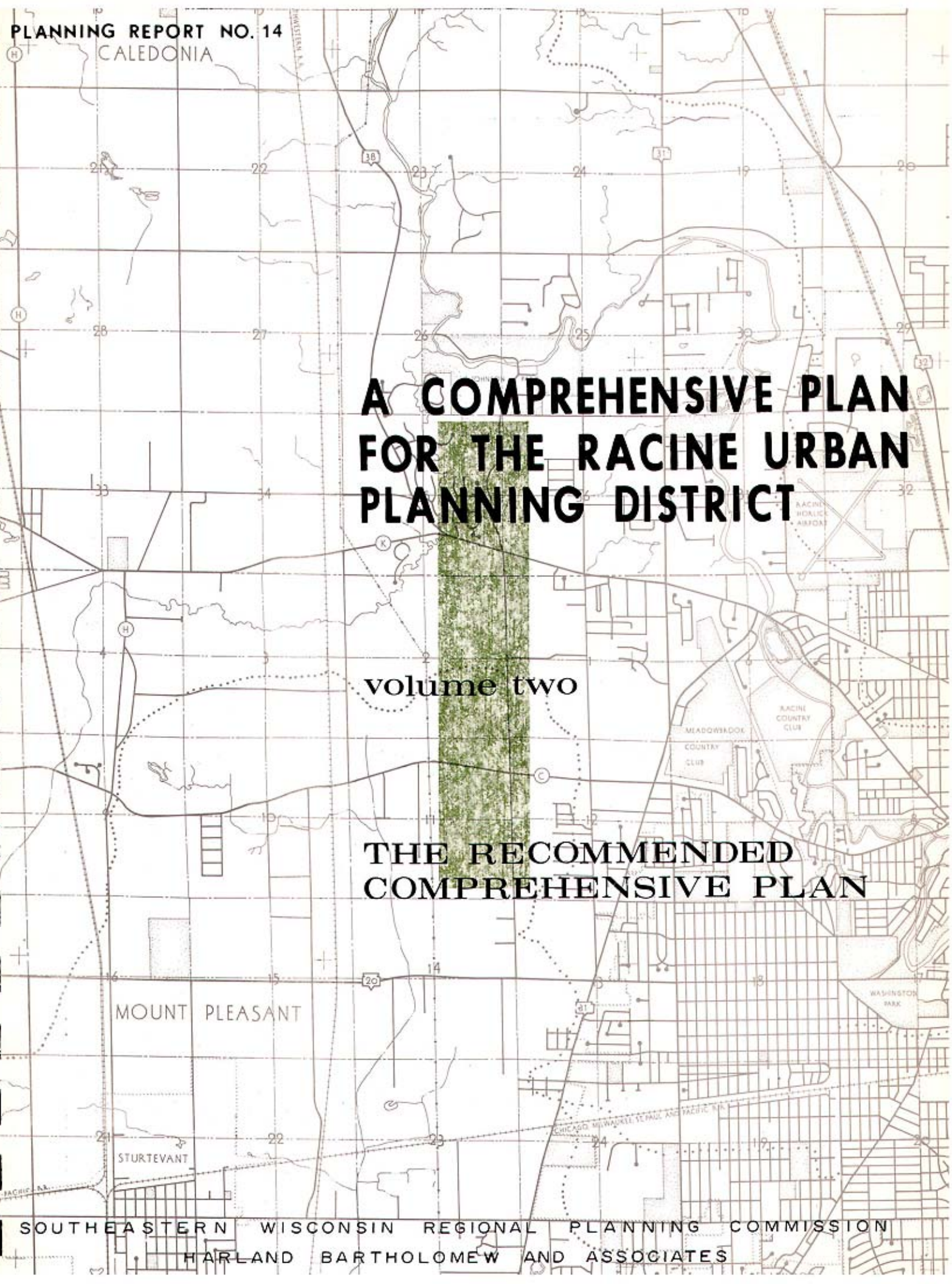
PLANNING REPORT NO. 14



A COMPREHENSIVE PLAN FOR THE RACINE URBAN PLANNING DISTRICT

volume two

THE RECOMMENDED COMPREHENSIVE PLAN

SOUTHEASTERN WISCONSIN REGIONAL PLANNING COMMISSION
HARLAND BARTHOLOMEW AND ASSOCIATES

MORATORIUM AND LONG-RANGE PLANNING
AGREEMENT SIGNATORIES

Racine County Board of Supervisors
City of Racine Common Council
Sturtevant Village Board
Mt. Pleasant Town Board

COOPERATING UNITS OF GOVERNMENT

Elmwood Park Village Board
North Bay Village Board
Wind Point Village Board
Caledonia Town Board
Racine Unified School District No. 1

RACINE URBAN PLANNING DISTRICT
CITIZENS ADVISORY COMMITTEE

David R. Rowland, Chairman . . . . . Executive Vice President and Treasurer Carpenter-Rowland-Battenburg Insurance Company

Eric Schroder, Vice-Chairman . . . . . Former Board Member Racine Unified School District

Marshall Lee, Jr., Secretary . . . . . Marshall E. Lee Agency, Inc.

Paul T. Bishop . . . . . President, Racine Unified School District

Paul Cody . . . . . Urban Affairs Manager, S. C. Johnson and Son, Inc.

David Grimm . . . . . President, Village of Wind Point

Wesley Hansche . . . . . Chairman, Town of Mt. Pleasant Plan Commission

Jack Harvey . . . . . City Attorney, City of Racine

Steven R. Horvath . . . . . Chairman, Town of Caledonia

Kenneth L. Huck . . . . . Mayor, City of Racine

LeRoy H. Jerstad, Jr. . . . . President, Village of North Bay

Richard LaFave . . . . . Chairman, Racine County Board of Supervisors

John Margis, Jr. . . . . First Vice-Chairman Racine County Board of Supervisors

Edward Mickelson, Jr. . . . . President, Village of Sturtevant

Mrs. Orby Moss, Jr. . . . . Instructor, Dominican College

Stephen F. Olsen . . . . . Alderman, City of Racine

Henry Rohner . . . . . Chairman, Town of Mount Pleasant

Virgil Schultz . . . . . Trustee, Village of Sturtevant

Mrs. Beryl Streiff . . . . . President, Village of Elmwood Park

Willard Walker . . . . . Executive Vice-President, Walker Forge, Inc.

The following individuals also participated actively in the work of the Committee as non-voting members: Gilbert Berthelsen, Racine County Administrator; Arnold L. Clement, Racine County Planning Director; Lester Hoganson, City Engineer, City of Racine; Karl B. Holzwarth, Racine County Park Director; Thomas N. Wright, Director of Planning, City of Racine; and Donald Zenz, Racine County Highway Engineer.

PLANNING REPORT

NUMBER 14

A COMPREHENSIVE PLAN FOR THE RACINE URBAN PLANNING DISTRICT

volume two

THE RECOMMENDED COMPREHENSIVE PLAN

Southeastern Wisconsin Regional Planning Commission

Old Courthouse
Waukesha, Wisconsin 53186

October 1972

Inside Region $10.00
Outside Region $15.00

SOUTHEASTERN WISCONSIN REGIONAL PLANNING COMMISSION

916 NO. EAST AVENUE • WAUKESHA, WISCONSIN 53186 • TELEPHONE (414) 547-6721

Serving the Counties of: KENOSHA
MILWAUKEE
OZAUKEE
RACINE
WALWORTH
WASHINGTON
WAUKESHA

September 1, 1972

STATEMENT OF THE CHAIRMAN

In May 1968 the Racine County Board of Supervisors requested the assistance of the Southeastern Wisconsin Regional Planning Commission in establishing and conducting the first phase of a planned two-phase comprehensive planning program for all that area of Racine County located east of IH 94, which area was designated as the Racine Urban Planning District. The first phase was to have as its major objective the preparation of a comprehensive physical development plan for the District, a plan which would provide for a safer, healthier, and more attractive, as well as a more orderly and efficient, environment for life within the District. The second phase would have as its major objective the preparation of recommendations relative to the future governmental framework of the District as required to implement the plan prepared in the first phase.

The entire two-phase planning program is being conducted by Racine County pursuant to the terms of a Moratorium and Long-Range Planning Agreement entered into by Racine County, the City of Racine, the Village of Sturtevant, and the Town of Mt. Pleasant. This Agreement came after several years of severe intergovernmental conflicts concerning municipal boundary lines and the provision of basic municipal services, and was conceived as an alternative to prolonged and bitter litigation which could adversely affect the economy of the District, as well as destroy the climate for necessary constructive intergovernmental action.

The final planning report for the first phase of the program consists of three volumes. The first volume, published in December 1970, presented the factual findings of the many inventories completed as a part of the program, as well as forecasts of future growth and development within the District. This, the second volume, contains the recommended development plan for the District, including a land use and housing plan element, a public utilities plan element, a transportation plan element, and a community facilities plan element. In addition, this second volume contains specific plan implementation recommendations predicated upon the existing structure of local government in the District pending the completion of the planned second phase of the comprehensive planning program. The third volume, published simultaneously with this volume, contains model plan implementation ordinances.

In all but two respects, the comprehensive development plan for the Racine Urban Planning District presented herein represents the work of a mutually agreed upon consultant for this program, Harland Bartholomew and Associates, Northbrook, Illinois. The two exceptions are the sanitary sewerage system plan and the arterial street and highway system plan. These two plan elements represent adaptation to the District of extensive planning and engineering work currently being carried on by the Commission under both the regional sanitary sewerage system planning program and the continuing regional land use-transportation study, the latter containing a specific work element directed at the preparation of a jurisdictional highway system plan for Racine County.

The very able direction and support which the Citizens Advisory Committee and local public officials in the District provided to this difficult planning program is deeply appreciated by the Commission. The comprehensive planning program for the Racine Urban Planning District marks a significant advance in the efforts of local units of government to collectively solve the growing problems of areawide development in southeastern Wisconsin on a voluntary, cooperative basis.

Respectfully submitted,

George C. Berteau
Chairman

HARLAND BARTHOLOMEW AND ASSOCIATES
PLANNING - ENGINEERING - LANDSCAPE ARCHITECTURE - URBAN RENEWAL

Est. 1919

165 N. Meramec Avenue
Saint Louis, Missouri 63105
314 726-1300

PARTNERS
Eldridge Lovelace
Charles P. Clayton
Frederic M. Robinson
J. Robert Moore
Malcolm C. Drummond
Joseph W. Guyton
ASSOCIATE PARTNERS
Claire Avis
Robert A. Beesley
Charles H. Bryant
John I. Cofer, III
Stanley Dolecki
Thompson A. Dyke
Charles A. Franzman
Joseph M. Ross
Edward D. Schippmann
Alan R. Siff
Billy G. Stinson
James W. Yarbrough
JUNIOR ASSOCIATE
Richard L. Davis

October 1972

Dr. Kurt W. Bauer, Director
Southeastern Wisconsin Regional
Planning Commission
916 No. East Avenue
Waukesha, Wisconsin

Dear Dr. Bauer:

In accordance with our agreement of July 10, 1969, we are submitting Volume Two of the Comprehensive Plan for the Racine Urban Planning District. Volume One contained the inventory of conditions and forecasts, and this volume contains the Recommended Comprehensive Plan.

Volume Two was reviewed by a special technical advisory committee appointed for such purpose prior to its submittal to the full Citizens' Advisory Committee, chaired by David R. Rowland. Both committees conducted a series of extensive review meetings over a one-year period before giving the plan preliminary approval and authorization to publish.

We wish to thank Mr. Rowland, especially, for his able leadership, the members of his executive committee, and the many members of the Citizens' Advisory Committee for their helpful ideas, suggestions and comments. We also wish to thank Paul T. Bishop, Richard LaFave and Kenneth L. Huck for their steady guidance and direction throughout the planning study. Particular thanks is also due to Thomas Wright and Arnold Clement, Planning Directors of the City and County respectively, for their continuous and expert planning advice and assistance.

We are confident that the plan will be of great benefit to the Racine Urban Planning District in the years to come.

Yours sincerely,

HARLAND BARTHOLOMEW AND ASSOCIATES

By

(This page intentionally left blank)

TABLE OF CONTENTS

LIST OF APPENDICES

LIST OF TABLES

LIST OF FIGURES

LIST OF MAPS

Chapter I

INTRODUCTION

FIRST PHASE

This report contains the plan for the Racine Urban Planning District and is the second part of the first phase of the comprehensive area-wide planning program for the District, prepared in accordance with the "Moratorium and Long-Range Planning Agreement" executed among and between Racine County, the City of Racine, the Village of Sturtevant, and the Town of Mt. Pleasant. The first part of the first phase, consisting of inventories of physical facilities and forecasts of future growth and demands on these facilities, was presented in SEWRPC Planning Report No. 14, Volume One, A Comprehensive Plan for the Racine Urban Planning District, Inventory Findings and Forecasts. This second volume provides recommendations for the sound physical development of the District during the planning period – i.e., until 1990.

SECOND PHASE

The second, or jurisdictional, phase of the program is to be designed to provide recommendations relative to the future governmental framework for the District as required to implement the agreed-upon comprehensive plan for the physical development of the area. Included in the second phase will be such considerations as whether existing governmental units should be expanded or consolidated and whether waste water, water supply, police and fire protection, park and recreation, health, or other municipal services should be provided by Racine County, by metropolitan service districts, by cooperative municipal action, by individual municipalities, or by other means.

REGIONAL PLANNING PROGRAM

Formation of the Southeastern Wisconsin Regional Planning Commission in 1960, and its continued work since that date, is concrete recognition of the strong ties of common interest in the seven-county region (see Map 1-1). Widespread use of the automobile has erased the line between "city" and "country", between "urban" and "rural". Now, virtually all parts of this 2,689 square mile, seven-county region are subject to some degree of urbanization. No parts are isolated or self-sufficient; what happens in one affects the others. Thus, we come to the need for broad regional planning of this sizable area – regional planning which may establish guidelines for land use control, construction of transportation facilities, public utility systems, schools and recreation, conservation, and the elimination of pollution.

Regional planning does not replace local planning; rather, it provides a sound basis for such local planning. Regional plans, in turn, must relate their proposals to consideration of state and national trends, awaiting the day when they may be related to some type of state-wide or national planning activities more extensive than those now at hand.

RACINE URBAN PLANNING DISTRICT PLAN

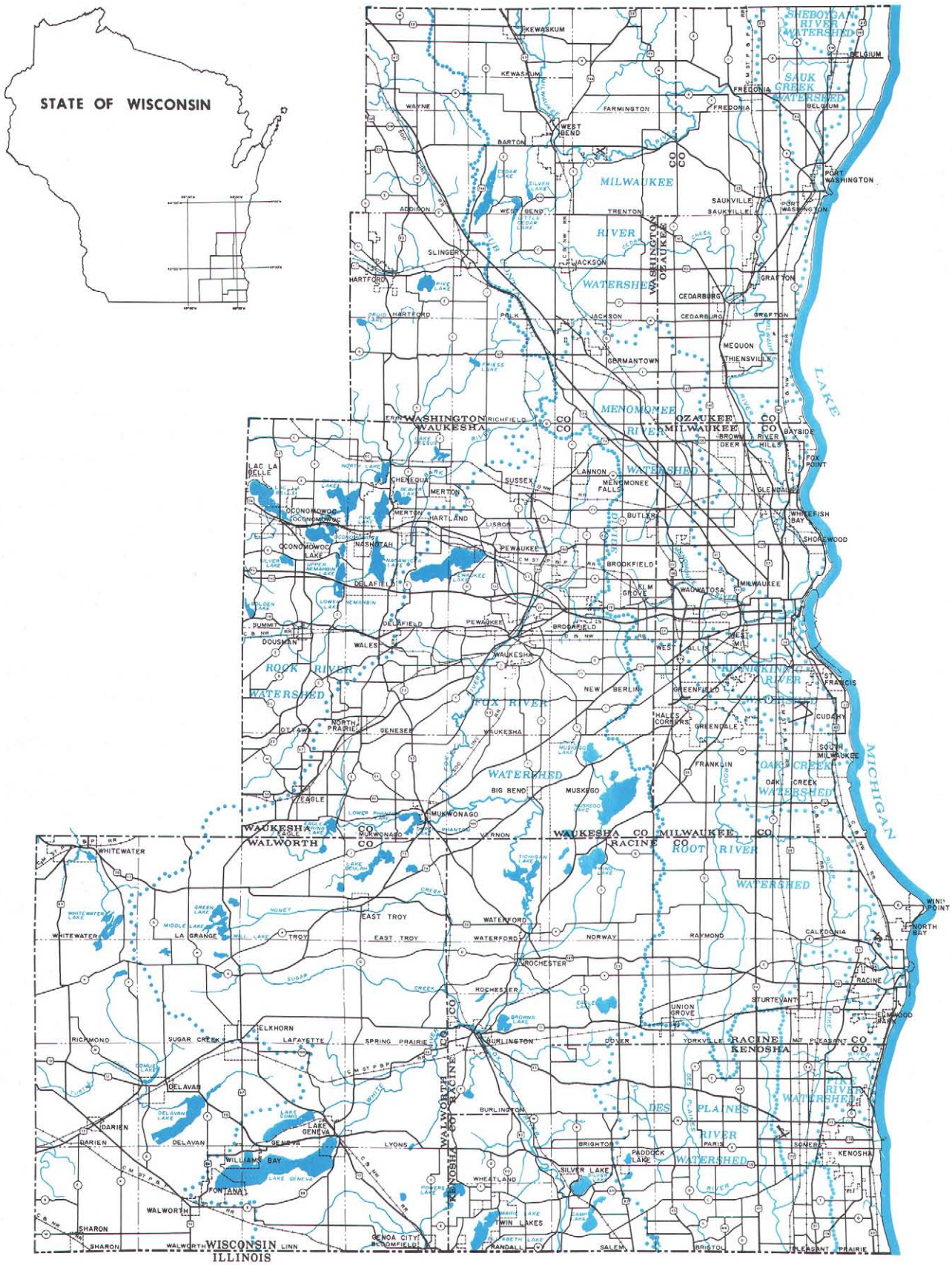
The Comprehensive Plan for the Racine Urban Planning District, contained herein, refines the already completed and adopted regional plan elements, presenting a wider spectrum of proposals and focusing on local objectives. The Planning District is 101 square miles in area and is an integral, yet separately identifiable, part of the Region. Its boundary to the east is natural – Lake Michigan; its boundary to the west is cultural – IH 94; and to the north and south, the boundaries are political – county lines (Milwaukee and Kenosha Counties), but fortuitously located to logically bound the developing pattern of urbanization focused on the central city of Racine (see Map 1-2).

Socioeconomically, the Planning District is a single community, as best evidenced by the boundaries chosen for the Unified School District. Churches, clubs, local unions, and similar organizations relate their identity and activities much more to this District than to any individual part of it, such as a city, town, or village. The average citizen seldom knows when he crosses one of these boundaries, most of which have been arbitrarily located.

Unified physically and socially, it seems logical to study physical development problems from a unified point of view. The Comprehensive Plan proposed herein does this. It has been prepared in consideration of the whole District rather than of specific local political jurisdictions. Proposals have been made in the best interest of all of the people of all of the Planning District in order to provide a sound basis for the design of local governmental, administrative, and financing organizations needed to accomplish the stated goals and objectives.

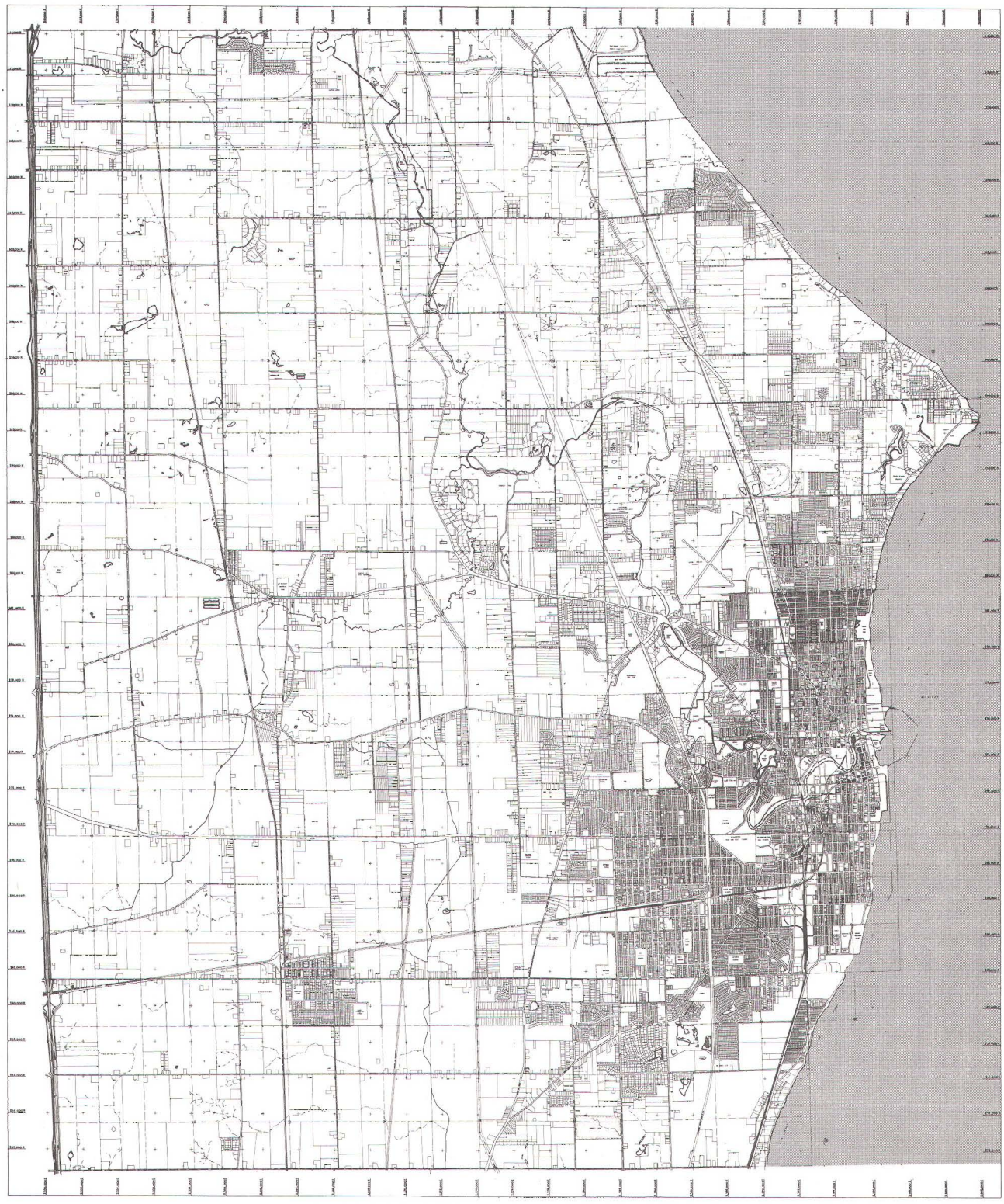
Amenity, efficiency, and economy have been the watchwords for this plan. Without a superior environment for living and working, the very reason for the community disappears. Thus, water and air pollution must be stopped, and areas of scenic interest and recreational value must be preserved.

MAP 1-1



SOUTHEASTERN WISCONSIN REGION

MAP 1-2



LEGEND

- COUNTY LINE
- TOWN AND RANGE LINE
- SECTION LINE
- QUARTER SECTION LINE
- STATE PLANE COORDINATE GRID
- INCORPORATED CITY OR VILLAGE
- INTERSTATE HIGHWAY
- U.S. NUMBERED HIGHWAY
- STATE TRUNK HIGHWAY
- COUNTY TRUNK HIGHWAY
- LOCAL OR MINOR STREET
- RAILROAD
- RIVER AND LAKE SHORELINE
- INTERMITTENT STREAM OR WATERCOURSE
- MAJOR PUBLIC AND SEMI-PUBLIC LAND
- POWER LINES

GRID NORTH

GRAPHIC SCALE IN FEET

0 1000 2000 4000

RACINE COUNTY BOARD OF SUPERVISORS

SOUTHEASTERN WISCONSIN REGIONAL PLANNING COMMISSION

HARLAND BARTHOLOMEW AND ASSOCIATES
CITY PLANNERS - CIVIL ENGINEERS - LANDSCAPE ARCHITECTS
CHICAGO ST. LOUIS

THIS IS NOT A CADASTRAL MAP. PROPERTY BOUNDARY LINES, WHEN SHOWN, ARE SHOWN IN APPROXIMATE LOCATION ONLY. COMPILED BY HARLAND BARTHOLOMEW AND ASSOCIATES FROM S.E.W.R.P.C. AERIAL PHOTOGRAPHS, BASE MAPS, AND TOPOGRAPHIC MAPS; RACINE COUNTY TOPOGRAPHIC MAPS; RACINE COUNTY HIGHWAY DEPT. AND PARK DEPT. INFORMATION; CITY OF RACINE CITY PLANNING DEPT. AND RACINE UNIFIED SCHOOL DISTRICT NO. 1 INFORMATION ON WISCONSIN STATE PLANE COORDINATE ZN (1), SOUTH ZONE (LAMBERT CONFORMAL CONIC PROJECTIONS)

RACINE URBAN PLANNING DISTRICT

RACINE URBAN PLANNING DISTRICT

DRAWN BY:	DATE: JULY 1970
CHECKED BY:	DATE:
APPROVED BY:	DATE:
PROJECT DESIGN:	
SCALE: 1 INCH = 2000 FEET (COMPILATION SCALE 1 INCH = 2000 FEET)	
REVISED BY:	DATE:

RACINE URBAN PLANNING DISTRICT
RACINE COUNTY, WISC.

Good transportation and a well-educated labor force are essential to continued industrial and business activities. Finally, public investment in physical facilities – sewer, water, streets, schools, parks and the like – must produce the maximum value for the dollar and must be so arranged as to induce minimum annual costs for operation and maintenance. The heavy burden of the taxpayer may be lightened by increased efficiency and economy in public agency operations which, in turn, need to be based upon a well thought-out Comprehensive Plan.

The plan recognizes social conditions and problems. Residential areas are studied as neighborhood and community units. While a physical plan does not deal directly with solutions to such human problems as welfare, unemployment, day care of children, and the elderly, the basic proposals contained in the physical plan will assist in the solutions of these problems. Reservation of ample, well-located and served areas for commerce and industry should encourage economic development.

By 1990, the District is expected to approach a population of 225,000. Yet, at higher density standards the 101 square-mile area could easily accommodate twice that number. It would be foolish to pay to install sewer and water facilities over an area twice as large as necessary, for example, or to similarly extend other public services. A 20-year planning period is not very long. Looking backward, 1950 does not seem so long ago. While, to the maximum extent possible, vision and imagination should enter into our plans and we should heed the injunction to avoid "little plans", we should relate our plans to what we know we will need, basing them on facts and not on fancies.

SUMMARY

This volume first contains a summary of the forecasts presented in Volume One. Implications of the forecasts to the Comprehensive Plan are identified. District development problems are then discussed in relation to the individual, to the environment, to private development, and to public development. Alternative solutions to these problems are appraised. Following the objectives, principles, and standards for development of the District, the Comprehensive Plan is presented, first in its general aspects and in its proposed land use arrangements, and then in the proposals for such facilities as housing, transportation, public utilities, and community facilities. The final parts of the report demonstrate the financial feasibility of the plan and present plan implementation recommendations. A companion third volume contains recommended regulations designed to implement the plan.

Chapter II

ANTICIPATED FUTURE DISTRICT GROWTH

SUMMARY OF FORECASTS

The District plan should be based upon realistic estimates of future growth. This chapter represents a summary of the forecasts for the District as reported in the first volume of this report.[1]

Economy

The strength of the economy will largely determine the size of the population which, in turn, will influence land use demand and the extent of the housing supply, transportation facilities, public utilities, schools, parks, and other public facilities required to serve the future population.

Employment is estimated to reach 78,700 persons by 1990, an increase of 54 percent over the 1970 employment of 51,200 persons. Persons employed constituted 38.5 percent of the population in 1970; by 1990, this proportion would be 35 percent.

Manufacturing will continue as the dominant employment source, although substantial increases are projected for the other major employment categories, also. The additional 27,500 employees are estimated to include: 10,900 in manufacturing; 7,400 in services; 4,700 in trade; 1,200 in finance, insurance and real estate, 1,100 in construction; 900 in transportation and communications; and 1,600 in the various remaining categories.

Population and Housing

Population growth is expected to continue during the next two decades, with the total population of the District increasing to about 225,000 persons by 1990. The additional 92,000 persons would mean a net increase of about 27,600 households, requiring about 30,000 new residential housing units or 1,500 units per year.

Land Use

By 1990, the developed area in the Planning District is expected to cover 54.4 square miles, an increase of 22.3 square miles over the 1970 total of 32.1 square miles. Areas estimated to be needed include: 7,400 acres of residential use, 600 acres of commercial, 1,100 acres of industrial, 3,300 acres of open space, and an additional 1,900 acres in streets and alleys.

Transportation

The number of automobiles and the amount of automobile travel is expected to increase markedly in the District by 1990. The number of automobiles available in the District totaled about 40,000 in 1963 and 52,000 in 1970. By 1990, it is expected that automobile availability in the District will be about 90,000 vehicles, representing a 125 percent increase over the 1963 level and a 73 percent increase over the 1970 level. The number of vehicle miles of travel on the arterial street and highway system was about 860,000 per average weekday in 1963 and about 1,260,000 per average weekday in 1970. By 1990 the number of vehicle miles of travel is expected to increase to about 3,300,000, representing increases of about 284 and 162 percent, respectively.

The survey of transit ridership conducted in 1969 as a part of the District planning program revealed a total of about 2,500 transit revenue passengers in the District on an average weekday. Most of the riders were either students or female workers, with about only one rider in 10 having an automobile available for use when the trip was made. Thus, about 90 percent of the total ridership had no reasonable alternative choice available to them to make the trip other than public transit. It is not anticipated that transit ridership will increase substantially by 1990, given continued almost universal automobile ownership and ready availability of motor vehicle fuels. It is expected, however, that a substantial number of people, including students and the elderly, will not have private automobiles available for use. It may be necessary to provide public subsidy to the existing system in order to continue to provide this service which is so essential to certain segments of the population.

Water Use

The public water system should serve at least 90 percent of the District's population by 1990. Increased per capita water consumption, primarily caused by large volume industrial users, will increase water demands at a rate faster than that of population growth. Water consumption is expected to reach 53.5 MGD (million gallons per day) by the end of the planning period. This is over twice the 1970 consumption of 21.6 MGD.

---

[1] *Described in more detail in SEWRPC Planning Report No. 14, Volume One, A Comprehensive Plan for the Racine Urban Planning District, Inventory Findings and Forecasts, December, 1970.*

A greater volume of sewage will require treatment. The 1970 combined volume at the four treatment plants, 23.9 MGD, is estimated to increase to 53.5 MGD by 1990. As urban development occurs. increased paved areas will require more storm water drainage facilities and more land area will be needed for solid waste disposal sites.

Community Facilities

Public school enrollment is forecast to increase by 19,500 students in the next two decades, reaching a total of 51,000 students in 1990. In order to accommodate the anticipated increase in enrollment and in order to replace obsolete facilities, an additional 22 elementary schools, four junior high schools, and one senior high school are estimated to be needed, assuming that the current pattern of a nine-month utilization of the physical plant continues.

Total future park needs are estimated at 5,600 acres, a portion of which would be satisfied by parklands located outside the District. However, within the District, 4,500 acres should be provided – 2,910 acres more than are now available. There should be: 200 more acres in regional parks, 530 more acres in large urban parks, and 940 more acres in neighborhood and community parks, with the remaining additional acreage made up of primary environmental corridor land.

A system of a main library and five branches, four more than are now provided, is estimated to be needed to serve the future population.

IMPLICATIONS OF THE FORECASTS

For Existing Conditions

Adding 92,000 persons in the next 20 years will mean that all public facilities and services will have to be increased proportionately by about 70 percent. This will require fully coordinated planning programs at all local levels of government and a major commitment to providing these facilities and services by local residents.

In 1970, about 60 percent of the buildings in the Planning District were more than 40 years old. By 1990, these same buildings will be more than 60 years old and will constitute about 35 percent of the total building stock, assuming no demolition and replacement. A substantial proportion will be either structurally or functionally obsolete, or both. Areas containing such buildings include the Central Business District and a sizable part of the industrial facilities. Generally, the current practice in other urban areas is to abandon these buildings and replace them with new facilities in outlying areas. This obviously requires the extension of utilities and services over a greater area than needed, and a concomitant under-use of facilities already paid for. To avoid these needless costs, the community should encourage the continued use of existing facilities which can be brought up-to-date structurally and functionally by rehabilitation.

The Central Business District, because of obsolescence and inconvenience resulting from its no longer central location, is not serving as the vigorous community center needed for a community of 133,000 persons. It will be less adequate and more inconvenient for a community of 225,000 persons. Some of the retail trade function will shift to outlying shopping centers. The Central Business District is far more than a retail center. It provides public buildings, cultural and amusement centers, offices, churches, and lodges, and it is the unique complex of these varied uses that make it the true community center. It is doubtful that a new center could, or should, be constructed to replace the present center.

The implications of the forecasts for existing areas are clear. The majority of the community of 1990 is here now. Improvement, rehabilitation, and replacement will be essential within the existing areas. Sweeping and dramatic changes in existing neighborhoods are not likely.

For Social Conditions

Impact of the forecasts on social conditions will depend upon the form and character of the urban community that evolves. Generally, a community of 225,000 is not too different from the present one of 133,000. Both are of the same relative size, and particularly so in relation to such larger urban centers as Milwaukee and Chicago. A most important consideration is to preserve the identity of the Racine area by preventing the urban growth pattern from merging with and becoming an extension of the Milwaukee or Kenosha urban areas. A larger community size should make it possible to provide richer cultural and recreational experiences.

To the individual, the quality of the environment is an intimate matter relating personally to where he lives, his neighbors, his hobbies, convenience to shops and to work, and quality of his children's schools. Freedom of choice, urban areas suited to a variety of life styles, standard housing in keeping with his preferences at a price he can afford to pay – all these should be provided. These objectives should affect all elements of the planning program.

For Financing

It has been estimated that for every new family moving into an urban area, a capital public investment of about $5,000 is needed for public facilities such as streets, schools, sewer, water, storm drainage, public buildings, police and fire

stations, and the like.[2] On this basis, existing public investment would be about $200,000,000. Anticipated growth of 1,500 dwelling units per year would require an annual public investment of $7,500,000. Existing improvements would depreciate at a rate of two percent per year or $4,000,000 per year. Thus, if the District had a completely adequate system of public improvements now (which it does not), the forecast growth rate would indicate a need for approximately $11,500,000 to be spent on public improvements each year. In contrast, recent expenditures on capital improvements have been at a rate of $5,000,000 to $10,000,000 per year. It should be noted, however, that a major portion of the total investment in public facilities, primarily for minor streets and local sewer and water facilities, is actually made in the private sector of the economy.

For Management

Extraordinarily careful management will be required over the next 20 years as the Racine urban area expands. Critical problems need correction and expansion must be controlled to prevent additional problems. A wide range of conditions are interrelated. For example, the land use arrangement affects traffic; the extension of sewer or water mains affects the development pattern; existing buildings age and are abandoned; water and air pollution should be eliminated. All of the interrelationships must be known and understood and dealt with vigorously.

Three things are required: first, an educated and enlightened citizenry aware of the problems and the measures required for their solution; second, a system enabling public participation in the decision-making process; and third, a qualified professional staff equipped by training and experience to manage these complicated problems.

Forecasts reflect the magnitude of anticipated change in the Racine Urban Planning District by the year 1990. These changes will affect every aspect of the community. Because there are strong interrelationships between the various planning elements, i.e., schools, parks, and the neighborhood; transportation facilities and the environment; housing conditions and social objectives; and the ability of the community to finance anticipated improvements, the Comprehensive Plan is based on a thorough evaluation of existing conditions and an understanding of the need for change.

---

[2] *American Institute of Planners, New Communities: Challenge For Today; Washington, D.C., October, 1968; p. 18.*

(This page intentionally left blank)

Chapter III

OBJECTIVES, PRINCIPLES, AND STANDARDS FOR DEVELOPMENT OF THE DISTRICT

INTRODUCTION

Planning is a rational process for formulating and meeting objectives. The formulation of objectives is, therefore, an essential task which must be undertaken before plans can be prepared. The term "objective" is subject to a wide range of interpretation and application and is closely linked to other terms often used in planning work which are equally subject to a wide range of interpretation and application. The following definitions have, therefore, been adopted to provide a common frame of reference:

1. Objective: a goal or end toward the attainment of which plans and policies are directed.

2. Principle: a fundamental, primary, or generally accepted tenet used to support objectives and prepare standards and plans.

3. Standard: a criterion used as a basis of comparison to determine the adequacy of plan proposals to attain objectives.

4. Plan: a design which seeks to achieve agreed upon objectives.

5. Policy: a rule or course of action used to ensure plan implementation.

6. Program: a coordinated series of policies and actions to carry out a plan.

OBJECTIVES

In order to be useful in the comprehensive planning process, objectives must be sound logically and related in a demonstrable and measurable way to physical development proposals. By nature, development objectives are either qualitative or very difficult to relate directly to development plans. There are, however, other specific development objectives which can be directly related to physical development plans and at least generally quantified.

General Objectives

The following general objectives are recommended for adoption as part of the Comprehensive Plan for the Racine Urban Planning District. These general development objectives have already been adopted by the Southeastern Wisconsin Regional Planning Commission upon recommendation of its technical and intergovernmental advisory committees and are designed to improve the quality of life in the Racine Urban Planning District.

1. Economic growth at a maximum rate, consistent with District resources, and primary dependence on free enterprise in order to provide maximum employment opportunities for the expanding labor force of the District.

2. A wide range of employment opportunities provided through a broad, diversified economic base.

3. Conservation and protection of desirable existing residential, commercial, industrial, and agricultural development in order to maintain desirable social and economic values; renewal of obsolete and deteriorating residential, commercial, and industrial areas in the rural as well as in the urban areas of the District; and prevention of slums and blight.

4. A broad range or choice among housing types, designs, and costs, recognizing changing trends in age group composition, income, and family living habits.

5. An adequate and balanced level of community services and facilities.

6. An efficient and equitable allocation of fiscal resources within the public sector of the economy.

7. An attractive and healthful physical and social environment with ample opportunities for education, cultural activities, and recreation.

8. Protection, wise use, and sound development of the natural resource base.

9. Development of neighborhoods and communities having distinctive individual character, based on physical conditions, historical factors, and local desires.

Table 3-1

LAND USE PLANNING OBJECTIVES, PRINCIPLES, AND STANDARDS

OBJECTIVE NO. 1

A balanced allocation of space to the various land use categories which meets the social, physical, and economic needs of the District population.

Principle

The planned supply of land set aside for any given use should at least approximate and in some cases exceed the known and anticipated demand for that use.

Standards

1. For each additional 1,000 persons to be accommodated within the District at each density, the following minimum amounts of land should be set aside:

Residential Land	Net Area[a]	Gross Area[b]
Low Density	250 acres/1,000 persons	312 acres/1,000 persons
Medium Density	70 acres/1,000 persons	98 acres/1,000 persons
High Density	25 acres/1,000 persons	38 acres/1,000 persons

2. For each additional 100 commercial and industrial employees to be accommodated within the District, the following minimum amount of land should be set aside:

	Gross Area[c]
Commercial land[d]	5 acres/100 employees
Industrial land[e]	7 acres/100 employees

OBJECTIVE NO. 2

A spatial distribution of the various land uses which will result in a compatible arrangement of land uses.

Principle

The proper allocation of uses of land can avoid or minimize hazards and dangers to health, safety, and welfare and maximize amenity and convenience in terms of accessibility to *supporting land uses.*

Standards

1. Residential uses should be located within planning units which contain, within a reasonable walking distance, necessary supporting uses such as neighborhood park, local commercial, and elementary school facilities, and should have reasonable access through the appropriate component of the transportation system to employment, commercial and cultural centers, and secondary school facilities.

2. Regional commercial uses should be located in centers of concentrated activity on only one side of an arterial street and should be afforded direct access to the arterial street system.

3. Industrial uses should be located to have direct access to highway facilities and reasonable access through the appropriate component of the transportation system to residential areas and to railway and airport facilities, and should not be intermixed with commercial, residential, governmental, recreational or institutional land uses.

OBJECTIVE NO. 3

A spatial distribution of the various land uses which will result in the protection, wise use, and development of the natural resources of the Region.

Principle

The proper allocation of uses to land can assist in maintaining an ecological balance between the activities of man and the natural environment which supports him.

Principle – Soils

The proper relation of urban and rural land use development to soils can serve to avoid many environmental problems, aid in the establishment of better settlement patterns, and promote the wise use of an irreplaceable resource.

Standards

1. Urban development, even with public sanitary sewer service and particularly for residential use, shall be located only in those areas which do not contain significant concentrations of soils rated in the regional detailed operational soil survey as having severe or very severe limitations for such development.[f]

2. Rural development, principally agricultural land uses, shall be allocated primarily to those areas covered by soils rated in the regional soil survey as having very slight, slight, or moderate limitations for such uses.

3. Land developed or proposed to be developed without public sanitary sewer service should be located only on areas covered by soils rated in the regional soil survey as having very slight, *slight, or moderate limitations for such development.*

Principle - Streams

Streams contribute to the atmospheric water supply through evaporation; provide a suitable environment for desirable and sometimes unique plant and animal life; provide the population with opportunities for certain scientific, cultural and educational pursuits; constitute prime recreational areas; provide a desirable aesthetic setting for certain types of land use development; and serve to store and convey flood waters.

Standards

1. Floodplain lands[g] should not be allocated to any urban development which would cause or be subject to flood damage.

2. No unauthorized structure or fill should be allowed to encroach upon and obstruct the flow of water in the perennial stream channels[h] and floodways[i].

Principle – Wetlands

Wetlands support a wide variety of desirable and sometimes unique plant and animal life; assist in the stabilization of lake levels and streamflows; trap, store, and release plant nutrients in runoff with a net improvement in the quality of runoff, thus reducing enrichment of surface waters and obnoxious weed and algae growth; contribute to the atmospheric oxygen supply; reduce storm water runoff by providing area for floodwater impoundment and storage; reduce stream sedimentation; and provide the population with opportunities for certain scientific, educational, and recreational pursuits.

Standard

All wetland areas[j] adjacent to streams or lakes, all wetlands within areas having special wildlife values, and all wetlands having an area in excess of 50 acres should not be allocated to any urban development except limited recreation and should not be drained or filled. Adjacent surrounding areas should be kept in open-space use, such as agriculture or limited recreation.

Principle – Woodlands[k]

Woodlands assist in maintaining unique natural relationships between plants and animals; reduce storm water runoff; contribute to the atmospheric oxygen supply; contribute to the atmospheric water supply through transpiration; aid in reducing soil erosion and stream sedimentation; provide the resource base for the forest product industries; provide the population with opportunities for certain scientific, educational and recreational pursuits; and provide a desirable aesthetic setting for certain types of land use development.

Standard

A minimum of 10 percent of the land area of each watershed[l] should be devoted to woodlands.

Principle – Wildlife[m]

Wildlife, when provided with a suitable habitat, will provide the population with opportunities for certain scientific, educational, and recreational pursuits; provide a food source; aid significantly in controlling harmful insects and other noxious pests; and provide an economic resource for the fur and fishing industries.

Standard

The most suitable habitat for wildlife, that is, the area wherein fish and game can best be fed, sheltered, and reproduced, is a natural habitat. Since the natural habitat for fish and game can best be obtained by preserving or maintaining other resources, such as soil, air, water, wetlands, and woodlands, in a wholesome state, the standards for each of these other resources, if met, would ensure the preservation of a suitable wildlife habitat and population.

OBJECTIVE NO. 4

A spatial distribution of the various land uses which is properly related to the supporting transportation and public utility systems in order to assure the economical provision of utilities and municipal services.

Principle

The transportation and public utility facilities and the land use pattern which these facilities serve and support are mutually interdependent in that the land use pattern determines the demand for, and loadings upon, transportation and utility facilities and these facilities, in turn, are essential to, and form a basic framework for, land use development.

Standards

1. *The transportation system should be located and designed to avoid the penetration of* residential planning units by through traffic.

2. The transportation system should be located and designed to avoid the penetration of prime natural resource areas by through traffic.

3. The transportation system should be located and designed to provide access not only to all land presently devoted to urban development but to all land well suited for urban development.

4. Transportation terminal facilities, such as off-street parking, should be located in close proximity to the principal land uses to which they are accessory.

5. Land developed or proposed to be developed for medium- and high-density residential use should be located in a gravity drainage area tributary to an existing or proposed public sanitary sewerage system.

6. Land developed or proposed to be developed for medium- or high-density residential use should be located in areas serviceable by an existing or proposed public water supply system.

7. Urban development should be located so as to maximize the use of existing transportation and utility systems.

OBJECTIVE NO. 5

The preservation and provision of a variety of suitable industrial and commercial sites both in terms of physical characteristics and location.

Principle

The production and sale of goods and services are among the principal determinants of the level of economic vitality in any society, and the important activities related to these functions require areas and locations suitable to their purpose.

Standards

1. New industrial development should be located in planned industrial districts which meet the following standards:

   a. Convenient access to the arterial street system.

   b. Reasonable access to railroad facilities.

   c. Reasonable access to airport facilities for the movement of both passengers and freight.

   d. Available adequate water supply.

   e. Available adequate sanitary sewer service.

   f. Available adequate storm water drainage facilities.

   g. Available adequate power supply.

   h. Soils rated in the regional soil survey as having very slight, slight, or moderate limitations for such development.

   i. Avoidance of industrial vehicular traffic through residential neighborhoods.

2. New local commercial development, which includes activities primarily associated with the *sale of convenience goods and services, should* be contained within the residential planning units, the total area devoted to the commercial use varying with the residential density:

   a. In low-density areas, land devoted to local commercial centers should comprise at least 0.5 percent of the total gross residential area or about 3.2 acres per square mile of gross residential land use.

   b. In medium-density areas, land devoted to local commercial centers should comprise at least 1.0 percent of the total gross residential area or about 6.4 acres per square mile of gross residential land use.

   c. In high-density areas, land devoted to local commercial centers should comprise at least 1.5 percent of the total gross residential area or about 9.6 acres per square mile of gross residential land use.

3. New regional commercial development, which would include activities primarily associated with the sale of shopper's goods, should be concentrated in regional commercial centers which meet the following minimum standards:

   a. Accessibility to a population of between 75,000 and 150,000 persons located within either a 20-minute one-way travel period or a ten-mile radius.

   b. Direct access to the arterial street system.

   c. Available adequate water supply.

   d. Available adequate sanitary sewer service.

   e. Available adequate storm water drainage facilities.

   f. Available adequate power supply.

   g. A minimum site area of 60 acres.

   h. Soils rated in the regional soil survey as having very slight, slight, or moderate limitations for such development.

In addition to the above minimum standards, the following site development standards are desirable:

provision of off-street parking for at least 5,000 cars.

provision of adequate off-street loading facilities.

provision of well-located points of ingress and egress which are controlled to prevent traffic congestion on adjacent arterial streets.

provision of adequate screening to serve as a buffer between the commercial use and adjacent noncommercial uses.

provision of adequate building setbacks from major streets.

OBJECTIVE NO. 6

The preservation of land areas for agricultural uses in order to provide for certain special types of agriculture, provide a reserve for future needs, and ensure the preservation of those unique rural areas which provide wildlife habitat and which are essential to shape and order urban development.

Principle

Agricultural areas, in addition to providing food and fibre, contribute to maintaining the ecological balance between plants and animals; provide locations proximal to urban centers for the production of certain food commodities which may require nearby population concentrations for an efficient production-distribution relationship; and provide open spaces which give form and structure to urban development.

Standards

1. All prime agricultural areas[n] should be preserved.

2. All agricultural lands surround adjacent high-value scientific, educational or recreational resources and covered by soils rated in the regional detailed operational soil survey as very good, good, or fair for agricultural use should be preserved.

3. In addition to the above, attempts should be made to preserve agricultural areas which are covered by soils rated in the regional detailed operational soil survey as fair, if these soils (a) occur in concentrations greater than five square miles and surround or lie adjacent to areas which qualify under either of the above standards, or (b) occur in areas which may be designated as desirable open spaces for shaping urban development.

---

[a] *Net land use area is defined as the actual site area devoted to a given use and consists of the ground floor site area occupied by any buildings plus the required yards and open spaces.*

[b] *Gross residential land use area is defined as the net area devoted to this use plus the area devoted to all supporting land uses including streets, neighborhood parks and playgrounds, elementary schools, and neighborhood institutional and commercial uses, but not including freeways and expressways.*

[c] *Gross commercial and industrial area is defined as the net area devoted to this use plus the area devoted to supporting land uses, including streets and off street parking.*

[d] *Includes all regional, local, and highway-oriented commercial activities plus adjacent streets and on-site parking.*

[e] *Includes all manufacturing and wholesaling activities plus adjacent streets and on-site parking.*

[f] *SEWRPC, Planning Report No. 14, Volume One, A Comprehensive Plan for the Racine, Wisconsin Urban Planning District, Inventory, Findings and Forecasts, Chapter IV, pp 47-50.*

[g] *Floodplain lands are herein defined as those lands, inundated by flood having a recurrence interval of 100 years where hydrologic and hydraulic engineering data are available and as those lands inundated by the maximum flood of record where such data are not available.*

[h] *A stream channel is herein defined as that area of the floodplain lying either within legally established bulkhead lines or within sharp and pronounced banks marked by an identifiable change in flora and normally occupied by the stream under average annual high flow conditions.*

[i] *Floodway lands are herein defined as those lands required to carry and discharge the 100 year recurrence interval flood.*

[j] *Wetlands are defined as those lands which are partially covered by marshland flora and generally covered with shallow standing water, open lands intermittently covered with water, or lands which are wet and spongy due to a high water table or character of the soil.*

[k] *The term woodlands, as used herein, is defined as a dense, concentrated stand of trees and underbrush covering a minimum of 20 acres.*

[l] *A watershed, as used herein, is defined as a portion of the surface of the earth occupied by a surface drainage system discharging all surface water runoff to a common outlet and which is 25 square miles or larger in areal extent.*

[m] *Includes all fish and game.*

[n] *Prime agricultural areas are defined as those areas which (a) contain soils rated in the regional detailed operational soil survey as very good for agriculture, and (b) occur in concentrated areas over five square miles in extent which have been designated as exceptionally good for agricultural production by agricultural specialists.*

The foregoing general development objectives are proposed as goals which public policy within the District should promote. They are all necessarily general, but, nevertheless, provide the broad framework within which District planning can take place and the more specific goals of the various functional elements and component parts of the District stated and pursued. The statement of the foregoing general development objectives is concerned entirely with ends and not with means, and the principal emphasis of these general objectives is on those aspects of District development which relate either to the expenditure of funds or to the effects of governmental actions and regulations.

Specific Development Objectives

Within the foregoing framework established by general development objectives, a secondary set of more specific objectives are recommended which are directly relatable to the physical development plans of the District. Each specific objective is facilitated by complementing it with a set of quantifiable standards which are, in turn, directly relatable to a planning principle which supports the chosen objective. The planning principles thus augment each specific objective by asserting its inherent validity as an objective. Specific development objectives are set forth below for land use, transportation, housing, community facilities, and public utility planning. It should be emphasized that these development objectives are inextricably linked and are presented as separate listings only for convenience of organization and presentation.

Land Use Development Objectives. The specific objectives recommended for adoption in the District land use plan are largely self-descriptive. They are concerned primarily with spatial allocation to, and distribution of, the various land uses; land use compatibility; resource protection; and accessibility. The six specific land use development objectives recommended for inclusion in the District plan are identified in Table 3-1.

Transportation System Development Objectives. The specific objectives recommended for adoption in the District transportation plan are concerned primarily with a balanced transportation system, alleviating traffic congestion, reducing travel time and accident exposure, and minimizing costs and disruptive effects upon community and natural resources. The seven specific transportation development objectives recommended for inclusion in the District plan are identified in Table 3-2.

Community Facility Development Objectives. Objectives recommended for adoption in the District community facility plan are concerned primarily with the efficient and economical provision of parks and open spaces, education, fire protection, law enforcement, libraries, health care facilities, and housing. The thirteen specific community facility development objectives recommended for inclusion in the District plan are identified in Table 3-3.

Utility System Development Objectives. The specific objectives recommended for adoption in the District utility system plan are concerned primarily with the efficient and economical provision of sanitary sewerage, water supply, storm water drainage, and solid waste disposal. The four specific utility system development objectives recommended for inclusion in the District plan are identified in Table 3-4.

Table 3-2

TRANSPORTATION PLANNING OBJECTIVES, PRINCIPLES, AND STANDARDS

OBJECTIVE NO. 1

An integrated transportation system which will effectively serve the existing District land use pattern and promote the implementation of the District land use plan, meeting the anticipated travel demand generated by the existing and proposed land uses.

Principle

A District transportation system serves to freely interconnect the various land use activities within the District, thereby providing the attribute of accessibility essential to the support of these activities. Through its effect on accessibility, the District transportation system can be used to induce development in desired locations and to separate incompatible uses.

Standards

1. The relative accessibility provided by the District transportation system should be adjusted to the land use plan, and areas in which development is to be induced should have a higher relative accessibility than areas which should be protected from development.
2. Highway transportation facilities should be located and designed so as to provide adequate capacity, that is, a volume to capacity ratio equal to, or less than, 1.0 based on 24-hour average weekday traffic volumes, to meet the existing and potential travel demand between the various land uses consistent with the trip generating and trip interaction characteristics of these uses and the resulting forecast of travel. In such location and design, due consideration should be given to the ability of transit service to meet the existing and potential travel demand and serve the land use pattern.

OBJECTIVE NO. 2

A balanced transportation system providing the appropriate types of transportation service needed by the various subareas of the District at an adequate level of service.

Principle

A balanced District transportation system consisting of highway and transit transportation and terminal facilities is necessary to provide an adequate level of transportation service to all segments of the population, to properly support essential economic and social activities, and to achieve economy and efficiency in the provision of transportation service. The transit component provides transportation service to that segment of the population which does not for various reasons own and operate an auto. Furthermore, transit supplies added transportation system capacity to alleviate the peak loadings on highway facilities and assists in reducing the land use demand for parking facilities in central business districts.

Standards

1. Local transit routes should be provided at intervals of no more than one-half mile in all high-density residential areas.
2. Maximum operating headways for all transit service throughout the daylight hours should not exceed one hour.
3. The average distance between transit stops for local transit should not be less than 660 feet.
4. Transit routes should be direct in alignment, with a minimum number of turning movements, and arranged to minimize transfers and duplication of service.
5. The proportion of transit ridership to the Racine central business district should be maintained at least at the present level and increased if possible.
6. Freeways or expressways should be provided for all routes within the District where all of the following criteria are met:
   a. The route provides intercommunity service;
   b. The desired speeds or a volume to capacity ratio of 1.0 requires control of access and interrupted flow;
   c. Alternate routes exist or will be provided to adequately serve local traffic; and
   d. Potential average weekday traffic exceeds 25,000 vehicles per day in urban areas and 15,000 vehicles per day in rural areas.
7. Arterial streets and highways should be provided at intervals of no more than one-half mile in each direction in high-density residential areas, at intervals of no more than one mile in each direction in medium-density areas, and at intervals of no more than two miles in each direction in all low-density residential areas.
8. In the Racine central business district, parking should be provided sufficiently near concentrations of demand so that 80 percent of the short-term parkers need walk no more than one block.

OBJECTIVE NO. 3

The alleviation of traffic congestion and the reduction of travel time between component parts of the District.

Principle

To support the everyday activities of business, shipping and social intercourse, a transportation system which provides for reasonably fast, convenient travel is essential. Furthermore, congestion increases the cost of transportation, including the cost of the journey to work, which is necessarily reflected in higher production costs and thereby adversely affects the relative market advantage of businesses and industries within the District.

Standards

1. The total vehicle-hours of travel within the District should be minimized.
2. The proportion of total travel on freeway and expressway facilities should be maximized.
3. Adequate capacity and a sufficiently high level of geometric design should be provided to achieve the following overall speeds based on potential 24-hour average weekday traffic volumes for arterial street and highway facilities:

Type of Facility	Overall Speed[a] in M.P.H. for Various Type Areas			
	Downtown	Intermediate	Outlying	Rural
A. Arterials:				
1. Freeway	35–55	40–55	55–65	60–70
2. Expressway	25–40	30–45	40–50	50–65
3. Standard Arterials:				
a. Divided	15–25	25–35	35–45	45–60
b. Undivided	15–25	20–35	25–40	40–50
B. Collectors	10–20	15–30	20–35	40–50
C. Locals	5–15	10–20	15–25	30–40

OBJECTIVE NO. 4

The reduction of accident exposure and the provision of increased traffic safety.

Principle

Accidents take a heavy toll in life, property damage, and human suffering; contribute substantially to overall transportation costs; and increase public costs for police and welfare services; therefore, every attempt should be made to reduce both the incidence and severity of accidents.

Standards

1. Traffic congestion and vehicle conflicts should be reduced by maintaining a volume to capacity ratio equal to or less than 0.9, based on 24-hour average weekday traffic volumes.
2. Travel on facilities which exhibit the lowest accident exposure, that is, freeways, expressways, and all forms of transit, should be maximized.

OBJECTIVE NO. 5

A transportation system which is both economical and efficient, meeting all other objectives at the lowest cost possible.

Principle

The total resources of the District are limited, and any undue investment in transportation facilities and services must occur at the expense of other public and private investment; therefore, total transportation costs should be minimized for the desired level of service.

Standards

1. The sum of transportation system operating and capital investment costs should be minimized.
2. The total vehicle miles of travel should be minimized by reducing trip length, total number of trips made, or both.
3. Full use should be made of all existing and committed major transportation facilities, and such facilities should be supplemented only with such additional major facilities as necessary to serve the anticipated travel demand derived from the land use plan at the desired level of service.

OBJECTIVE NO. 6

The minimization or disruption of desirable existing neighborhood and community development and of the deterioration or destruction of the natural resource base.

Principle

The social and economic costs attendant to the disruption and dislocation of homes, businesses, industries, and communication and utility facilities, as well as adverse effects on the natural resource base, can be minimized through proper location of transportation facilities.

Standards

1. The penetration of neighborhood units and of neighborhood facility service areas by arterial streets and highways and rapid transit routes should be avoided.
2. The dislocation of families, businesses and industries should be minimized.
3. Transportation facilities should not be located in or through environmental corridors except as necessary to serve the proper utilization of these areas.
4. The proper use of land for, and adjacent to, transportation facilities should be maximized and disruption of future development minimized through advance reservation of rights-of-way for highway facilities.
5. The destruction of historic buildings and of historic, scenic, scientific, and cultural sites should be avoided.
6. The use of land for transportation and supporting terminal facilities should be minimized.

OBJECTIVE NO. 7

A high aesthetic quality in the transportation system with proper visual relation of the major transportation facilities to the land and city-scape.

Principle

Beauty in the physical environment is conducive to the physical and mental health and well-being of people; and, as major features of the land and city-scape, transportation facilities have an important impact on the aesthetic quality of the total environment.

Standards

1. Transportation facilities should be located to avoid destruction of visually pleasing buildings, structures, and natural features, and to avoid interference with vistas to such features.
2. Transportation facility construction plans should be developed using good geometric, structural, and landscape design standards which consider the aesthetic quality of the transportation facilities and the areas through which they pass.

[a] *Overall speed is defined as average speed over the transportation system, not including terminal time, is expressed in miles per hour based on 24-hour average weekday traffic, and should not be confused with posted speed limits.*

Table 3-3

COMMUNITY FACILITY DEVELOPMENT OBJECTIVES, PRINCIPLES, AND STANDARDS

OBJECTIVE NO. 1 (OPEN SPACE)

To preserve and provide open space[a] in order to enhance the total quality of the regional environment; maximize essential natural resource availability; improve and maintain an attractive urban setting and give form and structure to urban development by developing and preserving open space as a contrasting visual element; and to create greater recreational opportunities.

Principle

Open space is the fundamental element required for the preservation, wise use, and development of such natural resources as soil, water woodlands, wetlands, and wildlife; it provides the opportunity to add to the physical, intellectual, and spiritual growth of the population; it enhances the economic and aesthetic value of certain types of development and is essential to outdoor recreational pursuits.

Standards

1. Withhold from urban use and retain as open space those lands not suitable for development due to soil condition, topography, or drainage.
2. Connect parks, open space areas and Lake Michigan with trails, scenic drives and environmental corridors.
3. Provide major regional open spaces as follows:

	Recommended Acres Per 1,000 People
Environmental Corridors	–[b]
Regional Parks	4

OBJECTIVE NO. 3 (EDUCATION)

Develop in each person a strong moral character, a respect for home, country and duly constituted authority, concern and consideration for the welfare of others, a willingness to act in the interest of the general welfare, and a desire to improve in those competencies essential to effective personal, neighborhood and community life.

Principle

An effective educational system offers the most comprehensive educational programs and physical facilities possible within the financial resources of the District.

Standards

1. Maintain and encourage the neighborhood school system through the acquisition, replacement, and relocation of buildings and sites within each neighborhood of the District, wherever possible.
2. Establish and maintain physical plants which are up-to-date and designed to serve the needs of all the children.
3. Determine and effectuate the most efficient means of utilizing the facilities.

Principle

An effective educational system encourages higher academic achievement of pupils and increased holding power of schools to develop full educational potential.

Standard

Further development and expansion of the Racine Technical Institute, Dominican College and Parkside Campus of the University of Wisconsin.

Principle

An effective educational system maintains and encourages an aggressive student attitude to meet and keep pace with educational progress in a changing environment.

Standard

Provide the kind of education each child needs for his best development, including special education facilities and pre-school learning programs.

Principle

An effective educational system provides equal educational opportunities for all children and strives to eliminate undesirable cultural, racial, economic, ethnic and social imbalances.

Standard

Offer freedom from the isolation of poverty and the frustration of dependency through broadened educational programs and increased vocational opportunities.

[a] *Open space is defined as land or water areas which are generally undeveloped for residential, commercial, or industrial uses and are or can be considered relatively permanent in character; it includes areas devoted to park and recreation uses and to large land consuming institutional uses, as well as areas devoted to agricultural use and to resource conservation whether publicly or privately owned.*

[b] *According to amount of undeveloped acreage available and classified as primary environmental corridors by the Southeastern Wisconsin Regional Planning Commission.*

[c] *Neighborhood parks may also include mini-neighborhood parks, playgrounds, and/or tot lots as a part of the recommended standard.*

OBJECTIVE NO. 2 (OPEN SPACE)

Increase the amount of park and open space land in public ownership commensurate with citizen needs.

Principle

In order to provide the benefits listed above, open space must be preserved in sufficient quantity and in suitable locations to correspond to the needs of the population.

Standards

1. Acquire park sites in advance of urban development and in conformance with the District land use plan and in coordination with school district plans.
2. Encourage construction of pedestrian walkways and paths to enable more children to walk to school and enjoy the outdoors.
3. Provide local parks and open spaces as follows:

	Recommended Acres Per 1,000 People
Large Urban Parks	5
Community and Neighborhood Parks[c]	5
Total	10
Total including Regional Parks	14

OBJECTIVE NO. 4 (EDUCATION)

Locate elementary, junior high, and high schools within developing and redeveloping neighborhoods so that they will promote racial integration as well as to serve existing and projected enrollments.

Principle

Elementary schools should be located within walking distance of the pupils and provide for kindergarten through sixth grade. Each school site should be connected with or contain a neighborhood park.

Standards

1. Desirable enrollment: 200 to 500 pupils.
2. Students per classroom: 25 to 30.
3. Each section of the school should contain seven classrooms, and there should be three sections.
4. Service radius of one-half mile in medium and high-density areas.
5. School-park sites should be 15 to 20 acres.
6. Each site should have space for off-street parking of automobiles and bicycles.
7. Each site should have a paved multi-purpose court area as well as grassed areas for active playground use.

Principle

Junior high schools should provide for grades seven through nine and should draw its pupils from three to five elementary schools.

Standards

1. Desirable enrollment: 700 to 1,500 pupils.
2. Students per classroom: 25 to 30.
3. Service radius of one mile in medium and high-density areas and up to three miles in low-density areas.
4. School-playfield sites should be 22 to 30 acres in size.
5. Facilities in the building so that it may serve as a community center.
6. Each site should have space for off-street parking for automobiles and bicycles.
7. Each site should have a paved multi-purpose court area as well as a large grassed area for active sports, such as softball, baseball, football and winter sports.

Principle

Senior high schools should provide for grades 10 through 12 and be conveniently located on arterial streets.

Standards

1. Desirable enrollment: 2,200 students.
2. Service radius: 2 to 5 miles.
3. School sites should be 40 acres minimum up to approximately 60 acres.
4. Ample off-street parking facilities should be provided for faculty, staff, employees, students, visitors and parents.
5. Large outdoor areas should be set aside for sports facilities.

Table 3-3

COMMUNITY FACILITY DEVELOPMENT OBJECTIVES, PRINCIPLES, AND STANDARDS (Continued)

OBJECTIVE NO. 5 (FIRE PROTECTION)

Prevent loss of life, personal injury, and/or property loss due to hazardous conditions resulting from fire, explosion or other emergency.

Principle

An up-to-date fire prevention code and program designed to inform and educate the residents of the Racine Urban Planning District is essential, as are fire assistance agreements, as necessary, among local governments to provide for protection against major emergencies, accidents and acts of God.

Standards

1. The fire prevention code should deal with all types of construction and include but not be limited to provisions dealing with water supply, water pressure, water storage, fire extinguishers, sprinklers, alarm systems, fire detectors, exits amd escapes, inspection of buildings and unsafe buildings.
2. Regulations should be prepared and maintained to deal with liquified petroleum gases, volatile oils, gasoline tank trunks, tank cars, service stations, dry cleaning, oil burning equipment, and other provisions dealing with the storage, handling and use of hazardous substances, materials and devices.

OBJECTIVE NO. 6 (FIRE PROTECTION)

Promote the health, safety, welfare, and convenience of the public and protect them from loss of life, personal injury and loss of property values from undue loss due to fire, fire damage, smoke, explosion or other emergency.

Principle

Safe, swift, efficient, and effective fire protection and rescue operations in the existing and future developed areas of the District are essential, as is provision for the acquisition, establishment, maintenance and operation of fire stations, facilities, vehicles, apparatus and equipment for the prevention and control of fire.

Standards

1. In the high value-high intensity residential, commercial and industrial areas of the District, a fire station should be provided within a one-mile travel distance.
2. In medium density-medium intensity use areas, a fire station should be provided within a one and one-half mile travel distance from the area.
3. In low density-low intensity use areas, a fire station should be provided within a three and one-half mile travel distance from the areas.
4. Fire stations should be located on arterial streets and highways where they will be most accessible to the areas they serve and with easy access from the station onto the street without interference.
5. Special care should be given in the location of stations with respect to railroad grade crossings, location of freeways, pattern of one-way streets and traffic signaling, and channeling of adjacent streets.

OBJECTIVE NO. 7 (LAW ENFORCEMENT)

Eliminate crime in the Racine Urban Planning District.

Principle

By increasing the risk and difficulty of committing crime, as well as reducing the need and desire to commit crimes, crime can be curtailed.

Standards

1. Establish crime prevention programs along with a Local Laws Educational Program, both of which should be designed to educate the citizenry as to what the local laws are, their purpose, their cost to administer.
2. Establish and maintain cooperative enforcement and rehabilitation programs with local, state, and federal law-enforcement agencies.

OBJECTIVE NO. 8 (LAW ENFORCEMENT)

Promote the health, safety, welfare, and convenience of the public and protect them from loss of life, personal injury, and loss of property values due to crime, acts of violence and/or accident in the public streets, waterways, and rights-of-way.

Principle

By providing police protection for the residents of the District, including traffic patrol, parking patrol, waterway patrol, crime investigation, and apprehension of offenders of the laws, loss of life and property can be minimized.

Standards

1. Provide facilities such as police stations, police laboratories, jails with recreation facilities, water rescue equipment, courts for the administration of justice, and traffic safety programs.
2. Cooperate with the Coast Guard in the provision of water patrol services.

OBJECTIVE NO. 9 (LIBRARIES)

The provision of effective and efficient library services to meet the social, educational, informational, economic, and recreational needs of the people of the District.

Principle

By providing main and branch libraries of appropriate sizes throughout the District, so that library service is easily accessible to every existing or potential library user, it will contribute to meeting the needs of the people.

Standards

1. The Main Library should be centrally located within the District, at or near to arterial streets, and be readily visible from the arterial streets. The Main Library should also be the location for the data retrieval and data bank systems of the District.
2. Branch libraries need not necessarily be established if mobile libraries are provided which will equal or improve branch library service.
3. Branch libraries, when constructed, should be physically located according to population density and have an effective service radius of one mile in high-density areas, one and one-half miles in medium-density areas, and one and one-half to two miles in low-density areas. Mobile library service, when provided in lieu of a branch library service, should be scheduled more frequently in higher density areas than in lower density areas.
4. The mobile library should provide service to users for data retrieval purposes from the library data bank as well as the usual library functions.
5. Branch libraries in a district system should be located within not more than a 15-minute driving radius, and serve from 25,000 to 50,000 persons. They may be located in public or private buildings, such as a shopping center, in order to provide the best possible service.

OBJECTIVE NO. 10 (HEALTH CARE FACILITIES)

Provide adequate land for future health care facilities.

Principle

By appropriately locating a sufficient number of hospitals and related health care facilities, the residents of the District will be conveniently served.

Standards

1. Hard and fast standards for the size of health facilities are not established. However, an optimum hospital size in range with a minimum of 200 beds and a maximum of 600 to 800 beds is often mentioned by medical authorities. As a general rule, regional hospitals of less than 200 beds cannot provide adequate services and hospitals of over 600 to 800 beds become difficult to administer efficiently. The District should plan for a system of hospitals in which the physical plant of each facility could be easily expanded to a size of 600 to 800 beds and in which an appropriate number of hospitals would be provided with none smaller than 200 beds and none larger than 600 to 800 beds.
2. Due to many variations in types of building construction, the range of services provided and variations in parking needs, site size standards for health facilities are difficult to establish. Based on a figure of 3.4 acres per 100 beds to 3.7 acres per 100 beds for existing hospitals, future District hospitals should have a minimum land area on the order of four to five acres for each 100 beds.
3. Health facility off-street parking spaces are needed for: (1) persons who visit patients; (2) doctors: (3) employees; and (4) users of out-patient services. Emergency drives for ambulances and loading areas for truck deliveries are also needed. These standards, applicable to District hospitals, are to maintain 1.5 parking spaces per currently occupied bed and to achieve a long-range standard of 2.5 parking spaces for each occupied bed.

Table 3-3

COMMUNITY FACILITY DEVELOPMENT OBJECTIVES, PRINCIPLES, AND STANDARDS (Continued)

OBJECTIVE NO. 11 (HOUSING)

To provide and encourage for all residents, a variety of lot sizes, housing units, and housing types within each community that affords opportunities for comfortable, ideal, and creative living and sociability.

Principle

All residential neighborhoods within each community should ideally be provided with readily available and adequate community facilities and services such as schools, parks, fire and police protection.

Standard

Each neighborhood should be provided with utilities such as sanitary sewers, public water supply, storm drainage facilities, gas supply, telephone service, electricity, refuse collection and other essential facilities such as an elementary school, neighborhood park and convenient shopping at the edge of the neighborhood.

Principle

Residential neighborhoods should ideally be separated from incompatible commercial and industrial establishments by natural or man-made boundaries which form buffers and *transitional areas*, properly separating the uses and making them aesthetically pleasing.

Standard

Each neighborhood within a community should be of sufficient population size (1,000 to 12,000 persons) to protect and maintain its own environment about the area ordinarily tributary to an elementary school, and small isolated fragments of residential developments should be avoided.

Principle

Low-density, medium-density and high-density residential areas should be ideally located properly throughout the planning district, including multi-family, two-family and single-family structures, with an intermixing of housing densities appropriately designed, avoiding monotony.

Standard

Residential neighborhoods should contain enough area to provide: housing for the population served by one elementary school and one neighborhood park; an internal street system which discourages penetration of the unit by through traffic; and all of the community and commercial facilities necessary to meet the day-to-day living requirements of the family within the immediate vicinity of its dwelling unit. To meet these requirements at varied residential densities, the following standards should be met:

Land Use	Low-Density Development (2 Miles Square) Percent of Area	Medium-Density Development (1 Mile Square) Percent of Area	High-Density Development (½ Mile Square) Percent of Area
Residential	80.0	71.0	66.0
Streets and Utilities	16.5	23.0	25.0
Parks and Playgrounds	1.5	2.5	3.5
Elementary School	0.5	1.5	2.5
Other Governmental and Institutional	1.0	1.0	1.5
Commercial	0.5	1.0	1.5
Total	100.0	100.0	100.0

Principle

Housing should ideally be varied in type and cost, and in adequate supply for all income levels and age groups. The transition between income levels in any one neighborhood should be gradual with a minimum of 5 to 15 percent, and a maximum of 60 to 70 percent of the families of similar income levels closely grouped together in the same neighborhood. The mixture of housing types and lot sizes should be encouraged to help solve the problems of socioeconomic and racial segregation.

Standard

Each neighborhood should be designed to avoid extremes of monotony in architecture or social stratification with an intermixture of housing types, lot sizes and styles. Multi-family structures, normally containing greater densities of population, should be located closer to parks, open space, community facilities and schools. For planned multiple-family developments, the lot coverage maximum should not exceed 30 percent; the floor area ratio should not exceed 0.4 percent; and the usable open space should be at least 20 percent of the site for each development.

OBJECTIVE NO. 12 (HOUSING)

The development and conservation of neighborhoods within a physical environment that is healthy, safe, convenient and attractive.

Principle

Neighborhoods, designed and developed as residential planning units, can assist in stabilizing community property values, preserving residential amenities, and promoting efficiency in the provision of public and community service facilities; can best provide a desirable environment for family life; and can provide the population with improved levels of safety and convenience.

Standard

Residential neighborhoods should be physically self-contained within clearly defined and relatively permanent isolating boundaries, such as arterial streets and highways, major park and open space reservations, or significant natural features, such as rivers, streams or hills.

OBJECTIVE NO. 13 (HOUSING)

To provide decent, safe, and sanitary housing for all inhabitants of the District.

Principle

Existing sound housing must be maintained and all substandard housing in the District should be removed or improved. The quantity and quality of available housing should be increased by assuring that future dwellings are built to meet adequate living standards and to provide desirable amenities.

Standards

1. Each individual dwelling unit should:
   a. Be structurally safe and in good repair.
   b. Provide running water, a private inside toilet, bathtub and shower, kitchen sink and electricity.
   c. Provide adequate light, air and ventilation for every room, and adequate heating facilities.
2. Each individual dwelling unit should be of sufficient size, according to the prevailing contemporary standard of the Southeastern Wisconsin Region.
3. Each neighborhood should be individually planned, and dwelling units which are dilapidated should be removed. Dwellings in need of rehabilitation should be rehabilitated, and dwellings in need of repair should be repaired through proper and equal administration of codes and ordinances.
4. New housing should be built for the elderly, low and moderate income persons, and for persons relocated due to various governmental programs who are unable to find decent, safe and sanitary housing at a price they can afford to pay.

Table 3-4

UTILITY SYSTEM DEVELOPMENT OBJECTIVES, PRINCIPLES, AND STANDARDS

OBJECTIVE NO. 1

Adequate public utilities are a basic determinant of an area's growth; they provide for the protection of the residents' health, and are an essential element in affecting the quality of the neighborhood.

Principle

Older neighborhoods with inadequate utilities and newer, more recently built subdivisions with septic tanks in unsuitable soils and without engineered storm drainage systems create health problems, require continual and costly maintenance, and cause unnecessary property damage. Quality and stability of such neighborhoods is problematical and can only be remedied by construction of the necessary utilities.

OBJECTIVE NO. 2

The proper allocation of uses to land requires a commensurate allocation of utility services to implement such assignment of use.

Principle

The most efficient use of a community's land and financial resources can be achieved when land planning and utilities planning are coordinated. This coordination is most effective when reliance can be placed on decisions made for each phase, i.e., that land use plans will not be changed markedly nor utilities undersized or withheld from some portions of the planning district.

New commercial and industrial developments which are heavy water users and sewage generators should be located only in accordance with the land use plan. Location of these uses in areas other than that designated on the land use plan nullifies utility planning, requires costly replacement of many facilities already in the ground and makes efficient utility planning almost impossible.

OBJECTIVE NO. 3

Extension of water and sewer facilities in coordination with land use planning provides an effective means of controlling land development as well as minimizing utilities' expenditures.

Principle

Recognition of the interdependence of utilities to serve land uses and the knowledge of the use of the land prior to the design and construction of such facilities requires some standards to be followed to bring about greatest efficiency at lowest cost.

Standards

1. Centralized water and sewer system should be extended only to those areas projected to become urbanized during the planning period.
2. Non-urban areas should be served by individual water and sewer facilities installed in accordance with State requirements. This is more efficient and economical than extending utility lines long distances to serve low densities or isolated locations.

OBJECTIVE NO. 4

The optimum development of utility systems or services is achieved on the basis of defined areas of service with known (or assigned) land uses.

Principle – Water and Water Supply

Definition of the size of the service area should reflect the largest area expected to be served by the system.

Standards

1. Underground pipe systems normally have a life of 40 years or greater. This period usually brings complete development of most service areas. For greatest economy, distribution systems should be designed for complete development of the service area to avoid replacement during the planning period or before the normal service life is completed.
2. Plans for area-wide systems and supply should be designed to provide capacity for present and future growth with units and links designed to reflect these conditions of service area and complete development.
3. Strive to develop, throughout the portion of the Planning District expected to urbanize, water systems and supplies capable of achieving, as a minimum, fire insurance ratings of Class 8 on a scale of 10 as established by the American Institute of Assurance (formerly National Board of Fire Underwriters).
4. Avoid duplication of lines, storage facilities and treatment plants by the various units of government.
5. Due to limited subsurface water supplies, every effort should be made to eliminate or diminish subsurface withdrawals to preserve this resource for areas beyond centralized water distribution systems.

Principle – Sanitary Sewers and Wastewater Treatment

Sanitary sewer service areas should be determined by watersheds and other topographical features rather than governmental boundaries. This permits construction of gravity flow systems which are more efficient in operation and more economical in construction costs.

Standards

1. Avoid undersizing facilities that may not serve a complete watershed or portions likely to become developed during the long-range planning period.
2. Review each project's relationship to adjacent areas to avoid duplication of existing or planned facilities and to effectuate connections of systems where possible.
3. Develop plans for area-wide systems designed to provide adequate capacity for present and future growth. Service areas should reflect units and links for economical and efficient sewer systems.
4. Minimize the number of wastewater treatment plants to produce greater treatment efficiency, lower maintenance and operating costs, and achieve lower construction costs. Numerous small plants have higher unit construction costs, are more expensive to operate, and are difficult to staff properly.

Principle – Storm Water Drainage

Storm drainage systems, similar to sanitary sewage systems, should be designed to serve all the land area draining to the point of design considering the complete development of the watershed in accordance with the land use plan.

Standards

1. Avoid undersizing facilities that may not serve a complete watershed or portions likely to become developed during the long-range planning period.
2. Hydrologic study of perennial and intermittent streams as well as normally dry waterways should be made to determine the natural watercourses to be preserved and utilized for storm drainage purposes. Such studies should establish waterway widths and flood levels.
3. Review each project's relationship to other areas upstream or downstream to provide compatible facilities and to effectuate connection of systems where necessary.

Principle – Solid Waste

The relatively compact size of the Planning District in conjunction with the few available areas for solid waste disposal provides a reasonable basis for overall consideration of unified operation of solid waste disposal facilities.

Standards

1. Sites adequate to meet the estimated volume of soild waste expected to be generated by the entire Planning District during the planning period should be acquired immediately.
2. Sites must satisfy Wisconsin regulations and should be in such locations that are reasonably accessible to the portion of the Planning District it is to serve.
3. Unnecessarily remote or inaccessible sites provide for disposal but only with increased disposal and collection costs.

Chapter IV

THE DISTRICT DEVELOPMENT PLAN

INTRODUCTION

Looking ahead to the year 1990 and an estimated future population of 225,000, the District Development Plan establishes a framework for planning and development. If attained, this population would produce a total of about 60,000 households, 78 jobs, and 56,000 students. Extensive new development will result from this growth in the form of new buildings, streets and highways, utility systems and public facilities. The District Development Plan should serve as a guide for this anticipated growth and development.

Five interrelated plan elements comprise the District Development Plan:

1. Land Use Plan
2. Housing Plan
3. Transportation Plan
   a. Arterial Street and Highway System Plan
   b. Transit System Plan
4. Community Facilities Plan
   a. School Plan
   b. Park Plan
   c. Public Buildings Plan
5. Public Utilities Plan
   a. Water Supply Plan
   b. Sanitary Sewerage Plan
   c. Storm Drainage Plan
   d. Solid Waste Disposal Plan

The land use plan identifies the type and intensity of land uses required to meet the forecast population and economic activity levels, and recommends a spatial relationship between uses. Residential neighborhoods and population densities are established, commercial and industrial areas are indicated, and public and semi-public lands required to serve the future population are shown.

Based upon the land use arrangement, a transportation system, designed to provide each land use with convenient access, is planned to serve future travel demands. Similarly, utility systems, including water supply, sanitary sewerage, storm drainage, and solid waste disposal, are designed to satisfy the needs of the growing District. District facilities, including schools, parks, open space, and public buildings, are designed to enable sites to be purchased in good locations to serve the long-range needs of the District residents.

LAND USE PLAN

The Land Use Plan provides a framework for the location of various uses: residential, commercial, industrial, public and semi-public, and parks and open space. Land use areas approximate the amount of land required to serve the anticipated future population. This spatial arrangement of uses provides the basis for each of the interrelated plans which follow.

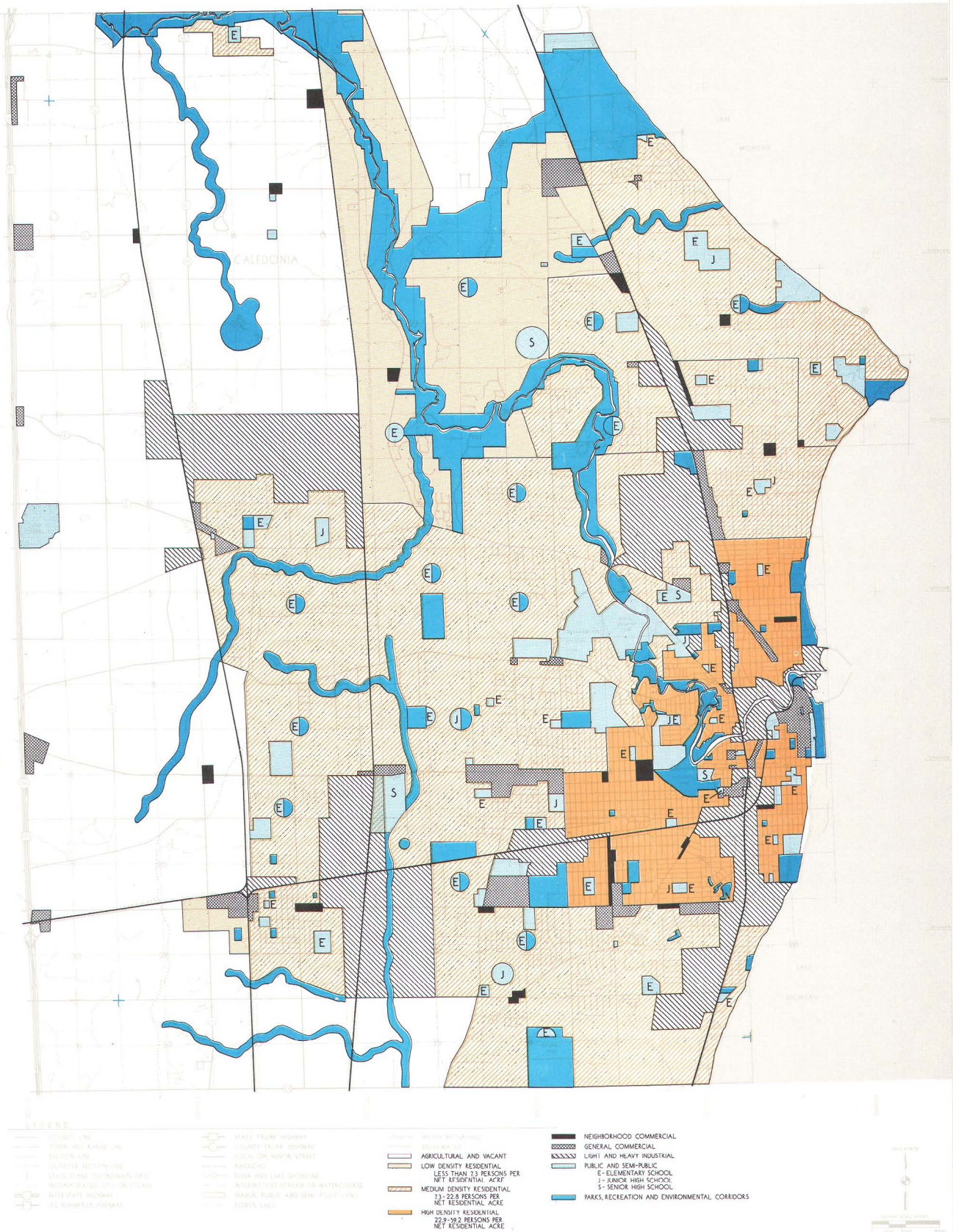
Broad land use relationships and densities are based upon the regional land use plan developed from the regional land use-transportation study.[1] Regional development alternatives have been evaluated and the controlled existing trend plan has been adopted by the SEWRPC and Racine County. This plan places emphasis on the continual effect of the real estate market in determining the location, intensity, and character of new development. To provide a more orderly and economical growth pattern and to avoid intensification of development and environmental problems, the plan is based upon regulating development in the public interest. The historic growth trend would be altered by restricting intensive urban development to those areas having soils suitable for such development and where sanitary sewer service is available. Basic regional development objectives would be achieved by protecting floodplains from urban encroachment, by protecting the best woodlands and wetlands from development, and by establishing a balanced system of parks and open space centered on the primary environmental corridors.

Based upon the adopted regional land use plan for development, the District 1990 land use plan provides a framework for extending the current land use pattern in an efficient and orderly manner. With a continuity of improvements, the new growth areas should be developed and served with public facilities and utilities. The 1990 land use plan is based upon the assumptions of regulated development, recognizing the importance of site limitations and environmental considerations (see Map 4-1). Regulations established to control development in areas unsuited to urban purposes would be strictly enforced, resulting in a sharper delineation of urban and non-urban areas in the District.

---

[1] *SEWRPC, Planning Report No. 14, Volume One, A Comprehensive Plan for the Racine, Wisconsin Urban Planning District, Inventory Findings and Forecasts, Chapter V, pp. 87-114.*

MAP 4-1



1990 LAND USE PLAN

RACINE URBAN PLANNING DISTRICT

Table 4-1

1990 LAND USE AREAS SHOWN IN THE PLAN

Land Use Category	In Acres				Percent Over
	1969 Acres	1990 Estimate	Shown in Plan	Surplus	
Residential	9,196	16,633	18,100	1,500	9
Commercial	693	1,229	1,330	100	8
Industrial	2,678	3,789	5,100	1,800	48
Public and Semi-Public[a]	3,308	6,602	6,100	–	–
Streets and Alleys	4,674	6,531	6,531[b]	–	–
Total Developed Area	20,529	34,784	38,161	3,400	

[a]*Public and semi-public figures also include parks and recreation areas.*

[b]*Streets and alleys are estimated at 6,531 acres based upon a declining ratio of from 3.30 acres per 100 persons in 1969 to 2.94 acres per 100 persons in 1990.*

The future development pattern is expected to be well defined with growth occurring in those areas provided with water and sewer services. Gaps in the urban development pattern should disappear as the cost of extending utility mains is transferred to properties benefiting from the improvement.

The land use plan is based upon forecasts prepared as a part of Volume One of the Comprehensive Plan. By the year 1990, the developed area is expected to increase from 20,529 acres in 1969 to almost 35,000 acres.[2] New growth areas should amount to almost 14,000 acres to accommodate the 92,000 additional persons forecast.

Land Use Areas

In determining the arrangement and extent of land uses in the District, five basic factors were considered: (1) the existing land use pattern; (2) suitability for development, i.e., environmental corridors, soil conditions, and availability of utility extensions; (3) the arterial street system; (4) existing zoning; and (5) the amount of land estimated to be needed to accommodate the 1990 population. Forecasts of future land use areas required to meet the anticipated growth in the District were prepared and presented in Volume I of this report.[2] Based upon the relationships between the amount of land utilized for each 100 persons in 1969, taking into consideration existing trends, estimated ratios for each land use were prepared. In 1969, about 32 percent of the District, 20,529 acres of 64,625 acres, was developed. By 1990, the developed area is expected to utilize about 54 percent of the total area, or approximately 34,800 acres.

Land use areas shown in the plan approximate estimated land use area needs. To maintain flexibility in the private land development market and provide more than ample room for growth, several categories have surplus acreages: residential categories exceed the estimated need by nine percent; commercial areas by eight percent; and industrial categories are 48 percent greater than the estimated need (see Table 4-1). These surplus areas allow ample space for uses requiring more space in the future due to changes in technology or upward trends in acres used per person. The surplus areas will also provide space for industrial growth well beyond the planning period and also will enable individual industries to acquire sites large enough to protect their potential future expansions.

Residential Land Uses

Residential use categories account for the largest single land use classification shown on the plan: (1) high density residential areas, 22.9 to 59.2 or more persons per net residential acre (7.2 to 18.0 or more dwelling units); (2) medium density areas, 7.3 to 22.8 persons per net residential acre (2.2 to 7.2 dwelling units); and (3) low density residential areas, 0.5 to 7.2 persons per net acre (0.51 to 2.1 dwelling units).[3] Each of the residential land use categories can include a variety of dwelling unit types within the overall density ranges indicated on the plan for each of the various neighborhoods in the Planning District (see Appendix A).

[2]*Ibid. Chapter V, Table 5-4, p. 76.*

[3]*Note: A net residential acre is defined as an acre of land devoted entirely to residential uses. A gross residential acre includes the area devoted to residential uses and the area needed for street and right-of-way purposes.*

High Density. Existing development has occurred over a long period of time based on a variety of residential standards. Because of this, the highest density residential areas are found in the older part of the City of Racine where the development pattern was confined to small lots. As the pattern of development has changed and standards for various housing types have increased, the pattern of residential street arrangement and lot sizes has resulted in a more spacious land use pattern. In the last decade, residential land use areas have become combined with a variety of densities occurring in each neighborhood. This is expected to continue into the planning period with a variety of single-family, two-family, and multiple-family housing types being developed in various neighborhoods in the Planning District. The plan provides for approximately 2,200 acres for high density development, which if fully developed according to the recommendations contained herein would have 68,200 persons (see 1990 Land Use Plan).

Medium Density. Medium-density residential areas are proposed to extend from two to four miles outward surrounding the central city area.[4] These areas are located to the south, west, northwest and north in a consistent urban pattern resulting from the outward extension of water and sewer utilities and include approximately 12,550 acres. This density category by far exceeds the other two and represents enough land area to house approximately 142,000 persons. To the south, the existing urban development now extends within one mile of the Kenosha County line. This area is expected to be fully developed during the planning period. To the west, residential areas are proposed to extend to the Chicago, Milwaukee, St. Paul and Pacific Railroad Line which lies to the west of Sturtevant and Franksville. To the north and northwest, in the Town of Caledonia, much of the area south of the Root River and north to the Crestview Subdivision should be utilized for medium-density residential development. In the Caddy Vista Subdivision area, north of Seven Mile Road, the medium-density residential land use pattern is proposed to extend southward to Seven Mile Road.

Low Density. Residential densities in the older portion of the City of Racine are primarily in the high and medium categories. New growth areas to the south and west are planned for medium residential density. To the north and northwest, where topographical features are more rolling and varied, residential densities are also proposed to follow existing trends and are planned for low-density development. Low-density areas are also expected to occur in the area immediately adjacent to the Root River Parkway. There are approximately 3,350 acres planned for low-density development, representing 15,000 persons.

These densities produce the following estimated population by land use density classifications:

	Population	Acres
High Density	68,200 Persons	2,218
Medium Density	141,700 Persons	12,546
Low Density	15,000 Persons	3,350
Subtotal	224,900 Persons	18,114

An additional population of approximately 6,000 persons are expected to reside in the remaining agricultural areas.

Residential land use areas described above are typified by various types of development now existing in the Planning District. A typical high density residential area is found in the South Side Neighborhood from Twelfth to Sixteenth Streets, from the Northwestern Railroad east to South Main Street; a typical medium density residential area is located in the southwest portion of the City of Racine, between Taylor and Durand, from Meecham Road west to Pine Hill Drive (this area has a combination of multiple and single-family residential uses); typical low density residential areas are similar to the various subdivisions located to the west of Johnson Park along STH 38.

Future residential development will undoubtedly occur through a series of individual residential subdivisions. The 1990 land use plan is based upon this growth occurring in accordance with precise neighborhood unit development plans. These should be presented to the Planning Commission of the District concerned and reviewed in accordance with the subdivision ordinances in effect. Two typical neighborhood development plans are presented in a later section of this report. These illustrate both the problems and the opportunities which exist in various areas of the District and the best means by which development may occur in these areas in accordance with the plan. Each of these neighborhood development plans follows subdivision design principles discussed in Volume One of the Comprehensive Plan[5] and the objectives discussed in Chapter III.

Commercial Land Uses

Retail establishments, services, offices and entertainment facilities are found in commercial areas. In the older

[4] *Ibid. Appendix V-C, p. 246.*

[5] *SEWRPC, Planning Report No. 14, Volume One, A Comprehensive Plan for the Racine, Wisconsin Urban Planning District, Inventory Findings and Forecasts, Chapter XI, Figure 11-1, p. 220.*

neighborhoods there is a mixed land use pattern where commercial, residential, and industrial uses are freely intermixed. With increasing reliance on the automobile, merchants and shoppers have found that groupings of commercial uses are more convenient for the shopper and therefore better for the merchant. This principle has resulted in the classification of commercial areas into two broad groupings: neighborhood and general commercial areas.

Neighborhood commercial areas provide for the sale of convenience goods (foods, drugs, and sundries) and personal services (laundry and dry cleaning, barbering, shoe repairing, etc.) for day-to-day living needs of an immediate neighborhood. A neighborhood commercial center or area is normally built around a supermarket as the principal tenant. It normally has an average gross leasable area close to 50,000 square feet and needs from four to five acres to serve a trade area population of 5,000 to 20,000 persons.

The general commercial areas include three types of shopping and service centers:[6]

1. Highway commercial areas cater primarily to the needs of motorists. Typical uses offer accommodations, food, lodging, specialized retail outlets, commercial amusement enterprises and related service uses. These areas are normally located at intersections of freeways or major arterial highways.

2. Community shopping centers and strip commercial areas offering a variety of convenience goods and personal services in addition to the services of a neighborhood center. Although strip commercial areas are not recommended as the way to provide good commercial development, it is an established pattern of development in Racine. It provides a wider range of sizes, styles, colors and prices for the sale of soft lines (wearing apparel for men, women and children) and hard lines (hardware and appliances). It is normally built around a junior department store as the major tenant, in addition to the supermarket. This category of commercial development may also include the office or business park which provides individual sites for office and business development. In size, the community center or the strip commercial area should have an average gross leasable area of about 150,000 square feet on a site of 10 to 25 acres in order to serve a population of 25,000 to 60,000 persons.

3. Regional shopping centers should provide for general merchandise, apparel, furniture, and have furnishings in full depth and variety. It is built around a full-line department store as the major drawing power and normally has a gross leasable area of 300,000 square feet or more. The regional center needs at least 150,000 persons to draw from and needs a site of at least 60 acres. It comes closest to reproducing the shopping facilities and consumer attractions of the central business district which is also considered to be a regional shopping center.

Neighborhood shopping areas are widely scattered throughout the various residential areas. In some instances these centers are mixed retail outlets in strip commercial areas in the older neighborhoods. Typical areas are found along Douglas and Washington Avenues and along Lathrop Street. New neighborhood centers, similar in character to the facilities at Erie and Three Mile Road, are anticipated in convenient locations, such as the southeast corner of Four Mile Road and Green Bay Road in the Root River Neighborhood, following recommended subdivision design principles.[7]

Highway commercial areas are proposed to be grouped at major interchanges and intersections of the arterial street and highway systems. In some instances, these service-oriented uses will be a part of other general commercial areas.

There are several community shopping centers, such as Elmwood Plaza. The expected decrease in the retail and service function of the central business district will be off-set to some extent by the addition of more office uses, the concentration of commercial outlets and service facilities along STH 20 near Green Bay Road, and the grouping of commercial facilities on Durand Avenue near Taylor.

The land use plan proposes 630 additional acres of commercial uses. One new regional shopping center, in addition to the Racine central business district, is proposed in the southwest portion of the urban area, at STH 31 and STH 11. This new center should contain two or more department stores, a variety of specialty shops, food stores, and entertainment facilities.

---

[6] *Urban Land Institute, The Community Builders Handbook, Anniversary Edition, 1968, Section 3, p. 265.*

[7] *SEWRPC, Planning Report No. 14, Volume One, A Comprehensive Plan for the Racine, Wisconsin Urban Planning District, Inventory Findings and Forecasts, Chapter XI, Figure 11-1, p. 220.*

Industrial Land Uses

Economic forecasts indicate that manufacturing will remain the largest employment sector of the District economy, with about 42 percent of the labor force. A 50 percent increase is forecast in the number of persons employed in manufacturing, adding 11,000 persons to total employment in the District.

Highways, railroads, labor, taxes, climate, sites, available utilities and Lake Michigan have influenced the location of industrial land uses in the past and they are expected to remain primary location factors. Industries today require large, level sites for single floor operations and parking, and provisions for waste water disposal. Many of the more objectionable qualities of industrial processes (emission of smoke, gas and noise) have been greatly reduced or eliminated. New industrial operations are generally housed in modern buildings on sites that have been carefully designed and maintained with attractive plantings. The land use plan provides more than 2,900 acres for new industry. The 1,800 acres in excess of anticipated 1990 need will assure the availability of land for expansion and new development far beyond the end of the planning period.

Major new industrial sites are proposed in outlying locations near Sturtevant and Franksville. These include areas for both light and heavy industrial uses. Highway and rail access, the relatively level topography and the availability of water and sewer services were prime considerations. Other new industrial areas are proposed west of the Chicago and Northwestern Railroad and south of Durand Avenue; in the vicinity of Racine-Horlick Airport; and to the north in the area between STH 32 and the railroad.

In the older industrial areas along the Root River and the eastern alignment of the Chicago and Northwestern Railroad, numerous deteriorating and dilapidated nonresidential structures now blight the area. As a part of the Southside Revitalization Project, some of these industrial buildings will be rehabilitated while others should be removed. North of the Root River, along the railroad, another sizable area of obsolescent nonresidential structures have the same blighting influence. These areas should receive a high priority for rehabilitation and removal of these blighting influences.[8]

Public and Semi-Public Land Uses and Parks

Schools, parks, public and private golf courses, churches, cemeteries, public buildings and similar uses are classified in the public and semi-public category. Residents of the District now have almost 2,000 acres of parks and open space recreation areas available for their use. These areas are found in the neighborhoods along Lake Michigan, along the Root River, and in large wooded areas in the District. Both the City of Racine and Racine County have made a major commitment in acquiring and developing parklands. The county has an acquisition program underway to purchase large areas in the floodplain of the Root River. Both the county program to acquire floodplain lands and the city program to expand the lakefront system have been incorporated into the plan. These are discussed in more detail in the community facilities section of this chapter.

Anticipated future needs for public and semi-public areas and parks and recreation lands amount to about 6,600 acres, or about 10 percent of the total land area in the District. School sites and large institutional sites such as Dominican College, Dekoven, and a large number of churches and cemeteries account for some of the public and semi-public use areas. Parklands and open space areas, which include extensive woodland and wetland areas, primary environmental corridors[9], large regional parks, community parks, and neighborhood parks account for about 65 percent of the total area in this classification, or approximately 4,450 acres.

Agricultural and Open Lands

The plan is designed to provide a compact arrangement of developed land use areas in the eastern and central portions of the Planning District. Remaining areas are to remain in agricultural and open uses with a scattered rural residential pattern. The highly productive agricultural areas to the southwest should be retained in production and protected against urbanization.[10] This will be difficult to accomplish since real estate values will increase as the development pattern extends outward and farm landowners are subjected to increasing pressures of taxation similar to those of the urban resident.

These conditions have already resulted in a disturbing strip residential land use pattern along many of the county and town roads. In some areas lot sizes are extremely large and extend up to one-fourth of a mile in depth. Where strip development has been permitted to occur in an unbroken sequence of single-family homes, access to the remaining farmlands has become severely restricted. Because over 90 percent of the soils in the District have severe soil liminations and are dependent upon on-site septic disposal systems, there are major problems in view. To maintain the aesthetic value and healthy environment of these agricultural lands, urban development without public sewers should be severely restricted within the District.

---

[8] *Ibid. Chapter VI, Map 6-4, p. 87.*

[9] *Ibid. Chapter IV, Map 4-6, pp. 60-61.*

[10] *Ibid. Chapter IV, Map 4-1, text pp. 47-48.*

HOUSING PLAN

Urban communities throughout the nation are concerned with the conditions, quantity, and quality of the available housing supply. Deterioration and the eventual dilapidation of large segments of the existing stock of housing are common conditions which result from lack of maintenance or deficiencies of initial construction. Results of the housing inventory indicate the extent of these problems and show the need for corrective action.[11]

Another major area of concern is the establishment of a workable system of neighborhoods throughout the District. Once established, these neighborhoods provide a basis for evaluation of and continuity in planning which may then be directed toward the specific needs of these areas.

Housing forecasts indicate that an average of 1,500 housing units will have to be constructed each year during the planning period if the more than 30,000 additional housing units needed to house the estimated 1990 population are to be provided.

The housing plan consists of five major sections:

1. Identification of residential neighborhoods;
2. Presentation of representative precise neighborhood unit development plans;
3. Identification of problem housing areas;
4. Housing improvement programs; and
5. Recommended housing plan.

These five elements, combined with the inventory and forecasts, make it possible for the development of precise neighborhood development plans, coordinated within the framework of the 1990 land use plan, and for the implementation of specific improvement projects and programs in each neighborhood.

Residential Neighborhoods

Neighborhoods in the Planning District were evaluated as a part of the housing study in the inventory phase.[12] These neighborhoods form realistic planning units which may be evaluated either separately or in groups which, when taken together, form communities within the larger urban Planning District. To the greatest extent possible, each neighborhood should be designed and developed according to the objectives, principles and standards discussed in Chapter III. For detailed 1990 land use information by neighborhood, see Appendix A.

Sixty-six neighborhoods were identified in the housing inventory. These neighborhoods are primarily residential in character in the eastern and central portions of the District, and agricultural in character in surrounding areas. The neighborhoods were then combined into 15 communities containing from two to nine neighborhoods each.[13] Some of the neighborhoods are already developed or partially developed and may be classified into three types: (1) older neighborhoods, (2) established neighborhoods, and (3) fringe area neighborhoods which are only partially developed. These existing neighborhoods constitute a major portion of the future urban District.

Older Neighborhoods. In the area surrounding the Racine Central Business District, the older neighborhoods suffer from a gridiron street pattern and mixed land uses where industry and commerce are combined with residential uses. Problems of deteriorated housing, caused by a lack of maintenance and blighting influences such as vacant industrial and commercial buildings, are most severe in these neighborhoods. As deterioration occurs, the stability of these neighborhoods often suffers from a decline in property values. Social problems are often associated with deteriorating housing conditions. Fourteen central neighborhoods are affected by these conditions[14] and are discussed in more detail in the following section on problem housing areas.

Established Neighborhoods. Surrounding the older neighborhoods is a band of residential neighborhoods which were developed prior to World War II, generally during the period 1900 to 1939. These areas are still marked with a scattered, mixed land use pattern but, in contrast to the older neighborhoods, property values have not declined, and the process of deterioration has been forestalled with a consistently high level of maintenance. These established neighborhoods will be vulnerable to deterioration and aging during the planning period to 1990. Homes constructed near the turn of the century will be almost 90 years old and those homes constructed prior to 1939 will be at least 50 years old. Conserving this housing supply in a well-maintained condition is a matter of vital importance.

---

[11] *Ibid. Chapter VI, pp. 78-93, See Map 6-4.*

[12] *SEWRPC, Planning Report No. 14, Volume One, A Comprehensive Plan for the Racine, Wisconsin Urban Planning District, Inventory Findings and Forecasts, Chapter VI, pp. 79-89. See Map 6-1 and 6-3.*

[13] *Ibid. Chapter VI, p. 78, Table 6-1.*

[14] *Ibid. Chapter VI, Map 6-4, p. 87.*

Fringe-Area Neighborhoods. Since 1940 the urban area has more than doubled as single-family subdivisions have been the prevailing type of residential development. Lot areas have increased as standards for development have changed. This pattern is evidenced by the abrupt changes in lot sizes north of Melvin Street and west of Lathrop Avenue. Neighborhoods adjacent to the more established areas have a similar character, although there are instances where considerable open areas still exist. In the urban fringe area, lot areas are noticeably larger, indicating yet another change in the increasing standard of development.

With new growth primarily occurring to the southwest, west, and north, new residential neighborhoods will be developed in these fringe areas. These neighborhoods will all contain some degree of existing urban development due to existing scattered residential uses along rural roads and isolated subdivisions. In some neighborhoods serious development problems exist because of cumbersome land splits, unusually deep lots, and fragmented development patterns which have been allowed in the past. These problems are typified by the conditions which exist in the Peterson Neighborhood west of Green Bay Road and north of STH 20.[15] In new growth areas, such as the Peterson Neighborhood, proper use of control measures and application of the objectives, principles and standards in Chapter III should insure that new residential neighborhoods will have a desirable land use pattern and needed community facilities. A detailed development plan for this neighborhood is included in this section of the report to illustrate how these unusual conditions may be adjusted to form a neighborhood unit.

Representative Precise Neighborhood Development Plans

Representative precise unit development plans were prepared under the District planning program for two developing neighborhoods in the District, namely the Peterson Neighborhood, located primarily in the Town of Mt. Pleasant west of the City of Racine, and the Root River Neighborhood located in the Town of Caledonia northwest of the Racine-Horlick Airport. The specific location of these neighborhoods (33 and 42) in the District is shown on Map 6-1, Volume One of this report. Such precise development plans have been recommended by the SEWRPC to local units of government in the Region as an important land use plan implementation tool.

The basic objective of preparing such precise neighborhood plans is to ensure that urban areas develop as a series of recognizable units rather than a formless mass. The recommendation to prepare neighborhood plans is based on aesthetics, on providing convenience in living and traveling in an urban area, on organizing and supplying public services and facilities efficiently, and on a recognition that the size of an area in which a family lives should be brought into a scale within which an individual can feel at home and take an active part in community affairs. In addition, the preparation and adoption of precise neighborhood unit development plans provide a basis for designing individual land subdivisions in proper relation to external features of areawide concern, such as arterial streets and highways; to major land use centers, including commercial, industrial, and institutional centers; to other existing and proposed land uses; and to other subdivisions. The preparation of such neighborhood unit development plans must be preceded by the preparation and adoption of areawide land use plans which determine overall densities and the general location of land uses and facilities of areawide concern, such as arterial streets and highways; transitways; airports; and major industrial, institutional and commercial centers.

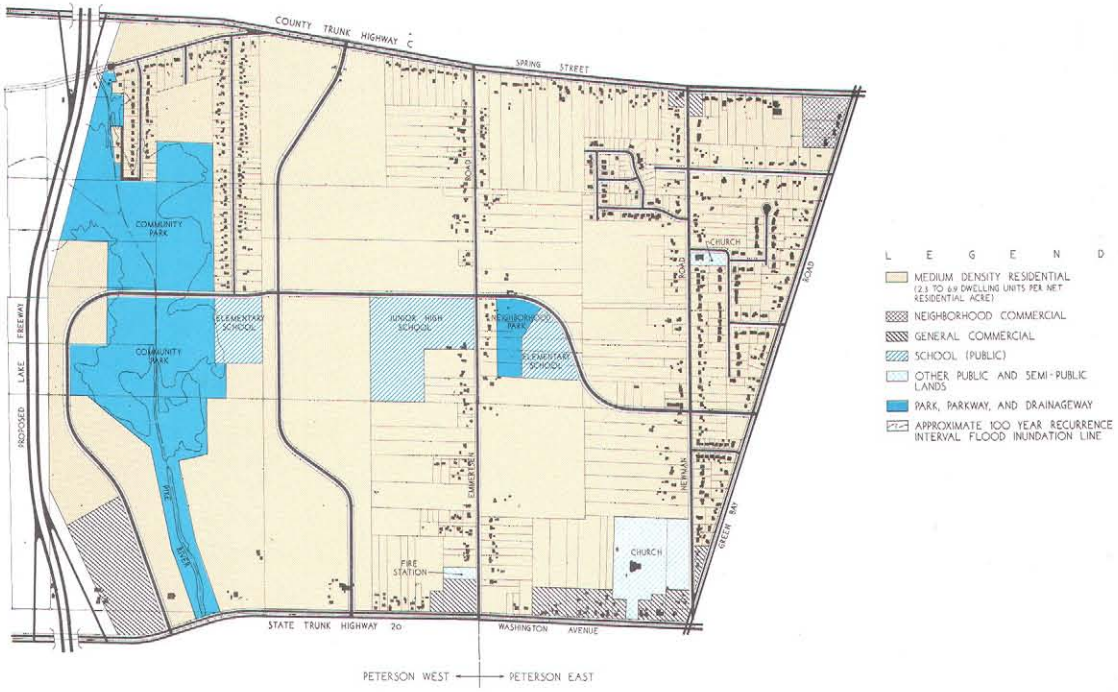
The precise neighborhood land use development plans prepared for the Peterson and Root River Neighborhoods are shown on Maps 4-2 and 4-3, respectively. These precise land use plans refine and detail the recommended District land use plan as shown on Map 4-1. The development of the two neighborhood unit plans followed extensive analyses with respect to the existing land use in each neighborhood, including the location of existing street and highway rights-of-way, utilities, and location of buildings and other structures, as well as such natural characteristics as surface water drainage, soil properties, topography, and location of such natural resource base elements as wetlands, woodlands, and wildlife habitat. The preparation of these two neighborhood unit development plans within the District planning program is intended to be illustrative of what should be accomplished by local planning staffs following completion of the District planning program itself. It is essential that the local units of government in the District take such steps to refine and detail in a very precise manner the recommended District land use plan, in order to precisely locate future sites for school, park, and drainage facilities, and for the location of arterial and collector streets.

The local units of government in the District are indeed fortunate to have an ongoing large-scale topographic mapping program being conducted by Racine County, which program provides the basic topographic maps with which precise land use planning can be accomplished. Such large-scale topographic maps also provide the control needed to prepare real property boundary line maps so that existing and future parcels of land can be taken into account in the design of the precise neighborhood land use plan.

---

[15] *Ibid. Chapter V, Map 5-3, p. 74.*

MAP 4-2

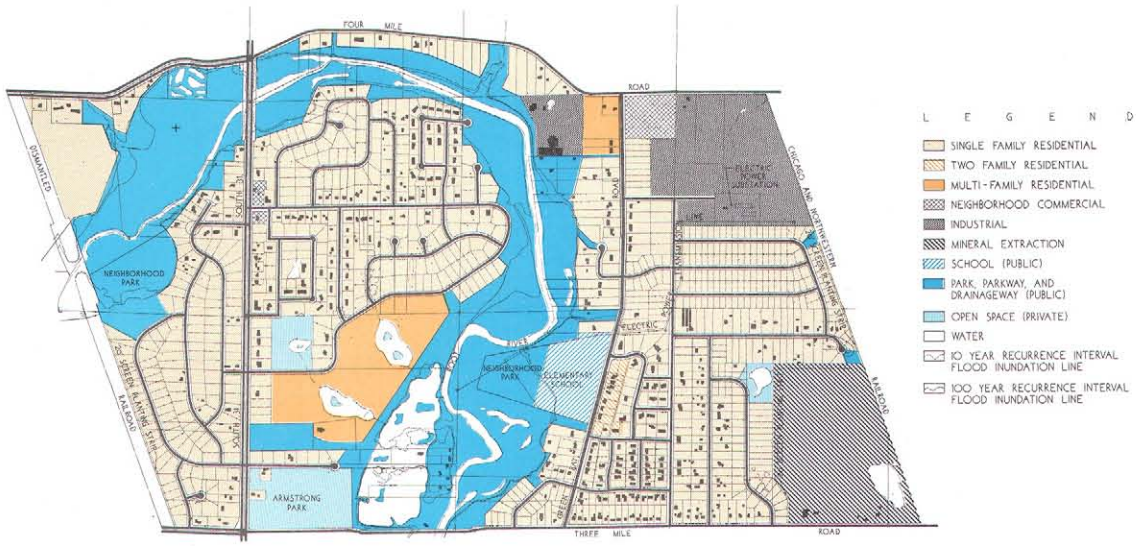


RACINE COUNTY BOARD OF SUPERVISORS
SOUTHEASTERN WISCONSIN REGIONAL PLANNING COMMISSION
HARLAND BARTHOLOMEW AND ASSOCIATES

GENERALIZED NEIGHBORHOOD UNIT DEVELOPMENT PLAN
PETERSON NEIGHBORHOOD

DRAWN BY: DATE
CHECKED BY: DATE
APPROVED BY: DATE
PROJECT DESIGN
SCALE: 1 INCH = 400 FEET
REVISED BY: DATE

MAP 4-3



RACINE COUNTY BOARD OF SUPERVISORS
SOUTHEASTERN WISCONSIN REGIONAL PLANNING COMMISSION
HARLAND BARTHOLOMEW AND ASSOCIATES

PRECISE NEIGHBORHOOD UNIT DEVELOPMENT PLAN
ROOT RIVER NEIGHBORHOOD

DRAWN BY: DATE
CHECKED BY: DATE
APPROVED BY: DATE
PROJECT DESIGN
SCALE: 1 INCH = 400 FEET
REVISED BY: DATE

Table 4-2

PROBLEM HOUSING CONDITIONS IN THE CENTRAL AREA

Community/Neighborhood	Number of Housing Units		
	Deteriorating	Dilapidated	Total
A. Central/			
1. CBD North	24	12	36
2. CBD South	72	1	73
* 3. State Street-Case	189	7	196
*10. Janes	869	164	1,033
Sub-Total	1,154	184	1,338
B. South Central/			
* 4. Franklin	455	45	500
* 5. Winslow Johnson Wax	229	33	262
*21. Dekoven	279	53	332
22. Holy Trinity	76	1	77
Sub-Total	1,039	132	1,171
C. South/			
*23. Lakeside-Greencrest	44	11	55
Sub-Total	44	11	55
F. West Central/			
* 6. Washington Park-Uptown	212	25	237
* 7. Jefferson Herrick	447	23	470
8. McKinley	33	2	35
Sub-Total	692	50	742
G. Riverside/			
* 9. Lincoln-Horlick	185	24	209
Sub-Total	185	24	209
H. North Central/			
11. Lakeview	249	5	254
Sub-Total	249	5	254
TOTAL	3,363	406	3,769
Total Units from Housing Study	3,701	424	4,125
Percent of Total in Category	90.8%	95.7%	91.4%

**Principal concentrations of blocks with 51 to 100 percent of all structures substandard.*

Source: Land Use Housing Study — 1969, Harland Bartholomew and Associates

Problem Housing Areas

Analysis of data from the 1969 housing inventory indicated that 4,125, or 10.5 percent, out of a total of 39,326 dwelling units were substandard, having a combination of deficiencies which were rated as deteriorating (3,701 units) or dilapidated (424 units).[16] The 14 central neighborhoods are most affected by these conditions, having 3,373 (91 percent) of the total of 3,701 deteriorating dwelling units. The problem conditions are centralized and located in a number of clearly identifiable areas within these neighborhoods (see Table 4-2).[17]

As a part of the housing inventory, these problem housing conditions were located by blocks to determine the degree of substandard conditions. Blocks with more than 20 percent of all dwelling units in these substandard classifications would qualify for Federally assisted clearance or rehabilitation provisions of Title I of the Housing Act of

[16] *Ibid. Chapter VI, Table 6-2, p. 82.*

[17] *Ibid. Chapter VI, Table 6-1, p. 78 and Map 6-4, p. 87.*

1949 as amended. These problem conditions are located in a broad band, about one mile wide, along the Chicago and Northwestern Railway from south of Durand Avenue to north of High Street, a distance of about four miles.[18]

Principal concentrations of blocks having more than half of dwelling structures in deteriorating or dilapidated condition are found in nine neighborhoods in the central city area (see note on Table 4-2). Only 10 percent of the existing problem housing conditions are classified as dilapidated. Deteriorating housing can usually be restored to a standard building code classification, at a lower cost than replacement housing.

Only the worst housing conditions should be eliminated. Deteriorating areas should be subjected to concentrated building and housing code enforcement programs to gradually return most of the housing supply to a standard condition.

Housing Improvement Programs

A pattern of deterioration and dilapidation has been shown to exist throughout much of the older portion of the City of Racine. The District must make a commitment to eliminate blight if it wishes to provide a decent home for every family and to attract a continuing level of growth.

Initial steps which must be taken are: to reach agreement upon the facts concerning undesirable housing conditions which need to be corrected (without some understanding of this basic consideration, little progress would result); to establish specific objectives and standards for revitalization efforts in the affected neighborhoods; to devise a community-wide program aimed at the elimination of blight. Then, residents and property owners having a substantial vested interest in improving the quality of their neighborhood should form neighborhood improvement groups and join with the city in a parternship to initiate a series of public and private actions to improve problem conditions.

Four basic types of action are available to correct housing problem areas throughout the community: clearance and redevelopment, rehabilitation, preservation, and development guidance. Each of these has some direct application in the problem housing areas of the Racine Planning District.

Clearance and Redevelopment. Whenever housing units reach an advanced state of deterioration and obsolescence which makes it impractical or uneconomical to attempt to rehabilitate them, clearance and redevelopment action is required. Clearance activities can be achieved through positive action by local governments in the form of public improvements such as public buildings, streets and utilities. However, any extensive clearance and redevelopment normally requires participation in the Federal program of urban renewal. Redevelopment does not necessarily mean removal of all structures within an area. Many structures may be retained as a part of the overall project.

Rehabilitation. This type of action is appropriate in the deteriorating areas of the community in which existing buildings, public facilities, and improvements can be expected to be renewed to a long-term useful life. A rehabilitation area may require spot clearance of structures not feasible for rehabilitation. Rehabilitation can be and is achieved by many means. A considerable amount can be undertaken by private sources. S.C. Johnson and Sons, Inc. has implemented private rehabilitation near their administrative offices north of Sixteenth Street. This program, sponsored by S.C. Johnson and Sons, Inc., with the support of the City of Racine and the Town of Mt. Pleasant, is called the Southside Revitalization Project.[19] It is a multi-directional effort to rehabilitate, reconstruct, and revitalize a series of neighborhoods in the south central community. With respect to housing, there are three major goals in the revitalization program: (1) to repair sound housing units; (2) to reconstruct dilapidated units; and (3) to help low-income families to own their own homes. The revitalization plan identifies dwelling units to be repaired and those to be replaced. In addition, the plan contains recommendations for changes in the arterial street and highway system, for industrial and commercial development and redevelopment, for recreational development, for the provision of open spaces, for institutional expansions, and for the provision of social services. A major feature of the plan is to permanently close certain east-west streets, utilizing the right-of-way for open space. This project is proposed to be used by the City of Racine as a prototype for revitalization of other problem neighborhoods. A summary of the recommendations contained in the Southside Revitalization Project is shown on Map 4-4.

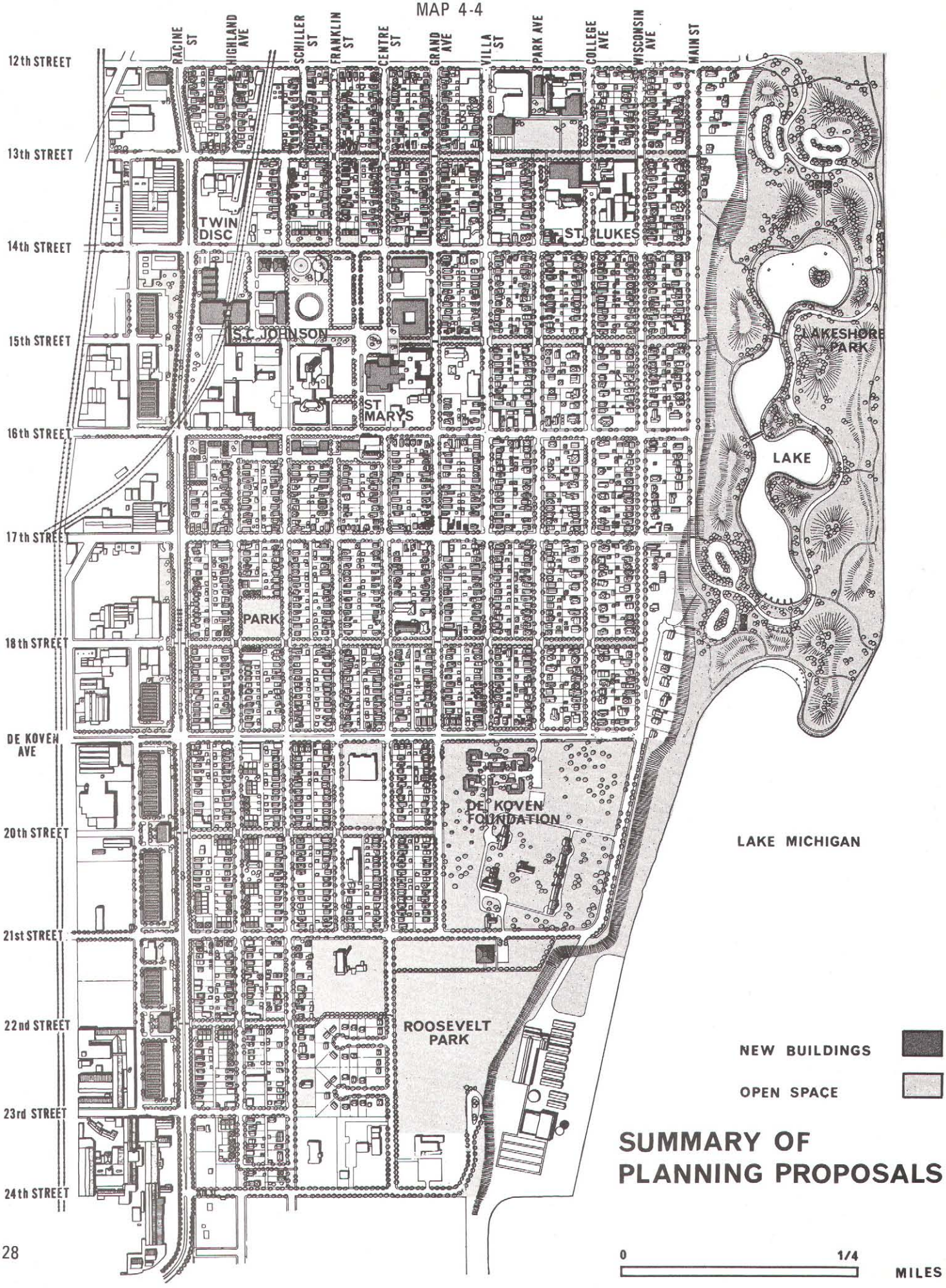
Preservation. In areas of structurally sound housing where blight is just beginning to appear and where adequate community facilities are available, a preservation program is appropriate. Basically, this consists of preserving existing desirable conditions by enforcing local regulations such as the Housing Code, Building Code, and Health and Safety Codes.

Development Guidance. Projected growth in the Planning District will involve a significant number of new housing

[18] *Ibid. Chapter VI, Map 6-4, p. 87.*

[19] *Llewelyn-Davies, Southside Revitalization Plan, 1970.*

MAP 4-4


RACINE ST
HIGHLAND AVE
SCHILLER ST
FRANKLIN ST
CENTRE ST
GRAND AVE
VILLA ST
PARK AVE
COLLEGE AVE
WISCONSIN AVE
MAIN ST
12th STREET
13th STREET
14th STREET
15th STREET
16th STREET
17th STREET
18th STREET
DE KOVEN AVE
20th STREET
21st STREET
22nd STREET
23rd STREET
24th STREET
TWIN DISC
S.C. JOHNSON
ST MARYS
ST. LUKES
LAKESHORE PARK
LAKE
PARK
DE KOVEN FOUNDATION
LAKE MICHIGAN
ROOSEVELT PARK
NEW BUILDINGS
OPEN SPACE
SUMMARY OF PLANNING PROPOSALS
0
1/4
MILES

units. To insure sound housing in all areas and sound neighborhood unit development, a county-wide, coordinated program of development guidance is needed. Basically, this consists of proper coordination and application of subdivision regulations, zoning regulations, building codes, housing codes, and other planning aids to good development.

Recommended Housing Plan

The Housing Plan for the Racine Urban Planning District is shown on Map 4-5. Each neighborhood and community is identified and general recommendations are indicated on the map pertaining to the types of treatment needed to improve housing conditions within the particular neighborhood.

Redevelopment and Clearance. Data from the 1969 Housing Inventory indicated that this type of problem condition is located in the residential areas surrounding the central business district and the older industrial areas along the Chicago and Northwestern Railway in the central city area. To serve as a guide in delineating treatment areas, detailed maps were prepared to show the location and extent of all recommended residential renewal areas. These maps include conservation areas, rehabilitation areas, clearance sites, low and moderate income housing areas, elderly housing sites, and public and semi-public lands expansion. Generalized recommendations for redevelopment and clearance programs are proposed in the neighborhoods as indicated. The detailed maps, while not a part of the plan, remain in the study files for potential future use.

Residential Rehabilitation Neighborhoods. For areas within neighborhoods which are not in need of redevelopment but do need substantial rehabilitation work, intensive code enforcement, some spot clearance, and public lands expansion, a separate category was used. In addition to the areas within the inner city, such as the Southside Revitalization Area, Sturtevant and Lakeside are recommended as rehabilitation neighborhoods. A separate study was made of the Jefferson-Herrick Neighborhood (Number Seven) where the 1990 land use plan proposes the continuance of the residential character of the neighborhood at about the same density. There are several areas in the neighborhood where it would be reasonable and attractive to have new multiple-family dwellings, especially along the slopes and bluffs of Cedar Bend and Horlick Park. Recommended treatment for the Jefferson-Herrick Neighborhood includes the utilization of now vacant residential lots, the removal and replacement of the substandard residential structures, the removal of floodland structures, the establishment of intensive code enforcement for residential building rehabilitation and for planned redevelopment. Intensive code enforcement is the key to the revitalization of this neighborhood. More stable conditions will encourage new investments in residential uses, thereby permitting about 40 remaining undeveloped lots to be utilized (see Map 4-6).

Preservation Neighborhoods. Based upon the 1969 Housing Inventory, there are some neighborhoods in the District which contain substandard dwellings but which may be classified as deteriorating and not dilapidated. Neighborhoods with this type of dwelling are identified on Map 4-5 and are recommended for code enforcement to correct the deteriorating conditions.

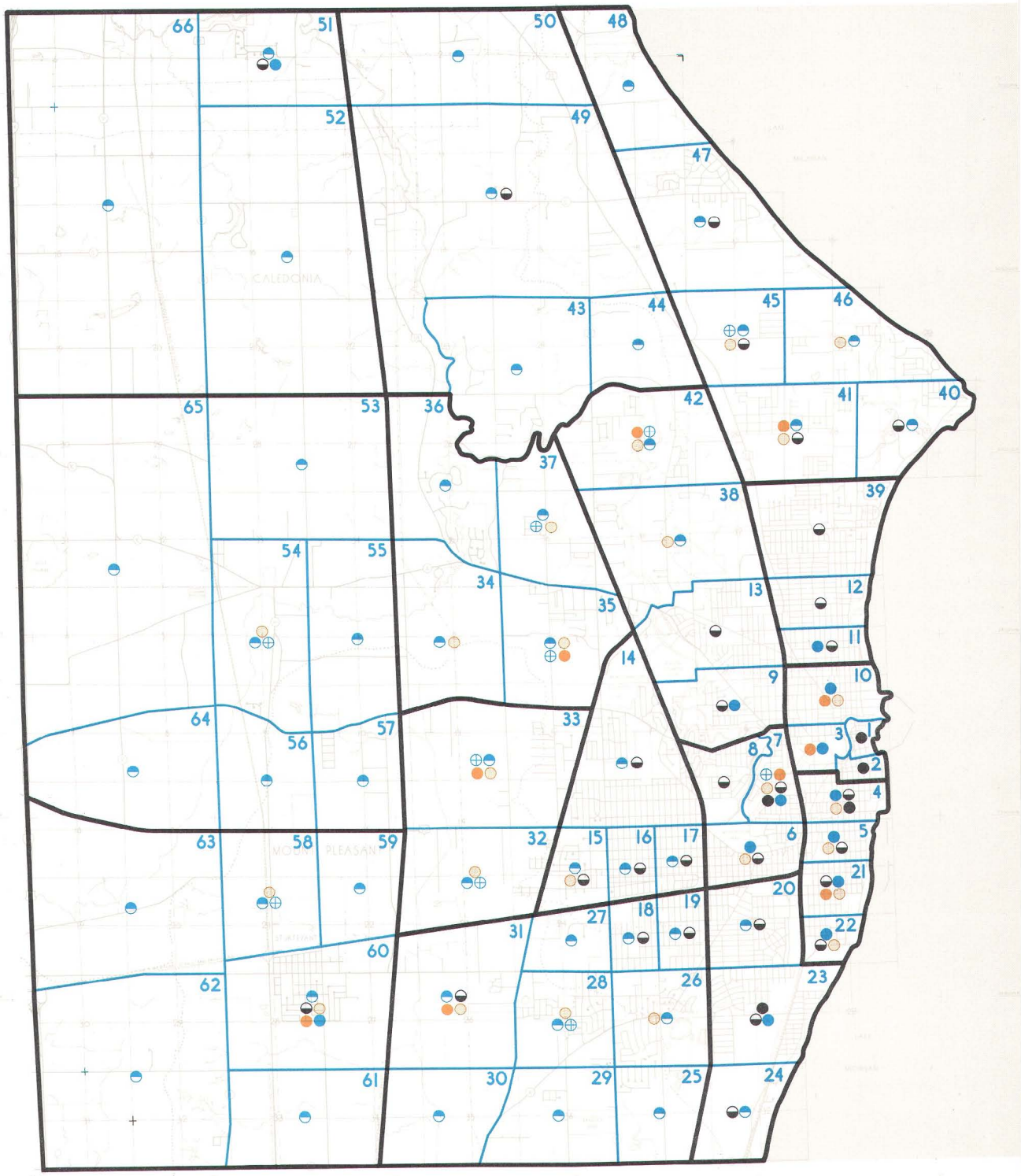
Development Guidance. All of the neighborhoods are recommended for development guidance of one type or another, depending upon the type of housing problem. Those neighborhoods which do not at present have a particular housing problem but may be in the process of developing or will be in the future, have been identified and are recommended for development guidance. Guidance should be in the form of advice provided to the owners and developers of property by the planning officials of the District applying the zoning, subdivision, building and housing codes. Although some of the neighborhoods are not recommended for development according to the 1990 land use plan, guidance should be provided in order to properly direct growth and development according to the plan.

Relocation Housing Areas. There are several neighborhoods indicated on the Housing Plan where relocation housing could be provided for persons displaced from governmental action or to carry out the housing policies, objectives and standards. Such governmental action might include redevelopment, highway construction or land acquisition for public purposes. Such areas are located in the Jefferson-Herrick, Peterson, Root River, and other neighborhoods.

Elderly Housing Areas. Several areas are also located on the Housing Plan for senior citizen housing, or housing for the elderly, as it is sometimes called. These areas are generally located in neighborhoods where community facilities are already available or are proposed in other plans contained in this report.

Low and Moderate Income Areas. Of primary importance is the identification of areas for low and moderate income housing to replace structures removed as part of spot clearance and code enforcement programs. In the Southside Revitalization Project, actual sites are designated to accommodate low and moderate income housing. Other areas in the Washington Park, Uptown, Franklin, Jones and Jefferson-Herrick Neighborhoods are also indicated. Additional areas are indicated in the Mt. Pleasant, Peterson,

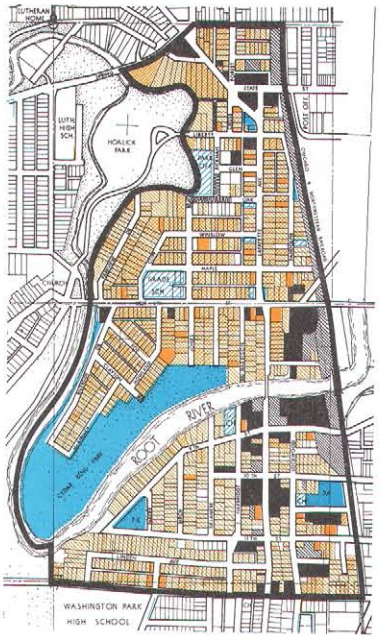
MAP 4-5



HOUSING PLAN

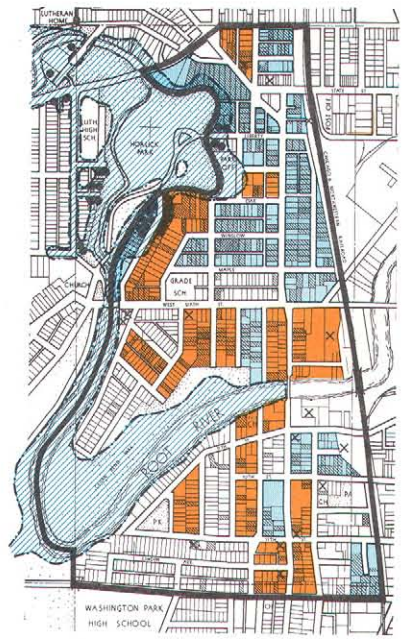
RACINE URBAN PLANNING DISTRICT

MAP 4-6



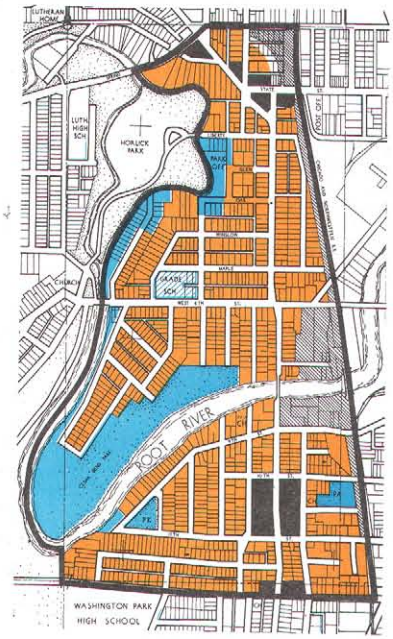
EXISTING LAND USE

- SINGLE FAMILY RESIDENCE
- TWO FAMILY RESIDENCE
- MULTIPLE FAMILY RESIDENCE
- PUBLIC AND SEMI-PUBLIC
- PARK
- INDUSTRY
- COMMERCE
- UNOPENED STREET



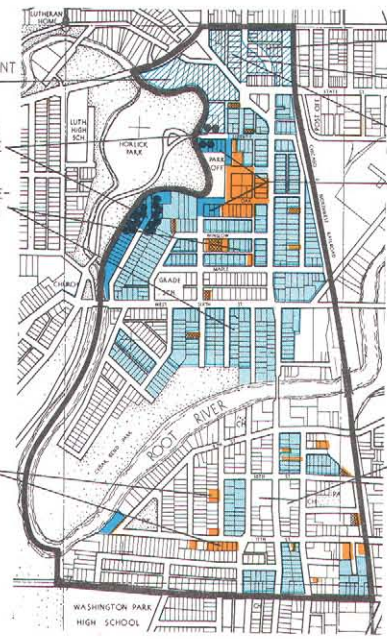
BUILDING CONDITIONS

- 20-50% – DWELLING STRUCTURES DETERIORATED
- 51% OR MORE – DILAPIDATED CONDITION BY BLOCK
- DILAPIDATED DWELLING STRUCTURES
- DETERIORATING DWELLING STRUCTURES
- OTHER DILAPIDATED AND DETERIORATING STRUCTURES
- ROOT RIVER FLOOD PLAIN (100 YEAR FLOOD) AND RESIDENCES WITH FIRST FLOOR FLOODING



1990 LAND USE PLAN

- HIGH DENSITY RESIDENTIAL
- PUBLIC AND SEMI-PUBLIC
- PARK
- COMMERCE
- INDUSTRY



RESIDENTIAL REDEVELOPMENT FOR MULTIPLE FAMILY DWELLINGS

BUILDINGS IN THE FLOOD PLAIN WHICH SHOULD BE REMOVED

INTENSIVE CODE ENFORCEMENT AND REHABILITATION AREAS

INDUSTRIAL REDEVELOPMENT

MEMORIAL DRIVE REROUTING

POSSIBLE TOWN HOUSE AND COMMERCIAL AREA

POSSIBLE PARK EXPANSION

FILLING IN OF EXISTING RESIDENTIAL LOTS WITH NEW DWELLINGS

IMPROVE AS NEIGHBORHOOD COMMERCIAL CENTER

RECOMMENDED TREATMENT

- NEW RESIDENTIAL CONSTRUCTION ON VACANT LOTS
- NEW RESIDENTIAL CONSTRUCTION-REMOVAL OF DILAPIDATED STRUCTURES
- INTENSIVE RESIDENTIAL REHABILITATION
- NORMAL RESIDENTIAL REHABILITATION
- PLANNED REDEVELOPMENT
- PARK EXPANSION
- RESIDENCES IN THE FLOOD PLAIN TO BE REMOVED

LEGEND

- COUNTY LINE
- TOWN AND RANGE LINE
- SECTION LINE
- QUARTER SECTION LINE
- STATE PLANE COORDINATE GRID
- INCORPORATED CITY OR VILLAGE
- PROPERTY LINE
- INTERSTATE HIGHWAY
- U.S. NUMBERED HIGHWAY
- STATE TRUNK HIGHWAY
- COUNTY TRUNK HIGHWAY
- LOCAL OR MINOR STREET
- RAILROAD
- RIVER AND LAKE SHORELINE
- INTERMITTENT STREAM OR WATERCOURSE
- BREAKWATER
- MAJOR PUBLIC LAND

RACINE COUNTY BOARD OF SUPERVISORS
SOUTHEASTERN WISCONSIN REGIONAL PLANNING COMMISSION
HARLAND BARTHOLOMEW AND ASSOCIATES
CITY PLANNERS – CIVIL ENGINEERS – LANDSCAPE ARCHITECTS
CHICAGO ST. LOUIS

COMPILED BY HARLAND BARTHOLOMEW AND ASSOCIATES FROM S.E.W.R.P.C. AERIAL PHOTOGRAPHS, BASE MAPS, AND TOPOGRAPHIC MAPS, RACINE COUNTY TOPOGRAPHIC MAPS, RACINE COUNTY HIGHWAY DEPT. AND MILE DEPT. INFORMATION AND RACINE UNITED SCHOOL DIST. NO. 1 INFORMATION. ON WISCONSIN STATE PLANE COORDINATE GRID, SOUTH ZONE (LAMBERT CONFORMAL CONIC PROJECTION).

JEFFERSON-HERRICK NEIGHBORHOOD HOUSING RECOMMENDATIONS

RACINE URBAN PLANNING DISTRICT

DRAWN BY:	DATE: DEC. 7, 1971	MAP NUMBER
CHECKED BY:	DATE:	
APPROVED BY:	DATE:	
PROJECT DESIGN:		
SCALE:		SECTION T N, R E
REVISED BY:	DATE:	RACINE COUNTY

Root River, 4½ Mile Road, and Sturtevant Neighborhoods. The Housing Plan indicates areas to adequately accommodate 500 to 550 low and moderate income families.

Summary of the Housing Plan

More than 1,500 new housing units are forecast to be needed in the District each year for the next 20 years in order to provide an additional 30,000 dwelling units for the estimated 1990 population of 225,000 people. This projected number includes units not only to accommodate the forecast growth but also to off-set any loss for dilapidated structures (about 400) removed in spot clearance projects. This estimate is based upon preservation and rehabilitation programs which are designed to restore about 10 percent of the existing housing stock of about 4,000 dwelling units by 1990 to a sound condition. In essence, a series of projects similar to the Southside Revitalization Project are proposed for the immediate future for neighborhoods which are primarily concentrated around the Racine Central Business District, but also include Sturtevant, Caddy Vista, Lakeside, and Sheridan Woods.

Two neighborhood development plans were prepared as a part of this section for the Peterson and Root River Neighborhoods. The basic objective of the detailed neighborhood plans is to illustrate how the principles, objectives, standards and plans recommended in the report can be carried out and coordinated with existing development.

A variety of housing improvement programs are recommended to help eliminate blight and guide new growth according to the 1990 land use plan. These programs include clearance and redevelopment, residential rehabilitation, preservation and development guidance. The Southside Revitalization Project is included in the text to help illustrate the ways in which these programs may be carried out.

In addition to the neighborhoods recommended for treatment of one type or another, the Housing Plan recommends locations for 350 relocation housing units for persons displaced from governmental actions other than spot clearance and redevelopment. Areas are also recommended for 250 senior citizen dwellings and 550 low and moderate income families by 1990.

TRANSPORTATION PLAN

Urban communities require a complete and intrarelated system of transportation facilities, including: an arterial street system; major parking facilities to satisfy parking demand at key locations; public transit facilities; harbor, airport, rail, bus, and truck terminal facilities. This section of the general development plan presents recommendations on three important transportation elements: the arterial street and highway system, major parking facilities, and mass transportation. Other modes of transportation, privately owned and operated, are discussed to illustrate their relationship to other plan elements.

Arterial Street and Highway System Plan

The Prospectus for the Racine Urban Planning District comprehensive planning program specified that the arterial street and highway system prepared as part of the regional transportation plan and adopted by the SEWRPC and by Racine County be utilized as the basis for the transportation plan element of the comprehensive District plan. The Prospectus further noted that Racine County had mounted a jurisdictional highway system planning program designed to recommend the future jurisdiction of all arterial highway and street facilities included in the Racine County portion of the adopted regional transportation plan; that is, the jurisdictional plan would contain specific recommendations as to which levels and agencies of government should build, operate, and maintain the various arterial street and highway facilities comprising the total system. No major inventory or analytical efforts relating to transportation planning were, therefore, anticipated in the Prospectus for the District planning program.

Since preparation of the Prospectus, however, the City of Racine, following a public hearing on the matter, determined to dispose of the abandoned Chicago, North Shore and Milwaukee Railroad right-of-way within the city, which right-of-way was recommended as a potential location for the Racine Loop Freeway in the adopted regional transportation plan. This decision carries with it the clear implication that the city is opposed to the ultimate development of the proposed Loop Freeway. This freeway, while not of regional significance, is of great local significance, particularly in terms of alleviating traffic congestion and promoting economic development in the City of Racine. The City of Racine purchased the abandoned right-of-way within the city limits in 1965, in order to preserve intact the right-of-way for possible future public use. At this time, several portions of the right-of-way have already been sold by the city, the most significant being a section 1.75 miles long sold to the Wisconsin Electric Power Company. In making the decision to dispose of the abandoned right-of-way, the Common Council and the Plan Commission of the City of Racine gave explicit consideration to the future arterial street and highway system needs of the Racine area, including the possibility of building the Racine Loop Freeway. In so doing, the city examined alternatives to the Racine Loop Freeway, including building no Loop Freeway at all and building a standard surface arterial on a portion of the abandoned

right-of-way. To assist in the deliberations on this matter, the city requested analyses of the alternatives from the SEWRPC, the results of which were set forth in a series of staff memoranda prepared by the SEWRPC and transmitted to the City of Racine.[20] After considering these alternative system analyses, the Common Council of the City of Racine on August 18, 1970, as already noted, decided to dispose of the abandoned North Shore right-of-way to the Transit Right-of-Way Authority created under Section 66.941 of the Wisconsin Statutes. The statutes require that the Authority be given an opportunity to purchase any part of any abandoned interurban railway or railroad right-of-way which may be owned by a municipality, should that municipality wish to dispose of the right-of-way. The Authority, however, declined to purchase the right-of-way, thus clearing the way for the city to dispose of it in any way the city saw fit.

The decision by the City of Racine to dispose of the abandoned right-of-way intended for use for the Loop Freeway in the adopted regional transportation plan has important ramifications affecting all of the seven local units of government in the District. For this reason, the assumption made in the Prospectus that the arterial street and highway system plan prepared as a part of the regional transportation plan be adopted for use in the District planning program, had to be modified in order that the question of whether or not the Racine Loop Freeway should be included in the recommended comprehensive District plan, which had been reopened by the city's action to dispose of the abandoned Chicago, North Shore and Milwaukee Railroad right-of-way, could be resolved on a cooperative, areawide basis. Accordingly, the following discussion presents alternative arterial street and highway system plans for the Racine Urban Planning District, including an alternative based upon an assumption that the Racine Loop Freeway be constructed as originally recommended. It is essential that all of the local units of government in the Racine area carefully consider the alternative arterial street and highway systems presented in order that agreement can be reached upon a recommended transportation system plan and that, based upon such agreement, the jurisdictional highway system planning program being conducted by the county can be concluded. Absent such agreement, the jurisdictional highway system planning program could not be completed readily and meaningfully, and a cloud would remain over the question of whether or not the Racine Loop Freeway should remain in the long-range plans for the development of the District.

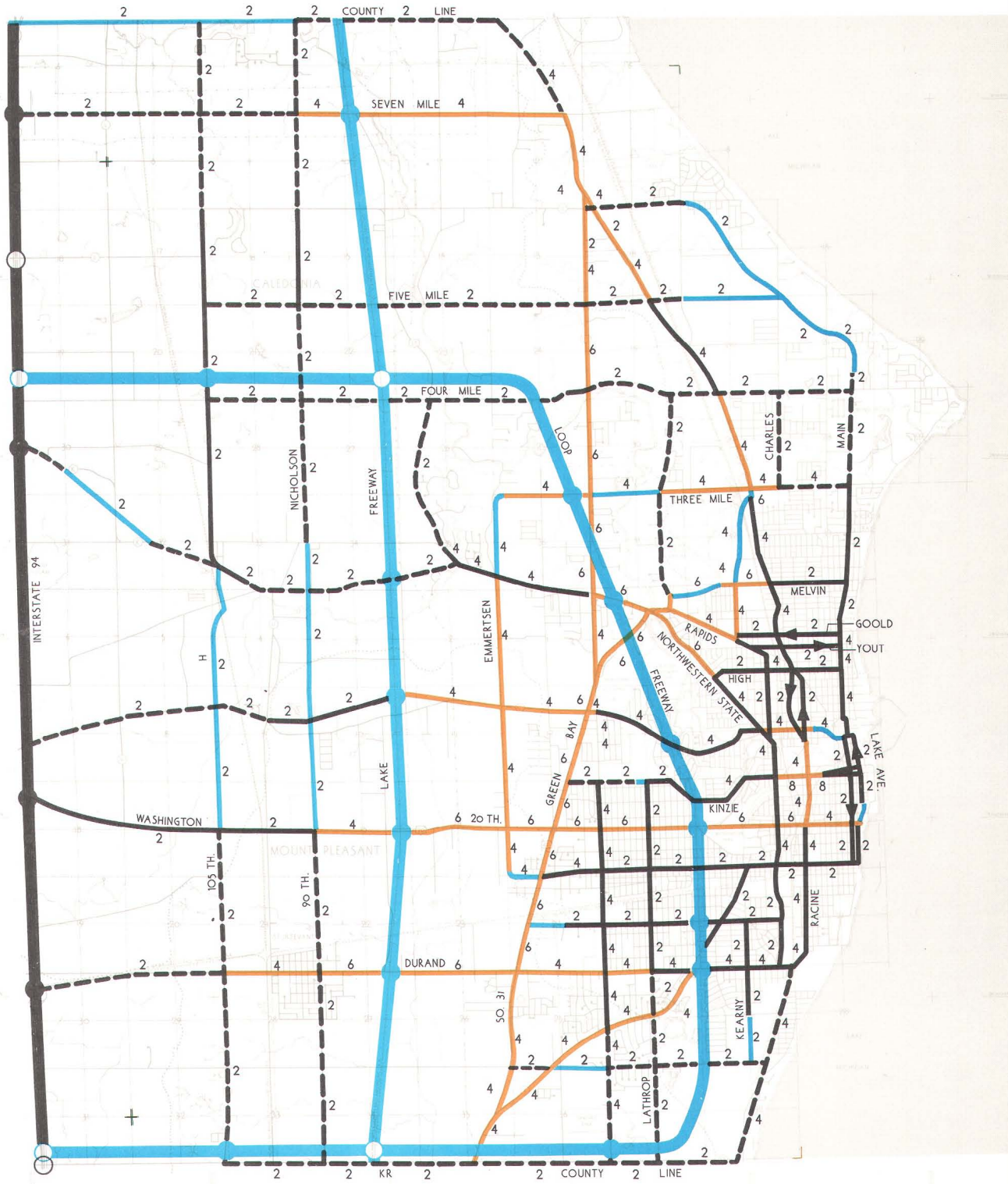
Five basic arterial street and highway system alternatives for the District have been prepared and analyzed. These include: (1) an arterial street system with a Loop Freeway on the abandoned Chicago, North Shore and Milwaukee Railroad right-of-way as recommended in the adopted regional transportation plan; (2) an arterial system that substitutes a standard surface arterial on a portion of the right-of-way designated for the Loop Freeway under the first alternative; (3) an alternative that contains neither the Loop Freeway nor any standard surface arterial on the right-of-way designated for the Loop Freeway; (4) an alternative that contains modifications to the third alternative, which modifications minimize the necessary relocation of homes, businesses, and industrial structures; and (5) an alternative based on the 1970 arterial street and highway system and which assumes neither reconstruction of existing facilities nor any new facility construction. Each of these five alternatives is described and compared in the following discussion with respect to system performance, cost, and structure displacement. It should be noted that the cost estimates presented below do not include the cost of acquiring commercial and industrial structures or of relocating the establishments located therein. Although it would be highly desirable to include such estimates, it is not possible to do so without detailed right-of-way, appraisal, and relocation studies. The total number of commercial and industrual structures affected by each alternative plan has been estimated; it was considered unreasonable, however, to attempt to assign an average unit cost in order to arrive at total cost estimates because of the great variety of sizes and types of structures. Such an approach was used, however, in estimating the cost of acquiring residential structures, where there is less variety in size and type and where historic data on which to base average cost estimates are available.

Loop Freeway Alternative. The first alternative arterial street and highway system plan considered for the Racine Urban Planning District consists of the adopted regional transportation plan as refined in the Racine County jurisdictional highway system planning program currently underway. This alternative system plan is shown on Map 4-7. It provides three major freeway facilities to serve the growing transportation demands within the District: the proposed Lake Freeway through the District in the vicinity of the Chicago and Northwestern Railroad freight line through the Towns of Caledonia and Mt. Pleasant; the proposed Racine Loop Freeway from its intersection with IH 94 through the Towns of Caledonia and Mt. Pleasant and the City of Racine returning to IH 94; and existing IH 94. The total arterial street and highway system under this alternative plan would consist of about 210 miles of

---

[20] *See SEWRPC staff memoranda dated September 30, 1969; April 30, 1970; and July 30, 1969, presenting traffic flow, transportation service level, structure displacement data, and attendant cost estimates for alternative 1990 arterial street and highways systems in the Racine Urban Planning District.*

MAP 4-7



RESURFACE (STANDARD ARTERIAL)
RESURFACE (FREEWAY)
RECONSTRUCTION FOR SAME CAPACITY (STANDARD ARTERIAL)
RECONSTRUCTION FOR ADDITIONAL CAPACITY (STANDARD ARTERIAL)
NEW CONSTRUCTION (STANDARD ARTERIAL)
NEW CONSTRUCTION (FREEWAY)
EXISTING FREEWAY (STANDARD SURFACE ARTERIAL INTERCHANGE)

EXISTING FREEWAY (STANDARD SURFACE ARTERIAL INTERCHANGE - TO BE CLOSED)
PROPOSED FREEWAY (STANDARD SURFACE ARTERIAL INTERCHANGE)
PROPOSED FREEWAY (FREEWAY INTERCHANGE (NO LOCAL ACCESS)
ONE-WAY STREETS
2 NUMBER OF THROUGH TRAFFIC LANES

ARTERIAL STREET AND HIGHWAY SYSTEM PLAN NO. 1
(LOOP FREEWAY ALTERNATIVE)

RACINE URBAN PLANNING DISTRICT

facilities, of which about 45 miles, or about 20 percent, would consist of freeways and the remaining 165 miles of standard surface arterials. The freeway mileage would be composed of approximately 21 miles of new Loop Freeway, approximately 12 miles of new Lake Freeway, and 12 miles of existing IH 94. In addition to the construction of the Lake and Loop Freeways, this alternative plan would provide for the construction of approximately 17 miles of new standard arterial streets. Finally, in order to provide needed additional traffic capacity, this alternative would require the reconstruction of about 44 miles of surface arterial facilities and the resurfacing and structural upgrading of an additional 116 miles of such facilities. The location of the specific improvements required, as well as the number of through traffic lanes recommended for each arterial segment, are shown on Map 4-7. The assignment of specific construction cross-sections is recommended to be completed as part of the Racine County jurisdictional highway planning program.

Traffic assignments to and analyses of this alternative arterial street and highway system indicate that less than one mile, or less than one percent of the total arterial street and highway system within the District, could be expected to remain congested if the plan were to be adopted and fully implemented. The arterial segments that could be expected to remain congested are: Twelfth Street from Main Street to Racine Street, and West Street from State Street to Memorial Drive.

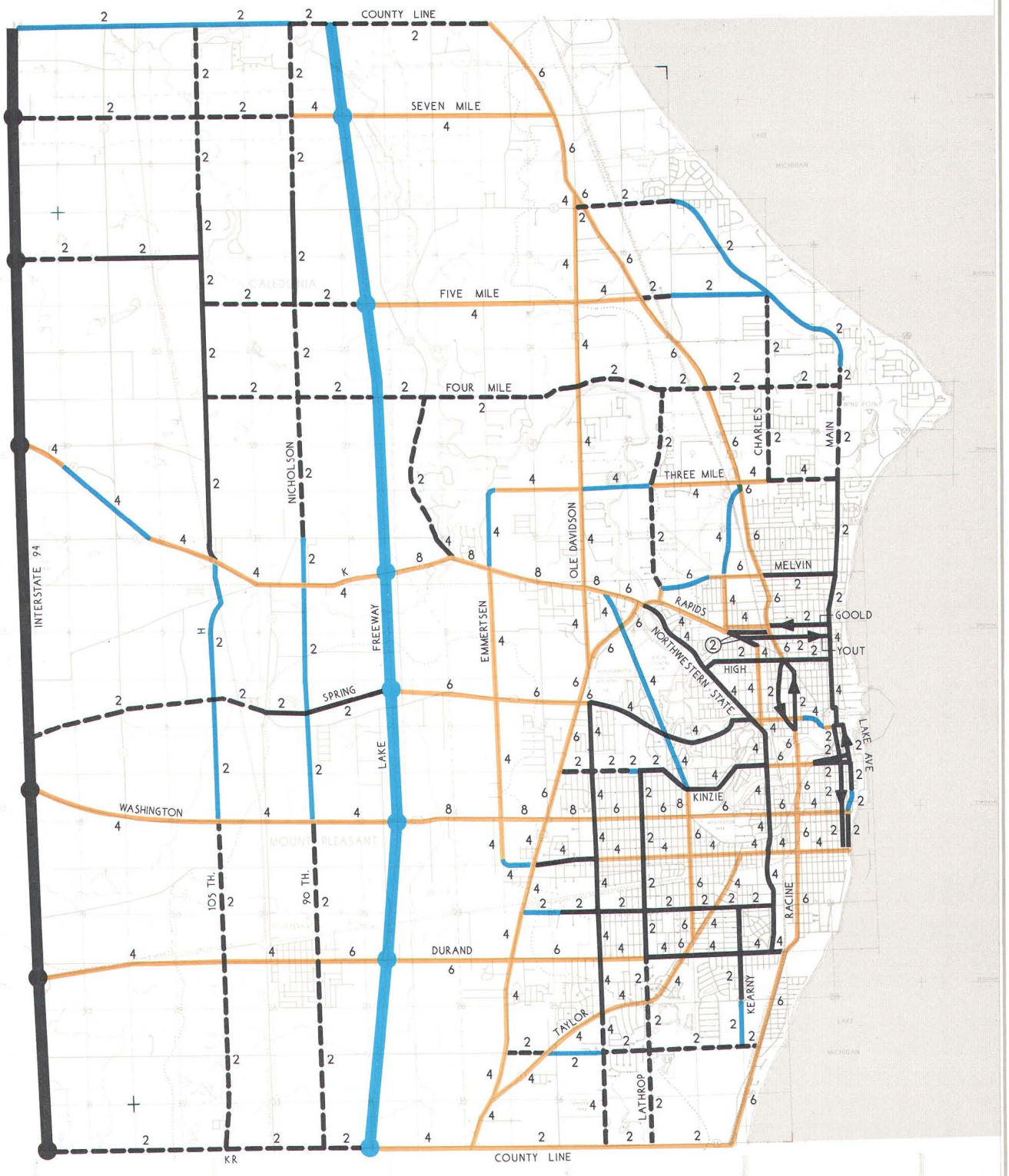
The total cost of constructing the first alternative arterial street and highway system considered was estimated, in 1970 dollars, at about $119 million, including about $49 million for freeway construction and $70 million for standard arterial construction. Under this alternative it is estimated that a total of 314 residential and other major structures would be displaced, with the occupants thereof requiring relocation assistance. An estimate of the cost of providing relocation assistance for occupants of the residential structures is included in the total construction and right-of-way costs presented above. If this system were implemented, it is estimated that on an average weekday in 1990, about 1.5 million vehicle miles of travel, or about 45 percent of the total arterial travel in the District, would be carried on the freeway system, with the remaining 1.8 million vehicle miles of travel, or about 55 percent, carried on the standard surface arterial street and highway system.

West Boulevard Alternative. The second alternative arterial street and highway system plan considered for the Racine Urban Planning District differs from the first alternative only in that the proposed Loop Freeway has been eliminated and a standard surface arterial along that portion of the proposed Loop Freeway right-of-way from Taylor Avenue to STH 38, which includes existing West Boulevard from Taylor Avenue to W. Kinzie Avenue, substituted. This alternative system plan is shown on Map 4-8. It represents a minimal freeway system for the District, providing for the inclusion of the proposed Lake Freeway through the District in the vicinity of the Chicago and Northwestern Railroad freight line, as well as existing IH 94. The total arterial street and highway system under this alternative plan would consist of about 196 miles of facilities, of which about 24 miles, or about 12 percent, would consist of freeway mileage, composed of 12 miles of existing IH 94 and approximately 12 miles of new Lake Freeway.

In addition to the construction of the Lake Freeway, this alternative would provide for the construction of about 20 miles of new standard surface arterial streets and highways. Finally, this alternative plan would require the reconstruction, in order to provide needed additional traffic capacity, of about 72 miles of arterial facilities and the resurfacing and structural upgrading of an additional 92 miles of facilities. The specific improvements, as well as the number of through traffic lanes recommended for each arterial segment, are shown on Map 4-8. It is important to note that, because this alternative does not contain the Loop Freeway, approximately 40 miles of surface arterial facilities would have to be reconstructed in order to provide the additional traffic capacity needed to meet the traffic volumes anticipated in the District without increasing congestion to intolerable levels. Of this total of 40 miles of facilities, as shown on Map 4-9, about 30 miles represent facilities which would not require reconstruction for additonal capacity if the Loop Freeway were constructed, with the remaining 10 miles representing the provision of additional lanes of moving traffic on wider rights-of-way for certain facilities that need reconstruction even if the Loop Freeway is constructed. For example, Five Mile Road from STH 32 to the Lake Freeway would not require reconstruction for additional capacity if the Loop Freeway was built. Under the second alternative, however, this arterial facility would require reconstruction to provide for four lanes of moving traffic. Similarly, Washington Avenue from Ohio Street to the Lake Freeway, which would have to be reconstructed to provide for six moving lanes of traffic if the Loop Freeway were built, would have to be reconstructed to provide eight lanes for moving traffic if the Loop Freeway were not built.

Traffic assignments to this alternative arterial street and highway system indicate that approximately six miles, or about three percent of the total arterial system within the District, could be expected to remain congested. The arterial segments that could be expected to remain congested are: Taylor Avenue from Lathrop Avenue to West Boulevard; Washington Avenue from the Lake Freeway to STH 31; Northwestern Avenue and CTH K

MAP 4-8

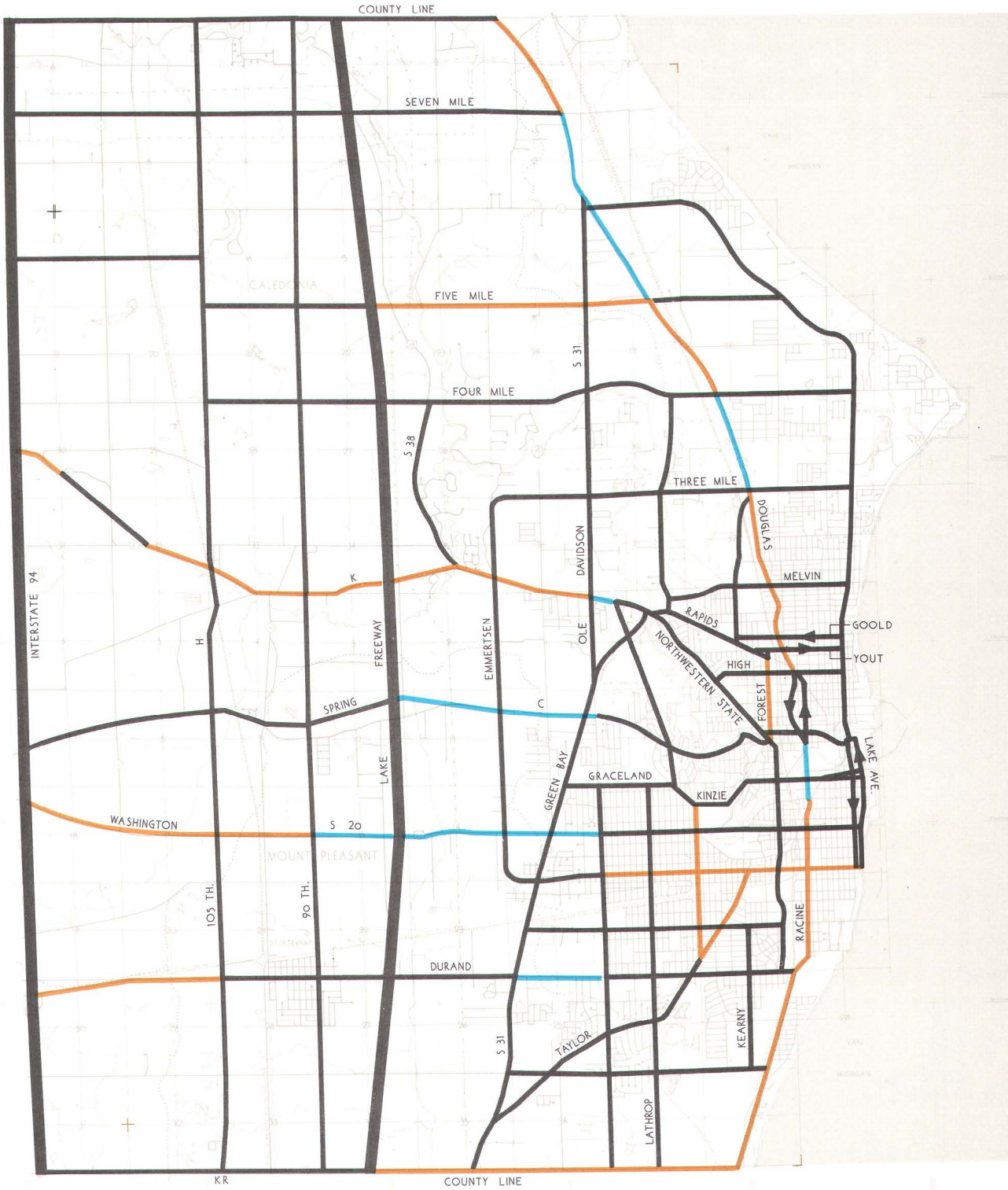


RESURFACE (STANDARD ARTERIAL)
RESURFACE (FREEWAY)
RECONSTRUCTION FOR SAME CAPACITY (STANDARD ARTERIAL)
RECONSTRUCTION FOR ADDITIONAL CAPACITY (STANDARD ARTERIAL)
NEW CONSTRUCTION (STANDARD ARTERIAL)
NEW CONSTRUCTION (FREEWAY)

EXISTING FREEWAY (STANDARD SURFACE ARTERIAL INTERCHANGE)
PROPOSED FREEWAY (STANDARD SURFACE ARTERIAL INTERCHANGE)
ONE-WAY STREETS
2 NUMBER OF THROUGH TRAFFIC LANES

ARTERIAL STREET AND HIGHWAY SYSTEM PLAN NO. 2
(WEST BOULEVARD ALTERNATIVE)
RACINE URBAN PLANNING DISTRICT

MAP 4-9



FREEWAY NOT AFFECTED BY DELETION OF LOOP FREEWAY

STANDARD SURFACE ARTERIAL NOT AFFECTED BY DELETION OF LOOP FREEWAY

STANDARD SURFACE ARTERIAL REQUIRING RECONSTRUCTION FOR ADDITIONAL CAPACITY (REQUIRES ONLY RESURFACING OR SAME CAPACITY RECONSTRUCTION IF LOOP FREEWAY IS CONSTRUCTED)

STANDARD SURFACE ARTERIAL REQUIRING RECONSTRUCTION FOR ADDITIONAL CAPACITY (REQUIRES LESS RECONSTRUCTION FOR ADDITIONAL CAPACITY IF LOOP FREEWAY IS CONSTRUCTED)

ONE-WAY STREETS

IMPACT ON THE STANDARD ARTERIAL SYSTEM
OF NOT CONSTRUCTING THE LOOP FREEWAY
(WEST BOULEVARD ALTERNATIVE)

RACINE URBAN PLANNING DISTRICT

from the proposed extension of West Boulevard to the Lake Freeway; the westerly extension of Melvin Avenue from Mt. Pleasant Avenue to Green Bay Road; Green Bay Road from the extension of Melvin Avenue to Rapids Drive; Rapids Drive from Green Bay Road to Northwestern Avenue; and CTH MM from Northwestern Avenue to the proposed extension of West Boulevard.

The total cost of constructing the second alternative arterial street and highway system considered was estimated, in 1970 dollars, at about $121 million, including about $21 million for freeway construction and $100 million for standard surface arterial construction. Under this alternative it is estimated that a total of 415 residential and other major structures would be displaced, with the occupants thereof requiring relocation assistance. An estimate of the cost of providing relocation assistance for residential property is included in the total construction and right-of-way costs presented above. If this system plan were adopted and implemented, it is estimated that on an average weekday in 1990 about 1.1 million vehicle miles of travel, or about 30 percent of the arterial travel in the District, will be carried on the freeway system, with the remaining 2.2 million vehicle miles of travel, or about 70 percent of travel, carried on the standard surface arterial street system.

No Loop Freeway-No West Boulevard Alternative. The third alternative arterial street and highway system plan considered for the Racine Urban Planning District differs from the first and second alternative plans in that neither the proposed Loop Freeway nor a standard surface arterial along any portion of the Loop Freeway right-of-way was included. This alternative system plan is shown on Map 4-10. Like the second alternative plan, this alternative represents a minimal freeway system for the District, providing for the inclusion of the proposed Lake Freeway through the District in the vicinity of the Chicago and Northwestern Railroad freight line, as well as existing IH 94.

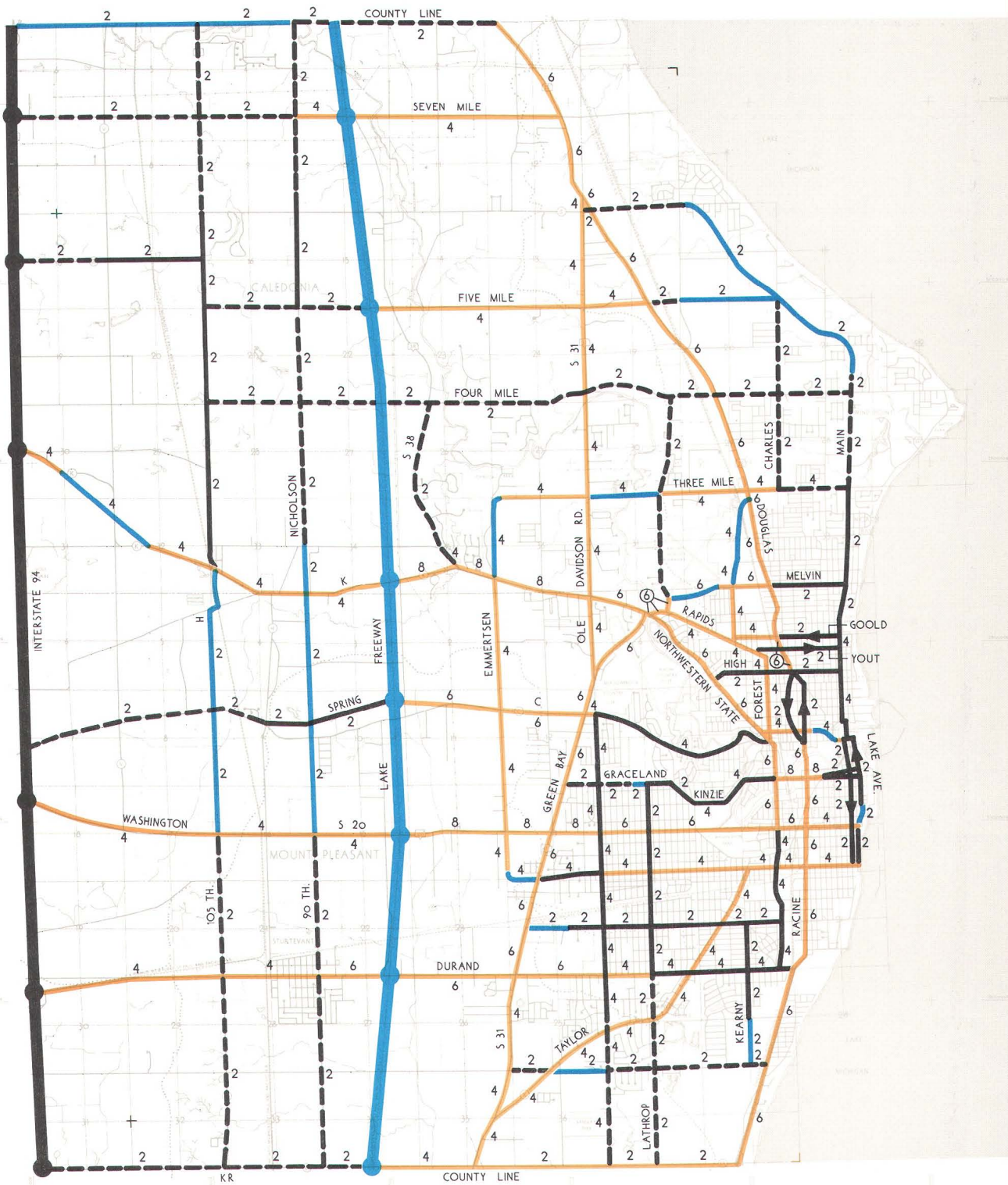
The total arterial street and highway system under this alternative plan would consist of approximately 192 miles of facilities, of which about 24 miles, or 13 percent, would consist of freeway mileage, including 12 miles of existing IH 94 Freeway and approximately 12 miles of new Lake Freeway. In addition to the construction of the Lake Freeway, this alternative plan would provide for the construction of about 17 miles of new standard arterial streets and highways, as shown on Map 4-10. Finally, this alternative plan would require the reconstruction, for capacity purposes, of about 74 miles of arterial facilities and the resurfacing and structural upgrading of an additional 89 miles of facilities. The specific improvements, as well as the number of through traffic lanes recommended for each arterial segment, are shown on the map. It is important to note that, because this alternative plan does not contain the Loop Freeway, about 38 miles of facilities would have to be reconstructed for additional capacity in order to meet the traffic volumes anticipated in the District without increasing congestion to intolerable levels. Of this total of 38 miles of facilities, as shown on Map 4-11, 29 miles represent facilities which would not require reconstruction for additional capacity if the Loop Freeway were constructed, with the remaining nine miles constituting the provision of additional lanes of moving traffic on wider rights-of-way for certain facilities that need reconstruction even if the Loop Freeway were built.

Traffic assignments to this alternative arterial street and highway system indicate that approximately three miles of surface arterials, or about one percent of the total arterial system, could be expected to remain congested even though certain of these facilities would be improved. The arterial segments that would remain congested are: Washington Avenue from the Lake Freeway to STH 31; Memorial Drive from State Street to Sixth Street; Northwestern Avenue from State Street to West Street; and Sixteenth Street from Taylor Avenue to Memorial Drive.

The total cost of constructing the third alternative arterial street and highway system considered was estimated, in 1970 dollars, at about $113 million, including about $21 million for freeway construction and $92 million for standard arterial construction. Under this alternative it is estimated that a total of 374 residential and other major structures would be displaced, with the occupants therein requiring relocation assistance. An estimate of the cost of providing relocation assistance for residential property is included in the total construction and rights-of-way costs presented above. If this arterial system plan is implemented, it is estimated that on an average weekday in 1990 about 1.1 million vehicle miles of travel, or about 30 percent of the total arterial travel in the District, will be carried on the freeway system, with the remaining 2.2 million vehicles miles of travel, or about 70 percent of travel, carried on the standard arterial street system.

Minimum Relocation Alternative. The three previous alternative arterial street and highway plans were designed to provide nearly equal levels of traffic service. As can be noted, the number of miles of congested streets were similar and minimal in all three instances. Without the Loop Freeway, however, extensive arterial street widening and new rights-of-way for arterial street improvements were required in the West Boulevard and No Loop Freeway-No West Boulevard alternatives to provide adequate levels of traffic service throughout the District.

MAP 4-10



LEGEND

- COUNTY LINE
- TOWN AND RANGE LINE
- SECTION LINE
- QUARTER SECTION LINE
- STATE PLANE COORDINATE GRID
- INCORPORATED CITY OR VILLAGE
- INTERSTATE HIGHWAY
- U.S. NUMBERED HIGHWAY
- STATE TRUNK HIGHWAY
- COUNTY TRUNK HIGHWAY
- LOCAL OR MINOR STREET
- RAILROAD
- RIVER AND LAKE SHORELINE
- INTERMITTENT STREAM OR WATERCOURSE
- MAJOR PUBLIC AND SEMI-PUBLIC LAND
- POWER LINES
- MAJOR WATERSHED
- BREAKWATER

- RESURFACE (STANDARD ARTERIAL)
- RESURFACE (FREEWAY)
- RECONSTRUCTION FOR SAME CAPACITY (STANDARD ARTERIAL)
- RECONSTRUCTION FOR ADDITIONAL CAPACITY (STANDARD ARTERIAL)
- NEW CONSTRUCTION (STANDARD ARTERIAL)
- NEW CONSTRUCTION (FREEWAY)
- EXISTING FREEWAY (STANDARD SURFACE ARTERIAL INTERCHANGE)
- PROPOSED FREEWAY (STANDARD SURFACE ARTERIAL INTERCHANGE)
- ONE-WAY STREETS
- 2 NUMBER OF THROUGH TRAFFIC LANES

RACINE COUNTY BOARD OF SUPERVISORS

SOUTHEASTERN WISCONSIN REGIONAL PLANNING COMMISSION

HARLAND BARTHOLOMEW AND ASSOCIATES

ARTERIAL STREET AND HIGHWAY SYSTEM PLAN NO. 3
(NO LOOP FREEWAY-NO WEST BOULEVARD ALTERNATIVE)

RACINE URBAN PLANNING DISTRICT

MAP 4-11

IMPACT ON THE STANDARD ARTERIAL SYSTEM
OF NOT CONSTRUCTING THE LOOP FREEWAY
(NO LOOP FREEWAY-NO WEST BOULEVARD ALTERNATIVE)
RACINE URBAN PLANNING DISTRICT

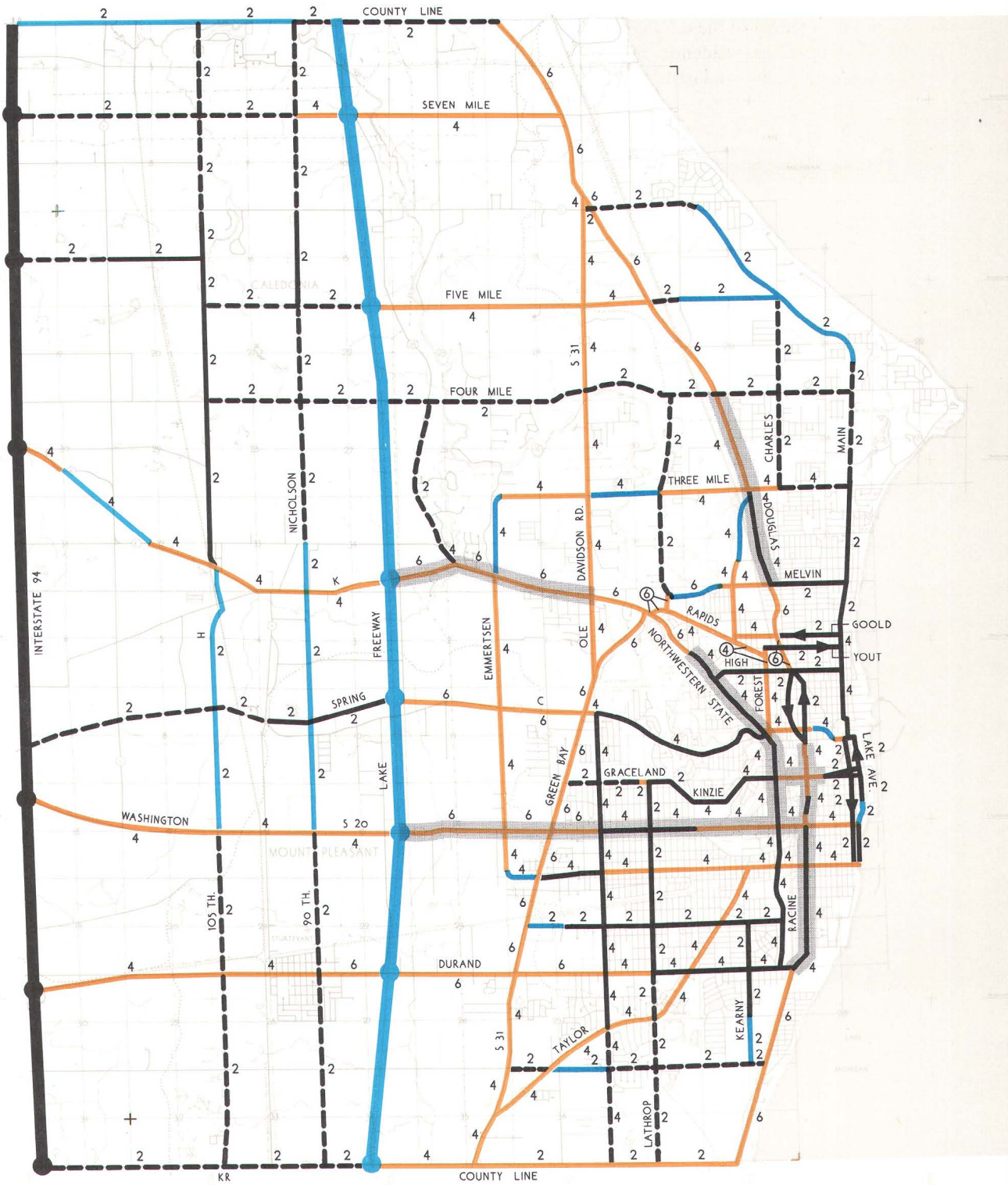
In recognition of the potential of the undesirable aspects of extensive right-of-way takings, residential relocations, and removal of commercial and industrial properties for transportation system improvements, a fourth alternative was developed. This fourth alternative arterial street and highway system considered for the District is based on the third alternative, differing from that alternative in that there is no reconstruction of existing arterial facilities for additional capacity recommended where such reconstruction would entail substantial displacement of residential, commercial, industrial, or other major structures, and a lower level of traffic service has been accepted on those segments of arterial facilities requiring eight moving traffic lanes to provide for only six moving traffic lanes. In a manner similar to the second and third alternatives, this alternative represents a minimal freeway system for the District, and includes existing IH 94, as well as the proposed Lake Freeway in the vicinity of the Chicago and Northwestern Railroad freight line. Unlike the first three alternatives, however, this alternative plan was not developed to provide levels of service on most arterials throughout the system comparable to the previous three alternatives, but rather to accept a lower level of service along several streets in order to reduce the displacements of residential, commercial, industrial, or other major structures.

This alternative system, shown on Map 4-12, consists of about 192 miles of facilities, of which about 24 miles, or about 13 percent, would consist of freeway mileage, including 12 miles of existing IH 94 Freeway and approximately 12 miles of new Lake Freeway. In addition to the construction of the Lake Freeway, this alternative would provide for the construction of about 17 miles of new standard surface arterial streets and highways. Finally, this alternative would require the reconstruction, in order to provide needed additional traffic capacity, of about 68 miles of arterial facilities and the resurfacing and structural upgrading of an additional 95 miles of facilities. The specific improvements, as well as the number of through traffic lanes recommended for each arterial segment, are shown on Map 4-12. It is important to note that, because this alternative plan does not contain the Loop Freeway, approximately 30 miles of surface arterial facilities would have to be reconstructed in order to provide the additional traffic capacity needed to nearly meet the traffic volumes anticipated in the District without taking right-of-way involving substantial relocation. Of this total of 30 miles of facilities, as shown on Map 4-13, about 26 miles represent facilities which would not require reconstruction for additional capacity if the Loop Freeway were constructed, with the remaining four miles constituting the provision of additional lanes of moving traffic on wider rights-of-way for certain facilities that need reconstruction even if the Loop Freeway is constructed. For example, Douglas Avenue from Melvin Avenue to High Street would require reconstruction to provide for six moving lanes of traffic under this alternative. If the Loop Freeway were built, this facility would not require reconstruction for additional capacity. Similarly, Douglas Avenue from Six Mile Road to Five Mile Road would require reconstruction to provide for six moving lanes of traffic under this alternative if the Loop Freeway were not built, and only require reconstruction to provide for four moving lanes of traffic if the Loop Freeway were built.

Traffic assignments to this alternative arterial street and highway system indicate that approximately 15 miles, or about eight percent of the total arterial system within the District, could be expected to remain severely congested. This is an increase of 12 miles, or 400 percent, in congested facilities over the third alternative. This increase is the result of two considerations in the plan design. The first consideration is the attempt to minimize disruption of residential, commercial, and industrial development by not acquiring additional right-of-way for facilities requiring reconstruction to provide additional capacity for the anticipated traffic volumes. The second consideration is the decision to limit surface arterial facilities to six lane facilities, even where anticipated travel demand sufficient to require eight travel lanes exists. The latter situation develops because of the impracticality of constructing and safely operating such eight-lane arterial facilities. Those facilities to be built to provide a lower level of traffic service to reduce relocation and facility operation impracticalities are shown on Map 4-12. Those arterial facilities which could be expected to remain congested are: CTH K from the proposed Lake Freeway to STH 38; STH 38 from CTH K to STH 31; Northwestern Avenue from Yout Street to West Street; Memorial Drive from Sixth Street to Washington Avenue; Douglas Avenue from Four Mile Road to Melvin Avenue; Sixth Street from Memorial Drive to Grand Avenue; Washington Avenue from STH 31 to Racine Street; and Racine Street, Washington Avenue, and Marquette Street from Durand Avenue to State Street, as well as those arterial facilities noted as being congested under the third alternative arterial system.

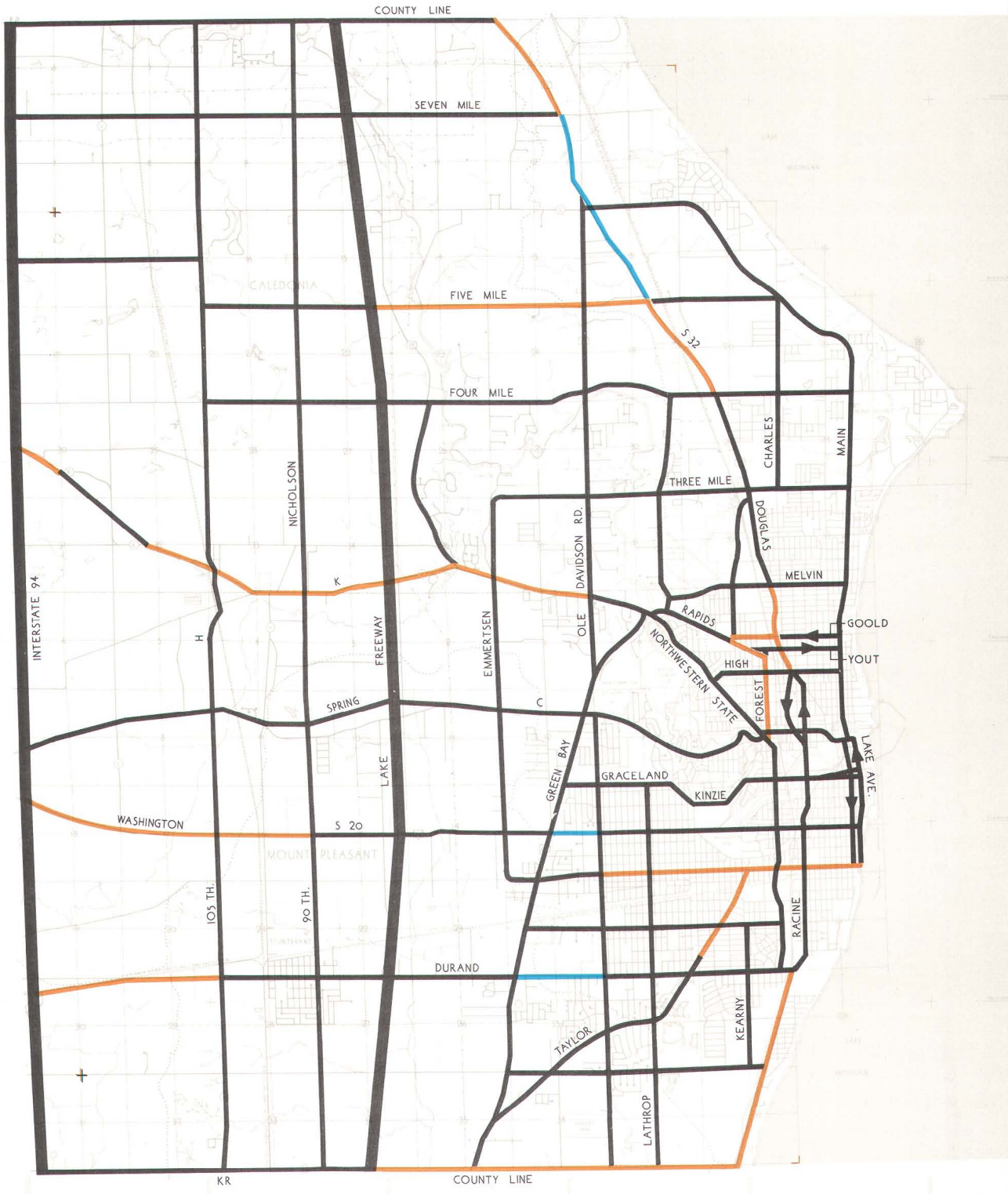
The total cost of constructing the fourth alternative arterial street and highway system considered was estimated, in 1970 dollars, at about $97 million, including about $21 million for freeway construction and $76 million for standard surface arterial construction. Under this alternative, it is estimated that a total of 102 residential and other major structures would be displaced, with the occupants thereof requiring relocation assistance. An estimate of the cost of providing relocation assistance for residential property is included in the total construction and right-of-way costs presented above. If this system were implemented, it is estimated that on an average weekday in

MAP 4-12



ARTERIAL STREET AND HIGHWAY SYSTEM PLAN NO. 4
(MINIMUM RELOCATION ALTERNATIVE)
RACINE URBAN PLANNING DISTRICT

MAP 4-13



FREEWAY NOT AFFECTED BY DELETION OF LOOP FREEWAY

STANDARD SURFACE ARTERIAL NOT AFFECTED BY DELETION OF LOOP FREEWAY

STANDARD SURFACE ARTERIAL REQUIRING RECONSTRUCTION FOR ADDITIONAL CAPACITY (REQUIRES ONLY RESURFACING OR SAME CAPACITY RECONSTRUCTION IF LOOP FREEWAY IS CONSTRUCTED)

STANDARD SURFACE ARTERIAL REQUIRING RECONSTRUCTION FOR ADDITIONAL CAPACITY (REQUIRES LESS RECONSTRUCTION FOR ADDITIONAL CAPACITY IF LOOP FREEWAY IS CONSTRUCTED)

ONE-WAY STREETS

IMPACT ON THE STANDARD ARTERIAL SYSTEM
OF NOT CONSTRUCTING THE LOOP FREEWAY
(MINIMUM RELOCATION ALTERNATIVE)

RACINE URBAN PLANNING DISTRICT

Table 4-3

ESTIMATED STRUCTURE DISPLACEMENT DUE TO FACILITY CONSTRUCTION FOR FIVE ALTERNATIVE ARTERIAL STREET AND HIGHWAY SYSTEMS FOR THE DISTRICT

Structure Type	Alternative Arterial System				
	Loop Freeway	West Boulevard	No Loop Freeway-No West Boulevard	Minimum Relocation	"Do Nothing"
Residential	255	317	264	72	–
Commercial	15	10	15	2	–
Industrial	–	27	27	–	–
Other	44	61	68	28	–
Total	314	415	374	102	–

Source: SEWRPC.

1990 about 1.10 million vehicle miles of travel, or about 30 percent of the total travel in the District, would be carried on the freeway system, with the remaining 2.20 million vehicle miles of travel, or about 70 percent, carried on the standard surface arterial street and highway system.

"Do Nothing" Alternative. The fifth alternative arterial street and highway system developed for the District consists of the existing arterial street and highway system as documented in SEWRPC Planning Report No. 14, A Comprehensive Plan for the Racine Urban Planning District, Volume One, Inventory Findings and Forecasts. This alternative system consists of about 156 miles of facilities of which 12 miles, or about eight percent, would consist of freeway mileage, namely existing IH 94. This alternative assumed that no new arterial streets and highways would be constructed in the District, nor would any existing arterial streets and highways be reconstructed for either additional capacity or structural adequacy. The only construction activity assumed under this alternative was the resurfacing of all existing arterial streets and highways once during the plan implementation period.

The traffic assignment to this alternative arterial street and highway system, as graphically shown on Map 7-4 of Volume One of this report, indicates that nearly all of the 156 miles of arterials within the District could be anticipated to operate in a severely congested condition. The total cost of constructing this system, in 1970 dollars, is estimated at $3.88 million and would not entail the acquisition of any right-of-way. Furthermore, if this system were implemented, it is estimated that 0.73 million vehicle miles of travel, or about 25 percent of the total travel in the District, would be carried on the freeway system, with the remaining 2.08 million vehicle miles of travel, or 75 percent, carried on the standard surface arterial street and highway system.

Comparison of the Five Alternatives. Of the five alternative arterial street and highway systems considered, the first three would provide approximately the same overall level of transportation service in the District. The fourth alternative, in reducing the relocation of residences, commercial establishments, and industrial structures, would provide a lower level of service to the District and particularly to the City of Racine. Finally, the fifth alternative, due to severe congestion on nearly all segments of the system, would provide the lowest level of service to the District. The alternatives can be compared in several ways, however, including: disruption of existing land uses as evidenced by structure displacement; total vehicle miles of travel on the arterial system, including vehicle miles of travel on the freeways; total construction costs; and total direct costs, including right-of-way, construction, maintenance, operation, and accident costs.

The number of residential and other major structures displaced by each of the five alternative arterial systems is shown on Table 4-3. From this table it is evident that the "Do Nothing" alternative would require displacement of the fewest number of structures, with the alternative utilizing West Boulevard and its extension on the Loop right-of-way as a standard surface arterial resulting in displacement of the most structures. The great majority of these structures in each case are residential housing units. The "Do Nothing" alternative would displace the fewest structures; however, its potential impact on the continued economic development of the District may be so great as to render it untenable. The Minimum Relocation Alternative, which displaces about 102 structures, would displace the fewest residences and people, but would require the additional reconstruction of 30 miles of arterial streets and highways for additional capacity.

Total vehicle miles of travel on the arterial street and highway system for each of the five alternatives considered

Table 4-4

VEHICLE TRAVEL ON STREET SYSTEM: 1990

(Vehicle Miles of Travel on the Alternative Arterial Street Highway Systems
For the District During an Average Weekday: 1990)

Alternative Arterial System	Freeway		Standard Surface Arterial		Total
	Vehicle Miles of Travel (Millions)	Percent of Total	Vehicle Miles of Travel (Millions)	Percent of Total	Vehicle Miles of Travel (Millions)
Loop Freeway	1.52	45.9	1.79	54.1	3.31
West Boulevard	1.06	32.2	2.23	67.8	3.31
No Loop Freeway-No West Boulevard	1.10	33.3	2.20	66.7	3.30
Minimum Relocation	1.10	33.3	2.20	66.7	3.30
"Do Nothing"	0.73	26.0	2.08	74.0	2.81

Source: SEWRPC

Table 4-5

IMPROVEMENT AND CONGESTED MILEAGE FOR THE
ALTERNATIVE ARTERIAL STREET AND HIGHWAY SYSTEMS
FOR THE DISTRICT: 1990

Alternative Arterial System	System Miles	Miles of New Freeway	Miles of New Arterial Streets	Miles of Arterials Reconstructed for Additional Capacity	Miles of Arterials Resurfaced and Structurally Upgraded	Miles of Congested Streets
Loop Freeway	210	33	17	44	116	1
West Boulevard	196	12	20	72	92	6
No Loop Freeway-No West Boulevard	192	12	17	74	89	3
Minimum Relocation	192	12	17	68	95	15
"Do Nothing"	156	–	–	–	156	125

Source: SEWRPC.

is shown in Table 4-4. It is evident that the total vehicle miles of arterial travel expected to occur on an average weekday in 1990 would vary little among the first four alternatives considered. The total vehicle miles of travel under the fifth alternative would be lower due to a reduction in arterial utilization and travel through the District. It should be noted, however, that the alternative system which includes the Loop Freeway is expected to carry the greatest proportion of vehicle miles of travel on the freeway system. In this respect, it should be further noted that one of the standards for transportation system development, as set forth in Chapter III of this volume, specifies that the proportion of total travel on freeway facilities should be maximized within the District insofar as possible.

Another comparison among the five alternatives is shown in Table 4-5 which summarizes the miles of arterial improvements by type of improvement and the miles of congested network links. This table indicates that construction of the Loop Freeway would limit the need to reconstruct many existing arterials to provide similar levels of arterial service. A decision to tolerate lower traffic service levels, or more congestion on a greater proportion of the arterial street system, perhaps even spreading to collector and local streets, permits less arterial construction or construction of a lesser street cross-section.

The total construction and right-of-way costs for all of the facilities needed under each of the five alternative arterial systems considered are presented in Table 4-6. Examination

Table 4-6

COSTS FOR ALTERNATIVE ARTERIAL STREET AND HIGHWAY SYSTEMS FOR THE DISTRICT: 1990
(TOTAL CONSTRUCTION AND RIGHT-OF-WAY COSTS: 1972-1990)
(In Millions of Dollars)

Alternative Arterial System	Right-of-Way	Construction	Total
Loop Freeway	$21.71	$97.71	$119.42
West Boulevard	21.19	99.48	120.67
No Loop Freeway-No West Boulevard	19.33	93.87	113.20
Minimum Relocation	9.93	87.33	97.26
"Do Nothing"	–	3.88	3.88

Source: SEWRPC.

Table 4-7

ANNUAL COST FOR THE ALTERNATIVE ARTERIAL STREET AND HIGHWAY SYSTEMS FOR THE DISTRICT: 1990 [a]

Cost Item	Alternative Arterial System				
	Loop Freeway	West Boulevard	No Loop Freeway-No West Boulevard	Minimum Relocation	"Do Nothing"
Construction	$ 4,885,000	$ 4,974,000	$ 4,693,000	$ 4,367,000	$ 194,000
Right-of-Way	1,086,000	1,059,000	967,000	497,000	–
Maintenance	982,000	993,000	981,000	937,000	435,000
Operating	119,790,000	119,690,000	120,430,000	121,705,000	143,809,000
Accident	13,400,000	15,500,000	15,300,000	15,300,000	14,040,000
Total	$140,143,000	$142,216,000	$142,371,000	$142,806,000	$158,478,000

[a] *Assumes 1/20 of construction costs and 1/20 of right-of-way costs will occur in 1990.*

Source: SEWRPC.

of this table reveals that the second alternative considered, which alternative includes an arterial facility within the abandoned Chicago, North Shore, and Milwaukee Railroad right-of-way, is the most expensive alternative in terms of initial construction and right-of-way costs, totaling about $120.7 million; as opposed to $119.4 million for the alternative containing the Loop Freeway, a total of $113.2 million for the alternative without the Loop Freeway or West Boulevard, $97.3 million for the alternative with minimized relocation, and $3.9 million for the alternative based on the existing arterial street and highway system. Maintenance costs on each of the first three systems are approximately the same, averaging about $980,000 per year on the first and third alternatives considered and $990,000 per year on the second alternative. Maintenance costs on the fourth and fifth alternatives are lower than the first three alternatives, $940,000 per year and $440,000 per year, respectively. Based on construction and right-of-way costs alone, the least expensive alternative arterial system for the District is that which provides either no new construction or no reconstruction of any of the existing arterial street and highway facilities. Average total annual costs for 1990 for each of the five alternative arterial street and highway systems considered are shown in Table 4-7. This cost analysis takes into account not only the construction, right-of-way, and maintenance costs previously considered but also operating and accident costs. Operating costs include the cost of: gasoline, oil, tires, repairs, depreciation, and vehicle operator time for both automobiles and commercial vehicles. Accident costs include the costs of property damage, personal injuries, and fatalities. It is readily apparent from Table 4-7 that when accident and operating costs are combined with the construction, right-of-way and maintenance costs, the alternative containing the Loop Freeway becomes the least costly alternative, with the "Do Nothing" Alternative being

the most costly alternative. The basic reason for this is that travel costs are not only lower on controlled access facilities, such as freeways, than on ordinary surface arterials but are lower on uncongested than on congested facilities. It should be further noted that accident costs for both the fourth and fifth alternatives are based on the same rate of incidence that was used for the first three alternatives. While the increased congestion in Alternative 4 would not appreciably increase annual accident costs, the intolerable congestion experienced under Alternative 5 could be expected to increase the number of property damage accidents, thus increasing total annual accident costs for the alternative.

Loop Freeway Near Chicago and Northwestern Passenger Line Right-of-Way. A sixth alternative arterial street and highway system for the District exists. This alternative would place the Racine Loop Freeway on an alignment adjacent to the Chicago and Northwestern Railroad passenger line right-of-way located approximately one mile east of and parallel to the abandoned Chicago, North Shore, and Milwaukee Railroad right-of-way. This alternative was considered in a freeway corridor location study conducted by Consoer, Townsend & Associates for the Wisconsin Division of Highways and is documented in a published report.[21] From a land use service point of view, including access to existing and potentially renewable commercial and industrial areas, the Loop Freeway located on the easternmost right-of-way paralleling the Chicago and Northwestern Railroad passenger line tracks would be the most desirable alternative. In terms of right-of-way costs as estimated by the Division of Highways, however, this alternative is far more costly than other alternatives considered, costing an estimated $51 million as opposed to about $11 million for the alternative having the Loop Freeway located on the abandoned Chicago, North Shore, and Milwaukee Railroad right-of-way. It should be noted that these right-of-way costs could be reduced through the application of minimal design standards. Right-of-way costs for the Loop Freeway on the Chicago, North Shore, and Milwaukee Railroad location were estimated through the application of such a minimal cross-section and indicated a total right-of-way cost of $8.4 million. In addition, the Chicago and Northwestern Railroad Alternative would displace far more families, businesses, and industries. For these reasons, this alternative location was not studied in detail in the District planning program. It remains, however, as a potential alternative alignment for the Loop Freeway if such freeway is recommended for inclusion in the adopted District plan.

[21] *Racine Loop Freeway Location Report, Racine County, Consoer, Townsend & Associates, Consulting Engineers, Chicago, Illinois, July 1969.*

Summary – Arterial Street and Highway System Plan. Based upon the foregoing analyses of alternative arterial street and highway system plans for the Racine Urban Planning District, it is recommended that the alternative containing the Loop Freeway located along the abandoned Chicago, North Shore and Milwaukee right-of-way (Alternative 1) (see Map 4-7) be included in the recommended comprehensive District development plan. From a comprehensive viewpoint, this alternative is least costly and would provide the highest level of traffic and land use service even though it displaces a greater number of structures than either the alternative which minimizes relocation (Alternative 4) or the alternative which includes no construction or reconstruction at all (Alternative 5). It should be noted that the most expensive alternative on a comprehensive basis, the "Do Nothing" Alternative, might have a far reaching impact on the future economic and social well-being of the District. It should be further noted that construction of the Loop Freeway is not recommended in the adopted regional transportation plan until the latter portion of the 20-year planning period, and that this freeway would serve the District's needs beyond the 1990 plan design year.

Committee Action – Arterial Street and Highway System Plan. After very lengthy and careful deliberation on the five alternative arterial street and highway system plans presented herein, the Racine Urban Planning District Citizens Advisory Committee selected the Loop Freeway Alternative for inclusion in the recommended comprehensive plan for the District. This decision reaffirmed the recommendations made in the adopted regional transportation plan for arterial street and highway system development in the easterly portion of Racine County. In making this decision, the Committee directed that the following clarifying comments be included in the text of the final planning report:

1. That the locations of all new arterial street and highway facilities shown on the plan map represent corridors varying in width from up to one-half mile for proposed standard surface arterial facilities to up to two miles for proposed freeway facilities, and that engineering route location studies will be needed to determine the precise centerline location and alignment for each such new facility.

2. That, in conducting future engineering route location studies to determine the precise centerline location and alignment of the Racine Loop Freeway, the abandoned Chicago, North Shore, and Milwaukee Railroad right-of-way be considered the most westerly potential alignment for this facility, and that consideration be given

to alternate alignments through the City of Racine easterly from this location in order that the proposed freeway facility can provide the best possible service to the Racine Central Business District and to other concentrations of renewable commercial and industrial land uses within the City of Racine.

3. That, in conducting future engineering route location studies to determine the precise centerline location and alignment of the extension of Three Mile Road across the Root River in the Town of Caledonia, appropriate consideration be given to the expansion plans for Armstrong Park in order to minimize any adverse impacts that this facility may have on the park.

4. That the specific cross-sections to be utilized in implementation of the arterial street and highway system plan be determined as part of the Racine County jurisdictional highway system planning program and be documented in the Racine County jurisdictional highway system plan.

Public Transportation Plan

Public transit service in the District is provided by ten bus routes in more densely populated neighborhoods. Service is focused on the Racine Central Business District where all routes interconnect. Prospects for extending this service are limited because of reduced population densities in new growth areas and increased use of the automobile. Bus revenues are not increasing at the same rate as the costs of operations. This presents a dilemma with equally undesirable alternatives: (1) fares can be increased to off-set increased costs, or (2) service can be reduced to the most productive and profitable routes. Either alternative will likely result in a decrease in bus riders, placing continued operations of the entire system in jeopardy.

The Need for Public Transportation. Perhaps the most perplexing aspect of the mass transit problem is that there are about 2,500 persons within the District who rely upon bus service for transportation each weekday. Only one bus rider in ten has an automobile available for use, and two-thirds of the total riders do not have an auto drivers license. Riders are mainly comprised of the poor, the young, the elderly, and working women, who, without bus service, would have no transportation.[22]

The areas where population densities are greatest are the same areas that contain families with low and moderate incomes. Fifty-five percent of all riders reporting had annual household incomes of under $7,000.

Unfortunately, not enough people need the bus system and use it to a point where it is an economically sound business venture. Those who do use the system generally find it convenient, comfortable, and pleasant.

Alternatives. Those routes with the lower daily passenger volumes could be adjusted or combined to improve the seat-mile to passenger-mile ratio. For example, each of the present routes is approximately of equal length, operating on a 40 minute round trip with an average of 250 passengers per route per day. Six of the ten routes produce less than this average passenger volume.[23] Routes No. 3 and 4, serving the northwest urban area, have a combined average daily load of 373 passengers, about 187 passengers each, but the combined total for these routes is less than Route No. 1 which carried an average of 388 passengers. These routes could be combined. A similar situation exists with Routes No. 5 and No. 6 in the western urban area, and Route No. 8 also has an average daily volume well below the average for the system.

Transit System Plan. A practical bus transit system must be based upon providing transportation to major concentrations of commerce, industry, and institutions from residential neighborhoods, particularly those whose residents demonstrate that they need and use the service. To a very large extent, the present system of bus routes provides precisely this type of service. Where ridership is below average, modifications to the system have been proposed.

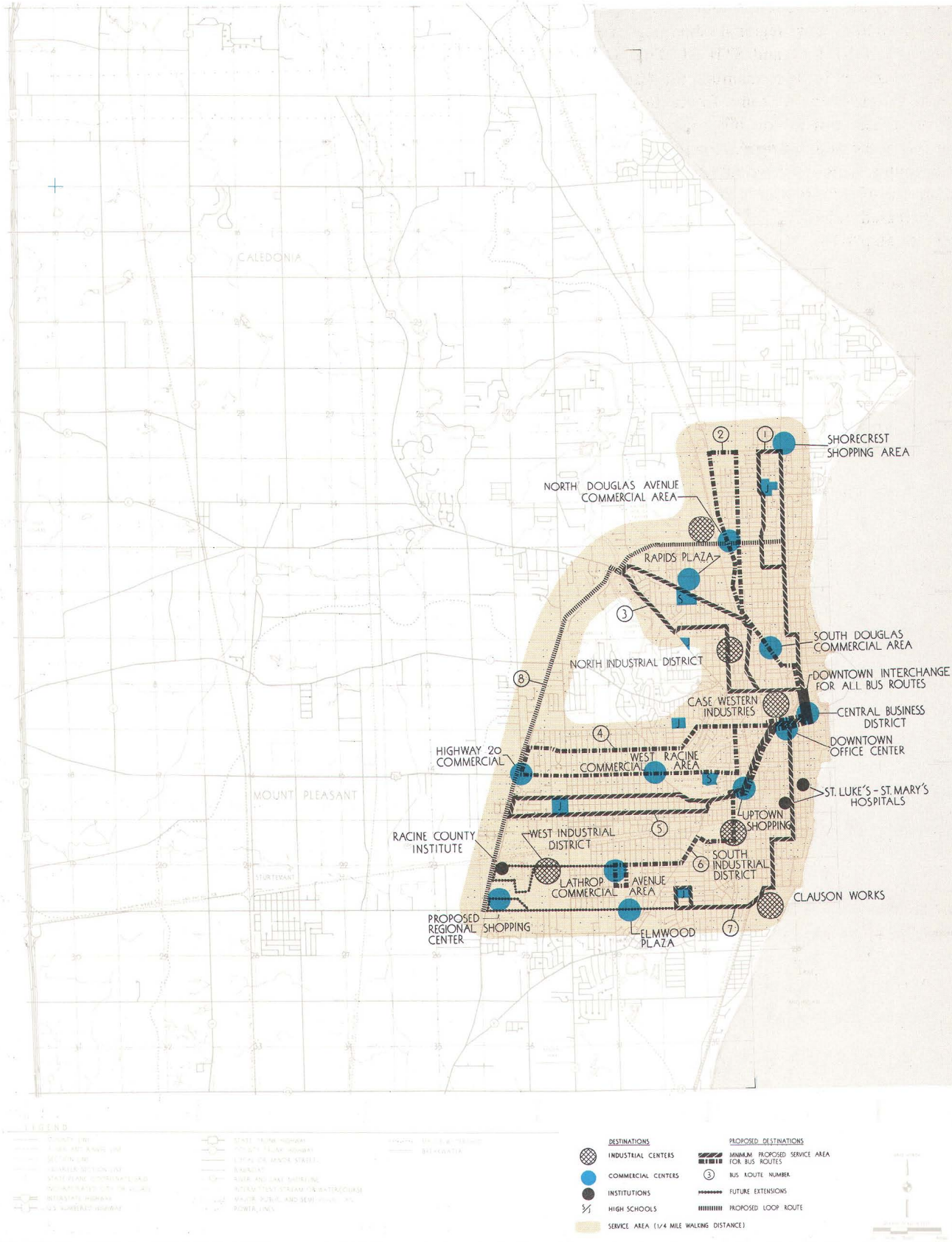
The transit system plan proposes to reduce the number of bus routes from ten to seven. The two northern routes (No. 1 and 2) would remain essentially unchanged, except that Erie Street is recommended to replace N. Main Street as a part of the route, improving the service area of Route No. 1. The two northwestern routes (No. 3 and No. 4) would be combined to form the proposed Route No. 3. The three western routes (No. 5, 6 and 9) would be combined to form two proposed routes, No. 4 and No. 5. In the south and southwest, three routes (No. 7, 8 and 10) would be combined to form two proposed routes, No. 6 and No. 7 (see Map 4-14).

Each route is located to provide bus service within a walking distance of two to four blocks from the majority of the people in the urban service area (an average block is about 300 feet or the service area for each route is about 1,200 feet or one-fourth mile). Major concentrations of business and industry are provided with bus service. Hospitals, nursing homes, and proposed housing areas for the elderly are located adjacent to the proposed bus routes.

[22] *Ibid. Chapter VII, pp. 106-112.*

[23] *Ibid. Chapter VII, See Map 7-6, pp. 108-109.*

MAP 4-14



TRANSIT SYSTEM PLAN

RACINE URBAN PLANNING DISTRICT

Extensions of the two southern routes would permit service to the proposed new regional shopping center at the intersection of STH 11 and STH 31. This would require two buses for each route to maintain the 40-minute interval for each normal trip. At some future time it may prove practical to establish a loop bus route (Route No. 8) on Green Bay Road and Melvin Avenue, which would connect all bus routes. This route would also require two buses to maintain the 40-minute round trip and would be predicated upon increased ridership and the new regional shopping center (see Map 4-14).

As a first step, the present system utilizing ten routes could be reduced to seven routes. The modified system could then be extended, utilizing two additional buses on the southern routes. This would bring the total number of buses in use at one time to nine. Then, as ridership increases, the loop route could be put into operation, requiring two additional buses and probably the purchase of new equipment.

Other Transportation Facilities

In addition to the arterial street system, parking facilities and public transit system, the District is served by water, air, bus, rail and truck facilities. These facilities are found in a variety of locations and provide various levels of services to residents of the District.[24] Each of these transportation modes, with the exception of passenger rail service, is expected to continue in essentially its present form.

Off-Street Parking. Adequate off-street parking lots are essential to the efficient operation of the arterial street system. Off-street parking facilities which serve major concentrations of commercial and industrial uses of the District now provide about 20,000 spaces, a capacity to serve about one-half of all vehicles registered in the District. Existing off-street parking areas are of two types: public lots and private employee-customer lots. These facilities are almost equally divided between commercial and major industrial concentrations. Public off-street parking totals about 1,800 spaces, or almost 20 percent of the number of spaces available in commercial areas. The public facilities are provided by the City of Racine, and are located in the Central Business District, Uptown, West Racine, and State Street areas.

Parking studies show that occupancy in the commercial areas served by public off-street lots ranged from only 29 to 51 percent,[25] indicating a substantial existing surplus capacity. With this surplus parking available, the city may be able to increase the traffic carrying capacity of some arterial streets by removing on-street parking.

Public off-street parking facilities are associated with the older commercial areas of the city. Large areas have been utilized for off-street parking in the central business district and are now available to accommodate other uses, such as office and residential uses, which may be attracted into the area. However, more convenient off-street parking is needed in some key location. In the Uptown and West Racine areas some additional off-street parking is proposed in small lots.

Industrial areas and other commercial shopping centers are required to provide off-street parking in new development and this should assure the future adequacy of these facilities.

Harbor. Located at the mouth of the Root River, the Port of Racine has a limited industrial shipping and commercial fishing function. Competition from other ports and inadequate facilities, docking, and channel depth, have resulted in a reduction of shipping. Use of the harbor facilities for recreation purposes is, however, increasing. During the period from 1963 to 1969 motor propelled boats over 12 feet in length and sailboats registered in Racine County increased by 50 percent, from 4,752 to 6,164. In the planning period, harbor facilities are expected to be almost entirely oriented to recreation boating. Boat docking space is limited and there are practical reasons to convert the public dock to boat slips.

With the demand for boat slips increasing rapidly and a limited supply available, a serious shortage will develop. There are two possible areas which could be improved as harbors for small craft: (1) the present harbor, requiring breakwater modifications, and (2) the protected area south of Pershing Park where a small marina could be developed inside the breakwater as a part of a future lakefront park improvement program. Boat slips rather than swing moorings are recommended to fully utilize protected water areas.

Airport. Racine-Horlick Airport, a privately owned facility, jointly held by several principal industries, is primarily utilized for the business purposes of the owners. This facility has good runways and hangars which are extensive enough to gain a Class 4 rating for the airport. Additional improvements, including navigational aids, are needed to keep the Class 4 rating.

Commercial air service is provided at General Mitchell Field in Milwaukee, less than 30 minutes from the Planning District. Because of the availability of a full range of private facilities at Racine-Horlick Airport, no additional major

---

[24] *Ibid. Chapter VII, pp. 112-119.*

[25] *SEWRPC, Planning Report No. 14, Volume One, A Comprehensive Plan for the Racine Urban Planning District, Inventory Findings and Forecasts, Chapter VII, Table 7-1, p. 104.*

improvements are included as part of the Comprehensive Plan.

Rail, Inter-City Bus, and Truck Facilities. Rail services now consist of only freight operations due to the consolidation of service which occurred after the formation of AMTRAK, the national passenger service rail system. Passenger service on AMTRAK, between Chicago and Milwaukee, utilizes the Chicago, Milwaukee, St. Paul and Pacific Railroad line through the western portion of the Planning District with a station at Sturtevant. Freight service provided by the Chicago and Northwestern Railroad is expected to continue at all present locations.

During the planning period grade crossings in the newly developing portions of the District should be separated as highway traffic volumes increase. "Piggy Back" facilities to lead truck trailers on or off flatcars may also prove to be needed. Such an operation should be located in redeveloped industrial areas along the Chicago and Northwestern Railway, north of Durand Avenue.

Inter-city bus service, provided by Greyhound Bus Lines (inter-state only) and Wisconsin Coach Lines, Inc. (intra-state), is expected to continue with increased passenger and shipping volumes. A new terminal for bus service is needed and should be located near the downtown interchange of the mass transit bus routes and provided with adequate off-street parking.

Truck terminal facilities are closely associated with major highways, railroads, and industries which utilize this form of shipping.[26] There are eight major truck terminals in the District and more should be developed during the planning period. These terminals should be located adjacent to the new Lake Freeway where both railroads provide an alternate mode of transportation, along Industrial Drive and in several industrial locations near the airport and to the north along STH 32.

COMMUNITY FACILITIES PLAN

This section of the general development plan presents recommendations pertaining to three important community facility elements: public schools, parks and open spaces, and public buildings.

Public School Plan

Long-range planning will enable the District to measure future needs, to locate and acquire future school sites, and to establish a pattern for school facilities construction in new residential neighborhoods that is both efficient and economical. Coordinating the purchase of school sites and the construction of new buildings with other public improvements, such as the extension of utility systems and arterial streets, will, to a very large extent, serve to direct growth and development in the District.

General Characteristics. School facilities are comprised of lands and buildings. In a number of instances in the District there are combined sites where elementary and junior high schools are located adjacent to each other. Because of the strong interrelationship which exists between schools and parks, combined sites for these facilities are recommended as the center of each residential neighborhood. This provides a focal point for activities in the neighborhood and conforms to recommended and desirable subdivision design principles.[27]

These subdivision design principles have been applied to the neighborhood planning units which form the residential living areas of the Racine Urban Planning District plan. As a part of the housing section of the District plan, special attention has been given to the objective of creating a truly integrated society within the developing and redeveloping neighborhoods of the District. New school sites have been located on the school plan where social, economic and racial integration is taking place or is expected to take place. These sites for new buildings will in turn promote the neighborhood park-school concept so vital to the success of viable neighborhoods, communities, cities and regions.

The location of these school facilities also depends, to a large extent, on the density of the population to be served. In the less densely developed portions of the District, where walking distances are less convenient for the children, a complete network of school bus routes has been established to provide transportation. This permits flexibility in the establishment of service areas for each school. This flexibility is particularly important in neighborhoods where urban development is now occurring. Spacing of schools should be directly related to the population densities as established in the land use plan and according to the standards in Chapter III.

Facilities Required – 1990. School enrollment forecasts indicate that if the forecast 1990 population of 225,000 is reached, there will be 51,000 students in the public schools by the year 1990. An additional 5,000 students are

---

[26] *Ibid. Chapter VII, pp. 118-119.*

[27] *Ibid. Chapter XI, Figure 11-1, p. 220.*

expected to remain in private schools. Student enrollment forecasts are as follows:

School	Students	Grades
Elementary	29,070	K-6
Junior High	11,730	7-9
Senior High	10,250	10-12

Facilities required to serve this estimated student population include 45 elementary schools, nine junior high schools, and four senior high schools. These estimates are based upon population and student enrollment forecasts found in Volume One of the Comprehensive Plan[28] and enrollment standards identified in Chapter III of this volume. The school plan is based on the assumption that the first six grades and kindergarten (K-6) will be in elementary school; the next three grades (7-9) will be in junior high school; and the remaining three grades (10-12) will be in high school.

Elementary Schools. Inventory and evaluation of existing school facilities indicated that the students' educational needs are now served by some exceptionally fine school buildings. The school plan proposes to retain 23 of the existing schools. These facilities are considered to be adequate to serve future educational needs.

Nine existing schools are proposed to be either closed or replaced. These include small schools located on inadequate sites and older school buildings with physical building limitations such as limited capacity. Schools to be replaced are:

School Name	Year Constructed	Site Area In Acres	Student Enrollment 1969-1970
Garfield	1857	2.6	301
Janes	1857	2.1	668
Winslow	1856	1.3	300

Source: Racine Unified School District No. 1, and Harland Bartholomew and Associates Field Studies, 1969-1970.

Each of the older schools to be replaced (Winslow, Garfield and Janes) are located on small sites that do not conform to current school standards. Each of these sites should be expanded when the replacement facility is constructed. This would require expansion into adjacent residential areas. This may be accomplished as a part of revitalization efforts in the central and south central communities. Enrollments at the Franklin School which should be converted to park usage will need to be absorbed into other schools.

Five of the existing fringe area schools are proposed to be abandoned as other facilities are constructed to take their place. These are relatively small in size and located on constricted sites. As student enrollments begin to increase in the newly formed residential neighborhoods, these facilities would become totally inadequate and should be terminated. The schools falling into this classification include the following:

School Name	Year Constructed	Site Area In Acres	Student Enrollment 1969-1970
Bartlett	1930	3.5	294
Beebe	1928	3.0	109
Franksville	1910	2.2	308
Hood's Creek	1900	2.5	162
Trautwein	1912	2.2	277

Source: Racine Unified School District No. 1, and Harland Bartholomew and Associates Field Studies, 1969-1970.

Three of these existing school sites (Franksville, Bartlett, and Trautwein) are proposed to be retained in public ownership and converted to other uses. The Beebe and Hood's Creek Schools are proposed to be terminated and the sites sold (see Table 4-7).

These changes have the net effect of reducing the total number of existing schools from 32 to 26 after replacement of three schools. Nineteen additional schools are forecast to be needed by the end of the planning period. These proposals are shown on the school plan (see Map 4-15). Eleven of the proposed elementary schools are located to the west and southwest in areas that will become medium density residential neighborhoods. Eight proposed schools are located to the north and northwest, with six of these sites located in medium density neighborhoods and three in low density neighborhoods. The Winslow replacement school (Winslow) is relocated to the north of its present site in conjunction with the St. Catherine's complex, while the Janes and Garfield replacement schools are replaced on the same site.

Junior High Schools. Five of the six existing junior high schools would be retained as a part of the school system. Washington Junior High School should be replaced and relocated since it is one of the oldest schools in the system, has a large student body, and is located on an extremely small site for the number of students in attendance. The new location is identified as the Belle site on Map 4-15. Student enrollment at this school is expected to continue at approximately its current level. The site should be turned

[28] *Ibid. Chapter IX, pp. 166-168.*

MAP 4-15

RACINE COUNTY BOARD OF SUPERVISORS
SOUTHEASTERN WISCONSIN REGIONAL PLANNING COMMISSION
HARLAND BARTHOLOMEW AND ASSOCIATES

SCHOOL PLAN

RACINE URBAN PLANNING DISTRICT

Table 4-8

SCHOOL SITE REUSE RECOMMENDATIONS

Site	Existing School Building	Type	Size In Acres	Recommendation
1. Bartlett	Yes	Elementary	3.5	Sell
2. Bay	No	–	12.0	Sell
3. Beebee	Yes	Elementary	3.0	Sell
4. Franklin	Yes	Elementary	1.9	Use for park
5. Franksville	Yes	Elementary	2.2	Use for fire station site
6. Garfield	Yes	Elementary	2.6	Replace
7. Harris	No	–	13.9	Sell
8. Hoods Creek	Yes	Elementary	2.5	Sell
9. Horner (Erie)	No	–	21.0	Use as park and fire station
10. Janes	Yes	Elementary	2.1	Replace
11. Midway	No	–	31.8	Sell for residential
12. Mona Park	No	–	25.3	Reserve until freeway is determined
13. Nicholson	No	–	12.0	Retain for possible future school use
14. Schacht (Trautwein)	Yes	Elementary	47.2	Use for school or other public use
15. Washington	Yes	Junior	2.6	Retain as park
16. Winslow	Yes	Elementary	1.3	Replace and relocate [a]
Total			184.9	

[a] *Use site for hospital expansion.*

into a neighborhood park and branch library (see Table 4-8).

Forecasts of 11,730 students indicate the need for a total of nine junior high schools.[29] School enrollment standards currently being followed by the School District place an upper limit of 1,500 students for each school and a projected capacity of 12,300 students. At the present time, only the three outlying junior high schools, Jerstad-Agerholm, Gifford, and Starbuck approach the upper limit of student enrollment. Some of the older schools in the central part of the community do not have the physical capacity to handle student enrollments of this size. Therefore, the plan would add three additional junior high schools in the outer fringes of the urban area, each of which should have a capacity of between 1,200 and 1,500 students and a school site of about 30 acres.

One of the new junior high schools would be located in the north portion of the Planning District and is identified as the Woitshek-Smershek site. To the west, a new junior high school is proposed on the new site located on Emmertsen Road within the Peterson Neighborhood (see Map 4-15). To the south, a new junior high school (Sanders) is proposed west of Taylor Avenue and north of Braun Road.

Senior High Schools. The three existing senior high schools are retained in the school plan. Forecasts indicate the need for one additional senior high school following current standards for student enrollments at these facilities. Current standards of 2,200 students per school are now exceeded at two of the existing senior high schools. By increasing the current standard to 2,600 students, only one additional senior high school would be required during the planning period. This school is proposed to be located to the northwest at the intersection of STH 31 and Four Mile Road on a site of 50 to 60 acres. This may require the relocation of some residential homes nearby.

Undeveloped School Properties. The inventory of school facilities showed that the School District owned 390 acres at 15 separate locations throughout the Planning District. Five of the existing undeveloped sites have been incorporated into the school plan. These include the following sites:

[29] *Ibid. Chapter IX, p. 167.*

	Acres
Emstad	16.0
Emmertsen	29.9
Howard	20.0
Highway 32	15.0
Woiteshek-Smershek	50.0
Total	132.9

The 47.2 Schacht site should be retained for possible public use such as a possible additional hospital site, branch library, or for other. possible school use. Recommendations for the use of other undeveloped sites are listed on Table 4-8.

Other Considerations. Taxpayers and school officials throughout the nation are concerned with the high cost of providing these important facilities. In every school system there is an urgent need for new facilities and the efficient and economical use of existing facilities. To accomplish this task, some school officials are examining the possibility of operating existing school systems on a 12-month basis, as opposed to the current nine-month schedule. There are several major benefits in the twelve-month operating schedule: (1) buildings and facilities would not stand vacant or be only partially utilized for three months of the year; (2) students would remain in school for only nine months but would be on a staggered schedule with vacations occurring throughout the school year; (3) teachers would have an opportunity to select either a nine-month or a twelve-month teaching schedule; and (4) the cost of construction of new facilities would be reduced as much as one-half, although operating expenses would be expected to increase.

Space allocation studies could be prepared to achieve full utilization of the facilities. Many school systems use computer programs which produce the proper allocation of student enrollment by facilities so that maximum efficiency is achieved. The resulting full utilization would reduce the number of classrooms required at the proposed new school sites, reducing a four-unit school to three units with an approximate saving of six classrooms per school. With staggered family and faculty vacations, there would be a need for additional recreational opportunities throughout the year and utilization of recreation facilities in the District should be expected to increase.

This alternative should be considered as a part of continuing school planning activities in the District. It would relieve congestion in some of the existing schools and enable the construction of additional facilities to be spread over a longer period of time. Conversion of the school system to a 12-month program could alter the proposed number or location of new schools, and/or could have the effect of reducing the size of individual installations.

Park and Open Space Plan

The park and open space plan is designed to enhance the total quality of the environment through the wise use of available natural resources. Parks give form and structure to urban areas and provide facilities for a balanced year-round outdoor recreational program. The park and open space plan is based upon the inventory of facilities found in Volume One of the Comprehensive Plan[30] and the standards presented in Chapter III of this Volume.

Forecasts for parkland and open space needs by the year 1990 indicate that approximately 1,650 acres will need to be added to the existing 1,500 acres of parklands now available. These areas will consist primarily of community and neighborhood parklands (over one-half of the area to be added), with large urban parks comprising most of the remaining area. Standards which are recommended to be followed in the establishment of this system indicate a need of 14 acres of parkland and open space for each 1,000 persons by the year 1990 (see Chapter III). In addition, the plan recommends the public acquisition of certain primary environmental corridor lands.

General Characteristics of the Plan. Major open space acquisitions identified in the plan include environmental corridor lands along the Root River and wooded areas between the Root River and Cliffside Park, which is proposed for expansion along Lake Michigan. A number of large urban and community parks in the District are proposed to be expanded or acquired and additional open spaces proposed along Lake Michigan to the north of the central business district.

In new residential neighborhoods, school-park sites are indicated to show appropriate locations for these facilities in new growth areas. A system of scenic roadways is also proposed to accommodate pleasure driving between major scenic and recreational areas in the District.

Environmental Corridors. Primary environmental corridors are defined as areas in which concentrations of scenic, recreational, and cultural resources occur, containing lakes, rivers and streams, and their natural floodplains, wetlands, woodlands, wildlife habitat areas, rugged topography, significant geological formations, and wet or poorly drained soils. In the Planning District, the environmental corridors are most closely associated with watercourses and Lake Michigan. Portions (1,340 acres) of the primary and secondary environmental corridors are incorporated as a

[30] *Ibid. Chapter IX, pp. 168-172.*

part of the park and open space plan. The Root River Parkway is considered to be an environmental corridor. While these areas are generalized on the plan, the designations may be used to assist in the administration of regulatory measures designed to preserve as much of the corridors as possible.

The largest single acquisition recommended in the plan is the purchase of land associated with the Root River environmental corridor. This acquisition program includes areas starting one mile west of Caddy Vista and extending almost ten miles south along the Root River to the Quarry Lake Park. Portions of the parkway have already been acquired and other areas have already been developed for park purposes. The Root River Parkway, once completed, will contain approximately 2,000 acres and will connect Johnson Park, Quarry Lake Park, and the various large regional, large urban, and community parks already developed by the City and County of Racine along the river (see Map 4-16).

Regional Parks. Large regional parks serve the entire urban area and normally contain 250 acres or more. These parks are located to take advantage of topographic, scenic, or physical features. The most desirable locations are on lakes and rivers, or in areas that contain topographic variations or woodlands. These parks should be conveniently located to most of the urban population, but they need not be located within the urban area itself. Regional parks may contain golf courses or other facilities for active recreation, such as open playfields. However, for the most part, they should be maintained in their natural state to afford opportunities for picnicking, walking, riding, boating and other types of passive recreation. Two regional parks are currently found in the Planning District: Cliffside Park and Johnson Park. The plan proposes one major addition to the regional park system: the expansion of Cliffside Park to the north and west by nearly 200 acres to include all of the area between the Chicago and Northwestern Railway and Lake Michigan, including the area approximately one-half mile north of Seven Mile Road. This area includes a variety of open spaces and woodland areas identified as a part of the environmental corridor in the Cliffside Park area.

Large Urban Parks. These parks are so classified because they provide a wide range of active and passive recreational facilities that serve the residents of several adjacent communities. The remaining portion (327 acres) of the environmental corridor between Cliffside Park and the Root River is proposed for acquisition as a large urban park during the planning period to 1990. This area, which may be referred to as the Linwood Park expansion, is characterized by small streams, and some of the major woodland areas in the Planning District will be a very important connection between the Root River Parkway and Cliffside Park. The marshlands conservation area north of Franksville is also proposed for acquisition as a large urban park. Although the area is quite large, 200 acres is proposed in the plan for acquisition.

Community Parks. These parks are so classified because they provide a range of active recreational facilities that serve the residents of several adjacent neighborhoods. These parks provide multiple use playfields with provisions for baseball, football, soccer, and other forms of active recreation as well as single-purpose use areas such as baseball and softball diamonds, ice skating rinks and areas for court games.

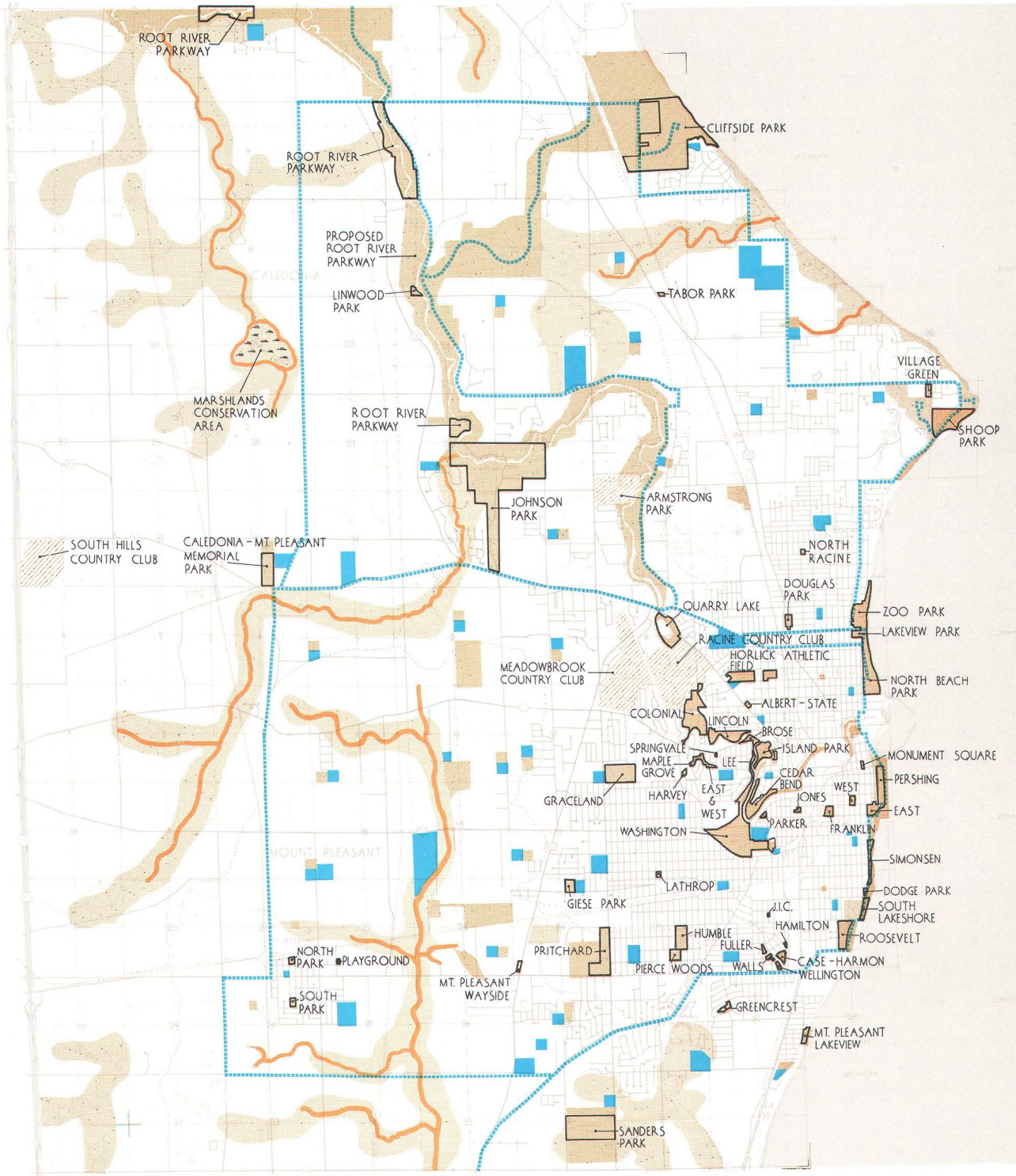
Community parks usually have the widest range of recreational facilities and include areas for passive recreation such as picnicking, walking, bicycle riding, and so forth. These include a complete network of parklands located along the Root River from the Racine Country Club south to Cedar Bend Park in the Jefferson-Herrick Neighborhood; a network of parks along the shoreline of Lake Michigan where a nine-hole golf course (Shoop Park), zoological park, and swimming beach are the major features. The plan proposes to retain almost all existing parklands in their present locations and to make several significant additions to some.

A major community park is proposed near the south county line and would consist of the existing Sanders Park enlarged to more than twice its present size by acquisition of 120 acres to the south and north of the existing property. Sanders Park, with its nature trails through the woodland areas, is one of the most interesting recreational facilities in the District. This park will provide additional areas for picnicking, nature studies, and active forms of recreation.

Two new community parks are proposed in the Airline and Peterson Neighborhoods. The Airline Park is proposed to be 80 acres in size, while the Peterson Park is recommended to be 110 acres.

On the Root River, areas (15 acres) adjacent to the river from Cedar Bend Park north and east to the downtown area are proposed for gradual acquisition as a part of the Root River Parkway system. This area contains some obsolescent industrial buildings. Acquisition of these areas, when available, and then development to enhance the urban environment, will make a major contribution toward restoring the lower portion of the Root River to an attractive state. Expansion of the lakefront parks is also proposed through the gradual acquisition of residential properties north along the lake shore and south of the zoological gardens and East Park.

MAP 4-16



PARK AND OPEN SPACE PLAN

RACINE URBAN PLANNING DISTRICT

To the west, Pritchard Park recently expanded through the addition of land now owned by Racine County and provides important recreational opportunities in the southwest portion of the community. Further to the west, the Oakes Sanitary Landfill site is also proposed for utilization as a community park as soon as landfill operations have been terminated (see Map 4-16).

Neighborhood Parks. Children's playgrounds, ballfields, walking paths, basketball and tennis courts, areas for roller-skating and tot-lots are typical of facilities normally provided in neighborhood parks. The developed portion of the City of Racine is virtually the only area where neighborhood parks are found in the Planning District. New growth areas have not been provided with these facilities which is a serious deficiency. At this time, there are approximately 26 neighborhoods in the District, the majority of which are in the City of Racine. Notable exceptions to this would be the Village Green in Wind Point, Mt. Pleasant Lakeview Park, and the North and South Parks in Sturtevant. Fringe growth areas in the towns, where a variety of subdivisions have been developed, are almost totally without this type of facility to enhance the neighborhood.

The plan proposes to extend a series of neighborhood parks throughout the future urban area. Twenty-three new neighborhood parks are proposed in the areas to be urbanized by the year 1990. Seventeen of these parks will be located adjacent to an elementary school, following the school-park concept. Thirteen new neighborhood parks are proposed to be located in the west and the southwest portions of the Planning District and ten in the north and northwest portions. Six neighborhood park locations are proposed which are not adjacent to elementary school sites. The plan includes, for example, a proposal to convert the Washington Junior School site to a neighborhood park and branch library. Other opportunities for the establishment of neighborhood parks, or the type of facilities normally found in neighborhood parks, will be provided in the larger community parks, some of which are adjacent to school sites.

Where a larger community park serves the recreational needs of a given neighborhood, additional investments in small neighborhood parks would not be necessary. Two examples of this situation are found at the Goodland School, located adjacent to Graceland Park, and the proposed elementary school located immediately adjacent to Sanders Park.

Neighborhood park sites should be acquired when elementary school sites are acquired. Long-range benefits can accrue in the efficiency of operation and in the elimination of duplication of facilities. To accomplish this purpose, a parkland purchase fund should be established and all school site purchases should be coordinated with the Park Authorities so that joint sites may be acquired.

Other Open Space and Conservation Proposals. In addition to the various parks and open space areas proposed to be acquired during the planning period, there are several environmental corridors which must be protected from and integrated into future urban development. These environmental corridors are also identified on the parks and open space plan (see Map 4-16). These areas are identified so that they may be protected through the use of the various regulatory measures now in effect. Among the more important considerations to be evaluated are soil conditions and location of wetland areas. These lands are unsuited for urban development and help to maintain the ecological balance in the District. These environmental corridors are found in the south along the Pike River, in the central area along Hood's Creek, to the north along Caledonia Creek, along portions of the Root River, and along several small streams which flow to the east into Lake Michigan north of Wind Point.

Another important recreational opportunity is found in the establishment of scenic parkways which provide facilities for pleasure driving. In 1962, pleasure driving was identified as the most popular form of outdoor recreation in the nation.[31] Because important scenic advantages are found in the county and opportunities exist to connect with scenic routes in Kenosha and Milwaukee Counties, a 50-mile system of scenic routes is proposed in the Planning District.

The proposed scenic route extends from Franksville to Sturtevant, and then east to connect with the lakefront parks to the north and south of the business district. The drive then continues north to Shoop Park, Wingspread and then north to Cliffside Park. At this point, the route is proposed to turn westerly on Seven Mile Road and then south to return to Franksville. Three interior connections are also proposed: one along Route 38 from Franksville to Lakeview Park; a scenic drive along the eastern side of the Root River Parkway lands; and a connection from the Root River Parkway to Cliffside Park through the proposed woodland park area.

Much of this network of scenic roads could be established on existing county and city streets and highways. In the more scenic portions of the county and adjacent to the major parks and open spaces, consideration should be given to protecting the scenic quality of the parkway system through the establishment of zoning provisions, or through the purchase of scenic easements.

---

[31] *The Outdoor Recreation Resources Review Commission, Outdoor Recreation in America, July 31, 1962.*

By establishing the parkway system on existing roadways, initial expenses would be limited to signing the system of parkway routes. The only portion of this scenic route system that would have to be constructed would be certain sections along the Root River Parkway and in the enviromental corridor between the Parkway and Cliffside Park.

Public Buildings Plan

With the forecast growth of 92,000 persons by the year 1990, additional space will undoubtedly be required to serve an expanded demand for governmental services. Because of the changing nature of incorporated areas, it is difficult to determine, with any degree of precision, the amount of floor space that will be required for offices and administrative activities of the local levels of government. The same is true for state and federal facilities because of the trend toward more services at the state level and a reorganization of postal facilities. As a part of the Comprehensive Plan, those buildings recommended as necessary to meet the anticipated needs of the District are identified and discussed as a part of this Chapter and include libraries and cultural buildings, public administration buildings, public safety buildings, and health care facilities.

Library and Cultural Buildings. Although the regional library facilities and services planning program being conducted by the SEWRPC has not yet been completed, preliminary standards for the location of public library facilities and the provision of library services at public libraries throughout southeastern Wisconsin have been prepared. These preliminary standards relating to the location of library facilities, as modified by the Citizens Advisory Committee, have been set forth in Chapter III of this volume and have formed the basis for the library facility component of the community facility plan for the District (see Map 4-17).

Two library facilities – the City of Racine Main Library and the Uptown Branch – currently serve the District population.[32] Relating the recommended standards to the existing and forecast population of the District indicates that two branch library facilities should be provided in the very near future to meet existing needs within the District, and three additional branch libraries will be required to meet the needs of the District by 1990. The addition of these new branch library facilities would expand the public library system in the District to include the main library facility in the City of Racine plus six branch facilities throughout the urban areas of the District. Consideration should be given to locating the branches in leased space in shopping centers. In addition, it is expected that some mobile library service will be required in those areas of the District which by 1990 will be partially urbanized but which will not require, because of either density or population size, the construction of a full service branch facility.

In addition to the planned expansion of library facilities, several important cultural buildings and historical sites are found in the District. These include Memorial Hall, the Racine County Museum, the Wustum Museum, the Golden Rondell and the Wingspread Conference Center. These facilities are important centers of activity in the community and all of the buildings are retained as a part of the District plan.

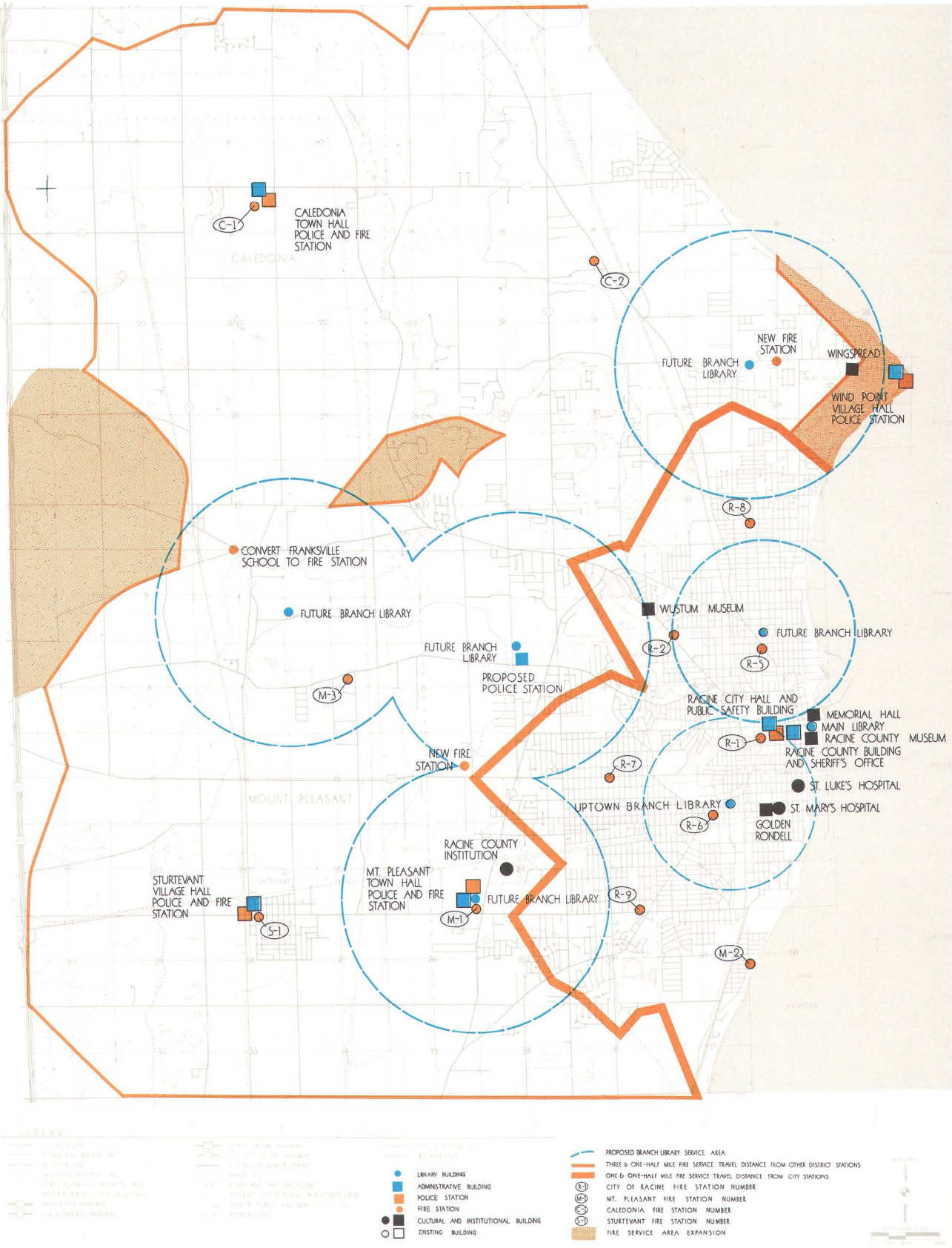
Public Administration Buildings. There are six major public administrative centers in the District. These include the Racine County Courthouse, the Racine City Hall, the Village Halls of Sturtevant and Wind Point, and the Town Halls in Caledonia and Mt. Pleasant (see Map 4-17). The County Highway Building is located adjacent to the District, west of Interstate 94. These buildings are expected to be retained in their present use as public administrative buildings, with the one exception being the Village Hall in Sturtevant, which will need to be replaced, probably early in the planning period. However, should it be determined during the second (jurisdictional) phase of the Comprehensive Planning Program that less administrative buildings are needed due to governmental reorganization, appropriate changes to the Public Buildings Plan will need to be made.

Police Stations. Police protection services are now provided by the county, the city, both towns and the Villages of Sturtevant and Wind Point. Each of these departments operates out of its own central police station. The County Sheriff's office and the Police Departments in the city and both towns operate with a permanent staff of police officers. The Villages have part-time policemen. Because the county provides protection services to the unincorporated areas and smaller communities, a disproportionately high per capita cost for police services accrues to residents of the city. Cities, however, have a proportionately higher per capita crime rate which can be attributed, in part, to factors of concentrated population at higher densities, social and economic problems, and traffic congestion. An additional police station should be located generally at the intersection of Spring Street, Green Bay Road and Newman Street on the Schacht site for additional police protection in this area. Other police protection services and facilities are proposed to be continued during the planning period

---

[32] *SEWRPC, Planning Report No. 14, Volume One, A Comprehensive Plan for the Racine Urban Planning District, Inventory Findings and Forecasts, Chapter IX, p. 175.*

MAP 4-17



PUBLIC BUILDINGS PLAN

RACINE URBAN PLANNING DISTRICT

regardless of the outcome of the jurisdictional phase (Phase II) of the Comprehensive Planning Study.

Fire Stations. Fire protection in the District is provided by the city, the towns and the Village of Sturtevant. There are thirteen fire stations in the District: seven in the city, five in the towns, and one in Sturtevant. One and one-half mile travel time service areas, for urbanized areas, is adequate for residential fire protection. High value property areas, such as the Central Business District, or intensely built up industrial areas, should have a one-mile travel time service area. In the less densely populated areas of the District, a three and one-half mile service area is adequate.

Three new fire stations will be needed to serve new growth areas: one to the north and two to the west. One of these stations (Franksville) is proposed to be located on an existing school site which is recommended to be closed in the School Plan. Each site contains one or more acres in area and is located on an arterial street or highway. Arrangements should be made to transfer the site as the school is phased out. Other new fire stations to the west should be located near the vicinity of the intersection of Emmertsen Road and STH 20. The other new station to the north should be located in the vicinity of Erie Street and Four Mile Road in the neighborhood park. The plan provides for new fire station locations with travel distance service areas of three and one-half to four miles, providing fire protection areas for 100 percent of the future developed area (see Map 4-17). These recommendations are predicated upon current administrative jurisdictions but should also provide sufficient fire protection should governmental reorganization take place.

Health Care Facilities. Three major hospitals serve the Planning District and the surrounding areas in Racine County. St. Luke's Hospital, with 345 beds; St. Mary's Hospital, with 400 beds; and the Racine County Institution, with three different but related medical divisions providing 655 beds -- a three hospital total of 1,400 beds. These totals reflect recent expansions at St. Luke's and St. Mary's. These hospitals have a service area which extends throughout Racine County and adjacent areas. Based upon a ratio of three acute hospital beds per 1,000 persons and five long term care beds per 1,000 persons,[33] a total of 740 acute beds will be needed and a total of 1,125 long term care beds will be needed by 1990. From these figures, it appears that another 465 beds will be needed by 1990, or about 23 beds per year if properly distributed according to need.

[33] *Harland Bartholomew and Associates, The Comprehensive Plan, Jackson County, Michigan, Chapter XI, p. 246.*

In view of the fact that there are major investments in existing facilities and that they are now centrally located to serve much of the high density residential area of the District, each of the existing hospitals should remain as vital parts of the Public Buildings Plan (see Map 4-17). Although this planning study does not attempt to go into the detail necessary to solve the hospital service problem, it does appear evident that a new 500 bed hospital may be necessary to serve the 1990 population. The property known as the Schacht (Trautwein School) site, indicated on both the School Plan (Map 4-15) and the Public Buildings Plan (Map 4-17) is recommended for consideration as a centrally located hospital site. The Schacht site is almost 50 acres in size and has frontage on Spring Street, Green Bay Road and Newman Street. It is further recommended that a special study be undertaken to determine more exactly the needs and suitable locations for the various hospital and related facilities including such facilities as the Lincoln Lutheran Extended Care Center to serve the District population.

PUBLIC UTILITIES PLAN

In the Racine Urban Planning District, approximately 92,000 persons are expected to be added to the population over the next 20 years. This growth, which represents nearly 70 percent of the present population, will add to the water supply, sewerage, storm water drainage and solid waste disposal problems unless direction is given to the location in both space and time of high and low density residential areas, new businesses and new and expanded industrial areas. Without proper control of land use, design considerations for underground piping systems will have to be unnecessarily larger to provide reserve for the possibility that each area could be developed to a much more intensive use than that considered at this time. Unplanned changes in land use could have drastic effects on existing utilities which may not have been designed for such development. On the other hand, adherence to adopted plans can save thousands of dollars by the proper sizing of utilities and by avoiding unnecessary extensions or replacements. Thus, the construction and extension of utilities in conjunction with related subdivision and zoning regulations can help achieve the goal of locating and guiding development. Few factors stimulate construction of homes, businesses and industries in desired locations as greatly as the availability of water and sanitary sewers, and inversely, nothing except lack of financing retards development as the absence of these same utilities. Therefore, the governmental jurisdiction having the power to provide and extend utilities must have a plan to base their policy upon in order to serve the residents of the District in the best manner possible.

Water Supply and Distribution Plan

In 1970, 82 percent of the Racine Urban Planning District's

population was connected to 11 municipal or utility district water systems. Through inter-governmental agreements and interconnection, nine of these systems function as one large system of which the prime supplier is the City of Racine Water Works Commission. Only the water systems of the Caddy Vista and Crestview Districts are not connected to the City of Racine system.[34]

Water Supply. The existing Racine Water Works is centrally located on the east side of the present and projected urban area (see Map 4-18). Because of the large site and adequate capacity of in-takes from Lake Michigan, the future water treatment facilities should be concentrated at this location. The three existing in-takes have a reported capacity of 110 MGD, which is expected to satisfy peak demand conditions estimated for the 1990 population. However, the somewhat limited capacity of existing key lines (24-inch and 30-inch in diameter) which convey water from the present plant may not be adequate for the future peak conditions. Due to the need to build extensive new facilities to serve future demand while also building major transmission system improvements, it may be more economical to construct a second 40.0 MGD plant.

Construction of a second water treatment facility at a location north of the present plant has the advantages of reducing pumping and distribution costs and minimizing the possibility of a complete shut down in the event of natural or man-caused disaster at a single plant location. In addition, it spreads the distribution load, reducing the need to replace existing key lines, and could improve distribution and pumping conditions. Disadvantages of this alternative are that new in-take facilities would be required, a site must be purchased, and some redesign of the distribution system may be necessary.

Although enlargement of the present plant to satisfy demand is favored, the two alternatives are very complex and it is recommended that detailed studies of these two possibilities be made, taking into consideration initial and long-range needs, fire protection, first costs versus annual operating costs, and the concurrent need for an overall analysis of the present distribution system with extensions. Such a detailed engineering study can provide the design and economic answers required to satisfactorily provide the most beneficial and economical water system for the twenty year period, based upon the Land Use Plan.

Water Storage. At the present time, the interconnected water systems have only four storage tanks with a total capacity of 5.8 million gallons. Because the amount of urbanized land will almost double, it is anticipated that additional elevated storage will be required to maintain pressure and fire flow for areas some distance from the existing central system. It is common practice to have at least a half-day's supply in elevated storage to provide for system disruption or pumping malfunction. However, this storage should also be sized commensurate with the fire insurance classification the area desires to achieve. Because of these variables and the need for detailed elevation and pressure information, no elevated tank locations are indicated on the map. It is strongly recommended that a system-wide study be initiated for the sizing of future mains and the placement of additional storage facilities.

Water Distribution. Recommended extensions to the water distribution system have been made in consideration of the Land Use Plan and the already existing connections (see Map 4-18). All of the proposed system extensions are recommended as key distribution mains that will provide both extension of the system and "looping" of the lines for the benefit of pressure, flow, and alternative direction of supply. It is expected that none of these lines will be smaller than 12 inches in diameter and that many of them will need to be 18 to 30 inches in diameter. However, final sizing will require a detailed analysis of the existing system, proposed additions and the estimated residential, industrial, and fire flow requirements. Such factors as elevation differences, location of storage facilities, point and volume of supply, and the age of lines will have to be considered.

Anticipated 1990 average daily water consumption is expected to reach approximately 53.5 MGD while peak days will approach 80 to 90 MGD.[35] This will require that the water treatment plants be expanded over the next twenty years to at least double present capacity (40.0 MGD). Actual peak consumption in 1970 approached 37 MGD. Thus, continued growth in the District will require that construction of additional water treatment facilities be started within the next five years.

Sanitary Sewer Service Plan[36]

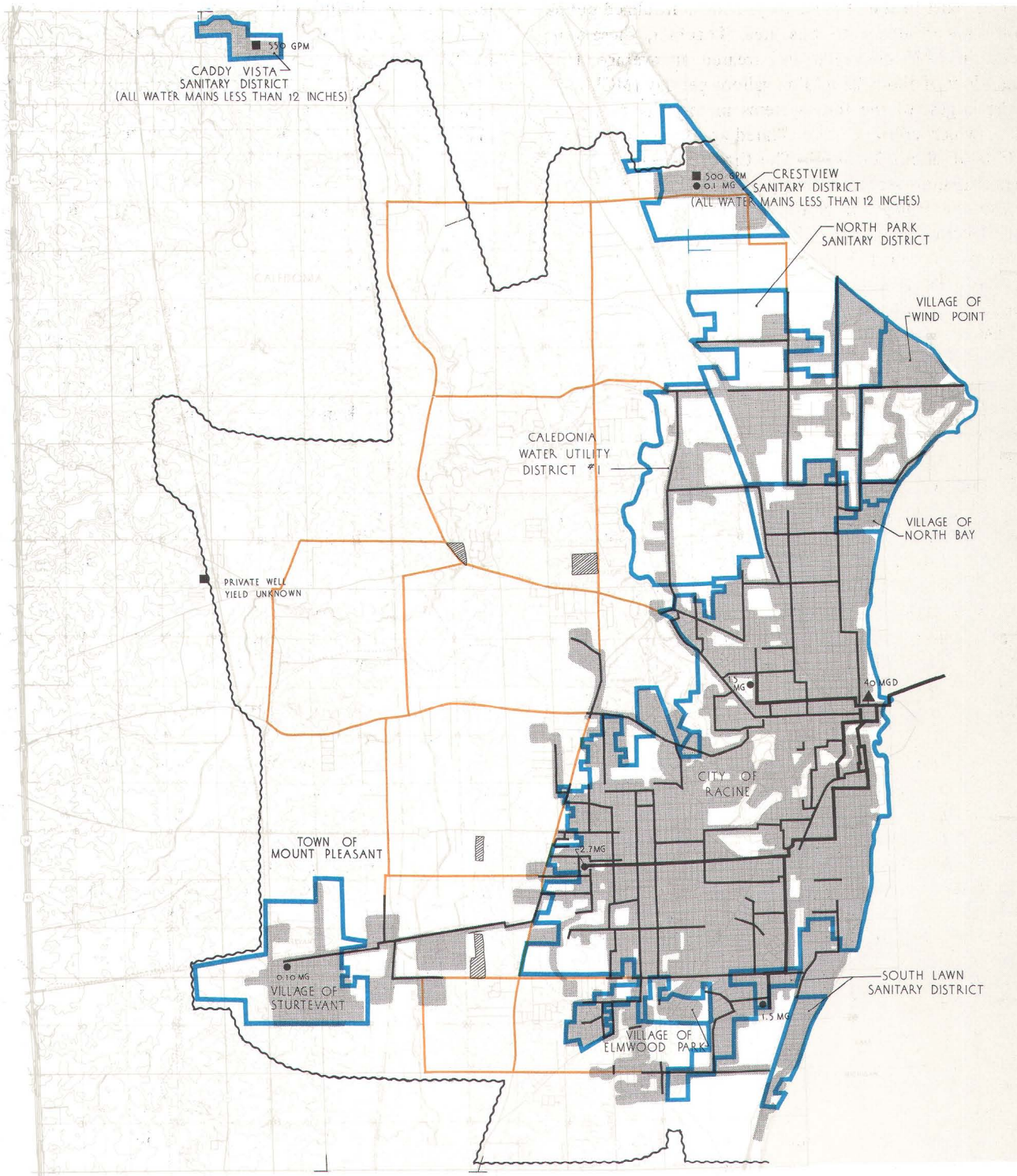
As discussed in Volume One of this report, about 83 percent of the 1970 total District population of 133,000 persons was served by public sanitary sewers. In total, the sewer service area of the District in 1970 approximated 40 square miles, and four separate sanitary sewerage systems

[34] *SEWRPC, Planning Report No. 14, Volume One, A Comprehensive Plan for the Racine Urban Planning District, Inventory Findings and Forecasts, Chapter VII, p. 121.*

[35] *Ibid. Chapter VIII, Table 8-5, p. 134.*

[36] *The sanitary sewer service plan for the District contained herein was prepared and recommended by the SEWRPC. Harland Bartholomew and Associates also prepared a sanitary sewer service plan for the District which was included in an earlier draft.*

MAP 4-18



SOURCE: MANAGERS AND ENGINEERS OF EACH OF THE SYSTEMS SHOWN - COMPILED BY HARLAND BARTHOLOMEW & ASSOC

WATER SYSTEM SERVICE AREAS AND DISTRIBUTION SYSTEMS

currently exist in the District to provide centralized public sanitary sewer service to this area. Together, these four systems in 1970 conveyed and treated an average daily sewage flow of about 25 million gallons per day (MGD). By far, the largest of the four systems in the City of Racine system, which conveyed and treated an average daily flow in 1970 of about 24 MGD. The City of Racine sanitary sewerage system served not only all of the City of Racine but also the Village of North Bay, the Caledonia Sewer Utility District No. 1, and the Mt. Pleasant Sewer Utility District No. 1. The second largest system in the District is the North Park system, which in 1970 conveyed and treated an average daily flow of about 0.9 MGD and provided sewer service for the North Park Sanitary District, including all of the Village of Wind Point and a portion of the Town of Caledonia and the Crestview Sanitary District in the Town of Caledonia. The Village of Sturtevant was served by its own sanitary sewerage system which in 1970 conveyed and treated an average daily flow of about 0.2 MGD. Finally, the Caddy Vista Sanitary District in the Town of Caledonia was served by a sanitary sewerage system which in 1970 conveyed and treated about 0.1 MGD. All of these systems were described in Volume One of this report, and the area served by each system, the major trunk sewers in each system, and the location of each of the four sewage treatment plants, are shown on Map 8-4 of Volume One of this report. It should also be noted that no sanitary sewer service is currently provided in the Village of Elmwood Park.

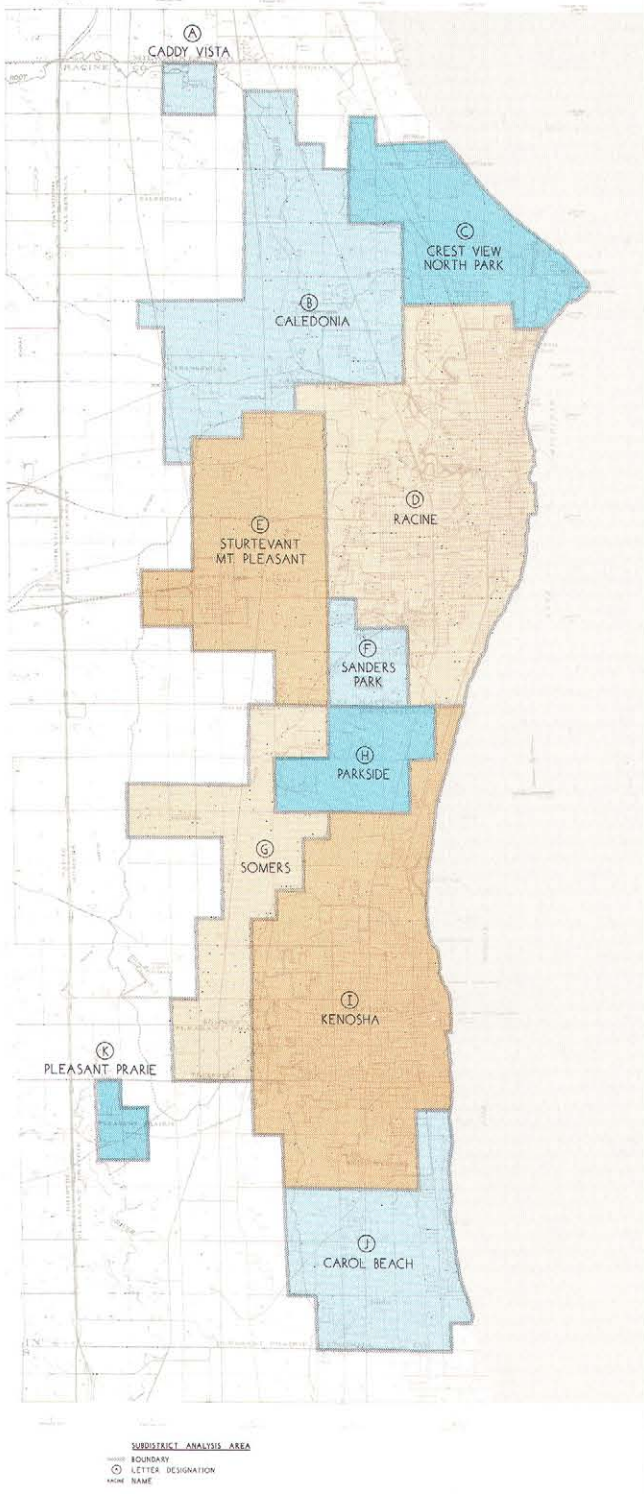
One of the major elements of the comprehensive plan for the District is the sanitary sewerage system plan. This plan element is intended to recommend the general location and approximate capacity of all sewage treatment plants, together with the approximate location, size, and grade of all necessary major trunk sanitary sewers and the geographic area that each sewer and treatment plant is intended to serve. Since sanitary sewerage system plans had already been prepared for the Kenosha Planning District to the south of the Racine Urban Planning District and for the Milwaukee-Metropolitan sanitary sewerage system to the north of the Racine Urban Planning District, it was originally intended, when the Prospectus for the Racine Urban Planning District comprehensive planning program was prepared, to confine the analyses relating to the preparation of a recommended sanitary sewerage system plan for the District to the geographical area encompassed by the District. Several factors, however, intervened during the course of conducting the Racine Urban Planning District comprehensive planning program that dictated the need to expand the scope of the study to include the Kenosha Planning District. These factors included the adoption of federal and state planning requirements by the U. S. Environmental Protection Agency and the Wisconsin Department of Natural Resources, respectively, which requirements include the need to prepare economic analyses relating to the potential for interconnection of sanitary sewerage systems within natural drainage basins and metropolitan areas; the conduct of a regional sanitary sewerage system planning program by the Regional Planning Commission, undertaken in part to meet these federal requirements; and a local proposal by the Town of Mt. Pleasant to construct a major new sewage treatment plant on the Pike River. For all of the foregoing reasons and, in addition, because the Pike River watershed includes major areas proposed for urban development in both the Kenosha and Racine Planning Districts, it became necessary to expand the scope of the investigations under the Racine Urban Planning District comprehensive planning program to include system analyses in respect to size and location of sewage treatment plants and their respective service areas considering the Kenosha and Racine Planning Districts as a subregional planning area for sanitary sewerage system planning purposes. Accordingly, the following discussion presents the results of this expanded planning investigation. The work on which the discussion is based was fully coordinated with the recommendations to be included in the sanitary sewerage system plan for the Southeastern Wisconsin Region, and, to the extent possible, with the recommendations contained in the adopted comprehensive plan for the Root River watershed and the comprehensive plan for the Kenosha Planning District.

Subdistrict Analysis Areas. For purposes of preparing alternative sanitary sewerage system plans for the Kenosha-Racine subregional area, the anticipated 1990 urban growth areas within the Kenosha and Racine Planning Districts were divided into 11 subareas. The delineation of these subareas was based upon consideration of both the existing sanitary sewer service areas and the natural drainage areas in the outlying portions of the Districts. As rational sewerage system planning areas, these subareas do not necessarily correspond directly to the existing civil division, sanitary district, or utility district boundaries, and should not be confused with such legal entities as discussed in the inventories presented in Volume One of this report. The 11 sanitary sewer analysis areas are shown on Map 4-19 and are described as follows:

1. Area A – This 625 acre area includes the existing Caddy Vista Subdivision in the Town of Caledonia and such additional lands as may be required for sufficient new urban development to provide, with the existing urban development, a complete neighborhood unit in this area. This area will be referenced as the "Caddy Vista" sewer service area in the ensuing discussion.

2. Area B – This 10,965 acre area includes portions of the Town of Caledonia either already

MAP 4-19



SUBDISTRICT ANALYSIS AREAS
KENOSHA-RACINE SUBREGIONAL AREA

urbanized and included in the Caledonia Sewer Utility District No. 1 or proposed for urbanization by 1990 in the recommended Racine District land use plan. All of these lands lie within the Root River watershed. This area will be referenced as the "Caledonia" sewer service area in the ensuing discussion.

3. Area C – This 5,565 acre area includes all of the existing Crestview Sanitary District and the existing North Park Sanitary District, including the Village of Wind Point. This area will be referenced as the "Crestview-North Park" sewer service area in the ensuing discussion.

4. Area D – This 13,657 acre area includes nearly all of the City of Racine, the Villages of Elmwood Park and North Bay, and certain additional lands lying in the Towns of Caledonia and Mt. Pleasant. This area will be referenced as the "Racine" sewer service area in the ensuing discussion.

5. Area E – This 8,361 acre area includes all of the Village of Sturtevant and much of the Pike River watershed area in the Town of Mt. Pleasant. This area will be referenced as the "Sturtevant-Mt. Pleasant" sewer service area in the ensuing discussion.

6. Area F – This 1,599 acre area includes a small portion of the City of Racine and a portion of the Town of Mt. Pleasant lying in the Sorenson Creek subwatershed of the Pike River watershed. This area will be referenced as the "Sanders Park" sewer service area in the ensuing discussion.

7. Area G – This 7,142 acre area includes the westerly portion of the Pike River watershed in the Town of Somers. This area will be referenced as the "Somers" sewer service area in the ensuing discussion.

8. Area H – This 2,918 acre area includes an easterly portion of the Pike River watershed in the Town of Somers. This area will be referenced as the "Parkside" sewer service area in the ensuing discussion.

9. Area I – This 14,183 acre area includes all of the City of Kenosha and portions of the Towns of Pleasant Prairie and Somers. This area will be referenced as the "Kenosha" sewer service area in the ensuing discussion.

10. Area J – This 2,849 acre area includes a portion of the Town of Pleasant Prairie south of the City of Kenosha. This area will be referenced as the "Carol Beach" sewer service area in the ensuing discussion.

11. Area K – This 803 acre area includes a portion of the Town of Pleasant Prairie lying west of the Subcontinental Divide. This area will be referenced as the "Pleasant Prairie" sewer service area in the ensuing discussion.

The foregoing sewer service analysis areas were utilized in various combinations in the preparation of alternative sanitary sewerage system plans for the Kenosha-Racine subregional area. Out of the many possible ways of providing these areas with sanitary sewer service to the proposed 1990 urban development pattern, five basic alternatives were selected for economic analysis. These five alternatives were selected based upon considerations relating to existing sanitary sewerage systems, existing patterns of contract sewer service, county boundaries, State of Wisconsin policy pertaining to the proliferation of sewage treatment facilities, and Federal Lake Michigan Enforcement Conference requirements for levels of sewage treatment.

Two of the foregoing 11 sewer service areas were excluded from the investigation of alternative sanitary sewerage system plans. The first of these areas, the Caddy Vista area, was excluded from the analysis because of a previous recommendation made in the adopted comprehensive plan for the Root River watershed that the very small Caddy Vista sewage treatment plant be abandoned and its sewer service area connected by contract to the Milwaukee-Metropolitan sewerage system. The second area eliminated from further analysis is the Pleasant Prairie sewer service area lying west of the Subcontinental Divide traversing Racine and Kenosha Counties. Major diversions of water across the Subcontinental Divide could pose serious and costly legal problems having international ramifications. For this reason, the Pleasant Prairie sewer service area was considered as an individual entity in having no interconnection potential in the Kenosha-Racine subregional area.

Each of the five alternatives selected for analysis is described in the ensuing discussion. The criteria utilized to design the components of the alternative sanitary sewerage systems presented in the ensuing discussion are identical to those used in the regional sanitary sewerage system planning program. The method of economic analysis utilized to fully cost and compare the alternatives presented are also identical to those used in the regional sanitary sewerage system planning program. The design criteria and the method of economic analysis are fully described in Chapter IX of SEWRPC Planning Report No. 15, A Regional Sanitary Sewerage System Plan for Southeastern Wisconsin.

Alternative 1. The first alternative sanitary sewerage system plan considered for the Kenosha-Racine subregional area would provide for the expansion of the existing City of Racine and City of Kenosha sewage treatment facilities in order to provide sanitary sewer service for the entire subregional area. Under this alternative, the Caledonia, Crestview-North Park, Racine, Sturtevant-Mt. Pleasant, Sanders Park, Somers, and Parkside sewer service areas would be served by the Racine sewage treatment facility (see Map 4-20). The remaining area, including the Kenosha and Carol Beach sewer service areas, would be served by the Kenosha sewage treatment facility. In accordance with state and federal requirements, advanced waste treatment,[37] including phosphorus removal, would be provided at the Racine and Kenosha sewage treatment plants. Under this alternative, the existing public sewage treatment facilities at Crestview-North Park, Sturtevant, and Somers would all be ultimately abandoned. In addition, all existing private sewage treatment facilities within the 1990 urban development area would be abandoned, including in the Racine Planning District the Frank Pure Foods[38] and St. Bonaventure sewage treatment facilities.

The facilities needed for this alternative sanitary sewerage system plan would include the expansion of the existing Racine sewage treatment facility from its existing capacity of 23 MGD to a proposed 1990 capacity of 53.0 MGD and the expansion of the existing Kenosha sewage treatment facility from its existing capacity of 18 MGD to a proposed 1990 capacity of 31.7 MGD. Such facility expansion at the Racine and Kenosha treatment facilities would require site expansion of an estimated 17 acres at the Racine facility and an estimated 10 acres at the Kenosha facility. In addition, major improvements to existing trunk sewers would be required in the Crestview-North Park, Caledonia, and Racine sewer service areas. Finally, major new trunk sewers would be required to connect the Caledonia, Crestview-North Park, Sturtevant-Mt. Pleasant, Sanders Park, Somers, and Parkside sewer service areas to the Racine sewage treatment facility and the Carol Beach sewer service area to the Kenosha sewage treatment facility. The

---

[37] *The various levels and types of sewage treatment are defined in Chapter VIII of Volume One of this report.*

[38] *Connection of the Frank Pure Food Company to the City of Racine sewerage system, after appropriate pretreatment of industrial wastes, has already been recommended in the adopted Root River watershed plan.*

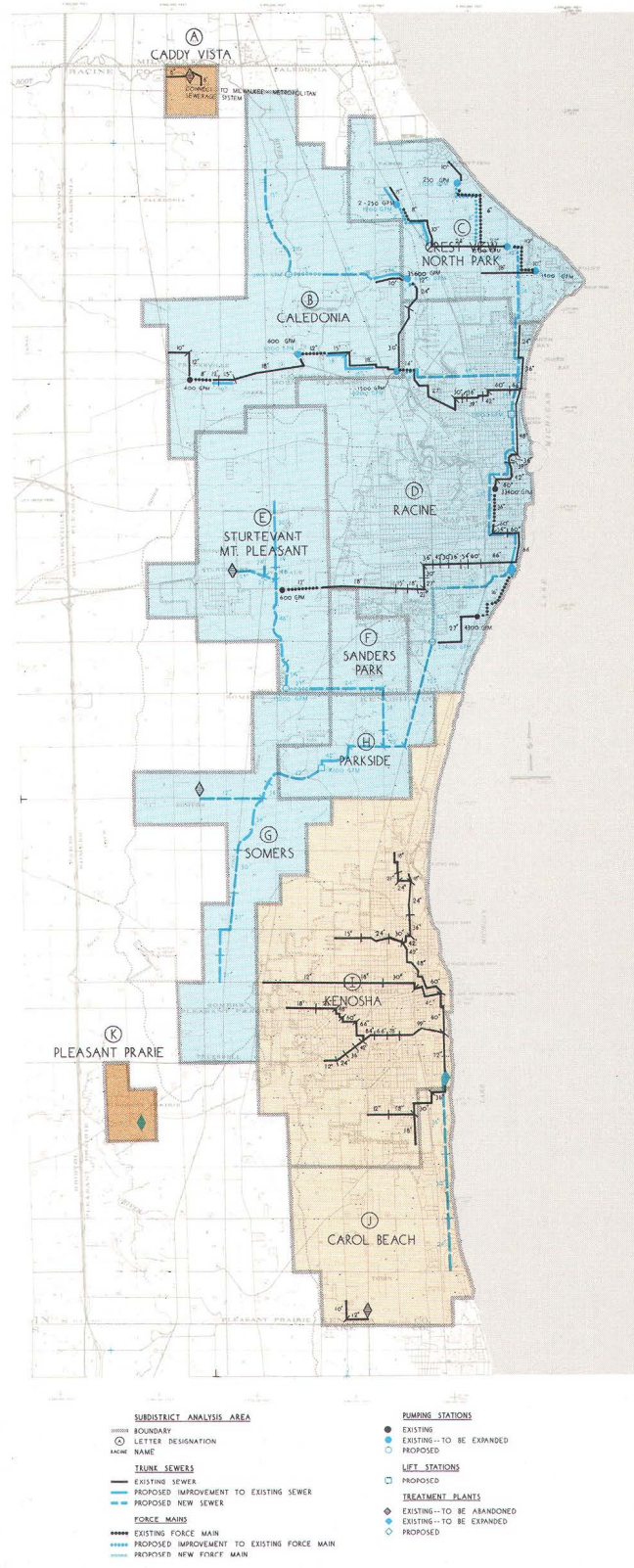
location of these major trunk sewer improvements and additions is shown on Map 4-20.

Implementation of this alternative sanitary sewerage system plan for the Racine-Kenosha subregional area would entail an estimated initial capital cost of $35,463,000, with the total equivalent annual cost, including operation and maintenance, over a 50-year period estimated to be $4,793,600 or about $16 per capita per year. The per capita cost has, for analysis purposes, been based upon a 1980 population of 296,000 to be served by the facilities. The present worth of this alternative plan for 50 years at six percent interest is $75,556,000. Detailed cost estimates for this alternative plan are presented in Table 4-9. These estimates include the cost of all required treatment plant additions at Racine and Kenosha, including the cost of acquiring or constructing additional land on the lake shore and the cost of providing advanced waste treatment at both sewage treatment plants; improvements to existing trunk sewer systems in the Crestview-North Park, Caledonia, and Racine sewer service areas; and major new trunk sewers needed to connect the Crestview-North Park, Caledonia, Sturtevant-Mt. Pleasant, Sanders Park, Somers, and Parkside areas to the Racine sewage treatment facility and the Carol Beach area to the Kenosha sewage treatment facility.

Alternative 2. The second alternative sanitary sewerage system plan considered for the Kenosha-Racine subregional area would, like the first alternative, provide for the expansion of the existing City of Racine and City of Kenosha sewage treatment facilities in order to provide sanitary sewer service for the entire subregional area. Under this alternative, the Caledonia, Crestview-North Park, Racine, and Sanders Park sewer service areas would be served by the Racine sewage treatment facility (see Map 4-21). The remaining area, including the Kenosha, Sturtevant-Mt. Pleasant, Somers, Parkside, and Carol Beach sewer service areas, would be served by the Kenosha sewage treatment facility. In accordance with state and federal requirements, advanced waste treatment, including phosphorus removal, would be provided at the Kenosha and Racine sewage treatment plants. Under this alternative the existing public sewage treatment facilities at Crestview-North Park, Sturtevant, and Somers would be ultimately abandoned. In addition, all existing private sewage treatment facilities within the 1990 urban development area would be abandoned, including in the Racine Planning District the Frank Pure Foods and St. Bonaventure sewage treatment facilities.

The facilities needed for this alternative sanitary sewerage system plan would include the expansion of the existing Racine sewage treatment facility from its existing capacity of 23 MGD to a proposed 1990 capacity of 37.0 MGD and the expansion of the existing Kenosha sewage treatment

MAP 4-20



ALTERNATIVE SANITARY SEWERAGE SYSTEM PLAN NO. 1
KENOSHA-RACINE SUBREGIONAL AREA

Table 4-9

DETAILED COST ESTIMATES
ALTERNATIVE SANITARY SEWERAGE SYSTEM PLAN NO. 1
KENOSHA-RACINE SUBREGIONAL AREA

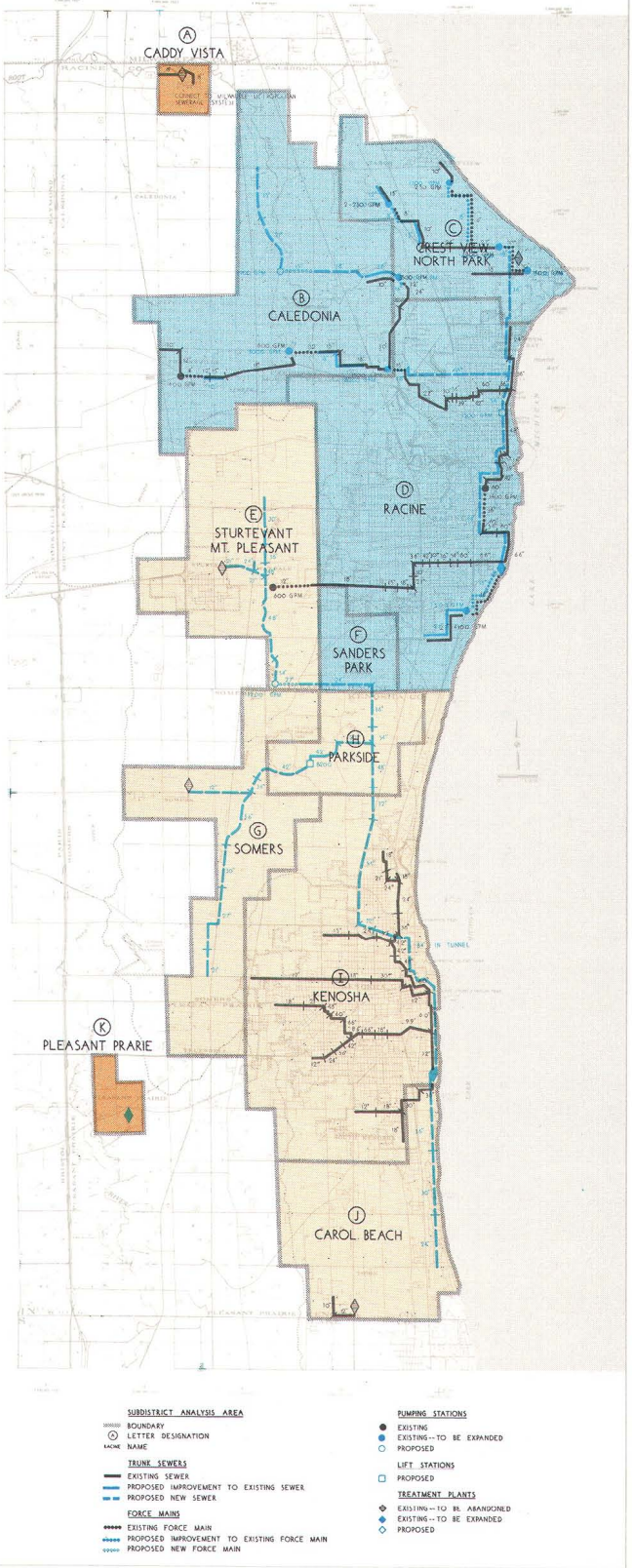
Plan Subelement	Estimated Cost						
		Present Worth (1970-2020)			Equivalent Annual (1970-2020)		
	Capital Construction	Construction	Operation and Maintenance	Total	Construction	Operation and Maintenance	Total
Treatment Plant							
Racine							
Facilities (53.0 MGD)	$12,430,000	$12,216,000	$24,226,000	$36,442,000	$ 775,000	$1,537,000	$2,312,000
Land (17 acres)	1,270,000	946,000	–	946,000	60,000	–	60,000
Kenosha							
Facilities (31.7 MGD)	2,940,000	4,272,000	16,345,000	20,617,000	271,000	1,037,000	1,308,000
Land (10 acres)	100,000	71,000	–	71,000	4,500	–	4,500
Subtotal Treatment Facilities and Land	16,740,000	17,505,000	40,571,000	58,076,000	1,110,500	2,574,000	3,684,500
Trunk Sewers Improvements							
Caledonia	965,000	867,000	594,000	1,461,000	55,000	37,700	92,700
Crestview-North Park	747,000	646,000	473,000	1,119,000	41,000	30,000	71,000
Racine	500,000	487,000	252,000	739,000	31,000	16,000	47,000
Subtotal Trunk Sewer Improvements	2,212,000	2,000,000	1,319,000	3,319,000	127,000	83,700	210,700
New Trunk Sewers							
Caledonia	983,000	772,000	142,000	914,000	49,000	9,000	58,000
Sturtevant-Mt. Pleasant, Sanders Park, Somers, and Parkside to Racine	9,695,000	7,156,000	878,000	8,034,000	454,000	55,700	509,700
Caledonia and Crestview-North Park to Racine	5,104,000	4,461,000	205,000	4,666,000	283,000	13,000	296,000
Carol Beach to Kenosha	729,000	536,000	11,000	547,000	34,000	700	34,700
Subtotal New Trunk Sewers	16,511,000	12,925,000	1,236,000	14,161,000	820,000	78,400	898,400
TOTALS	$35,463,000	$32,430,000	$43,126,000	$75,556,000	$2,057,500	$2,736,100	$4,793,600

Source: Harza Engineering Company and SEWRPC.

facility from its existing capacity of 18 MGD to a proposed 1990 capacity of 47.7 MGD. Such facility expansion at the Racine and Kenosha treatment facilities would require site expansion of an estimated 3.5 acres at the Racine facility and an estimated 26 acres at the Kenosha facility. In addition, major improvements to existing trunk sewers would be required in the Crestview-North Park, Caledonia, and Racine sewer service areas. Finally, major new trunk sewers would be required to connect the Caledonia and Crestview-North Park sewer service areas to the Racine sewage treatment facility and the Sturtevant-Mt. Pleasant, Sanders Park, Somers, Parkside, and Carol Beach sewer service areas to the Kenosha sewage treatment facility. The location of these major new trunk sewers and additions are shown on Map 4-21.

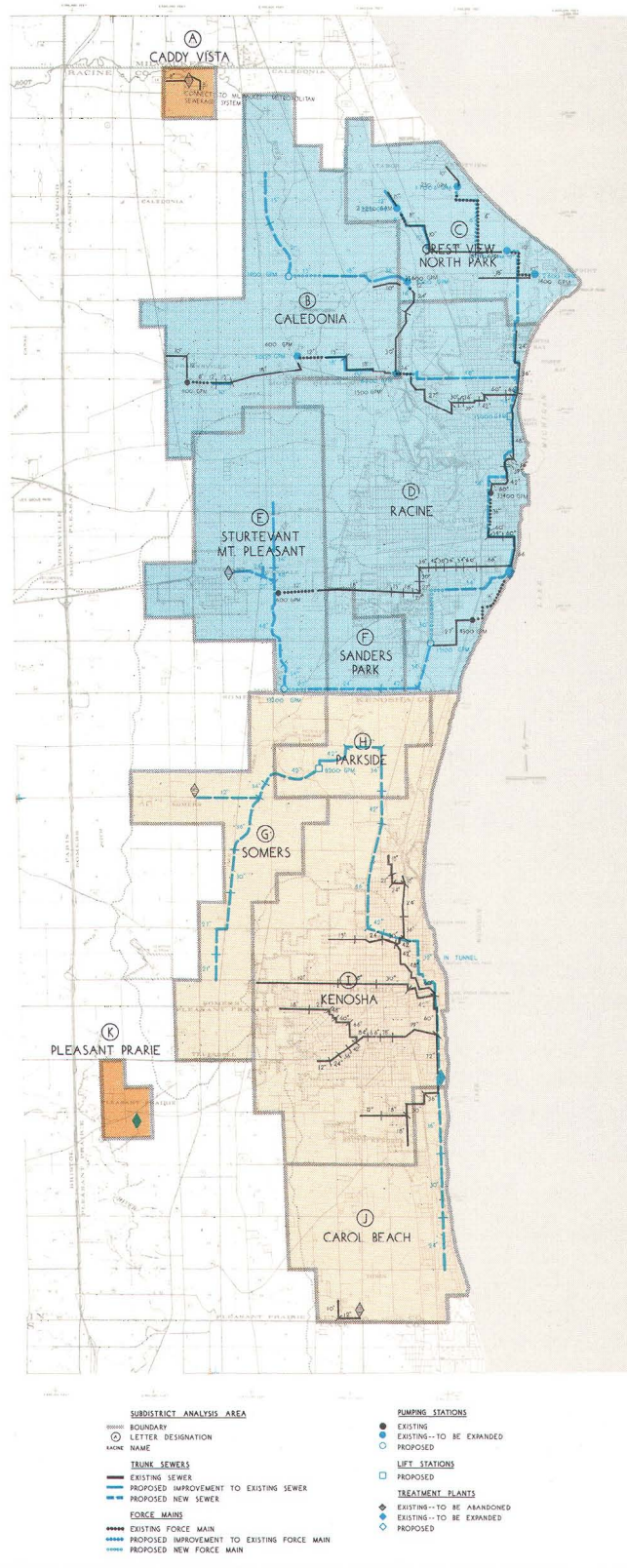
Implementation of this alternative sanitary sewerage system plan for the Kenosha-Racine subregional area would entail an estimated initial capital cost of $37,470,000, with the total equivalent annual cost, including operation and maintenance, over a 50-year period estimated to be $4,885,400, or about $16 per capita per year. The per capita cost has, for analysis purposes, been based upon a 1980 population of 296,000 to be served by the facility. The present worth of this alternative plan for 50 years at six percent interest is $77,001,000. Detailed cost estimates

MAP 4-21



ALTERNATIVE SANITARY SEWERAGE SYSTEM PLAN NO. 2
KENOSHA-RACINE SUBREGIONAL AREA

MAP 4-22



ALTERNATIVE SANITARY SEWERAGE SYSTEM PLAN NO. 3
KENOSHA-RACINE SUBREGIONAL AREA

Table 4-10

DETAILED COST ESTIMATES
ALTERNATIVE SANITARY SEWERAGE SYSTEM PLAN NO. 2
KENOSHA-RACINE SUBREGIONAL AREA

Plan Subelement	Estimated Cost						
		Present Worth (1970-2020)			Equivalent Annual (1970-2020)		
	Capital Construction	Construction	Operation and Maintenance	Total	Construction	Operation and Maintenance	Total
Treatment Plant							
Racine							
Facilities (37.0 MGD)	$ 8,100,000	$ 8,180,000	$18,315,000	$26,495,000	$ 519,000	$1,162,000	$1,681,000
Land (3.5 acres)	262,000	195,000	–	195,000	12,400	–	12,400
Kenosha							
Facilities (47.7 MGD)	7,720,000	8,575,000	22,603,000	31,178,000	544,000	1,434,000	1,978,000
Land (26 acres)	260,000	183,000	–	183,000	11,600	–	11,600
Subtotal Treatment Facilities and Land	16,342,000	17,133,000	40,918,000	58,051,000	1,087,000	2,596,000	3,683,000
Trunk Sewers Improvements							
Caledonia	965,000	867,000	594,000	1,461,000	55,000	37,700	92,700
Crestview-North Park	747,000	646,000	473,000	1,119,000	41,000	30,000	71,000
Racine	500,000	487,000	252,000	739,000	31,000	16,000	47,000
Subtotal Trunk Sewer Improvements	2,212,000	2,000,000	1,319,000	3,319,000	127,000	83,700	210,700
New Trunk Sewers							
Caledonia	983,000	772,000	142,000	914,000	49,000	9,000	58,000
Caledonia and Crestview-North Park to Racine	5,104,000	4,461,000	205,000	4,666,000	283,000	13,000	296,000
Sturtevant-Mt. Pleasant, Sanders Park, and Parkside to Kenosha	12,100,000	8,937,000	567,000	9,504,000	567,000	36,000	603,000
Carol Beach to Kenosha	729,000	536,000	11,000	547,000	34,000	700	34,700
Subtotal New Trunk Sewers	18,916,000	14,706,000	925,000	15,631,000	933,000	58,700	991,700
TOTALS	$37,470,000	$33,839,000	$43,162,000	$77,001,000	$2,147,000	$2,738,400	$4,885,400

Source: Harza Engineering Company and SEWRPC.

for this alternative plan are presented in Table 4-10. These estimates include the cost of all required treatment plant additions at Racine and Kenosha, including the cost of acquiring or constructing additional land on the lake shore and the cost of providing advanced waste treatment at both sewage treatment plants; improvements to existing trunk sewer systems in the Crestview-North Park, Caledonia, and Racine sewer service areas; and major new trunk sewers needed to connect the Crestview-North Park and Caledonia areas to the Racine sewage treatment facility and the Sturtevant-Mt. Pleasant, Sanders Park, Somers, Parkside, and Carol Beach areas to the Kenosha sewage treatment facility.

Alternative 3. The third alternative sanitary sewerage system plan considered for the Kenosha-Racine subregional area would, like the first and second alternatives, provide for the expansion of the existing City of Racine and City of Kenosha sewage treatment facilities in order to provide sanitary sewer service for the entire subregional area. Under this alternative, the Caledonia, Crestview-North Park, Racine, Sturtevant-Mt. Pleasant, and Sanders Park sewer service areas would be served by the Racine sewage treatment facility (see Map 4-22). The remaining area, including the Kenosha, Somers, Parkside, and Carol Beach sewer service areas, would be served by the Kenosha sewage treatment facility. In accordance with state and federal

Table 4-11

DETAILED COST ESTIMATE
ALTERNATIVE SANITARY SEWERAGE SYSTEM PLAN NO. 3
KENOSHA-RACINE SUBREGIONAL AREA

Plan Subelement	Estimated Cost						
		Present Worth (1970-2020)			Equivalent Annual (1970-2020)		
	Capital Construction	Construction	Operation and Maintenance	Total	Construction	Operation and Maintenance	Total
Treatment Plants							
Racine							
Facilities (48.5 MGD)	$11,600,000	$11,806,000	$22,619,000	$34,425,000	$ 749,000	$1,435,000	$2,184,000
Land (13 acres)	975,000	728,000	–	728,000	46,200	–	46,200
Kenosha							
Facilities (36.2 MGD)	4,200,000	5,391,000	17,527,000	22,918,000	342,000	1,112,000	1,454,000
Land (14 acres)	140,000	99,000	–	99,000	6,300	–	6,300
Subtotal Treatment Facilities and Land	16,915,000	18,024,000	40,146,000	58,170,000	1,143,500	2,547,000	3,690,500
Trunk Sewer Improvements							
Caledonia	965,000	867,000	594,000	1,461,000	55,000	37,700	92,700
Crestview-North Park	747,000	646,000	473,000	1,119,000	41,000	30,000	71,000
Racine	500,000	487,000	252,000	739,000	31,000	16,000	47,000
Subtotal Trunk Sewer Improvements	2,212,000	2,000,000	1,319,000	3,319,000	127,000	83,700	210,700
New Trunk Sewers							
Caledonia	983,000	772,000	142,000	914,000	49,000	9,000	58,000
Caledonia and Crestview-North Park to Racine	5,104,000	4,461,000	205,000	4,666,000	283,000	13,000	296,000
Carol Beach to Kenosha	729,000	536,000	11,000	547,000	34,000	700	34,700
Sturtevant-Mt. Pleasant, and Sanders Park to Racine	4,631,000	3,494,000	706,000	4,200,000	221,700	44,800	266,500
Somers and Parkside to Kenosha	7,649,000	5,586,000	216,000	5,802,000	354,400	13,700	368,100
Subtotal New Trunk Sewers	19,096,000	14,849,000	1,280,000	16,129,000	942,100	81,200	1,023,300
TOTALS	$38,223,000	$34,873,000	$42,745,000	$77,618,000	$2,212,600	$2,711,900	$4,924,500

Source: Harza Engineering Company and SEWRPC.

requirements, advanced waste treatment, including phosphorus removal, would be provided at the Kenosha and Racine sewage treatment plants. Under this alternative, the existing public sewage treatment facilities at Crestview-North Park, Sturtevant, and Somers would be ultimately abandoned. In addition, all existing private sewage treatment facilities within the 1990 urban development area would be abandoned, including in the Racine Urban Planning District the Frank Pure Foods and St. Bonaventure sewage treatment facilities.

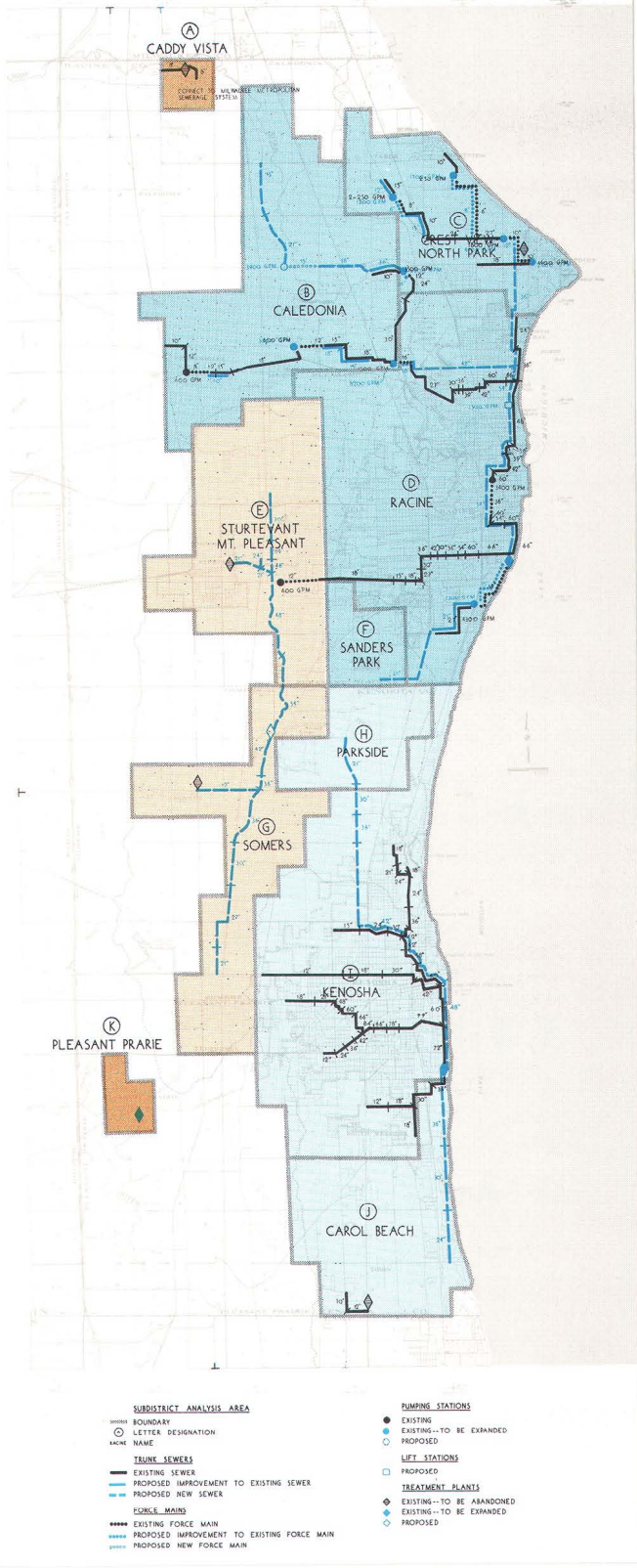
The facilities needed for this alternative sanitary sewerage system plan would include the expansion of the existing Racine sewage treatment facility from its existing capacity of 23 MGD to a proposed 1990 capacity of 48.5 MGD and the expansion of the existing Kenosha sewage treatment facility from its existing capacity of 18 MGD to a proposed 1990 capacity of 36.2 MGD. Such facility expansion at the Racine and Kenosha treatment facilities would require site expansion of an estimated 13 acres at the Racine facility and an estimated 14 acres at the Kenosha facility. In addition, major improvements to existing trunk sewers would be required in the Crestview-North Park, Caledonia, and Racine sewer service areas. Finally, major new trunk sewers would be required to connect the Caledonia, Crestview-North Park, Sturtevant-Mt. Pleasant, and Sanders

Park sewer service areas to the Racine sewage treatment facility and the Somers, Parkside, and Carol Beach sewer service areas to the Kenosha sewage treatment facility. The location of these major new trunk sewers and additions are shown on Map 4-22.

Implementation of this alternative sanitary sewerage system plan for the Kenosha-Racine subregional area would entail an estimated initial capital cost of $38,223,000 with the total equivalent annual cost, including operation and maintenance, over a 50-year period estimated to be $4,924,500, or about $17 per capita per year. The per capita cost has, for analysis purposes, been based upon a 1980 population of 296,000 to be served by the facility. The present worth of this alternative plan for 50 years at six percent interest is $77,618,000. Detailed cost estimates for this alternative plan are presented in Table 4-11. These estimates include the cost of all required treatment plant additions at Racine and Kenosha, including the cost of acquiring or constructing additional land on the lake shore and the cost of providing advanced waste treatment at both sewage treatment plants; improvements to existing trunk sewer systems in the Crestview-North Park, Caledonia, and Racine sewer service areas; and major new trunk sewers needed to connect the Crestview-North Park, Caledonia, Sturtevant-Mt. Pleasant, and Sanders Park areas to the Racine sewage treatment facility and the Somers, Parkside, and Carol Beach areas to the Kenosha sewage treatment facility.

Alternative 4. The fourth alternative sanitary sewerage system plan considered for the Kenosha-Racine subregional area would provide for more limited expansion of the existing City of Racine and City of Kenosha sewage treatment facilities combined with the construction of a new major sewage treatment facility on the Pike River in the Town of Somers. These three major sewage treatment facilities would provide sanitary sewer service for the entire subregional area. Under this alternative, the Caledonia, Crestview-North Park, Racine, and Sanders Park sewer service areas would be served by the Racine sewage treatment facility (see Map 4-23). The Parkside, Kenosha, and Carol Beach sewer service areas would be served by the Kenosha sewage treatment facility. The Sturtevant-Mt. Pleasant and Somers sewer service areas would be served by the proposed new Pike River sewage treatment plant in the Town of Somers. In accordance with state and federal requirements, advanced waste treatment, including phosphorus removal, would be provided at the Kenosha and Racine sewage treatment plants. The proposed Pike River sewage treatment plant would also provide advanced waste treatment, with such advanced waste treatment being defined to include, in addition to phosphorus removal, the conversion of ammonia nitrogen to nitrate in order to reduce the nitrogenous oxygen demand and toxic ammonia

MAP 4-23



ALTERNATIVE SANITARY SEWERAGE SYSTEM PLAN NO. 4
KENOSHA-RACINE SUBREGIONAL AREA

concentrations in the sewage effluent in order to meet the state-established water quality objectives for the Pike River. In addition, instream aeration would be provided during low-flow periods of the year in order to maintain the required dissolved oxygen levels in the Pike River. Under this alternative, the existing public sewage treatment facilities at Crestview-North Park, Sturtevant, and Somers would be ultimately abandoned. In addition, all existing private sewage treatment facilities within the 1990 urban development area would be abandoned, including in the Racine Planning District the Frank Pure Foods and St. Bonaventure sewage treatment facilities.

The facilities needed for this alternative sanitary sewerage system plan would include the expansion of the existing Racine sewage treatment facility from its existing capacity of 23 MGD to a proposed 1990 capacity of 37.0 MGD; the expansion of the existing Kenosha sewage treatment facility from its existing capacity of 18 MGD to a proposed 1990 capacity of 32.7 MGD; and the construction of a new 15.0 MGD sewage treatment facility on the Pike River in the Town of Somers. Facility expansion at the Racine and Kenosha treatment facilities would require site expansion of an estimated 3.5 acres at the Racine facility and an estimated 10 acres at the Kenosha facility. An estimated site area of 15 acres would be required at the new Pike River sewage treatment facility. In addition, major improvements to existing trunk sewers would be required in the Crestview, North Park, Caledonia, and Racine sewer service areas. Finally, major new trunk sewers would be required to connect the Caledonia, Crestview-North Park, and Sanders Park sewer service areas to the Racine sewage treatment facilities; the Parkside and Carol Beach sewer service areas to the Kenosha sewage treatment facility; and the Sturtevant-Mt. Pleasant and Somers sewer service areas to the proposed Pike River sewage treatment facility. The location of these new major trunk sewers and additions are shown on Map 4-23.

Implementation of this alternative sanitary sewerage system plan for the Kenosha-Racine subregional area would entail an estimated initial capital cost of $40,388,500, with the total equivalent annual cost, including operation and maintenance, over a 50-year period estimated to be $5,290,800, or about $18 per capita per year. The per capita cost has, for analysis purposes, been based upon a 1980 population of 296,000 to be served by the facility. The present worth of this alternative plan for 50 years at six percent interest is $83,481,000. Detailed cost estimates for this alternative plan are presented in Table 4-12. These estimates include the cost of all required treatment plant additions at Racine and Kenosha, including the cost of acquiring or constructing additional land on the lake shore and the cost of providing advanced waste treatment at both sewage treatment plants; the new major sewage treatment plant on the Pike River in the Town of Somers, including land acquisition, advanced waste treatment which would provide for the conversion of ammonia nitrogen, as well as the removal of phosphorus, and instream aeration on the Pike River downstream from the sewage treatment facility; improvements to existing trunk sewer systems in the Crestview-North Park, Caledonia, and Racine sewer service areas; and major new trunk sewers needed to connect the Crestview-North Park, Caledonia, and Sanders Park areas to the Racine sewage treatment facility, the Parkside and Carol Beach areas to the Kenosha sewage treatment facility, and the Sturtevant-Mt. Pleasant and Somers areas to the proposed new Pike River sewage treatment facility.

Alternative 5. The fifth alternative sanitary sewerage system plan considered for the Kenosha-Racine subregional area would, like the fourth alternative, provide for limited expansion of the existing City of Racine and City of Kenosha sewage treatment facilities combined with the construction of a new major sewage treatment facility on the Pike River in the Town of Somers. In addition, however, the existing North Park sewage treatment plant would be retained and expanded as a major sewage treatment facility. These four major sewage treatment facilities, then, would provide sanitary sewer service for the entire subregional area. Under this alternative, the Caledonia, Racine, and Sanders Park sewer service areas would be served by the Racine sewage treatment facility (see Map 4-24). The Parkside, Kenosha, and Carol Beach sewer service areas would be served by the Kenosha sewage treatment facility. The Sturtevant-Mt. Pleasant and Somers sewer service areas would be served by the proposed new Pike River sewage treatment facility in the Town of Somers. The Crestview-North Park sewer service area would be served by an expanded North Park sewage treatment facility. In accordance with state and federal requirements, advanced waste treatment, including phosphorus removal, would be provided at the Kenosha, Racine, and North Park sewage treatment plants. The proposed Pike River sewage treatment plant would also provide advanced waste treatment, with such advanced waste treatment being defined to include, in addition to phosphorus removal, the conversion of ammonia nitrogen to nitrate in order to reduce the nitrogenous oxygen demand and toxic ammonia concentrations in the sewage effluent in order to meet the state-established water quality objectives for the Pike River. In addition, instream aeration would be provided during low-flow periods of the year in order to maintain the required dissolved oxygen levels in the Pike River. Under this alternative, the existing public sewage treatment facilities at Sturtevant and Somers would be ultimately abandoned. In addition, all existing private sewage treatment facilities within the 1990 urban development area would be abandoned, including in the Racine Planning District the Frank Pure Foods and St. Bonaventure sewage treatment facilities.

Table 4-12

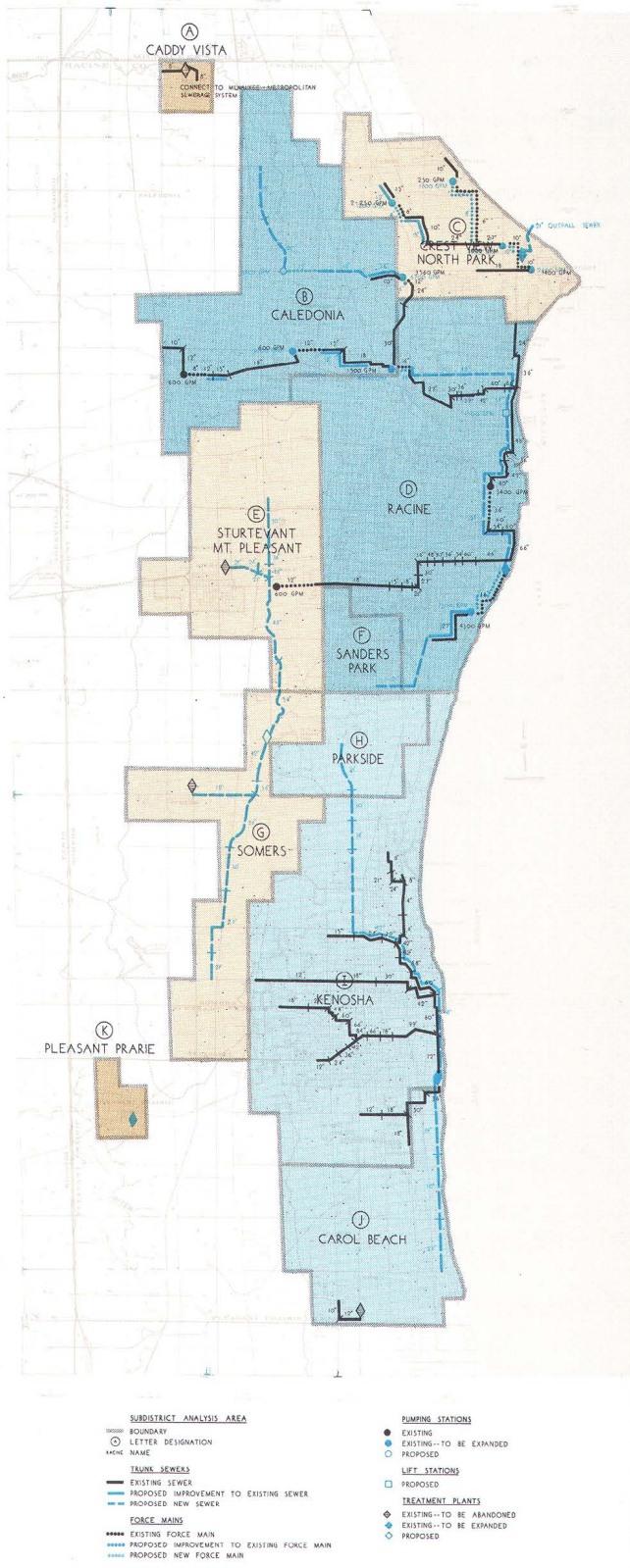
DETAILED COST ESTIMATES
ALTERNATIVE SANITARY SEWERAGE SYSTEM PLAN NO. 4
KENOSHA-RACINE SUBREGIONAL AREA

Plan Subelement	Estimated Cost						
		Present Worth (1970-2020)			Equivalent Annual (1970-2020)		
	Capital Construction	Construction	Operation and Maintenance	Total	Construction	Operation and Maintenance	Total
Treatment Plants							
Racine							
Facilities (37.0 MGD)	$ 8,100,000	$ 8,180,000	$18,315,000	$26,495,000	$ 519,000	$1,162,000	$1,681,000
Land (3.5 acres)	262,000	195,000	–	195,000	12,400	–	12,400
Kenosha							
Facilities (32.7 MGD)	3,360,000	4,634,000	16,487,000	21,212,000	294,000	1,046,000	1,340,000
Land (10 acres)	100,000	71,000	–	71,000	4,500	–	4,500
Pike River (New Plant)							
Facilities (15.0 MGD)	10,653,000	10,545,000	8,338,000	18,883,000	669,000	529,000	1,198,000
Land (15 acres)	30,000	20,000	–	20,000	1,300	–	1,300
Subtotal Treatment Facilities and Land	22,505,000	23,645,000	43,140,000	66,876,000	1,500,200	2,737,000	4,237,200
Trunk Sewer Improvements							
Caledonia	965,000	867,000	594,000	1,461,000	55,000	37,700	92,700
Crestview-North Park	747,000	646,000	473,000	1,119,000	41,000	30,000	71,000
Racine	500,000	487,000	252,000	739,000	31,000	16,000	47,000
Subtotal Trunk Sewer Improvements	2,212,000	2,000,000	1,319,000	3,319,000	127,000	83,700	210,700
New Trunk Sewers							
Caledonia	983,000	772,000	142,000	914,000	49,000	9,000	58,000
Sturtevant-Mt. Pleasant, and Somers to New Pike River Plant	4,988,000	4,256,000	47,000	4,303,000	270,000	3,000	273,000
Caledonia, Crestview-North Park, and Sanders Park to Racine	5,104,000	4,461,000	205,000	4,666,000	283,000	13,000	296,000
Carol Beach to Kenosha	729,000	536,000	11,000	547,000	34,000	700	34,700
Parkside to Kenosha	3,867,500	2,834,000	22,100	2,856,100	179,800	1,400	181,200
Subtotal New Trunk Sewers	15,671,500	12,859,000	427,100	13,286,100	815,800	27,100	842,900
TOTALS	$40,388,500	$38,504,000	$44,886,100	$83,481,000	$2,443,000	$2,847,800	$5,290,800

Source: Harza Engineering Company and SEWRPC.

The facilities needed for this alternative sanitary sewerage system plan would include the expansion of the existing Racine sewage treatment facility from its existing capacity of 23 MGD to a proposed 1990 capacity of 34.0 MGD; the expansion of the existing Kenosha sewage treatment facility from its existing capacity of 18 MGD to a proposed 1990 capacity of 32.7 MGD; the construction of a new 15.0 MGD sewage treatment facility on the Pike River in the Town of Somers; and the expansion of the existing North Park sewage treatment facility from its existing capacity of 0.9 MGD to a proposed 1990 capacity of 3.0 MGD. Under this alternative, no site expansion would be necessary at the Racine sewage treatment facility. An additional 10 acres of site area would be required at the Kenosha sewage treatment facility and an additional three acres would be required at the North Park sewage treatment facility. An estimated site area of 15 acres would be required at the new Pike River sewage treatment facility. In addition, major improvements to the existing major trunk sewers would be required in the Crestview-North Park, Caledonia, and

MAP 4-24



ALTERNATIVE SANITARY SEWERAGE SYSTEM PLAN NO. 5
KENOSHA-RACINE SUBREGIONAL AREA

Racine sewer service areas. Finally, major new trunk sewers would be required to connect the Caledonia and Sanders Park sewer service areas to the Racine sewage treatment facility; the Parkside and Carol Beach sewer service areas to the Kenosha sewage treatment facility; and the Sturtevant-Mt. Pleasant and Somers sewer service areas to the proposed new Pike River sewage treatment facility. The location of these new major trunk sewers and additions are shown on Map 4-24.

Implementation of this alternative sanitary sewerage system plan for the Kenosha-Racine subregional area would entail an estimated initial capital cost of $39,821,900, with the total equivalent annual cost, including operation and maintenance, over a 50-year period estimated to be $5,358,900, or about $18 per capita per year. The per capita cost has, for analysis purposes, been based upon a 1980 population of 296,000 to be served by the facility. The present worth of this alternative plan for 50 years at six percent interest is $84,324,400. Detailed cost estimates for this alternative plan are presented in Table 4-13. These estimates include the cost of all required treatment plant additions at Racine, Kenosha, and North Park, including the cost of acquiring additional land at the Kenosha and North Park sewage treatment plants and the cost of providing advanced waste treatment at all three sewage treatment plants; the new major sewage treatment plant on the Pike River in the Town of Somers, including land acquisition, advanced waste treatment which would provide for the conversion of ammonia nitrogen, as well as the removal of phosphorus, and instream aeration on the Pike River downstream from the sewage treatment facility; improvements to existing trunk sewer systems in the Crestview-North Park, Caledonia, and Racine sewer service areas; and major new trunk sewers needed to connect the Caledonia and Sanders Park areas to the Racine sewage treatment facility, the Parkside and Carol Beach areas to the Kenosha sewage treatment facility, and the Sturtevant-Mt. Pleasant and Somers areas to the proposed new Pike River sewage treatment facility.

Comparison of Alternatives. The costs involved in implementing the five alternative sanitary sewerage system plans presented above are summarized in Table 4-14. From a total annual cost point of view, it is apparent that the first three alternatives presented, which alternatives provide for two major sewage treatment facilities in the Kenosha-Racine subregional area, are more economical than Alternatives 4 and 5 which provide for additional treatment facilities on the Pike River and at the North Park Sanitary District, respectively. The difference in costs between the lowest cost alternative – Alternative 1 – and the highest cost alternative – Alternative 5 – is about 11 percent, however, within the range of precision with which the costs of each of these five alternative plans could be estimated. In

Table 4-13

DETAILED COST ESTIMATES
ALTERNATIVE SANITARY SEWERAGE SYSTEM PLAN NO. 5
KENOSHA-RACINE SUBREGIONAL AREA

Plan Subelement	Estimated Cost						
		Present Worth (1970-2020)			Equivalent Annual (1970-2020)		
	Capital Construction	Construction	Operation and Maintenance	Total	Construction	Operation and Maintenance	Total
Treatment Plants							
Racine							
Facilities (34.0 MGD)	$ 7,500,000	$ 7,771,000	$17,464,000	$25,235,000	$ 493,000	$1,108,000	$1,601,000
North Park							
Facilities (3.0 MGD)	1,404,000	1,419,000	2,475,000	3,894,000	90,000	157,000	247,000
Outfall Sewer	244,400	179,700	1,600	181,300	11,400	100	11,500
Land (3 acres)	6,000	5,000	–	5,000	300	–	300
Kenosha							
Facilities (32.7 MGD)	3,360,000	4,634,000	16,487,000	21,121,000	294,000	1,046,000	1,349,000
Land (15 acres)	100,000	71,000	–	71,000	4,500	–	4,500
Pike River							
Facilities (15.0 MGD)	10,653,000	10,545,000	8,338,000	18,883,000	669,000	529,000	1,198,000
Land (15 acres)	30,000	20,000	–	20,000	1,300	–	1,300
Subtotal Treatment Facilities and Land	23,297,400	24,644,700	44,765,600	69,410,300	1,563,500	2,840,100	4,412,600
Trunk Sewers Improvements							
Caledonia	965,000	867,000	594,000	1,461,000	55,000	37,700	92,700
Crestview-North Park	747,000	646,000	473,000	1,119,000	41,000	30,000	71,000
Racine	500,000	487,000	252,000	739,000	31,000	16,000	47,000
Subtotal Trunk Sewer Improvements	2,212,000	2,000,000	1,319,000	3,319,000	127,000	83,700	210,700
New Trunk Sewers							
Caledonia and Sanders Park	983,000	772,000	142,000	914,000	49,000	9,000	58,000
Sturtevant-Mt. Pleasant and Somers to New Pike River Plant	4,988,000	4,256,000	47,000	4,303,000	270,000	3,000	273,000
Caledonia to Racine	3,745,000	2,814,000	161,000	2,975,000	178,500	10,200	188,700
Carol Beach to Kenosha	729,000	536,000	11,000	547,000	34,000	700	34,700
Parkside to Kenosha	3,867,500	2,834,000	22,100	2,856,100	179,800	1,400	181,200
Subtotal New Trunk Sewers	14,312,500	11,212,000	383,100	11,595,100	711,300	24,300	735,600
TOTALS	$39,821,900	$37,856,700	$46,467,700	$84,324,400	$2,401,800	$2,948,100	$5,358,900

Source: Harza Engineering Company and SEWRPC.

addition to the total annual cost, it is important to consider other features of each of the alternative plans presented in order to provide a sound basis for selecting the one best alternative to be included in the Comprehensive Plan for the Racine Urban Planning District.

Alternatives 1, 2, and 3 have the advantage of relying heavily on the existing large Racine and Kenosha sanitary sewerage systems and all of the technical staff capabilities which have been acquired over the years in the construction, operation, and maintenace of these systems. The utilization of the Racine and Kenosha sewage treatment plants to provide sanitary sewer service for all of the proposed 1990 urban development in the Kenosha-Racine subregional area takes advantage of the economies of scale inherent in the operation of large plants and avoids needless duplication of staff and equipment. In addition, concentration of water pollution abatement efforts at these two major facilities results in allocating the costs involved in the provision of costly advanced waste

Table 4-14

COST SUMMARY
ALTERNATIVE SANITARY SEWERAGE SYSTEMS PLANS
FOR THE KENOSHA-RACINE SUBREGIONAL AREA

Alternative Plan		Estimated Cost				
			Equivalent Annual			
Number	Sewage Treatment Plants	Capital Construction	Construction	Operation and Maintenance	Total	Per Capita
1	Kenosha Racine	$35,463,000	$2,057,500	$2,736,100	$4,793,600	$16
2	Kenosha Racine	37,470,000	2,147,000	2,738,400	4,885,400	16
3	Kenosha Racine	38,223,000	2,212,600	2,711,900	4,924,500	17
4	Kenosha Racine Pike River	40,388,500	2,443,000	2,847,800	5,290,800	18
5	Kenosha Racine Pike River North Park	39,821,900	2,401,800	2,948,100	5,358,900	18

Source: Harza Engineering Company and SEWRPC.

treatment facilities on a larger areawide basis, with an attendant better correlation between needs and available financial resources.

Of the first three alternatives, which alternatives are very close in terms of total annual cost, it is apparent that Alternative 3 best fits the long-established major utility system patterns in the Kenosha and Racine Districts, particularly because each of the two systems proposed would be confined to a single county. Thus, the Racine sewage treatment facility would serve the entire Racine Urban Planning District and the Kenosha sewage treatment facility would serve the entire Kenosha Urban Planning District. This alternative also conforms to the recommendations contained in the Comprehensive Plan for the Kenosha Planning District. From a practical point of view, therefore, Alternative 3 is superior to either Alternative 1 or Alternative 2, both of which involve transmission of considerable amounts of sewage across the Kenosha-Racine County line to either the Kenosha or Racine sewage treatment plants. In terms of establishing a method of implementing the sanitary sewerage system plan, it may be concluded that Alternative 3 would lend itself more readily to the establishment of the needed institutional structure for plan implementation than either Alternatives 1 or 2.

Alternatives 4 and 5 are more costly than Alternatives 1, 2, and 3 and, in addition, involve the establishment of bi-county sanitary sewerage systems, which systems would not fit the established major utility system patterns in the two Planning Districts. In addition, Alternatives 4 and 5 involve the need to develop an adequate technical staff at one additional sewage treatment facility in the case of Alternative 4, and two additional sewage treatment facilities in the case of Alternative 5. Such staffs would have to be highly trained and capable of administering sanitary sewerage systems at a larger scale and at a higher level of treatment than is currently being provided at the small sewage treatment plants in the District and would, therefore, involve duplication of staff already being provided at the Kenosha and Racine sewage treatment facilities. Although the capital costs of the alternatives that involve only the two sewage treatment plants at Racine and Kenosha are higher than Alternatives 4 and 5, the additional capital costs are more than offset in the long run through reduced operation and maintenance costs at the larger treatment facilities.

In accordance with the foregoing discussion, it is recommended that the third alternative sanitary sewerage system plan presented be included in the Comprehensive Plan for the Racine Urban Planning District as that plan

element applies to the District. This alternative would provide for a single major sewage treatment facility to provide treatment for sewage generated in the entire District, with the single exception of the Caddy Vista Sanitary District which is recommended to be connected to the Milwaukee-Metropolitan sewerage system. This recommendation is the most economical alternative available consistent with established major sanitary sewerage system patterns and long-range commitments in the Kenosha Planning District and, therefore, takes maximum advantage of the technical capabilities of the existing City of Racine sanitary sewer utility. As a single system, it also readily lends itself to coordinated capital improvements programming for sewerage facilities in the District and to implementation through a Metropolitan sewerage district, should such a district be recommended in Phase Two of the comprehensive planning program.

Committee Action – Sanitary Sewerage System Plan. After very lengthy and careful deliberation on the five alternative sanitary sewerage system plans presented herein, the Racine Urban Planning District Citizens Advisory Committee selected the third alternative sanitary sewerage system plan for inclusion in the recommended Comprehensive Plan for the District. This plan, as it applies to the Racine Urban Planning District only, is shown on Map 4-25. In making this decision, the Committee directed that the following clarifying comments be included in the text of the final planning report:

1. That there exists in the Racine Urban Planning District several immediate, pressing problems relating to the provision of sanitary sewer service to rapidly developing areas and that, in adopting a long-range plan for the provision of such sanitary sewer service to the entire District, the Committee recognizes a need for all of the implementing governmental agencies to consider the provision of interim sewerage facility improvements, including, but not necessarily being limited to, the interim expansion of existing sewage treatment facilities which are ultimately recommended for abandonment and the provision of interim trunk sewer connections.

2. That, upon adoption of the District plan set forth herein, the City of Racine commence negotiations upon request with all other local units of government in the District in order to seek cooperative resolution of any immediate, pressing problems relating to the provision of sanitary sewer service.

Storm Drainage Plan

Storm water drainage facilities for purposes of this study are considered to be those facilities placed underground which are provided for the purpose of controlling and carrying surface and storm water drainage. In the Racine Urban Planning District these facilities are located almost exclusively within the City of Racine, with two smaller areas in Sturtevant and Elmwood Park which are also being served. Throughout most of the remainder of the District, such facilities are quite minimal or completely lacking, with only a relatively few scattered locations or subdivisions having a piped storm drainage system.

Some natural waterways, namely Sorenson Creek and the Pike River, have been straightened and deepened to improve drainage of adjacent areas and to increase carrying capacity of the channels.[39] These improvements, located in the Hood's Creek and Mt. Pleasant Drainage Districts, were primarily constructed by in-the-field grading and supervision, and thus no record of the size and elevation is available for these improvements.

Design Standards. As urbanization occurs, changing vacant and agricultural lands into subdivisions and industries, the storm water runoff is expected to increase substantially. To evaluate the effect the increased storm flow would have on the major drainageways, a series of calculations of the natural channels in the area expected to urbanize were made. These calculations utilized the Rational Method, considering a rainfall intensity expected to have a recurrence of 100 years as noted in Appendix I of the "Comprehensive Plan for the Root River Watershed".[40] In accordance with Table I-1 of that same report, runoff from the watersheds was calculated in accordance with the following impervious factors:

Industrial Areas	90% Impervious
Commercial Areas	95% Impervious
Residential Areas	30% Impervious
Parks and Other Permanent Open Space	5% Impervious

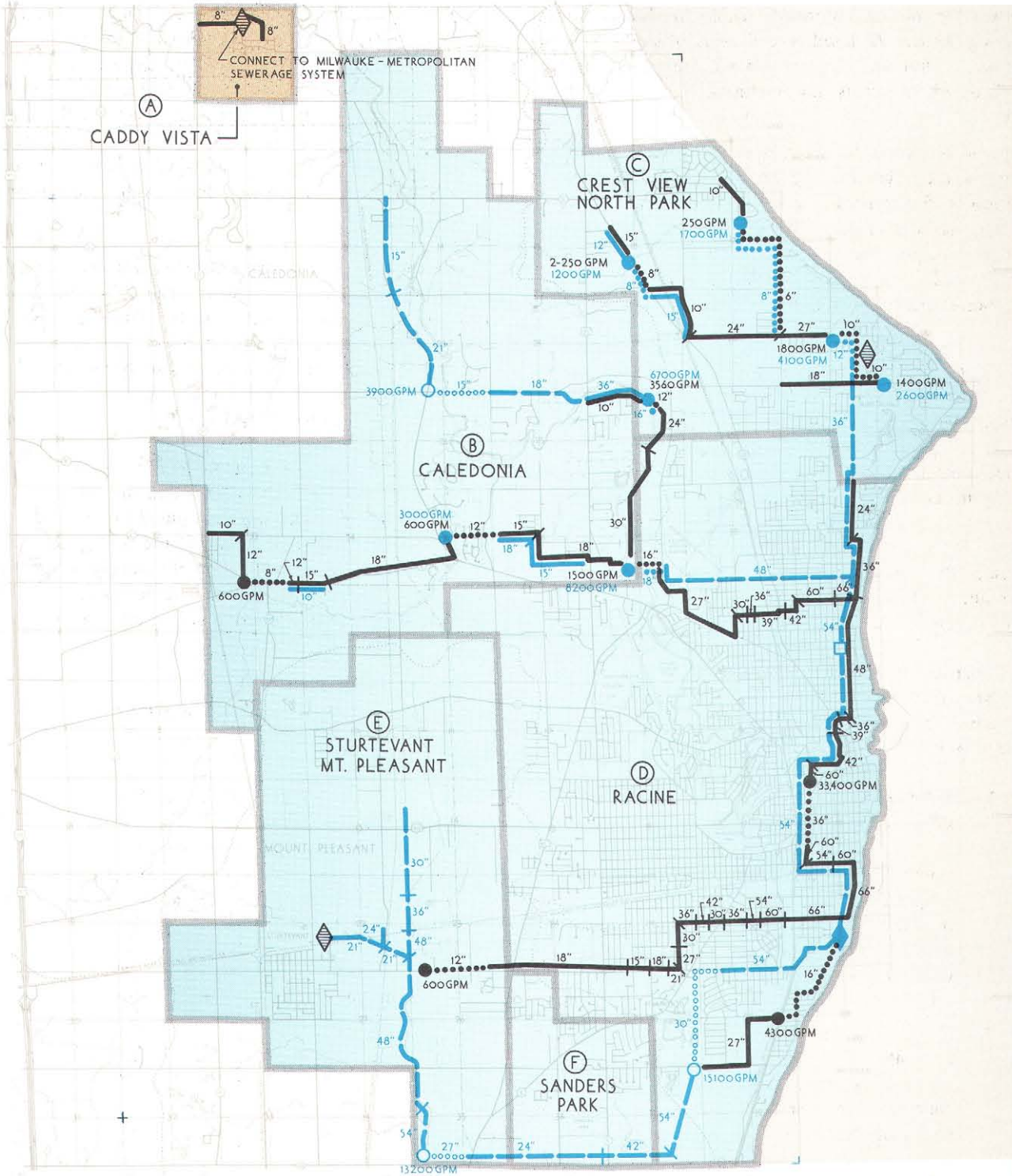
Major Storm Drainage Facilities. Based upon the standards noted above, utilizing land development from the 1990 Land Use Plan (Map 4-1), calculation of the runoff from the design conditions was made as would be expected to discharge to the present natural channels. Due to the scale of the maps and the available topographical information, only sizing of the natural channels was considered. Trunk sewers which are, in large part, located in accordance with street and property lines were not evaluated.

---

[39] *Ibid. Volume One, Chapter VIII, Map 8-6, p. 152.*

[40] *A Comprehensive Plan for the Root River Watershed, Planning Report No. 9, Southeastern Wisconsin Regional Planning Commission.*

MAP 4-25



RECOMMENDED
SANITARY SEWERAGE SYSTEM PLAN
RACINE URBAN PLANNING DISTRICT

Examination of the watersheds within the Racine Urban Planning District disclosed several areas of study. Because portions within the City of Racine are predominantly served by storm sewers, no evaluation of those areas was made.

It should be noted, however, that areas having combined sewers warrant detailed engineering studies to provide a solution to the combined sewer overflow problem. Storm drainage service in the City of Racine is reported as generally adequate except for isolated minor areas that may experience occasional back-up of flooding (see Jefferson-Herrick Plan, Map 4-6).

In addition, the elongated areas bordering the Root River and Hood's Creek were not analyzed for channel capacity since these are steeper areas which also contain a large amount of park and other open space. Also, the Root River had been studied in some detail in an earlier study.[41] The flatter areas in the Crestview, North Park and western urbanizing areas were reviewed to determine the size of waterways needed to meet the design standards noted earlier. These waterways are shown on Map 4-26, which indicates the type of channel section required, minimum flow line gradients, and elevations at key locations and terminal points.

The channel dimensions for natural waterways were calculated using available limited topographic information. As such, it was necessary to make the following design assumptions:

1. Sideslopes of 3-on-1 are the minimum permissible slopes for bank stability.

2. Depth of channels are limited to elevations no deeper than the elevation of the major waterways to which they flow. Based on the topographical information available, accuracy no closer than five feet in elevation could be determined.

3. Depth of channels was further limited by the necessity of keeping the channel below the surrounding land level as shown on the topographical map but above the elevations determined by Item No. 2 above.

4. Since most channel depths were relatively shallow (less than seven feet), rather wide channels were calculated to provide the waterway area adequate to carry the volume of flow and keep velocities below 6.0 feet per second.

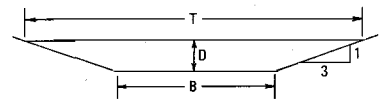
These channel sections are general in nature due to the limited topographical data, particularly so in flat areas. While they provide excellent guidelines for the implementation of the major waterways, they should not be considered as final design of these facilities. It is recommended that major waterways be designed based on detailed field information which will permit more exact determination of the required depth, width and gradient of the channels.

While widening and straightening channels can increase the carrying capacity, such work can also have some undesirable environmental effects. These can include changes in fishing conditions, removal of general cover for wildlife in areas where streams previously meandered, and quite obviously visual changes brought about by straightening, clearing and widening.

In accordance with the Rational Method and the available topographic elevations, it is estimated that channels from 22 to 241 feet in width will be required to carry the runoff from the 100-year rainfall (see Figure 4-1). Some of the very wide sections are a function of naturally flat gradients and the necessity to keep channel velocities below six feet per second to prevent scouring and severe channel erosion.

Figure 4-1

STORM CHANNEL SECTIONS

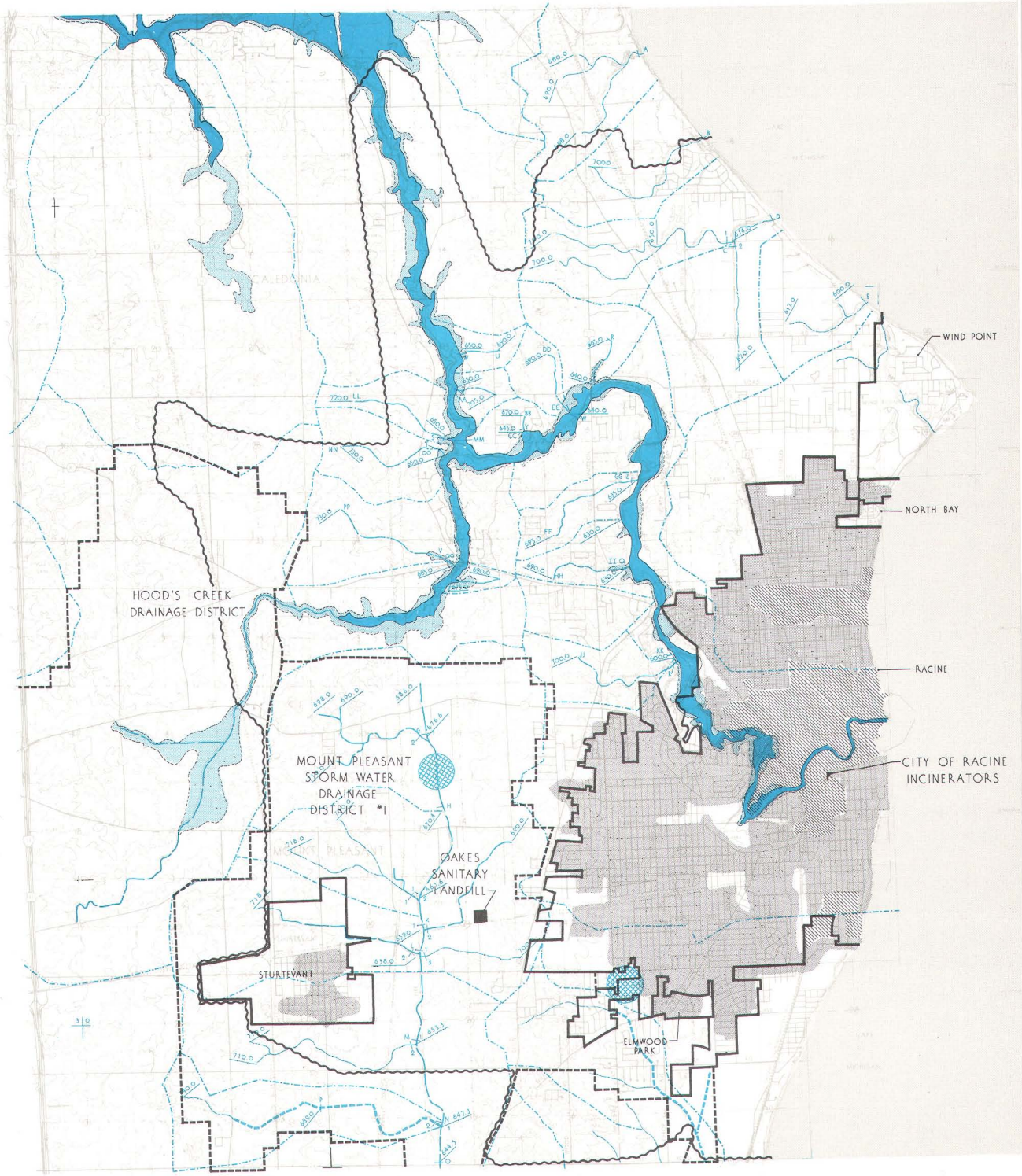


Channel Cross-Section	Bottom Width B (Ft.)	Depth D (Ft.)	Top Width T (Ft.)	Capacity** Q (cfs)
A	32	1.0	38.0	184
B	90	1.4	98.4	665
C-1	50	2.6	65.6	738
C-2	70	5.2	101.2	1,420
D	200	2.0	212.0	2,160
E	40	2.4	54.4	387
*G-1	20	5.0	50.0	745
G-2	30	5.8	64.8	950
*H	100	4.6	127.6	2,200
J-1	20	4.6	47.6	775
*J-2	100	5.0	130.0	2,500
*K-1	130	5.8	164.8	3,420
K-2	20	4.4	46.4	650
*L-1	150	6.0	186.0	3,930
L-2	60	3.4	80.4	1,300
L-3	50	1.8	60.8	488
*M-1	180	6.4	218.4	6,750
M-2	50	2.6	65.6	780
*N-1	200	6.8	240.8	8,300
N-2	12	2.4	26.4	185
*O	200	6.8	240.8	8,300
P	10	2.0	22.0	120
Q	35	1.4	43.4	310
R	50	1.4	58.4	435
S	20	1.4	28.4	170
T	110	1.2	117.2	650
U	100	2.2	113.2	1,240
V	40	2.0	52.0	475
W	30	1.2	37.2	192
X	28	1.0	34.0	173
Y	32	1.0	38.0	145
Z	26	1.8	36.8	310

** Sections on main channel: The Pike River*
*** Theoretical capacity not actual flow*

[41] *Ibid. SEWRPC, Root River Watershed Study.*

MAP 4-26



WASTE DISPOSAL SITES
IMPROVED CHANNELS
PLANNED IMPROVEMENTS TO CHANNELS
DISTRICT BOUNDARIES
AREA SERVED BY COMBINED STORM & SANITARY SEWERS
AREA SERVED BY STORM SEWERS

10-YEAR RECURRENCE INTERVAL FLOODPLAIN (ROOT RIVER WATERSHED ONLY)
100-YEAR RECURRENCE INTERVAL FLOODPLAIN (ROOT RIVER WATERSHED ONLY)
MUNICIPAL BOUNDARIES
LIMITS OF PROPOSED 1990 URBANIZATION
OTHER DRAINAGE CHANNELS
WATERSHED BOUNDARY AND ELEVATIONS WITH CROSS-SECTION MARKS
PROPOSED RETENTION BASIN

SOURCE: STORM WATER DRAINAGE DISTRICTS AND HARLAND BARTHOLOMEW & ASSOCIATES FIELD STUDIES

STORM DRAINAGE SYSTEMS AND SOLID WASTE DISPOSAL SITES

RACINE URBAN PLANNING DISTRICT

In certain soils, even lower velocities may be required, and special velocity reducing structures or stepdams may be required. Channel improvements should not stop at county lines. The effect of urbanization in the Pike River Watershed could produce sizable damage downstream in Kenosha County to Petrifying Springs County Park and the University of Wisconsin Parkside Campus unless overall channel studies and controls are initiated. Establishment of environmental corridors with a lagoon system similar to Cook County, Illinois Forest Preserve System may assist handling of storm runoff, but volume of flow may be too large for even natural channels to carry in their present state. Careful consideration of these problems will be required for urbanizing areas as large as the upper Pike River Watershed.

Some areas expected to urbanize have such flat topography that no natural waterways appear on the available topographical maps. As such, it was not possible to calculate expected storm runoff since the points of concentration could not be determined. Accordingly, no channel sections have been calculated for these areas.

General Recommendations. As noted at the beginning of this section, except for the City of Racine and two small portions in Sturtevant and Elmwood Park, piped storm water drainage facilities are minimal. Consequently, most of the area is drained by roadside ditches discharging to the existing major waterways. This type of development will not be satisfactory over the planning period as urbanization intensifies storm water runoff. Unless adequate advance reservation along the natural waterways is made, serious flood losses and property damage will occur.

The Wisconsin Statutes now require land use controls along major rivers and creeks which have defined flood limits. It will be the responsibility of the jurisdictions within the Planning District to establish easements and reservation of waterways along the somewhat minor natural channels that have been evaluated in this study. Failure to define the size and location of channels to be reserved will, in all likelihood, mean development of homes or industries in areas that will be inundated by the design conditions. On the other hand, sizing and locating these channels ahead of time will maximize the amount of storm drainage that can be handled in open channels. This is generally more efficient and economic than underground piping systems. The extreme flatness in some of the area makes these channel reservations extremely critical.

To achieve control of drainage as development occurs throughout the county, particularly in the urbanizing area, it is suggested that standards of the following type be adopted.

1. Utilize the standard rainfall criteria developed by SEWRPC[42] so that all segments of a system or several systems are compatible. This is particularly important for development of a subdivision or area located at the low point of a watershed, which will receive runoff from areas at higher elevations. A "design" rainfall based on the maximum rainfall which may be expected to occur in a 15-20 year period is quite commonly used. Data from the Root River Watershed study will be of material benefit for these purposes.

2. Adopt standards for streets with curbs, in subdivisions with lots smaller than 20,000 square feet, to be used for carrying and in some cases holding much of the storm water from adajcent properties. An adequate system of this type can handle sizable amounts of storm drainage while reducing the need for pipe. It also eliminates roadside ditches. Care should be exercised to avoid overloading the streets with excessive depth of water by establishing maximum distances that inlets or catch basins will be placed.

3. Provide a storm drainage system in the urbanized areas to pipe water from streets to a storm drainage channel, stream or river. This would prohibit discharge of street drainage into ditches located in or adajcent to front yards, except for more rural areas where it is acceptable. This can be amended to require putting all drainage into pipes of a certain size, say 24 or 30 inches in diameter. This eliminates small ditches along rear or side lines that are nuisances and breeding areas of mosquitoes.

4. Establish easement widths and degree of improvement for major storm drainage channels or ditches. This will reserve sufficiently wide strips to widen channels (where necessary) and keep buildings far enough away from the channels in order not to be endangered by crumbling sideslopes. This should also provide that very winding channels be straightened as a means of improving the hydraulic flow and to permit better maintenance of the areas along the channels.

5. Develop standard design criteria such as minimum street grades for drainage, minimum pipe sizes for storm sewers, material to be submitted for review of the plans, maximum

---

[42] *SEWRPC, Standard Rainfall Criteria.*

velocities permitted in ditches (with and without channel lining), and similar criteria to aid in the coordination of projects and development of sound neighborhoods with adequate storm drainage systems.

6. Establish criteria for the location and construction of retention basins for the holding of storm drainage during peak rainfall periods similar to the one in Pritchard Park. Require developers as well as public agencies to construct such facilities in order to avoid future flooding due to excess water runoff. The criteria should be based on the premise that runoff from the developed property will not exceed the runoff from property prior to development.

In many areas of the country, especially where the land is relatively level, storm water retention basins are used to hold storm water in a specific area reserved for this purpose until such time as the storm drainage system can accommodate the flow. These basins have the effect of reducing needed sizes of storm trunk sewers and to reduce flooding in the lower reaches of the drainage courses. The cost of these retention basins is also substantially lower than the conventional storm sewer pipes. In addition, many communities have been successful in developing these basins for park purposes, affording multiple use and a corresponding reduction of associated costs in areas where no permanent pool is created and which would be dry most of the time.

One such storm water retention basin has been proposed for the District and is suggested to be located in accordance with hydrologic, topographic, and geologic studies. The basin is located in the Peterson Neighborhood in the Pike River Watershed north of STH 20 and in conjunction with the proposed Community Park site (see Map 4-26). Since it is close to the new freeway, the fill needed for the freeway could be excavated properly, leaving the basin for flood control purposes and at the same time offering protection to Sturtevant and Mt. Pleasant areas. Other basins should be designed in coordination with each other in order to insure multiple use benefits; namely, flood control, low flow augmentation, preservation of open space with the environmental corridor, recreation, and scenic and aesthetic value.

Coordination of street improvements with storm drainage facilities is of paramount importance. Utilizing as much of the street system for drainage purposes as is safely possible can improve drainage while minimizing pipe costs. It can also avoid having one facility block the functioning of another. This can occur due to poor planning of bridges and culverts which may not be designed to serve street needs and, consequently, are not hydraulically adequate to carry the drainage. Conversely, a hydraulically satisfactory channel could block the extension of a major street, producing poor traffic circulation for that part of the urban area.

Plans of the sanitary sewer system and those relating to storm drainage both utilize gravity flow and subsequently use the low points of watersheds. Several sanitary trunk sewers are located near or along natural drainageways which will be subject to widening, lagooning or improvement. Accordingly, careful planning and coordination of the engineering plans for facilities in these areas will be necessary to provide maximum use with minimum conflict of purpose.

Solid Waste Disposal

Solid waste disposal in nearly every sizable community in the nation is either now or is becoming a problem due to the loss of disposal sites to urbanization, proximity to other uses, or environmental difficulties. The annual volume of compacted waste in the Racine Urban Planning District is expected to reach an average of approximately 265,000 cubic yards per year by 1990.[43] This is equivalent to filling an 82-acre site to a depth of two feet every year – plus six to twelve inches of additional depth is required for cover material.

Projected over the 20-year planning period, total compacted volume is calculated to be 5,282,000 cubic yards, or the grading and filling of an 82-acre site to a depth of 40 feet. Including depth of cover material, total depth could be expected to approach 50 feet.

Due to the need for some buffer area on the perimeter, reservation of some land for cover material and additional space for access roads and other operational space, it is not possible to fill any site from property line to property line. It is probable that a 100-acre site would be required to provide the 82-acre area.

Review of the present sites in Racine County discloses that the present sites have difficulties with regard to sufficient size to serve the long-range needs; or they may be located in areas of soil, ground water, or flood conditions that do not meet State of Wisconsin Solid Waste Disposal Standards. One of these sites, the Mt. Pleasant Landfill, was closed in 1971. The Hunt's Disposal site has little remaining capacity and can serve the District for only a few more years. The Hunt's site is, moreover, located in the Root River

---

[43] *SEWRPC, Planning Report No. 14, Volume One, A Comprehensive Plan for the Racine Urban Planning District, Inventory Findings and Forecasts, p. 157.*

floodplain and should be phased out. Long-range disposal problems must still be met. The Oakes site has 81 acres available for landfill operations which can be filled to a depth of 60 feet and receive waste until the year 2000. The site can also be expanded to utilize vacant adjacent land.

It should also be noted that the western portion of the Oakes site is abutting a tributary to the Pike River and may be subject to some difficulties due to unsuitable drainage, flooding or leaching of pollutants. Accordingly, the estimates of the operational life of the Oakes site may be overly optimistic and should be carefully reviewed against the expected yearly volume of waste to ascertain the adequacy of this site for the planning period.[44]

Due to the uncertainty of estimates of the growth of per capita solid waste generations and the possibility of areas other than the Racine Urban Planning District disposing of solid waste at the Oakes site, it is recommended that two sites of approximately 50 acres each be located to provide sanitary landfill sites adequate to handle the expected volumes of waste over the 20-year period. Certainly, one of these sites can be the Oakes site, but additional land appears to be warranted to provide for the uncertainties noted. Another possible location could be developed in Caledonia in the vicinity of Section 28 south of Five Mile Road. Ownership and operation of the two sites should be seriously considered by Racine County.

Any sites investigated should be adequate to provide buffer zones, areas for borrow material, operational facilities, and storage of equipment. Due to generally adverse soil conditions for sanitary landfills throughout much of the District, it may be very difficult or impossible to assemble sufficient land that will meet the solid waste diposal site requirements of the State of Wisconsin. Site location, inspection and development should be accomplished by means of a detailed engineering study investigating soil types and other geological factors while also considering the size of land ownership, projected land use, drainage, road access, floodplain characteristics, and travel distance. Early study of potential sites and acquisition is recommended so that these areas may be purchased prior to any development occurring around the proposed site. Purchase of sites for even partially urbanized areas are frequently bitterly contested by those in the immediate area, with the result that the sites are discarded due to such pressures. It is extremely important that sites be acquired at the very earliest data and prior to their immediate need. All alternatives should be explored, including the establishment of a recycling center to serve the District in conjunction with or in lieu of the landfill.

If it is not possible to locate satisfactory sites as noted, it is recommended that collection stations in the northwest, central and southwest areas be established for transfer of solid waste from neighborhood collection vehicles to large size trailer units. These units then could haul the refuse approximately seven to ten miles to a large centrally located site west of IH-94 in the western part of Racine County. Under efficient operating conditions, such an effort would be able to provide a relatively economical means of handling solid waste. It is not at all uncommon for solid waste to be transported 10 to 20 miles in many larger communities and still achieve reasonably economical disposal. However, the travel distance should be minimized as much as possible.

---

[44] *Ibid. p. 157; and Report on Solid Waste Disposal for the Unified Racine Area, January 1970.*

Chapter V

FINANCIAL FEASIBILITY OF THE PLAN

INTRODUCTION

Both urban and rural living in today's modern world require facilities which in past years were considered a luxury, but today are, for all practical purposes, a necessity. Highways and streets are required for the simplest travel. Schools and colleges are necessary to educate our children. Sewer, water, storm drainage and solid waste facilities are necessary for protection of the health of the residents and to minimize pollution of our lakes, rivers, and streams so that these may be used for recreation and wildlife habitats. Hospitals, public buildings and recreation areas are necessary as well. While the facilities and programs provided meet different standards in different communities, no one denies the need for these facilities and services. As pointed out in Volume One[1], residents of the Racine Urban Planning District are spending some $47,000,000 per year, or approximately $360 per capita, for the administration of local government and the provision of public services and facilities in the District.

The Comprehensive Plan projects the needed public facilities expected to be required by the District residents for the next 20 years. Two methods are usually followed in the provision of public improvements in a community. They are either built when the need is so pressing that it may no longer be ignored, or improvements are constructed when some segment of the population becomes concerned and actively promotes such construction. Neither is a desirable method. Instead, public improvements should be constructed on a systematic basis utilizing a carefully planned program related to the financing ability of the citizens and designed to build the most needed improvements first. It is also significant that improvements constructed by one public agency, such as a highway department, may affect construction by another, such as the school district.

In order that the residents of the Racine Urban Planning District have an opportunity to make a decision on whether they approve or disapprove of the Comprehensive Plan, this chapter is included to demonstrate the financial feasibility of the plan. In the text that follows, the estimated costs of the various major capital expenditures are provided along with recommended District priorities for each major expenditure. The ability of the District to collectively finance the costs over a 20-year period is also determined, and a projection of equalized assessed values based on the 1990 Comprehensive Plan is made.

DISTRICT TRENDS IN FINANCING

Since 1960, the equalized valuation has been growing at a rate in excess of six percent per year and has increased from about 590 million to 990 million in 1970. Continued development should sustain an average of $40 million per year. During the same period, revenues have increased by 135 percent, from $21.6 million in 1960 to $52 million in 1968. The growth of revenues has kept pace and exceeded the rising cost of local government in the District which has more than doubled to $47.5 million in 1968. In 1968, state and federal sources contributed almost $16 million, or 31 percent of the total expenditures. The next largest expenditure was public health, sanitation and social services which amounted to 16.3 percent, with protection of persons and property running a distant third at 9.5 percent.

Capital improvements have been running between 10 and 14 percent of District expenditures, representing only $2 million in 1960, $9.6 million in 1966, and decreasing to $6.6 million in 1968. General obligation bonds are the most common method of financing civic improvements in the District with $41.6 million outstanding at the end of 1969.[2] Of the $5.6 million in revenue bonds outstanding at the end of 1969, $2.8 million represented improvements to the City of Racine waterworks and public parking facilities. The remaining $2.8 million in revenue bonds have been sold by the North Park, Caddy Vista, and Crestview Sanitary Districts and the Mt. Pleasant Sewer Utility District. As of 1970, it was estimated that the Racine District could legally issue bonds totalling $26.6 million. However, practical bonding capacity (75 percent) of legal bonding limits totals $14.3 million.

FORECAST OF LOCAL GOVERNMENT FINANCES

The ability of local governments to finance major capital improvement projects is a critical part of the financial feasibility analysis of the Comprehensive Plan. For this reason, the major findings in regard to local government

---

[1] *SEWRPC Planning Report No. 14, Volume One, A Comprehensive Plan for the Racine Urban Planning District, p. 192.*

[2] *Ibid. Volume One, Chapter X, p. 196.*

Table 5-1

FACTORS FOR DETERMINING THE FINANCIAL FEASIBILITY OF THE COMPREHENSIVE PLAN

Item	1970				1990		
	Current Amount	Amount Per Capita	Estimated Annual Increment Increase		Total 20-Year Increase	Estimated Amount	Amount Per Capita
			Percent Rate	Amount			
Population	133,000	–	3.5	4,600	92,000	225,000	–
Equalized Valuation	$990,000 [a]	$7,443	6.0	$40,000	$800,000	$1,790,000	$7,955
Developed Area (in acres)	20,500 [b]	.154	3.2	725	14,500	34,500	.153
Revenues	$ 52,000 [c]	$ 390	13.5	$ 1,820	$ 36,400	$ 88,000	$ 392
Expenditures	$ 47,000 [d]	$ 353	13.5	$ 1,645	$ 32,900	$ 80,000	$ 355
Bonded Debt [f]	$ 47,200 [e] (represents 4.5% of equalized value)	$ 354				$ 80,550 [h]	$ 358
CIP Spending [g]	$ 4,700	$ 35	10% of Expenditures Based on 1980 Year	$ 6,350	$127,000	$ 127,000	$ 28

[a] *SEWRPC, Planning Report No. 14, A Comprehensive Plan for the Racine Urban Planning District, Volume One, Table 10-11.*
[b] *Ibid. Volume Two, Table 4-1.*
[c] *Ibid. Volume One, Table 10-4.*
[d] *Ibid. Volume One, Table 10-5.*
[e] *Ibid. Volume One, Table 10-9.*
[f] *Includes general obligation and revenue bonds.*
[g] *CIP is the Capital Improvement Program.*
[h] *Amount represents 4.4 percent of $1,790,000.*
Note: All dollar amounts shown in $000 except amount per capita column.
Source: Harland Bartholomew and Associates.

finances, as contained in Volume One[3], are summarized below in the appropriate categories. In addition, a revenue and expenditure forecast along with projected equalized assessed valuation are provided to assist in determining the financial feasibility of the plan (see Table 5-1). Several assumptions regarding the factors indicated in the table are made to assist in the analysis, namely:

1. Population will increase at the rate of 3.5 percent per year, (1,500 households per year) to total 225,000 in 1990.

2. Based on current ratios of land used per acre to its equalized value over the last ten-year period, valuations will almost double by 1990.

3. The area will develop according to the Comprehensive Plan at the rate of 735 acres per year with essentially the ratio of land used per acre remaining constant.

4. Revenues are expected to increase based on current trends which showed an increase of 135 percent over the past 10 years. The list below represents the forecast of major sources of revenue to the District in the forseeable future:

   a. Federal Government – Various programs including revenue sharing.

   b. State Government – Various programs including bond issues, income tax rebates and highway revenues.

   c. Real Estate Taxes.

[3] *Ibid. Volume One, Chapter X, p. 185.*

d. Personal Property Taxes.

e. Utility Taxes.

f. Other Special Taxes, including gasoline, liquor and cigarette.

g. General Obligation Bonds

h. Revenue Bonds.

i. Special Assessments.

j. Tuition (for schools).

k. Fees and Costs (including connection fees).

l. Licenses and Permits.

m. Annexation Fees.

n. Gifts and Grants.

o. Commercial Revenues – Interest and rents.

p. Revenues from Institutions.

q. Other Department Revenues.

5. Expenditures are expected to increase based on current trends which are currently increasing at the rate of 135 percent over the last 10-year period. The following list represents the major categories of expected expenditures.

   a. Environmental Expenditures: Water supply; storage and distribution; sanitary sewerage services, collection and treatment; storm drainage facilities and shore protection; and solid waste disposal.

   b. Social Needs: Parks, recreation and preservation of open space; education; housing and redevelopment; public health, welfare, medical facilities and social services.

   c. Public Streets and Buildings: Public buildings, local streets, highways and transit improvements.

   d. Administration of local government and police and fire protection.

6. Current bonded debt of $47 million (including general obligation and revenue bonds) represents 4.5 percent of equalized value now and does not exceed that amount in the future.

7. CIP spending will not exceed $6.35 million in an average year (based on the 10th year), thereby an estimated $127 million would be spent over the 20-year period. Also, the District will continue to pay off $3.8 million annually in general obligation debt, totalling $76 million over the 20-year period. If current bonded debt is increased to $80 million, based on the same ratio of bonded debt to equalized valuation, then an additional $33 million could be available, totalling $127 million (not including debt service) over the 20-year period for CIP projects.

8. The residential development in the District will continue to pay the major share (over 60 percent) of the real estate property tax.

This summary indicates in a general way the trends in income and expenditures and the ability of the local units of government in the Racine District to finance $94 million in capital improvement expenditures if present trends continue.

CAPITAL IMPROVEMENT PROGRAM 1972-1992

The capital improvement program for the Racine Urban Planning District includes all major projects proposed in the five interrelated plans making up the Comprehensive Plan: land use plan, housing plan, transportation plan, community facilities plan and public utilities plan. The capital improvement program (CIP) is one of the several tools available for the implementation of planning proposals contained in the Comprehensive Plan. In addition to its fundamental purpose of implementing the plan, the CIP serves several other functions. With the numerous projects undertaken in any area every year, the CIP provides an overview of all projects, pointing out duplications, encouraging coordination, and providing the opportunity to set priorities and make decisions based on the relative need of the proposed projects, rather than community or political pressures. To avoid duplication or confusion of efforts and to promote an efficient system for planning and constructing public improvements, a coordinated program by all local governmental units, taxing agencies, and governmental departments should be established on a District basis in cooperation with the county. This section of the Comprehensive Plan is designed to be the first step in the establishment of a consistent county-wide capital improvements program.

What is a CIP?

A capital improvement is a public improvement

construction project, or item, or equipment having a considerable life expectancy and generally costing more than $10,000, including such items as governmental buildings, road projects, water facilities, land acquisition and purchases of major pieces of equipment. A CIP is a comprehensive schedule of these needed capital improvement projects indicating priority as to urgency and ability to finance. From the overall schedule, a short-range program of five years should be prepared with general cost estimates for the proposed projects. The short-range program should be reviewed each year and revised to keep it up-to-date. Those items considered to be the most important and necessary should be included within the annual budgets of the local units of government carrying out the CIP. The revision process should include some reevaluation of specific projects and priorities, as well as a review of the potential for financing the improvements. Currently, the Unified School District is the only unit of government which utilizes the CIP approach to capital improvements, although the City of Racine prepares a limited program for guiding its administration in spending for major expenditures.

Role of Governmental Units in Financing Projects

The recommended role of the various units of government within the District in providing facilities and services was explained in Volume One.[4] In general, principal services and facilities are provided by Racine County, the Unified School District No. 1, local municipalities and utility districts and include protection of persons and property (fire and police protection), education, public health, welfare, sanitation, road and bridge construction and maintenance, provision of parks and recreational facilities, environmental controls and essential administrative activities. The City of Racine should continue to take a more metropolitan role along with Racine County, participating in the provision of urban area facilities as well as providing services and facilities for its residents. This part of the Comprehensive Plan does not include recommendations on changes in the administration of government financing. Such changes are to be considered and discussed in the second phase of the comprehensive planning study to be undertaken upon completion of this first phase.

District Priorities

In order to determine scheduling of capital improvement projects, priorities for the Racine Urban Planning District should be generally agreed upon. These priorities should be broad in scale for use on a District basis. The various units of government within the District should then supplement these with more detailed priorities for use in their own capital improvement program scheduling.

Based on goals, objectives and standards[5] for the District and the results of the various planning studies conducted as a part of the plan, the following District public priorities should be utilized in the scheduling of capital improvement projects.

Quality of the Environment

First Priority should be given to those projects affecting the quality of the environment and the health of the residents of the District. In general, these would include sewer and sewage treatment facilities, provision of water and distribution systems, storm drainage and solid waste disposal facilities, and provision of health and medical facilities.

Social Needs

Second Priority should be given to those projects which provide for the social needs of residents, including educational facilities, housing, and park facilities.

Improving the Economic Status

Third priority should be given to those projects which will contribute to improving the economic status of the District, providing an increase in job opportunities and of the standard of living. These projects include improvement to streets, public buildings, airports, railroads, port facilities and which in turn encourage general business and industrial development.

The District priorities, when related to recommended capital improvements, are presented in summary form on Table 5-2. (A more detailed program is included in Appendix B.) This table indicates that of the total estimated cost ($242,335,000) of needed capital improvements, approximately one-half, or $129,522,000 would be the local share and represent about $575.95 per capita spread over a 20-year period (see Appendix B also). The table also indicates that the local share of the priority one items represents about 25 percent, while the priority two items represent almost 50 percent of the total estimated cost. The larger expenditure in priority two is caused by the amount of money allocated for new school construction estimated to be needed for the increasing population. The largest single expenditure of all is found in priority three, and represents the street and highway plan which, if it were to be financed locally, would almost be larger than the entire local share of the capital expenditure program for all three priorities.

FINANCIAL FEASIBILITY OF THE CIP

In order to assist the residents of the Racine Urban Planning District in arriving at a decision regarding the

[4] *Ibid. Volume One, Chapter X, p. 185.*

[5] *Ibid. Volume Two, Chapter III.*

Table 5-2

MAJOR CAPITAL EXPENDITURES OF THE COMPREHENSIVE PLAN

Priority	Improvement Item	Total Cost in $000	Local Share in $000	Local Share Per Capita in 1992 [a]
Quality of the Environment:				
1	Water	$14,880	$14,880	$ 66.13
1	Sanitary Services	25,505	12,753	56.68
1	Storm Drainage	4,500	4,500	20.00
1	Solid Waste Disposal	500	500	2.22
	Subtotal of 1	$45,385	$32,633	$145.03
Social Needs:				
2	Parks	$ 3,630	$ 2,299	$ 9.52
2	Schools	54,040	54,040	240.18
2	Housing	16,925	1,725	7.67
	Subtotal of 2	$74,595	$58,064	$257.37
Economic Status:				
3	Public Buildings	$ 3,025	$ 3,025	$ 13.44
3	Transportation	119,420	35,800	159.11
	Subtotal of 3	$122,445	$ 38,825	$172.55
	TOTAL	$242,325	$129,522	$575.95

[a] *Based on 1990 estimated population of 225,000.*

Source: Harland Bartholomew and Associates.

financial feasibility of the Comprehensive Plan and the recommended expenditures, Table 5-3 has been prepared. Five alternatives are presented on the table.

Reduced Spending

The first alternative assumes that instead of spending more money per capita to finance capital improvements, the District will spend $5 less per capita, resulting in a total capital improvement program of $107,400,000. This alternative also assumes that the plan cannot be achieved as it falls short of providing approximately $22,000,000 in needed improvements for a population of 225,000.

Present Trend

If present spending patterns continue at a rate of $35 per capita per year, approximately $127 million would be generated over a 20-year period, which would nearly finance the recommended capital expenditures except for a debt service. Although present spending represents approximately $4.7 million, the increase in population would generate $6.35 million by 1980, and by 1990 would generate nearly $8 million per year.

Recommended CIP Program

The recommended program (Appendix B) is estimated to cost a total of $242,325,000, of which $129,522,000 represents probable local funding. The estimated expenditures almost represent the present trend spending pattern, and it clearly indicates that the CIP program is financially feasible. However, should state and federal funding programs decrease to the point where matching grants are not available to the Racine District, then the

Table 5-3

COMPARATIVE DATA FOR DETERMINING THE FINANCIAL FEASIBILITY OF THE COMPREHENSIVE PLAN

Item	1970 Amount of CIP Annual Spending Per Capita	CIP Annual Average Spending [a] Increase	Total CIP Spending Over 20 Year Period 1970-1990 Not Including Debt Service	Annual Amount 225,000 People Will Generate for CIP Spending At Same Rate
Reduced Spending	30	$ 5,370,000	$107,400,000	$ 6,750,000
Present Trend[b]	35	6,350,000	127,000,000	7,875,000
Recommended District CIP Program (Local Share Only)	36 (at 10th year)	6,476,000	129,533,000	8,100,000
Recommended CIP School Alternate (Local Share Only)	28 (at 10th year)	5,011,100	100,222,000	6,300,000
Total CIP Cost	67	$12,116,000	$242,325,000	$15,075,000

Note: [a] *Figures are based on 1980 year when there will be an estimated 179,000 persons.*
[b] *Based on 1970 population of 133,000 persons (see also Table 1, this chapter).*

Source: Harland Bartholomew and Associates

program may be considered infeasible as it represents a doubling of the cost to local residents.

Recommended Alternate CIP Program

Under the alternative CIP program (Appendix C) a year-round school system is assumed for the District, resulting in the existing school plant being utilized on a full 12-month schedule. This assumption reduces the need for additional school sites and buildings amounting to a total estimated cost of $29,300,000. This reduction in capital improvements means that the local share of the total CIP would be $100 million, and would be clearly feasible; it would cost approximately $6,476,000 in the 10th year, or $36 per capita.

Total CIP Cost

The last column on Table 5-3 provides comparative data on the total cost of the CIP should no federal or state funds be available to assist the District in financing the program. In brief, the total cost would be approximately double the present trend of spending for capital improvements in the District. Although this amount represents the capital improvements estimated to be needed to serve the future population in 1990, they clearly represent a higher standard of development and would be infeasible to finance under the current spending patterns of the District.

CIP COORDINATING COMMITTEE

It is recommended that a committee be organized in order to coordinate the capital improvement spending in the District. Such a committee should include appropriate representatives from each of the taxing jurisdictions and Planning Commissions. A single committee would facilitate the transfer of information concerning financial and project data as well as serve to coordinate the implementation of specific projects. The County Planning Department staff should maintain a semi-annual or quarterly review of proposed projects submitted by various agencies and prepare reports as part of the review procedure for members of the committee. Among some of the other services that could be performed by the planning staff are:

1. Project analysis in terms of conformance to the Comprehensive Plan;
2. Recommendations on needed additional projects and suggestions on methods of financing;
3. Recommendations for additions or alterations to agency policy on capital improvements;
4. Suggestions on time and scheduling related construction projects;
5. Annual revision to the District capital improvement program;
6. Assistance to the other public agencies in the preparation of their separate capital improvement programs.

Chapter VI

PLAN IMPLEMENTATION

INTRODUCTION

The proposed land use, housing, transportation, and community facility plans described in the preceding chapters of the report provide a design for the attainment of the specific objectives, principles, and standards enumerated in this report. These proposed plans together represent the major components of the Comprehensive Plan for the Racine Urban Planning District. The plan is not complete, however, unless there is a procedural method to implement the plan. This chapter is presented as a guide for the implementation of the proposed plans, pending completion of Phase II of the comprehensive planning program. It outlines the actions which should be taken in the interim period by the local agencies of government if the plans are to be realized. The local units of government which have powers to adopt and implement the plans are identified, actions are specified, and specific implementation actions are recommended with respect to land use, housing, transportation and community facilities.

The Comprehensive Plan for the Racine Urban Planning District has been coordinated with the regional development objectives, principles, standards, and plans, and serves to carry the adopted regional plans into greater detail. The coordination of the District Plan with the Regional Plan is also a necessary prerequisite to the approval of many Federal Aid programs. The recommendations contained herein are also related to each of the seven existing local units of government comprising the District, namely; the City and County of Racine, the Villages of Elmwood Park, Wind Point, Sturtevant and North Bay, and the Towns of Mount Pleasant and Caledonia.

There are also several state and federal agencies that have either a direct or indirect effect upon development in the District and, as a result, upon the implementation of the development plan. State and federal agencies concerned with development in the District would be coordinated through the Regional Planning Office which will serve as the primary review agency for federal assistance projects[1]. Decisions of these agencies regarding assistance programs for development can serve to implement major elements of the District plan. The availability of funds in the various state and federal programs will have a major impact on the implementation program. Several of the more important projects that will require outside assistance include: the Lake Freeway, Loop Freeway, Root River Parkway, and major extensions of the public utility systems.

PLAN IMPLEMENTATION ORGANIZATIONS

Cooperation of the local agencies will be essential for the implementation of major elements of the District Comprehensive Plan. A fully coordinated series of cooperative steps in plan implementation will be essential to the successful attainment of the objectives of the plan. Duties, responsibilities and function of these local agencies have been identified by SEWRPC.[2]

The ability of the local levels of government to use these agencies to implement the plan will have a direct impact upon the level of accomplishment that is achieved.[3] The Jurisdictional Highway Committee, for example, is a key organization in the successful implementation of the plan, as the arterial street and highway system plan represents the largest public expenditure of the entire Comprehensive Plan.

Local Planning Agencies

Initial steps in the implementation of the proposed District plan include adoption of the Comprehensive Plan by the various governing bodies in the District. Each unit of government must adopt the plan to be effective. Once the plan is agreed upon, administrative procedures should be established, regulatory ordinances adopted, and various detailed capital improvement programs adopted to identify priorities and financing methods to be utilized. In addition to these measures, provisions will be needed for updating the adopted plan and the implementation programs.

Each of the local levels of government has established Plan Commissions in accordance with Wisconsin Statutes. Adoption of the Comprehensive Plan for the District will

---

[1] *SEWRPC, Planning Report No. 7, Volume Three, Recommended Regional Land Use and Transportation Plans — 1990, Chapter VII.*

[2] *SEWRPC, Technical Report No. 6, Planning Law in Southeastern Wisconsin, 1966, and SEWRPC, Planning Guide No. 4, Organization of Planning Agencies, 1964.*

[3] *ibid, page 205.*

provide a framework for decisions in administration of the various control measures now in effect and subsequently adopted, and this will have a major impact upon coordinated development activities in the District.

Local Redevelopment Authority

Redevelopment Authorities created in accordance with Section 66.431 of the Wisconsin Statutes are empowered to prepare plans for and to undertake redevelopment and urban renewal projects which include the power to acquire, clear, rehabilitate, conserve, and install public improvements in problem areas. Redevelopment activities at the present time are a combination of code enforcement and revitalization projects which, for the most part, include the private rehabilitation of some structures. Housing and Building Codes are utilized to remove the most severely dilapidated housing units. Significant opportunities for outside assistance in the form of federal subsidies are lost without the establishment of a local Redevelopment Authority. Consideration should be given in the second phase of the District planning program to the establishment of a Redevelopment and Housing Authority in accordance with Wisconsin Statutes in order to carry out related recommendations of this report.

Local Public Works Agencies

Numerous local agencies currently have the responsibility, authority, or the ability to finance and implement one or more of the elements contained in the proposed Comprehensive Plan. Those agencies which have primary acquisition, development and maintenance responsibilities include the following:

Proposed Plan Element	Local Agency Responsible
1. Arterial Street and Highway Plan	City Department of Public Works, Village and Town Road Depts., County Highway Commission
2. Transit Plan	Jurisdictional Highway Committee, City of Racine
3. Public School Plan	Racine Unified School District No. 1
4. Park and Open Space Plan	City Parks and Recreation Dept., County Park Commission, and Racine Unified School District No. 1 (Local parks)
5. Water Distribution System Plan	Water Works Commission of the City of Racine
6. Sanitary Sewer System Plan	City Department of Public Works, Caledonia Sewer Utility District No. 1, Mt. Pleasant Sewer Utility District No. 1, and Caddy Vista, Crestview, North Park, and Village of Sturtevant Sewer Systems
7. Storm Sewer System Plan	County Highway Commission, City Dept. of Public Works; Villages of Elmwood Park, Wind Point, Sturtevant and North Bay; Towns of Mt. Pleasant and Caledonia
8. Solid Waste Plan	City of Racine, Towns of Mt. Pleasant and Caledonia
9. Land Use Plan	City and County of Racine, Towns of Caledonia and Mt. Pleasant, and Villages of Elmwood Park, Sturtevant, Wind Point and North Bay
10. Housing Plan	None

It is recognized that the array of local agencies responsible for plan implementation may change significantly upon completion of Phase II of the District planning program.

Private Companies and Institutions

Many private companies, organizations, and institutions are involved in development and redevelopment activities within the District. Each program and project can have a direct effect upon the implementation of the District Comprehensive Plan. Examples of these programs and proposals should include alterations in the location of mass transit bus routes in the City of Racine involving the Flash City Transit Company, and redevelopment activities by the S. C. Johnson Company in the area surrounding their

administrative headquarters. Such programs must be coordinated with other elements of the plan so that facilities such as schools and parks may be located properly and in balance with anticipated urban development in the District.

County Highway Committee

The Racine County Highway Committee, established pursuant to Section 83.45 of the Wisconsin Statutes, is responsible for the administration and expenditure of all county funds for construction and maintenance. The Committee is empowered to establish and change the county trunk highway system, to cooperate with the State Highway Commission in the selection of a system of Federal Aid secondary roads, to oversee expenditures and projects of Mt. Pleasant and Caledonia, and to acquire land for county highway purchase or condemnation.

County Soil and Water Conservation Districts

The Racine County Soil and Water Conservation District, established pursuant to Section 92.05 of the Wisconsin Statutes, has the authority to develop comprehensive plans for the conservation of soil and water resources, the prevention of soil erosion and floods, and the authority to adopt land use regulations in unincorporated areas that would implement these plans. The importance of proper water and soil conservation and management practices to the successful attainment of the District development objectives is extremely important. The absence of such measures will have a serious adverse effect upon agricultural areas and the important environmental corridors identified in the land use plan.

Local Park Agencies

Both the Racine County Highway and Parks Commission, the City of Racine Department of Parks and Recreation, and the Caledonia-Mt. Pleasant Park Commission own, maintain and operate the existing park lands within the District. Those agencies are empowered upon the direction of their respective governing bodies to acquire and develop park lands according to the recommended open space plan for the District.

Cooperative Contract Commissions

Municipalities may contract to provide jointly any services or exercise any powers that such municipalities may be authorized to provide or exercise separately. These powers are identified in Section 66.30 of the Wisconsin Statutes, enacted in 1939. Recent state legislation clarified these powers and granted such commissions bonding powers for the purposes of acquisition, development, and equipment of lands, buildings, and facilities for regional projects.

It is often possible to achieve significant economies if certain municipal services or facilities are provided on a cooperative intergovernmental basis. Because of the area-wide nature of certain problems, such as air pollution, drainage, and public utility systems, some municipalities or special purpose districts have joined together to find a joint solution to their common problem. In the past, cooperative contracts have been negotiated between the City of Racine and surrounding municipalities to provide water and sewer service and cooperative fire protection. Such cooperative contract commissions may also be delegated specific District plan implementation powers by the city, towns and villages. The contract commission may continue to be an important method for the implementation of certain functional elements of the proposed Comprehensive Plan for the physical development of the District, at least until Phase II has been completed. A model agreement for the creation of a cooperative contract commission is available through SEWRPC.[4] The creation of formal cooperative contract commissions for one or more functions should be considered in Phase II.

Intergovernmental Cooperation and Coordination

Because of the interrelated nature of many of the plans and programs currently being carried on in the District, it is extremely important that close cooperation and coordination be required between various public and private groups, both at the municipal and county levels. To a very large degree, intergovernmental cooperation and coordination has been clearly demonstrated in the activities of the Racine Urban Planning District Citizens' Advisory Committee. This Committee, comprised of elected public officials and members of the business community, has worked to achieve the common development objectives for the District contained herein. Continuing cooperative actions may take any of the following forms:

> Informal cooperation may be achieved by continuing the coordination between the city, town, village, and county planning agencies, on an informal basis, through the use of a permanent active Citizens' Advisory Committee, comprised of members of recognized experience and qualifications. Membership on the Committee would be drawn from each affected unit of government. The Committee members should be appointed by the Mayor, Town Chairman, Village Presidents, and Chairman of the Board of Supervisors, subject to confirmation by the respective governing bodies. Since a Citizens' Advisory Committee was created to assist with the review of the District development plan. this Committee would have an important continuing role in achieving unity and cooperation in the District. Public acceptance and understanding of the plan can

[4] *See Appendix "A"*

be greatly enhanced through the continued activities of such a citizens' committee.

District Technical Planning Committee. During the preparation of this Volume, a special Technical Subcommittee of the Citizens' Advisory Committee was appointed to review the document before it was forwarded to the full Committee review. This Committee was complsed of technical and professional representatives of the county, city and two towns, and proved to be very effective in working together to solve the technical problems of the District on a technical and professional level. It is suggested that this Committee be reestablished on a permanent basis and meet on a regular basis to evaluate and make advisory recommendations to the District concerning physical development problems related to the land use plan, housing plan, transportation plan and community facility plan. The committee should be composed of one professional representative from the city, one from the county, and one from each of the towns, with an additional citizen representative of the District at large. Liaison should be provided to the Citizens' Advisory Committee on a regular basis.

The Regional Planning Commission is available to provide assistance and coordination in the application of any of these intergovernmental cooperation techniques to specific problems or activities in the Racine Urban Planning District. Assistance in the form of continued planning and plan implementation programs will also be available through SEWRPC.

PLAN ADOPTION

All local governing bodies and agencies involved in plan implementation should adopt the Comprehensive Plan to assure a common understanding between the several governing levels and to enable their staffs to program the necessary implementation work. In some instances, this may take the form of an endorsement; however, the city, the towns and the county should formally adopt the Comprehensive Plan. Such formal adoption is required by the Wisconsin Statutes before certain public plan implementation actions can proceed. The following steps should be initiated as soon as possible:

1. Following delivery of this document by Harland Bartholomew and Associates to the Southeastern Wisconsin Regional Planning Commission, and its subsequent transmittal by the committee to all local governing bodies, agencies and commissions in the District, a series of public hearings should be held. The hearings should be set up to give the general public an opportunity to learn what is in the plan and present their views, criticism, comments and constructive suggestions. The hearings should be oriented around the neighborhood or community level, depending upon the areas, in order to give maximum exposure and participation.

2. Following the hearings, the City, Village and Town Plan Commissions should adopt the District Comprehensive Plan by resolution pursuant to the Wisconsin Statutes, thereby amending their existing plans and certifying such adoption to their respective Common Council, Village Board or Town Board. The Common Council and Town Board should then endorse the Comprehensive Plan and formally acknowledge their Plan Commission adoption of the Plan. The adoption of the Plan by each affected unit of government is a necessary and desirable step prior to the undertaking of the second, or jurisdictional phase of the planning program, since the Comprehensive Plan is intended to provide the fundamental basis for jurisdictional recommendations. Model resolutions for Plan adoption are set forth in Appendices D and E.

3. The County Park Commission, the County Highway Committee, the School District, the County Water and Soil Conservation District Supervisors and the County Zoning Commission should also endorse the District Comprehensive Plan as it relates to their respective interests.

4. The various city and town departments, boards, utility districts, and commissions, and any cooperative contract commission in existence or subsequently created, directly affected by the District Comprehensive Plan, should endorse such Plan as it relates to their implementation powers. These elements of the Plan should be integrated into their particular acquisition, utility extension, construction or other development programs. The appropriate capital improvement program elements should be adopted as a guide for public works improvements in the next five years. Remaining portions of the capital improvement program would be subject to periodic review and updating in accordance with development trends in the District.

5. When a Redevelopment Authority is created, formal acknowledgement of the District Comprehensive Plan should be required in reference to specific recommendations

concerning community action aceas. Any related elements contained in the capital improvement program, relating to the community action areas, should be adopted by reference.

6. Private companies and institutions directly affected by the Comprehensive Plan should provide formal endorsement of the plan as it relates to their operation and development programs.

ADJUSTMENT OF THE PLAN

Because of the extent of time involved in the preparation, hearings, endorsement, and implementation of the Plan, the precise delineation of programs and improvements will be altered by changing conditions in the District. The definition and characteristics of a Comprehensive Plan suggest that it must be viable and relevant to the activities and programs of local units of government and agencies. Because of this, continual adjustments through amendments, extensions, additions, and refinements, must be made. The Wisconsin Legislature clearly foresaw this need when it gave to local Plan Commissions the power to "amend, extend, or add to the master plan or carry any part or subject into greater detail" under Section 62.23 of the Wisconsin Statutes.

Amendments, extensions, and additions to the Comprehensive Plan of the District will be forthcoming, following final adoption also, not only from the local planning programs but also from the work of the Southeastern Wisconsin Regional Planning Commission under its continuing regional planning program. In addition to this, the changing programs, assistance activities, and requirements of various state and federal agencies will require additional adjustments, refinements and implementation programs. These changes will also need to be made to keep the Plan up-to-date. The changes can be made locally by the City and County Planning Departments on a cooperative basis.

LAND USE PLAN IMPLEMENTATION

Implementation of the District land use plan is the most important single element in the ultimate realization of development objectives in the District. The Zoning Ordinance is the single most important and versatile control measure appropriate to the designation of land use areas within the District. It is therefore highly desirable that there be only one zoning control measure which will permit urban development to extend outward in accordance with the adopted District Comprehensive Plan. Each government should adopt the same zoning ordinance recommended as a part of the study which will simplify administration of land control measures for the general public and implement the Plan. This procedure will also be a positive step towards encouraging cooperation in Phase II, to begin following completion of Phase I.

Regulatory Ordinances

The SEWRPC has prepared under separate cover (see Volume Three of this report) recommended model regulations designed to implement the District Comprehensive Plan. These regulations include zoning, subdivision regulations, sanitary and official map ordinances.

Public Development Policies

The adoption and adherence to certain public development policies concerning annexation, incorporation, consolidation, and the extension of municipal utilities, is equal in importance to the adoption and implementation of coordinated zoning regulations. The District land use plan identifies future urban areas and recommends public utilities and services which should be provided. If uniform development objectives and standards are adhered to and the land use plan for the District is adopted, the provision of utilities and other public services can occur in a consistent manner as new areas are developed. Proper consideration of the District land use plan in these deliverations will assist in achieving more economical urban services at a uniform level.

The following recommendations concern the more important public policies that will have a significant effect upon the implementation of the District Comprehensive Plan:

1. The city, towns and villages should carefully consider the urban land use pattern indicated in the District Comprehensive Plan when reviewing water and sanitary sewer extensions.

2. Agreements with property owners and developers should be utilized providing for the extension of the utility service. The agreement should also clearly state that the owner and/or developer agrees to abide by the recommended land uses of the Comprehensive Plan in the development of the property and, pending the outcome of the jurisdictional phase of the study, will agree to make the property being developed a part of the community determined in the jurisdictional study.

HOUSING PLAN IMPLEMENTATION

In order to implement the housing plan, it will be necessary to undertake several actions.

1. Consideration should be given in Phase II of this study to the establishment of a Redevelopment Authority to undertake neighborhood projects where renewal and clearance are needed and to take advantage of federal funding for such projects.

2. Neighborhood plans, similar to the Peterson, Root River, Jefferson Herrick, and Southside Neighborhood plans should be prepared for each neighborhood recommended for development according to the District housing plan. Plans should be prepared first for the neighborhoods experiencing rapid growth or developmental pressure as well as neighborhoods determined to have the most serious housing problems.

3. Consideration should be given in Phase II of the study to the establishment of an area-wide housing agency to undertake the building of low and moderate income housing, housing for the elderly, and relocation housing. By centralizing the housing function, greater coordination can be achieved in the building and proper location of new housing to serve the need according to the housing plan. Relocation housing can be provided to serve the needs resulting from displacement from various governmental actions; namely, highway construction, redevelopment, land acquisition or natural disaster. Housing so constructed by the agency should be sold to the occupants or privately managed.

TRANSPORTATION PLAN IMPLEMENTATION

Implementation of the District transportation plan may be subdivided into two basic areas: the arterial street system plan and the mass transit facilities plan. The following implementation actions should be initiated in the immediate future:

1. The Jurisdictional Highway Committee has taken action in approving the Loop Freeway alternative plan, also recommended in this report. This Committee should now complete its work. Each of the local units of government should formally adopt the District plan and begin to implement the plan through their budgeting programs. As urban growth occurs and development extends outward, scheduled improvements may be developed to provide adequate highway transportation facilities in the Planning District. Lack of agreement on these recommendations would ultimately affect the land use pattern, residential property values, and the viability of existing and future commercial and industrial enterprises. Every effort should be made to gain the approval, support and funding of the state and federal governments in implementing the approved plan.

2. Mass transit facilities in the District are provided on a weak economic footing. Reorganization of the system and the purchase of new equipment has permitted service to be extended for a number of years. Additional modifications appear to be warranted in light of recent ridership statistics. If mass transit is to be continued, residents of the District should be fully prepared to assume the burden of these services at some future point in time. However, alternatives should be considered to support the bus operation, including, but not limited to, a local tax upon automobiles, making the franchise a part of the school bus contract and a state licensing tax for mass transit. Future modifications in the extent of service may be required before additional development and improvements of the system can take place.

The arterial street and highway plan as presented in this report is related to the functional classification of these facilities. Jurisdictional responsibilities are not being defined. The plan contains specific recommendations as to the type and character of facilities that are required to serve the forecast traffic needs. The plan does not, however, specify the governmental unit or agency that should have the responsibility for acquiring, constructing, or maintaining each of the recommended facilities.

Perhaps the first and most important step in the implementation of the arterial street and highway plan will be to complete the Racine County jurisdictional highway plan to determine jurisdictional responsibilities for all elements of the plan; then the Federal Aid, state trunk and county trunk highway systems can be adjusted to the jurisdictional plan in stages.

COMMUNITY FACILITIES PLAN IMPLEMENTATION

This element of the District development plan is divided into three sections: the school plan, the park and open space plan, and the public buildings plan.

Public School System Plan Implementation

Because the Racine Unified School District No. 1 has boundaries which are coterminous with the Urban Planning District, all public school improvements may be undertaken by one agency.

The development plan for schools reflects estimates of the future student population and area requirements for each of the various school facilities recommended. Existing development trends have been analyzed and those school sites which have received highest priorities for development are identified in the capital improvement program. Because the school district currently has a substantial amount of lands which are not considered to be properly located for future school sites, the school system should trade or sell these properties and reinvest the money into well located future school sites. These school sites should be fully coordinated with park development programs so that the principal of the school-park complex as the center of each residential neighborhood may be strengthened as a part of the development program in the District.

Parks and Open Space Plan Implementation

The acquisition of environmental corridors and the proposed park and recreation sites shown on the District land use plan and the parks and open space plan will constitute a major undertaking during the planning period to 1990. Because it is not economically feasible to acquire all of these parks and open space lands immediately, it will be necessary to utilize certain police powers that are available to local units of government to conserve these areas until the appropriate level of government may acquire them by fee or donation.

In addition to the preservation of existing public and private parks by exclusive Park District zoning and the protection of those lands to be acquired within a reasonable period of time by the use of exclusive conservancy and agricultural zoning Districts, the official mapping powers possessed by the municipalities in Wisconsin may be utilized. Assistance in determining these powers, as well as the required maps and survey control systems, is available through SEWRPC.[5]

Significant progress has already been made in the identification and mapping of these important areas for future parks and open space acquisition. The plan proposes the addition of several important environmental corridors, especially the Root River corridor, with significant natural environmental conditions which should be preserved. The mapping program currently underway under the auspices of Racine County will soon provide complete detailed maps for the entire Planning District.

In addition to the Root River Parkway lands other areas are identified in both the land use plan and open space plan as environmental corridors which should be protected as a part of continuing conservation activities. Woodlands, wetlands, and natural habitats are found in these areas, making them a part of the important natural resources of the District. Soil suitability maps for urban development should be utilized in protecting these areas from urban encroachment.

The City of Racine and the Towns of Caledonia and Mt. Pleasant should prepare and adopt official maps pursuant to Section 62.23 (6), showing these proposed park and recreational sites and select park and natural drainage courses in the environmental corridors. Acquisition of proposed park and recreation sites and certain open space lands lying in the environmental corridors may be accomplished in a variety of ways: (1) gifts by owners, (2) dedication by land developers, (3) outright purchase by the state or local units of government, (4) formulation of a conservancy organization and (5) philanthropic gifts. Large land owners may achieve desirable tax relief by making outright donations of desirable open space areas. Similarly, there is justification for requiring land developers to dedicate reasonable portions of those sites or proposed park lands lying within their subdivision. In addition to this, it will become increasingly important to establish a framework for the purchase of park sites in accordance with school site development programs. Since the school system is in a more flexible position, having District-wide jurisdiction, it should be the responsibility of the school systems to implement this cooperative action. Here again, these important considerations will be a part of the future jurisdictional studies to be undertaken as Phase II of the Comprehensive Plan.

Public Buildings Plan Implementation

City, town and village fire departments will be required to acquire and construct three new fire stations in the planning period. These should be located in accordance with the plan to provide a desirable system of fire service areas regardless of the outcome of the jurisdictional phase of the planning program. Existing cooperative agreements provide for mutual assistance in time of need. As urban development occurs, it will be increasingly important to have sites available and to anticipate protection service needs.

One new police station has been recommended in the public buildings plan at the intersection of Spring Street, Green Bay Road and Newman Street on the Schacht site in the Indian Hills Neighborhood. A considerable amount of new development is recommended in this general area which could place the station in close proximity and with easy access to the developing area.

Hospital needs are identified in the public buildings plan. Existing public and private institutions are expected to

---

[5] *SEWRPC, Planning Guide No. 2, Official Mapping Guide, 1964.*

expand and additional beds are expected to be needed by 1990. For this reason, the Schacht site, presently in public ownership, should be retained to preserve its potential for public use or a hospital location. Principal responsibilities for health care facilities would be found at the county level of government.

Five new branch libraries are proposed along with mobile library service to serve the growing Planning District. A new Village Hall is recommended in Sturtevant to replace the existing building.

PUBLIC UTILITY PLANS IMPLEMENTATION

During the planning period, environmental conditions will dictate that a uniform level of water, sanitary sewer, storm drainage and solid waste services be provided throughout much of the Urban Planning District. In spite of the fact that water and sewer services are now provided by a number of agencies and jurisdictions, seemingly to the satisfaction of administrators and customers, recent conflicts over extensions and cooperative agreements clearly indicate that a uniformity of standards and service will be necessary if the full economic growth and development potential of the District is to be achieved.

The most efficient means of accommodating these extensions at a uniform development standard would be to eliminate some of the jurisdictional lines which now exist. This would require a consolidation of one or more of the various sanitary and water supply districts which now provide services to outlying areas. Since cooperative contracts already exist in these areas, the foundation for providing these services on a uniform basis is already established. What remains to be accomplished is to devise sensible solutions to insure the well-being of the District's residents.

It is in the best interest of the residents of the District that solutions to jurisdictional service area problems be found so that future extensions of these utilities may qualify for the various available state and federal assistance programs. A series of fragmented jurisdictional agencies trying to provide a uniform level of services will undoubtedly present development problems for each of the jurisdictions. In Phase II of the Comprehensive Plan, discussions as to the best means for devising consolidations will be explored. Solutions to these problems should reflect the enlightened self-interests of all District residents.

In the meantime, additional demands due to growth and development will be made on the existing water system. The plan for water indicates that by 1990 the existing Racine Water Works will need to be doubled in size. Additional water mains and water storage facilities will need to be provided to meet an estimated average daily water consumption of 55 million gallons per day. Although detailed engineering studies are recommended on how the enlargement and extensions should be made, the city should continue to provide and extend water on an equitable basis to areas in need of water based on the water plan and land use plan for the District. This single water system lends itself to a Metropolitan Water District, should such a District be recommended in Phase II of the comprehensive planning program.

The third alternative sanitary sewerage system plan is recommended for the Racine Urban Planning District. This alternative allows for one single sewage treatment facility to provide treatment for sewage generated in the District with the exception of the Caddy Vista District which should be connected with the Milwaukee-Metropolitan sewerage system. As a single system, it lends itself to coordinated capital improvement programming for sewerage facilities in the District and to implementation through a Metropolitan Sewerage District, should such a district be recommended in Phase II of the comprehensive planning program.

Although plans for drainage improvements can often be carried out on an individual basis as development occurs or as roads are constructed, or as the need warrants, storm drainage as a whole is inexplicably intertwined with sanitary sewerage service and treatment as well as water supply and distribution. When the subject of water is viewed in this manner, it becomes a problem of water management. Accordingly, careful planning and coordination of storm drainage problems with water supply and sanitary sewerage service needs to be worked out in harmony with one another for the best interest of the District. We are therefore recommending that should a Metropolitan Sewer and Water District be recommended in Phase II of the comprehensive planning program, that storm water drainage also be included in the District.

With respect to solid waste disposal, it is recommended that the county own and operate the sanitary land fill sites.

FINANCIAL AND TECHNICAL ASSISTANCE

Numerous types of financial assistance are available to local units of government ranging from current revenue sources to borrowing, through the various city, state and federal loan and grant programs.[6] These state and federal programs include local code enforcement, park land acquisition and development, water and sewer systems, sewage treatment works and transportation grants.

---

[6] *SEWRPC, Planning Report No. 7, Volume Three, Recommended Regional Land Use and Transportation Plan — 1990, Chapter VII.*

Technical assistance is available through SEWRPC, the Racine County Planning Department, and state and federal agencies which maintain local offices in the Planning District.

ADMINISTRATION

The City and County Planning Departments, because of their experience and knowledge of development problems in the District, are the most appropriate local agencies for the administration and updating of the District development plan. Consideration should be given in Phase II of the study to the establishment of a joint Planning Department.

Under Wisconsin planning enabling legislation, the Plan Commission performs a unique role of representing the public interest, not only of today's public, but of tomorrow's as well. This is an interest shared by many elected officials, although elected officials are often forced to take actions reflecting immediate public needs. Local units of government need the separate embodiment of the future public interest in a Plan Commission. The elected legislative body need not fear any loss of power or authority to this Plan Commission since the local governing body not only controls the budget of the Commission, but also the final decision as to whether to act upon Commission recommendations. Membership, organization, and functions of a Plan Commission are well known in the District since each of the local municipalities has established a Commission, although not all function on an equal basis.[7]

Referrals

One of the most important functions of the Plan Commission is its review powers over specific aspects of community development. The Wisconsin Statutes require that certain matters must be referred to the Plan Commission for recommendation prior to any final action by the Common Council or Town Board. The most important of the referral matters are the following:

1. All plats of land within the corporate limits and the extraterritorial plat approval jurisdiction of the municipality.

2. The location, acceptance, extension, alteration, vacation, abandonment, change of use, sale, acquisition, or lease of any public way, park, playground, airport, parking area, public grounds, or memorial.

3. The location, extension, abandonment, or authorization of any public utility, whether privately or publicly owned.

4. The location, character and extent, acquisition, sale or lease of lands for public or semi-public housing and slum clearance.

5. Changes to the zoning ordinance regulations or District map.

6. Temporary zoning classifications of annexed territory.

7. Changes or additions to the official map.

8. The location and design of public buildings.

Failure of the governing bodies to comply with these referral requirements of the Statutes will affect the legality of their actions. The Wisconsin Supreme Court recently held invalid the attempt of the Common Council of the City of Menasha to transfer city property because the Council had failed to properly refer the matter to the City Plan Commission before taking final action.[8]

Therefore, whenever any new improvements of a type covered in the District Comprehensive Plan, such as school and park sites, arterial streets, or public buildings are initiated by various local municipal agencies, the plans for such improvement shall be submitted to the local Plan Commission for study and report before actual construction is started. The Plan Commission checks the improvement against the Comprehensive Plan and if the project is generally in accord therewith, the Commission should approve the improvement and so report to the sponsoring agency. If, however, the Commission finds that the proposed improvement is contrary to the Plan, it should recommend that the project not be undertaken, unless it is suitably changed. This referral function is very important to plan implementation, as the Comprehensive Plan should be consistently recognized in the design and location of public improvements.

The various city and town officials considering the above mentioned matters should be required to refer such matters to the District Technical Planning Committee for review and conformance to the Comprehensive Plan. They should

---

[7] *SEWRPC, Planning Report No. 14, A Comprehensive Plan for the Racine, Wisconsin Urban Planning District, Volume One, Inventory Findings and Forecasts, Chapter XI, pp. 205-206.*

[8] *Scanlon vs. the City of Menasha, 16 Wisconsin 2d 437, 114 N. W. 2d 791 (1962).*

also seek the review and comment of their local planning staffs, and the city and town governing bodies should obtain the review and recommendations of their local Plan Commission before taking any action on these various aspects of community development.

Importance of a Local Planning Staff

In order for the local Plan Commission to adequately perform their duties, they must be properly supported by a competent, professional staff whose duty it is to furnish professional and technical assistance. In the Racine Planning District, only the City and County Planning Departments fill this function. Without adequate technical assistance, the local Planning Commissions will be severely handicapped in administering the Comprehensive Plan. Listed below are the more important functions of a planning staff:

1. A major function of the Plan Commission is to prepare and keep up-to-date the Comprehensive Plan and to assist the other elements of the city government in encouraging the realization of the proposals and objectives of the Plan. The time of the Plan Commission should not be so preponderantly devoted to the consideration of relatively minor individual zoning and land division problems. In this respect, it should be the responsibility of the Planning Department to provide adequate staff work to enable the current matters to be disposed of expeditiously. Thus, a major part of the time of the Plan Commission can be devoted to keeping the Comprehensive Plan up-to-date and to promoting major programs for the realization of the District development objectives.

2. The Planning Department should process and report on all petitions for rezoning. This involves field inspections of existing land uses and structures, the preparation of not only the area in question, but for some distance around, and the preparation of a recommendation for approval or disapproval including the reasons for such recommendation.

3. The planning staff should also process, review and report on all land divisions and planned developments. The review process should include a comparison of the local land division ordinance with the proposed division, thus insuring that sound subdivision and site planning principles have been used in the design of the plat and compliance made with all other applicable local ordinances. Preliminary subdivision layout plans will need to be made from time to time to make sure that an individual plat fits into a reasonable neighborhood pattern. Close coordination with other municipal agencies such as the Public Works Department, School District, Park Agency and the Water Utility District is extremely important in this review of land divisions.

4. The Planning Department should also conduct inventories and analyses on land use, financial capabilities, population, economic activity and development trends, so as to keep up-to-date the various studies undertaken, plans, and capital improvement programs prepared under the District planning program.

5. Because of the vast number of state and federal assistance programs available to local units of government, there is need for one local official to be familiar with all these programs and able to provide information on these programs to other local officials. Logically, this can be a function of the Director of Planning.

6. The Planning Department should also be responsible for the preparation of general plans for specific projects recommended in the Comprehensive Plan, such as Comprehensive Plans for proposed neighborhood parks, combined school park sites and arterial street improvements. The Director of Planning should work with other department heads in evaluating the need for public improvements and participate in the preparation of an annual capital budget based on the capital improvement program.

7. An additional duty and responsibility of the Director of Planning should be to furnish technical assistance to the Board of Zoning Appeals, in the administration of the zoning regulations. He should also cooperate with the Engineering Department in the preparation and maintenance of an "Official Map" based on the arterial street and highway plan.

As evident from the above suggested work program, a Plan Commission composed partially of lay people cannot possibly implement the Comprehensive Plan without an adequate professional and technical staff. The Towns of Caledonia and Mt. Pleasant do not have full-time planning staffs. Without such staffs, it will be extremely difficult to implement the Comprehensive Plan.

Experience has shown that the employment of a full-time resident planning staff supplemented by consultants as necessary, responsible to a Plan Commission, is the best

method of obtaining professional planning services. The size, cost, and administrative organization of such resident staffs vary from one community to another. A staff may consist of one trained planner, as in the case of small communities, or may number several planners, researchers, draftsmen and secretaries in larger cities. The District should continue with at least two professional planning staffs unless and until it is determined in the jurisdictional study to only have one staff serving the District.

The majority of local planning offices are small one- or two-man operations usually consisting of a Planning Director, an assistant, and a clerk-stenographer. If the community desires its own planning staff, it must be prepared to commit itself to paying the cost of the planning staff employed not for one or two years, but on a permanent basis. Office space, equipment, supplies, and other expense items must also be provided. These expenses, however, are minor in comparison with the economies that may be realized from sound community planning.

EDUCATION PROGRAM

Those communities in which the planning function has been most effective are those where public support for the plans has been developed and maintained. The Plan Commissions and planning staff or consultants must do more than just work with community leaders and certain elected public officials. It must also reach out to the general public to promote understanding and to solicit wide participation. Public participation in the planning process is difficult to obtain and requires a continuing effort. Strong and active citizen planning groups are of tremendous value and are often able to aid the Plan Commission in carrying out the community plan. Their assistance may take the following forms: exhibits, discussions, before civic professional and neighborhood conservation groups, newspaper articles, radio broadcasts, education television, and study courses in the local schools.

Many voluntary local citizen groups are only successful when the initiating drive comes from within their group; however, the local Plan Commissions can do much to encourage the growth of these organizations. The Plan Commissions can furnish them information about the District Comprehensive Plan, consult with them regularly about this Plan, and encourage expression of opinions. Those groups, in turn, can assist the local Plan Commissions by their testimony and support of sound planning at both public and private gatherings. These groups may become lay experts on community planning, aiding in policy formulation, maintaining citizen support, insuring more critical examination of proposals, and generally creating a more favorable planning atmosphere in the community.

Publication and distribution of the Comprehensive Plan is the first important step in familiarizing the public with the activities of the District's planning program. The mere printing of the plan in its entirety, however, will not be an adequate means of securing public understanding. Many people will not read such a long report and many will not remember the large amount of data and recommendations contained therein.

At least 10,000 copies of a colorful, graphic summary brochure of about two to five pages describing the District's planning program, its studies, plan proposals and implementation recommendations should be prepared for distribution to at least one out of every three households in the District.

(This page intentionally left blank)

APPENDICES

(This page intentionally left blank)

Appendix A

DENSITY DATA – RACINE URBAN PLANNING DISTRICT

Community	Neighborhood Number*	1970 Population	Net Residential Area – 1990	Assumed 1990 Density Persons Per Acre	1990 Population	New 1990 Commerce	New 1990 Industry	Comments
A	1 L	85	0.0	–	–	10	–	Redevelopment activity centered in Central Business District and along State Street, north of Root River.
	2 H	515	20.0	47.0	1,000	20	–	
	3 L	850	0.0	–	–	–	35	
	10 H	5,815	152.0	38.0	5,800	–	–	
	Sub-total	7,265	172.0	39.5	6,800	30	35	
B	4 H	3,250	70.0	47.0	3,300	–	10	Southside Revitalization Area, industrial redevelopment and rehabilitation of deteriorating housing.
	5 H	3,305	70.0	47.0	3,300	–	10	
	21 H	3,950	100.0	38.0	3,800	–	25	
	22 H	690	18.0	40.0	700	–	10	
	Sub-total	11,195	258.0	43.0	11,100	–	55	
C	20 H	7,400	256.0	30.0	7,700	–	10	Industrial filling in and residential development. Very severe soil limitations.
	23 M	4,120	210.0	20.0	4,200	10	200	
	24 M	270	80.0	20.0	1,600	–	170	
	Sub-total	11,790	546.0	23.9	13,500	10	380	
D	18 H	2,545	106.0	24.0	2,600	–	–	Major industrial areas adjacent to Chicago and Northwestern Railway. New residential areas in medium-density range.
	19 H	2,660	106.0	26.0	2,800	10	–	
	25 M	585	315.0	9.0	2,800	–	–	
	26 M	2,250	270.0	14.0	3,800	–	–	
	27 L	155	–	–	–	80	30	
	28 M	1,930	348.0	12.0	4,100	20	–	
	29 M	445	385.0	12.0	4,600	10	–	
	30 M	80	200.0	9.0	1,800	–	–	
	31 M	930	375.0	12.0	4,500	15	500	
	Sub-total	11,580	2,105.0	12.8	27,000	135	530	
E	14 M	9,790	625.0	19.0	11,900	15	–	Neighborhoods are almost fully developed. Some filling out expected, no major change.
	15 M	1,185	168.0	19.0	3,200	10	–	
	16 H	3,190	140.0	23.0	3,200	5	–	
	17 H	4,010	125.0	32.0	4,000	5	–	
	Sub-total	18,175	1,058.0	21.1	22,300	30	–	
F	6 H	6,215	131.0	38.0	5,000	–	40	Revitalization No. 7, Jefferson-Herrick and new industry expansion in No. 6, Washington Park Uptown.
	7 H	4,260	103.0	41.0	4,200	–	10	
	8 H	2,350	98.0	25.0	2,500	–	–	
	Sub-total	12,825	332.0	33.7	11,700	–	–	
TOTAL – SHEET 1		71,830	4,471.0	20.6	92,400	205	1,050	

**Letter designation represents:*

L — Low Density

M — Medium Density

H — High Density

Appendix A

DENSITY DATA – RACINE URBAN PLANNING DISTRICT (Continued)

Community	Neighborhood Number*	1970 Population	Net Residential Area – 1990	Assumed 1990 Density Persons Per Acre	1990 Population	New 1990 Commerce	New 1990 Industry	Comments
G	9 H	4,110	200.0	23.0	4,600	–	–	
	13 H	5,225	225.0	34.0	5,400	10	100	Major industrial expansion at
	38 M	1,120	230.0	10.0	2,300	–	200	airport.
	42 M	1,245	310.0	9.0	2,800	5	60	
	Sub-total	11,700	965.0	15.6	15,100	15	360	
H	11 H	3,200	110.0	29.0	3,200	–	–	
	12 H	4,975	188.0	27.0	5,100	–	–	Fully developed neighborhoods.
	39 M	9,464	540.0	21.0	11,300	25	–	Some commercial expansion.
	Sub-total	17,640	838.0	23.4	19,600	25	–	
I	40 M	605	235.0	8.0	1,900	–	–	
	41 M	3,330	495.0	13.0	6,400	5	55	
	45 M	730	430.0	8.0	3,400	10	20	Commercial and industrial filling
	46 M	1,595	450.0	8.0	3,600	–	–	out along Douglas Avenue. Low-
	47 M	1,835	640.0	7.0	5,100	–	–	density residential areas to be
	48 L	35	–	–	–	–	–	developed.
	Sub-total	8,130	2,250.0	9.1	20,400	15	75	
J	43 L	420	525.0	4.0	2,100	10	–	
	44 M	190	300.0	7.3	2,200	10	–	Low-density residential and new
	49 L	1,320	670.0	4.3	2,900	75	–	commercial areas. (Neighbor-
	50 L	305	120.0	–	400	–	–	hood and regional centers)
	Sub-total	2,235	1,615.0	3.4	7,600	95	–	
K	34 M	230	760.0	10.0	7,600	–	–	
	35 M	1,205	450.0	12.0	5,900	5	–	Medium-density residential
	36 L	350	425.0	4.0	1,700	10	–	areas and neighborhood
	37 M	750	510.0	10.0	5,100	–	–	commercial
	Sub-total	2,535	2,145.0	9.5	20,300	15	–	
L	32 M	810	480.0	10.0	4,800	40	–	Major growth areas with land
	33 M	1,900	1,005.0	12.0	11,200	70	–	fragmentation problems.
	Sub-total	2,710	1,485.0	10.8	16,000	110	–	
TOTAL – SHEET 2		44,950	9,298.0	10.6	99,000	275	435	

**Letter designation represents:*

L — Low Density

M — Medium Density

H — High Density

Appendix A

DENSITY DATA – RACINE URBAN PLANNING DISTRICT (Continued)

Community	Neighborhood Number*	1970 Population	Net Residential Area – 1990	Assumed 1990 Density Persons Per Acre	1990 Population	New 1990 Commerce	New 1990 Industry	Comments
M	58 M	180	245.0	9.0	2,200	10	–	
	59 M	235	90.0	9.0	800	–	320	
	60 M	2,935	470.0	14.0	6,600	55	225	Industrial expansion near Sturtevant and medium-density residential growth.
	61 L	85	40.0	–	100	–	–	
	62 L	210	140.0	–	500	–	–	
	63 L	345	120.0	–	500	–	–	
	Sub-total	3,990	1,105.0	9.6	10,700	65	545	
N	53 L	630	295.0	–	1,500	–	750	
	54 M	870	700.0	8.0	5,000	25	–	
	55 M	240	600.0	9.0	5,900	–	80	Major industrial expansion in Town of Caledonia. New medium-density residential areas near Franksville.
	56 M	225	210.0	8.0	1,300	10	–	
	57 M	645	420.0	9.0	3,800	–	–	
	64 L	200	70.0	–	200	10	–	
	65 L	790	275.0	–	900	5	75	
	Sub-total	3,550	2,570.0	7.6	18,600	50	905	
O	51 L	1,190	120.0	–	2,000	–	–	Modest growth for this area. Some commercial expansion along arterial roads.
	52 L	420	200.0	–	600	10	–	
	66 L	1,430	350.0	–	1,600	30	–	
	Sub-total	3,040	670.0	5.2	4,200	40	–	
TOTAL – SHEET 3		10,580	4,345.0	7.7	33,500	155	1 1,450	
RECAP:								
	SHEET 1	71,830	4,471.0	20.6	92,400	205	1,050	
	SHEET 2	44,950	9,298.0	10.6	99,000	275	435	
	SHEET 3	10,580	4,345.0	7.7	33,500	155	1,450	
	TOTAL	127,360	18,114.0	12.3	224,900	635	2,935	

SUMMARY BY DENSITY CATEGORY

	Net Residential Area – 1990	1990 Population
Low	3,350	15,000
Medium	12,546	141,700
High	2,218	68,200
	18,114	224,900

**Letter designation represents:*
L — Low Density
M — Medium Density
H — High Density

Source: Harland Bartholomew and Associates

Appendix B

RECOMMENDED CAPITAL IMPROVEMENT PROGRAM
1972 – 1992
Racine Planning District

Priority 1 – Quality of the Environment	Total Cost in $000	Local Share in $000	Local Share Per Capita 1992 [1]
I. WATER			
A. Supply 1. New Major Transmission Lines 2. Expand Treatment Facilities (by 40 MGD)			
B. Storage – Construct Storage Tanks (12 MGD)			
C. Distribution System – Extend 16 mains for 36 miles to provide local service. Include 180 valves at 1,000 foot intervals.			
TOTAL WATER	$14,880*	$14,880*	$66.13
*Does not include expenses for engineering design, legal surveys, appraisals and administrative costs, normally about 25% additional.			
II. SANITARY SERVICES			
A. Treatment Facilities – Expand Racine Plant to 48.5 MGD	$11,600		
Acquire 13 more acres at site	975		
Sub-total	$12,575		
B. Trunk Sewer Improvements			
Caledonia	$ 965		
Crestview-North Park	747		
Racine	500		
Sub-total	$ 2,212		
C. New Trunk Sewers			
Caledonia	$ 983		
Caledonia and Crestview-North Park to Racine	5,104		
Sturtevant-Mt. Pleasant and Sanders Park to Racine	4,631		
Sub-total	$10,718		
TOTAL SANITARY SEWER IMPROVEMENTS	$25,505	$12,753	$56.68
III. STORM DRAINAGE			
Widen channels, purchase floodways and easements.			
TOTAL STORM DRAINAGE	$ 4,500	$ 4,500	$20.00
IV. SOLID WASTE DISPOSAL			
Land acquisition of new 50-acre site; provide equipment, fencing, shed, etc.	500	500	2.22
SUB-TOTAL PRIORITY 1	$45,385	$32,633	$145.03

[1] *Based on 1990 population of 225,000.*

Priority 3 – Improving Economic Status	Total Cost in $000	Local Share in $000	Local Share Per Capita 1992
I. PUBLIC BUILDINGS			
A. Neighborhood Libraries – 5 @ $200,000	$ 1,025	$ 1,025	
B. Sturtevant Village Hall	500	500	
C. Police Station and Equipment	300	300	
D. Fire Station and Equipment – 3 @ $400,000 – Includes site of 5 acres ($25,000)	1,200	1,200	
TOTAL PUBLIC BUILDINGS	$ 3,025	$ 3,025	$ 13.44
II. TRANSPORTATION			
A. Loop Freeway Alternative	$119,420	$ 35,800	$159.11
SUB-TOTAL OF PRIORITY 3	122,445	38,825	172.55
GRAND TOTAL OF CIP	$242,325	$129,522	$575.95

Priority 2 – Social Needs	Land Acquisition Acres	Land Acquisition Cost in $000	Development in $000	Total Cost in $000	Local Share in $000	Local Share Per Capita
I. PARKS						
A. Regional Parks						
1. Lake Segment – East of Northwestern Railroad	198	$ 198	$ 0	$ 198	$ 99	$ .44
Sub-Total of "A"	198	$ 198	$ 0	$ 198	$ 99	$ .44
B. Large Urban Parks						
1. Linwood Park Expansion	327	$ 327	$ 50	$ 377		
2. Marshlands Conservation Area	200	200	50	250		
Sub-Total of "B"	527	$ 527	$ 100	$ 627	$ 315	$ .71
C. Community Parks						
1. Sanders Park Expansion						
a. North Segment	40	$ 100	$ 80			
b. South Segment	80	240	160			
2. Cedar Bend Expansion	15	45	30			
3. Airline Road Park (Neighborhood 34)	80	240	160			
4. Pritchard Park Expansion	25	60	50			
5. Peterson Park	110	270	220			
Sub-Total of "C"	350	$ 955	$ 700	$1,655	$1,025	$4.55
D. Neighborhood Parks						
23 parks @ 10 acres each	230	575	575	1,150	860	3.82
TOTAL PARKS	1,305	$2,255	$1,375	$3,630	$2,299	$9.52

Note: Land acquisition figures based on 50% of cost available from Federal Open Space Grant Program.

	Total Cost in $000	Local Share in $000	Local Share Per Capita 1992
II. SCHOOLS			
A. Elementary Schools			
School Sites (13 @ $30,000)	$ 390	$ 390	
School Buildings (22 @ $1,500,000)	33,000	33,000	
Sub-Total	$33,390	$33,390	
B. Junior High Schools			
School Sites (1 @ $50,000)	$ 50	$ 50	
School Buildings (4 @ $3,000,000	12,000	12,000	
Sub-Total	$12,050	$12,050	
C. Senior High Schools			
School Site	$ 100	$ 100	
School Building	8,500	8,500	
Sub-Total	$ 8,600	$ 8,600	
TOTAL SCHOOLS	$54,040	$54,040	$240.18

	Total Cost in $000	Local Share in $000	Local Share Per Capita 1992
III. HOUSING IMPROVEMENT			
A. Spot Clearance – 200 Structures ($1,000 per structure and relocation costs for 80 families. Presume remainder will be vacant.)	$ 600	$ 200	
Note: Remaining dilapidated dwelling units included in Code Project.			
B. Janes-Lakeview Code Enforcement Project	1,750	583	
C. Franklin School Code Enforcement Project	700	233	
D. Jefferson-Herrick Code Enforcement Project	450	150	
E. Lincoln School Code Enforcement Project	275	92	
F. Washington Park-Uptown Code Enforcement Project	350	117	
G. South Central Code Enforcement Project*	1,050	350	
H. Elderly Housing – 200 units @ $12,000	2,400	**	
I. Low and Middle Income Housing – 500 units @ $17,000	9,350	**	
TOTAL HOUSING COSTS	$16,925	$ 1,725	$ 7.67
SUB-TOTAL PRIORITY 2	$74,595	$58,064	$257.37

Code Enforcement costs based on: $500 per deteriorating and dilapidated dwelling unit for rehabilitation processing; $5,000 per dilapidated dwelling unit for relocation; 30% of above total for administration; 30% of above total for public improvements.

*Self Liquidating
**This is within Southside Revitalization Area

Appendix C

RECOMMENDED ALTERNATIVE CIP PROGRAM
FOR SCHOOLS

IMPROVEMENT ITEM	Total Cost in $000	Local Share in $000	Local Share Per Capita 1992
A. Elementary Schools			
School Sites (8 @ $30,000)	$ 240	$ 240	
School Buildings (11 @ $1,500,000)	16,500	16,500	
Sub-total	$ 18,740	$ 18,740	
B. Junior High Schools			
School Buildings (2 @ $3,000,000)	6,000	6,000	
Sub-total of Schools Alternative	$ 24,740	$ 24,740	$109.96
Total of Alternative 1	54,040	54,040	240.18
Difference Between Alternatives	$ 29,300	$ 29,300	$130.22
Analysis of Effect on Total CIP Program			
Estimated CIP Cost	$242,325	$129,522	$575.95
Reduction	29,300	29,300	130.22
Revised Total Cost	$213,025	$100,222	$445.73

A SUGGESTED (CITY OF_____) (VILLAGE OF_____) (TOWN OF _____) PLAN COMMISSION RESOLUTION ADOPTING THE COMPREHENSIVE PLAN FOR THE RACINE URBAN PLANNING DISTRICT

WHEREAS, the (City of _____) (Village of _____) (Town of _____) pursuant to the provisions of Section 62.23(1) of the Wisconsin Statutes has created a (City) (Village) (Town) Plan Commission; and

WHEREAS, it is the duty and function of the (City) (Village)(Town) Plan Commission, pursuant to Section 62.23(2) of the Wisconsin Statutes, to make and adopt a master plan for the physical development of the (City of _____) (Village of _____) (Town of _____); and

WHEREAS, the County of Racine contracted with the Southeastern Wisconsin Regional Planning Commission to prepare a comprehensive plan for the Racine Urban Planning District through a consultant, local staff, and its own staff; which plan includes:

1. Collection, compilation, processing, and analyses of various types of demographic, economic, financial resources, public utility, housing, public facilities, natural resources, land use, and transportation and other materials pertaining to the District.

2. Objectives, principles, and standards for the District's land use, transportation, community facilities, and public utilities development.

3. A forecast of District growth and change.

4. A comprehensive plan for the physical development of the District.

5. Suggested model zoning, subdivision control, official map, and sanitary ordinances for the implementation of such plans; and

WHEREAS, the aforementioned inventories, analyses, objectives, principles, standards, forecasts, comprehensive plan, and implementing ordinances are set forth in a published report entitled SEWRPC Planning Report No. 14, A Comprehensive Plan for the Racine Urban Planning District, comprised of the following volumes:

1. Volume One, Inventory Findings and Forecasts

2. Volume Two, Recommended Comprehensive Plan

3. Volume Three, Model Plan Implementation Ordinances; and

WHEREAS, the (City) (Village) (Town) Plan Commission has supported, participated in, and generally concurred in the District Planning Program undertaken by the Southeastern Wisconsin Regional Planning Commission for and together with Racine County and the communities located

within the Racine Urban Planning District, and considers the plans prepared by the Commission and its consultant to be a valuable guide not only to the development of the District but also of the (City of _____) (Village of _____) Town of _____), and the adoption of such plans by the (City of _____) (Village of _____) (Town of _____) will assure a common understanding by the several governmental agencies, departments, boards, and commissions concerned and enable their staffs to program the necessary areawide and local plan implementation work; and

WHEREAS, the (City) (Village) (Town) Plan Commission on the _____ day of _____, 19___, did adopt the regional land use and transportation plans previously adopted by the Southeastern Wisconsin Regional Planning Commission as set forth in SEWRPC Planning Report No. 7, The Regional Land Use-Transportation Study, as a guide for regional and community development; and

WHEREAS, the (City) (Village) (Town) Plan Commission on the _____ day of _____, 19___, did adopt the comprehensive plan for the Root River watershed previously adopted by the Southeastern Wisconsin Regional Planning Commission as set forth in SEWRPC Planning Report No. 9, A Comprehensive Plan for the Root River Watershed, as a guide for regional and community development.

NOW, THEREFORE, be it resolved that pursuant to Section 62.23(3)(b) of the Wisconsin Statutes, the (City of _____) (Village of _____) (Town of _____) Plan Commission, by an affirmative vote of _____ members, on the _____ day of _____, 19___, hereby adopts as the (City of _____) (Village of _____) (Town of _____) master plan, the comprehensive plan for the Racine Urban Planning District as set forth in SEWRPC Planning Report No. 14, as a guide for development of the District and the (City of _____) (Village of _____) Town of _____).

BE IT FURTHER HEREBY RESOLVED that the Secretary of the (City) (Village) (Town) Plan Commission transmit a certified copy of this resolution to the (Common Council) (Village Board) (Town Board) of the (City of _____) (Village of _____) (Town of _____).

BE IT FURTHER HEREBY RESOLVED that the Secretary of the (City) (Village) (Town) Plan Commission transmit certified copies of this resolution to the Racine County Board of Supervisors and the Southeastern Wisconsin Regional Planning Commission.

_____
Chairman, Plan Commission

ATTESTATION:

_____
Secretary, Plan Commission

Appendix E

A SUGGESTED (COMMON COUNCIL) (VILLAGE BOARD) (TOWN BOARD) RESOLUTION ADOPTING THE COMPREHENSIVE PLAN FOR THE RACINE URBAN PLANNING DISTRICT

WHEREAS, the (City of _____) (Village of _____) (Town of _____), pursuant to the provisions of Section 62.23(1) of the Wisconsin Statutes, has created a (City) (Village) (Town) Plan Commission; and

WHEREAS, it is the duty and function of the (City) (Village) (Town) Plan Commission, pursuant to Section 62.23(2) of the Wisconsin Statutes, to make and adopt a master plan for the physical development of the (City of _____) (Village of _____) (Town of _____); and

WHEREAS, the County of Racine contracted with the Southeastern Wisconsin Regional Planning Commission to prepare a comprehensive plan for the Racine Urban Planning District through a consultant, local staff, and its own staff; which plan includes:

1. Collection, compilation, processing, and analyses of various types of demographic, economic, financial resources, public utility, housing, public facilities, natural resource, land use, and transportation and other materials pertaining to the District.

2. Objectives, principles, and standards for the District's land use, transportation, community facilities, and public utilities development.

3. A forecast of District growth and change.

4. A comprehensive plan for the physical development of the District.

5. Suggested model zoning, subdivision control, official map, and sanitary ordinances for the implementation of such plans; and

WHEREAS, the aforementioned inventories, analyses, objectives, principles, standards, forecasts, comprehensive plan, and implementing ordinances are set forth in a published report entitled SEWRPC Planning Report No. 14, A Comprehensive Plan for the Racine Urban Planning District, comprised of the following volumes:

1. Volume One, Inventory Findings and Forecasts

2. Volume Two, Recommended Comprehensive Plan

3. Volume Three, Model Plan Implementation Ordinances; and

WHEREAS, the (City) (Village) (Town) Plan Commission has supported, participated in, and generally concurred in the District Planning Program undertaken by the Southeastern Wisconsin Regional Planning Commission for and together with Racine County and the communities located within the Racine Urban Planning District, and considers the plans prepared by the Commission and its consultant to be a valuable guide not only to the development of the District but also of the (City of _____) (Village of _____) (Town of _____) and the adoption of such plans by the (City of _____) (Village of _____) (Town of _____) will assure a common understanding by the several governmental agencies, departments, boards, and commissions concerned and enable their staffs to program the necessary areawide and local plan implementation work; and

WHEREAS, the (City) (Village) (Town) Plan Commission on the _____ day of _____, 19___, did adopt the comprehensive plan for the Racine Urban Planning District as the master plan for the (City of _____) (Village of _____) (Town of _____) by resolution, a copy of which was certified to the (Common Council) (Village Board) (Town Board); and

WHEREAS, the (City) (Village) (Town) on the _____ day of _____, 19___, did adopt the regional land use and transportation plans previously adopted by the Southeastern Wisconsin Regional Planning Commission as set forth in SEWRPC Planning Report No. 7, The Regional Land Use-Transportation Study, as a guide for regional and community development; and

WHEREAS, the (City) (Village) (Town) on the _____ day of _____, 19___, did adopt the comprehensive plan for the Root River watershed previously adopted by the Southeastern Wisconsin Regional Planning Commission as set forth in SEWRPC Planning Report No. 9, A Comprehensive Plan for the Root River Watershed, as a guide for regional and community development.

NOW, THEREFORE, BE IT HEREBY RESOLVED that, pursuant to Section 66.945(12) of the Wisconsin Statutes, the (Common Council) (Village Board) (Town Board) of the (City of _____) (Village of _____) (Town of _____) on this _____ day of _____, 19___, hereby adopts the comprehensive plan for the Racine Urban Planning District as set forth in SEWRPC Planning Report No. 14 as a guide for regional and community development.

BE IT FURTHER HEREBY RESOLVED that the (Common Council) (Village Board) (Town Board) of the (City of _____) (Village of _____) Town of _____) on this _____ day of _____, 19___, hereby recognizes and endorses the action of the (City of _____) (Village of _____) (Town of _____) Plan Commission in adopting the comprehensive plan for the Racine Urban Planning District as the (City of _____) (Village of _____) (Town of _____) master plan.

BE IT FURTHER HEREBY RESOLVED that the (City) (Village) (Town) Clerk transmit a certified copy of this resolution to the (City) (Village) (Town) Plan Commission of the (City of _____) (Village of _____) (Town of _____).

BE IT FURTHER HEREBY RESOLVED that the (City) (Village) (Town) Clerk transmit certified copies of this resolution to the Racine County Board of Supervisors and the Southeastern Wisconsin Regional Planning Commission.

_____
(Mayor, City of _____)
(President, Village of _____)
(Chairman, Town of _____)

ATTESTATION:

_____
Clerk, (City of _____)
(Village of _____)
(Town of _____)

COMMISSION MEMBERS

KENOSHA COUNTY

Donald L. Klapper
Donald E. Mayew
Francis J. Pitts

MILWAUKEE COUNTY

Richard W. Cutler,
Secretary
Emil M. Stanislawski
Norman C. Storck, P.E.

OZAUKEE COUNTY

Thomas H. Buestrin
James F. Egan,
Vice-Chairman
Ralph J. Huiras

RACINE COUNTY

George C. Berteau,
Chairman
Leonard C. Rauen
Garth R. Seehawer

WALWORTH COUNTY

Anthony F. Balestrieri
Eugene Hollister
John D. Voss

WASHINGTON COUNTY

Lawrence W. Hillman
Paul F. Quick
Joseph A. Schmitz,
Treasurer

WAUKESHA COUNTY

Charles J. Davis
Lyle L. Link
Theodore F. Matt

COMMISSION STAFF

Kurt W. Bauer, P.E. . . . . Executive Director
Harlan E. Clinkenbeard . . . . . Assistant Director
Philip C. Evenson . . . . . Assistant Director
Keith W. Graham . . . . . Assistant Director
Dallas R. Behnke . . . . . Chief Planning Illustrator
Donald N. Drews . . . . . Administrative Officer
John W. Ernst . . . . . Data Processing Manager
Robert L. Fisher . . . . . Chief Land Use Planner
Mark P. Green . . . . . Chief Transportation Planner
Michael J. Keidel . . . . . Chief of Planning Research
William D. McElwee, P.E. . . . . Chief Natural Resources Planner
Bruce P. Rubin . . . . . Chief Housing Planner
Sheldon W. Sullivan . . . . . Chief of Data Collection
Norbert S. Theine, P.E. . . . . Chief Community Assistance Planner

HARLAND BARTHOLOMEW AND ASSOCIATES STAFF

Eldridge H. Lovelace . . . . . Partner
Thompson A. Dyke . . . . . Associate Partner
Stanley Dolecki . . . . . Associate Partner