores took in about \$2 of every \$6 spent on retail goods in the Metropolitan Area. Payrolls, downtown, exceeded \$17 million in 1954.

By comparison, downtown Flint, with 33.4 per cent of the sales in the Metropolitan Area, was well ahead of Grand Rapids, with 24.3 per cent, and very much more ahead of Detroit, with 9.9 per cent, in 1954. Moreover, the proportion of business in downtown Flint, although it declined by about 20.1 per cent between 1948 and 1954, held up better than in Grand Rapids, with a decline of 24.1 per cent, and in Detroit, 36.1 per cent.

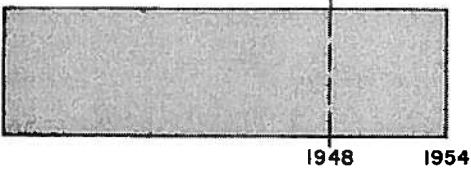
Wholesale Trade. Flint's wholesale trade is at a disadvantage due to the city's geographic location close to major wholesale distribution centers. In 1950, wholesale trade employment in Flint was proportionately about 70 per cent of that in the average Michigan city.

By 1958 there were indications that the wholesale trade position had improved somewhat in relation to the total local economy. From 1947 to 1958, Flint's wholesale establishments had increased in number from 182 to 259. Payrolls increased to over \$15 million - bringing the payroll per employee figure to about \$5,900. Sales by Flint establishments had risen by 1958 to almost

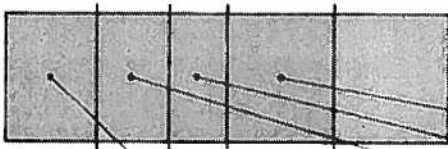
1 To an extent this may be due to the Supplementary Unemployment Benefits contract of 1955 between General Motors and the United Auto Workers which makes SUB benefits payable only if personal contact is made in Flint every week.



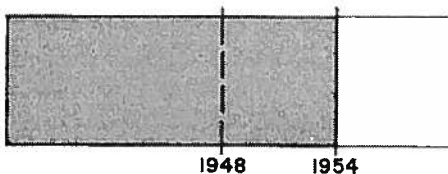
In 1954, Flint Metropolitan retail sales totaled over \$413 million—
an increase of 72% over 1948.



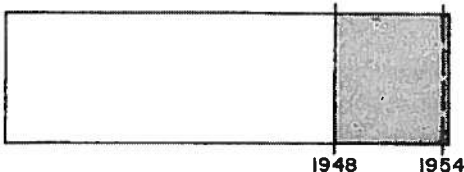
About one-third of this amount was spent
in Downtown Flint: less than \$140 million—
an increase of only 36% over 1948.



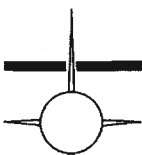
The general merchandise, apparel, furniture, and automotive groups
accounted for almost three-fourths of all Downtown sales.



These four groups were the strongest
competitors Downtown, increasing their
sales more than 50% over 1948.



Other Downtown groups increased their sales
less than 5% — including Downtown food stores
which declined 3%.



**COMPREHENSIVE
MASTER PLAN**

CITY OF FLINT · MICHIGAN
FLINT PLANNING COMMISSION

1958

LADISLAS SEGOE & ASSOCIATES
CITY PLANNERS · CONSULTING ENGINEERS
CINCINNATI · OHIO FLINT · MICHIGAN

RETAIL SALES : 1954

DOWNTOWN FLINT COMPARED WITH THE
FLINT METROPOLITAN AREA.

\$205 million, an increase of 63 per cent over 1947. Corresponding figures for the Metropolitan Area are \$325 million and 148 per cent. In 1958, with sales of nearly \$120 million, Flint merchant wholesalers - establishments selling generally merchandise to retailers, industry or other commercial enterprises - had recorded an increase of 64 per cent over 1948.

Selected Services¹. In 1958, receipts of selected services in Flint totaled over \$30 million. This was an increase of over 221 per cent in 11 years. The number of selected services establishments increased nearly 50 per cent in the city, and employment was up 99 per cent. As in the case of wholesale trade, these accelerated increases tend to indicate some bettering of the position of selected services in the city's economy. In 1958, personal services accounted for over 33 per cent of all selected services receipts in the city.

Employment Projections

Flint's economy has been built and is founded on the manufacture of General Motors automobiles. GM sales outside the community account for over 90 per cent of Flint's external sales. From its external sales, the community derives over two-thirds of its income - wages, salaries, and shareholders' returns. To a very large extent, changes in the city and Metropolitan Area in non-manufacturing employment - as well as in population, school enrollment, retail trade, and personal income - all follow in varying but considerable degrees the rise or fall in employment levels at the auto plants.

In the past, Flint's economy and its employment composition have not responded adequately to the stimulus of added manufacturing employment. For the most part, community enterprise has focused on the auto plants. Expansion has been rapid, and so many manufacturing jobs were created within such a short period that the community was unable to develop a complement of non-manufacturing establishments in scale with its factory employment and payrolls. As a consequence, it has not as yet harvested the full economic benefit from these factory jobs, in terms of sales in trade, receipts from services and in other respects.

To evaluate the total job potential created in Flint by manufacturing employment, medians have been drawn from 1957 labor force statistics. These medians are calculated for manufacturing and non-manufacturing employment in Michigan's Metropolitan Areas, exclusive of Flint (see table).

Medians in these areas indicate 101 persons employed in non-manufacturing establishments per every 100 manufacturing workers. In Flint, however, employment composition shows only 68 such employees per 100 manufacturing jobs, broken down as shown in the table. The Michigan Metropolitan Area medians reflect regional trends and conditions and, therefore, may serve as a basis for esti-

¹ Includes various personal services such as: hotels, rooming houses, automotive and other repair services, motion pictures, amusement and recreation, and other business and personal services.

WHAT 100 MICHIGAN MANUFACTURING WORKERS MEAN
in TERMS of TOTAL EMPLOYMENT
(Selected sources)

Medians in 9 Michigan Metropolitan Areas
(not including Flint)

		<u>Flint</u>
<u>Total Jobs</u>	<u>201</u>	<u>168</u>
Manufacturing	100	100
Retail Trade	32	26
Services	27	19
Transportation	12	5
Construction	10	6
Government	8	5
Wholesale Trade	6	3
Finance	5	3
Other	1	1

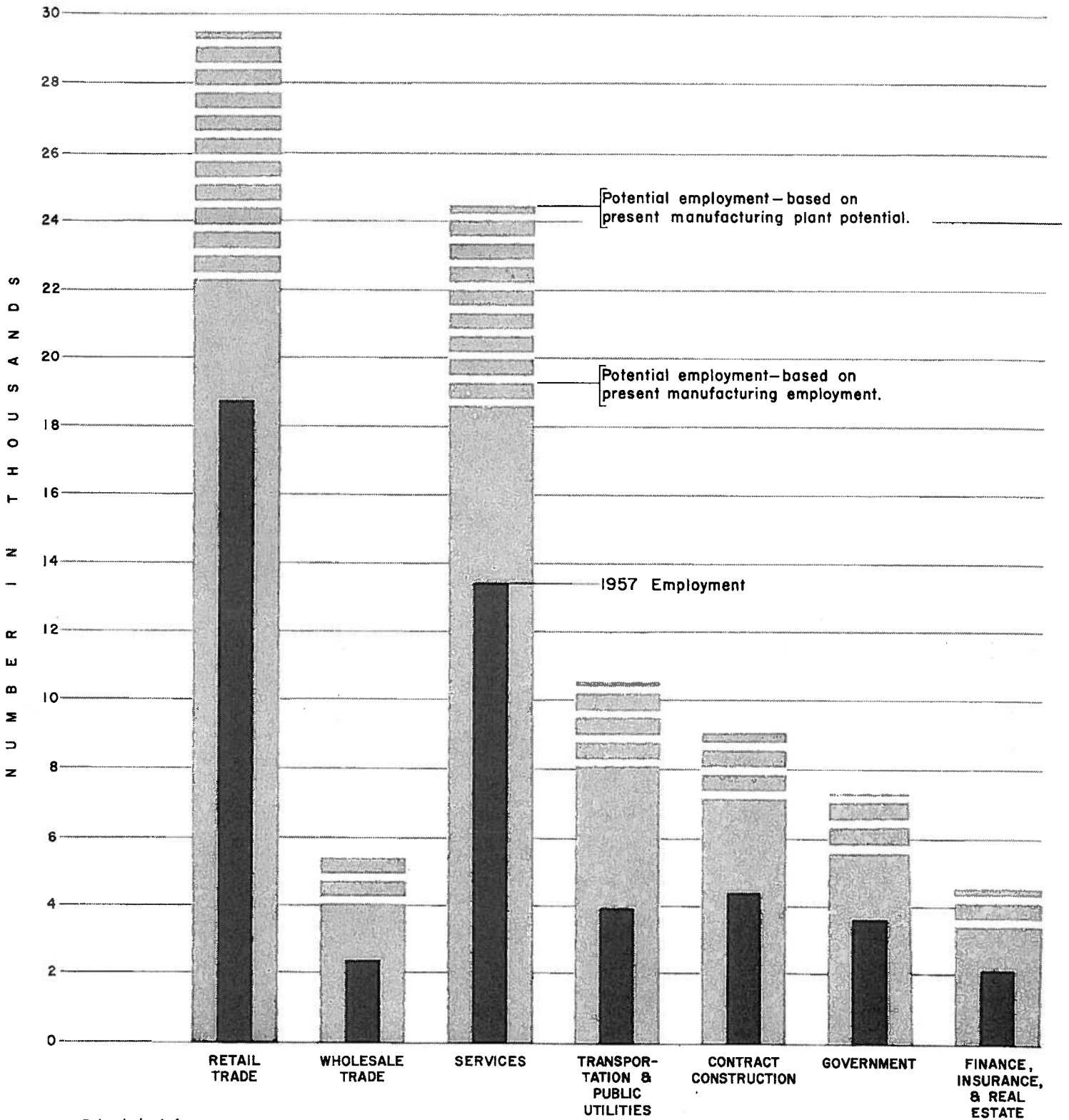
mating Flint's future employment potentials which, conceivably, might be realized if the manufacturing employment base remains constant, at least, or - as may be rightly assumed - will continue to increase.¹ If applied without further adjustment, the derived ratios would suggest that Flint has an unrealized trade and service employment potential of some 33 per cent - or a total non-manufacturing employment growth potential of about 45 per cent.

In 1955, Flint's manufacturing plants employed nearly 94,000 - the highest number to date. Other employment did not rise correspondingly but lagged somewhat behind. Had it been possible to sustain the exceptionally high level of 1955 manufacturing employment for an appreciable period of time, potential employment opportunities in non-manufacturing might have developed within the following range: in trades and services - up to 75 per cent over 1955; in all non-manufacturing employment, including trades and services - over 85 per cent; and in the overall employment picture - over 50 per cent.

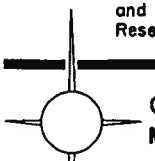
With continuing emphasis on auto manufacture, it would appear unlikely for Flint to actually realize such potentials in non-manufacturing employment, as this would call for drastic shifts in the city's economic make-up. These are neither indicated nor necessarily desirable. It would appear, however, that Flint's economic growth in the future might well be based on selective expansion of non-durable goods manufacturing and of general non-manufacturing enterprises more nearly in line with the average manufacturing employment potential of Flint's big auto plants.

Therefore, in projecting 1980 prospective employment for the Flint Metropolitan Area, it was assumed that - rather than simply paralleling the 9-area

¹ Diagram: Employment Potential.



Data derived from U.S. Department of Labor study of 174 Metropolitan Labor Market Areas, and on Flint estimates by Michigan Employment Security Commission Research and Studies Division.



COMPREHENSIVE MASTER PLAN

CITY OF FLINT · MICHIGAN
FLINT PLANNING COMMISSION
1958

LADISLAS SEGOE & ASSOCIATES
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CINCINNATI · OHIO FLINT · MICHIGAN

NON-MANUFACTURING WAGE AND SALARY EMPLOYMENT POTENTIAL

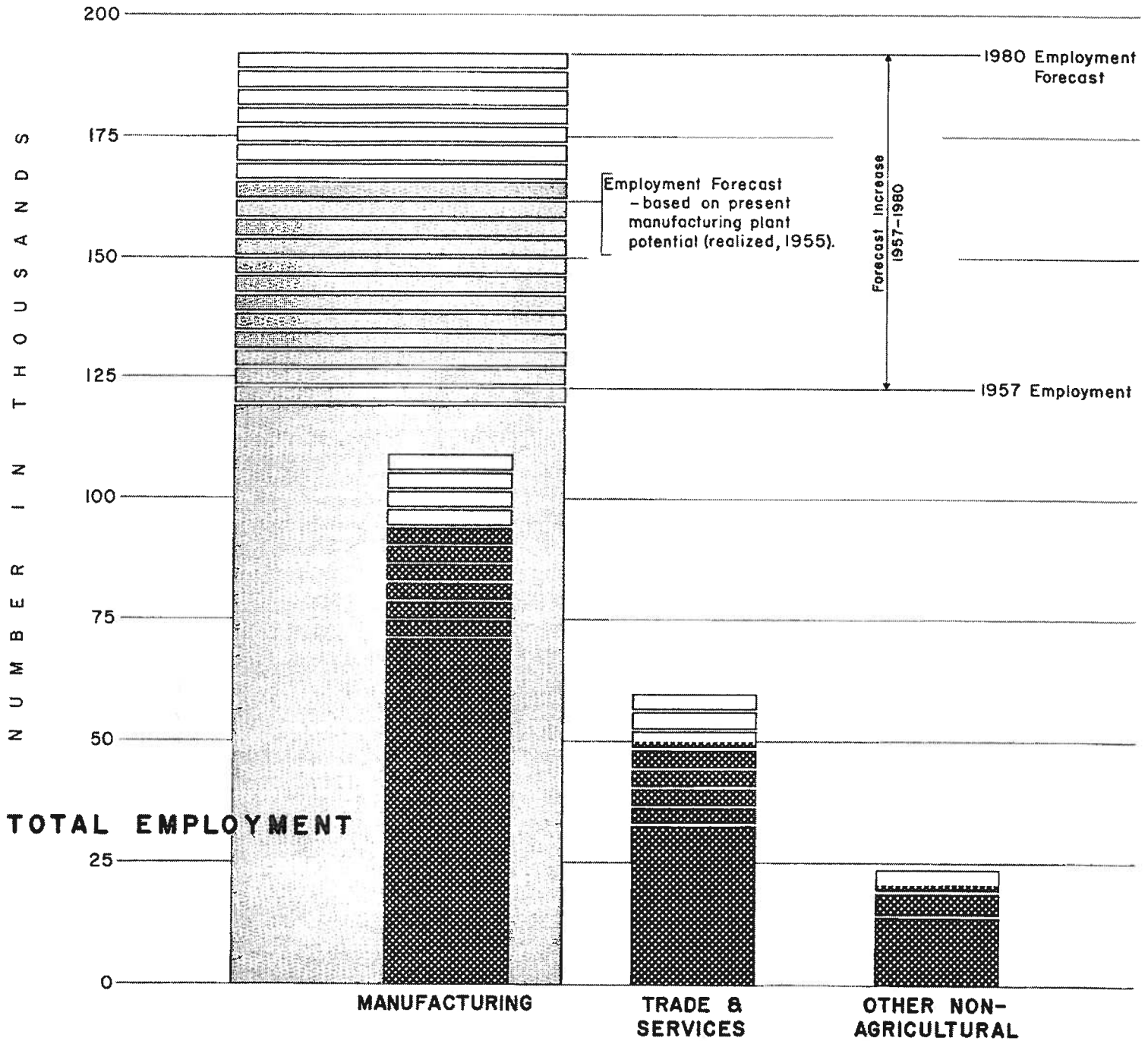
BASED ON MANUFACTURING EMPLOYMENT IN FLINT METROPOLITAN AREA.

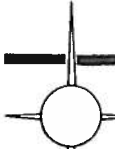
Employment Potential, based on:
 • manufacturing employment potential of Flint's present manufacturing plants,
 • ratio of manufacturing-based employment to manufacturing employment in Michigan's 10 Metropolitan Areas.




Employment Potential, based on:
 • 1957 Flint manufacturing employment,
 • ratio of manufacturing-based employment to manufacturing employment.

1957
Flint Metropolitan Area Employment.




**COMPREHENSIVE
MASTER PLAN**
 CITY OF FLINT · MICHIGAN
 FLINT PLANNING COMMISSION
 1958
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**WAGE AND SALARY
EMPLOYMENT PROJECTIONS**
 FLINT METROPOLITAN AREA


 — 1980 Employment Forecast.
 — Employment Forecast based on the manufacturing employment potential of Flint's present manufacturing plants (realized, 1955).
 — 1957 Flint Metropolitan Area Employment.

medians - the present state of relative underdevelopment of trade, services and other non-manufacturing income-producing activities in Flint would be gradually adjusted to the extent of an increase of about 10 per cent or so in the proportion of workers in these activities to the total employed.

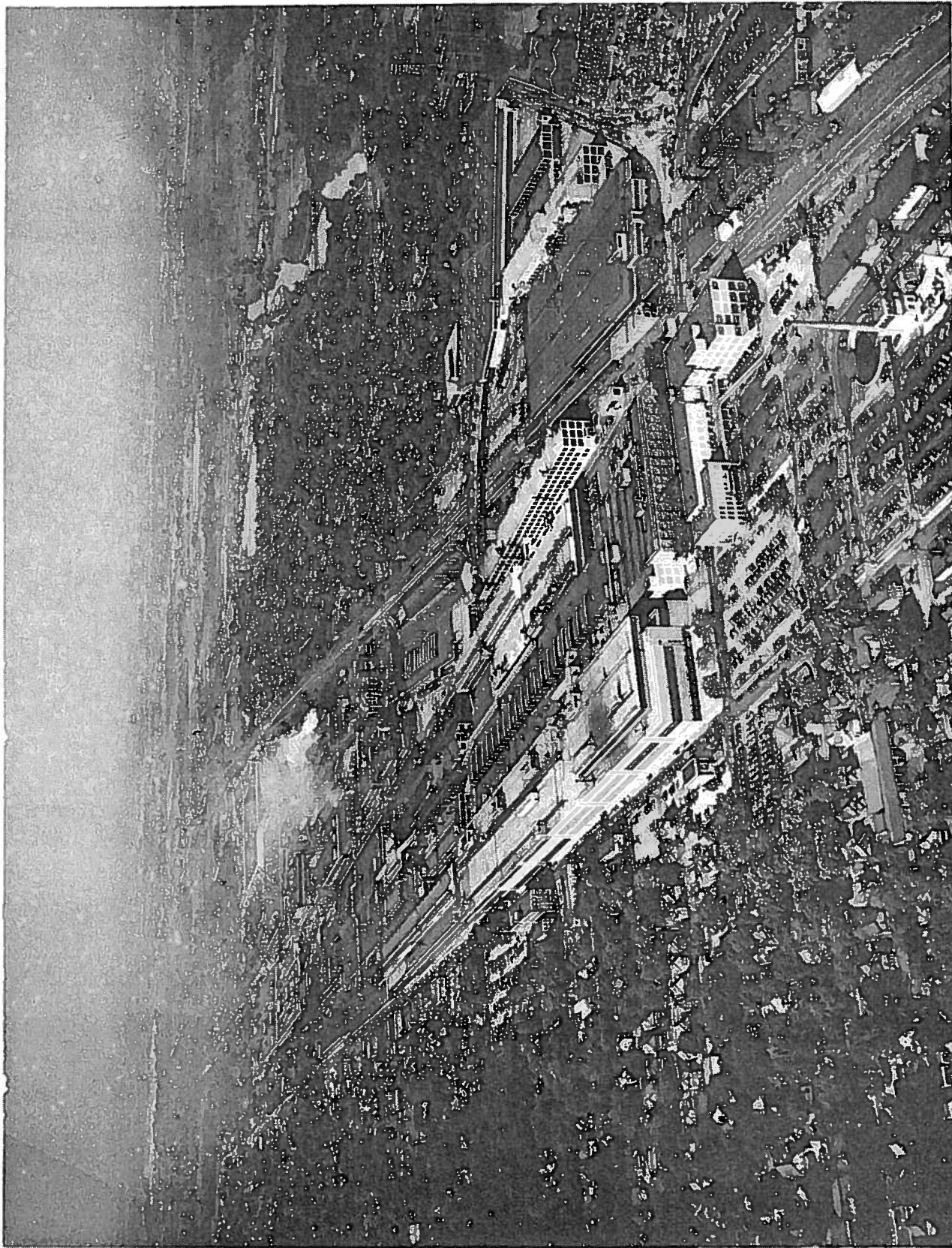
Based on this assumption the distribution among the principal industry groups would compare as follows:

	<u>Medians in 9 Michigan Metropolitan Areas</u>	<u>Flint Metropolitan Area</u>	
		1957	1980
Total jobs	201	168	175
Manufacturing	100	100	100
Trade and Services	65	48	53
Other	36	20	22

Applying these adjusted ratios to 1957 manufacturing employment of over 72,000, the derived potential employment would figure at 126,000 compared with 121,000 actually employed at the time. The 1955 all-time high-level manufacturing employment of 94,000 would indicate a corresponding hypothetical total employment of nearly 165,000 - about 36 per cent higher than in 1957 but over 45 per cent higher in respect to non-manufacturing jobs.¹

If it may be assumed that the 1955 manufacturing employment level is again realizable - and in relation to anticipated age composition changes - the indicated resulting 165,000 total jobs would be sufficient to sustain the population increases estimated for the next decade or so. However, if by 1980 employment in the plants should further increase, say 15 or 20 per cent, to about 110,000 and if promotion of the relatively underdeveloped non-manufacturing activities results in employment gains of only 10 per cent, a total of 190,000 or more jobs in all non-farm income producing activities would not seem unlikely.

¹ Diagram: Employment Projections.



GENERAL MOTORS CORPORATION
BUICK MOTOR DIVISION
JOURNAL PHOTO

LAND USE

In order to plan for the desirable future development of a community, its private land uses and public facilities, it is necessary first to determine how the community presently uses its land. Such determination is made from land use surveys and detailed analyses. For purposes of effective land use controls (by means of zoning, subdivision regulations and others), records of existing land use must be established, these setting down: the use of all parcels of land; the use, character, size and occupancy of various structures and the open spaces about them; the location and extent of all public facilities.

These details are indispensable in the preparation of a realistic community plan attuned to the individual conditions and requirements of the community, and the subsequent improvement program, as well as in the formulating of fiscal policies, land policies, ordinances and regulations.

Land Use Maps

Preparatory to a land use survey and the recording of land use information in Flint and environs, it was necessary to assemble existing maps and to prepare new base maps at scales suitable for portraying field survey data as well as proposals for future developments or improvements.

Geological survey and topographic maps were obtained and used in connection with this work. Toward the recording in the field of land use survey data within the city of Flint and in connection with other studies, a set of 415 Sanborn maps, supplemented by 52 sectional property line maps (Atlas sheets), were used. In the urbanized area outside the Flint city limits, field survey data were recorded on 33 large-scale aerial photographs. Subsequently, the information gathered in the field was transferred by means of colors and symbols to sectional property line maps where available, by categories of land use, whereupon a detailed land use inventory was compiled.

In addition to the detailed sectional land use maps, a Generalized Land Use Map,¹ portraying the 68-square mile urbanized area, was prepared. This served as a convenient reference and as a guide in the preparation of the Land Use Plan,² as well as other component elements of the Master Plan. This map shows in generalized fashion Flint's present land uses and portrays the land use pattern in the area.

Present Uses of Land

The Flint urbanized area comprises over 43,500 acres (about 68 square miles) and contains an estimated population of 265,000. Much more densely populated

¹ Map: Generalized Land Use Map, 1958.

² See section on Land Use Plan.

than the remainder of the urbanized area, the city of Flint holds nearly three-fourths of the urbanized area population on less than one-half of the land. The urbanized area outside the city of Flint comprises the cities of Mt. Morris and Grand Blanc, and the more densely populated parts of four adjacent townships - Burton, Flint, Genesee and Mt. Morris.

TOTAL AREA & POPULATION DISTRIBUTION

	<u>Approx. Area</u>		<u>Approx. Population</u>	
	Acres	%	Numbers	%
<u>Urban Area</u>	<u>43,500</u>	<u>100.0</u>	<u>265,000</u>	<u>100.0</u>
City	19,000	43.5	195,000	73.5
Urban Fringe	24,500	56.5	70,000	26.5

In the urbanized area the nearly 43,000 acres of land¹ are 53.5 per cent developed, a total of almost 23,000 acres. While well over one-half of the urbanized land lies in the fringe area, almost two-thirds of the developed land is within the city of Flint - about 14,500 acres, as against nearly 8,500 acres in the fringe area. Almost 47 per cent of the urbanized area is vacant (some 20,000 acres). This proportion is made up of about 22 per cent of the land in the city of Flint and almost 66 per cent of the land in the outlying area. The 22 per cent vacant land in Flint compares with 34 per cent in the average central city.

PERCENTAGE of TOTAL LAND AREA

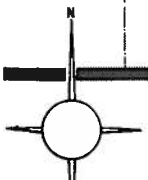
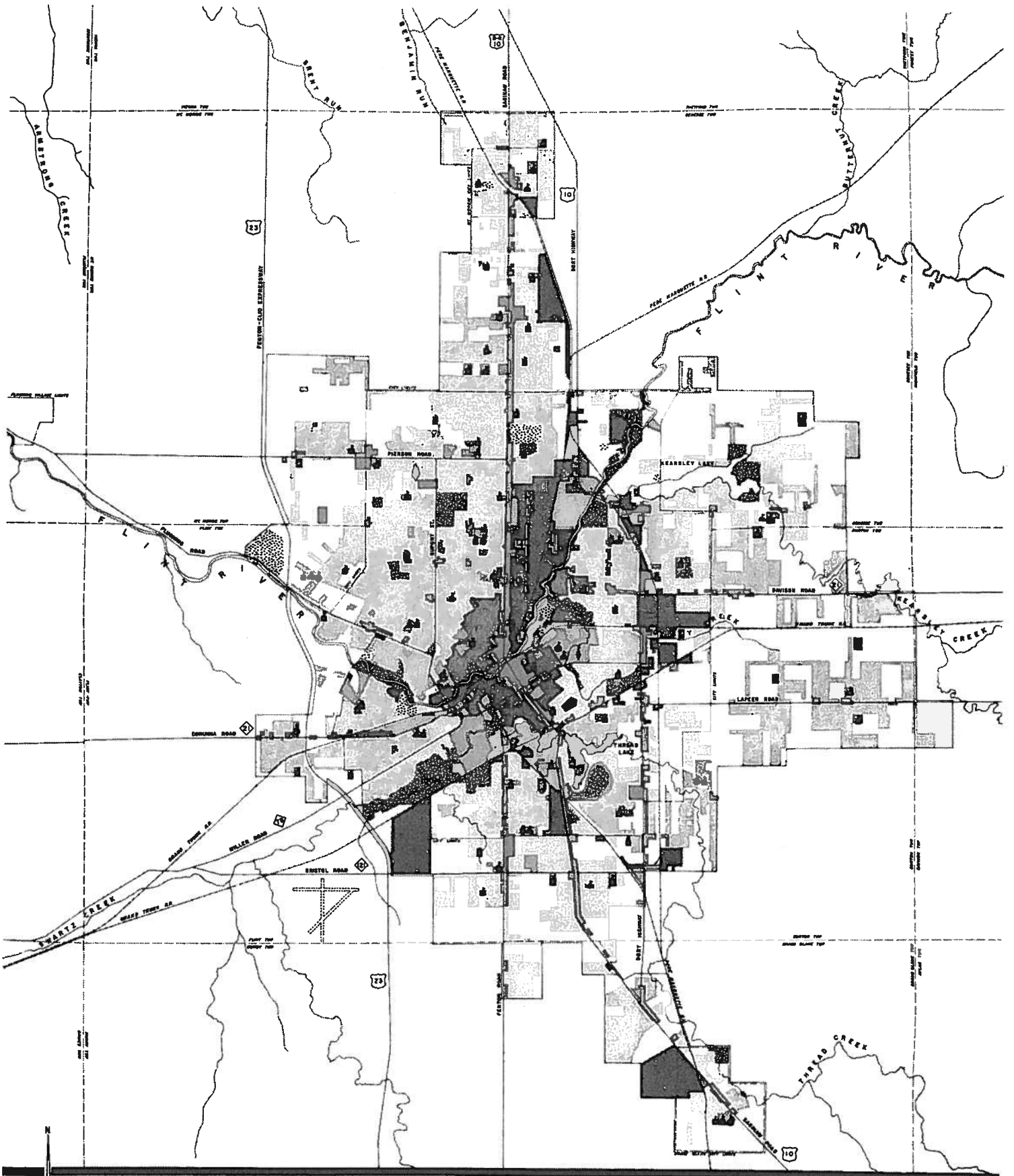
	Flint Urbanized Area	City of Flint	Average Central City
<u>TOTAL</u>	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>
Developed	53.5	77.8	65.8
Vacant	46.5	22.2	34.2

City of Flint

The corporate area of Flint comprises almost 30 square miles. Of this area, about 78 per cent is developed, with the amount of vacant land proportionately about 35 per cent lower than in the average central city of Flint's population size.

Of Flint's developed land, 43 per cent is in residential use - some 6,300 acres. Of this, about 86 per cent is in single-family use, less than nine per cent in two-family use, and about five per cent in multi-family use. The proportion of

¹ With additional acreage in water.



**COMPREHENSIVE
MASTER PLAN**

**CITY OF FLINT · MICHIGAN
FLINT PLANNING COMMISSION**

1958
1" = 1/2" (Scale: 0 to 1200 feet)

**LADISLAS SEGOE & ASSOCIATES
CITY PLANNERS · CONSULTING ENGINEERS
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GENERALIZED LAND USE MAP · 1958

FLINT URBANIZED AREA

- | | | | |
|---------------------------------|-----------------------|--------------------------|-------------|
| RESIDENTIAL: SINGLE-FAMILY | INDUSTRIAL | PUBLIC PARK | HIGH |
| RESIDENTIAL: TWO & MULTI-FAMILY | CHURCH, INSTITUTIONAL | OTHER PUBLIC | JUNIOR HIGH |
| COMMERCIAL | CEMETERY | SEMI-PUBLIC RECREATIONAL | ELEMENTARY |
| | | | COLLEGE |
| URBANIZED AREA PERIMETER | | | CITY LIMITS |

land in residential use is somewhat higher in Flint than in the average city. Over one-fourth of Flint's developed area is used for streets and alleys - a

PERCENTAGE of TOTAL DEVELOPED AREA¹
City of Flint

	City of Flint	Average Central City
<u>TOTAL</u>	<u>100.0</u>	<u>100.0</u>
Residential	43.0	41.4
Streets & Alleys	26.2	27.6
Public, Inst. & Util.	9.0	11.2
Recreational	8.8	5.7
Industrial	6.7	5.8
Commercial	4.3	2.9
Railroads	2.0	5.4

somewhat lower proportion than in the average city of comparable size. However, Flint's commercial and industrial land use proportions are considerably higher than in the average city, and similarly, Flint's 1,300 acres in recreation use is proportionately over 50 per cent higher than average. Public, institutional, and utility uses are somewhat lower, and railroad uses account for less than one-half the land area, proportionately, in the average city.

Flint puts its land to relatively more intensive use than the average city, with developed land in the city holding about 8,600 persons per square mile, compared

ACRES per 100 PERSONS
City of Flint

	City of Flint	Average Central City
<u>TOTAL</u>	<u>7.44</u>	<u>8.03</u>
Residential	3.21	3.33
Streets & Alleys	1.95	2.21
Public, Inst. & Util.	0.66	0.90
Recreational	0.65	0.46
Industrial	0.50	0.47
Commercial	0.32	0.23
Railroads	0.15	0.43

with less than 8,000 persons in the average central city. In Flint, public and institutional uses, streets and alleys, and railroad uses are lower, proportionately, than in the average city and contribute considerably to higher overall density. By contrast, Flint devotes more land per person to commercial and industrial uses than does the average city. It also has more than the average amount of recreational land per person.

Outlying Urban Area

Of the 68 square miles within the urbanized area, about 56 per cent - some 24,500 acres - lies outside the city of Flint. Just over 34 per cent of this is developed, totaling less than 8,300 acres. Most of this - almost 53 per cent -

¹ Chart: Land Use, 1958

is in residential use, nearly all of it one-family homes - this being in marked contrast with the 14.2 per cent found in the fringe area of the average comparable city. Also, there are considerable differences between the proportion of

PERCENTAGE of TOTAL DEVELOPED AREA
Flint Urbanized Area outside City of Flint

	Outlying Urbanized Area	Average Outlying Urban Area
<u>TOTAL</u>	<u>100.0</u>	<u>100.0</u>
Residential	52.8	14.2
Streets & Alleys	26.3	23.6
Public, Inst. & Util.	5.8	40.3
Industrial	5.8	6.6
Commercial	3.6	2.0
Railroads	3.3	8.2
Recreational	2.4	5.1

land devoted to public, railroad, and recreational uses in the Flint fringe area and that of the average city. Most marked is the difference in land devoted to public, institutional and utility uses - in Flint 5.8 per cent compared with an average 40.3 per cent. In the average fringe area, a high proportion of developed land includes airports, hospitals, cemeteries, fairgrounds, and other public or semi-public uses. In the case of Flint, sizeable public tracts lie outside its urbanized area (the sewage disposal plant and the airport).

Developed land use is considerably more intensive in Flint's fringe area than the average. Population density is 5,400 persons per square mile, compared with about 1,400 persons in the average outlying urban area. This wide difference is not due principally to more intensive use of residential land itself - although residential density in the outlying Flint area is higher than in the average fringe area - but is due mainly to the high overall proportion of residential use.

ACRES per 100 PERSONS
Flint Urbanized Area Outside City of Flint

	Outlying Urbanized Area	Average Outlying Urban Area
<u>TOTAL</u>	<u>11.85</u>	<u>46.27</u>
Residential	6.25	6.57
Streets & Alleys	3.12	10.91
Public, Inst. & Util.	0.69	18.64
Industrial	0.69	3.07
Commercial	0.43	0.93
Railroads	0.39	3.81
Recreational	0.28	2.34

Total Flint Urbanized Area

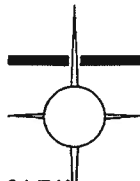
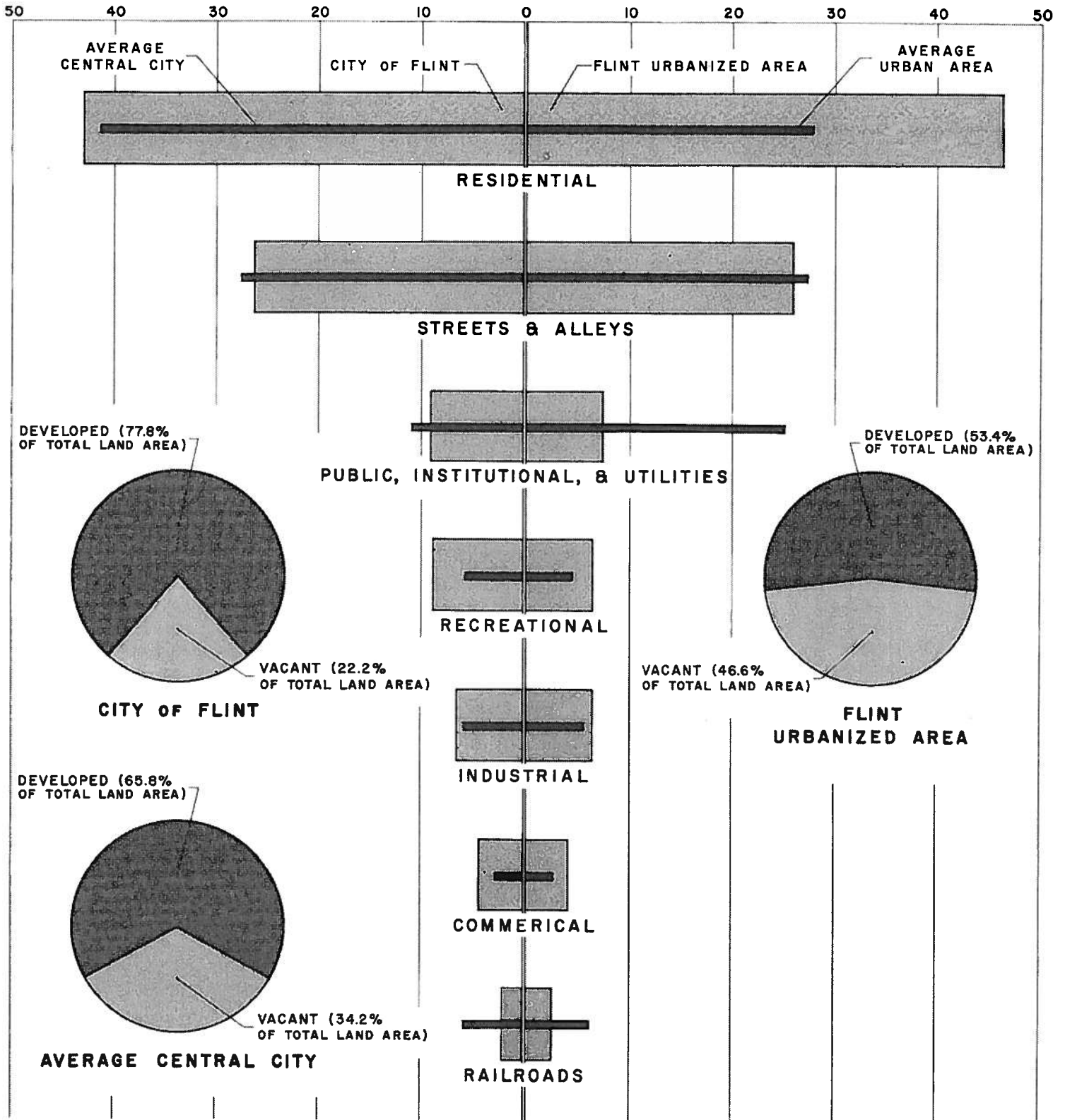
Land use characteristics of Flint's urbanized area reflect the uses of land in the city of Flint and in all of the outlying area combined.¹ This total urbanized area is about 53 per cent developed, with almost 47 per cent in residential use. There is a marked difference between Flint and the average urbanized area in the

¹ Chart: Land Use, 1958.
Map: Generalized Land Use Map, 1958.

CITY AREA

URBANIZED AREA

PERCENT OF DEVELOPED LAND AREA



COMPREHENSIVE MASTER PLAN

CITY OF FLINT · MICHIGAN
 FLINT PLANNING COMMISSION
 1959

LADISLAS SEGOE & ASSOCIATES
 CITY PLANNERS · CONSULTING ENGINEERS
 CINCINNATI · OHIO FLINT · MICHIGAN

LAND USE · 1958

CITY OF FLINT AND FLINT URBANIZED AREA

PERCENTAGE of TOTAL DEVELOPED AREA
Total Flint Urbanized Area

	Flint Urbanized Area	Average Urban Area
<u>TOTAL</u>	<u>100.0</u>	<u>100.0</u>
Residential	46.6	28.0
Streets & Alleys	26.2	27.6
Public, Inst. & Util.	7.7	25.3
Recreational	6.5	4.6
Industrial	6.4	5.6
Commercial	4.1	2.7
Railroads	2.5	6.2

proportion of developed parts in residential use and in public uses, with less significant differences in the other major land use categories. Such residential land use is about 65 per cent higher in Flint than that in the average urban area. Public, institutional, utility and railroad land use is proportionately about one-third of that found in the average urban area.

As might be expected, in view of the figures in the foregoing,

ACRES per 100 PERSONS
Total Flint Urbanized Area

	Flint Urbanized Area	Average Urban Area
<u>TOTAL</u>	<u>8.62</u>	<u>14.84</u>
Residential	4.02	4.16
Streets & Alleys	2.26	4.10
Public, Inst. & Util.	0.67 ¹	3.75 ¹
Recreational	0.56	0.68
Industrial	0.55	0.84
Commercial	0.35	0.39
Railroads	0.21	0.92

gross residential density in Flint's developed urbanized area is considerably higher than that found in the average urban area - 7,400 as against 4,300 persons per developed square mile. Again this marked contrast is due more to differences in the proportionate relationship between residential and other land uses than to unusually high population density on the residential land itself. In all of the major land use categories, Flint uses less acreage per person than does the average comparable urban community.

Of the developed land in the Flint urbanized area, about 64 per cent is within the city with the other 36 per cent distributed in the outlying area. Compared with the distribution of the developed land in the average urbanized area - about 58 and 42 per cent, respectively - Flint figures reveal considerable concentration of developed land in the city of Flint. Distribution of land is most meaningful when portrayed against a "back-drop" of population distribution. The city of Flint holds 74 per cent of the urbanized area population - considerably lower than in the average urban area - namely over 86 per cent. The proportion of urban area population living in Flint's urban fringe is almost double the average.

¹ This difference would be reduced somewhat if the airport and the sewage disposal plant were included within the Flint Urbanized Area.

Vacant Land

Nearly 47 per cent of the Flint urbanized area is vacant or used for agriculture - with almost four-fifths of this within the urban fringe area. In the city, vacant land (about 21% of the total) is dispersed throughout generally developed areas. Relatively few large tracts of vacant land remain - these located principally in the far northwest, northeast, and southeast sectors of the city. In the outlying urbanized area, vacant land is proportionately most available throughout the areas east of the city, in the city of Grand Blanc, and in the southern part of Mt. Morris Township. Developments are sporadic in Genesee and Burton Townships, with large vacant tracts interspersed throughout the fringe area. In this sector, vacant land totals almost three-fourths of all the land in this part of the urbanized area.

Residential Land

As might be expected from a comparison of population distribution figures, Flint's residential land distribution differs considerably from that found in the average urban area. In the Flint area residential land within the city comprises only 59 per cent of the total in the urbanized area, as against an average of 78 per cent, while residential land in Flint's fringe area is almost double the proportion found in the average outlying urban area. As noted, residential densities in Flint and the fringe area are higher than average. Apparently, lot sizes are generally somewhat smaller in Flint than in the average urban area. In the city of Flint, residential uses predominate most in an area northwest of the central business district, and are lowest in areas west and south of the center of the city. In the outlying urban area, residential uses are most preponderant directly north and south of the city and in the large areas to the east. They are much less so to the north, northwest, and southwest of Flint, and in the city of Grand Blanc.

Commercial Land

In most urban areas commercial uses are concentrated in the central cities, as is the case in Flint. On a strict percentage basis, distribution of commercial land as between the city and its outlying urban area is almost the same as it is in the average urban area. However, due to higher-than-average proportion of the area population in the outlying urban area, the commercial land/population ratio in this area is less than one-half the average while this ratio for the city is about 40 per cent higher. Comparison of commercial land use with population distribution figures thus indicates a proportionately high concentration of the urbanized area's commercial uses within the city of Flint.

Flint's central business district comprises the largest concentration of retail uses in the city or urbanized area. In addition to this regional retail center, there are in the city three other types of business concentrations or outlets:

- a) outlying community and neighborhood shopping centers (e.g., North Flint Plaza; business centers at Dupont and Dayton Streets, and at Davison Road and Franklin Road);

- b) strip commercial development along major thoroughfares (e.g., retail frontage along North and South Saginaw Streets, Fenton Road, Corunna Road, and Dort Highway);
- c) scattered stores, occurring singly, or in groups of two or three, in the various neighborhood areas.

Industrial Land

In the Flint urbanized area a high proportion of the industrial land is located within the city. Due to relatively high intensity of use, the urbanized area industrial land/population ratio is considerably lower than average. In the average urbanized area, industrial land use is distributed evenly between the central city and the fringe area; by contrast, in the Flint area the city contains almost two-thirds of the industrial land.

In the fringe area, principal industrial concentrations are: the General Motors Ternstedt Division plant, north of Coldwater Road; the GM Chevrolet Division and Fisher Body Division plants, west of Van Slyke Road; the General Foundry and Manufacturing plant, north of East Bristol Road. Principal industrial concentrations in the city include: the complex of industrial plants along the Chesapeake and Ohio tracks north of the central business district, including the plants of the GM Buick Motor Car Division, the GM AC Spark Plug Division plant at Dort Highway and Davison Road; GM Chevrolet Division Manufacturing plant, west of the central business district; GM Fisher Body Division Plant #1 on South Saginaw Road; the Consumers Power Company plant, north of East Court Street.

Public Land

In the locational distribution of public, institutional, and utility uses, the Flint area differs most markedly from the average urban area where the central city contains only 32 per cent of the land in these uses whereas in the Flint area 73 per cent is located within the city.¹

Outlying public land uses are most concentrated in the cities of Mt. Morris and Grand Blanc, with public schools accounting for a high proportion. The largest units in the city of Flint are the Michigan School for the Deaf (southwest of the downtown area); and the College and Cultural Development (northeast of the central sector). The Municipal Center, hospitals, and junior and senior high schools - plus recreational land which is separately categorized herein - constitute the other major public land holdings in the city.

¹ These proportions for Flint would be modified considerably by the inclusion of Bishop Airport and the city's sewage disposal plant. The marked concentration of these uses within the city still would be very evident, however.

Recreational Land

Compared with the average urban area, recreational land uses in the Flint urbanized area are similarly concentrated within the city of Flint, with only 13 per cent of the urbanized area's recreational land located in the urban fringe compared with nearly one-half in the average urban area. While outlying parts of the urban areas often include large parks and other recreational open spaces, this is not so in the Flint area, where the recreation land/population ratio is only about 12 per cent of that found in the average urban fringe area. Thus, while this ratio for the city is higher than average, that for the urbanized area as a whole is lower than average.

In Flint's outlying areas, only in the city of Grand Blanc and in the area of Kearsley Lake golf course is recreational land better represented than the average fringe area. Within the city of Flint, the pattern of distribution of recreational land is relatively even. The city's principal recreational areas are: Swartz Creek golf course; Thread Lake golf course; Kearsley Park and other recreation areas along Gilkey Road; Whaley Park; the North Flint River park area; and Forest Park.

Land Used for Streets and Alleys

In the Flint urbanized area, the amount of land used for roads, streets and alleys is proportionately somewhat lower than in the average urban area - 26 per cent compared with almost 28 per cent. This holds also in the case of the city of Flint - with the same proportions, while in the fringe area the amount of land in streets and alleys is somewhat higher than average. Because the street system, both in the city and in the fringe area, serves higher than average population densities, area/population ratios for this use are 45 per cent lower than average in the Flint area.

Zoning District Distribution of Principal Land Uses

The Flint Zoning Ordinance divides the city into six principal zoning districts and a number of sub-districts, as follows:

- Zone A - Single-family residential district;
- Zone B - Two-family residential district;
- Zone C - Multi-family residential district;
- Zone D - Commercial district;
- Zone E - Industrial district;
- Zone F - General Industrial district.

Within a minor portion of Zone C, sub-districts C-1 and C-2 provide for graduation of restrictions for multi-family residential use, whereas limited parts of Zone D have been designated sub-districts D-1 through D-5. Of the latter, D-1 through D-4 provide for various groups of commercial use categories, ranging from professional offices through heavy commercial uses; while D-5 applies to the central business district.

Land area within the city of Flint, including vacant land, totals nearly 19,000 acres of which some 20 per cent is in streets and alleys. For the net land area (gross area less streets and alleys) distribution among the six principal zoning districts is approximately as follows:

Zone A - 60.5 per cent; Zone B - 11 per cent; Zone C - 5 per cent (Sub-total, residential zones: 76.5 per cent);

Zone D - 7.5 per cent (Sub-total, commercial zone: 7.5 per cent);

Zone E - 10 per cent; Zone F - 6 per cent (Sub-total, industrial zones: 16 per cent).

Comprising over three-fourths of net area of the city, residential zones include by far the greatest proportion of the city's developed land and most of its vacant land as well. The commercial zone contains less than eight per cent of the developed land and about seven per cent of the vacant land. Some 14 per cent of the city's developed land is zoned for industry, with 20 per cent of the vacant land so zoned.

Residential Use

About 94 per cent of all land in residential uses in the city is located in residential zones, four per cent in commercial and two per cent in industrial zones. Of all land occupied by one-family homes, 73 per cent is in Zone A, 19 per cent in Zone B, nearly four per cent in Zone C, with declining percentages in each of the remaining three zones. Some 45 per cent of all land used for two-family homes is located in Zone B, and most of the rest in Zones C, A and D. Over 43 per cent of the land occupied by multi-family dwellings is located in Zone C, and the rest mainly in Zone B.

Commercial Use

Most of the land devoted to commercial uses is located in Zone D - some 69 per cent, with another 22 per cent found in industrial zones. In terms of land occupied, almost nine per cent of the city's commercial uses are found in the residential zones.

Industrial Use

Most of Flint's industrial uses - about 60 per cent of all the land used by industry - are located in Zone E, with slightly less than one-third located in Zone F. Zone E contains most of the city's "light" industry and most of its "heavy" industry as well, measured by the land in such uses. Considerable proportions of the city's light industries are located in Zone F, also in Zone D. Well over one-half of the land used by the city's heavy industries is located in Zone E, and some 34 per cent in Zone F. There are no sizeable heavy industries in Zone D, and only some scattered light industrial uses in the residential zones.

Other Uses

Almost all of Flint's public and recreational uses are located in Zone A, with each of the other zoning districts containing but a relatively small proportion. Institutional uses are located principally in Zones A and C, with most of the churches in Zone A. All of the cemeteries are in Zone A, and some 74 per cent of the land in hospital use is in Zone C.

Most of the railroad and utility uses are in the commercial and industrial zones. With railroad right-of-ways extending through the city area, almost 20 per cent are located in Zone A. Some 38 per cent of water and telephone utility land is located in Zone A.

Land Uses in the Commercial Zone D

More concern, generally, is shown for commercial and industrial zoning districts - their location and extent - than for residential districts. In the case of commercial districts, particularly, is pressure commonly encountered to extend these or create new ones.

USE of LAND in ZONE D

	Acres	% of developed land
NET LAND AREA	1,131.8	
Vacant	303.6	
% vacant	26.8	
<u>TOTAL DEVELOPED</u>	<u>828.2</u>	<u>100.0</u>
Commercial	436.8	52.8
Residential	237.0	28.6
Industrial	46.9	5.7
Utilities	29.4	3.5
Railroads	23.1	2.8
Public	21.9	2.6
Institutional	20.5	2.5
Recreational	12.6	1.5

Hence, further attention to the commercial zone, as well as the industrial zones in Flint, appears to be in order. Although the 436.8 acres in commercial uses are the most prevalent in the commercial zone, these occupy only slightly more than one-half of the developed land and only about 38 per cent of the total area of commercial Zone D. Residential uses account for 28.6 per cent of this zone's developed land, and recreational uses, 6.6 per cent. It is significant that almost nine per cent of the commercial uses are found in residential zones.

The Industrial Zones - E and F

Of Flint's nearly 2,400 acres zoned for industry, 35 per cent in the aggregate is vacant, with the vacant land divided more or less evenly, quantitatively, between Zone E and Zone F. Most of the industrially zoned vacant land is spottily occupied through large areas by dispersed uses of various kinds. Few sites are available in the city that can meet today's requirements of industry for major plants of large site with adequate rail and highway access.

Utilities

In the various expansion areas of a growing community, land use and development potentialities are conditioned by the availability of utilities - water, sanitary and storm sewers, electricity, gas, and telephone. Information regarding existing utility facilities and prospects of expansion is an important guide in delineating Flint's suggested urban service area - that land area within and contiguous to the city of Flint in which community expansion can most desirably take place. This delineation is made with due regard to the quantity and quality of land available for urban expansion, and to the anticipated availability of all urban facilities in the expansion area. Availability of adequate utility service is a most important consideration, and present utility systems necessarily form the nucleus for the area expansion of these services.

Gas, Electric and Telephone Service

In the city of Flint and in its urbanizing environs, gas, electric, and telephone service are provided by two public utility companies - gas and electric service by the Consumers Power Company and telephone service by the Michigan Bell Telephone Company.

Gas Service - without going into detail concerning source of supply and in other respects, natural gas for industrial and commercial use has been available in the Flint Metropolitan Area without restriction. Large volumes for additional loads have been added, in recent years, for new processes and for conversion from oil, at various General Motors plants. Gas has been restricted for residential space-heating purposes, although allocations permitting several thousand customers to be served have been made almost every year for the past seven or eight years. Additional supplies of gas, making possible unrestricted new residence gas use, hinge upon federal decisions in regard to the construction of additional pipeline capacity. At present, gas for industrial and commercial use is available without restriction throughout Flint and its environs. Subject only to the foregoing restrictions, gas is available for all residential uses in the same area.

Electric Service - In recent years, large blocks of power have been needed for the various General Motors Divisions. The capacity necessary always has been available prior to the actual need. With major generating plants under construction at the time of this writing, there will continue to be adequate electric capacity available for growth anywhere in Flint and its environs.

Telephone Service - Telephone service is available in the entire area of Flint and its environs on an unrestricted basis. Telephones were first installed in Flint in 1878, and, by 1890, some two hundred telephones were being served by the Flint central office. In 1928, the city's dial system was installed. The community's telephone system has experienced its greatest growth in the last two decades, and the number of Flint area telephones has doubled in the years since World War II. Flint's direct distance dialing system went into operation in 1958. There are over 117 thousand telephones in the Flint area, with about nine out of every 10 Flint families having telephone service.

Water, Sanitary Sewer, and Storm Sewer Service

At present, about 55 per cent of the Flint urbanized area has either water, sanitary sewer or storm sewer service.¹ Well over three-fourths of the serviced area lies within the city of Flint. About 97 per cent of the city has either water or sewer service or both; about 28 per cent of the urbanized area outside the city has some type of utility service.

Water Service - In Flint's 68 square-mile urbanized area, approximately a 36 square-mile area is served by a centralized water system. Some 77 per cent of this water service area is within the city of Flint, with the system administered by the City's water department. Over 93 per cent of the city area has water service - about 28 square miles. About one-fifth of the urbanized area outside the city is served by a centralized water system - an area of about eight square miles. The water service area inside the city follows the city limit lines at the north, south, and west. Only in limited areas, to the northwest and northeast parts of the city and along the east side, is city water service unavailable. There are four principal areas of water service outside the city: the Beecher Metropolitan District; the Burton Township area; the city of Mt. Morris; and the city of Grand Blanc.

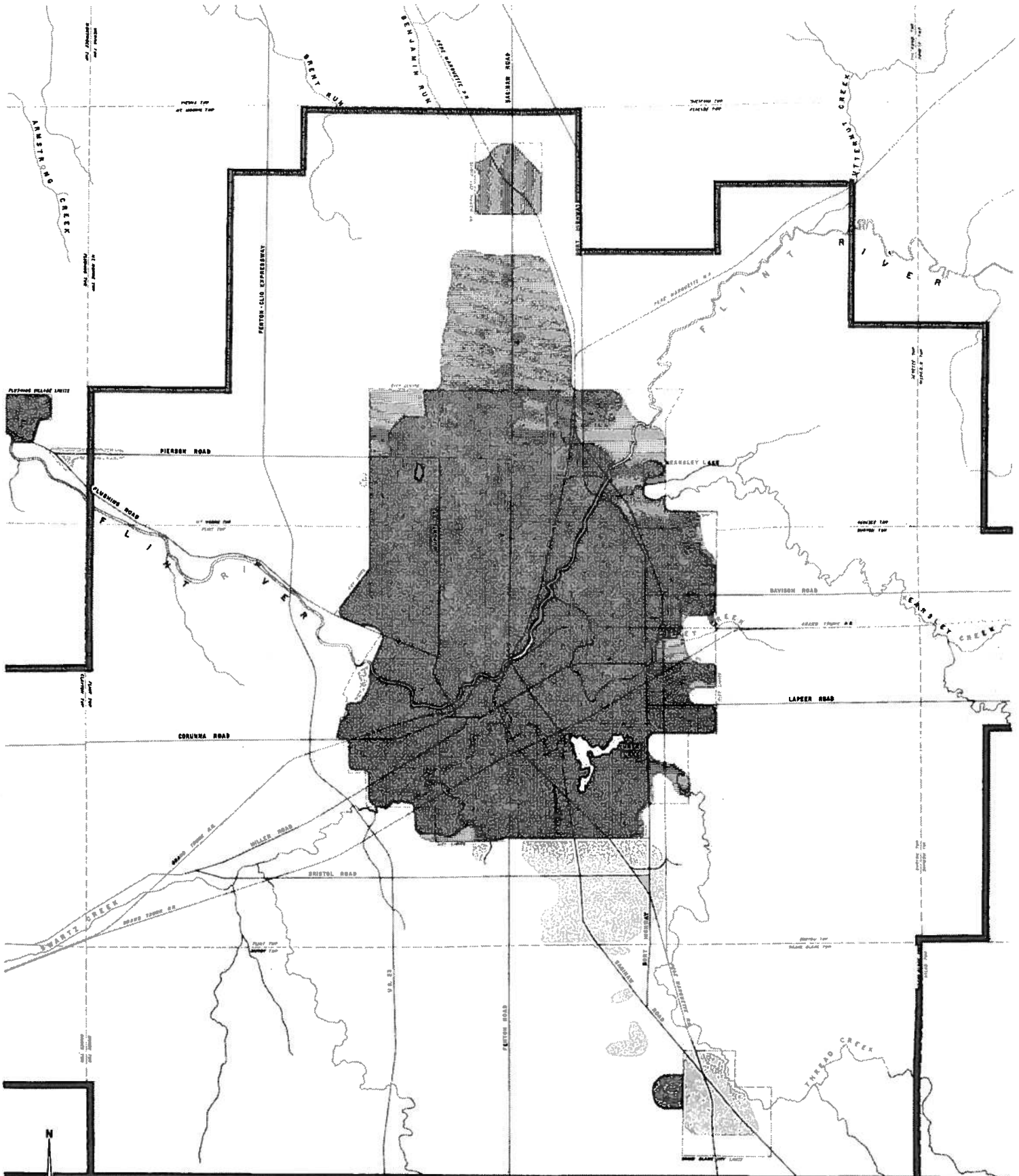
Flint River water is the city of Flint's only source of public supply, with reserves maintained at Holloway Reservoir and at Kearsley Reservoir. A special study of water needs has been authorized by the Flint City Commission. Toward meeting its projected requirements, the City has authorized detailed engineering studies for an aqueduct designed to bring Lake Huron water to the Flint area. It is proposed that the aqueduct could be designed to supply water to the entire Metropolitan Area, or to the city of Flint alone.

Water for public systems outside the city of Flint presently is supplied by wells - Burton Township; the Beecher Metropolitan District; the city of Mt. Morris; the city of Grand Blanc; and, directly adjacent to Grand Blanc, the Fisher Body Division. In Flint's outlying water systems, plans have anticipated that increased needs would be met by drilling more wells.

Sanitary Sewer System - Slightly less than half of Flint's urbanized area is served by sanitary sewers, with over 90 per cent of this within the city of Flint. About 97 per cent of the city area has sanitary sewer service - some 29 square miles, whereas outside the city only a total area of 3.4 square miles has sanitary sewers - about nine per cent of the outlying urbanized area.

Within the city, the sanitary sewer area perimeter is approximately coterminous with the city limit lines, and only scattered areas along the east side still lack central sewer service. Outside the city, centralized sewer service is available only at the Fisher Body plant at Grand Blanc, and in the Beecher

¹ Map: Generalized Utility Service Areas, 1959.



COMPREHENSIVE MASTER PLAN

CITY OF FLINT · MICHIGAN
 FLINT PLANNING COMMISSION
 1959

LADISLAS SEGOE & ASSOCIATES
 CITY PLANNERS · CONSULTING ENGINEERS
 CINCINNATI · OHIO FLINT · MICHIGAN

GENERALIZED UTILITY SERVICE AREA · 1959
 FLINT · MICHIGAN AND ENVIRONS

-  WATER SERVICE AREA
-  SANITARY SEWER SERVICE AREA
-  STORM SEWER SERVICE AREA
-  PROPOSED SEWERABLE AREA PERIMETER - COUNTY DRAIN COMMISSION TRUNK SANITARY SEWER STUDY
-  POLITICAL BOUNDARY LINE

Metropolitan District (the latter with the collection system tied into Flint's). Sewage collection in the city of Flint is based on a system of interceptor areas with their perimeters approximating topographic ridge lines. Where slopes in these interceptor areas are toward the Flint River, sewage collection is by gravity system; where slopes are away from the Flint River (in the northwest area especially) a series of pumping stations supplement the gravity system. Treated sewage is discharged downstream into the Flint River. Flint's manufacturing plants provide treatment and control of industrial waste.

According to a comprehensive sewage treatment study and report for the city of Flint, it is "not desirable to rely upon the present treatment plant to treat sewage flow in excess of 22 million gallons per day average." With present and projected sewage flow exceeding this capacity, studies have been authorized by the City toward the construction of sewage treatment facilities that will meet the city's needs plus the needs of surrounding urbanized areas.

The Genesee County Sewage Disposal District has been formed toward the provision of sewage collection and treatment facilities for the Flint Metropolitan Area. This district comprises the various incorporated and unincorporated governmental units in the Flint urbanized area outside the city of Flint. Authorized by the Disposal District, preliminary studies have delineated an area for proposed sanitary sewer service. This sewerable area includes some 90 square miles surrounding the city of Flint.

Storm Sewer Service - In the city of Flint and its urbanized environs, an area of 27 square miles is served by storm sewers - some 40 per cent of the total urbanized area. Almost all of the storm sewer service area lies within Flint's city limits, whereas in Flint's outlying urbanized area, Mt. Morris has the only storm sewer area of significant size. About 87 per cent of the city of Flint is serviced by storm sewers, while only about three per cent of the urbanized area outside has storm sewer service. Storm sewers are available throughout Flint, except in a limited sector to the northwest, a larger area to the northeast, and scattered areas along the east perimeter.

Land Requirements

In proceeding with comprehensive land use planning, it obviously is necessary to determine the land requirements of the growing urban area, leading to the delineation of the "urban service area" - that is, the area within which all or most future developments of urban types desirably should be located, with the view, among other purposes, of the efficient and economical provision of municipal facilities, utilities and services.

Accordingly, Flint's Land Use Plan studies¹ begin with a quantitative consideration of the anticipated land area requirements in the major land use categories.

¹ See section on Land Use Plan.

The estimates derived take into account:

- a) trends in land use ratios not only in Flint but in other cities as well;
- b) the very strong prevailing trends in favor of single-family homes on relatively large lots;
- c) the trend toward low intensity of land use in industrial areas; continuing increases in automation;
- d) the need for additional recreational land and education facilities.

The following table compares present land use/population ratios in: the city; the urbanized and urbanizing area outside the city; the entire Flint urbanized and urbanizing area - 1958. These ratios are further compared with the ratios derived for Flint's projected urban service area for an anticipated population of 380,000.

LAND AREA/POPULATION RATIOS
for
PROJECTED URBAN SERVICE AREA
(Acres/100 Persons)

<u>Land Use</u>	<u>City 1958</u>	<u>Outlying 1958</u>	<u>Flint Urbanized Area 1958</u>	<u>Projected Urban Service Area¹</u>
Residential	3.21	6.25	4.02	5.0
Commercial	0.32	0.43	0.35	0.5
Industrial	0.50	0.69	0.55	1.0
(Sub-total, private development)	(4.03)	(7.37)	(4.92)	(6.5)
Public, Institutional & Utility	0.66	0.69	0.67 ²	1.0
Recreational	0.65	0.28	0.56	1.0
Streets and Alleys	1.95	3.12	2.26	2.75
Railroads	0.15	0.39	0.21	0.25
(Sub-total, non-private development)	(3.41)	(4.48)	(3.70)	(5.0)
TOTAL	7.44	11.85	8.62	11.5

For the projected urban service area, the residential land ratio of 5.0 is derived:

- a) from existing residential land use densities;
- b) from an assumed 14-15 persons/acre residential land use density for the area population increase increment of 115,000.

¹ These ratios bear reasonable relation to those in the overall area, but do not provide for adequate range of choice in sites, as brought out later.

² Including airport and sewage disposal plant, the ratio would be 1.0.

The 0.5 commercial land ratio derives from present proportions of commercial land use, modified in recognition of needed additional off-street parking areas, and further allows the opportunity for an evolving increased economic emphasis on retail and wholesale trade, service trades and the like.

Flint's present industrial density is about 35 manufacturing workers/industrial acre, with the ratio in its newer plants being about 30. With the emphasis on single-story manufacturing plants, increased parking and material handling requirements, and ever more highly automated manufacturing processes, nation-wide ratios of industrial land to manufacturing workers continue to increase. The 1.0 industrial land ratio is based on:

- a) a projected 20 manufacturing jobs/100 population, for a total population of some 380,000;
- b) a gradual increase in the industrial land ratio for some of Flint's present manufacturing plants;
- c) considerable increase in the industrial land ratio for new manufacturing plants;
- d) adequate range of choice to meet widely differing locational and site requirements.

With Bishop Airport and the sewage disposal plant included, the present public, institutional, and utility land ratio is about 1.0. The projection anticipates that the present ratio in this land use will remain fairly stable in the years to come. Although the ratio for public, institutional and utility land is considerably below nationwide averages, this may well continue to serve the community's needs.

With continued accent on leisure time activities, the 1.0 ratio for recreational land anticipates a proportionate increase in this use, bringing the projected ratio up to recommended standards.

Proportionate street, alley and railroad land use is most directly related to the quantity of developed land area involved. Based on developable land area, a factor of somewhat less than 25 per cent is indicated for streets and alleys in the projected urban service area. For land devoted to railroad use, recognition is given to increased right-of-way needs for new industrial development.

If an urban service area were limited to providing land in the ratios thus estimated, monopoly land values might be created due to lack of reasonably wide range of choice in sites for various enterprises and developments. Therefore, it is considered advisable to adjust the total land requirements to allow a margin on projected development, as follows:

- a) a 50 per cent margin on additional private land requirements;
- b) a 30 per cent margin on additional public land requirements.

Based on these considerations, the following approximate total urban service area land requirements are derived:

Residential	26,500 acres
Commercial	2,000 "
Industrial	5,500 "
(Sub-total, private development)	(34,000 ")
Public, institutional & utility	4,500 "
Recreational	4,500 "
Streets & Alleys	10,000 "
Railroads	1,000 "
(Sub-total, non-private development)	(20,000 ")
TOTAL	54,000 acres

The foregoing total is the estimated requirement for land area; with water areas included, the total exceeds 85 square miles. The Flint Urbanized Area - 1958 - included some 37 square miles of developed land and water area and about 31 square miles of vacant and developable land. Hence, the indicated need for developable land outside the limits of the present urban and urbanizing area is about 18 square miles. Having made this determination, land seemingly most suitable for urban expansion was blocked out around the periphery of the community - delineating the urban service area. Within this area, as shown on the Land Use Plan,¹ general plans of the various facilities described in the following sections were developed.

¹ See section on Land Use Plan.

MAJOR STREET PLAN

Most urban traffic problems derive principally from an attempt to serve today's traffic with yesterday's streets. Street and road improvements have not kept pace with the phenomenal rise in the numbers and use of automobiles. Generally, communities have found that only temporary traffic congestion relief results from the mere improvement of existing major streets (widening, intersection improvement, and the like). More permanent relief requires more imaginative plans and more decisive measures.

Effective traffic improvement programs are expensive - customarily necessitating major construction projects financed with federal and state aid over a period of years. They must be designed to accommodate the ever-increasing traffic volumes of the foreseeable future. Hence, adequate knowledge of the problems and needs of traffic must precede sound planning and programming of new major streets and related transportation facilities - bridges, railroad crossings, transit facilities, and the like.

Present Trafficways

Though many are deficient by present-day standards, reasonably direct highways connect Flint with the state's major cities.¹ The major regional trunkline highway system in the Flint area includes US-10, US-10 Business Route, and US-23, M-21, M-78, and M-121. US-23, in the Flint Area, has been relocated to the recently completed Fenton-Clio Expressway, with its northern segment (Interstate 75) being a part of the national Interstate highway system. A programmed route relocation (relocated US-10) will connect this segment, at an interchange southwest of Flint, with the proposed Interstate route to Detroit.¹ Proposed route relocations to the north will carry traffic over the Interstate to Saginaw, the Mackinac Bridge, and Canada. Though not a part of the Interstate system, a four-lane expressway will connect the south end of the Fenton-Clio Expressway with the Ohio Turnpike in the vicinity of Toledo.

Within Flint's Metropolitan Area (Genesee County), County primary roads, as well as the trunkline routes, connect Flint and the smaller nearby urban and suburban centers. The more heavily traveled County primaries are: Clio, Coldwater, Flushing, Lapeer, Linden, Mt. Morris, Pierson, and Silver Lake Roads.

Flint's local street system has been laid out as a rather typical grid pattern - with some modification where watercourses, large land uses, or major radial streets intervene. The principal radial streets leading from Flint's central area include Saginaw to the north; Davison, Longway, Court, and Lapeer to the east; Saginaw, Grand Traverse, and Fenton to the south; 12th and Miller to the southwest; Corunna, Court, and Flushing to the west; Dupont, Grand Traverse, and Detroit to the northwest.

¹ Map: Regional Map of Flint and Genesee County, Michigan (with state insert).

Flint's principal concentric "ring" streets comprise Pierson Road on the north, Dort Highway on the east, Atherton Road on the south, and Ballenger-Clio Road on the west. This system is supplemented principally by a number of routes which travel across parts of the urbanized area and are located out of the vicinity of the downtown area.

Traffic Surveys and Investigations

Traffic origin and destination, routes of travel, and traffic volumes are revealed in surveys of Flint area traffic. In 1950, the State Highway Department conducted an origin and destination survey of Flint traffic with the purpose of producing a composite portrayal of the origin, destination, and desired lines of travel of vehicle trips within a selected portion of the Flint Metropolitan Area. The 1950 O-D survey information was supplemented in 1958 by extensive field checks and investigations of traffic movements to and from Flint's major traffic generators; also by the extensive data on traffic volumes gathered and plotted over a period of years both by the City's Traffic Engineering Division and by the County Road Commission. However, the field survey conducted during 1958 and the diagram based thereon provides not only the most recent, but the most comprehensive picture of traffic flow - area-wise and by number of streets portrayed as traffic carriers - at a given period in the city and its environs.

Trip Origin and Vehicle Ownership

In 1950, nearly 435,000 vehicle trips were made on an average summer weekday within, into, and out of Flint. About 89 per cent of this traffic originated within the community. Local-origin traffic is known to vary more or less in direct proportion to local vehicle ownership and population growth; however, the proportion that local-origin traffic is of total traffic varies widely - normally the larger the city the higher the proportion. Thus, to a degree, vehicle ownership and population figures give an indication of trends in vehicle travel in Flint, and of the comparison between 1950 and present traffic volumes.

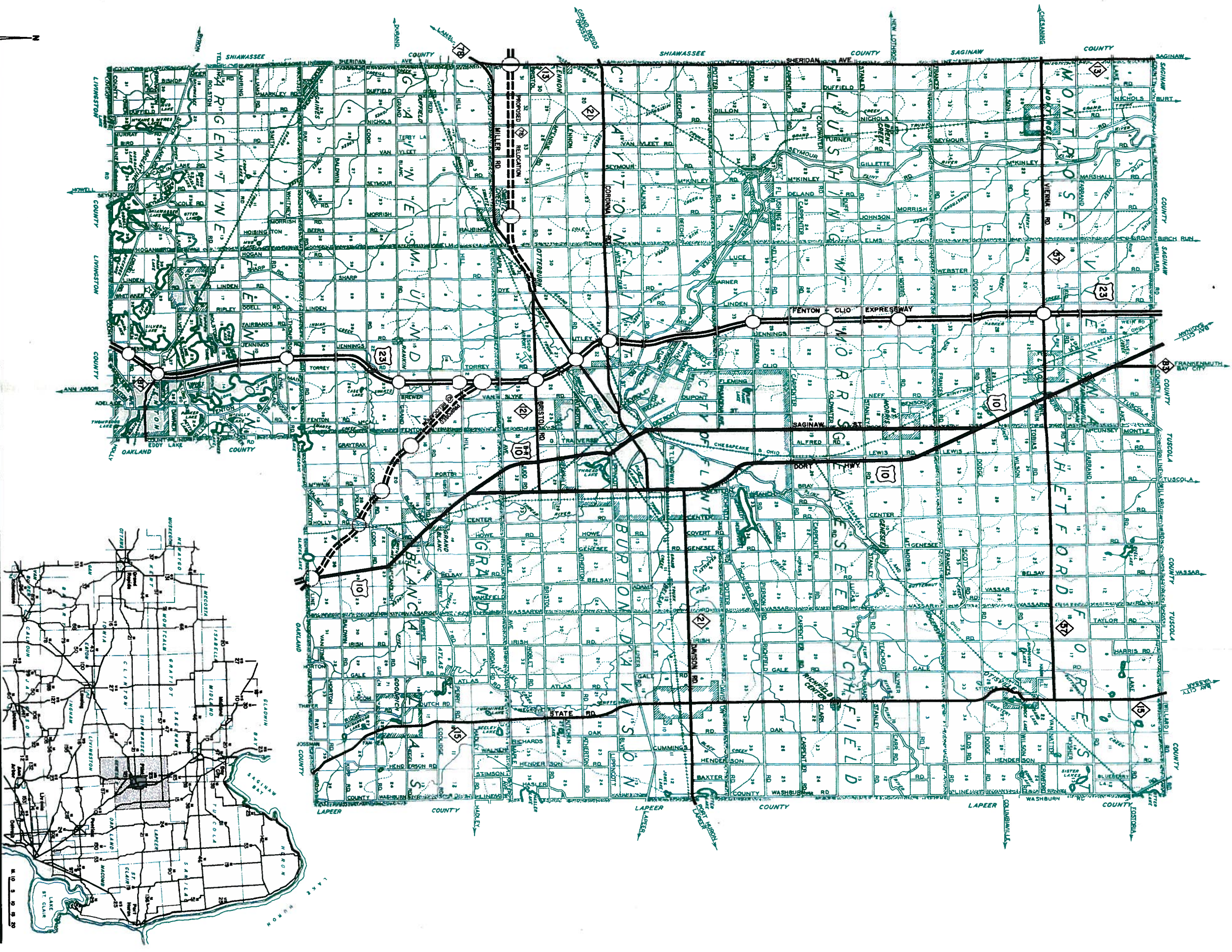
From 1940 to 1950, in the Flint Metropolitan Area, motor vehicle registration¹ increased from 64,484 to 104,825 - a gain of over 60 per cent. During this same period, the population increased about 19 per cent. From 1950 to 1957, motor vehicle registration increased to 150,505 - a gain of about 44 per cent, despite a leveling off since 1955, as against an estimated population gain of about 34 per cent. City of Flint registrations have increased at a comparable rate, and both city and Metropolitan Area increases were at a rate about 35 per cent higher than that of the state as a whole.

Traffic Generation by Land Use Areas

Of the trips generated within the community, 89 per cent of Flint's traffic, most have a destination in the generally residential areas.² Estimates indi-

¹ Passenger and commercial vehicles.

² Map: Traffic Generation.



COMPREHENSIVE
MASTER PLAN

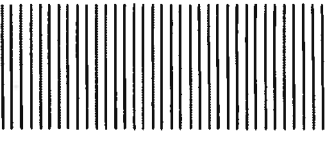
REGIONAL MAP OF
FLINT AND GENESEE COUNTY · MICHIGAN

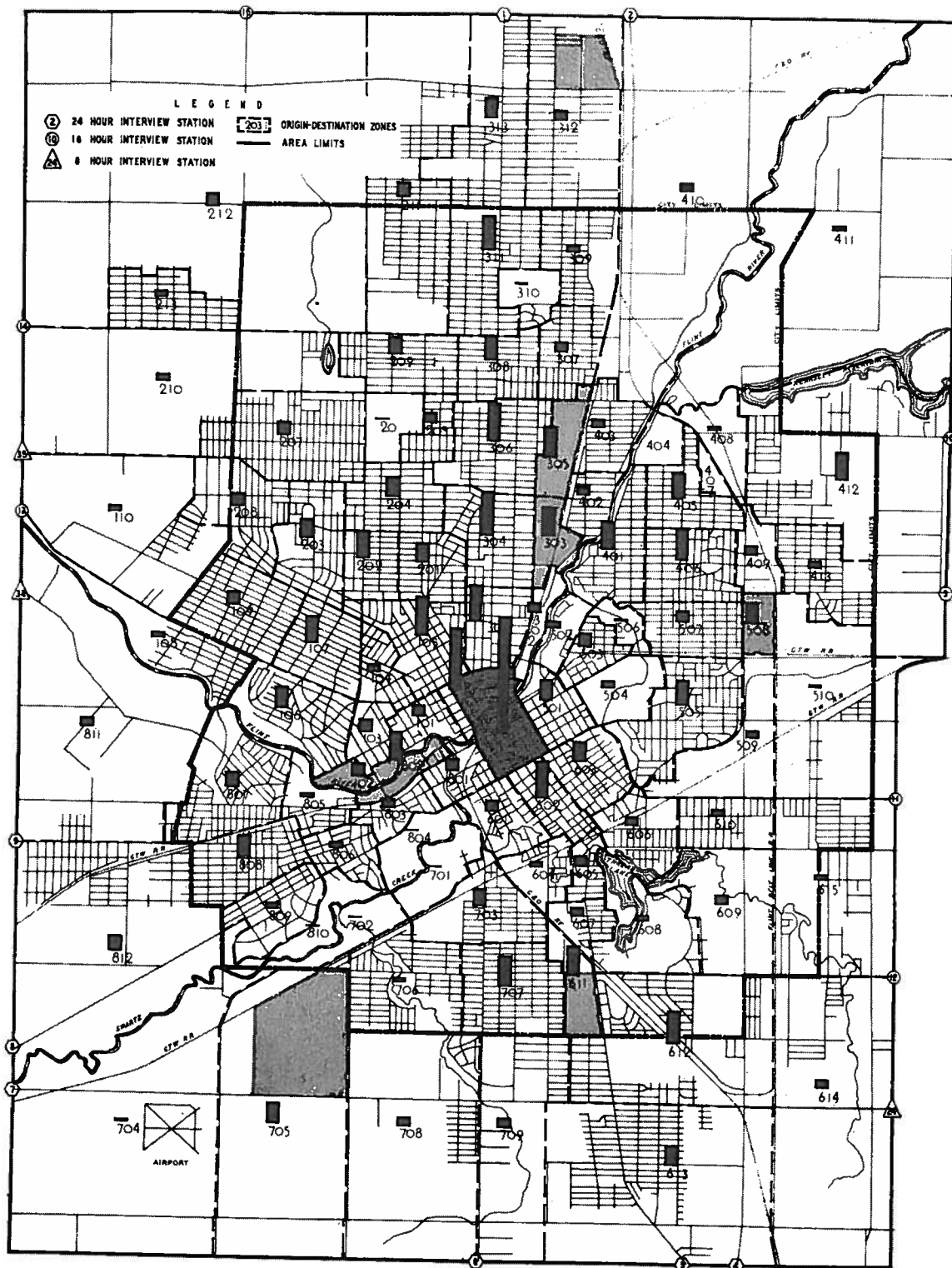
CITY OF FLINT · MICHIGAN
FLINT PLANNING COMMISSION

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-  U.S. TRUNKLINE - DIVIDED HIGHWAY
-  U.S. TRUNKLINE
-  STATE TRUNKLINE
-  GRADE SEPARATION
-  INTERCHANGE





**COMPREHENSIVE
MASTER PLAN**

CITY OF FLINT · MICHIGAN
FLINT PLANNING COMMISSION

1959 M. 1/2 1/4 0

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**TRAFFIC GENERATION
TRIP DESTINATIONS PER 24 HOURS**

--- CITY LIMITS

■ DOWNTOWN RETAIL COMMERCIAL

■ VERTICAL SCALE:
1" = 10,000 DESTINATIONS/24 HOURS

■ MAJOR INDUSTRIAL AREA

Map and data source: Origin-Destination Survey, Michigan State Highway Department,
John C. Mackie, Commissioner, prepared by the Office of Planning.

cate that nearly 3,000 vehicle trips per day were generated by every 1,000 Flint dwelling units in 1950 - this being well above a 38-city average (2,300 trips).¹ In addition to that generated by the dwelling units, traffic is attracted to scattered stores, neighborhood shopping centers, schools, recreation areas, and the like, in these residential areas.

Flint's principal concentrated areas of traffic generation are the central business district and the General Motors manufacturing plants - Buick Motor, the four Chevrolet plants, the three Fisher Body plants, the AC plant, and the Ternstedt plant. Together, these are the destinations for almost 30 per cent of Flint's traffic. The location of these traffic generators does much to set the directional pattern of the community's traffic flow. With the exception of the AC plant and the plants on Van Slyke Road, Flint's major generators are roughly aligned on a north-south axis beginning at the Ternstedt plant in the north, extending through the Buick plant, the central business district, and terminating at the Grand Blanc Fisher Body plant to the south. It is estimated that over 45 per cent of all Flint traffic (dwelling-unit generation included) has a destination within one-half mile of this north-south line.

Generation of Local Traffic

Individual dwelling units generate most of the traffic into the community's residential areas. Most of Flint's dwelling units are single-family detached structures (about 72%); there are no large land areas of multi-family residences. Thus, residence-generated traffic is widely dispersed throughout the urbanized area, and no major concentrations of traffic are created by residential generation.

As much as one-fifth of Flint's traffic is generated by commercial land uses, with the central business district attracting over 11 per cent of all the traffic generated in the community. With its traffic generation the highest of the community's principal generators, the CBD exerts a telling influence on the traffic pattern of the community.² The CBD's "pull" is strong in all directions with somewhat the larger portion of its traffic originating generally to the north. The 1959 CBD traffic volumes apparently are somewhat lower than those of 1950,³ but indications are that trip distribution is similar to that of 1950.

Flint's neighborhood and community shopping centers can be considered minor traffic generators with respect to the total volume of traffic in the urbanized area. The largest centers may generate up to 3,000-4,000 trips per day - about one per cent of the traffic generated in Flint each day. Shopping center-generated traffic does, however, have a telling effect on the traffic pattern in an individual residential area.

¹ From data published by the Bureau of Public Roads for 38 cities.

² Map: Traffic from Local Zones of Origin to Six Principal Zones of Attraction, 1950. (On this map, and those which follow it - except that showing 24-hour Traffic Volume - traffic bands indicate a straight-line desired interchange of traffic and not the distribution of volumes.)

³ See section on Central Business District.

In 1950, Flint's principal industrial area traffic generators comprised four General Motors plants: the Buick plant, the AC Spark Plug plant, the Chevrolet Flint Manufacturing plant, and Fisher Body plant No. 1. Since 1950, in addition to expansion of existing plants, six plants have been added or reactivated at three locations in the Flint area: Ternstedt Division, the three Chevrolet plants and Fisher Body plant No. 2 on Van Slyke Road, and the Fisher Body plant at Grand Blanc.

Buick Motor Division, as a traffic generator, exerts a "pull" on the community traffic second only to the central business district. The Buick plant and surrounding land uses attract about one-tenth of all the traffic generated in the community. Buick's impact on the community traffic pattern is similar to that of the CBD whereby traffic is attracted in a radial pattern from the zones of origin, with the heaviest interchange between the plant and the CBD. Plant traffic information indicates that the volume and pattern of traffic at the Buick plant in 1959 is similar to that in 1950.

Traffic study zones at Fisher Body plant No. 1, the Chevrolet Manufacturing plant, and the AC Spark Plug plant attracted over eight per cent of the traffic generated by the community at the time of the 1950 survey. Though it is located at the southern edge of the city, traffic is attracted to Fisher Body No. 1 on a generally balanced radial pattern. Heaviest generation of traffic is from residential areas to the south and from the Buick plant. The Chevrolet Manufacturing plant attracts most of its traffic from residential areas to the northwest and southwest, with other attraction forming a fairly radial pattern. AC Spark Plug attracts radially from all directions.

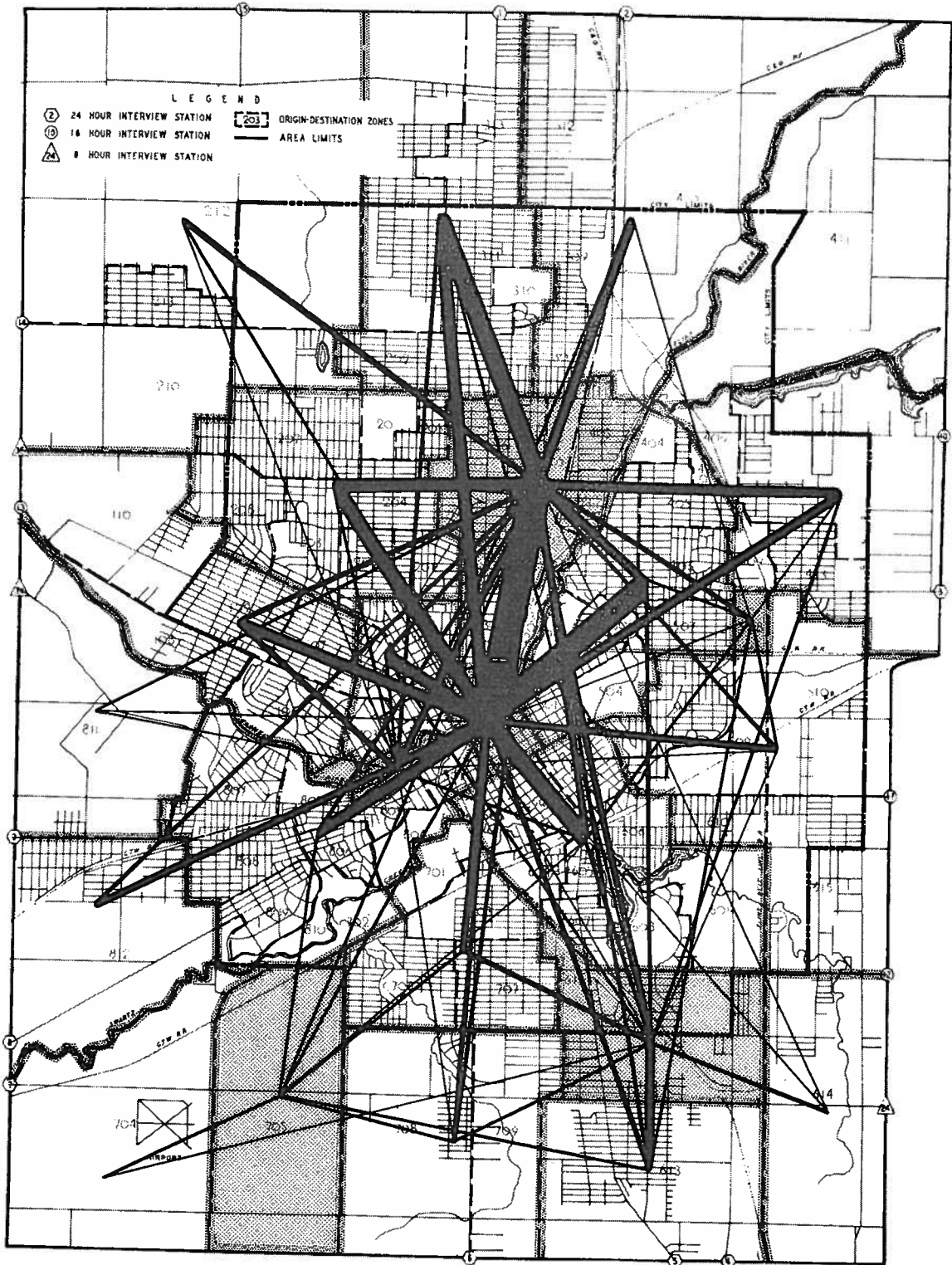
Recent surveys indicate that traffic volume and pattern at the above plants in 1959 is similar to that in 1950. The six manufacturing plants added or reactivated since 1950 have created three new major traffic generators in the Flint area. The Ternstedt Division plant generates 5,000-6,000 vehicle trips per day, with nearby residential areas generating another 2,000-3,000. Distribution of this traffic again is in a generally radial pattern.

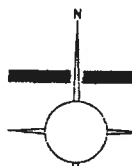
Located together on Van Slyke Road, the Chevrolet Division plant and Fisher Body plant No. 2 act as a single traffic generator in the urban complex. Their total traffic generation is in the order of 7,000-8,000 vehicles per day, with heaviest attraction to the north, east and south.

The Fisher Body plant at Grand Blanc is outside of the original 1950 survey area but within Flint's urbanized area. The plant itself generates 4,500-5,000 vehicle trips per day. Residential areas nearby, including the city of Grand Blanc, attract about 4,000 trips per day. Located near the southern end of the urbanized area, its pattern of traffic generation strongly favors the north, but strong attraction also is exerted to the west and southeast.

Generation of External Traffic

As indicated by the 1950 survey, some 20 per cent of Flint's traffic has at least one terminal outside the community. About one-tenth of Flint's traffic is generated outside the community, while a like proportion of Flint-generated



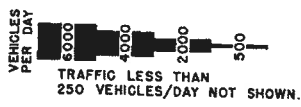





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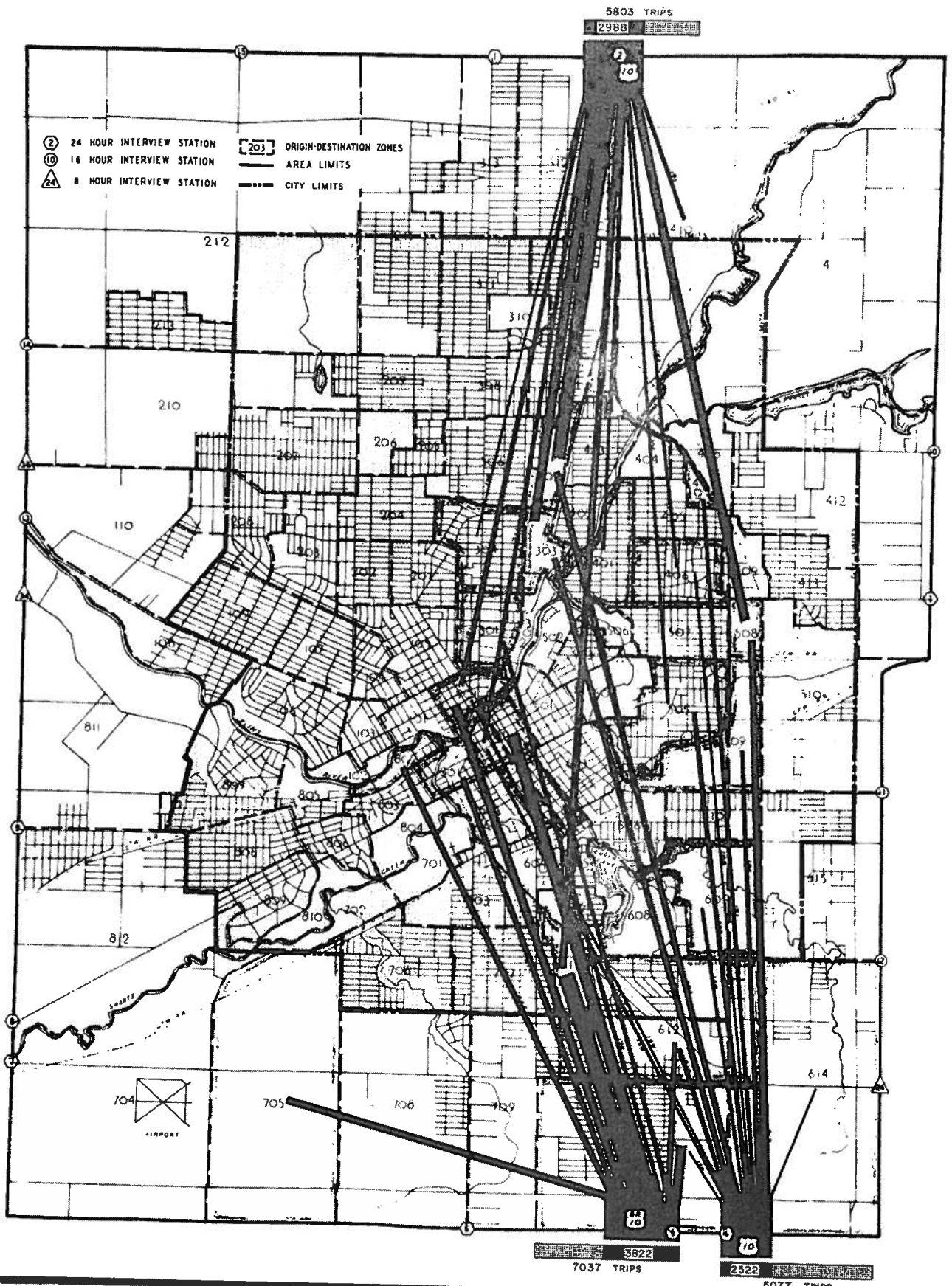
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TRAFFIC FROM LOCAL ZONES OF ORIGIN TO SIX PRINCIPAL ZONES OF ATTRACTION - 1950



-  CITY LIMITS
-  ZONE BOUNDARY
-  PRINCIPAL ZONE OF ATTRACTION

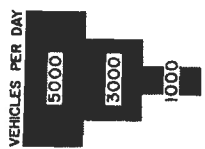
Map and data source: Origin-Destination Survey, Michigan State Highway Department, John C. Mackie, Commissioner; prepared by the Office of Planning.



- ② 24 HOUR INTERVIEW STATION
- ⑩ 16 HOUR INTERVIEW STATION
- △ 8 HOUR INTERVIEW STATION
- 203 ORIGIN-DESTINATION ZONES
- AREA LIMITS
- CITY LIMITS

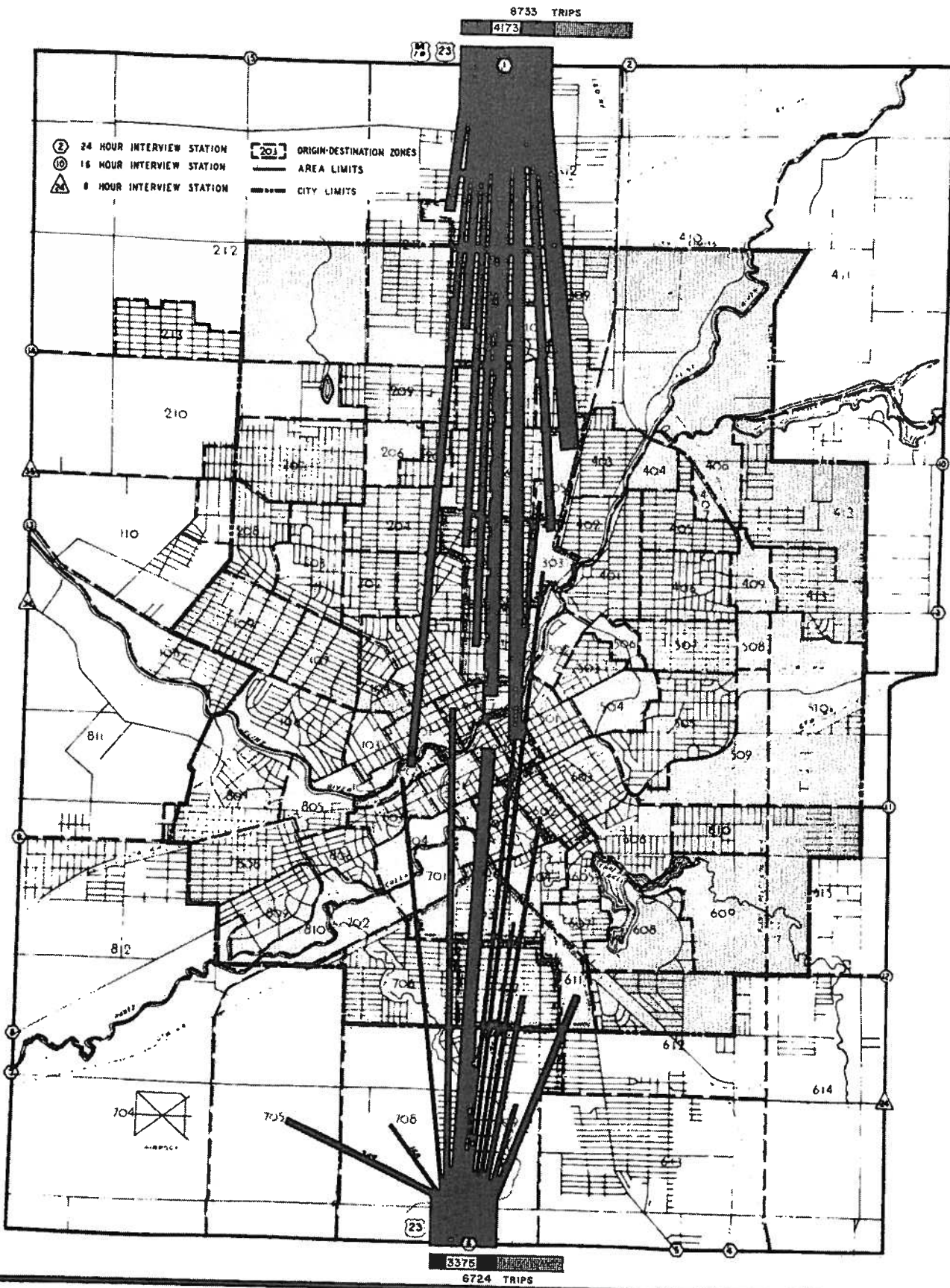
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**TRAFFIC BETWEEN US-10 · US-10BR AND THE
 PRINCIPAL ZONES OF ATTRACTION AND ORIGIN - 1950**



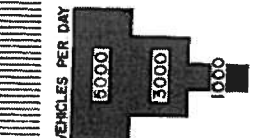
TRIPS TO AND FROM PRINCIPAL ZONES. TRIPS TO AND FROM ALL OTHER ZONES.

Map and data source: Origin-Destination Survey, Michigan State Highway Department, John C. Mackie, Commissioner, prepared by the Office of Planning, February, 1958.



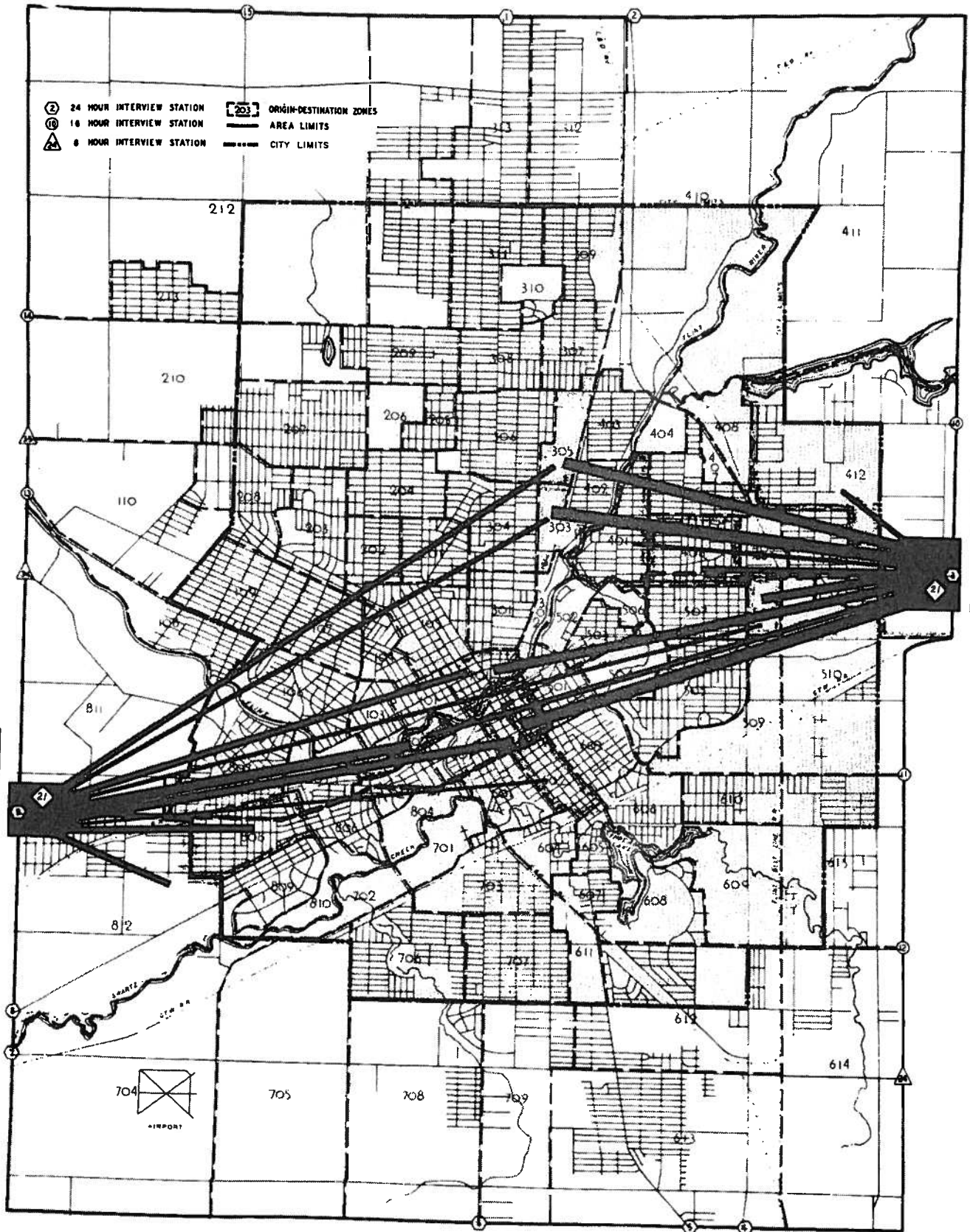
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TRAFFIC BETWEEN US-23 AND THE PRINCIPAL ZONES OF ATTRACTION AND ORIGIN - 1950



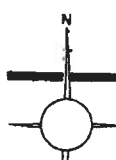
TRIPS TO AND FROM PRINCIPAL ZONES
 TRIPS TO AND FROM ALL OTHER ZONES.

Map and data source: Origin-Destination Survey, Michigan State Highway Department, John C Mackie, Commissioner, prepared by the Office of Planning, February, 1958.



5805 TRIPS
2749

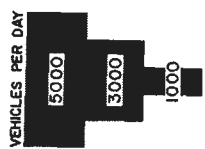
5770
7508 TRIPS



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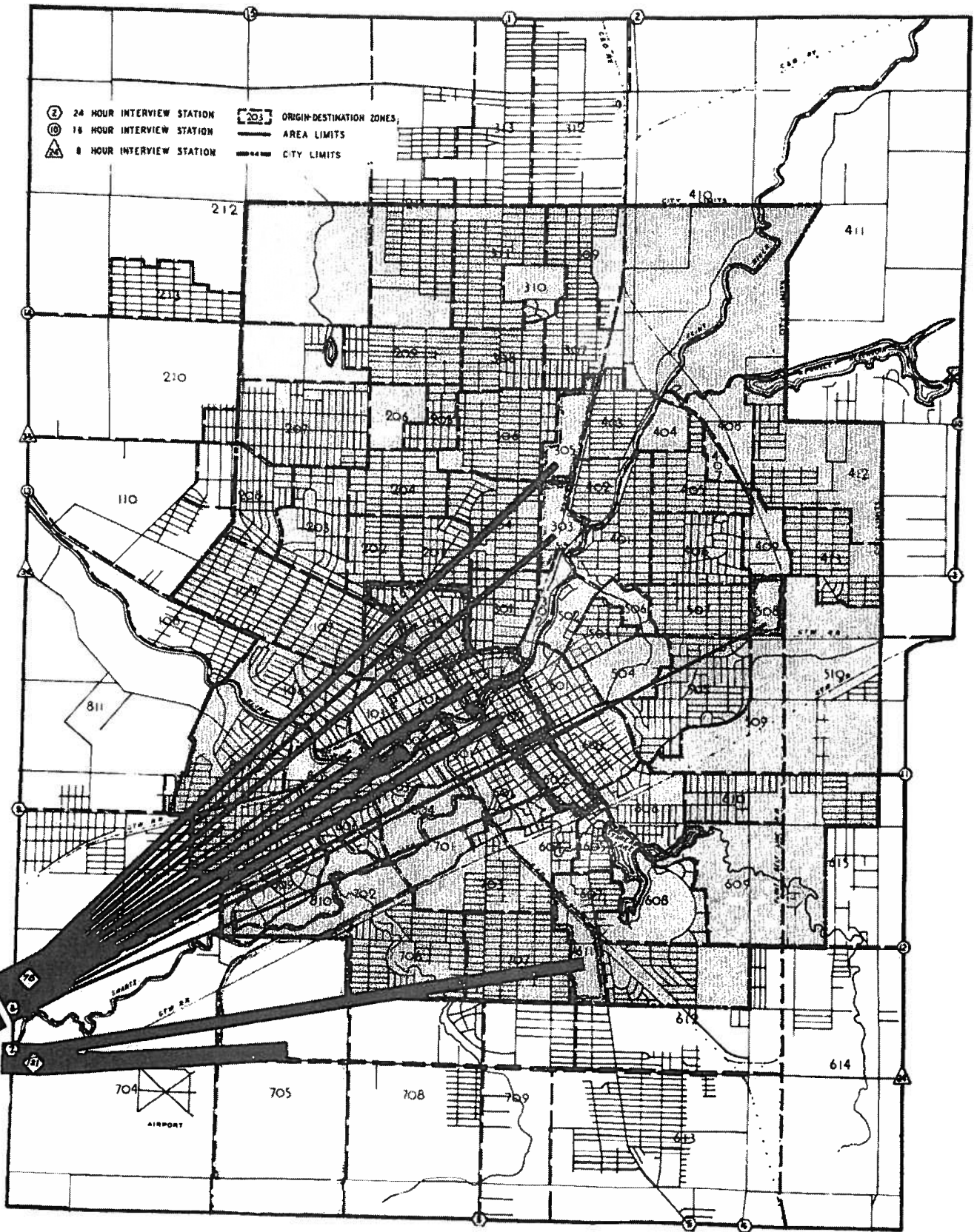
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**TRAFFIC BETWEEN M-21 AND THE
PRINCIPAL ZONES OF ATTRACTION AND ORIGIN - 1950**



TRIPS TO AND FROM PRINCIPAL ZONES. TRIPS TO AND FROM ALL OTHER ZONES.

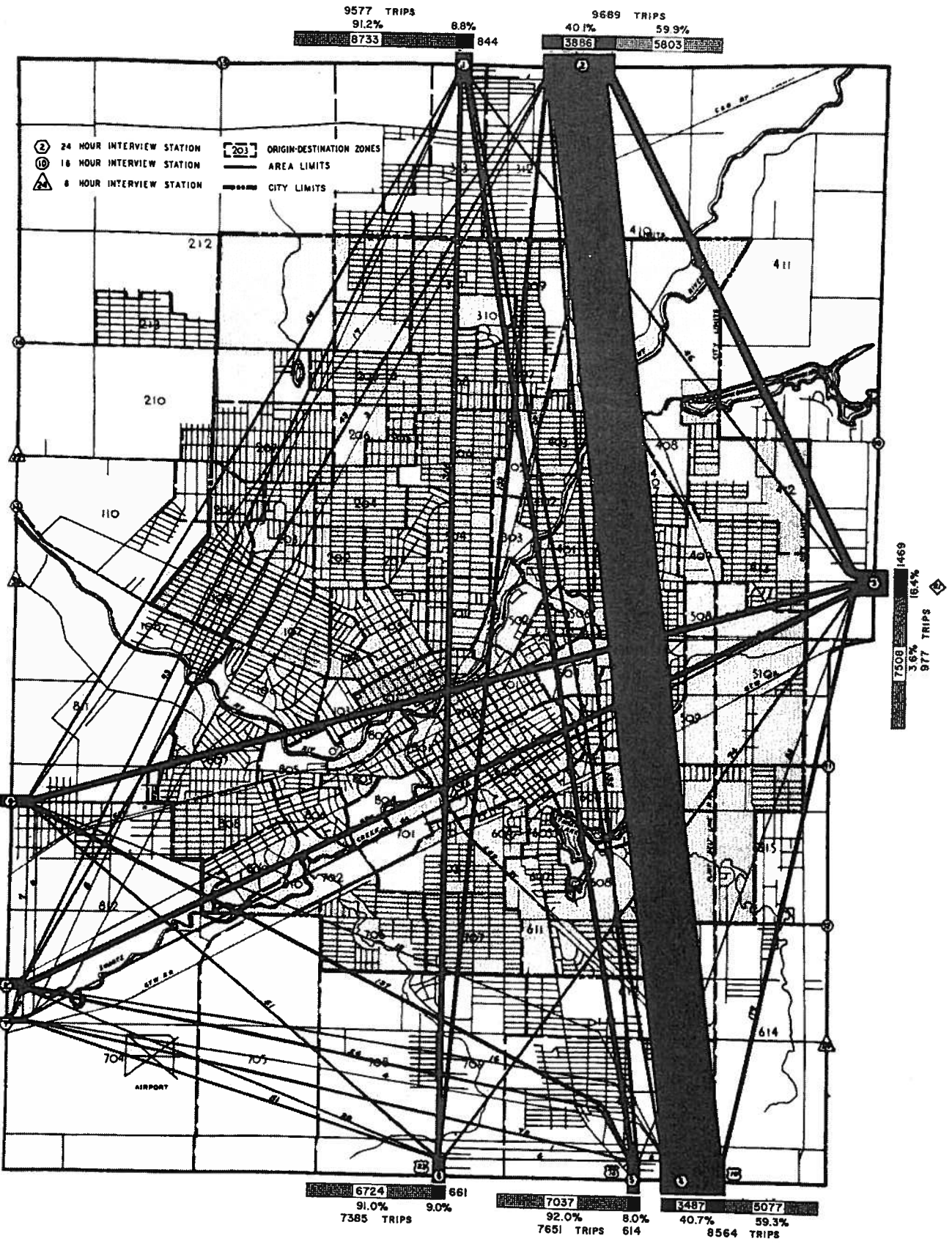
Map and data source: Origin-Destination Survey, Michigan State Highway Department, John C. Mackie, Commissioner; prepared by the Office of Planning, February, 1958.



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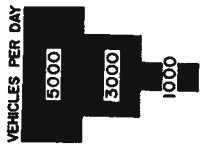
TRAFFIC BETWEEN M-78 AND THE PRINCIPAL ZONES OF ATTRACTION AND ORIGIN - 1950

Map and data source: Origin-Destination Survey, Michigan State Highway Department, John C. Mackie, Commissioner, prepared by the Office of Planning, February, 1958.



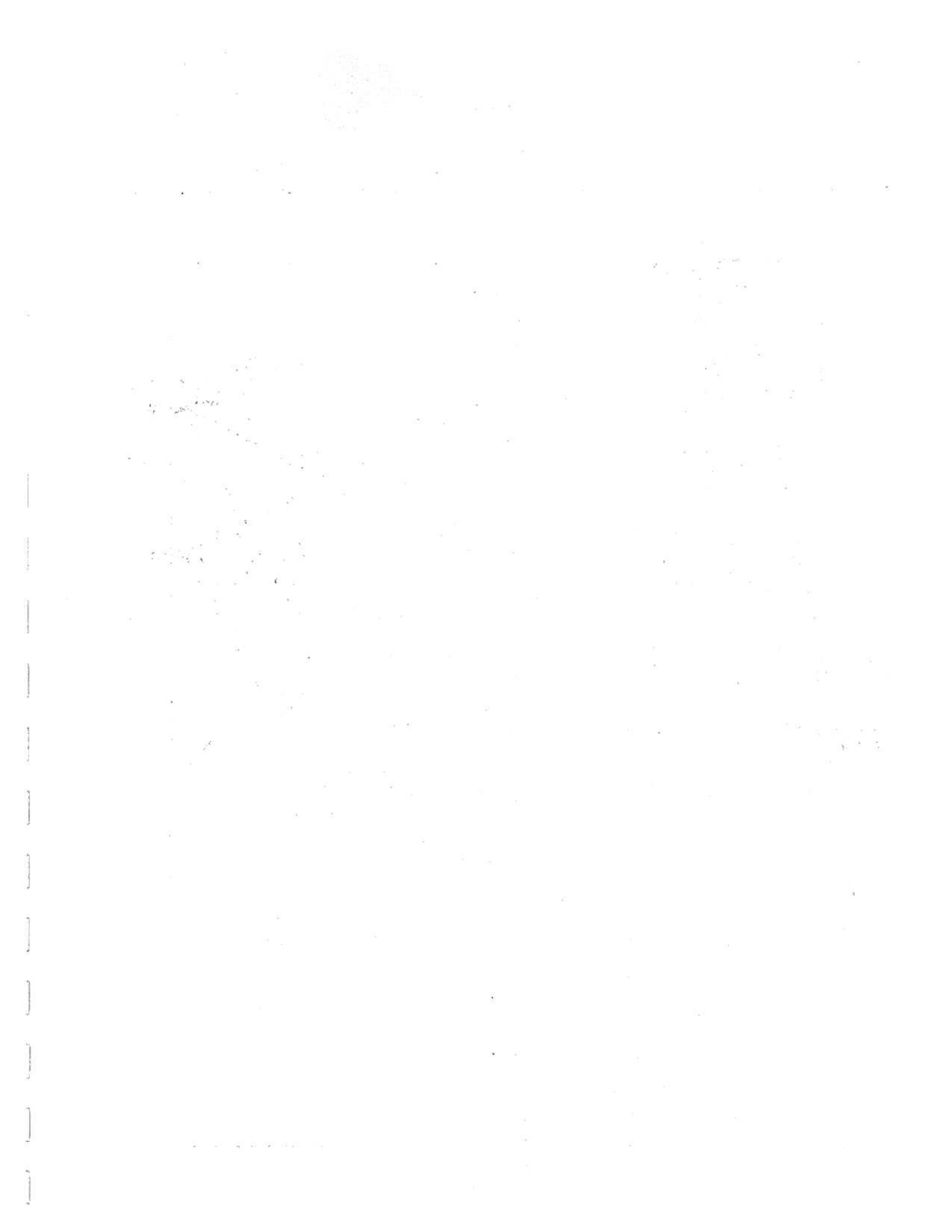
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INTERCHANGE OF THROUGH TRIPS BETWEEN STATE TRUNKLINES - 1950



THROUGH TRAFFIC. TRAFFIC WITH ONE TERMINAL IN THE STUDY AREA.

Map and data source: Origin-Destination Survey, Michigan State Highway Department, John C. Mackie, Commissioner, prepared by the Office of Planning, February, 1958.



traffic is attracted from outside. Flint-generated external traffic has its principal avenue of entry from the north on Saginaw Street. Next in importance as entry points are Davison Road from the east and Saginaw Street from the south. Recent traffic volume counts indicate that with the opening of the Fenton-Clio Expressway the Miller Road interchange has become an important point of entry.

The approach to the community by Flint-generated traffic on the trunkline routes (trunk traffic with a Flint destination) is heaviest from the south, heavy from the north and the west, and light from the east.¹ In 1950, Flint-generated external traffic from the south entered the community on the US-10 system (65.3%), and on Fenton Road (34.7%). It is estimated that in 1959 much of the Flint-generated 1950 traffic on Fenton Road and some of the US-10 traffic from the south enters the community from the Fenton-Clio Expressway Miller Road interchange, as against a possible entrance via a more direct route from a point farther south.

In 1950, all of the Flint-generated trunkline traffic from the north entered the community on the present US-10 system. It is estimated that an increasing share of this traffic now enters the community on the Fenton-Clio Expressway, using the various interchanges with east-west thoroughfares as against a more direct route angling from the northwest to the previously mentioned north-south axis of major traffic generators in the urban area.

By-passable traffic will range in inverse proportion to a community's importance as a traffic generator. Flint - with only 8.7 per cent of external traffic with both origin and destination outside the community - is at the low end of the "by-passable traffic" scale. If all the by-passable traffic were evenly distributed over all of the trunkline routes, it probably would not justify a by-pass route on any of them. This, however, is not the case.² By-passable traffic reaches significant proportions on US-10 (Dort Highway), with interchange of this traffic between North Dort and South Dort Highway totaling almost 35 per cent of the average external traffic on that route, this representing the traffic which can be diverted to Interstate 75.

Trunkline Traffic

By attracting traffic to land areas of limited size, Flint's major traffic generators create the community's traffic concentrations. These same major generators exert a like impact on Flint-generated external traffic moving on local segments of trunkline routes.

-
- 1 Maps: Traffic between US-10, US-10BR and the Principal Zones of Attraction and Origin, 1950.
Traffic between US-23 and the Principal Zones of Attraction and Origin, 1950.
Traffic between M-21 and the Principal Zones of Attraction and Origin, 1950.
Traffic between M-78 and the Principal Zones of Attraction and Origin, 1950.
- 2 Map: Interchange of Through Trips between State Trunklines, 1950.

It has been noted that Flint's major traffic generators are aligned in a generally north-south direction. Additionally, Flint's trunkline traffic is heaviest to the north and south. In combination, these factors create a very strong north-south axis of trunkline traffic origin and destination. Since its east-west trunk route traffic is rather concentrated, a strong east-west axis of travel is formed as well - diagonally from southwest to northeast across the central area of the community.

Traffic Accommodation

The 1958 traffic volume counts reveal the impact of Flint's traffic generation on its trafficway system.¹ It is possible, by combining consideration of both, to evaluate the traffic flow on Flint's major thoroughfares in terms of the traffic generation that produces it.

Trunkline Routes

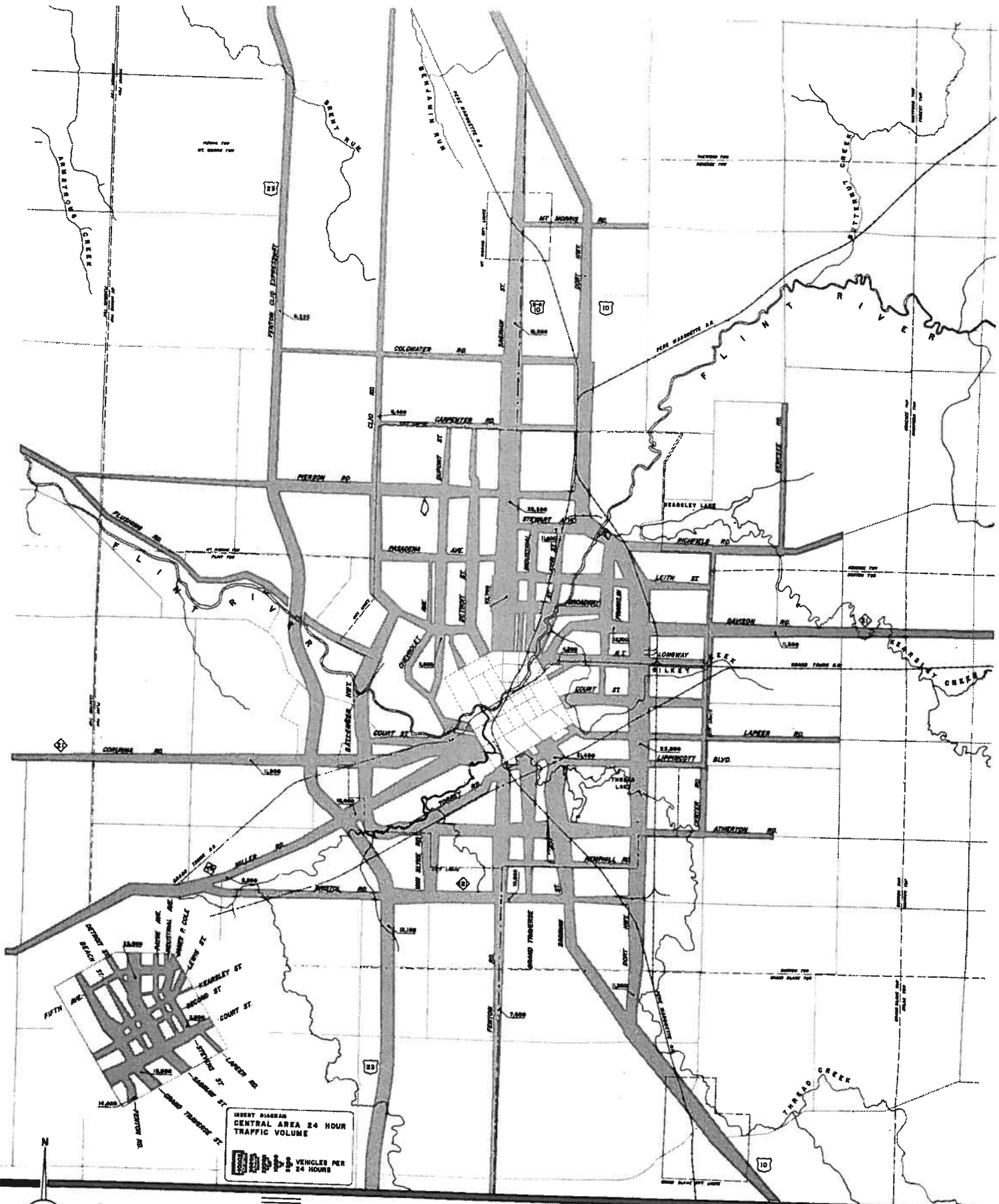
At the time of the 1950 origin-destination survey, cordon traffic count points were established where the trunkline routes enter the Flint community. During the 1958 volume count, traffic volumes were recounted at these points to determine any increases, decreases, or diversions of traffic. These new traffic cordon totals indicate approximately an 80 per cent increase from 1950 to 1959 - well above the increase normally expected of urban traffic.

In assessing the traffic diversions which have occurred in Flint's external traffic pattern, the opening of the Fenton-Clio Expressway (Interstate 75-US-23) is of over-riding significance. This trafficway already has made a telling impact on external traffic movement, with the biggest immediate effect on Fenton Road traffic volumes. From 1950 to 1958, Fenton Road traffic showed only a slight increase (2.9%). In view of Flint-generated traffic on US-23, it is very probable that a high proportion of the Expressway traffic has Flint origin or destination.

Examination of regional traffic increases on the US-10 system indicates an overall average increase of about 62 per cent - below the average for the area; however, US-10BR (Saginaw Street) regional traffic increased an average 85 per cent - above average - while US-10 (Dort Highway) regional traffic increased an average 40 per cent - well below average. The 1958 figures indicate that part of this Dort Highway through traffic already has begun to by-pass the community, traveling on US-23 - Interstate 75. This apparent by-passing takes place despite the fact that there is, at present, no direct, high-standard connection south of the community between US-10 and US-23.

With the completion of relocated US-10 south of Flint, it is reasonable to assume that almost all by-passable US-10 and US-23 traffic will travel over the new US-10-23 system (Interstate 75) south and west of Flint. When this becomes a reality, Flint's significant by-passable traffic will have been provided with a by-pass route, and this phase of Flint's traffic problem can be considered solved. However, by-passable traffic never has been the biggest

¹ Map: 24-Hour Traffic Volume, 1958.



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CITY OF FLINT · MICHIGAN
FLINT PLANNING COMMISSION

1959

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CINCINNATI · OHIO FLINT · MICHIGAN

24 - HOUR TRAFFIC VOLUME · 1958

FLINT · MICHIGAN AND ENVIRONS



VEHICLES PER 24 HOURS
TRAFFIC VOLUMES LESS THAN
5000



problem created by regional traffic. The major problem remains: the distribution and accommodation of regional trips with one terminal in Flint.

Local Trafficways

Saginaw Street (US-10BR) and Dort Highway (US-10) are principal carriers of local north-south traffic. The same is true with regard to local east-west traffic on Court Street (M-21 and M-78) and Davison Road (M-21). Since Flint has relatively few streets which lead directly from a major residential area to a major traffic generator, most locally generated traffic resolves itself into north-south and east-west components of travel. Saginaw Street is supplemented and relieved of traffic over parts of its length by Dupont Street, Detroit Street, Grand Traverse, Beach-Garland Streets, Harrison-Payne-North Streets, Stevens Street, and Industrial Avenue. Dort Highway is served in a similar manner by Franklin Avenue, and Center Road. Flint's other major north-south routes are Ballenger-Clio Road, and the Fenton-Clio Expressway. Most of Flint's local east-west traffic is distributed over a number of primary routes. Generally, each route's traffic volume is proportional to the size of the residential traffic generating area it serves. The most important exceptions to this general distribution of east-west traffic are Miller Road-Court Street, and Pierson Road. The Miller Road Expressway interchange has become the principal entry to the community from US-23. Throughout its length through the community, M-21 carries a heavy volume of local east-west traffic. The Pierson Road interchange is Flint's principal northern entry from Interstate 75. Additionally, Pierson Road serves both North Flint Plaza and Northwest shopping centers, making it the heaviest traveled east-west route in the northern sector of the community.

Major Street Plan

Any urban trafficways system must be developed within the framework and as a part of a functional, properly scaled and balanced land use pattern for the area it is to serve. When correctly located, traffic facilities will afford direct travel routes, protect the stability and desirability of existing residential, commercial and industrial developments, and further the orderly development of as yet open or relatively undeveloped sections.

The proposed trafficways system for the Flint area is designed to accommodate the important primary and secondary traffic flow of both intra-urban and inter-urban categories. The various thoroughfares in the system are located with a view to effectively serving their particular functions - in logical relationship to the other features of physical development composing the Master Plan. Wherever possible, route locations take advantage of existing right-of-ways. Where possible, vacant property or predominantly undeveloped areas were sought for locating new facilities, in order to minimize right-of-way costs. Direct and otherwise adequate access is provided for the downtown area, industrial areas, proposed community park sites and major residential areas, as well as to the principal points of access to the new system of Interstate expressways - including Interstate 75 (Fenton-Clio Expressway to the north and relocated US-10 to the south) and the US-23 expressway connection to the Ohio Turnpike (Fenton-Clio Expressway to the south).

Traffic Trends and Projections

The design scale of the Major Street Plan was determined by projecting traffic volumes into the future on the basis of the estimated growth of population, vehicle registration, and vehicle miles traveled. The Michigan State Highway Department has designated as reasonable and acceptable a maximum traffic volume estimate at 2.2 times present traffic volumes. This overall increase factor was observed in the preparation of the Major Street Plan, although obviously it did not apply uniformly to all major streets.

Regional Traffic

Over 20 per cent of Flint's traffic is regional in nature - trips having at least one terminal outside the community. The Flint community is an important regional traffic generator. However, less than 10 per cent of Flint's regional traffic is by-passable, with over 90 per cent having a Flint origin or destination. Most non-by-passable regional traffic (trips with community origin or destination) travels to and from Flint's eight major traffic generators - the central business district and the seven General Motors plant locations. Of these eight major generators, five comprise a centrally located north-south axis of generation.

Local Traffic

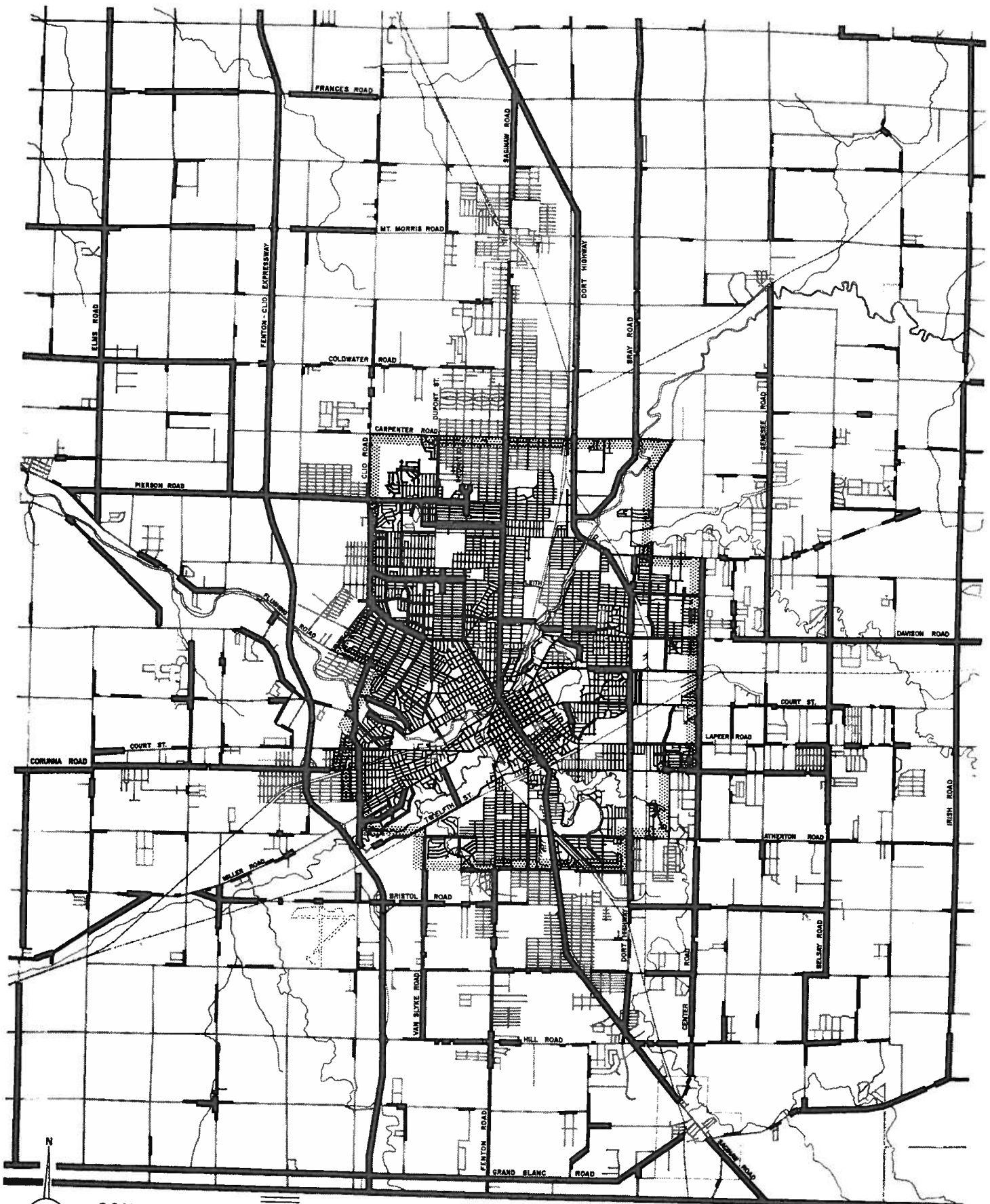
Flint's local traffic - that is, traffic between points within the community - accounts for some 80 per cent of the vehicle trips in the city. Following the average pattern for this type of traffic, about 20 per cent is between two non-residential uses; some 40 per cent is generated by residential and about 60 per cent by non-residential land uses. Thus, similar to regional traffic, a sizable proportion of Flint's local traffic has destinations at the community's major traffic generators.

Traffic Projections

In light of past local trends and population-land use projections, the State Highway Department's average, community-wide traffic projection ratio was considered adequate in deriving projections for the next 15 to 20 years. Flint's detailed traffic projections were based on present traffic volumes; origin and destination surveys; projected increases in vehicular ownership and travel; estimated increased traffic generation by present generators; and on the anticipated new major and minor traffic generators in the growing community. These traffic projections were translated into anticipated peak-hour volumes on a coordinated series of screen lines throughout the urban service area. Based on traffic lane capacities, these peak-hour volume projections, in turn, were expressed in terms of traffic lane needs. The present trafficway system then was reviewed and evaluated in the light of these projected needs, and of the principles and objectives already stated.

Present Trafficway System

As gauged by present traffic demands, adequacy of Flint's present trafficway system varies from section to section in the community. A principal deficiency is the lack of continuous and direct arterials of adequate capacity to carry



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FLINT PLANNING COMMISSION
1959

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**DIAGRAM OF
STREET RIGHT-OF-WAYS · 1959**

FLINT · MICHIGAN AND ENVIRONS

- ROW WIDTH
- 99'+
 - 80' - 98'
 - 68' - 79'
 - 60' - 65'
 - UP TO 59'



IN THE ENVIRON AREA, ROW WIDTHS UP TO 79 FEET
ARE INDICATED BY A LIGHT DOUBLE LINE.

traffic to and from the major traffic generators. This deficiency is most severe in regard to the older major traffic generators - the central business district and the in-town General Motors plants. Trafficway overloading results principally from: lack of adequate roadway width; lack of route continuity.

In evaluating roadway and right-of-way widths,¹ a summary comparison was made between the traffic volume demands and the traffic-carrying capacities on the routes concerned. The 1975-1980 traffic projections reveal the need for considerable additional roadway and right-of-way capacity through the Flint community. The Major Street Plan is drawn to meet the demands of this projected traffic. By the target dates, it seems apparent, many of Flint's primary and secondary thoroughfares will require wider roadways and, in a number of instances, wider right-of-ways to accommodate these roadways. Even this would not meet the projected need; hence new trafficways will be required where demand is heaviest.

The need for route continuity is based on travel convenience and safety, as well as on traffic demand. At present, only three north-south trafficways are completely continuous from the extreme north to the extreme south part of the Flint community: Interstate 75 - US-23; Saginaw Street; and Dort Highway (US-10). The Ballenger-Clio Highway is continuous from the north to the Van Slyke plant area, but here its continuity as a major trafficway ends. The deficiency in continuous east-west trafficways is even more acute. In the city, only Corunna Road-Court Street is completely continuous across the entire community. The section line roads to the north and south of the city have greater continuity, though even here such roads often provide continuity only over graveled surfaces.

The Plan

The Major Street Plan² shows the recommended location of each major trafficway in the developing Flint community. Further, it indicates the nature of recommended improvements, whether widening, connection or extension of right-of-way, or a new trafficway. The design scale of the Plan was developed as indicated, by projecting traffic volumes into the future. The recommended highway and street improvements are proposed to be carried out gradually and systematically over a period of years, in order to provide an adequate major street system for the community.

While all roads of the recommended trafficway system perform an arterial function within the urban area, the most important of these also perform regional functions. For purposes of reference, the Flint street system may be divided into four categories of trafficways as follows:

- a) limited access routes of regional importance;
- b) other routes of regional importance;
- c) local primary thoroughfares and parkways;
- d) local secondary thoroughfares and parkways.

¹ Map: Street Right-of-Ways, 1959.

² Map: Major Street Plan.

Regional trafficways are meant to connect the urban area with other parts of the region of which Flint is a part. They carry regional traffic to Flint's major traffic generators and by-pass the community where this routing is desirable. It is the principal function of local primary and secondary thoroughfares to accommodate local traffic between the city's major and secondary traffic generators and its residential areas. Collector streets¹ provide for connections between the major thoroughfares and the minor streets which give access to individual properties.

Principal function, and minimum ultimate width of right-of-way and roadway for each major trafficway are indicated in the table ² opposite the Major Street Plan.³ The widths listed are the minimum recommended - adjusting roadway requirements to existing right-of-ways wherever possible.

Among the more important features of the Plan are the proposed limited access routes which form the "backbone," as it were, of the overall trafficways system: Interstate 475, connecting with both US-23 and proposed Interstate 75 south of the city and with Interstate 75 to the northwest, this expressway following a route along the north-south axis of major traffic generators in the urban area; M-78 - M-21, by-passing the city to the south and east, with an internal segment to the center of the community from the southwest, paralleling Court Street and connecting with the proposed Fourth-Fifth Avenue crosstown and other streets in the central area. These expressways, with interchanges provided at various primary thoroughfares, not only will accommodate regional traffic but the growing local traffic to and from the major traffic generators in the urban area. With the complement of primary and secondary thoroughfares, the system envisioned should most adequately serve the traffic requirements of the Flint area.

Recommended Street Cross-Sections

Proposed right-of-way and recommended pavement widths are an integral part of the Major Street Plan. In order to indicate more specifically the type of improvement contemplated in each instance, and designated in the preceding table, standard cross-sections have been designed. The accompanying diagram⁴ is intended to serve as a guide for the Planning Commission and other officials in establishing standard pavement widths and the right-of-way widths required for such pavement widths, as well as the appropriate arrangement within the right-of-way - pavement, sidewalks and flexible medians or planting strips for different streets or types of streets and different right-of-way widths, existing or as proposed. Obviously, as indicated by variable medians or planting strips, these must be adapted to prevailing conditions and adjusted where such appears practical and desirable or is essential because of restricted right-of-way.

1 Map: Land Use Plan, in the section so named.

2 Table: Major Streets.

3 Map: Major Street Plan.

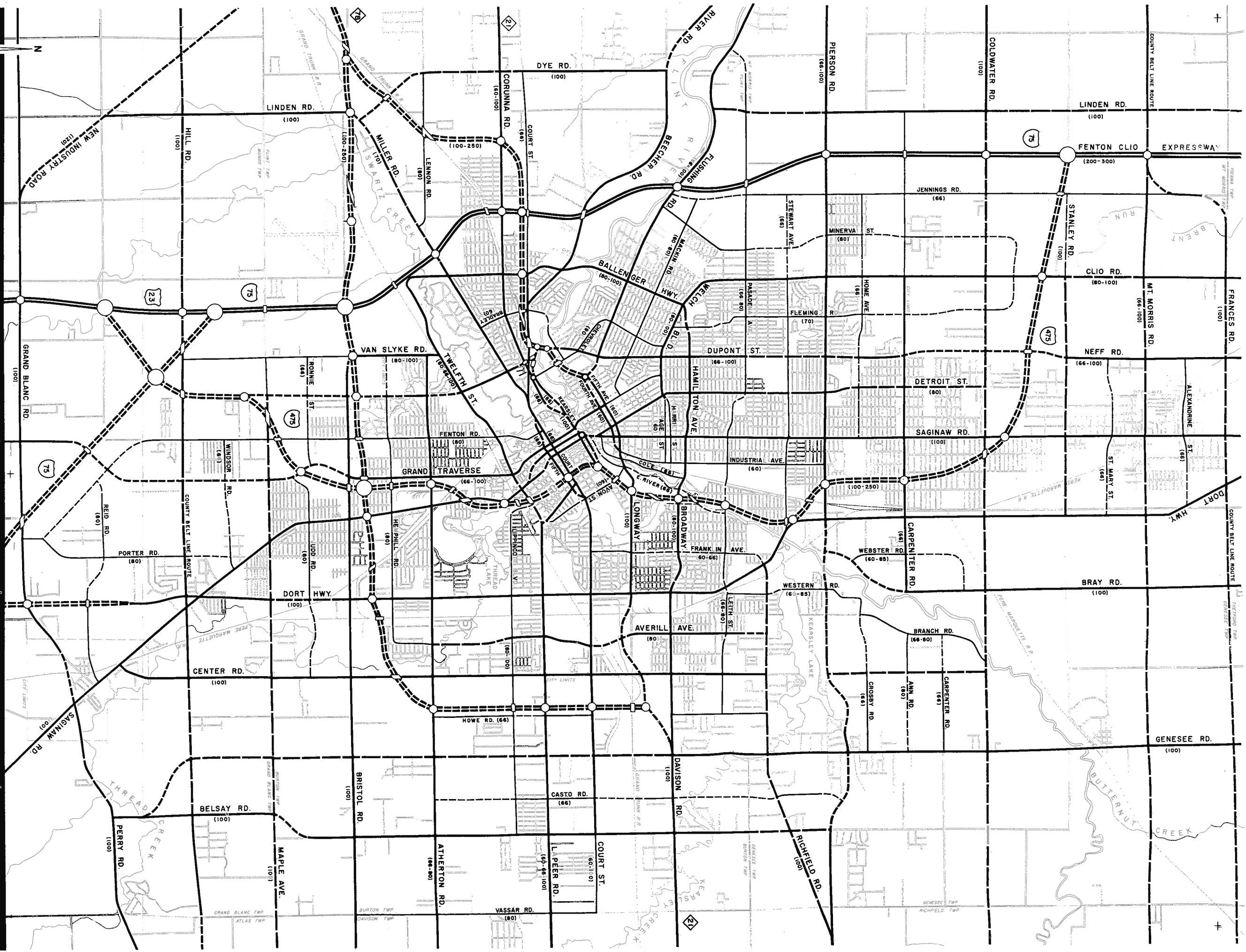
4 Diagram: Recommended Street Cross-Sections.

MAJOR STREETS

Trafficway	R i s k - o f - W a y			Proposed Pavement Width	Within City (all or part)	R e m a r k s
	Proposed Width	Adequate To be Widened	New			
<u>Limited Access Regional Routes</u>						
Interstate 75	200-300	X		24-24		N-S by-pass route with Flint connection via Interstate 475.
Interstate 475	100-250		X	36-36 (24-24) 24-24	X	N-S local route on Interstate system. Connection between Interstate 75 in Flint and Toledo and Ohio Turnpike
US-23	200-300	X		24-24	X	E-W regional by-pass to the south and east of Flint.
M-78-21	100-250		X	24-24	X	E-W local route to downtown; connection with Fourth-Fifth Ave. crossroad.
M-78-21BR	100-250		X	24-24	X	
<u>Other Regional Routes</u>						
Dort Highway	100		X	36-36	X	Principal N-S route serving east side; to be widened between Bristol Rd. - Maple Avenue.
<u>Primary Thoroughfares</u>						
Asherton	80	X		24-24	X	A principal southern crossroad.
Averill	80	X	X	44	X	To be improved as Dort Highway relief route.
Bellanger-Clio	80-100	X		44	X	Principal north-south primary on west side.
Belaey	100		X	44		Easternmost north-south primary to be improved in part.
Bray	100		X	44	X	Proposed to extend southward from Carpenter Road to proposed extension of Pierson Road.
Bristol	100	X		24-24		Principal east-west route in southern section.
Carpenter	66	X		44	X	
Center	100	X		44	X	
Coldwater	100		X	44		Principal east-west route through northern part of the urban area; proposed to be widened where necessary; includes new bridge over Flint River.
Coruna	60-100	X		44	X	
Court (E)	60-100	X		44	X	Principal crossroad connection through center of community.
Court-Fifth Crossroad	66		X	44	X	Proposed one-way pair (crossroad).
Detroit	80		X	44	X	
Duport-Neff- Hammerberg	100		X	24-24	X	New continuous north-south route through western sectors.
Dye	100		X	44		
Elms (not shown)	100			24-24		Western leg of the County's belt line around the urban service area (not shown on map).
Fourth-Fifth Ave. Crossroad	60		X	44	X	Proposed one-way pair north of downtown.
Flushing	60-66	X		44	X	Proposed to connect with Fourth-Fifth Avenue Crossroad.
Frances	100		X	24-24		To be widened, with connection via Jennings with Interstate 75.
Genesee	100		X	44		Principal north-south primary through eastern sectors.
Grand Blanc-Perry	100		X	44		Proposed widening of Perry and new connection with Grand Blanc.
Grand Traverse	100		X	44	X	Proposed to be extended southward to Interstate 75 and beyond.
Hamilton-Broadway	80-100		X	44	X	A principal crossroad primary, with connections east and west at Dort and at Welch.
Hill	100		X	24-24		
Irish (not shown)	100			24-24		Eastern leg of County Belt Line route around urban service area.
Jennings	80		X	44		Proposed to be extended from Pasadena south to Flushing Road.
Kearsley, Kearsley - Second, Kearsley - Union Linden	100 66 66 100		X X X X	36-36 44 44 44	X	New connections to provide one-way pairs; part of M-78-21BR complex. County primary in southwest.
Maple	100		X	44		To be widened east from proposed Hammerberg extension and connection.
Longway-Davison	100		X	36-36	X	To be connected on new r-o-w from Dort to Genesee; eastern leg, Fourth-Fifth Avenue Crossroad.
Miller	70		X	48		To be widened and extended between Interstate 75 and proposed M-78-21.

Major Streets cont.

Mt. Morris	66-100		X	44		
New Industry Rd.	120		X	36-36 24-24		New road through proposed industrial district to southwest.
Pierson	66-100			44	X	To be extended east of Dort Hwy.; connection between Interstate Routes 75 and 475.
Richfield	100		X	44	X	
Saginaw-Church Beach-Saginaw	99 66			36-36 44	X	Principal primary through central area; one-way pair in part skirting retail core to west; connections with Interstate 75 and M-78-21.
Stanley	100		X	44		
Twelfth-Lapeer	100 60-66 80-100			44 44 24-24	X	E-W cross-town; to be widened between Grand Traverse and Avon.
Van Slyke	80-100	X		24-24		
Welch	80-100	X		24-24		
<u>Secondary Thoroughfare</u>						
Alexandrine	66		X	40		To be extended east to connect with Dort Highway.
Ann	80		X	40		To be extended east to connect with Genesee Road.
Avon	60		X	44	X	Improved connection between Lapeer and Longway.
Bradley	60	X		40	X	Improved connection between Court and Sunset.
Branch	66-80	X		44	X	
Carpenter	60	X		40		
Casto	66		X	40		To be extended and connected between Atherton and Pierson Road.
Chevrolet	90	X		21-21		
Cole	66	X		44		
Court (W)	66	X		40		
East River (E Blvd.)	66		X	44	X	New connection along east side Flint River between Saginaw and Leith.
Renton	80		X	44	X	Extension south of Hill Road to Porter Road.
Fleming	70		X	40	X	
Franklin	60-66		X	44	X	
Hariet-Page	60	X		33	X	Proposed one-way pair.
Hemphill	80		X	44	X	To be extended west to Van Slyke.
Home	66		X	40	X	To be widened and extended between Jennings and Saginaw Roads.
Howe	66		X	40		To be connected between Ilypincott and Lapeer.
Industrial	60	X		40	X	
Judd	80		X	40		To be extended east and west between Grand Traverse extension and Center Road.
Lennon	80	X		40		
Ilypincott	66-80-100	X		44	X	
Mackin.	60-80	X		40		
Minerva	80			40		Proposed extension and connection in northwest sector.
Pasadena-Leith	66-80		X	44	X	Proposed connections to provide continuous east-west cross-town.
Porter	80		X	40		
Reid	80		X	40		
Rommel	66		X	40		
St. Mary	66		X	40		
Stewart	66		X	44	X	
Van Slyke	100			44		Industrial secondary serving Van Slyke plant area.
Vassar	80	X		40		
Western	60-85		X	40	X	
Windsor	66		X	40		



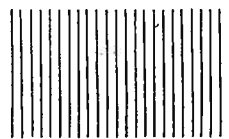
**COMPREHENSIVE
MASTER PLAN**

**MAJOR STREET PLAN
FLINT MICHIGAN AND ENVIRONS**

CITY OF FLINT - MICHIGAN
FLINT PLANNING COMMISSION
1960
FT. 0 2000 4000 6000 8000 10000
M. 0 1/4 1/2 2

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CITY PLANNERS - CONSULTING ENGINEERS
CINCINNATI - OHIO FLINT - MICHIGAN

- PRESENT R.O.W. TO BE ADQUATE
- R.O.W. TO BE WIDENED
- NEW R.O.W. TO BE OPENED
- LIMITED ACCESS ROUTE
- PRIMARY THOROUGHFARE
- SECONDARY THOROUGHFARE
- RECOMMENDED RIGHT-OF-WAY WIDTH
- GRADE SEPARATION
- INTERCHANGE ON LIMITED ACCESS ROUTE
- INTERCHANGE AT GRADE



LIMITED ACCESS ROUTE	PRIMARY THOROUGHFARE	PARKWAY	SECONDARY THOROUGHFARE	LOCAL STREET (COLLECTOR STREET)	MINOR STREET	RIGHT-OF-WAY WIDTH	
●						200-300 FEET	
●						100-250 FEET	
●	●	●				100-120 FEET	
●	●					100 FEET	
●						80 FEET	
●						60-66 FEET	
			●			80 FEET	
			●			60-66 FEET	
				●	●	50-66 FEET	


COMPREHENSIVE MASTER PLAN
 CITY OF FLINT MICHIGAN
 FLINT PLANNING COMMISSION
 1959
 LADISLAS SEGOE & ASSOCIATES
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RECOMMENDED STREET CROSS-SECTIONS



The appropriate cross-section for a given street is conditioned by the amount of traffic anticipated, which establishes the number of lanes required; the standard widths for traffic lanes, for moving lanes and for parking lanes, where parking is to be permitted; the present and desirable future use of abutting properties; and, finally, provision for sidewalk space, including parkway strips between sidewalks and curbs for the planting of trees and other landscaping, and central dividing strips (medians) where such appear necessary or desirable. Essentially, overall pavement width derives from standard traffic lane widths. In arriving at the recommendations herein, multiples of contemporary standards of lane width were used - from eight or nine feet for parking lanes, to 10 to 12 feet for traffic lanes.

A pavement width of 26 feet is usually sufficient on residential streets serving exclusively the properties abutting thereon.¹ A width of 26 to 36 feet for collector streets of relatively minor traffic importance is considered adequate. Wider pavements than these must be provided on the more important traffic arteries as multiples of standard lane width.

Odd numbers of lanes are undesirable, except on one-way traffic streets or minor residential streets. On two-way streets, there is a dangerous tendency for vehicles traveling in opposite directions to contest the use of a center lane. If an odd width of pavement should prove necessary, parking should be limited to one side of the street if this is to be two-way, thus leaving open an even number of lanes for moving vehicles.

Sidewalks in residential sections generally should be five feet in width - although in the case of minor streets or service roads, four-foot sidewalks would suffice where these are separated from the curb by a planting strip. Where it is necessary for the sidewalk to be placed adjacent to the curb, a width of six feet is a desirable minimum. Sidewalks in business district, wherever possible, should be not less than eight and desirably not less than 10 feet in width.

The ultimate improvement for Flint's limited access routes generally involves two 36-foot roadways and a median strip. The intermediate cross-section of two 24-foot roadways, which may serve for some years to come, may be built in stages, with a single roadway placed so as to fit into the ultimate section.

An attempt should be made, over the years, to secure 80 or 100 feet of right-of-way for each primary thoroughfare. If this cannot be accomplished initially, mapped street lines can be established on the basis of a future 100-foot right-of-way, toward its eventual accomplishment. The desirable right-of-way width for secondary thoroughfares is 80 feet. Local and minor streets can be developed on a 50 or 60-foot right-of-way, but 60 and 66 feet are preferable. Certain primary or secondary thoroughfares - such as those adjacent to or traversing park areas or especially attractive residential areas - may be desig-

¹ Flint's Department of Public Works has established the 26-foot width as its basic working minimum for this type of street.

nated as parkways¹ - limited to use by passenger vehicles and treated specially by appropriate planting of the medians or the wider than usual parkway strips between the roadway and walks. Appropriate pavement widths for primary and secondary thoroughfares, also on residential streets, are indicated in the diagram.

Street Details

The general locations of the various highways and thoroughfares necessary to provide Flint and environs with an adequate network of trafficways are shown on the Major Street Plan. The nature of each improvement - whether widening, extension, connection, or new facility - also is indicated on the Plan. However, in certain cases, the proposed improvements warrant further explanation. These include strategic downtown street improvements² and various extensions, connections and new routes in generally built-up areas elsewhere in the city.

The accompanying details, discussed briefly in the following, are not intended to portray precised alignments nor should they be construed as illustrating proposed improvements based on engineering design. They merely illustrate methods of accomplishing the indicated purposes with a practicable minimum of property damage. These should be reviewed and restudied in the development of precise mapped improvement plats establishing right-of-way lines preparatory to acquiring the properties needed to accomplish the improvements.

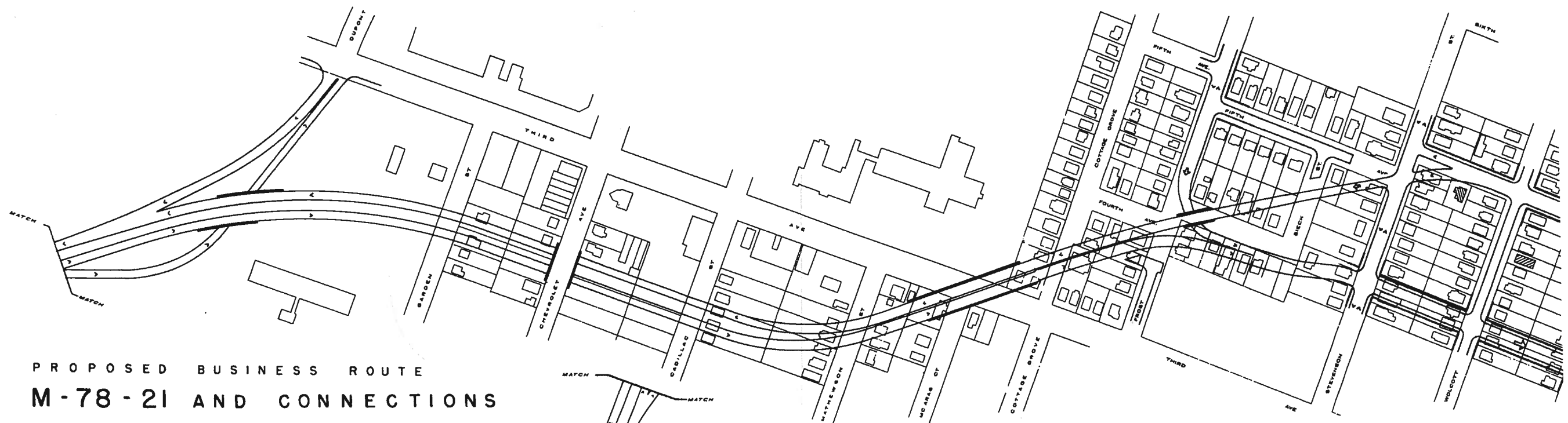
M-78-21-BR

This improvement, of limited access design, is the in-town or internal segment of M-78-21 from the southwest to the center of the community. It, together with the proposed Fourth-Fifth Avenue crosstown, discussed later, and the longer range Longway-Davison improvement would satisfy the need for a major east-west facility through the northern part of the central business district, linking with streets in the central area. Features are based on 24-foot divided roadways on variable right-of-way, with access from abutting property prohibited and connections with existing streets confined to major thoroughfares. As envisioned, coming from the west the facility would be depressed, underpassing Bradley Avenue and Court Street as it swings north across the river. Some shifting of the Grand Trunk tracks would be called for east of Bradley for a distance of about one-half mile. Interchanges would be provided with I-75 and Ballenger Road,³ and a system of on and off-ramps would link traffic both with the proposed Kearsley-Second improvement and the central business district, and with Dupont Street and Hammerberg Avenue via Pershing Street. North of Flint River, the highway would parallel Third Avenue, in part, underpass Chevrolet Avenue and swing northward over Third Avenue to connect with the proposed one-way pair of Fourth and Fifth Avenues at Stevenson Street - necessitating the opening of Fourth Avenue between Stevenson and Begole.

¹ See diagram: Recommended Street Cross-Sections.

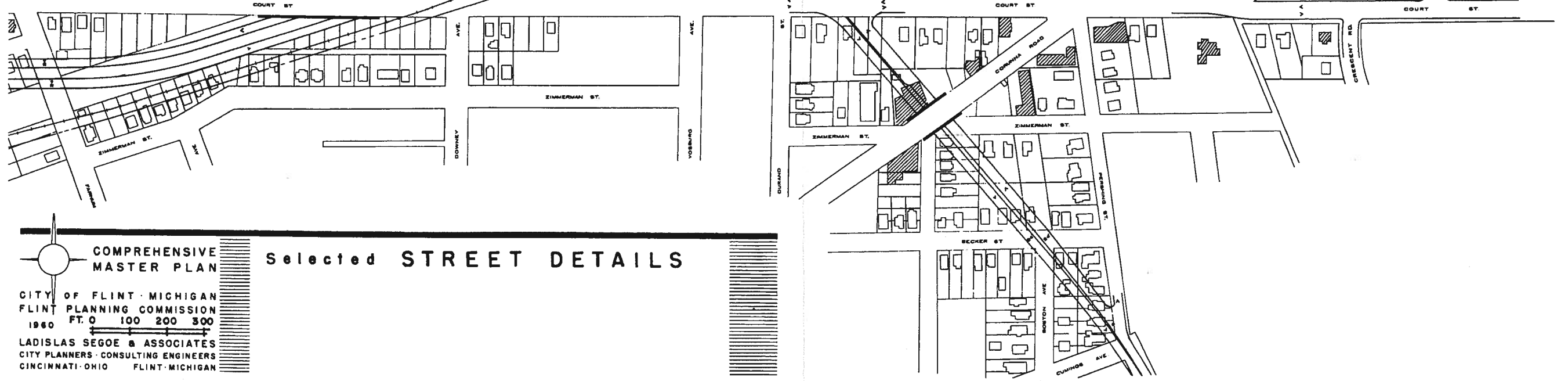
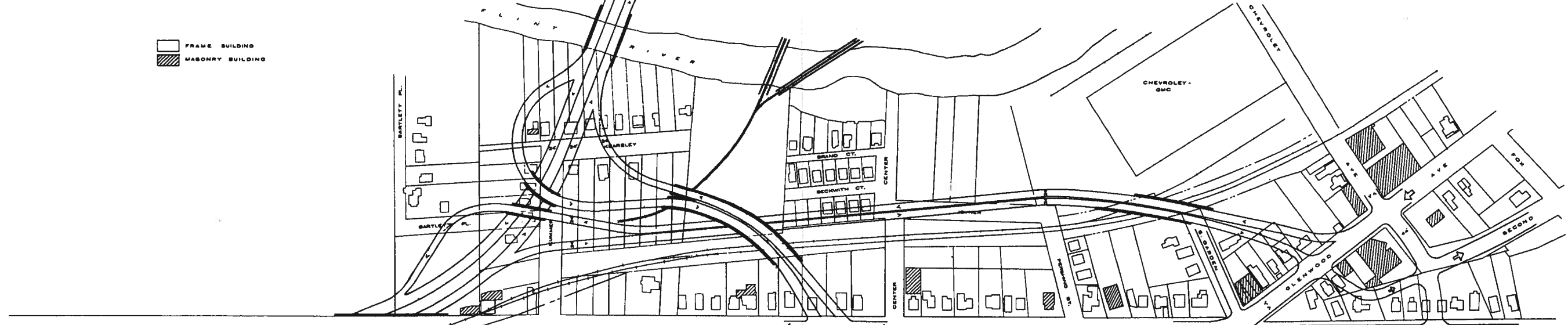
² See section on Central Business District.


³ Map: Major Street Plan.



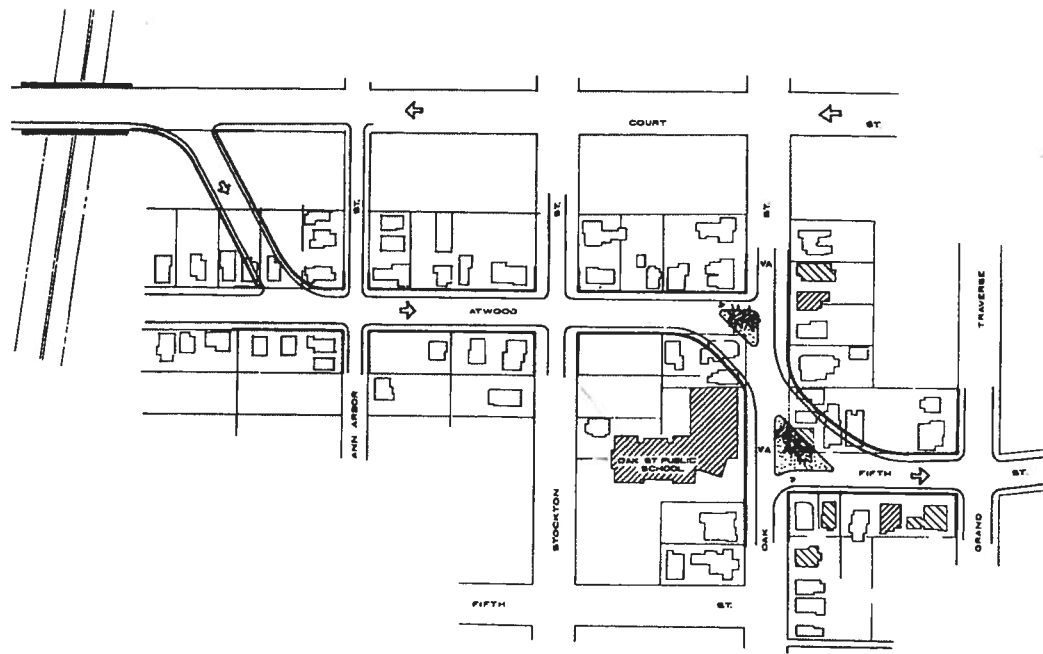
PROPOSED BUSINESS ROUTE
M-78-21 AND CONNECTIONS

□ FRAME BUILDING
▨ MASONRY BUILDING

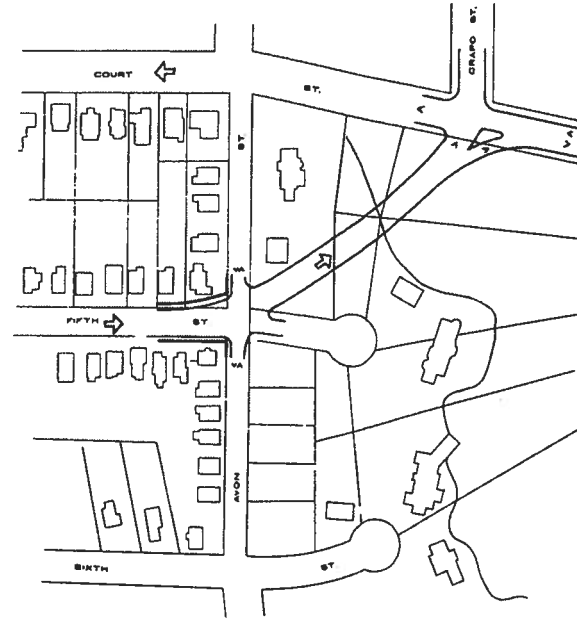



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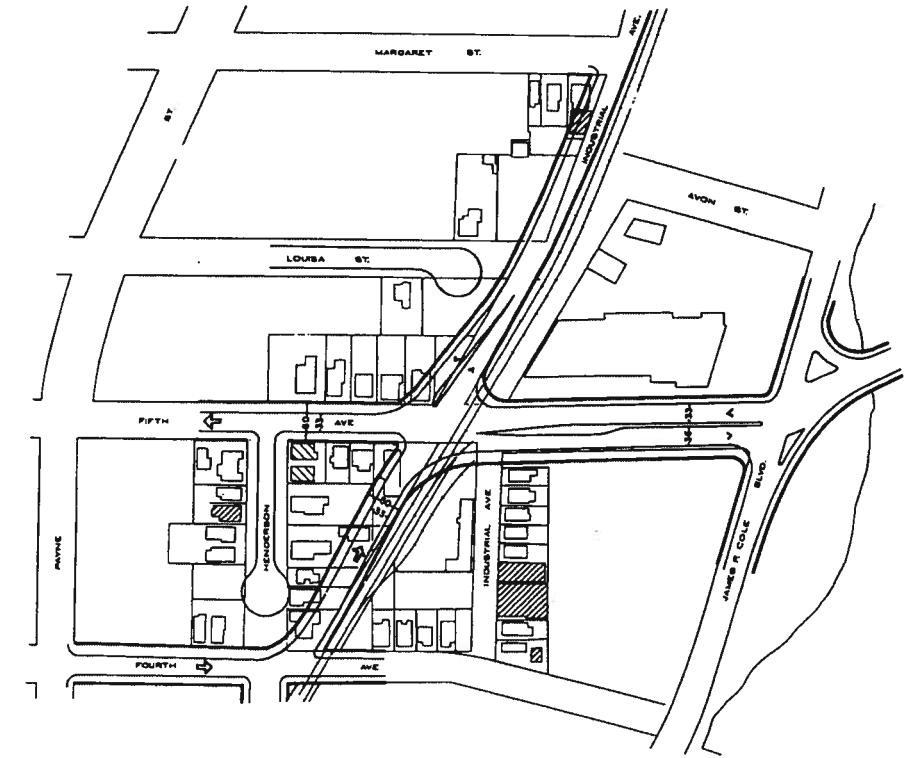
Selected STREET DETAILS



COURT - FIFTH STREETS - WEST



COURT - FIFTH STREETS - EAST

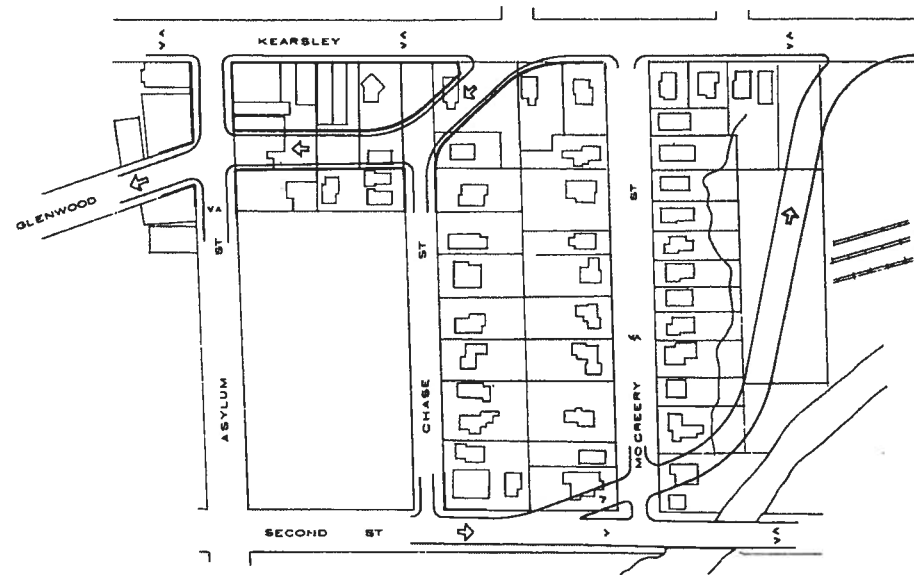


FOURTH - FIFTH AVENUES

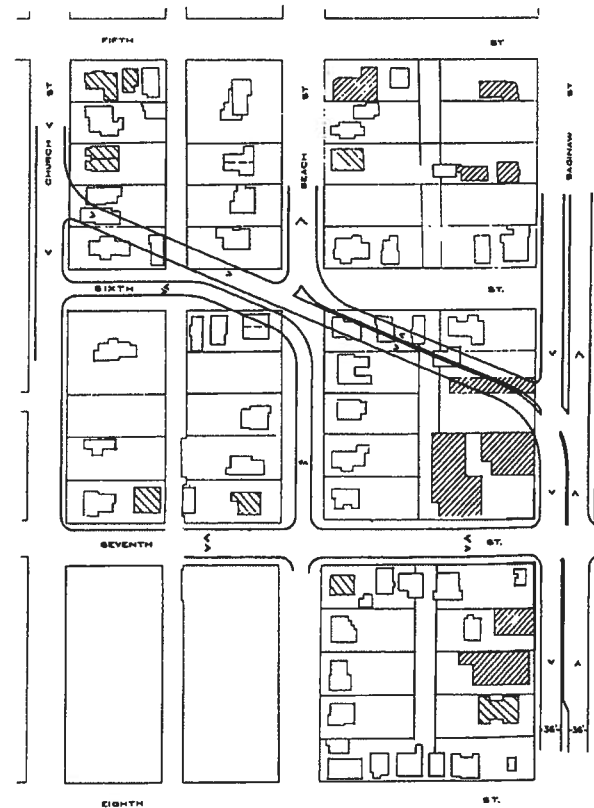
CITY OF FLINT MICHIGAN
FLINT PLANNING COMMISSION

1960 FEET 0 100 200 300 400 500 600

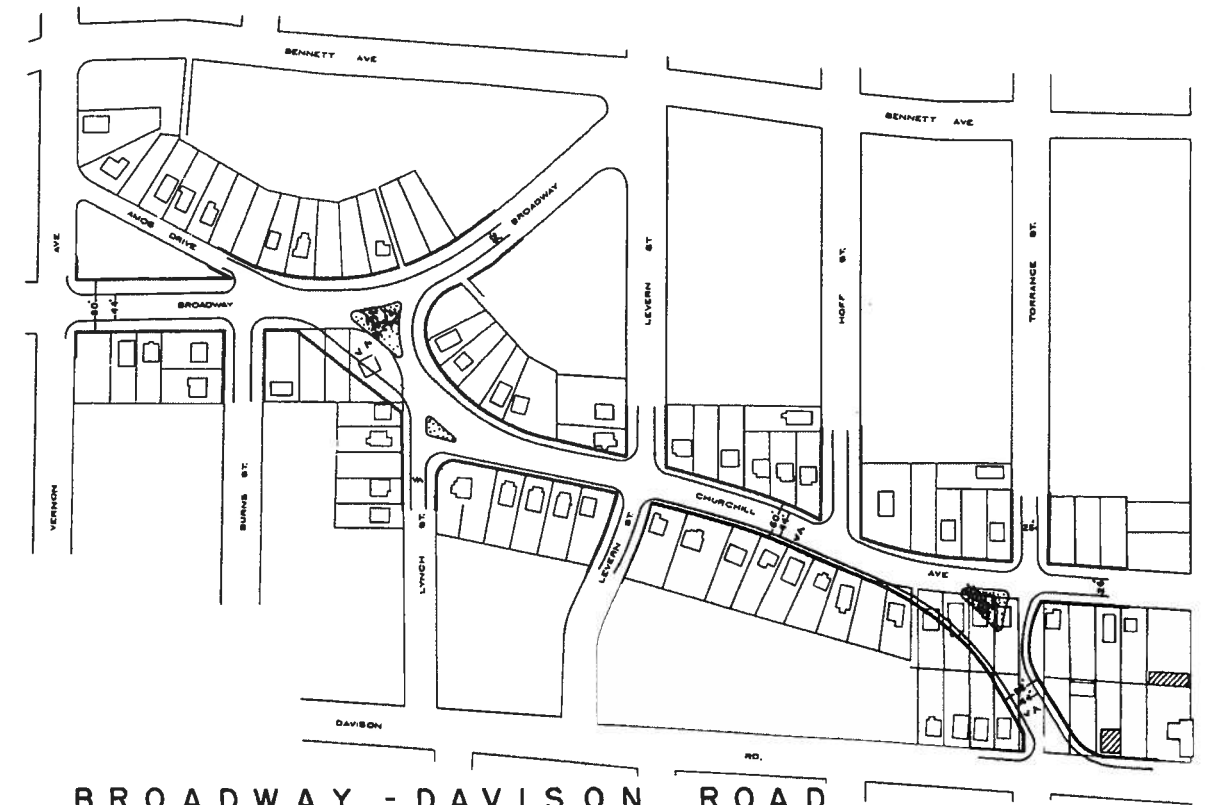
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SECOND - KEARSLEY STREETS



CHURCH - BEACH - SAGINAW STREETS



BROADWAY - DAVISON ROAD

Kearsley-Second Streets

An important link between the central business district and the above described improvement is the extension and connection of Glenwood Avenue at Asylum Street with Kearsley, and a new connection along the west side of Swartz Creek, tying Kearsley and Second together. Such improvement would permit the one-way operation east and west respectively of Second and Glenwood and facilitate greatly traffic movements between M-78-21BR, the western sector of Flint and the downtown area.

Church-Beach-Saginaw Streets

This scheme, an alternate to that indicated elsewhere,¹ proposes the one-way operation of Beach and Church north and south respectively via a new connection with Saginaw just north of Seventh Street. Saginaw also would be improved in the area by the addition of a center divider to facilitate both through movements and turning movements.

Broadway-Davison Road

A part of the Hamilton-Broadway crosstown primary, the improvement proposed for this section is between Vernon Avenue and Dort Highway, consisting of a widened and improved intersection at Churchill and Broadway and an improved connection of Churchill with Davison at Torrance Street.

Court-Fifth Streets - East and West

To provide for the proposed one-way operation of Court and Fifth Streets, a number of improvements are indicated. At the western end, these include connections between Court, Atwood and Fifth. At its eastern end, Fifth Street is proposed to be extended to connect with Court at Crapo Street. One-way operation would be eastbound on Fifth and westbound on Court.

Fourth-Fifth Avenue Crosstown

In addition to the westward extension of Fourth Avenue (see detail of M-78-21BR), the eastern end of this proposed one-way pair is proposed to be connected along the westerly side of the C&O tracks. The intersection of Industrial Avenue with Fifth would be improved and Industrial widened northward. Between the railroad and Cole Boulevard Fifth Street would be widened and channelized to provide two moving lanes plus a holding lane eastbound and three moving lanes westbound.

¹ Map: Major Street Plan.

Carrying Out the Major Street Plan

The best method for carrying out the various improvements under the Plan will depend upon conditions existing in each case - the urgency of the improvement, the presence or absence of buildings, the stage, quality and intensity of building development, the extent of special or local benefits which may accrue, and the availability of local funds and of financial assistance by the state or federal governments.

In undeveloped areas, the right-of-ways for recommended new thoroughfares and extensions can and should be obtained, as a rule, by the control of subdivision layouts. In some cases the widening of existing thoroughfares or the provision of new streets may be obtained also by subdivision control or by dedication. Thus, much of the land needed for major streets and highways in undeveloped or partially developed areas can be secured by the community without cost. Where the need is pressing, however, the required right-of-way may have to be purchased in advance of subdivision development.

Purchase or condemnation will likely be necessary through areas previously platted. Where the needed right-of-way is as yet free of buildings, this should be acquired without delay, or protected from building encroachment by means of mapped improvement plats.

In newer residential areas, necessary widenings usually will result in small building damages - since present building set-backs often will permit them without serious effect on property. In older sections, however, particularly along business streets, such widenings could be more costly, although it may be assumed that many present business buildings are substantially amortized. In order to carry out necessary street widenings without excessive public expenditures, building set-back lines should be established under the mapped improvements statute many years in advance of the actual street widening, so that new buildings may be required to keep back of such lines as the older structures gradually are replaced. As a part of the necessary legal procedure, precise plats would have to be prepared for each route and certified by the Planning Commission to the City Commission for adoption by ordinance - thereby to establish the precise and official locations of the new street right-of-way lines, including future widenings and connections or extensions. After adoption of these official plats, new buildings or additions to buildings within the city would be required to observe the mapped street lines, subject to relief by the Board of Appeals in cases of hardship.

While the majority of the thoroughfare improvements can be carried out gradually as the need arises, certain of those should be completed as soon as possible, in order to relieve the most critical traffic situations on existing streets. In general, the logical method of carrying out the Major Street Plan is to set up a program of priorities for construction - based on the order of urgency of each project in respect to traffic relief, its effect on the desirable development of the city, and available or potential finances. A suggested order of priority for proposed thoroughfare and highway improvements within the city is presented elsewhere.¹

¹See Public Improvements Program published separately.

PARKING FACILITIES

Parking Generation

A community's parking generation is closely related to its traffic generation; parking and traffic are influenced by the same local factors. Based on trip origin and destination data, about one-half of Flint's parking demand is for space at dwelling units in its residential areas. With most of Flint's residences single-family dwelling units, this demand is dispersed over a large land area. In contrast, Flint's major and minor parking generators tend to concentrate parking demand on relatively limited land areas. These generators are the principal destination of the community's work, shopping and business trips, and many of its social-recreational trips as well.

Residential Parking

Residential parking demand is generated by individual dwelling units, and, as such, is directly related to vehicle ownership ratios. In 1950, Flint and Metropolitan Area vehicle-per-dwelling-unit ratios were among the highest in the nation. From 1950 to 1957, Flint's vehicle-per-dwelling unit ratio increased by 13.8 per cent. This unusually high ratio of vehicles to dwelling units creates an exceptional demand for parking space in Flint's residential areas.

Off-street parking usually is provided in new residential subdivisions, thus relieving parking demand at the curb. In the block-fronts of most new residential areas, curb space usage usually can be attributed to visitor parking or parking for temporary convenience. In older residential areas, driveways, garages, and other off-street parking facilities often have been added. Where this has been done for most of the dwelling units in the area, little street parking congestion results. In many older areas, however, narrowness of residential lots and other factors make the provision of off-street parking difficult. In these areas, excessive curb parking becomes a chronic traffic hazard, pre-empting street width needed for traffic movement and tending to create a debilitating effect on the neighborhood.

Industrial and Commercial Parking

Parking demand is concentrated, to a greater or lesser degree, wherever industrial or commercial land uses occur in the urbanized area. In some cases, this demand is satisfied by off-street parking facilities, planned as an integral part of the development (e.g., North Flint Plaza). In others, off-street facilities have been provided as parking demand has increased (e.g., the downtown commercial area, the Buick Motor plant). Still others (e.g., commercial strips along major thoroughfares) depend principally on curb spaces to satisfy the parking demand.

In Flint's long strips of commercial land use - up to six miles in length - curb spaces supply a large proportion of available parking. Areas of so-called "off-street parking" often have been so located that excessive maneuvering must be done on the trafficway. In some of the strip-commercial areas, during periods of peak demand, trafficways almost cease to function for their principal purpose -

i.e., the efficient movement of vehicles. Where well-designed off-street parking facilities have been provided, the confusion in trafficway usage is greatly reduced.

There are eight major traffic generators in the urbanized area - seven General Motors manufacturing plant areas and the downtown commercial area.¹ The manufacturing plants comprise: Ternstedt Division; Buick Motor Division and the AC Spark Plug Division plant on Industrial Avenue; AC Spark Plug Division on Dort Highway; Chevrolet Division Flint Manufacturing; Chevrolet Division Flint V-8 Engine, Frame and Stamping, and Assembly, and Fisher Body Division No. 2 on Van Slyke Road; Fisher Body Division No. 1; Fisher Body Division at Grand Blanc. Like Flint's traffic demand pattern, the community's major parking generation occurs in a generally north-south alignment. The principal exceptions to this alignment are the Chevrolet plants and Fisher Body No. 2 at Van Slyke Road, and AC Spark Plug Division at Dort Highway.

With the great bulk of its concentrated parking demand occurring in these eight areas, 11 additional commercial areas can be considered minor parking generators. These business centers are located throughout the city, with the greater number located in the northwest sector.¹ Three of these centers (North and South Flint Plaza, and Northwest Center) were built as planned shopping centers with integrated off-street parking, and a fourth (Saginaw-Bristol) may, for purposes of this study, be grouped with these. The other nucleated centers depend on curb spaces for a large proportion of their parking, but most have provided some planned off-street facilities.

Parking Generation in the Downtown Area

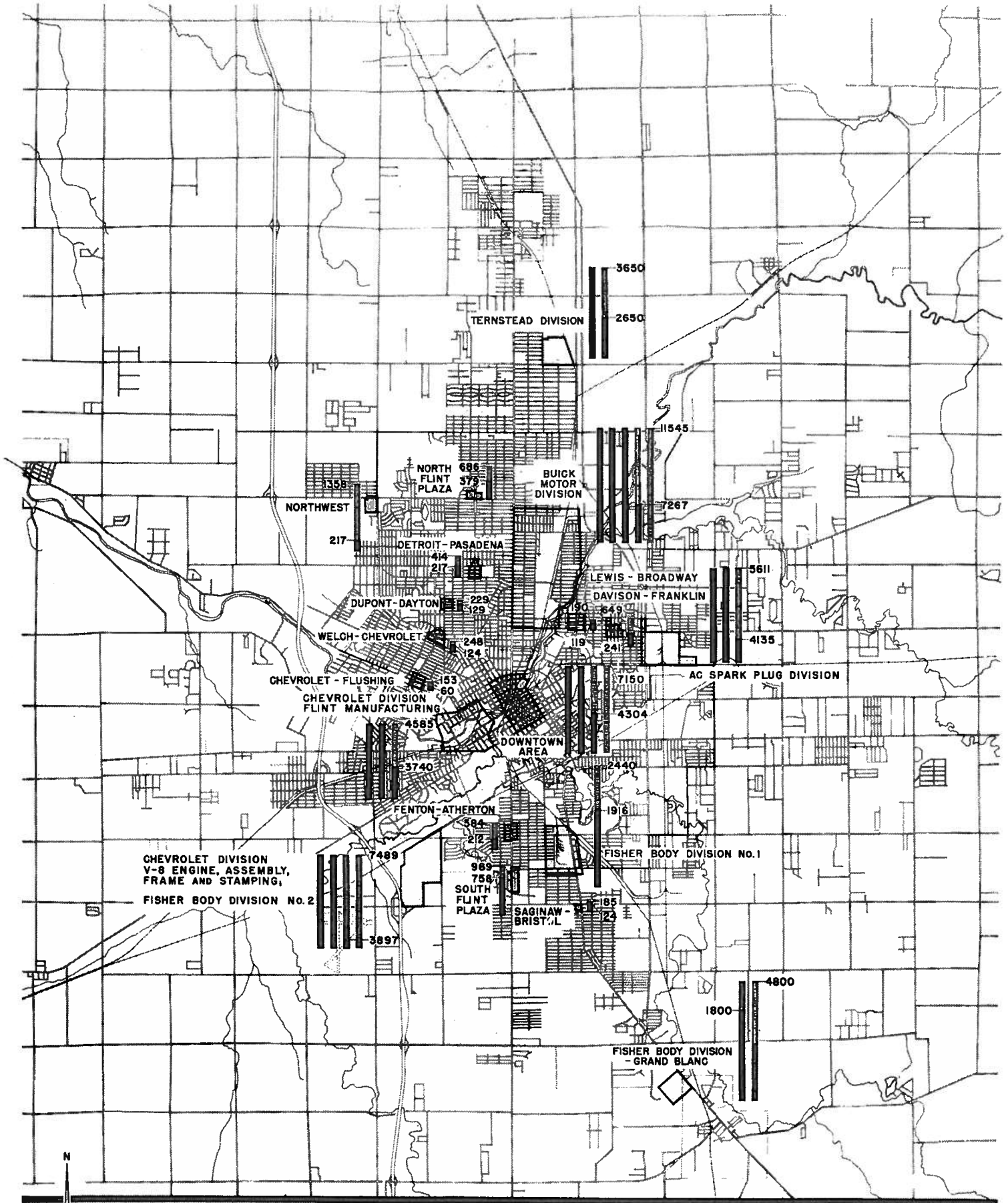
Inventory

In Flint's four-tenths square mile downtown area, 7,150 spaces are available for general parking - in addition to curb loading zones and private and employee parking lots.² The 7,150 spaces represent "theoretical capacity," as experience indicates that part of this capacity is always absorbed through parking turnover, maneuvering for parking, and the like. Even with heavy parking demand, parking accumulation seldom exceeds 85 per cent use of the theoretical capacity. "Practical capacity" downtown thus is about 6,100 spaces.

The 1,044 curb spaces make up 14.6 per cent of the total downtown parking generally available - compared with an average of 30 per cent in eight cities of Flint's population size. This curb supply is 12.6 per cent less than the 1,194 curb spaces available in 1955, whereas the off-street supply is up 30.8 per cent - from 4,667 spaces in 1955 to 6,106 in 1958.

¹ Map: Flint Area Parking Inventory and Accumulation.

² Map: Downtown Parking Inventory and Accumulation.



**COMPREHENSIVE
MASTER PLAN**

CITY OF FLINT · MICHIGAN
FLINT PLANNING COMMISSION

1959



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FLINT AREA

PARKING INVENTORY AND ACCUMULATION

19 SURVEY AREAS IN THE FLINT URBANIZED AREA



SURVEY AREA WITH
COMMERCIAL LAND USE



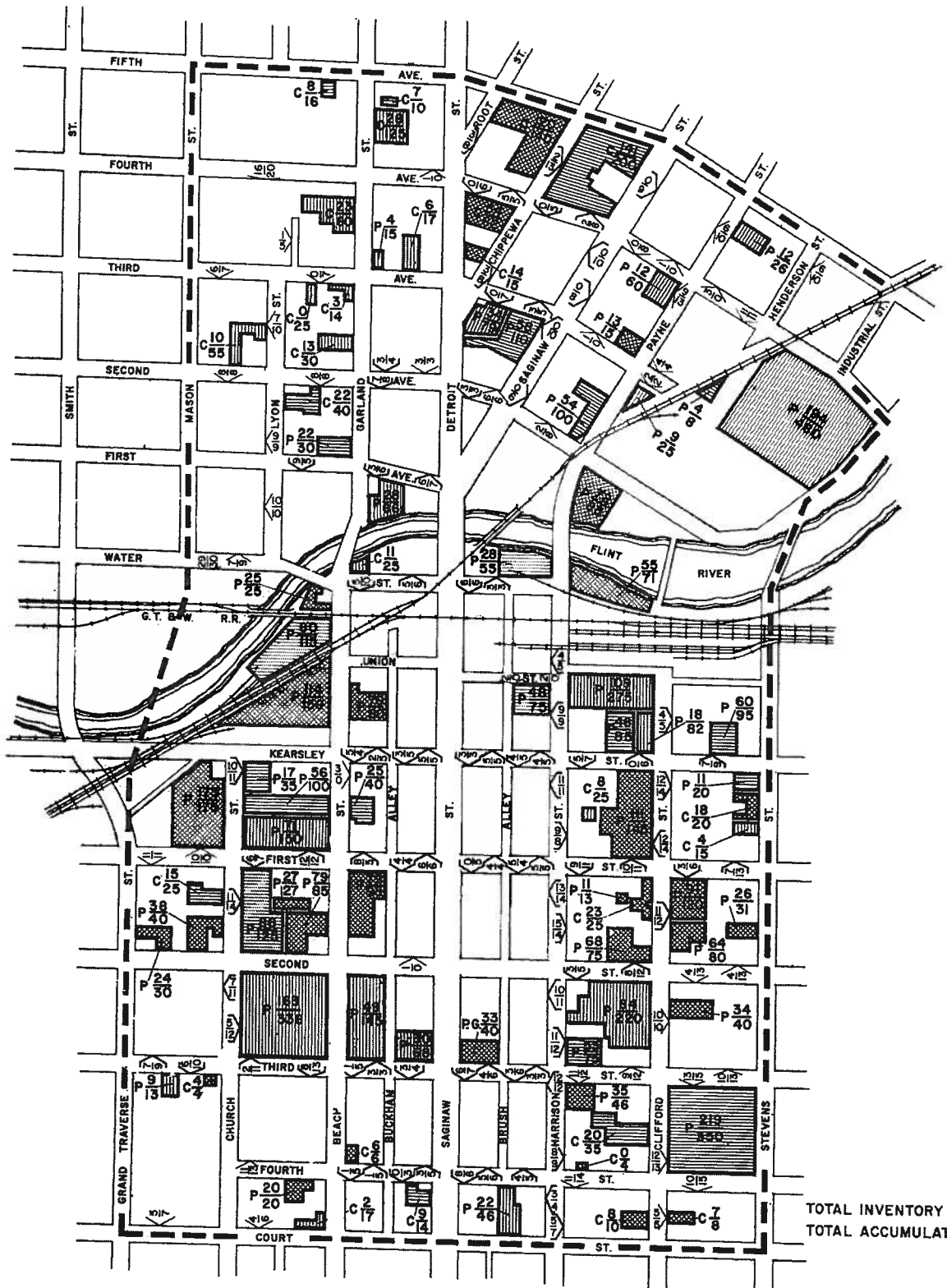
SURVEY AREA WITH
INDUSTRIAL LAND USE



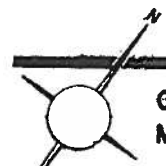
811 INVENTORY
(TOTAL SPACES)



305 ACCUMULATION
(SPACES IN USE)



TOTAL INVENTORY - 7150
 TOTAL ACCUMULATION - 4304



**COMPREHENSIVE
 MASTER PLAN**

CITY OF FLINT · MICHIGAN
 FLINT PLANNING COMMISSION

1 8 9 FT.: 0 200 400 600

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DOWNTOWN PARKING INVENTORY AND ACCUMULATION
 DOWNTOWN FLINT SURVEY AREA

— BOUNDARY OF SURVEY AREA
 OFF-STREET FACILITY TYPE
 P = PUBLIC LOT
 C = CUSTOMER LOT
 P.G. = PUBLIC GARAGE
 P 20 ACCUMULATION (SPACES IN USE)
 P 35 INVENTORY (TOTAL SPACES)

OFF-STREET FACILITIES
 OVER 75% OCCUPANCY
 50 - 75% OCCUPANCY
 LESS THAN 50% OCCUPANCY

STREET SPACES
 METERED STREET SPACES
 NON-METERED STREET SPACES



DOWNTOWN PARKING
PHOTO-KENNETH G. WELCH



DOWNTOWN PARKING

PHOTO - KENNETH G. WELCH

Off-street spaces have been added in significant quantity east of Clifford Street, between Third and Fourth Streets; west of Saginaw Street between Second and Third Streets; at the northwest corner of Kearsley and Beach Streets; at the Harrison Street parking deck; east of Clifford Street between First and Second Streets; and at the southwest corner of Kearsley and Church Streets. At the I.M.A. auditorium, with the building of the new auditorium annex, nearly 500 spaces were moved one block north.

Most of Flint's downtown parking spaces are in public (i.e., commercial) parking lots, operated in private ownership under license from the City. These lots provide some 5,064 spaces - 82.8 per cent of the off-street parking and 70.8 per cent of all the downtown spaces available for general parking. Parking rates at these lots range from 10 cents per hour, up to 10 cents for the first half-hour, 15 cents for the first half-hour, and 25 cents for the first hour. The 1,042 customer spaces - relatively few of which are located in the area south of the Flint River - make up the remainder of the off-street parking available for general patronage.

Of Flint's downtown parking spaces in the aggregate, 67.5 per cent are located in the 150-acre area south of the Flint River. Here, most parking spaces are located in a 16-block area bounded by Union, Clifford, Third, and Church Streets.

Average Day Peak Accumulation

During an average day peak period, 4,304 vehicles occupy spaces available for general parking in Flint's downtown area, representing 60.2 per cent of all available spaces, or about 71 per cent of downtown's "practical capacity." Compared with the average city, Flint's downtown parking demand apparently is distributed similarly throughout the day and the week. The ratio of daily peak accumulation to daily average is 1.11, which is about four per cent lower than the derived ratio for cities of Flint's population size.

Parking space usage is distributed with some uniformity throughout the downtown area. However, considerable variation is revealed in detailed comparison of the use of curb and off-street spaces. Throughout the downtown area, usage of free curb space is 76.3 per cent - higher than the average for the area. Free curb spaces generally are located in areas less desirable for shopper parking - some distance from most retail establishments. Their high percentage use can be attributed to long-term parking by downtown workers.

Parking Turnover

Parking turnover apparently is heaviest at the center of the downtown area, becoming less as distance from the center increases. Within the four-block area centered on the intersection of Saginaw and First Streets, curb space turnover approximates nine during the 10-hour period between 8 a.m. and 6 p.m. In the remaining 12 blocks bounded by Union, Clifford, Third and Church Streets, curb space turnover is about 30 per cent lower - 6.5. Catering to a somewhat longer-term parking demand, Flint's off-street downtown facilities naturally have a lower rate of parking turnover.

Parking Generation in the Industrial Areas

In 1958, peak parking accumulation in the Buick plant area was 25 per cent higher than in 1953 (when previous parking studies were made) despite a peak shift employment decrease of 15 per cent. Since 1953, the Chevrolet Manufacturing area total peak parking accumulation increased over seven per cent, despite a peak shift employment decrease of 36 per cent. At Fisher Body Division No. 1, peak work day parking demand has decreased almost 23 per cent since 1953, resulting from a peak shift employment decrease of about 30 per cent. In 1953, studies indicated that parking problems had been solved at AC Spark Plug Division. Since then, employment on the peak shift has increased nearly 43 per cent.

Since 1953, company parking at Buick has been increased to 10,135 spaces, and total off-street capacity is 11,545 spaces.¹ Use of company lots has increased over 90 per cent, from about 58 per cent of all off-street parking in 1953 to the present 88 per cent. Use of public lots has decreased about 84 per cent and excessive curb space parking found in 1953 apparently has stopped with the increased availability of off-street facilities.

Company parking lot capacity at Chevrolet Manufacturing now totals 2,800 spaces, and the total off-street capacity is 4,585 spaces. Use of spaces in company lots has increased over 115 per cent since 1953, and during this same period use of public lots has decreased about 57 per cent, with only 25.2 per cent of off-street parking in these lots at the present time. Curb parking has decreased and the 1953 over-usage of curb spaces apparently has been relieved. In present off-street public parking facilities the use is about 53 per cent, with that in company lots 100 per cent.

Parking capacity at the Fisher Body Plant No. 1 now totals 2,440 spaces, with some 1,900 provided in company lots. Parking in company lots has decreased about 14 per cent, though proportionate use of company lots increased from 71.5 per cent of all off-street parking in 1953 to the present 79 per cent. Present use of company lots is about 79 per cent of capacity, while in public lots it is approximately 76 per cent.

The AC study area has increased its off-street parking capacity to some 5,600 spaces - 85 per cent in company lots and the remainder in public lots. With some 3,550 vehicles parked during the peak shift, company lots operate at 86 per cent of capacity, whereas use is lower in the public lots, about 70 per cent of capacity. There is little evidence of curb parking.

The Ternstedt Division study area has an off-street parking capacity of 3,650 spaces - all of these provided in company lots. Parking accumulation indicates that the parking lots operate at about 73 per cent of capacity. There is no significant amount of parking at curb spaces.

¹ Map: Flint Area Parking Inventory and Accumulation.

For the plants in the Chevrolet Division and Fisher Body Division area at Van Slyke Road, company lots comprise all available parking, with a total capacity of nearly 7,500 spaces, these operating during the peak shift at about 52 per cent of capacity.

For Fisher Body Division's plant at Grand Blanc all parking is provided in company lots, with a total capacity of 4,800 spaces. Indications are that these facilities are used only to about 38 per cent of capacity during the peak shift.

Parking Generation in the Neighborhood Business Centers

Availability of adequate free parking has become one of the major inducements to shop in outlying business centers. In planned shopping centers, parking is integrated initially with the retailing areas. In other successful neighborhood centers, parking often has been added in proportions comparable to that found in integrally-planned centers. Through day-to-day experience with parking demands, certain parking relationships have been derived to serve as a general guide toward the provision of adequate parking. These are codified in terms of: (a) parking area per retail floor area (the "parking ratio"); (b) parking spaces per 1,000 square feet of retail floor area (the "parking index").

The Community Builders' Council of the Urban Land Institute summarizes these derived relationships:¹

Over a long period of experimentation and experience with the operation of parking space in connection with shopping centers, the members of the Council recommend that a parking ratio of three square feet of parking area to one square foot of gross building area (a 3:1 ratio) be used. Where the amount of walk-in trade is expected to be relatively high because of adjacent multi-family development or relatively low-income groups, the ratio could be lowered to 2:1.

Another measure of parking area adequacy is the relationship between the number of parking spaces and each 1,000 square feet of floor area. A parking ratio of two square feet of parking area to one square foot of gross building area (a 2:1 ratio) translates into a parking index of 6.7 parking spaces (say 7) for each 1,000 square feet of building. A ratio of three square feet of parking area to one square foot of building area (a 3:1 ratio) translates into a parking index of 10 parking spaces per 1,000 square feet of building.

With the increased size of passenger vehicles, these proportions have changed somewhat in recent years. In calculating the off-street parking index, a 3:1 parking ratio now produces about nine parking spaces per 1,000 square feet of building, and a 2:1 ratio produces about six spaces.

¹ Urban Land Institute: Community Builders Handbook.

The foregoing parking proportions were calculated and are applicable to off-street parking facilities. The area relationships indicated are meant to include maneuvering aisles as well as actual parking spaces. In evaluating curb parking, where maneuvering to park is done on the street, parking ratio figures for off-street spaces would not apply; however, the parking index figures would remain the same in either case, with similar areas per space used in their derivation.

Retail Ground Floor Area

Flint's principal conventional business centers average 65,500 square feet in retail ground floor area - ranging from 25,000 square feet to 93,500 square feet. Of the seven centers, five exceed this average size. Flint's planned neighborhood business centers average somewhat larger - 114,000 square feet. Three of these centers (South Flint Plaza, Northwest Center, and North Flint Plaza) exceed in size the largest conventional neighborhood business center at Davison Road and Franklin Avenue, whereas the Saginaw-Bristol center is about two-thirds the size of the "average" conventional center.

Aside from Flint's central business district, its largest business center is South Flint Plaza, with 202,900 square feet of retail ground floor area. Of the planned neighborhood business centers, only one, North Flint Plaza, is located within the city limits. By contrast, all of the conventional neighborhood business centers surveyed are located inside the city.

Use of Parking Facilities

In Flint's conventional neighborhood business centers, peak parking averages 44 per cent. These seven centers now have over 2,500 spaces available, an average of 360. Use of parking spaces is highest proportionately in the Lewis Street-Broadway center, although even here peak use does not exceed two-thirds of the spaces available. Lowest proportionate use is in the Fenton-Atherton Road center, with about one-third of the spaces used during peak periods. As might be expected, from a consideration of relative floor areas, vehicles park in greatest numbers at the largest center - Davison Road-Franklin Avenue. However, a center of more average size ranks second in vehicles parked - the Detroit Street-Pasadena Avenue center, with a peak use of over 52 per cent. The Fenton-Atherton Road center, second largest in size, is third in parking volume.

Peak parking in the planned neighborhood business centers ranges from 16 per cent at the Northwest Center area to over 78 per cent in South Flint Plaza, with an average of 46 per cent. Northwest center, second largest of the four, has the largest number of spaces available. However, parking volume (as well as use of parking spaces) is highest at the largest center, South Flint Plaza.

Parking Index

In Flint's conventional neighborhood business centers, the average parking index is about equal to the standard recommended for centers of this type.

PARKING INDEX
Conventional Neighborhood Business Centers

<u>Average</u>	Parking Index
Davison Rd.-Franklin Ave.	5.5
Fenton Rd.-Atherton Rd.	6.9
Dupont St.-Dayton St.	6.5
Detroit St.-Pasadena Ave.	6.3
Chevrolet Ave.-Flushing Rd.	6.2
Welch Blvd.-Chevrolet Ave.	6.1
Lewis St.-Broadway	3.9
	2.7

The parking index is low at Welch Boulevard-Chevrolet Avenue and at Lewis Street - Broadway - at 3.9 and 2.7 respectively, about 35 per cent and 55 per cent lower than the recommended standard. Indices at the other centers range from 6.1 to 6.9 - above average for shopping areas of this type.

Of the planned business centers, only Northwest exceeds the recommended standard for shopping centers of this type - allowing for considerable future retail area

PARKING INDEX
Planned Neighborhood Business Centers

<u>Average</u>	Parking Index
Northwest Center	7.0
North Flint Plaza	11.4
South Flint Plaza	7.3
Saginaw-Bristol	4.8
	4.6

expansion. South Flint Plaza and the Saginaw-Bristol center have indices considerably lower than the 6.0 - 9.0 recommended. North Flint Plaza provides 7.3 spaces per 1,000 square feet. However, North Flint Plaza's parking is divided by Detroit

Street, with most of the center's stores located to the west of the street. In the immediate store area, the parking index is only 4.6.

Improved Parking Facilities

In order to formulate an adequate, comprehensive parking program for Flint, it is necessary to give consideration to facilities at both the origin and destination of automobile trips. For certain areas, such as the residential neighborhoods and major industrial concentrations, general consideration, only, is called for, as explained later. For others, such as the central business district and the outlying business centers, more detailed consideration is in order.

Residential Areas

Provision for parking in residential areas has for the most part been borne in mind in the layout of lots and the provision of adequate street right-of-ways and pavements in subdivisions platted in recent decades. However, in some of the older sections of Flint residential parking problems are found, for example: in areas with single-family homes on very small lots; or in sections where extensive conversion of larger homes to multi-family use has occurred and where little or no provision for off-street parking has been made. In certain of these sections, streets have proven to be inadequate to handle the parking load. Provision of off-street facilities on a block or neighborhood basis, and application of off-street parking regulations in the case of conversions and the

establishment of rooming houses should do much to remedy these deficiencies.

Non-Residential Areas

It is at non-residential destinations where the most serious parking problems exist. Each traffic generator, at least each major generator, desirably should be capable of absorbing its own share of the parking load, whether by voluntary effort or through application of off-street parking regulations.

Industrial Areas - In general, as indicated previously, parking for individual plants, at least the larger ones, has been satisfactorily provided for by the companies concerned. Supplementing company facilities in certain cases are commercial parking lots nearby. In cases where future demand necessitates expanding plant parking facilities, past experience indicates that the companies concerned will make every effort to increase the supply of spaces. In certain cases, if and when redevelopment occurs under an urban renewal program,¹ the City may prove to be of material assistance by acquiring land subject to sale to companies needing land - either for plant expansion or for parking - to the advantage of the City in eliminating substandard areas, gaining plant expansion and easing the parking problem, and of advantage to the companies, as well, in facilitating the acquisition of land through condemnation under the power of eminent domain, if need be, as against the companies having to acquire properties, parcel by parcel, on the open market.

Central Business District - The largest single generator of parking demand is the central business district. The parking requirements for this district, present and future, are covered in considerable detail elsewhere.²

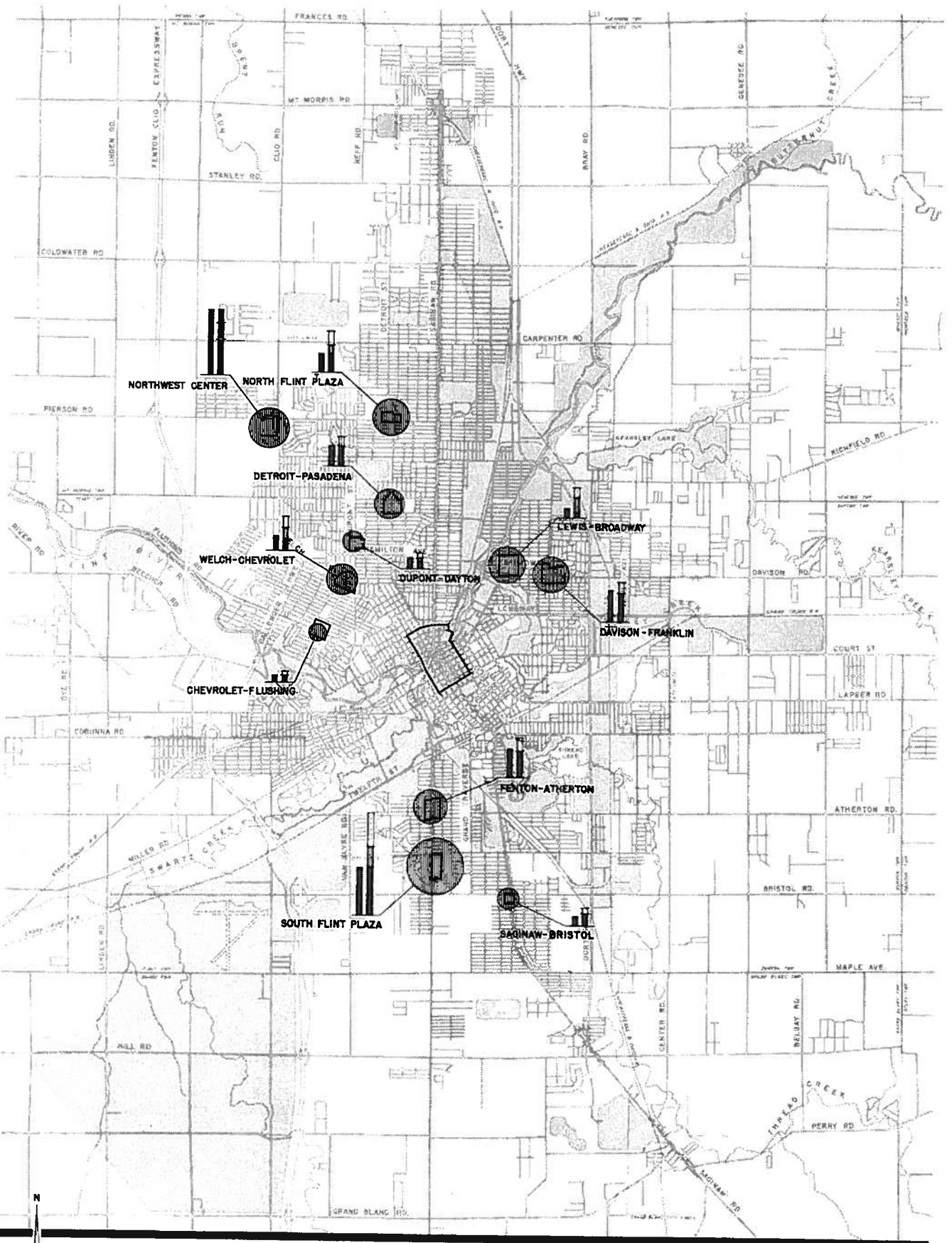
Secondary Business Centers - Next in importance to the industrial areas and the central business district are the secondary business centers - the seven conventional centers and the four planned centers, discussed previously. The relative ground area, floor area, as well as the situation in respect to present parking supply and prospective parking "requirements" of these centers are graphically depicted on the accompanying illustration.³ The improvement of certain streets on which the conventional centers abut and the possible need to eliminate street parking in favor of moving traffic in such cases or in the case of other streets on which these centers abut would occasion a reduction in the number of available parking spaces. In addition, at certain of the planned shopping centers, the supply of parking spaces is below current standards for such centers. It has been assumed, accordingly, that all of the secondary centers may find it necessary in time to extend their parking facilities to more nearly meet current standards.

Modern shopping center practice recognizes a "parking ratio" of about three square feet of parking for each square foot of floor area (3:1) against an earlier standard of 2:1. The "parking ratio" commonly is translated into the "parking index" - namely, the number of parking spaces divided by the retail floor area in units of 1,000 square feet, or, in other words; the number of

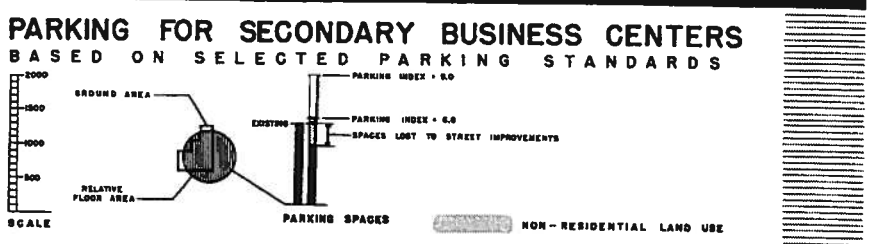
¹ See section on Housing and Urban Renewal.

² See section on Central Business District.

³ Map: Parking for Secondary Business Centers.

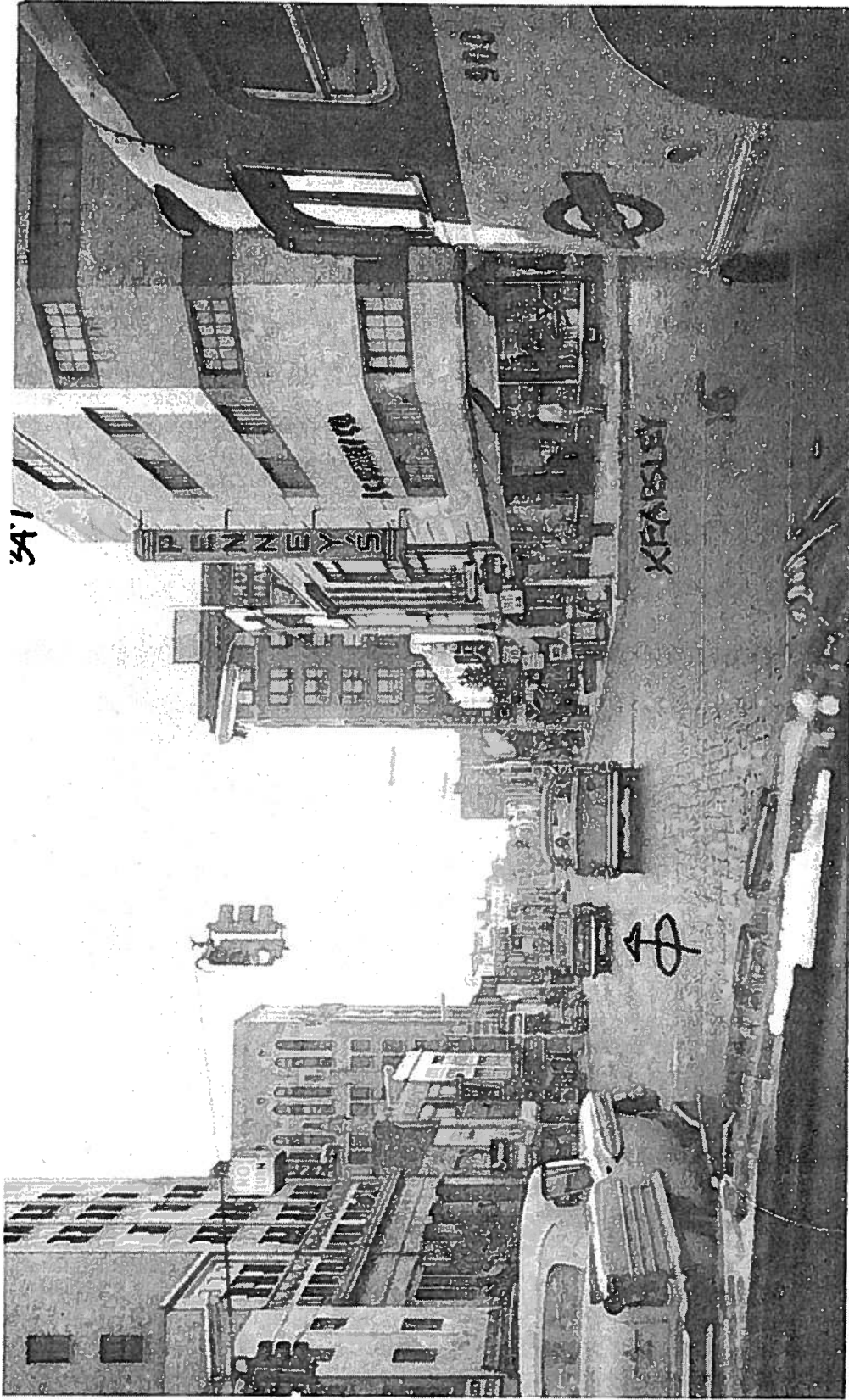


COMPREHENSIVE MASTER PLAN
 CITY OF FLINT · MICHIGAN
 FLINT PLANNING COMMISSION
 1960
 FT 0 2000 4000 6000 8000 10000
 MI 0 1/4 1/2
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spaces per 1,000 square feet. For purposes of comparison, a parking index of 6 or 7 represents a parking ratio of about 2:1, and an index of 9 or 10 is equivalent to a ratio of 3:1. The accompanying illustration uses the lower of these alternate indices (namely 6 and 9) as a reference for evaluating the existing supply of parking and the adjusted supply after possible street improvements or change in street parking regulations. Of course, there are other factors which must be considered in determining the optimum supply of spaces, such as the type of center, its size and type of tenants, amount of walk-in customers, accessibility to transit service, buying power of the area served and others. Therefore, the indices indicated should be considered as only a general yardstick of parking requirements and serve as a guide to business property owners or tenants in augmenting their supply of parking spaces from center to center.

In the case of the secondary shopping centers, as in the case of industrial areas, the City may be of assistance in acquiring substandard properties suitable for off-street parking under an urban renewal program, or, as another possibility by setting up special assessment districts as a means toward financing public parking facilities at the secondary centers.



TRANSIT PHOTO - KENNETH C. WELCH

TRANSIT SYSTEM

Existing Transit System

The present local transit system, operated by Flint City Coach Lines, Inc., provides, as of 1960, service on 14 regularly scheduled lines with additional diverted runs and "tripper" coaches employed to meet the locational requirements and peak loads of schools and industrial areas. While the regular lines have been studied in some particular, detailed analyses of the special runs have not been included due to the exceptional conditions and factors involved in justifying and setting up this type of service.

Rider Characteristics

The rider characteristics of the present system are illustrated by the accompanying exhibit.¹ This graph shows when peak loads occur and the composition of riders producing these peaks. From the beginning of operation in the morning until 7 a.m., the main load consists of industrial workers; then the morning peak is reached between 8 a.m. and 9 a.m., with the influx of students and employees of downtown stores and offices; and from 10 a.m. until 1 p.m., most of the transit passengers are shoppers and other downtown riders. From 2 p.m. until 6 p.m., the highest loads of the day occur due to the overlapping of several individual peaks. The industrial peak around 3 p.m. is followed by the student load between 3 and 5 p.m. These two highs are amplified by the large numbers of shoppers and other downtown riders returning home during these hours. Between 5 and 7 p.m., the principal transit riders are downtown employees and late shoppers; after 7 p.m., the number of riders - made up mainly of industrial workers and those to and from downtown recreation, school activities and sports events - decreases sharply to the lowest levels of the day until service ceases after midnight.

The general rider characteristics indicated above vary, of course, from line to line due to basic differences in the population density, riding habits of the areas served, and major generators located along the lines. The accompanying map² shows the routing of coaches under the existing system, with bands 1/4-mile wide on either side of each line representing areas within about a five-minute walk of transit service. This map indicates relative population density, and shows areas of duplication or triplication of service. Also indicated is the two-mile limit beyond the corporation line within which the transit system is authorized to provide service.

Route Characteristics

A line by line breakdown of information concerning the various routes is provided in the accompanying table³ which, along with the map of the existing system, suggests certain significant conclusions about the operation of the transit system in general and individual lines in particular. In the table,

¹ Graph: Daily Transit Passengers, 1959.

² Map: Existing Transit System.

³ Table: Flint Transit Data.

it should be noted that: Column 3 shows the scheduled headways (time interval between coaches), with the most prevalent headways underlined; Column 6 indicates the resident population within the half-mile service bands - prorated in cases of duplication or triplication of service.¹

From the table (column 11, which is derived from columns 5 and 10), a measure of the revenue potential of each line can be derived, with the number of passengers indicating revenue, and miles driven representing operating cost. The figures indicate that the best revenue producing lines are short, direct, and serve more densely populated areas, whereas the poor paying lines, as would be expected, are long, indirect, and traverse more sparsely inhabited suburban areas. The figures serve to identify lines which have poor revenue producing characteristics, in order that they may be appraised in the light of various factors: length of line, population density, headway, relative demand for bus service in various areas, and routing.

For further comparison, the various transit lines were arrayed by population per mile (an index of the passenger potential); by passengers per 100 population; and by passengers per coach mile.

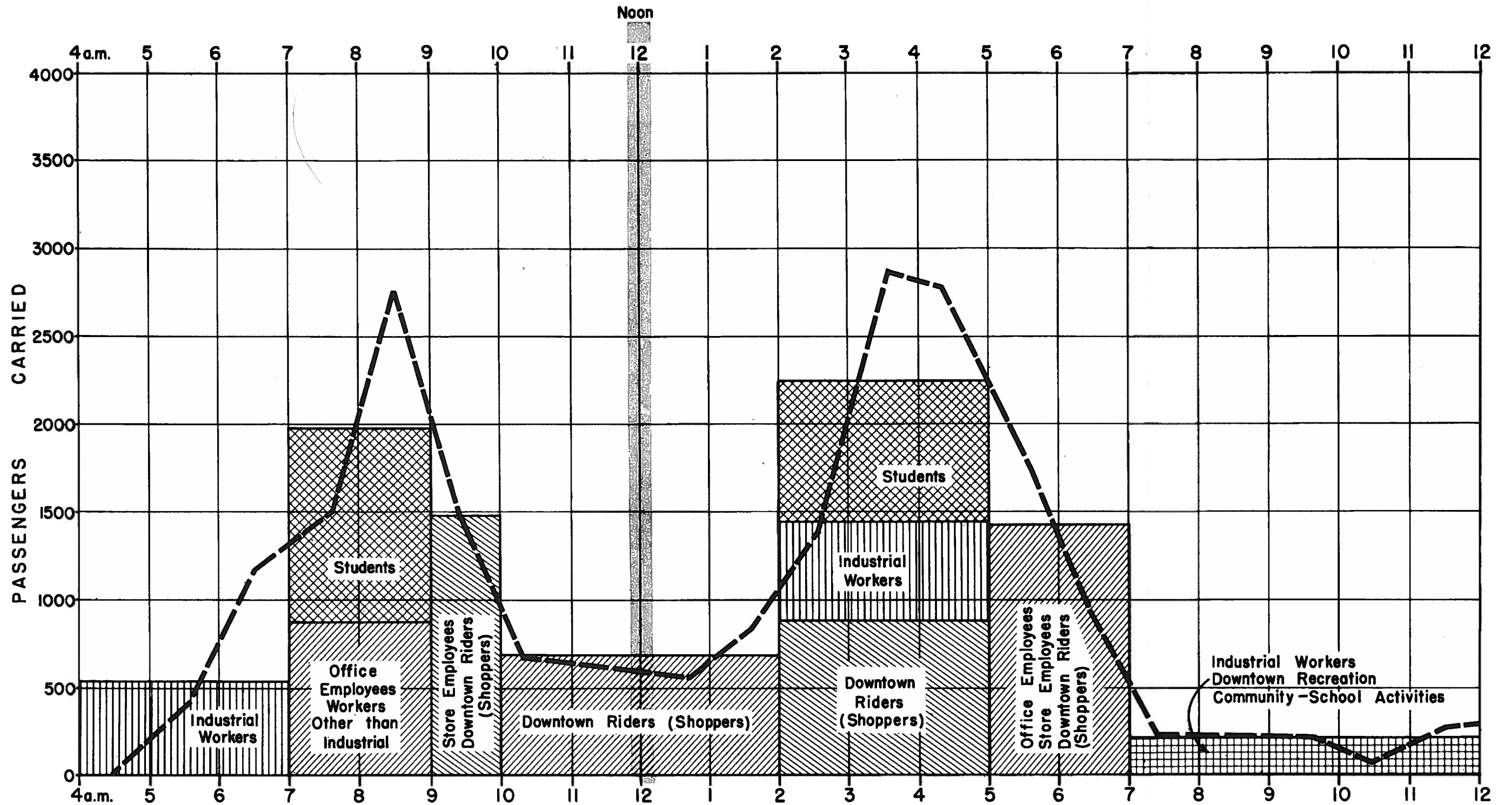
Population per Mile - In respect to population per mile of line, the lines to the north of the central business district - North Saginaw, Detroit and Dupont - rank high, while lines to the southeast and west - namely Lapeer, Beecher and Corunna - rank low, reflecting the more open development in the general areas served by these lines.

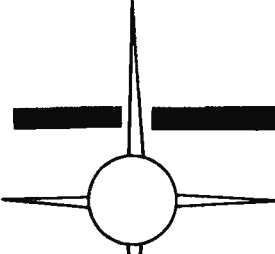
Passengers per 100 Population - Two of the lines ranking low in population per mile - namely Corunna and Lapeer - rank relatively high with respect to passengers per 100 population, while Detroit and Dupont, which rank second and fourth, respectively, in population per mile of line, have the fewest passengers per 100 population. It seems apparent, accordingly, that density of population is not a controlling factor in regard to the number of potential transit customers as a proportion of the population served by a transit line.

In addition to the above comparisons, it is revealing to note the relationship between the number of passengers generated per 100 population and the service provided. For example, one of the lines with longer headways, Lapeer, has a relatively high proportionate number of passengers per 100 population served. It also should be noted that the fastest line, Dupont, ranks last in transit passengers per 100 population. These figures seem to indicate that faster speeds and shorter headways do not necessarily generate more transit riders.

The above figures permit making certain general observations, but perhaps the most meaningful statistics concerning the operation of individual lines are the numbers of passengers per total coach miles of operation, reflecting the amount of service offered and the revenue produced per line.

¹Due to the difficulty of assigning precise figures to individual lines near the central business district with the convergence of lines and because the CBD is within walking distance of many, the population within the square mile at the center of town has not been included.




COMPREHENSIVE MASTER PLAN
 CITY OF FLINT MICHIGAN
 FLINT PLANNING COMMISSION
 1960
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 CITY PLANNERS CONSULTING ENGINEERS
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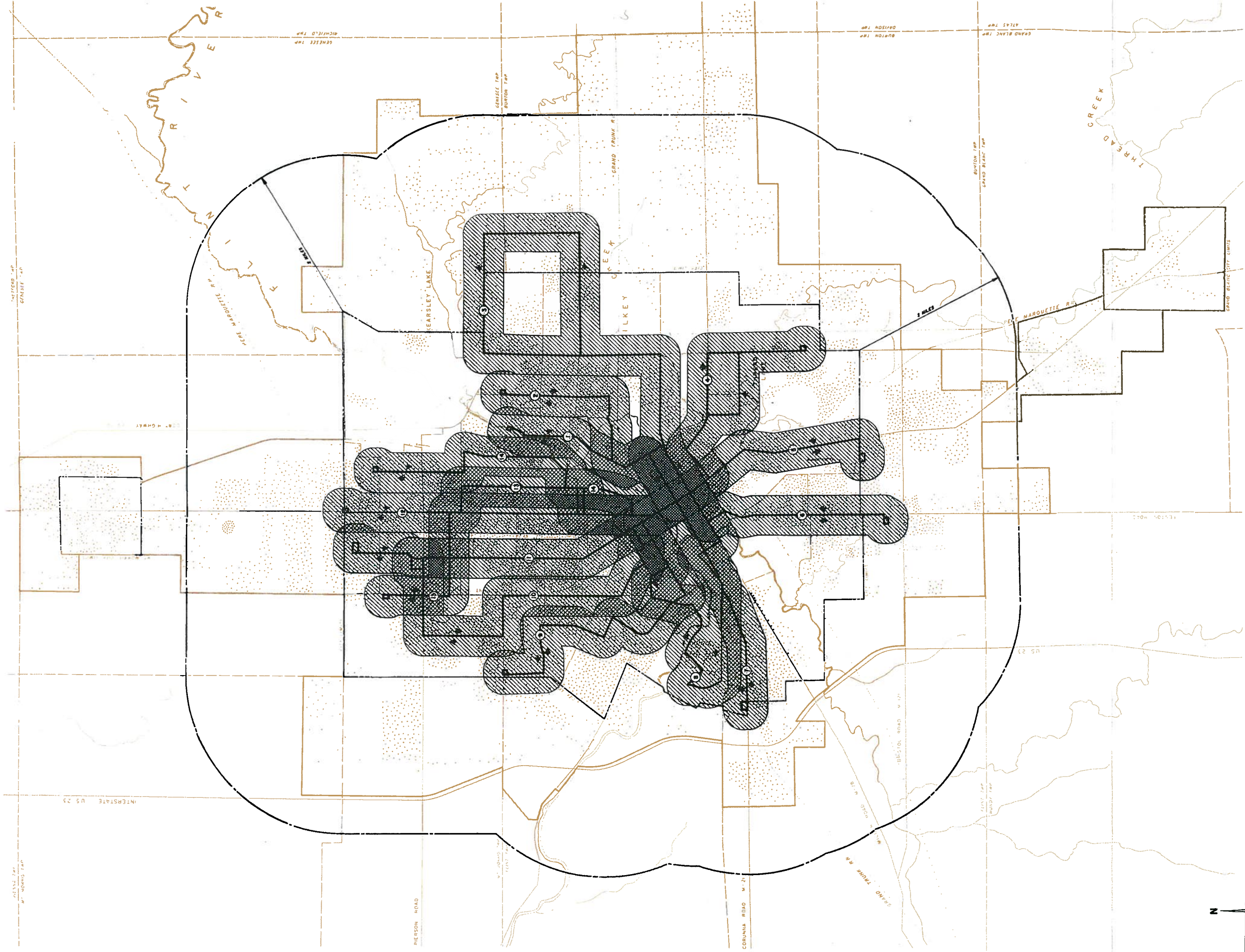
DAILY TRANSIT PASSENGERS — 1959

CITY OF FLINT-MICHIGAN

(Third Week of September)

 Hourly Volumes
  Generalized Composition of Passengers

Source: Flint City Coach Lines, Inc.



**COMPREHENSIVE
MASTER PLAN**

CITY OF FLINT · MICHIGAN
FLINT PLANNING COMMISSION

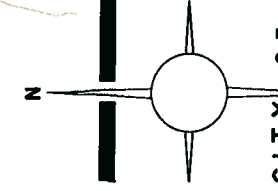
1960

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EXISTING TRANSIT SYSTEM

LEGEND

① LEWIS STREET	⑧ BEECHER ROAD	⑬ ONE DOT EQUALS 20 PERSONS
② FRANKLIN AVENUE	⑨ CIVIC PARK	▨ LIMITS OF EFFECTIVE SERVICE
③ RICHFIELD ROAD	⑩ DUPONT STREET	▩ DUPLICATION OF SERVICE
④ LAPEER ROAD	⑪ DETROIT STREET	▤ TRIPLICATION OF SERVICE
⑤ SOUTH SAGINAW STREET	⑫ NORTH SAGINAW STREET	— TRANSIT ROUTE
⑥ FENTON ROAD	⑬ FLINT PARK	
⑦ CORUNNA ROAD	⑭ ST. JOHN STREET	



FLINT TRANSIT DATA

LINE	(1) Length of Line (one-way)	(2) Running Time	(3) Headway	(4) Ave. Speed (MPH)	(5) Ave. Pass. per Day	(6) Popu- lation	(7) Pass. per 100 Pop.	(8) Pop. Density per Mile	(9) One-way Trips per Day	(10) Miles per Day	(11) Pass. per Coach Mile
Lewis	2.6	13	15-20	12.0	1,271	7,220	17.6	2,780	100 (2)*	260 (5)*	4.9
Franklin	3.3	15	15-20	13.2	1,529	10,420	14.7	3,170	113 (17)*	403 (82)*	3.8
Richfield	5.8	23	20-30	15.0	1,632	13,880	11.7	2,390	80 (28)*	586 (28)*	2.8
Lapeer	3.6	15	20-45	14.4	879	5,240	16.8	1,450	76 (6)*	280 (27)*	3.1
S. Saginaw	2.6	12	15-30	13.0	1,732	7,620	22.8	2,930	123 (17)*	390 (112)*	4.4
Fenton	3.1	15	20-20	12.4	923	7,680	12.0	2,480	100 (20)*	342 (94)*	2.7
Corunna	3.5	15	12-20	14.0	1,465	6,840	21.4	1,950	169 (47)*	611 (184)*	2.4
Beecher	2.8	15	20-60	11.2	547	4,320	12.6	1,540	36 (6)*	189 (24)*	2.9
Civic Park	5.3	23	15-30	13.8	2,419	14,360	16.8	2,710	146 (44)*	721 (185)*	3.4
Dupont	6.0	22	20-30	16.3	1,279	17,780	7.2	2,960	92 (12)*	567 (87)*	2.3
Detroit	4.5	20	15-30	13.2	1,505	16,020	9.4	3,560	106 (4)*	483 (20)*	3.1
N. Saginaw	4.5	23	12-15	11.7	2,824	18,590	15.2	4,130	168 (30)*	720 (104)*	3.9
Flint Park	5.7	26	15-30	13.2	1,706	11,760	14.4	2,060	117 (13)*	702 (97)*	2.4
St. John	5.2	27	30	11.5	1,262	10,870	11.6	2,090	76 (6)*	404 (39)*	3.1
					20,973		14.6		1,502 (252)*	772 (1202)*	3.2
							Avg.				Avg.

* Tripper trips - included in total.

PASSENGERS per COACH MILE

Line	Rank by Pass./Coach Mile	Number of Pass./Coach Mile	Running Time	Rank by Pass./100 Pop.
Lewis	1	4.9	13 min.	(3)
S. Saginaw	2	4.4	12 min.	(1)
N. Saginaw	3	3.9	23 min.	(6)
Franklin	4	3.8	15 min.	(7)
Civic Park	5	3.4	23 min.	(5)
Lapeer	6	3.1	15 min.	(4)
Detroit	7	3.1	20 min.	(13)
St. John	8	3.1	27 min.	(12)
Beecher	9	2.9	15 min.	(9)
Richfield	10	2.8	23 min.	(11)
Fenton	11	2.7	15 min.	(10)
Corunna	12	2.4	15 min.	(2)
Flint Park	13	2.4	26 min.	(12)
Dupont	14	2.3	22 min.	(14)

Although there are several exceptions, similarity may be noted between the standing of the lines in the above table in respect to passengers per coach mile and passengers per 100 population. The two lines at the top of the above table are first and third in passengers per 100 population, while the last two are in 12th and 14th place as regards passengers. A notable departure from the foregoing may be seen in the case of the Corunna line, which is 12th in passengers per coach mile although second in passengers per 100 population. A significant relationship between passengers per coach mile and length of line (and, accordingly, running time) is indicated by the above table, it being fairly apparent that the shorter rides and correspondingly shorter running time on certain lines may be a factor in producing higher proportions of transit passengers.

Because of the relatively few lines to the south, located farther apart than in the northwest section, the relative demand for transit service in these two general sections of the city is considered significant. Because of their spacing, the transit lines to the south evidently serve riders at a distance greater than 1/4 mile. Hence, a mile-wide service band appears to be more realistic in calculating population served, this producing complete overlap of service to the northwest and almost complete coverage to the south. Calculation of the area, population served, transit mileage, and passengers reveals that the northwest lines serve nearly twice the area of those to the south, with three times the total population, also more than three times the route miles. It also indicates that about the same number of transit riders per 100 population are generated along the lines to the north, but that the total coach mileage and the number of passengers per coach mile reveal a somewhat disadvantageous position of the northwest lines in respect to revenue potential.

Intermediate Recommendations

In general, to continue to provide adequate public transportation, it is necessary to avoid unwarranted duplication of service, indirect routing, excessive turning movements and similar hindrances to efficient operation. Additionally,

the various transit lines should be carefully coordinated with the thoroughfare system, population distribution, locations of major industrial and business concentrations. With the foregoing map¹ and statistical data about the existing transit system, certain recommendations can be offered, and in making these certain generally accepted principles were borne in mind.

Since certain facts concerning the operation of the transit lines in the northwest part of the city were brought to light, it would be in order to suggest alternative possibilities for improving the situation. In view of the somewhat lower usage of mass transportation, in spite of relatively good service, it would appear that service better tailored to this usage would be in order. There are different ways for modifying service in the northwest area: by spacing lines farther apart, keeping the same headways; by lengthening headways on existing lines; or a combination, or both of the above, reducing mileage where possible.

It has been indicated that neither the longer walking distances nor greater headways for the lines to the south seem to adversely affect the demand for transit service. However, since the northwest quadrant of the city is more densely populated, with fewer large areas of undeveloped land, it would seem unwise to increase the spacing because this would necessitate considerable reorientation of riding habits on the part of the public. In addition, suitable streets are not available for direct routing without eliminating perhaps half the existing lines. Therefore, the proposed routes, with certain modifications, are generally along streets where lines now operate, anticipating headways adjusted to better reflect the demands of the riding public.

Recommendations for intermediate changes in the transit system are found in the accompanying illustration.² By comparing this map with the foregoing one,¹ it will be noted that the most significant adjustments are proposed in the northwest where lines are straightened out and extended into the environs of the city. As a result, areas of duplication are substantially reduced. To the south and east, in general, only minor changes are involved, other than for extending the southerly lines. To the west the Corunna Road line (No. 7) is proposed to be extended and the routing of the Flushing-Clio Road line (No. 9) is modified somewhat. As indicated, most other changes are minor.³

The total length of all regular lines in the existing transit system is 58.5 miles. The proposed changes would increase this total by five and one-half miles; however, an additional 24,500 people would be within areas of convenient service, resulting in some increase in population served per mile of line - 2,750 versus 2,600 served by the existing system.

1 Map: Existing Transit System.

2 Map: Proposed Transit System.

3 The preliminary Master Plan report entitled "Transit System" (Part 4, Volume II, Master Plan Elements), which describes all the changes in detail, may be referred to in the office of the Flint Planning Commission.

Factors Conditioning the Future of Public Transit

The various intermediate improvements recommended for the transit system should serve to improve operations of individual lines but will not solve the long-range problems of mass transportation, in general, as the automobile becomes increasingly dominant in the total transportation picture of the community.

From 1946 through 1958, revenue passengers on the Flint transit lines declined by 78 per cent, although the reduction in miles driven by transit vehicles was only 22 per cent. The net income for 1957 was down more than 90 per cent from 1946, although the years from 1952 through 1956 showed fairly substantial incomes. For 1958, however, substantial loss was incurred.¹ There are several reasons why the situation should be improved, if at all possible, to the point where the transit company can again show a profit, as it is not in the best interest of the community to be without a transit system, for the following reasons, among others:

- a) Many people do not drive automobiles - the aged, the young, the infirm, must depend on transit service to a considerable extent. Certain people simply prefer not to purchase an automobile or, as is more often the case, prefer to use transit facilities for essential transportation purposes such as going to work or school.
- b) Mass transportation is a much more efficient carrier of people than the private motor car. (One 50-passenger bus can do the work of 30 to 40 cars - and it requires no parking space at its destination.)
- c) The central business district cannot absorb a very much greater number of automobiles without providing an exceptional additional supply of parking spaces over what would otherwise be required.

An efficient system of mass transportation, providing service that approaches the convenience of the automobile at a lower cost, could do much to ease some of the traffic problems inherent in a growing community such as Flint, and especially parking problems in the central business district. It is conservatively estimated that without the existing transit system an additional 2,500 - 3,000 parking spaces would be needed to accommodate present terminal traffic in the central business district.

The present system of motor coach lines operates with stops at closely spaced points along the lines. This is satisfactory where the total trip time is short, but as the length of line increases it becomes more difficult to provide service that can compete with the private car. As lines are extended into lower density suburban areas the proportion of potential customers in the population drops off sharply due to several factors: actual population density is lower; each family is more likely to own at least one car, or, more recently, two; transit becomes less attractive due to the increased riding time compared with automobile travel.

¹ Likewise, during 1959 and 1960 losses were incurred - the 1959 loss being less than 1958 and the 1960 loss, in turn, substantially less than 1959.

Owing to the combination of these factors and because the pattern of working, shopping, and living has been established independently of mass transportation, the extension of lines into suburban areas generally does not produce, at the start, additional net income to the transit company. Consequently, it becomes difficult for transit to play a major role in meeting transportation needs of these suburban areas.

The Future Transit System

An urban area's transit system should be flexible enough to meet varying demands for service. The general suggestions advanced herein rest on the following assumptions:

- a) Flint will continue to grow in population;
- b) the number of automobiles per family will continue to increase;
- c) suburban development in general will be more regular and orderly, with considerable future development at lower densities than is prevalent today;
- d) growth may be irregular in some areas, even though the Master Plan seeks to minimize this possibility, thus leaving some relatively undeveloped areas to be filled in later.

It is obvious that the motor coach cannot better the average speed of the automobile, although it can compete very effectively in cost. Even if the bus fare were to be increased considerably it still would cost substantially less to ride the bus. However, it is recognized that few people consider more than the out-of-the-pocket, short-time expenses of gas, oil, and parking when visualizing relative costs, ignoring the fixed yearly costs of depreciation, insurance, repairs, etc. This relative cost advantage of transit should be fully exploited.

Beyond relatively short distances the existing normal bus service is neither attractive to riders nor profitable for the transit company. Customers on the ends of the line are subsidized by those closer to the central business district if fares remain constant, hence the "close-in" rider also may find the service unattractive. A zoned fare system would help balance these inequities, but perhaps what is needed still more is a system zoned for service to meet the varying demands of different parts of the community.

"Urban" service might be provided in the more densely populated areas closer to the center of the city with short, direct lines operating on existing streets, with special bus lanes provided where traffic congestion is severe - in the central business district, and along overloaded streets near the downtown area. Except for certain improvements of this nature, this "urban" service would approximate that which exists now for the central area. The length of lines providing this type of service would be determined by the demand for service at the outer end. This would have to be determined operationally, since population densities and relative demands for service vary from line to line.

"Suburban" service zones, on the other hand, might provide service to suit the actual demands in specific areas at a correspondingly higher price, but, in turn,

could be expected to provide better service. These "suburban" lines could provide express service within the inner zone, picking up passengers within a defined outlying area, stopping only at infrequent intervals in the inner zone where transfer points and principal generators are located, finally unloading riders at preferred locations in the central business district. Since these "suburban" lines would operate independently of the lines within the "urban" service zone they could reasonably expect to achieve speeds approaching that of the automobile, using future expressways where possible. Since demand for service to suburban areas will not be known precisely, the exact frequency, fares to be charged, and schedules again would need to be determined by operations. Once this demand factor is known, routes could be adjusted to the levels of service required to operate at a profit.

Depending upon the demand, the suburban routes could provide different types of service, certain of which are described below:

1. Express Service - This would be service much like that which now exists, except that it would not provide for pickup or discharge of passengers within the "urban" service zone and thus would provide faster service. In more sparsely populated areas these lines might follow a base route for much of the suburban pickup zone, operating on either side of the base on alternate trips.
2. Club Service - This is a variation on the above, where continuous service is not justified. In effect, it amounts to a large car pool, operating only at hours when a bus load of people may be transferred between two points, such as a suburban community and the central business district. This specialized service commands a premium fare and has been reasonably successful in certain cities.
3. Jitney Service - This type of service has proven economically feasible where larger buses cannot operate at a profit. The essential features of this type of service are the use of smaller, more economical buses which are owned, maintained and operated by individuals. If properly coordinated with the pickup areas and schedules of the larger buses, these vehicles could provide interim service in sparsely populated areas until regular suburban service is warranted, or provide regular express type service between the peak hour schedules of club coaches.

There are variations and refinements of the above to serve the specialized needs of the community, such as special buses to churches, shopping centers, industrial plants, and special civic and sporting events. In addition, certain other special types of services may be offered to the downtown shopper to utilize equipment during off-peak hours - such as "shoppers' express" and "ride-and-shop"; wherein all or part of the bus fare is redeemable upon purchase of a given amount in cooperating stores.



TORREY YARDS GRAND TRUNK
WESTERN RAILROAD
JOURNAL PHOTO

RAILROADS

As part of the Comprehensive Master Plan, the existing railroad network and its operation has been evaluated and, in the light of recent developments, coordinated with other essential parts of the Master Plan. From this analysis certain recommendations and suggestions are offered for consideration.

Existing Railroad Facilities and Service

The city of Flint is served by two railroads, the Chesapeake and Ohio, to and from points north and south, and the Grand Trunk Western, running generally east and west. Both railroads originally ran all trains through the center of town, but have since by-passed the central business district, leaving only local traffic on these original lines.

The Chesapeake and Ohio, which provides freight service only, now uses the tracks of the old Flint Belt Line to the east for all through traffic. The original tracks through the center of Flint are used for switching operations to local customers. The principal switching facility of the C&O is the McGrew Yard at the north junction of the old main line and the Belt Line, along Dort Highway south of Carpenter Road. Additional storage tracks are located near the Fisher Body Plant #1 and alongside the Buick Plant to the north. The C&O has no freight station as such, but a McGrew Yard building handles freight.

All Grand Trunk through service by-passes the center of Flint to the south. The original line still serves those customers located along its right-of-way, but all switching is done from the ends with few movements across the center of town. The Grand Trunk, until recently, operated from the Belsay Yards at the eastern junction of its old and new main lines. However, almost all switching now is handled from the Torrey Yard west of the Chevrolet Van Slyke plant. There are storage tracks on the northern line just east of the Fenton-Clio Expressway, and at the Van Slyke plant. The Grand Trunk - with six passenger trains per day - maintains a passenger station on the main line at South Saginaw Street and operates a freight house in the central business district at Union and Harrison Streets.

Railroad Customers

Manufacturing is the principal customer of both railroads. Well over 80 per cent of all freight cars in the Flint area have their origin of destination at the seven General Motors industrial concentrations. The remaining customers are local supply warehouses and other service establishments. Inbound freight movements (numbers of cars) are substantially greater than outbound. Relative volumes (by numbers of cars per month) are indicated by circles on the accompanying illustration.¹ Buick is the largest customer of the C&O, followed by Fisher Body #1 and Ternstedt. AC Spark Plug, which is next, is served by both railroads (with direct service from the C&O). The relatively few remaining major customers are duPont (which receives about the same number of cars per month as AC), National Carloading, warehouses owned by the Hamady and A&P Food Store chains, and the General Wholesale Warehouse.

¹ Map: Existing Railroad Facilities. (To avoid disclosure of actual traffic, no scale has been assigned to the circles.)

The Grand Trunk Railroad normally handles substantially more cars per month than the C&O, with Chevrolet accounting for over 60 per cent of all traffic at its Van Slyke and in-town plants. The Chevrolet operation at Otterburn, and the AC Spark Plug plant, follow in descending order. Major customers of secondary importance include the Acme Company, Central Grocery Warehouse, Flint Coal Storage, Michigan Lumber and M&M Warehouse.

Traffic and Operations

As mentioned before, both railroads have abandoned through operations in downtown Flint, the C&O normally averaging approximately 20 freight trains per day over the Belt Line, of which two or three are regularly scheduled. Local freight movement between Fisher Body #1 and the McGrew Yard to the north (over the C&O) amount to about five trains per day along the old main line through the central business district. This remains the more significant railroad movement through downtown Flint at the present time.

Traffic volume on the Grand Trunk main line averages about 24 trains per day, of which six are regularly scheduled passenger trains. All of these are routed over the southern line, by-passing the CBD. In effect, the northern line is used as a spur from either end with few movements crossing downtown. Traffic to the Chevrolet Manufacturing and Otterburn plants goes west from the Torrey Yard to the junction near Elms Road, then east to the plants. Movements to AC and other users in the vicinity go east to the junction near Center Road, then west to their destination. Necessary car spotting at the AC plant normally is handled by the C&O.

Proposed Railroad Improvements

Previous studies - in 1937 and 1944 - recommended that the tracks of each railroad through downtown Flint be severed. The principal arguments were based on street traffic delays caused by crosstown rail movements. With the construction of its Torrey Yard, the Grand Trunk no longer needs to cross the central business district in order to serve the Chevrolet Manufacturing plant and points west. Removal of the Grand Trunk downtown tracks is anticipated in the not too distant future.¹ Therefore, C&O traffic between the McGrew Yard and the Fisher Body Plant #1 remains the principal rail movement through downtown Flint - averaging five trains per day - so traffic delay still is a valid reason for eliminating the trackage concerned.

The need for land for urban thoroughfares, parking facilities, and other purposes associated with the central business district constitutes further reason for removal of downtown rail facilities. Doing so not only would release needed land in strategic locations, but, in addition, would eliminate the conflicts of rail and motor traffic in the central business district. The severing of the Grand Trunk downtown tracks is assured, as indicated. Hence, the principal problem, so far as the basic conflict between the railroads and the central business district is concerned, is accomplishing a similar action on the part of the C&O.

¹ Before publication of this report, it was announced that severance of the downtown tracks was scheduled for January 23, 1961.

Recommended Changes

Although the most direct route from the C&O McGrew Yard to Fisher Body is through the central business district, there are seemingly suitable alternate routes which apparently could be used without serious complications. As may be seen on the accompanying illustration,¹ one alternative is the use of the Flint Belt Line and the connection between the old and new main lines near Bristol Road. Since the Belt Line has one track south of the Grand Trunk, either more refined traffic control to handle the mixture of through and local operations would be called for or possibly an additional parallel track would need to be provided. The distance between the two points would be increased substantially, it should be noted, with a corresponding increase in operating costs for the C&O.

The other alternative for the C&O would increase the present distance relatively little, and appears to call for only a few connections. This would involve the joint use of tracks, but, apparently, might be somewhat difficult to accomplish from an operating or jurisdictional standpoint. This second route would be along the Belt Line south to a new connection in the northwest quadrant of the C&O and Grand Trunk main line intersection, thence west along the main line to a new connection in the southeast quadrant of the crossing with the original C&O line, thence south to the Fisher Body plant. This alternative poses certain problems: the double track main line of the Grand Trunk is heavily used, and transfer movements of the C&O would tend to interfere with Grand Trunk movements; the cost of installing the necessary traffic control equipment reportedly might well approximate the cost of extending the C&O's second main track southward on the Belt Line; delays to C&O trains might well equal the additional time required to make the longer run via the Belt Line; relative track grades at the Grand Trunk crossing of the C&O old main line indicate that the connection would be on a rather steep gradient.

Despite the difficulties indicated, the possibilities of accomplishing joint use of the Grand Trunk tracks should be fully explored. Among other things this would call for arrangements recognizing and preserving the existing customer pattern and, of course, working out operational arrangements to the mutual satisfaction of the two railroads.

Grade Crossings

While a number of conflicts between rail and highway traffic have been eliminated in Flint, the development of new areas and the creation of new major traffic generators necessitated a study of current conditions and possible future needs. This study, of course, takes into account certain features of the Master Plan which will cause the existing traffic patterns to change.

It would be desirable, of course, to eliminate all of the more dangerous points of conflict between rail and highway traffic, but such an undertaking - which, among other things, would be extremely expensive - is most unlikely. There-

¹ Map: Proposed Railroad Facilities.

fore, this study includes only rail crossings of those existing thoroughfares which have been designated as primaries on the Major Street Plan. Secondary thoroughfares and future primaries have not been included, nor have those crossings which other features of the Master Plan propose to eliminate, such as in the downtown area. By thus defining and limiting the problem, the number of crossings to be considered has been reduced from nearly 100 to 40. In determining the relative hazards at grade crossings, the factors selected as most significant are the relative volumes of rail and highway traffic; number of tracks; type of tracks (main line or spur); roadway surface and its condition; existence of signals; and street grades and visibility.

The individual crossing features were weighted as to importance, adjusted by the volume of rail and highway traffic, and combined into a safety score for each crossing. The combination of factors was used as the final score of relative hazard which, in turn, suggests an order of priority for the elimination of grade crossings. In general, the traffic volume was taken as being more important in determining the relative crossing hazard, with the physical conditions of the crossings less significant.

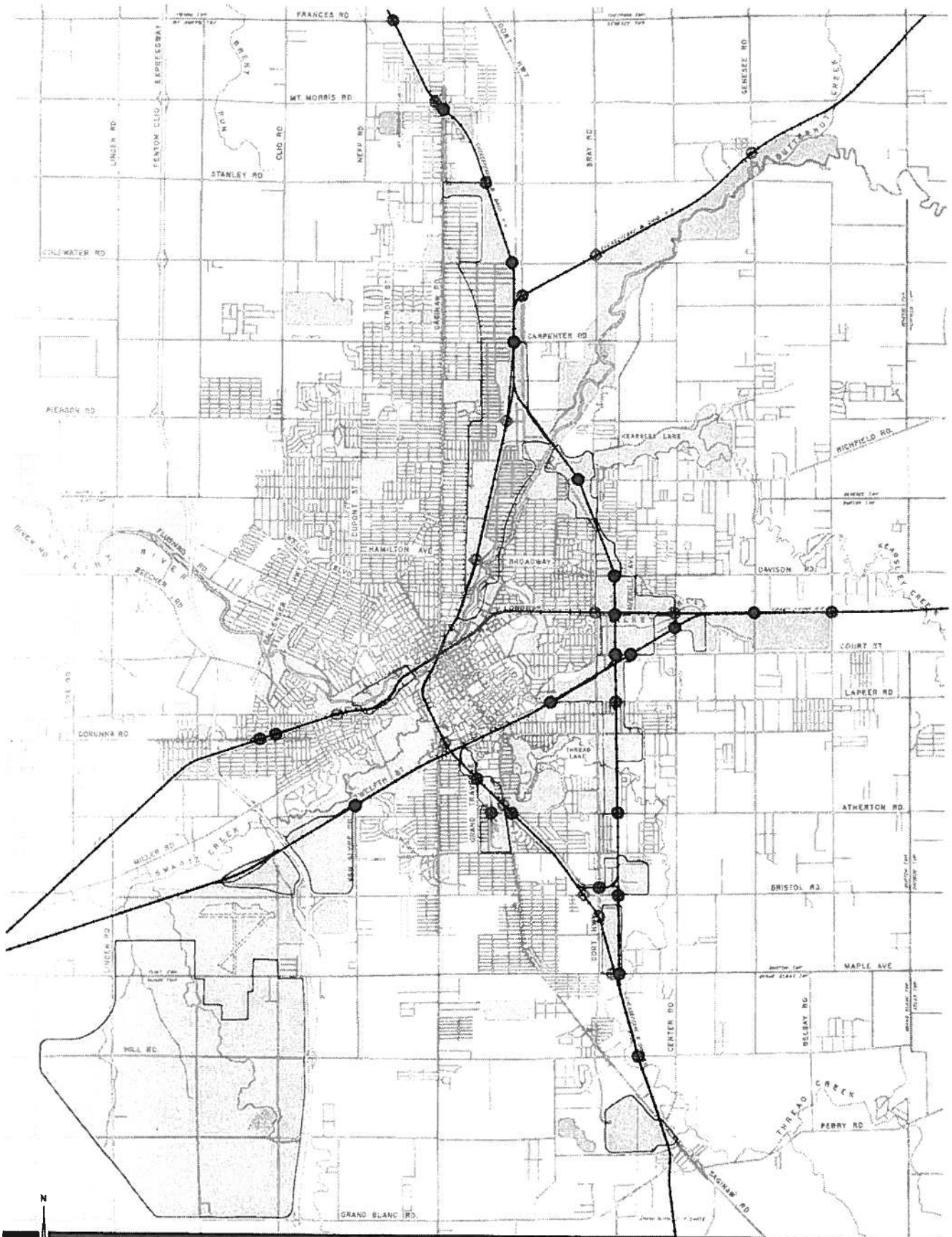
Using this scoring system, the final order of relative hazard for the 40 crossings which were studied indicates that at least 12 could be singled out as more dangerous than average, while the bottom part of the scale produced no such sharp break. The last 12 crossings, as would be expected, are located generally at points where both rail and traffic volumes are very light. The middle 16 crossings, while not as hazardous as the top 12, still represent points of relatively high conflict of movement and should by no means be considered acceptable for the long run. On the map entitled "Proposed Railroad Facilities," the 40 crossings are grouped in four categories: the 12 more hazardous placed in two groups and classed as "first" and "second" priority; the next 16 categorized as "third" priority; the lower 12 designated as in the "fourth" priority.¹


The 12 crossings designated as "first" and "second" priority - listed herein - are located on main line tracks with the first six being clearly more hazardous, on the basis of the indices used, than the average for the group. The second six may be considered in the next category, namely "second" priority, inasmuch as they score roughly twice as high as the average for all crossings. These and the other crossings shown on the accompanying illustration² should be earmarked, as it were, for grade separation when major improvements of the highways or thoroughfares involved are to be carried out. It should be noted that certain of the crossings under the "third" and all of those under the "fourth" priority are designated as being on "local" tracks, with all others on the main lines.³

¹ In setting up a program for grade separations, judgment will be involved in consideration of the timing of street improvements where grade crossings are involved, or the carrying out of other improvements under the Master Plan which may alter considerably the order suggested by the conditions set forth above.

² Map: Proposed Railroad Facilities.




³ The specific locations of the third and fourth priority crossings may be ascertained at the office of the Flint Planning Commission.








COMPREHENSIVE MASTER PLAN
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 1960
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PROPOSED RAILROAD FACILITIES


RAILROAD FACILITIES

-  TO BE RETAINED
-  NEW CONNECTION
-  TO BE ABANDONED

PRIORITY OF GRADE CROSSING ELIMINATION (PRIMARY THOROUGHFARES)

-  FIRST
-  SECOND
-  THIRD
-  FOURTH

 INDUSTRIAL

 NON-RESIDENTIAL LAND USE

RAILROAD CROSSINGS SUBJECT to GRADE SEPARATION

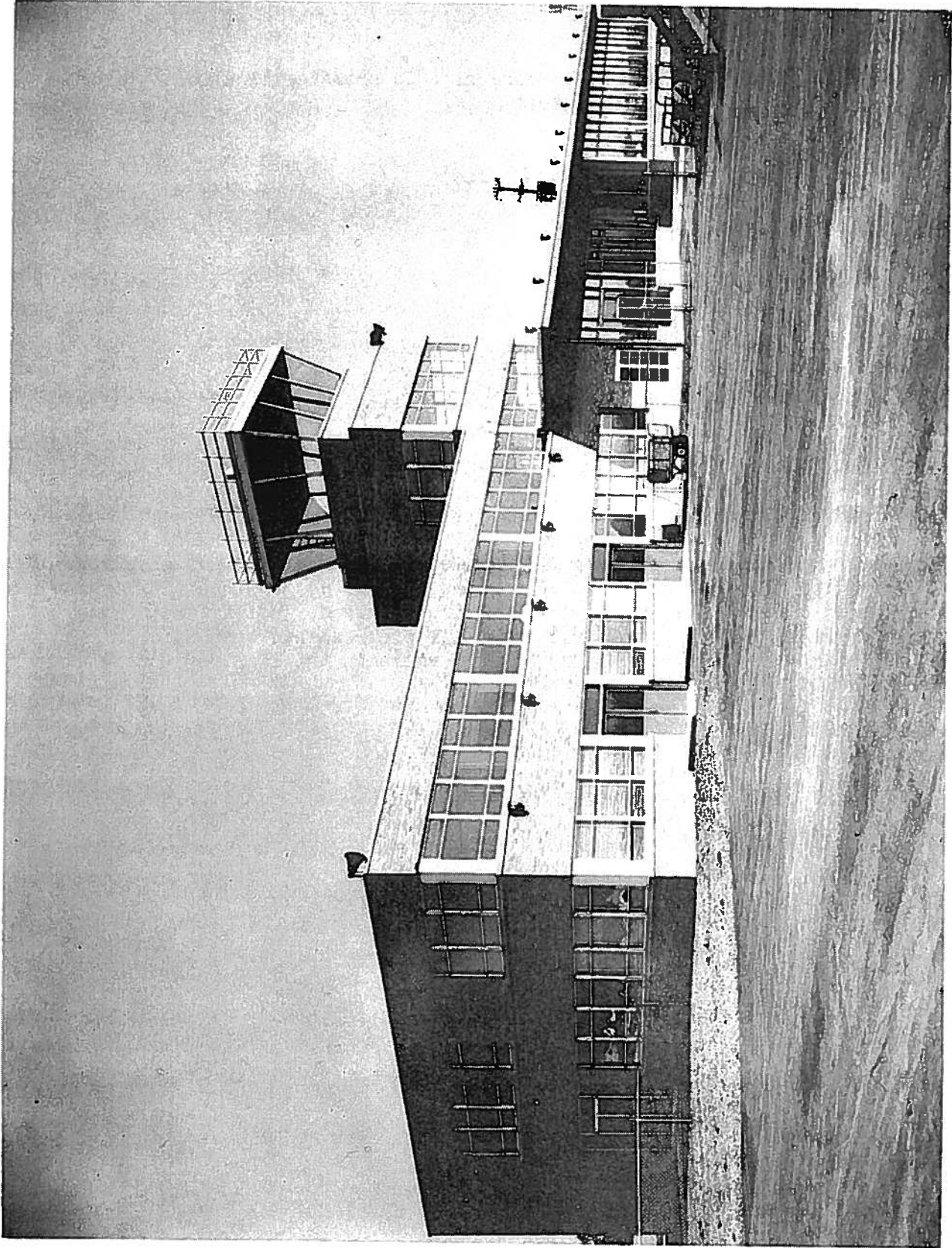
First Priority

1. Van Slyke /GTW - the score of this crossing is almost twice that of the next highest
2. Davison Road/C&O
3. East Court Street/GTW
4. North Saginaw/C&O (Mt. Morris)
5. East Carpenter Road/C&O
6. East Court Street/C&O

Second Priority

7. Richfield Road/C&O
8. Lapeer Road/GTW
9. Center Road/GTW
10. East Coldwater Road/C&O
11. Genesee Road/GTW
12. Longway Road/C&O

It should be understood that elimination of even part of the listed crossings of the "first" and "second" priority represents a major undertaking. Therefore, separation of the remaining crossings - under the "third" and "fourth" priorities - necessarily may need to be deferred until a substantial number of the more dangerous ones have been eliminated, unless major street or highway improvements, where these other crossings are involved, justify including grade separation projects. After substantial progress has been made in the elimination of crossings, a restudy of the others in the light of possible new conditions may well be in order.



BISHOP AIRPORT TERMINAL
JOURNAL PHOTO

AIRFIELDS

Bishop Airport, with its excellent terminal facilities, is the only airfield of major proportions in Flint or its environs.¹ There are three grass fields within a 15-mile radius - Dalton to the west, near Flushing, Westport to the northwest, and Aero Acres to the south - which apparently serve the needs of private aviation. However, none of these facilities are within the Flint urban service area and there is no clear indication that additional facilities are necessary or desirable, especially within the urban service area. Therefore, this section of the Master Plan will be concerned with Bishop Airport and its relation to various features of the Master Plan.

Bishop Airport

In 1957 an "Airline Service Survey and Master Plan Review of Bishop Airport" was prepared² which outlined the growth potential and future space requirements for the Airport and its immediate environs. Subsequent to this report, steps were taken to acquire the necessary land for expansion, so additional land requirements or relocation considerations will not be a factor under the Master Plan. There are, however, several aspects of the air transportation picture which bear relation to other elements of the Master Plan. The highway network and land uses surrounding the Airport have a very substantial effect on the accessibility and efficiency of the port itself. The Airport and its flight pattern were, of course, considered in the preparation of the Land Use Plan as regards adjacent areas.

Barring unforeseen developments, Bishop Airport, with an excellent field and terminal building, should serve the needs of Flint and its surrounding area for the foreseeable future. The close proximity of Flint to the Detroit Metropolitan Area makes it unlikely that the very long runways necessary for long-haul jet service will be needed. Flint, of course, lies to the north of the heavily traveled east-west airways and is beyond the range of north-south flights to and from the Detroit region, and thus cannot efficiently be included on trunkline flights between other major hubs such as Chicago, Milwaukee and Cleveland. For this reason air service to Flint is determined largely by the number of air passengers generated in the Flint air service area rather than by its position as a stopping point on flights between major terminals.

The reasonable capacity of single runway types of airport such as Bishop is estimated at 200,000 operations per year. Allowing for natural growth and increased air travel the level of air activity by 1970 is expected to reach only 125,000.² Therefore, another major airport or an additional parallel runway at Bishop should not be necessary for a long time to come.

¹ Service at Bishop was added by North Central Airlines during 1960 - supplementing the service of Capital Airlines which previously was the only carrier providing local service.

² By Leigh Fisher and Associates.

Highways

The location of Bishop Airport in the Flint urban service area leaves little to be desired as regards accessibility. At present the driving time from the central business district to the airport is about 15 minutes, and proposed highway improvements should enhance its accessibility. Being located between the residential areas of the community to the north and east and the proposed industrial district to the south and southwest, the Airport stands to gain from the future highway improvements designed to provide access to this industrial area.

Bishop Airport is directly accessible from US-23 (Interstate-75), the existing expressway-type facility serving north-south movements in the region. The east-west expressway (M-78-21 By-Pass), as proposed, would pass directly to the north of the airport site, this connecting with proposed Interstate-475 and other highways and thoroughfares to the east, thus adequately providing for movements of traffic to and from the Airport.

Land Use

From the standpoint of land use, Bishop Airport will be surrounded for the most part by compatible land uses. Except for the land to the east, which is proposed to be developed residentially, little of the adjacent land use would feel the impact of the high noise levels found near a major airport. Even this residential area to the east would be "buffered" by the park proposed immediately east of the Airport. A future school to the east, incidentally, is proposed to be located south of the "approach" zone.

The Land Use Plan proposes industrial uses immediately to the north and south of the Airport, with land toward the west to remain agricultural. Both agricultural and industrial uses - except for smokestacks or other tall structures in flight zones - are considered highly compatible with airports. Even though the land east of the Airport is planned to be residential, it is unlikely that air traffic here will reach major proportions, since both the instrument landing system equipment and high intensity approach lights which would be used for most approaches under very low ceiling conditions are oriented for approaches from the west. Most other landings with high ceilings or clear weather would be made visually and not require the long flat straight-in instrument approaches necessary in extremely unfavorable weather.

Zoning

Despite the generally favorable land uses, present and prospective, in the environs of Bishop Airport, control of residential densities should prove beneficial within the two-mile approach zone beyond the clear zones. In addition, desirably no schools, churches or other places of assembly should be permitted in these zones. Presently, the territory involved is subject to Township regulations, including airport zoning. Should this come under the jurisdiction of Flint, appropriate regulations should be continued or refashioned, if need be, toward adequately attaining the objectives indicated.

INTERCITY TRUCK ROUTES

Flint's present truck traffic can be categorized as follows: truck-trailer and other truck traffic; and intercity and intracity traffic. The present truck route system distributes all types of truck traffic to all of the major and minor truck-traffic generators within and immediately adjoining the city. Five General Motors plants and one automobile haul-away truck terminal are the city's six major truck-trailer traffic generators. The city is further served by a number of truck terminals distributed through the non-residential sections. Other truck traffic is distributed more generally throughout the community area. It concentrates to a degree in the downtown area (including the Saginaw Street and Industrial Avenue areas north of the Flint River), and in an area between Court Street and Lippincott Boulevard north of Thread Lake.

The Present City Truck Route System

The present truck routes are spaced at an average interval of about 3/4 of a mile, generally distributed throughout the city. All of the trunklines are designated as truck routes, and the major arterial streets are so designated as well. On occasion a "spur" route is extended from a through route into an industrial district or to a terminal point for truck traffic. Concentration of truck traffic is heaviest on the trunklines, with a high proportion of truck-trailer traffic. It will be noted that on the present truck route system, both truck-trailers and other trucks are permitted on any of the routes. In general, intercity truck traffic tends to concentrate on the trunkline routes, while arterial-street truck routes serve as a distribution system for intracity truck trips and for the terminal portions of intercity trips.

The Proposed System

It is a suggestion of the Master Plan that Flint's truck routes be designated in two categories: intercity and intracity routes. The following routes (with accompanying recommendations) are suggested as integral parts of the intercity truck route system, providing a system of truck routes connecting Flint's major generators and the cities of the region:¹

Interstate 75 With the Fenton-Clio expressway completed, Flint has the beginning of a major, high-standard intercity truck route to northern points and to southern points lying west of Detroit. With the building of I-75's southern portion the Flint Metropolitan Area will have a high standard connection to metropolitan Detroit as well. In the Flint urban area, I-75 provides direct connection to the Van Slyke industrial area and serves as the community's major north-south by-pass as well.

Interstate 475 A high proportion of the area's regional truck traffic has origin or destination at Flint's major generators. As proposed, Interstate 475 will connect these generators into the total Interstate system. With its com-

¹ Map: Intercity Truck Routes.

pletion, a facility will be provided that is designed to handle heavy traffic with speed and safety, affording more direct access to Flint points of origin and destination.

Relocated M-78 and M-78BR The southernmost leg of the relocated M-78 system can provide for intercity traffic on (or, along) an east-west community by-pass comparable to that provided in a north-south direction by the Fenton-Clio Expressway. In addition, by interchanging with I-75, US-23 and I-475, the route can provide a major east-west connection between these routes. M-78's city-penetration route (relocated M-78BR) is envisioned as an expressway-type connector to Flint's 4th-5th Avenue Crosstown, providing direct access to the major trucking generators near the center of the community.

M-21 (to the west) If M-21 traffic is directed to relocated M-78 west of the urban area, this traffic will enter the area over the relocated M-78 system. If such redirection does not take place, continued use of the present M-21 would seem indicated, interchanging this traffic with the relocated M-78BR at the latter's crossing of Corunna Road.

M-21 (to the east) With projected traffic unlikely to require expressway capacity in the near future, use of Davison Road as an intercity truck route may well continue.

Saginaw Street It seems likely that the proposed Interstate system will attract most of Flint's regional, long-haul, north-south truck traffic. Saginaw Street seems likely to play a somewhat changed role in the future, serving principally short-haul regional traffic.

Dort Highway Dort Highway will continue to provide the principal intercity truck route connection to the manufacturing areas on Flint's east side. With the completion of the southern leg of I-75, most, or all, by-passable north-south traffic will be attracted away from Dort Highway. However, as local traffic increases continue, that segment of Dort Highway between Pierson Road and Saginaw Road seems likely to carry an increasing volume of regional truck traffic.

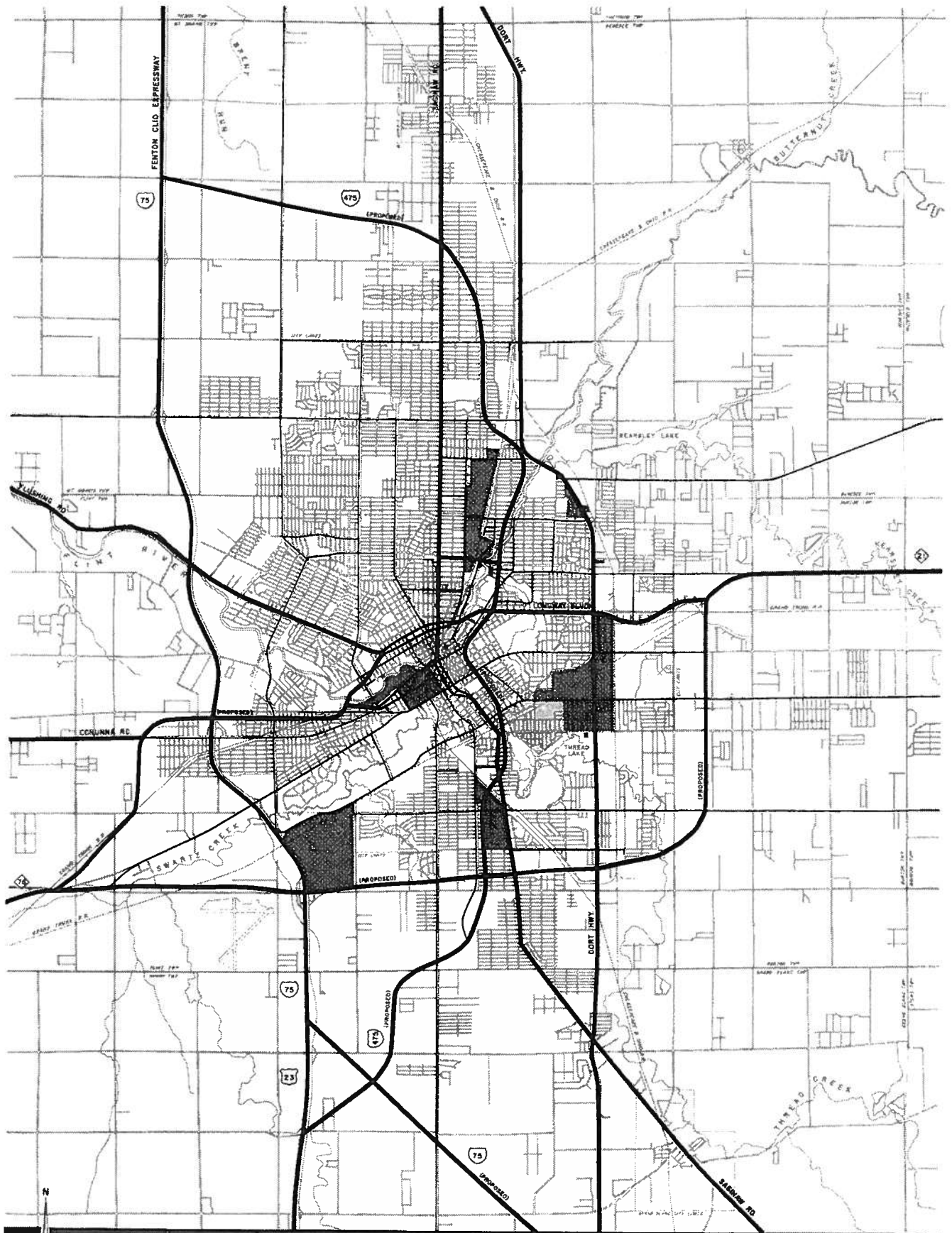
Flushing Road This route is indicated for short haul, intercity truck traffic, connecting the 4th-5th Avenue Crosstown to the village of Flushing and to nearby points.

While it is the purpose, here, to formulate an intercity truck route system, for completeness the accompanying map shows Flint's present truck-route system as well. It will be noted that most of these routes follow the primary thoroughfare system recommended in the Major Street Plan. With regard to the city's future intracity truck route system, it may prove desirable to modify the present pattern somewhat, gaining an even greater coordination with the proposed primary thoroughfare system.

Trucking Terminals

It is suggested that truck terminal location be encouraged at desirable points along the proposed intercity truck route system. It is further suggested:

- a) that new-terminal location off the intercity system be discouraged;



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INTERCITY TRUCK ROUTES
 FLINT MICHIGAN AND ENVIRONS

- INTERCITY TRUCK ROUTES
- PRESENT INTRACITY TRUCK ROUTES

- REGIONAL TRUCK TRAFFIC GENERATION
- MAJOR GENERATOR OF TRUCK-TRAILER AND OTHER TRUCK TRAFFIC (OVER 90 TRUCK-TRAILER TRIPS PER DAY)
 - MAJOR GENERATOR OF OTHER TRUCK TRAFFIC (OVER 200 TRUCK TRIPS PER DAY)
 - TRUCK TERMINAL

- b) that an effort be made to relocate present terminal facilities close to, and preferably on, the highest standard intercity truck routes available - preferably the expressway system.

The community's haul-away truck terminals act as major generators of intercity truck traffic. Both the trucking companies and the city would, perhaps, be best served if these facilities were located on expressway. Especially to be encouraged would be the relocation of the haul-away truck terminal from north Dort Highway to an I-475 location in the vicinity of the Buick plant - possibly on a site made available through an urban redevelopment program.

Two truck terminals presently operate in the downtown area on railroad sidings. Operation of the terminals is inhibited by other traffic demands in their areas. The terminals and nearby warehousing facilities congest the traffic pattern at these locations, and hamper greatly the future development of these portions of the downtown area. Relocation of these facilities on intercity routes away from the downtown area is to be desired.



WALKER ELEMENTARY SCHOOL
JOURNAL PHOTO

PUBLIC SCHOOL PLAN

Flint's Board of Education has shown good judgment and foresight in its expansion of Flint's public school plant, keeping it abreast, and in some areas, actually somewhat ahead, of the demand for school facilities. Flint is widely regarded as a city taking the lead in developing the community school concept - using its public schools as full-time community education and recreation centers.

In the following text and maps, specific recommendations are advanced toward the desirable expansion and integration of public school facilities for the entire Flint community. In setting the scale for these recommendations, recent trends in enrollment were studied and future enrollment projections drawn. School enrollments in the environs were projected to 1980. City enrollment projections were derived from the full population holding capacity of city land. School need projections generally were based on anticipated overall growth in population and on indicated trends in age composition.

In evolving these recommendations for Flint's expanding school system, certain assumptions are made:

- a) that the Master Plan will be adopted and carried out in progressive steps; that development of the community as a whole will proceed in general accord with the recommendations of the Plan;
- b) that the school system will operate on a 6-3-3 basis - grades kindergarten through six in elementary schools, seven through nine in junior high schools, and 10 through 12 in the senior high schools;
- c) that the prognostications of population growth and age composition, on which estimates of future school enrollments and classroom requirements are based, will not be invalidated by major changes in the trends now indicated;
- d) that indicated trends in residential land use densities will continue;
- e) that public school-parochial school attendance ratios will remain fairly constant;
- f) that it will prove possible, legally and otherwise, for boundaries of the school attendance areas to be established and re-established substantially as hereinafter indicated.

Principles and Standards

In Flint, a community elementary school (the central, "mother" unit) with capacity from 300 to 400 pupils is considered the minimum size basically economical to operate. Further economies often are realized with an increase in this student enrollment. To provide the proper setting for school buildings and to

allow for adequate playground area, elementary school sites desirably should be at least five to 10 acres in area, and school yards should be adequately equipped to provide year-round recreation for children of school age. The school playground often can and should serve as the principal playground in a neighborhood area.

The use of primary units by the Flint Board of Education affords considerable latitude in the expansion and contraction of the community school plant to fit current needs of an increasing or decreasing population in given school districts. Individual grades (kindergarten through three) are housed in separate classroom structures. These are built to conform to the residential structures in the neighborhood, and are placed on individual lots, with the buildings so designed as to facilitate conversion of each classroom structure to a single-family dwelling, with subsequent sale by the Board of Education on that basis. As developmental characteristics change, those primary classes held in the primary units either can be consolidated in those classes served in a conventional elementary school building, or dropped - in either case discontinuing the use of the primary unit.

A junior high school is justified where enrollment in the three junior high grades reaches 350 to 500 pupils. Here, again, some greater economy can be realized with larger enrollments. Junior high school sites will vary considerably in size, depending, chiefly, on the desirability of on-site accommodation of community playfield areas. Sites of 40 to 50 acres often are desirable to provide a full complement of playfield activities.

A senior high school commonly serves enrollments upward of 800 to 1,000 pupils. To accommodate contemporary one and two-story design plus a full complement of playfield activities, sites of 50 acres are desirable.

Classroom capacity often must be adjusted to current demand and to the availability of both classroom space and teachers. Desirably, capacity of regular classrooms should not exceed 30 pupils in elementary grades and 25 pupils in junior and senior high school grades. Where feasible, each school should be located near the geographic center of the attendance area which it serves. Children of elementary school age ordinarily should not be required to walk farther than one-half to two-thirds of a mile to reach a school. Under optimum circumstances, junior high school students should not need to walk more than one and one-quarter miles. In the case of senior high school students, walking distance usually is no longer of serious concern, for most pupils have other means of private or public transportation.

Present School Systems

The Flint community presently is served by a number of school systems:

- a) the public school system in the city of Flint - comprising 35 elementary schools, seven junior high schools, three high schools, and the college center;

- b) the public school system of the County, administrated under a number of school districts and comprising, in the Flint environs, some 24 elementary schools, six junior high schools, and 10 high schools;
- c) the parochial schools of the community, comprising 18 elementary schools and eight junior-senior high schools.

Flint Public Schools

Elementary schools, in the Flint school system, house grades kindergarten through six; junior high schools, grades seven through nine; senior high schools, grades 10 through 12. Flint's oldest existing public elementary school is Doyle elementary, built in 1901. Thirteen of Flint's public schools were built before 1920 - in order of age as follows: Doyle, Walker, Hazelton, Oak, Stevenson, Dort, Clark, Homedale, Parkland, Fairview, Cook, Lewis and Lincoln. About one-half of Flint's public schools are situated on sites larger than five acres. Most of the sites exceed two acres in size with only Doyle, Hazelton, Stevenson and Oak being smaller.

Flint's public schools have been located with due regard to the geographic areas which they serve - in general, at or near the geographic centers of attendance areas. Departures from this practice most often are due to an irregular pattern of residential development in an individual attendance area. In some cases, however, schools have been located principally on the basis of site availability.

Public Schools in the Environs

The elementary, junior high, and senior high schools in Flint's environs are administrated under 15 separate school districts. In the environs, schools are located with regard to present population distribution within individual school districts. For the most part, schools have been built as expanding residential areas have created a demand. As a result of these two factors:

- a) location of schools has been on the basis of existing school districts rather than the emerging and prospective population distribution, with schools in adjoining school districts thus bearing little geographic relation to each other;
- b) within the individual school districts, the school locations selected have not always been advantageous with regard to the prospective distribution of population.

Parochial Schools

The community's parochial schools supplement its public school system. Of Flint's 18 parochial schools, 11 are Catholic, five are Lutheran; one is Seventh Day Adventist; and one is Christian denominational. Eight of the Catholic schools accommodate high school grades.

Public School Enrollment Trends and Projections

School enrollment projections admittedly are difficult, for a school attendance area represents a relatively small population unit for prognostication. In the past, such projection has been especially difficult, with adequate information relatively unavailable in regard to the amount of vacant land remaining for development in any given school attendance area. Derived from the Master Plan land use surveys, such information becomes a valuable tool in the projection of school enrollments. Estimates can be made for an area's full population holding capacity - in effect, the maximum enrollment that can reasonably be anticipated with current trend patterns of residential development and household characteristics.

Toward this end, the population holding capacity has been estimated for 35 study areas within the present city limits, corresponding to the 35 present elementary school attendance areas.¹ For each of the elementary schools, 1958-59 area enrollments were compared with existing capacity. Anticipated proportionate increase or decrease in each attendance area was applied to 1958-59 enrollment and compared with present school capacity. A similar procedure was followed in the case of junior high school and high school attendance areas.

Summary

Public school enrollment projections for city of Flint public schools are based on community population age composition projections, on enrollment factor trends, and on availability of vacant, developable land in each of the indicated school attendance areas. The projection made for each attendance area is based on full land development at current area residential density. It represents a maximum population that can reasonably be expected in an area if present developmental trends continue.

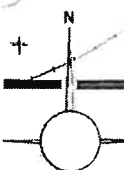
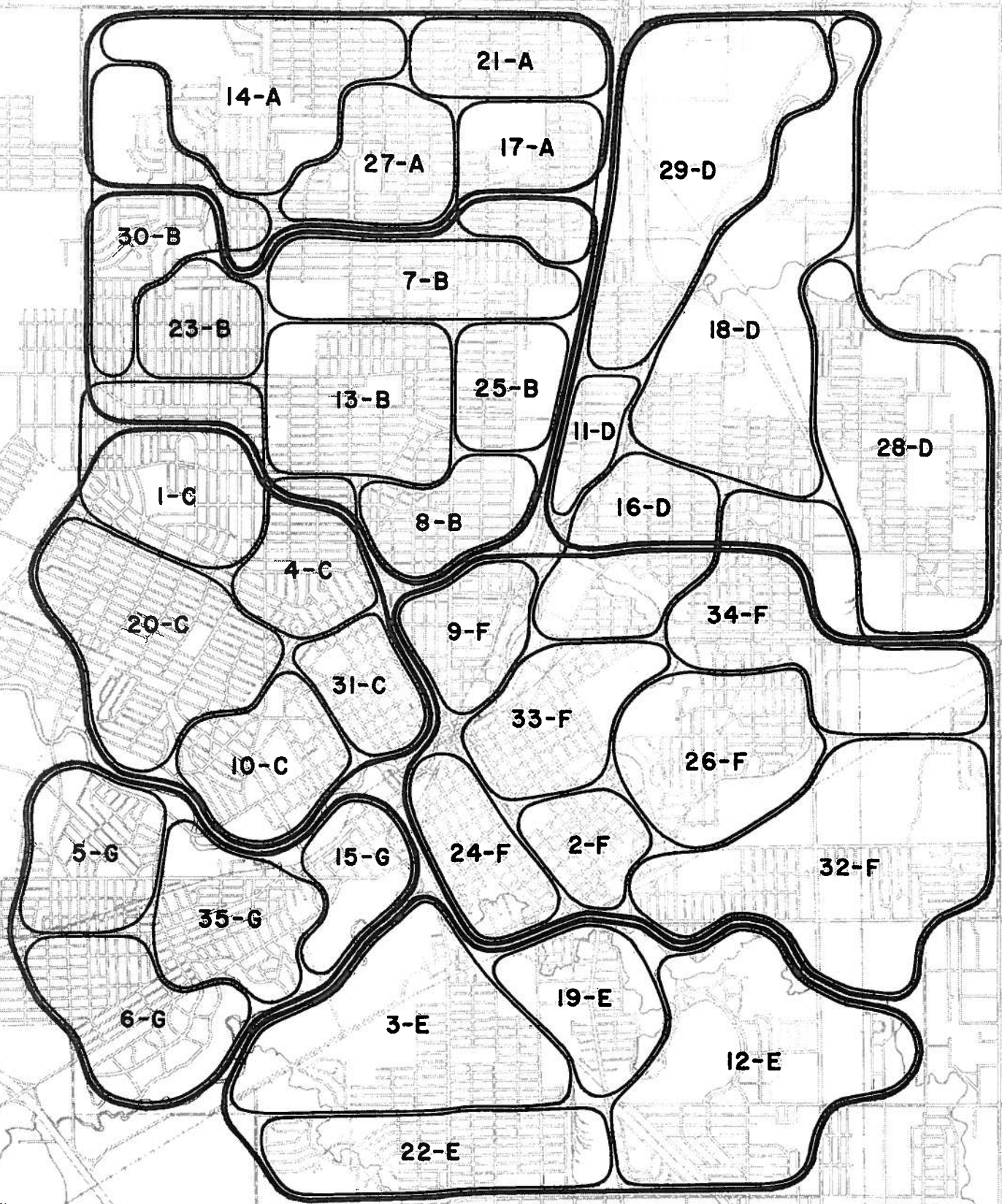
Public school enrollment projections for Flint's environs are based on 1960 population projections, on community population age composition projections and on the anticipated density of residential development for outlying areas. The projected population is not necessarily the full population holding capacity of each area, but rather, the population likely to be reached in about 20 years.

Proposed Public School System

School enrollment projections suggest the following for consideration as circumstances dictate in the formulation of a public school plan:

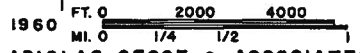
- a) where projected enrollment shows a relatively small increase over present capacity: provide additional capacity (in building additions or in new structures) at the present school site; or reduce enrollment through minor adjustment of attendance area;

¹ Map: Population Study Areas.



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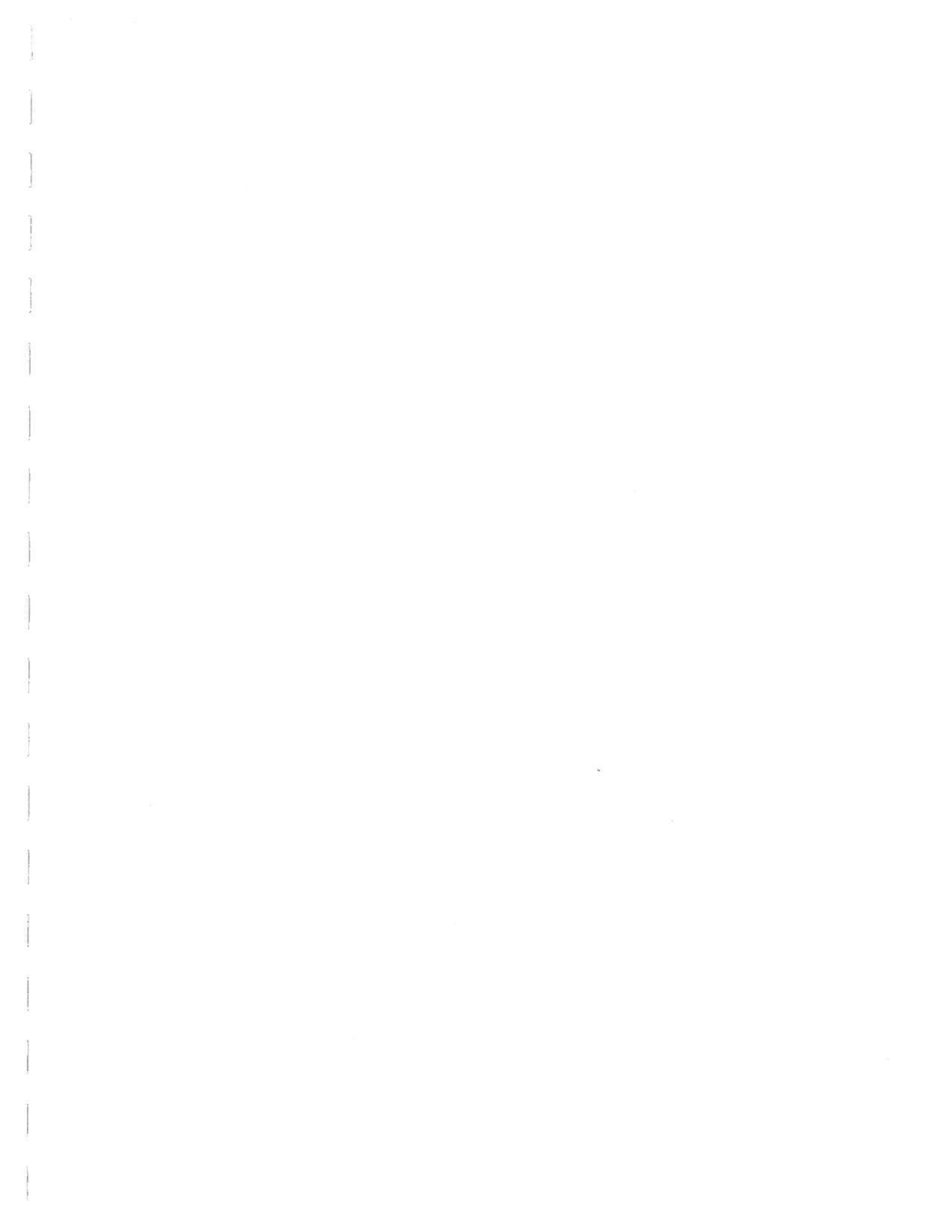
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POPULATION STUDY AREAS

FLINT · MICHIGAN · AND ENVIRONS

—— PERIMETER OF NEIGHBORHOOD STUDY AREA

—— PERIMETER OF COMMUNITY STUDY AREA



- b) where projected enrollment increase is large: divide present attendance area, providing new schools on new sites to accommodate anticipated increase;
- c) where projected enrollment shows a relatively small decrease below present capacity: reduce capacity by discontinuing use of some primary units; or increase enrollment through minor adjustment in attendance area;
- d) where projected enrollment decrease is large: discontinue use of some community school units.

The Attendance Areas

Based on the above considerations and others relative to costs and school site availability, eight new elementary school attendance areas are recommended for the present city area.¹ Enrollment projections have been made for these eight attendance areas, and for the 35 attendance areas served by existing elementary schools.

In Flint's environs outside the present city, 61 attendance areas are proposed - 24 utilizing existing elementary schools, and 37 requiring new elementary school facilities.¹ Enrollment projections were developed for these attendance areas.

As regards public junior high school attendance areas, the recommendations recognize, in the case of three of the areas (E, G, H), the desirability of combining three outlying residential areas with three presently in the city of Flint.² One of these proposed attendance areas (E) combines related-outlying residential tracts with a major in-city attendance area. The other two (G, H) are so fashioned as to permit the combined operation of a single, large junior high school or separate operation of two schools in each - one in the present city and one in the outlying area. In addition to these combined areas (E, G, H) - nine new junior high attendance areas are suggested in the environs - five (Mt. Morris, Daly, Bendle, Grand Blanc, Mandeville) using existing school facilities and four requiring new school facilities.

Projected senior high school attendance figures are based on five senior high attendance areas. Three of these (Atherton, Beecher, Kearsley) utilize present facilities while two would require new senior high schools. As an alternative, two present high schools - in the incorporated communities of Grand Blanc and Mt. Morris - may be continued with capacities increased as required. In this case, there would be seven high schools in the environs.

Elementary Schools

The findings, in regard to individual elementary schools in respect to capacity requirements, together with recommended action, in cases where necessary, are summarized in the accompanying table³ which is keyed to the accompanying map.¹

¹ Map: Public Elementary School Plan.

² Map: Public Junior High and High School Plan.

³ Table: Public Elementary Schools.

It will be noted that the city of Flint schools and their attendance areas are designated by single or double digit numbers, whereas the environs schools and areas are designated by three digit numbers. The latter areas, in general, represent reductions and adjustments in other respect in the present attendance areas, as will be necessary in order to adjust to the evolving urban densities as further urban development occurs in the environs.

Junior and Senior High Schools

The findings, in regard to individual junior and senior high schools in respect to capacity requirements, together with recommended action, in cases where necessary, to be effectuated as community development and population growth occur, are summarized in the accompanying table¹ which is keyed into the accompanying map.² Under the Plan, certain city and environs areas have been combined as already noted, in setting up attendance areas bearing appropriate relation to others and of such size as to justify schools of sufficient enrollments to effect the economies already noted. Should it not prove feasible to make such consolidations, extra schools - such as noted previously - will need to be provided.

* * *

Recommendations in regard to elementary, junior high and high school sites are indicated on the accompanying composite map.³ The map makes available a single reference to the recommendations set forth in the accompanying tables.

Special Considerations

Future Use of Primary Units

It is anticipated that the practice of using primary units will continue and perhaps increase in the city of Flint as well as in the environs. As indicated previously, these units permit a flexibility in school construction that will undoubtedly find much use in the years to come. Seemingly, primary units will prove especially useful in adapting the facilities of an expanding school plant to the demands of growing population in the now vacant or sparsely developed parts of the urban service area.

Adult Educational and Recreational Use of Public School Facilities

With its Mott Foundation Program, Flint's leadership in the field of adult educational and of recreational use of school facilities is widely recognized. Supported by the endowment of its founder, Charles Stewart Mott, it has, over a period of 25 years, worked toward community betterment through a comprehensive program of education and recreation. It utilizes the facilities of the public school system; adult education classes are conducted in community schools throughout the city. Over 3,000 classes are offered and enrollment exceeds

¹ Table: Public Junior High and Senior High Schools.
² Map: Public Junior High and High School Plan.
³ Map: Public School Plan.

PUBLIC ELEMENTARY SCHOOLS

Attendance Area	School Name	Existing School		Proposed School	Remarks
		Adequate Capacity At Present	In Prospect		
<u>City Attendance Areas</u>					
1	Clyde Park	X			
2	Clark	X			
3	Cody		X		Transfer pupils in western part of attendance area to new school (#38).
4	Cook	X			
5	Coolidge	X			
6	Cummings	X			
7	Dewey	X			
8	Dort	X			Excess capacity (if old Tech high school included); transfer pupils from adjacent attendance areas as need arises. Transfer pupils in northern part of attendance area to Dort (#8).
9	Doyle		X		Transfer pupils in northern part of attendance area to new school (#40 or #43).
10	Durant	X			
11	Fairview			X	If area is redeveloped, discontinue use.
12	Freeman	X			
13	Garfield	X			
14	Gundry		X		Transfer pupils in western part of attendance area to new school (#36).
15	Hazelton	X			
16	Homedale	X			
17	Jefferson	X			
18	Lewis		X		Transfer pupils in northern part of attendance area to new school (#40 or #43).
19	Lincoln	X			
20	Longfellow		X		Transfer pupils, western part of attendance area, to new school (#41).
21	Martin	X			
22	McKinley		X		Transfer pupils in western part of attendance area to new school (#38).
23	Merrill	X			
24	Oak	X			
25	Parkland	X			
26	Pierce	X			
27	Pleron			X	Increase capacity to accommodate projected enrollment. Transfer pupils in northern part of attendance area to new school (#43)
28	Potter		X		If area is redeveloped, discontinue use; transfer pupils in northern part of attendance area to new school (#37).
29	Roosevelt			X	Transfer pupils, northern part of attendance area, to new school (#36).
30	Selby		X		
31	Stevenson	X			
32	Stewart		X		Transfer pupils, eastern part of attendance area, to new schools (#39, #42).
33	Walker	X			Excess capacity; consider utilizing in related community school program
34	Washington	X			Excess capacity; possible use of excess space by junior high grades or for allied community school use.
35	Zimmerman	X			

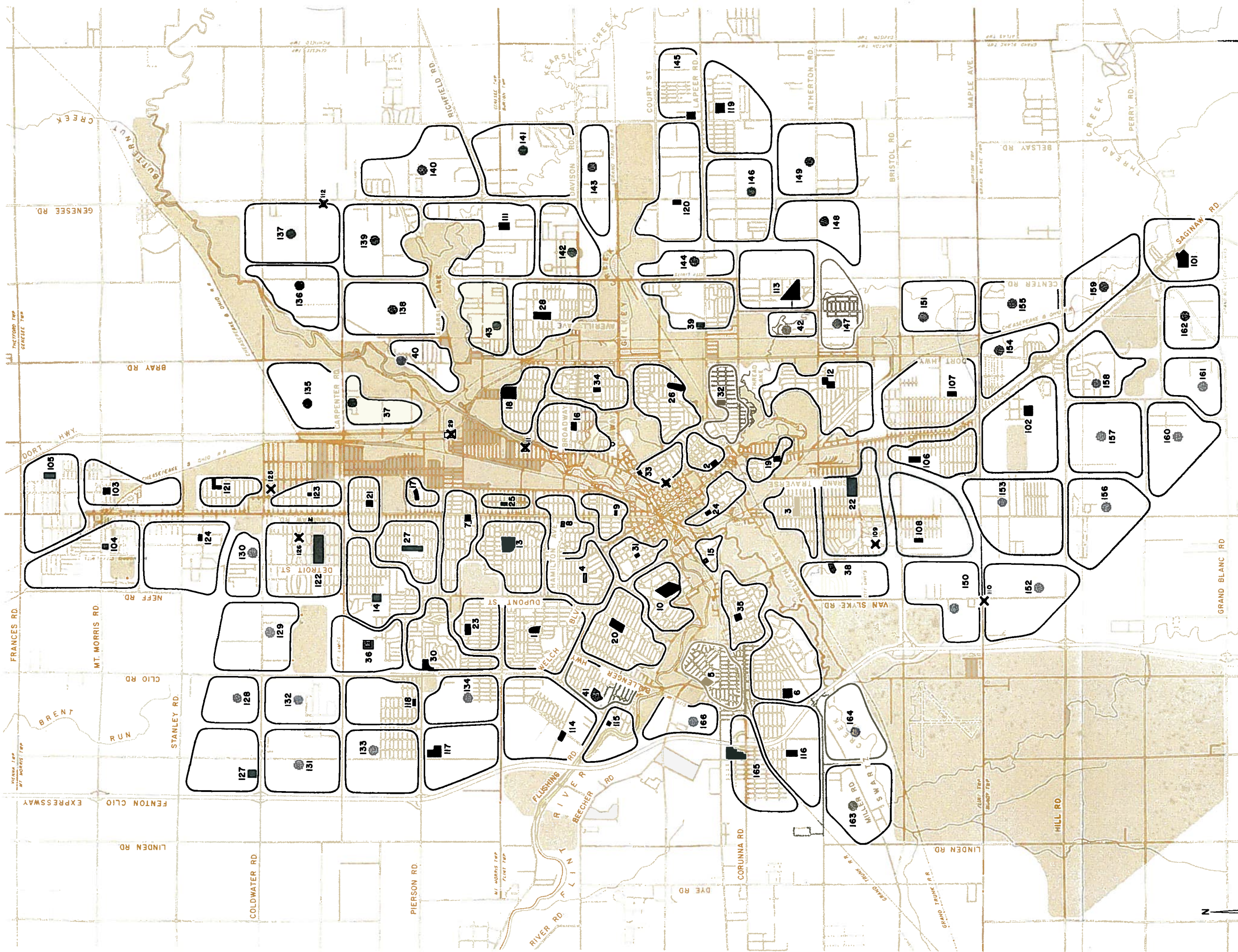
Attendance Area	School Name	Existing School		Proposed School	Remarks
		Adequate At Present	Capacity In Prospect		

Attendance Area	School Name	Adequate At Present	Capacity In Prospect	Proposed School	To be		Remarks
					Enlarged	Discontinued or Converted	

36	New School			X			To accommodate excess projected enrollment from attendance areas #14 and #30.
37	New School			X			To accommodate projected enrollment from northern part of attendance area #29.
38	New School			X			To accommodate excess projected enrollment from attendance areas #3 and #22.
39	New School			X			To accommodate excess projected enrollment from northeast part of attendance area #32.
40	New School			X			To accommodate excess projected enrollment from attendance area #18.
41	New School			X			To accommodate excess projected enrollment from attendance area #20.
42	New School			X			To accommodate excess projected enrollment from southeast part of attendance area #32.
43	New School			X			To accommodate excess projected enrollment from attendance area #28.

Enviroms Attendance Areas

101	Grand Blanc			X			Increase capacity as required.
102	McGrath			X			Increase capacity as required.
103	Mt. Morris (Jr. High)				X		Convert from junior high to elementary use.
104	Montague			X			Increase capacity as required.
105	Moore			X			Increase capacity as required.
106	West Bendle			X			Increase capacity as required.
107	South Bendle			X			Increase capacity as required.
108	Fenton Lawn			X			Increase capacity as required.
109	Garman Park				X		Consolidate attendance area; discontinue elementary use; convert to related community school use.
110	Van Slyke				X		Poor location in attendance area; discontinue elementary use; convert to related community school use.
111	Weston			X			Increase capacity as required.
112	Paro				X		Consolidate attendance areas; discontinue elementary use; convert to related community school use.
113	Van Y			X			Increase capacity as required.
114	Hoover		X				Continue elementary use; convert junior-senior high facilities to elementary use
115	Lena Stalker			X			Increase capacity as required.
116	Woodland			X			Increase capacity as required.
117	Hamady		X				Continue elementary use; convert junior-senior high facilities to elementary use.
118	Beckwith			X			Increase capacity as required.
119	Barchitte			X			Increase capacity as required.
120	Johnson			X			Increase capacity as required.
121	Bulck			X			Increase capacity as required.
122	Buell		X				Continue elementary use; convert junior high facilities to elementary use.
123	George Street			X			Increase capacity as required.
124	Klein			X			Increase capacity as required.
125	Kurtz				X		Discontinue; part of attendance area within possible redevelopment area; site on proposed expressway right-of-way.
126	Northgate				X		Consolidate attendance areas; discontinue; convert to related community school use.
127	Gustin			X			Increase capacity as required.
145	Bentley			X			Continue elementary use; convert junior high facilities to elementary use.
165	Utley			X			Continue elementary use; convert junior-senior high facilities to elementary use.









**COMPREHENSIVE
MASTER PLAN**

CITY OF FLINT · MICHIGAN
FLINT PLANNING COMMISSION
1960

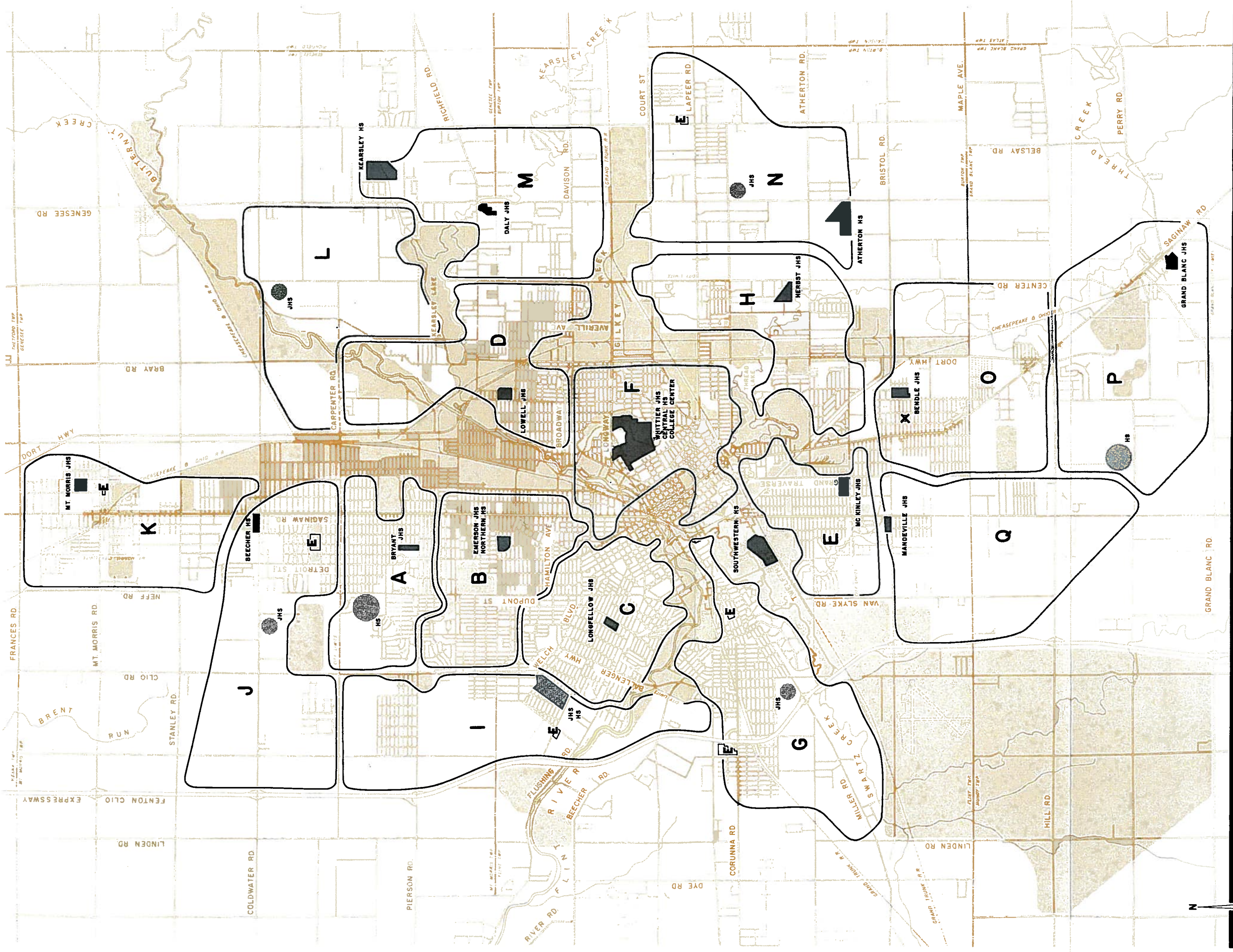
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PUBLIC ELEMENTARY SCHOOL PLAN
FLINT MICHIGAN AND ENVIRONS

-  PRESENT SCHOOL SITE - CONTINUED USE
-  PRESENT SCHOOL SITE - DISCONTINUED USE
-  PROPOSED SCHOOL SITE - SITE SELECTED
-  PROPOSED SCHOOL SITE - SITE UNDETERMINED
-  SCHOOL ATTENDANCE AREA
-  NON-RESIDENTIAL LAND USE

PUBLIC JUNIOR HIGH AND SENIOR HIGH SCHOOLS

Attendance Area	School Name	Existing		School		Proposed School	Remarks
		Adequate Capacity At Present	Capacity In Prospect	To be Enlarged	To be Discontinued or Converted		
<u>Junior High Schools</u>							
A	Bryant	X					
B	Emerson	X					
C	Longfellow	X					Adapt some elementary capacity to junior high use.
D	Lowell	X					
E	McKinley		X				Transfer pupils in eastern part of attendance area to school in area H (either Herbst J.H.S. or new school in city). Transfer pupils in western part of attendance area to school in area H (either Herbst J.H.S. or new school in city). If feasible, consolidate city and environs attendance areas and construct new school; otherwise, utilize excess capacity at Zimmerman elementary.
F	Whittier		X				If feasible, consolidate city and environs attendance areas and increase capacity.
G	Zimmerman					X	Convert junior high facilities to elementary use.
H	Herbst			X			Combine junior-senior high (See Senior High Schools below).
I	Hoover				X		Convert junior high facilities to elementary use.
J	New School					X	Combination junior-senior high (See Senior High Schools below).
K	Beecher				X		Convert junior high facilities to elementary use.
L	Mt. Morris (present junior high)				X		Convert junior high facilities to elementary use.
M	Mt. Morris				X		Convert junior high facilities to elementary use.
N	Mt. Morris (present junior high)				X		Convert junior high facilities to elementary use.
O	New School					X	Continue use of junior high facilities; convert elementary facilities to junior high use.
P	Bendle (present senior high)				X		Convert high school facilities to junior high use.
Q	Lamb (present junior high)				X		Discontinue.
<u>Senior High Schools</u>							
	Mandeville	X					Continue use of junior high facilities; convert senior high facilities to junior high use.
	Central		X				Adjust future enrollment to present capacity.
	Northern		X				Adjust future enrollment to present capacity.
	Southwestern		X				Adjust future enrollment to present capacity.
	New City High School					X	Locate in area A to serve northern sector; possible consolidation of attendance area with area I. (Note: Site was acquired in general area subsequent to preparation of accompanying map.) Increase capacity to accommodate areas N and O.
	Atherton			X			Increase capacity to accommodate areas J and K.
	Beecher			X			Increase capacity to accommodate areas J and K.
	Bendle				X		Discontinue; adapt facilities to junior high use.
	Grand Blanc					X	Discontinue; adapt facilities to junior high use.
	Hoover				X		If feasible to consolidate high school attendance areas, discontinue present high school facilities; adapt to junior high use; transfer students to new high school to the west (See text).
	Kearsley			X			Discontinue; adapt to elementary use; transfer pupils to new school.
	Mandeville				X		Increase capacity to accommodate areas L and M.
	Mt. Morris				X		Discontinue present high school facilities; adapt to junior high use.
	Utley				X		Discontinue present high school facilities; adapt to junior high use. If feasible to consolidate high school attendance areas, convert high school facilities to junior high use; transfer students to new school to the west. (See text.)
	New West Environs High School					X	Discontinue as high school; adapt facilities to elementary use.
	New South Environs High School					X	Junior-senior high school to serve area I unless high school students are accommodated at New City High School. (See above.) To serve attendance areas P and Q.










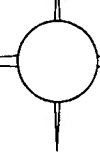
**COMPREHENSIVE
MASTER PLAN**

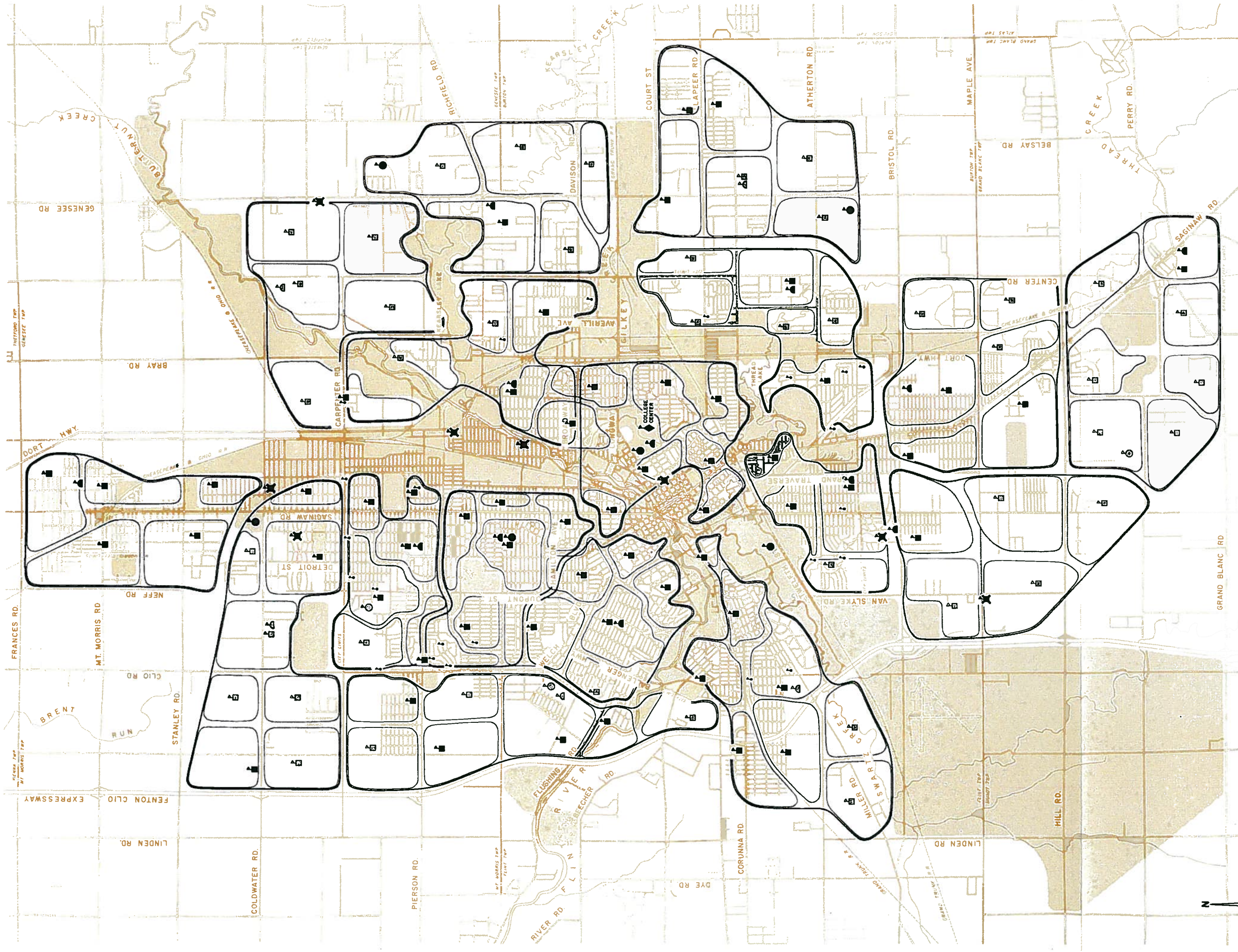
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 FLINT PLANNING COMMISSION
 1960
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**PUBLIC JUNIOR HIGH AND
HIGH SCHOOL PLAN**

FLINT MICHIGAN AND ENVIRONS

-  PRESENT SCHOOL SITE - CONTINUED USE
-  PRESENT SCHOOL SITE - DISCONTINUED USE
-  PROPOSED SCHOOL SITE - SITE SELECTED
-  PROPOSED SCHOOL SITE - SITE UNDETERMINED
-  PRESENT SCHOOL SITE - CONVERSION TO ELEMENTARY SCHOOL
-  SCHOOL ATTENDANCE AREA
-  NON-RESIDENTIAL LAND USE





**COMPREHENSIVE
MASTER PLAN**

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 FLINT PLANNING COMMISSION
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PUBLIC SCHOOL PLAN

FLINT MICHIGAN AND ENVIRONS

- HIGH SCHOOL
- ◻ JUNIOR HIGH SCHOOL
- ▲ ELEMENTARY SCHOOL
- ◻ PRESENT SCHOOL SITE - CONTINUED USE
- ◻ PRESENT SCHOOL SITE - DISCONTINUED USE
- ◻ PROPOSED SCHOOL SITE
- ◻ PRESENT PRIMARY UNIT SITE

- ◻ PRIMARY SCHOOL ATTENDANCE AREA
- ◻ JUNIOR HIGH SCHOOL ATTENDANCE AREA
- ◻ NON-RESIDENTIAL LAND USE

77,000. The Foundation provides the Flint Board of Education with funds necessary to carry out experimental projects in community improvement which might not be attempted with public funds. It seeks to demonstrate the effectiveness of the public school as a focal point for furthering the development of the community's human resources.

In the interest of economy of investment and operation, among other reasons, still greater use of public school facilities for adult education and for public recreation should be encouraged. Declining school populations have been found to be in prospect in some school attendance areas - due to declining family size plus the difficulty in adjusting attendance area boundaries owing to topography and various other features. In a number of such cases, where excess existing school capacity meets acceptable building standards and where only limited use is made of these facilities for school-day instructional purposes, more use of these facilities for special instructional courses - such as those of the Mott Foundation Program - seems reasonable and advisable.



BALLENGER PARK
JOURNAL PHOTO

PUBLIC RECREATION PLAN

A well-balanced public recreation system, in accordance with contemporary standards, should consist of parks and play areas of several distinctive types affording a wide range of recreational opportunities, so distributed in the community as to be conveniently accessible to all. As has been the case in Flint, consideration should be given to indoor recreation, such as activities requiring gymnasiums or assembly rooms of various sizes for smaller and larger groups.

In the field of open-air recreation, there are two general standards widely recognized in measuring the adequacy of recreational areas in a community. The first is that there should be 10 acres of recreation area available per 1,000 population, of which there should be three or more acres in neighborhood playgrounds, neighborhood parks and in playfields. The second is that eight to 10 per cent of the land in the community should be devoted to recreational uses. While these standards sometimes are difficult to meet, they may be taken as objectives to be attained eventually. However, the proper composition and distribution of the total recreational acreage is fully as important as the amount of total acreage in determining the adequacy of recreation systems. Different types of recreation areas are required to meet the needs of different population groups and these should be so distributed as to be conveniently accessible to the groups they are intended to serve primarily; otherwise they will not be used and, consequently, will not be effective.

Modern public recreation systems usually consist of the following principal types of areas:

- a) playgrounds, primarily at elementary schools, plus auxiliary or supplementary ones;
- b) neighborhood parks (or neighborhood park-playgrounds), located in neighborhood areas; at times, combined with school sites;
- c) playfields, located in relation to community and sub-community areas at senior and junior high schools; also at other locations (primarily for others than school enrollees) in larger parks or located separately;
- d) community parks (with playfields where needed);
- e) large city parks (also with playfields where needed);
- f) outlying reservations and recreational areas.

There are, of course, in addition, certain special types of recreation facilities - provided generally in combination with the above-mentioned areas - such as swimming pools, tennis courts, golf courses, camp sites, picnic grounds, community centers, band shells, outdoor theaters, and the like.

Present Recreation System

Funds expended in supplying a community's recreation and park needs fall into two categories:

- a) a capital outlay for the acquisition and improvement of sites and facilities;
- b) maintenance and operating expenses.

In the Flint community a number of governmental bodies share the responsibility for expending funds in both of these categories. In the city of Flint, the Recreation and Park Board bears the responsibility for both capital cost and operation of the city recreation system. Capital cost of recreational facilities provided in school buildings and on school sites is under the jurisdiction of the Flint Board of Education. Extra-curricular utilization of these facilities on a community-wide basis is provided as part of the Mott Foundation Program, described in general elsewhere.¹ In the environs, school recreational facilities are owned by a number of individual school boards. The Genesee County Road Commission operates three large, outlying parks in Genesee County - Flushing Park, Linden Park, and Richfield Park - all outside Flint's urban service area.

About 1,300 acres of recreational land are under the jurisdiction of the Recreation and Park Board and the Board of Education in the city of Flint. Neighborhood parks or park-playgrounds, along with school playgrounds account for some 250 acres of this total. Flint's playfields comprise another 230 acres or so of its recreational land. The remaining 800 acres of recreation land are devoted to various major recreation uses - golf courses and others - at the several relatively large recreation areas in the city.

As has been noted previously,² Flint's present recreation land/population ratio is comparatively favorable, being higher than average in the city of Flint. Though considerable land area is available for public recreation use, its development is uneven, with much of the acquired land lying relatively undeveloped.

Proposed Recreation Plan

Quantitative Evaluation in Terms of Present Population

In arriving at the recommendations advanced herein, present city playground and playfield land was quantitatively evaluated in terms of present population in the various residential areas. For playgrounds, neighborhood parks and park-playgrounds, land area needs were derived on the basis of an optimum land area ratio of about 1.5 acres per 1,000 population. Based on this ratio, and to achieve these optimum standards, city of Flint neighborhoods presently would re-

1 See section on Public School Plan.

2 See section on Land Use.

quire the acquisition of some 85 acres of neighborhood park or playground land. Playfield land area needs were derived on the basis of an optimum ratio of 1.25 acres per 1,000 population. To reach this desirable standard, an additional 100 acres or so, distributed in the city's community areas, would be needed at the present time.

Study Area Population Trends and Projections

As an integral part of population projections under the Master Plan program, area population projections were devised for the entire urban service area.¹ A benchmark for all of the various parts of the Master Plan, these population projections set the scale for the proposed Recreation Plan in the Flint community. Projections for the present city area were drawn on the basis of the full population holding capacity of present city land. Population projections in the environs were derived from area-wide projections for the year 1980.

The Plan

Recreation recommendations include some 4,500 acres, exclusive of water areas, in the Flint community. This supply of recreation land would meet the community's indicated future need, drawn from various empirical ratios of park land to population as adapted to local circumstances. The recommendations further recognize the need for adequate spatial distribution of recreational land throughout the community. Developmental needs for present and future recreation areas are recognized though not detailed in this report of land needs. Due to cost factors involved and to the limited availability of large land tracts in an expanding community, it is advisable to secure open land for parks ahead of other developments in the area. Development of these park lands for recreational uses then can take place as a growing population expresses its needs.

Playground and Neighborhood Park Plan

In addition to recommending more intensive development of present park and playground areas, the proposed plan indicates a projected future need of some 140 acres in the present city and 260 acres in the present environs. This acreage, as shown on the accompanying illustration² is distributed throughout the Flint community. Some of it would comprise additions to present facilities while most would be supplied at new sites. These proposals are listed in the accompanying table³ (with letters indicating the type of area - P for park, S for school and school playground, and PS for neighborhood park combined with or adjacent to a school site). It should be noted that in certain instances school sites may serve the primary recreational needs of the neighborhoods - especially in outlying areas where relatively more open-type residential development may be anticipated. Where a choice is indicated, a combined facility or a park adjacent to the school site may be warranted depending on population age composition in the tributary area and other factors.

¹ Map: Population Study Areas, in section on Public School Plan.

² Map: Public Playground and Neighborhood Park Plan.

³ Table: Public Playgrounds and Neighborhood Parks.

Playfield Plan

The proposed Plan recommends more intensive development of present playfield facilities. It further indicates a projected future need of some 150 acres of playfield land in the present city area and about 150 acres in Flint's environs. This acreage, as shown on the accompanying illustration¹ is distributed throughout the Flint community. As with the playgrounds and neighborhood parks, some acreage would be added to present facilities, while much would be supplied at new playfield sites. These proposals are listed in the accompanying table.²

Major Recreation Area Plan

The recommended future major recreation areas comprise relatively large land areas which often include playgrounds and playfields as well as those facilities requiring greater acreage. Where possible, they recognize areas of natural development potential. Major recreation area acreage, as shown on the accompanying illustration,³ is distributed through the Flint community - all sites within easy driving distance of all parts of the community. These present and proposed areas are set forth in the accompanying table.⁴

* * *

Existing and proposed recreation facilities in the different categories above discussed in brief are shown on the accompanying composite map.⁵

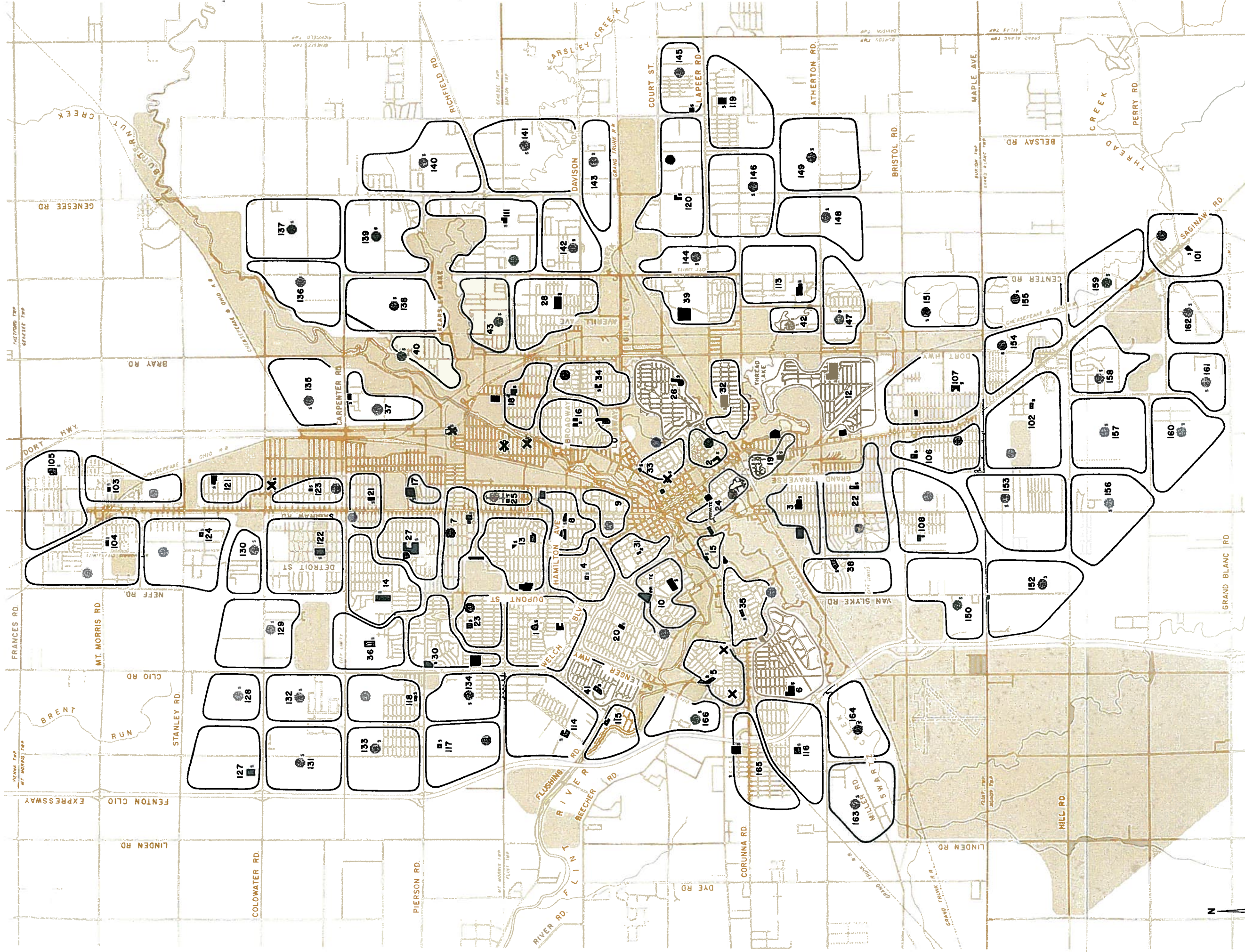
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- 1 Map: Public Playfield Plan.
 - 2 Table: Public Playfields.
 - 3 Map: Plan for Major Recreation Areas.
 - 4 Table: Major Recreation Areas.
 - 5 Map: Public Recreation Plan.

PUBLIC PLAYGROUNDS AND NEIGHBORHOOD PARKS

Neighborhood or Community	Name of Facility	Existing		Proposed	Function			Remarks	
		Adequate	To be Enlarged		P - Park	S - School- Playground	PS - Park- School		
1	Civic Park	X				X			Retain; adjust for Forest Hill Avenue Improvement.
	Bassett						X		Retain; adjust for Hamilton Avenue Improvement.
2	Clark						X		Retain.
	Clifford								Replace eventually.
	New facility			X			X		(See text).
3	Cody	X					X		Add five acres to present playground area.
	Lincoln	X					X		Discontinue.
4	Cook						X		Discontinue.
5	Coolidge			X				X	
	Mann-Hall								
	McCallum								
6	Cummings	X						X	
	Chicago Blvd.	X							
7	Dewey			X					Add one acre to present playground area.
	Forest Park	X					X		
	New facility			X					Five acres at new site.
8	Dart	X					X		
	Durant			X					Add two acres to present playground area.
	Oak	X					X		
9	New facility			X					Nine acres possibly as part of rehabilitation area.
10	Durant.	X						X	
	Ballenger								Private operation.
11	Fairview						X		Discontinue if area redeveloped.
	St. John Street								(Neighborhood playground-community center)
12	Freeman- Farnumwood	X						X	Discontinue if area redeveloped.
	Windlate	X					X		
13	Garfield	X					X		
	Hardenbrook	X					X		
	Iroquois	X					X		
14	Gundry- Hasselbring	X						X	
15	Hazeltan	X					X		
	Aldrich	X					X		
	Mobley	X					X		
16	Homedale	X					X		
	Kearsley	X					X		Convert five acres of present park to playground use.
17	Jefferson- Oak Knoll	X						X	
18	Lewis	X					X		
19	Lincoln	X					X		
	McKinley- Threed Lake- Cummings	X					X		
20	Longfellow	X					X		10-acres at new site.
	New facility			X					Six acres at new site.
21	Martin	X					X		Six acres at new site.
	New facility			X					Six acres at new site.
22	McKinley	X					X		Six acres at new site.
	New facility			X					Six acres at new site.
23	Merrill	X					X		Five acres at new site.
	New facility			X					Private operation.
24	Memorial	X					X		Five acres at new site.
	New facility			X					
25	Parkland	X					X		Six acres possibly in connection with rehabilitation or redevelopment.
	New facility			X					
26	Pierce	X						X	
	Burroughs- Woodlawn	X					X		
27	Pierson	X					X		

PUBLIC PLAYGROUNDS AND NEIGHBORHOOD PARKS

Neighborhood or Community	Name of Facility	Existing		Proposed	Function			Remarks	
		Adequate	To be Pulvered		P - Park	S - School- Playground	PS - Park- School		
28	Hillborn Potter- Longway	X						X	
29	Roosevelt	X					X		Discontinue if area redeveloped.
30	Selby	X					X		
31	Sarvin Stevenson	X						X	Retain; suggest also extended use Whaley Home playground (see text).
32	Stewart- Brennan	X						X	Retain present new site area.
33	Walker Wilson	X					X		
34	New facility Washington		X		X		X		Nine acres in connection with junior high school site.
35	New facility Zimmerman			X			X		Three-five acres at new site.
36	New facility			X			X		Five acres at new site.
37	New facility New facility			X			X		Seven acres proposed at new school site. Provide playground at Carpenter school site. Five acres at new site.
38	New facility			X			X		Five acres at or near new school site.
39	Cook Park	X					X		Retain and develop
40-43	New facilities			X			X		Five to seven acres at or near new school sites.
101	Grand Blanc	X					X		
102	McGrath New facility	X					X		Five acres at new site.
103	Mt. Morris New facility	X					X		Three-five acres at new site.
104	Montague New facility	X		X			X		Four-five acres at new site.
105	Moore West Bendle		X				X		Add two acres to present playground area.
106	New facility			X			X		Three-five acres at new site.
107	South Bendle		X				X		Add two acres to present playground area.
108	Fenton Lawn New facility	X					X		Four-five acres at new site.
111	Weston New facility	X					X		Four-five acres at new site.
113	Van Y	X					X		Four-five acres at new site.
114	Hoover		X				X		Add five acres to present playground area.
115	Lana Stalker		X				X		Add four acres to present playground area.
116	Woodland Hamdy		X				X		Add three acres to present playground area.
117	New facility			X			X		Three-five acres at new site.
118	Beckwith New facility	X					X		Three-five acres at new site.
119	Barhite		X				X		Add two acres to present playground area.
120	Johnson New facility	X					X		Three-five acres at new site.
121	Bulck		X				X		Add two acres to present playground area.
122	Buell	X					X		
123	George Street New facility	X					X		Four-five acres at new site.
124	Klein New facility	X					X		Four-five acres at new site.
127	Gustin	X					X		Four-five acres at new site.
128-144	New facilities			X			X		Five to seven acres at or near new school sites.
145	Bentley New facility	X					X		Three-five acres at new site.
146-164	New facilities			X			X		Five-seven acres at or near new school sites.



**COMPREHENSIVE
MASTER PLAN**

CITY OF FLINT · MICHIGAN
 FLINT PLANNING COMMISSION
 1960
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**PUBLIC PLAYGROUND AND
NEIGHBORHOOD PARK PLAN**

- PRESENT SITE - CONTINUED USE
- ⊗ PRESENT SITE - DISCONTINUED USE
- ▨ PROPOSED OR EXTENSION OF SITE - SITE SELECTED
- PROPOSED PLAYGROUND OR NEIGHBORHOOD PARK - SITE UNDETERMINED
- SITE RELATED TO SCHOOL USE

**FLINT MICHIGAN
AND ENVIRONS**

- 26

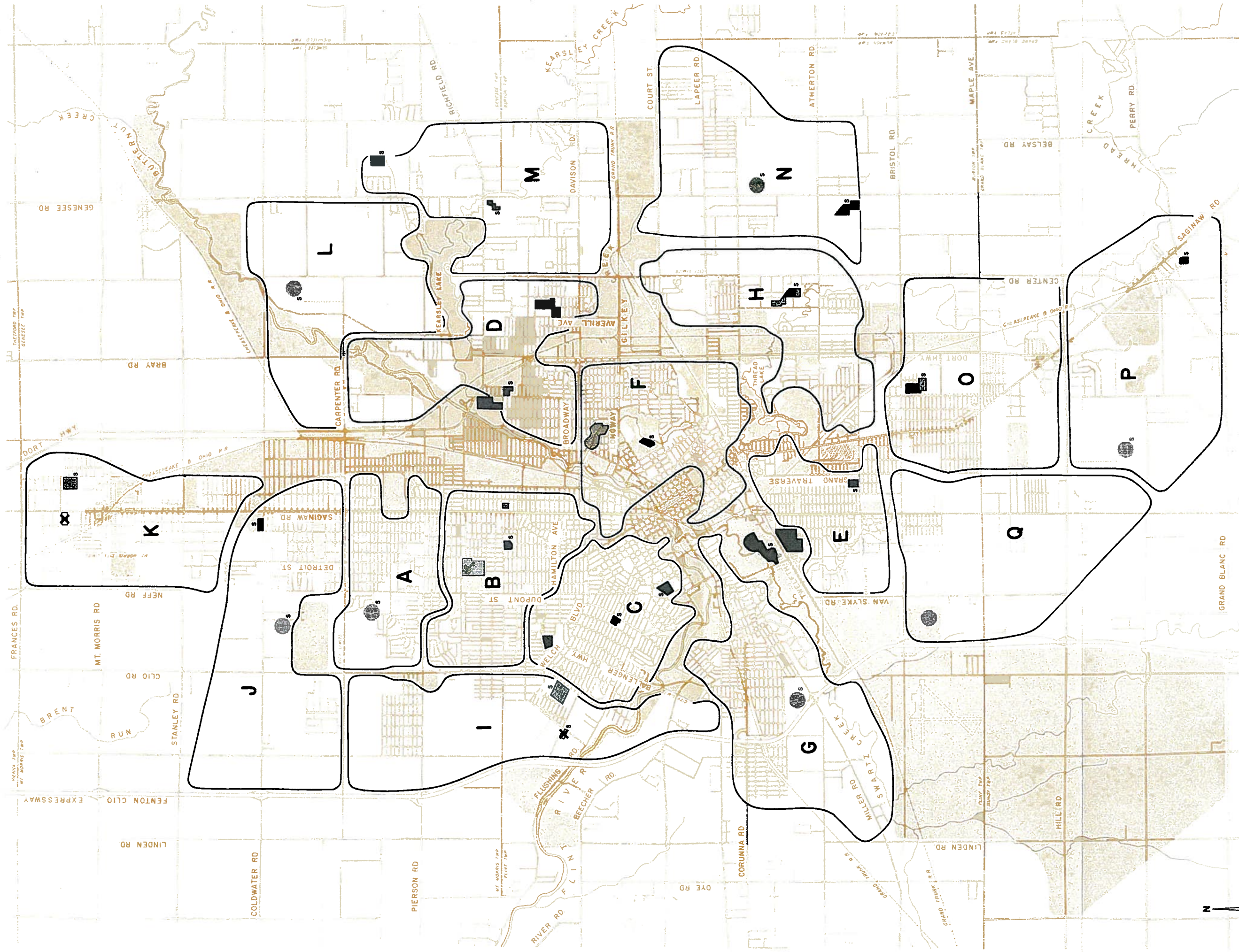
NEIGHBORHOOD AREA

NON-RESIDENTIAL LAND USE



PUBLIC PLAYFIELDS

Community	Name of Facility	Adequate	To be Enlarged	To be Discontinued or Converted	Proposed	R e m a r k s
A	Hasselbring				X	Provide 30-40 acres in conjunction with new high school site acquired in general vicinity subsequent to preparation of the accompanying map.
B	Emerson	X				
	Barston	X				
	New facility at Forest Park			X		Convert 45-50 acres of Forest Park to playfield use.
C	Longfellow	X				
	Durant	X				
	Bassett	X				Encourage cooperative use of new facilities in area I.
D	Lowell	X				
	Longway	X				
	Whaley	X				
E	McKinley	X				
	Lincoln	X				
	Swartz Creek	X				
F	Whittier	X				
	Kearsley			X		Convert portions of Kearsley Park to playfield use.
G	Swartz Creek	X				
	New facility				X	If new junior high is built, provide playfield on same site.
H	Herbst		X			Add 17 acres to present area.
I	Hoover			X		Discontinue use as playfield.
	New facility				X	Provide 20-40 acres at new school site. (See text.)
J	Beecher	X				
	New facility				X	Provide 15-25 acres at new junior high site.
K	Mt. Morris			X		Discontinue present facility; provide 15-25 acre area at junior high site.
	New facility				X	Provide 15-25 acres at new school site.
L	New facility				X	Provide 10-15 acres at new junior high site.
M	Daly	X				
	Kearsley	X				Add nine acres to present area.
N	Atherton	X				
	New facility				X	Provide 15-25 acres at new high school site.
O	Bendle		X			
	Grand Blanc		X			
P	New facility				X	Provide 15-25 acres at new high school site.
Q	New facility				X	Provide 20-25 acres at new junior high site.



**COMPREHENSIVE
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**PUBLIC PLAYFIELD PLAN
FLINT MICHIGAN AND ENVIRONS**

- PRESENT PLAYFIELD SITE - CONTINUED USE
- ⊗ PRESENT PLAYFIELD SITE - DISCONTINUED USE
- ▣ PROPOSED OR EXTENSION OF PLAYFIELD SITE - SITE SELECTED
- PROPOSED PLAYFIELD - SITE UNDETERMINED
- Ⓢ PLAYFIELD SITE RELATED TO SCHOOL USE

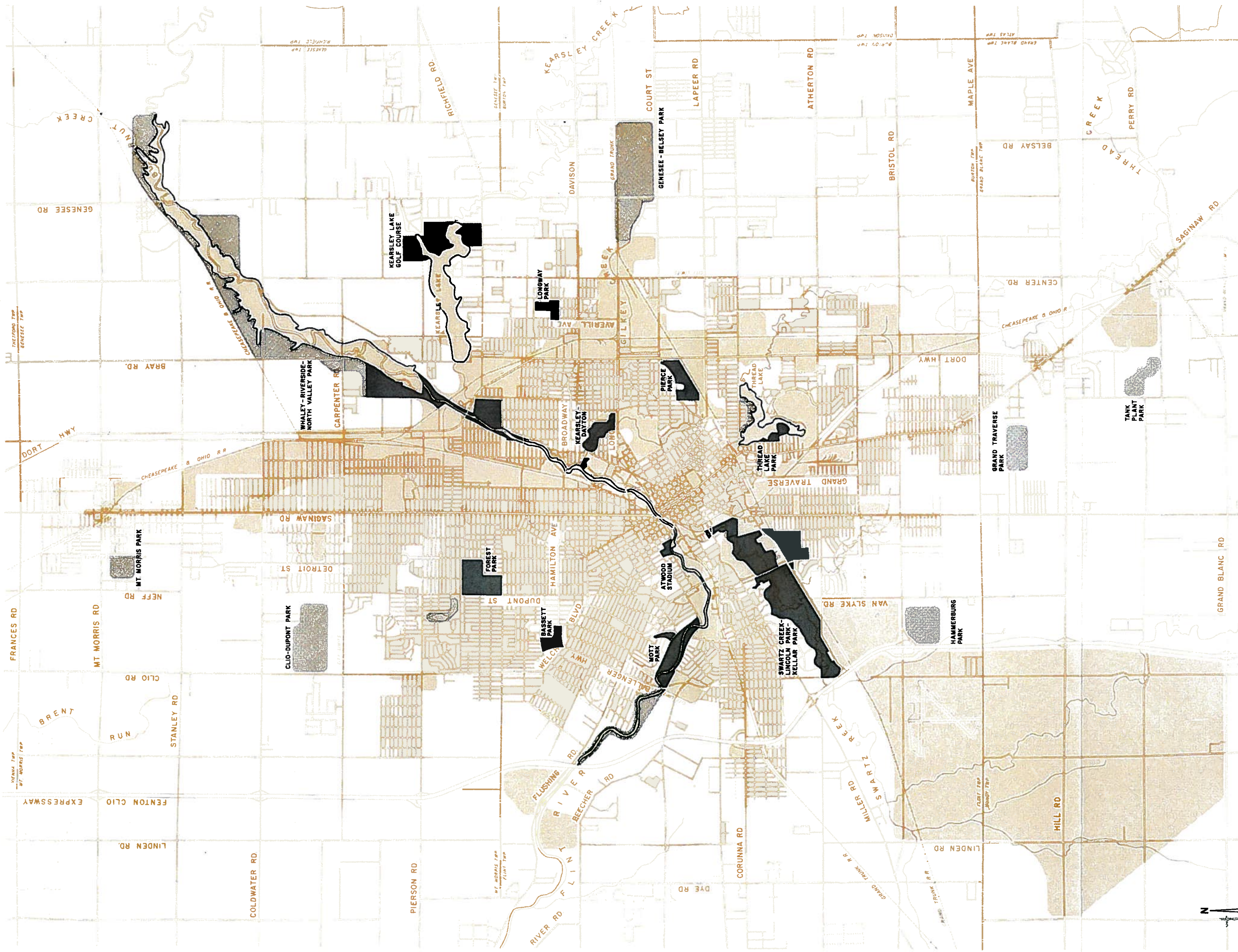


COMMUNITY AREA

NON-RESIDENTIAL LAND USE

MAJOR RECREATION AREAS

Name of Facility	Existing	To be Enlarged	Proposed	Remarks
Atwood Stadium	X			Continue improvements.
Bassett Park	X			Continue development as park, playfield and playground area.
Forest Park		X		Add 45 acres to northwest when present land use at Flint Park Lake is discontinued; continue development as park, playfield and playground.
Kearsley-Dayton	X			Adjust area for expressway right-of-way; continue development as park, playground and playfield area.
Kearsley Lake Golf Course	X			Continue present use.
Longway Park	X			Continue development as park, playfield and playground area.
Mott Park		X		Add 50-80 acres along Flint River, to the northwest, for park-picnic area and related use; continue present use as community golf course.
Pierce Park	X			Continue development as community golf course.
Swartz Creek - Lincoln Park - Keller Park	X			Continue development as general recreation and park area, including golf course; consolidate with Aldrich Park, if possible.
Thread Lake Park		X		Extend and consolidate McKinley, Thread Lake and Cummings Parks; add suitable acreage along Lake front.
Whaley - Riverside - North Valley Park	X			Continue development as park, playfield and playground area; construct Flint River dam to provide 800-acre lake. (See text).
Clio-Dupont Park (north of city)		X		200-250 acres for possible golf course and related recreational facilities.
Mt. Morris Park (west of Mt. Morris)	X			50-60 acres for possible development as park, playground and playfield area.
Genesee-Belsey Park (east of city)	X			450-500 acres for possible golf course and related recreational facilities.
Hammerberg Park (south of city)	X			150-200 acres for wooded park, playfield and playground area.
Grand Traverse Park (south of city)	X			100-150 acres for wooded park, playfield and playground area.
Tank Plant Park (west of Grand Blanc)	X			50-60 acres for development as park, playfield and playground area.

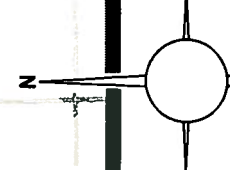


**COMPREHENSIVE
MASTER PLAN**



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MI. 0 1/4 1/2 2

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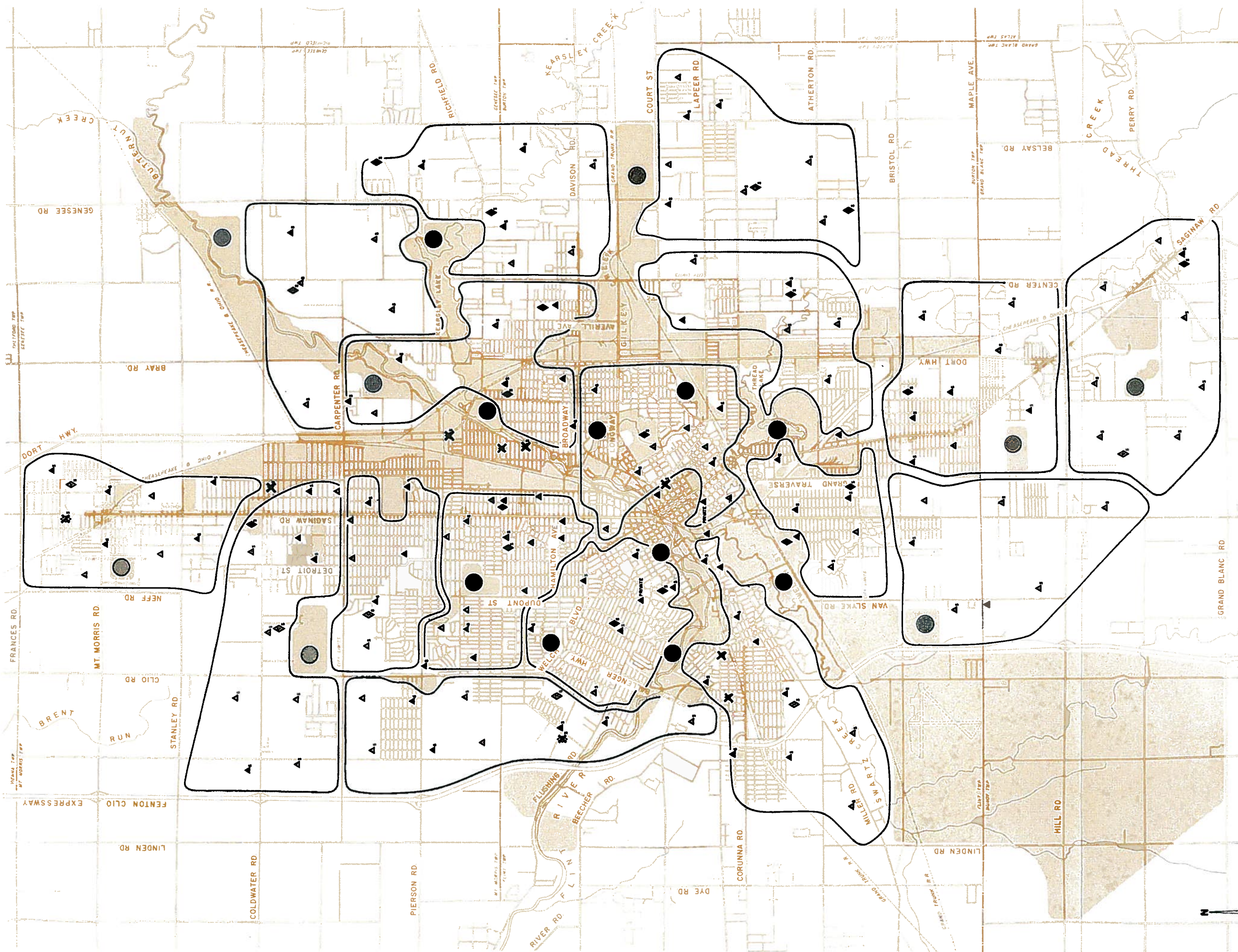


**PLAN FOR MAJOR RECREATION AREAS
FLINT MICHIGAN AND ENVIRONS**

-  PRESENT MAJOR RECREATION SITE - CONTINUED USE
-  PROPOSED MAJOR RECREATION SITE - NEW SITE OR EXTENSION OF PRESENT SITE

MAJOR RECREATION SITES AS SHOWN INCLUDE RELATED PLAYFIELD, PLAYGROUND, AND PARK FACILITIES

NON-RESIDENTIAL LAND USE



**COMPREHENSIVE
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**PUBLIC RECREATION PLAN
FLINT MICHIGAN AND ENVIRONS**

- PRESENT SITE
- ⊗ DISCONTINUED SITE
- ◐ PROPOSED SITE
- ◑ SITE RELATED TO SCHOOL USE
- ▲ PRESENT SITE
- ⦿ COMMUNITY PLAYFIELD SITE
- ◊ NEIGHBORHOOD PLAYGROUND OR PARK SITE
- COMMUNITY AREA
- ▭ NON-RESIDENTIAL LAND USE



HOUSING AND URBAN RENEWAL

City-Wide Housing Conditions

Occupancy Characteristics

Over 68 per cent of Flint's dwelling units are in single-family residences, and about 17 per cent are in two-family structures. Less than 15 per cent of the units are in multi-family buildings, and over three-fifths of these are in three and four-family structures. Flint's single-family residency is 11 per cent higher than that of the average Michigan city. Further, this proportion is about one per cent higher than Saginaw's; almost 25 per cent higher than Grand Rapids' and over 43 per cent higher than in Detroit. The median number of persons per occupied dwelling unit in Flint was 3.0 as reported by the 1950 Census.¹ This ratio is closely comparable to those found in the three comparison cities of Detroit, Grand Rapids and Saginaw.

Flint's dwelling unit vacancies have fluctuated considerably during the 1950-1958 period. In 1950, less than one per cent were on the sale or rental market, but at the time of the 1958 land use survey, one-fourth to one-third of Flint's labor force was unemployed² and the dwelling unit vacancy rate was estimated at 3.0 to 3.5 per cent.

Size, Age and Value of Dwelling Units

Most Flint dwelling units are about the same size as the average in the state and in Michigan cities - averaging about five rooms each. Of all Flint dwelling units, about 29 per cent have five rooms, 19 per cent have six rooms, and 18 per cent have four rooms. About 18 per cent have three rooms or less, while almost 16 per cent have seven or more rooms.

A very high proportion of Flint's dwelling units were built during the 1920-1929 period. Of all the dwelling units in the city in 1950, 41 per cent were built during these years. This percentage is about 45 per cent higher than the comparable proportion in the average Michigan city. The residential building rate during this period was higher in Flint than in any of the comparison cities.

	AGE of DWELLING UNITS: 1960			
	% Built during Designated Period			
	1940 or <u>later</u>	1930 to <u>1939</u>	1920 to <u>1929</u>	1919 or <u>earlier</u>
<u>Flint</u>	13.9	10.8	41.0	34.3
Michigan Urban	20.8	11.4	28.2	39.6
Detroit	17.4	11.1	36.7	34.8
Grand Rapids	7.7	5.2	19.2	67.9
Saginaw	10.6	6.4	17.2	65.8

¹ Comparable Census data for 1960 were not available at this writing.

² During the 1958 nation-wide economic recession.

The median value of Flint's owner-occupied dwelling units, as reported by the 1950 Census, was considerably lower than the state average or in the average Michigan city - with a value of \$6,970. Local dwelling unit values were almost 15 per cent lower than those in the average Michigan city. In contrast to values of dwelling units, median residential rent in Flint in 1950 was somewhat higher than the medians for the state and for its urban centers. Flint's median was the highest of all the comparison cities.

Dilapidation

The extent of residential dilapidation in Flint is very much out of line with the city's history of economic growth. Over one-fifth of Flint's dwelling units are without hot running water, private toilet or bath, or are otherwise "dilapidated."¹ This proportion exceeds by 27 per cent the average of Michigan cities. Proportionately, dilapidation and lack of plumbing facilities in Flint is more than double that found in Detroit, over 17 per cent higher than in Grand Rapids, though about 18 per cent lower than in Saginaw.

Overcrowding

Occupancy of dwelling units in Flint is somewhat lower than in the average Michigan city or in the state as a whole. In the city, 2.3 per cent of the dwelling units have an occupancy ratio exceeding 1.5 persons per room. Among the comparison cities, the ratio in Flint is lower than in Detroit or Saginaw, but considerably higher than the 1.4 per cent found in Grand Rapids.

Sectional Housing Conditions

Housing conditions in Flint vary considerably from area to area. In a comprehensive portrayal of the city's housing, residential sections bear definition and examination. Occupancy characteristics, value and age of dwelling units, dilapidation and overcrowding can be depicted graphically on a block by block basis, then summarized for each of the residential sections.

Occupancy Characteristics

Flint's owner-occupancy ratio is not uniformly high throughout the city, being most concentrated in the areas around the perimeter, with the area of highest owner-occupancy - southwest of the College and Cultural Development - having

¹ By U.S. Census definition: A dwelling unit is reported as dilapidated when it has serious deficiencies, is run-down or neglected, or is of inadequate original construction, so that it does not provide adequate shelter or protection against the elements or endangers the safety of the occupants.

93.5 per cent of the dwelling units so occupied. Except for this area, the owner-occupancy ratio is highest along the western edge of the city.

OWNER-OCCUPANCY of DWELLING UNITS		RENTER-OCCUPANCY of DWELLING UNITS	
<u>Census Tract</u> ¹	<u>% of d.u.'s</u>	<u>Census Tract</u> ¹	<u>% of d.u.'s</u>
16	93.5	8	70.7
37	93.3	29	68.1
36	93.2	28	67.3
39	91.3	7	65.6
38	91.1	6	62.8
35	85.1	26	56.6
34	82.9	15	50.5
40	82.4		

There are some renter-occupied residences throughout most of the city area, but concentration is heaviest in areas surrounding the central business district, being highest directly east and west of the district.² It is next highest directly north of the downtown area, whereas areas west of the Buick plant and east of North Saginaw Street are others where renter occupancy exceeds 50 per cent.

Within the city, single-family detached homes are most concentrated along the west perimeter, in the residential section directly southeast of the College and Cultural Development, and in the areas on the north edge of the city. In each of these areas, over 90 per cent of all dwelling units are single-family homes.

ONE-DWELLING-UNIT-DETACHED STRUCTURES

<u>Census Tract</u> ¹	<u>% of d.u.'s</u>
39	97.7
36	96.4
37	96.4
16	95.4
38	94.1
1	93.0
40	92.9
41	92.9
35	92.1
2	90.4
34	90.0

¹ Map: Urbanized Area and Census Tracts.

² Map: Renter Occupancy.

Flint's occupancy median is 3.0 persons per dwelling unit. The highest ratio of dwelling unit occupancy is in the area east of North Saginaw Street - with 3.6 persons per dwelling unit. The occupancy ratio ranges from 3.3 to 3.5 persons per dwelling unit in the other high-ratio areas indicated above.¹

Value and Age of Dwelling Units

Dwelling unit values vary considerably from one residential area to the next.² Average values are highest: in the area southeast of the College and Cultural Development; in the southwest sections of the city directly north of Swartz Creek; in the northwest section of the city, directly north of Flushing Road. Values tend to be low in the north central and northeast sections of the city. Indications are that residential construction since 1950 has raised average values in some areas, especially that area west of Detroit Street and north of Pierson Road.

Flint's two relatively concentrated low-value areas are directly west of the Flint River, north of Hamilton Avenue, and farther west toward North Saginaw Street. By 1950, a considerable amount of low-value housing was located in the north central part of the city, and east of the Flint Belt Line railroad, north of Davison Road. Since 1950 new residential construction has increased the proportions of higher-value housing in these areas. However, the 1950 low-value housing still remains.

Flint's high-rental areas exhibit much the same pattern as that indicated for high values.³ Areas of highest monthly rent lie to the southeast of the College and Cultural Development. High rents also prevail in the central parts of the city, generally to the northwest of the downtown area. Areas of low monthly rent accord generally with those of low value dwellings. Low rent areas lie west of the Flint River, east of North Saginaw Street, and between the Chesapeake and Ohio Railroad and North Saginaw Street.

Between 1940 and 1950, the residential construction rate was highest: in the area east of the College and Cultural Development; along the west perimeter of the city. By contrast there was little or no new construction in the older residential areas - in the central portion of the city - where vacant land was relatively unavailable. There was almost no new residential construction west and north of the downtown area, and east of North Saginaw Street.

Dilapidation

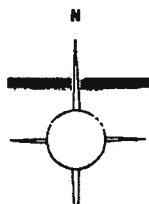
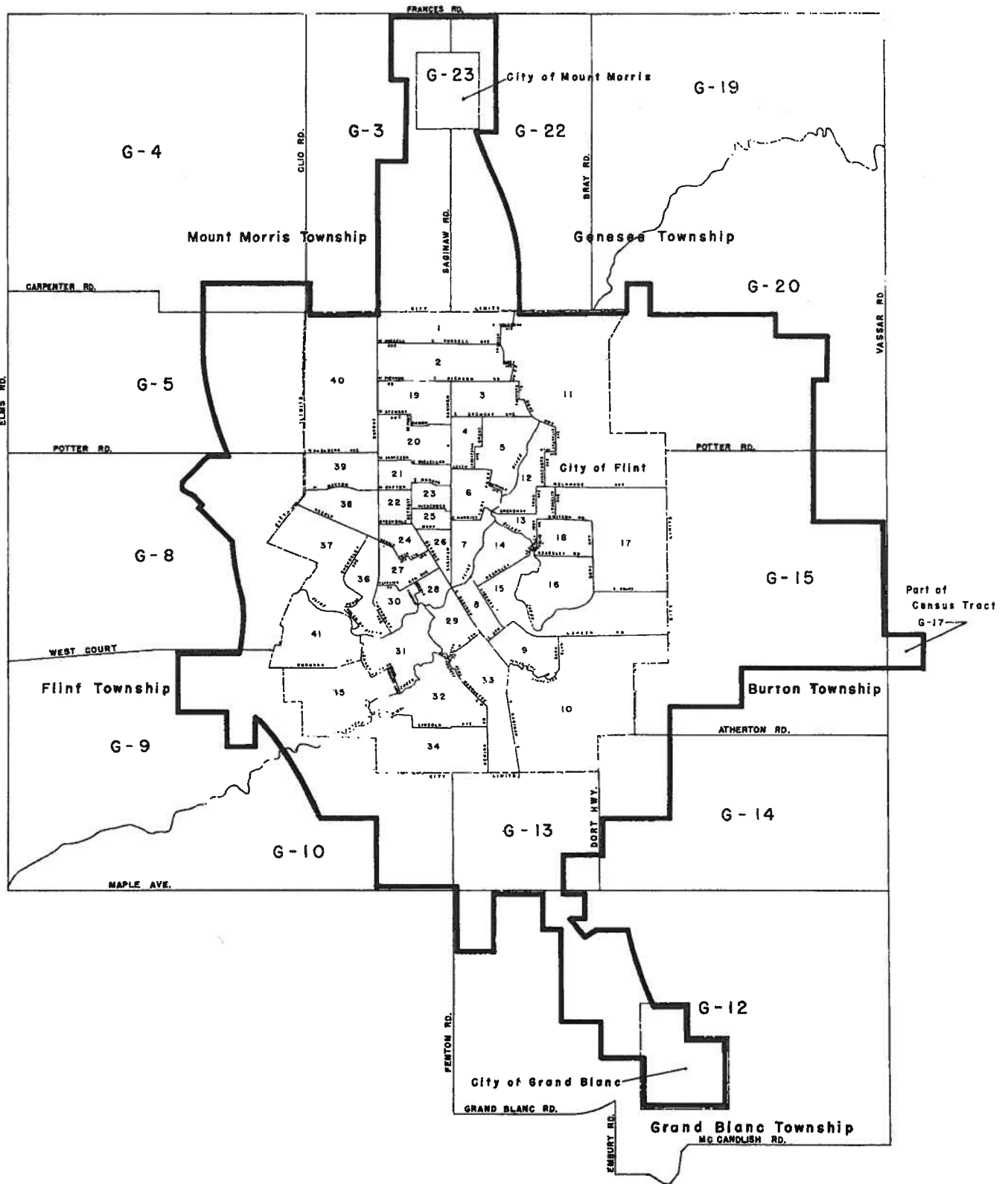
Flint's high ratio of dilapidated housing has been noted. Over 18 per cent of its dwelling units are without private bath or dilapidated. Scattered dilapidation exists in most areas of the city; however, dilapidation is most concentrated in the older residential sections.⁴ In the residential areas west of the Flint River, east of North Saginaw, and along the C&O Railroad to the north, well over one-third of the dwelling units must be considered substandard.

¹ Map: 1.51 or More Persons per room.

² Map: Average Value, One Dwelling Unit Structure.

³ Map: Average Contract Monthly Rent.

⁴ Map: No Private Bath or Dilapidated.



**COMPREHENSIVE
MASTER PLAN**

CITY OF FLINT · MICHIGAN
FLINT PLANNING COMMISSION
1958

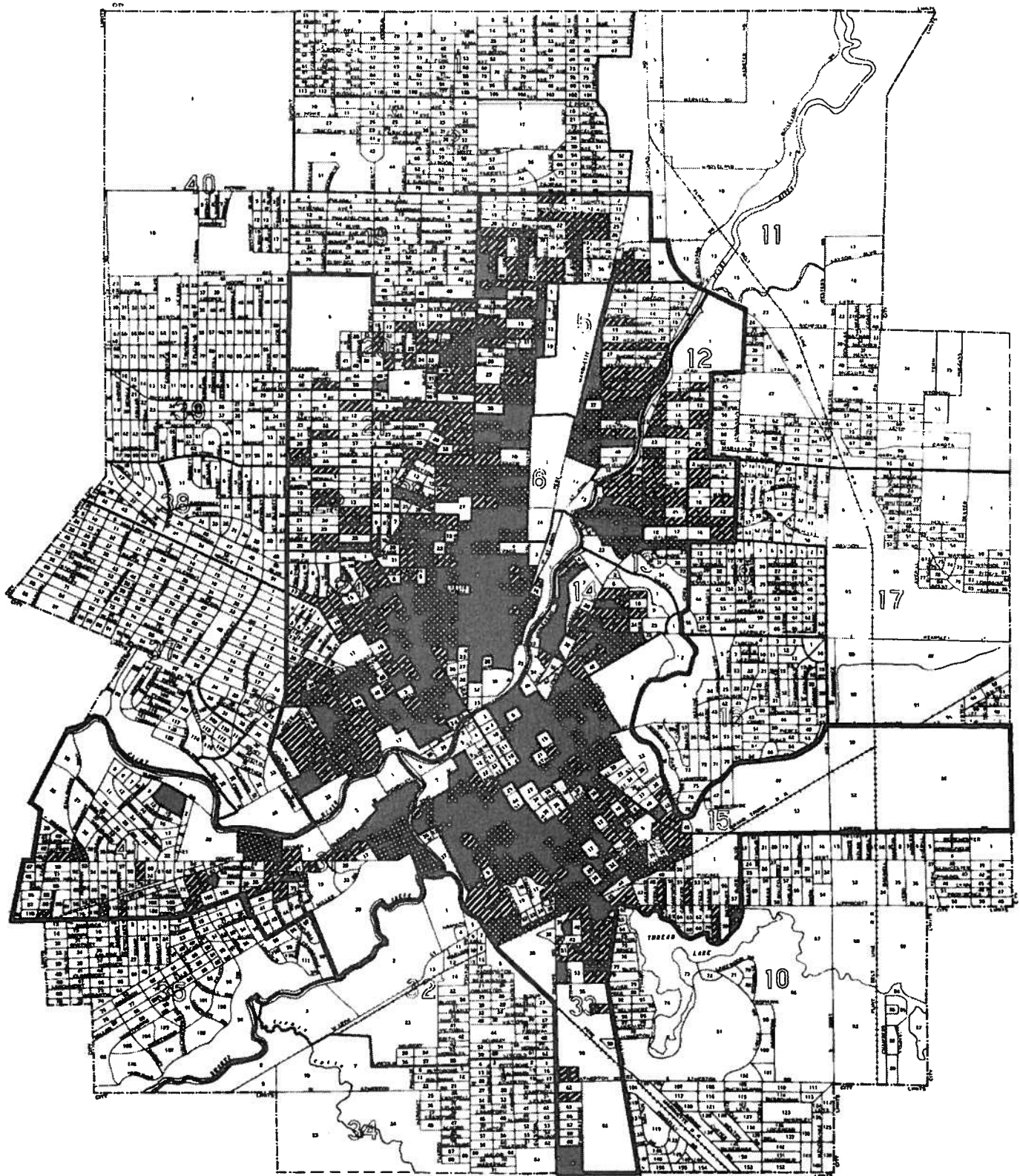
LADISLAS SEGOE & ASSOCIATES
CITY PLANNERS CONSULTING ENGINEERS
CINCINNATI · OHIO FLINT · MICHIGAN

**URBANIZED AREA AND
CENSUS TRACTS**

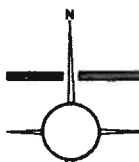
FLINT URBANIZED AREA

— CENSUS TRACT BOUNDARY

— PERIMETER OF
FLINT URBANIZED AREA · 1958



SOURCE: U S CENSUS OF HOUSING, 1950



**COMPREHENSIVE
MASTER PLAN**

CITY OF FLINT · MICHIGAN
FLINT PLANNING COMMISSION

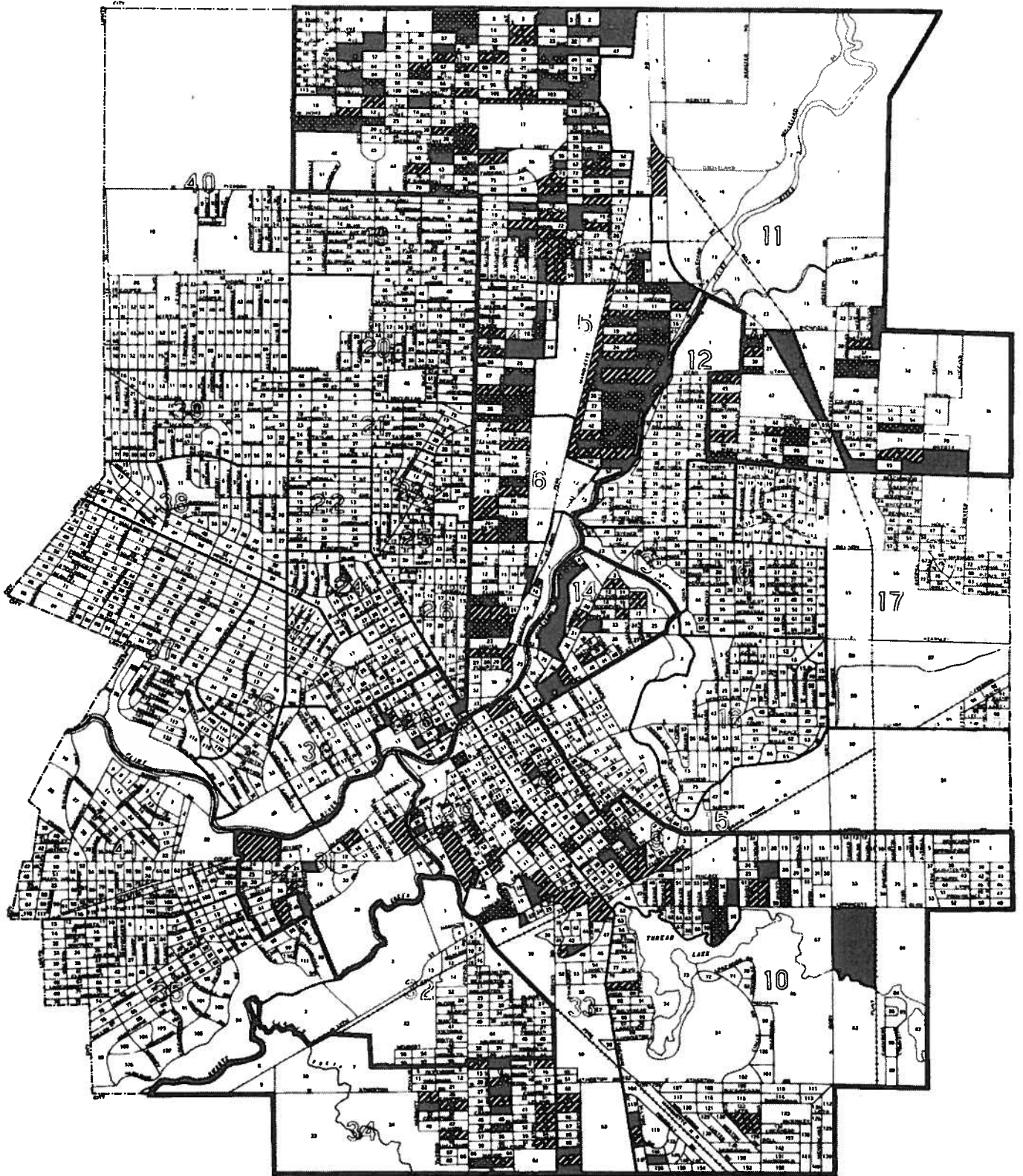
1959 FTD 2000 4000
MO 1/4 1/2 1

LADISLAS SEGOE & ASSOCIATES
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CINCINNATI · OHIO FLINT · MICHIGAN

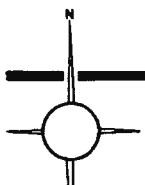
RENTER OCCUPANCY

- PERIMETER OF CENSUS TRACTS WITH HIGH PROPORTION OF RENTER OCCUPANCY
- 60%+ RENTER OCCUPIED
- ▨ 30% - 44.9% RENTER OCCUPIED
- ▤ 45% - 59.9% RENTER OCCUPIED
- 0 - 29.9% RENTER OCCUPIED

CITY-WIDE PROPORTION OF RENTER OCCUPANCY: 31.5%
*ALSO INCLUDES: LOW DENSITY BLOCKS AND BLOCKS NOT REPORTING



SOURCE: U S CENSUS OF HOUSING, 1950



**COMPREHENSIVE
MASTER PLAN**

CITY OF FLINT · MICHIGAN
FLINT PLANNING COMMISSION

1959 FTQ 2000 4000
MO 1/4 1/2 1

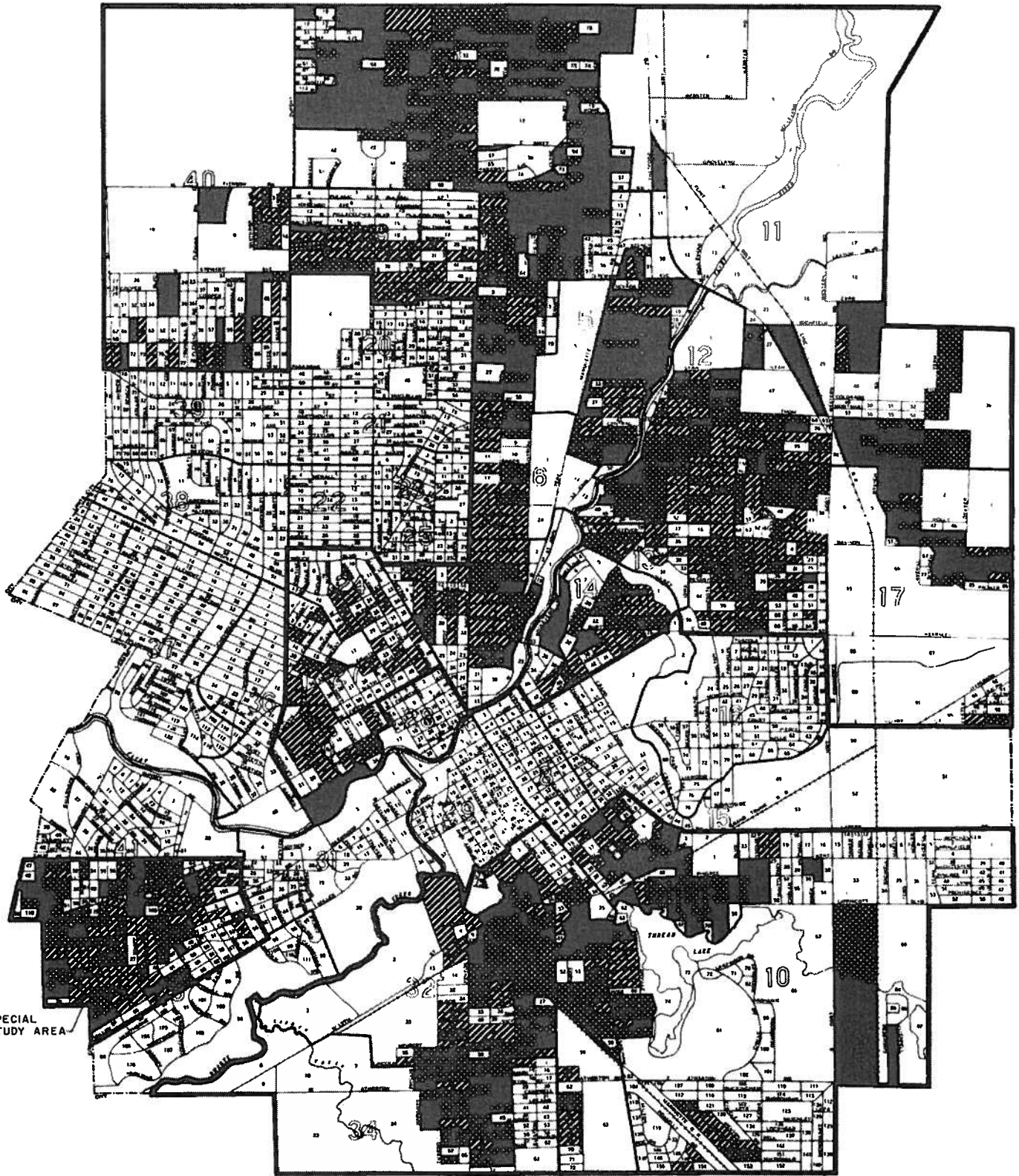
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1.51 OR MORE PERSONS PER ROOM

— PERIMETER OF CENSUS TRACTS
WITH HIGH PROPORTION OF OVERCROWDING

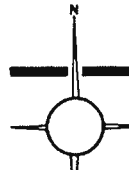
- 15% + OVERCROWDED ▨ 5% - 9.9% OVERCROWDED
- ▩ 10% - 14.9% OVERCROWDED □ *0 - 4.9% OVERCROWDED

CITY-WIDE PROPORTION 1.51 OR MORE PERSONS PER ROOM: 2.3%
*ALSO INCLUDES: LOW DENSITY BLOCKS AND BLOCKS NOT REPORTING



**SPECIAL STUDY AREA

SOURCE: U.S. CENSUS OF HOUSING, 1950


COMPREHENSIVE MASTER PLAN
 CITY OF FLINT · MICHIGAN
 FLINT PLANNING COMMISSION
 1959
 FT. 0 2000 4000
 M.O. 1/4 1/2
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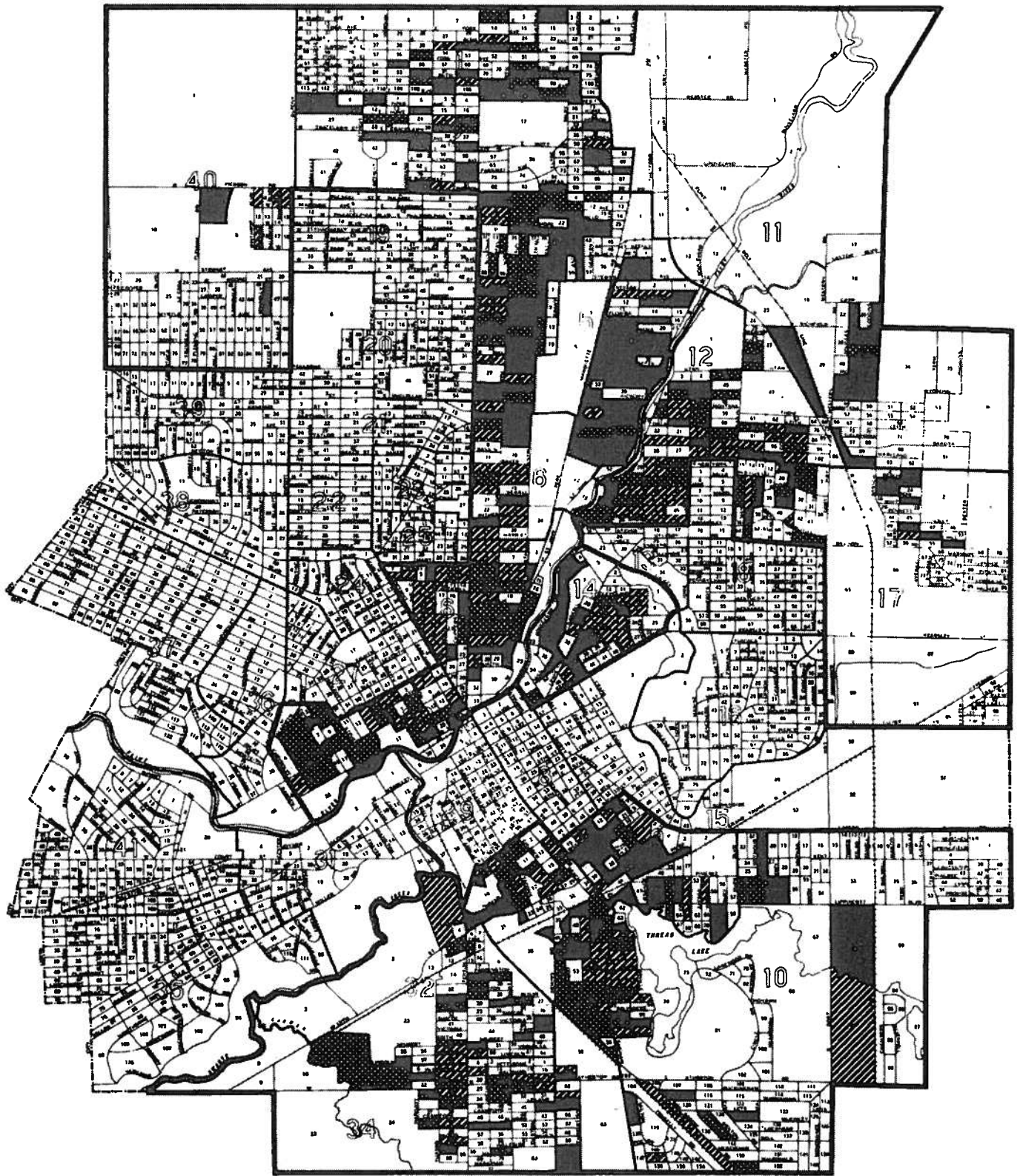
AVERAGE VALUE · ONE DWELLING UNIT STRUCTURE

- PERIMETER OF CENSUS TRACTS WITH LOW VALUE OF ONE-DWELLING-UNIT STRUCTURES
- \$0 - \$4900
- ▨ \$5000 - \$5900
- ▧ \$6000 - \$6900
- *\$7000 +

CITY-WIDE AVERAGE: \$7543

*ALSO INCLUDES LOW DENSITY BLOCKS AND BLOCKS NOT REPORTING

**SPECIAL STUDY AREA INCLUDES PORTIONS OF CENSUS TRACTS 35 AND 40



SOURCE: U S CENSUS OF HOUSING, 1950



**COMPREHENSIVE
MASTER PLAN**

CITY OF FLINT · MICHIGAN
FLINT PLANNING COMMISSION

1959 FT. 0 2000 4000
MO 1/4 1/2 1

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CITY PLANNERS · CONSULTING ENGINEERS
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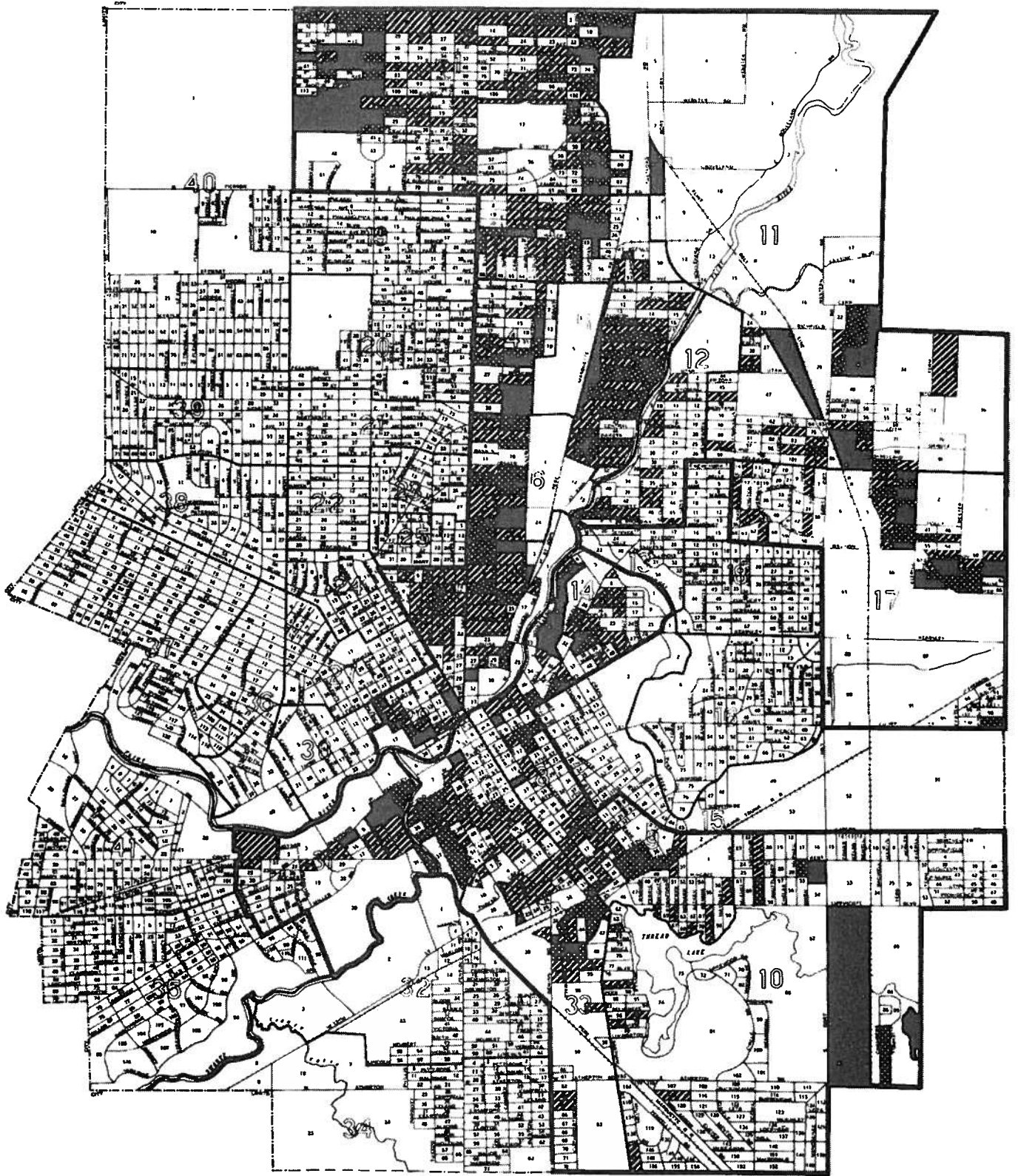
AVERAGE CONTRACT MONTHLY RENT

— PERIMETER OF CENSUS TRACTS
WITH LOW AVERAGE MONTHLY RENT

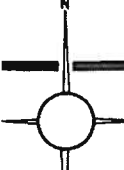
- \$0-\$39.99 PER MONTH ▨ \$45.00-\$49.99 PER MONTH
- ▩ \$40.00-\$44.99 PER MONTH □ *\$50.00 + PER MONTH

CITY-WIDE AVERAGE MONTHLY RENT: \$47.38

*ALSO INCLUDES: LOW DENSITY BLOCKS AND BLOCKS NOT REPORTING



SOURCE U S CENSUS OF HOUSING, 1950


**COMPREHENSIVE
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 CITY OF FLINT · MICHIGAN
 FLINT PLANNING COMMISSION
 1959 FTD 2000 4000
 MO 1/4 1/2
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NO PRIVATE BATH OR DILAPIDATED

- PERIMETER OF CENSUS TRACTS WITH HIGH DEGREE OF DILAPIDATION
- 60%+ DILAPIDATED
- ▨ 20% - 39.9% DILAPIDATED
- ▩ 40% - 59.9% DILAPIDATED
- 0 - 19.9% DILAPIDATED

CITY-WIDE PROPORTION NO PRIVATE BATH OR DILAPIDATED: 18.2%
 *ALSO INCLUDES: LOW DENSITY BLOCKS AND BLOCKS NOT REPORTING

Overcrowding

As a consequence usually of adverse economic circumstances, overcrowding often parallels housing dilapidation. Overcrowded conditions in Flint tend to occur in the

OVERCROWDING of DWELLING UNITS -
OVER 1.5 PERSONS PER ROOM

<u>Census Tract</u>	<u>% of d.u.'s</u>
5	7.5
4	5.2
3	5.0
28	4.8
1	4.4
11	4.3
6	4.1
14	4.1
9	3.6
2	3.1
31	3.1

same areas where considerable housing dilapidation exists. Residential overcrowding can consist both of the overcrowding of dwelling units and the overcrowding of land. Overcrowding of dwellings is most severe in the west Flint River area¹ where the rate is about three times as high as the city-wide average. It is high generally: in residential areas between the Flint River, the C&O Railroad and North Saginaw Street; in the areas directly east of North Saginaw; and those in the north-central part of the city west of the C&O Railroad.

Overcrowding of land occurs in the following areas: east of North Saginaw Street; the west Flint River area immediately adjoining the C&O tracks; southeast and southwest of the central business district; between Detroit and North Saginaw Streets, as far north as about Dayton Street; the area bounded by Kearsley Street, the College and Cultural Development, Court Street and the central business district. In these residential areas, lots generally are small and lot coverage high. Residential densities range up to 90 per cent higher than the city-wide average.

Redevelopment, Rehabilitation and Conservation Plan

The residential areas of the city can be categorized according to the conditions of housing therein:

- a) areas of advanced decline or blight, with a large proportion of the buildings dilapidated and overcrowded, usually also adjoining or spotted with numerous incompatible if not objectionable uses and afflicted with other adverse influences including a lack or deficiency of essential community facilities;
- b) areas of incipient or moderate decline, with dilapidated or overcrowded buildings or groups of buildings here and there, probably also adjoining or containing incompatible uses and lacking entirely adequate or otherwise satisfactory community facilities;

¹ Map: 1.51 or More Persons per Room.

- c) sound areas with little or no dilapidation, overcrowding or adverse or deficient environmental features or conditions.

Each of these general types of areas, and likewise the several possible intermediate types requires a different approach and treatment, or usually a different combination of treatments, in point of type or degree.

Redevelopment of Areas of Predominantly Substandard Housing Conditions

In some areas housing conditions have deteriorated to the extent that rehabilitation as a general remedy combined with spot clearance and the other methods above described would no longer suffice and might even make effective reclamation more difficult later on. In such cases nothing short of complete, or largely complete, clearance and redevelopment may be necessary before conservation or protective measures can be effective or even meaningful.

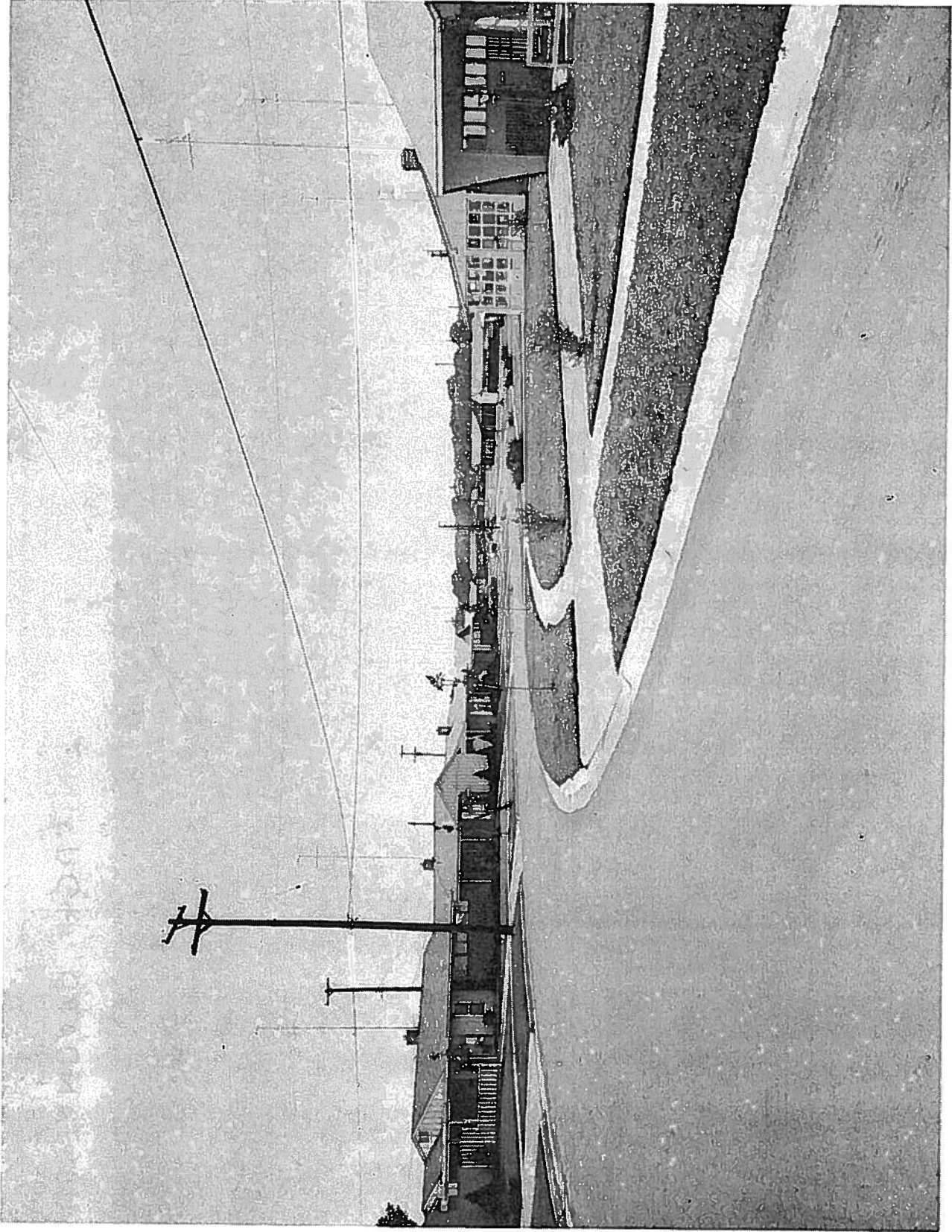
Rehabilitation of Areas of Mixed Housing Standards

A rehabilitation program for areas containing a mixture of satisfactory and substandard housing necessarily includes all of the protective measures listed below under Conservation. Required, in addition, however, and before such protective measures can become fully effective, are: the rehabilitation of such of the substandard residential structures as are capable and worthy of being rehabilitated, physically and economically; the removal of those that are not salvable, as well as non-residential structures or uses having an adverse effect upon and threatening to blight the area, and, in addition, bringing the community facilities up to standards adequate and otherwise suitable to serve the needs of the area.

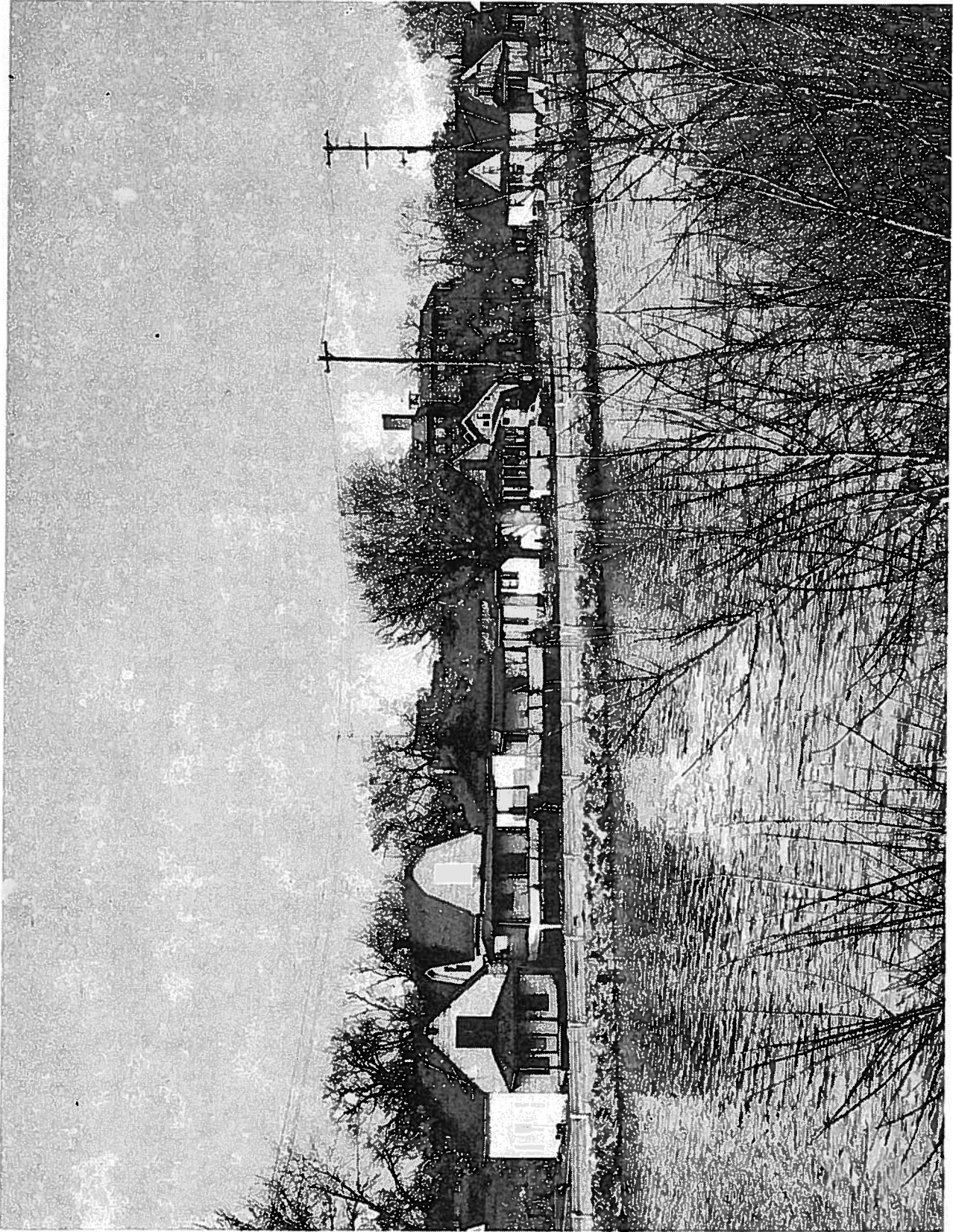
Conservation of Areas with Satisfactory Housing Standards

The majority of residential areas in Flint are of a desirable or satisfactory standard - among these are large sections in the northwest, parts of the southwest, and particularly areas southeast of the College and Cultural Development. The conservation of such sound and stable residential sections is, of course, one of the principal aims of zoning, building codes and community planning in general. The conservation of such good and stable residential areas require principally protection by means of:

- a) consistent and strict enforcement of a sound up-to-date zoning ordinance, to prevent incompatible or conflicting uses or other developments at standards at variance with the character of the area;
- b) requiring strict conformance by new buildings or reconstruction, including conversion, with adequate building and housing codes;
- c) protection against the adverse impact of heavy vehicular traffic through the area;



RESIDENTIAL DEVELOPMENT
JOURNAL PHOTO



SUBSTANDARD HOUSING
JOURNAL PHOTO

- d) providing and maintaining at suitable standards community services and facilities for the area.

* * *

It is now widely recognized that an attack on urban blight must be a total program, including the entire community. The nature of this attack may range from the conservation of developments that are stable and desirable or of a satisfactory standard, through the up-grading of declining developments and those showing evidence of incipient blight, to the clearance and re-use of sections where deterioration is so far advanced as to be irreversible.

Identification of Flint's Blighted Areas

The broad problem of blight affects all types of urban developments - residential, commercial and industrial. However, it is in blighted residential areas that this problem is most serious. The total program of blight prevention, control and elimination can begin with an identification of those residential areas where conditions are worst and the problem most severe. Housing conditions, as already reported, were surveyed, evaluated and portrayed for various study areas in the city, by means of various generally recognized criteria. In those study areas where conditions were found to be most severely substandard, occupancy characteristics, value and age of dwelling units, dilapidation and overcrowding were depicted. The information with respect to housing conditions revealed by these criteria is consolidated and extended here by bringing together and weighing the factors adversely affecting housing.¹

Focusing attention on areas where the problems of poor housing conditions are most serious, the pattern of substandard housing is shown only in those neighborhoods where blight in various degrees generally exists. Housing conditions are portrayed in three categories - areas of a low, medium and high proportion of substandard housing conditions, that is, those severely blighted, blighted, and declining, respectively.

Flint's most pronounced area of badly deteriorated housing lies between the Chesapeake and Ohio Railroad and the Flint River, between Garfield Avenue and the Flint Water Works. Other areas of relatively severe deterioration are bounded approximately by Carpenter Road, Stewart Avenue, Selby Street, and the C&O tracks; and by Edmund Street, the Fifth Avenue Crosstown, Detroit Street, Mary Street, Saginaw Street, and Industrial Avenue.

There are other areas in the city containing considerable substandard housing, though not to the degree of those described above. One of these is bounded approximately by Russell Avenue, Edmund Street, Saginaw Street and Selby Street; another lies along the east bank of the Flint River, north of the present re-development area. Most of the residential areas surrounding the central business district - as well as the scattered residences within the district itself - show signs of decline, and some of these areas a relatively high proportion of substandard housing conditions.

¹ Map: Summary of Substandard Housing Conditions.

The Total Urban Renewal Approach

Urban renewal is the broad approach taken in recent years by cities in their attack on problems of blight and obsolescence. Cities are finding - and this is coming to be recognized in Flint - that unless the trend of deterioration is arrested and reversed, large sections of the city are on their way to dilapidation. In considering what can be done to halt or reverse this trend, a number of guide lines are available in the various urban renewal projects now under way in numerous cities and in the procedures recommended by the U.S. Housing and Home Finance Agency.

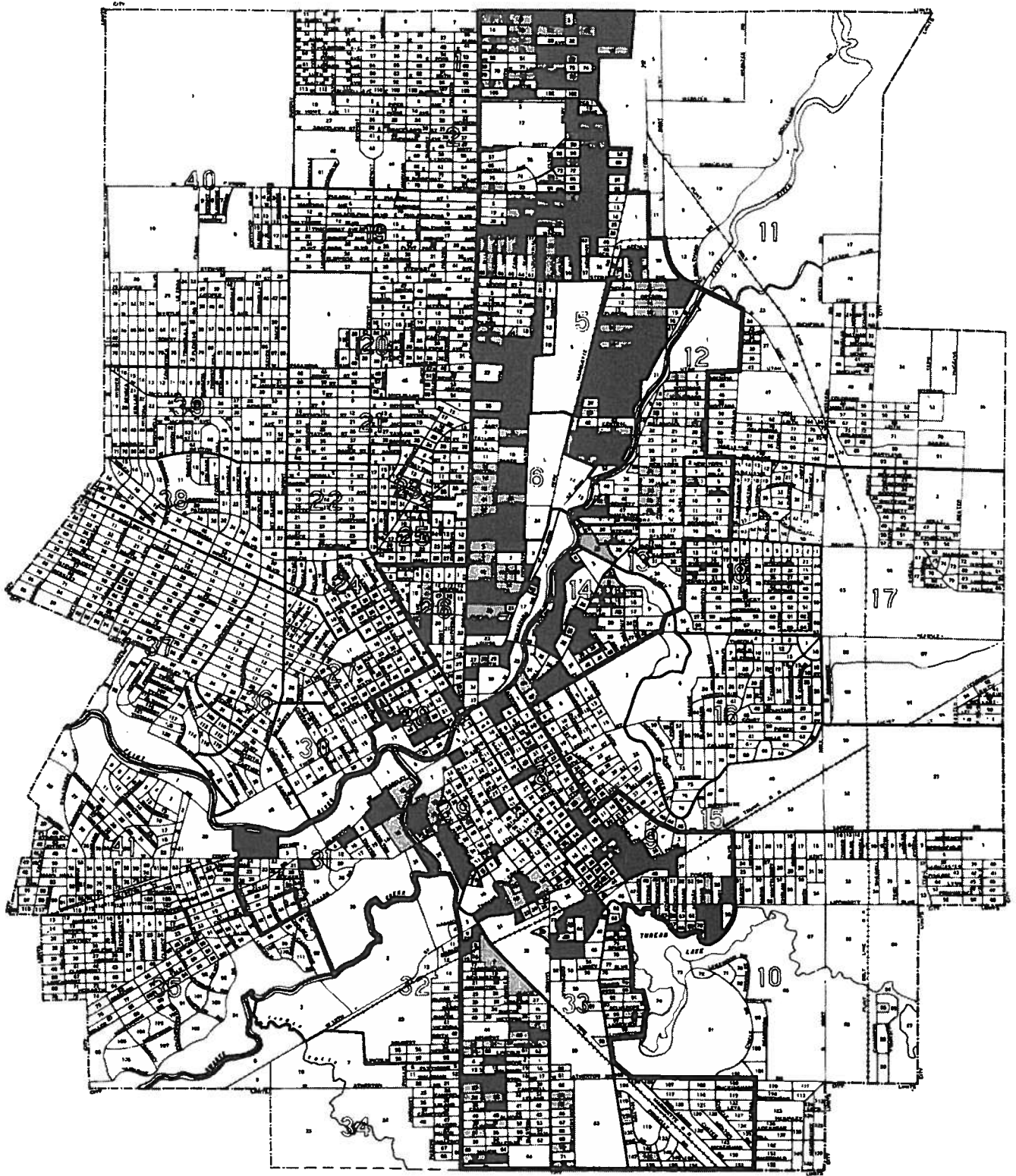
The Federal Urban Renewal Program

While the conservation of sound residential sections and the rehabilitation or redevelopment of blighted areas in our cities, as well as the prevention of the spread of blight are predominantly of local concern and a local responsibility, the national interest is encouraging. The Housing Act of 1949, as amended, includes provisions designed to help cities to attack directly the problems of eradicating slums and blight and prevent the spread of blight - all as a part of a comprehensive program of community improvement now known by the generic term "urban renewal."

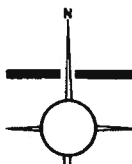
Federal financial and other assistance now is available to the cities, subject to meeting certain requirements, through the Urban Renewal Administration of the Housing and Home Finance Agency. This consists in the main of loans and grants for the preparation of plans and for the financing of projects - be these clearance and redevelopment, or rehabilitation or any combination of these and other devices. Certain aids are available to property owners in urban renewal areas for rehabilitation of individual structures and to builders for residential developments intended to provide housing for families displaced by other phases of the urban renewal program in the community.

A total program of urban renewal can best be considered within the purview of seven functional divisions comprising a "Workable Program" which is a prerequisite to receiving federal urban renewal assistance. Such a program is a document setting forth the city's objectives, policies and legal powers in regard to the following items:

1. Statutes, Codes and Ordinances regarding urban renewal and public housing enabling legislation; building, plumbing, electrical, sanitary and general housing standards and regulations.
2. Comprehensive Master Plan for the city and environs; zoning and subdivision administration.
3. Neighborhood Analyses related to housing conditions and community facilities.
4. Administrative Organization of the city concerning code enforcement and urban renewal programs.



SOURCE. U S CENSUS OF HOUSING



**COMPREHENSIVE
MASTER PLAN**

CITY OF FLINT · MICHIGAN
FLINT PLANNING COMMISSION

1960
 FT 0 2000 4000
 MO 1/4 1/2 1

LADISLAS SEGOE & ASSOCIATES
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**SUMMARY MAP OF
SUBSTANDARD HOUSING CONDITIONS**

- PERIMETER OF STUDY AREA GENERALLY CONTAINING
BLIGHTED OR NEAR BLIGHTED HOUSING
- WITHIN STUDY AREA:
- SEVERELY BLIGHTED
 - ▨ BLIGHTED
 - DECLINING

5. Financial Ability of the City to carry out the Workable Program.
6. Relocation of Persons Displaced in the course of urban renewal and other public works programs, including highway projects, and general policy regarding minority group housing.
7. Citizens Participation at the neighborhood level and city-wide.

The Housing and Home Finance Agency suggests a note of caution with regard to Workable Program submittal and certification.

"The approval of a workable program is a prerequisite to eligibility for aids . . . but does not in itself qualify a locality for any of these aids. Neither does it imply approval of any proposals which the workable program may contain for delineation and treatment of specific areas and neighborhoods.

"Certification (by the HHFA) of a locality's workable program means that it has faced up to the community-wide problem of its slums and blight and is ready to proceed with its urban renewal program. In so doing, it may decide to undertake an urban renewal project or projects and may desire federal assistance . . ."

Upon receipt of HHFA certification of the Workable Program, the City becomes eligible to apply for any of the several kinds of assistance available under the various provisions of the Housing Act. The following is a brief summary of the major programs administered by the Urban Renewal Administration of the HHFA. Not all have specific application in Flint, but are included to form a complete list of major programs as summarized by the HHFA:¹

"Title I Project

A Title I project is an urban renewal project which is financed in part through federal advances, loans, and grants authorized by Title I of the Housing Act of 1949, as amended.

"Urban Planning Assistance

Urban planning assistance is a program, authorized by Section 701 of the Housing Act of 1954, as amended, of federal grants to finance the various kinds of planning activity on a metropolitan area or regional basis, as well as for community-wide planning in municipalities and counties with less than 50,000 population.

¹ Quotations are from the HHFA Urban Renewal Manual.

"Community Renewal Program

A Community Renewal Program is a program under which federal grants up to two-thirds of total cost may be made for preparing community-wide blueprints for urban renewal.

"Feasibility Survey

A Feasibility Survey is a special study of questions about an urban area which should be examined even before the beginning of normal survey and planning activity for an urban renewal project.

"General Neighborhood Renewal Plan

A General Neighborhood Renewal Plan is a plan for an urban renewal area of such scope that renewal activities may have to be "phased" over a period as long as 10 years.

"Non-assisted Project

A Non-assisted Project is distinguished from the Title I project assisted by federal loans and grants. The principal form of federal assistance for a Non-assisted Project is FHA special mortgage insurance.

"Demonstration Program

The Demonstration Program is a program authorized by Section 314 of the Housing Act of 1954 of federal grants for experimental undertakings which will add fresh information about urban renewal problems and be useful in guiding renewal activities in other communities."

One of these programs, the Title I Program especially, is important enough to Flint's urban renewal program to merit careful investigation.¹

Neighborhood Analyses

In order that an urban renewal program be effective, it is necessary to attack the problem of urban blight in different sections according to carefully considered sequence of priorities. Such a program must be based on adequate information as to the pattern, nature and scale of blight and its severity. Neighborhood analyses - a key part of the "Workable Program" - provides this necessary information. It can serve as the starting point for all orderly discussion of urban renewal needs and courses of action.

¹ Its features were explained in the detailed report entitled "Redevelopment, Rehabilitation and Conservation Plan" (Part 6, Volume II of the Master Plan), which may be referred to at the office of the Flint Planning Commission.

Flint's neighborhood analyses begin with the delineation of residential neighborhoods as based on the land use considerations of the Master Plan. The extent, intensity and pattern of blight within these neighborhoods is determined. Where housing conditions in an entire neighborhood are more or less homogenous, the entire neighborhood can be categorized as a single unit in the total, long-term urban renewal program. Where a neighborhood's housing conditions differ in different parts, the neighborhood is divided and recommended action indicated for each of the parts. The broad causes of deterioration are identified and means suggested to deal with the situation.

Results of Flint's neighborhood analyses are portrayed graphically on the accompanying Plan.¹ The Plan, as such, concerns only the residential uses within the indicated areas and should be viewed in this context. Flint's neighborhoods can be categorized as follows:

- I. High priority redevelopment areas - where deterioration is far advanced and where this, along with adverse environmental factors, rule out the possibility of reclaiming the areas by other means.
- II. Redevelopment areas of second priority - where urban blight is severe but not as advanced as that in the areas of the foregoing category; or where - due primarily to the presence of adverse environmental conditions within the area or due to adjoining development of appropriate and permanent, but of incompatible type - the comprehensive Master Plan recommends a change to a more suitable type of land use.
- III. Rehabilitation areas - where the deterioration of housing conditions is more moderate and also more scattered, but where further decline may well occur and spread unless individual structures are rehabilitated or eliminated and unless adverse environmental factors are corrected or greatly ameliorated.
- IV. Conservation areas with limited rehabilitation - where housing conditions in the area are generally of an acceptable standard, but where certain very limited and scattered structures or groups of structures show evidence of decline.
- V. Conservation areas - where there is little or no evidence of decline and where housing is generally sound.

General Methods of Action

Redevelopment methods include the purchase, clearing, resale, and reuse of land in the area. It is the most expensive method of urban renewal and, generally, is to

¹ Map: Redevelopment, Rehabilitation and Conservation Plan.

be employed only where a thorough study establishes this method to be the only effective remedy - where deterioration is so severe and prevalent that rehabilitation as a general remedy, combined with spot clearance and other measures, effective in the case of a less severely deteriorated area, no longer suffice and might even make successful reclamation more difficult later on.

Rehabilitation methods are aimed at the general up-grading of residential standards in an area, through encouragement of private investment and through selective provisions of any necessary new or more adequate community facilities. Spot clearance of deteriorated residential structures and others having an adverse effect on the area often is necessary, but a rehabilitation program stops short of wholesale or large-scale clearing and redevelopment of the area.

Conservation measures are those generally regarded as necessary to maintain satisfactory standards of housing quality in a given area where such standards presently exist. Where such satisfactory standards do not exist but where they may ultimately be created through redevelopment or rehabilitation, continuation of the newly established housing standards will depend upon the application of these same conservation measures.

Redevelopment, Rehabilitation and Conservation Areas

Areas for redevelopment are outlined on the accompanying Plan¹ in two priorities and are described briefly in the table² opposite the Plan. Likewise, rehabilitation areas and areas needing conservation combined with limited rehabilitation are outlined and described. Finally, conservation areas, covering the balance of the city, are shown and the treatments indicated.

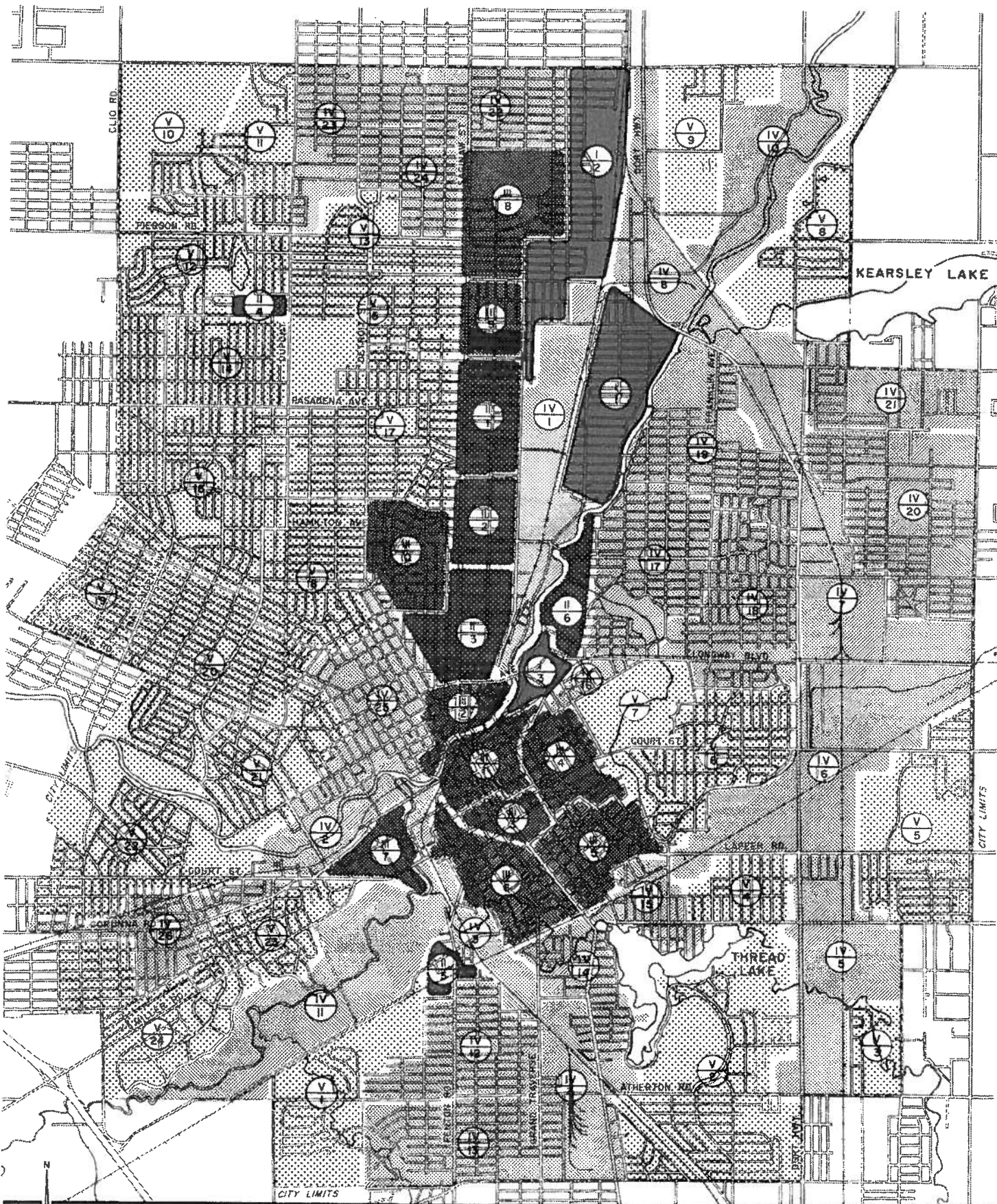
The clearing and redeveloping of slums and the halting and reversal of the spread of blight call for a comprehensive, many-sided, long-term program. Only concerted and sustained effort on the part of the community as a whole can produce enough civic power to change a downward trend. The job is usually complex and costly - although an average of three-fold increase in values experienced thus far through redevelopment should go a long way to help carry and eventually defray the local share of the cost of redevelopment. Be that as it may, the cost of inaction in the end is likely to be even greater.


1 Map: Redevelopment, Rehabilitation and Conservation Plan.

2 Table: Redevelopment, Rehabilitation and Conservation.

REDEVELOPMENT, REHABILITATION AND CONSERVATION






Area	Indicated Treatment of Areas			Remarks
	Complete Redevelopment	Selective Redevelopment & Rehabilitation	Conservation	
<u>Redevelopment Areas</u>				
I-1	X			City's worst housing conditions; redevelop for industry; <u>highest priority</u> .
I-2	X			Extensive dilapidation, overcrowding; redevelop for industry; <u>high priority</u> .
I-3	X			Present riverfront redevelopment area.
II-1, II-2 & II-3		X		Very poor housing conditions; limited rehabilitation initially; ultimately, selective redevelopment and area-wide full-scale rehabilitation.
II-4		X		Relocate amusement park; redevelop as park area to include Forest Park and Flint Park Lake.
II-5	X			Environmental conditions poor; redevelop for industrial use as feasible; <u>low priority</u> .
II-6	X			Mixed land uses; dilapidation; if Interstate 475 expressway is located as recommended, redevelop, in coordination with expressway construction, for housing at least in northern part; if not, rehabilitate housing in northern part and redevelop for light industry in southern part.
<u>Rehabilitation Areas</u>				
III-1		X		Retail core of central business district; remove non-transient housing; rehabilitate in accord with CBD plan; <u>highest priority</u> for rehabilitation.
III-2 & III-3		X		Supplementary retail areas and local government center; rehabilitate in accord with CBD plan; <u>high priority</u> .
III-4		X		Key residential district in central area; remove blighting influences; upgrade through rehabilitation and provision of amenities; encourage apartment house construction; <u>high priority</u> .
III-5 & III-6		X		Scattered dilapidation more severe than in Area III-4; some severe blight; remove adverse influences and rehabilitate to halt blight.
III-7		X		Remove adverse features and rehabilitate; create northern buffer (e.g. industrial parking).
III-8 & III-9		X		Predominantly residential; rehabilitate, providing transitional buffer-type uses against non-residential uses to east and west.
III-10		X		Predominantly residential, rehabilitate; redevelop blocks of severe dilapidation.
<u>Conservation Areas</u>				
IV-1 through IV-9		X		Primarily industrial; discourage residential and encourage non-residential development; relocate residential uses where feasible.
IV-10 & IV-11		X		Discourage further residential development; develop for park purposes.
IV-12 through IV-26		X		Housing generally good; inaugurate program of repair, improved upkeep; limited rehabilitation.
V-1 through V-24		X		Primarily residential; environmental conditions good; undertake program of conservation primarily.

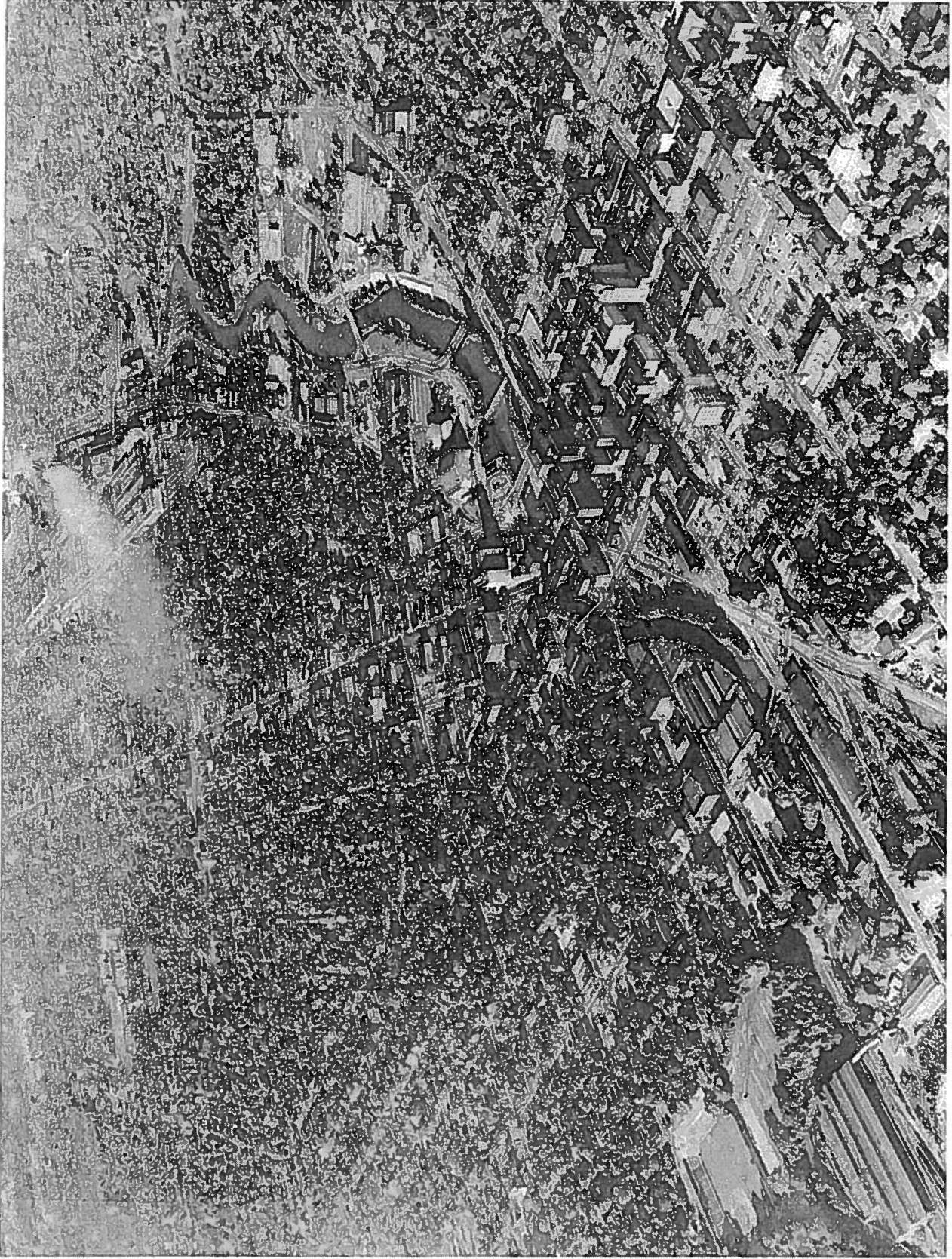



COMPREHENSIVE MASTER PLAN
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REDEVELOPMENT, REHABILITATION AND CONSERVATION PLAN
 FLINT · MICHIGAN

IDENTIFYING AND DELIMITING NEIGHBORHOOD ANALYSIS AREAS - TOWARD APPLICATION OF RECOMMENDED URBAN RENEWAL PROCEDURES TO THE HOUSING IN EACH, IN A TOTAL APPROACH TO PRESERVING AND/OR BETTERING COMMUNITY HOUSING STANDARDS.

-  REDEVELOPMENT AREA (FIRST PRIORITY)
-  REDEVELOPMENT AREA (SECOND PRIORITY) OR REHABILITATION AREA WITH SELECTIVE REDEVELOPMENT
-  REHABILITATION AREA
-  CONSERVATION AREA WITH LIMITED REHABILITATION
-  CONSERVATION AREA



DOWNTOWN FLINT
PHOTO - KENNETH G. WELCH

LAND USE PLAN

Relatively limited supply of land available at any given time for urban uses - due to the inevitable requirement to provide this with necessary services and facilities at reasonable cost - was among the reasons that led to systematic land use planning as a function of municipal and county government. While other parts of the Master Plan deal specifically with the providing of such needed facilities and services, it is the purpose of this section to portray and present the Flint urban area of the future with the various uses of land shown in their relationships to the physical facilities proposed to serve these uses. The concept held in mind in developing the Land Use Plan recognizes a basic philosophy - the organization of the activities and land use areas of the overall urban service area into communities and neighborhoods.

Communities and Neighborhoods as Organic Units

The Master Plan will tend to strengthen the present composition of Flint and its environs by forming organized communities, each divisible into neighborhoods. Primarily residential in character, each community as proposed is equipped with a relatively full complement of facilities for shopping; for social, civic and religious activities; for education and recreation; and for fire protection. These facilities should be reasonably comparable with those in a properly planned isolated city of similar size.

A community comprises a land area generally defined by non-residential "corridors" as follows:

- a) the principal business and industrial areas;
- b) existing and potential railroad lines and expressways;
- c) large open areas, including cemeteries; public land, including major parks and recreation areas;
- d) natural features such as rivers and lakes.

Each of the defined communities is primarily residential in character, as already stated, and provision of related facilities in the individual communities facilitates the desirable maintenance of balance in their distribution throughout the urban area. In Flint, influenced by a number of factors - including the bounding of residential areas by non-residential land use corridors - a reasonably natural formation of communities and neighborhoods has occurred. The Master Plan, as indicated, attempts to strengthen this emerging pattern, mapping these non-residential corridors and these residential areas.

Flint's present communities range in population from about 20,000 to over 40,000 - each with one junior high school and related adult education, recreation, and social activities. A playfield usually is available for community use. Shopping facilities are distributed in the community and one shopping district may dominate.

A community comprises a number of neighborhoods which range in population from about 2,000 to 9,000. Each neighborhood has an elementary school with either present or potential accompanying adult education and social facilities. It most often contains neighborhood parks and playgrounds; and neighborhood shopping facilities generally are available.

Supplying the Market for Urban Land

The Land Use Plan¹ portrays an urban service area of approximately the size calculated previously,² taking account of topography and "squaring off" the boundaries to some extent. Additional land, beyond the area designated - mainly to the northeast and northwest - may be considered for urban expansion in the more distant future. The Land Use Plan portrays in terms of long-range growth and development the proposed uses to which different parts of the Flint urban service area desirably should be put, in consideration of existing uses, functional suitability and estimated future land requirements. As is customary practice, the Plan portrays Flint and its environs many years hence - when all will have been accomplished that is envisioned by the Master Plan.

The Land Use Plan, in addition to delineating the urban service area, shows the location of facilities and features of community development, described in some particular in the preceding sections. In addition to the city proper, the urban service area comprises the territory surrounding the city which is estimated to be required and deemed suitable for development of the urban type. The urban service area, then, is that area in which Flint's anticipated growth during the next 20 to 25 years might best take place in accordance with the recommendations of the Master Plan. It is the area in which public facilities and services can most readily be expanded and provided, both from the standpoint of efficiency and economy.

Within the urban service area, the Land Use Plan portrays by distinctive symbols and tones the various categories of uses estimated to be required and for which the land in various parts appears to be most suited. The different land use areas consist of:

- a) the areas held most appropriate for single-family and multi-family residential use;
- b) the areas considered to be most appropriate for commercial use, including downtown business development, shopping centers, and general and highway service business;
- c) the areas best suited for industrial expansion;
- d) sites for public facilities, such as schools, parks and playgrounds, those existing to be retained and the additional ones proposed.

¹ Map: Land Use Plan.

² See section on Land Use.

Besides school and recreational facilities, the public facilities shown include fire stations (described later), also the highways, thoroughfares and more important local streets (the latter described later) which should be provided in undeveloped sections, and the highways and thoroughfares to be improved or added in the developed parts of the community. Among other purposes, the Plan's generalized land use districts are intended to serve in years to come as a guide in amending the zoning map - in order to provide for emerging needs - and in the acquisition of appropriate sites for public and semi-public uses. In addition, indication of the desirable future land use in each part of the area should encourage and aid in bringing about subdivision practices appropriate in each area. Such indication should be of assistance in determining the proper location and size of various utilities or extensions, such as sewer and water mains. The Land Use Plan - by indicating the boundaries of the area estimated to be fully adequate to accommodate all prospective growth of the urban type within the next quarter century - provides a basis for establishment of policies in respect to the extension of utilities and other municipal services and facilities; furthers urban expansion along desirable lines indicated herein and at minimum costs to the taxpayer.

Types and Interrelationships of Land Use

Land use in the urban service area can be categorized as residential and non-residential. Residential land includes single-family, two-family, and multiple-family residential use. Non-residential land includes industrial, commercial, public, institutional, utility, railroad and street and alley use. The Land Use Plan depicts, by colors and symbols, the inter-relationships of these land uses.¹ Flint's projected land use is almost evenly divided between residential and non-residential uses.

The Plan depicts residential land use as organized in broad and cohesive community areas, often bounded by corridors of non-residential land use. The largest portion of each community area is devoted to residential use, including different types of housing and in some communities comprising a range of types. In the main, the color symbol of the Land Use Plan depicts the predominating housing characteristic of indicated residential land use. Such depiction does not mean to exclude related residential uses, because, obviously, certain non-residential uses bear a direct relationship to community areas. Schools, parks and other recreation areas, including community center facilities, are so related. Their location is one of the principal factors in the delimitation of these areas.

Certain commercial areas serve and are related rather directly to community and neighborhood areas while others are not. The central business district and the major industrial areas serve and are related to the entire urban and urbanizing area. Community and neighborhood shopping centers are an important feature of the Plan. In some communities and neighborhoods no single commercial center dominates, while in others a clear pattern of commercial area relationships exists. General business and highway service business usually are located in the non-residential corridors.

¹ Map: Land Use Plan.

Various other public and semi-public uses are located in non-residential areas, generally accessible to the residential parts of the community. Larger institutional and other uses also tend to locate in the non-residential corridors. However, certain of these types - especially neighborhood churches - are located within the residential communities and neighborhoods themselves. All major industrial areas are located in the non-residential corridors.

Non-residential Uses: Industrial

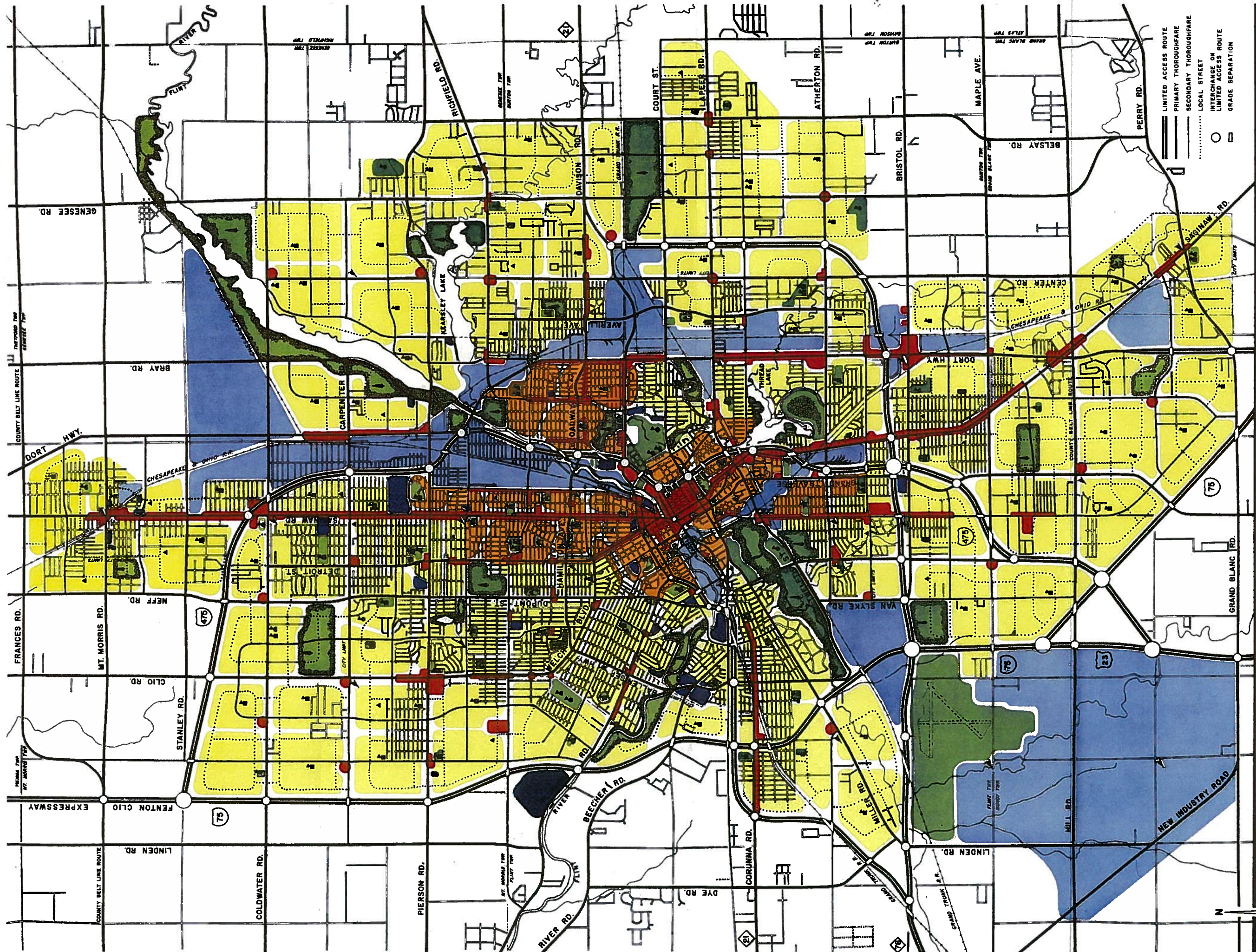
In these times of rapid technological change it is rather difficult to predict future industrial land requirements. Much of past experience is becoming obsolete. This may be stated with certainty however: industry will not take second-rate real estate for its plants, and consequently, industrial land which is desirable - not merely suitable - must be reserved for that specific purpose. Convenient rail and highway access - and, in the case of major industry, expressway access; access to sewers, industrial water supply; absence of residential "nuisance" development; proper drainage; extra land for expansion; sound protective zoning are among the important criteria of industrial site selection.

Scattering of small industrial tracts should be avoided, and industrial districts should be developed on the basis of comprehensive plans for each. The Land Use Plan recognizes these principles and proposes sizeable industrial tracts: on open land south of Bishop Airport and west of Interstate 75; in a "redevelopment" area east and west of Interstate 475 and between the Buick and Ternstedt plants; eastward along the northeast branch of the C&O Railroad; at the site of all of the urban service area's major industrial plant locations - consolidating the present industrial land uses. Vacant tracts should be zoned by the City of Flint - or by the township having jurisdiction - for industrial use exclusively - prohibiting residences.¹

Non-residential Uses: Commercial

A section of this report is devoted to a study of Flint's central business district. Additionally, some general shopping center planning procedures are described here in subsequent paragraphs. Along with the planning of the central business district and the siting of shopping centers, the sound development of general commercial land throughout the urban area is one of the most difficult problems confronting the jurisdictional bodies and officials engaged in the administration of planning and zoning. Desirably, heavy traffic-generating commercial uses should not be permitted to develop endless strings of establishments along thoroughfares, but should be concentrated in compact areas. Neighborhood retail business and services not accommodated in shopping centers should be concentrated in those areas along thoroughfares indicated therefor. The city should provide adequate zoning protection to existing commercial, residential, and other areas by observing conservative policies toward new commercial ventures.

¹ When present residential areas have been cleared for redevelopment for industrial use, these should be similarly zoned.



COMPREHENSIVE MASTER PLAN
 CITY OF FLINT · MICHIGAN
 FLINT PLANNING COMMISSION
 1960
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 MI. 0 1/4 1/2 1
ADILAS SEGOE & ASSOCIATES
 CITY PLANNERS · CONSULTING ENGINEERS
 CINCINNATI · OHIO FLINT · MICHIGAN

LAND USE PLAN
 FLINT URBAN SERVICE AREA MICHIGAN

- RESIDENTIAL: SINGLE-FAMILY
- RESIDENTIAL: TWO & MULTI-FAMILY
- COMMERCIAL*
- INDUSTRIAL & PUBLIC UTILITY
- PUBLIC PARK
- OTHER PUBLIC
- SEMI-PUBLIC RECREATIONAL
- SENIOR HIGH SCHOOL
- JUNIOR HIGH SCHOOL
- ELEMENTARY SCHOOL
- COLLEGE
- MAJOR RECREATION AREA - INCLUDES RELATED PLAYFIELDS, PARKS, PLAYFIELDS, ETC.
- PLAYFIELD
- PARK OR PLAYGROUND
- CHURCH
- INSTITUTIONAL
- CEMETERY

* NOTE: CIRCULAR FORM INDICATES GENERAL LOCATION

- LIMITED ACCESS ROUTE
- PRIMARY THOROUGHFARE
- SECONDARY THOROUGHFARE
- LOCAL STREET
- INTERCHANGE OR LIMITED ACCESS ROUTE
- GRADE SEPARATION

One of the more recent techniques in community planning utilizes the Land Use Plan as a guide in locating future shopping centers - not centers in direct competition with the central business district, but those mainly of the type serving the more frequent needs of the residents in the tributary area. The Land Use Plan should not attempt to designate specific locations of shopping centers; however, it can serve as a basis for a broad, general appraisal of shopping center demand in the various communities and neighborhoods in the urban area. To this end, the Plan shows - in various parts of the urban area which may eventually be expected to require shopping facilities - generalized locations for centers. This means, in practice, that the potential locations for such centers remain in a residential zoning category until population increase in the area to be served establishes a market demand sufficient to support such a center. At that time - evidenced by analysis of the then prevailing market conditions - a specific suitable site may be selected, planned for development into a shopping center, and zoned therefor provided the selected site is approximately at or near the location shown on the Land Use Plan.

In various urban areas, principles and techniques such as this have been devised to remedy disappointing experience in the over-building of shopping centers. The American Marketing Institute, the Urban Land Institute and others have warned repeatedly that such over-building will result not only in untimely deterioration of older commercial areas but in failure of new shopping centers as well. In due course, it will deplete the community tax base as a result of declining real estate values. In this connection, shopping centers and commercial enterprises do not create purchasing power, they merely draw from an existing and expanding market; substantial population growth must precede successfully expanded commercial development.

Non-residential Uses: Public, Institutional and Other

Flint's sizeable public holdings include Bishop Airport, the major recreation areas and the land holdings of the public school system. These land areas have been reviewed in appropriate sections of this report. Several public and semi-public areas are particularly important to Flint's broad central area development. The College and Cultural Development is the major public land holding on the east perimeter of this broad central area. The Industrial Mutual Association auditorium and related uses can form the nucleus of a broader semi-public area at the present site. The government center, comprising both municipal and county buildings, is a principal attraction at the south perimeter of the central business district. With consolidation of this area, and with, perhaps, some future location of governmental buildings and plaza areas therein, an expanded community feature can be established.

Church buildings and schools are, in the aggregate, the principal institutional uses in the urban service area, with sites related generally to the residential uses. A major institutional area is growing in all quadrants of the Beecher Road-Ballenger Highway intersection.

Residential Use: Density of Development and Population Distribution

In presently platted residential areas, single-family lot size is controlled by past practice. In these areas, single-lot sizes average from less than 5,000 to 6,000 square feet or so. In newly platted portions of the city, modern subdivision practice generally has resulted in increased lot sizes. In most of the

urban service area outside the city of Flint, lot sizes are controlled to some extent by the demands of private water and sewer systems, and generally are larger than city lot sizes.

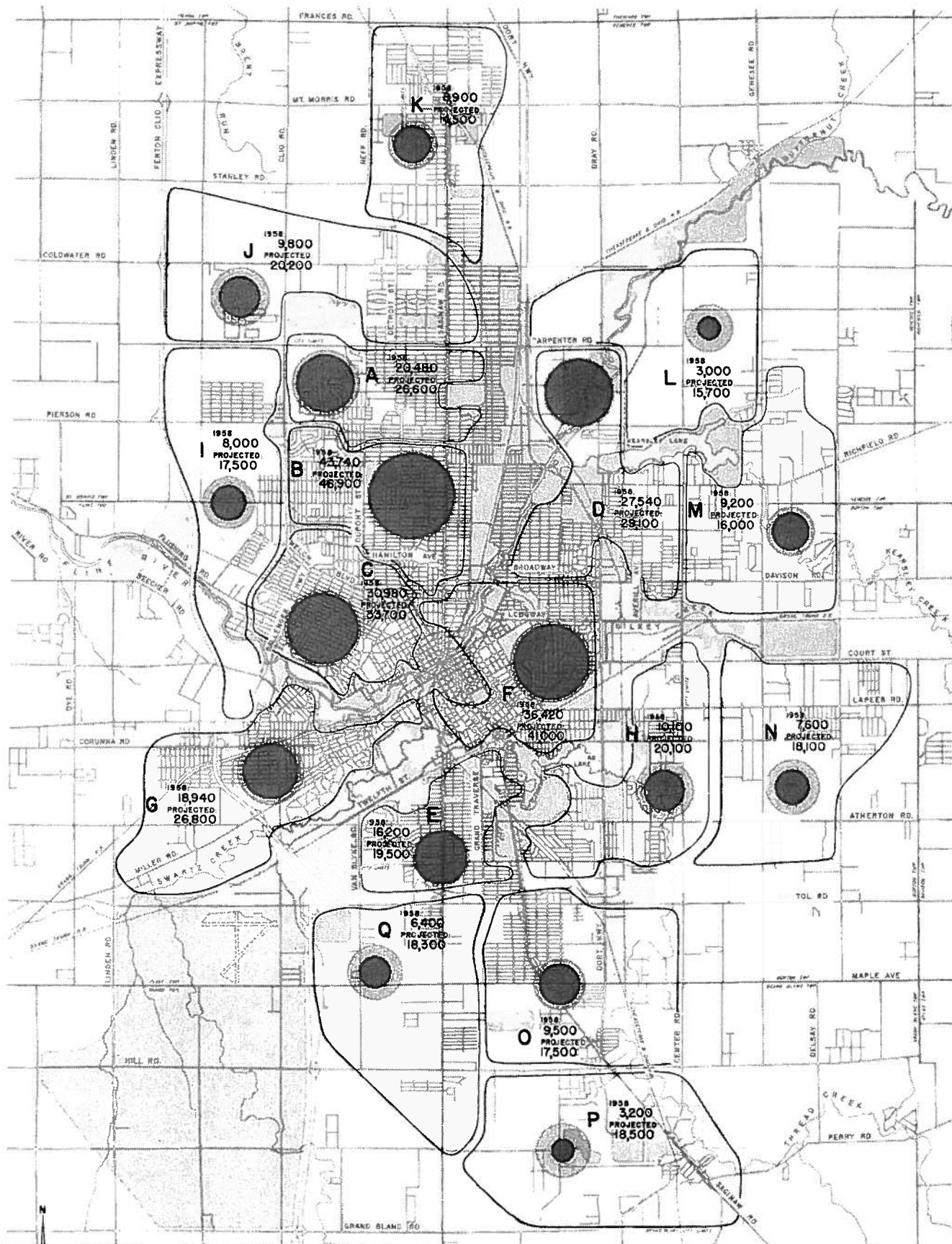
At the present time, Flint has relatively little high-density, multi-family residential use - most being conversions from larger single-family dwellings. It would seem likely that higher density residential use may well increase - at least to a degree. Conversion of older single-family dwelling units and the building of new medium-density multi-family units seems likely to continue - perhaps at an increased rate. Land areas best suited for this multi-family, high-density land use are centrally located, with some multi-family use sites located here and there in the expanding environs. The residential area bounded by the central business district, Kearsley Street, and the College and Cultural Center and Fifth Street seems particularly well suited by location for high-quality, high-density residential development.

As noted earlier, the size of the projected urban service area is based upon a careful appraisal of the needs projected for all categories of land uses. Similarly, a more detailed projection of population distribution can be derived from the locational pattern of these uses on the Land Use Plan.¹ Population growth is projected for Flint's various community areas in the city and in the urbanizing environs. In-city area population is projected on the basis of holding capacity - derived from present and projected patterns of residential density and from projected land use. In the remainder of the urban service area projections are based on reasonable assumptions as to land use density attainable during the time period for which the projections are drawn.

The holding capacity of the city area is calculated at about 225,000. This represents about a 15 per cent increase over the presently estimated 195,000. Some prognostication can be made as to the attainability of this holding-capacity figure. If public sewer and water supply continues to be unavailable in most of the outlying urban service area, subdivision development may well be concentrated on the relatively limited vacant city land (with public facilities available). This would tend to produce growth-inhibiting high land prices but also might tend to fill up the available vacant city land at an earlier date than otherwise. If, on the other hand, extensive public facilities were to become more available in the outlying urban service area, subdivision development in this area would share more of the projected growth. The "filling up" of present city land then probably would proceed at a more leisurely pace. It is important to note that if city land is developed in general accord with the comprehensive Master Plan - devoting appropriate land to industrial and other non-residential uses - a relatively small increase in population seems likely at present densities within the city area.

Based on the availability of developable residential land, proportionately the largest in-city population increases seem likely to occur in areas H, A, and E.¹ Due to the decreasing availability of residential land, proportionately small increases can be expected in areas B, C, and D. With attainment of full holding capacity, areas B and F will have the largest population in the city.




¹ Map: Projected Population Distribution by Community Areas.



COMPREHENSIVE MASTER PLAN
 CITY OF FLINT · MICHIGAN
 FLINT PLANNING COMMISSION
 1960
 LADISLAS SEGOE & ASSOCIATES
 CITY PLANNERS · CONSULTING ENGINEERS
 CINCINNATI · OHIO FLINT · MICHIGAN

PROJECTED POPULATION DISTRIBUTION BY COMMUNITY AREAS
 FLINT MICHIGAN AND ENVIRONS


E COMMUNITY AREA

 1958 POPULATION
 PROJECTED POPULATION
 NON-RESIDENTIAL LAND USE

Due to the generally lower density pattern in outlying portions of the urban service area, it would seem unlikely that any of these areas would reach the population totals indicated for in-city areas during the projection period. However, proportionate increases in almost all of these areas would tend to exceed those in the city communities. As indicated, the greatest proportionate increases can be expected in areas L and P.

Layout of Undeveloped Sections

The Land Use Plan, as brought out earlier, shows the local or collector streets proposed for undeveloped residential sections within the urban service area. These have been laid out in a manner suggestive, in each area, of economical, attractive and otherwise desirable street patterns for residential development. In addition to their main purpose of helping to guide the desirable layout and development of the various areas, the collector street patterns shown are intended to serve as specific examples of the application of principles and standards of design set forth in the Subdivision Regulations.¹

In general, the collector street layout has been designed - within the broader framework of the Major Street Plan - for the neighborhood units, as indicated under the School and Recreation Plans. The Major Street Plan in general provides for either primary or secondary thoroughfares at half-mile intervals in both north-south and east-west directions. It is estimated that these major traffic arteries will have ample capacity to accommodate all trips beyond the boundaries of the neighborhoods, and, therefore, the local or collector streets should not be called upon to handle more than local traffic.

Most of the neighborhoods comprise an area of about one square mile, bounded by expressways, primary thoroughfares, railroads, or other natural or man-made features. Access to the center of each neighborhood generally is provided via secondary thoroughfares. The function of the collector streets is to provide a connection between these major thoroughfares and the minor access streets and to provide internal circulation within each neighborhood independently of the minor streets.

The above general concepts were further refined by other desirable planning criteria in setting up the following general collector street design standards:

1. Collectors should discourage traffic through more than one neighborhood. This may be done by curvilinear alignment, jogs, loops, or "T" intersections.
2. Some collectors should form a continuous loop within the neighborhood, tying all parts of the neighborhood together. This loop should serve as the unifying element of the neighborhood street system. Schools, churches, parks, apartment houses and other traffic generators in a residential neighborhood would logically be located on this street. In addition, such loop would serve to make all parts of each neighborhood

¹ Reproduced separately.

accessible to transit vehicles offering some form of sub-urban service described in the section on the Transit System.

3. Collector streets generally should be located at one-quarter mile intervals between primaries and secondaries. Topography and other barriers, however, may require additional collector streets at closer intervals.
4. Existing streets should be utilized as collectors in partially developed areas, provided the above design criteria can be observed.

Undeveloped sections remain one of the few areas where modern planning practice may be put into effect directly without condemnation and purchase of land with its litigation and cost. Effectively administered, the control of street layout exercised by the Planning Commission and other officials in the approval of subdivision plats can be one of the most powerful tools in the implementation of the Master Plan.

Fire Stations

Important in the development of the Land Use Plan is a study of the appropriate future locations of fire stations. Those shown on the Plan were selected after consultations with the Flint Fire Chief and others - in consideration of improvements proposed under the Master Plan and in accordance with Fire Underwriters' standards.

Present Facilities

The present city of Flint system comprises eight stations, two of which, in addition to the recently abandoned Central Station on Saginaw Street, are proposed to be abandoned. The newest facility is the Headquarters station at the Municipal Center, recently completed and replacing the old Central Station. Following are the existing stations and their locations:

Headquarters - South side of Fifth Street at Stevens on the site of the Municipal Center;

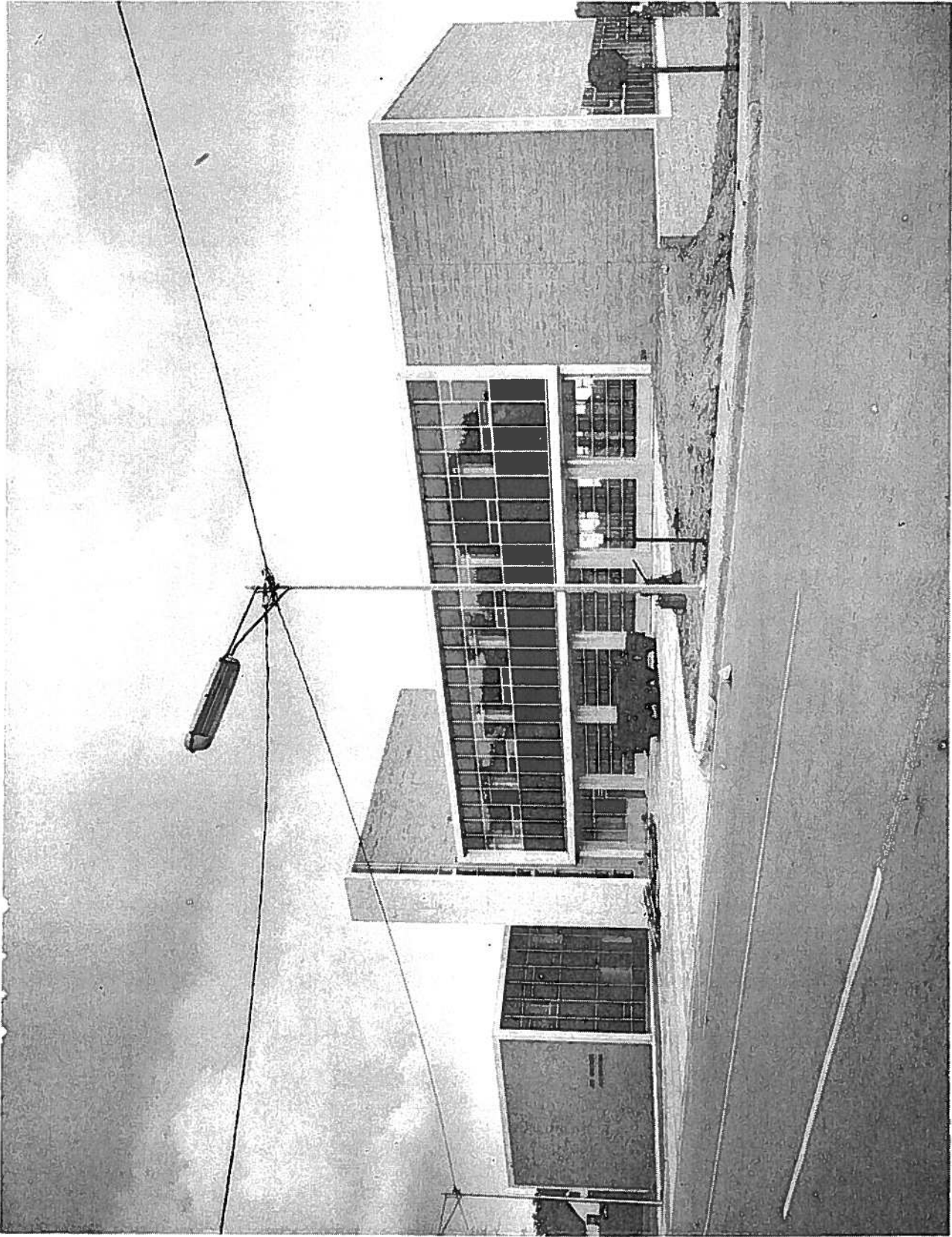
Northwest corner of Detroit Street and Fourth Avenue;

Northwest corner of Detroit and Witherbee Streets;

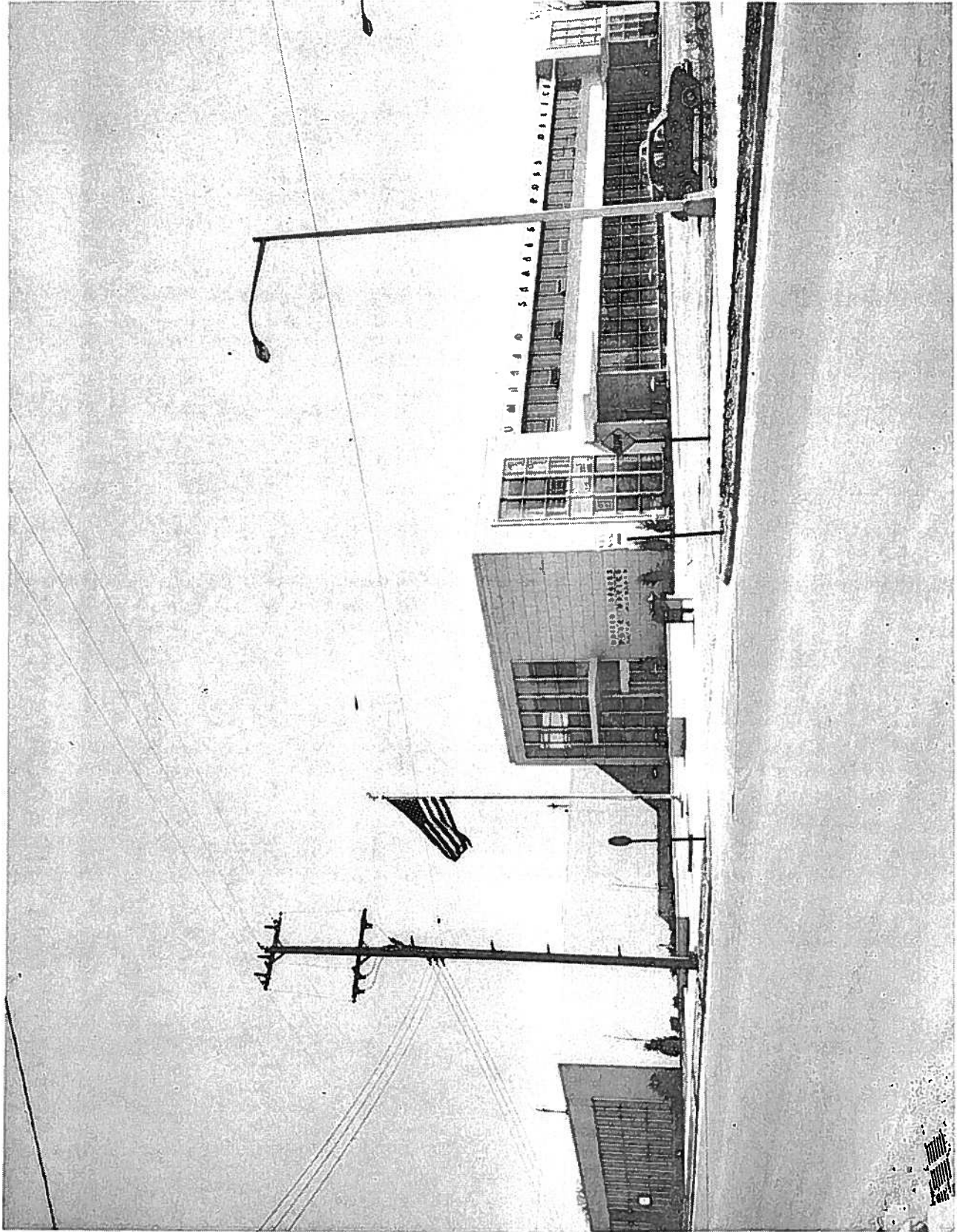
North side of Witherbee Street at Industrial Avenue;

Northeast corner of Davison Road and Minnesota Avenue (to be abandoned);

Northwest corner of North Saginaw and Eldridge Avenue;



FIRE DEPARTMENT HEADQUARTERS
JOURNAL PHOTO



POST OFFICE
JOURNAL PHOTO

North side of West Court Street, east of Pershing Street;

Northwest corner of South Saginaw Street and Belvidere Avenue (to be abandoned).

Proposed Facilities

Holding in view an estimated population in the Flint urban area of some 380,000 by 1980, a total of 22 stations (six of the present eight in the city - 16 others in the city and other parts of the urban service area) are envisioned under the proposed system to provide adequate coverage in consideration of prevailing standards.¹ Service radii for the stations vary according to the intensity and kind of development intended to be protected. These radii range from three-fourths of a mile in high value areas to three miles in areas of more or less open type of development. In closely built-up residential sections, radii of one and one-half to two miles have been observed.

General Appearance

While the Land Use Plan is intended to serve as a guide to the orderly, efficient and otherwise desirable development and redevelopment of the community in the years ahead, the Plan cannot of itself produce a more attractive environment. However, in setting the stage for orderly overall development, the Plan suggests that the element of attractiveness, or good appearance, as a third dimension, as it were, should go hand in hand with the two-dimensional development envisioned and portrayed by the Plan.

Unlike the Land Use Plan, other parts of the Master Plan - concerning facilities such as streets, schools, parks and playgrounds, among others: effectuating measures such as zoning and subdivision regulations; other measures or procedures concerning neighborhood conservation and rehabilitation - deal with one type of community function or facility. The element of appearance, in this regard, is concerned in a general way with all things in the community. Hence, it seems appropriate to discuss this here when envisaging the overall community of the future as portrayed by the Land Use Plan.

Beauty and good appearance of a community do not just happen. They are achieved by persistent efforts of various kinds over a period of years. Many different and seemingly small and unrelated matters must be made to contribute to the final result. The purpose here is to call attention to the need for wider or more effective application of the practices already employed, and to suggest additional ways for a well-rounded, effective program for improving the appearance of Flint, through the coordinated and collaborative efforts of public and private agencies, with the aid and participation of all its citizens.

¹ Certain stations in nearby communities or the townships may continue to serve for some time to come. When replaced, however, locations in the general proximity of those indicated on the Land Use Plan would be desirable.

Order is needed for attractiveness, and order does not connote monotony. Partly, it implies a harmonious arrangement, so that everything has a place and everything is in its proper place. Zoning is one of the instruments promotive of order in the city - it is directed toward producing harmony in the use of land. But order means more than this. It really starts with the individual lot and building, and extends through all things which make up the community - the streets and their appurtenances, parks, playgrounds and other open spaces, public structures and service facilities. Examples of more dramatic attempts at creating order and attractiveness in a city are the elimination of slums and blighted areas, and the grouping of public buildings in civic centers.

Orderly, harmonious development is one of the basic objectives of the Master Plan. It is generally recognized, however, that to make the community beautiful, other things, besides orderliness, are needed - among these, well-designed streets and street furnishings; good taste in the architectural design of public and private buildings and structures; adequate, attractive parks and other open spaces; a minimum of such fixtures as poles, wires and signs; and suitable and well-maintained street trees.

Streets

Streets not only provide channels for traffic, access to abutting properties and right-of-way for utilities; they also serve as a setting for buildings and other features of development - when of generous width, pleasing alignment, and properly improved and maintained, they contribute much to the attractiveness of the city. For one thing, more land is devoted to streets and alleys than to any other public purpose. For this reason alone, the design, construction and care of streets materially affect the appearance of the community.

Alignment and width, proportion in roadway and sidewalks, planting strips, angles of intersection with other streets are among the more important design features which together largely determine whether the street will be attractive or unattractive in appearance. With this in mind, certain design standards have been recommended in other parts of the Master Plan for the layout and cross-section of streets of different categories, with the view that these be not only adequate, safe and convenient, but also be pleasing in appearance.

The proposed Subdivision Regulations¹ contain numerous provisions pertaining to streets which will, if intelligently applied, contribute much to make not only the streets, but the new subdivisions in their entirety, generally attractive in appearance. These Regulations, among other things, will combat rigid adherence to the gridiron pattern of too closely spaced streets. The principles of design set forth also will guard against acute and multiple street intersections which can produce triangular or other odd-shaped lots and their baneful effects on the quality, orderliness and appearance of building developments.

The Major Street Plan is designed to accommodate all heavy traffic movements on a limited number of strategically located, coordinated and wide thoroughfares to be built and operated to handle large volumes of traffic expeditiously and with safety. Besides obviating traffic congestion and confusion in business

¹ Reproduced separately.

districts and along main traffic arteries, such a system of thoroughfares will protect residential sections against intrusion by heavy traffic, and thereby safeguard their sustained desirability and good appearance as well. With the Major Street Plan as a guide, the design of each street can be properly related to its function, thus preventing, on the one hand, congestion on important traffic arteries and, on the other, the wastefulness and other undesirable consequences of excessively wide right-of-way and pavements on purely local residential streets.

Public Buildings

Public buildings, because of their size and usually conspicuous position, have a considerable effect on the community's appearance. The newly constructed College and Cultural Center and the Municipal Center are excellent examples of the highly desirable effect attractive public buildings can have on the general appearance of the city. Obviously, public buildings may be made to contribute most to the attractiveness of Flint by seeing to it that their architectural design is fitting and of a high order, by ensuring their appropriate setting, and in certain cases, by arranging them in groups of harmonious design. Obviously, also, public buildings must be properly maintained; otherwise attractiveness of design and setting will be of no avail. Making public buildings and public building groups compose harmoniously with the surrounding neighborhood, and conversely, fitting the design of adjacent private buildings to the character of the public buildings, are additional means for enhancing both the economic and civic value of such investments.

Parks

That more and better located parks and playgrounds are needed in Flint was demonstrated elsewhere.¹ To be fully effective, recreational areas also must be attractive. A number of Flint's parks give evidence of considerable effort at landscaping and maintenance. Good landscaping, architectural and engineering design should be extended to all the park areas in the community, in respect to both original design and construction, and to long-range maintenance.

When cities become more and more built up, parks and playgrounds become necessary to compensate for the disappearing open spaces. Few communities, if any, have provided enough of these or have these suitably distributed to properly serve their people - especially those in the central, closely built-up sections who need them most. Unfortunately, even the more recently developed outlying areas all too often have been built with little regard for this need.

To be fully effective as places of recreation, parks and playgrounds must be attractive. If carefully located, well designed and maintained, they will also contribute greatly to the appearance of the community. While most communities are deficient in the amount and distribution of recreation areas, almost everyone can call to mind some notable for their beautiful parks - principally because of the excellence of design and the way in which they are cared for.

¹ See section on Public Recreation Plan.

In addition to larger park and playground areas, small ornamental parks, especially established for the purpose, triangles and circles at odd intersections, play a role in enhancing the city's appearance. Attractively landscaped and properly maintained, they will create a pleasant street scene or brighten an otherwise drab location. Traffic islands and center dividing strips can contribute in a similar way.

Rivers, streams, water courses and other minor drainage channels, if properly treated, also can enhance the attractiveness of the city. They can be turned from a liability to a community asset. Lands bordering them often lend themselves admirably to use as parks or parkways. However, when not used for public purposes or adequately protected, they often become dumps or junk yards. The Flint River provides a largely unrealized potential for enhancing community appearance. Work already done on reclaiming the riverbank is to be commended. Further riverfront landscaping is highly desirable - such as in the central business district,¹ also in the area bordering Flint's new post office where lack of suitable riverfront treatment would detract seriously from the desirable impact this new structure has on the appearance of Flint's important central area.

Street Trees

Good street trees, or the lack of them, make a major difference in the general attractiveness of any community. Aside from their aesthetic value, street trees screen the glare of the sun on pavements, and on the windows and walls of buildings. If properly chosen, spaced and maintained, street trees will make attractive most any street, including business streets as has been demonstrated by the planting of trees along Saginaw Street in the central business district a few years ago. Some of the famous streets of the world are remembered principally because of the character given them by their trees. In many a community trees have given their names to streets.

One plan suggests that one kind of tree should be planted along the entire length of a street. When replacements are made later, they should, of course, conform to the original type. To be successful, street tree planting should conform to proper standards and rules of spacing and arrangement which will vary according to type of tree and the special conditions on different types of streets and thoroughfares. For best effect, street trees should be planted with uniform spacing. It is very important that the space between curb and walk should always be wide enough to allow for the full and healthy development of the trees. In the choice of species, the most desirable features are hardiness, longevity, straightness and symmetry, immunity from disease and insects, shade and cleanliness.

The widening of a number of streets is proposed by the Major Street Plan. The replacing of trees which have to be removed in the process of street widening, and the planting of street trees in general, should be made a part of these improvements. Such future widenings, in fact, should be anticipated in preparing the planting plans. Where no trees exist now, the new planting should logically be located where it will be undisturbed in the future by the street widenings proposed in the Major Street Plan. Sometimes mature trees may have to be removed in the course of such widenings. In these cases new trees could be set out to advan-

¹See section on Central Business District.

tage at the new location in advance of the widening, so that they would be mature and fit in more attractively with the older trees on the opposite, undisturbed side of the street.

Street Furnishings and Street Lighting

The accumulation of poles and wires along streets mar their appearance. Fortunately, in Flint wires in the downtown area are underground, and in many other sections poles and wires are carried along alleys or special easements. Such practices are considered best for the community. Here, again, the time to provide for such arrangements is when the land is first laid out for urban development.

Besides poles and wires, many other street fixtures are customarily found within the street space. In contrast with the former, most of these must be there because they are essential for the convenient or safe use of streets, or for the furnishing of certain public services. In this category are street name signs, traffic signs and signals, fire alarm boxes, fire hydrants, waste receptacles, mail boxes, and street light standards. While functionally necessary, they may detract from the appearance of streets if principles of good taste and orderliness are not applied to their design and placement.

Street lighting is a street installation of exceptional importance. The combining of utility and beauty in this case must be especially striven for. Good street lighting contributes to the attractiveness of the community in a number of ways: through graceful design of the light standard itself; the pleasing and restful effect of efficient lighting; the feeling of greater safety. Flint has made notable strides during recent years in improving the standard of street lighting along Saginaw Street. The results effected - reduced traffic and pedestrian hazards, reduced crime rate - have more than justified the community investment. However, in general, Flint's street lighting is not altogether satisfactory judged by modern standards. The type and intensity of street lighting installation should be directly related to the function and use of the particular street. Streets in business districts, for instance, should be, and sometimes are, intensively illuminated. All traffic thoroughfares should likewise be well lighted for safety of travel. Local residential streets do not require quite so much lighting. The Major Street Plan can be used as a guide for future street lighting development, both for the improvement of present installations and the projection of new extensions.

Bridges, subways and similar public structures, because of their usually exposed and prominent location, can add or detract greatly from the appearance of the community. Pleasing appearance is being more and more insisted upon, and fortunately, incorporated in the design of such structures.

Private Development - Subdivision Regulations

The application of sound principles of design and adequate minimum standards in the layout of new land subdivisions, such as provided for in the proposed Subdivision Regulations, also will help in a number of ways to enhance the appearance of the community. The relation of a house to its surroundings, whether it faces one direction or another, is governed mostly by the initial arrangement of streets and lots. As demonstrated by a number of older lots in Flint, unsound practices

in these respects give rise to numerous and varied undesirable consequences of not alone an aesthetic, but serious economic nature. Odd shaped lots and excessively narrow or deep lots also invite building developments not in keeping with desirable standards. In guarding against such, and in a number of other ways, the Subdivision Regulations will help to create stable and attractive neighborhoods.

Private Development - Zoning

Zoning promotes order, and order is one of the important ingredients of good appearance, as already indicated. Aside from such general effect, Flint's proposed Zoning Ordinance¹ contains a number of provisions which may be expected to further attractive community development.

The proposed Ordinance complements existing sign regulations which should be re-fashioned, if need be, to adequately regulate the location and size of billboards and signs which can so easily spoil the appearance of a neighborhood. Commercial billboards are prohibited in all residence districts and also in neighborhood business districts. Signs in residence districts are limited to temporary real estate signs, to name plates and institutional signs. These are reasonable restrictions, but important for protecting the character and appearance of the neighborhood. Other provisions of the Zoning Ordinance applying to local or neighborhood business districts, and pertinent to the subject under discussion, require, among other things, that business structures be set back from the street line where such structures adjoin residence districts.

Maintenance of Values

It is not enough to build the community in an attractive manner; it must be properly maintained if it is to be kept attractive. High standards of maintenance of all public buildings, structures and facilities will set an example and will stimulate the maintenance of private buildings and properties. Annual clean-up and paint-up campaigns, including awards, have been found effective and are well established in many communities. Beauty and attractiveness in community development are not accidental. Where these have been achieved, they are the result of persistent and intelligent efforts over a long period, sustained by community pride and cooperation.

¹ Reproduced separately.

CENTRAL BUSINESS DISTRICT

Recent or current economic problems of the central business districts of most large and medium size cities across the nation are a matter of growing concern. These older central commercial districts are losing business to the new outlying shopping centers, and the neighboring cities are becoming sharper competitors because of the reduction in travel time between them. There is a strong tendency toward decentralization of more and more downtown activities which is giving great concern to responsible civic leaders and the business interests involved.

What happens to Flint's Central Business District ought to be the concern of every taxpayer and business interest. With its high concentration of taxable values in the city, the CBD produces a significant share of the taxes needed to provide adequate schools, fire and police protection, health and welfare services, and other municipal services in all parts of the city. Any severe loss of tax revenue from this area inevitably will result in higher taxes for every home owner in order to make up the difference. Business lost to other cities probably will mean a corresponding loss of jobs and payrolls in Flint. The entire community will benefit from a revitalization of the CBD so that it will continue to be the dominant and expanding trade and service center for the Flint trade area.

Flint's Central Area

Flint's central area extends from Grand Traverse Street eastward to the College and Cultural Development, including the redevelopment area along Flint River, southward to include the Municipal Center, and, north of the Flint River, from a line west of Detroit Street eastward to the River and northward to the proposed Fourth-Fifth Avenue crosstown. As is generally the case in other cities, Flint's central area includes a rather broad spectrum of related land uses - ranging from concentrated retail trade and services to areas of high residential density. Included are the community's various central cultural and educational facilities, institutional and semi-public uses. Business activity tends to concentrate in a section generally referred to as "downtown" - in recent years more specifically designated as the Central Business District - or CBD - which comprises most of the central area's business uses, along with some of its public, institutional and residential uses. That portion of the central area outside the limits of the CBD usually includes a scattering of business uses, but the greater part of this area is occupied by public, institutional, and relatively high density residential uses.

The CBD usually occupies a relatively small portion of the total central area and comprises, in itself, several degrees of business concentration. The most highly concentrated area of the CBD has come to be known as its "retail core"; the "inner frame" usually contains the larger off-street parking lots related to the retail core; and the "outer frame" is occupied by a wide variety of business and services - related to but not usually as highly productive as the retail core uses - along with supporting parking. Within the CBD, the retail core and the inner frame have been designated and referred to herein as the Central Shopping-Service District - or CSSD.

Although the central area encompasses a wide range of economic activities, including finance, insurance, real estate offices, etc., retail trade in the main is its most important component. Without subtracting from the importance of social and cultural activity, it is recognized that healthy retail trade is the essential ingredient to central area well-being. Thus, it is considered necessary to the economic welfare of the community's central area to encourage new public and private capital investment - most specifically in the Central Shopping-Service District - toward its refashioning and revitalization; to explore coordination of the business activities in the CBD - especially the retail trade activities in the retail core; to recognize the desirability of active sales and general business promotion in the CBD - with a special need to re-emphasize the identity of the retail core.

It is the special purpose of this study to develop a general program and proposals for physical refashioning in the central area; more particularized recommendations with regard to the Central Business District - its land uses and access; and still more particularized proposals for the Central Shopping-Service District.

Economic Conditions¹

Retail trade has been characterized as the economic life blood of the central business district. Flint's CBD historically has served as the central retailing area for the community and for the smaller communities and farms of its trade area. As a central city grows in population and in land area, the character of retailing functions in its central business district markedly changes. Such has been the case in Flint.

In earlier days, downtown stores catered to the everyday needs of their customers. As population and physical size of the city increased, neighborhood stores began to serve the most immediate needs of residential areas, although shopping for convenience goods (items purchased on a daily or weekly basis) continued in the downtown area. Following World War II, decentralization of residential development, increased use of the automobile, and the construction of planned outlying retail centers began to have a marked effect on retail trade in the downtown area. While general merchandise, apparel, furniture, and related lines (the so-called "shoppers' goods" items) continued to flourish in the central business district, convenience goods outlets were disappearing at an accelerated rate. In Flint, as in other cities, these changes seem most concentrated in the Central Shopping-Service District. Indications are that Flint's CSSD has, during the past 15 or 20 years, completed a cycle of change from mixed shoppers' and convenience goods to almost strictly shoppers' goods lines. In making the change, it has become the only regional shoppers' goods center in the trade area.

CBD Position in the Present Market

Flint's present market area is quite limited, when compared with what would be a normal market area for a city the size of Flint. This is due to its locational relationship to large metropolitan areas in the southeast Michigan region, includ-

¹ Summary of the more significant findings of the market analysis prepared by Kenneth C. Welch, FAIA.

ing giant Detroit. Flint is the only major community in an 18-county region where shoppers' goods sales¹ are less than the expenditures for such goods by its area residents.² There is a net outflow of GAF expenditures to centers in other cities of \$6.23 million, which amounts to 6.9 per cent of the Flint Metropolitan Area's GAF sales (inflow of \$1.02 million, in most part from Lapeer County; outflow of \$7.25 million, in most part to Detroit).

Of the buying power potentially available to Flint Metropolitan Area (Genesee County) GAF outlets, only a small proportion exists outside the Metropolitan Area. Not all of the buying potential is absorbed by Metropolitan Area GAF outlets. Of a potential of \$97.26 million, Metropolitan Area outlets' share of GAF retail sales is \$90.01 million (92.6% of the potential buying power and 93.5% of Genesee County expenditures). Loss to GAF outlets outside the metropolitan area is \$7.25 million (7.4% of the buying power potential and 7.5% of Metropolitan Area expenditures). Flint's primary retail trade area for shoppers' goods is limited almost exclusively to Genesee County, as GAF trade in-flow from surrounding counties does not presently constitute a significant portion of the GAF retail trade market. GAF expenditure out-flow from the County is somewhat higher than one might expect in a metropolitan area of Flint's population size.

Although having a primary trade area of rather limited size, Flint from 1948 to 1954 had the greatest percentage increase in total retail sales of any metropolitan area in the country. This was due principally to a very substantial rise in employment and population during the period. In 1958, however, retail sales in the Metropolitan Area were 1.7 per cent less than in 1954, and in the city of Flint 5.9 per cent less. This change occurred in the face of an estimated population increase during the period of 15 per cent. Depressed economic and employment conditions in 1958 were primarily responsible for this drop.

GAF sales also had the greatest percentage increase in the Flint area between 1948 and 1954. However, in the four years between 1954 and 1958, GAF sales likewise declined, as would be expected in view of the decrease in total retail sales. In the Metropolitan Area as a whole the decrease in GAF sales was estimated at 1.7 per cent, and in the CBD at 6.1 per cent. As a comparison, in the same period the Detroit area's GAF sales increased an estimated 10 per cent.

As noted earlier, GAF sales of Metropolitan Area outlets are made principally to Metropolitan Area residents. The market of Flint's GAF sales is even more confined. By applying the law of "retail gravitation" (the pull of a major retail center varies directly with the concentration of GAF stores or GAF sales in the center and inversely with the square of travel time-distance to the center), it is possible to determine and note the contribution of each of some 14 economic areas to GAF sales in the several retail centers in the area, including the three major planned suburban centers and the CBD.³

1 General Merchandise, Apparel, and Home Furnishings - abbreviated as GAF.

2 Map: GAF Expenditures and Sales, 18-County Region.

3 Map: Estimated Distribution of GAF Expenditures - Genesee County.

Market Projections

With a normal rate of increase in spendable income and in GAF expenditures per capita in the area - in light of anticipated population growth¹ - total Metropolitan Area GAF sales in 1980 may well be more than \$155 million, a 72 per cent increase over 1958. This projected figure includes a considerable increase in sales to areas outside the county.

The CBD's adjusted share of the present GAF retail market can be calculated by re-applying the law of retail gravitation - assuming that certain improvements in the thoroughfare system, as recommended under the Master Plan, have been made, and assuming further that the first stage of a downtown revitalization program has been carried out. An increase of five to almost 10 per cent in GAF sales apparently could be realized in the CBD as a result of these improvements alone, without considering any significant growth in population or spendable income.

Without purposeful and sustained efforts on the part of both downtown interests and public authorities to arrest and reverse recent trends, Flint's CBD share of GAF sales is likely to decline in future years. Moreover, without such efforts, the share of all GAF expenditures by the area's residents made in retail centers in the Flint area may likewise be expected to decline, due to the weakening pull of Flint's CBD relative to that of competing centers in other major cities in the region.

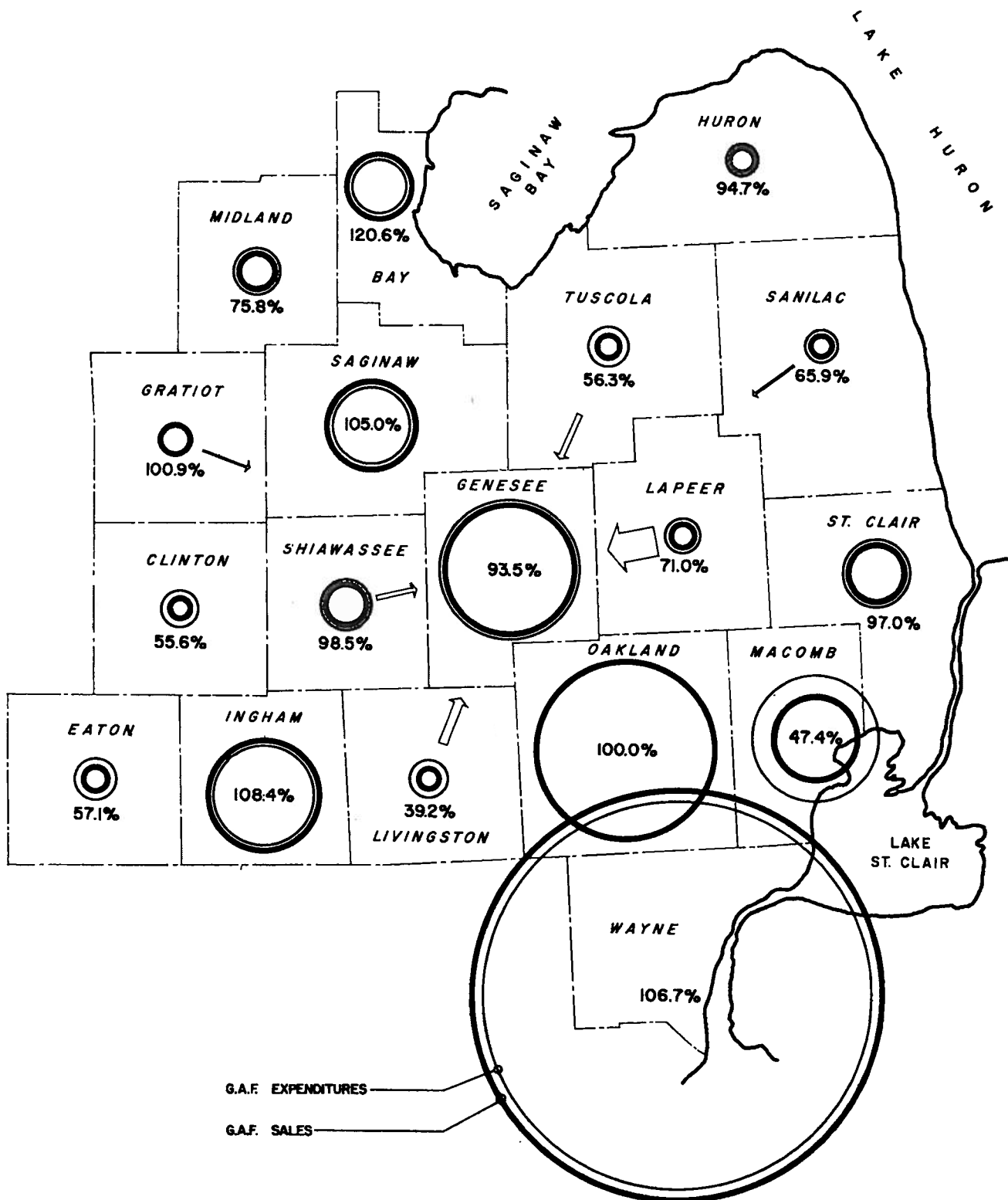
With effective physical and operational improvements in the downtown area, it would seem possible to produce \$100 to \$110 million GAF sales - some 65 to 70 per cent of the total projected sales. Most of any increase in Flint's GAF sales must be to residents of Genesee County itself, due to the highly competitive cities in the larger region, and as only a little more than one per cent of the total County GAF sales presently are made to those living outside the County.

Surveys and Studies of Existing Physical Conditions and Recent Trends

Complete and detailed field surveys and studies were made of the present land occupancy of the Central Business District and of the use of building space, along with major changes in these regards and also in land valuations as reflecting changes in the functional and physical composition and pattern of the CBD. These surveys and studies furnished the principal factual bases for:

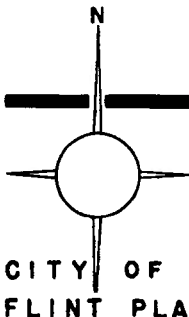
1. Ascertaining and analyzing the characteristics of the prevailing physical pattern, composition and extent of the CBD as presently constituted and evaluating the level of potentials of the various types of establishments with respect to trade, services, etc.

¹ See section on Population.



G.A.F. EXPENDITURES
 G.A.F. SALES

FLINT MARKET STUDY - KENNETH C. WELCH - F. A. I. A.



**COMPREHENSIVE
 MASTER PLAN**

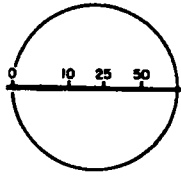
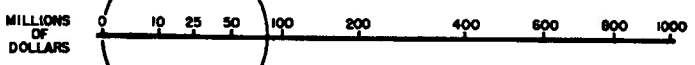
CITY OF FLINT · MICHIGAN
 FLINT PLANNING COMMISSION

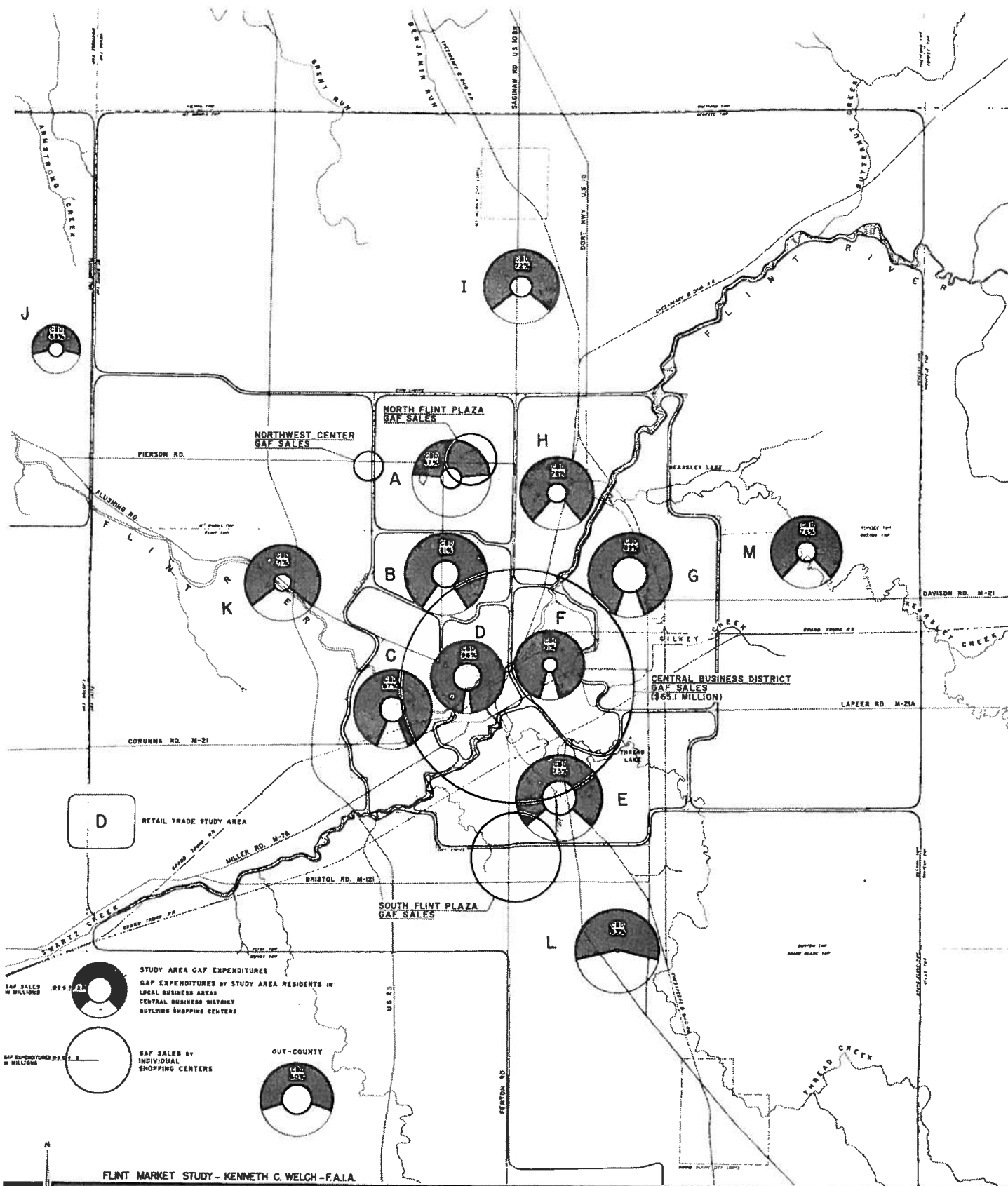
1960



LADISLAS SEGOE & ASSOCIATES
 CITY PLANNERS · CONSULTING ENGINEERS
 CINCINNATI OHIO FLINT MICHIGAN

**GAF EXPENDITURES AND SALES
 18-COUNTY REGION**





**COMPREHENSIVE
 MASTER PLAN**

CITY OF FLINT · MICHIGAN
 FLINT PLANNING COMMISSION

1960

LADISLAS SEGOE & ASSOCIATES
 CITY PLANNERS · CONSULTING ENGINEERS
 CINCINNATI · OHIO FLINT · MICHIGAN

**ESTIMATED DISTRIBUTION OF GAF EXPENDITURES
 GENESEE COUNTY - 1958
 BY SOURCE AND DISPOSITION**

2. Uncovering any distinctive or unusual conditions respecting the functional and physical character, form and composition of Flint's CBD by comparing the data and trends gained through these surveys and studies with similar information available for other selected cities.
3. Identifying and delimiting the three functionally and physically distinct parts of the CBD - its core, inner frame and outer frame - which need to be recognized and considered separately and in relation to one another in any adequate study of CBD refashioning and revitalization.
4. Ascertaining recent and emerging trends in the changing function and physical make-up of the CBD, insofar as these may be uncovered through surveys and studies of this nature.
5. Identifying and devising plans of the physical changes necessary for modernizing and otherwise refashioning the CBD, with the view to enhancing its functional fitness and maximizing its drawing power.

Downtown Land and Space Uses

For survey and study purposes, downtown space uses were summarized in 18 categories: food, clothing, household, automotive, variety, miscellaneous; financial, service trades; headquarters office, general office; transportation, parking, transient residential, residential; public and organizational; industrial, wholesale; vacancy. For mapping purposes - to provide a comprehensible and meaningful graphic image of the downtown land use pattern - these categories were further consolidated - e.g., core area retail, core area service, financial and office.¹ The accompanying map² indicates, by tone-pattern and symbols, the ground floor land and space use in the business sector of the central area.

In addition to its primary purpose - providing basic data toward physical planning for refashioning the Central Business District - the land use survey process made possible a comparison between the CBD area in Flint and in other cities: Grand Rapids, Michigan; Worcester, Massachusetts; Tacoma, Washington; and with a nine-city average. Like Flint, the nine comparison cities are of medium size.³

¹ Table: Downtown Space Use Categories.

² Map: Land and Space Use Map - 1959.

³ The list includes two manufacturing cities (Grand Rapids and Worcester), one of diversified employment with manufacturing employment predominant (Tacoma), one retailing city (Phoenix), three cities of diversified employment with retail trade predominant (Mobile, Roanoke and Tulsa), one government center (Sacramento) and one wholesale center (Salt Lake City).

Flint is classified as a manufacturing city and two of the three cities used for more detailed comparison, Grand Rapids and Worcester, also are manufacturing centers. In the compared manufacturing centers, Worcester seems most similar to Flint. In total ground area, Flint's CBD is larger than that in the average city and in all comparison cities. In gross floor space, Flint's CBD is smaller than the average, Grand Rapids and Worcester. Reconciling the above comparisons, Flint's total height index is considerably lower than that found in the average city or in any of the comparison cities, indicating a smaller concentration of tall buildings in Flint's CBD. Flint is about average in its intensity of distribution of central business uses throughout the study area.

A highly efficient use of central business district space would demand that most or all be developed for CBD uses. Devoting over 77 per cent of its CBD space to CBD uses, Flint is more efficient than the average, Grand Rapids or Worcester, in this regard. However, with department store type merchandise outlets providing the chief attraction for downtown retail trade, Flint devotes a somewhat lower than average proportion of its CBD area to these uses. An unusually high proportion of Flint's CBD area is used for parking: 18.9% of the total CBD space as against an average city's 7.0%; Grand Rapids' 8.7%; Tacoma's 6.5%; Worcester's 5.6%.

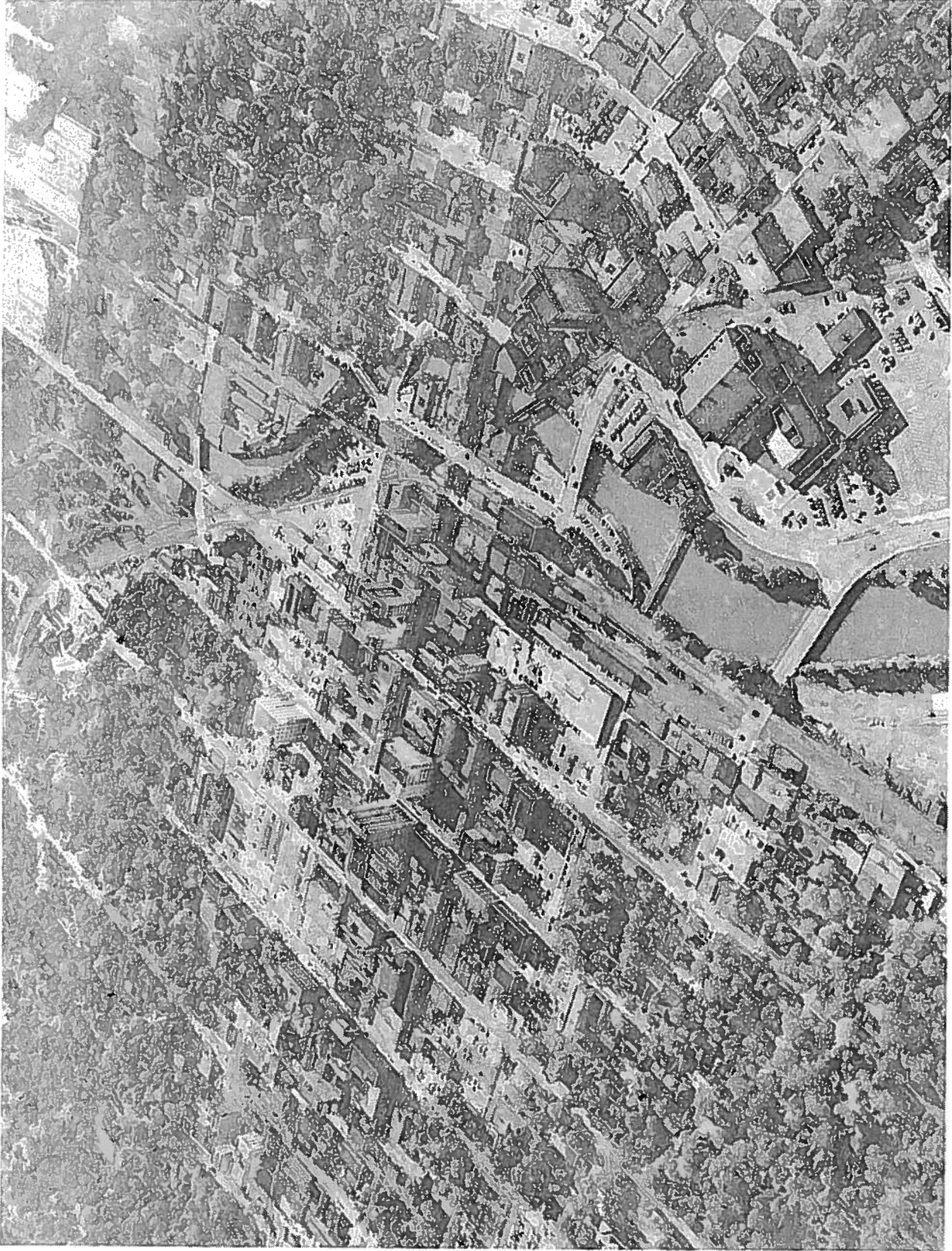
To gain a more precise idea of these relationships, it is necessary to make comparisons on the basis of metropolitan area population. On this basis, Flint's total space ratio of 50.7 acres per 100,000 population is well below the average city, Grand Rapids and Worcester.

The CBD type space use can be considered in two categories: uses tending to occur inside, and uses tending to occur outside the retail core (in the inner frame area of the CBD). Core-type uses occupy a relatively small portion of Flint's CBD space. Other uses occupy a large portion - with heavy emphasis on parking, as indicated.

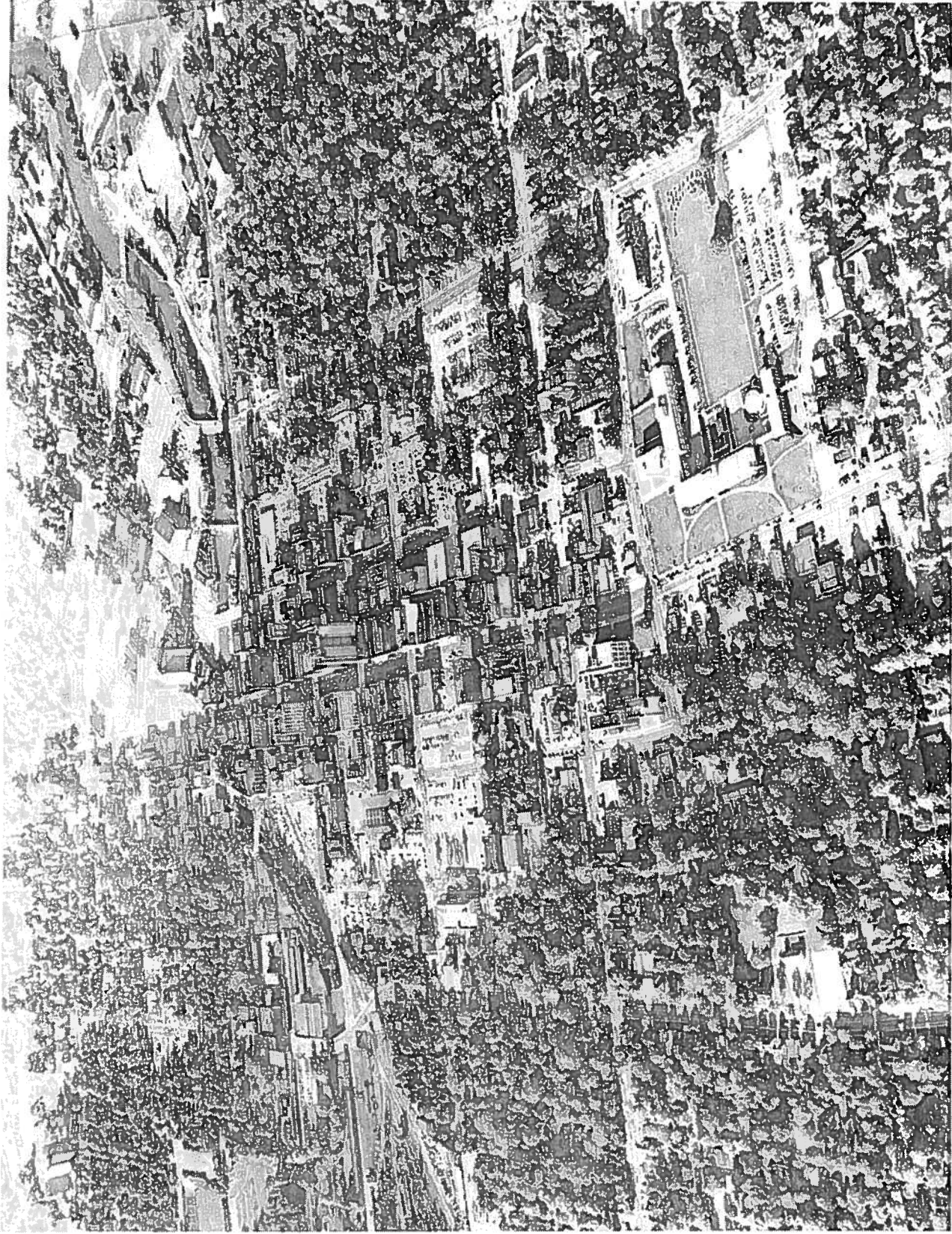
Flint's lower than average core-type space use can be attributed, principally, to lower than average space use in department store type merchandise, in general office space, and in transient residence uses (hotels), the latter in Flint being 75 per cent lower than the average and lower than any comparison city. Flint is about 65 per cent lower than the average city in general office space, and again is lower than any of the comparison cities.

Department store type merchandise comprises four categories: general merchandise (department and variety stores); clothing, including shoes; household goods (furniture, furnishings, appliances); miscellaneous department store type merchandise. In its household goods and miscellaneous lines, Flint's ratio is about 25 per cent lower than the average. In general merchandise, Flint is about 40 per cent lower than average, and lower than any of the comparison cities.

Flint's emphasis on frame area CBD uses - with the heaviest emphasis on parking - has been noted. Proportionately, Flint devotes about twice as much space to parking as does the average city, 60 per cent more than Grand Rapids, 170 per cent more than Worcester, and over three times as much as Tacoma.



CENTRAL BUSINESS DISTRICT
PHOTO - KENNETH G. WELCH



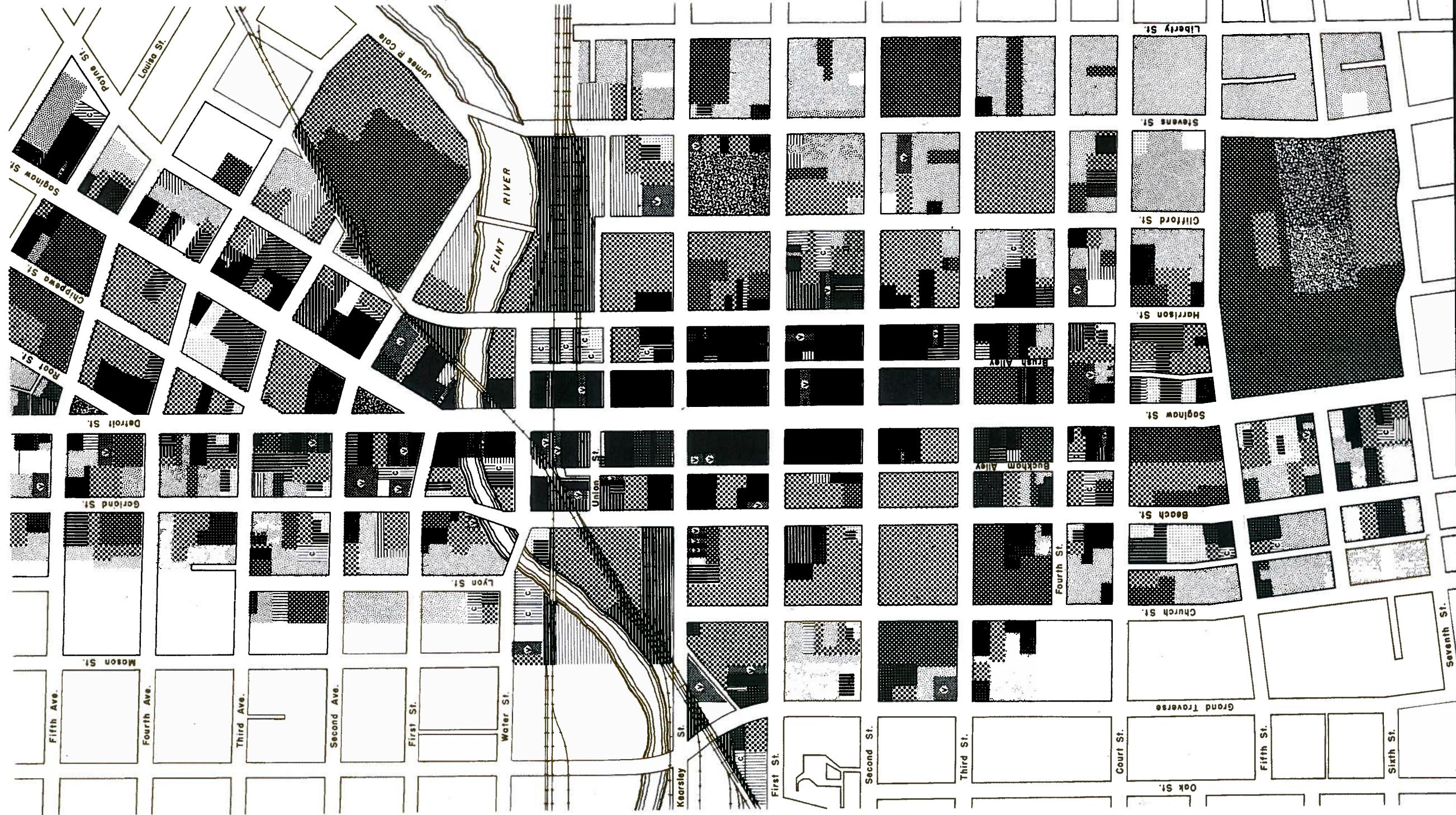
MUNICIPAL CENTER - FOREGROUND

CENTRAL BUSINESS DISTRICT
PHOTO - KENNETH G. WELCH

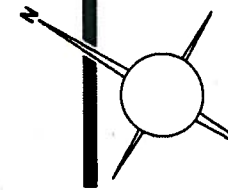
DOWNTOWN SPACE USE CATEGORIES

<u>Core Area Retail</u>	<u>Core Area Service, Financial, Office</u>	<u>Parking</u>
Restaurant	Bank	Customer parking
Food specialty	Personal loan	Commercial parking
Delicatessen and ice cream parlor	Insurance agencies and real estate offices	Employees parking
Package store	Brokers, stock, etc.	<u>Public and Institutional</u>
Bar	Personal service	Public buildings
Women's clothing	Clothing service	Organizational and charitable institutions
Men's clothing	Business service	Instructional
Family clothing	General office	<u>Vacant Building</u>
Clothing specialty	Hotels and other transient lodging	Vacant building or store
General shoe store	<u>Frame Area Retail</u>	<u>Wholesale</u>
Men's and women's clothing	Supermarket	Wholesale
Furniture	General food	<u>Commercial Storage</u>
Hardware and appliance	Coal, oil, ice, and heating sales	Commercial storage
Dry goods, rugs, curtains, etc.	Used furniture and antiques	<u>Industrial</u>
Department store	Automobile sales - new and used	Light industry
"5 and 10"	Service station or garage	Heavy industry
Drug store	Accessory, tire, and battery sales	<u>Residential</u>
Cigar and news	Automotive rental	Permanent multi-family dwelling units
Sport, photo, hobby, toy, etc.	Office machine and furniture	Permanent one & two-family dwelling units
Jewelry and gift	Pawn shop	<u>Open Air Retail</u> ¹
Florist shop	<u>Frame Area Service, Financial, Office</u>	<u>Open Air Service and Industrial</u> ¹
Book store	Air transport	<u>Park</u>
Office supply and stationery	Bus uses	<u>Vacant Land</u>
Amusement establishment	Headquarters office	Vacant lot
	Household service	
	Railroad uses	
	Trucking	

¹ Similar to above uses but conducted on open lots.



- CORE AREA RETAIL
- CORE AREA SERVICE, FINANCIAL, OFFICE
- ▨ FRAME AREA RETAIL
- ▨ FRAME AREA SERVICE, FINANCIAL, OFFICE
- ▨ PARKING
- ▨ PUBLIC AND INSTITUTIONAL
- ▨ VACANT BUILDING
- ▨ WHOLESALE
- ▨ COMMERCIAL STORAGE
- ▨ INDUSTRIAL
- ▨ RESIDENTIAL
- ▨ OPEN AIR - RETAIL
- ▨ OPEN AIR - SERVICE AND INDUSTRIAL
- ▨ PARK
- VACANT LAND



COMPREHENSIVE MASTER PLAN
 CITY OF FLINT · MICHIGAN
 FLINT PLANNING COMMISSION
 1960 FT. 100 500 200 400 600
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GROUND LEVEL
LAND AND SPACE USE MAP - 1959
 CENTRAL BUSINESS DISTRICT
 FLINT · MICHIGAN

The mapping and inventory procedure which lead to the foregoing findings and the application of certain recently developed techniques¹ make possible the delineation of a downtown study area. The perimeter of the CBD Study Area is so delineated as to enclose those contiguous block-front with a height index exceeding 1.0 - i.e., an average height of buildings of one story; and a CBD use intensity index exceeding 50 per cent - i.e., where the area of central business uses exceed one-half of all uses, plus related adjacent public use areas up to one square block in size.² A further refinement is in the retail core, showing areas wherein the intensity index of retail core uses exceeds 75 per cent.

Land Values

As is the case in most communities, downtown Flint has the highest land values in the city. More accurately than building valuations, land valuations reflect the impact of various developmental factors on the use of downtown land.

Flint's highest value intersection is at Saginaw and First Streets (the intersection at the Mott Foundation building). The highest valuation block-front is on the east side of Saginaw Street between Kearsley and First Streets (the block-front containing the Smith-Bridgman store). The downtown land valuation pattern is most meaningful when portrayed in terms of the relationship between various block-front valuations and the valuation of this highest value block-front.³ In four block-fronts and two one-half block-fronts along Saginaw Street, land valuation is highest and most closely comparable. Within this very compact area, land valuations are within 70 to 100 per cent of that in the highest value block-front. In most cities surveyed, as is the case in Flint, the so-called five per cent line tends to delimit an area within which significant land use interrelationship exists; the highest value area points up the retail core.

Another of the accompanying maps⁴ depicts the effect of various factors on the 1959 value of downtown land, by showing the changes brought about during the past decade or so. The most significant revaluation of downtown land took place between 1949 and 1959.⁵ In the indicated period, two notable changes in land valuation pattern have occurred: the five per cent area has expanded somewhat and the area with block-front valuation 20 to 100 per cent has contracted during the period. Both the expansion of the five per cent area and the contraction of the 20 per cent area are meaningful: recent retailing emphasis on one-stop shopping has put a premium on retail locations within easy walking distance of each other and parking lots; Flint's Central Shopping-Service District has tended to specialize to a greater degree in shoppers' goods lines. These factors, working together, have tended to consolidate the shopping center, reducing its land area to enhance its compactness.

¹ Central Business District Studies: Raymond E. Murphy, J. E. Vance, Jr., and Bart J. Epstein - Clark University.

² Map: Space Use Study Map - 1959.

³ Map: Land Valuation - 1959.

⁴ Map: Land Valuation Trends - 1949 and 1959.

⁵ The valuation changes made during the 10-year period actually portray trends extending well beyond that decade, because prior revaluations occurred rarely.

Surveys and Studies of Traffic and Parking

Traffic

As the focal points of the trafficway systems of communities, downtown areas often are plagued by heavy volumes of extraneous traffic - that is, traffic without downtown destinations. With the provision in Flint of major relief routes, a portion of such extraneous downtown traffic is being diverted. Since 1950, downtown traffic, overall, has decreased about nine per cent.

In order to gain a relatively detailed picture of traffic circulation in the Central Business District - more specifically the part of the CBD comprising the Central Shopping-Service District (CSSD) - a traffic survey, covering volumes and turning movements, was conducted. This was done concurrently with a parking survey, in order that the information obtained might be analyzed in a complementary manner. The generalized results of this traffic survey in the accompanying illustration¹ depict diagrammatically the relative volumes of traffic and turning movements on the most important streets of the CBD.

Several conclusions may be drawn from the diagram. The center of activity, and the highest land values, are at First and Saginaw Streets, with the northern two of the four blocks centered on this intersection being the more important. Two blocks beyond this central point, on Clifford, Third and Church Streets, traffic volumes are only a fraction of those on the six more centrally located streets, even though these outer streets have ample capacity to accommodate higher volumes.

The Traffic Flow Diagram also shows that most of the north-south traffic destined to the CSSD is carried by Beach and Harrison Streets and that this traffic finds its way to these two streets before entering the study area covered by the Diagram. One rather surprising fact revealed is that, even though certain turns are permitted, there are comparatively few turning movements off Saginaw Street. This would seem to indicate that most of the traffic on this central artery has destinations other than the CSSD. The existing relatively high volumes of north-south traffic on Beach and Harrison Streets would suggest that the by-passable traffic on Saginaw could not be handled by these one-way streets alone.

Parking

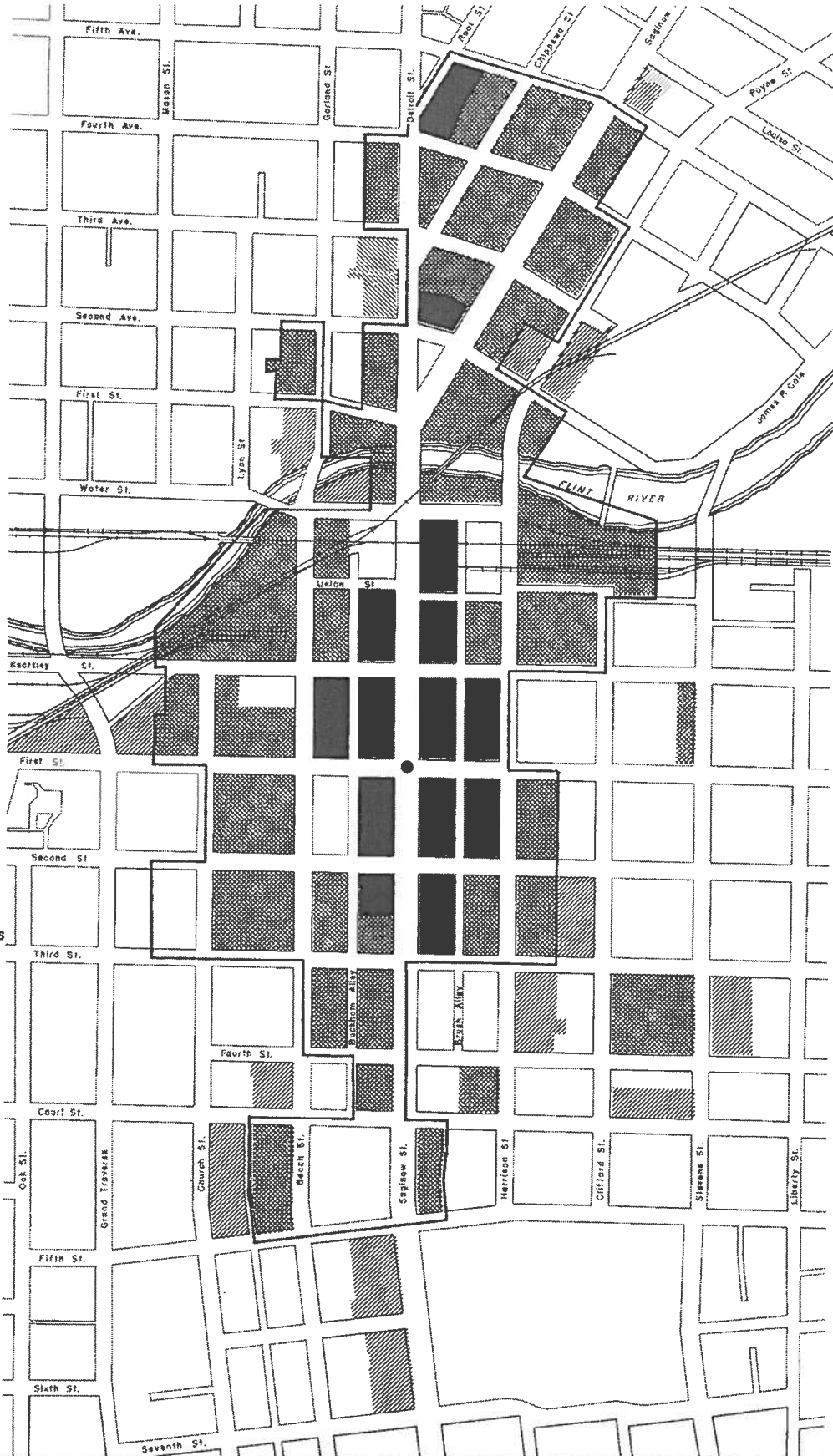
In addition to the parking surveys and studies conducted in the city as a whole,² certain more detailed studies were made of the CBD, with special attention to the CSSD. Parking capacity and daily accumulation for the entire CBD were determined; and the more detailed studies of the CSSD included the accumulation and duration patterns for curb spaces and off-street parking facilities.






Findings of the survey were broken down into five areas of concern for purposes of comparison and future estimates of demand for various types of parking spaces:

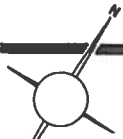
1. The 4-block area - the most intensively developed blocks centered on First and Saginaw Streets.

¹ Traffic Flow Diagram.

² See section on Parking.



- 
HIGH CONCENTRATION OF RETAIL CORE USES
 HEIGHT INDEX GREATER THAN 1.0
 INTENSITY INDEX GREATER THAN 75%
- 
MEDIUM CONCENTRATION OF CBD USES
 HEIGHT INDEX GREATER THAN 1.0
 INTENSITY INDEX GREATER THAN 50%
- LOW CONCENTRATION OF CBD USES**
 - 
 HEIGHT INDEX GREATER THAN 1.0
 INTENSITY INDEX LESS THAN 50%
 - 
 HEIGHT INDEX LESS THAN 1.0
 INTENSITY INDEX GREATER THAN 50%
 - 
 HEIGHT INDEX LESS THAN 1.0
 INTENSITY INDEX LESS THAN 50%



**COMPREHENSIVE
MASTER PLAN**

CITY OF FLINT · MICHIGAN
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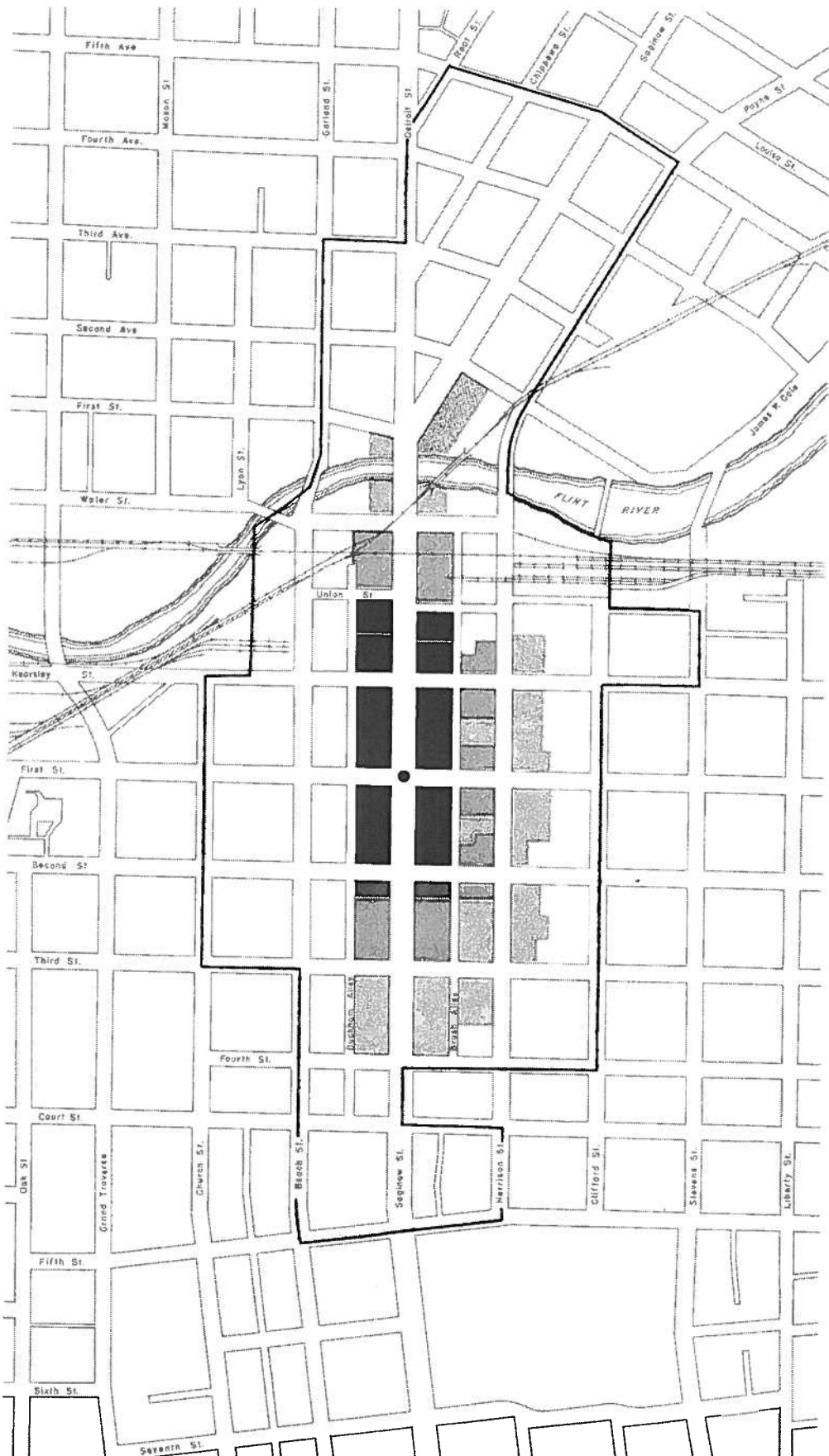
1960 FT 100 500 200 400 800

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SPACE USE STUDY MAP · 1959

**CENTRAL BUSINESS DISTRICT
FLINT · MICHIGAN**

-  PERIMETER OF DELINEATED CBD STUDY AREA
-  HIGHEST VALUE INTERSECTION



Land valuation - by block-fronts - as a proportion of the highest value block front.

70 TO 100%

30 TO 69%

20 TO 29%

10 TO 19%

PERIMETER OF 5 TO 10% AREA

HIGHEST VALUE INTERSECTION



**COMPREHENSIVE
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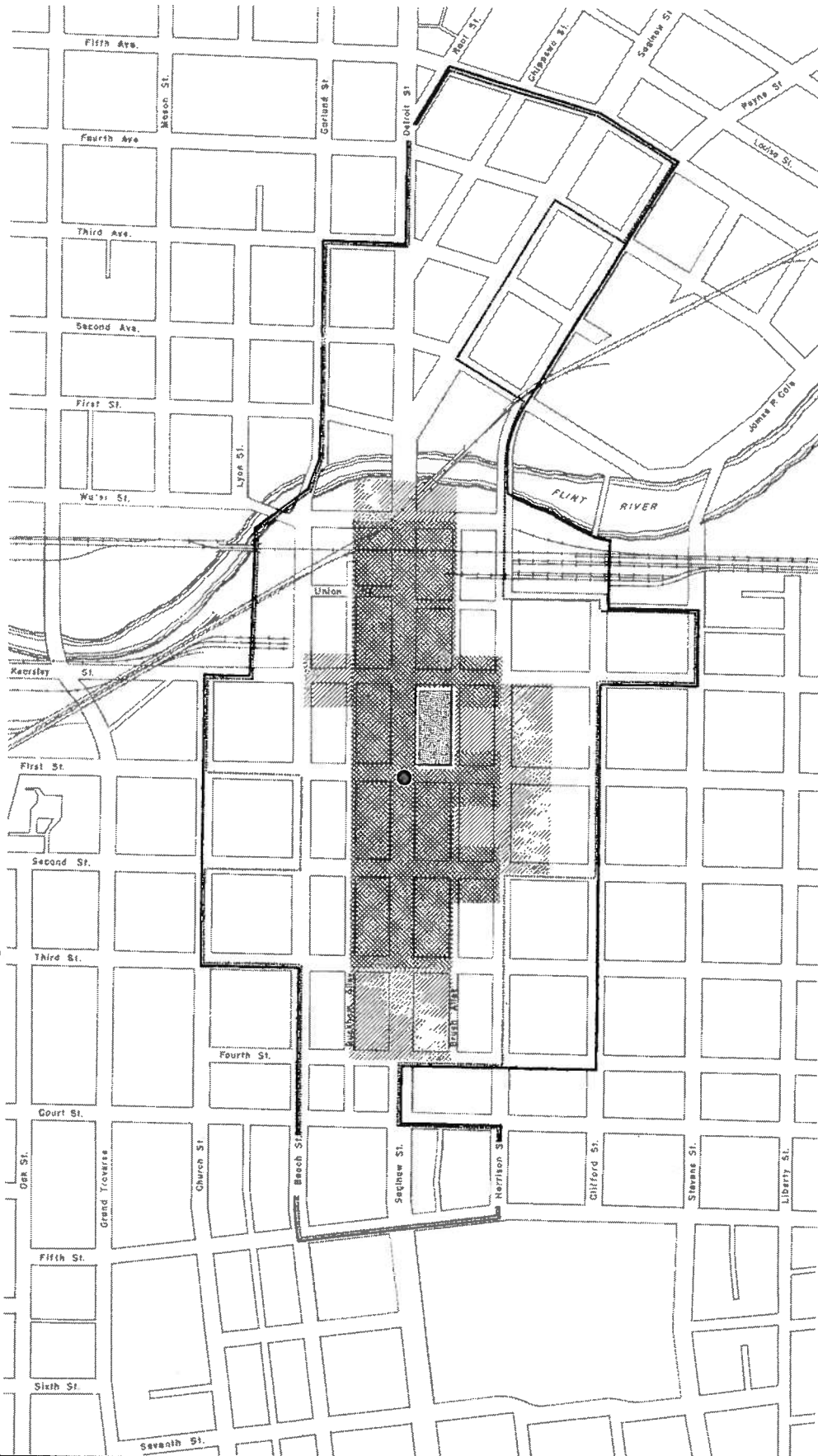
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
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LAND VALUATION - 1959

**CENTRAL BUSINESS DISTRICT
FLINT · MICHIGAN**



 HIGHEST VALUE BLOCK - 1949 & 1959
 HIGHEST VALUE INTERSECTION - 1949 & 1959
 1949 1959
  LAND VALUATION 20 TO 100% THAT OF HIGHEST VALUE BLOCK
 1949 1959
  PERIMETER OF AREA WITH LAND VALUATION 5 TO 100% THAT OF HIGHEST VALUE BLOCK



COMPREHENSIVE MASTER PLAN

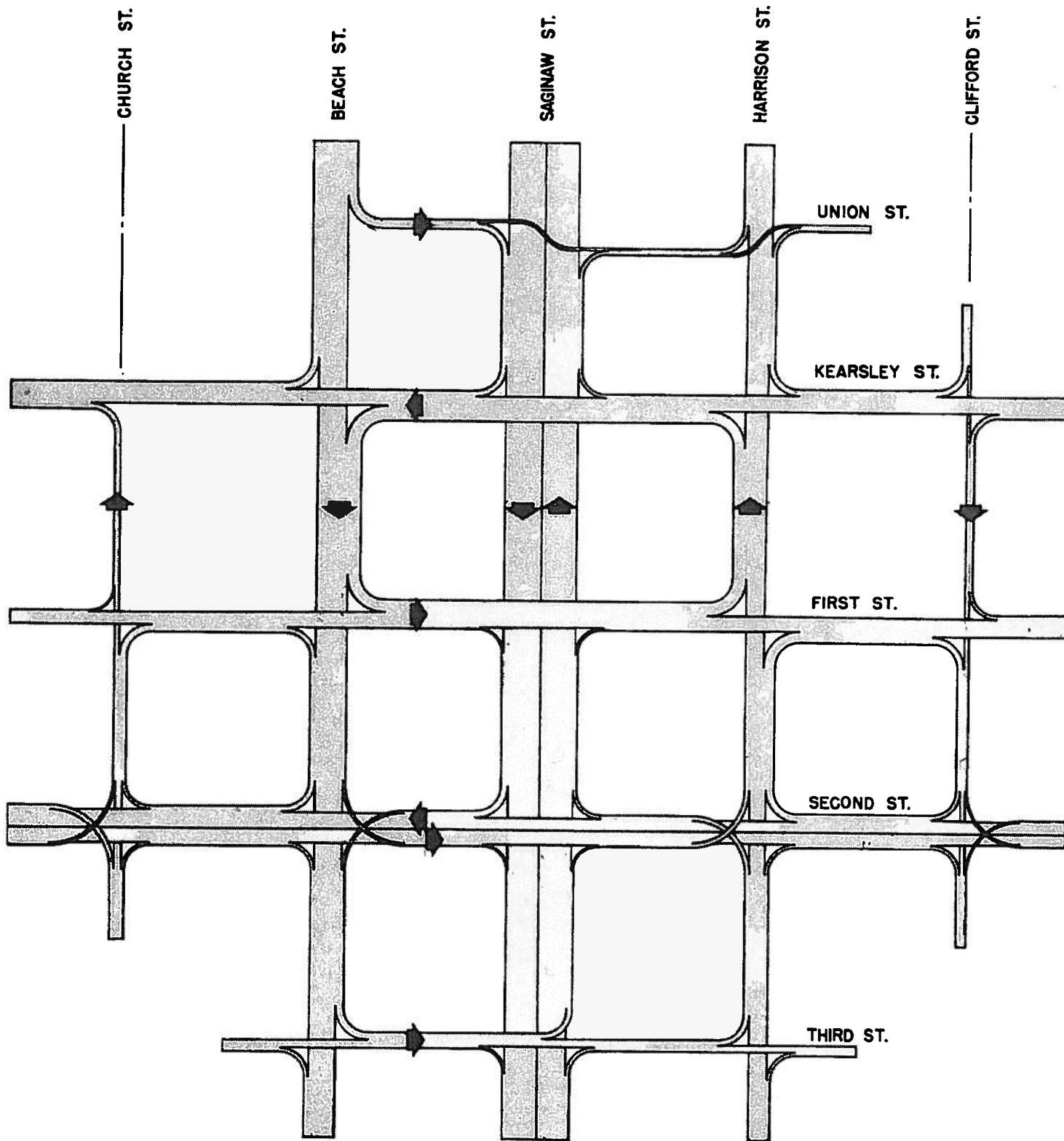
CITY OF FLINT · MICHIGAN
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1960 FT. 100 500 200 400 600

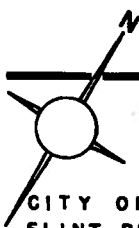
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LAND VALUATION TRENDS - 1949 & 1959

CENTRAL BUSINESS DISTRICT
 FLINT · MICHIGAN



TRAFFIC COUNT AND TURNING MOVEMENTS TAKEN: NOVEMBER 1958



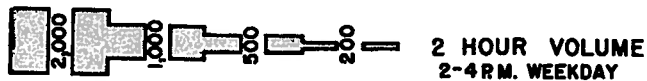
**COMPREHENSIVE
MASTER PLAN**

CITY OF FLINT MICHIGAN
FLINT PLANNING COMMISSION

1960

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T R A F F I C F L O W D I A G R A M
FLINT CENTRAL BUSINESS DISTRICT



2. The 12-block area - the adjoining blocks bounded by Union, Clifford, Third and Church Streets.
3. The 16-block area - the combination of the above two areas.
4. The 24-block area - the area outside the 16-block area.
5. The 40-block area - the entire study area, bounded by the Flint River, Stevens, Court, and Grand Traverse Streets.

Analyzing the data compiled regarding supply of parking spaces, accumulation, per cent of occupancy, numbers of parking operations, and "turnover," certain conclusions were reached for the district as a whole and its various parts. Without going into detail, it was found that in Flint, by comparison with average conditions in 12 cities in Flint's population class where similar duration studies were made, there is a significant departure from the average in several respects: first, Flint has only 32 per cent of parkers staying less than one-half hour as against 47 per cent in the "average" city; second, the one-half hour to one hour category is somewhat higher; and, third, the proportion of one to two-hour parkers is over 50 per cent greater than the average. Beyond this, the duration pattern shows no significant difference from that of other cities.

One possible explanation for the higher than average number of one-half to two-hour parkers is that the Flint CBD has a much lower percentage of available curb spaces.¹

Land Use Density, Space Ratios and Parking Index

Derivation of market trends and projections has as its principal purpose the projection of sales space and other space ratios in the Central Business District as a whole, and, more particularly, in the Central Shopping-Service District. In making these studies it is necessary to consider four categories of land use relationship: (a) downtown land use density; (b) present space use and land use density in the retail core; (c) present CBD-GAF sales ratios; (d) optimum and present parking index in the Central Shopping-Service District.

Downtown Land Use Density and Space Use

A useful indicator of land use density is the height index, previously described. With land use concentrated in the retail core, the height index outside the CBD is somewhat lower than the central area average. Within the CBD itself, density is, of course, highest in the core, lowest in the inner frame, and about average in the outer frame.

¹ While the "average" city has 76 per cent street spaces as against 24 per cent off-street, the Flint CBD has only 14 per cent of the former. The absence of sufficient short-time spaces near the major destinations necessitates those not finding curb spaces to use off-street facilities. Once parked in a lot it is more likely that the parker will walk to secondary destinations rather than unpark and drive to another lot or curb space.

With a total building space use of some 2,140,000 square feet, Flint's present retail core shows a relatively high concentration of retail core type uses:¹

Total retail core type uses	1,280,000	(60%)
Total related uses	600,000	(28%)
Total non-related uses	260,000	(12%)
	<u>2,140,000</u>	(100%)

Most of the retail core type space is occupied by GAF uses:

Total GAF type uses	790,000	(62%)
Total of other retail core type	490,000	(38%)
	<u>1,280,000</u>	(100%)

Of the related retail core space (some 600,000 square feet), only 18 per cent is occupied by uses unlikely to recur in the retail core. Some 490,000 square feet are occupied by offices and other related uses whose recurrence in the retail core may be expected - though not necessarily in the present proportion.

Summarizing the present relationship of uses likely to recur in the retail core:

Retail core type uses		1,280,000	(72%)
GAF-type uses	790,000	(44%)	
Other retail core type	490,000	(28%)	
Related uses likely to recur in retail core	490,000	(28%)	
General offices	265,000	(15%)	
Commercial storage	225,000	(13%)	
		<u>1,770,000</u>	(100%)

These proportions in terms of height index are an indication of land use density:

	Height Index (including basements)
GAF uses in retail core	1.44
Other retail core type uses	0.89
Recurring related uses:	
General offices	0.48
Commercial storage	<u>0.41</u>
	3.22

Present CBD-GAF Sales Ratios

In calculating Flint's CBD sales ratios, estimates of gross sales are derived from U.S. Census Bureau CBD sales figures. By applying the estimated CBD-GAF annual

¹ Table: Downtown Space Use Categories.

sales to the CBD-GAF sales space, the average sales/square foot can be derived for further comparison:

	Sales Area in CBD (sq.ft.)	Estimated 1958 sales in CBD (\$ million)	Sales/sq.ft. (\$)	Range in sales/ sq.ft. expected in regional shop- ping centers (\$)
Gen. Mdse. (G)	376,000			60-80
Clothing (A)	436,000			40-80
Household (F)	430,000			40-45
TOTAL GAF	1,152,000	62.5-63.7	54-55	45-65 ¹

Applying these sales/square foot averages on floor area in Flint's Central Shopping-Service District, an average CSSD-GAF store (about 9,000 square feet) might well produce about \$500,000 in annual GAF sales. A department store of 100,000 square feet (smaller than the total Smith-Bridgman-retail area but about the size of the main store) might well produce annual GAF sales of \$6 to \$8 million.

An average Flint retail core block-front is built on 1.1 acres of land (one-half of a full block) or about 48,000 square feet. Utilization of this land at the average retail core GAF land use density (a height index of 1.44), would produce about 70,000 square feet of GAF sales space. Operating at the average GAF sales/square foot ratio, this block-front of stores would produce about \$4 million in annual GAF sales.

Optimum and Present Parking Index in the Central Shopping-Service District

A shopping center's parking index is the number of effective parking spaces available per thousand square feet of retail floor area. Its relationship to parking area to floor area ratios is as follows:

<u>Parking Index</u>	<u>Parking Area to Floor Area Ratio</u>
3	1:1
6	2:1
9	3:1

Optimum parking indices vary considerably for different types of shopping centers. Where all shopping trips are made by automobile for that specific purpose, a parking index of about nine is usually selected as a target. As the factor of walk-in trade or other influences, such as transit, are brought to bear, a parking index of about six usually will suffice. As the shopping area becomes more complex with increasing interrelationship of retailing and other uses (offices, banks, etc.), a parking index of two to three usually will serve the purpose. Recognizing these

¹ As applied to Flint's retail core GAF sales space proportions.

latter factors, the Bureau of Public Roads and other agencies, both public and private, have derived parking indices for downtown areas. An application of these optimum indices to Flint's present retail core produces an indication of present parking requirements in the Central Shopping-Service District:

<u>Recurring Retail Core Uses Requiring Parking</u>	<u>Optimum Parking Index</u>	<u>Space in Use in Retail Core (1,000 sq.ft.)</u>	<u>Approximate Car Space Needs as per Optimum Parking Index</u>
Retail Core Type Use			
G	3.0	209	600
A	3.0	381	1,100
F	2.0	200	400
Other Retail	2.0	202	400
Financial	3.0	203	600
Service, etc.	1.5	85	100
Recurring Related Uses			
Office	1.5	<u>265</u>	<u>400</u>
		1,545	3,600

The derived optimum total parking index for Flint's present retail core is 2.3.

An inventory of Central Business District parking shows nearly 4,700 parking spaces available within reasonable walking distance of the retail core of Flint's present Central Shopping-Service District. Of these spaces, over 70 per cent apparently support retail core business activities, with the remainder serving other less concentrated CBD business uses. This would indicate that Flint's present CSSD parking index (with a total of 2,140,000 square feet of floor space) is about 2.2 - a very favorable relationship.

A Program for Downtown Development

Delineation of Areas in the Present CBD

Flint's present CBD comprises three main areas: the retail core; the inner frame; the outer frame. The retail core and inner frame together comprise the Central Shopping-Service District. This district, with the outer frame, comprises the Central Business District, bounded as follows: on the north, by the Fifth Avenue crosstown; on the south, by the southern edge of the Civic Center (Seventh Street); on the east, by Stevens Street and the James P. Cole Boulevard; on the west, by Grand Traverse (south of Flint River) and Lyon and Garland Streets (north of the River).

The Central Shopping-Service District boundaries on the east and west (defining the outer limits of the inner frame) are the same as those of the CBD. On the north, the CSSD is bounded by the Flint River. On the south, it is bounded by the southern edge of inner frame parking lots (southernmost points: parking lots south of Third Street).

The retail core extends predominantly along Saginaw Street from Union Street on the north to the old City Hall site on the south. Its western boundary is in the most part Buckham Alley, with some extension along Kearsley and First Street block-fronts to Beach Street. Its eastern boundary is generally Brush Alley, with extensions including the two block-fronts on the west side of Harrison Street, north and south of First Street.

Prospects, Requirements and Targets

Downtown refashioning, if it is to be most effective, must focus on the CSSD. Requirements in regard to ready accessibility extend, of course, way beyond this compact area - through the Central Business District, the central area as a whole, and into the farther reaches of the trade area. To make the plans and proposals for such refashioning meaningful it is necessary to adopt some estimates of space, land area, and parking needs in the CSSD. While admittedly but approximations and fraught with uncertainties, such estimates or projections can be drawn based on the space use surveys, the market study and the derived space use ratios in the present CSSD. Land area needs are estimated by projecting the space relationship of other core uses to GAF uses, then projecting GAF needs on the basis of findings the market research previously described.

Projected Space, Land Area and Parking Requirements for the CSSD

Based on market projections, the present and projected space use ratios, intensity of land use, relationships of gross sales to sales area in the CSSD, anticipated space relationships between GAF and other retail core and related uses, and allowing for some latitude and adjustment as downtown development occurs, the following space, land area and parking requirements have been derived:

GAF Space, Land Area and Parking Requirements in the CSSD

	Projected CSSD-GAF Sales (\$ million)	GAF space (million sq. ft.)	Land Area (acres)	Block- fronts ¹ ($\frac{1}{2}$ city block)	Parking Spaces	Indicated new depart- ment stores
Long-term prospects	\$70-80	1.12-1.28 ²	15-18 ⁵	13-17	5,500-6,400	1 or 2
Short-term prospects	\$60-65	1.00-1.08 ³	14-16 ⁶	12-15	4,600-5,300	1
Present prospects	\$47-48	0.81-0.83 ⁴	12-13 ⁷	11-12	3,700-4,000	-

¹An average Flint retail core block-front contains 1.1 acres. The projected composition of retail core uses: GAF uses: 50%; other retail core type uses: 30%; recurring related uses - general office: 15%; commercial storage: 5%. Total height index (including basements): 3.4. (It will be noted that these ratios reflect an anticipated increase in CSSD concentration of retail core type uses plus a somewhat higher density of CSSD land use.)

²At projected \$60-65 sales per square foot.

³At projected \$60 sales per square foot.

⁴At projected \$58 sales per square foot.

⁵At projected long-term height index for GAF uses: 1.70.

⁶At projected short-term height index for GAF uses: 1.57.

⁷At present height index for GAF uses: 1.44.

The above ratios take account of the increasing intensity and productivity of CSSD retail core land use which may be expected as sales volume increases and as land area expansion occurs.

With the projected higher concentration and productivity of GAF space in the retail core, the indicated CSSD parking index rises from the present 2.2 to a long-term 2.6.

General Plan of the Central Area

The accompanying illustration¹ shows in generalized form the land uses proposed in the central part of the city between the proposed Fourth-Fifth Avenue crosstown and the Municipal Center, and between Grand Traverse Street and the College of Cultural Development. Overlaid, as the title suggests, are the streets serving or proposed to serve this area. The proposed street system would be developed in stages, as portrayed by the three illustrations described later.²

The land use organization of the central area, as proposed, envisions the "retail core" of the CBD as located mainly between Union and Third Streets, including, besides Saginaw Street, part of Beach and most of Harrison Street within these north-south boundaries. The "inner frame" - mostly parking - extends generally east and west beyond the core between Grand Traverse and proposed Interstate 475. As stated previously, the core and inner frame constitute the Central Shopping-Service District (the CSSD). Beyond the CSSD - in the outer frame - are a complementary retail area, also an office and exhibit area, plus a "transportation" center (interurban bus terminal, car rental agencies, taxicab headquarters) north of the Flint River. Also beyond the CSSD, to the south, are an area of subsidiary frame uses and the County-City government center - desirably expanded on the west side of Saginaw as indicated.

Beyond the CBD (core, inner and outer frames) are an extension into a "redevelopment" area, to the northeast, of an office and a business service area, and, to the east, a "close-in" medium and high density residential area - and, beyond, the College-Cultural Development.

Staging of the CBD Plan

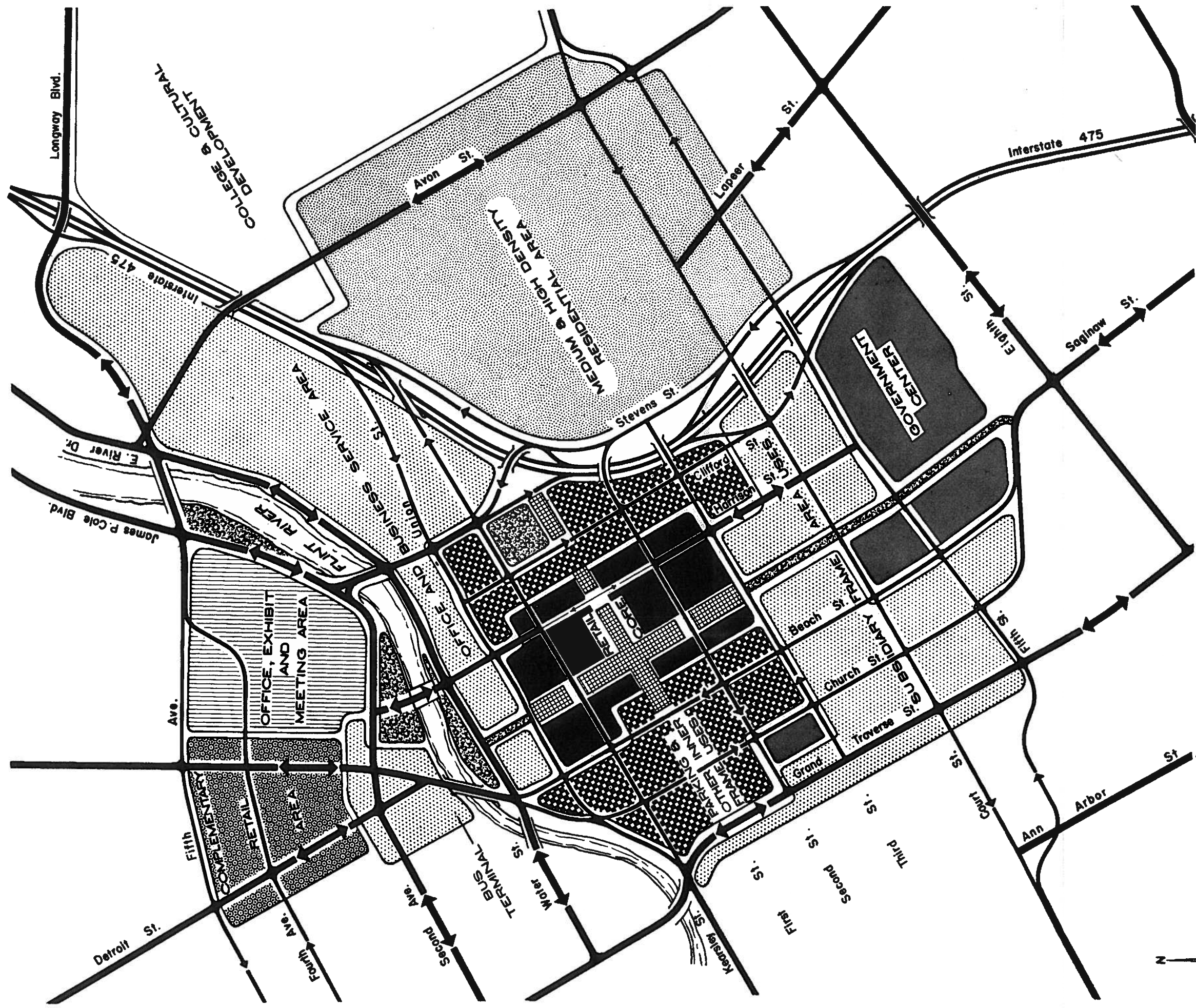
The Central Business District refashioning program is so designed as to allow for continued expansion over the years. Land use projections for the foreseeable future were drawn and proposals are submitted toward the implementation of a three-stage program covering 20 years or so.

The Immediate Program: Stage I

Stage I calls for stabilizing and strengthening the CBD's position in the present market by seeking to gain the objective of increasing CBD-GAF sales to \$69 million (with perhaps \$47-48 million of this in the CSSD), reversing the decline since 1954. In so doing, all possible sales increase desirably should be absorbed by

¹ Map: Land Use and Circulation Scheme.

² Maps: Major Streets and Parking Plan - Stages I, II and III.



**CENTRAL BUSINESS DISTRICT - FLINT - MICHIGAN
LAND USE AND CIRCULATION SCHEME**

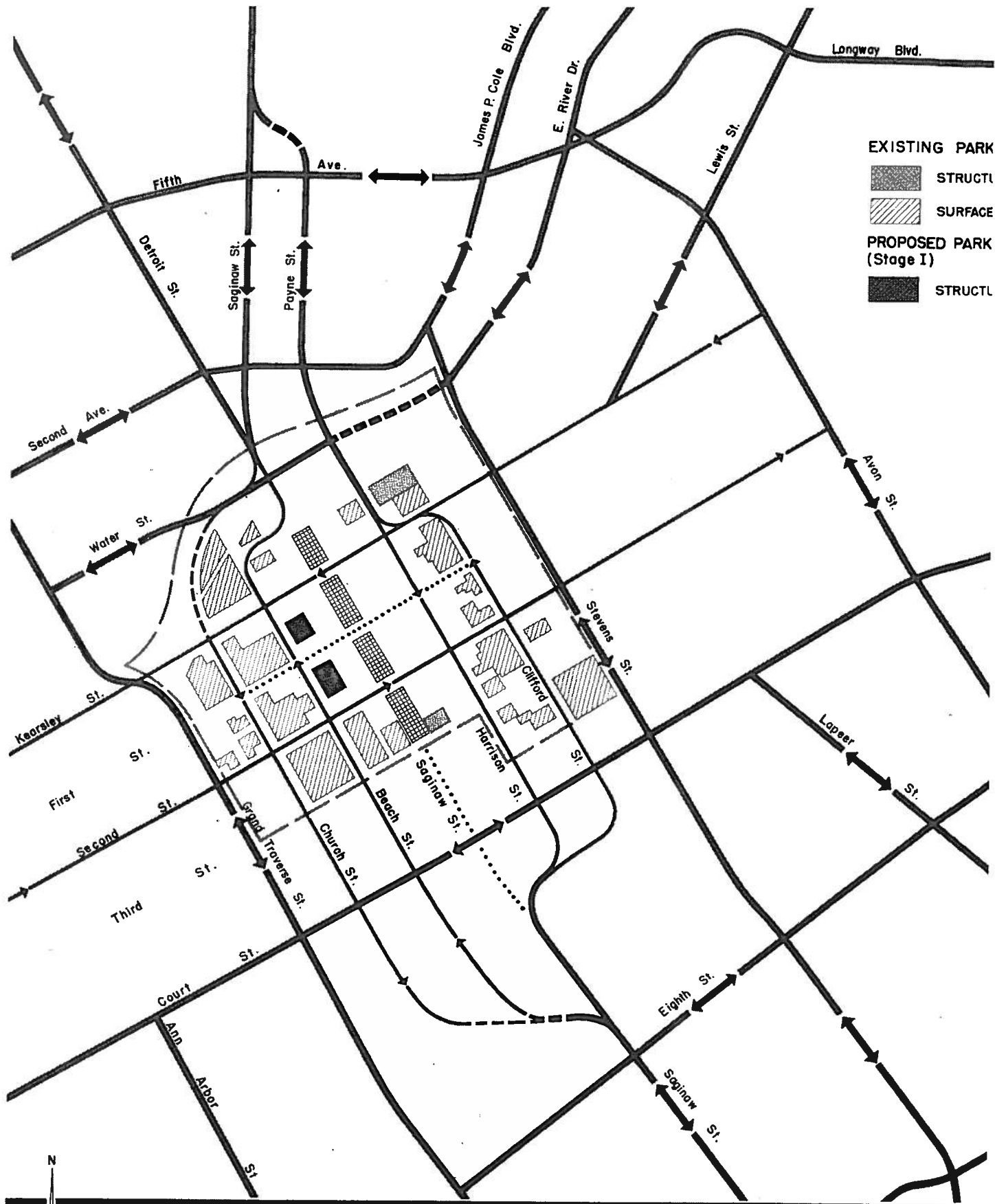
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- MAJOR TWO-WAY STREET
- MAJOR ONE-WAY STREET
- CONVERT TO PEDESTRIAN MALL
- BOULEVARD TREATMENT
- BUS LANE AND PARKING



EXISTING PARK
 STRUCTL
 SURFACE
 PROPOSED PARK (Stage I)
 STRUCTL


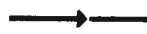






COMPREHENSIVE MASTER PLAN

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**CENTRAL BUSINESS DISTRICT - FLINT · MICHIGAN
 MAJOR STREETS AND PARKING PLAN - STAGE I**

-  MAJOR TWO-WAY STREET
-  MAJOR ONE-WAY STREET
-  ACQUIRE NEW RIGHT-OF WAY
-  CONVERT FROM MAJOR STREET
-  CONVERT TO PEDESTRIAN MALL
-  CSSD BOUNDARIES

present establishments, with any possible sales space increase resulting from general bettering of conditions rather than from active new-store promotion.

Stage I Development¹ Under Stage I, Beach and Church Streets, proposed to be operated as a one-way pair of traffic streets, would be connected with Saginaw Street, north of Kearsley, and, to the south, in the vicinity of Seventh Street; connections between Harrison and Clifford, operated as another one-way pair, and Saginaw Street would be improved by "easing" of corners on Fifth Street and also at Kearsley, plus a connection between Payne and Saginaw north of Fifth Avenue. East River Drive (East Boulevard) would be extended and Kearsley and Second would be operated as still another one-way pair, with First Street devoted temporarily to parking and movement of transit vehicles.

Four blocks of Saginaw Street, between Union and Third Streets, would be converted into a landscaped mall.² The shortage of close-in, high-turnover parking spaces - due largely to the short supply of street spaces - would be made up by constructing garages at the two parking lots in the blocks east of Beach, flanking First Street. Shops desirably should be incorporated along the First Street frontage in the design of the southerly garage, in anticipation of the later establishment of a mall on First Street.

The Short-Term Program: Stage II

Stage II is aimed at raising the CBD's share of the present market and securing for the CBD a reasonably stable and increasing share of the growing market for GAF goods - increasing of CBD-GAF sales some 30-40 per cent over current sales to \$85-90 million, with perhaps \$60-65 million of this in the CSSD. New sales space should be made available to meet the space demand created by that portion of the CBD-GAF sales increase that tends to exceed the potential afforded by present sales space.

Stage II Development³ - Under Stage II, if not Stage I, Saginaw Street, between Third and Seventh Streets, desirably should be converted into a boulevard - as an appropriate visual link between the mall and the Municipal Center. The section of Saginaw, between Union and First Avenue, would be treated in similar manner. The blocks on First Street, from Beach to Harrison, if not to Clifford, would be converted to a landscaped mall.⁴ First Street, between Grand Traverse and Beach, and between Harrison and Stevens, also Harrison, between Kearsley and Second, would be devoted to parking and, probably, bus movements.

Also called for under Stage II, if not in part under Stage I, is the extension of Union Street east and west (to operate as a one-way pair with Kearsley); the projection of Saginaw Street from Detroit Street across a new bridge to improved connections with Beach and Church; new connections between Court and Fifth Street in the vicinity of Ann Arbor and Avon Streets.

1 Map: Major Streets and Parking Plan - Stage I.

2 Illustration: Saginaw Mall.

3 Map: Major Streets and Parking Plan - Stage II.

4 Illustration: Central Square (showing First Street mall to east).

Surface parking under Stage II would be "squared off," primarily in the blocks between Beach and Church, and temporary facilities would be gained between Union and East River Drive, assuming that the Grand Trunk, if not the C&O tracks, plus adjacent freight and warehouses, will have been removed.¹ Temporary facilities also would be gained east of Clifford, the latter on the assumption that Interstate right-of-way may have been acquired here sometime in advance of construction.

The Long-Term Program: Stage III

Stage III is aimed at enhancing further the CBD's share of the present market and securing for the CBD a reasonable increase of its expanding future market for GAF goods - an increase in CBD-GAF sales of some 55-70 per cent over current sales to \$100-110 million, with perhaps \$70-80 million of this in the CSSD. Additional sales space would have to be made available to handle a sales volume of this magnitude.

Stage III Development² Stage III would be high-lighted by Interstate 475, if this is not built sooner, as it likely will be, by certain mall extensions and the establishment of a modified mall (with possible bus lane) on Harrison. At the same time, parking garages would be built at the parking lots in the blocks between Beach and Church and Harrison and Clifford, these connected by a pedestrian bridge, in the case of Beach Street, and in both cases served by escalators from the First Street mall.

On the accompanying plan³ are shown the various features making up the refashioned Central Shopping-Service District: malls; plazas or squares at Union Street, First Street and just north of Third Street; new buildings, including department stores at Union and at Third Street, an office building on the Union Street square and parking garages, among others.

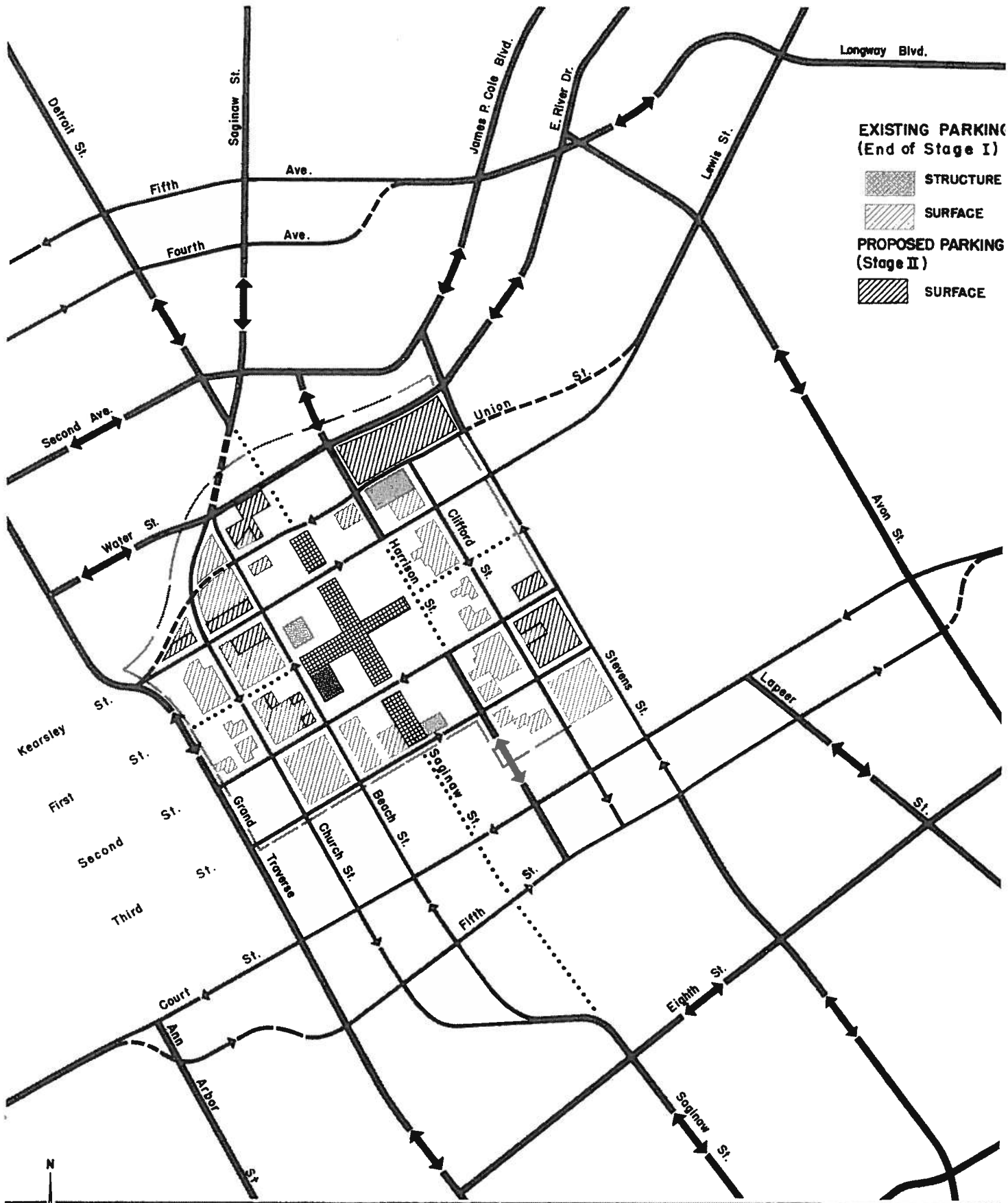
In developing the plan, a conscious effort was made toward opening up areas in order to provide settings for the more prominent buildings, including: (a) on Union Square - the Citizens Bank, Kobacker and Sill Buildings, plus one of the above-mentioned department stores and the new office building; (b) on Central Square (First Street) - the Mott Foundation Building, the National Building, Smith-Bridgman's and the Telephone Company Building; and (c) on Saginaw Square (Third Street) - the second new department store.

Depending on the growth in demand for parking, certain designated parking lots may later be decked by structures. Among these are the lot shown on the east side of Beach, between Second and Third, and that at the southwest corner of Union and Harrison. In this or even later stages of development as shown in the Land Use and Circulation Scheme, previously described, expansion of the retail core would occur to the south and east, and additional office buildings would be erected in the area of the GTW freight house. The area bounded by Union, Clifford, Third and Beach Streets would be made in the most part traffic-free - except for service and emergency vehicles, and possibly bus movements. This area would become the ultimate retailing core of the CSSD.

¹ In January, 1961, the Grand Trunk tracks were severed at Saginaw Street.

² Map: Major Streets and Parking Plan - Stage III.

³ Map: Illustrative Development Scheme - Stage III.



EXISTING PARKING (End of Stage I)

STRUCTURE

SURFACE

PROPOSED PARKING (Stage II)

SURFACE



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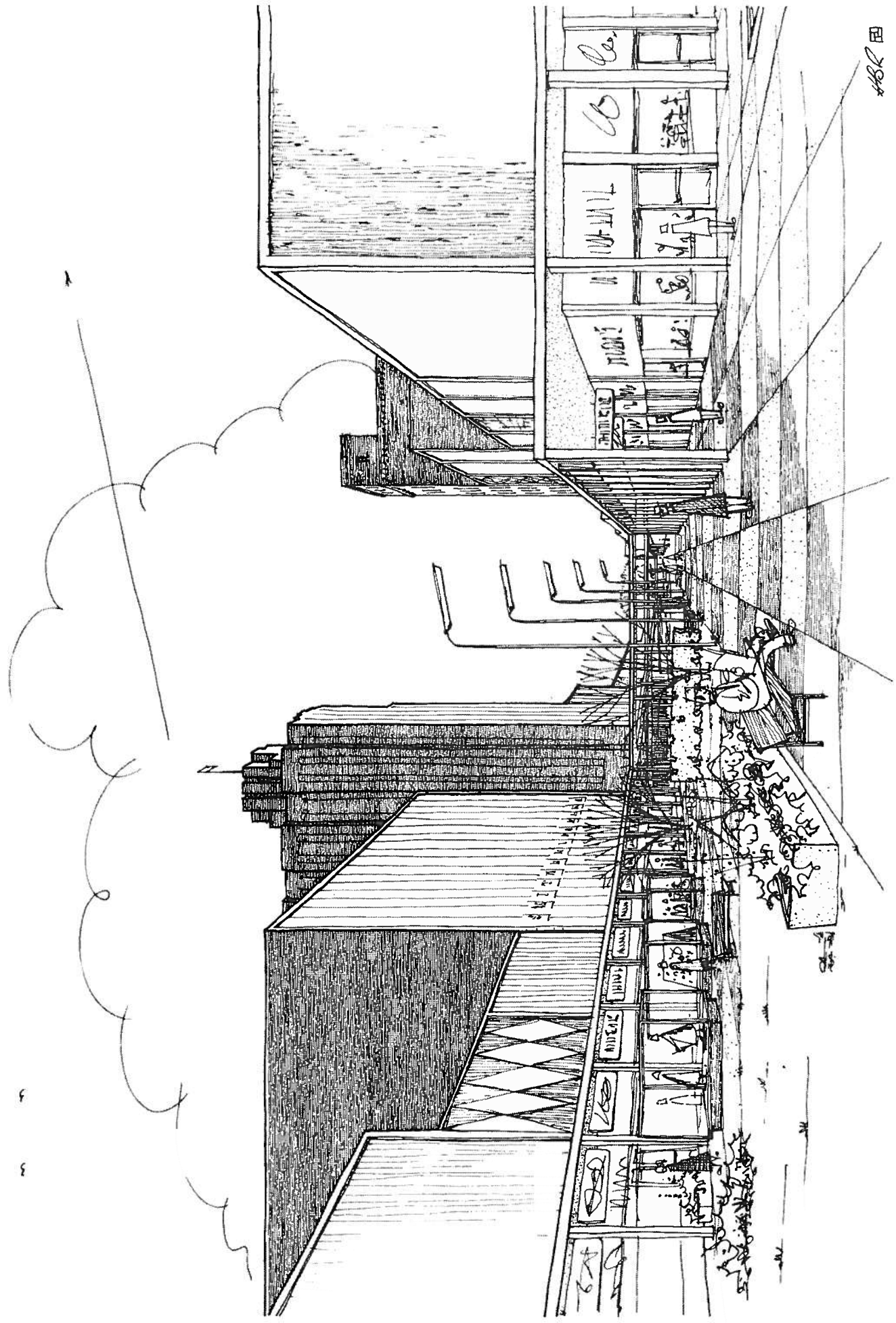
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**CENTRAL BUSINESS DISTRICT - FLINT · MICHIGAN
 MAJOR STREETS AND PARKING PLAN - STAGE II**

- ← → MAJOR TWO-WAY STREET
- MAJOR ONE-WAY STREET
- — — — — ACQUIRE NEW RIGHT-OF WAY
- · · · · CONVERT FROM MAJOR STREET
- ▨ PEDESTRIAN MALL

□ CSSD BOUNDARIES

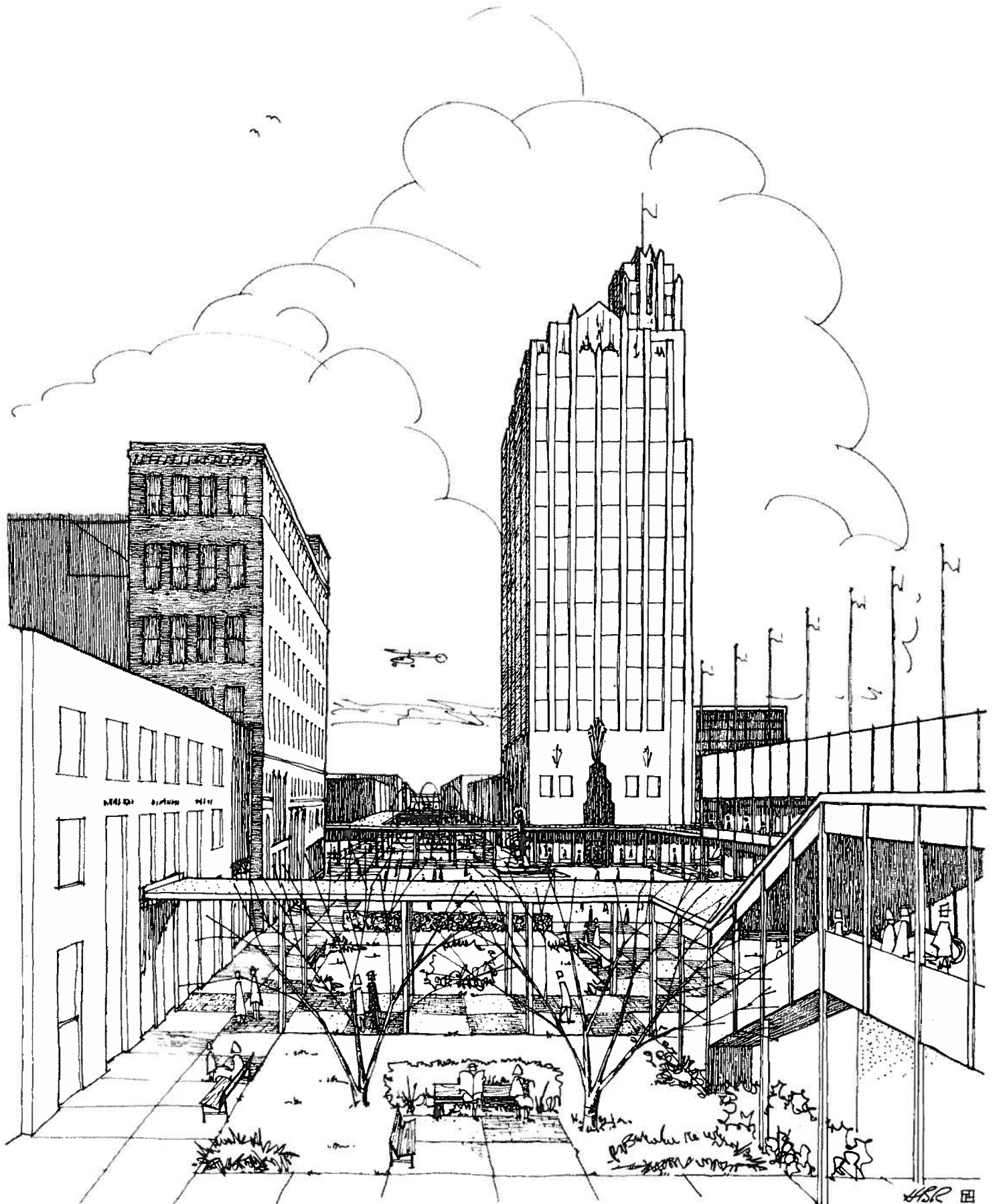




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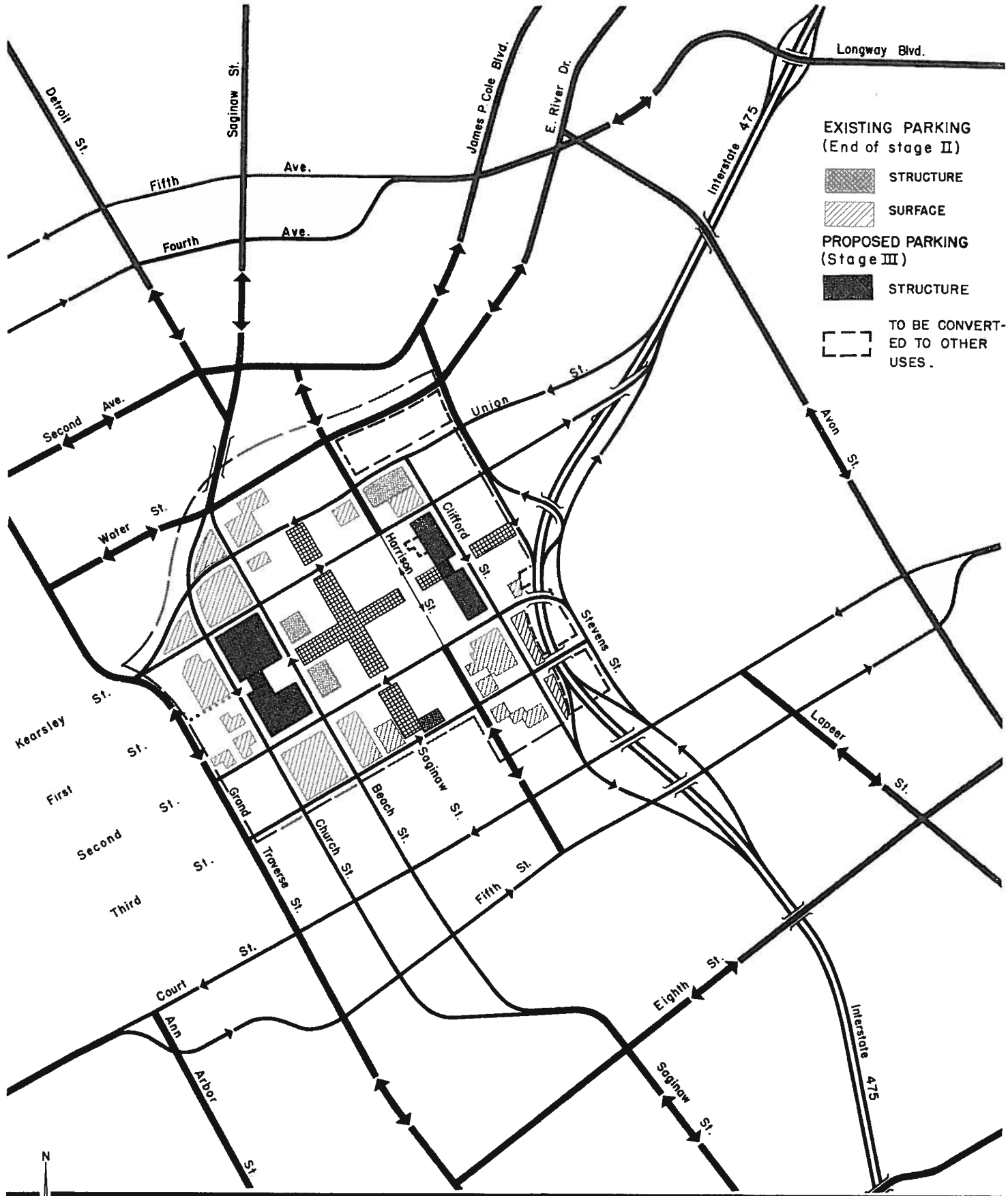
SAGINAW MALL - FLINT - MICHIGAN
LOOKING SOUTH TOWARD SMITH BRIDGMAN'S DEPARTMENT STORE

LADISLAS SEGDE AND ASSOCIATES
CITY PLANNERS - CONSULTING ENGINEERS
CINCINNATI, OHIO



CENTRAL SQUARE - FLINT · MICHIGAN
LOOKING EAST TOWARD MOTT FOUNDATION BUILDING

LADISLAS SEGOE AND ASSOCIATES
CITY PLANNERS · CONSULTING ENGINEERS
CINCINNATI · OHIO
1960



EXISTING PARKING (End of stage II)

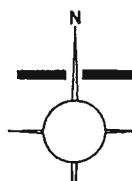
STRUCTURE

SURFACE

PROPOSED PARKING (Stage III)

STRUCTURE

TO BE CONVERTED TO OTHER USES.



COMPREHENSIVE MASTER PLAN

CITY OF FLINT · MICHIGAN
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**CENTRAL BUSINESS DISTRICT - FLINT · MICHIGAN
MAJOR STREETS AND PARKING PLAN - STAGE III**

MAJOR TWO-WAY STREET

MAJOR ONE-WAY STREET

CONVERT TO PEDESTRIAN MALL

BUS LANE AND PARKING

CSSD BOUNDARIES



PROPOSED · INTERSTATE 475

It should be noted on this long-term scheme for the expanded GBD that one feature of development shown, namely Willson Park, would be separated by Interstate 475 from the medium and high density residential area to the east which it would be expected to serve. With a more appropriately located downtown park along Flint River, Willson Park logically should be replaced by another to the east of the Interstate. In addition to thus better serving the residential area, advantages in locating and designing the Interstate would be gained, or, at least, additional area for long-time parking made available.

Implementation

To take the steps necessary to change a paper plan into reality calls for foresight, perseverance, patience, and cooperation of all concerned. The citizens of Flint represented by the City Commission, along with the advisory City Planning Commission and the downtown business interests represented by the Greater Flint Downtown Corporation, are all concerned in various degrees with various aspects of such a program.

The first necessary steps toward realization are the official adoption of the Central Business District Plan by the Planning Commission,¹ as part of the Master Plan, and its approval by the City Commission. This would be tantamount to agreement, presumably also on the part of the Downtown Corporation particularly involved, that the recommended Plan is acceptable, at least in its major features, and suitable generally for being carried out in successive stages.

Desirably, the next step would involve agreement between the City and the Michigan State Highway Department that trunkline business routes, where necessary, can be diverted practicably to parallel streets. A landscaped pedestrian mall along Saginaw Street, the "backbone" of the whole design concept, is essential to the success of the Plan. Once this agreement as to the desirability and feasibility of the Plan has been reached by those concerned, the stage is set for the necessary more detailed studies, designs and programming preliminary to actual construction.

At this point, it would seem well to select an architect to make or coordinate the required more detailed studies. His job would be to coordinate the studies and plans of all those engaged in the work - the City's Public Works Department, landscape architects and other technicians who would prepare designs for the various individual elements of the Plan.

After preparation of preliminary designs and approximate cost estimates, an understanding between the City and the Downtown Corporation as to the equitable division of responsibility and costs of the actual construction and maintenance should be reached - for at least the Stage I program.

When the scope of immediately desirable and feasible improvements, along with costs are known and accepted by both the public and private interests, selection of architects, engineers, landscape architects and other professional persons will be necessary for the preparation of final plans and working drawings. Such professionals, particularly the coordinating architect, should be engaged with the

¹ This was done in January, 1961.

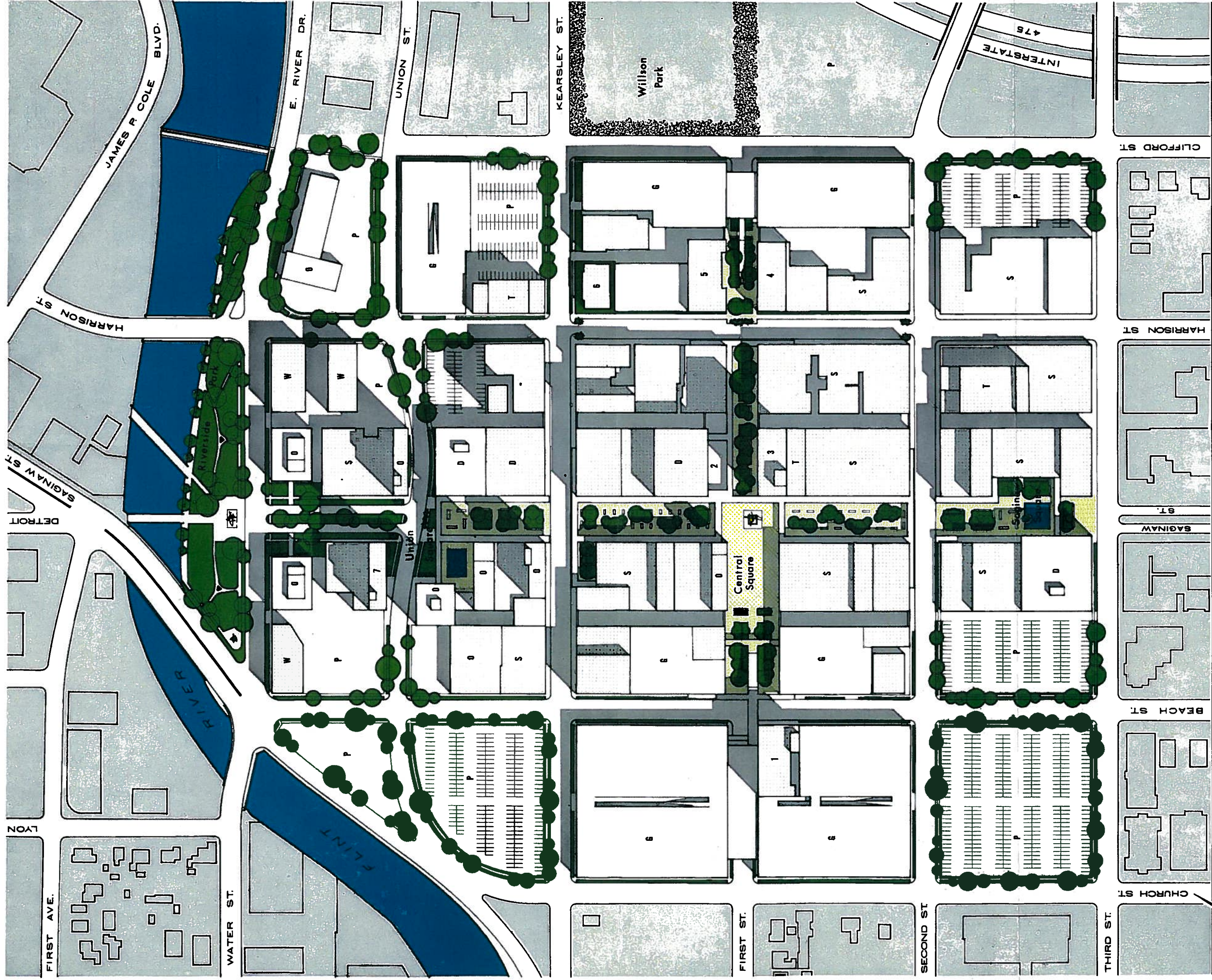
understanding that they will be available to carry out, or be retained for consultation on successive stages of the work in order to insure, insofar as may be possible, that the design of individual elements is consistent with the total functional and design concept, as the Plan is implemented over a period of years.

Once precise plans have been prepared, the methods by which the accomplishment of various features of development might be insured should be considered. There are several means available:

1. Zoning - In a "Metropolitan Business District," such as contained in proposed zoning regulations, the City may establish suitable use, building height, bulk and set-back, off-street parking and loading requirements and sign regulations.
2. Mapped Improvement Plats - Under the Mapped Improvement Act, the sites or right-of-ways of proposed public improvements - such as parks and other public open spaces, street widenings or extensions, parking areas and others - may be protected and secured with the aid of precise plats, adopted by the City Commission, defining their limits, by the refusal of building permits for any building or structure which may encroach on such sites or right-of-ways so adopted under this Act. The actual securing of the sites or right-of-ways then may be accomplished either through the voluntary conformance by the property owners, or by suitable adjustment of the conflict through the instrumentality of the Board of Appeals or through the purchase by the City or others of the desired site or right-of-way.
3. Joint Action and Cooperation of Private Interests - Public regulations under the zoning ordinance, building code, etc., while going a long way, will not suffice to create in full measure the functional and physical enhancement necessary for any fully effective refashioning of the Central Business District. Such regulations will have to be supplemented by requirements and standards agreed upon by property owners and tenants in the CBD, in respect not only to physical development and features but also maintenance and operating practices, and by adherence to these through cooperation among them. Without such cooperation in matters which cannot be controlled by law, it is unlikely that significant improvement in the general appearance and functional effectiveness of the Central Business District can be achieved.

The above methods of accomplishing the Plan are suggestive of the various ways of financing the features of different categories. Financing, of course, will vary with the type and cost of improvement, the probable benefits to be gained by the interests involved, and other factors.¹ The means available at local level include the following:

¹ In addition to financing at the local level, the possibility of gaining financial aid at the federal level in the form of urban renewal funds for the clearance of eligible areas, and, of course, the further possibility of gaining county, state or other federal financial assistance as may be available should be fully explored as means toward carrying out the CBD Plan.



COMPREHENSIVE
MASTER
PLAN

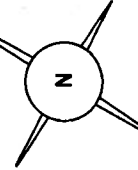
CITY OF FLINT · MICHIGAN
FLINT PLANNING COMMISSION
1960

LADISLAS SEGOE & ASSOCIATES
CITY PLANNERS · CONSULTING ENGINEERS
CINCINNATI · OHIO FLINT · MICHIGAN

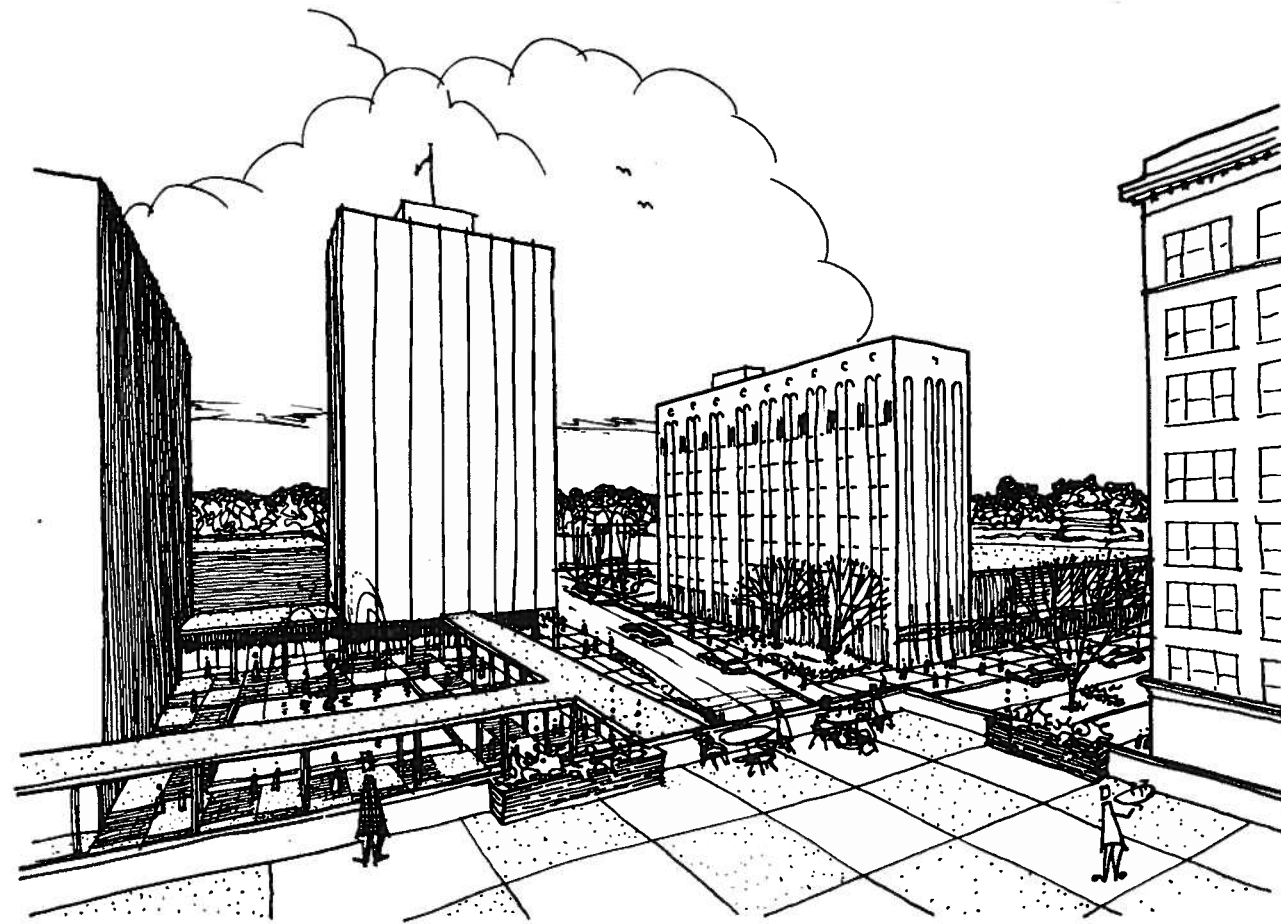
ILLUSTRATIVE DEVELOPMENT SCHEME - Stage III
CENTRAL SHOPPING-SERVICE DISTRICT - FLINT · MICHIGAN



- S SHOPS
- D DEPARTMENT STORE
- O OFFICES
- T THEATRE
- W WAREHOUSE
- 6 PARKING GARAGE
- P SURFACE PARKING
- 1 TELEPHONE BUILDING
- 2 NURSERY & PLAYGROUND
- 3 MOTT FOUNDATION BUILDING
- 4 FLINT JOURNAL
- 5 Y.W.C.A.
- 6 COMMUNITY SERVICE CENTER
- 7 KOBACKER BUILDING



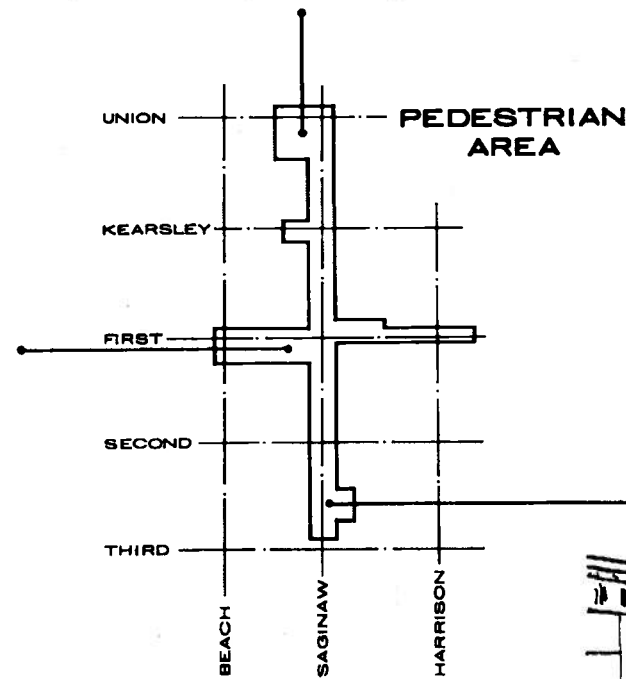
UNION SQUARE - LOOKING WEST TOWARD KOBACKER BUILDING



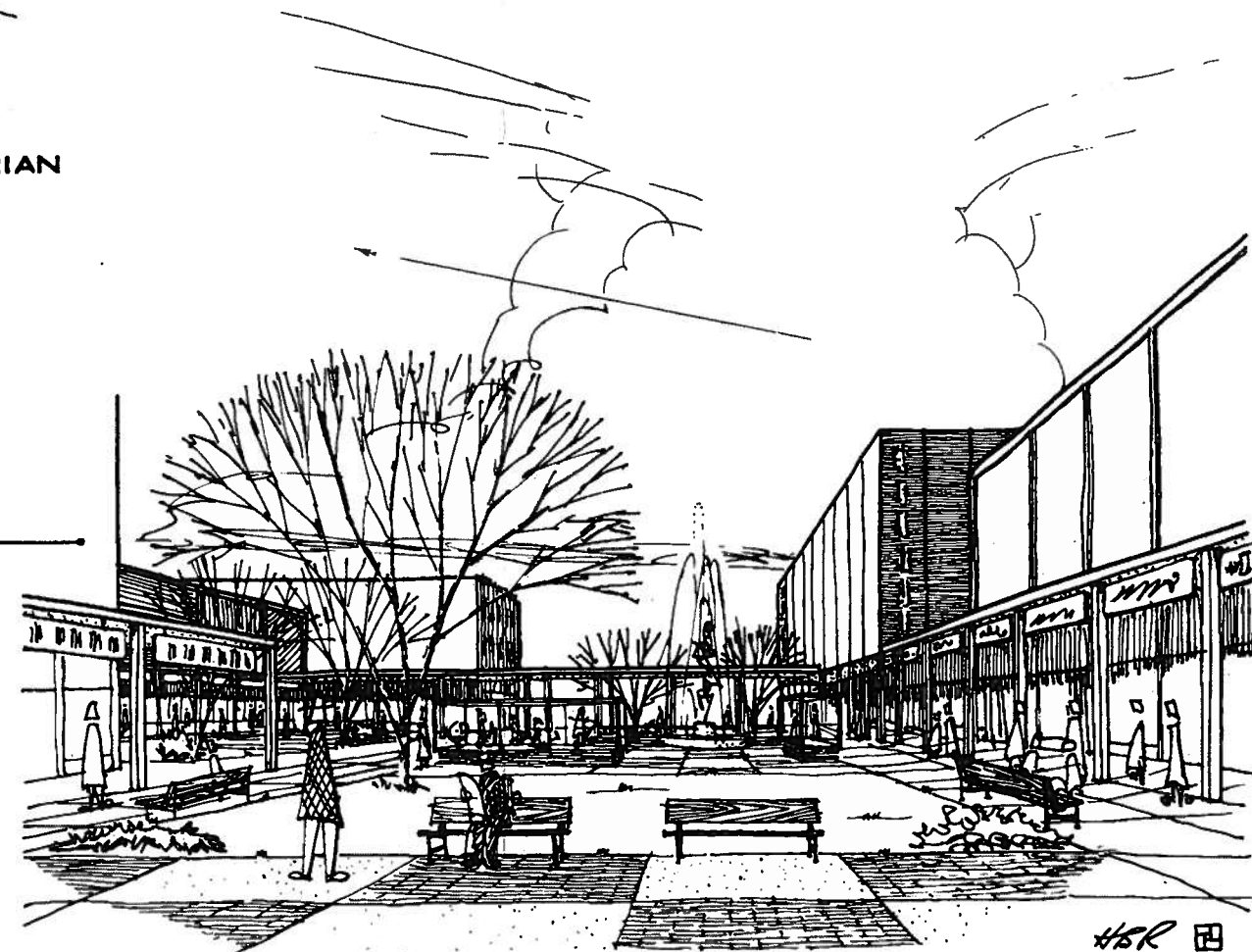
ILLUSTRATIVE DEVELOPMENT

THREE DOWNTOWN SQUARES

CENTRAL BUSINESS DISTRICT FLINT · MICHIGAN
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CENTRAL SQUARE - LOOKING WEST TOWARD TELEPHONE BUILDING



SAGINAW SQUARE - LOOKING SOUTH TOWARD NEW DEPARTMENT STORE

HSR

1. Public Improvements
 - a. Revenue Bonds - for parking lots and structures;
 - b. General Obligation Bonds - for squares and parks benefitting the entire city;
 - c. Special Assessment Bonds - for improvements and maintenance benefitting readily determined groups of interests;
 - d. General Funds.
2. Private Improvements
 - a. Direct improvements by individual establishments or groups in conformity with detailed plans; e.g., new buildings, building modernization, store-front remodelings, display cases, signs, canopies, etc.;
 - b. General or overall structural improvements and costs of services financed by the Downtown Corporation.

The steps from plan to reality are many, varied and admittedly difficult, but determined civic leadership, with continued public support and competent professional guidance, Downtown Flint can even surpass the concept of a refashioned and modernized Central Business District presented in this report.