



# KENOSHA AREA TRANSIT SYSTEM DEVELOPMENT PLAN: 1998-2002

**CITY OF KENOSHA OFFICIALS****MAYOR**

John M. Antaramian

**COMMON COUNCIL**

Arthur A. Landry, President  
Keith G. Bosman  
Charles W. Bradley  
Everett C. Butler  
Stephen P. Casey  
Ronald R. Frederick  
Donald K. Holland  
Katherine Marks  
Frank J. Pacetti

Dennis M. Pierce  
Kenneth O. Polzin, Jr.  
Julia Robinson  
Donald Ruef  
G. John Ruffolo  
Jack F. Ruffolo  
Kurt A. Sinclair  
John M. Wamboldt

**KENOSHA TRANSIT COMMISSION**

Walter J. Barthuly, Chairman  
Donald K. Holland  
Edward Kelter  
Arthur A. Landry

Emanuel E. Rizzo  
Louis J. Rugani  
Edwin L. Stevens

**KENOSHA DEPARTMENT OF TRANSPORTATION**

Joseph McCarthy, Director

**SOUTHEASTERN WISCONSIN  
REGIONAL PLANNING COMMISSION****KENOSHA COUNTY**

Leon T. Dreger  
Thomas J. Gorlinski  
Sheila M. Siegler

**RACINE COUNTY**

David B. Falstad  
Martin J. Itzin  
Jean M. Jacobson,  
Secretary

**MILWAUKEE COUNTY**

Daniel J. Diliberti  
William R. Drew, Vice-Chairman  
Tyrone P. Dumas

**WALWORTH COUNTY**

Anthony F. Balestrieri  
Allen L. Morrison, Treasurer  
Robert J. Voss

**OZAUKEE COUNTY**

Leroy A. Bley  
Thomas H. Buestrin, Chairman  
Elroy J. Schreiner

**WASHINGTON COUNTY**

Lawrence W. Hillman  
Daniel S. Schmidt  
Patricia A. Strachota

**WAUKESHA COUNTY**

Duane H. Bluemke  
Robert F. Hamilton  
Paul G. Vrakas

**KENOSHA AREA PUBLIC TRANSIT  
PLANNING ADVISORY COMMITTEE**

Walter J. Barthuly, Chairman ..... Chairman, City of Kenosha  
Transit Commission  
Nickolas Arnold ..... Administrator, City of Kenosha  
John Bechler ..... President, Kenosha Area  
Business Alliance, Inc.  
Daniel Cesario ..... Supervisor of Operations,  
City of Kenosha Transit Commission  
Joel P. Ettinger ..... Regional Director, Region V  
U. S. Department of Transportation,  
Federal Transit Administration  
Leslie J. Fafard ..... Director, District 2,  
Wisconsin Department of Transportation  
Carolyn Feldt ..... Assistant Director, Kenosha County  
Department of Human Services,  
Division of Aging Services  
Jerold P. Franke ..... Vice President, WisPark Corporation  
Mary Galligan ..... President, Kenosha Area  
Convention & Visitors Bureau  
Daniel L. Gray ..... Branch Manager, Laidlaw Bus Service  
David D. Holtze ..... Chairman, Town of Somers  
Teri Jacobson ..... President, University of Wisconsin-Parkside,  
Student Government Association  
Edward A. Jenkins ..... Chairman, Kenosha County Specialized  
Transportation Commission  
Michael Johnson ..... Superintendent of Schools,  
Kenosha Unified School District  
A. Zohrab Kaligian ..... Community Development Specialist,  
Kenosha Lakeshore Business  
Improvement District, Kenosha  
Department of City Development  
Linda A. Lovejoy ..... Chief, Public Transit Section,  
Bureau of Transit and Local Roads  
Wisconsin Department of Transportation  
Joseph McCarthy ..... Director of Transportation,  
City of Kenosha  
Margaret Matoska ..... Steward, Division 998,  
Amalgamated Transit Union  
Thelma Orr ..... Director, Urban League of  
Racine and Kenosha, Inc.  
Peter Parsons ..... Supervisor of Transportation,  
Kenosha Unified School District  
Michael R. Pollocoff ..... Administrator, Village of Pleasant Prairie  
Paul J. Raddatz ..... Alderman, City of Kenosha  
Dr. William Streeter ..... Assistant Chancellor,  
University of Wisconsin-Parkside  
Richard Tyrina ..... Spanish Center  
Paula I. Williams ..... Executive Director,  
Kenosha Achievement Center, Inc.

COMMUNITY ASSISTANCE PLANNING REPORT  
NUMBER 231

**KENOSHA AREA TRANSIT SYSTEM  
DEVELOPMENT PLAN: 1998-2002**

**CITY OF KENOSHA, WISCONSIN**

Prepared by the

Southeastern Wisconsin Regional Planning Commission  
P. O. Box 1607  
Old Courthouse  
916 N. East Avenue  
Waukesha, Wisconsin 53187-1607

The preparation of this publication was financed in part through planning funds provided by the Wisconsin Department of Transportation and the U. S. Department of Transportation, Federal Transit Administration.

April 1998

Inside Region \$ 5.00  
Outside Region \$10.00

(This page intentionally left blank)



# TABLE OF CONTENTS

	Page		Page
<b>Chapter I—INTRODUCTION</b> .....	1	Specialized Transportation Services .....	69
Study Purpose .....	2	School District Student .....	
Scope of Work .....	2	Transportation Service .....	69
Study Areas .....	2	Summary .....	71
Study Organization .....	4		
Scheme of Presentation .....	4	<b>Chapter IV—PUBLIC TRANSIT SERVICE</b>	
		<b>OBJECTIVES AND STANDARDS</b> .....	75
<b>Chapter II—LAND USE AND</b>		Introduction .....	75
<b>TRAVEL PATTERNS</b> .....	7	Objectives .....	75
Introduction .....	7	Principles and Standards .....	75
Population and Employment .....	7	Overriding Considerations .....	79
General Population Characteristics .....	7		
Transit-Dependent		<b>Chapter V—EVALUATION OF THE</b>	
Population Characteristics .....	7	<b>EXISTING TRANSIT SYSTEM</b> .....	81
Employment Characteristics .....	16	Introduction .....	81
Existing Land Use .....	19	Systemwide Performance Evaluation .....	82
Major Potential Transit Trip Generators .....	20	Service to Existing Land Uses	
Transit-Dependent Population		and Population Groups .....	82
Trip Generators .....	20	Ridership and Financial Performance .....	88
Major Land Use Trip Generators .....	20	Contributions to the Efficiency of the	
Travel Habits and Patterns .....	20	Total Transportation System .....	90
Total Person Travel Characteristics .....	20	Provision of Transportation Services	
Transit Person Travel Characteristics		for Disabled Individuals .....	93
of Kenosha Transit System Users .....	25	Route Performance Evaluation .....	94
Personal Opinion Survey .....	34	Route Ridership and	
Focus Groups for Regional		Financial Performance .....	94
Transit Marketing Program .....	34	Compliance with Operating Headway	
Summary .....	40	and Passenger Loading Standards .....	98
		Schedule Adherence .....	102
<b>Chapter III—EXISTING PUBLIC</b>		Indirect Route Alignments and	
<b>TRANSIT SYSTEM</b> .....	49	Lengthy Transit Travel Times .....	102
Introduction .....	49	Summary .....	104
The City of Kenosha Transit System .....	49		
Administrative Structure .....	49	<b>Chapter VI—EXISTING TRANSIT</b>	
Fixed-Route Bus Service .....	49	<b>LEGISLATION, REGULATIONS,</b>	
Regular Routes .....	49	<b>AND PUBLIC FUNDING PROGRAMS</b> .....	109
Peak-Hour Tripper Routes .....	53	Introduction .....	109
Service Levels .....	53	Federal Funding Programs	
Fares .....	53	and Authorizing Legislation .....	109
Paratransit Service for		Federal Transit Administration	
Disabled Individuals .....	53	(FTA) Programs .....	109
Equipment and Facilities .....	54	Section 5309 Capital Program .....	109
Marketing .....	56	Section 5307 Urbanized Area	
Ridership and Service Levels .....	56	Formula Program .....	113
Operating and Capital Costs .....	60	Section 5310 Elderly and	
Other Public Transit Services .....	63	Persons with Disabilities Program .....	114
Additional Local and Intercity Services .....	63	Section 5311 Nonurbanized	
		Area Formula Program .....	114

	Page		Page
Funding Opportunities for Transit under		Recommendation .....	146
Other Federal Transportation Programs .....	115	Alternative 2: Expanded Industrial	
Federal Administrative Regulations .....	116	Park Service .....	148
State Funding Programs and		Description .....	148
Authorizing Legislation .....	118	Analysis of Expected Impacts	
Indirect Aid, Tax Relief .....	118	on Service, Ridership, and Costs .....	148
Section 85.20 Urban Mass Transit		Recommendation .....	152
Operating Assistance Program .....	119	Alternative 3: Expanded Weekday	
Section 85.24 Transportation		Service Hours for Regular Bus Routes .....	153
Demand Management Program .....	121	Description .....	153
Section 85.21 Specialized		Analysis of Expected Impacts	
Transportation Program for Counties .....	122	on Service, Ridership, and Costs .....	153
Section 85.22 Specialized Transportation		Recommendation .....	155
Assistance Program for Private		Alternative 4: Reduced Weekday	
Non-Profit Corporations .....	122	Midday Operating Headways for	
State Enabling Legislation .....	122	Regular Bus Routes .....	155
County Contract with Private		Description .....	155
Transit System Operators .....	123	Analysis of Expected Impacts	
County Ownership and		on Service, Ridership, and Costs .....	155
Operation of Transit Systems .....	123	Recommendation .....	157
County Transit Commission .....	123	Advisory Committee Recommendations .....	157
Municipal Contract with		Summary .....	158
Private Transit System Operator .....	123	Existing and Committed Transit System ....	158
Municipal Operation of Transit System .....	123	Alternative 1 .....	158
City, Village, or Town		Alternative 2 .....	159
Transit Commission .....	123	Alternative 3 .....	159
City, Village, or Town		Alternative 4 .....	160
Transit-Parking Commission .....	123	Advisory Committee Recommendations ....	160
Municipal Transit Utility .....	124		
Cooperative Contract Commissions .....	124	<b>Chapter VIII—ALTERNATIVE COMMUTER</b>	
Metropolitan Transit Authority .....	124	<b>TRANSIT SERVICE IMPROVEMENTS ..</b>	161
Regional Transportation Authority .....	124	Introduction .....	161
Contracting Requirements .....	125	Commuter Transit Service Improvements	
Conclusions Pertaining to		to Serve Travel between the Kenosha Area	
State Enabling Legislation .....	125	(Primary Study Area) and Lake County	
Local Legislation .....	125	(Secondary Study Area) .....	161
Summary .....	126	Land Use and Travel Patterns .....	161
		Employment Characteristics .....	161
<b>Chapter VII—ALTERNATIVE LOCAL</b>		Major Employment Centers .....	161
<b>TRANSIT SERVICE IMPROVEMENTS</b>		Travel Patterns between the Primary	
<b>TO SERVE KENOSHA AREA TRAVEL ..</b>	129	and Secondary Study Areas .....	161
Introduction .....	129	Existing Transit Services .....	163
Existing and Committed Transit System .....	129	Metra Commuter Rail Service .....	164
Description of Services .....	129	Intercity Bus Service .....	166
System Performance and Cost .....	132	Local Bus Service .....	166
Alternatives for Service Improvement .....	136	Proposed Commuter Services .....	168
Alternative 1: Route Realignments to		Other Options Considered .....	172
Facilitate Improved Operation		Commuter Transit Service Improvements	
and Service Expansion .....	136	to Serve Travel between the Kenosha Area	
Description .....	136	and the Cities of Racine and Milwaukee .....	174
Analysis of Expected Impacts		Existing Milwaukee-Racine-Kenosha	
on Service, Ridership, and Costs .....	143	Commuter Bus Service .....	176

	Page		Page
Connecting Public Transit Services .....	181	Plan Implementation—Local	
Existing Travel Habits and Patterns .....	185	Service Element .....	218
Total Person Travel Characteristics .....	185	Plan Implementation—Commuter	
Transit Person Travel Characteristics		Service Element .....	218
of Wisconsin Coach Lines, Inc., Users .....	189	Plan Implementation—Park-Ride Lots .....	219
Proposed Service Improvements .....	190	Summary .....	219
Description .....	190		
Forecast Service Levels,		<b>Chapter X—SUMMARY</b>	
Ridership, and Costs .....	194	<b>AND CONCLUSIONS</b> .....	223
Advisory Committee Recommendations .....	198	Introduction .....	223
Summary .....	199	Purpose of the Transit System	
Commuter Transit Service Improvements		Development Plan .....	223
to Serve Travel between the Primary		Study Organization .....	223
and Secondary Study Areas .....	199	Land Use and Travel Patterns .....	223
Commuter Transit Service Improvements		Existing Public Transit System .....	225
to Serve Travel between the Kenosha Area		Public Transit Service Objectives	
and the Cities of Racine and Milwaukee ...	200	and Standards .....	226
Advisory Committee Recommendations ....	201	Evaluation of the Existing Transit System .....	226
		Alternative Transit Service Improvements .....	228
<b>Chapter IX—RECOMMENDED TRANSIT</b>		Local Transit Service Alternatives .....	228
<b>SYSTEM DEVELOPMENT PLAN</b> .....	203	Commuter Transit Service Alternatives .....	228
Introduction .....	203	Advisory Committee Recommendations ....	228
Recommended Transit Services .....	203	The Recommended Plan .....	229
Local Transit Service .....	203	Local Transit Service Element .....	229
Commuter Transit Services .....	207	Commuter Transit Service Element .....	229
Plan Performance and Costs .....	213	Plan Performance and Cost .....	229
Basic Assumptions and Determinations .....	213	Local Transit Service Element .....	229
Ridership, Service Levels, and		Commuter Transit Service Element .....	229
Financial Performance .....	214	Plan Implementation .....	230
Local Transit Element .....	214	Local Transit Service Element .....	230
Commuter Transit Element .....	215	Commuter Transit Service Element .....	230
Plan Adoption and Implementation .....	217	Park-Ride Lots .....	230
Plan Adoption .....	217	Conclusions .....	230

## LIST OF APPENDICES

Appendix		Page
A	Weekday Boarding Passengers by Bus Run on the Regular Routes of the Kenosha Transit System: March 5-7, 1996 .....	235
	Figure A-1 Weekday Boarding Passengers on Route No. 1 .....	235
	Figure A-2 Weekday Boarding Passengers on Route No. 2 .....	235
	Figure A-3 Weekday Boarding Passengers on Route No. 3 .....	236
	Figure A-4 Weekday Boarding Passengers on Route No. 4 .....	236
	Figure A-5 Weekday Boarding Passengers on Route No. 5 .....	237
	Figure A-6 Weekday Boarding Passengers on Route No. 6 .....	237
	Figure A-7 Weekday Boarding Passengers on Route No. 7 .....	238
	Figure A-8 Weekday Boarding Passengers on Route No. 8 .....	238

<b>B</b>	Forecasts of Annual Service Levels, Ridership, and Costs for Service Improvement Alternatives .....	239
Table B-1	Annual Ridership and Financial Performance of the Kenosha Transit System under the Existing and Committed System: 1997-2002 .....	239
Table B-2	Capital Project Expenditures Required for the Kenosha Transit System under the Existing and Committed Transit System: 1998-2002 .....	240
Table B-3	Annual Ridership and Financial Performance of the Kenosha Transit System with the Changes Proposed under Alternative 1: 1997-2002 .....	240
Table B-4	Capital Project Expenditures Required for the Kenosha Transit System under Alternative 1: 1998-2002 .....	242
Table B-5	Annual Ridership and Financial Performance of the Kenosha Transit System with the Changes Proposed under Alternative 2: 1997-2002 .....	243
Table B-6	Annual Ridership and Financial Performance of the Kenosha Transit System with the Changes Proposed under Alternative 3: 1997-2002 .....	244
Table B-7	Annual Ridership and Financial Performance of the Kenosha Transit System with the Changes Proposed under Alternative 4: 1997-2002 .....	245
<b>C</b>	Forecasts of Annual Service Levels, Ridership, and Costs for Commuter Transit Service Improvement Alternatives .....	247
	Annual Ridership and Financial Performance of Milwaukee-Racine-Kenosha Commuter Bus Services with Proposed Service Improvements: 1997-2002 .....	247
<b>D</b>	Forecasts of Annual Service Levels, Ridership, and Costs for the Recommended Kenosha Area Transit Services .....	249
Table D-1	Annual Ridership and Financial Performance of the Kenosha Transit System under the Local Service Element of the Recommended Plan: 1998-2002 .....	249
Table D-2	Capital Project Expenditures Required for the Kenosha Transit System under the Local Service Element of the Recommended Plan: 1998-2002 .....	250
Table D-3	Annual Ridership and Financial Performance for the Bus Services Proposed under the Commuter Service Element of the Recommended Plan: 1998-2002 .....	251

## LIST OF TABLES

Table		Page
<b>Chapter II</b>		
1	Total Population in the Primary Study Area: 1960-1995 .....	8
2	Total Households in the Primary Study Area: 1960-1995 .....	10
3	Historic Levels of Transit-Dependent Populations within the Primary Study Area: 1960-1990 .....	10
4	Transit-Dependent Populations within the Primary Study Area by Block Group: 1990 .....	11
5	Total Employment in the Primary Study Area: 1970-1990 .....	16
6	Historic Urban Growth in the Primary Study Area: 1900-1990 .....	19
7	Population Density Trends in the Primary Study Area: 1963-1990 .....	22
8	New and Proposed Residential Development in the Primary Study Area: 1995-1997 .....	24

9	New and Proposed Commercial, Industrial, and Institutional Development in the Primary Study Area: 1995-1997 .....	25
10	Facilities for the Elderly within the Primary Study Area: 1997 .....	27
11	Facilities for the Disabled within the Primary Study Area: 1997 .....	28
12	Federally Assisted Rental Housing within the Primary Study Area: 1997 .....	28
13	Commercial Centers within the Primary Study Area: 1997 .....	30
14	Educational Institutions within the Primary Study Area: 1997 .....	31
15	Medical Centers within the Primary Study Area: 1997 .....	32
16	Governmental and Public Institutional Centers within the Primary Study Area: 1997 .....	32
17	Major Employment Centers within the Primary Study Area: 1997 .....	33
18	Major Recreational Areas within the Primary Study Area: 1997 .....	35
19	Distribution of Average Weekday Person Trips for the Primary Study Area by Trip Purpose: 1963, 1972, and 1991 .....	37
20	Distribution of Average Weekday Person Trips Produced inside the Primary Study Area: 1991 .....	40
21	Distribution of Average Weekday Person Trips Produced outside, and Attracted to, the Primary Study Area: 1991 .....	41
22	Percentage Distribution of Ridership on the Kenosha Transit System for Various Ridership Characteristics: 1991 .....	43
23	The 1991 Survey of Personal Opinion: Percentage Distribution of Support for Possible Actions to Reduce Automobile Travel To and From Work .....	46
24	The 1991 Survey of Person Opinion: Percentage Distribution of Factors Considered Necessary Before Choosing to Carpool or Use Transit Rather than Driving Alone .....	46

### Chapter III

25	Operating and Service Characteristics by Route for the Kenosha Transit System: August 1997 ....	54
26	Fares for Fixed-Route Bus Service for the Kenosha Transit System: August 1997 .....	55
27	Operating and Service Characteristics of the Complementary Paratransit Service for Disabled Individuals Provided by the Kenosha Transit System and Kenosha County: 1997 .....	57
28	Bus Fleet of the Kenosha Transit System: 1997 .....	57
29	Selected Socio-Economic Characteristics of the City of Kenosha: 1980-1995 .....	60
30	Annual Ridership and Service Levels on the Kenosha Transit System: 1992-1996 .....	60
31	Average Weekday Ridership on the Regular Bus Routes of the Kenosha Transit System: March 5-7, 1996 .....	61
32	Ridership on the Complementary Paratransit Service for Disabled Individuals Provided by the Kenosha Transit System and Kenosha County: 1992-1996 .....	61
33	Annual Operating Expenses, Revenues, and Deficits for the Kenosha Transit System: 1992-1996 .....	62
34	Annual Capital Project Expenditures by Funding Source for the Kenosha Transit System: 1992-1996 .....	63
35	Additional Local and Intercity Transit Services for the General Public in the Primary Study Area: 1997 .....	65
36	Major Specialized Transportation Services for Elderly and Disabled Persons Provided within the Primary Study Area: 1997 .....	70

### Chapter IV

37	Public Transit Service Objectives, Principles, and Standards for the Kenosha Transit System ....	76
38	Transit Service Objectives and Standards which can be Used to Develop State-Required Performance Goals .....	79



**Chapter V**

39	Standards Used in the Evaluation of the Performance of the Existing Transit System .....	81
40	Application of Specific Performance Measures in the Performance Evaluation Process .....	82
41	Standards Not Used in the Performance Evaluation of the Existing Transit System .....	83
42	Transit Service Provided to Land Uses and Population Groups in the Primary Study Area by the Kenosha Transit System: August 1997 .....	83
43	New and Proposed Development in the Primary Study Area Not Served by the Kenosha Transit System: August 1997 .....	84
44	Major Land Use Trip Generators in the Primary Study Area Not Served by the Kenosha Transit System: August 1997 .....	86
45	Major Transit-Dependent Population Trip Generators in the Primary Study Area Not Served by the Kenosha Transit System: August 1997 .....	88
46	Key Indicators of Ridership and Financial Performance for the Kenosha Transit System Compared with the Average for Similar Wisconsin Bus Systems: 1992-1996 .....	91
47	Comparison of the Weekday Energy Efficiency of Public Transit in Southeastern Wisconsin: 1996 .....	92
48	Total Vehicular and Transit Passenger Volumes on Selected Surface Streets in the City of Kenosha: 1996 .....	92
49	Average Weekday Performance Characteristics of the Regular Routes of the Kenosha Transit System: March 5-7, 1996 .....	94
50	Maximum Load Factors for the Regular Routes of the Kenosha Transit System: March 5-7, 1996 .....	101
51	On-Time Performance of the Regular Routes of the Kenosha Transit System: November 5 and 6, 1996 .....	103
52	Transit-to-Automobile Distances and Travel Times at Selected Locations Served by the Regular Routes of the Kenosha Transit System: May 1997 .....	104

**Chapter VI**

53	Summary of Major Federal and State Transit Assistance Programs Applicable to Transit Services in the Kenosha Area: 1997 .....	110
54	Estimated Amount of Funds Provided through Major Federal and State Transit Assistance Programs to Recipients in the Kenosha Area: 1992-1996 .....	112
55	Estimated Percentage of Transit Operating Expenses Funded by State Aids under the Section 86.20 Urban Mass Transportation Operating Assistance Program: 1997 .....	120

**Chapter VII**

56	General Operating Characteristics of Downtown Circulator Streetcar Service under Service Options Being Considered by the City of Kenosha .....	134
57	Estimated Costs of the Proposed Kenosha Downtown Circulator Streetcar Service .....	135
58	Round-Trip Route-Miles and Vehicle Requirements for the Kenosha Transit System under the Existing and Committed System .....	136
59	Common Assumptions and Determinations Affecting Forecast Transit Ridership, Costs, and Subsidies for the Existing and Committed Transit System and Transit Improvement Alternatives .....	137
60	Average Annual Ridership, Service Levels, and Costs for the Kenosha Transit System under the Existing and Committed System: 1998-2002 .....	138
61	Summary of Existing and Committed Transit System Service Characteristics and Changes Proposed under Service Improvement Alternatives .....	139

62	Change in Round-Trip Route Miles and Vehicle Requirements for the Kenosha Transit System under Alternative 1 .....	146
63	Average Annual Ridership, Service Levels, and Costs for the Kenosha Transit System with the Changes Proposed under Alternative 1: 1998-2002 .....	147
64	Change in Round-Trip Route Miles and Vehicle Requirements for the Kenosha Transit System under Alternative 2 .....	150
65	Average Annual Ridership, Service Levels, and Costs for the Kenosha Transit System with the Changes Proposed under Alternative 2: 1998-2002 .....	151
66	Average Annual Ridership, Service Levels, and Costs for the Kenosha Transit System with the Changes Proposed under Alternative 3: 1998-2002 .....	154
67	Average Annual Ridership, Service Levels, and Costs for the Kenosha Transit System with the Changes Proposed under Alternative 4: 1998-2002 .....	156

### Chapter VIII

68	Secondary Study Area Employment by Secondary Study Area Analysis Area: 1980-1990 .....	162
69	Major Employers in the Secondary Study Area: 1996 .....	164
70	Major Industrial and Office Development Parks in the Secondary Study Area: 1991 .....	165
71	Distribution of Average Weekday Work-Purpose Person Trips between the Primary and Secondary Study Areas: 1991 .....	167
72	Distribution of Total Average Weekday Person Trips between the Primary and Secondary Study Areas: 1991 .....	168
73	Change in Average Weekday Person Trips for all Purposes and Work-Purpose between the Primary and Secondary Study Areas: 1972 and 1991 .....	170
74	Distribution of Average Weekday Metra Transit Trips between the Region and Northeastern Illinois: 1991 .....	171
75	Transit Services Available for Travel between the Primary Study Area and the Secondary Study Area: 1997 .....	172
76	Existing Vanpool and Carpool Services Available to Primary Study Area Residents Commuting to Jobs in the Secondary Study Area: 1997 .....	174
77	Operating Characteristics of the Commuter Transit Bus Services Proposed to Serve Primary Study Area Residents Commuting to Jobs in the Secondary Study Area: 2002 .....	176
78	Annual Ridership and Financial Performance Forecast of the Commuter Transit Bus Services Proposed to Serve Primary Study Area Residents Commuting to Jobs in the Secondary Study Area: 2002 .....	177
79	Operating Characteristics of Existing Milwaukee-Racine-Kenosha Commuter Bus Service: 1997 .....	180
80	Annual Ridership, Service Levels, and Operating Expenses for the Milwaukee-Racine-Kenosha Commuter Bus Service: 1993-1997 .....	181
81	Distribution of Average Weekday Total Person Trips between Analysis Areas within the Milwaukee-Racine-Kenosha Travel Corridor: 1991 .....	186
82	Distribution of Average Weekday Work-Purpose Person Trips between Analysis Areas within the Milwaukee-Racine-Kenosha Travel Corridor: 1991 .....	186
83	Percentage Distribution of Ridership on the Milwaukee-Racine-Kenosha Commuter Bus Service for Various Ridership Characteristics: 1991 .....	189
84	Distribution of Average Weekday Transit Trips on the Milwaukee-Racine-Kenosha Commuter Bus Service: 1991 .....	190
85	Fares for the Proposed Commuter Bus Services in the Milwaukee-Racine-Kenosha Corridor .....	195
86	Change in Service Characteristics for Milwaukee-Racine-Kenosha Commuter Bus Services with Proposed Service Improvements .....	196
87	Average Annual Ridership, Service Levels, and Costs for Milwaukee-Racine-Kenosha Commuter Bus Services: 1998-2002 .....	197

Table		Page
88	Assumptions and Determinations Affecting Forecast Transit Ridership, Costs, and Subsidies for the Proposed Commuter Bus Services .....	198

### Chapter IX

89	Round-Trip Route Miles and Vehicle Requirements for the Existing and Proposed Bus Service under the Local Service Element of the Recommended Plan .....	204
90	Round-Trip Route Miles and Vehicle Requirements for the Existing and Proposed Bus Service under the Commuter Element of the Recommended Plan .....	209
91	Average Annual Ridership, Service Levels, and Costs for the Kenosha Transit System under the Local Service Element of the Recommended Plan: 1998-2002 .....	215
92	Average Annual Ridership, Service Levels, and Costs for the Bus Services Proposed under the Commuter Service Element of the Recommended Plan: 1998-2002 .....	216

### LIST OF FIGURES

Figure		Page
--------	--	------

### Chapter II

1	Hourly Distribution of Trips Made by Revenue Passengers on the Kenosha Transit System: October 29-30, 1991 .....	43
2	Relative Changes in Selected Characteristics of the Primary Study Area over Approximately the Last Three Decades .....	47

### Chapter III

3	Historic Fares for Fixed-Route Bus Service for the Kenosha Transit System: 1971-1997 .....	56
4	Historic Ridership and Service Levels on the Kenosha Transit System: 1971-1996 .....	59
5	Percentage Change in Annual Ridership on the Kenosha Transit System: 1973-1996 .....	59
6	Total Annual Operating Expenses, Revenues, and Deficits for the Kenosha Transit System: 1971-1996 .....	61
7	Distribution of Total Operating Expenses for the Kenosha Transit System by Funding Source: 1992 and 1996 .....	64

### Chapter V

8	Total Passengers on the Regular Routes of the Kenosha Transit System: March 5-7, 1996 .....	95
9	Total Passengers per Route-Mile on the Regular Routes of the Kenosha Transit System: March 5-7, 1996 .....	95
10	Total Passengers per Revenue Vehicle-Hour on the Regular Routes of the Kenosha Transit System: March 5-7, 1996 .....	95
11	Total Passengers per Revenue Vehicle-Mile on the Regular Routes of the Kenosha Transit System: March 5-7, 1996 .....	95
12	Total Operating Expense per Passenger on the Regular Routes of the Kenosha Transit System: March 5-7, 1996 .....	96
13	Total Operating Deficit per Passenger on the Regular Routes of the Kenosha Transit System: March 5-7, 1996 .....	96
14	Percent of Operating Expenses Recovered from Operating Revenues on the Regular Routes of the Kenosha Transit System: March 5-7, 1996 .....	96

Figure		Page
15	Passenger Activity by Route Segment of the Kenosha Transit System: Weekdays, March 5-7, 1996 .....	97

### Chapter VIII

16	Historic Ridership and Service Levels on the Milwaukee-Racine-Kenosha Commuter Bus Service: 1984-1997 .....	180
----	---	-----

### LIST OF MAPS

Map		Page
-----	--	------

### Chapter I

1	Primary Study Area for the Kenosha Area Transit System Development Plan .....	3
2	Secondary Study Area for the Kenosha Area Transit System Development Plan .....	4

### Chapter II

3	Population Distribution in the Primary Study Area: 1990 .....	9
4	Residential Concentrations of Transit-Dependent Populations in the Primary Study Area: 1990 ...	14
5	Average Vehicles per Person Ages 16 and Older in the Primary Study Area: 1990 .....	15
6	Employment Distribution in the Primary Study Area: 1990 .....	17
7	Locations of Employers with Twenty or More Employees in the Primary Study Area: 1995 .....	18
8	Extent of Urban Development in the Primary Study Area: 1990 .....	21
9	Residential Land Use Density in the Study Area: 1990 .....	23
10	New and Proposed Development in the Primary Study Area: 1995-1997 .....	26
11	Major Transit-Dependent Population Trip Generators within the Primary Study Area: 1997 .....	29
12	Major Land Use Trip Generators in the Primary Study Area: 1997 .....	36
13	Total Person Trip Productions by Internal Analysis Area in the Primary Study Area: 1991 .....	38
14	Total Person Trip Attractions by Internal Analysis Area in the Primary Study Area: 1991 .....	39
15	Average Weekday Person Trips between the Primary Study Area and Other Areas Outside the Primary Study Area: 1991 .....	42
16	Trip Productions of Revenue Passengers on the Kenosha Transit System: October 29-30, 1991 ...	44
17	Trip Attractions of Revenue Passengers on the Kenosha Transit System: October 29-30, 1991 ....	45

### Chapter III

18	Fixed-Route Transit Service Provided by the Kenosha Transit System: August 1997 .....	50
19	Fixed-Route Peak-Hour Tripper Bus Service Provided by the Kenosha Transit System: 1996-1997 School Year .....	52
20	Location of Fixed Facilities for the Kenosha Transit System: August 1997 .....	58
21	Additional Bus and Railroad Passenger Service in the Primary Study Area: 1997 .....	66

### Chapter V

22	New and Proposed Development in the Primary Study Area Not Served by the Kenosha Transit System: August 1997 .....	85
23	Major Land Use Trip Generators in the Primary Study Area Not Served by the Kenosha Transit System: August 1997 .....	87

Map		Page
24	Major Transit-Dependent Population Trip Generators in the Primary Study Area Not Served by the Kenosha Transit System: August 1997 .....	89
25	Productive and Nonproductive Route Segments of the Kenosha Transit System: March 5-7, 1996 .....	98
26	Route Segments on the Kenosha Transit System Not Direct in Alignment: August 1997 .....	105

## Chapter VII

27	Fixed-Route Transit Service Provided by the Kenosha Transit System under the Existing and Committed System .....	130
28	Downtown Circulator Streetcar Line to be Implemented by the City of Kenosha .....	133
29	Changes to Bus Routes Proposed under Alternative 1 .....	140
30	Fixed-Route Transit Service Provided by the Kenosha Transit System under Alternative 1 .....	144
31	New Industrial Park Routes Proposed under Alternative 2 .....	149

## Chapter VIII

32	Employment Distribution in the Secondary Study Area: 1990 .....	163
33	Major Employers in the Secondary Study Area: 1996 .....	165
34	Major Industrial and Office Development Parks in the Secondary Study Area: 1991 .....	166
35	Average Weekday Work-Purpose Person Trips between the Primary and Secondary Study Areas: 1991 .....	169
36	Total Average Weekday Person Trips between the Primary and Secondary Study Areas: 1991 ....	169
37	Transit Services Available for Travel between the Primary and Secondary Study Areas: 1997 ....	173
38	Commuter Transit Bus Services Proposed to Serve Primary Study Area Residents Commuting to Jobs in the Secondary Study Area .....	175
39	Existing Milwaukee-Racine-Kenosha Commuter Bus Route: 1997 .....	178
40	Unproductive Stops and Route Segments on the Existing Milwaukee-Racine-Kenosha Commuter Bus Service: October 1997 .....	182
41	Other Publicly Operated Transit Services in the Milwaukee-Racine-Kenosha Corridor: 1997 .....	183
42	Intercounty Average Weekday Total Person Trips between Analysis Areas within the Milwaukee-Racine-Kenosha Travel Corridor: 1991 .....	187
43	Intercounty Average Weekday Work-Purpose Person Trips between Analysis Areas within the Milwaukee-Racine-Kenosha Travel Corridor: 1991 .....	188
44	Proposed Milwaukee-Racine-Kenosha Commuter Bus Routes for the Corridor .....	192

## Chapter IX

45	Recommended Regular Routes for the Kenosha Transit System .....	206
46	Proposed Industrial Park Routes for the Kenosha Transit System .....	208
47	Proposed Commuter and Express Bus Routes for the Milwaukee-Racine-Kenosha Corridor .....	210



## Chapter I

# INTRODUCTION

On December 19, 1995, the City of Kenosha requested the assistance of the Regional Planning Commission in the preparation of a new transit system development plan for the City and its environs. The previous plan prepared by the Commission for the City covered the period from 1991 through 1995 and needed extension. The new plan was also needed in order for the transit system to respond to recent changes in State and Federal funding programs, as well as to changes in residential, industrial, and commercial development occurring in the Kenosha area, and to address the potential need for transit service designed to accommodate work trips between the Kenosha area and major employment centers in Lake County, Illinois. The Commission agreed to assist the City in the preparation of the new plan, documented in this report.

The Kenosha transit planning study was carried out within the context of the continuing regional transportation planning program. It was begun following the completion and adoption by the Commission of a regional transportation system plan with a design year 2010.<sup>1</sup> That plan includes a public transit element recommending that certain public transit services be provided in the Kenosha area. The long-range regional transportation plan recommends significant improvement and expansion of transit service over the next 15 years, with rapid-transit connections to Milwaukee and through Milwaukee to the other urban centers of Southeastern Wisconsin, improved rapid and express transit service between the Cities of Kenosha and Racine, and an improved and expanded local bus system for the greater Kenosha area, with more frequent service and longer service hours and extending service to developing areas. More specifically, the regional plan recommends:

- The provision of rapid transit service between the City of Kenosha Central Business District (CBD) and the City of Milwaukee CBD. Connections in the Milwaukee CBD would be available via express and local service to sites in Milwaukee County and via other rapid services to all urban centers of Southeastern Wisconsin. Initially, the plan envisions that rapid transit service would be provided by a

bus route operating principally over STH 158 and IH 94 with stops at five public transit stations in eastern Kenosha County and at General Mitchell International Airport in Milwaukee County, as well as in the City of Milwaukee CBD. Bidirectional service would be provided on weekdays at headways of 30 minutes during peak periods and 60 minutes during offpeak periods. The regional plan recommends that the institution of commuter rail service from Milwaukee through Racine and Kenosha to a connection with the existing Chicago-oriented Metra commuter rail service should be considered as an alternative to the bus-on-freeway service in this travel corridor. A separate Commission study examining the feasibility of such commuter rail service in the south lakeshore travel corridor was under way as this Kenosha area transit development study was beginning.

- The provision of express bus service between Kenosha and Racine. A proposed express route would operate weekdays and Saturdays between the CBDs of the Cities of Kenosha and Racine, principally over STH 158, STH 31, and STH 20 in eastern Kenosha and Racine Counties, with headways of 30 minutes during weekday peak periods and 60 minutes during offpeak periods. The express route would include stops at rapid transit stations in both Kenosha and Racine and connections with local transit routes to serve individuals traveling for work and other purposes to locations in eastern Kenosha and Racine Counties.
- The improvement and expansion of the existing Kenosha local bus system. Headways on the principal routes of the transit system would be reduced from 30 minutes to 15 minutes during weekday peak periods and service would be extended to 10:00 p.m. on weekday and Saturday evenings. Service would also be extended to areas proposed to be developed by the year 2010, principally west of STH 31 in the City of Kenosha, the Village of Pleasant Prairie, and the Town of Bristol.

---

<sup>1</sup>See *SEWRPC Planning Report No. 41, A Transportation System Plan for the Southeastern Wisconsin Region: 2010, December 1994*.

The Kenosha transportation system plan for the year 2010 was adopted by the City of Kenosha on May 15, 1995, as a guide to transportation development in the City. The

Kenosha transit planning study was designed to consider, refine, and detail an initial stage of implementation of the adopted regional plan and potentially extend those recommendations to provide special commuter bus service to major job centers in Lake County, Illinois.

This Kenosha area transit system development plan is short-range in nature, covering the period 1998 through 2002, and is based on a thorough evaluation of the performance of the existing transit system operated by the City of Kenosha; analyses of the travel habits, patterns, and needs of the residents of the City and environs; analysis of the transportation needs of existing land use patterns and major land use developments which have been proposed or are occurring within the area; and a careful evaluation of alternative courses of action for providing the needed transit service. The plan also identifies the financial commitments and actions necessary by the various levels and units of government concerned to implement the plan.

## STUDY PURPOSE

This transit system development plan was intended to serve the following purposes:

1. To evaluate the effectiveness of the existing route structure and schedules and the financial performance of the current transit system;
2. To identify, evaluate, and recommend potential transit service improvements which would
  - a. Address the recent changes in urban development in the Kenosha area;
  - b. Address work-trip commuting between the Kenosha area and Lake County, Illinois; and
  - c. Represent the initial implementation stage of the transit recommendations for the Kenosha area in the Commission's adopted design year 2010 regional transportation system plan;
3. To develop appropriate responses to recent changes in State and Federal funding programs in order to assure adequate financing of existing and planned transit services; and
4. To provide a sound basis for monitoring the implementation status of the plan and the updating

required to maintain a valid plan through the five-year planning period.

## SCOPE OF WORK

A detailed scope of work for preparing the new transit system development plan was prepared by the Commission and approved by the City of Kenosha Transit Commission on November 6, 1997.<sup>2</sup> Eight specific steps were involved in the preparation of the plan as follows:

1. Study organization, including the appointment by the City of an advisory committee to guide the study effort;
2. The formulation of appropriate objectives and supporting performance standards for transit service development;
3. The collation and collection of data pertinent to the evaluation of the existing and proposed transit services regarding the socio-economic, land use, and travel habits and patterns;
4. The analysis of the operation of the existing transit system, including the identification of any potential deficiencies in that system;
5. The design of transit service changes which could address the problems and deficiencies that were identified;
6. The evaluation of alternative transit service changes which could address the problems and deficiencies that were identified;
7. The selection and documentation of a recommended plan; and
8. The identification of the actions which must be taken by the City of Kenosha and by each of the other concerned levels and units of government to implement the recommended transit service in an orderly and timely manner.

## STUDY AREAS

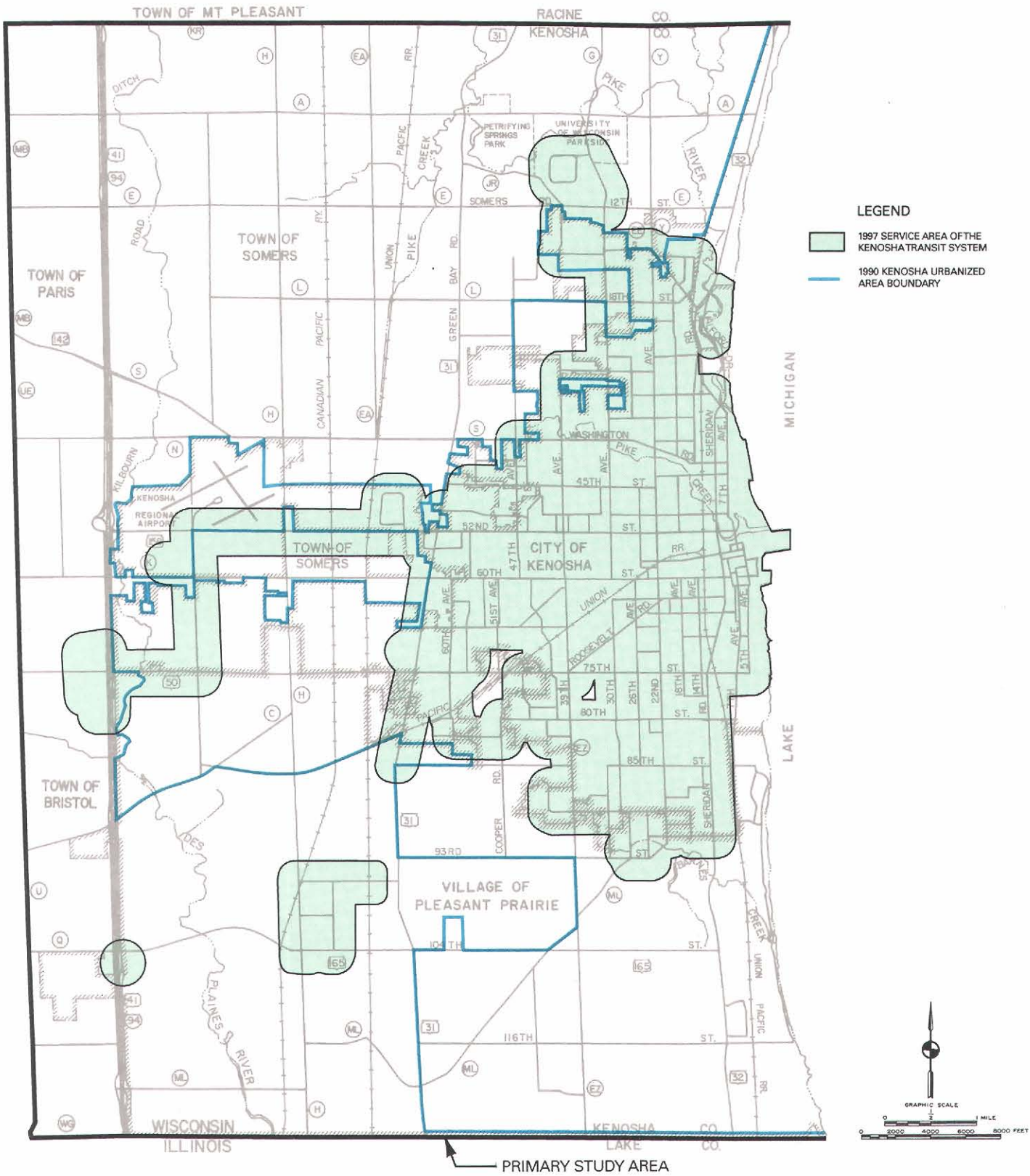
The primary study area considered in this report comprised the eastern portion of Kenosha County and includes all

---

<sup>2</sup>See *SEWRPC Staff Memorandum, Scope of Work for Preparing a New Kenosha Area Transit System Development Plan, November 1996.*

Map 1

PRIMARY STUDY AREA FOR THE KENOSHA AREA TRANSIT SYSTEM DEVELOPMENT PLAN





the City of Kenosha, the Village of Pleasant Prairie, and the Town of Somers, as well as the eastern one-sixth of the Towns of Bristol and Paris (see Map 1). The study area included the entire area served by the fixed-route bus system operated by the City of Kenosha in 1997, and the entire Kenosha urbanized area as defined by the U. S. Census in 1990. A secondary study area was considered for that portion of the study focusing on work trip travel from the Kenosha area to jobs in Lake County, Illinois (see Map 2).

## STUDY ORGANIZATION

The preparation of this transit system development plan was a joint effort by the staffs of the City of Kenosha and of the Southeastern Wisconsin Regional Planning Commission. Additional staff assistance was obtained from certain other agencies concerned with transit development in the Kenosha area, including the Wisconsin Department of Transportation.

To provide guidance to the technical staffs in the preparation of this plan and to involve concerned and affected public officials and citizen leaders more directly and actively in the development of transit service policies and improvement proposals, the City of Kenosha acted in April 1997 to create a Kenosha Area Public Transit Planning Advisory Committee. The full membership of the Committee is listed on the inside front cover of this report.

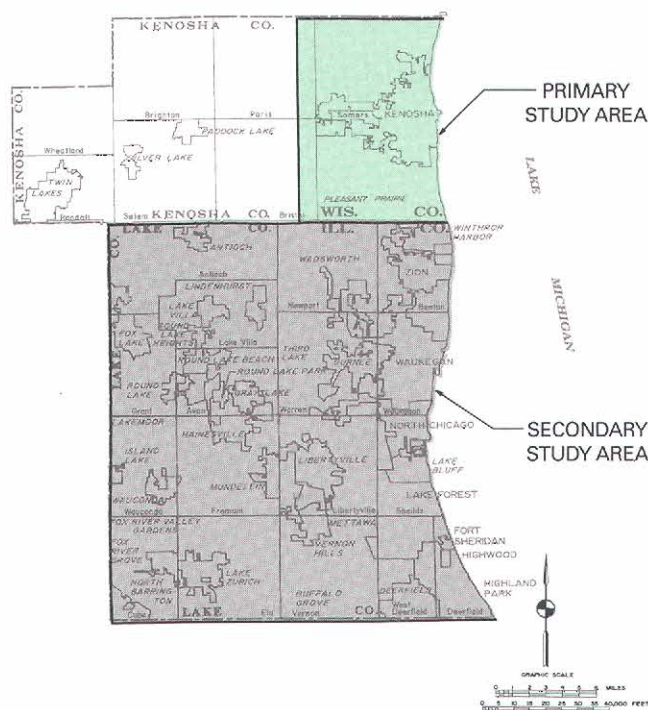
## SCHEME OF PRESENTATION

After this introductory chapter, seven chapters present the findings of the major inventories and analyses conducted under the planning effort and describe the plan recommendations. More specifically, the remainder of this report consists of the following chapters:

- Chapter II, "Land Use and Travel Patterns," describes the land use, demographic, and economic characteristics of, and the travel habits and patterns in, the primary study area;
- Chapter III, "Existing Public Transit System," describes the public transit system serving the City of Kenosha and environs as that system existed in 1997, along with other major transit services currently available within the primary study area;

Map 2

### SECONDARY STUDY AREA FOR THE KENOSHA AREA TRANSIT SYSTEM DEVELOPMENT PLAN



Source: SEWRPC.

- Chapter IV, "Public Transit Service Objectives and Standards," sets forth a set of transit service objectives and supporting performance standards and design criteria;
- Chapter V, "Evaluation of the Existing Transit System," describes how well the existing 1997 transit system meets the objectives and standards, thereby identifying service-related problems and deficiencies;
- Chapter VI, "Existing Transit Legislation, Regulations, and Public Funding Programs," summarizes existing legislation at the Federal, State, and local levels which define the local governmental powers to oversee the operation of transit services and provide financial assistance for the operation of the transit services;
- Chapter VII, "Alternative Local Transit Service Improvements to Serve Kenosha Area Travel," identifies, describes, and evaluates the alternative local transit service improvements for the primary study area;

- Chapter VIII, "Alternative Commuter Transit Service Improvements," identifies, describes, and evaluates the alternative transit service improvements considered to accommodate commuter-oriented work trip travel between the primary and the secondary study areas and between the primary study area and the Cities of Milwaukee and Racine;
- Chapter IX, "Recommended Transit System Development Plan," sets forth a detailed description of the transit service improvements recommended by the Advisory Committee; and
- Chapter X, "Summary and Conclusions," provides a brief overview of the significant findings and recommendations of the study.



(This page intentionally left blank)

## Chapter II

# LAND USE AND TRAVEL PATTERNS

## INTRODUCTION

In order to evaluate the existing transit services within the primary study area and to identify the potential need for transit service improvements, it is necessary to consider those factors which affect, or are affected by, the provision of transit service. These factors include the extent of existing urban development in the primary study area, along with the size, distribution and characteristics of the resident population and of employment. In addition, the travel habits and patterns associated with the population, employment, and land use distribution in the primary study area must also be considered. This chapter presents the results of an inventory of these important factors within the primary study area.

## POPULATION AND EMPLOYMENT

### General Population Characteristics

The resident population levels within primary study area over the period 1960 through 1995 are set forth in Table 1. Map 3 shows the distribution of the resident population of the primary study area in 1990. Table 2 indicates the change in the number of households in the primary study area from 1960 to 1995. The following observations may be made based upon an examination of this information:

- Between 1960 and 1995, the resident population of the primary study area increased by about 25 percent. Most of this growth occurred in the City of Kenosha and the Village of Pleasant Prairie, which experienced population increases of about 25 and 27 percent, respectively, over this period. Of the 21,100 new residents of the primary study area between 1960 and 1995, about 19,900, or about 94 percent, were residents of the City of Kenosha or Village of Pleasant Prairie. These communities have also seen most of the population growth within the primary study area in more recent times, with increases of between 6 and 8 percent between 1990 and 1995.
- In 1995, about 85,000 persons resided in the City of Kenosha, almost 80 percent of the total primary study area population. The highest population concentrations in the primary study area were within portions of the City of Kenosha lying east of Green

Bay Road. The population in the remainder of the primary study area was more widely dispersed with population concentrations that do not approach the concentrations found in the central portions of the City of Kenosha.

- The number of households in the primary study area increased by about 57 percent from 1960 to 1995, more than twice as fast as the resident population. The average household size within the primary study area, consequently, decreased from about 3.3 persons per household in 1960 to about 2.6 persons per household in 1995. This trend mirrored trends for Kenosha County and the seven-county South-eastern Wisconsin Region as a whole.

### Transit-Dependent Population Characteristics

Certain segments of the population may be expected to have a greater dependence on, and make more extensive use of, public transit than the population as a whole because they have historically had more limited access to the automobile as a mode of travel than the population in general. The following five such "transit-dependent" population groups were identified for this study: 1) school-age children (age 10 through 18),<sup>1</sup> elderly individuals (age 60 and older), 3) persons in low-income households, 4) households with no vehicle available, and 5) disabled individuals.

Information about these transit-dependent groups in the primary study area was obtained from U. S. Census data. Table 3 sets forth the historic levels of these groups in the primary study area from 1960 to 1990. To facilitate identification of population concentrations by subarea, the 1990 census data for these groups within the primary study

---

<sup>1</sup>For the purpose of this study, children in the age group 10 through 18 were considered as potentially transit-dependent, principally for social and recreational trips. Those in the upper end of this age range could also be transit-dependent for work trips. Transit dependence for trips between homes and schools was considered to be significant for this study only for trips made by students who reside between one and two miles from school and are not eligible for the student transportation provided by the Kenosha School District.

Table 1

## TOTAL POPULATION IN THE PRIMARY STUDY AREA: 1960-1995

Civil Division	Total Population									
	1960		1970		1980		1990		1995 <sup>a</sup>	
	Number	Percent of Study Area	Number	Percent of Study Area	Number	Percent of Study Area	Number	Percent of Study Area	Number	Percent of Study Area
City of Kenosha .....	67,899	79.2	78,805	79.9	77,685	78.7	80,426	79.7	85,000	79.5
Village of Pleasant Prairie .....	10,287	12.0	12,019	12.2	12,703	12.9	12,037	11.9	13,090	12.2
Town of Somers .....	7,139	8.3	7,270	7.4	7,724	7.8	7,748	7.7	8,140	7.6
Town of Paris <sup>b</sup> .....	270	0.3	332	0.3	307	0.3	282	0.3	280	0.3
Town of Bristol <sup>b</sup> .....	194	0.2	247	0.2	324	0.3	357	0.4	380	0.4
Total	85,789	100.0	98,673	100.0	98,743	100.0	100,850	100.0	106,890	100.0

Civil Division	Change in Population									
	1960-1970		1970-1980		1980-1990		1990-1995		1960-1995	
	Absolute	Percent	Absolute	Percent	Absolute	Percent	Absolute	Percent	Absolute	Percent
City of Kenosha .....	10,906	16.1	-1,120	-1.4	2,741	3.5	4,574	5.7	17,101	25.2
Village of Pleasant Prairie .....	1,732	16.8	684	5.7	-666	-5.2	1,053	8.7	2,803	27.2
Town of Somers .....	131	1.8	454	6.2	24	0.3	392	5.1	1,001	14.0
Town of Paris <sup>b</sup> .....	62	23.0	-26	-7.7	-25	-8.1	-2	-0.7	10	3.7
Town of Bristol <sup>b</sup> .....	53	27.3	77	31.2	33	10.2	23	6.4	186	95.9
Total	12,884	15.0	70	0.1	2,107	2.1	6,040	6.0	21,101	24.6

<sup>a</sup>Estimated.

<sup>b</sup>Figures are estimates for the portion of the Town within the study area.

Source: U. S. Bureau of the Census, Wisconsin Department of Administration, and SEWRPC.

area were examined by the census block groups, as set forth in Table 4. The block groups within the primary study area which display concentrations above the primary study area averages for at least three of the five transit-dependent groups were identified as potential priority areas for the provision of transit service, as shown on Map 4. The information in these tables and map indicate the following:

- Since 1960, both the elderly and the low-income populations have increased significantly in terms of absolute numbers and of their proportions of the total primary study area population. Both the school-age population and the number of zero-auto households have remained stable in absolute numbers, but have declined as their share of the total population. A similar trend analysis for the disabled population could not be developed as data for the disabled population comparable to that collected in the 1990 census was not collected in any previous census.
- The largest transit-dependent population group in the primary study area in 1990 was elderly persons, who constituted about 18 percent of the total primary study area population. School-age children, persons

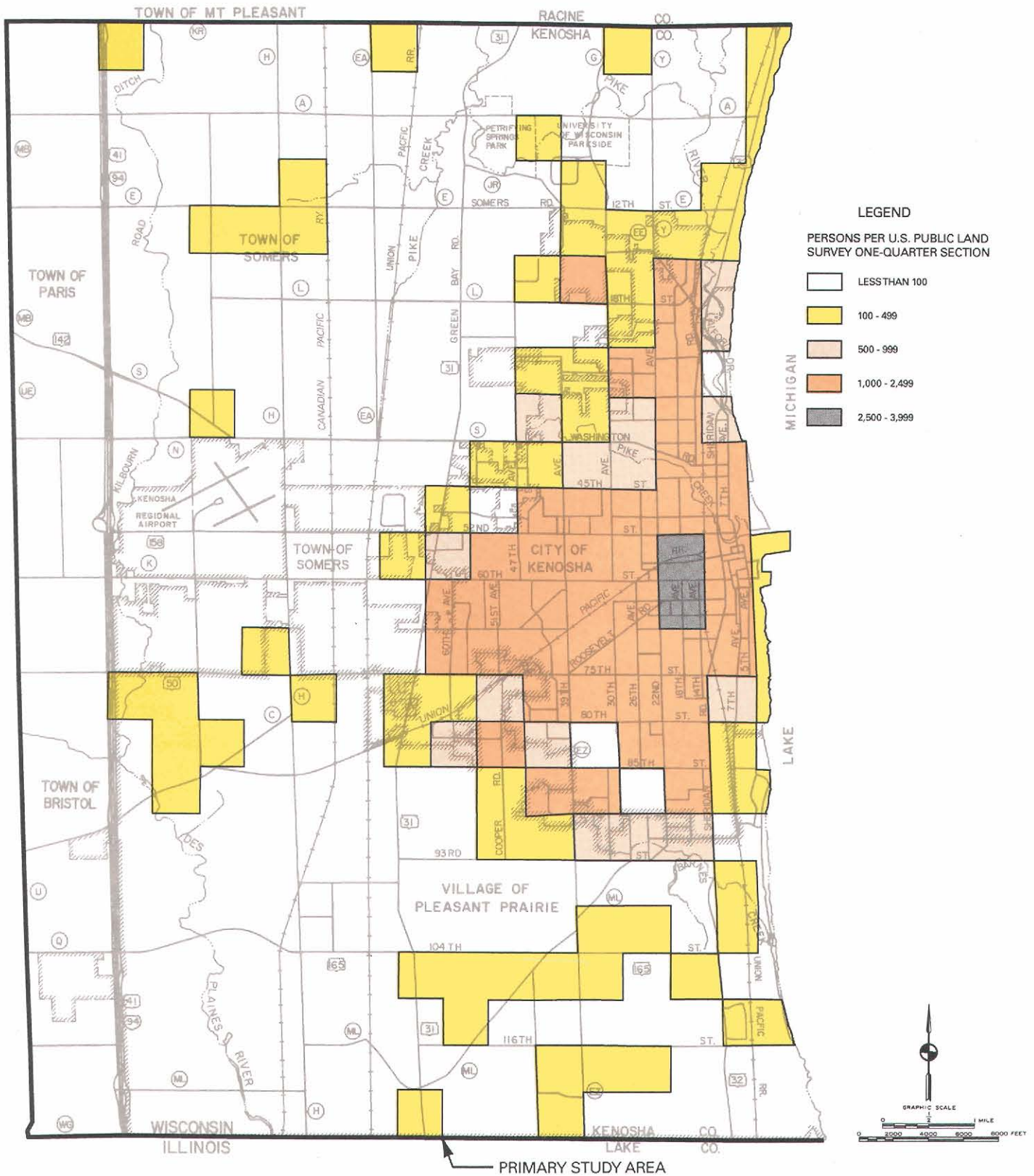
in low-income households, and households with no vehicle available represented about 13, 11, and 10 percent, respectively, of the primary study area residents or households. A significantly smaller segment of the primary study area population had a disability which limited their mobility.<sup>2</sup>

- As indicated by the low percentage of households in the study area with no automobile available, most of the resident household population in the study area may have access to a vehicle, reducing their potential dependence on transit. Another way to consider household vehicle availability in assessing the potential need for transit is to determine the number of vehicles available in relation to the size of the population 16 years of age or older, that is, the number of potentially licensed drivers. Where the number of persons 16 years of age or older significantly exceeds the number of vehicles available, such ratios would be low, indicating a higher potential need for transit. As shown on Map 5, in

<sup>2</sup>The Census data do not reflect ambulatory disabled persons whose physical or mental impairment does not prevent them from traveling independently.

Map 3

POPULATION DISTRIBUTION IN THE PRIMARY STUDY AREA: 1990



Source: SEWRPC.

Table 2

## TOTAL HOUSEHOLDS IN THE PRIMARY STUDY AREA: 1960-1995

Civil Division	Total Households									
	1960		1970		1980		1990		1995 <sup>a</sup>	
	Number	Percent of Study Area	Number	Percent of Study Area	Number	Percent of Study Area	Number	Percent of Study Area	Number	Percent of Study Area
City of Kenosha .....	20,593	81.2	24,245	81.3	27,964	80.0	29,919	80.0	31,890	79.8
Village of Pleasant Prairie .....	2,774	10.9	3,303	11.1	4,041	11.6	4,204	11.3	4,620	11.6
Town of Somers .....	1,884	7.4	2,115	7.1	2,741	7.8	3,023	8.1	3,150	7.9
Town of Paris <sup>b</sup> .....	65	0.3	82	0.3	89	0.3	94	0.3	100	0.3
Town of Bristol <sup>b</sup> .....	53	0.2	68	0.2	107	0.3	126	0.3	140	0.4
Total	25,369	100.0	29,813	100.0	34,942	100.0	37,366	100.0	39,900	100.0

Civil Division	Change in Population									
	1960-1970		1970-1980		1980-1990		1990-1995		1960-1995	
	Absolute	Percent	Absolute	Percent	Absolute	Percent	Absolute	Percent	Absolute	Percent
City of Kenosha .....	3,652	17.7	3,719	15.3	1,955	7.0	1,971	6.6	11,297	54.9
Village of Pleasant Prairie .....	529	19.1	738	1.0	163	4.0	416	9.9	1,846	66.5
Town of Somers .....	231	12.3	626	1.0	282	10.3	127	4.2	1,266	67.2
Town of Paris <sup>b</sup> .....	17	26.2	7	8.5	5	5.6	6	6.4	35	53.8
Town of Bristol <sup>b</sup> .....	15	28.3	39	57.4	19	17.8	14	11.1	87	164.2
Total	4,444	17.5	5,129	17.2	2,424	6.9	2,534	6.8	14,531	57.3

<sup>a</sup>Estimated.<sup>b</sup>Figures are estimates for the portion of the Town within the study area.

Source: U.S. Bureau of the Census and SEWRPC.

Table 3

## HISTORIC LEVELS OF TRANSIT-DEPENDENT POPULATIONS WITHIN THE PRIMARY STUDY AREA: 1960-1990

Year	Population			Transit-Dependent Population Groups <sup>a</sup>									
	Total	Ages 16 and Older	Total Households	School-Age Children (ages 10 through 18)		Elderly Persons (ages 60 and older)		Persons in Low-Income Households <sup>b</sup>		Disabled Persons <sup>c</sup>		Households with No Vehicle Available	
				Number	Percent of Total Population	Number	Percent of Total Population	Number	Percent of Total Population	Number	Percent of Population Ages 16 and Older	Number	Percent of Total Households
1960	86,284	--	25,485	12,965	15.0	11,258	13.0	N/A	N/A	N/A	N/A	3,709	14.6
1970	99,250	--	29,963	17,970	18.1	12,956	13.1	7,442	7.5	N/A	N/A	3,676	12.3
1980	99,373	--	35,137	16,046	16.1	15,131	15.2	6,888	6.9	N/A	N/A	3,321	9.5
1990	100,850	76,599	37,366	12,563	12.5	17,666	17.5	11,165	11.1	3,016	3.9	3,701	9.9

Change in Total Population: 1960-1990				Change in Transit-Dependent Population Groups: 1960-1990									
Number		Percent		School-Age Children (ages 10 through 18)		Elderly Persons (ages 60 and older)		Persons in Low-Income Households <sup>d</sup>		Disabled Persons		Households with No Vehicle Available	
Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
14,566	16.9	11,881	46.6	-402	-3.1	6,348	56.4	3,723	50.0	N/A	N/A	-8	-0.2

Note: N/A indicates that comparable data are not available for all years.

<sup>a</sup>All figures are based on Census information derived from sample data.<sup>b</sup>Represents persons residing in households with a total 1989 family income below Federal poverty thresholds.<sup>c</sup>Includes persons age 16 and older with a health condition lasting six months or more which made it difficult to travel alone outside the home.<sup>d</sup>Changes listed are for the period from 1970 to 1990.

Source: U.S. Bureau of the Census and SEWRPC.



Table 4

## TRANSIT-DEPENDENT POPULATIONS WITHIN THE PRIMARY STUDY AREA BY BLOCK GROUP: 1990

Census Tract	Block Group	Population		Total Households	Transit-Dependent Population Groups <sup>a</sup>									
					School-Age Children (ages 10 through 18)		Elderly Persons (ages 60 and older)		Persons in Low-Income Households <sup>b</sup>		Disabled Persons <sup>c</sup>		Households with No Vehicle Available	
		Total	Ages 16 and Older		Number	Percent of Block Group Population	Number	Percent of Block Group Population	Number	Percent of Block Group Population	Number	Percent of Block Group Population Ages 16 and Older	Number	Percent of Block Group Households
1	2	324	270	142	31	9.6	90	27.8	11	3.4	10	3.7	--	--
	3	606	531	317	31	5.1	91	15.0	52	8.6	15	2.8	7	2.2
	4	1,540	1,198	692	170	11.0	210	13.6	234	15.2	32	2.7	35	5.1
	5	706	477	281	86	12.2	103	14.6	91	12.9	8	1.7	11	3.9
	6	872	740	414	89	10.2	156	17.9	81	9.3	23	3.1	23	5.6
2	1	840	825	24	172	20.5	--	--	--	--	5	0.6	--	--
3	1	848	753	247	43	5.1	371	43.8	70	8.3	25	3.3	5	2.0
	2	959	673	356	113	11.8	141	14.7	98	10.2	34	5.1	33	9.3
	3	1,106	821	434	137	12.4	188	17.0	220	19.9	32	3.9	93	21.4
	4	640	506	310	78	12.2	104	16.3	133	20.8	13	2.6	51	16.5
4	1	707	530	297	49	6.9	210	29.7	17	2.4	13	2.5	5	1.7
	2	584	490	207	50	8.6	150	25.7	14	2.4	--	--	7	3.4
	3	551	487	226	26	4.7	188	34.1	16	2.9	28	5.7	21	9.3
	4	633	475	262	76	12.0	159	25.1	57	9.0	16	3.4	39	14.9
	5	1,220	997	456	132	10.8	296	24.3	35	2.9	37	3.7	24	5.3
5	2	1,061	919	466	92	8.7	412	38.8	25	2.4	29	3.2	50	10.7
	4	1,069	687	360	161	15.1	64	6.0	120	11.2	22	3.2	10	2.8
	5	1,165	958	395	162	13.9	223	19.1	53	4.5	21	2.2	37	9.4
	6	864	739	439	129	14.9	338	39.1	97	11.2	106	14.3	169	38.5
	7	751	617	286	90	12.0	151	20.1	44	5.9	25	4.1	10	3.5
6	1	749	615	270	90	12.0	100	13.4	--	--	9	1.5	--	--
	2	353	353	52	72	20.4	--	--	259	73.4	--	--	14	26.9
	3	447	397	159	62	13.9	103	23.0	30	6.7	26	6.5	10	6.3
	4	513	416	238	56	10.9	95	18.5	17	3.3	31	7.5	79	33.2
	6	871	595	358	123	14.1	136	15.6	16	1.8	17	2.9	17	4.7
	7	912	744	308	99	10.9	138	15.1	--	--	31	4.2	9	2.9
	8	1,728	1,435	794	156	9.0	187	10.8	100	5.8	39	2.7	37	4.7
	9	1,763	1,390	550	269	15.3	442	25.1	52	3.0	57	4.1	16	2.9
7	1	522	409	192	85	16.3	115	22.0	60	11.5	14	3.4	16	8.3
	4	907	673	331	139	15.3	134	14.8	123	13.6	30	4.5	41	12.4
	5	1,397	954	450	137	9.8	101	7.2	175	12.5	54	5.7	38	8.4
	6	823	405	256	121	14.7	38	4.6	316	38.4	10	2.5	111	43.4
	7	853	589	321	87	10.2	109	12.8	266	31.2	26	4.4	54	16.8
8	1	910	589	268	120	13.2	78	8.6	236	25.9	17	2.9	64	23.9
	2	515	418	204	62	12.0	130	25.2	120	23.3	18	4.3	36	17.6
	3	1,032	776	414	158	15.3	179	17.3	138	13.4	61	7.9	104	25.1

Table 4 (continued)

Census Tract	Block Group	Population		Total Households	Transit-Dependent Population Groups <sup>a</sup>									
					School-Age Children (ages 10 through 18)		Elderly Persons (ages 60 and older)		Persons in Low-Income Households <sup>b</sup>		Disabled Persons <sup>c</sup>		Households with No Vehicle Available	
		Total	Ages 16 and Older		Number	Percent of Block Group Population	Number	Percent of Block Group Population	Number	Percent of Block Group Population	Number	Percent of Block Group Population Ages 16 and Older	Number	Percent of Block Group Households
9	2	1,066	781	436	111	10.4	138	12.9	378	35.5	78	10.0	75	17.2
	4	788	586	300	125	15.9	76	9.6	68	8.6	10	1.7	20	6.7
	5	963	719	375	136	14.1	109	11.3	203	21.1	21	2.9	51	13.6
	6	707	514	270	82	11.6	141	19.9	132	18.7	29	5.6	68	25.2
	7	745	453	235	184	24.7	74	9.9	379	50.9	15	3.3	29	12.3
10	1	95	83	53	12	12.6	43	45.3	22	23.2	7	8.4	12	22.6
	2	648	560	392	50	7.7	221	34.1	259	40.0	109	19.5	217	55.4
	3	561	476	210	69	12.3	165	29.4	115	20.5	22	4.6	40	19.0
	4	381	318	59	52	13.6	24	6.3	60	15.7	--	--	12	20.3
11	1	950	611	301	98	10.3	76	8.0	442	46.5	55	9.0	111	36.9
	2	1,522	1,083	462	212	13.9	317	20.8	523	34.4	33	3.0	144	31.2
	3	1,350	920	459	174	12.9	168	12.4	458	33.9	25	2.7	103	22.4
12	1	1,150	677	357	197	17.1	83	7.2	411	35.7	28	4.1	96	26.9
	2	1,346	949	511	192	14.3	233	17.3	183	13.6	38	4.0	49	9.6
	3	1,033	827	413	92	8.9	182	17.6	73	7.1	55	6.7	62	15.0
	4	855	666	381	50	5.8	207	24.2	57	6.7	41	6.2	40	10.5
13	1	940	688	319	106	11.3	83	8.8	51	5.4	16	2.3	41	12.9
	2	824	664	303	82	10.0	180	21.8	6	0.7	21	3.2	12	4.0
	4	668	497	254	52	7.8	139	20.8	67	10.0	7	1.4	24	9.4
	5	1,380	964	526	227	16.4	106	7.7	144	10.4	28	2.9	36	6.8
14	1	1,023	797	375	112	10.9	250	24.4	--	--	6	0.8	8	2.1
	2	553	464	196	72	13.0	131	23.7	55	9.9	--	--	7	3.6
	3	1,165	907	421	190	16.3	221	19.0	54	4.6	27	3.0	17	4.0
	4	1,422	1,062	519	181	12.7	204	14.3	27	1.9	30	2.8	7	1.3
	5	1,050	827	337	110	10.5	160	15.2	64	6.1	48	5.8	14	4.2
	6	2,034	1,492	766	197	9.7	234	11.5	78	3.8	50	3.4	45	5.9
15	1	867	638	318	89	10.3	151	17.4	141	16.3	22	3.4	37	11.6
	2	994	740	362	151	15.2	174	17.5	58	5.8	34	4.6	38	10.5
	3	780	620	313	100	12.8	87	11.2	84	10.8	16	2.6	18	5.8
	4	528	375	192	68	12.9	100	18.9	32	6.1	30	8.0	17	8.9
	5	759	582	319	77	10.1	145	19.1	49	6.5	46	7.9	44	13.8
16	1	1,032	613	252	222	21.5	73	7.1	439	42.5	33	5.4	51	20.2
	2	1,356	870	497	177	13.1	142	10.5	380	28.0	49	5.6	92	18.5
	3	1,129	849	457	95	8.4	153	13.6	209	18.5	34	4.0	31	6.8
17	1	638	457	227	143	22.4	136	21.3	169	26.5	32	7.0	42	18.5
	2	566	403	178	96	17.0	47	8.3	--	--	13	3.2	6	3.4
	3	857	619	330	131	15.3	164	19.1	55	6.4	26	4.2	21	6.4
	4	747	524	259	89	11.9	89	11.9	86	11.5	26	5.0	--	--

Table 4 (continued)

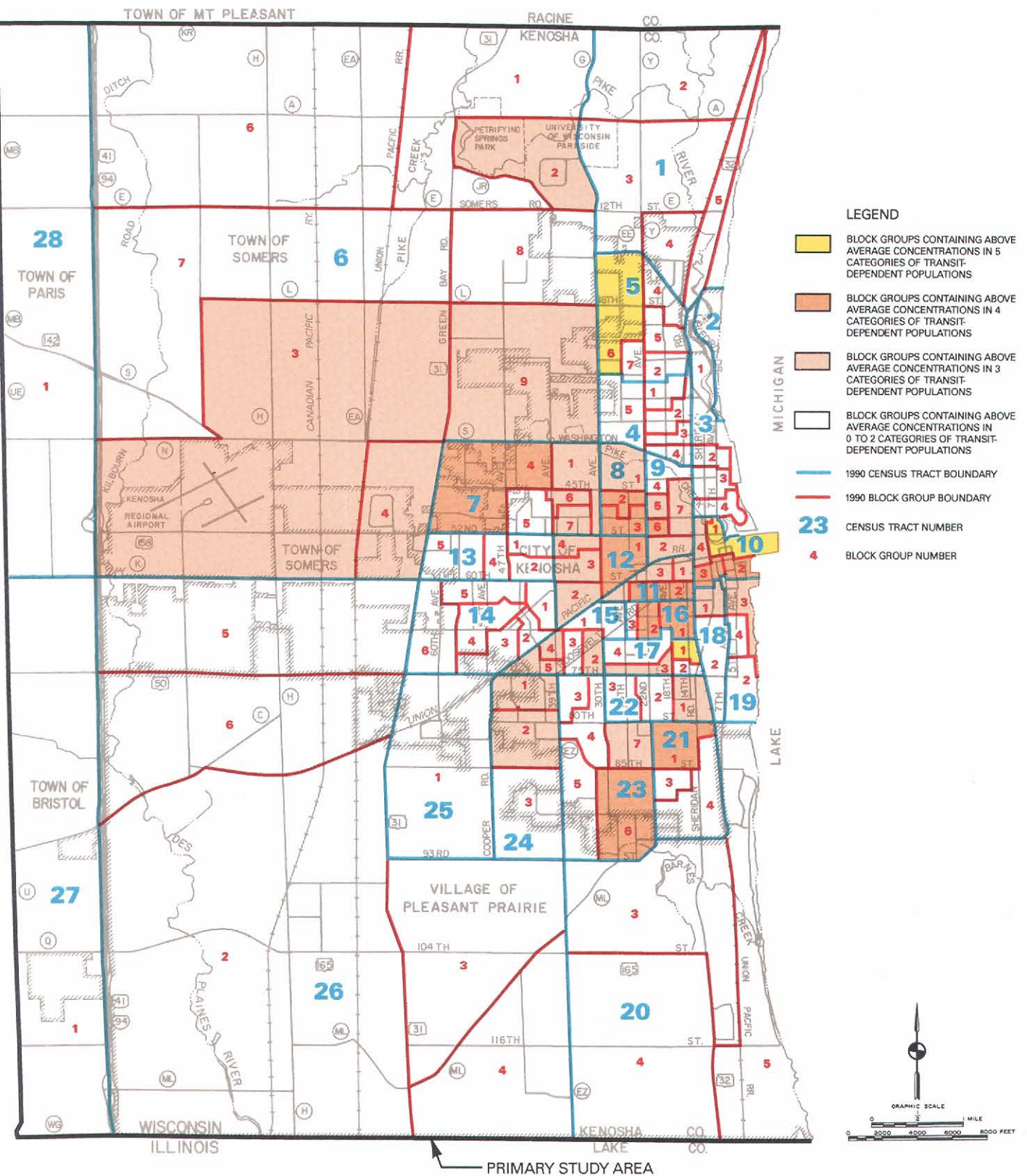
Census Tract	Block Group	Population		Total Households	Transit-Dependent Population Groups <sup>a</sup>									
					School-Age Children (ages 10 through 18)		Elderly Persons (ages 60 and older)		Persons in Low-Income Households <sup>b</sup>		Disabled Persons <sup>c</sup>		Households with No Vehicle Available	
		Total	Ages 16 and Older		Number	Percent of Block Group Population	Number	Percent of Block Group Population	Number	Percent of Block Group Population	Number	Percent of Block Group Population Ages 16 and Older	Number	Percent of Block Group Households
18	1	962	639	350	110	11.4	105	10.9	196	20.4	71	11.1	65	18.6
	2	1,405	1,026	558	166	11.8	228	16.2	71	5.1	52	5.1	11	2.0
19	2	995	811	404	89	8.9	294	29.5	34	3.4	17	2.1	13	3.2
	3	869	710	337	54	6.2	218	25.1	17	2.0	44	6.2	39	11.6
	4	759	584	293	124	16.3	98	12.9	26	3.4	21	3.6	24	8.2
20	3	1,275	967	404	145	11.4	185	14.5	33	2.6	18	1.9	--	--
	4	1,068	820	377	118	11.0	123	11.5	50	4.7	34	4.1	--	--
	5	867	601	301	166	19.1	54	6.2	24	2.8	7	1.2	4	1.3
21	1	1,356	1,159	454	94	6.9	432	31.9	161	11.9	54	4.7	49	10.8
	3	992	783	356	205	20.7	129	13.0	19	1.9	32	4.1	5	1.4
	4	1,919	1,408	813	158	8.2	284	14.8	250	13.0	46	3.3	61	7.5
22	1	1,050	852	428	144	13.7	295	28.1	33	3.1	48	5.6	16	3.7
	2	1,300	963	516	159	12.2	342	26.3	70	5.4	31	3.2	7	1.4
	3	1,323	1,053	527	92	7.0	316	23.9	0	0.0	47	4.5	17	3.2
23	3	958	779	412	57	6.0	354	37.0	54	5.6	--	--	20	4.9
	4	787	576	286	101	12.8	129	16.4	--	--	11	1.9	7	2.4
	5	1,079	855	373	138	12.8	173	16.0	9	0.8	31	3.6	--	--
	6	1,246	1,050	466	142	11.4	511	41.0	174	14.0	65	6.2	124	26.6
	7	1,333	1,056	527	196	14.7	318	23.9	54	4.1	8	0.8	58	11.0
24	1	1,209	1,013	452	153	12.7	319	26.4	42	3.5	60	5.9	28	6.2
	2	1,458	1,171	567	206	14.1	327	22.4	10	0.7	49	4.2	23	4.1
	3	1,802	1,352	647	221	12.3	291	16.1	101	5.6	65	4.8	69	10.7
25	1	2,230	1,625	759	399	17.9	282	12.6	45	2.0	32	2.0	--	--
26	2	548	402	200	117	21.4	39	7.1	12	2.2	5	1.2	--	--
	3	773	613	283	77	10.0	80	10.3	19	2.5	--	--	9	3.2
	4	1,253	911	399	195	15.6	86	6.9	100	8.0	18	2.0	5	1.3
	5	572	474	226	64	11.2	91	15.9	7	1.2	13	2.7	5	2.2
	6	2,010	1,542	721	223	11.1	324	16.1	126	6.3	27	1.8	24	3.3
27	1	357	270	126	57	16.0	45	12.6	25	7.0	11	4.1	5	4.0
28	1	282	208	94	37	13.1	38	13.5	16	5.7	5	2.6	--	0.5
Total		100,850	76,599	37,366	12,563	12.5	17,666	17.5	11,165	11.1	3,016	3.9	3,701	9.9

<sup>a</sup>All figures are based on Census information derived from sample data.<sup>b</sup>Represents persons residing in households with a total family income below Federal poverty thresholds.<sup>c</sup>Includes persons age 16 and older with a health condition lasting six months or more which made it difficult to travel alone outside the home.

Source: U. S. Bureau of the Census and SEWRPC.

Map 4

RESIDENTIAL CONCENTRATIONS OF TRANSIT-DEPENDENT POPULATIONS IN THE PRIMARY STUDY AREA: 1990

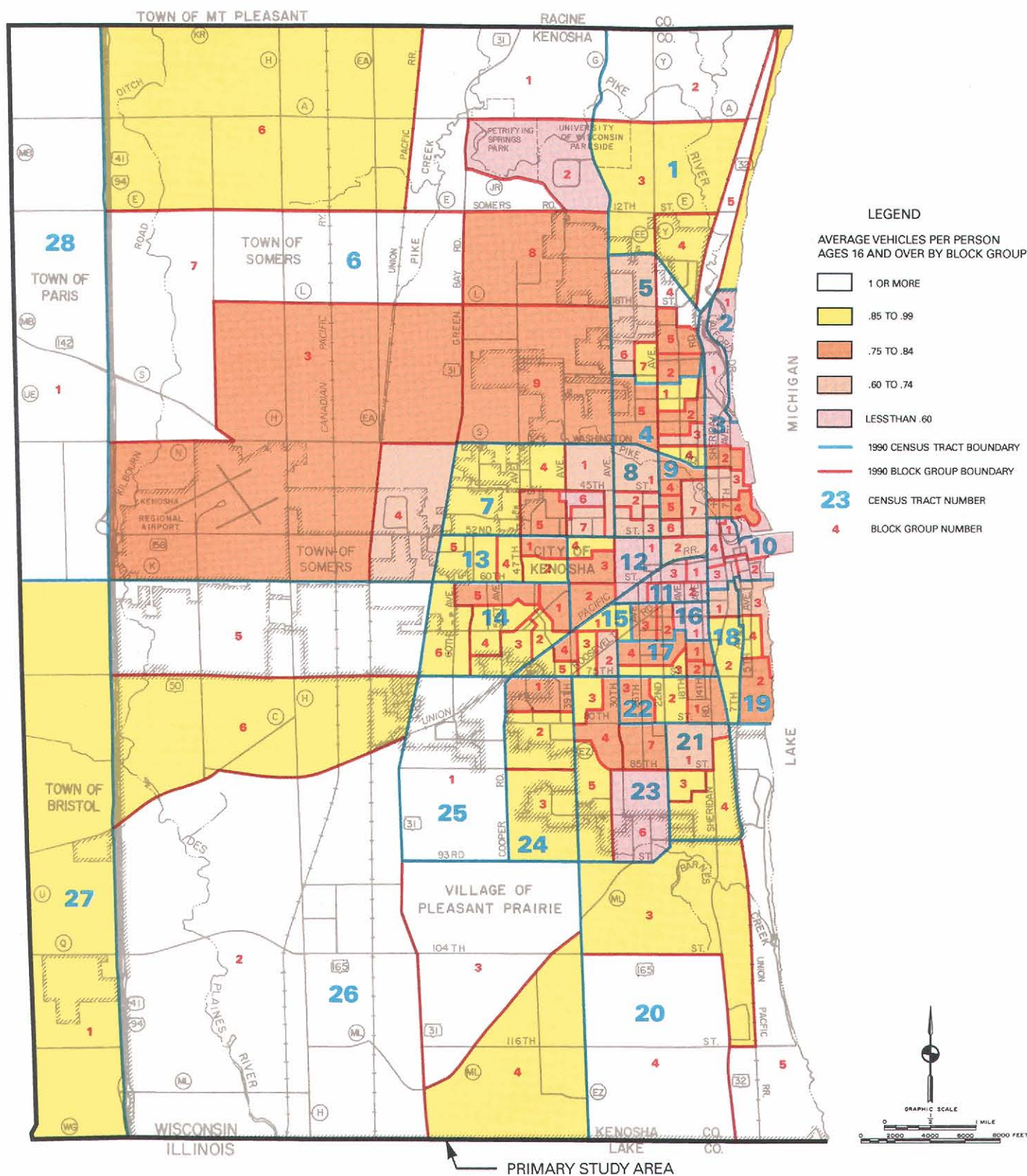


Source: U. S. Bureau of the Census and SEWRPC.



Map 5

AVERAGE VEHICLES PER PERSON AGES 16 AND OLDER IN THE PRIMARY STUDY AREA: 1990



Source: U. S. Bureau of the Census and SEWRPC.

Table 5

## TOTAL EMPLOYMENT IN THE PRIMARY STUDY AREA: 1970-1990

Civil Division	Total Employment					
	1970		1980		1990	
	Number	Percent of Study Area	Number	Percent of Study Area	Number	Percent of Study Area
City of Kenosha .....	34,160	86.5	42,230	84.6	34,370	78.9
Village of Pleasant Prairie .....	3,110	7.9	4,280	8.6	4,450	10.2
Town of Somers .....	2,180	5.5	2,750	5.5	2,860	6.5
Town of Bristol .....	40	0.1	530	1.0	1,730	4.0
Town of Paris .....	--	--	140	0.3	160	0.4
Total	39,490	100.0	49,930	100.0	43,570	100.0

Civil Division	Change in Employment					
	1970-1980		1980-1990		1970-1990	
	Absolute	Percent	Absolute	Percent	Absolute	Percent
City of Kenosha .....	8,070	23.6	-7,860	-18.6	210	0.6
Village of Pleasant Prairie .....	1,170	37.6	170	4.0	1,340	43.1
Town of Somers .....	570	26.1	110	4.0	680	31.2
Town of Bristol .....	490	1,225.0	1,200	226.4	1,690	4,225.0
Town of Paris .....	140	--	20	14.3	160	--
Total	10,440	26.4	-6,360	-12.7	4,080	10.3

Source: U. S. Bureau of Economic Analysis, Wisconsin Department of Workforce Development, and SEWRPC.

1990 the lowest ratios were found primarily within the central portions of the City of Kenosha and in areas which included significant group-quartered housing facilities, such as the University of Wisconsin-Parkside, Carthage College, St. Joseph's Home, and the Brookside Care Center.

- In 1990, the highest residential concentrations of transit-dependent persons were found within the City of Kenosha. The highest absolute numbers of transit-dependent persons were generally concentrated in the central portion of the City, in the area bounded by 75th Street on the south, 39th Avenue on the west, the Pike River on the north, and Lake Michigan on the east. For the most part, transit-dependent population levels in areas outside the City of Kenosha were low, except for the portion of the Town of Somers which includes the University of Wisconsin-Parkside. This is reflected in the potential priority areas for transit service identified on Map 4.

### Employment Characteristics

Employment trends in the primary study area from 1970 through 1990 are set forth in Table 5. The distri-

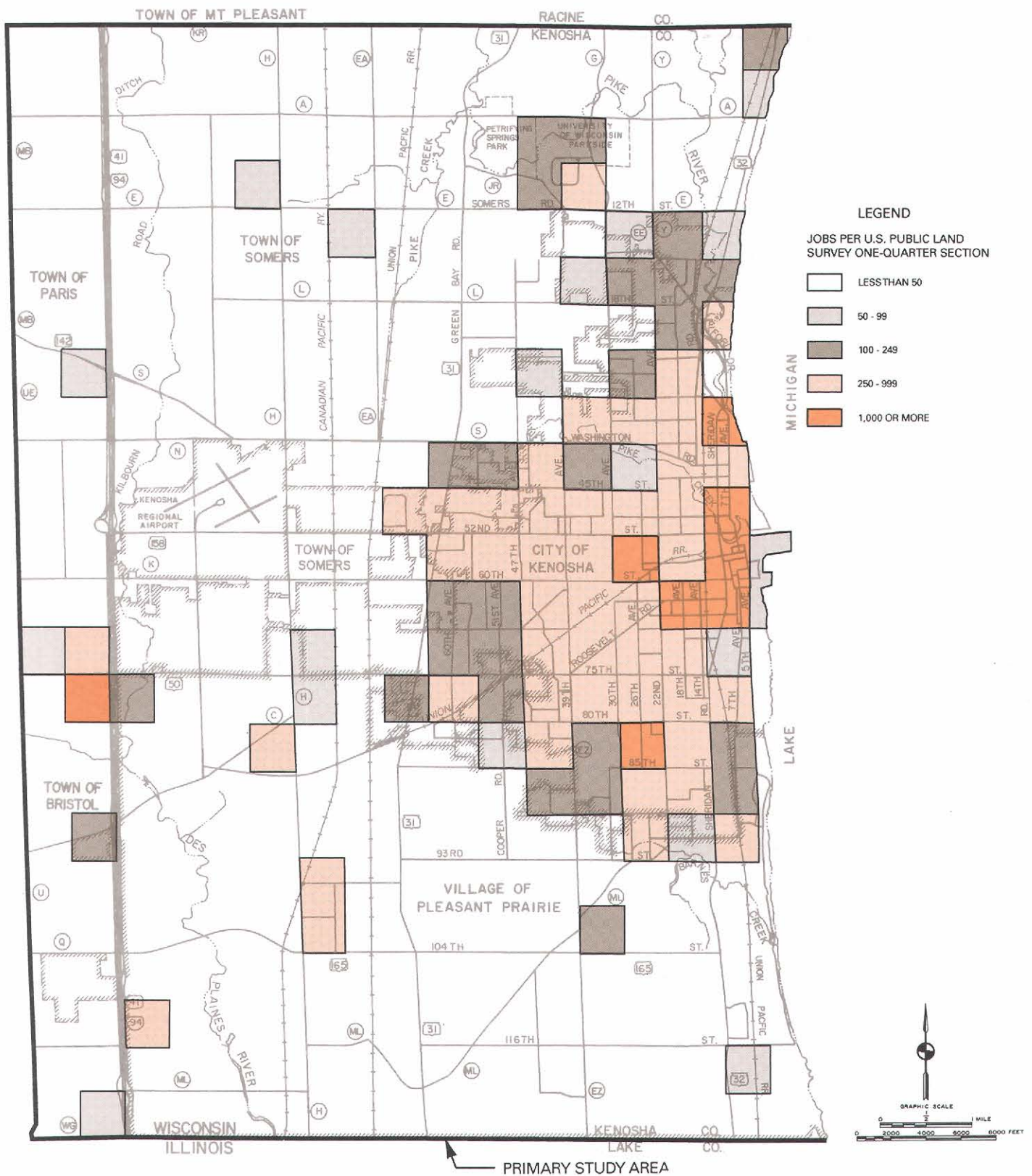
bution of jobs in the primary study area in 1990 by U. S. Public Land Survey quarter-section is shown on Map 6. To supplement the Commission's 1990 quarter-section employment data, individual employers with 20 or more employees in 1995 were identified and their locations plotted, as shown on Map 7. From the table and maps it can be seen that:

- The primary study area experienced an overall increase in employment between 1970 and 1990 of about 10 percent, although the employment increases varied significantly by decade and municipality. Increases in employment between 1970 and 1980 were partially offset by the decrease in employment between 1980 and 1990 caused by the nationwide recession, which severely affected the local economy between 1979 and 1984, and also by the closing of the Chrysler Motors automotive body assembly plants in the City of Kenosha in late 1988. Employment opportunities at new commercial, industrial, and office developments which have been completed since 1990 or are currently under way have helped to offset the job losses of the 1980s. In this respect, employment levels in Kenosha County have increased from 50,000 jobs



Map 6

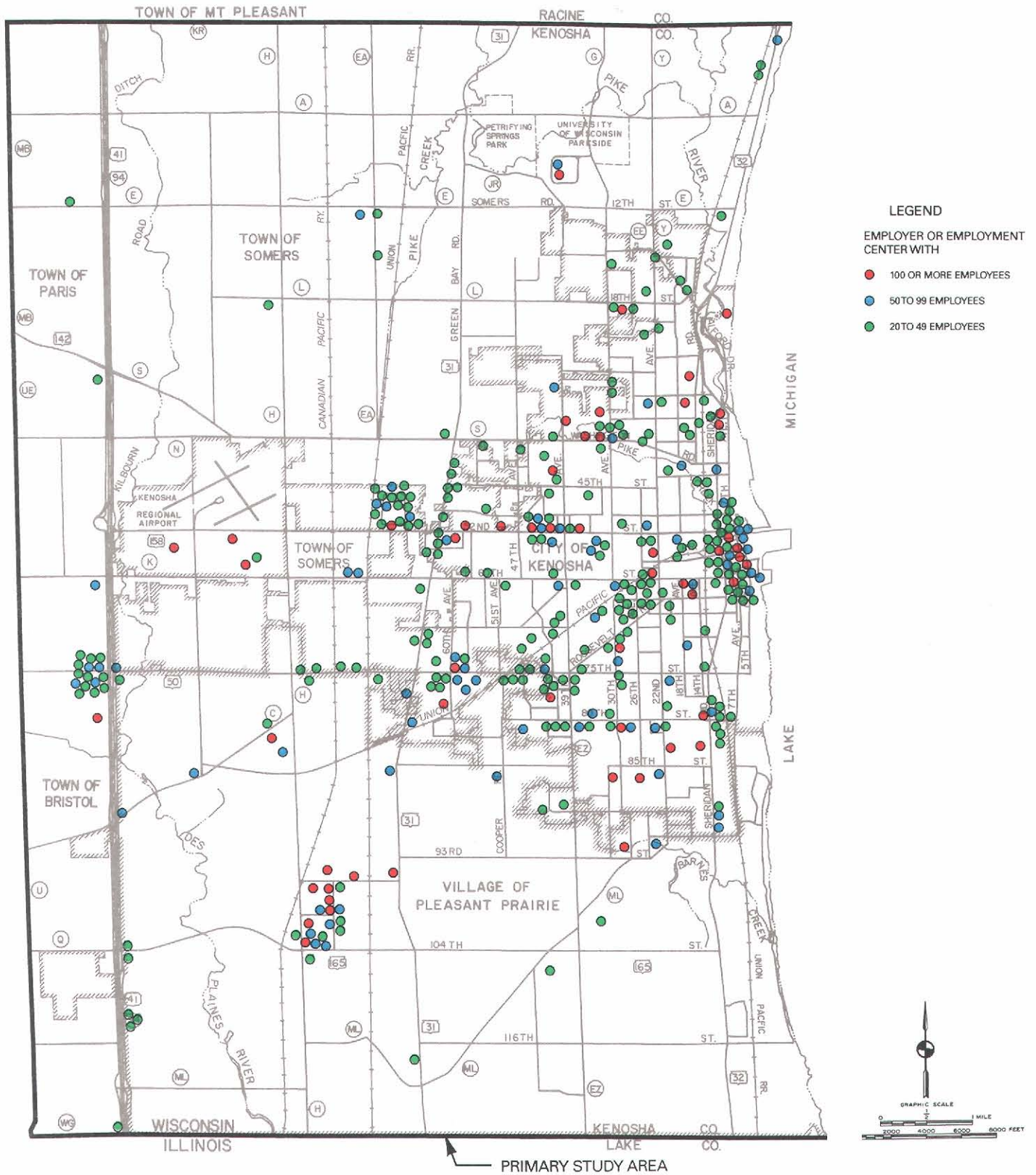
EMPLOYMENT DISTRIBUTION IN THE PRIMARY STUDY AREA: 1990





Map 7

LOCATIONS OF EMPLOYERS WITH TWENTY OF MORE EMPLOYEES IN THE PRIMARY STUDY AREA: 1995



Source: SEWRPC.

Table 6

## HISTORIC URBAN GROWTH IN THE PRIMARY STUDY AREA: 1900-1990

Year	Study Area Urban Development <sup>a</sup>				
	Total Area in Square Miles	Change from Previous Time Date		Average Annual Change in Square Miles from Previous Date	Percent of Total Area <sup>b</sup>
		Square Miles	Percent		
1900	1.34	--	--	--	1.4
1950	7.16	5.82	433.9	0.12	7.3
1963	16.56	9.40	131.3	0.72	16.9
1970	18.88	2.32	14.0	0.33	19.3
1980	22.62	3.74	19.8	0.37	23.1
1990	24.81	2.19	9.7	0.22	25.3

<sup>a</sup>Urban development as defined for the purposes of this analysis includes those areas of the Region where houses or other buildings have been constructed in relatively compact groups, thereby indicating a concentration of residential, commercial, industrial, governmental, or institutional land uses. The continuity of such development was considered interrupted if a quarter-mile area or more of such nonurban type land uses as agriculture, woodlands, or wetlands in which the above conditions were generally absent prevailed.

<sup>b</sup>The total land area of the study area is 97.94 square miles.

Source: SEWRPC.

in 1990 to 55,500 jobs in 1995, an increase of 5,500 jobs, or 11 percent.

of IH 94 and STH 50, and the LakeView Corporate Park.

- About 95 percent of the overall increase in employment in the primary study area between 1970 and 1990 occurred outside the City of Kenosha. During this period, the number of jobs at employers in the Village of Pleasant Prairie and the Town of Bristol more than doubled, increasing from about 3,000 jobs in 1960 to almost 6,200 jobs in 1990. A large part of this job growth can be attributed to new employment centers which developed in these communities, including the LakeView Corporate Park in the Village of Pleasant Prairie and commercial development in the vicinity of the intersection of IH 94 and STH 50 in the Town of Bristol.
- At present, the highest employment concentrations in the primary study area are in the City of Kenosha, particularly in the central business district (CBD), where several governmental employers, along with retail and service employers, are located, and in the areas which contain one or more major employment centers. Other areas of significant employment concentrations are also found outside the City in the areas of the University of Wisconsin-Parkside, the commercial development near the intersection

## EXISTING LAND USE

Utilizing aerial photographs, the Regional Planning Commission has assembled information documenting the historic growth and pattern of urban development throughout the Southeastern Wisconsin Region. The historic increase in the developed urban land in the primary study area is quantitatively summarized in Table 6.

In 1900, development in the primary study area was virtually nonexistent outside the area immediately surrounding and including the City of Kenosha CBD. During the first half of this century, most of the development in the primary study area occurred in relatively tight, concentric rings, contiguous to, and outward from, existing urban development in the center of the City of Kenosha. The primary study area experienced a period of rapid urban development between 1950 and 1963, when urban land uses grew at an average annual average rate of about 0.7 square mile per year, after which the rate of growth slowed to about 0.3 square mile per year through 1990. While much of the rapid development between 1950 and 1963 occurred near the established urban areas, other

development was scattered in outlying portions of the primary study area. Since 1963 urban development has occurred both through the infilling of partially developed areas, particularly in the urban-rural fringe, and in scattered urban enclaves. The extent of urban development in the primary study area in 1990 is shown on Map 8.

Decreases in the population density within the urban portion of the primary study area has accompanied the diffused pattern of urban development. While the land devoted to urban land uses in the primary study area increased by almost 50 percent, from 16.6 to 24.8 square miles, between 1963 and 1990, the population in the developed urban areas was estimated to have increased by only 24 percent, from about 76,300 persons in 1963, or about 4,606 persons per square mile, to about 94,400 persons in 1990, or about 3,805 persons per square mile. The population density trends in the primary study area are shown in Table 7.

Residential development is the predominant land use in the developed urban portion of the primary study area. Conventional fixed-route local bus service is generally most effective and cost-efficient when serving areas with residential densities of five dwelling units per acre or higher. As shown on Map 9, areas with such densities were widespread throughout the City of Kenosha in 1990, but existed in only few widely scattered areas outside the City.

On the basis of recent development trends and proposals, continued increases in residential and commercial development may be expected in the near future. Tables 8 and 9 and Map 10 identify significant residential and commercial developments within the primary study area that occurred after 1995 and were under construction, or had been proposed, as of July 1997.

### **Major Potential Transit Trip Generators**

The need to serve the local travel demand generated by major potential transit trip generators must also be considered in any transit service planning effort. Two basic categories of potential transit trip generators were identified for this study: transit-dependent population trip generators and major land use trip generators.

#### ***Transit-Dependent Population Trip Generators***

Specific locations of facilities used by, or serving, the elderly, the disabled, and the low-income transit-dependent population groups within the primary study area were identified for the year 1997 and are listed in Tables 10, 11, and 12, respectively. The nature of the population using the types of facilities identified under this category could be expected to generate significant transit usage. The

locations of these transit-dependent population trip generators in the primary study area are shown on Map 11.

### **Major Land Use Trip Generators**

Specific land uses or concentrations of such land uses which attract a large number of person trips also have the potential to attract a relatively large number of transit trips. The types of land uses within the primary study area which were identified as major potential transit trip generators for public transit planning purposes included the following: 1) commercial centers, 2) educational institutions, 3) medical centers, 4) governmental and public institutional centers, 5) major employers, and 6) major recreational areas. The specific trip generators identified within the primary study area in 1997 under each type of land use are presented in Tables 13 through 18 and their locations shown on Map 12.

## **TRAVEL HABITS AND PATTERNS**

Information on the quantity and characteristics of travel in the primary study area was based on the findings of a household travel survey and a survey of Kenosha transit system users conducted by the Regional Planning Commission in the autumn of 1991. The sample size for the Commission's household home interview survey was about 17,500 households, or about 2.5 percent of the total households in the Region. The Commission's on-board bus survey of City of Kenosha transit system users entailed distributing a prepaid, preaddressed, mail-back survey questionnaire. About 800, or 21 percent of the 3,600 average weekday revenue passengers, returned the questionnaires. The surveys were part of a comprehensive inventory of travel which also included a truck and taxi survey and an external cordon survey. Inventories of travel using similar surveys were also conducted by the Commission in 1963 and 1972.

### **Total Person Travel Characteristics**

The distributions of primary study area person trips<sup>3</sup> in 1963, 1972 and 1991 are shown in Table 19 by trip purpose and by area including internal trips, which had both trip ends within the primary study area; external intraregional trips, which had one trip end within the primary study area and the other trip end in a different

---

<sup>3</sup>A person trip was defined as a one-way journey between a point of origin and a point of destination by a person five years of age or older traveling as an auto driver or as a passenger in an auto, taxi, truck, motorcycle, school bus, or other mass transit carrier. To be considered, the trip must have been at least the equivalent of one full city block in length.



### EXTENT OF URBAN DEVELOPMENT IN THE PRIMARY STUDY AREA: 1990

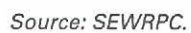


Table 7

## POPULATION DENSITY TRENDS IN THE PRIMARY STUDY AREA: 1963-1990

Year	Urban Population <sup>a</sup>		Rural Population		Total Population	Area (square miles)		Persons per Square Mile	
	Number	Percent of Total	Number	Percent of Total		Urban Development <sup>b</sup>	Total Study Area	Urban Development <sup>b</sup>	Total Study Area
1963 <sup>c</sup>	76,275	85.1	13,379	14.9	89,654	16.56	97.94	4,606	915
1970	84,262	85.4	14,410	14.6	98,672	18.88	97.94	4,463	1,007
1980	85,783	86.9	12,960	13.1	98,743	22.62	97.94	3,792	1,008
1990	94,390	93.6	6,460	6.4	100,850	24.81	97.94	3,805	1,030

<sup>a</sup>Includes urban and "rural nonfarm" population.

<sup>b</sup>For the purposes of this analysis, areas of urban development were defined to include those areas of the Region wherein houses or other buildings have been constructed in relatively compact groups, thereby indicating a concentration of residential, commercial, industrial, governmental, or institutional land uses. The continuity of such development was considered interrupted if a quarter-mile area or more of such nonurban type land uses such as agriculture, woodlands, or wetlands in which the above conditions were generally absent prevailed.

<sup>c</sup>1963 population estimated.

area within the seven-county Southeastern Wisconsin Region; and external interregional trips, which had one trip end within the primary study area and the other trip end in a different area outside the Region.

To facilitate analysis of 1991 person-travel, the primary study area was divided into 21 internal analysis areas, and the areas outside the primary study area was divided into 19 external analysis areas, including 12 areas inside the Region and seven areas outside the Region. The volume of trip productions and attractions<sup>4</sup> in 1991 for each internal

analysis area is shown on Maps 13 and 14. The generalized pattern and volume of the person trips made in 1991 between the primary study area and the external analysis areas inside and outside the Region are presented in Tables 20 and 21. Map 15 graphically illustrates the flow of trips between the primary study area and the external analysis areas and shows principally the volume of trips between place of residence and place of work, shopping, and another destination. These tables and maps lead to the following conclusions:

- About 406,200 person trips with origins or destinations within the primary study area, including both internal and external trips, were made on an average weekday in 1991. This represents an increase in person-travel of about 35 percent since 1963. Most of the observed increase occurred as external person-travel which increased by about 103 percent, from about 62,400 trips in 1963 to about 126,400 trips in 1991. In comparison, internal person trips increased by about 18 percent, from about 238,000 trips in 1963 to about 279,800 trips in 1991.
- About 69 percent of these person trips were made internal to, or inside, the primary study area in 1991, with the largest number being home-based other trips, such as trips made for medical, personal business, or social or recreational purposes. As would be expected, the distribution of person-trip productions reflects the residential concentrations of the

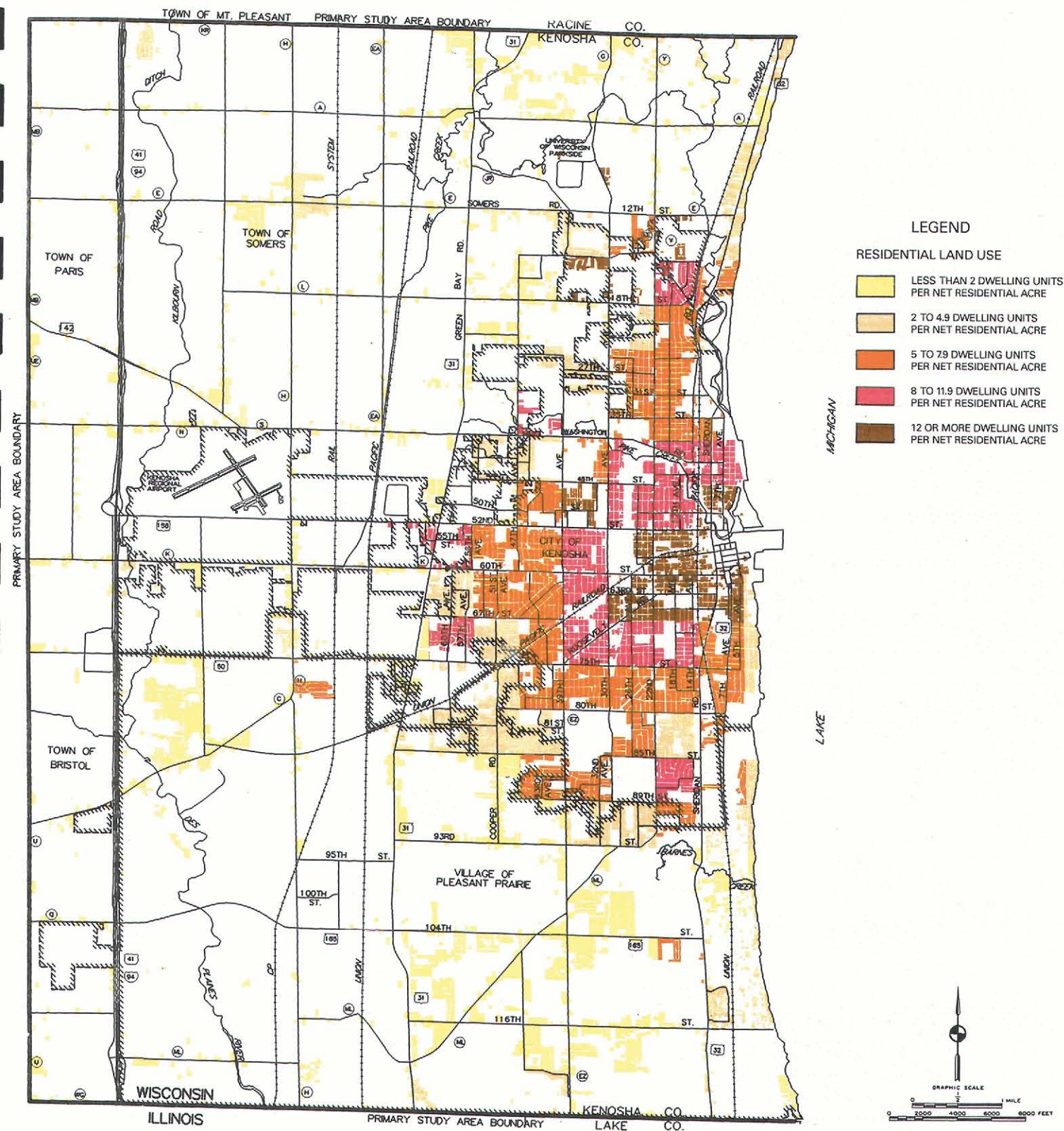
<sup>4</sup>To help identify the residential distribution of trip makers and also the concentrations of work, shopping, educational, or other trip generators, it is convenient to express travel in terms of trip ends, with one end of the trip being the "production end" and the other end being the "attraction end." For trips beginning or ending at home, or home-based trips, the production end is always considered the home end of the trip, while the attraction end is always considered the nonhome end, regardless of the actual direction of the trip. For example, the number of home-based trips produced within a specified area would be the number of trips from homes in that area to places of employment in all other areas plus the number of trips from places of employment in all other areas to homes in the specified area. Conversely, the number of home-based work trips attracted to a specified area would be the number of trips from homes in all other areas to a place of employment within that specified area plus the number of trips from places of employment in that specified area to homes in all other areas. For trips having neither end at home or nonhome-based-trips, the origin of the trip

is defined as the production end, while the destination is defined as the attraction end.



Map 9

RESIDENTIAL LAND USE DENSITY IN THE STUDY AREA: 1990



Source: SEWRPC.

Table 8

## NEW AND PROPOSED RESIDENTIAL DEVELOPMENT IN THE PRIMARY STUDY AREA: 1995-1997

Number on Map 10	Development by Civil Division <sup>a</sup>	Number of Housing Units	Type of Housing Units	Status
	<b>City of Kenosha</b>			
1	Beach Point Apartments .....	146	Multi-family	Under Development
2	Bodner Apartments .....	24	Multi-family	Proposed
3	Cornerstone Condominiums .....	156	Multi-family	Under Development
4	Court Homes at St. Peter's I & II .....	28	Multi-family	Under Development
5	Glenwood Crossing Senior Housing .....	150	Multi-family	Under Development
6	Kenosha Lakefront Development .....	350	Multi-family, Condominiums	Proposed
7	Meadow Green Condominiums .....	36	Multi-family	Proposed
8	Park Ridge Estates Addition No.1 .....	22	Single-family	Existing Platted Subdivision
9	Riverwood Apartments .....	216	Multi-family	Under Development
10	St. Peter's Village .....	60	Multi-family	Under Development
11	Shagbark Apartments .....	198	Multi-family	Under Development
12	Stonefield .....	28	Single-family	Existing Platted Subdivision
13	Stonefield Addition No. 1 .....	25	Single-family	Existing Platted Subdivision
14	Stonefield Addition No. 2 .....	33	Single-family	Existing Platted Subdivision
15	Villa Rae Apartment Complex .....	64	Multi-family	Under Development
16	Westview Apartments .....	24	Multi-family	Under Development
17	Wovenhearts CLA .....	19	Community-based Residential Facility	Proposed
	<b>Village of Pleasant Prairie</b>			
18	Country Corner Subdivision .....	38	Single-family, Duplexes	Proposed
19	Courtyard Junction Apartments .....	96	Multi-family	Under Development
20	Creekside Subdivision .....	421	Single-family, Multi-family, Duplexes	Existing Platted Subdivision
21	Hidden Meadows .....	57	Single-family	Proposed
22	Hidden Oak Apartments .....	324	Multi-family	Proposed
23	High Point Ridge			
	Neighborhood Development .....	N/A	N/A	Proposed
24	Lake Michigan Shores .....	168	Single-family, Multi-family	Existing Platted Condominium
25	Lighthouse Point .....	151	Single-family	Proposed
26	Mission Hills .....	27	Single-family	Existing Platted Subdivision
27	Oakridge Subdivision .....	11	Single-family	Existing Platted Subdivision
28	Prairie Ridge Phase One .....	49	Single-family	Existing Platted Subdivision
29	Prairie Ridge Senior Housing .....	1,060	Multi-family	Proposed
30	Prairie Trails West Addition No. 1 .....	66	Single-family	Existing Platted Subdivision
31	Prairie Village West Condominiums .....	21	Multi-family	Existing Condominium
32	Timberline Terrace Apartments .....	128	Multi-family	Proposed
33	Tobin Creek .....	260	Single-family, Condominiums	Proposed
34	Tobin Woods Estates .....	19	Single-family	Existing Platted Subdivision
35	Villa Genesis Assisted Living .....	52	Assisted Living Apartments	Under Development
36	Village Green Neighborhood Development ...	403	Single-family, Condominiums	Proposed
	<b>Town of Somers</b>			
37	Eaglewood Estates .....	24	Single-family	Existing Platted Subdivision
38	Somers Village Centre .....	128	Multi-family	Proposed
39	Whispering Meadows .....	56	Single-family	Existing Platted Subdivision
40	Whispering Meadows Addition No. 1 .....	26	Single-family	Existing Platted Subdivision

NOTE: N/A indicates data was not available.

<sup>a</sup>Residential development in this table includes only that with 10 or more lots or housing units.

Source: City of Kenosha Department of City Development, Village of Pleasant Prairie Department of Community Development, Town of Somers Department of Public Works, and SEWRPC.

primary study area population. The heaviest concentrations of person-trip attractions within the primary study area were located in the analysis areas containing major office and commercial development.

- The remaining 31 percent of all person trips were made with one trip end external to the primary study area, with most trips made for work purposes. Trips

made between the primary study area and Racine County accounted for about 50,100 trips, or about 40 percent of all external trips. Trips between the primary study area and Lake County, Illinois, the secondary study area for this study, accounted for about 36,500 trips, or about 29 percent, of all external trips. About 75 percent of the trips made between the primary study area and Lake County



Table 9

**NEW AND PROPOSED COMMERCIAL, INDUSTRIAL, AND INSTITUTIONAL  
DEVELOPMENT IN THE PRIMARY STUDY AREA: 1995-1997**

Number on Map 10	Development by Civil Division	Size of Facility	Status	Estimated Average Weekday Vehicle Trips
1	Town of Bristol Commercial/Industrial Quality Inn and Suites .....	100 rooms	Proposed	1,000
2	City of Kenosha Commercial/Industrial/Institutional Aldi .....	15,600 square feet	Completed	2,000
3	AM Credit Union .....	16,768 square feet	Under Development	2,400
4	Burger King .....	3,956 square feet	Completed	2,500
5	Business Park of Kenosha .....	517,200 square feet	Under Development	3,400
6	Eldercare Alzheimer's Facility .....	33 units	Completed	90
7	Harborview .....	41,351 square feet	Under Development	600
8	Indian Trail Academy <sup>a</sup> .....	171,000 square feet	Proposed	1,800
9	Kenosha County House of Corrections .....	156,800 square feet	Under Development	1,000
10	Menards .....	160,680 square feet	Under Development	8,200
11	Northeast Pointe Shopping Center .....	10,832 square feet	Under Development	500
12	Osco .....	16,853 square feet	Under Development	700
13	Pershing Place .....	7,286 square feet	Under Development	300
14	Southport Bank .....	11,800 square feet	Under Development	3,100
15	Southport Plaza .....	64 acres	Under Development	16,000
16	Tinseltown .....	52,500 square feet	Under Development	2,100
17	Woodman's Grocery .....	250,000 square feet	Under Development	19,000
18	Village of Pleasant Prairie Commercial/Industrial/Institutional Catholic Church and School .....	14.00 acres	Proposed	800
19	Crossings Office Development .....	2.03 acres	Proposed	350
20	Lakeside Marketplace Phase Five .....	11.31 acres	Proposed	2,800
21	Lakeview Corporate Park East <sup>b</sup> .....	N/A	Under Development	N/A
22	PDQ Convenience Store and Offices .....	1.94 acres	Proposed	2,200
23	Pleasant Prairie Post Office .....	3.90 acres	Proposed	1,000
24	Radisson Hotel/Conference Center .....	5.59 acres	Under Development	1,500
25	Town of Somers Commercial/Industrial/Institutional Funeral Home .....	9,000 square feet	Proposed	400
26	Student Residence Hall .....	500 rooms	Under Development	800

NOTE: N/A indicates data was not available.

<sup>a</sup>New Kenosha High School under development.

<sup>b</sup>Includes the Cherry Electrical Products Corporation facility under development.

Source: City of Kenosha Department of City Development, Village of Pleasant Prairie Department of Community Development, Town of Somers Department of Public Works, and SEWRPC.

were produced from home locations or origins within the primary study area. A significant volume of external person travel, about 17,600 trips, or about 14 percent of all external trips, was also identified between the primary study area and western Kenosha County and about 9,300 trips, or about 7 percent of all external trips, were made between the primary study area and Milwaukee County.

### **Transit Person Travel Characteristics of Kenosha Transit System Users**

Survey data indicate that about 3,600 transit revenue passenger trips were made on an average weekday in 1991 on the Kenosha transit system, representing about 1.3 percent of the estimated 279,800 average weekday total person trips made entirely within the primary study area. Table 22 summarizes the socio-economic characteris-

Map 10

NEW AND PROPOSED DEVELOPMENT IN THE PRIMARY STUDY AREA: 1995-1997

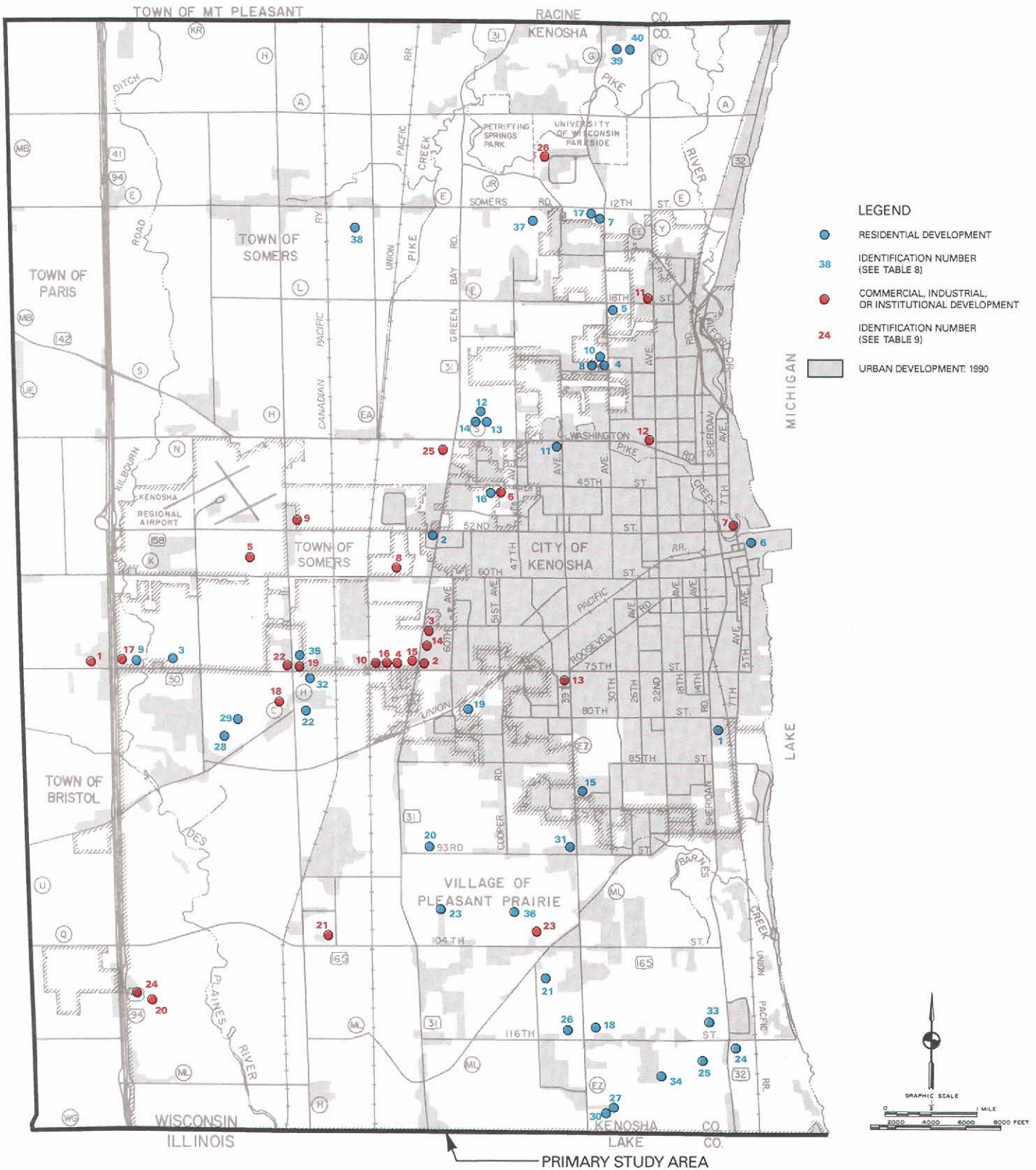


Table 10

## FACILITIES FOR THE ELDERLY WITHIN THE PRIMARY STUDY AREA: 1997

Number on Map 11	Facility <sup>a</sup>	Address <sup>b</sup>
	<b>Residential Care and Day Care Centers</b>	
1	Brookside Care Center .....	3506 Washington Road
2	Carey Manor .....	10628 22nd Avenue, Village of Pleasant Prairie
3	Christopher House VOA <sup>c</sup> .....	8322 14th Avenue
4	Claridge House <sup>c</sup> .....	1519 60th Street
5	Dayton Residential Care <sup>c</sup> .....	521 59th Street
6	Elder Haus of Kenosha .....	7135 and 7207 Green Bay Road
7	Friendship Manor Homes .....	1130 and 1150 82nd Street
8	Hospitality Manor Nursing Home .....	8633 32nd Avenue
9	Kenosha Care Center .....	1703 60th Street
10	Mapleridge Adult Day Care Center <sup>c</sup> .....	1760 22nd Avenue
11	Pennoyer Home .....	6305 7th Avenue
12	R Home .....	7851 115th Avenue, Village of Pleasant Prairie
13	St. Andrew's Place .....	6603 26th Avenue
14	St. James Manor .....	910 59th Street
15	St. Joseph's Home for the Aged .....	9244 29th Avenue, Village of Pleasant Prairie
16	Sheridan Nursing Home .....	8400 Sheridan Road
	Transitional Living <sup>c</sup>	
17	House I .....	6024 18th Avenue
18	House II .....	5909 19th Avenue
19	House III .....	1834 60th Street
20	Washington Manor Nursing Home .....	3100 Washington Road
21	Woodstock Kenosha Health and Rehabilitation Center <sup>c</sup> .....	3415 Sheridan Road
	<b>Residential Facilities and Apartment Complexes</b>	
22	Beeche Point Senior Complex <sup>c</sup> .....	910 85th Street
23	Joanne Apartments <sup>c</sup> .....	8828 41st Avenue
24	Kenosha Gardens .....	5308 64th Avenue
25	Lakeside Towers Apartments <sup>c,d</sup> .....	5800 3rd Avenue
26	Saxony Manor, Inc. ....	1876 22nd Avenue
27	St. Joseph's Villa .....	9250 29th Avenue, Village of Pleasant Prairie
28	Tanglewood Apartments <sup>c</sup> .....	3020 87th Place
29	Tuscan Villas <sup>c</sup> .....	8051 25th Avenue
30	Villa Nova Apartments <sup>c</sup> .....	2401 18th Street
	<b>Senior Centers and Nutrition Sites</b>	
31	Kenosha Senior Citizen Center .....	2717 67th Street
32	Parkside Baptist Church <sup>e</sup> .....	2620 14th Place
33	St. Paul's Lutheran Church <sup>e</sup> .....	8760 37th Avenue
	<b>Referral Facility and Volunteer Service Offices</b>	
34	Kenosha Area Family and Aging Services, Inc. ....	7730 Sheridan Road
35	Kenosha County Job Center .....	8600 Sheridan Road
36	Kenosha County Department of Human Services, Division of Aging Services .....	5407 8th Avenue
37	Retired Senior Volunteer Program .....	714 58th Street
38	Senior Action Council of Kenosha County .....	625 52nd Street

<sup>a</sup>A number of the low-income family housing facilities in Table 12 are noted as also serving elderly individuals.

<sup>b</sup>All addresses are in the City of Kenosha, unless otherwise noted.

<sup>c</sup>Facility also provides housing for the disabled.

<sup>d</sup>Facility also serves as a nutrition site.

<sup>e</sup>Facility serves as a nutrition site only.

Source: Kenosha County Department of Human Services, Division of Aging Services, and SEWRPC.

Table 11

## FACILITIES FOR THE DISABLED WITHIN THE PRIMARY STUDY AREA: 1997

Number on Map 11	Facility <sup>a</sup>	Address <sup>b</sup>
1	Residential Care and Housing Facilities	
2	Kenosha Group Home .....	4831-33 47th Avenue
3	Santschi House .....	7835 17th Avenue
4	Victorian Manor .....	6416 22nd Avenue
	Windy Oaks Group Home .....	11831 120th Avenue, Village of Pleasant Prairie
5	Rehabilitation, Training, and Employment Facilities	
	Developmental Disabilities Service Center, Inc. ....	3734 7th Avenue
6	Kenosha Achievement Center	
	Main Facility <sup>c</sup> .....	1218 79th Street
7	West Facility .....	7405 30th Avenue
8	Kenosha Hospital and Medical Center .....	6308 8th Avenue
9	St. Catherine's Hospital .....	3556 7th Avenue
10	Referral Facilities	
11	Kenosha County Job Center .....	8600 Sheridan Road
12	Kenosha County Social Services .....	714 52nd Street
13	Kenosha Human Development Services, Inc. ....	5407 8th Avenue
	Society's Assets .....	1202 60th Street

<sup>a</sup>A number of the elderly facilities in Table 10 and low-income housing facilities in Table 12 are noted as also serving disabled individuals.

<sup>b</sup>All addresses are in the City of Kenosha unless otherwise noted.

<sup>c</sup>Facility also serves as meeting place for ABLE, a support group for individuals with disabilities.

Source: Kenosha County Department of Human Services, Division of Aging Services, and SEWRPC.

Table 12

## FEDERALLY ASSISTED RENTAL HOUSING WITHIN THE PRIMARY STUDY AREA: 1997

Number on Map 11	Housing Facility <sup>a</sup>	Address
1	Arbor Green <sup>b</sup> .....	6001-6025 55th Street
2	Birch Gardens <sup>c</sup> .....	1666 Birch Road
3	Briarcliff Apartments .....	2150 89th Street
	Forest Court <sup>b</sup>	
4	Birch Road .....	1745-1793 Birch Road
5	52nd Street .....	5605-5611 52nd Street
6	47th Avenue .....	4915-4925 47th Avenue
7	Forest Towers-Metro <sup>b</sup> .....	8200 and 8212 14th Avenue
8	Glenview Apartments .....	53rd Street and 43rd Avenue
	Sheridan-Lincoln Park <sup>c</sup>	
9	82nd Street .....	1101 82nd Avenue
10	17th Avenue .....	6600, 6627, 6642, and 6705 17th Avenue
11	Washington Park Apartments .....	2805 40th Street

<sup>a</sup>The facilities listed are primarily for low income families. Three housing facilities for the elderly shown in Table 10 are also low income housing facilities: Kenosha Gardens, Tuscan Villas, and Villa Nova Apartments.

<sup>b</sup>Facility also serves disabled individuals.

<sup>c</sup>Facility also serves elderly individuals.

Source: Wisconsin Housing and Economic Development Authority, and SEWRPC.



Map 11

MAJOR TRANSIT-DEPENDENT POPULATION TRIP GENERATORS WITHIN THE PRIMARY STUDY AREA: 1997

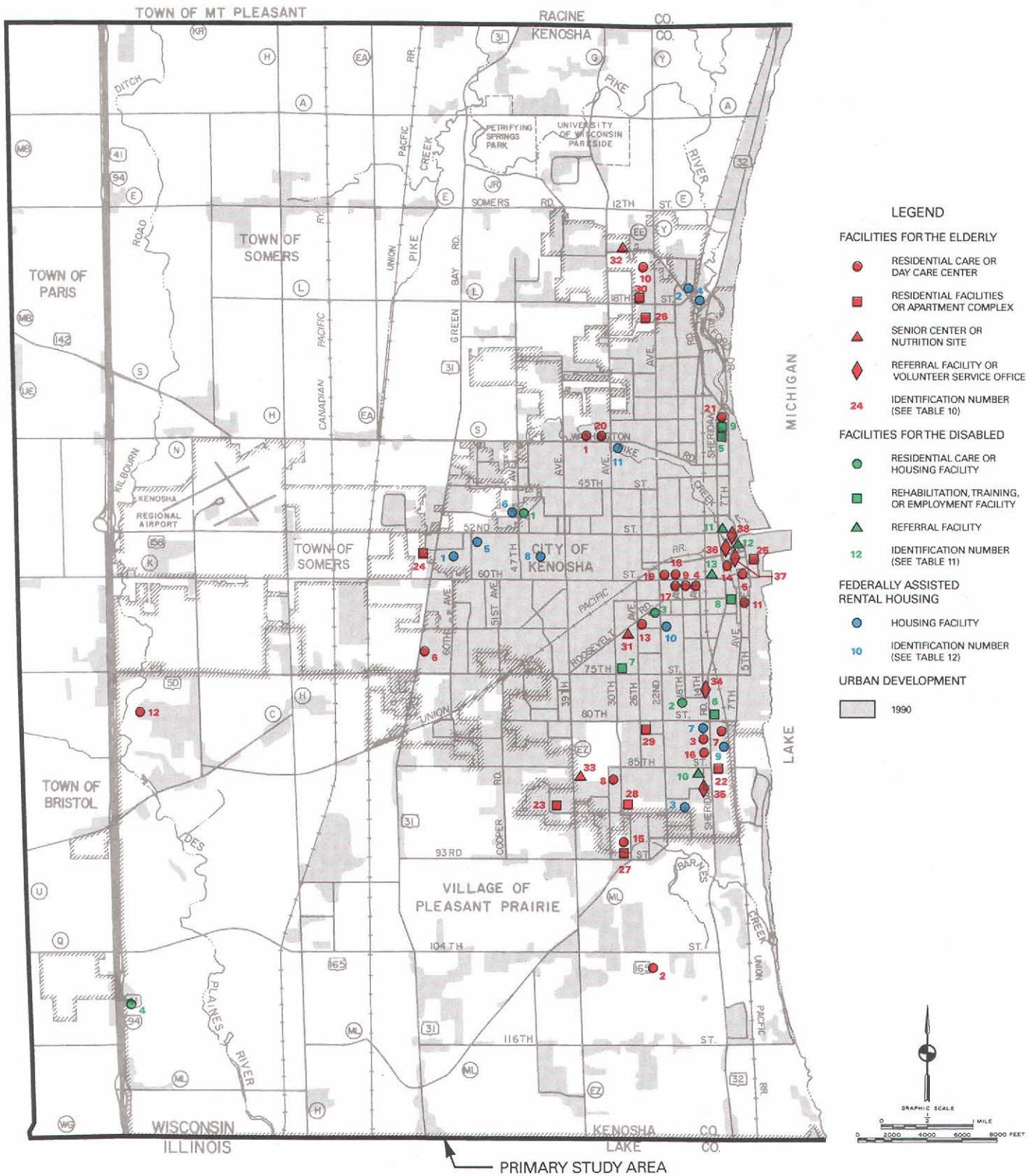


Table 13

## COMMERCIAL CENTERS WITHIN THE PRIMARY STUDY AREA: 1997

Number on Map 12	Commercial Center	Location <sup>a</sup>
1	Regional <sup>b</sup> Kenosha Central Business District Office Center .....	Area bounded by 52nd Street, Union Pacific Railroad Right-of-way, 60th Street, and Lake Michigan
2	Major Community <sup>c</sup> Factory Outlet Center .....	IH 94 and STH 50, Town of Bristol
3	52nd Street Commercial Area <sup>d</sup> .....	52nd Street between 30th Avenue and Pershing Boulevard
4	Lakeside Marketplace Shopping Center .....	IH 94 and STH 165, Village of Pleasant Prairie
5	Pershing Plaza .....	75th Street and Pershing Boulevard
6	Shopko Department Store .....	5300 52nd Street
7	Southport Plaza .....	6804 Green Bay Avenue
8	Minor Community <sup>e</sup> 80th Street Commercial Area <sup>f</sup> .....	80th Street between 30th Avenue and 39th Avenue
9	Glenwood Crossings .....	18th Street and 27th Avenue
10	Midtown Shopping District .....	52nd Street between 19th Avenue and 23rd Avenue
11	Roosevelt Road Shopping District .....	Between 30th Avenue and 39th Avenue
12	75th Street Commercial Area <sup>g</sup> .....	75th Street between 46th Avenue and 60th Avenue
13	Simmons Plaza .....	7709 Sheridan Road
14	Sunnyside Shopping Center .....	22nd Avenue between 75th Street and 80th Street
15	Uptown Business District .....	22nd Avenue between 61st Street and Roosevelt Road
16	Villa Capri Shopping Center .....	2121 21st Street

<sup>a</sup>All locations are in the City of Kenosha unless otherwise noted.

<sup>b</sup>Major regional commercial centers include retail centers and office centers. Major office centers are defined as concentrations of employment with at least 3,500 jobs in the office and service sectors. Major retail centers were defined as concentrations of employment with at least 2,000 jobs in the retail trade sector. No major regional retail commercial centers were identified within the study area in 1997. The Racine-West retail center, which includes the Regency Mall Shopping Center, is located in neighboring Racine County, approximately two miles north of the Racine-Kenosha County line. It is the closest major retail commercial center and can be expected to attract a large number of daily trips from inside the study area.

<sup>c</sup>Major community shopping areas were defined as concentrations of retail and service establishments which typically include a junior department store, variety store, or discount store along with a supermarket, and which are generally located on sites of 15 to 60 acres with a gross leasable floor space of between 150,000 and 400,000 square feet. Such shopping areas are oriented to the community as a whole, rather than to the immediate neighborhood.

<sup>d</sup>Includes K-Mart and Wal-Mart Department Stores and Sun Plaza shopping center.

<sup>e</sup>Minor community shopping areas were defined as concentrations of retail and service establishments which typically included a grocery store or supermarket and such other establishments as drugstores, hardware stores, dry cleaners, and other service-oriented businesses, and are generally located on sites of three to 15 acres, with a gross leasable floor space of between 50,000 and 150,000 square feet. Such shopping areas are intended to serve the day-to-day shopping and service needs of nearby residents conveniently.

<sup>f</sup>Includes Greenwood Plaza, Friars Wood Country Village, and Super Value Food and Drug store.

<sup>g</sup>Includes Pick 'N Save and Town and Country shopping center.

Source: SEWRPC.

tics of all Kenosha transit system revenue passengers in 1991, including passengers on both the regular and peak-hour tripper routes operated by the system. The hourly distributional pattern of transit system revenue passengers is shown in Figure 1. Maps 16 and 17 illustrate graphically the distribution of transit person trip productions and attractions by the internal analysis areas

developed for analysis of total person travel. The following observations may be made based upon the examination of this information:

- Kenosha transit system passengers on regular routes were predominantly female, without a valid drivers license, ages 34 and under, and from households

Table 14

## EDUCATIONAL INSTITUTIONS WITHIN THE PRIMARY STUDY AREA: 1997

Number on Map 12	Educational Institution	Address <sup>a</sup>	Approximate Enrollment
1	Universities and Colleges		
2	Carthage College .....	2001 Alford Drive	1,430
3	Gateway Technical College .....	3520 30th Avenue	5,310
	University of Wisconsin-Parkside .....	Wood Road, Town of Somers	4,260
4	Public Junior and Senior High Schools <sup>b</sup>		
5	Bradford High School .....	3700 Washington Road	1,640
6	Bullen Junior High School .....	2804 39th Avenue	890
7	Lance Junior High School .....	4515 80th Street	930
8	Lincoln Junior High School .....	6729 18th Avenue	880
9	McKinley Junior High School .....	5710 32nd Avenue	640
10	Reuther Alternative High School .....	913 57th Street	380
11	Tremper High School .....	8560 26th Avenue	1,770
	Washington Junior High School .....	811 Washington Road	720
12	Major Parochial and Private Schools <sup>c</sup>		
13	Armitage Academy .....	6032 8th Avenue	110
14	Christian Life High School and Elementary School .....	10700 75th Street	490
15	Friedens Lutheran Elementary School .....	5043 20th Avenue	170
16	Holy Rosary Elementary School .....	4400 22nd Avenue	330
17	Our Lady of Mt. Carmel Elementary School .....	5400 19th Avenue	120
18	St. Joseph's High School and Junior High School .....	2401 69th Street	580
19	St. Mark's Elementary School .....	7207 14th Avenue	240
20	St. Mary's Elementary School .....	7400 39th Avenue	390
21	St. Peter's Elementary School .....	2224 30th Avenue	110
22	St. Therese Elementary School .....	2020 91st Street	110
	Shoreland Lutheran High School .....	9026 12th Street, Town of Somers	240

<sup>a</sup>All addresses are in the City of Kenosha unless otherwise noted.

<sup>b</sup>Public high schools and middle schools were identified as major potential transit trip generators because students at this level often are involved in extracurricular activities or have a part-time jobs after school hours and may be in need of transportation beyond that provided by the local school district or their families. Public elementary schools were not considered as major potential transit trip generators because their students generally have fewer school-sponsored after-school activities, typically live in relatively close proximity to the school permitting them to travel by walking or bicycling, or are likely to have transportation regularly provided by the local school district or by their families.

<sup>c</sup>Parochial and private schools were identified as major potential transit trip generators because students are drawn from a larger area than the surrounding neighborhoods.

Source: Wisconsin Department of Public Instruction, and SEWRPC.

with incomes below \$20,000 per year. Most of the trips made on the Kenosha transit system regular routes were for school or work purposes. The characteristics of the passengers using the system's peak-hour tripper routes reflect the predominance of school-age children using this service to travel to and from elementary and secondary schools in the City.

- Most of the travel on the transit system occurred during the two peak periods of transit ridership, from 6:30 to 8:00 a.m. and from 2:30 to

4:00 p.m. Approximately 62 percent of the total daily ridership occurred during these two peak periods, with the morning ridership peak accounting for about 33 percent, and the afternoon peak accounting for about 29 percent.

- The distribution of transit trip productions in the primary study area reflects the concentrations of population within the City of Kenosha, with the heaviest concentration of person trip productions located in the residential northeastern area of the City of Kenosha. The concentrations of



Table 15

## MEDICAL CENTERS WITHIN THE PRIMARY STUDY AREA: 1997

Number on Map 12	Medical Center	Address <sup>a</sup>
1	Community Medical Centers <sup>b</sup>	
2	Kenosha Hospital and Medical Center .....	6308 8th Avenue
	St. Catherine's Hospital .....	3556 7th Avenue
3	Special Medical Centers <sup>c</sup>	
4	Aurora Health Center .....	10400 75th Street
5	Dominican Medical Building .....	3734 7th Avenue
6	Doctor's Park .....	6530 Sheridan Road
7	Family Practice Associates of Kenosha .....	3535 30th Avenue
8	Lakeshore Medical Building .....	3618 8th Avenue
9	Northside Professional Building .....	3200 Sheridan Road
10	Romani Neighborhood Clinic .....	4507 23rd Avenue
11	St. Catherine's Family Practice Center, University of Wisconsin-Parkside .....	900 Wood Road, Town of Somers
	St. Catherine's Medical Campus West .....	7201 Green Bay Road

<sup>a</sup>All addresses are in the City of Kenosha unless otherwise noted.

<sup>b</sup>Defined as a hospital with a least 100 beds and providing inpatient and outpatient facilities and laboratory and clinical services.

<sup>c</sup>Defined as all other major medical facilities and special clinics offering multispecialty medical services.

Source: SEWRPC.

Table 16

## GOVERNMENTAL AND PUBLIC INSTITUTIONAL CENTERS WITHIN THE PRIMARY STUDY AREA: 1997

Number on Map 12	Institutional Center	Address <sup>a</sup>
1	Regional and County	
2	G. M. Simmons Main Library .....	711 59th Place
3	Kenosha County Courthouse .....	912 56th Street
4	Kenosha County Historical Society and Museum .....	6300 3rd Avenue
5	Kenosha City and County Safety Building .....	1000 55th Street
6	Kenosha County Social Services Building .....	714 52nd Street
7	Kenosha County Department of Aging and Long Term Care .....	5407 8th Avenue
8	Kenosha County Job Center .....	8600 Sheridan Road
9	Social Security Administration .....	5624 6th Avenue
	Wisconsin Department of Health and Social Services Division of Vocational Rehabilitation .....	712 55th Street
10	Community	
11	Local Government	
12	Kenosha Municipal Building .....	625 52nd Street
13	Pleasant Prairie Village Hall .....	9915 39th Avenue, Village of Pleasant Prairie
14	Roger Prange Municipal Building .....	8600 Green Bay Road, Village of Pleasant Prairie
15	Somers Town Hall .....	7511 12th Street, Town of Somers
16	Kenosha Public Library Branches	
17	Northside Branch .....	1500 27th Avenue
18	Southwest Branch .....	7979 38th Avenue
19	West Branch .....	2419 63rd Street
	U. S. Post Office	
	Kenosha Main Office .....	5605 Sheridan Road
	Pleasant Prairie Office .....	8451 104th Avenue, Village of Pleasant Prairie
	Somers Office .....	7621 12th Street, Town of Somers
20	Other	
21	Kenosha Public Museum .....	5608 10th Avenue
	Kenosha Unified School District Offices .....	3600 52nd Street

<sup>a</sup>All addresses are in the City of Kenosha unless otherwise noted.

Source: SEWRPC.

Table 17

## MAJOR EMPLOYMENT CENTERS WITHIN THE PRIMARY STUDY AREA: 1997

Number on Map 12	Employment Center	Address <sup>a</sup>	Approximate Employment <sup>b</sup>			
			100-249	250-499	500-999	1,000 or More
1	Industrial and Manufacturing					
2	Albany Chicago, Inc. ....	8200 100th Street	x	--	--	--
3	ATC Leasing Company ....	4314 39th Avenue	x	--	--	--
4	Chicago Lock ....	10100 88th Avenue	x	--	--	--
5	Chrysler Motors ....	5626 25th Avenue	--	--	--	x
6	Doheny Enterprises ....	6950 51st Street	x	--	--	--
7	Eaton Corporation & Cutler-Hammer, Inc. ....	3122 14th Avenue	x	--	--	--
8	Fair Oaks Farms, Inc. ....	7600 95th Street, Village of Pleasant Prairie	x	--	--	--
9	Jockey International, Inc. ....	2300 60th Street	--	x	--	--
10	Laminated Products, Inc. ....	5718 52nd Street	x	--	--	--
11	Lawter International, Inc. ....	8601 95th Street	x	--	--	--
12	G. LeBlanc Corporation ....	7019 30th Avenue	x	--	--	--
13	MacWhyte Company ....	2906 14th Avenue	--	x	--	--
14	Manu-Tronics ....	8701 100th Street, Village of Pleasant Prairie	--	x	--	--
15	Martin Petersen Company, Inc. ....	9625 55th Street	x	--	--	--
16	Ocean Spray Cranberries, Inc. ....	7800 60th Avenue	--	x	--	--
17	Outokumpo Copper Kenosha, Inc. ....	1420 63rd Street	--	x	--	--
18	Rust Oleum ....	8105 Fergusson Drive	x	--	--	--
19	Snap-On Tools Corporation ....	2801 80th Street	--	--	--	x
20	Supervalu Distribution Center ....	7400 95th Street, Village of Pleasant Prairie	--	--	x	--
21	Tri-Clover Inc. ....	9201 Wilmot Road, Village of Pleasant Prairie	--	--	x	--
22	Unified Solutions ....	9801 80th Avenue	x	--	--	--
	Westvaco ....	5612 95th Avenue	x	--	--	--
23	Retail and Service					
24	Bank One Kenosha ....	5522 6th Avenue	x	--	--	--
25	Dairyland Greyhound Park ....	5522 104th Avenue	--	x	--	--
26	K-Mart Department Store ....	4100 52nd Street	x	--	--	--
27	Kenosha News ....	715 58th Street	--	x	--	--
28	Laidlaw Transit, Inc. ....	6015 52nd Street	x	--	--	--
29	Mauro Auto Mall ....	8200 120th Avenue	x	--	--	--
30	Pick 'N Save ....	5914 75th Street	x	--	--	--
31	Sears, Roebuck and Company ....	7630 Pershing Boulevard	x	--	--	--
32	Sentry Food Stores. ....	8207 22nd Avenue	x	--	--	--
33	Shopko Stores, Inc. ....	5300 52nd Street	x	--	--	--
34	Supersaver ....	2811 18th Street	x	--	--	--
35	United Health ....	8633 32nd Avenue	x	--	--	--
36	Wal-Mart Department Store ....	4404 52nd Street	x	--	--	--
	Wisconsin Electric Power Company- Pleasant Prairie Generating Station ....	8000 95th Street, Village of Pleasant Prairie	x	--	--	--
37	Governmental and Institutional					
38	Brookside Care Center ....	3506 Washington Road	--	x	--	--
39	Kenosha Achievement Center ....	1218 79th Street	--	x	--	--
40	Kenosha Care Center ....	1703 60th Street	x	--	--	--
41	Kenosha City and County Safety Building ....	1000 55th Street	x	--	--	--
42	Kenosha County Courthouse ....	912 56th Street	x	--	--	--
43	Kenosha Hospital and Medical Center ....	6308 8th Avenue	--	--	x	--
44	Kenosha Municipal Building ....	625 52nd Street	x	--	--	--
45	Kenosha Unified School District Offices ....	3600 52nd Street	x	--	--	--
46	St. Catherine's Hospital ....	3556 7th Avenue	--	--	x	--
47	St. Joseph's Home for the Aged ....	9244 29th Avenue, Village of Pleasant Prairie	x	--	--	--
48	Sheridan Nursing Home ....	8400 Sheridan Road	x	--	--	--
49	U. S. Postal Service-Kenosha Office ....	5605 Sheridan Road	x	--	--	--
50	Washington Manor Nursing Home ....	3100 Washington Road	x	--	--	--
	Woodstock Kenosha Health and Rehabilitation Center ....	3415 Sheridan Road	--	x	--	--
51	Educational					
52	Bradford High School ....	3700 Washington Road	x	--	--	--
53	Carthage College ....	2001 Alford Drive	--	x	--	--
54	Gateway Technical College ....	3520 30th Avenue	--	x	--	--
55	Tremper High School ....	8560 26th Avenue	x	--	--	--
	University of Wisconsin-Parkside ....	Wood Road, Town of Somers	--	x	--	--

<sup>a</sup>All addresses are in the City of Kenosha unless otherwise noted.

<sup>b</sup>Only major employment centers having an employment of 100 or more persons are listed.

Source: Wisconsin Department of Natural Resources, Wisconsin Department of Workforce Development, and SEWRPC.

transit trip attractions largely reflect the locations of schools and employment concentrations within the City of Kenosha.

### **Personal Opinion Survey<sup>5</sup>**

As part of the 1991 home interview survey, a special survey was conducted to obtain the opinions, preferences, and attitudes, not the behavior, of heads of households or their spouses on certain travel-related issues, including the use of public transit. Preferences were expressed without regard to the practicality of satisfying those preferences in the face of economic and other realities. The 1991 survey, which reflected the attitudes of the more than 1,700 households responding to the survey, can be used to provide some insight into attitudes toward the use of public transit.

One part of the questionnaire asked the respondents to indicate agreement or disagreement with various actions that could be taken to reduce automobile travel, particularly work-related travel, to meet the requirements of the Federal Clean Air Act. A second part of the questionnaire asked respondents to indicate agreement or disagreement with factors that would need to change before they would carpool or use transit if they currently drive alone to and from work. The responses to the questions are summarized in Tables 23 and 24. The information presented in these tables indicates the following:

- The action to reduce work-related automobile travel approved most frequently, by 82 percent of the respondents, was to improve public transit and thereby encourage and facilitate more transit use, including the provision of more available, faster, and more frequent bus transit. The action opposed most frequently, by 74 percent of the respondents, was the elimination of free employee parking to encourage more carpooling and transit use.
- Of the factors that would need to change before respondents would carpool or use transit, the following the following three were cited most frequently:

1) faster and more frequent public bus transit, cited by 60 percent, 2) faster and more frequent public transit, including light-rail transit and commuter-rail transit, cited by 50 percent, and 3) carpool incentives, such as exclusive carpool freeway lanes and priority parking, cited by 50 percent. Only a small percentage, 16 and 14 percent, respectively, of respondents indicated that elimination of free workplace parking or substantially increased automobile costs would encourage them to consider alternatives to driving alone to work. Respondents may have reacted to these last two proposed actions, not with respect to potential to change their travel behavior, but, rather, with respect to their disapproval of increases in the cost of operating an automobile.

### **Focus Groups for Regional Transit Marketing Program**

Special focus-group discussions were conducted as part of a regional marketing program for the bus systems in Southeastern Wisconsin, including the Milwaukee County Transit System, the Kenosha transit system, the Racine Belle Urban System, and Waukesha Metro Transit. The program, which began in 1996, is funded in part through a Federal Congestion Mitigation and Air Quality Improvement program grant administered by the Wisconsin Department of Transportation. The efforts were undertaken during 1996 and 1997 by a private market research firm, Northwest Research Group, Inc., to identify potential bus riders in each service area and reasons why they were not using transit.

The Research Group conducted four focus-group discussions in late January 1996, including two directed at the transit systems serving the Kenosha and Racine areas and two directed at the transit systems serving Milwaukee and Waukesha Counties. For each of the target areas, one group was comprised of transit "riders," which included individuals who had made at least one round trip by public transit within the past 30 days. The other group was comprised of "nonriders," which included individuals who did not use transit but had indicated they would be at least somewhat likely to consider using it if service was available. The Kenosha-Racine focus groups consisted of a total of 20 individuals, including 11 riders of the Kenosha or Racine transit systems and nine nonriders, with participants representing a mix of different demographic characteristics. Participants of the focus groups were asked a number of questions designed to provide an understanding of the characteristics of riders and nonriders, attitudes toward using public transit including potential benefits and barriers to use, and possible

<sup>5</sup>The Commission's household personal opinion survey was conducted shortly after the passage of the Clean Air Act Amendments of 1990. One of the requirements of the Act was to reduce work-travel in single-occupant vehicles in areas which did not meet Federal air quality standards, such as the counties within the Southeastern Wisconsin Region. The survey questions for which data are reported in this section were largely intended to ascertain attitudes toward such alternatives to driving alone to work as using public transit or carpooling.

Table 18

## MAJOR RECREATIONAL AREAS WITHIN THE PRIMARY STUDY AREA: 1997

Number on Map 12	Recreational Area	Civil Division
1	Regional <sup>a</sup> Petrifying Springs Park .....	Town of Somers
2	Major Community <sup>b</sup> Alford Park .....	City of Kenosha
3	James Anderson Park .....	City of Kenosha
4	J. F. Kennedy Park .....	City of Kenosha
5	Kemper Center .....	City of Kenosha
6	Lincoln Park .....	City of Kenosha
7	Nash Park .....	City of Kenosha
8	Pennoyer Park .....	City of Kenosha
9	Petretti Park .....	City of Kenosha
10	Petzke Park .....	City of Kenosha
11	Prairie Spring Park .....	Village of Pleasant Prairie
12	Sam Poerio Park .....	City of Kenosha
13	Simmons Island Park .....	City of Kenosha
14	Southport Park .....	City of Kenosha
15	University of Wisconsin-Parkside .....	Town of Somers
16	Washington Park and Golf Course .....	City of Kenosha
17	Wolfenbuttel Park .....	City of Kenosha
18	Special <sup>c</sup> Dairyland Greyhound Park .....	City of Kenosha
19	Kenosha County Ice Arena .....	City of Kenosha
20	Kenosha Little League Park .....	City of Kenosha
21	Pleasant Prairie Ball Park .....	Village of Pleasant Prairie
22	Roosevelte Park Softball Diamonds .....	City of Kenosha
23	Simmons Athletic Field .....	City of Kenosha
24	Somers Athletic Field .....	Town of Somers
25	Southport Marina .....	City of Kenosha

<sup>a</sup>Defined as public recreation sites of at least 250 acres in size offering multiple recreational opportunities.

<sup>b</sup>Defined as multiple-use public recreation sites which are community-oriented in service area and which contain such community recreation facilities as baseball or softball diamonds, soccer or football fields, swimming pools or beaches, or tennis courts.

<sup>c</sup>Defined as public and private recreational areas or facilities used primarily for special purposes.

Source: SEWRPC.

marketing strategies to encourage ridership. The major findings of the Kenosha-Racine focus-group discussions may be summarized as follows:

- Participants in the rider focus group were primarily transit-dependent individuals. Most participants in the nonrider focus group used their own personal automobile for travel but had past experience with using public transit for travel to downtown areas, to special events where parking cost or availability

was an issue, when visiting other cities, or when their car was not available.

- The rider focus group used bus service for many trip purposes, with the few choice riders in this group often using the bus during inclement weather. In contrast, participants in the nonrider group indicated that the bus was not viewed as an option for regular travel. If their car was not available for a trip, they would ride with someone else or stay at home.

Map 12

MAJOR LAND USE TRIP GENERATORS IN THE PRIMARY STUDY AREA: 1997

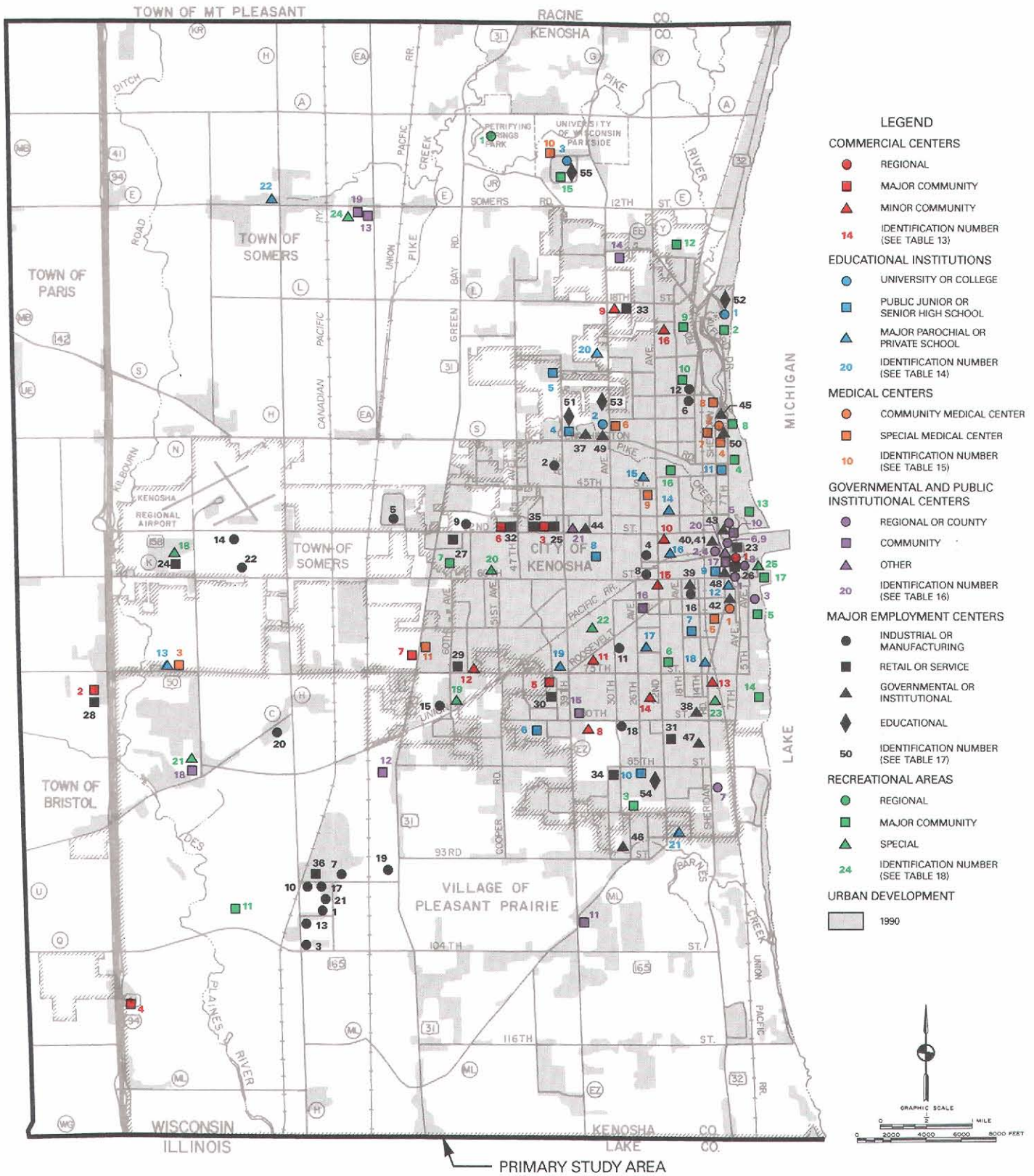


Table 19

**DISTRIBUTION OF AVERAGE WEEKDAY PERSON TRIPS FOR THE  
PRIMARY STUDY AREA BY TRIP PURPOSE: 1963, 1972, AND 1991**

Area	Trip Purpose <sup>a</sup>	Person Trips						Change in Person Trips			
		1963		1972		1991		1963-1991		1972-1991	
		Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Inside the Primary Study Area	Home-based work	39,000	16.4	49,400	15.6	47,000	16.8	8,000	20.5	-2400	-4.9
	Home-based shopping	38,800	16.3	50,400	16.0	40,600	14.5	1,800	4.6	-9800	-19.4
	Home-based other	98,500	41.4	128,700	40.7	101,900	36.4	3,400	3.5	-26800	-20.8
	Nonhome-based	46,900	19.7	55,500	17.6	60,400	21.6	13,500	28.8	4,900	8.8
	School	14,800	6.2	31,900	10.1	29,900	10.7	15,100	102.0	-2000	-6.3
	Total	238,000	100.0	315,900	100.0	279,800	100.0	41,800	17.6	-36100	-11.4
Between the Primary Study Area and Other Areas Inside the Region	Home-based work	11,800	32.0	14,500	33.3	23,400	29.1	11,600	98.3	8,900	61.4
	Home-based shopping	4,700	12.7	4,400	10.1	11,600	14.4	6,900	146.8	7,200	163.6
	Home-based other	12,500	33.9	12,700	29.1	20,400	25.4	7,900	63.2	7,700	60.6
	Nonhome-based	7,100	19.2	7,600	17.4	15,800	19.7	8,700	122.5	8,200	107.9
	School	800	2.2	4,400	10.1	9,200	11.4	8,400	1,050.0	4,800	109.1
	Total	36,900	100.0	43,600	100.0	80,400	100.0	43,500	117.9	36,800	84.4
Between the Primary Study Area and Areas Outside the Region	Home-based work	8,600	33.7	10,600	40.3	27,500	59.8	18,900	219.8	16,900	159.4
	Home-based shopping	2,500	9.8	3,000	11.4	4,800	10.4	2,300	92.0	1,800	60.0
	Home-based other	10,800	42.4	9,900	37.6	9,600	20.9	(1,200)	-11.1	-300	-3.0
	Nonhome-based	3,300	12.9	2,100	8.0	3,300	7.2	--	--	1,200	57.1
	School	300	1.2	700	2.7	800	1.7	500	166.7	100	14.3
	Total	25,500	100.0	26,300	100.0	46,000	100.0	20,500	80.4	19,700	74.9
Total	Home-based work	59,400	19.8	74,500	19.3	97,900	24.1	38,500	64.8	23,400	31.4
	Home-based shopping	46,000	15.3	57,800	15.0	57,000	14.0	11,000	23.9	-800	-1.4
	Home-based other	121,800	40.5	151,300	39.2	131,900	32.5	10,100	8.3	-19400	-12.8
	Nonhome-based	57,300	19.1	65,200	16.9	79,500	19.6	22,200	38.7	14,300	21.9
	School	15,900	5.3	37,000	9.6	39,900	9.8	24,000	150.9	2,900	7.8
	Total	300,400	100.0	385,800	100.0	406,200	100.0	105,800	35.2	20,400	5.3

<sup>a</sup>The trip data were grouped into five categories of travel purpose: home-based work trips, home-based shopping trips, home-based other trips, nonhome-based trips, and school-based trips. Home-based work trips are defined as trips having one end at the place of residence of the tripmaker and the other end at the place of work. Home-based shopping trips are defined as trips having one end at the place of residence of the tripmaker and the other end at a shopping place of destination. Home-based other trips are defined as trips having one end at the place of residence of the tripmaker and the other end at a place of destination other than home, work, shopping, or school. Such trips would include trips made for social, recreation medical, and personal business. Nonhome-based trips are defined as trips that neither originate or end at home. School-based trips are defined as having at least one end at school.

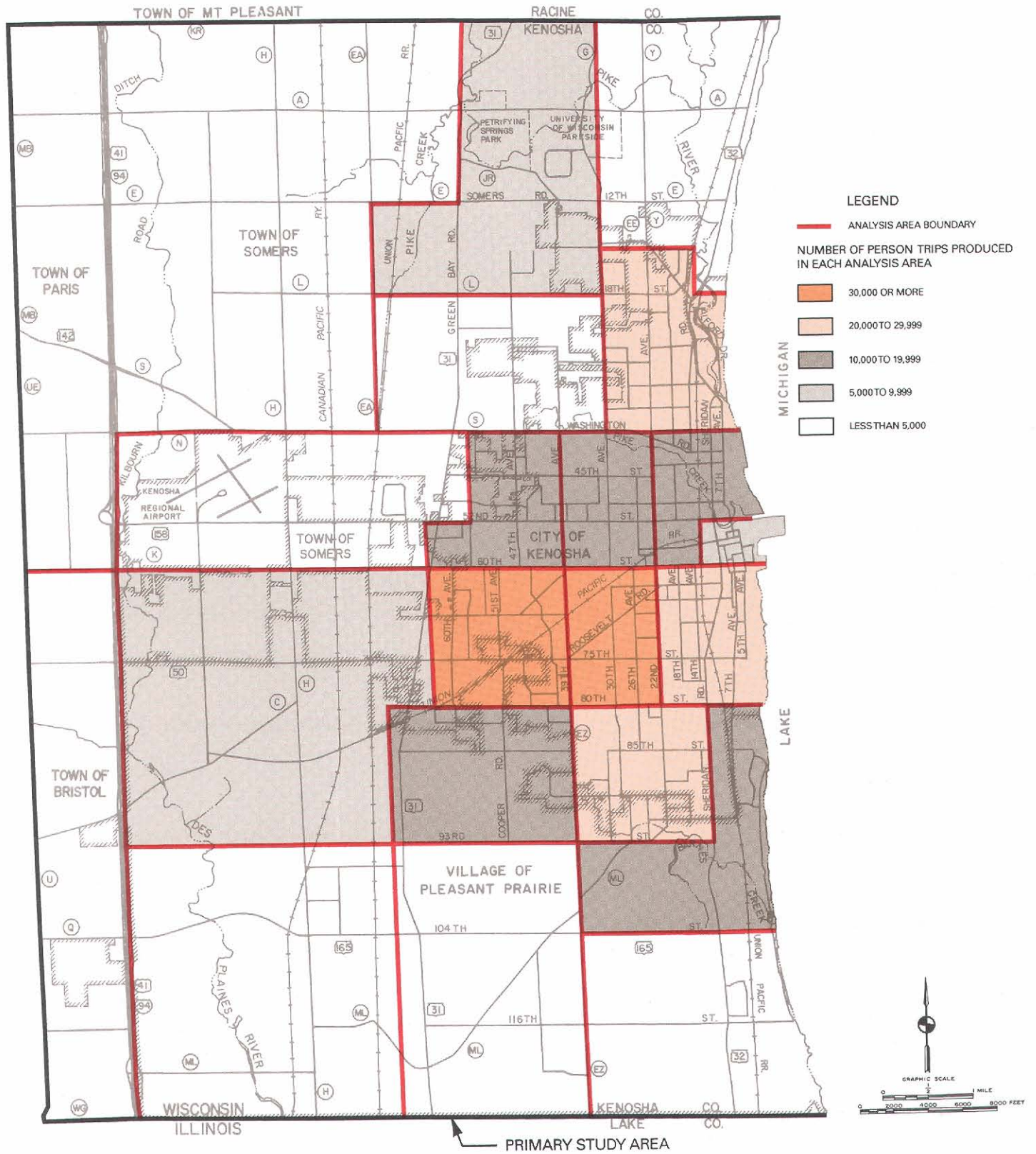
Source: SEWRPC.

- Most participants in the nonrider group indicated they would ride the bus if the right circumstances were present, with use of public transit to special events or to destinations where parking was costly or unavailable showing the greatest potential for at least occasional use of transit. Most nonriders considered transit-dependent riders to be economically disadvantaged individuals, a viewpoint which limited their further consideration of using transit.
- The benefits of using transit cited by riders focused primarily on the convenience and ease of using transit where bus service was readily available and mentioned that transit was less stressful, cost less than driving a car, and providing individuals with a degree of independence and the opportunity to socialize with others. For nonriders, the benefits of transit most often cited were how transit could benefit others or the community at large rather than themselves, most often in terms of environmental or economic benefits.
- Major barriers to the use of transit cited by both riders and nonriders included inconveniences associated using transit, such as limited access to service, lack of direct service and long travel times; concerns about personal safety and security while riding on, or waiting for, a bus; and simply not knowing how to use the transit system because of a lack of knowledge of routes and schedules. Other barriers cited by riders included the perceptions of social class associated with transit users and problems with snow at bus stops. Other barriers cited by nonriders included the lack of service in a particular area or at the right time and indirect service.
- Both riders and nonriders suggested more advertising and promotions to increase awareness and



Map 13

TOTAL PERSON TRIP PRODUCTIONS BY INTERNAL ANALYSIS AREA IN THE PRIMARY STUDY AREA: 1991

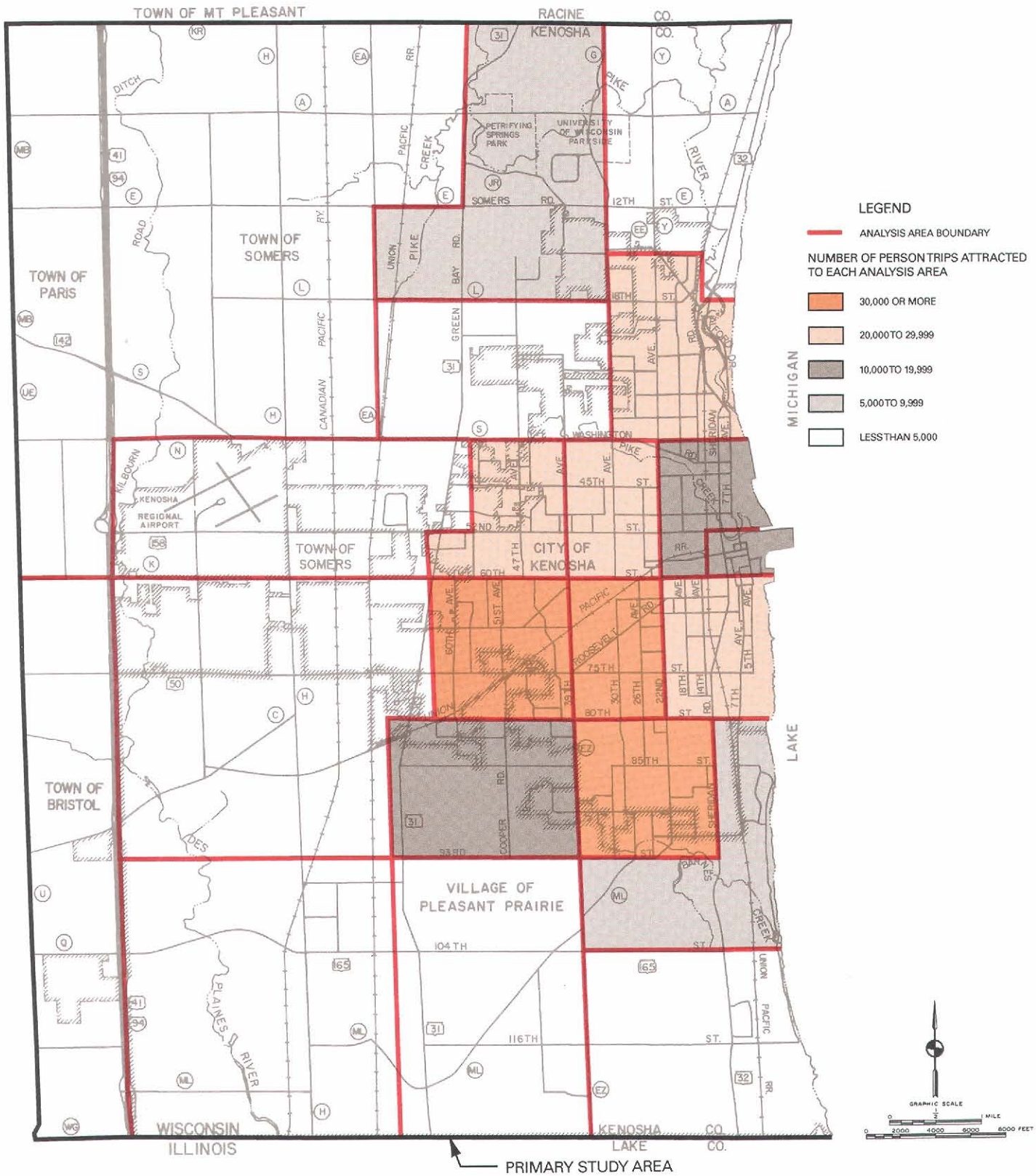


Source: SEWRPC.



Map 14

TOTAL PERSON TRIP ATTRactions BY INTERNAL ANALYSIS AREA IN THE PRIMARY STUDY AREA: 1991



Source: SEWRPC.

Table 20

## DISTRIBUTION OF AVERAGE WEEKDAY PERSON TRIPS PRODUCED INSIDE THE PRIMARY STUDY AREA: 1991

Area of Trip Production inside the Primary Study Area	Area of Trip Attraction									
	Inside the Primary Study Area				Outside the Primary Study Area within the Region					
	Somers	Kenosha	Pleasant Prairie	Subtotal	Western Kenosha County	Milwaukee County				Subtotal
						West Central	Central Business District <sup>a</sup>	East Central	Northern	
Somers .....	3,010	12,940	1,230	17,180	890	--	110	360	--	470
Kenosha .....	15,850	203,130	14,090	233,070	2,320	730	950	2,230	460	4,370
Pleasant Prairie .....	1,150	22,230	6,150	29,530	1,630	270	260	230	70	830
Total	20,010	238,300	21,470	279,780	4,840	1,000	1,320	2,820	530	5,670

Area of Trip Production inside the Primary Study Area	Area of Trip Attraction								
	Outside the Primary Study Area but inside the Region								
	Ozaukee and Washington Counties	Racine County					Walworth County	Waukesha County	Subtotal
		Western	Caledonia	Mt. Pleasant	Racine	Subtotal			
Somers .....	40	330	720	930	4,770	6,750	--	110	8,260
Kenosha .....	80	500	480	1,780	14,270	17,030	660	180	24,640
Pleasant Prairie .....	40	210	--	470	1,590	2,270	40	20	4,830
Total	160	1,040	1,200	3,180	20,630	26,050	700	310	37,730

Area of Trip Production inside the Primary Study Area	Area of Trip Attraction									
	Outside the Primary Study Area but outside the Region									
	Boone and McHenry Counties	Cook County	DuPage County	Lake County				All Others	Subtotal	Total
				Northeastern	Southeastern	Western	Subtotal			
Somers .....	20	450	80	1,230	900	150	2,280	150	2,980	28,420
Kenosha .....	220	3,030	170	11,580	8,000	540	20,120	830	24,370	282,080
Pleasant Prairie .....	20	940	140	3,100	2,000	250	5,350	190	6,640	41,000
Total	260	4,420	390	15,910	10,900	940	27,750	1,170	33,990	351,500

<sup>a</sup>The City of Milwaukee central business district includes the area bounded on the south by the Menomonee River, Broadway and St. Paul Avenue; on the west by N. 12th Street; on the north by E. Highland Avenue, 8th Street, and Juneau Avenue; and on the east by N. Lincoln Memorial Drive.

Source: SEWRPC.

use of public transportation. Riders suggested encouraging transit use by promoting the reduced cost and stress of taking transit versus driving a car and the ease of using transit. Non-riders suggested themes focusing on the environment and the convenience of using transit; using incentives, such as free-ride tickets, to encourage first-time users to try transit; simplifying the transit information available to make it easier for first-time riders; using electronic methods of information delivery, such as faxing maps and schedules or putting them on the Internet; and emphasizing, in driver training, a willingness to assist and answer questions from first-time users.

## SUMMARY

This chapter has presented pertinent information on past trends and existing conditions for selected characteristics of the primary study area which affect, or may be affected by, the provision and use of transit service, including population, employment, land use, and travel habits and patterns. Information on the changes in such key characteristic which were observed over approximately the last three decades are summarized in Figure 2. The most important findings concerning these characteristics may be summarized as follows:

1. The the primary study area population has grown steadily since 1960, when the population level stood

Table 21

**DISTRIBUTION OF AVERAGE WEEKDAY PERSON TRIPS PRODUCED  
OUTSIDE, AND ATTRACTED TO, THE PRIMARY STUDY AREA: 1991**

Area of Trip Production			Area of Trip Attraction inside the Primary Study Area			
Area	Civil Division	Analysis Area Description	Somers	Kenosha	Pleasant Prairie	Total
Outside the Primary Study Area but inside the Region	Kenosha County	Western .....	2,110	6,820	3,830	12,760
	Milwaukee County	West Central .....	390	450	360	1,200
		Central Business District <sup>a</sup> ...	--	--	--	--
		East Central .....	450	870	590	1,910
		Northern .....	40	230	320	590
		Subtotal	880	1,550	1,270	3,700
	Ozaukee and Washington Counties	Both Counties .....	50	80	90	220
	Racine County	Western .....	1,290	760	720	2,770
		Caledonia .....	1,080	2,020	140	3,240
		Mt. Pleasant .....	1,510	1,790	210	3,510
		Racine .....	5,160	7,750	1,620	14,530
		Subtotal	9,040	12,320	2,690	24,050
	Walworth County	Entire County .....	200	780	30	1,010
	Waukesha County	Entire County .....	230	180	430	840
	--	Subtotal	12,510	21,730	8,340	42,580
Outside the Primary Study Area but outside the Region	Boone and McHenry Counties	Both Counties .....	70	120	170	360
	Cook County	Entire County .....	130	370	540	1,040
	Dupage County	Entire County .....	20	130	160	310
	Lake County	Northeastern .....	620	4,920	1,340	6,880
		Southeastern .....	110	630	280	1,020
		Western .....	120	440	250	810
		Subtotal	850	5,990	1,870	8,710
	All Others	All Other Areas .....	140	600	280	1,020
	--	Subtotal	1,210	7,210	3,020	11,440
--	--	Total	13,720	28,940	11,360	54,020

<sup>a</sup>The City of Milwaukee central business district includes the area bounded on the south by the Menomonee River, Broadway, and St. Paul Avenue; on the west by N. 12th Street; on the north by E. Highland Avenue, 8th Street, and Juneau Avenue; and on the east by N. Lincoln Memorial Drive.

Source: SEWRPC.

at about 85,800 persons. Over this period, the primary study area population increased by about 25 percent, to about 106,900 persons. Most of the population growth over this period occurred in the City of Kenosha and the Village of Pleasant Prairie, which experienced population increases of about 25 and 27 percent, respectively. The populations of these communities have continued to increase in recent times, with increases of between 6 and 8 percent between 1990 and 1995.

- The number of households in the primary study area increased between 1960 and 1995 by about 57 per-

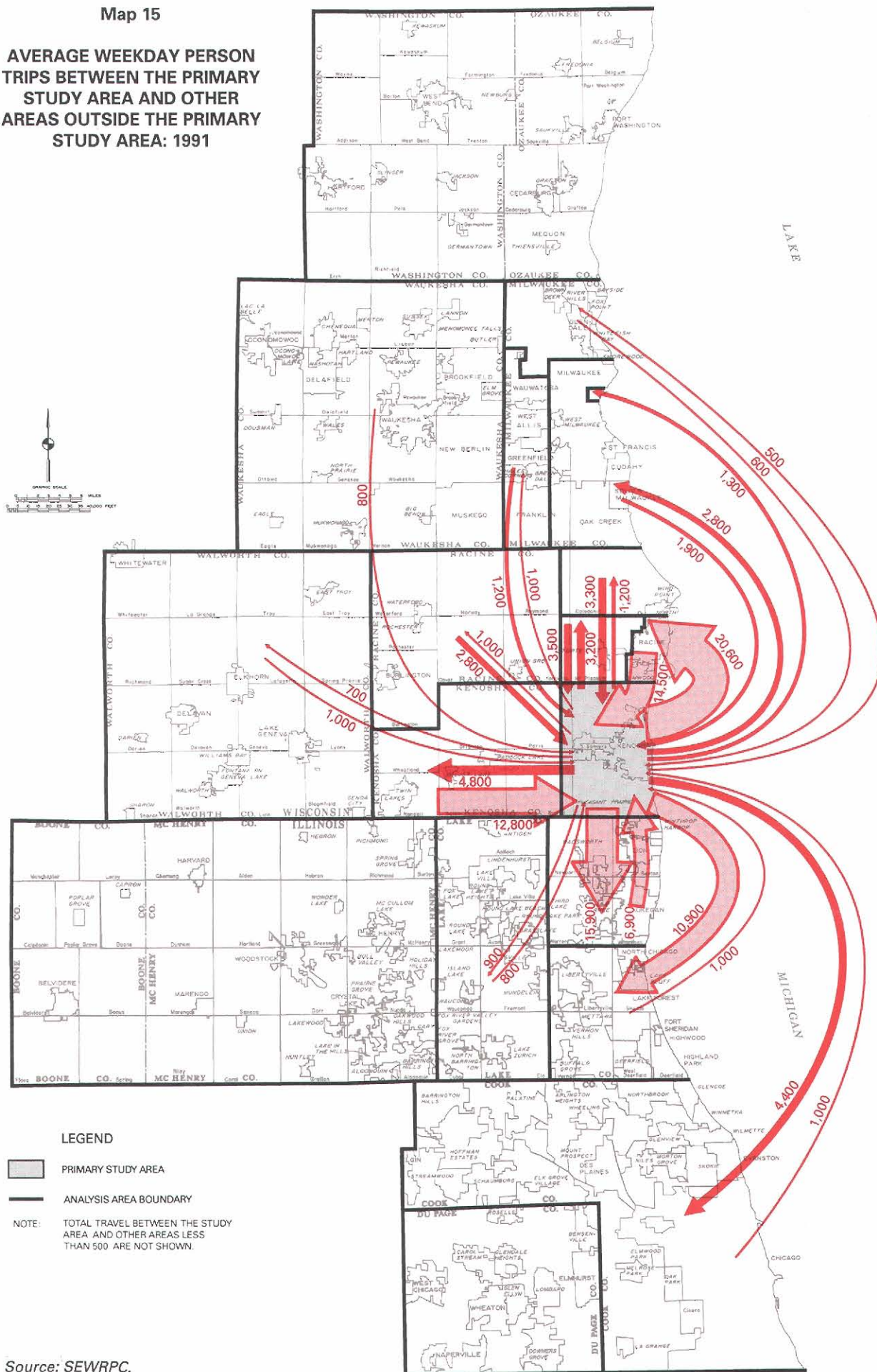
cent, from 25,638 in 1960 to 39,800 in 1995, or more than twice as fast as primary study area the resident population. Consequently, the average household size decreased from about 3.3 persons in 1960 to about 2.6 persons in 1995. Trip making and, hence, the potential need to serve trips by transit, is strongly related to the number of households and their characteristics.

- Population subgroups whose dependence on, and use of, public transit service historically has been greater than that of the general population as a whole include school-age children (ages 10



Map 15

**AVERAGE WEEKDAY PERSON  
TRIPS BETWEEN THE PRIMARY  
STUDY AREA AND OTHER  
AREAS OUTSIDE THE PRIMARY  
STUDY AREA: 1991**



Source: SEWRPC.

Table 22

**PERCENTAGE DISTRIBUTION  
OF RIDERSHIP ON THE KENOSHA  
TRANSIT SYSTEM FOR VARIOUS  
RIDERSHIP CHARACTERISTICS: 1991**

Ridership Characteristic	Percent of Revenue Passengers		
	Regular Routes	Peak-Hour Tripper Routes	Total System
<b>Age</b>			
12 and under .....	0.3	9.4	3.1
13-18 .....	27.0	90.6	47.0
19-24 .....	13.6	--	9.3
25-34 .....	20.5	--	14.1
35-44 .....	8.6	--	5.9
45-54 .....	9.1	--	6.2
55-64 .....	7.3	--	5.0
65 and older .....	13.7	--	9.4
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
<b>Sex</b>			
Male .....	35.7	44.6	39.3
Female .....	64.3	55.4	60.7
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
<b>Licensed Driver</b>			
Yes .....	33.7	12.9	27.3
No .....	66.3	87.1	72.7
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
<b>Household Income</b>			
Under \$10,000 .....	40.0	7.1	32.7
\$10,000-\$19,999 .....	26.9	8.6	22.9
\$20,000-\$29,999 .....	13.8	11.4	13.3
\$30,000-\$39,999 .....	9.6	18.2	11.5
\$40,000 or over .....	9.7	54.7	19.6
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
<b>Trip Purpose</b>			
Home-based work .....	26.7	0.5	16.4
Home-based shopping .....	12.8	0.5	7.9
Home-based other .....	8.9	--	13.7
Nonhome-based .....	8.4	--	5.1
School based .....	43.2	99.0	56.9
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
<b>Vehicles Available<sup>a</sup> per Household</b>			
No vehicle .....	48.5	-- <sup>a</sup>	48.5
One vehicle .....	35.9	-- <sup>a</sup>	35.9
Two or more vehicles .....	15.6	-- <sup>a</sup>	15.6
<b>Total</b>	<b>100.0</b>	<b>--<sup>a</sup></b>	<b>100.0</b>

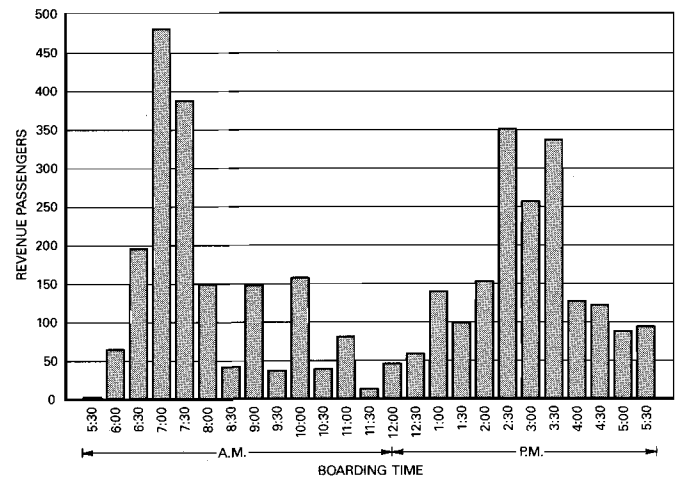
<sup>a</sup>Data on auto availability were not collected for users of the peak-hour tripper service.

Source: SEWRPC.

through 18), the elderly (age 60 and older), the disabled, persons in low-income households, and households with no vehicles available. Since 1960, both the elderly and the low-income populations have increased significantly in terms of absolute numbers and in their share of the total population of the primary study area, while the school-age population and zero-auto households have

Figure 1

**HOURLY DISTRIBUTION OF  
TRIPS MADE BY REVENUE  
PASSENGERS ON THE KENOSHA  
TRANSIT SYSTEM: OCTOBER 29-30, 1991**



Source: SEWRPC.

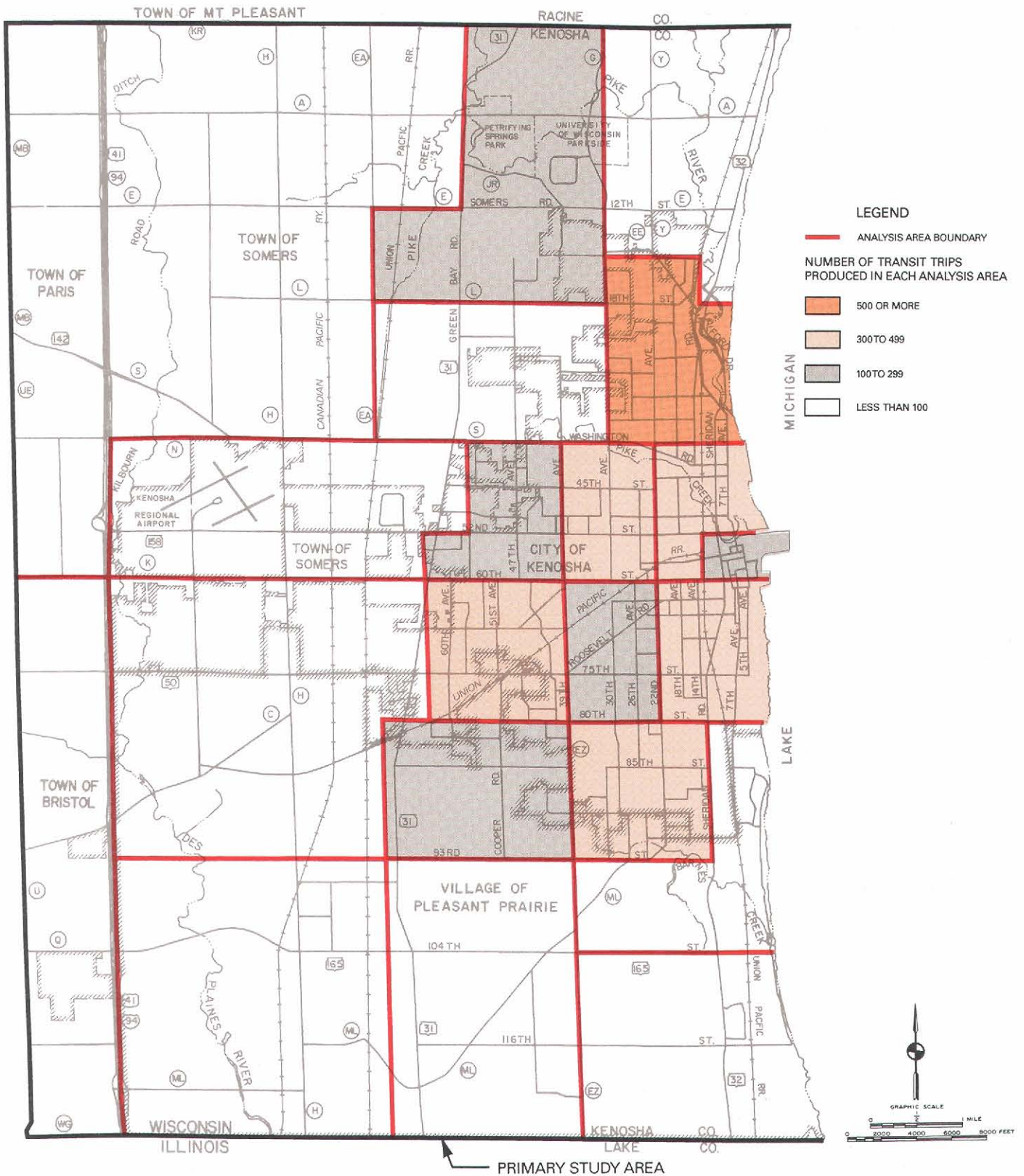
remained stable in absolute numbers and actually declined as a percent of the total population. Comparable data permitting a trend analysis for the disabled population since 1960 was not available. The transit-dependent population within the primary study area was concentrated primarily in the City of Kenosha in 1990.

- The number of jobs in the primary study area has increased from about 39,500 jobs in 1970 to about 43,600 jobs in 1990, or by about 10 percent. The increase in employment of about 26 percent observed between 1970 and 1980 was partially offset by a decrease in primary study area employment of about 13 percent observed between 1980 and 1990. This decrease largely resulted from a severe nationwide recession and the 1988 closing of Chrysler Motors automobile body assembly plants, which caused a decrease in employment levels in the City of Kenosha of about 19 percent over this period. Between 1970 and 1990, virtually all of the increase in employment occurred outside the City of Kenosha, in the Village of Pleasant Prairie and the Town of Bristol. Employment opportunities at new employment centers completed since 1990 or currently under way in these communities and in the City of Keno



Map 16

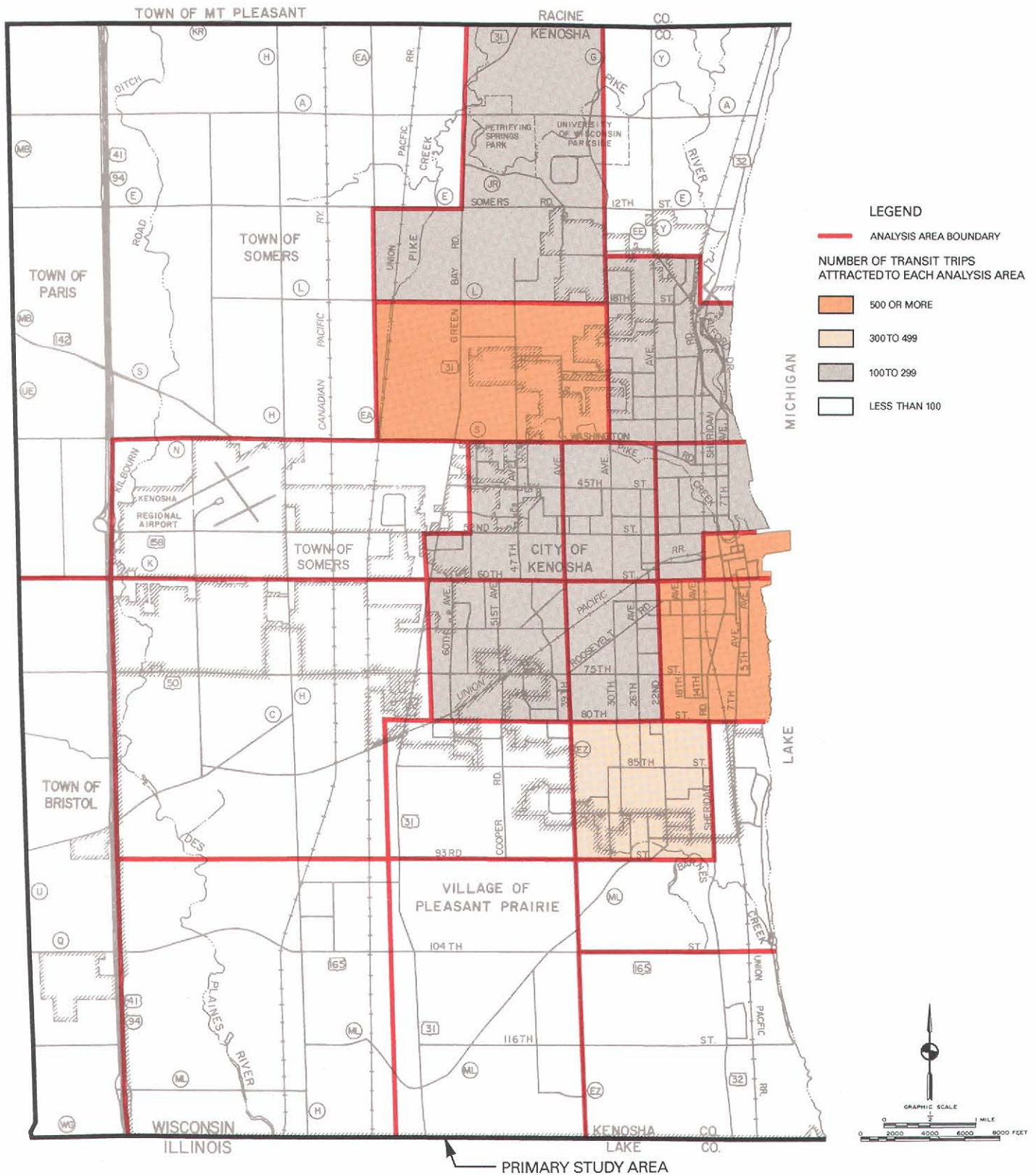
TRIP PRODUCTIONS OF REVENUE PASSENGERS ON THE KENOSHA TRANSIT SYSTEM: OCTOBER 29-30, 1991



Source: SEWRPC.

Map 17

TRIP ATTRactions OF REVENUE PASSENGERS ON THE KENOSHA TRANSIT SYSTEM: OCTOBER 29-30, 1991



Source: SEWRPC.

Table 23

**THE 1991 SURVEY OF PERSONAL OPINION: PERCENTAGE DISTRIBUTION OF SUPPORT  
FOR POSSIBLE ACTIONS TO REDUCE AUTOMOBILE TRAVEL TO AND FROM WORK**

Possible Actions	Yes	No	No Response	Total
Improve Public Transit to Encourage More Transit Use, Including of More Available, Faster, and Providing More Frequent Bus Transit .....	81.8	12.8	5.4	100.0
Provide Incentives to Carpoolers and Transit Users, Such as Exclusive Carpool and Transit Lanes on Streets and Freeways .....	62.4	29.7	7.9	100.0
Encourage Employers to Provide Transit Subsidies to Promote More Transit Use .....	61.6	29.6	8.8	100.0
Improve Public Transit with Light Rail and Commuter Rail .....	57.6	34.9	7.5	100.0
Encourage Employers to Offer Four-Day or Three-Day Work Weeks .....	56.9	35.3	7.8	100.0
Provide Convenient Bike Lanes and Paths .....	56.5	34.6	8.9	100.0
Encourage Employers to Arrange Programs to Permit Employees to Work at Home .....	54.9	36.4	8.7	100.0
Eliminate Free Employee Parking to Encourage More Carpooling and Transit Use .....	18.1	74.2	7.7	100.0
Other .....	3.8	1.1	95.1	100.0

Source: SEWRPC.

Table 24

**THE 1991 SURVEY OF PERSONAL OPINION: PERCENTAGE DISTRIBUTION OF FACTORS CONSIDERED  
NECESSARY BEFORE CHOOSING TO CARPOOL OR USE TRANSIT RATHER THAN DRIVING ALONE**

Factors	Yes	No	No Response	Total
Faster and More Frequent Public Bus Transit .....	60.1	25.0	14.9	100.0
Faster and More Frequent Public Transit, Including Light Rail and Commuter Rail .....	50.2	34.7	15.1	100.0
Carpool Incentives, Such as Exclusive Carpool Freeway Lanes and Priority Parking .....	50.1	33.1	16.8	100.0
Convenient Bike Lanes and Paths .....	40.0	41.6	18.4	100.0
Elimination of Free Parking at the Workplace with Possible Charges of \$20 to \$30 per Month .....	16.0	67.4	16.6	100.0
Substantial Increases in the Cost of Operating an Auto, Such as Increased Gasoline Prices .....	14.4	70.5	15.1	100.0

Source: SEWRPC.

sha have helped to offset the job losses of the 1980s. At present, the principal concentrations of employment in the primary study area are in the City of Kenosha and in the area of the University of Wisconsin-Parkside, the commercial development surrounding the intersection of IH 94 and STH 50, and the Lake View Corporate Park.

5. The amount of land in the primary study area devoted to urban land uses increased from about 16.6 square miles in 1963 to about 24.8 square miles

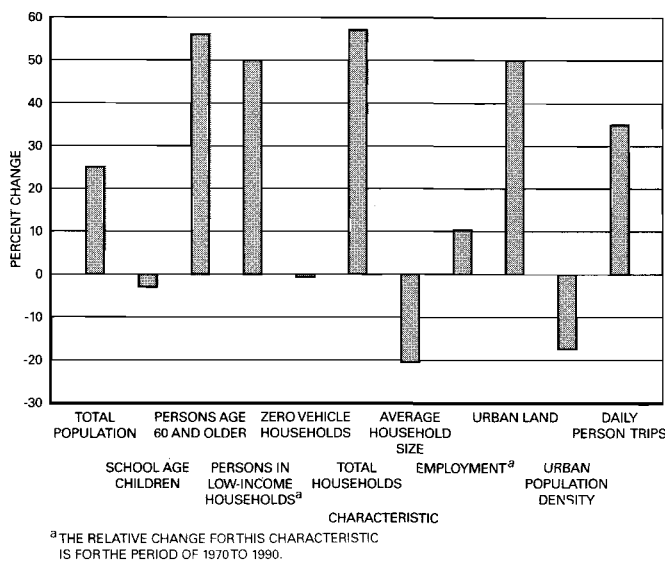
in 1990, an increase of about 50 percent. Over the same period, the population density in the developed urban areas decreased from 4,606 to 3,805 persons per square mile, or by about 17 percent. Despite the steady increase of urban development observed since 1963, only about 25 percent of the land in the primary study area is currently fully developed for urban land uses.

6. Certain major land uses in the primary study area generate a large number of person trips on a daily



**Figure 2**

**RELATIVE CHANGES IN SELECTED CHARACTERISTICS OF THE PRIMARY STUDY AREA OVER APPROXIMATELY THE LAST THREE DECADES**



Source: SEWRPC.

basis, including commercial centers, educational centers, medical centers, governmental and public institutional centers, employment centers, and recreational areas. These land uses, along with housing and care facilities for elderly and disabled persons and low-income housing, were identified as major potential transit trip generators in the primary study area in 1997 and were found to be scattered throughout the areas of urban development.

- On the basis of past travel surveys undertaken by the Regional Planning Commission, average weekday total person travel entirely within the primary study area and between the primary study area and other external areas has increased by about 35 percent, from about 300,400 person trips in 1963 to about 406,200 trips in 1991. About 69 percent of these person trips were made internal to the primary study area in 1991, with the largest proportion being home-based other trips, such as trips made for medical, personal business, or social or recreational purposes. The distribution of person trip productions and attractions within the primary study area reflects the concentrations of population, employment, and major trips generators in the City of Kenosha. The remaining 31 percent of all person trips were made with one trip end external

to the primary study area, with most trips made for work purposes. Trips made between the primary study area and Racine County accounted for the largest volume of external person travel, with about 40 percent of all external trips, followed by trips between the primary study area and Lake County, Illinois, with about 29 percent of all external trips. Other significant volumes of person trips were also identified between the primary study area and western Kenosha County and all of Milwaukee County. Notably, about 60 percent of the observed increase in person travel between 1963 and 1991 occurred as external trips, which increased by about 103 percent over this period.

- Commission survey data indicate that about 3,600 transit revenue passenger trips were made on an average weekday in 1991 on the Kenosha transit system. Passengers using regular routes of the system were predominantly female, without a valid drivers license, 34 years old or younger, and from a household with an income below \$20,000 per year. Most of the trips made by these passengers were for school and work purposes. Passengers using the system's peak-hour tripper routes were school-age children traveling to and from school. Almost two-thirds of the system ridership occurred during two peak periods coinciding with the starting and ending of classes at local schools and first shifts at employers. As would be expected, the distribution of transit trip productions and attractions reflects the service area for the transit system, which lies principally in the City of Kenosha.
- The findings of a special survey of personal opinion conducted in 1991 provided insight on the preferences and attitudes, not the behavior, of heads of households or their spouses on certain travel-related issues, including the use of public transit. Of several suggested actions to reduce work-related automobile-travel, improving public transit to encourage more transit use was approved most frequently; the elimination of free employee parking to encourage more carpooling and transit use was opposed most frequently. Of several suggested factors that would need to change before respondents would carpool or use transit, faster and more frequent public bus transit service, faster and more frequent public light-rail and commuter-rail transit service, and such carpool incentives as exclusive carpool freeway lanes and priority parking, were cited most frequently. The elimination of free workplace parking or substantially increased automobile costs were cited least frequently.

(This page intentionally left blank)



## Chapter III

# EXISTING PUBLIC TRANSIT SYSTEM

## INTRODUCTION

An understanding of the existing public transit system within the Kenosha area is basic to the preparation of any sound transit system development plan for it. This understanding should be based upon pertinent information describing the operating characteristics and ridership levels for the current City transit system and for the other major transit services within the primary study area.

This chapter documents the findings of an inventory of the principal public transit programs and services available within the primary Kenosha study area. Presented first is a description of the Kenosha public transit system, including service operations, equipment and facilities, ridership, and costs. This is followed by descriptions of the operations of other major public transit service providers serving the primary study area, including local and intercity bus service, railroad passenger service, taxicab service, specialized transportation services for elderly and disabled persons, and student transportation services provided by school districts.

## THE CITY OF KENOSHA TRANSIT SYSTEM

Urban public transit service has been available in the City of Kenosha since 1903, when streetcar operations began. Public transit service in the Kenosha area was provided exclusively by streetcars until 1932, when that service was replaced by a system of electric "trackless trolley" routes. The trolleybus system was converted to motor bus operation after World War II. Continuous declines in ridership and profits during the postwar period resulted in a series of private ownerships until February 1971, when, because of extreme financial difficulties, the last private operator ceased local bus operations. In September 1971, after almost eight months without local transit service, the City of Kenosha acquired the transit system, which it had subsidized for the previous two years, and began public operation of the Kenosha transit system.

### Administrative Structure

The Kenosha transit system is owned by the City of Kenosha and operated using public employees under the direct supervision of the City of Kenosha Department of Transportation. The policy-making body of the transit

system is the Kenosha Transit Commission, consisting of seven members appointed by the Mayor and confirmed by the Common Council. The powers of the Transit Commission are substantial, including essentially all the powers necessary to acquire, operate, and manage the transit system. The Kenosha Common Council has the ultimate responsibility for review and approval of certain important matters, including the annual budget for the public transit program.

### Fixed-Route Bus Service

During 1997 fixed-route bus service was provided by the City of Kenosha transit system using a system of regular bus routes, shown on Map 18, along with morning and afternoon special peak-hour "tripper routes," shown on Map 19, designed to serve the needs of students traveling to Kenosha schools. The current operating characteristics, service levels, and fares for the system are summarized below.

### Regular Routes

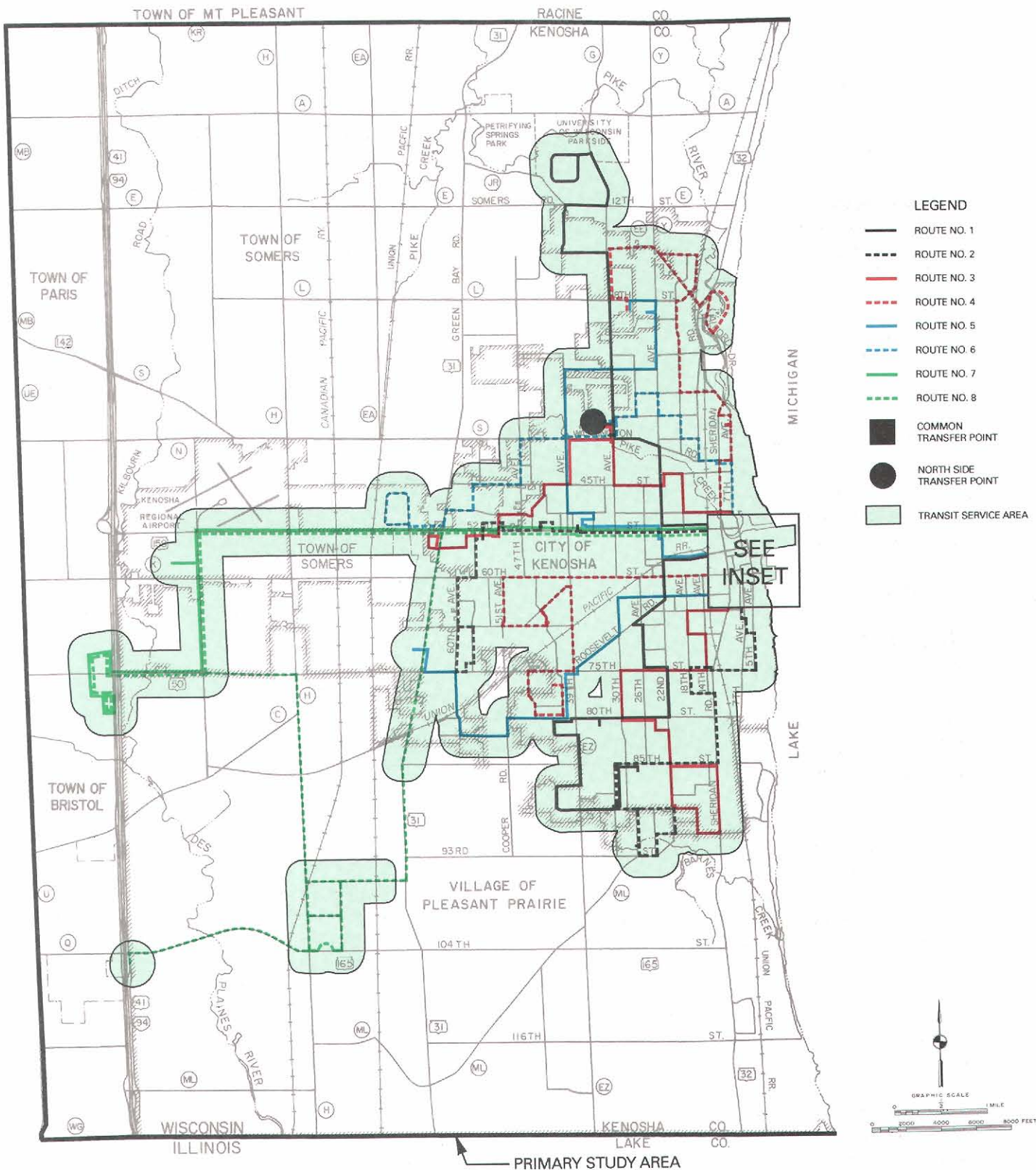
The regular routes operated by the transit system operate as follows:

- Five crosstown local routes, Route Nos. 1 through 5, operate between outlying portions of the City or the adjacent communities through the central portion of the City of Kenosha. Route No. 1 extends outside the corporate limits to serve the University of Wisconsin-Parkside, in the Town of Somers.
- Two downtown-oriented local routes, Route Nos. 6 and 7, operate between outlying portions of the City or adjacent communities and the Kenosha central business district (CBD). Route No. 7 extends outside the Kenosha corporate limits to serve the Factory Outlet Center, in the Town of Bristol.
- One route, Route No. 8, operates principally to serve the LakeView Corporate Park, in the Village of Pleasant Prairie.

All the regular routes serve a common transfer point on 56th Street between 7th and 8th Avenues, in the City of Kenosha CBD. The schedules of Route Nos. 1 through 6 are designed so that all routes meet at the common transfer

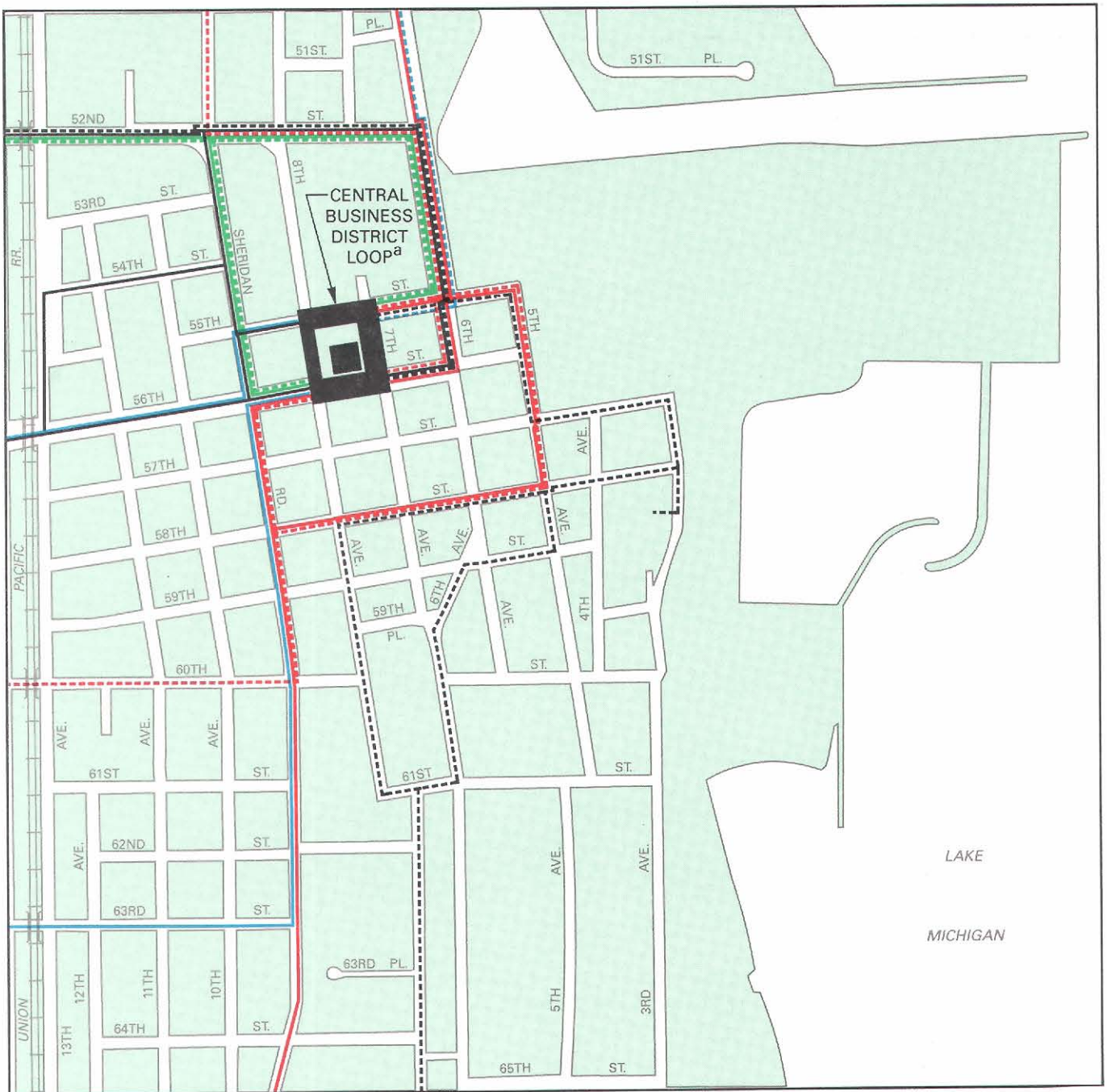
# Map 18

## FIXED-ROUTE TRANSIT SERVICE PROVIDED BY THE KENOSHA TRANSIT SYSTEM: AUGUST 1997



Source: City of Kenosha Department of Transportation and SEWRPC.

Inset for Map 18



<sup>a</sup>ALL ROUTES USE CENTRAL BUSINESS DISTRICT LOOP WITH THE EXCEPTION OF ROUTES 7 AND 8 WHICH DO NOT USE 8TH AVENUE OR 55TH STREET.



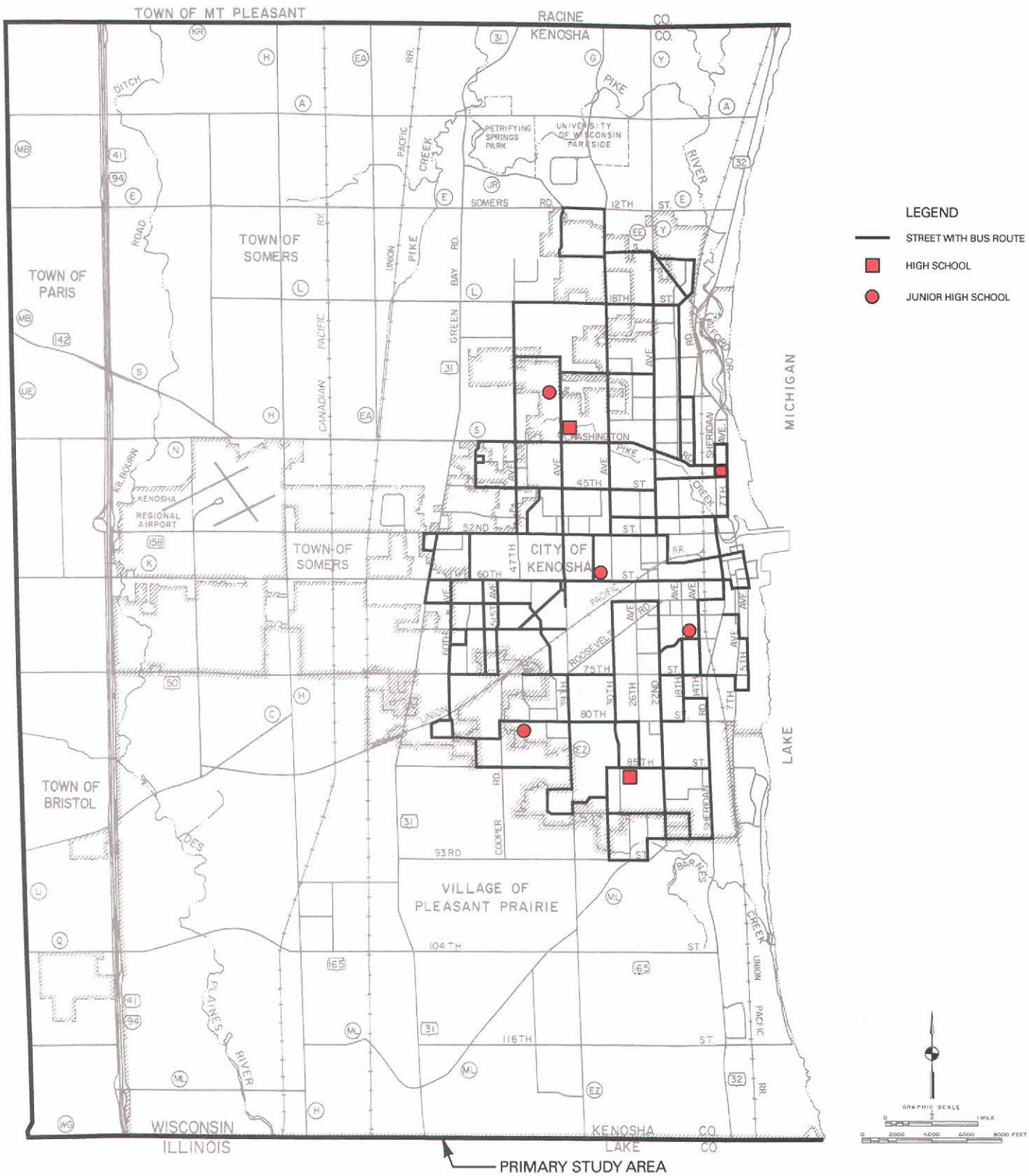
point every half hour during weekday peak periods and every hour at all other times, according to their headways. This cycle, or "pulse," scheduling allows passengers the opportunity to transfer conveniently between bus routes and complete a trip with a minimum of delay. Route

Nos. 7, and 8 also serve the common transfer point and meet the other routes of the system, but because they are operated with less extensive schedules than the other routes of the system, they meet less frequently with Routes Nos. 1 through 6.



Map 19

**FIXED-ROUTE PEAK-HOUR TRIPPER BUS SERVICE PROVIDED  
BY THE KENOSHA TRANSIT SYSTEM: 1996-1997 SCHOOL YEAR**



Source: Source: City of Kenosha Department of Transportation and SEWRPC.

### ***Peak-Hour Tripper Routes***

The peak-hour tripper routes are designed to accommodate the movement of junior and senior high school students and alleviate overcrowding on the regular bus routes. During the 1996-1997 school year, the transit system operated eight tripper routes between 6:45 and 8:30 a.m. and ten tripper routes between 2:30 and 4:30 p.m. on schooldays. Because the routes are designed to provide direct service between the homes and schools of students, the routes, for the most part, are operated independently of the regular routes and do not serve the downtown transfer point.

### ***Service Levels***

The current operating characteristics and service levels for the regular routes of the transit system are presented in Table 25. Local bus service over Route Nos. 1 through 7 is provided six days a week, excluding Sundays and holidays. Route No. 8 is limited to five trips during weekday peak periods. Operating headways for Route Nos. 1 through 6 are 30 minutes during weekday peak periods and 60 minutes during weekday off-peak periods and all day Saturdays. Route No. 7 operates six round-trips daily between the common transfer point and the Factory Outlet Center, with operating headways of 60 minutes between 10:30 a.m. and 1:30 p.m. and 120 minutes at all other times.

### ***Fares***

As shown in Table 26, the current cash fares charged for fixed-route bus service are \$1.00 per trip for adults 18 through 64 years of age, \$0.60 per trip for students ages five through 17, and \$0.50 per trip for elderly persons 65 and older and disabled individuals ages five and over. Children under five ride free if accompanied by an adult. The Kenosha Unified School District subsidizes the fares of a limited number of students residing two or more miles from the school they are entitled to attend. They are provided with bus passes which allow them to use the transit system on regular school days at no direct cost to them. Passengers may also purchase a monthly pass, good for unlimited riding during all hours of system operation during the month, and a special Saturday "Super Transfer," good for unlimited riding on Saturdays. Free one-hour transfers are issued upon request at the time the fare is paid and may be used to transfer to any route, including the route from which the transfer was issued.

The historic transit fares for the Kenosha transit system since it began public operation in 1971 are shown in Figure 3 in both actual dollars and constant 1971 dollars. After being reduced in September 1971 to promote transit ridership, passenger fares remained stable through January 1979, but have been increased several times since then

in response to increasing costs of operation and declining Federal operating subsidies. The last fare increase implemented by the City was in August 1997, when the adult cash fare was raised by about 33 percent, from \$0.75 to \$1.00 per trip; the elderly and disabled cash fare was raised by about 43 percent, from \$0.35 to \$0.50 per trip; and the student cash fare was raised by about 9 percent, from \$0.55 to \$0.60 per trip. Even with this series of past fare increases, the current adult cash fare in constant 1971 dollars is about the same as the fare of \$0.25 per trip in effect when the City began public operation of the system.

### ***Paratransit Service for Disabled Individuals***

In addition to fixed-route bus service, the City of Kenosha also provides paratransit service to serve the travel needs of disabled individuals. This service is provided to comply with Federal regulations implementing the public transit requirements of the Americans with Disabilities Act (ADA) of 1990. These regulations require each public entity operating fixed-route transit system to provide paratransit service to disabled individuals as a complement to its fixed-route bus service.

The current eligibility requirements for, and service characteristics of, the City's paratransit service are summarized in Table 27. The paratransit service is designed to provide door-to-door transportation to disabled individuals who are unable to use the fixed-route bus service provided by the Kenosha transit system. To provide the service, the City of Kenosha annually participates in, and contributes funds toward the operation of, the "Care-A-Van" paratransit program, administered by the Kenosha County Department of Human Services, Division of Aging Services and sponsored jointly by the City and County. The funds annually contributed to the program by the City of Kenosha, however, are specifically used to support the provision of paratransit service for disabled individuals who are certified by the Americans with Disabilities Act of 1990 (ADA) as paratransit eligible and who use the service to travel within the eastern portion of Kenosha County only, an area significantly larger than the required paratransit service area for the Kenosha transit system. Because the paratransit service is part of the Countywide paratransit program of the Division of Aging Services, disabled individuals residing within the primary study area can also utilize this service to travel anywhere within Kenosha County. Trips made between the primary study area and other parts of the County, however, are not counted toward meeting the City's ADA paratransit service requirement. The service is provided on a contract basis by the Kenosha Achievement Center, Inc.

In addition to this paratransit service, disabled individuals can also use accessible bus service provided on the regular



Table 25

## OPERATING AND SERVICE CHARACTERISTICS BY ROUTE FOR THE KENOSHA TRANSIT SYSTEM: AUGUST 1997

Bus Route	Round Trip Route Length (miles)	Service Availability			
		Weekdays		Saturdays	
		Start Time First Trip (a.m.)	Start Time Last Trip (p.m.)	Start Time First Trip (a.m.)	Start Time Last Trip (p.m.)
1	30.7	5:55	7:05 <sup>a</sup>	5:55	5:35 <sup>a</sup>
2	24.7	5:55	7:05 <sup>a</sup>	5:55	5:35 <sup>a</sup>
3	26.4	5:55	7:05 <sup>a</sup>	5:55	5:35 <sup>a</sup>
4	28.8	5:55	7:05 <sup>a</sup>	5:55	5:35 <sup>a</sup>
5	27.4	5:55	7:05 <sup>a</sup>	5:55	5:35 <sup>a</sup>
6	14.9	5:55	7:05 <sup>a</sup>	5:55	5:35 <sup>a</sup>
7	20.0	8:35	5:05	8:35	5:05
8	19.0	6:25	5:10	--	--
Subtotal	191.9	--	--	--	--
Peak-Hour Tripper Routes <sup>b</sup>	333.0	6:37	3:25	--	--
System Total	524.9	--	--	--	--

Bus Route	Service Frequency (Minutes)				Buses Required			
	Weekdays			Saturdays	Weekdays			Saturdays
	A.M. Peak	Off-Peak	P.M. Peak	All Day	A.M. Peak	Off-Peak	P.M. Peak	All Day
1	30	60	30	60	4	2	4	2
2	30	60	30	60	4	2	4	2
3	30	60	30	60	4	2	4	2
4	30	60	30	60	4	2	4	2
5	30	60	30	60	4	2	4	2
6	30	60	30	60	2	1	2	1
7	1 trip	3 trips	2 trips	6 trips	1	1	1	1
8	2 trips	--	2 trips	--	1	--	1	--
Subtotal	--	--	--	--	24	12	24	12
Peak-Hour Tripper Routes <sup>b</sup>	8 trips	--	10 trips	--	8	--	10	--
System Total	--	--	--	--	32	12	34	12

<sup>a</sup>Time shown is for the last trip departing the common transfer point in the Kenosha central business district.

<sup>b</sup>Reflects service provided during the 1996-1997 school year.

Source: City of Kenosha Department of Transportation and SEWRPC.

bus routes. A total of 28, or almost two-thirds, of the 43 buses in the transit system fleet are accessible to individuals using wheelchairs. The City uses these buses to provide a limited level of accessible bus service by assigning the buses to scheduled trips on an advance-reservation basis. Disabled individuals intending to use the service must call the transit system at least 24 hours in advance of the time service is needed and indicate on what routes and at what time they would like to travel.

### Equipment and Facilities

The current bus fleet of the Kenosha transit system is listed in Table 28. The total fleet consists of 43 standard-design diesel-powered buses, used on the regular and peak-hour tripper routes of the system. A total of 27, or about 63 percent, of these buses are equipped with air conditioning, and 28, or almost two-thirds, are equipped with wheelchair lifts to serve disabled individuals using wheelchairs. The average age from the original manufacture

Table 26

## FARES FOR FIXED-ROUTE BUS SERVICE FOR THE KENOSHA TRANSIT SYSTEM: AUGUST 1997

Fare Category	Adults (age 18 through 64)	Students (age 5 through 17)	Elderly (age 65 and over) and Disabled (age 5 and over)
Regular Route Service			
Cash .....	\$1.00 per trip	\$0.60 per trip	\$0.50 per trip <sup>a</sup>
Tokens <sup>b</sup> .....	\$1.00 per trip	--	--
Transfers .....	Free	Free	Free
Saturday Supertransfer <sup>c</sup> .....	\$2.00	--	--
Monthly Passes .....	\$22.00	\$15.00	\$15.00 <sup>d</sup>
School Bus Passes <sup>e</sup> .....	--	\$1.15 per school day	--

<sup>a</sup>To qualify, a person must be at least 65 years of age, have a doctor's certification of disability, or obtain a certification of disability from a local agency for disabled persons. A Medicare card or a reduced fare photo identification card, which is issued to persons qualifying for the program, must be shown to the bus driver upon request at the time the reduced fare is paid.

<sup>b</sup>Tokens are sold at the City of Kenosha Clerk's office in packets of ten each and at the Kenosha transit system administrative offices in any quantity.

<sup>c</sup>Special fare paid in lieu of cash fare, allowing unlimited riding on Saturday.

<sup>d</sup>The Kenosha Unified School District distributes monthly passes to exceptional education students and reimburses the Kenosha transit system for the passes issued at the rate shown.

<sup>e</sup>The Kenosha Unified School District remits payments to the Kenosha Transit System to transport a limited number of students if they live within certain boundaries jointly agreed upon by the City of Kenosha and the District and if the school they attend is farther than two miles from their home on the trip poses special hazards. Such students are issued a school bus pass allowing them to ride the transit system free of charge on regular school days. The District reimburses the transit system at the rate shown for an estimated 1,400 students transported each day.

Source: City of Kenosha Department of Transportation; Kenosha Unified School District, and SEWRPC.

date for the bus fleet is about 14 years, but many of the older vehicles have been rehabilitated to extend their service lives. When such rehabilitations are considered, the average age of the fleet is about 6 years.

The fixed facilities used by the transit system are shown on Map 20 and consist of the following:

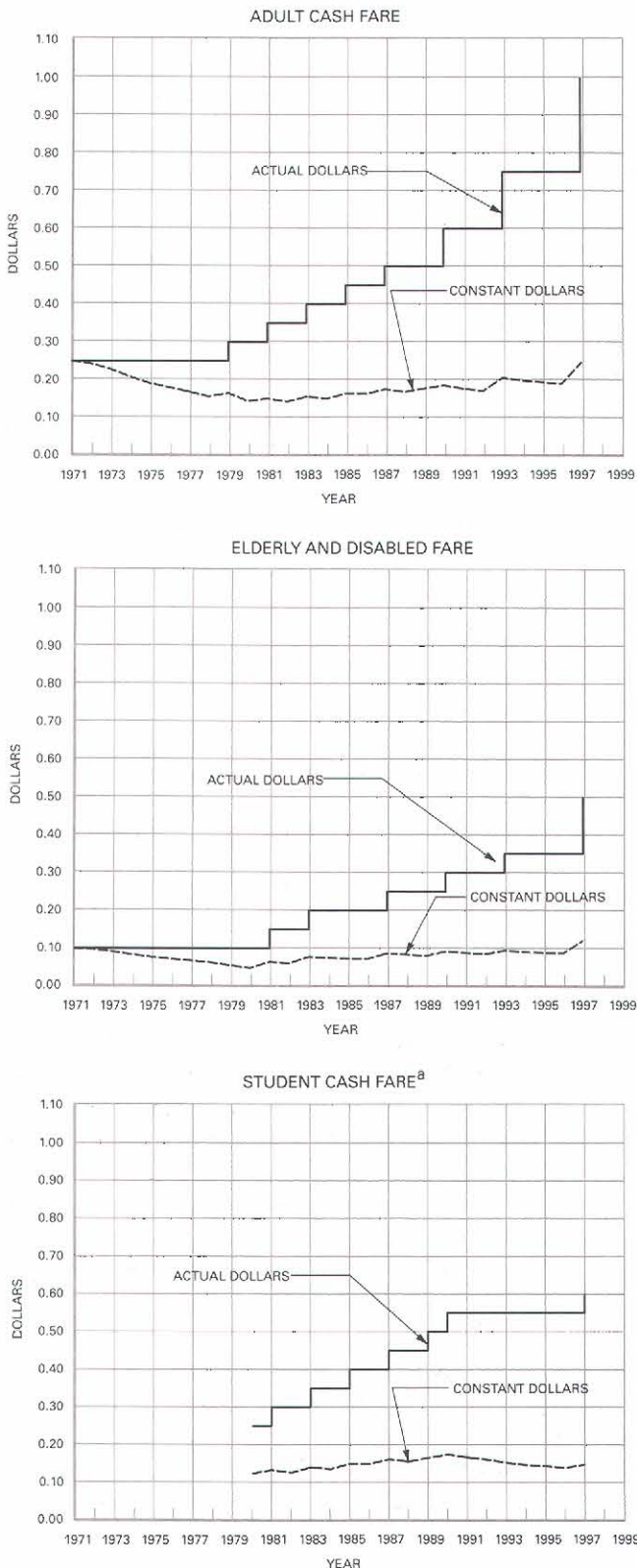
- Some 42 passenger waiting shelters are placed at various locations throughout the transit service area. Most of the shelters are of a modular design, with the size of the shelter determined by the number of back and side wall panels used. All shelters include a bench for waiting transit patrons.
- The Kenosha transit system bus-storage facility and maintenance garage is located in the City's yard at 3735 65th Street. The facility consists of a single-story building, built in 1975 and expanded in 1982.

It is used exclusively for transit program functions, including bus storage and maintenance, vehicle cleaning and servicing, parts storage, employee activities, and the offices of the City of Kenosha Department of Transportation. Services provided by the Department of Transportation to the general public consist of the sale of monthly bus passes and the distribution of transit system information, including route maps and schedules.

- The Kenosha Municipal Building, on the northern edge of the Kenosha CBD, at 625 52nd Street, houses the offices and public meeting rooms of the Mayor of the City of Kenosha, of the Kenosha Common Council, and of the Kenosha Transit and Parking Commission. Services to the general public performed in this building include the sale of monthly bus passes and the issuing of photo identification cards to elderly and disabled persons who qualify for reduced fares.

Figure 3

# HISTORIC FARES FOR FIXED-ROUTE BUS SERVICE FOR THE KENOSHA TRANSIT SYSTEM: 1971-1997



<sup>a</sup> STUDENT FARES WERE INTRODUCED IN 1980.

Source: City of Kenosha Department of Transportation and SEWRPC.

## Marketing

Marketing efforts for the Kenosha transit system are carried out by the staff of the City of Kenosha Department of Transportation. The current marketing program is directed principally toward disseminating system information to existing and potential riders and developing strategies to attract new riders.

The City is also participating in a regional marketing program with three other bus systems in Southeastern Wisconsin: the Milwaukee County Transit System, Racine Belle Urban System, and Waukesha Metro Transit. The program, which began in 1996, is funded in part through a Federal Congestion Mitigation and Air Quality Improvement program grant administered by the Wisconsin Department of Transportation. The effort included special telephone surveys and focus-group discussions to identify potential bus riders in each service area and potential reasons for not using transit. The first marketing campaign was conducted with newspaper and radio advertisements in the fall of 1996 and was directed at improving the image of public transit. After its completion, a follow-up evaluation was undertaken to gauge its success and to refine strategies for a second campaign. The second marketing campaign was conducted in the spring of 1997 with television advertisements in April and May using local celebrities, along with promotions designed to improve transit ridership including a two-day Super-Pass promotion in mid-May which allowed unlimited riding all day for \$1.50. A follow-up evaluation will be undertaken to gauge the success of the entire regional marketing program.

## Ridership and Service Levels

The historic trends in transit ridership and service levels for the Kenosha transit system since it began public operation in September 1971 are shown in Figures 4 and 5. The transit system experienced steadily increasing ridership each year from 1971 through 1980. Over this period ridership increased about 167 percent, from about 503,000 revenue passengers in 1972, the first full year of operation, to about 1.34 million revenue passengers in 1980. The period was one of major transit service improvement and expansion occurring immediately after the City began public operation of the transit system, during which time the City implemented a restructured system of routes, revised service schedules, reduced and stabilized transit fares, and introduced a fleet of new buses. Transit ridership increases between 1979 and 1980 may also be attributed to the substantial increases in gasoline prices which occurred in each of these years.

From 1981 to 1992, the predominant trend on the Kenosha transit system was one of declining transit ridership, to about 1.1 million revenue passengers in 1992, or

Table 27

**OPERATING AND SERVICE CHARACTERISTICS OF THE COMPLEMENTARY PARATRANSIT SERVICE  
FOR DISABLED INDIVIDUALS PROVIDED BY THE KENOSHA TRANSIT SYSTEM AND KENOSHA COUNTY: 1997**

Characteristics	Complementary Paratransit Service Provided by the Care-A-Van Program <sup>a</sup>
Eligibility	<ul style="list-style-type: none"> <li>Disabled individuals whose physical or cognitive disability prevents them from using the Kenosha transit system or who reside outside the service area of the Kenosha transit system and persons ages 80 and over</li> </ul>
Response Time	<ul style="list-style-type: none"> <li>Service provided on the basis of next-day reservations and provided on a shorter notice whenever capacity permits</li> <li>Reservation service for trip requests available Monday through Friday from 6:00 a.m. until 6:00 p.m.</li> </ul>
Restrictions or Priorities Placed on Trips	<ul style="list-style-type: none"> <li>None</li> </ul>
Fares	<ul style="list-style-type: none"> <li>\$0.50 per one-way trip to and from approved nutritional sites</li> <li>\$1.50 per one-way trip for all other trips</li> </ul>
Hours and Days of Operation	<ul style="list-style-type: none"> <li>Monday-Saturday: 6:00 a.m. - 7:00 p.m.</li> <li>Service extended to 9:00 p.m. on Tuesdays and fourth Wednesday of each month</li> <li>Sundays and Holidays: No service</li> </ul>
Service Area	<ul style="list-style-type: none"> <li>Service provided to that part of Kenosha County east of IH 94, including the entire City of Kenosha and the Kenosha transit system service area, and to the commercial area at the intersection of IH 94 and STH 50</li> </ul>

<sup>a</sup>Service provided on a contract basis by the Kenosha Achievement Center, Inc.

Source: City of Kenosha Department of Transportation and SEWRPC.

Table 28

**BUS FLEET OF THE KENOSHA TRANSIT SYSTEM: 1997**

Type of Bus		Number of Buses	Seats per Bus	Wheelchair Positions per Bus	Year of Manufacture	Year of Rehabilitation	Special Equipment			Age (Years)	
Make	Model						Air Conditioning	Wheelchair Lift/Ramp	Kneeling Feature	Original	After Rehabilitation
GMC	I6H4523N	5	45	--	1975	1989	No	No	No	22	8
GMC	I6H4532N	5	45	--	1975	1990	No	No	No	22	7
GMC	I6H4523N	4	45	--	1975	1991	No	No	No	22	6
GMC	T7W603A	1	35	--	1979	--	Yes	No	No	18	--
GMC	T7W603A	5	35	2	1980	1995	Yes	Yes	Yes	17	2
GMC	TGOUT82W	5	46	2	1981	1993	Yes	Yes	Yes	16	4
GMC	I80204	2	35	2	1987	--	No	Yes	Yes	11	--
GMC	I80204	4	35	2	1987	--	Yes	Yes	Yes	11	--
TMC	IUMDIIA	9	43	2	1994	--	Yes	Yes	Yes	3	--
Nova	--	3	43	2	1996	--	Yes	Yes	Yes	1	--
Total		43	--	--	--	--	--	--	--	Average 13.7	Average 5.7

Source: City of Kenosha Department of Transportation and SEWRPC.

about 18 percent below the 1980 level. Factors contributing to the decline in ridership over this period include the following:

- Fare increases implemented by the system in 1981, 1983, 1985, 1987, and 1990, which doubled the base adult fare from \$0.30 per trip in 1980 to \$0.60 per trip in 1990. In constant dollars, fares were increased by almost 30 percent between 1981 and 1990. On the basis of the general fare elasticity factor of -0.33 used widely in the

transit industry,<sup>1</sup> such an increase could account for a ridership loss of approximately 10 percent.

<sup>1</sup>The fare elasticity shown is based on Simpson-Curtin elasticity formula used widely in the transit industry for the past 30 years. It indicates the percentage decrease in transit ridership which can be expected to result from a one percent increase in transit fare.



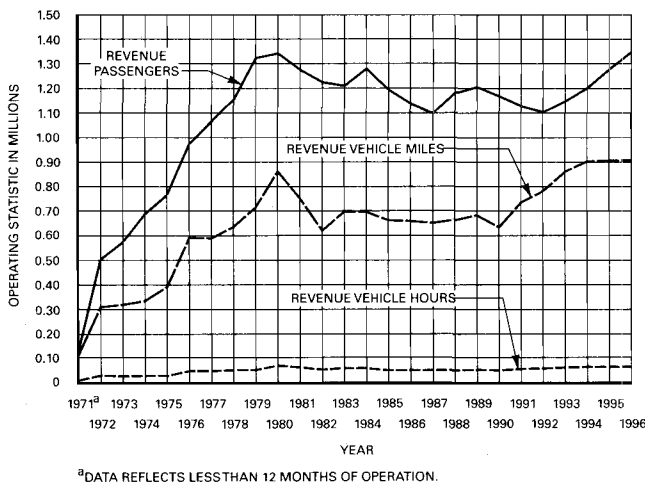
LOCATION OF FIXED FACILITIES FOR THE KENOSHA TRANSIT SYSTEM: AUGUST 1997





**Figure 4**

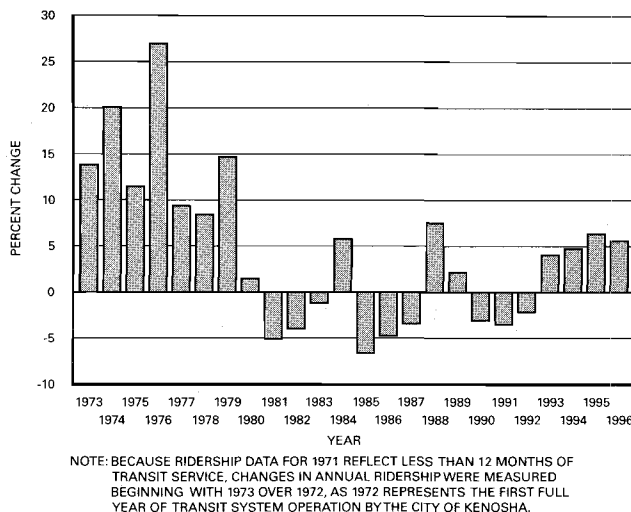
**HISTORIC RIDERSHIP AND SERVICE LEVELS  
ON THE KENOSHA TRANSIT SYSTEM: 1971-1996**



Source: City of Kenosha Department of Transportation and SEWRPC.

**Figure 5**

**PERCENTAGE CHANGE IN ANNUAL RIDERSHIP  
ON THE KENOSHA TRANSIT SYSTEM: 1973-1996**



Source: City of Kenosha Department of Transportation and SEWRPC.

- Decreases in systemwide service levels. The number of annual revenue vehicle-miles operated by the system declined from about 861,900 miles in 1980 to about 634,300 miles in 1990, or by about 25 percent. Most of the decrease occurred as a result of increases in midday headways implemented in mid-1981, after which service levels fluctuated as a result of the addition of new bus routes and reduc-

tions in Saturday operating headways and schoolday transit services.

- Changes in the overall market for transit service within the City of Kenosha, the principal service area for the transit system, are shown in Table 29. Of most importance, employment levels in the City declined by almost 19 percent from 1980 to 1990 as a result of a nationwide recession which severely affected the Kenosha economy between 1979 and 1984 and as a result of the closing of the Chrysler Motors automotive body assembly plants in 1988. Work trips have historically constituted about one-quarter of the average weekday ridership in the regular routes of the transit system.
- Other external factors including modest declines in the school-age population; declining gasoline prices, which have made travel by automobile more attractive; modest increases in vehicle availability; and stable levels of zero-automobile households.

Information on systemwide ridership and service levels on the transit system for the most recent five-year period, 1992 through 1996, are shown in Table 30. Since 1993, systemwide ridership has increased steadily, with about 1.35 million revenue passengers carried in 1996, representing an increase of about 22 percent over the 1992 level. The growth can be attributed to a restructuring of bus routes implemented in August 1993, on the recommendations of the previous transit system development plan completed in 1991, and to growth in residential, commercial, and industrial development which has occurred since 1990. Annual ridership on the regular and peak-hour tripper bus routes of the system has ranged from approximately 1,090,100 to 1,332,800 revenue passengers over the past five years, with an annual average of about 1,200,400 revenue passengers. The total weekday ridership on the regular bus routes, based on passenger counts conducted by Commission staff March 5 through 7, 1996, is presented in Table 31. As indicated in this table, Route Nos. 2 and 5 accounted for about 42 percent of the total weekday ridership on the City of Kenosha transit system during this period. Schoolday ridership on the peak-hour tripper routes was estimated at about 1,300 passengers per day.

Table 32 presents the ridership on the City's Federally required complementary paratransit service for disabled individuals provided through the Care-A-Van specialized transportation program administered by the Kenosha County Department of Human Services, Division of Aging Services. From 1992 through 1996, an average of about 16,200 trips per year were made on this service.

Table 29

## SELECTED SOCIO-ECONOMIC CHARACTERISTICS OF THE CITY OF KENOSHA: 1980-1995

Characteristic	1980	1990	1995	Change					
				1980-1990		1990-1995		1980-1995	
				Number	Percent	Number	Percent	Number	Percent
Total Population .....	79,700	80,400	85,000	700	0.7	4,600	5.7	5,300	6.6
Transit Dependant Population									
School-age Children .....	12,100	10,000	N/A	-2,100	-17.4	N/A	N/A	N/A	N/A
Elderly Persons .....	12,600	14,400	N/A	1,800	14.3	N/A	N/A	N/A	N/A
Persons in Low-Income Households .....	6,000	9,900	N/A	3,900	65.0	N/A	N/A	N/A	N/A
Households									
Total .....	28,000	29,900	31,900	1,900	6.8	2,000	6.7	3,900	13.9
With No Vehicle Available ...	3,100	3,400	N/A	300	9.7	N/A	N/A	N/A	N/A
Vehicles Available									
Total .....	42,400	46,100	N/A	3,700	8.7	N/A	N/A	N/A	N/A
Per Person .....	0.53	0.57	N/A	0.04	7.5	N/A	N/A	N/A	N/A
Per Household .....	1.51	1.54	N/A	0.03	2.0	N/A	N/A	N/A	N/A
Employment .....	42,200	34,400	N/A	-7,800	-18.5	N/A	N/A	N/A	N/A

Note: N/A indicates data not available.

Source: U. S. Bureau of the Census, Wisconsin Department of Administration, Wisconsin Department of Workforce Development, and SEWRPC.

Table 30

## ANNUAL RIDERSHIP AND SERVICE LEVELS ON THE KENOSHA TRANSIT SYSTEM: 1992-1996

Characteristic	Year					Five-Year Average
	1992	1993	1994	1995	1996	
Primary Service Area Population <sup>a</sup> .....	79,300	79,900	80,400	82,800	83,800	81,200
Service Provided						
Revenue Vehicle-Miles .....	781,600	860,800	903,300	906,200	907,800	871,900
Revenue Vehicle-Hours .....	60,100	63,800	66,000	66,000	66,900	64,600
Revenue Passengers						
Regular and Peak-Hour Tripper Bus Routes ...	1,090,100	1,132,000	1,185,100	1,262,200	1,332,800	1,200,400
Paratransit Service .....	13,700	16,300	17,200	16,500	17,500	16,200
Total	1,103,800	1,148,300	1,202,300	1,278,700	1,350,300	1,216,700
Service Effectiveness						
Revenue Passengers per Capita .....	13.9	14.4	15.0	15.4	16.1	15.0
Revenue Passengers per Vehicle-Mile .....	1.4	1.3	1.3	1.4	1.5	1.4
Revenue Passengers per Vehicle-Hour .....	18.4	18.0	18.2	19.4	20.2	18.8

<sup>a</sup>Based upon the estimated resident population of the City of Kenosha.

Source: Wisconsin Department of Administration, Wisconsin Department of Transportation, City of Kenosha Department of Transportation, and SEWRPC.

### Operating and Capital Costs

The operating expenses of the Kenosha transit system are funded through a combination of farebox revenues, and Federal, State, and local funds. Capital expenditures are funded through a combination of Federal and local funds. The historic trend of the operating expenses,

revenues, and deficits of the transit system since it began public operation in 1971 are shown in Figure 6, both in actual dollars and in constant 1971 dollars. A summary of the recent trends in operating expenses, revenues deficits, and local subsidies on the transit system is shown in Table 33 for the period 1992-1996, while information

Table 31

**AVERAGE WEEKDAY  
RIDERSHIP ON THE REGULAR  
BUS ROUTES OF THE KENOSHA  
TRANSIT SYSTEM: MARCH 5-7, 1996**

Route Number	Total Boarding Passengers	
	Number	Percent of Total
1	520	13.0
2	830	20.8
3	720	18.0
4	670	16.8
5	850	21.3
6	290	7.3
7	60	1.5
8	50	1.3
Total	3,990	100.0

Source: SEWRPC.

Table 32

**RIDERSHIP ON THE COMPLEMENTARY  
PARATRANSIT SERVICE FOR DISABLED  
INDIVIDUALS PROVIDED BY THE KENOSHA  
TRANSIT SYSTEM AND KENOSHA COUNTY: 1992-1996**

Year	Annual Ridership (one-way trips)
1992	13,700
1993	16,300
1994	17,200
1995	16,500
1996	17,500
Average Annual	16,200

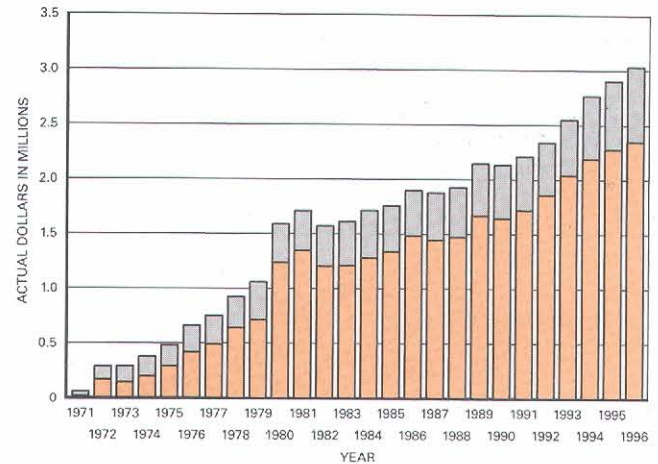
Source: City of Kenosha Department of Transportation, Kenosha Achievement Center, Inc., and SEWRPC.

on transit system capital expenditures over this same period is shown in Table 34. The following observations may be made on the basis of an examination of the information:

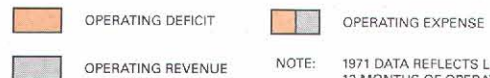
- Operating expenses and deficits for the transit system rose steadily in both actual and constant

Figure 6

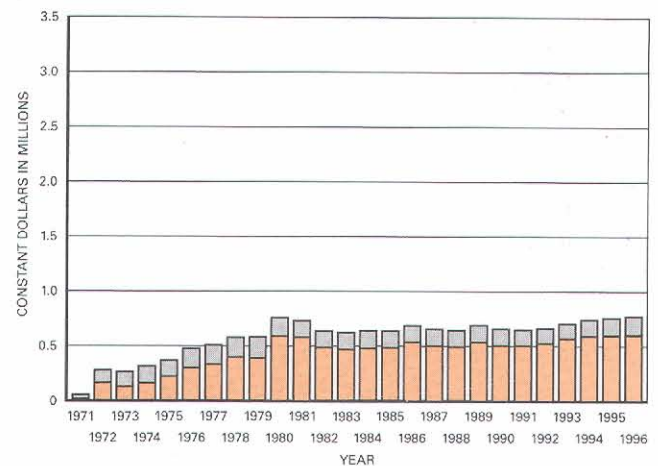
**TOTAL ANNUAL OPERATING EXPENSES,  
REVENUES, AND DEFICITS FOR THE  
KENOSHA TRANSIT SYSTEM: 1971-1996**



## LEGEND



NOTE: 1971 DATA REFLECTS LESS THAN 12 MONTHS OF OPERATION.



## LEGEND



NOTE: 1971 DATA REFLECTS LESS THAN 12 MONTHS OF OPERATION.

Source: Wisconsin Department of Transportation; City of Kenosha Department of Transportation; and SEWRPC.

dollars between 1971 and 1981 as a result of the major transit service improvements implemented by the City, as well as significant increases in diesel fuel costs and employee wages in the late 1970s and early 1980s. A modest decrease in operating expenses and deficits occurred in 1981 and 1982 as the City increased midday headways from 30 to

Table 33

**ANNUAL OPERATING EXPENSES, REVENUES, AND  
DEFICITS FOR THE KENOSHA TRANSIT SYSTEM: 1992-1996**

Characteristic	Year					Five-Year Average
	1992	1993	1994	1995	1996 <sup>a</sup>	
Revenue Passengers						
Regular and Peak-Hour Tripper Bus Routes .....	1,090,100	1,132,000	1,185,100	1,262,200	1,332,800	1,200,400
Paratransit Service .....	13,700	16,300	17,200	16,500	17,500	16,200
Total	1,103,800	1,148,300	1,202,300	1,278,700	1,350,300	1,216,700
Costs, Revenues, and Subsidies						
Operating Expenses						
Regular and Peak-Hour Tripper Bus Routes .....	\$2,274,200	\$2,484,400	\$2,695,700	\$2,832,700	\$2,960,200	\$2,649,400
Paratransit Service .....	65,000	65,000	69,000	70,000	72,500	68,300
Subtotal	\$2,339,200	\$2,549,400	\$2,764,700	\$2,902,700	\$3,032,700	\$2,717,700
Revenues						
Regular Passenger Fares .....	\$317,600	\$328,200	\$364,000	\$391,000	\$420,400	\$364,200
Student Transportation Service Revenue <sup>b</sup> .....	162,200	181,600	211,000	236,600	264,700	211,200
Subtotal	\$479,800	\$509,800	\$575,000	\$627,600	\$685,100	\$575,500
Required Public Subsidy .....	\$1,859,400	\$2,039,600	\$2,189,700	\$2,275,100	\$2,347,600	\$2,142,200
Percent of Expenses Recovered through Revenues .....	20.5	20.0	20.8	21.6	22.6	21.2
Source of Public Subsidy						
Federal .....	\$549,900	\$540,800	\$581,900	\$545,900	\$416,200	\$526,900
State .....	982,500	1,070,700	1,161,200	1,212,700	1,237,100	1,132,800
City .....	327,000	428,100	446,600	516,500	694,300	482,500
Total	\$1,859,400	\$2,039,600	\$2,189,700	\$2,275,100	\$2,347,600	\$2,142,200
Per Trip Data						
Operating Cost .....	\$2.12	\$2.22	\$2.30	\$2.27	\$2.25	\$2.23
Revenue .....	0.44	0.44	0.48	0.49	0.51	0.47
Total Public Subsidy .....	1.68	1.78	1.82	1.78	1.74	1.76
Local Public Subsidy .....	0.30	0.37	0.37	0.40	0.51	0.40

<sup>a</sup>Estimated.

<sup>b</sup>Represents revenue from the Kenosha Unified School District.

Source: Wisconsin Department of Transportation, City of Kenosha Department of Transportation, and SEWRPC.

60 minutes; after that operating expenses and deficits have risen steadily in actual dollars. Operating expenses and revenues remained stable in constant dollars from 1982 until 1993, when service was restructured on the basis of the recommendations of the previous transit system development plan, which included modest service increases. Expenses and deficits have remained stable, in constant dollars, since 1993, reflecting stable service levels.

- During the five years from 1992 through 1996, the City expended about \$2,718,000 on an average annual basis on operating and maintaining the transit system. Of this total, about \$576,000, or 21 percent, came from farebox and other miscellaneous revenue. The remaining \$2,142,000, or 79 percent, was the average annual public operating subsidy which had to be funded through Federal and State transit operating assistance programs and local property taxes. The average annual operating

Table 34

**ANNUAL CAPITAL PROJECT EXPENDITURES BY FUNDING  
SOURCE FOR THE KENOSHA TRANSIT SYSTEM: 1992-1996**

Characteristic	Capital Expenditures by Year					Five-Year Average
	1992	1993	1994	1995	1996 <sup>a</sup>	
<b>Capital Project Type</b>						
Bus Fleet Expansion, Replacement, or Rehabilitation .....	\$525,000	\$875,000	\$1,480,000	\$725,000	\$804,900	\$882,000
Facility Renovation or Replacement .....	38,000	35,000	591,000	--	--	132,800
Facility Expansion or Additions .....	--	--	--	--	--	--
Other .....	--	80,000	--	--	--	16,000
<b>Total</b>	<b>\$563,000</b>	<b>\$990,000</b>	<b>\$2,071,000</b>	<b>\$725,000</b>	<b>\$804,900</b>	<b>\$1,030,800</b>
<b>Source of Funds</b>						
Federal .....	\$422,200	\$792,000	\$1,656,800	\$580,000	\$643,920	\$819,000
City .....	140,800	198,000	414,200	145,000	160,980	211,800
<b>Total</b>	<b>\$563,000</b>	<b>\$990,000</b>	<b>\$2,071,000</b>	<b>\$725,000</b>	<b>\$804,900</b>	<b>\$1,030,800</b>

<sup>a</sup>Estimated.

Source: City of Kenosha Department of Transportation and SEWRPC.

subsidy from the City of Kenosha has been about \$483,000, or about 18 percent of total system operating expenses.

- The portion of total operating expenses funded by Federal operating assistance and local property taxes has changed significantly between 1992 and 1996, as illustrated in Figure 7. In 1992, Federal operating assistance was about \$550,000, or about 24 percent of transit system operating expenses; the total City funding amounted to about \$327,000, or about 14 percent of operating expenses. By 1996, however, Federal funding had been reduced by 24 percent, to about \$416,000, covering only about 14 percent of system operating expenses; the total City funding had been increased by 112 percent, to about \$694,000, covering about 23 percent of operating expenses.
- The average annual capital expenditures on the transit system over the same five-year period totaled about \$1,031,000, principally for bus replacement and improvements or equipment at the municipal garage. Of this total, about \$819,000, or about 80 percent, came from Federal programs providing transit capital assistance; the remaining \$212,000, or about 20 percent, came from the City of Kenosha.
- The total average annual expenditures for transit system operations and capital projects from 1992

through 1996 amounted to about \$3,749,000, or about \$3.08 per trip. The total average annual public subsidy funded through Federal and state transit assistance programs and local property taxes amounted to about \$3,173,000, or about \$2.61 per trip. The total average annual funds provided by the City of Kenosha amounted to about \$694,000, or about \$0.57 per trip.

## OTHER PUBLIC TRANSIT SERVICES

The City of Kenosha is the principal provider of public transit service within the greater Kenosha area. However, a number of other public transit services are also provided to study area residents, including local and intercity transit services for the general public, specialized transportation services for the elderly and disabled population, and transportation services for students at local schools.

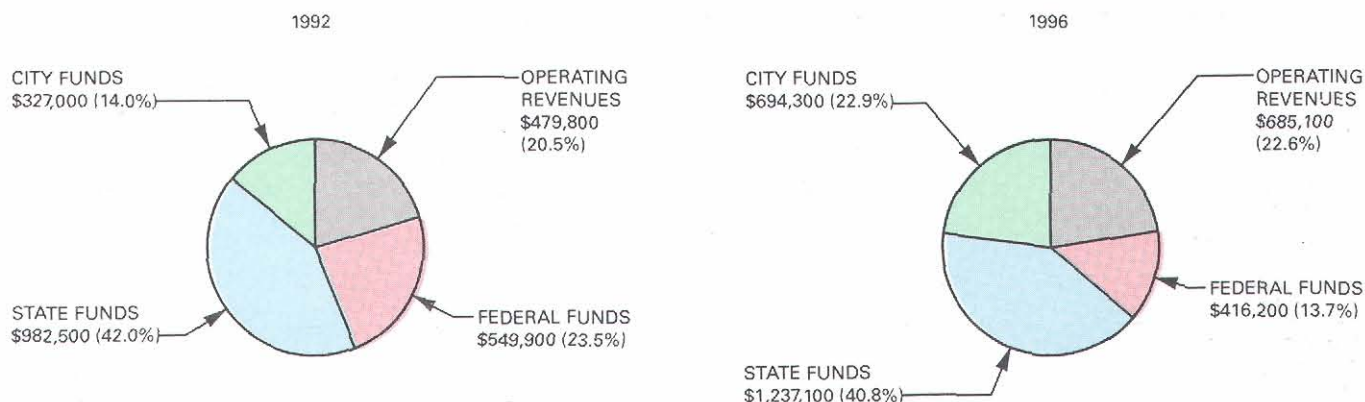
### Additional Local and Intercity Services

Additional transit services for the general public which were provided within the primary study area or which connected with the City of Kenosha included: local bus service provided by the City of Racine Belle Urban System and the Kenosha Lakefront Trolley; express bus service provided by Wisconsin Coach Lines, Inc.; intercity bus services provided by Greyhound Lines, Inc. and United Limo, Inc.; intercity passenger train service provided by Metra and the National Railway Passenger Corporation, commonly called Amtrak; and taxicab service provided



Figure 7

DISTRIBUTION OF TOTAL OPERATING EXPENSES FOR THE  
KENOSHA TRANSIT SYSTEM BY FUNDING SOURCE: 1992 AND 1996



Source: Wisconsin Department of Transportation, City of Kenosha Department of Transportation, and SEWRPC.

by several local taxicab companies. The general characteristics of these services are summarized in Table 35. The alignments of the routes for each operator are shown on Map 21. Each of the services may be briefly described as follows:

- City of Racine Belle Urban System

Route No. 9 of the Belle Urban System operates between the Racine CBD and the University of Wisconsin-Parkside. This route is one of eleven local bus routes operated by the City of Racine's publicly subsidized transit system. Route No. 9 operates only when classes are in session at the University, with no service provided on weekends and reduced service provided during the summer class session. Transit patrons who desire to travel between points served by the Racine and Kenosha transit systems can do so by transferring between the two bus routes at the University, but are required to pay the appropriate full fare for the bus service to which they are transferring. On the basis of the 1991 Commission surveys of passengers on both the Racine and Kenosha bus systems, it is estimated that only about 20 passengers per day, or less than 1 percent of the ridership on the systems, make such a transfer to travel between Racine and Kenosha.

- Kenosha Lakefront Trolley

Since 1986, the Kenosha Lakefront Business District has, without public operating subsidy, operated a unique transportation service, known as the Kenosha Lakefront Trolley, in the Kenosha CBD and its environs. The Kenosha Lakefront Trolley is a guided tour which is operates from Memorial

Day through Labor Day. The tour departs hourly from the corner of 58th Street and 7th Avenue in the Kenosha CBD, but flag stops can be made anywhere along the route. Service is provided with a diesel-powered bus which resembles a historic streetcar. A replacement bus of the same design but powered by compressed natural gas is currently being acquired, with the City acting as the public sponsor for Federal Congestion Mitigation and Air Quality Improvement funds used to purchase the vehicle. The Kenosha Lakeshore Business District estimates that approximately 180 trips were made per day during the period of operation in 1996.

- Wisconsin Coach Lines, Inc.

Wisconsin Coach Lines, Inc. operates one route which provides commuter-oriented express bus service between the Milwaukee CBD and the Cities of Racine and Kenosha. The route's southern terminus is at a passenger terminal area at 2105 Roosevelt Road, with buses stopping there and at several intermediate stops within the primary study area. Service over the route consists of eight runs in each direction each weekday and four runs in each direction operated on weekends and holidays. The company's service is oriented principally towards serving Racine and Kenosha passengers commuting to and from the Milwaukee area, but can also be used to travel between Racine and Kenosha. On the basis of the 1991 Commission survey of passengers using this route, it is estimated that about 100 trips per day, or about 48 percent of the average weekday trips, either originate or end in the study

Table 35

**ADDITIONAL LOCAL AND INTERCITY TRANSIT SERVICES  
FOR THE GENERAL PUBLIC IN THE PRIMARY STUDY AREA: 1997**

Name of Service Provider	Type of Provider	Type of Service	Days and Hours of Operation	Fares <sup>a</sup>	Service Area	Vehicles Used	Average Weekday Ridership (one-way trips)
Belle Urban System (City of Racine)	Public	Local bus	Weekdays: 7:15 a.m. - 7:00 p.m. Saturdays, Sundays and Holidays: No Service	Adults (ages 18-64): \$1.00 Students (ages 6-17): \$1.00 Elderly (ages 65 and over) and Disabled: \$0.50	Route No. 9 serves the University of Wisconsin-Parkside, with connections to other routes serving the City of Racine and environs in the Racine central business district	Urban transit buses	190 <sup>b</sup>
Kenosha Lakefront Trolley	Private	Local circulator bus	Tuesday-Friday: 11:00 a.m. - 4:00 p.m. Weekends: 10:00 a.m. - 3:00 p.m. (Service operates Memorial Day to Labor Day only)	Adults (ages 13 and over): \$2.00 Children (ages 3 to 12): \$1.00	Route follows a fixed route in and around the Kenosha central business district	Gasoline-powered bus resembling a streetcar	180
Wisconsin Coach Lines, Inc.	Public <sup>c</sup>	Express bus	Weekdays: 5:30 a.m. - 11:00 p.m. Weekends/Holidays: 8:10 a.m. - 11:00 p.m.	Distance-based ranging from \$1.70 to \$4.20 for adults	Stops made within the study area in the Town of Somers and the City of Kenosha; a passenger terminal is located at 2105 Roosevelt Road	Long distance over-the-road motor coaches	250
Greyhound Lines, Inc.	Private	Intercity bus	Daily service consisting of: 16 southbound bus trips and 14 northbound bus trips	Distance-based	Two northbound and southbound buses stop at a passenger terminal at 2105 Roosevelt Road; no other buses stop in the study area	Long-distance over-the-road motor coaches	N/A
United Limo, Inc.	Private	Intercity bus	Daily: 1:00 a.m. - 11:00 p.m.	Distance-based	One stop at IH 94 and STH 50	Long-distance over-the-road motor coaches	N/A
Metra	Public	Commuter rail	Weekdays: 6:00 a.m. - 9:00 a.m. 2:15 p.m. - 11:30 p.m. Saturdays: 5:45 a.m. - 8:45 a.m. 12:15 p.m. - 2:15 a.m. Sundays/Holidays: 6:45 a.m. - 8:45 a.m. 4:15 p.m. - 2:15 a.m.	Distance-based; fare for one-way travel between Kenosha and Chicago is \$5.80 for adults	One stop at a passenger terminal at 5414 13th Avenue serving eastern Kenosha County	Standard bi-level gallery passenger train coaches	265 <sup>d</sup>
Amtrak	Public	Intercity passenger train	Weekdays: <sup>e</sup> 7:30 a.m. - 9:00 p.m. Saturdays: <sup>e</sup> 7:30 a.m. - 9:00 p.m. Sundays/Holidays: <sup>e</sup> 7:30 a.m. - 9:00 p.m.	Distance-based	No stops in the study area; the closest stop is in the Village of Sturtevant in Racine County	Standard intercity single-level passenger train coaches	900-1,000 <sup>f</sup>
Taxicab Providers <sup>g</sup>	Private	Taxicab Service	Seven days a week, 24 hours a day	Zone-based fares for travel within the City of Kenosha ranging from \$2.50 to \$12.00; travel outside the city is charged on a distance-based system	City of Kenosha, Village of Pleasant Prairie, and Town of Somers	Automobiles	N/A

Note: N/A indicates data not available.

<sup>a</sup>Fares shown are cash fares per trip.

<sup>b</sup>Ridership shown is average weekday ridership on Route No. 9.

<sup>c</sup>The City of Racine acts as the public sponsor for the service. Wisconsin Coach Lines, Inc., is a private for-profit company under contract to the City of Racine for the bus service.

<sup>d</sup>Ridership shown is for passengers using the Kenosha station as one trip end.

<sup>e</sup>Indicates time of service in the Village of Sturtevant in Racine County, which is the closest station to the study area.

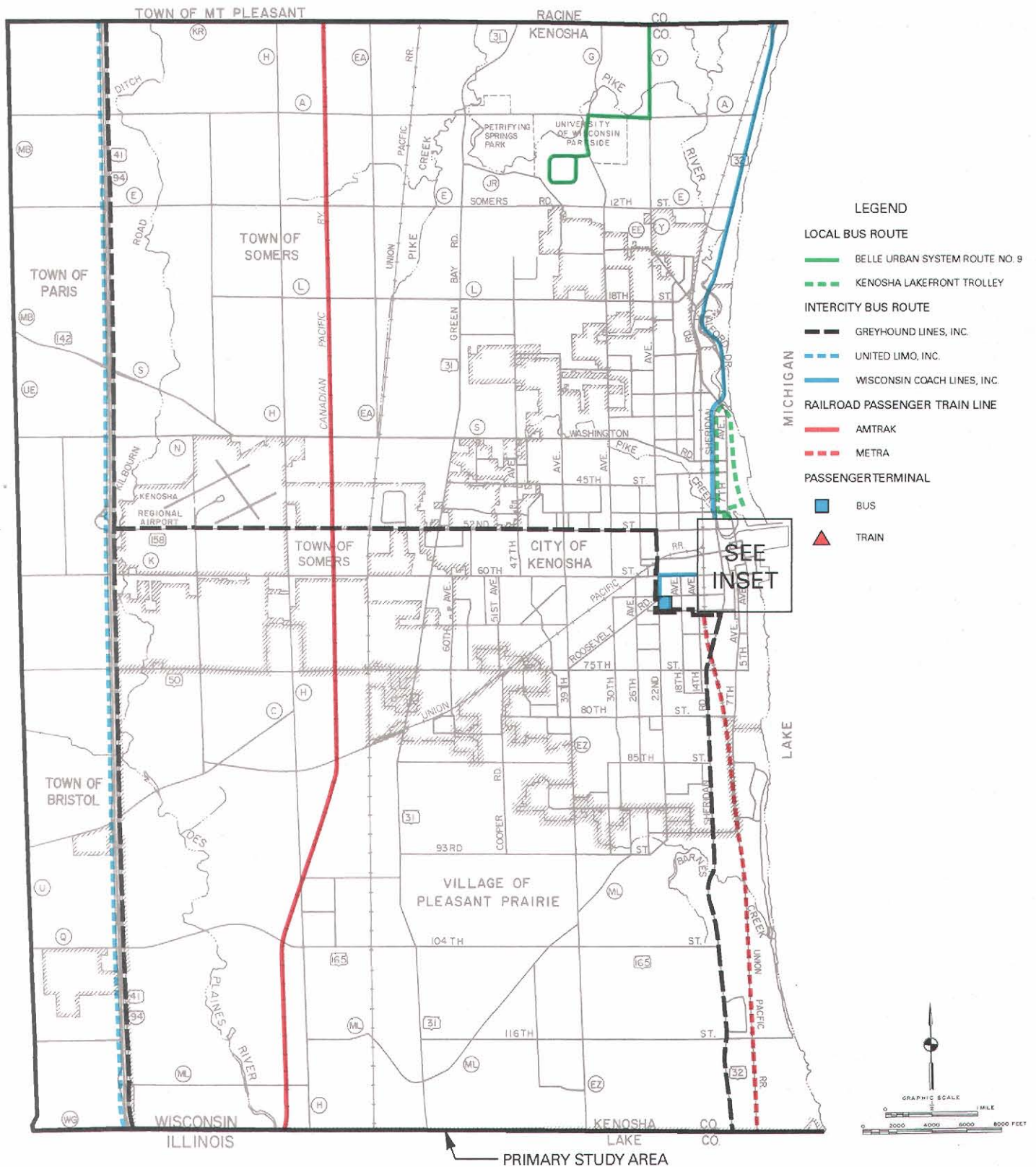
<sup>f</sup>Ridership shown is over the entire route between Milwaukee and Chicago. Average weekday ridership using the Sturtevant stop was estimated at 60 to 70 passengers.

<sup>g</sup>The providers include Excalibur Cab Company, Keno Cab Company, and Peppie's Courtesy Cab Company.

Source: SEWRPC.

Map 21

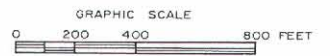
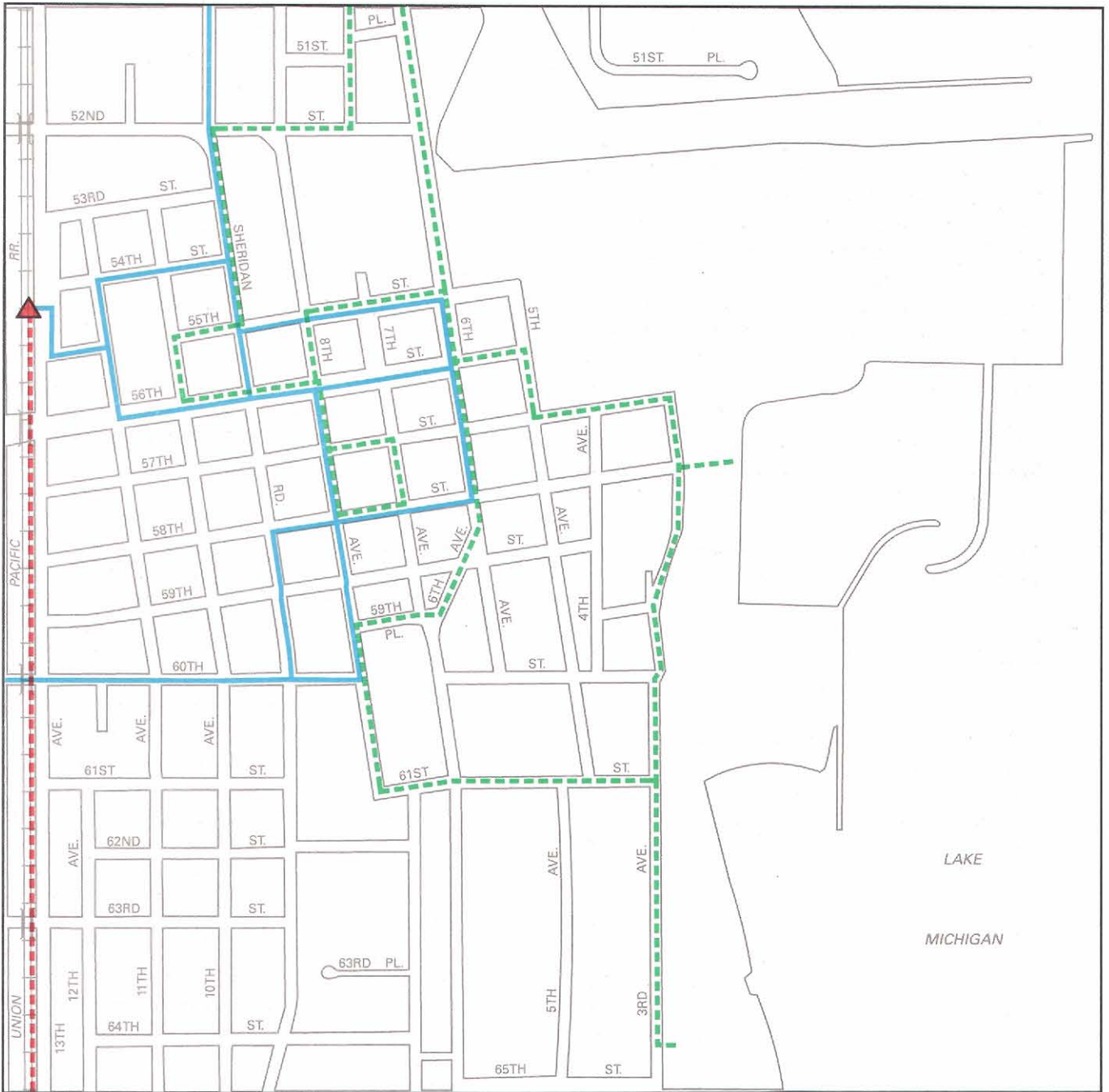
ADDITIONAL BUS AND RAILROAD PASSENGER SERVICE IN THE PRIMARY STUDY AREA: 1997



Source: SEWRPC.



Inset to Map 21



area. Since 1985 the City of Racine has acted as the public sponsor and applicant, or grantee, for the State urban transit operating assistance funds used to subsidize the operation of the service. Before 1985 the route was operated without public subsidy.

- Greyhound Lines, Inc.

Greyhound Lines, Inc., operates one intercity bus route through the western portion of the primary study area, providing service over IH 94 between Milwaukee and Chicago. Service over the route consists of 16 southbound runs and 14 northbound runs daily. All the runs stop within the study area, but only two of the southbound runs and two of the northbound runs stop near the Kenosha CBD, at a passenger terminal located at 2105 Roosevelt Road. The remaining northbound and southbound runs pass through the study area on IH 94 without stopping. The company's Milwaukee-Chicago service is strongly oriented towards providing connections for Milwaukee area passengers with other long-distance buses at its Chicago hub, as well as accommodating Milwaukee-Chicago trips. Greyhound Lines, Inc., currently does not receive public financial assistance for the service it provides through the study area.

- United Limo, Inc.

United Limo, Inc., operates one intercity bus route through the western portion of the primary study area, providing service over IH 94 between the Milwaukee CBD and Chicago's O'Hare International and Midway Airports, including a stop at Milwaukee's General Mitchell International Airport. Service over the route consists of 12 southbound runs and 12 northbound runs daily, with the only stop within the study area to serve Kenosha area passengers at IH 94 and STH 50. The company's service is directed principally toward serving airport-related trips and is not really conducive to general-purpose travel between Milwaukee and Chicago. United Limo, Inc., currently does not receive public financial assistance for the service it provides through the study area.

- Metra

Metra provides publicly subsidized commuter-rail passenger service between Kenosha and Chicago over the Union Pacific North Line. The City of Kenosha owns the Metra station and operates a park-ride lot immediately east of the station. The Kenosha stop, at a passenger terminal at 5414 13th Avenue, is the northern terminus of the Metra line and the only stop in the primary study area. The route's principal outlying station is in Waukegan,

Illinois, so only a portion of all runs on the line include the Kenosha stop. On weekdays, there are nine; on Saturdays, five; and on Sundays and holidays three trains originating in Kenosha. On the basis of the 1991 Commission survey of passengers using this service, it is estimated that about 740 trips per day either originate or end in the study area. Most of the trips originating at the Kenosha stop are made by study area residents with a destination of Cook County. The local public subsidies required to provide this service come from the Regional Transportation Authority of Chicago.

- Amtrak

Amtrak provides publicly subsidized intercity passenger service between the Milwaukee CBD and Chicago over the CP Rail System's Chicago-Milwaukee-St. Paul main line. Amtrak's Chicago-Milwaukee *Hiawatha* Service consists of six trains in each direction Monday through Saturday, and five trains in each direction on Sundays. There are no stops within the primary study area, but all trains on the *Hiawatha* Service stop in the Village of Sturtevant, Racine County, which is the stop located closest to the study area. One additional train, the *Empire Builder*, provides long-distance service through Milwaukee to St. Paul, Minnesota, and Seattle, Washington, and passes through the study area each day without stopping. While Amtrak service in the Chicago-Milwaukee corridor is oriented towards providing connections with other long-distance trains at the system's hub in Chicago, selected weekday trains have always been well patronized by individuals traveling to Chicago on business trips, commuting to Chicago workplaces, or making day trips to Chicago for personal or recreational purposes. The 1991 Commission survey of Amtrak passengers indicated that about 7 percent of the daily passengers on the Chicago-Milwaukee service, or about 60 to 70 passengers of the total 900 to 1,000 passengers daily, used the Sturtevant stop. Amtrak's Chicago-Milwaukee *Hiawatha* Service is funded in part by the Wisconsin and Illinois Departments of Transportation.

- Taxicab Services

Taxicab service in the primary study area is provided by three companies, Excalibur Cab Company, Keno Cab Company, and Peppie's Courtesy Cab Company. The companies operate under a zone-based fare system established by the City of Kenosha. Under the system, maximum fares for trips are set, with surcharges for travel outside the established zones on the basis of the distance traveled.



### **Specialized Transportation Services**

Specialized transportation services were also provided within the primary study area in 1997 by a number of public and private nonprofit agencies and organizations, as well as by private for-profit transportation companies. In general, most of the available specialized transportation services were provided on demand, rather than on a fixed schedule, with eligibility for service usually limited to the clientele of the sponsoring agency or organization, principally elderly or disabled individuals. The general characteristics of the major specialized transportation services provided within the study area in 1997 are presented in Table 36. The services identified may be characterized as follows:

- **Kenosha County Department of Human Services, Division of Aging Services**

Two major programs providing specialized transportation services within the primary study area are administered by the Kenosha County Department of Human Services, Division of Aging Services. The first, the Care-A-Van program, provides door-to-door transportation service for general travel to elderly persons and disabled individuals unable to use, or living outside the service area of, the City of Kenosha transit system, including the portion of Kenosha County outside the study area. Users are generally required to make reservations no later than the day before the trip, although allowances are made for scheduling trips on a space-available basis up to one hour before the desired travel time. The urban service provided by this program in eastern Kenosha County is used by the City to provide its Federally required complementary paratransit service for disabled individuals who are unable to use the City's fixed-route bus service. The rural service provided by the program in western Kenosha County is less extensive than the urban service and is oriented toward fixed destinations within the County. The second program offered by the Division of Aging Services, the Volunteer Escort Program, provides transportation to ambulatory persons unable to drive or use other forms of transportation because of age or impairment and is provided through the coordination of volunteer drivers using their own vehicles. The Kenosha Achievement Center, Inc., has been contracted to operate the Care-A-Van service and to provide recruitment of volunteers and scheduling of service for the Volunteer Escort Program.

- **Kenosha Achievement Center, Inc.**

The Kenosha Achievement Center, Inc., provides specialized transportation services to individuals

who have been assessed as being unable to use other transportation services, such as the Kenosha transit system, by participation in its training and rehabilitative programs. Service is provided by using busses owned by the Kenosha Achievement Center, Inc., on regular routes and prescheduled according to client needs.

- **Brookside Care Center**

The Brookside Care Center provides specialized transportation services for its residents. The organization provides service on a door-to-door basis as dictated by the needs of its residents. For such services, the Brookside Care Center operates the service directly, using its own vehicles.

- **Private For-Profit Transportation Services**

The following four private for-profit specialized transportation providers also served a significant number of passengers within the primary study area in 1997: A-1 Specialized Transport Services; Advanced Specialized Transportation Services, Inc.; Bella Mobile Care, Inc.; Guiding Star Transport; Mapleridge Transportation Services, Inc.; Nichols Medical Transport, Inc.; St. Christopher Mobile Care, Inc.; and Universal Medical Transport. These transportation services were provided primarily to elderly and disabled individuals for nonemergency trips within the study area and between the study area and the surrounding counties. Most trips were to and from hospitals, nursing homes, and physicians for health-related purposes. Service was provided both on a door-to-door basis and a door-through-door basis, as dictated by the special needs of the passengers. There were no strict service area boundaries.

### **School District Student Transportation Service**

The Kenosha Unified School District provides transportation to and from public, private, and parochial schools for pupils who reside in the School District two or more miles from the nearest public, private, or parochial school they are entitled to attend, live less than two miles from school but would face hazardous walking conditions on their journey to and from school, or participate in the District's exceptional education program. The District currently contracts with a private school bus company, Laidlaw Transit, Inc., for transportation services for about 6,500 such students. In addition, some students eligible for transportation service who reside within the service area of the City of Kenosha transit system are provided special student passes so they can ride to and from school on the City system. The District reimburses the City of Kenosha transit system on a daily basis for each student

Table 36

**MAJOR SPECIALIZED TRANSPORTATION SERVICES FOR ELDERLY  
AND DISABLED PERSONS PROVIDED WITHIN THE PRIMARY STUDY AREA: 1997**

Name of Service Provider	Type of Provider	Type of Service	Eligible Users	Days and Hours of Operation	Service Area	Fare Per Trip	Vehicles Used	Average Weekday Ridership (one-way trips)
Kenosha County Department of Human Services, Division of Aging Services  Care-A-Van Program	Public <sup>a</sup>	Advance reservation, door-to-door	Disabled individuals whose physical or cognitive disability prevents them from using the Kenosha transit system or who reside outside the service area of the Kenosha transit system and persons ages 80 and over	Urban Service: Monday-Saturday: 6:00 a.m.-6:00 p.m. (service extended to 9:00 p.m. on Tuesdays and fourth Wednesday each month) Rural Service: Monday-Friday: 9:00 a.m.-3:00 p.m.	Urban Service: Kenosha County East of IH 94 and commercial development at intersection of IH 94 and STH 50 Rural Service: Kenosha County west of IH 94	\$0.50 per one way trip to and from nutrition sites; \$1.50 per one-way trip for all other trips	Buses, vans, and automobiles provided by contract operation	75
Volunteer Escort Program	Public <sup>b</sup>	Advance reservation, door-through-door	Frail elderly Kenosha County residents over age 60 and disabled County residents unable to travel alone	Seven days a week depending upon volunteer availability	Kenosha County and surrounding counties	\$3.00, per one way trip for local trips; additional mileage charges for out-of-County trips	Personal automobiles provided by volunteer drivers	2
Kenosha Achievement Center, Inc.	Private, nonprofit	Regular route, prescheduled basis per client needs	Disabled persons participating in services offered by the Kenosha Achievement Center, Inc. who have been assessed as being unable to use other transportation services	Weekdays: 7:00 a.m.- 9:00 a.m. 3:00 p.m.- 5:00 p.m.	Kenosha County and northern Lake County, Illinois	Donation suggested	Buses	65
Brookside Care Center	Private, for-profit	Advance reservation, door-to-door	Residents of facility	As required	As required	No direct charge	Wheelchair-accessible van and bus	3
A-1 Specialized Transport Services	Private, for-profit	Advance reservation, door-to-door	Residents of facility	Seven days a week with reservation	Area within a 100 mile radius of City of Kenosha	\$28 per round-trip, mileage charge of \$1.25 per mile over 10 miles	Wheelchair-accessible vans	15
Advanced Specialized Transportation Services, Inc.	Private, for-profit	Advance reservation, door-to-door	General public for medical purposes	Seven days a week, 24 hours a day	Kenosha, Racine, and Walworth Counties	\$15 per one-way trip up to five miles, \$1.95 for every mile thereafter	Wheelchair-accessible vans, cars, and ambulances	10
Bella Mobile Care, Inc.	Private, for-profit	Advance reservation, door-to-door	General public	Seven days a week, 24 hours a day	Kenosha, Racine, and Walworth Counties	Round-trip fare within the City of Kenosha is \$27.50, additional charge of \$1.25 per mile over five miles	Wheelchair-accessible vans and non-accessible vans	75
Guiding Star Transport	Private, for-profit	Advance reservation, door-to-door	Title 19 recipients	Monday-Friday: 7:30 a.m.-6:00 p.m.	Southeastern Wisconsin	Only Title 19 accepted	Wheelchair-accessible vans and cars	15

Table 36 (continued)

Name of Service Provider	Type of Provider	Type of Service	Eligible Users	Days and Hours of Operation	Service Area	Fare Per Trip	Vehicles Used	Average Weekday Ridership (one-way trips)
Mapleridge Transportation Services, Inc.	Private, for-profit	Advance reservation, door-through-door	General public	Monday-Friday: 6:00 a.m.-7:00 p.m. Additional times with advance reservation	Within the City of Kenosha and trips between Kenosha and surrounding areas	Ambulatory \$8.75, non-ambulatory \$11.50 one-way, additional \$1.50 per mile over five miles	Wheelchair-accessible vans and cars	60
Nichols Medical Transport, Inc.	Private, for-profit	Advance reservation, door-to-door	General public for medical purposes	Seven days a week, 24 hours a day	Southeastern Wisconsin	Base fare plus mileage charges	Wheelchair-accessible vans	20
St. Christopher Mobile Care, Inc.	Private, for-profit	Advance reservation, door-through-door	General public	As required with 24 hour reservation	Within the City of Kenosha and trips between Kenosha and surrounding areas	Round-trip fare \$25.00, additional charge of \$1.25 per mile over five miles	Wheelchair-accessible vans	80
Universal Medical Transport	Private, for-profit	Advance reservation, door-to-door	General public for medical purposes	Monday-Saturday: 7:00 a.m.-7:00 p.m.	Kenosha, Milwaukee, and Racine Counties	Round-trip fare \$20.00, additional charge of \$1.50 per mile over five miles	Wheelchair accessible vans	2

<sup>a</sup>Service contracted from a private nonprofit agency, the Kenosha Achievement Center, Inc., by Kenosha County, and by the Kenosha Transit Commission.

<sup>b</sup>Recruitment of volunteer drivers and service scheduling contracted from a private nonprofit agency, the Kenosha Achievement Center, Inc., by Kenosha County.

Source: SEWRPC.

pass issued. About 1,800 students within the School District were eligible for these student passes during the 1996-1997 school year. All the District's school transportation service is provided at no direct cost to the student.

## SUMMARY

This chapter has presented pertinent information on the existing City of Kenosha public transit system and on other major transit services provided in the primary study area during 1997. A summary of the most important findings follows.

1. The major supplier of local public transit service in the Kenosha area is the City of Kenosha, which has operated the City of Kenosha transit system since September 1971. The City owns the facilities and equipment for its fixed-route transit system and operates it with public employees under the direct supervision of the City Department of Transportation. While the policy-making body of the transit system is the Kenosha Transit Commission, the

ultimate responsibility for review and approval of certain important matters, including the annual budget, lies with the Kenosha Common Council.

2. During 1997, fixed-route bus service was provided by the City of Kenosha transit system over a system of eight regular bus routes. Six routes provided local bus service within the City and direct service to the Kenosha CBD, where the City has established a common stop to facilitate transfers. All these routes operated on a cycle, or "pulse," schedule to further facilitate transfers. A seventh local route extended outside the City's corporate limits into the Town of Bristol to serve the Factory Outlet Center. The eighth regular route provided service with limited stops between the Kenosha CBD and businesses located in the LakeView Corporate Park, in the Village of Pleasant Prairie, and in the Factory Outlet Center, in the Town of Bristol. Service was provided over the regular routes between 5:55 a.m. and 7:35 p.m. on weekdays and between 5:55 a.m. and 5:35 p.m. on Saturdays. Operating headways for Route Nos. 1 through 6

were 30 minutes during weekday peak periods, 60 minutes during weekday middays, and 60 minutes all day Saturday. Route Nos. 7 and 8 operate less frequently; Route No. 8 does not operate on Saturdays. The system also operates a system of peak-hour tripper routes during the school year, designed to accommodate junior and senior high school students. The base adult cash fare for the regular route service was \$1.00 per trip, with a reduced fare \$0.50 per trip charged for elderly and disabled individuals and \$0.60 for students. Special reduced fares for students were provided through the Kenosha Unified School District. The transit system maintained a fleet of 44 buses to provide service over both the regular and the peak-hour tripper routes.

3. To comply with Federal regulations, the transit system also provided a paratransit service to serve the travel needs of disabled individuals unable to use the fixed-route bus service provided by the City of Kenosha transit system. The door-to-door service was operated during the same hours as the fixed-route service and was available throughout the entire transit system service area. The service was provided by Kenosha Achievement Center, Inc., through a contract with the Kenosha County Department of Human Services, Division of Aging Services. Disabled individuals may also use accessible-bus service provided over the regular routes of the transit system by calling the system no later than the day before service is needed to indicate at what time and on which route or routes they desire to travel.
4. Ridership on the Kenosha transit system increased steadily annually from 1971 through 1980, during which time ridership increased about 167 percent, from about 503,000 revenue passengers in 1972, the first full year of operation, to about 1.34 million revenue passengers in 1980. These increases may be attributed to new and expanded transit services, new operating equipment, stable passenger fares, and substantial increases in gasoline prices during this period. From 1981 through 1992, the predominant trend on the City of Kenosha transit system has been one of declining ridership, broken only by modest increases in 1984, 1988, and 1989. Contributing factors to declining ridership included a doubling of the base adult fare; a 25 percent reduction in service between 1980 and 1990; a severe economic recession, which resulted in high unemployment levels within the Kenosha area; decreases in gasoline prices, which made

travel by automobile more attractive; and increases in automobile availability. Systemwide ridership increased steadily from 1993 to 1996. By 1996, the transit system carried about 1.35 million more revenue passengers, or about 22 percent, more than in 1992. Currently, Route Nos. 2 and 5 are the most heavily used of the eight regular routes in the system.

5. Over the five-year period 1992 through 1996, the City expended a total of about \$3,749,000, or about \$3.08 per trip, for transit system operations and capital projects on an average annual basis. Of this total, about \$576,000, or about \$0.47 per trip, was recovered through farebox and other miscellaneous revenues. The remaining \$3,173,000, or about \$2.61 per trip, constituted the total average annual public subsidy which had to be funded through Federal and State transit assistance programs and local property taxes. The total average annual subsidy from the City of Kenosha amounted to about \$694,000, or about \$0.57 per trip. The local share of the public operating subsidy for the transit system increased by 112 percent between 1992 and 1996, due in part to a decrease in Federal transit operating assistance and in part to increases in service introduced during this period.
6. Other transit services for the general public which either operated within the primary study area or connected with the City of Kenosha transit system outside the study area were also identified. The City of Racine Belle Urban System operated one local bus route between the Racine CBD and the University of Wisconsin-Parkside, where connections could be made with Route No. 2 of the City of Kenosha transit system. The Kenosha Lakefront Business District operated the Kenosha Lakefront Trolley, a guided tour operated principally in the Kenosha CBD, operated during summer months. A commuter-oriented express-bus route was operated by Wisconsin Coach Lines, Inc., between the Milwaukee CBD and Racine and Kenosha, providing several intermediate stops within the City of Kenosha and the Town of Somers. Two private carriers, Greyhound Lines, Inc., and United Limo, Inc., operated intercity service between Milwaukee and Chicago, providing a stop along IH 94, with some buses on the former line stopping in the City of Kenosha. Intercity rail service was operated between Milwaukee and Chicago by the National Railway Passenger Corporation, Amtrak, and commuter-rail service was operated between Kenosha and Chicago by Metra. The Amtrak stop

closest to the study area was in the Village of Sturtevant, Racine County, while Metra service stopped in the City of Kenosha. Taxicab service was provided by three companies, Excalibur Cab Company, Kenosha Cab Company, and Peppie's Courtesy Cab.

7. Specialized transportation services for the elderly and disabled were also provided within the primary study area in 1997. The most significant service was offered by the Kenosha County Department of Human Services, Division of Aging Services, which administered two Countywide programs, the Care-A-Van Program, providing door-to-door transportation services to elderly and disabled individuals for general travel purposes with extensive service levels in eastern Kenosha County and more limited service levels in the western, rural portion of the County, and the Volunteer Escort Program, providing service with volunteer drivers using their own vehicles. The Kenosha Achievement Center, Inc., has been contracted to provide and coordinate both services. Other private nonprofit agencies and organizations providing service included the

Kenosha Achievement Center, Inc., providing transportation for participants in its training and rehabilitative programs, and the Brookside Care Center, providing transportation for the residents of their facility as dictated by their needs. Finally, the following eight private for-profit companies also provided service to a significant number of passengers within the study area: A-1 Specialized Transport Services; Advanced Specialized Transportation Services, Inc.; Bella Mobile Care, Inc.; Guiding Star Transport; Mapleridge Transportation Services, Inc.; Nichols Medical Transport, Inc.; St. Christopher Mobile Care, Inc.; and Universal Medical Transport.

8. The Kenosha Unified School District provides schoolday transportation to students residing within the School District. The District currently contracts with a private company, Laidlaw Transit, Inc., for yellow school bus service for about 6,500 students. The District also provides about 1,800 students who reside within the service area of the Kenosha transit system with special schoolday bus passes that can be used to travel to and from school on the Kenosha transit system.



(This page intentionally left blank)

## Chapter IV

# PUBLIC TRANSIT SERVICE OBJECTIVES AND STANDARDS

## INTRODUCTION

One of the critical steps in the preparation of a transit system development plan is the articulation of the objectives to be served by the transit system, together with the identification of supporting standards which can be used to measure the degree of attainment of the objectives. The objectives and standards provide the basis whereby the performance of existing transit services may be assessed, alternative service plans designed and evaluated, and recommendations for the institution or improvement of service. The objectives formulated under this study are, accordingly, intended to represent the level of transit performance desired by the residents of the greater Kenosha area. Only if the objectives and standards clearly reflect the transit-related goals of the community will the recommended plan provide the desired level of service within the limits of available financial resources.

This chapter presents the public transit service objectives, principles, and standards formulated under this study to guide the preparation of a new transit system development plan for the greater Kenosha area. The objectives and supporting standards were used in evaluating the existing transit system and in the design and evaluation of alternative improvement plans.

## OBJECTIVES

The transit service objectives, principles, and standards set forth herein are intended to reflect the underlying values of the elected officials and residents of the Kenosha community. The task of formulating objectives, principles, and standards must, therefore, involve interested and knowledgeable public officials and private citizens representing a broad cross-section of interests in the community, as well as individuals familiar with the technical aspects of providing transit service. Accordingly, one of the important functions of the Kenosha Area Public Transit Planning Advisory Committee was to articulate transit service objectives, principles, and supporting standards for the planning effort. By drawing upon the collective knowledge, experience, views, and values of the members of the Committee, it is believed that a meaningful expression of the performance desired for Kenosha transit system was

obtained and a relevant set of transit service objectives and supporting principles and standards was defined.

The specific objectives adopted basically envision a transit system which will effectively serve the City of Kenosha and adjacent communities while minimizing the costs entailed. More specifically, the following objectives were adopted by the Advisory Committee:

1. Public transit should be provided to those areas of the City and its immediate environs which can be efficiently served, including those areas which are fully developed to medium or high densities, and, in particular, the transit-dependent populations within those areas.
2. The public transit system should promote effective utilization of public transit services and provide for user convenience, comfort, and safety.
3. The public transit system should promote efficiency in the total transportation system.
4. The transit system should be economical and efficient, meeting all other objectives at the lowest possible cost.

## PRINCIPLES AND STANDARDS

Complementing each of the foregoing transit service objectives is a planning principle and a set of service and design standards, as set forth in Table 37. The planning principle supports each objective by asserting its validity. Each set of standards is directly related to each transit service objective and serves several purposes, including the following: to facilitate quantitative application of the objectives in the evaluation of the existing transit system, to provide guidelines for the consideration of new or improved services, and to serve as warrants for capital investment projects. The standards are intended to provide a relevant and important means of measuring the degree to which existing or proposed public transit services contribute to the attainment of each objective.

The evaluation of the performance of the existing transit system used in the current study included assessments of

Table 37

## PUBLIC TRANSIT SERVICE OBJECTIVES, PRINCIPLES, AND STANDARDS FOR THE KENOSHA TRANSIT SYSTEM

Objective	Principle	Standards
1. Public transit should serve those areas of the City and its immediate environs which can be efficiently served, including those areas which are fully developed to medium or high densities and, in particular, the transit-dependent populations within those areas	Public transit can provide an important means of access for all segments of the population, but particularly for low- to middle-income households, the youth and the elderly, and the transportation-disabled	<ol style="list-style-type: none"> <li>Local fixed-route transit service should be provided to serve existing and potential travel demand generated within areas of contiguous high- and medium-density urban development</li> <li>Public transit service to residential neighborhoods<sup>a</sup> and major potential transit trip generators should be maximized. The major potential transit trip generators served should include the following: <ol style="list-style-type: none"> <li>Major regional, community, and neighborhood retail and service centers<sup>b</sup></li> <li>Educational institutions, including universities, colleges, vocational schools, secondary schools, and parochial schools<sup>c</sup></li> <li>Major community and special medical centers<sup>b</sup></li> <li>Major employment centers<sup>d</sup></li> <li>Major governmental and public institutional centers<sup>c</sup></li> <li>Major recreational areas<sup>e</sup></li> <li>Facilities serving elderly and disabled individuals<sup>b</sup></li> <li>Publicly or privately subsidized rental housing<sup>e</sup></li> </ol> </li> <li>The population served and, particularly that portion which is transit-dependent, should be maximized</li> <li>The number of jobs served should be maximized</li> <li>Paratransit service should be available within the transit service area to meet the needs of disabled<sup>f</sup> individuals who are unable to use fixed-route bus service</li> </ol>
2. The public transit system should promote effective utilization of public transit services and provide for user convenience, comfort, and safety	The benefits of a public transit system are, to a large extent, greatly related to the degree to which it is used. The extent of such use, as measured by public transit ridership, is a function of the degree to which the transit facilities and services provide for user convenience, comfort, and safety	<ol style="list-style-type: none"> <li>Ridership on the transit system should be maximized. The following minimum systemwide effectiveness levels,<sup>g</sup> however, should be maintained: <ol style="list-style-type: none"> <li>10 annual rides per capita</li> <li>1.2 revenue passengers per revenue vehicle-mile</li> <li>17 revenue passengers per revenue vehicle-hour</li> </ol> </li> <li>Existing transit routes with ridership and effectiveness levels which are less than 80 percent of the average for all routes of the Kenosha transit system should be reviewed for potential service changes unless special circumstances warrant otherwise.<sup>h</sup> The measures used to evaluate individual route ridership and effectiveness levels should include: <ol style="list-style-type: none"> <li>Total boarding passengers per route</li> <li>Boarding passengers per route-mile</li> <li>Boarding passengers per revenue vehicle-mile</li> <li>Boarding passengers per revenue vehicle-hour</li> <li>Percent of weekday ridership carried on Saturday</li> </ol> </li> <li>Public transit service should be designed to provide adequate capacity to meet existing and projected demand. The average maximum load factor<sup>i</sup> during peak periods should not exceed 1.25 for local transit service and 1.00 for express transit service. During off-peak periods and at the 10-minute point,<sup>j</sup> the maximum load factor should not exceed 1.0</li> <li>Operating headways for fixed-route transit services should be capable of accommodating passenger demand at the recommended load standards, but headways for local service shall not exceed 30 minutes during weekday peak periods and 60 minutes during weekday offpeak and weekend periods unless special circumstances warrant otherwise</li> <li>The transit system should be designed and operated to maximize schedule adherence and be "on time" at least 90 percent of the time<sup>k</sup></li> <li>Public transit routes should be direct in alignment, with a minimum of turns, and arranged to minimize transfers and duplication of service, which would discourage transit use</li> <li>Travel times for transit system users should be kept reasonable in comparison to travel times by automobile for trips made between component parts of the service area.</li> </ol>

Table 37 (continued)

Objective	Principle	Standards
2. (continued)		<ol style="list-style-type: none"> <li>8. Local transit service should have route spacings of one-half mile in high-density and medium-density areas</li> <li>9. Express transit service should be provided as necessary to reduce travel times for the longest trips made between component parts of the study area</li> <li>10. Transit stops should be located two to three blocks apart along the entire length of local routes; and at intersecting transit routes, signalized intersections, and major traffic generators along express transit routes.</li> <li>11. Minimum travel speeds for fixed-route transit service should be provided as follows: <ol style="list-style-type: none"> <li>a. For local transit service: five miles per hour within the central business district and 10 miles per hour in all other areas</li> <li>b. For express transit service: 10 miles per hour within the central business district and 20 miles per hour in all other areas</li> </ol> </li> <li>12. To provide protection from the weather, passenger waiting shelters of an attractive design should be constructed at all major loading points</li> <li>13. Paved passenger loading areas should be provided at all fixed-route transit loading and unloading points, and all such points should be clearly marked by easily recognized bus stop signs</li> <li>14. Consideration should be given to rehabilitating or replacing each public transit vehicle at the end of its normal service life, which shall be defined as follows: <ol style="list-style-type: none"> <li>a. For standard-size, heavy-duty (approximately 35 to 40 feet) transit buses, normal service life is considered to be at least 12 years or at least 500,000 miles;</li> <li>b. For medium-size, heavy-duty (approximately 30 feet) transit buses, normal service life should be considered to be at least 10 years or 350,000 miles;</li> <li>c. For medium-size, medium-duty (approximately 30 feet) transit buses, normal service life should be considered to be at least seven years or at least 200,000 vehicle miles;</li> <li>d. For medium-size, light-duty (approximately 25-35 feet) transit buses, normal service life should be considered to be at least five years or at least 150,000 vehicle miles; and</li> <li>e. For other vehicles, such as automobiles and regular or accessible vans, normal service life should be considered to be at least four years or at least 100,000 vehicle miles</li> </ol> </li> </ol>
3. The public transit system should promote efficiency in the total transportation system	Public transit facilities and services can promote economy and efficiency in the total transportation system. The public transportation system has the potential to supply additional passenger transportation capacity, which can alleviate peak loadings on arterial street facilities and assist in reducing the demand for land necessary for parking facilities at major centers of land use activity. Efficient public transit service also has the potential to reduce energy consumption and air pollutant emissions	<ol style="list-style-type: none"> <li>1. The total amount of energy, and the total amount of energy per passenger mile consumed in operating the total transportation system of which the transit system is an integral part, particularly petroleum-based fuels, should be minimized</li> <li>2. The amount of highway system capacity which must be provided to serve travel demand should be minimized.</li> </ol>
4. The transit system should be economical and efficient, meeting all other objectives at the lowest possible cost	The total resources of the City are limited, hence any investment in transportation facilities and services provided outside the city limits of Kenosha would not occur at the expense of the City; therefore, total transit system costs should be minimized for the desired level of transit service and transit revenues should be maximized to maintain the financial stability of the system	<ol style="list-style-type: none"> <li>1. The total operating and capital investment for the transit system should be minimized and reflect efficient utilization of resources</li> <li>2. The operating expense per total vehicle mile, per total vehicle hour, and per revenue passenger; and the operating deficit per revenue passenger should be minimized.<sup>m</sup> Annual increases in such costs should not exceed the average percentage increase experienced by medium-size urban bus systems statewide</li> <li>3. The fare policy for the transit system should provide for premium fares for premium transit services, as well as special or discounted fares for priority population groups, including transit-dependent persons and frequent transit riders</li> </ol>

Table 37 (continued)

Objective	Principle	Standards
4. (continued)		<p>4. Transit system operating revenues generated from passenger fares and sources other than general public operating subsidies should be maximized. The transit system should recover at least 21 percent of operating expenses from such revenues<sup>n</sup></p> <p>5. Periodic increases in passenger fares should be considered to maintain the financial stability of the transit system<sup>o</sup></p> <p>6. Existing bus routes with financial performance levels which are less than 80 percent of the average for all routes of the Kenosha transit system, should be reviewed for service changes unless special circumstances warrant otherwise. The measures used to evaluate individual route financial performance should include:</p> <ul style="list-style-type: none"> <li>a. Operating expense per boarding passenger</li> <li>b. Operating deficit per boarding passenger</li> <li>c. Percent of operating expenses recovered from operating revenues, excluding general public operating subsidies</li> </ul>

<sup>a</sup>Residential neighborhoods shall be considered as served by fixed-route transit service when located within one-quarter mile of a local bus route and one-half mile of an express bus route.

<sup>b</sup>Shall be considered as served if located within one block of a bus route.

<sup>c</sup>Shall be considered as served if located within one-eighth mile of a bus route.

<sup>d</sup>A major employment center shall be defined as an existing or planned concentration of industrial, commercial, or institutional establishments providing employment for more than 100 persons. Employment centers shall be considered as served if located within one-eighth mile of a local bus route and one-quarter mile of an express bus route

<sup>e</sup>Shall be considered as served if located within one-quarter mile of a local bus route and one-half mile of an express bus route.

<sup>f</sup>The disabled shall be defined as individuals who, by reason of illness, injury, congenital malfunction, or other permanent or temporary incapacity or disability, are unable without special facilities or special planning or design to utilize public transit services.

<sup>g</sup>The minimum systemwide effectiveness levels specified in this standard are based on the average annual ridership per capita, per revenue vehicle-mile, and per revenue vehicle-hour for medium-size, urban bus systems within Wisconsin. During 1996, the Kenosha transit system carried about 16 revenue passengers per capita, about 1.5 revenue passengers per revenue vehicle mile, and about 20 revenue passengers per revenue vehicle hour.

<sup>h</sup>A reasonable period of time should be allowed for ridership to develop and stabilize before evaluating the performance of new transit services to determine if the service should be continued, modified, or eliminated. Generally, new transit services should achieve 30 percent of average performance levels for existing routes after six months of operation; 60 percent of average performance levels for existing routes after one year of operation; and 100 percent of average performance levels for existing routes after two years of operation.

<sup>i</sup>The average maximum load factor is calculated by dividing the number of passengers at the maximum loading point of a route by the number of seats at that point during the operating period.

<sup>j</sup>The 10-minute point is a point located 10 minutes' travel time from the maximum loading point on a route. This means that passengers generally should not have to stand on board the public transit vehicle for longer than 10 minutes.

<sup>k</sup>"On-time" is defined as schedule adherence within the range of one minute early and three minutes late.

<sup>l</sup>Construction of passenger waiting shelters at transit loading points should generally be considered where one or more of the following conditions exist: 1) the location serves major facilities designed specifically for the use of, or is frequently used by, elderly or disabled persons, 2) the location has a boarding passenger volume of 50 or more passengers per day, 3) the location is a major passenger transfer point between bus routes; or 4) the location is in a wide open space where waiting patrons would be unprotected from harsh weather conditions.

<sup>m</sup>During 1996, the systemwide average operating expense per total vehicle-mile on the Kenosha transit system was \$3.03; the total operating expense per total vehicle-hour was \$41.74; the total operating expense per revenue passenger was \$2.25; and the total operating deficit per revenue passenger was \$1.74.

<sup>n</sup>Over the five-year period from 1992 through 1996, the Kenosha transit system recovered an average of about 21 percent of its operating expenses from operating revenues. During 1996, the transit system recovered about 22.6 percent of its operating expenses from passenger and other revenues, excluding Federal, State, and local operating assistance funds.

<sup>o</sup>Increases in passenger fares should generally be considered when: 1) the actual cost recovery rate for the transit system goes below the rate prescribed in Standard 3 under Objectives 2, 2) operating expenses for the transit system have increased by 10 to 15 percent since fares were last raised, or 3) projected levels of Federal and State operating assistance funds would require an increase in projected local operating assistance levels above that determined to be acceptable by local officials.

Source: SEWRPC.



Table 38

**TRANSIT SERVICE OBJECTIVES AND STANDARDS WHICH  
CAN BE USED TO DEVELOP STATE-REQUIRED PERFORMANCE GOALS**

Objectives and Standards		Performance Measures
<b>Objective No. 2:</b>	Promote Transit Utilization and Provide for User Comfort, Convenience, and Safety	<ul style="list-style-type: none"> <li>10 rides per capita, 1.2 revenue passengers per revenue vehicle-mile, 17 revenue passengers per revenue vehicle-hour<sup>a</sup></li> </ul>
<b>Standard No. 1:</b>	Maximum Transit System Ridership	
<b>Objective No. 4:</b>	Provide Economical and Efficient Service	<ul style="list-style-type: none"> <li>Increases in operating expenses per total vehicle-mile, per total vehicle-hour, and per revenue passenger and increases in operating deficit per revenue passenger should not exceed the average percentage increase for medium-size urban bus systems statewide</li> <li>Recover at least 21 percent of operating expenses from operating revenues, excluding general public subsidies<sup>b</sup></li> </ul>
<b>Standard No. 2:</b>	Minimize Operating Expenses and Operating Deficit per Unit of Transit Service and per Transit Ride	
<b>Standard No. 4:</b>	Maximize Percent of Operating Expenses Recovered through Operating Revenues	

<sup>a</sup>The specified performance levels are based upon average annual performance levels for medium-size urban bus systems within Wisconsin. During 1996, the Kenosha transit system carried about 16 passengers per capita, 1.5 revenue passengers per revenue vehicle-mile, and 20 revenue passengers per revenue vehicle-hour.

<sup>b</sup>Over the five-year period from 1992 through 1996, the Kenosha transit system has recovered an average of about 21 percent of its operating expenses from operating revenues. During 1996, the transit system recovered 22.6 percent of its operating expenses from operating revenues, excluding Federal, State, and local operating assistance funds. The highest recovery rate for the Kenosha transit system since the City acquired it in 1971 was 51 percent of expenses from operating revenues, which occurred in 1973.

Source: SEWRPC.

transit performance on the basis of both the system and individual routes. The service standards set forth in this chapter represent a comprehensive list from which specific performance standards and measures, as deemed appropriate, were drawn in conducting the systemwide and route performance evaluations. A more complete description of the evaluation process is presented in Chapter V.

A number of the service standards set forth in Table 37 can provide guidance toward meeting certain requirements which the Wisconsin Department of Transportation has attached to the provision of State urban transit operating assistance funds. As a condition of eligibility for receiving State urban transit operating assistance, applicants must annually establish multi-year service and performance goals and assess the effectiveness of the applicant's transit system in relation to those goals on a quarterly basis. At a minimum, systemwide goals must be established for the following performance indicators: operating expense per total vehicle-mile, operating expense per platform-hour, operating expense per revenue passenger,

the proportion of operating expenses recovered from operating revenues, revenue passengers per revenue vehicle-mile, and revenue passengers per service area population. The service standards formulated under this study which can be drawn upon to establish the State-required performance goals are listed in Table 38.

## OVERRIDING CONSIDERATIONS

The objectives, principles, and standards set forth in Table 37 were intended to be used to guide the evaluation of the performance of existing transit system and the design and evaluation of alternative service improvements. In the application of the objectives, principles, and standards, several overriding considerations must be recognized.

First, it must be recognized that an overall evaluation of the existing public transit services and the alternative service plans must be made on the basis of cost

and revenue. Such an analysis may show that the attainment of some standards are beyond the economic capability of the community and, therefore, the standards cannot be met practically; they must be either modified or eliminated.

Second, it must be recognized that a transit system is unlikely to meet all the standards fully. That the extent to which each standard is met, exceeded, or violated must serve as the final measure of the ability of the system to achieve the objective which a given standard supports.

Third, it must be recognized that certain intangible factors, including the perceived value of the transit service to the community and its potential acceptance by the concerned elected officials, may influence the preparation and selection of a recommended plan. Inasmuch as transit service may be perceived as a valuable service within the community, the community may decide to initiate or retain such services regardless of performance or cost. Only if a considerable degree of such acceptance exists will service recommendations be implemented and their anticipated benefits realized.

## Chapter V

# EVALUATION OF THE EXISTING TRANSIT SYSTEM

## INTRODUCTION

This chapter documents the results of an evaluation of the performance of the City of Kenosha transit system on the basis of the four transit service objectives and supporting standards set forth in Chapter IV of this report. Table 39 lists the objectives and the standards which were used in the evaluation to determine whether the objectives were being met by the existing system. Table 40 identifies the performance measures used to quantify the achievement of each standard and also identifies whether the standard was used in the systemwide or route-by-route performance evaluation of the transit system.

Not all the standards listed under each objective were used in the performance evaluation process since not all were deemed appropriate for such use. Table 41 lists the standards not used. Some standards not used were intended primarily to serve as guidelines in the design of new and improved service. These standards were met in the design and operation of the current routes. Other standards not used were intended to serve as warrants for providing equipment and facilities for the transit system. These standards will be used to the extent necessary in the development of a program of recommended capital projects developed for the recommended transit system development plan. Still other standards not used were intended to be used in comparing the costs of alternative plans and will be used in evaluating the alternative plans and transit service improvements considered in Chapter VII.

The following sections of this chapter present the findings of the performance evaluation. Presented first is an assessment of transit performance on a systemwide basis to ascertain the extent to which the transit system currently serves the existing land use pattern, employment, and resident population of the primary study area; to assess the overall ridership and financial performance of the transit system; to determine the transit system's contribution to the efficiency of the total transportation system; and to determine the availability of transit services for disabled persons. This is followed by an evaluation of the performance of each route of the transit system with

Table 39

### STANDARDS USED IN THE EVALUATION OF THE PERFORMANCE OF THE EXISTING TRANSIT SYSTEM

Objectives and Standards	
<b>Objective No. 1: Provide Service to Portions of City that Can be Efficiently Served</b>	
Standard 1:	Provide local fixed-route transit service areas of contiguous high- and medium-density development
Standard 2:	Maximize the residential and nonresidential land use areas served
Standard 3:	Maximize the population served
Standard 4:	Maximize the jobs served
Standard 5:	Provide transportation services to serve disabled persons
<b>Objective No. 2: Promote Transit Utilization and Provide for User Comfort, Convenience, and Safety</b>	
Standard 1:	Maximize transit system ridership
Standard 2:	Review routes with substandard ridership and effectiveness levels
Standard 3:	Provide adequate capacity so as not to exceed load factors
Standard 4:	Provide service at headways capable of accommodating demand
Standard 5:	Achieve minimum acceptable schedule adherence
Standard 6:	Minimize indirect routing, duplication of service, and transfers which discourage transit use
Standard 7:	Provide for reasonable travel times in comparison to automobile travel times
<b>Objective No. 3: Promote Efficiency in the Total Transportation System</b>	
Standard 1:	Minimize the energy consumed in operating the total transportation system
Standard 2:	Minimize the amount of highway system capacity needed to serve travel demand
<b>Objective No. 4: Provide Economical and Efficient Service</b>	
Standard 2:	Minimize operating expenses and public subsidy per unit of transit service and per transit ride
Standard 4:	Maximize percent of operating expenses recovered through operating revenues
Standard 6:	Review routes with substandard financial performance

Source: SEWRPC.

respect to ridership and effectiveness levels, operating headways and peak passenger loading characteristics, on-time performance, and directness of route alignment. The evaluative findings were used to develop the alternative local service improvements described in Chapter VII of this report.

Table 40

## APPLICATION OF SPECIFIC PERFORMANCE MEASURES IN THE PERFORMANCE EVALUATION PROCESS

Performance Measure by Objective	Systemwide Performance Evaluation	Route Performance Evaluation
<b>Objective No. 1: Provide Service to Portions of City that Can be Efficiently Served</b>		
1. Population served .....	X	--
2. Total employment served .....	X	--
3. Major land use trip generators served .....	X	--
4. Areas of proposed new or expanding development served .....	X	--
5. Major transit-dependent population trip generators served .....	X	--
6. Residential concentrations of transit-dependent populations served .....	X	--
7. Accessibility of fixed-route transit vehicles for disabled persons .....	X	--
8. Provision of specialized transportation services for disabled persons .....	X	--
<b>Objective No. 2: Promote Transit Utilization and Provide for User Comfort, Convenience, and Safety</b>		
1. Ridership per capita .....	X	--
2. Revenue passengers per revenue vehicle-mile .....	X	--
3. Revenue passengers per revenue vehicle-hour .....	X	--
4. Total boarding passengers .....	--	X
5. Boarding passengers per revenue vehicle-hour .....	--	X
6. Boarding passengers by scheduled bus run .....	--	X
7. Percent on-time performance .....	--	X
8. Travel distance and time by transit versus travel distance and time by automobile ...	--	X
<b>Objective No. 3: Promote Efficiency in the Total Transportation System</b>		
1. Passenger miles per gallon of petroleum-based fuel .....	X	--
2. Impacts on highway capacity due to transit system operation .....	X	--
<b>Objective No. 4: Provide Economical and Efficient Service</b>		
1. Operating expense per total vehicle-mile .....	X	--
2. Operating expense per revenue vehicle-hour .....	X	--
3. Operating expense per revenue passenger .....	X	--
4. Operating deficit per revenue passenger .....	X	--
5. Operating expense per boarding passenger .....	--	X
6. Operating deficit per boarding passenger .....	--	X
7. Percent of operating expenses recovered by operating revenues .....	X	X

Source: SEWRPC.

## SYSTEMWIDE PERFORMANCE EVALUATION

### Service to Existing Land Uses and Population Groups

Performance measures used to evaluate the existing transit service provided to primary study area land uses and population groups included measures of the total resident population served, employment locations served, the major nonresidential land use trip generators served, the transit-dependent population trip generators served, and the residential concentrations of transit-dependent population groups served, all as specified under Standards

1 through 4 of Objective No. 1. This evaluation was based on the locations of the existing bus routes and the areal extent of service coverage provided by these routes, as shown on Map 18 in Chapter III. Ideally, the areal coverage should include the residential concentrations of the general and transit-dependent population, employment concentrations, and the potential major transit trip generators within the primary study area and, in particular, in the City of Kenosha. Such residential areas, employment concentrations, and potential transit trip generators were identified in Chapter II.

The performance of the existing transit system with respect to these measures is summarized in Tables 42

Table 41

**STANDARDS NOT USED  
IN THE PERFORMANCE EVALUATION  
OF THE EXISTING TRANSIT SYSTEM**

Objectives and Standards	
<b>Objective No. 2: Promote Transit Utilization and Provide for User Comfort, Convenience, and Safety</b>	
<b>Standard 8:</b>	Provide local routes at intervals of no more than one-half mile in high-density and medium-density residential areas
<b>Standard 9:</b>	Provide express service for longest trips in area
<b>Standard 10:</b>	Provide stops meeting minimum spacing
<b>Standard 11:</b>	Provide service which meets or exceeds minimum vehicle speeds
<b>Standard 12:</b>	Construct bus passenger shelters at major passenger loading areas
<b>Standard 13:</b>	Provide signs and paved passenger loading areas at bus stops
<b>Standard 14:</b>	Replace public transit vehicles at end of maximum service life for vehicles
<b>Objective No. 4: Provide Economical and Efficient Service</b>	
<b>Standard 1:</b>	Minimize total transit system operating and capital costs
<b>Standard 3:</b>	Provide premium fares for premium service and special or discounted fares for transit-dependent persons and frequent riders
<b>Standard 5:</b>	Consider periodic increases in passenger fares

Source: SEWRPC.

through 45 and on Maps 22 through 24. The following conclusions, based on this information, were reached:

1. The current transit system provides excellent areal coverage of the existing residential areas in the City of Kenosha, as well as the most densely populated residential areas lying adjacent to the City in the Town of Somers and in the Village of Pleasant Prairie. About 96 percent of the resident population in the City and about 82 percent of the resident population in the primary study area resided inside the Kenosha transit system service area, that is, within one-quarter mile of a bus route. The resident population of the primary study area not served by the transit system resides principally in partially developed or in undeveloped portions of the primary study area and in other areas where residential densities are generally too low to support conventional fixed-route transit service. Only small residential areas with densities capable of supporting local fixed-route bus service were found to be

Table 42

**TRANSIT SERVICE PROVIDED TO LAND USES AND  
POPULATION GROUPS IN THE PRIMARY STUDY AREA  
BY THE KENOSHA TRANSIT SYSTEM: AUGUST 1997**

Performance Measure	Systemwide Performance Characteristics
<b>Population Served<sup>a</sup></b>	
Inside City .....	77,200
Outside City .....	5,300
Total .....	82,500
Percent of City of Kenosha Resident Population Served .....	96.0
Percent of Study Area Resident Population Served .....	81.8
<b>Employment Served<sup>b</sup></b>	
Outside City .....	33,500
Outside City .....	4,200
Total .....	37,500
Percent of Total Employment Inside City of Kenosha Served .....	97.5
Percent of Total Employment Inside Study Area Served .....	86.1
<b>New and Proposed Development Served<sup>c</sup></b>	
Residential .....	16 of 39
Commercial and Industrial .....	14 of 27
Total .....	30 of 66
<b>Major Land Use Trip Generators Served<sup>d</sup></b>	
Retail, Service, and Office Centers .....	16 of 16
Educational Institutions .....	21 of 22
Community and Special Medical Centers .....	11 of 11
Governmental and Public Institutional Centers .....	17 of 21
Employment Centers .....	53 of 55
Recreational Areas .....	20 of 25
Total .....	128 of 140 <sup>e</sup>
<b>Transit-Dependent Population Trip Generators Served<sup>f</sup></b>	
Facilities for the Elderly .....	36 of 38
Facilities for the Disabled .....	13 of 13
Federally Subsidized Rental Housing .....	11 of 11
Total .....	59 of 61 <sup>g</sup>
Residential Concentrations of Transit Dependent Population Groups .....	Served <sup>g</sup>

<sup>a</sup>Residential areas were considered served by the transit system if they were within one-quarter mile of a bus route. Population figures are based on the 1990 U. S. Federal Census.

<sup>b</sup>Employment figures shown represent the number of jobs located within one-quarter mile of a bus route, a maximum walking distance for transit users based on industry standards. Employment figures are based on 1990 estimates.

<sup>c</sup>The new and proposed developments in the study area not served by the Kenosha transit system are presented in Table 43 and displayed in Map 22.

<sup>d</sup>The major land use trip generators within the study area not served by the Kenosha transit system are presented in Table 44 and shown on Map 23.

<sup>e</sup>The total number of trip generators served does not equal the sum of the trip generators for all categories because some trip generators have been assigned to more than one category. The total reflects a correction for such trip generators so they are counted only once for this analysis.

<sup>f</sup>The transit-dependent population trip generators within the study area not served by the Kenosha transit system are presented in Table 45 and shown on Map 24.

<sup>g</sup>The major residential concentrations of transit-dependent persons identified in the study area based on 1990 U. S. Census data are shown on Map 24 in Chapter II by Census block group. Virtually all concentrations were served by the Kenosha transit system with the exception of one area in the Town of Somers and a western portion of the City.

Source: SEWRPC.



Table 43

**NEW AND PROPOSED DEVELOPMENT IN THE PRIMARY STUDY AREA  
NOT SERVED<sup>a</sup> BY THE KENOSHA TRANSIT SYSTEM: AUGUST 1997**

Number on Map 22	Name	Type of Development	
		Residential	Commercial/ Industrial/Institutional
1	Burger King	--	X
2	Business Park of Kenosha <sup>b</sup>	--	X
3	Country Corner Subdivision	X	--
4	Creeside Subdivision	X	--
5	Crossings Office Development	--	X
6	Eaglewood Estates	X	--
7	Funeral Home	--	X
8	Hidden Meadows	X	--
9	High Point Ridge Neighborhood Development	X	--
10	Indian Trail Academy <sup>c</sup>	--	X
11	Kenosha County House of Corrections	--	X
12	Lake Michigan Shores	X	--
13	Lakeside Marketplace Phase Five	--	X
14	Lighthouse Point	X	--
15	Menards	--	X
16	Mission Hills	X	--
17	Oakridge Subdivision	X	--
18	PDQ Convenience Store and Offices	--	X
19	Pleasant Prairie Post Office	--	X
20	Prairie Ridge Phase One	X	--
21	Prairie Ridge Senior Housing	X	--
22	Prairie Trails West Addition No. 1	--	X
23	Prairie Village West Condominiums	X	--
24	Radisson Hotel and Conference Center	--	X
25	Somers Village Centre	--	X
26	Stonefield	X	--
27	Stonefield Addition No. 1	X	--
28	Stonefield Addition No. 2	X	--
29	Timberline Terrace Apartments	X	--
30	Tinseltown	--	X
31	Tobin Creek	X	--
32	Tobin Wood Estates	X	--
33	Villa Genesis Assisted Living	X	--
34	Village Green Neighborhood Development	X	--
35	Whispering Meadows	X	--
36	Whispering Meadows Addition No. 1	X	--

<sup>a</sup>New and proposed developments are considered to be served by the transit system on the basis of the following criteria, as specified under the transit service objectives and standards:

1. Commercial, industrial, and institutional development must lie within one-eighth mile of a bus route.
2. Residential development must lie within one-quarter mile of a bus route.

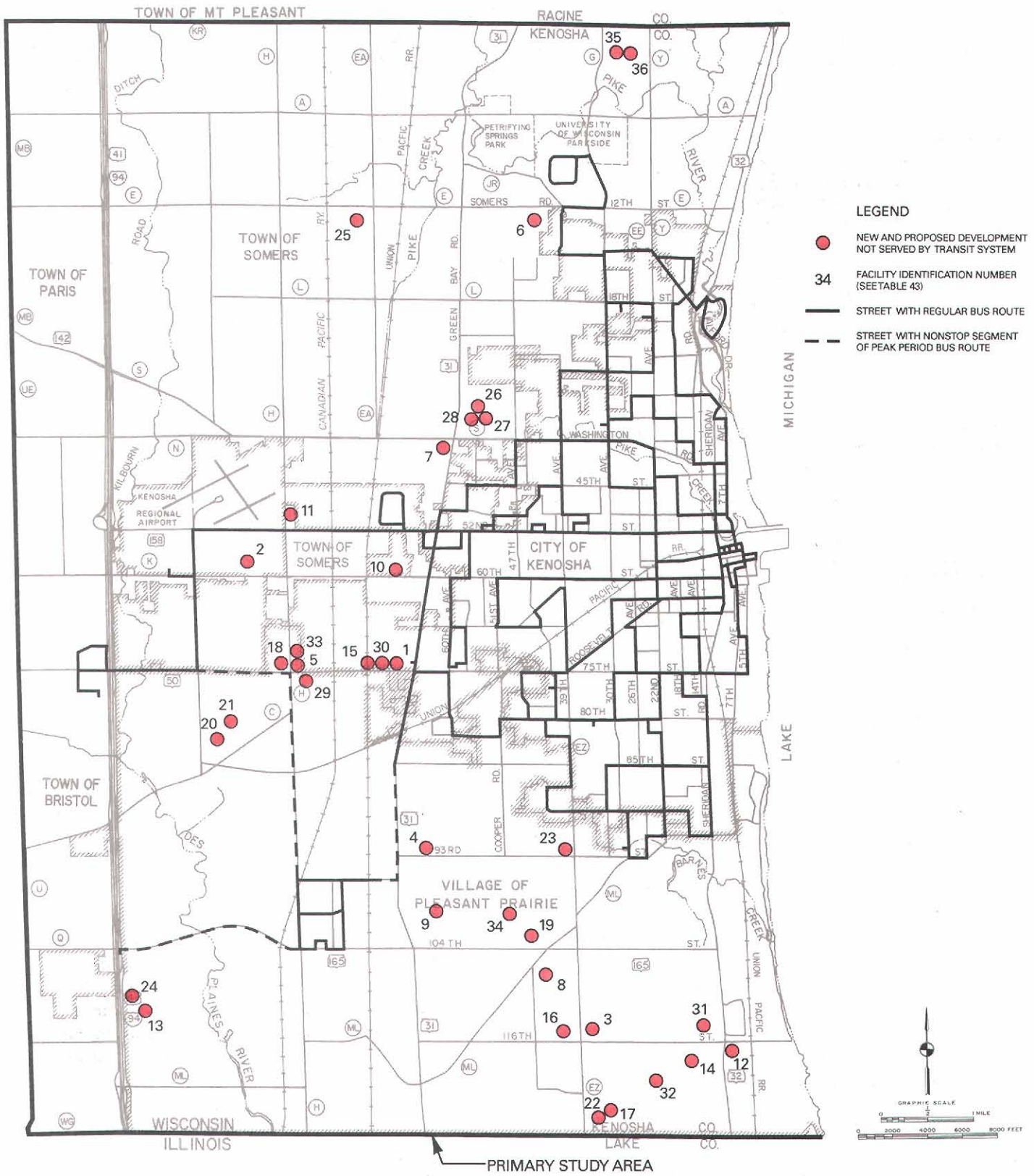
<sup>b</sup>Individual businesses which were identified within the Business Park of Kenosha included the following: Abatron, Inc.; Asyst Technologies; Converse Industries; Martin Peterson Company, Inc.; Neal's Electric Company; Oemmco; Priority Tool; Riley Multi-Tenant Building Nos. 1 and 2; Westvaco Envelope Division; and Young & Associates, Inc.

<sup>c</sup>Proposed new Kenosha high school.

Source: SEWRPC.

Map 22

**NEW AND PROPOSED DEVELOPMENT IN THE PRIMARY STUDY AREA  
NOT SERVED BY THE KENOSHA TRANSIT SYSTEM: AUGUST 1997**



Source: SEWRPC.

Table 44

**MAJOR LAND USE TRIP GENERATORS IN THE PRIMARY STUDY AREA  
NOT SERVED<sup>a</sup> BY THE KENOSHA TRANSIT SYSTEM: AUGUST 1997**

Number on Map 23	Name	Type of Major Land Use Trip Generator					
		Major Commercial and Office Center <sup>b</sup>	Educational Institution	Hospital and Medical Center <sup>b</sup>	Governmental and Public Institutional Center	Major Employment Center	Major Recreational Area
1	Martin Peterson Company, Inc.	--	--	--	--	X	--
2	Petrifying Springs Park	--	--	--	--	--	X
3	Pleasant Prairie Ball Park	--	--	--	--	--	X
4	Pleasant Prairie Post Office	--	--	--	X	--	--
5	Prairie Spring Park	--	--	--	--	--	X
6	Pleasant Prairie Village Hall	--	--	--	X	--	--
7	Shoreland Lutheran High School	--	X	--	--	--	--
8	Somers Athletic Field	--	--	--	--	--	X
9	Somers Post Office	--	--	--	X	--	--
10	Somers Town Hall	--	--	--	X	--	--
11	Southport Park	--	--	--	--	--	X
12	Westvaco	--	--	--	--	X	--

<sup>a</sup>Major land use centers are considered to be served by the transit system on the basis of the following criteria, as specified under the transit service objectives and standards:

1. Commercial and office centers must lie within one block of a bus route.
2. Educational institutions must lie within one-eighth mile of a bus route.
3. Hospitals and medical centers must lie within one block of a bus route.
4. Governmental and public institutional facilities must lie within one-eighth mile of a bus route.
5. Employment centers must lie within one-eighth mile of a bus route.
6. Recreational areas must lie within one-quarter mile of a bus route.

<sup>b</sup>All centers were served by the transit system.

Source: SEWRPC.

unserved. These areas are in the Village of Pleasant Prairie, east of the intersection of CTH H and CTH C, and in an area southeast of the intersection of 104th Street (STH 165) and STH 32.

2. The transit system provides excellent areal coverage of the employment concentrations in the City of Kenosha and very good coverage of the employment concentrations outside the City but inside the primary study area. Approximately 98 percent of the jobs inside the City and about 86 percent of the jobs inside the primary study area were at employers located within the transit system service area.

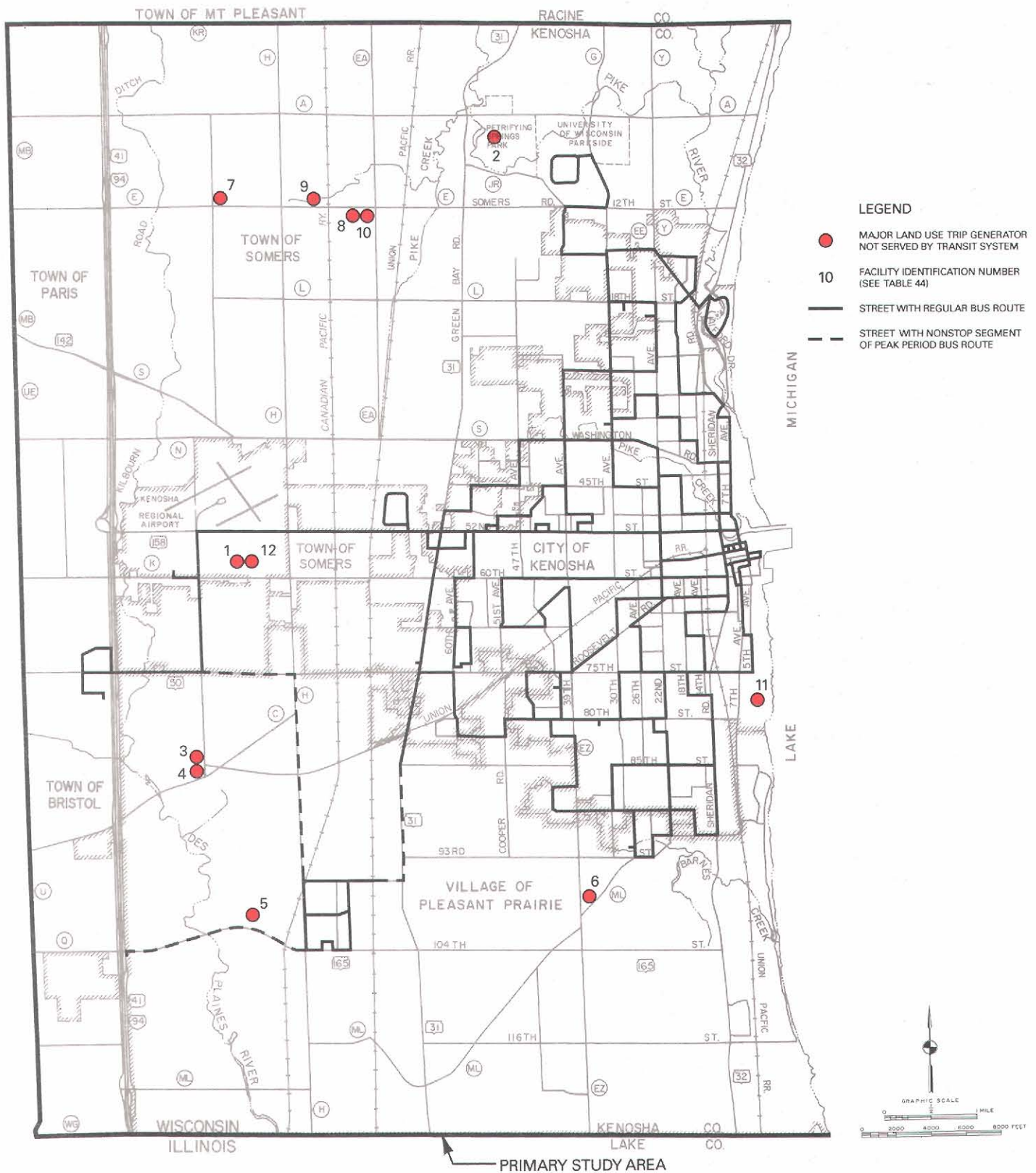
Not all jobs in the transit service area should be considered as completely served because of the current hours of operation of the Kenosha transit system, which extend from 6:00 a.m. until 7:00 p.m. on weekdays and from 6:00 a.m. until 5:30 p.m. on Saturdays. With these operating hours, transit service would be convenient for most weekday first-shift starting and ending times. The weekday and

Saturday hours also would not serve the ending times of most second-shift jobs and the starting times of most third-shift jobs. The absence of Sunday service also restricts the ability of individuals working on weekends to use the transit system, even though the job location may lie inside the service area.

3. The transit system would serve only about one-half of the new and proposed development projects in the primary study area, serving only 30 of 66 projects identified. The high proportion of unserved new and proposed development projects may be attributed to the fact that much of the new and proposed development lies outside those portions of the City of Kenosha east of Green Bay Road (STH 31), which historically have been the primary service area for the transit system. Most of the new and proposed residential developments in the Village of Pleasant Prairie, in the Town of Somers, and in portions of the City of Kenosha west of

Map 23

**MAJOR LAND USE TRIP GENERATORS IN THE PRIMARY STUDY AREA  
NOT SERVED BY THE KENOSHA TRANSIT SYSTEM: AUGUST 1997**



Source: SEWRPC.



Table 45

**MAJOR TRANSIT-DEPENDENT POPULATION  
TRIP GENERATORS IN THE PRIMARY  
STUDY AREA NOT SERVED<sup>a</sup> BY THE  
KENOSHA TRANSIT SYSTEM: AUGUST 1997**

Number on Map 24	Name	Type of Transit-Dependent Population Trip Generator		
		Facility for the Elderly	Facility for the Disabled <sup>b</sup>	Federally Subsidized Rental Housing <sup>b</sup>
1	Carey Manor	X	--	--
2	R Home	X	--	--

<sup>a</sup>Transit-dependent-population trip generators are considered served by the transit system on the basis of the following criteria, as specified under the transit service objectives and standards:

1. Facilities for elderly and disabled persons must lie within one block of a bus system.
2. Subsidized housing for low-income persons must lie within one-quarter mile of a bus route.

<sup>b</sup>All centers were served by the transit system.

Source: SEWRPC.

Green Bay Road (STH 31), as identified in Table 9 in Chapter II, had estimated densities below 5.0 dwelling units per net residential acre, viewed as necessary to support efficient and cost-effective local bus service. Only the multi-family developments had estimated densities over 5.0 dwelling units per net residential acre. Seven multi-family residential developments in the Village of Pleasant Prairie were outside the existing transit system service area. Extensions of bus service considered in the future should focus on serving these multi-family residential developments and other nonresidential developments in the primary study area identified as being unserved.

4. The transit system provides good coverage of the existing major land use trip generators in the primary study area, serving 128 of the 140 trip generators identified. Of the 12 generators not considered as served, 9 lie outside the City of Kenosha, and, therefore, outside the primary service area of the transit system. Of the three unserved generators inside the City, one, Southport Park, is partly inside the one-quarter-mile service area for the transit system. The remaining two are located in the Business Park of Kenosha, which is only partially served by one transit system route.

5. The transit system provides good areal coverage of both the residential concentrations of transit-dependent population groups and the facilities used by these groups. A total of 59 of the 61 facilities identified were served by the transit system, including all 11 of the housing facilities identified as housing for low-income residents, all 13 of the facilities identified as facilities for the disabled, and 36 of the 38 facilities identified as facilities for the elderly.

### Ridership and Financial Performance

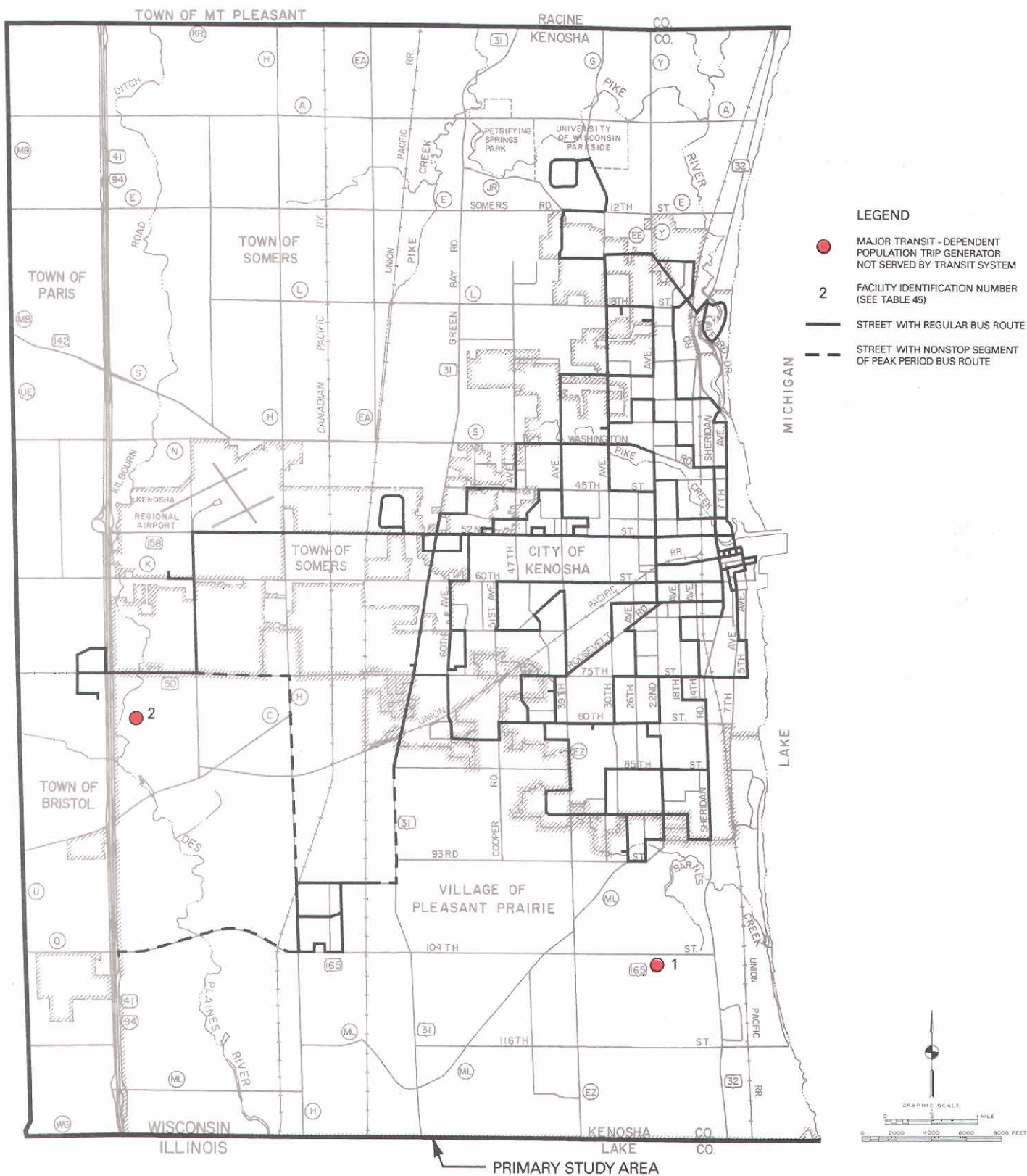
The systemwide ridership and financial performance of the Kenosha transit system was evaluated by using the key measures of ridership performance specified under Objective No. 2, Standard No. 1 and the key measures of financial performance specified under Objective No. 4, Standards No. 2, 4, and 6. The measures used to evaluate the effectiveness of the existing transit system consisted of three measures specified in the standards, annual ridership per capita, annual revenue passengers per revenue vehicle-mile, and annual revenue passengers per revenue vehicle-hour, and two measures, revenue vehicle hours and miles per capita, suggested by the Wisconsin Department of Transportation. The measures used to evaluate the efficiency and financial performance of the transit system included operating expense per total vehicle-mile and per revenue vehicle-hour, operating expense and operating deficit per revenue passenger, and percent of operating expenses recovered from operating revenues, often referred to as the farebox recovery rate. The observed performance levels of the Kenosha transit system for these measures were compared with minimum performance levels specified under the transit service standards and with the average performance levels for a group of twelve urban bus systems statewide.<sup>1</sup> The ridership data and financial data used covered the five-year period from 1992 through 1996, the most recent five year-period for which such information was available for the group of Wisconsin urban bus systems examined. All data were obtained from reports prepared by each transit system and submitted to the Federal Transit Administration and Wisconsin Department of Transportation.

<sup>1</sup>Averages for key performance indicators were developed based on information reported by a group of 12 Wisconsin small and medium-size urban bus systems, including those for the Cities of Appleton, Beloit, Eau Claire, Green Bay, Janesville, Kenosha, La Crosse, Oshkosh, Racine, Sheboygan, Wausau, and Waukesha.



Map 24

**MAJOR TRANSIT-DEPENDENT POPULATION TRIP GENERATORS  
IN THE PRIMARY STUDY AREA NOT SERVED BY THE KENOSHA TRANSIT SYSTEM: AUGUST 1997**



Source: SEWRPC.

The performance of the existing transit system with respect to these measures is summarized in Table 46. The following conclusions, based on this information, were reached:

1. In terms of ridership, the transit system has a higher effectiveness level than the average for similar urban bus systems within Wisconsin. Ridership on the transit system in 1996 exceeded the average observed for the 12 similar sized urban bus systems in Wisconsin in terms of annual rides per capita, revenue passengers per revenue vehicle-mile, and revenue passengers per revenue vehicle-hour. The effectiveness levels observed for the Kenosha transit system also exceed the minimum effectiveness levels of 10 rides per capita, 1.2 revenue passengers per revenue vehicle-mile, and 17 revenue passengers per revenue vehicle-hour specified under the transit service standards. From 1992 to 1996, the Kenosha transit system experienced an average annual increase in ridership of about 5 percent, in contrast to the average annual loss of about 1 percent experienced by the other Wisconsin urban bus systems.
2. In terms of financial performance, the trends for the Kenosha transit system also compare favorably with the trends for the Statewide group of urban bus systems observed from 1992 through 1996. With respect to changes in costs per unit of service and changes in operating costs and deficits per passenger, the rates of increase for the Kenosha transit system were about 40 to 80 percent less than those observed for the other systems.
3. For the five-year period examined, the farebox recovery rate for the Kenosha transit system increased by about 2 percent, from 20.5 percent of operating expenses to about 22.6 percent, which exceeds the rate specified under the transit service standards. Over the same period, the farebox recovery rate for the group of urban bus systems statewide increased by about 1 percent, from 19.3 percent to 20.6 percent of operating expenses. Notably, the farebox recovery rate for the Kenosha transit system has been about 6 to 10 percent higher than the average for the group of urban bus systems Statewide over the period.

### **Contributions to the Efficiency of the Total Transportation System**

Objective No. 3 concerns the operation of public transit services and facilities to promote both economy and efficiency in the total transportation system. This objective is supported by two standards relating to utilization of

energy and the provision of adequate capacity of the highway system.

The first standard under this objective requires that the amount of energy, particularly petroleum-based motor fuels, utilized in operating the transportation system be minimized. This standard is intended to measure the potential energy savings of public transit services provided by the Kenosha transit system. To measure compliance with this standard, a comparison of the relative energy efficiency of the current Kenosha transit system with that of automobile travel was undertaken and is presented in Table 47, along with a comparison with the other urban public transit systems in Southeastern Wisconsin.

The second standard under Objective No. 3 states that the amount of highway system capacity provided to serve total travel demand should be minimized. The intent of this standard is to measure the impact of the additional passenger transportation capacity provided by the public transportation system on peak loadings on arterial street and highway facilities and on the need for improvements to existing arterial streets and highways. Table 48 provides a comparison for selected arterial street segments in Kenosha of the current total vehicular traffic volume and the transit volume. The street segments selected include arterial streets carrying a major route of the transit system and streets in the central business district (CBD) where, generally, more than one route uses the same street. In reviewing this information, it should be noted that data presented on an average weekday basis understates somewhat the transportation system benefits of public transit. This understatement occurs because a higher percentage of average weekday transit passenger volumes, between about 20 and 25 percent for the Kenosha transit system, is typically carried during the morning or evening peak-traffic hour, than the percentage of vehicle traffic volumes. The latter peak at 8 to 10 percent of the average weekday total. For this reason, information is also provided for peak-hour traffic and transit passenger volumes.

On the basis of this information, the following conclusions were reached:

1. The overall energy efficiency of the Kenosha area's transit system in serving travel on an average weekday is higher than that of the private automobile. Based on 1996 operating information for the Kenosha transit system, the transit system provided about 23 passenger miles of travel for every gallon of fuel consumed in providing the service. During 1996, this compared with an estimated 14 to 17 passenger miles of travel provided per gallon of fuel consumed if the transit

Table 46

**KEY INDICATORS OF RIDERSHIP AND FINANCIAL PERFORMANCE FOR THE KENOSHA TRANSIT SYSTEM COMPARED WITH THE AVERAGE FOR SIMILAR WISCONSIN BUS SYSTEMS: 1992-1996**

Performance Measure	Operating Data <sup>a</sup>	
	Kenosha Transit System	Average for Wisconsin Small and Medium-Size Bus Systems <sup>b</sup>
<b>Service: 1996</b>		
Revenue Vehicle-Miles .....	781,600	697,600
Revenue Vehicle-Miles per Capita .....	9.5	8.9
Revenue Vehicle-Hours .....	60,100	52,500
Revenue Vehicle-Hours per Capita .....	0.8	0.6
<b>Ridership: 1996</b>		
Ridership per Capita .....	15.8	10.5
Revenue Passengers per Revenue Vehicle-Mile .....	1.5	1.2
Revenue Passengers per Revenue Vehicle-Hour .....	20.2	16.80
<b>Ridership Change: 1992-1996</b>		
Annual Revenue Passengers		
1992 .....	1,103,800	883,900
1996 .....	1,350,300	859,700
Average Annual Percentage Change 1992-1996 .....	5.2	-0.7
<b>Financial Performance Change: 1992-1996</b>		
Operating Expense per Total Vehicle-Mile		
1992 .....	\$2.81	\$2.91
1996 .....	\$3.03	\$3.51
Average Annual Percentage Change 1992-1996 .....	1.9 <sup>c</sup>	4.8 <sup>c</sup>
Operating Expense per Revenue Vehicle-Hour		
1992 .....	\$38.92	\$40.52
1996 .....	\$45.37	\$51.07
Average Annual Percentage Change 1992-1996 .....	3.9 <sup>c</sup>	6.0 <sup>c</sup>
Operating Expense per Revenue Passenger		
1992 .....	\$2.12	\$2.41
1996 .....	\$2.25	\$3.04
Average Annual Percentage Change 1992-1996 .....	1.5	6.0
Operating Deficit per Revenue Passenger		
1992 .....	\$1.68	\$1.94
1996 .....	\$1.74	\$2.41
Average Annual Percentage Change 1992-1996 .....	0.9	5.8
Percent of Operating Expenses Recovered from Operating Revenues		
1992 .....	20.5	19.3
1996 .....	22.6	20.6
Average Annual Percentage Change 1992-1996 .....	2.5	1.6

<sup>a</sup>Ridership and service data were obtained from reports submitted by each transit operator to the Wisconsin Department of Transportation. Financial data were obtained from reports prepared by each transit operator and submitted to the Federal Transit Administration to comply with National Transit Database reporting requirements.

<sup>b</sup>Averages for key performance indicators were developed based on information reported by a group of 12 Wisconsin small and medium-size urban bus systems, including the Cities of Appleton, Beloit, Eau Claire, Green Bay, Janesville, Kenosha, La Crosse, Oshkosh, Racine, Sheboygan, Wausau, and Waukesha.

<sup>c</sup>The average annual percentage change in the Consumer Price Index in the Region from 1992 to 1996 was about 3.1 percent.

Source: Wisconsin Department of Transportation and SEWRPC.

Table 47

**COMPARISON OF THE WEEKDAY ENERGY EFFICIENCY OF  
PUBLIC TRANSIT IN SOUTHEASTERN WISCONSIN: 1996**

Characteristic	Transit System Operating Data <sup>a</sup>				
	Waukesha County Transit System	Milwaukee County Transit System	City of Racine Transit System	City of Kenosha Transit System	City of Waukesha Transit System
Estimated Energy Efficiency of Travel by Transit					
Unlinked Transit Passenger Trips <sup>b</sup> .....	1,425	192,959	8,447	5,606	2,356
Transit Passenger-Miles of Travel .....	20,130	543,930	20,994	18,220	7,728
Passenger-Miles per Transit Trip .....	14.1	2.8	2.5	3.3	3.3
Total Vehicle-Miles .....	2,835	58,283	4,697	3,192	2,571
Bus Miles per Gallon of Diesel Fuel .....	5.3	4.2	3.9	4.1	4.4
Gallons of Petroleum-Based Fuel Used .....	535	13,920	1,194	780	587
Transit Passenger-Miles per Gallon of Diesel Fuel .....	37.6	39.1	17.6	23.4	13.2
Estimated Energy Efficiency if Transit Trips Were Made by Automobile .....					
Automobile Passenger-Miles of Travel .....	20,130	543,940	20,994	18,220	7,728
Vehicle-Miles (at 1.0-1.2 passengers per automobile) .....	16,775-20,130	453,283-543,940	17,495-20,994	15,183-18,220	4,440-7,728
Vehicle-Miles per Gallon of Gasoline <sup>c</sup> .....	21.2	14.6	14.0	14.0	14.0
Automobile Passenger-Miles per Gallon of Gasoline .....	21.2-25.4	14.6-17.5	14.0-16.8	14.0-16.8	14.0-16.8

<sup>a</sup>Transit system data are based upon information reported by each transit operator in its 1996 National Transit Database report submitted to the Federal Transit Administration.

<sup>b</sup>Represents all boarding passengers including transfer and free passengers.

<sup>c</sup>Estimated on the basis of an average auto fuel efficiency of about 21 miles per gallon, with average efficiency of about 14 miles per gallon for central city standard arterial travel and 26 miles per gallon for freeway and expressway travel.

Source: SEWRPC.

Table 48

**TOTAL VEHICULAR AND TRANSIT PASSENGER VOLUMES ON  
SELECTED SURFACE STREETS IN THE CITY OF KENOSHA: 1996**

Location	Average Weekday			Peak Hour		
	Vehicle Count	Transit Passenger Count	Potential Percent Increase in Vehicle Traffic if Transit Trips Use Automobile <sup>a</sup>	Vehicle Count	Transit Passenger Count	Potential Percent Increase in Vehicle Traffic if Transit Trips Use Automobile <sup>a</sup>
39th Avenue between Washington Road and 43rd Street	8,300	390	4	830	200	21
52nd Street between 22nd Avenue and 20th Avenue .....	19,300	790	4	1,930	200	9
56th Street between 7th Avenue and 8th Avenue .....	5,000	1,410	25	500	310	55
22nd Avenue between 76th Street and 80th Street .....	9,900	120	1	990	40	4
60th Street between 39th Avenue and 43rd Avenue .....	12,800	90	1	1,280	200	14

<sup>a</sup>Assumes an average automobile occupancy of 1.06 persons per auto for work trips and 1.33 persons per auto for all other trips. About 25 percent of weekday trips on the transit system are home-based work trips.

Source: SEWRPC.

trips had, instead, been made by automobile.<sup>2</sup> Consequently, the transit service provided by the system does reduce the daily use of petroleum-based motor fuels by Kenosha residents.

The information presented in Table 47 would indicate that the transit systems within the Region are generally more energy efficient than the automobile and that the transit system serving Milwaukee County is substantially more energy efficient than the private automobile. So also is the Waukesha County transit system, which serves mostly commuter travel between Waukesha County and the Milwaukee CBD. The higher efficiency of the Milwaukee County Transit System may be attributed to its service area, which includes central Milwaukee County, with high-density land uses and attendant travel and transit demand, particularly to and from the City of Milwaukee CBD. The higher energy efficiency of the Waukesha County transit system may be attributed to the focus of its service on travel between Waukesha County and the Milwaukee CBD and to the limitation of a sizable portion of its service to the morning and afternoon peak traffic periods.

Each of the transit systems generally operates at levels substantially higher than their average energy efficiency during the weekday peak-traffic periods and generally substantially lower than their average levels during off-peak periods. In addition, each of the transit systems generally operates at substantially higher than their average levels of energy efficiency on their routes which carry more than their average passenger loadings. Conversely, each generally operates at substantially lower than their average energy efficiency levels on routes which carry less than their average passenger loadings.

---

<sup>2</sup>This estimated range of automobile efficiency assumes an average 14 mile-per-gallon fuel efficiency for an automobile operated in city travel. The upper end of the range assumes that the comparable automobile travel is made at the average automobile occupancy in the Kenosha area, or at about 1.2 persons per vehicle. The lower end of the range for automobile travel is based on an average auto occupancy of 1.0 person, assuming that present transit passengers do not now have the opportunity to travel by carpool and, therefore, would not have such opportunity if they were assumed to have an automobile available for their travel.

In general, it can be stated that the public transit systems in the City of Kenosha and in the other urban areas in Southeastern Wisconsin do, on a daily, systemwide basis, provide some energy savings when compared to the automobile. Furthermore, public transit is somewhat more energy efficient than the automobile on its more heavily traveled routes and during peak periods, but only marginally more efficient, or, in some cases, less efficient, than the automobile on its more lightly traveled routes and during off-peak periods.

2. It would appear that the Kenosha transit system may contribute to efficiency in the utilization of the total capacity of the transportation system. If the people traveling by public transit were, instead, traveling by automobile, there would be an increase in automobile traffic utilizing arterial streets of the area of from 4 to 55 percent during the peak-traffic hour. The effect would be most pronounced on the streets in the City of Kenosha CBD, where the potential exists for traffic congestion to occur during peak traffic hours.

#### **Provision of Transportation Services for Disabled Individuals**

The provision of transportation services for disabled individuals is stipulated under Objective No. 1, Standard 5. The applicable specific performance measures reflect the need for both specialized transportation services to be provided and for fixed-route service to be accessible. The Kenosha transit system provides transit service for disabled persons in two ways.

First, the system contracts for paratransit service for those disabled individuals who are unable to use fixed-route bus service, with the eligibility requirements and service criteria of the service conforming with the requirements of the Americans with Disability Act of 1990 (ADA). The paratransit service, provided through the Countywide specialized transit program of the Kenosha County Department of Human Services, Division of Aging Services, has been in compliance with the Federal ADA requirements since January 1996. Notably, this paratransit service, with its extensive service levels, is provided throughout the primary study area, rather than being limited to the Federally required area within three-quarters of a mile of a regular bus route.

Second, the Kenosha transit system also provides service to disabled individuals by utilizing accessible vehicles on its regular bus routes. A total of 28 of the 43 buses in the transit system fleet, or almost two-thirds, are accessible to individuals using wheelchairs. The City uses these buses



Table 49

**AVERAGE WEEKDAY PERFORMANCE CHARACTERISTICS OF THE REGULAR ROUTES  
OF THE KENOSHA TRANSIT SYSTEM: MARCH 5-7, 1996**

Bus Route	Length (round-trip route miles)	Revenue Vehicle- Hours	Revenue Vehicle- Miles	Performance Characteristics					
				Total Boarding Passengers		Boarding Passengers per Route-Mile		Boarding Passengers per Revenue Vehicle-Hour	
				Number	Route Rank <sup>a</sup>	Number	Route Rank <sup>a</sup>	Number	Route Rank <sup>a</sup>
1	30.7	32.0	491.2	520	5	16.9	6	16.3	6*
2	24.7	32.0	395.2	830	2	33.6	1	25.9	2
3	26.4	32.0	422.4	720	3	27.3	3	22.5	3
4	28.8	32.0	480.0	670	4	23.3	4	20.9	4
5	27.4	32.0	419.2	850	1	31.0	2	26.6	1
6	14.9	16.0	238.4	290	6*	19.5	5	18.1	5
7	20.0	6.0	120.0	60 <sup>b</sup>	7*	3.0 <sup>b</sup>	7*	10.0	8*
8	19.0	3.0	95.0	50 <sup>b</sup>	8*	2.6 <sup>b</sup>	8*	16.7	7*
Systemwide Total or Average	191.9	185.0	2,661.4	3,990.0	--	20.8	--	21.6	--

Bus Route	Performance Characteristics							
	Boarding Passengers per Revenue Vehicle Mile		Operating Cost per Boarding Passenger		Operating Deficit per Boarding Passenger		Percent of Operating Costs Recovered through Operating Revenues	
	Number	Route Rank <sup>a</sup>	Cost (\$)	Route Rank <sup>a</sup>	Cost (\$)	Route Rank <sup>a</sup>	Number	Route Rank <sup>a</sup>
1	1.1	6*	3.11	6*	2.66	6*	14.5	6*
2	2.1	1	1.50	1	1.05	1	30.0	1
3	1.7	3	1.89	3	1.44	3	23.8	3
4	1.4	4	2.31	4	1.86	4	19.5	4
5	2.0	2	1.61	2	1.16	2	28.0	2
6	1.2	5	2.68	5*	2.23	5*	16.8	5
7	0.5	7*	6.91	8*	6.46	8*	6.5	8*
8	0.5	8*	6.22	7*	5.77	7*	7.2	7*
Systemwide Total or Average	1.5	--	2.16	--	1.71	--	20.8	--

<sup>a</sup>An \* indicates that the route performs below 80% of the systemwide average for a particular performance measure. For this analysis, routes which had service-based performance measures more than 20 percent below the systemwide average or cost-based performance measures more than 20 percent above the systemwide average were identified as poor performers.

<sup>b</sup>The low ridership levels are in part attributable to service levels below those operated on the other routes. While 16 bus round trips are operated each weekday over Route Nos. 1 through 6, only 6 and 2.5 bus round trips are operated each weekday over Route Nos. 7 and 8, respectively. The difference in service levels is accounted for in all other performance measures.

Source: City of Kenosha Department of Transportation and SEWRPC.

to provide a limited level of accessible bus service by assigning the buses to scheduled bus trips in response to requests made by disabled persons. Disabled individuals desiring to use the service must call the transit system at least 24 hours in advance of the time service is needed and indicate on what routes and at what time they would like to travel.

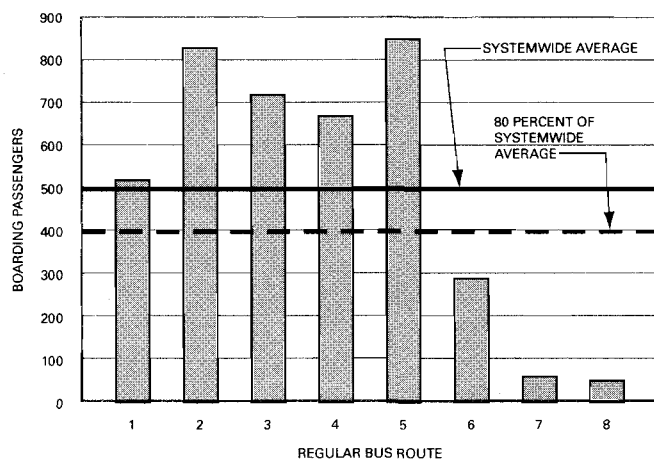
## ROUTE PERFORMANCE EVALUATION

### Route Ridership and Financial Performance

The evaluation of each route's ridership and financial performance was based on the standards under Objectives No. 2 and 4. The ridership and financial performance

Figure 8

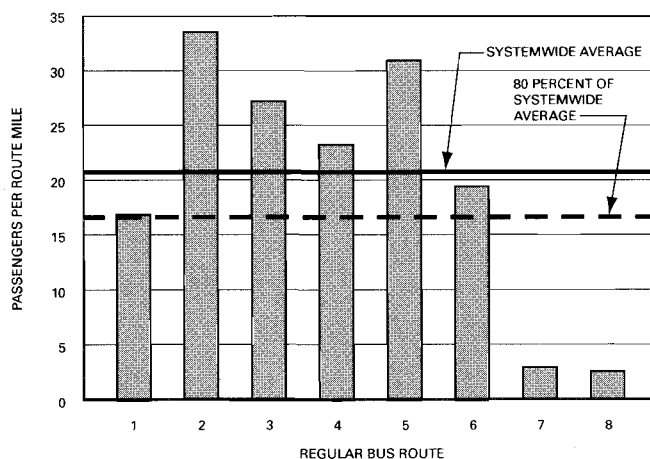
**TOTAL PASSENGERS ON THE  
REGULAR ROUTES OF THE KENOSHA  
TRANSIT SYSTEM: MARCH 5-7, 1996**



Source: City of Kenosha Department of Transportation and SEWRPC.

Figure 9

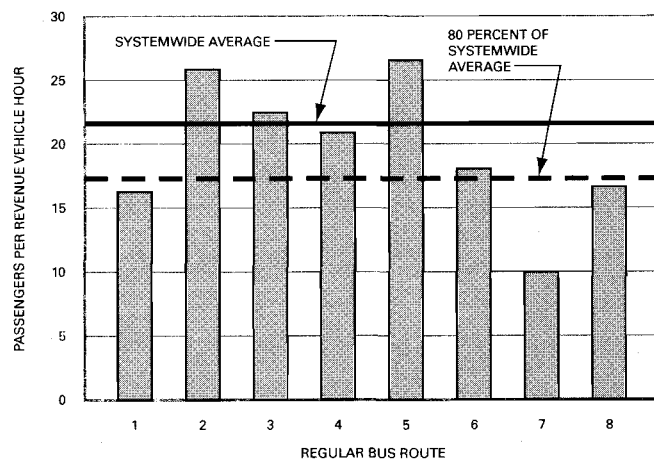
**TOTAL PASSENGERS PER  
ROUTE-MILE ON THE REGULAR ROUTES OF THE  
KENOSHA TRANSIT SYSTEM: MARCH 5-7, 1996**



Source: City of Kenosha Department of Transportation and SEWRPC.

Figure 10

**TOTAL PASSENGERS PER REVENUE  
VEHICLE-HOUR ON THE REGULAR ROUTES OF  
THE KENOSHA TRANSIT SYSTEM: MARCH 5-7, 1996**

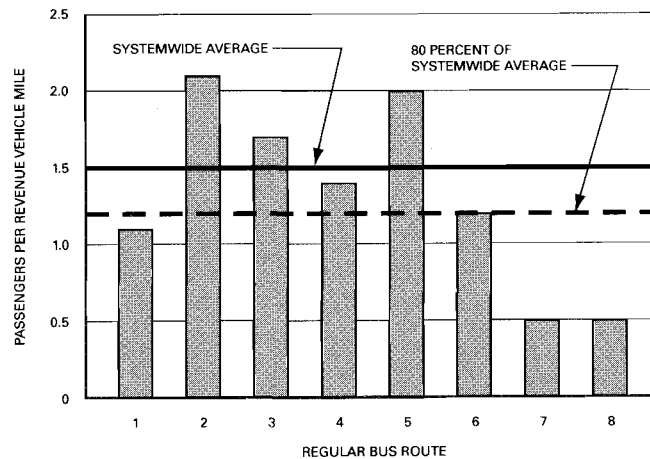


Source: City of Kenosha Department of Transportation and SEWRPC.

characteristics of the regular bus routes of the Kenosha transit system are shown in Table 49 and in Figures 8 through 14. The data presented in this table and in these figures are based on the operating characteristics and the total daily ridership, revenue passengers and transfer passengers, for each route of the Kenosha transit system from passenger counts taken during the period March 5 through 7, 1996, and on the average systemwide cost per

Figure 11

**TOTAL PASSENGERS PER REVENUE  
VEHICLE-MILE ON THE REGULAR ROUTES OF  
THE KENOSHA TRANSIT SYSTEM: MARCH 5-7, 1996**



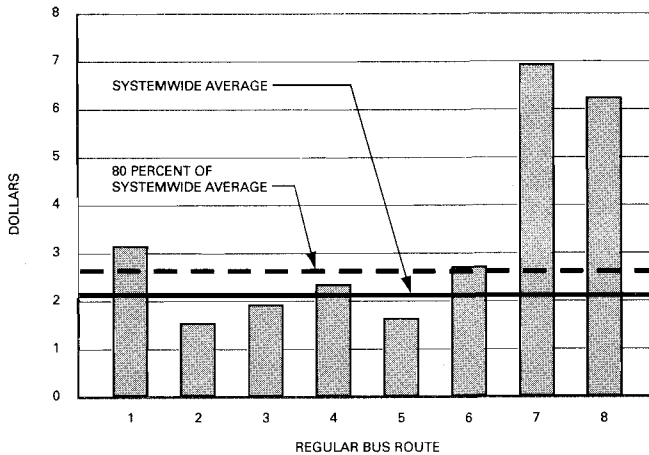
Source: City of Kenosha Department of Transportation and SEWRPC.

vehicle-mile and revenue per boarding passenger for the transit system during 1996.

The performance measures included in Table 49 provide an indication of the ridership, productivity, and financial performance of each bus route. For each performance measure, a minimum performance level equal to 80 percent of the systemwide average was set under the transit

Figure 12

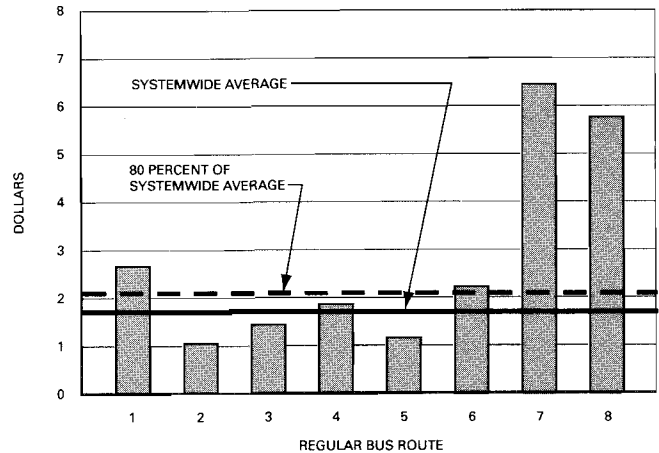
**TOTAL OPERATING EXPENSE PER PASSENGER ON THE REGULAR ROUTES OF THE KENOSHA TRANSIT SYSTEM: MARCH 5-7, 1996**



Source: City of Kenosha Department of Transportation and SEWRPC.

Figure 13

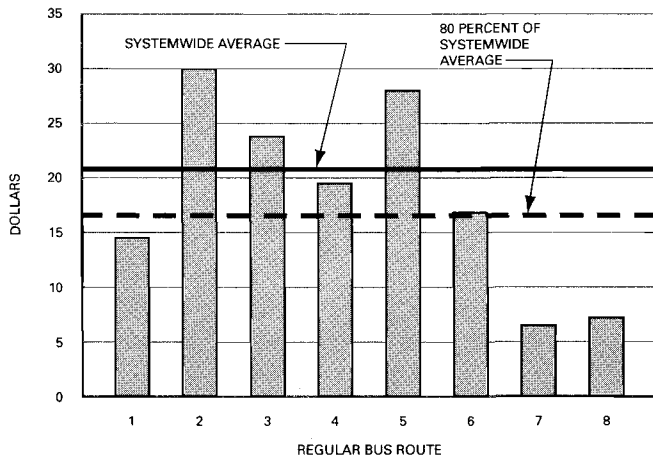
**TOTAL OPERATING DEFICIT PER PASSENGER ON THE REGULAR ROUTES OF THE KENOSHA TRANSIT SYSTEM: MARCH 5-7, 1996**



Source: City of Kenosha Department of Transportation and SEWRPC.

Figure 14

**PERCENT OF OPERATING EXPENSES RECOVERED FROM OPERATING REVENUES ON THE REGULAR ROUTES OF THE KENOSHA TRANSIT SYSTEM: MARCH 5-7, 1996**



Source: City of Kenosha Department of Transportation and SEWRPC.

service objectives and standards. Routes which had service-based performance measures 20 percent below the systemwide average, or cost-based performance measures 20 percent above the systemwide average, were identified as poor performers. Use of the systemwide average as the performance standard directs the transit system toward improving the performance of routes that are significantly below average so that, overtime,

the overall performance of the entire transit system will improve.

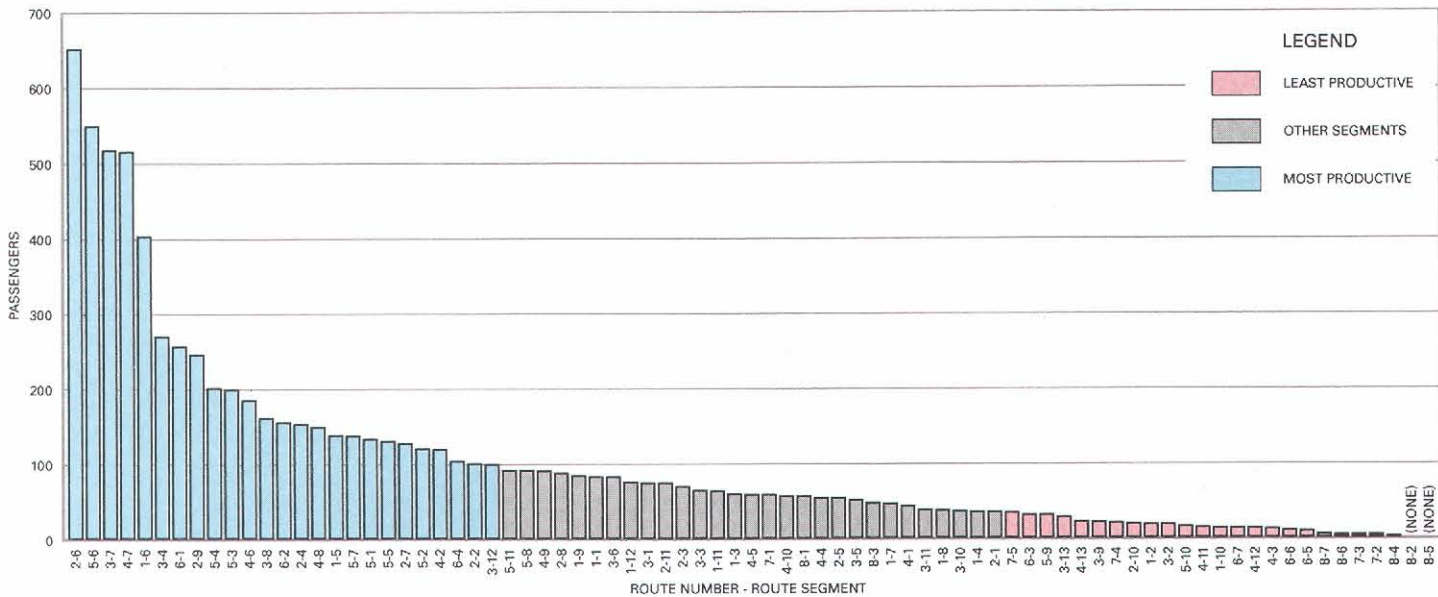
To supplement this route ridership and financial information, the boarding and alighting passenger activity along each bus route was also examined to help identify productive and nonproductive route segments. Information concerning the number of boarding and alighting passengers by location for each bus route was obtained from passenger counts conducted from March 5 through 7, 1996. To facilitate the analysis of this information, the bus routes were divided into segments based on distance and land uses served. Information on the total passenger activity, boarding passengers and alighting passengers, for each route segment, is provided in Figure 15, while the route segments are identified on Map 25. Approximately 7,950 boarding and alighting passengers were recorded over the 79 route segments identified on the system. The route segments were divided into three groups, based on passenger activity. About 5,800 passengers, or about 73 percent of the total recorded, boarded or alighted on the 25 most productive route segments. By way of contrast, only about 340 passengers, or about 4 percent of the total recorded, boarded or alighted on the 25 least productive route segments. The 25 most productive and the 25 least productive route segments are shown on Map 25.

The following conclusions were reached on the basis of the above information:

1. Certain bus routes had weekday performance levels consistently above the specified performance

Figure 15

**PASSENGER ACTIVITY BY ROUTE SEGMENT OF THE  
KENOSHA TRANSIT SYSTEM: WEEKDAYS, MARCH 5-7, 1996**



NOTE: THE SEPARATION OF ROUTE SEGMENTS INTO MOST PRODUCTIVE AND LEAST PRODUCTIVE GROUPINGS WAS BASED ON THE TOTAL BOARDING AND ALIGHTING PASSENGERS OBSERVED ON EACH ROUTE SEGMENT. FOR THE MOST PART, ALL ROUTE SEGMENTS WERE A UNIFORM ONE MILE IN LENGTH. THE LEVEL OF BUS SERVICE PROVIDED WAS NOT, HOWEVER, UNIFORM OVER ALL ROUTE SEGMENTS. WHILE SERVICE OVER ROUTE NOS. 1 THROUGH 6 CONSISTED OF 16 BUS ROUNDTRIPS EACH WEEKDAY, SERVICE OVER ROUTE NOS. 7 AND 8 CONSISTED OF ONLY 6 AND 2.5 BUS ROUNDTRIPS EACH WEEKDAY, RESPECTIVELY. IF THE RIDERSHIP BY SEGMENT FOR ROUTE NOS. 7 AND 8 ARE ADJUSTED TO REFLECTIVELY. IF THE RIDERSHIP BY SEGMENT FOR ROUTE NOS. 7 AND 8 ARE ADJUSTED TO REFLECT A COMPARABLE NUMBER OF BUSTRIPS TO THAT OPERATED ON THE OTHER ROUTES, THEN SEGMENT NOS. 7-1, 8-1 AND 8-3 WOULD FALL INTO THE MOST PRODUCTIVE CATEGORY, AND SEGMENT NOS. 7-4 AND 7-5 WOULD FALL INTO THE OTHER CATEGORY.

Source: SEWRPC.

standard of 80 percent of the systemwide average effectiveness levels. Such routes included Route Nos. 2, 3, 4, and 5. Of these four routes, Route Nos. 2, 3, and 5 were clearly the best performers, with weekday effectiveness levels exceeding 100 percent of the systemwide average for all measures of performance. The remaining route, Route No. 4, had acceptable weekday effectiveness levels, within 80 to 100 percent of the systemwide average for all performance measures. On the basis of their ridership and financial performance alone, these routes could continue to be operated without change.

2. The other four routes of the system, Route Nos. 1, 6, 7, and 8, had weekday performance levels below the specified performance standard for most or all of the performance measures. Of the 25 least productive route segments on the system, 15 were on these four routes. Potential changes to these routes to improve performance should be considered. It should be noted, however, that Route Nos. 7 and 8 provide significantly less service than the other

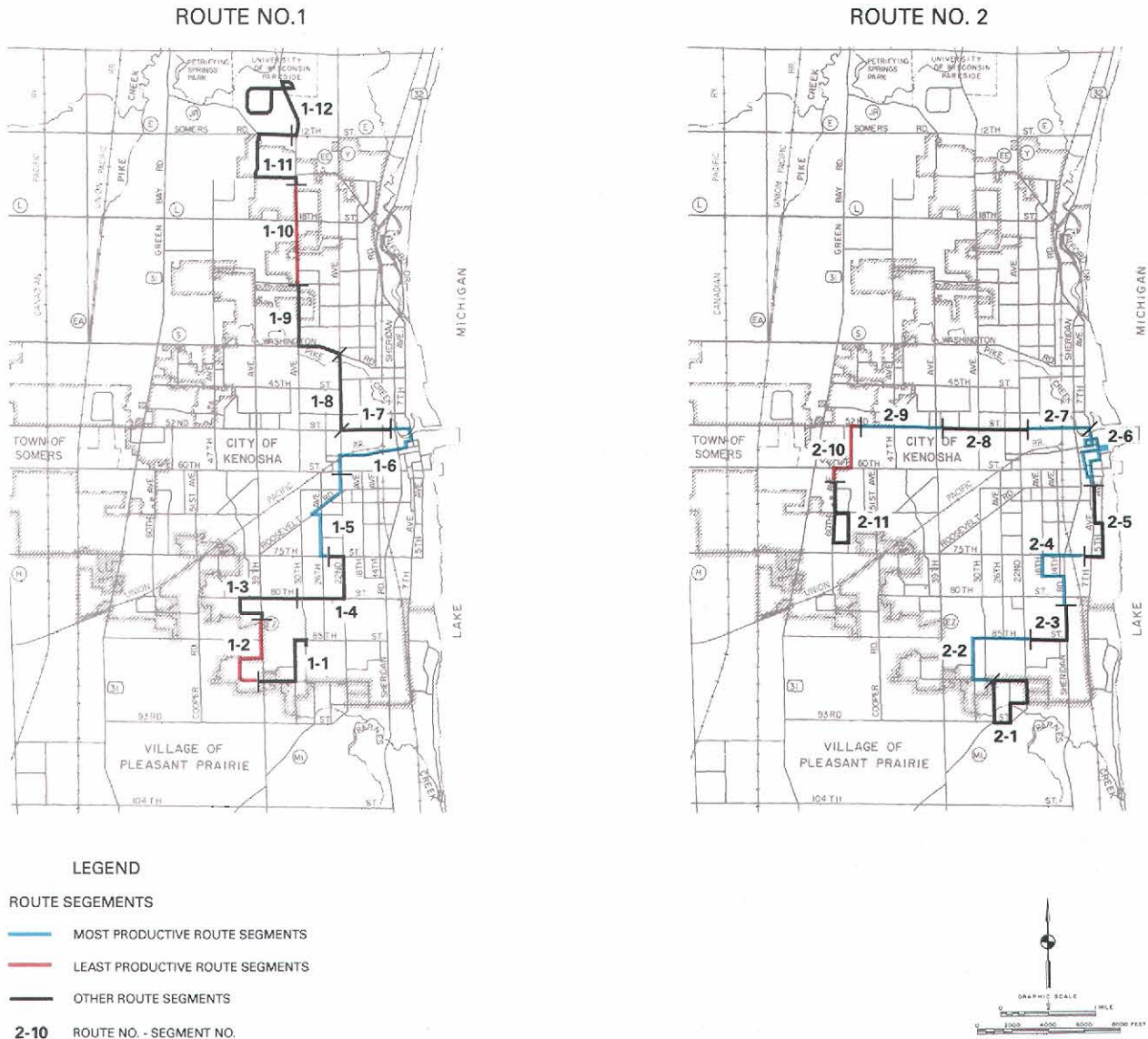
routes of the transit system. This directly affects the level of ridership they are able to generate.

3. While Route Nos. 6, 7, and 8 had the most unproductive route segments, at least one unproductive route segment was also found on each of the other routes of the system. This information should be viewed as an indicator of where routing changes in the current route structure should be considered. It should be noted, however, that some of the route segments with the lowest ridership occur where bus routes pass through areas with little residential development or few major trip generators as they travel towards residential areas or trip generators within the greater Kenosha area which do generate significant ridership. Consequently, if the transit system is to continue to provide extensive areal coverage of the Kenosha area, some bus routes must be expected to perform at relatively lower levels of efficiency than other bus routes because of the specific and constrained operating and service area characteristics of each route.



Map 25

PRODUCTIVE AND NONPRODUCTIVE ROUTE SEGMENTS OF THE KENOSHA TRANSIT SYSTEM: MARCH 5-7, 1996



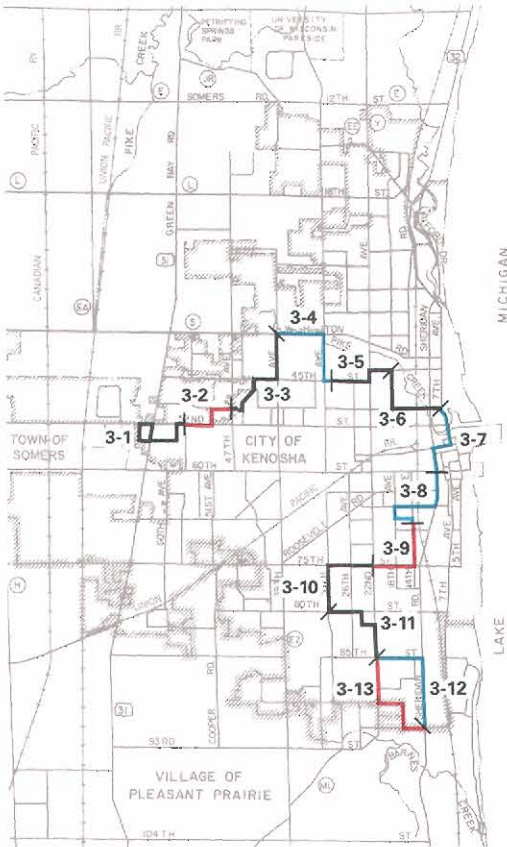
### Compliance with Operating Headway and Passenger Loading Standards

Standard No. 4 of Objective No. 2 states that operating headways for fixed bus routes should be capable of accommodating passenger demand at the recommended load standards. The recommended load standards, speci-

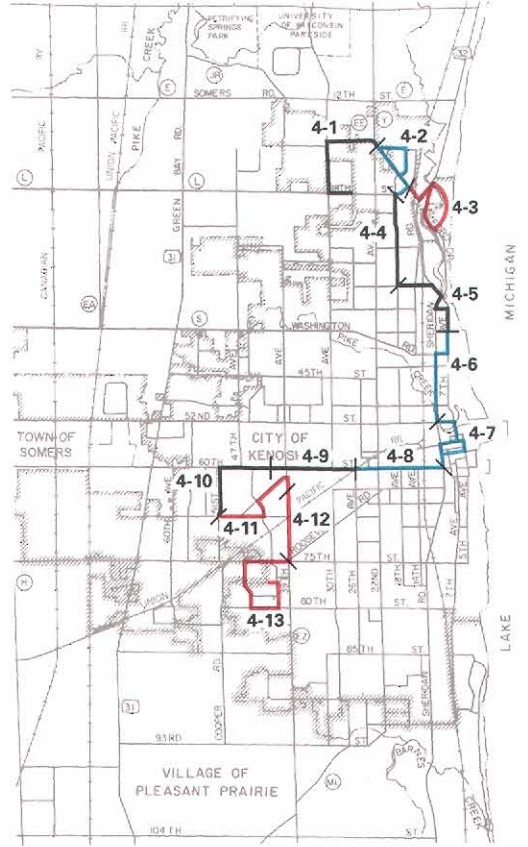
fied under Standard No. 3 of Objective No. 2, call for maximum load factors for local bus service which do not exceed 1.25 during peak periods and 1.00 at all other times. The maximum load factor is defined as the ratio of passengers to bus seats as measured at the point on the route where passenger loads are highest. The maximum



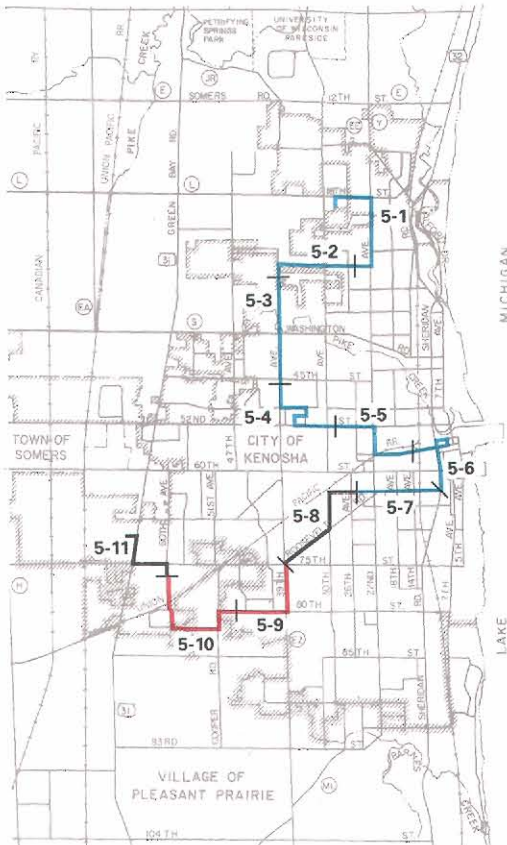
ROUTE NO. 3



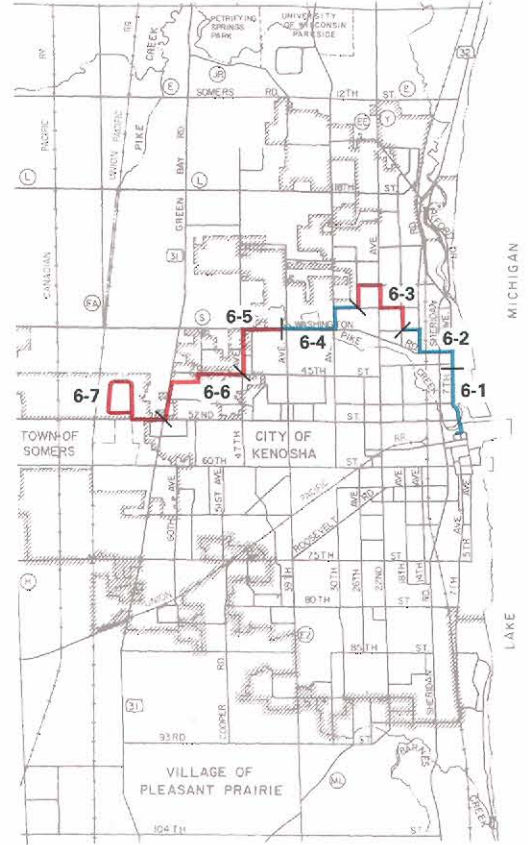
ROUTE NO. 4



ROUTE NO. 5

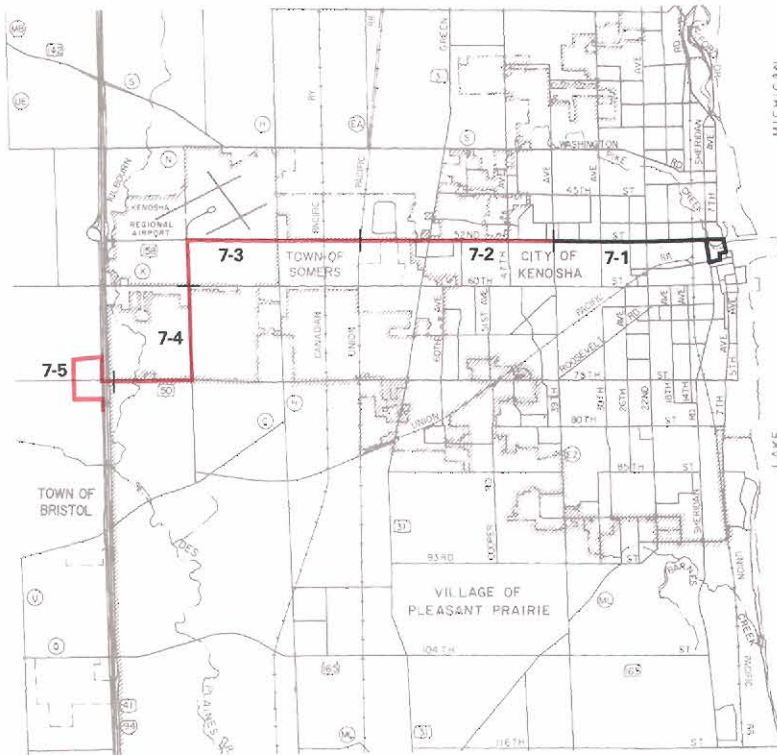


ROUTE NO. 6

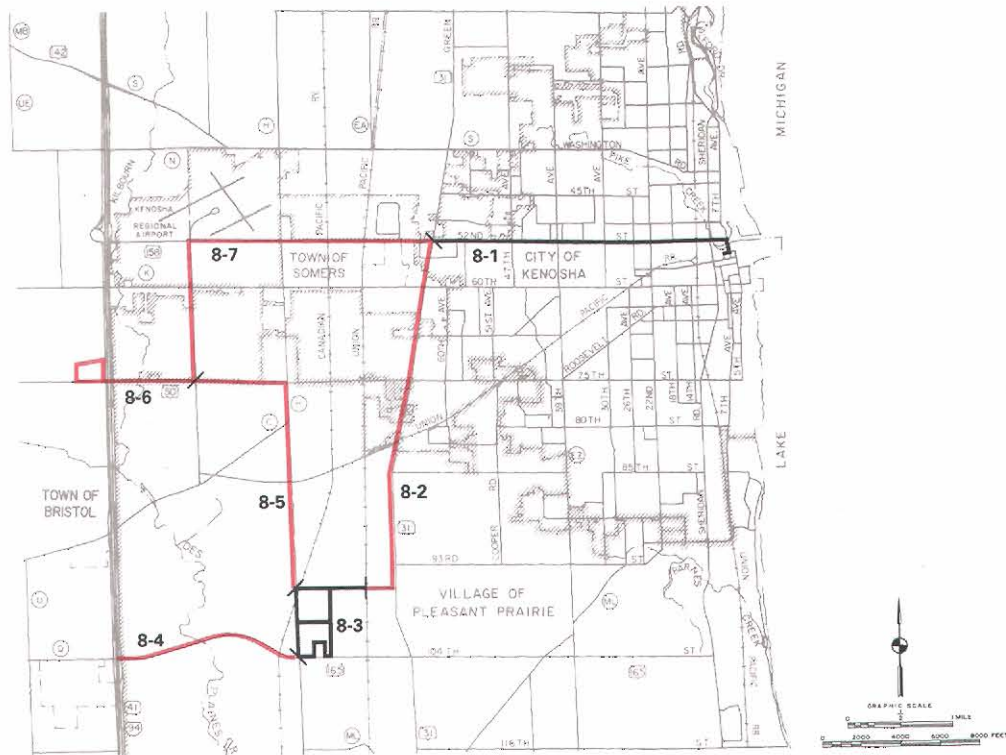


# Map 25 (continued)

## ROUTE NO. 7



## ROUTE NO. 8



<sup>8</sup> THE SEPARATION OF ROUTE SEGMENTS INTO MOST PRODUCTIVE AND LEAST PRODUCTIVE GROUPINGS WAS BASED ON THE TOTAL BOARDING AND ALIGHTING PASSENGERS OBSERVED ON EACH ROUTE SEGMENT. FOR THE MOST PART, ALL ROUTE SEGMENTS WERE A UNIFORM ONE MILE IN LENGTH. THE LEVEL OF BUS SERVICE PROVIDED WAS NOT, HOWEVER, UNIFORM OVER ALL ROUTE SEGMENTS. WHILE SERVICE OVER ROUTE NOS. 1 THROUGH 6 CONSISTED OF 16 BUS ROUNDTRIPS EACH WEEKDAY, SERVICE OVER ROUTE NOS. 7 AND 8 CONSISTED OF ONLY 6 AND 2.5 BUS ROUNDTRIPS EACH WEEKDAY, RESPECTIVELY. IF THE RIDERSHIP BY SEGMENT FOR ROUTE NOS. 7 AND 8 ARE ADJUSTED TO REFLECT A COMPARABLE NUMBER OF BUS TRIPS TO THAT OPERATED ON THE OTHER ROUTES, THEN SEGMENT NOS. 7-1, 8-1, AND 8-3 WOULD FALL INTO THE MOST PRODUCTIVE CATEGORY, AND SEGMENT NOS. 7-4 AND 7-5 WOULD FALL INTO THE OTHER CATEGORY.

Source: SEWRPC.

Table 50

**MAXIMUM LOAD FACTORS FOR THE REGULAR ROUTES  
OF THE KENOSHA TRANSIT SYSTEM: MARCH 5-7, 1996**

Route	Direction	Morning Peak Period <sup>a</sup>		Midday Off-Peak Period <sup>b</sup>		Afternoon Peak Period <sup>c</sup>	
		Maximum Passenger Volume	Maximum Load Factor <sup>d</sup>	Maximum Passenger Volume	Maximum Load Factor <sup>d</sup>	Maximum Passenger Volume	Maximum Load Factor <sup>d</sup>
1	Northbound	20	0.48	14	0.33	19	0.45
	Southbound	6	0.14	15	0.36	21	0.50
2	Northbound	9	0.21	23	0.55	42	1.00
	Southbound	35	0.83	21	0.50	20	0.48
3	Northbound	31	0.74	20	0.48	40	0.95
	Southbound	40	0.95	13	0.31	18	0.43
4	Northbound	27	0.64	21	0.50	27	0.64
	Southbound	32	0.76	12	0.29	27	0.64
5	Northbound	42	1.00	11	0.26	32	0.76
	Southbound	17	0.40	29	0.69	43	1.02
6	Eastbound	5	0.12	7	0.17	63	1.50
	Westbound	15	0.36	24	0.57	5	0.12
7	Eastbound	--	--	12	0.29	8	0.19
	Westbound	--	--	13	0.31	4	0.10
8	Eastbound	--	--	--	--	14	0.33
	Westbound	14	0.33	--	--	--	--

<sup>a</sup>6:00 - 8:29 a.m.

<sup>b</sup>8:30 a.m. - 2:29 p.m.

<sup>c</sup>2:30 - 6:00 p.m.

<sup>d</sup>Assumes 42 seats per bus. The maximum load factors specified under Objective No. 2, Standard No. 3, are 1.25 during weekday peak periods and 1.00 at all other times.

Source: SEWRPC.

load factor provides a measure of the quality of bus service by indicating the number of passengers on the bus on a given route who must stand.

The performance of Kenosha transit system bus routes against these two standards was determined from the weekday boarding and alighting passenger count data collected from March 5 through 7, 1996. Information on the total weekday boarding passengers by run by direction of travel for each route was used to identify individual trips with total passenger boardings in excess of the seating capacity of the buses used. The pattern of boarding and alighting passengers on these individual runs was then reviewed to determine the highest passenger loads for the particular bus trip from which the maximum load factor was computed. Information reflecting counts of the total weekday passengers carried on each scheduled bus trip for

each of the regular bus routes is presented in Appendix A. The maximum load factors observed on each regular bus route are presented in Table 50 and were used to help determine the need for increases in existing weekday service levels or headways to relieve overloaded conditions on City bus routes.

Route Nos. 2, 5, and 6 had peak-period load factors which met or exceeded 1.00. In only one case, however, did the observed passenger load result in a load factor which exceeded the peak-period service standard of 1.25. The highest load factor, 1.5, found on the eastbound Route No. 6 during the afternoon peak period direction was due to a significant level of boarding passengers from Washington Junior High School. It may, therefore, be concluded that the existing headways operated on the

regular routes of the transit system are capable of accommodating existing levels of passenger demand.

### **Schedule Adherence**

The provision of transit service that is reliable and on time is important to attracting and keeping transit riders. For the purpose of this study, "on time" has been defined as adherence to published schedules within the range of from one minute early to three minutes late. The headways operated on the bus routes of the Kenosha transit system range from 30 minutes during weekday peak periods to 60 minutes during weekday middays and on Saturdays, with the exceptions of Route Nos. 7 and 8. Route No. 7 is operated with six round-trips between the downtown central transfer point and the Factory Outlet Center, resulting in one- to two-hour headways throughout the day. Route No. 8 is operated with two westbound trips each weekday morning peak period and with three eastbound trips each weekday afternoon peak period. As a result, excessive waiting times can occur for passengers who miss service connections because of a departing ahead of schedule. Performance within these guidelines, therefore, becomes important to minimize passenger inconvenience.

To obtain a measure of schedule adherence on the Kenosha transit system, spot checks were made of departure times at bus stop locations along each regular route by the Commission staff on November 5 and 6, 1996. The random checks were made on selected inbound and outbound bus trips during the morning peak, midday off-peak, and afternoon peak periods of transit system operation at the primary transfer point located downtown on 56th Street and between 7th Avenue and 8th Avenue and at bus stops located along each route outside downtown. These checks of schedule adherence were made on 130, or 67 percent, of the 193 one-way bus trips operated on regular routes on weekdays. Actual departure times were recorded at each bus stop and compared with the scheduled departure times at the stop to determine if any problems in schedule adherence existed. The schedule adherence data collected are summarized in Table 51.

On the basis of this information, the following conclusions may be drawn:

1. For the 130 stops for which observed bus departure times were checked for adherence to published schedules, 106 departures, or 82 percent, were considered to be on time, in accordance with the foregoing definition. This falls below the recommended performance level of 90 percent on time set forth under the transit service objectives and

standards. Route Nos. 3, 5, and 8 were found to have the best on-time performance, which either met, or was within 3 percent of, the specified performance level of 90 percent on time.

2. Problems with schedule adherence were found to exist only at bus stops at some distance from the downtown transfer terminal. Only 35 of the 59 departures checked, or about 59 percent, at locations outside of downtown were found to be on time. The problems were found to be almost equally divided between early and late departures at bus stops. Such problems most commonly are related to differences between the actual running time and scheduled time for a round trip on each bus route and results from different passenger loading patterns or traffic conditions. Unless drivers constantly compensate for running time and scheduled time differences, schedule adherence problems will occur. To correct the problems with schedule adherence observed, the scheduled running times between timepoints along each route should be reviewed and, possibly, modified to reflect different passenger loading and traffic conditions which occur on each route throughout the day, affecting actual running times between stops.

### **Indirect Route Alignments and Lengthy Transit Travel Times**

Standards 6 and 7 of Objective 2 state that the transit system should minimize indirect routing, duplication of service, and transfers which discourage transit use and that the system should provide for reasonable travel times in comparison with automobile travel times. These two standards were considered together since indirect and circuitous routing alignments can cause unreasonably long travel times which can affect the ability of the transit system to compete with private automobiles and discourage transit use. In order to measure the directness of the alignments of the existing regular bus routes, the over-the-road distance and in-vehicle travel time between selected locations in the transit service area by transit and by automobile were compared. As noted in Chapter II, the Kenosha CBD both produces and attracts a significant number of both total person and transit person trips on an average weekday within the primary study area and also houses the common transfer terminal for all eight routes of the system. Accordingly, distances and travel times were measured between the outlying termini of each regular route and the common transfer terminal on 56th Street between 7th and 8th Avenues. In addition, distances and in-vehicle travel times were also measured between the outlying termini of those routes providing crosstown service through the CBD.



Table 51

**ON-TIME PERFORMANCE OF THE REGULAR ROUTES OF  
THE KENOSHA TRANSIT SYSTEM: NOVEMBER 5 AND 6, 1996**

Route Number	Weekday One-Way Bus Trips			Schedule Adherence Checks Made at Downtown Transfer Location							
	Total	Number of Bus Trips Checked	Percent of Bus Trips Checked	Total		Early Departures		On-Time <sup>a</sup>		Late Departures	
				Number	Percent	Number	Percent	Number	Percent	Number	Percent
1	32	22	69	12	100	--	--	12	100	--	--
2	32	22	69	12	100	--	--	12	100	--	--
3	32	22	69	12	100	--	--	12	100	--	--
4	32	22	69	12	100	--	--	12	100	--	--
5	32	22	69	12	100	--	--	12	100	--	--
6	16	13	81	6	100	--	--	6	100	--	--
7	12	5	42	3	100	--	--	3	100	--	--
8	5	2	40	2	100	--	--	2	100	--	--
Total	193	130	67	71	100	--	--	71	100	--	--

Route Number	Schedule Adherence Checks Made at Stops Outside Downtown								Schedule Adherence Checks Made Over Entire System							
	Total		Early Departures		On-Time <sup>a</sup>		Late Departures		Total		Early Departures		On-Time <sup>a</sup>		Late Departures	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
1	10	100	3	30	6	60	1	10	22	100	3	14	18	82	1	4
2	10	100	2	20	6	60	2	20	22	100	2	9	18	82	2	9
3	10	100	1	10	9	90	--	--	22	100	1	4	21	96	--	--
4	10	100	3	30	4	40	3	30	22	100	3	14	16	72	3	14
5	10	100	1	10	7	70	2	20	22	100	1	4	19	87	2	9
6	7	100	3	43	2	29	2	29	13	100	3	23	8	62	2	15
7	2	100	1	50	1	50	--	--	5	100	1	20	4	80	--	--
8	--	--	--	--	--	--	--	--	2	100	--	--	2	100	--	--
Total	59	100	14	24	35	59	10	17	130	100	14	11	106	82	10	8

<sup>a</sup> Defined as adherence to published schedules between one minute early and three minutes late.

Source: SEWRPC.

Table 52 presents the comparison of automobile and transit travel distances and in-vehicle times used to measure the directness of the current transit route alignments. For this analysis, transit-to-automobile ratios of distance and travel times in excess of 3.0 were considered as being unfavorable. From the information presented in this table the following conclusions were reached:

1. As shown in Map 26, most of the existing regular routes have at least one segment of their alignment which is to some degree less direct than the more direct path which would be followed by automobile travel. The indirectness of the current route alignments results largely from efforts to maximize ridership by maximizing service to the residential areas and major travel generators on each route while, at the same time, minimizing both the number of routes and the attendant total expenditures for system operation. In addition, the alignments of some routes have been designed to provide direct transit service between the residential areas

and major traffic generators, including schools, located along each route. The existing route alignments do, consequently, provide for relatively direct travel with only a minor amount of inconvenience for short trips.

2. For long crosstown trips on the transit system, however, the existing alignments of Route Nos. 1 through 5 have segments which are indirect and cause a significant amount of inconvenience. The ratios of transit in-vehicle travel times to automobile in-vehicle travel times are generally unfavorable, with ratios in excess of 3.0 and absolute travel time differences of from 38 to 46 minutes. The observed differences between transit and automobile travel times for crosstown travel exist because each route of the transit system is oriented to serving the common transfer terminal in the Kenosha CBD, not to providing crosstown service. In addition, the routes are also oriented to serving two outlying, or satellite, transfer centers, one at Gateway Technical College and one at 80th Street and 34th Avenue,



Table 52

**TRANSIT-TO-AUTOMOBILE DISTANCES AND TRAVEL TIMES AT SELECTED LOCATIONS  
SERVED BY THE REGULAR ROUTES OF THE KENOSHA TRANSIT SYSTEM: MAY 1997**

Route	Termini for Measurements of Travel Distance and Time	One-Way Travel Distance (miles) <sup>a</sup>				One-Way Travel Time (minutes) <sup>b</sup>			
		Transit	Automobile	Difference (transit-to-automobile)	Ratio (transit-to-automobile)	Transit	Automobile	Difference (transit-to-automobile)	Ratio (transit-to-automobile)
No. 1	U. W.- Parkside to Tremper High School .....	20.1	9.2	10.9	2.18	55	17	38	3.24
	U. W.- Parkside to Downtown .....	11.8	9.0	2.8	1.31	25	13	12	1.92
	Tremper High School to Downtown .....	9.3	4.4	4.9	2.11	25	7	18	3.57
No. 2	Pick'n Save to St. Joseph's Home for the Aged ...	17.3	4.5	12.8	3.84	55	9	46	6.11
	Pick'n Save to Downtown .....	7.6	5.5	2.1	1.38	25	8	17	3.13
	St. Joseph's Home for the Aged to Downtown ....	9.7	4.9	4.8	1.98	25	9	16	2.78
No. 3	Kenosha Gardens to Briarcliff Apartments .....	17.8	7.5	10.3	2.37	55	13	42	4.23
	Kenosha Gardens to Downtown .....	8.1	4.9	3.2	1.65	25	8	17	3.13
	Briarcliff to Downtown .....	9.7	4.7	5.0	2.06	25	7	18	3.57
No. 4	Glenwood Crossings to Pershing Plaza .....	18.4	6.1	12.3	3.02	55	10	45	5.50
	Glenwood Crossings to Downtown .....	9.3	5.0	4.3	1.86	25	8	17	3.13
	Pershing Plaza to Downtown .....	9.1	4.4	4.7	2.07	25	9	16	2.78
No. 5	Glenwood Crossings to Southport Plaza .....	15.8	7.8	8.0	2.03	55	10	45	5.50
	Glenwood Crossings to Downtown .....	8.3	5.3	3.0	1.57	25	10	15	2.50
	Southport Plaza to Downtown .....	7.5	6.1	1.4	1.23	25	9	16	2.78
No. 6	Kenosha Industrial Park to Downtown .....	10.4	5.4	5.0	1.93	25	9	16	2.78
No. 7	Factory Outlet Center to Downtown .....	14.0	11.4	2.6	1.23	30	18	12	1.67
No. 8	Lakeview Corporate Park to Downtown .....	15.0	11.6	3.4	1.29	25	17	8	1.47
Systemwide Average	Terminal to Terminus (Crosstown Routes 1-5) ....	17.9	7.0	10.9	2.69	55	12	43	4.92
	Terminus to Downtown (Routes 1-8) .....	10.6	7.3	3.3	1.53	26	11	14	2.47

<sup>a</sup>Based on average over-the-road distances between points identified.

<sup>b</sup>Based on average off-peak travel times between points identified.

Source: City of Kenosha Department of Transportation, and SEWRPC.

causing some indirect travel as routes are diverted from more direct paths to these satellite centers. Alternatives to help improve the convenience of crosstown travel time should be explored.

- Several of the routes also incorporate one-way loops at the outer end of the routes, as shown on Map 26, to maximize the areas served by each route. While the one-way service along these loops can inconvenience passengers traveling between points along the loop, the loops on most routes are small and result in only a minor amount of indirect travel for such passengers, as well as for passengers traveling between the outlying route termini and the Kenosha CBD or traveling across town.

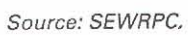
## SUMMARY

This chapter has evaluated the performance of the City of Kenosha transit system on the basis of specific performance measures related to the attainment of key transit system objectives as qualified by the standards. The evaluation included separate assessments of performance on a systemwide basis and on a route-by-route

basis. The most important findings of this evaluation include the following:

- The present system provides excellent areal coverage of the existing residential areas inside the City of Kenosha, together with good coverage of the most densely populated residential areas outside the City. About 96 percent of the resident population of the City and about 82 percent of the total resident population of the primary study area lay inside the transit system service area. The transit system also provides good areal coverage of the residential concentrations of transit-dependent population groups within the primary study area identified through 1990 U. S. Census data.
- The transit system also provides excellent areal coverage of the employment concentrations in the City of Kenosha, with about 98 percent of the City jobs lying inside the transit system service area. About 86 percent of the jobs in the primary study area were also situated inside the transit system service area.

ROUTE SEGMENTS ON THE KENOSHA TRANSIT SYSTEM NOT DIRECT IN ALIGNMENT: AUGUST 1997



3. The transit system also provides good coverage of the existing potential transit trip generators identified in the primary study area. The system serves 128 of the 140 major land use trip generators and 59 of the 61 major transit-dependent population trip generators identified in the primary study area. Of the 14 centers not served, 13 are outside those portions of the City of Kenosha east of Green Bay Road (STH 31), which have historically been the primary service area for the transit system. For a similar reason, the existing transit system is capable of serving only about one-half, 30 of 66, of the new and proposed developments identified in the primary study area because most of the new development has been occurring in the portions of the City west of Green Bay Road, outside the City, in the Village of Pleasant Prairie and in the Town of Somers.
4. In terms of ridership and financial performance, the Kenosha transit system compares favorably with other urban bus systems in Wisconsin. Ridership and effectiveness levels for the Kenosha transit system were found to be higher than those of a group of urban bus systems in Wisconsin from 1992 through 1996. The trends observed for the Kenosha transit system with respect to increases in operating expenses per vehicle-mile and per vehicle-hour, as well as increases in operating costs and deficits per passenger, were found to compare favorably with the trends observed for the Statewide group of urban bus systems during this period. Kenosha's rate of increase was about 40 to 80 percent less than the rates observed for the other systems. With respect to farebox recovery rates, the rate for the Kenosha transit system has been about 6 to 10 percent higher than the average for the Statewide group of urban bus systems over the period.
5. The overall energy efficiency of the Kenosha transit system in serving travel on an average weekday is somewhat higher than that of the private automobile. Consequently, the transit service provided by the system could be considered to be reducing the use of petroleum-based motor fuel by Kenosha area residents on a daily basis. The transit system also contributes to the efficiency of the transportation system by reducing peak-hour automobile traffic and the potential for congestion on streets in the Kenosha CBD.
6. The existing service provided by the transit system to disabled individuals unable to use fixed-route bus service meets all of the paratransit service requirements of the Americans with Disabilities Act of 1990. This paratransit service, with its extensive service levels, is provided throughout the primary study area, rather than being limited to the Federally required area within three-quarters of a mile of a regular bus route. The Kenosha transit system also provides service to disabled individuals by utilizing accessible vehicles on its regular bus routes. A total of 28, or almost two-thirds, of the 43 buses in the transit system fleet are accessible to individuals using wheelchairs. Individuals may request an accessible bus in advance of the time the service is needed and indicate on what routes and at what time they would like to travel.
7. Some regular bus routes had weekday performance levels consistently above the specified minimum performance standard of at least 80 percent of systemwide average effectiveness levels. These routes included Route Nos. 2, 3, 4, and 5, with Route Nos. 2, 3, and 5 clearly being the best performers, showing weekday effectiveness levels exceeding 100 percent of the systemwide average for all measures of performance. Based solely on their ridership and financial performance, these routes could continue to be operated without change.
8. The remaining four routes, Route Nos. 1, 6, 7, and 8, had weekday performance levels below 80 percent for most or all of the specified performance standards. Of the 25 least productive route segments identified on the system, 15 were on these four routes. While Route Nos. 6, 7, and 8 had the most unproductive route segments, at least one unproductive route segment was also found on each of the other routes of the system. This information should be viewed as an indicator of where routing changes in the current route structure should be considered.
9. Because some bus routes must pass through areas of little residential development or few major trip generators in order to reach other residential areas or trip generators, such bus routes must be expected to perform at somewhat lower levels of efficiency than other bus routes if the transit system is to continue to provide extensive areal coverage of the City of Kenosha and its environs.
10. The existing headways on the regular routes of the transit system are capable of accommodating

existing levels of passenger demand at the recommended load standards. Headway reductions are not needed on any routes. The observed passenger loads resulted in a load factor exceeding the maximum specified in the transit service standards in only one case, on Route No. 6 during the afternoon peak period, where a load factor of 1.50 was found. The next highest load factor was observed on Route No. 5, which had a load factor of 1.02 during the afternoon peak period. All other load factors were 1.00 or below.

11. On the basis of random checks of schedule adherence, the on-time performance of the existing transit system was found to be somewhat below the recommended performance level of 90 percent on time, as set forth under the transit service objectives and standards. Problems with schedule adherence were found to exist only at bus stops at some distance from the downtown transfer center. They were found to be almost equally divided between early and late departures at bus stops. To correct such problems, the scheduled running time between timepoints along each route should be reviewed and, possibly, modified to reflect different passenger

loading and traffic conditions which occur throughout the day and which affect actual running time between stops.

12. The existing alignments of the bus routes of the transit system are relatively direct for trips between the downtown central transfer point and outlying locations, but travel can be very inconvenient for crosstown trips. The in-vehicle travel times for crosstown travel were consistently higher than the in-vehicle travel time for automobile travel, with rates in excess of 3.0 on Route Nos. 1 through 5. The inconvenience is a result of the orientation of the routes serving the downtown transfer terminal and intermediate satellite transfer centers. Alternatives which would improve the convenience of crosstown travel should be explored.

The analyses documented in this chapter indicated that changes in some bus routes should be considered to improve their performance as well as the overall performance of the transit system. Alternative and recommended improvements to the local transit service provided by the transit system within the primary study area are described in Chapter VII of this report.

(This page intentionally left blank)



## EXISTING TRANSIT LEGISLATION, REGULATIONS, AND PUBLIC FUNDING PROGRAMS

### INTRODUCTION

This chapter summarizes the legislative and regulatory framework governing the provision of public transit service in the primary study area of the Kenosha transit system development plan. Federal legislation and rules govern the availability and distribution of Federal financial aid for capital improvements and operating subsidies. State legislation and rules govern the local institutional structure for the provision of public transit services and provide for operating subsidies. Local ordinances can further govern the provision of transit service. Table 53 summarizes the principal Federal and State transit assistance programs which represent sources of financial aid for public transit services in the Kenosha area. Table 54 shows the estimated funds received by the City of Kenosha and other recipients in the primary study area from Federal and State transit assistance programs from 1992 through 1996.

### FEDERAL FUNDING PROGRAMS AND AUTHORIZING LEGISLATION

#### **Federal Transit Administration (FTA) Programs<sup>1</sup>**

The Urban Mass Transportation Act (UMT) of 1964 established a comprehensive program of grants in partial support of the preservation, improvement, and expansion of public transit service in the urbanized areas of the United States.<sup>2</sup> The 1964 Act has been amended several

times, most recently by the Federal Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA). In 1994 the Federal transit laws were codified in Chapter 53 of Title 49 of the United States Code with the enactment of Public Law 103-272, which changed the citations for the various Federal transit assistance programs but made no substantive changes to the laws. Responsibility for administering the Federal transit programs lies with the FTA of the U. S. Department of Transportation. The authorized programs offer Federal funds to eligible local recipients to assist in carrying out transit projects.<sup>3</sup>

#### **Section 5309 Capital Program**

Discretionary capital grants are authorized under the Section 5309 Capital Program, formerly the Section 3 program. These grants can fund up to 80 percent of the cost of eligible projects, which include rail transit system modernization, construction and extension of new fixed-guideway systems, and bus and bus-related equipment and construction projects. The purchase of specific bus-related equipment needed to implement the requirements of the Americans with Disabilities Act (ADA) of 1990 or the Clean Air Act Amendments of 1990 are eligible for up to 90 percent Federal funding.

The Capital Program is the primary source of Federal funding in support of major capital investments in transit infrastructure, in particular rail rapid-transit facilities. Only a small portion of the total Capital Program funds authorized and appropriated nationally are typically available for use in funding bus and bus-related facilities. While the program originally provided funding for eligible projects

---

<sup>1</sup>The description of Federal Transit Administration Programs presented in this chapter excludes funds available for technical studies under the Section 5303 Metropolitan Planning Program, formerly the Section 8 Program. These funds are allocated to metropolitan areas and States for use by metropolitan planning organizations, like the Regional Planning Commission, in conducting planning studies like this study for the Kenosha area.

<sup>2</sup>An urbanized area is defined by the U. S. Bureau of the Census as having a concentrated population of at least 50,000 persons and meeting specific density criteria. Urbanized areas generally consist of a central city and the surrounding, closely settled, contiguous suburbs. The  
(continued...)

---

<sup>2</sup>(...continued)

Kenosha urbanized area as defined by the 1990 Census is shown on Map 1 in Chapter I and includes all of the City of Kenosha and portions of the Village of Pleasant Prairie and the Town of Somers.

<sup>3</sup>Authorization of Federal transit assistance programs described in this chapter extends through September 30, 1997, when the Federal ISTEA legislation of 1991 expires. The number and specific characteristics of each transit program may change under Federal authorizing legislation developed to replace ISTEA.

Table 53

**SUMMARY OF MAJOR FEDERAL AND STATE TRANSIT ASSISTANCE  
PROGRAMS APPLICABLE TO TRANSIT SERVICES IN THE KENOSHA AREA: 1997**

Sponsoring Agency	Program Name	Type of Transit Assistance	Eligible Applicants	Description of Major Program Elements
U. S. Department of Transportation, Federal Transit Administration	Section 5309 Capital Program (formerly Section 3 Program)	Capital	State or local public agencies within urbanized <sup>a</sup> or nonurbanized areas	Federal funds made available through Congressional earmarks and at the discretion of the Secretary of the U. S. Department of Transportation to cover up to 80 percent <sup>b</sup> of total costs of eligible projects, including those for construction or extension of new fixed-guideway systems, rail system modernization, and bus and bus-related equipment and construction projects
	Section 5307 Urbanized Area Formula Program (formerly Section 9 Program)	Operating/capital/planning	State or local public agencies within urbanized <sup>a</sup> areas designated as eligible recipients	<u>Operating</u> : For transit systems in small urbanized areas of Wisconsin, like the Kenosha transit system, Federal funds made available to cover up to 12 percent <sup>c</sup> of the total operating expenses of eligible transit services <u>Capital</u> : Federal funds made available to cover up to 80 percent of capital project costs <sup>b</sup> <u>Planning</u> : Federal funds made available to cover up to 80 percent of planning and engineering studies
	Section 5310 Elderly and Persons with Disabilities Program (formerly Section 16 Program)	Capital	Private, nonprofit corporations and certain local public agencies	Federal funds made available to cover 80 percent of the costs of capital equipment used in providing specialized transportation service to elderly or disabled persons
	Section 5311 Nonurbanized Area Formula Program (formerly Section 18 Program)	Operating/capital	State agencies, local public bodies, private transportation providers, and Indian reservations within nonurbanized areas	<u>Operating</u> : For transit services in the nonurbanized portions of Wisconsin, Federal funds made available to cover up to 29 percent <sup>d</sup> of the total operating expenses of eligible transit services <u>Capital</u> : Federal funds made available to cover up to 80 percent <sup>b</sup> of capital project costs
U. S. Department of Transportation, Federal Highway Administration	Surface Transportation Program (STP)	Capital	State or local public agencies within urbanized or nonurbanized areas	Federal funds made available to cover up to 80 percent of total costs of eligible capital projects including those for purchase of buses and transit equipment, programs for improved public transit and other traffic control measures identified under Clean Air Act Amendments of 1990, transit safety improvements and programs, and car and van-pool projects.
	Congestion Mitigation and Air Quality (CMAQ) Improvement Program	Capital/marketing	State or local public agencies within urbanized and nonurbanized areas in nonattainment areas for Federal air quality standards	Federal funds made available to cover up to 80 percent of total eligible costs of projects which will have a positive impact on improving air quality. Potential projects can include those for public transit, ridesharing, or vanpooling.

Table 53 (continued)

Sponsoring Agency	Program Name	Type of Transit Assistance	Eligible Applicants	Description of Major Program Elements
Wisconsin Department of Transportation, Bureau of Transit and Local Roads	Section 85.20 Urban Mass Transit Operating Assistance Program	Operating	Counties, municipalities or towns, or agencies thereof; and transit or transportation commissions or authorities	State funds made available to eligible applicants within State in urban areas having a population of 2,500 or more to cover a portion an eligible transit system's total operating expenses. The amount of State aid provided to an applicant is dependant upon the location of, the population of the urban area served by, and the amount of Federal transit operating assistance available to, each transit system and the total State funds appropriated for the program. <sup>e</sup>
	Section 85.21 Specialized Transportation Assistance Program for Counties	Operating/capital	Counties	State funds made available to counties within State on a formula basis for use for either operating or capital assistance projects to provide directly transportation for elderly or disabled persons, to aid other agencies or organizations which provide such services, or to create a user-side subsidy program for elderly or disabled persons to purchase transportation from other providers
	Section 85.22 Specialized Transportation Assistance Program for Private Nonprofit Corporations	Capital	Private, nonprofit corporations and certain local public agencies	State funds made available to cover 80 percent of the costs of capital equipment used in providing specialized transportation services to elderly or disabled persons
	Section 85.24 Transportation Demand Management Program	Operating/capital/planning	Local governments and public or private organizations	State funds made available for projects involving transportation demand management strategies in areas experiencing significant air quality or traffic congestion problems. Eligible projects can include public transit services and ridesharing or vanpooling services for more than one employer. Funds available to cover up to 80 percent of project costs.

<sup>a</sup>Urban areas with a central city of 50,000 or more population, as designated by the U. S. Bureau of the Census.

<sup>b</sup>The purchase of specific bus-related equipment needed to meet the requirements of the Americans with Disabilities Act of 1990 or the Clean Air Act Amendments of 1990 are eligible for up to 90 percent Federal funding.

<sup>c</sup>The amounts of Section 5307 operating assistance funds allocated annually to small urbanized areas in Wisconsin, like the Kenosha urbanized area, are not sufficient to fund the full 50 percent of operating deficits allowed under the program. Operating assistance is limited to the proportion of the sum of the Statewide operating expenses of participating transit systems in small urbanized areas in Wisconsin that can be covered by the total amount of operating assistance available Statewide to such areas. During 1997, the available Section 5307 operating assistance funds were sufficient to cover about 12 percent of the operating expenses of such transit systems.

<sup>d</sup>The amount of Section 5311 funds allocated annually to Wisconsin are not sufficient to cover the full 50 percent of operating deficits allowed under the Program. Operating assistance is limited to the proportion of the sum of the Statewide operating expenses of participating transit systems that can be covered by the total amount of operating assistance available Statewide under the program. During 1997, the available program funds were sufficient to cover about 29 percent of the operating expenses of participating transit systems.

<sup>e</sup>All transit systems participating in the program are grouped into five categories, or tiers, based upon the location of the transit system and the population of the urban areas served. State aids are distributed among the transit systems in each tier so that each transit system has an equal percentage of operating expenses funded by the combination of Federal and State transit operating assistance. The percentage of operating expenses covered by State aid varies among tiers, and in some cases among transit systems within each tier, is based upon the amount of Federal transit operating assistance available to the transit systems in each tier, and the appropriations of State funds to each tier specified under the State budget. During 1997, the available program funds were sufficient to cover about 42.5 percent of operating expenses in the tier which included the Kenosha transit system.

Source: SEWRPC.

Table 54

**ESTIMATED AMOUNT OF FUNDS PROVIDED THROUGH MAJOR FEDERAL AND STATE  
TRANSIT ASSISTANCE PROGRAMS TO RECIPIENTS IN THE KENOSHA AREA: 1992-1996**

Sponsoring Agency	Program Name	Recipient of Funds	Year					Average Annual
			1992	1993	1994	1995	1996	
U. S. Department of Transportation, Federal Transit Administration	Section 5309 Capital Program (formerly Section 3 Program)	City of Kenosha	\$ 422,300	--	--	\$ 492,800	\$ 938,800	\$ 370,800
	Section 5307 Urbanized Area Formula Program (formerly Section 9 Program)	City of Kenosha	\$ 549,900	\$ 540,800	\$ 581,900	\$ 468,000	\$ 495,500	\$ 527,200
	Section 5310 Elderly and Persons with Disabilities Program (formerly Section 16 Program)	Kenosha Achievement Center, Inc.	\$ 36,500	--	\$ 37,300	--	--	\$ 14,800
	Section 5311 Nonurbanized Area Formula Program (formerly Section 18 Program)	--	--	--	--	--	--	--
Federal Highway Administration	Surface Transportation Program (STP)	--	--	--	--	--	--	--
	Congestion Mitigation and Air Quality (CMAQ) Improvement Program	City of Kenosha	\$ 740,000	--	--	\$ 503,200	\$ 343,300	\$ 317,300
Wisconsin Department of Transportation, Bureau of Transit and Local Roads	Section 85.20 Urban Mass Transit Operating Assistance Program	City of Kenosha	\$ 982,500	\$1,070,700	\$1,161,200	\$1,212,700	\$1,237,100	\$1,132,800
	Section 85.21 Specialized Transportation Assistance Program for Counties	Kenosha County	\$ 111,500	\$ 117,900	\$ 120,900	\$ 123,400	\$ 136,500	\$ 122,000
	Section 85.22 Specialized Transportation Assistance Program for Private Nonprofit Corporations	--	--	--	--	--	--	--
	Section 85.24 Transportation Demand Management Program	City of Kenosha	--	--	\$ 48,900	--	--	\$ 9,800
		Kenosha Area Business Alliance	--	--	--	--	\$ 27,800	\$ 5,600
		Subtotal	--	--	\$ 48,900	--	\$ 27,800	\$ 15,400
Total	--	--	\$2,842,700	\$1,729,400	\$1,950,200	\$2,800,100	\$3,179,000	\$2,500,300

Source: Wisconsin Department of Transportation, City of Kenosha Department of Transportation, and SEWRPC.

at the discretion of the Secretary of the U.S. Department of Transportation, about 90 percent of the available funds have been distributed in the recent past on the basis of Congressional earmarks set forth in Federal appropriations legislation. Accordingly, demand is high for the limited

funding which is still distributed on a discretionary basis. Applicants who propose a local matching share significantly greater than the 20 percent required under the program may improve the probability of receiving a Capital Program discretionary grant.

Capital Program grants are available to public agencies which operate transit systems in both urbanized and nonurbanized areas. Applicants for Capital Program funds may also include States applying on behalf of local public agencies. The Wisconsin Department of Transportation has obtained Capital Program grants on behalf of transit operators in the State, including the City of Kenosha.

### ***Section 5307 Urbanized Area Formula Program***

Section 5307 of the United States Code, formerly Section 9 of the Act, provides for a formula block grant program which makes Federal assistance available to designated transit agencies within urbanized areas. These funds can be used for planning and engineering studies, capital improvements, and operations. The funds are distributed among the Nation's urbanized areas on the basis of a statutory formula. For urbanized areas with a population of 200,000 persons or less, such as the Kenosha urbanized area, the funds are apportioned on the basis of population and population density. For urbanized areas with a population of over 200,000 persons, such as the Milwaukee and Madison urbanized areas, formula funds are apportioned on the basis of population and population density; fixed guideway, busway or rail, route-miles; bus and guideway revenue vehicle-miles; and transit system efficiency as measured by passenger miles of travel and operating expenses.

The annual allocation of Formula Program funds made to each urbanized area specifies the maximum amount of funds which may be used for transit operating subsidies, with the remaining funds available for planning and capital assistance projects. The funds allocated to each urbanized area remain available for up to three years past the year for which the allocation was made, a total of four years. Any funds remaining unobligated after four years are reapportioned Nationwide by the FTA.

The Urbanized Area Formula Program is the primary source of Federal funds for routine bus and rail transit facility replacements, equipment purchases, new facility construction, and system rehabilitation. The Federal share for planning and capital projects may not exceed 80 percent of the eligible project costs, again except for specific bus-related equipment needed to implement the requirements of the ADA of 1990 or the Clean Air Act Amendments of 1990 which are eligible for up to 90 percent Federal funding. The formula program is also the principal source of Federal funds for transit operating assistance for urbanized area transit systems, with the maximum Federal share for operating assistance equal to 50 percent of transit system operating deficits.

A recent change to the Program, made effective in 1996, allows the purchase of certain spare parts, which previously were considered as operating expenses, as associated capital maintenance items and, consequently, eligible for Federal capital assistance. Such items are limited to any equipment, tires, tubes, and materials for transit vehicles which cost at least 0.5 percent of the current value of the vehicle in which the item is to be used. The FTA also permits grant recipients the option of using Urbanized Area Formula Program capital assistance, rather than operating assistance, to fund the costs of privately owned capital components of transit services obtained through competitive procurement actions. Eligible capital components are limited to items used in the operation of the contracted transit services. Under this policy, which has been in effect since 1987, the total eligible capital costs are limited to the actual depreciation of the capital items or to a fixed percentage of the total contract costs, whichever is lower. The FTA has prescribed fixed percentage caps for four different categories of service.<sup>4</sup> Within the Southeastern Wisconsin Region, Waukesha County currently uses Urbanized Area Formula Program capital assistance in the above described manner to augment the limited amount of operating assistance it is allocated annually.

Section 5307 Program funds for urbanized areas with a population of 200,000 or more are allocated directly to the urbanized area, while funds for small urbanized areas of less than 200,000 population are allocated to the governor of each state on behalf of each urbanized area. In Wisconsin, Governor Thompson has delegated his responsibility for designating the eligible recipients of Section 5307 funds to the Secretary of the Wisconsin Department of Transportation, who, in turn, has delegated this recipient status annually to the individual communities operating publicly owned transit systems in the small urbanized areas of Wisconsin, including the City of Kenosha.

The Wisconsin Department of Transportation currently distributes the operating assistance funds available under the Section 5307 Program among the Statewide applicants in small urbanized areas to cover a percentage of transit system operating expenses. Because the limited amounts of capital assistance available to participating Wisconsin

---

<sup>4</sup>The fixed percentage caps are as follows: 1) 20 percent of total contract costs for elderly and disabled paratransit and noncommuter paratransit services, 2) 25 percent of total contract costs for regular bus service, 3) 35 percent of total contract costs for such commuter services as express bus services, and 4) 25 percent of total contract costs for vehicle maintenance services.



systems has not been sufficient to meet all of the potential needs, the State has applied for, and received, funds under the Section 5309 Capital Program for capital projects which could not be funded through the Urbanized Area Formula Program<sup>5</sup>

Because the funds allocated under the Section 5307 program to the small urbanized areas in Wisconsin have been insufficient to fund fully 50 percent of transit system operating deficits of the transit systems participating in the program, the Wisconsin Department of Transportation has distributed the operating assistance funds available in small urbanized areas among Statewide applicants to cover a lower percentage of transit system operating expenses. The percentage of operating expenses funded annually is determined on the basis of the percentage which available program funds for small urbanized areas constitutes of the Statewide sum of the operating expenses of the participating transit systems. For 1997, it is estimated that the total operating assistance funds available to the State under the Program for transit systems in small urbanized areas will be sufficient to cover an average of about 12 percent of operating expenses.

The State's 1997 allocation of Section 5307 funds for small urbanized areas totaled approximately \$7.2 million. The City of Kenosha received a total allocation of approximately \$495,500 in these Urbanized Area Formula Program funds, including about \$396,800 for use as transit operating assistance, and about \$98,700 for transit capital assistance.

#### ***Section 5310 Elderly and Persons with Disabilities Program***

Capital grants are available under the Section 5310 Elderly and Persons with Disabilities Program, formerly the Section 16 Program, to purchase vans, buses, and related equipment needed to meet the specialized transportation needs of the elderly and disabled. These funds are distributed to states in proportion to the elderly and disabled population within each state. Grants are available on an 80 percent Federal-20 percent local matching basis for capital expenditures to support the provision of coordinated specialized transportation services for elderly and disabled persons. This program was established to fill service gaps in areas where transit services for the general

public do not operate or do not provide adequate transportation services for the elderly and disabled.

Eligible applicants for these funds principally are private, nonprofit organizations which provide transportation services specifically designed to meet the needs of elderly and disabled persons. A local public body may apply for these funds under the following two conditions: 1) if it has been approved by the State as a coordinator of human services activities in a particular area, such as an agency on aging or a transit service provider which the State has identified as the lead agency to coordinate transportation service funded by multiple Federal or State human services programs and 2) if the public body certifies to the Governor that no nonprofit agencies or organizations are readily available to provide service in an area. Public bodies may also contract for services from agencies which have received funds under the Program. Private for-profit organizations are also not eligible to receive funds under the Program, but may lease equipment purchased with Program funds from nonprofit organizations.

The Wisconsin Department of Transportation administers the Elderly and Persons with Disabilities Program in Wisconsin. Grants are awarded on a Statewide competitive basis. The total allocation of such funds to Wisconsin amounted to about \$1.1 million in 1997. Within the study area, the Kenosha Achievement Center, Inc., has been the recipient of several grants under the Program, with the most recent grant awarded in 1994.

#### ***Section 5311 Nonurbanized Area Formula Program***

Section 5311 of the United States Code, formerly Section 18 of the Act, authorizes a formula block grant program which makes available Federal assistance for transit services serving the nonurbanized areas of each state. Funds are apportioned to each state based on nonurbanized area population. Within Wisconsin, the Department of Transportation administers the Nonurbanized Area Formula Program and uses its annual Statewide apportionment to support operating and capital improvement projects for transit systems serving local communities, for the provision of intercity transit services, and to support Departmental costs for administration of the program and technical assistance for rural transit projects.

Applicants eligible for Nonurbanized Area Formula Program funds include counties, cities, villages, and towns; and Federally recognized Indian tribal governing bodies. Public transit projects eligible for Nonurbanized Formula funds must be available to the general public and provide service in a nonurbanized area. Coordinated human service transportation which primarily serves elderly and disabled individuals, but which is not restricted from carrying other

---

<sup>5</sup>The Section 5307 Program allows for a maximum of 50 percent of operating deficits to be funded. However, the funds currently allocated under the program to small urbanized areas in Wisconsin are insufficient to fund transit systems at this level.

members of the general public, is considered available to the general public if it is marketed as public transit service. Eligible services could include those intended to transport residents from rural areas to an urban community with a population of less than 50,000 persons or to an urbanized area as defined by the U. S. Bureau of the Census, services intended to transport passengers within a rural area or within an urban community having a population of less than 50,000 persons, and services intended to transport passengers between urbanized areas not in close proximity which serve at least one stop outside an urbanized area. The Program could fund transit services provided entirely within the rural portions of the study area or to transport rural residents of the study area to and from the Kenosha urbanized area. Services intended principally to transport urbanized area residents to locations outside the urbanized area, such as from the City of Kenosha to major employment centers outside the Kenosha urbanized area in the Village of Pleasant Prairie, are not eligible for these funds.

The Federal share of eligible capital projects<sup>6</sup> under the Program may not exceed 80 percent of total eligible costs, except for specific bus-related equipment needed to implement the requirements of the Federal ADA of 1990 or the Federal Clean Air Act Amendments of 1990, which are eligible for up to 90 percent Federal funding. The maximum Federal share for operating assistance under the program is 50 percent of a transit system's operating deficit. Because the funds allocated to the State under the program in the recent past have been insufficient to fully fund participating systems at this level, the State has distributed the available operating assistance funds among applicants at a lower percentage of the operating expenses. The percent of operating expenses funded annually is determined on the basis of the percentage which the available program funds constitutes of the Statewide sum of the operating expenses of the participating transit systems. For 1997, it is estimated that the total operating assistance funds available to the State under the program will be sufficient to cover up to about 29 percent of operating expenses.

---

<sup>6</sup>Capital projects are considered for funding by the Wisconsin Department of Transportation in the following order of priority: 1) Projects to replace vehicles operated by existing systems, 2) projects to initiate a transit service, 3) projects to replace maintenance and storage facilities of existing systems, 4) projects to expand the number of vehicles operated by existing systems, 5) projects to expand and rehabilitate maintenance and storage facilities of existing systems, and 6) projects to purchase and install such passenger amenities as shelters and bus stop signs for existing systems.

The State's total 1997 allocation of funds under the Non-urbanized Area Formula Program amounted to approximately \$3.1 million. While these funds are not currently being used in the study area or Kenosha County, they are used by several communities in the nonurbanized portions of the Region to support the operating and capital expenses of publicly subsidized shared-ride taxicab systems.

### **Funding Opportunities for Transit under Other Federal Transportation Programs**

The ISTEA created other opportunities for Federal funding of transit services. The new programs authorized under the ISTEA which should be viewed as potential sources of Federal funds for transit projects within the study area include the Surface Transportation Program (STP) and the Congestion Mitigation and Air Quality Improvement Program (CMAQ). Both of these programs are administered by the Federal Highway Administration (FHWA) through the Wisconsin Department of Transportation.

The Statewide Multimodal Improvement Program (SMIP) provides funding to both urbanized areas, including the Kenosha urbanized area, and nonurbanized areas for a broad range of highway and transit capital projects. The funds distributed by the State under the Program include those authorized under the STP-discretionary, created under the ISTEA. All capital projects which might otherwise be eligible for funding under current FTA grant programs are potentially eligible for STP funds. Possible transit and transit-related projects eligible for funding would include: purchases of rolling stock and other transit equipment; construction, rehabilitation, and/or improvement of fixed-rail systems and other transit facilities; programs for improved public transit and other transportation control measures defined under the Clean Air Act Amendments of 1990; transit and transit-related planning, research, and development activities; transit safety improvements and programs; and carpool and vanpool projects. Projects are selected on a competitive basis by the Department of Transportation with no predetermined funding level for any particular geographic area. Because of budgetary constraints, no funding is available for new SMIP projects until at least the 1998-1999 State budget cycle.

The CMAQ Program provides Federal funding for projects aimed at reducing congestion and improving air quality in areas identified as not meeting the ozone and carbon monoxide emission standards set forth in the Federal Clean Air Act Amendments of 1990. Because Kenosha County has been identified as part of the six-county Milwaukee severe air quality nonattainment area for ozone, transit projects proposed within the primary study area may qualify for CMAQ funds. Eligible projects would include

transit or transit-related projects or programs directed at reducing single-occupant automobile travel, thereby assisting in improving air quality, and the development of new traffic demand management programs such as carpool and vanpool matching and marketing services, along with transit marketing services. Since 1992, the City of Kenosha has been awarded several grants for capital projects from this program, including the purchase of new compressed natural gas buses, the expansion of bus service during weekday peak periods, and transit marketing activities as part of a regional transit marketing program.

Federal funds made available for transit projects under both of the above programs are transferred for administrative purposes from the FHWA to the FTA Section 5307 Urbanized Area Formula Program or Section 5311 Nonurbanized Area Formula Program, as appropriate for the area being served by the project. The funds, therefore, become subject to the application requirements and administrative regulations applicable to all FTA programs. Federal funds made available under these programs can cover up to 80 percent of the eligible transit project costs.

### **Federal Administrative Regulations**

The availability of Federal funds is restricted by administrative regulations. Below are key regulations relevant to the use of Federal urban transit assistance funds in the primary study area:

#### **1. Public Hearing Requirements**

All applicants for FTA capital assistance funds available under the Section 5307, 5309, and 5311 Programs and applicants for FTA operating assistance funds who are first-time applicants or who are proposing significant changes in transit service levels must hold a public hearing on the proposed project. This hearing is to be held to give parties with significant social, economic, or environmental interests an adequate opportunity to present their views on the project publicly.

#### **2. Local Share Requirements**

When Federal funds provide a portion of the cost of a project, the remaining portion must come from sources other than Federal funds, with the exception of funds from Federal programs other than FTA monies from eligible as local-share funds. Thus, funds received by transit operators pursuant to service agreements with State or local social service agencies or a private social service organization may be considered, even though the original source of such funds may have been another Federal program.

#### **3. Civil Rights Requirements**

All applicants for Federal funds must certify that they will not discriminate on the grounds of race, color, or national origin in the provision of the public transit services for which Federal funding will be used, pursuant to the provisions of Title VI of the Civil Rights Act of 1964.

#### **4. ADA Requirements**

All transit operators must comply with current FTA regulations issued to implement the requirements of the ADA of 1990. These requirements are briefly summarized as follows:

- a. For operators of fixed-route bus services, the regulations require that all new vehicles purchased or leased for the transit system on or after August 25, 1990, must be accessible to disabled individuals using wheelchairs. Transit operators acquiring used vehicles on or after the above date must make demonstrable efforts to acquire accessible used equipment. Vehicles which will be rehabilitated or reconstructed after the above date must, to the maximum extent practical, be made accessible to disabled individuals using wheelchairs. In addition, the regulations require the provision of complementary paratransit services for disabled individuals unable to use the accessible vehicles operated in regular, noncommuter, fixed-route transit service.
- b. For transit systems providing demand-responsive service, the vehicles purchased or leased for use on the system on or after August 25, 1990, must be accessible to wheelchair-bound individuals unless the system, when viewed in its entirety, provides a level of service to individuals with disabilities which is equivalent to the service which it provides to individuals without disabilities. A demand-responsive system would be deemed to provide equivalent service if the service available to individuals with disabilities is provided in the most integrated setting feasible and is equivalent to the service provided to other individuals with respect to the following service characteristics: 1) response time, 2) fares, 3) geographic area of service, 4) hours and days of service, 5) restrictions based on trip purpose, 6) availability of information and reservations, and 7) any constraints on capacity or service availability.

Waivers from the above requirements may be considered by the FTA. Any waiver granted, however, would be temporary and pertain to a particular transit vehicle procurement, lease, or service contract. The regulations also indicate that private transit operators contracting with a public body to provide a specific transit service would be required to meet the same requirements imposed upon the public body under the regulation.

5. Requirements for Drug and Alcohol Testing

All transit operators must comply with current FTA regulations concerning drug and alcohol testing of personnel involved in the provision of public transit services. The regulations require employees in what are considered safety-sensitive positions to undergo tests for various drugs and alcohol use. Safety-sensitive employees would include those who operate the revenue and nonrevenue service equipment involved in the provision of public transit service, those who control the dispatch or movement of revenue service vehicles, those who are responsible for maintaining revenue service vehicles and equipment, and those who are armed security personnel. Transit systems are required to establish a program of tests for covered employees which would include tests before employment; random tests, tests administered when there is reasonable suspicion that the employee has used prohibited drugs or misused alcohol; post-accident tests performed after an accident involving the employee has occurred; return to duty tests performed before a covered employee who has tested positive, or has refused to be tested, can return to his or her job; and follow-up tests administered after an employee who has previously tested positive has been allowed to return to duty. Employees who are either directly employed by the transit operator or by a contractor are subject to the drug and alcohol testing requirements, except for contract maintenance personnel in transit systems funded with Section 5311 assistance.

6. "Buy America" Requirements

Public transit programs and activities receiving Federal financial assistance must comply with Part 661 of Title 49 of the Code of Federal Regulations, which mandates a preference for the purchase of domestic articles, materials, and supplies, whether manufactured or unmanufactured. These requirements, known as "Buy America," establish that no Federal funds may be obligated for public transit projects unless the steel and other manufactured products are produced in the United States, apply

ing to purchases or projects of \$100,000 or more. Rolling stock is required to have 60 percent domestic content and be assembled in the United States to qualify as being made in America. Components of products other than rolling stock must be 100 percent American made. Waivers are available which allow the purchase of foreign-made items under certain circumstances, such as when the purchase of items are in the public interest, when items are not produced in the United States in sufficient quantity or of satisfactory quality, or when the purchase of domestic manufactured items other than rolling stock will increase the cost of the purchase by more than 25 percent.

7. General Procurement Requirements

All contracts executed with Federal funds are subject to the requirements of fundamental procurement principles and applicable laws and regulations. Grant recipients are responsible for ensuring full and open competition and equitable treatment of all potential sources when purchasing operating equipment or contracting for transit services. All grantees are required to follow procedures for procuring goods and services which comply with Federal procurement guidelines. Notably, this policy has important implications for recipients of FTA funds which contract with a transit operator for the provision of eligible public transit service rather than providing the service directly. With few exceptions, such applicants are required to follow a competitive bidding process in selecting the contract service provider.

8. Charter Service Requirements

The applicant must certify that it will comply with current FTA regulations pertaining to the provision of charter service by Federally funded public transit operators. If an applicant desires to provide charter service using Federally funded equipment or facilities, the applicant must first determine if there are private charter operators willing and able to provide the charter service the applicant desires to provide. To the extent that there is at least one such private operator, the applicant is prohibited from providing charter service using FTA-funded equipment or facilities. Certain exceptions to the general prohibition on providing charter service are allowed, including one for recipients in nonurbanized areas. The FTA allows recipients in nonurbanized areas to petition for an exception if the charter service which would be provided by willing and able pri-

vate charter operators would result in a hardship on the customer. Any charter service which an applicant provides under any of the above conditions must be incidental to regular transit service.

9. School Busing Requirements

No Federal assistance may be provided for the purchase or operation of buses unless the applicant agrees not to engage in school bus operations for the exclusive transportation of students and school personnel in competition with private school bus operators. This rule does not apply, however, to "tripper" service provided for the transportation of school children along with other passengers by regularly scheduled bus service at either full or reduced rates.

10. Requirements on Employee Protection

No Federal financial assistance may be provided until fair and equitable arrangements have been made, as determined by the U. S. Secretary of Labor, to protect the interests of employees affected by such assistance pursuant to Section 5333(b) of the United States Code, formerly Section 13(c) of the Urban Mass Transportation Act of 1964, as amended. Such arrangements must include provisions protecting individual employees against a worsening of their positions with respect to their employment, collective bargaining rights, and other existing employee rights, privileges, and benefits. Recipients of Federal transit assistance are required to execute special agreements specifying such provisions either with the affected unions in the transit service area or, in the case of recipients of funds under the Section 5311 Nonurbanized Area Formula Program, with the Wisconsin Department of Transportation.

11. Requirements on Disadvantaged Business Enterprises

No Federal assistance may be provided until all eligible disadvantaged business enterprises (DBEs) have been afforded the opportunity to participate fairly and equitably in any proposed public transit project. The applicant must provide assurance of its adherence to meeting specified goals concerning what proportion of work available to outside contractors has been awarded to DBE contractors.

12. Requirements on Equipment Ownership

Recipients of Federal capital assistance must assure that the capital equipment and facilities acquired with Federal funds will be owned by a public body and used in a manner consistent with the public

transit service for which it was acquired during the useful life of the capital equipment or facilities. In the event that such equipment or a facility is sold or otherwise devoted to another use during its useful life, the recipient may be required to refund a proportionate share of the Federal funds based on the value of the equipment or facilities at the time of sale.

13. Requirements on Employment Nondiscrimination

Recipients of Federal funds must agree that, as a condition of receiving Federal financial assistance, they will not discriminate against any employee or applicant for employment because of race, color, religion, sex, national origin, or disability and that they shall take affirmative action to ensure that applicants are employed and that employees are treated without regard to their race, color, religion, sex, national origin, or disability during the employment tenure.

## STATE FUNDING PROGRAMS AND AUTHORIZING LEGISLATION

Financial assistance provided by the State for urban transit includes indirect aid, principally in the form of tax relief, and direct aid in the form of operating subsidies and planning grants, principally through several programs administered by the Wisconsin Department of Transportation. The State of Wisconsin currently has no legislation which authorizes a program to provide capital assistance to public transit systems.

### Indirect Aid, Tax Relief

Indirect aid to urban public transit systems in Wisconsin began in 1955, when ridership on, and the profitability of, privately operated transit service was declining, and tax incentives to encourage private transit companies to reinvest profits in new capital facilities and stock were first enacted. The Wisconsin Statutes currently in effect which give urban transit systems tax relief are as follows:

1. Section 71.39 of the Wisconsin Statutes, which provides a special method which can be used by privately owned urban transit organizations to calculate State income tax liability in such a way as to encourage reinvestment of profits in new capital facilities and stock.
2. Section 76.54 prohibits cities, villages, and towns from imposing a license tax on vehicles owned by private urban transit companies.



3. Section 77.54(5) excludes buses, spare parts and accessories, and other supplies and materials sold to common carriers for use in providing urban transit services from the general sales tax imposed on goods and services.
4. Section 78.01(2)(d) excludes vehicles engaged in urban public transit service from the fuel tax imposed upon motor fuel, such as diesel fuel, specifically used in transit vehicle operation.
5. Section 78.40(2)(c) excludes vehicles engaged in urban public transit service from the fuel tax imposed upon special fuel, such as propane gas, specifically used in transit vehicle operation.
6. Section 78.75(1)(a) allows taxi companies to obtain rebates of the tax paid on motor fuel or special fuel on over 100 gallons per year.
7. Section 341.26(2)(h) requires that each vehicle engaged in urban public transit service be charged an annual registration fee of \$1.00 unless a municipal license has been obtained for the vehicle.

### **Section 85.20 Urban Mass Transit Operating Assistance Program**

Financial aid in the form of transit operating assistance is currently available under the Wisconsin Urban Mass Transit Operating Assistance Program. The Program was established in 1973, when \$5.0 million in general-purpose revenue funds for transit operating assistance was appropriated during the 1973-1975 biennium. The Program has been funded at increasing levels in every subsequent budget biennium, most recently totaling \$147.13 million for the 1995-1997 biennium. The program is authorized under Section 85.20 of the Wisconsin Statutes and is currently funded by the Wisconsin Transportation Fund, a multi-purpose special revenue fund created to fund transportation-related facilities and modes, with revenues derived from transportation users primarily through taxes on motor fuels and vehicle registration fees.

Under the Program, local public bodies in an urban area which directly operate, or contract for the operation of, a public transit system are eligible for State aid from the Wisconsin Department of Transportation as partial reimbursement for the total annual operating expenses of the transit system. "Local public bodies" are defined as counties, cities, villages, or towns, or agencies thereof; transit or transportation commissions or authorities and public corporations established by law or by interstate compact to provide public transit services and facilities; or two or more such bodies acting jointly. An "urban area"

is defined as any area which includes a city, village, or town having a population of 2,500 or more which is appropriate, in the judgment of the Department of Transportation, for service by a public transit system. Eligible transit systems under the program include those serving the general public with fixed-route bus or rail transit service, with shared-ride taxicab service, or some other public transit or paratransit service. Transit systems may directly operate, or contract for the operation of, a subsystem to provide paratransit services to elderly and disabled persons.

Between 1982 and 1995, State aids were distributed under the program to cover a fixed percentage of an eligible transit system's total operating expenses, not to exceed the audited nonFederal share of the operating deficit, with the percentage specified in the authorizing State Statute. State aids covered 42 percent of operating expenses during 1995. As a consequence of provisions of the 1995 State Budget Act, the fixed percentage of operating expenses was eliminated from the authorizing Statute and the method for distributing State aids under the Program was revised. Beginning in 1996, all transit systems participating in the Program are grouped into five categories, or tiers, based upon the location of the transit system and the population of the urban area served. State aids are distributed among the transit systems in each tier so that each transit system has an equal percentage of operating expenses funded by the combination of Federal and State transit operating assistance. The percent of operating expenses covered by State aid varies among tiers, and in some cases among transit systems within each tier, based upon the amount of Federal transit operating assistance available to each transit system in each tier, and the appropriations of State funds to each tier specified under the State budget. The funding tiers and the estimated proportions of operating expenses funded with Federal and State transit operating assistance under each tier during 1997 are identified in Table 55. Eligible public transit services provided within the Kenosha urbanized area would qualify for State aids under Tier IV.

Eligible transit operating expenses can include the costs of user-side subsidies<sup>7</sup> provided by eligible transit systems to disabled persons and to the general public in urban areas served exclusively by shared-ride taxi systems. Eligible expenses can also include profit and return on investment

<sup>7</sup>User-side subsidy is defined as financial assistance which is provided directly to a transit user, usually in the form of a voucher from a local public body or sponsoring agency, for use in payment of a fare for a trip taken on a public transit system or specialized transit service.

Table 55

**ESTIMATED PERCENTAGE OF TRANSIT OPERATING EXPENSES FUNDED BY STATE AIDS UNDER  
THE SECTION 86.20 URBAN MASS TRANSPORTATION OPERATING ASSISTANCE PROGRAM: 1997**

Funding Tier	Transit Systems <sup>b</sup> Included under Funding Tier	Average Percent <sup>a</sup> of Operating Expenses Covered by:	
		State Transit Operating Assistance	Total Federal and State Operating Assistance
I	Milwaukee County Transit System	45.7	48.1
II	Madison METRO Transit System	44.1	45.9
III	Transit systems in urbanized areas of the State over 200,000 in population which are not included in Tiers I and II	43.2	46.8
IV	Transit systems in urbanized areas of State between 50,000 and 200,000 in population <sup>c</sup>	42.3	54.5
V	Transit systems in nonurbanized areas of State under 50,000 in population	37.2	66.2

<sup>a</sup>The figures shown represent averages for all the transit systems included under each tier. Figures for the individual transit systems or subsystems within each tier may be higher or lower.

<sup>b</sup>Includes paratransit services for disabled persons provided by each transit system to meet Federal ADA requirements.

<sup>c</sup>The Kenosha transit system falls into this funding tier.

Source: Wisconsin Department of Transportation and SEWRPC.

charged by private operators, provided the service contract was awarded using a competitive procurement process approved by the Department of Transportation. Applicants providing fixed-route transit service are required to provide a local match equal to 20 percent of the State aid received as a condition for receiving State funds under the program. No local matching funds are required for applicants providing shared-ride taxicab services. Funds from Federal and State sources, farebox revenues, and in-kind services cannot be used as local matching funds. In 1997 the City of Kenosha received about \$1.4 million in State transit operating assistance to support the operation of the Kenosha transit system.

Like the Federal funds described previously in this chapter, the availability of State urban mass transit operating assistance funds is restricted by administrative regulations. The most important of these restrictions are as follows:

1. Referendum Requirement

No applicant will be eligible for State aid under the program to support the operation of a fixed-route

transit system unless operation or subsidizing the system is approved by action of the governing body and by referendum vote of its electorate. Such approval is not required, however, for shared-ride taxicab service systems.

2. Passenger Service Focus Requirement

The operating assistance project must be for passenger transportation service, with at least two-thirds of the service, measured in terms of vehicle-miles, provided within the boundaries of an appropriate urban area as defined by the Department of Transportation. Package delivery service is also allowed provided it is incidental to the provision of passenger transportation service.

3. General Public Service Requirement

The public transit service must be provided on a regular and continuing basis and must be open to the general public. Service provided exclusively for a particular subgroup of the general public, such as the elderly, disabled, or school children, is not eligible.

4. Fare Requirements

Fares must be collected for the transportation service in accordance with established fare tariffs. Fixed-route transit systems are also required to provide a reduced-fare program for elderly and disabled persons during nonpeak hours of operation, with such reduced fares not to exceed one-half of the adult cash fare. Shared-ride taxicab systems are not required to provide such reduced fares.

5. Private Contracting Limitations

Contracts for transit service awarded to a private transit operator following a competitive bid process may not exceed a five-year term. Negotiated contracts with private transit operators are limited to one year.

6. Duration of State Funding Commitment

Commitments of State funds for operating assistance contracts are based on projections of operating revenues and operating expenses for a calendar-year contract period. Contracts between the Wisconsin Department of Transportation and recipients of State aids may not exceed one year's duration.

7. Management Planning Requirement

Transit systems are required to prepare a "transit management plan" describing how the transit system will be operated for the contract year, the amount of service which will be provided, the fares to be charged, steps to be taken to make the system operate more efficiently and effectively, and the procedures to be used for counting passenger trips on the transit system. Projections of operating revenues and expenses must be based upon the approved one-year management plan governing the operation of the participating transit system during the contract period.

8. Financial Auditing Requirements

Each participating transit system, except privately owned systems with which a local public body contracts for services on the basis of competitive bids, must allow the Department of Transportation to audit their financial records in order for the Department to determine the actual operating expenses and revenues, and the amount of State aid to which the transit system is entitled during the contract period. For privately owned systems, the Department will conduct audits to determine compliance with service contracts, but not financial audits of the private provider's business records.

9. Program of Projects Requirement

Recipients must annually submit to the Department of Transportation a four-year program of transit projects directed toward maintaining or improving the transit service provided by the system. The four-year program must include descriptions of any proposed changes in service levels or fares; capital project needs; and projections of ridership, the amount of service provided, operating expenses and revenues, and the public funding requirement.

10. System Performance Goals Requirement

Each recipient must annually establish service performance goals for a four-year period and assess the effectiveness of its transit system in relation to those goals. At a minimum, systemwide goals must be established for the following: operating expenses per total vehicle mile, operating expenses per revenue passenger, operating expenses per platform vehicle-hour, the proportion of operating expenses recovered through operating revenues, revenue passengers per revenue vehicle-mile, and revenue passengers per service area population.

11. Management Audit Requirement

All transit systems participating in the program must submit to a management performance audit conducted by the Department of Transportation at least once every five years.

## **Section 85.24 Transportation**

### **Demand Management Program**

A State Transportation Demand Management Grant Program was created in 1991. Authorized under Section 85.24 of the State Statutes, the program is intended to encourage public and private organizations to develop and implement transportation demand management programs and approaches. Such programs and approaches would be aimed at reducing traffic congestion, promoting the conservation of energy, improving air quality, and enhancing the efficient use of existing transportation systems. The primary purpose of such actions would be to enhance the movement of people and goods, not vehicles. A total of \$600,000 was appropriated from the State Transportation Fund for the program during the 1995-1997 budget biennium.

Applicants eligible for funds under the Program include local governments and public and private organizations. Eligible projects include those involving transportation demand management strategies or approaches which will be undertaken in areas of Wisconsin experiencing sig-

nificant air quality or traffic congestion problems. Projects which promote alternatives to automobile travel and encourage the use of high efficiency modes of travel, such as public transit, vanpooling and ridesharing programs serving more than one employer, fall within the type of projects which could be considered for funding under this program. Notably, an important eligibility criterion is that the proposed project would be unlikely to occur without grant funding. State funds are available under the program to cover up to 80 percent of the project costs. The minimum 20 percent applicant matching share may include any combination of Federal, local, or private funding. To be considered for funding, a written endorsement of the project is required from all organizations or governing bodies which will be participating in the project. In addition, evidence must be provided that the transportation demand management strategy or initiative would be scheduled to begin within six months of the date of grant approval. Reasonable assurance is also required that the project, if it is a demonstration, is likely to be continued following the grant period.

#### **Section 85.21 Specialized Transportation Program for Counties**

Section 85.21 of the Wisconsin Statutes authorizes the provision of financial assistance to counties for specialized transportation programs serving elderly and disabled persons who would not otherwise have an available or accessible method of transport. Funds for the program are derived from the State Transportation Fund. A proportionate share of funds under this State program is allocated to each county in Wisconsin on the basis of the estimated percentage of the total Statewide elderly and disabled population residing in the county. In general, counties may use these funds for either operating assistance or capital projects to directly provide transportation services for the elderly and disabled, to aid other agencies or organizations which provide such services, or to create a user-side subsidy program through which the elderly and the disabled may purchase transportation services from existing providers at reduced rates. Counties must provide a local match equal to 20 percent of their allocation. In addition, a county may hold its allocated aid in trust for the future acquisition or maintenance of transportation equipment.

Transportation services supported by funds available under this program may, at the direction of the county, carry members of the general public on a space-available basis, provided that priority is given to serving elderly and disabled patrons. In addition, Section 85.21 requires that a copayment, which can be a voluntary donation, be

collected from users of the specialized transportation service, and that a means for giving priority to medical, nutritional, and work-related trips be adopted if the transportation service is unable to satisfy all of the demands placed on it.

Funding for this program during the 1995-1997 biennium was established at \$11.5 million by the 1995 State Budget Act. Kenosha County currently participates in this program to help support the countywide paratransit service programs administered by the Kenosha County Department of Human Services, Division of Aging Services, which provides door-to-door, specialized transportation service to elderly and disabled residents of Kenosha County. These programs include the Care-A-Van program, which provides the Federally-required paratransit service for disabled persons unable to use the City of Kenosha's fixed-route bus system and is also supported by the City and a volunteer escort program for frail elderly individuals. The 1997 budget for the County's paratransit programs included approximately \$136,200 allocated to Kenosha County under this State program.

#### **Section 85.22 Specialized Transportation Assistance Program for Private Non-Profit Corporations**

Section 85.22 of the Wisconsin Statutes authorizes the provision of financial assistance for the purchase of capital equipment to private, nonprofit organizations which provide paratransit services to the elderly and disabled. This program represents the State counterpart to the previously referenced Federal Section 5310 Program for elderly and disabled persons. The State aids available under this program are distributed to applicants in the State on an 80 percent combined State-Federal and 20 percent local matching basis. The program is administered jointly with the Federal Section 5310 Program by the Wisconsin Department of Transportation. In all cases, the applicant is responsible for providing the 20 percent local share of capital project costs. A total of \$1.42 million from the State Transportation Fund was appropriated for the Program during the 1995-1997 biennium by the 1995 State Budget Act.

### **STATE ENABLING LEGISLATION**

In addition to providing financial assistance to public transit systems in the State, the Wisconsin Statutes enable counties and municipalities to operate public transit systems. The more important State legislation which defines local governmental powers which can be used to oversee the operation of a public transit system is outlined in the following sections.

### **County Contract with Private Transit System Operators**

Sections 59.968(1) through 59.968(3) of the Wisconsin Statutes permit a county to assist private urban public transit companies operating principally within the county financially by the following means: 1) direct subsidies, 2) purchasing of buses and leasing them back to the private company, and 3) acting as the agent for the private operator in filing applications for Federal aid.

### **County Ownership and Operation of Transit Systems**

Sections 59.968(4) through 59.968(8), 59.969, and 63.03(2)(x) of the Wisconsin Statutes permit a county to acquire a transportation system by purchase, condemnation, or other means and to provide funds for the operation and maintenance of such systems. The term "transportation system" is defined as all land, shops, structures, equipment, property, franchises, and rights of whatever nature for the transportation of passengers. The acquisition of the system must be approved by a two-thirds vote of a county board. The county has the right to operate into contiguous or "cornering" counties. However, where operation into other counties would be competitive with the urban or suburban operations of other existing common carriers of passengers, the county must coordinate the operations with such other carriers to eliminate adverse financial impacts on those carriers. Such coordination may include, but is not limited to, route overlapping, transfers, transfer points, schedule coordinations, joint use of facilities, lease of route service, and acquisition of route and corollary equipment. The law permits a county to use any street for transit operations without obtaining a license or permit from the local municipality concerned. The law requires the county to assume all the employer obligations under any contract between the employees and management of the system and to negotiate an agreement protecting the interest of employees affected by the acquisition, construction, control, or operation of the transit system. This provision for the protection of labor is similar to Section 13(c) of the Federal Urban Mass Transportation Act of 1964, as amended.

### **County Transit Commission**

Section 59.967 of the Wisconsin Statutes provides for the creation of county transit commissions, authorized to operate a transportation system to be used for the transportation of persons or freight. A county transit commission is to be composed of not fewer than seven members appointed by the county board. A county transit commission is permitted to extend its transit system into adjacent territory within 30 miles of the county boundary. Counties may also establish, by contract, a joint municipi-

pal transit commission in cooperation with any city, village, or town. County ownership and operation of the transit system is subject to the requirements for municipal operation of transit systems discussed in a following section.

### **Municipal Contract with Private Transit System Operator**

Section 66.064 of the Wisconsin Statutes permits a city, village, or town served by a privately owned urban public transit system to contract with the private owners for the leasing, public operation, joint operation, subsidization, or extension of service of the system.

### **Municipal Operation of Transit System**

Section 66.065(5) of the Wisconsin Statutes provides that any city, village, or town may, by action of its governing body and upon a favorable referendum vote, own, operate, or engage in an urban public transit system. This Statute permits a city or village to establish a separate department to undertake transit operation under municipal ownership or to expand an existing city department to accommodate the responsibility of municipal transit operation.

### **City, Village, or Town Transit Commission**

Section 66.943 of the Wisconsin Statutes provides for the formation of a city, village, or town transit commission composed of not fewer than three members appointed by the mayor, village board, or town board chairperson and approved by the city council, village board, or town board. No member of the commission may hold any other public office. The Commission is empowered to "establish, maintain, and operate a bus system, the major portion of which is located in, or the major portion of the service is supplied to, such a city, village, or town." Ownership and operation of the transit system is subject to the requirements for municipal operation of a transit system discussed in a preceding section. The transit commission is permitted to extend the urban transit system into adjacent territory beyond the city, village, or town, but not more than 30 miles from the corporate limits of the municipality. In lieu of providing transportation services directly, the transit commission may contract with a private organization for such services.

### **City, Village, or Town Transit-Parking Commission**

Sections 66.068, 66.079, and 66.943 of the Wisconsin Statutes provide for the formation of city, village, or town transit and parking commissions. A combined transit-parking commission may be organized as a single body under this enabling legislation; not only may it have



all the powers of a city transit commission, but it may also be empowered to regulate on-street parking facilities and own and operate off-street facilities as well.

### **Municipal Transit Utility**

Sections 66.066 and 66.068 of the Wisconsin Statutes provide for the creation of a municipal transit utility. The statutes provide for the formation of a management board of three, five, or seven commissioners elected by the city council or village or town board to supervise the general operation of the utility. Ownership and operation of the transit system is subject to the requirements for municipal operation of a transit system discussed in a preceding section. In cities with populations of less than 150,000, the city council may provide for the operation of the utility by the board of public works or by another municipal officer in lieu of the above commission.

### **Cooperative Contract Commissions**

Section 66.30 of the Wisconsin Statutes provides that municipalities<sup>8</sup> may contract with each other to provide jointly any services or exercise jointly any powers which such municipalities may be authorized to provide or exercise separately. While no transportation-related cooperative contract commissions currently exist within the Region, there is potential to achieve significant economies through providing transportation services and facilities on a cooperative, areawide basis. Moreover, the nature of certain transportation problems often requires that solutions be approached on an areawide basis.

### **Metropolitan Transit Authority**

Such an authority, if created pursuant to Section 66.94 of the Wisconsin Statutes, would have the power to acquire, construct, and operate a public transportation system and would have the power of eminent domain within a district which must include a city with a population of 125,000 or more persons. Significantly, such an authority would not have any powers of taxation. It could, however, issue revenue bonds.

### **Regional Transportation Authority**

The Regional Planning Commission studied the feasibility of creating a regional transportation authority (RTA)

within Southeastern Wisconsin.<sup>9</sup> Following that study, State legislation was enacted to create an RTA encompassing all seven counties in the Region and directing that the RTA conduct its own study and recommend whether or not it should continue in existence after September 30, 1993.<sup>10</sup> Over an approximately 15-month period during 1992 and 1993, the RTA Board carried out its own study. The results of that study were set forth in a report to the Governor and the Legislature.<sup>11</sup> In that report, the RTA Board developed a proposal for a permanent authority, the essence of which consisted of the following:

1. **Geographic Scope**

The study proposed a seven-county RTA providing, however, that during the first six months of existence, a county could exercise a withdrawal option. Absent such a withdrawal, the county would be a permanent member of the RTA. Any county which withdrew in the initial six months could petition later to rejoin. The RTA Board would be permitted to impose conditions for rejoining.

2. **Board Structure**

The study proposed that the RTA be governed by an 11-member board, assuming all seven counties participated, including, on an ex-officio basis, the State Secretary of Transportation. Each participating county would have one resident representative. There would be three at-large members residing in the Region, with one of those appointed residing within the City of Milwaukee. All members would be appointed by the Governor and confirmed by State Senate. The Governor would designate the Board chair.

3. **Functions and Responsibilities**

The study proposed that the RTA be empowered as a funding and plan implementation agency. All transportation projects supported with RTA funds would have to be drawn from the adopted regional transportation system plan. The RTA would not be enabled to construct and maintain arterial highway systems; however, the RTA would be enabled to

---

<sup>9</sup>See *SEWRPC Memorandum Report No. 38, A Regional Transportation Authority Feasibility Study for Southeastern Wisconsin, November 1990.*

<sup>10</sup>See Wisconsin Statutes, Section 59.966.

<sup>11</sup>See Southeastern Wisconsin Regional Transportation authority Report to Governor Thompson and the Wisconsin Legislature, May 1993.

---

<sup>8</sup>Under this section of the Statutes, the term municipality is defined to include the State and any agency thereof, cities, villages, towns, counties, school districts, and regional planning commissions.

provide funds to county and local governments for arterial highway construction, operation, and maintenance. The RTA would also be enabled to fund county and local governments which deliver transit services as well as to directly sponsor and provide transit services on a contractual basis either with public transit agencies or with private providers. The RTA would also be empowered to assume responsibilities to provide county and local transit services where county and local governments want to transfer that function to the RTA. Finally, the RTA would be given responsibility to carry out areawide transportation demand management programs, such as carpooling and vanpooling promotional efforts.

#### 4. Revenues

The study proposed that the RTA be funded through two additional taxes levied in the Region by the RTA; a 0.4 percent general sales tax and a five-cent-per-gallon motor fuel tax. The motor fuel tax would not be levied on diesel fuel. These two taxes could be expected to raise a minimum of \$90 million annually in the Region.

#### 5. Revenue Allocation

The study proposed that the legislation guarantee that over a six-year period every county would receive a minimum of 98 percent of the revenue raised in the county. In addition, every county would be guaranteed to receive annually at least 80 percent of the revenue raised in the county.

The RTA Board delivered its study recommendations to the seven counties in the Region early in 1993. Resolutions supporting the study recommendations were defeated by the County Boards of Kenosha, Ozaukee, Racine, Walworth, Washington, and Waukesha Counties. The Milwaukee County Board approved the supporting resolution on the condition that the regional taxes envisioned be levied instead Statewide and be confined to motor fuel taxes. On the strength of these County Board actions, the RTA Board recommended to the Governor and the Legislature that the Board be disbanded and that a permanent authority not be created at that time.

#### **Contracting Requirements**

Important changes to the aforementioned Wisconsin Statutes defining municipal powers for operation of public transit systems were enacted by the State Legislature in the spring of 1994. For all of the above operational structures, with the exceptions of the municipal transit utility, the Metropolitan Transit Authority and the Regional Transportation Authority, the Wisconsin Statutes now prohibit the provi-

sion of transit service outside the corporate limits of the public entity or entities which directly provide, or contract for, transit service, unless a contract providing for financial assistance for the transit service has been executed with the public or private organization receiving transit service. This requirement applies only to new transit services which were not provided as of April 1994.

#### **Conclusions Pertaining to State Enabling Legislation**

From the information presented above, it should be apparent that there is currently no state legislation which would permit transit operators, like the City of Kenosha, to create an areawide or regional transit agency other than cooperation contract commissions. The authorizing State statute, however, does not empower such commissions to levy taxes dedicated to supporting transit operations. Under current State legislation, the only tax which local municipalities can levy for transit and other uses is a vehicle registration fee, or wheel tax, which would be added on to, and collected with, the State's vehicle registration fee.

The lack of State enabling legislation permitting local areas to establish regional transit services funded with a discrete source of revenue dedicated to transit was recognized in the Wisconsin Department of Transportation Intermodal Transportation Plan developed through the long-range Statewide transportation planning process termed TRANSLINKS 21.<sup>12</sup> The State plan proposed that the Department work with local governments and metropolitan planning organizations in the State's larger metropolitan areas to develop "metropolitan transit cooperatives" to coordinate and manage transit services which cross several jurisdictional boundaries and to assist in developing nonproperty-tax sources of local revenues dedicated to transit to ensure adequate financial support for existing and potential future transit services.

#### **LOCAL LEGISLATION**

Local legislation pertaining to bus and taxicab operations currently exists in the municipal code for the City of Kenosha. The most significant sections and their content include the following:

- Section 1.06(f)

This section establishes the Kenosha Transit and Parking Commission, defines its function and

---

<sup>12</sup>See Wisconsin Department of Transportation report, Wisconsin TRANSLINKS 21 Intermodal Transportation Plan, September, 1994.

powers, and specifies the terms and qualifications of the individuals serving as commissioners; and

- Sections 13.07 and 13.08

These sections regulate taxicab services in the City and include provisions for the licensing of each taxicab company, licensing of taxicab drivers, and regulation of the operation of taxicab services.

- Section 13.09

These sections regulate specialized transportation services for elderly and disabled persons in the City and include provisions for the licensing of each company, licensing requirements for drivers, and regulations for the operation of specialized transportation services.

## SUMMARY

This chapter has presented information about transit-related legislation and regulations, with emphasis on Federal and State financial assistance programs for transit services. It has also summarized State enabling legislation as it applies to county and local government organizational options for establishing and operating public transit systems. On the basis of this information, the following conclusions may be drawn about the provision of public transit services in the primary study area of the Kenosha transit system development plan:

1. Public transit services provided to serve travel within that portion of Kenosha County lying inside the Kenosha urbanized area, which portion consists essentially of the City of Kenosha and the eastern portions of the Village of Pleasant Prairie and the Town of Somers, are eligible for financial assistance under the Federal Section 5307 Urbanized Area Formula Program. For such services, Federal assistance could cover about 80 percent of the total costs of capital projects and up to 50 percent of operating deficits. Because the funds allocated under the Program to small urbanized areas in Wisconsin, like the Kenosha urbanized area, have been insufficient to fund the operating deficits of participating transit systems fully at the maximum allowed level, the State has distributed the available operating assistance funds to cover a lower percentage of the operating expenses. For 1997, it was estimated that the total operating assistance funds available under the Program to participating transit systems in the State's small urbanized areas will be sufficient to cover about 12 percent of operating expenses. The City of Kenosha has made use of both operating and capital assistance available under the Program

since it began public operation of the Kenosha transit system in 1975.

2. Public transit services provided to serve travel within the remaining rural portions of the primary study area or to transport rural residents to and from the Kenosha urbanized area could be eligible for financial assistance under the Federal Section 5311 Nonurbanized Area Formula Program. Like the Federal Urbanized Area Formula Program, Federal funds under the Nonurbanized Area Formula Program would potentially be available to cover about 80 percent of capital project costs and up to 50 percent of operating deficits. Because the funds allocated to the state under the program in the recent past have been insufficient to fund the operating deficits of participating transit systems at the maximum allowed level fully, the State has distributed the available operating assistance funds to cover a lower percentage of the operating expenses. For 1997, it was estimated that the total operating assistance funds available under the program to participating transit systems in the State's non-urbanized areas will be sufficient to cover up to about 29 percent of operating expenses.
3. Public transit services provided throughout the primary study area would potentially be eligible for financial assistance under the Federal Section 5309 Capital Program. For such services, Federal assistance could cover about 80 percent of the cost of capital projects. Most of the Nationwide appropriation of Capital Program funds have been distributed in the recent past on the basis of Congressional earmarks, leaving limited funding for distribution on a discretionary basis. Since 1991, the Wisconsin Department of Transportation has obtained several Capital Program grants on behalf of transit operators in the State, including the City of Kenosha.
4. Public transit services provided throughout all of the primary study area would be eligible for financial assistance through the State Section 85.20 Urban Mass Transit Operating Assistance Program. All transit systems participating in the Program are grouped into five separate categories, or tiers, based upon the location of the transit system or the population of the urban areas served. State aids are distributed among the transit systems in each tier so that each transit system has an equal percentage of its total eligible operating expenses funded by the combination of Federal and State transit operating assistance, with the percent of operating expenses covered by State aid varying among tiers. The State

operating assistance available to the City of Kenosha during 1997 covered about 42 percent of the operating expenses of the Kenosha transit system. No State program currently exists to provide assistance to public transit systems for capital projects.

5. Funds to support the operation of, and to purchase capital equipment for, transit services in the primary study area on a short-term or demonstration basis may be available through the following Federal and State programs administered by the Wisconsin Department of Transportation:
  - a. The Statewide Multimodal Improvement Program (SMIP), which provides funds for transit projects through the STP-discretionary Program created under the ISTEA. All capital projects which might otherwise be eligible for funding under other FTA grant programs are potentially eligible for STP funds.
  - b. The Federal Congestion Mitigation and Air Quality (CMAQ) Improvement Program, which provides funds to public bodies for projects aimed at reducing congestion and improving air quality in areas identified as not meeting Federal air quality standards. The City of Kenosha has used CMAQ funds in the recent past to fund expanded weekday peak-period transit, the purchase of new buses, and transit marketing activities.
  - c. The State Section 85.24 Transportation Demand Management Program, which provides funds to local governments and private organizations for projects undertaken in areas of Wisconsin experiencing significant air quality or traffic congestion problems. These projects are to promote alternatives to automobile travel, and, in particular, alternatives to making work trips by single-occupant vehicle.
6. As a condition for the receipt and use of Federal and State transit financial assistance, the City of Kenosha is required to satisfy a number of Federal and State administrative requirements. Among these are vehicle-accessibility requirements associated with the Federal ADA of 1990, the "Buy America" requirements associated with Part 661 of Title 49 of the Code of Federal Regulations, and such other Federal requirements as nondiscrimination in employment, requirements for labor protection, requirements for drug and alcohol testing for transit operating and maintenance personnel, requirements for procurement, and requirements for disadvantaged business enterprises.
7. The Wisconsin Statutes provide several organizational alternatives to local municipalities and counties for the operation of public transit services including the following: contracting for services with a private operator, public ownership and operation of a municipal utility, and public ownership and operation by a municipal transit commission or cooperative contract commissions. There is currently no State legislation which would permit transit operators, like the City of Kenosha, to create an areawide or regional transit agency, other than cooperative contract commissions, or to levy taxes for transit or other uses, other than a vehicle registration fee. The lack of State enabling legislation permitting local areas to establish regional transit services funded with a discrete source of revenue dedicated to transit was recognized in the State Intermodal Transportation Plan. The State plan proposed that the Department of Transportation work with local governments and metropolitan planning organizations in the State's larger metropolitan areas to develop "metropolitan transit cooperatives" to coordinate and manage transit services which cross several jurisdictional boundaries, and also to assist in developing nonproperty-tax sources of local revenues dedicated to transit.

(This page intentionally left blank)



## Chapter VII

# ALTERNATIVE LOCAL TRANSIT SERVICE IMPROVEMENTS TO SERVE KENOSHA AREA TRAVEL

## INTRODUCTION

This chapter describes the alternative local transit service improvements for the primary study area which were considered and those ultimately chosen by the Advisory Committee to be included in a final system plan, together with the recommended commuter services identified in Chapter VIII. The remainder of the chapter consists of four sections. The first describes the existing and committed transit system which will serve as a baseline for comparison against proposed transit service improvement alternatives. The second documents the three service improvement alternatives which were developed. The third reports the recommendations of the Advisory Committee relative to the service improvements to be included in the final recommended plan. The chapter concludes with a brief summary.

## EXISTING AND COMMITTED TRANSIT SYSTEM

One possible course of action for providing transit service within the primary study area would be to continue to operate the existing transit system over the planning period. This course would include making those service changes or improvements which are currently at a stage where it is reasonable to assume a commitment has been made by the City to their implementation or continued operation. Such a course not only represents a possible policy alternative, but also becomes the baseline for identifying alternative service improvements and measuring the performance and costs of the other courses of action, or "alternatives."

### Description of Services

The existing and committed Kenosha transit system was defined to include the following existing services and committed system improvements:

1. The bus routes, service levels, and service periods of the existing transit system operated as of January 1, 1998, essentially as described in Chapter III, would continue over the planning period. Service would continue to be provided over the eight regular bus routes shown on Map 27. Service levels in the

portion of the City lying east of Green Bay Road served by Route Nos. 1 through 6 would continue at 30-minute headways during weekday peak periods and 60-minute headways during weekday middays and all day Saturday. The areas west of Green Bay Road served by Route Nos. 7 and 8 would continue to have less extensive service, with service over Route No. 7 provided at one- to two-hour intervals weekdays and Saturdays and with Route No. 8 operated only during weekday peak periods. The system of peak-hour tripper routes primarily serving students at Kenosha schools would continue to be operated, as would paratransit service for disabled individuals unable to use fixed-route bus services.

2. The expanded weekday afternoon service on the eight regular bus routes implemented in August 1997 on a trial basis was assumed to continue throughout the planning period. This service expansion extended by one hour the weekday afternoon peak period when service at 30-minute headways was provided, the expanded peak period being from 2:00 p.m. until 6:00 p.m. instead of from 3:00 p.m. until 6:00 p.m. The service day was also lengthened by one and one-half hours, with service ending at 7:30 p.m. instead of at 6:00 p.m. A Federal grant through the Congestion Mitigation and Air Quality Improvement (CMAQ) Program to fund the additional service for two years, through July 1999, was obtained by the City in 1994. It was assumed that the City would be able to secure CMAQ funding to for a third year to extend the trial period through July 2000. At that time any subsidy for the service would be funded through the existing Federal and State transit operating assistance programs and City funds.
3. A new electric circulator streetcar line will be constructed to serve the Kenosha central business district (CBD) and the Harborpark area. The downtown circulator project is part of the Harborpark Plan<sup>1</sup> for development of the Kenosha's Lakefront.

---

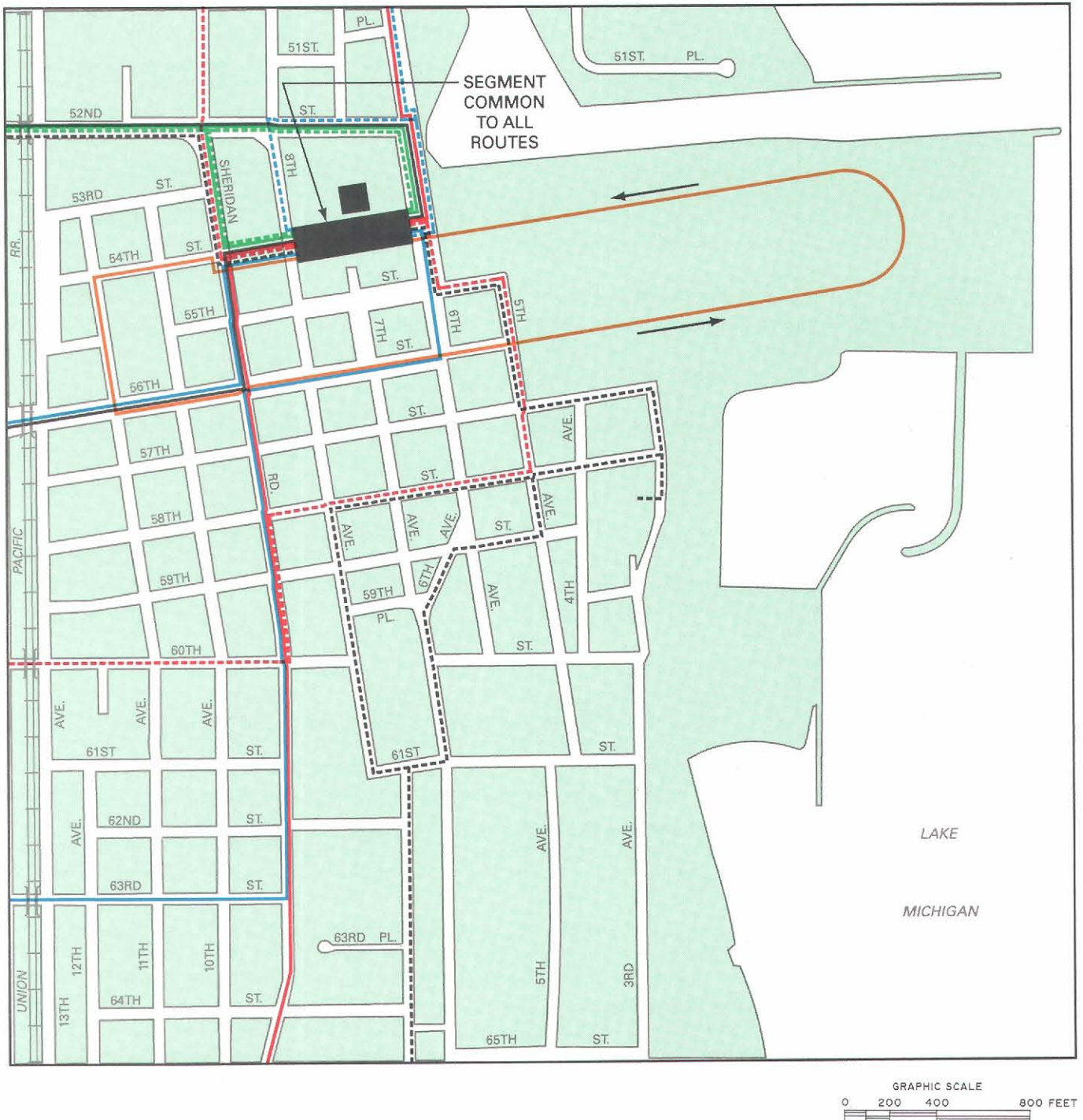
<sup>1</sup>See *City of Kenosha, Harborpark Master Plan: Kenosha, Wisconsin, September 1997.*

**FIXED-ROUTE TRANSIT SERVICE PROVIDED BY THE  
KENOSHA TRANSIT SYSTEM UNDER THE EXISTING AND COMMITTED SYSTEM**





Inset to Map 27



The plan proposes actions directed at redevelopment of a “brownfields” site located on the Kenosha lakefront immediately east of the Kenosha CBD. The 69-acre site has been vacant since the Chrysler Motors Corporation closed its manufacturing plant

at that location in 1988 and demolished the buildings. The City purchased the site in 1994 and completed the Harborpark Plan with the intent of initiating efforts to redevelop the site and create a livable neighborhood in the lakefront area. The plan

was completed and approved by the City Common Council and Mayor in September 1997. The City is currently working with the Wisconsin Department of Transportation and Federal Transit Administration to secure the necessary funding. The circulator has, accordingly, been considered as a committed facility for this study to be integrated with the bus transit system.

The circulator, shown on Map 28, will consist of a local streetcar service operated over a one-way rail loop to be constructed between the METRA commuter rail station at 54th Street and 11th Avenue and the end of 56th Street, approximately one mile to the east, in the proposed Harborpark development. The approximately one-mile system would be constructed within the right-of-way of 11th Avenue from 54th Street southward to 56th Street; in the median of 56th Street between 11th Avenue and the east end of 56th Street, which would be extended into the Harborpark area; and in a private right-of-way between 56th Street and the proposed extension of 54th Street, and adjacent to 54th Street west to 11th Avenue. The trackage will be constructed at the same time street improvements are made in the Harborpark area and will be located on publicly owned land, along with other facilities, including a storage and maintenance facility, a transit information center, and a new downtown bus transfer terminal.

Service is to be provided using five historic PCC streetcars which the City purchased in 1997. Three basic service options for the circulator, with the general service characteristics as presented in Table 56, are currently under consideration by the City. The most extensive service periods would be during the summer, between mid-May and mid-September, when the circulator would operate seven days a week, with service extended into Saturday evenings. The options differ with respect to the extent of weekday service provided throughout the year and also the Saturday service during the winter. A final decision by the City on the service to be operated is currently pending.

City estimates of the total capital and operating costs in 1997 dollars are presented in Table 57. Capital costs are expected to total approximately \$4,192,600. After anticipated Federal and State funds are accounted for, about \$626,500, or about 15 percent of the total capital costs, would need to be funded by the City. The annual operating costs would range from \$79,500 to \$142,200, depending on the service option. After anticipated passen-

ger fares along with Federal and State funds are accounted for, between \$11,900 and \$21,300, or about 15 percent of the total operating costs, would need to be funded by the City.

Alternatives to the proposed streetcar line were considered by the City and are documented in an environmental assessment<sup>2</sup> for the project prepared as part of the City's grant application for Federal transit capital assistance. The alternatives included operating a bus or trackless trolley on either a separate roadway or in mixed traffic.

The tentative timetable for the circulator project calls for construction of the streetcar line to be completed by Autumn of 1999. For this Kenosha transit planning effort, it was assumed that limited service over the streetcar line, consisting of the winter service proposed by the City under Option 1, would be initiated in September 1999. This reflects comments by City officials that circulator service would probably be phased in as development occurs in the Harborpark area. Operation with service as proposed under Option 3 was assumed to begin in mid-May 2000. Operation with the full weekday service included under this option was viewed as the best way to integrate the circulator service fully with the City's bus service.

4. The common transfer point for the regular routes of the transit system in the Kenosha CBD will be relocated from the current location on 56th Street between 7th and 8th Avenues to a new terminal facility located on the north side of 54th Street between 6th and 8th Avenues. The new terminal will be located at stop on the proposed downtown circulator streetcar line, allowing bus and streetcar services to be fully integrated. A Federal grant will cover 80 percent of the total estimated cost for the new facility of \$400,000, leaving \$80,000 to be funded by the City.

The basic operating characteristics of the existing and committed transit system with the above services are presented in Table 58.

### **System Performance and Cost**

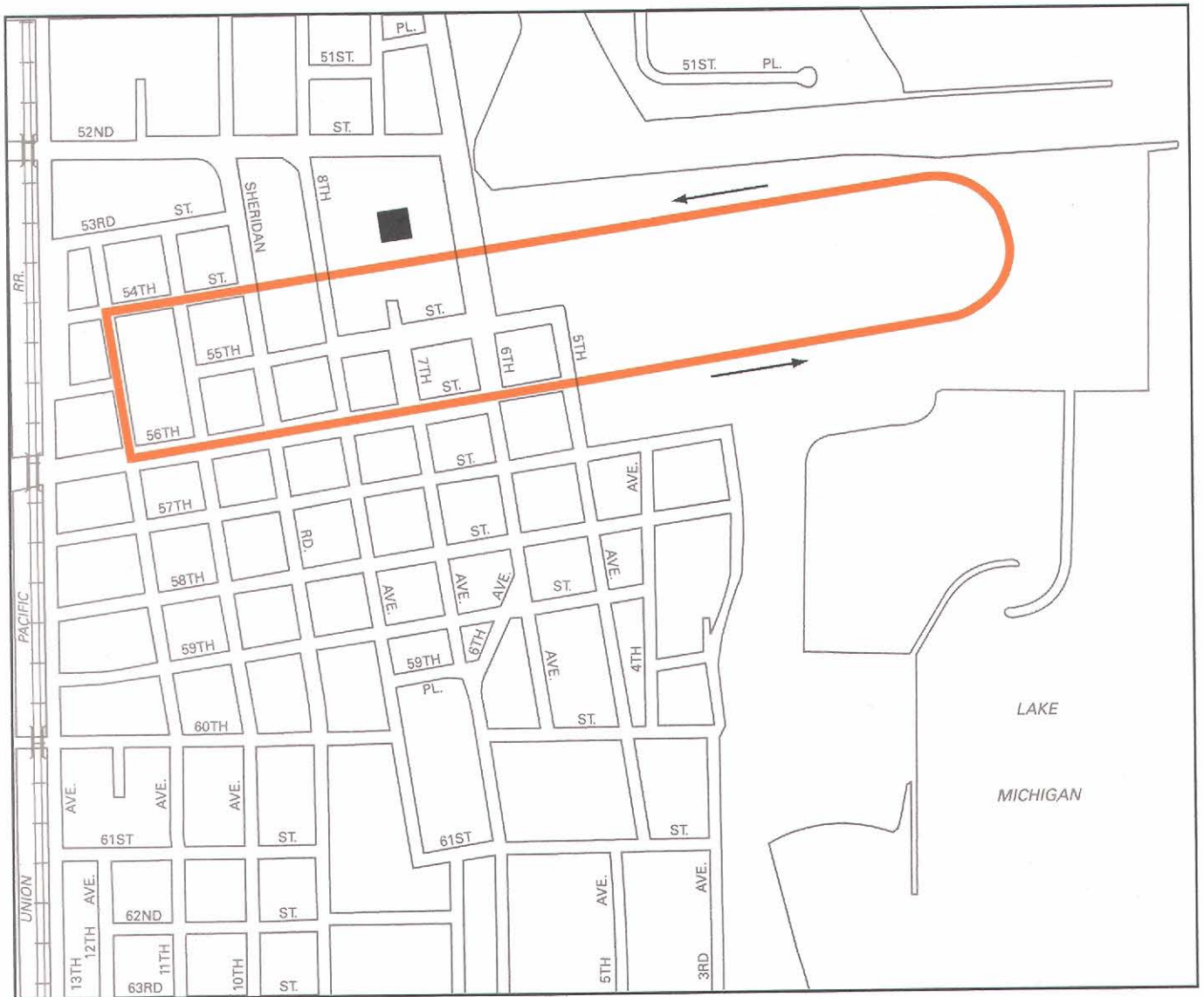
The analyses of the anticipated performance of the existing and committed transit system, including the service levels,

---

<sup>2</sup>See *City of Kenosha, Environmental Assessment: Downtown Circulator, November 26, 1997, FTA Project No. WI-90-X273.*

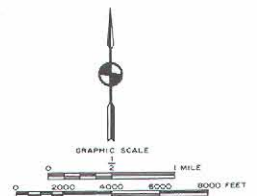
Map 28

**DOWNTOWN CIRCULATOR STREETCAR LINE TO BE IMPLEMENTED BY THE CITY OF KENOSHA**



**LEGEND**

- DOWNTOWN CIRCULATOR STREETCAR LINE
- STORAGE AND MAINTENANCE FACILITY



Source: City of Kenosha Department of Transportation and SEWRPC.

ridership, cost, and funding estimates associated with the existing and committed services, are predicated upon the assumptions and determinations presented in Table 59. The anticipated average annual ridership, operating charac-

teristics, and the costs and revenues associated with the system from 1988 through 2002 are compared with those for the existing 1997 transit system in Table 60, while detailed annual forecasts of this information are provided



Table 56

**GENERAL OPERATING CHARACTERISTICS OF DOWNTOWN CIRCULATOR STREETCAR SERVICE  
UNDER SERVICE OPTIONS BEING CONSIDERED BY THE CITY OF KENOSHA**

Service Characteristics	Service Options Considered by City		
	Option 1	Option 2	Option 3
<b>Service Periods</b>			
<b>Weekdays</b>			
All Year .....	Service provided for about six hours a day during morning and afternoon peak hours and noon lunch period	Service provided for about eight hours a day during entire morning and afternoon peak periods and midday lunch period	Service provided for about 13.5 hours a day over same period as bus service
<b>Saturdays</b>			
Summer <sup>a</sup> .....	Service provided for about 16 hours a day including early mornings and evenings	Service provided for about 16 hours a day including early mornings and evenings	Service provided for about 16 hours a day including early mornings and evenings
Winter <sup>b</sup> .....	Service provided for about eight hours a day with no early morning or evening service	Service provided for about eight hours a day with no early morning or evening service	Service provided for about nine and one-quarter hours a day with no evening service
<b>Sundays and Holidays</b>			
Summer <sup>a</sup> .....	Service provided for about eight hours a day with no early morning or evening service; extended service provided on July 4	Service provided for about eight hours a day with no early morning or evening service; extended service provided on July 4	Service provided for about eight hours a day with no early morning or evening service; extended service provided on July 4
Winter <sup>b</sup> .....	No service	No service	No service
<b>Service Levels .....</b>	15-minute base headways operated during all operating periods except special holiday events. Lower headways could be operated if warranted by demands. Five-minute headways operated for peak season events such as July 4 celebration	15-minute base headways operated during all operating periods except special holiday events. Lower headways could be operated if warranted by demands. Five-minute headways operated for peak season events such as July 4 celebration	15-minute base headways operated during all operating periods except special holiday events. Lower headways could be operated if warranted by demands. Five-minute headways operated for peak season events such as July 4 celebration
<b>Annual Revenue Vehicle- Hours of Service .....</b>	2,270	2,930	4,060

<sup>a</sup>Mid-May through mid-September

<sup>b</sup>Mid-September through mid-May

Source: City of Kenosha Department of Transportation.

in Appendix B. The estimated costs to the City for the downtown circulator service have been incorporated into the Commission's forecasts of operating and capital costs after the necessary adjustment for inflation. The following observations may be made based upon an examination of the information presented in this table:

- With the existing and committed services, the Kenosha transit system would operate about 79,700 revenue vehicle-hours and about 1,096,400 revenue vehicle-hours of service annually, or between 15 and 18 percent more service than operated in 1997. The additional service would be attributable to the expanded weekday afternoon bus service implemented in August 1997 and the new

circulator streetcar service to be implemented in Autumn 1999.

- The existing and committed system may be expected to carry about 1,412,600 revenue passengers annually, or about 4 percent more than the 1997 level of 1,356,400 revenue passengers. Most of this increase would be expected to occur in 1998 and 1999 as a result of the expanded service implemented in 1997. The increases in passenger fares which are assumed to be implemented in 2000 and 2002 would be expected reduce ridership somewhat during the later years of the planning period.

Table 57

**ESTIMATED COSTS OF THE PROPOSED KENOSHA  
DOWNTOWN CIRCULATOR STREETCAR SERVICE**

Characteristic	Service Options <sup>a</sup>		
	Option 1	Option 2	Option 3
Revenue Vehicle-Hours of Service	2,270	2,930	4,190
Operating Costs and Revenues (1997 Dollars)			
Operating Expenses .....	\$79,500	\$ 102,700	\$142,200
Operating Revenue <sup>b</sup> .....	19,900	25,700	35,600
Operating Deficit .....	59,600	77,000	106,600
Percent of Expenses Recovered through Operating Revenues <sup>b</sup> .....	25.0	25.0	25.0
Sources of Public Operating Subsidy (1997 Dollars)			
Federal .....	\$10,300	\$ 48,300	\$ 18,500
State .....	37,400	13,300	66,800
Local .....	11,900	15,400	21,300
Total	\$59,600	\$ 77,000	\$106,600
Capital Costs (1997 Dollars)			
Construction .....		\$3,142,000	
Right-of-Way and Relocation .....		530,100	
Vehicles .....		370,500 <sup>c</sup>	
Engineering .....		100,000	
Contingency .....		50,000	
Total		\$4,192,600	
Sources of Public Capital Subsidy (1997 Dollars)			
Federal .....		\$3,430,200	
State .....		135,900	
Local .....		626,500	
Total		\$4,192,600	

<sup>a</sup>The general service characteristics of each option are described in Table 56.

<sup>b</sup>The analysis of service options conducted by the City assumed the circulator service would have a farebox recovery rate similar to the transit system as a whole during 1997 which was estimated about 25 percent of operating expenses.

<sup>c</sup>Vehicle costs include approximately \$135,000 spent by the City in 1997 to purchase five historic PCC streetcars. These costs have been excluded from the capital costs for the streetcar line for 1998 through 2002 shown under the transit service improvement alternatives.

Source: City of Kenosha Department of Transportation.

- Over all, the system would be expected to carry about 18 passengers per vehicle-hour of service, slightly less than the 20 percent on the system in 1997.
- The total cost of providing transit service, including the operating and capital costs of both

bus service and the proposed downtown circulator streetcar line, would be expected to be about \$7,376,800 annually, including about \$4,040,400, or about 55 percent, for service operation and about \$3,336,400, or about 45 percent, for capital projects. Of this total, about \$897,900, or about 12 percent, may be expected to be recovered by operating

Table 58

**ROUND-TRIP ROUTE-MILES  
AND VEHICLE REQUIREMENTS FOR THE  
KENOSHA TRANSIT SYSTEM UNDER  
THE EXISTING AND COMMITTED SYSTEM**

Characteristic	Under Existing and Committed System
Number of Routes	
Regular Bus Routes .....	8
Peak-Hour Tripper Bus Routes .....	11
Circulator Route .....	1
<b>Total</b>	<b>20</b>
Round Trip Route-Miles	
Regular Bus Routes .....	200.7
Peak-Hour Tripper Bus Routes .....	269.0
Circulator Route .....	1.7 <sup>a</sup>
<b>Total</b>	<b>471.4</b>
Vehicle Requirements	
Buses	
Weekdays	
Peak Periods .....	34-38 <sup>b</sup>
Middays .....	12
Saturdays .....	12
Streetcars	
Weekdays .....	1
Saturdays and Sundays .....	1
Holidays and Special Events .....	1-4

<sup>a</sup>Refers to miles of directional trackage.

<sup>b</sup>During the school year, 34 buses are needed to provide weekday peak service except on Wednesdays, when four extra buses are required to accommodate early dismissal times.

Source: SEWRPC.

revenues. The total required average annual operating and capital subsidies would approximate \$6,478,900.

- Federal and State funds totaling over \$5,149,200 may be expected to be available to cover about 70 percent of the total operating and capital costs, as well as about 79 percent of the total required subsidy. About \$1,329,700, representing about 18 percent of the total costs and about 21 percent of the required subsidy, would have to be provided by the City of Kenosha.

## ALTERNATIVES FOR SERVICE IMPROVEMENT

A number of potential transit service changes, including adjustments to existing route alignments or to service schedules and periods of operation, were considered under service improvement alternatives. The changes were

developed to correct deficiencies identified by the Advisory Committee and the Commission staff on the basis of the findings of the transit system performance evaluation presented in Chapter V and of the addition of potential new services. The alternative service changes are summarized in Table 61.

The following sections provide a brief description of the service improvements proposed under each alternative and its anticipated performance with respect to ridership, farebox revenues, and costs. A comparative evaluation of each alternative against the existing and committed transit system is also provided. The Commission staff recommendation pertaining to each alternative are then set forth.

### Alternative 1: Route Realignment to Facilitate Improved Operation and Service Expansion

#### Description

This alternative proposes changes to the alignments of seven of the eight regular City bus routes to facilitate improved service delivery and expansion of service into new areas. The specific alignment changes proposed for each route are shown on Map 29, while Map 30 displays the proposed alignments and service area for all regular routes of the system under Alternative 1. The service changes would include the following major elements:

1. The alignments of Route Nos. 2 through 8, operated through the western portions of the City, would be modified so that these routes would have a common terminus at the site of the new high school, Indian Trail Academy, currently being constructed by the Kenosha School District at approximately 60th Street and 68th Avenue. The alignment changes would create a new west-side transfer point, or "mini-hub," similar to the one at the Gateway Technical College, where buses on a number of routes would meet at regular intervals to facilitate passenger transfers. Moving the eastern terminus for Route Nos. 7 and 8 from the common transfer point in downtown Kenosha to the west side of the City would allow these routes to be extended to serve new areas west of Green Bay Road in the City of Kenosha and the Village of Pleasant Prairie or to provide more frequent service without significantly increasing their operating costs. The changes would also enable six of the eight regular City bus routes to serve students attending the new high school directly.
2. The northern end of the alignment of Route No. 4 would be changed to make the terminus of the route Carthage College instead of the Glenwood

Table 59

**COMMON ASSUMPTIONS AND DETERMINATIONS AFFECTING FORECAST  
TRANSIT RIDERSHIP, COSTS, AND SUBSIDIES FOR THE EXISTING AND  
COMMITTED TRANSIT SYSTEM AND TRANSIT IMPROVEMENT ALTERNATIVES**

Forecast Area	Assumptions and Determinations
Costs	<ul style="list-style-type: none"> <li>Costs are expressed in projected "year of expenditure" dollars and assume a 3.5 percent per year increase in annual operating costs per unit of service and capital costs due to general price inflation.</li> <li>The City's estimates of the operating and capital costs for the downtown circulator streetcar line presented in Table 57, adjusted as necessary for inflationary increases, have been incorporated into Commission forecasts.</li> </ul>
Passenger Fares	<ul style="list-style-type: none"> <li>Fares in all categories would be increased over the period in response to inflationary increases in operating costs, with adult cash fares raised in 2000 by 10 percent, from \$1.00 to \$1.10, and again in 2002 by 9 percent, to \$1.20.</li> <li>The increases would be expected to result in a decrease in system ridership from the prior year of about 3.3 percent in 2000 and about 3 percent in 2002, although new ridership generated by operation of the downtown circulator in 2000 would be expected to reduce the ridership loss from the fare increase in that year.</li> </ul>
State Transit Assistance	<ul style="list-style-type: none"> <li>State operating assistance would cover about 43 percent of the total operating expenses for the system annually. This compares with about 40.8 percent of total operating expenses during 1997.</li> <li>A limited amount of State oil overcharge funds would be available for the capital costs of the downtown circulator streetcar line.</li> </ul>
Federal Transit Assistance	<ul style="list-style-type: none"> <li>Federal funds used as operating assistance, including formula funds provided to cover operating expenses and the capital component of maintenance costs, and funds provided through the Congestion Mitigation and Air Quality (CMAQ) Improvement Program, will not keep pace with inflation and will decrease from 23 percent of total operating expenses in 1998 to about 16 percent of operating expenses by 2002. This compares with about 16.8 percent of total operating expenses during 1997.</li> <li>Sufficient capital assistance funds would continue to be available to the City to offset 80 percent of capital costs.</li> </ul>

Source: SEWRPC.

Crossings shopping center. Full service to Glenwood Crossings would be retained by adding a new route segment over 18th Street between 18th and 30th Avenues. The revised route would have buses operate outbound from downtown Kenosha over 18th Street to 30th Avenue, 30th Avenue to 14th Street, 14th Street to Birch Road, and Birch Road and Sheridan Road to Carthage College. Buses would operate over the same streets in the inbound direction except they would operate north and west over 15th Street and 15th Avenue, respectively, instead of over Birch Road. The revised routing would eliminate a segment along Birch Road where the route currently "doubles-back" on itself, thereby providing for a more logical operation.

3. New segments would be added to Route No. 7 within the City of Kenosha to replace the service

to the Kenosha Industrial Park currently provided by Route No. 6, to extend service to the Business Park of Kenosha, and to extend service to the Whitecaps residential area northeast of 75th Street and 104th Avenue. Segments would also be added to extend service to two proposed facilities for the elderly in the Village of Pleasant Prairie, Villa Genesis Assisted Living, just north of 75th Street and 88th Avenue, and Prairie Ridge Senior Housing, at approximately 79th Street and 94th Avenue. The new route segments would create a loop with two-way service. In the morning, buses would operate outbound from the west side transfer point to the Factory Outlet Centre over 68th Avenue, 52nd Street, and 104th Avenue to bring workers out to their jobs, then inbound over 75th Street, Green Bay Road, and 60th Street to bring passengers from residential areas and to facilities for the elderly to

Table 60

**AVERAGE ANNUAL RIDERSHIP, SERVICE LEVELS, AND COSTS FOR THE KENOSHA  
TRANSIT SYSTEM UNDER THE EXISTING AND COMMITTED SYSTEM: 1998-2002**

Operating Characteristic	1997 Estimated	Forecast Average Annual: 1998-2002 <sup>a</sup>		
		Difference		With Service Proposed under Existing and Committed System
		Number	Percent	
<b>Service</b>				
Revenue Vehicle-Hours of Service .....	67,700	12,000	17.7	79,700
Revenue Vehicle-Miles of Service .....	952,000	144,400	15.2	1,096,400
<b>Ridership</b>				
Total System Revenue Passengers .....	1,356,400	56,200	4.1	1,412,600
Revenue Passengers per				
Revenue Vehicle-Hour .....	20.0	-2.3	-11.5	17.7
Revenue Vehicle-Mile .....	1.42	-0.14	-9.6	1.29
<b>Operating Costs, Revenues, and Subsidies</b>				
Expenses .....	\$3,357,800	\$ 682,600	20.3	\$4,040,400
Passenger and Other Revenues .....	756,100	141,800	18.8	897,900
Subsidy .....	2,601,700	540,800	20.8	3,142,500
Percent of Expenses Recovered through Operating Revenues .....	22.5	-0.3	-1.3	22.2
<b>Anticipated Sources of Public Subsidy</b>				
Federal .....	\$ 563,200	\$ 204,900	36.4	\$ 768,100
State .....	1,370,400	304,600	22.2	1,675,000
Local .....	668,100	31,300	4.7	699,400
<b>Capital Costs</b>				
Total Costs .....	\$1,313,700 <sup>b</sup>	\$2,022,700	154.0	\$3,336,400
<b>Anticipated Sources of Public Subsidy</b>				
Federal .....	1,031,900 <sup>b</sup>	1,663,000	161.2	2,694,900
State .....	16,000 <sup>b</sup>	-4,800	-30.0	11,200
Local .....	265,800 <sup>b</sup>	364,500	137.1	630,300

<sup>a</sup>The following assumptions were made in preparing the annual projections forecasts of ridership, revenues and costs:

1. Service over the downtown circulator streetcar line will be initiated on a limited basis in September 1999, with full service initiated in mid-May 2000.
2. A 3.5 percent per year increase in operating expenses per unit of service.
3. The 10 percent fare increase in 2000, raising base adult cash fares from \$1.00 to \$1.10 per trip, will decrease annual system ridership by 3.3 percent. However, new ridership generated by the operation of the downtown circulator streetcar service will partially offset some the ridership loss resulting from the fare increase
4. The 9 percent fare increase in 2002, raising base adult cash fares from \$1.10 to \$1.20 per trip, will decrease annual system ridership by 3.0 percent.
5. Federal funds used as operating assistance, including formula funds provided to cover operating expenses and the capital component of maintenance costs, and funds provided through the Congestion Mitigation and Air Quality (CMAQ) Improvement Program, will not keep pace with inflation and will decrease from about 23 percent of operating costs in 1998 to about 16 percent of operating costs by 2002. Sufficient Federal capital assistance will be available to cover 80 percent of total capital project costs.
6. State operating assistance will be available to cover about 43 percent of operating expenses over the period. A limited amount of State oil overcharge funds will be available for the capital costs of the downtown circulator project.

<sup>b</sup>Average annual capital costs for the period 1993-1997.

Source: SEWRPC.



Table 61

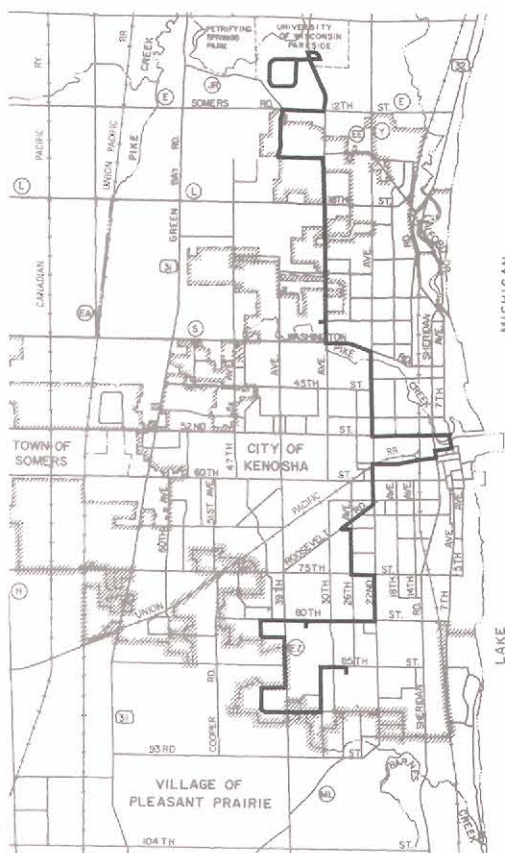
# SUMMARY OF EXISTING AND COMMITTED TRANSIT SYSTEM SERVICE CHARACTERISTICS AND CHANGES PROPOSED UNDER SERVICE IMPROVEMENT ALTERNATIVES

Service Characteristics	With Existing System and Committed Service Improvements	Service Changes Proposed under:			
		Alternative 1	Alternative 2	Alternative 3	Alternative 4
Route Structure	<ul style="list-style-type: none"> <li>Service provided over January 1, 1998, system of eight regular bus routes and 11 peak-hour tripper bus routes</li> <li>Expanded afternoon peak period bus service implemented on two-year trial basis in August 1997 continued over entire period</li> <li>New electric circulator streetcar line providing collection-distribution service in the Kenosha central business district and Harborpark area completed and in operation by fall 1999</li> <li>New central transfer terminal completed at approximately 54th Street and 6th Avenue on downtown circulator streetcar line</li> </ul>	<ul style="list-style-type: none"> <li>A new west side transfer point created at the site of the new Kenosha high school, Indian Trail Academy, near 60th Street and 68th Avenue</li> <li>Alignment changes made to all regular routes, except Route No. 1, to allow Route Nos. 2 through 8 to serve new west side transfer point</li> <li>Alignment changes made to north end of Route No. 4 to provide improved operation</li> <li>Alignment changes made to Route Nos. 7 and 8 to extend service to the Business Park of Kenosha and Whitecaps residential development, and to expand service to the LakeView East portion of LakeView Corporate Park south of 104th Street</li> </ul>	<ul style="list-style-type: none"> <li>Same bus route adjustments proposed under Alternative 1</li> <li>Create two new routes: Route No. 9 serving the Kenosha Industrial Park and the Business Park of Kenosha, and Route No. 10 serving the LakeView East portion of LakeView Corporate Park</li> <li>New Route Nos. 9 and 10 would provide direct service for jobs in the Kenosha Industrial Park, Business Park of Kenosha, and LakeView East portion of LakeView Corporate Park with first shift start times at 6:00 and 6:30 a.m. and second shift ending times at 11:00 p.m. and 12:00 midnight</li> </ul>	<ul style="list-style-type: none"> <li>Same bus route adjustments and new routes proposed under Alternatives 1 and 2</li> </ul>	<ul style="list-style-type: none"> <li>Same bus route adjustments and new routes proposed under Alternatives 1 and 2</li> </ul>
Service Periods	<p><u>East of Green Bay Road</u></p> <ul style="list-style-type: none"> <li>Route Nos. 1 - 6</li> <li>Weekdays: 6:00 a.m. - 7:30 p.m.</li> <li>Saturdays: 6:00 a.m. - 6:00 p.m.</li> </ul> <p><u>Downtown Circulator Streetcar Line</u></p> <p>Seven days a week between mid-May and mid-September, and six days a week at all other times; operating hours tailored to the season and special event</p> <p><u>West of Green Bay Road</u></p> <ul style="list-style-type: none"> <li>Route No. 7</li> <li>Weekdays and Saturdays: 8:35 a.m. - 5:30 p.m.</li> <li>Route No. 8</li> <li>Weekdays: 6:25 a.m. - 8:30 a.m.</li> <li>3:40 p.m. - 5:00 p.m.</li> <li>Saturdays: No service</li> </ul>	<p><u>East of Green Bay Road</u></p> <ul style="list-style-type: none"> <li>No change from service hours for Route Nos. 1 through 6 proposed under existing and committed system</li> </ul> <p><u>West of Green Bay Road</u></p> <ul style="list-style-type: none"> <li>Revise and expand weekday service hours for Route No. 7 to between 6:25 a.m. and 5:00 p.m.</li> <li>Expand weekday service hours for Route No. 8 to include limited mid-day service between 12:00 and 12:30 p.m. and 1:30 and 2:00 p.m.</li> </ul>	<p><u>East of Green Bay Road</u></p> <ul style="list-style-type: none"> <li>No change from service hours for Route Nos. 1 through 6 proposed under existing and committed system</li> </ul> <p><u>West of Green Bay Road</u></p> <ul style="list-style-type: none"> <li>Extend Saturday service hours for Route No. 7 to include limited service between 6:00 and 7:00 a.m.</li> <li>Add Saturday service hours to Route No. 8 to include limited service between 6:00 and 7:00 a.m. and 2:00 and 3:00 p.m.</li> <li>Operate new Route Nos. 9 and 10 with limited weekday service hours between about 5:00 and 6:30 a.m. and 11:00 p.m. and 1:00 a.m.</li> </ul>	<p><u>East of Green Bay Road</u></p> <ul style="list-style-type: none"> <li>Add early morning service on weekdays to Route Nos. 1 - 6 by starting service at about 5:30 a.m. instead of at about 6:00 a.m.</li> <li>Add evening service on weekdays to Route Nos. 1 - 5 by ending service about 12:00 midnight instead of at about 7:30 p.m.</li> <li>Adjust times buses meet at downtown transfer terminal to occur on the half-hour instead of on the hour during weekday evenings beginning at 6:30 p.m.</li> </ul> <p><u>West of Green Bay Road</u></p> <ul style="list-style-type: none"> <li>Operate Route Nos. 7 and 9 as proposed under Alternative 2</li> <li>Operate Route No. 8 with one more morning bus trip than under Alternative 2, departing downtown Kenosha at about 6:00 a.m.</li> <li>Operate new Route No. 10 with one less morning bus trip than under Alternative 2, with new weekday morning service hours between about 5:00 and 6:00 a.m.</li> </ul>	<p><u>East of Green Bay Road</u></p> <ul style="list-style-type: none"> <li>No change from service hours for Route Nos. 1 through 6 proposed under existing and committed system</li> </ul> <p><u>West of Green Bay Road</u></p> <ul style="list-style-type: none"> <li>No change from service hours for Route Nos. 7 through 10 proposed under Alternative 2</li> </ul>
Service Levels	<p><u>East of Green Bay Road</u></p> <ul style="list-style-type: none"> <li>Route Nos. 1 - 6</li> <li>Weekday Peak Periods: 30-minute headways</li> <li>Weekday Midday: 60-minute headways</li> <li>Saturdays: 60-minute headways</li> <li>Downtown Circulator Streetcar Line</li> <li>Weekdays, Saturdays, and Sundays: 15-minute headways</li> <li>July 4 and Special Events: five to 15-minute headways</li> </ul> <p><u>West of Green Bay Road</u></p> <ul style="list-style-type: none"> <li>Route No. 7</li> <li>Weekdays and Saturdays: Six round trips (60-120-minute headways)</li> <li>Route No. 8</li> <li>Weekday Peak Periods: Two morning and two afternoon round trips (60-minute headways)</li> <li>Weekday Midday: No service</li> <li>Saturday: No service</li> </ul>	<p><u>East of Green Bay Road</u></p> <ul style="list-style-type: none"> <li>No change from service levels proposed under existing and committed system</li> </ul> <p><u>West of Green Bay Road</u></p> <ul style="list-style-type: none"> <li>Route No. 7</li> <li>Weekdays: Increase service to seven and one-half round trips and add trips during peak-periods to serve only the Kenosha Industrial Park and the Business Park of Kenosha</li> <li>Saturdays: No change in number of trips from existing and committed system but trips would serve the Kenosha Industrial Park and the Business Park of Kenosha</li> <li>Route No. 8</li> <li>Weekday peak periods: Increase service to three morning and three afternoon round trips</li> <li>Weekday midday: Add one round trip</li> <li>Saturday: No change from existing and committed system</li> </ul>	<p><u>East of Green Bay Road</u></p> <ul style="list-style-type: none"> <li>No change from service levels proposed under existing and committed system</li> </ul> <p><u>West of Green Bay Road</u></p> <ul style="list-style-type: none"> <li>Route No. 7</li> <li>Weekdays and Saturdays: same service levels as Alternative 1</li> <li>Saturdays: Add one morning trip outbound and one after noon trip inbound</li> <li>Route No. 8</li> <li>Weekdays: Same service levels as Alternative 1</li> <li>Saturdays: Add one morning trip outbound and one afternoon trip inbound</li> <li>Route Nos. 9 and 10</li> <li>Weekdays: 2 early morning and 2 late evening round trips</li> </ul>	<p><u>East of Green Bay Road</u></p> <ul style="list-style-type: none"> <li>Early morning bus service provided at 30-minute headways</li> <li>Evening bus service provided at 60-minute headways</li> </ul> <p><u>West of Green Bay Road</u></p> <ul style="list-style-type: none"> <li>Operate Route Nos. 7 and 9 with service levels proposed under Alternative 2</li> <li>Route No. 8</li> <li>Weekdays: Add one morning bus trip departing downtown Kenosha at about 6:00 a.m.</li> <li>Saturdays: Same service levels as Alternative 2</li> <li>Route No. 10</li> <li>Weekdays: Operate one less morning bus trip (replaced with service over Route No. 8)</li> </ul>	<p><u>East of Green Bay Road</u></p> <ul style="list-style-type: none"> <li>Reduce weekday midday headways on Route Nos. 1 through 6 from the current 60-minute headways to 30 minute headways</li> </ul> <p><u>West of Green Bay Road</u></p> <ul style="list-style-type: none"> <li>Operate Route Nos. 7 through 10 with service levels proposed under Alternative 2</li> </ul>
Fares	<ul style="list-style-type: none"> <li>Fares in all categories increased over period with adult fares raised from current \$1.00 to \$1.10 in 2000 and to \$1.20 in 2002</li> </ul>	<ul style="list-style-type: none"> <li>No change from fares proposed under existing and committed system</li> </ul>	<ul style="list-style-type: none"> <li>No change from fares proposed under existing and committed system</li> </ul>	<ul style="list-style-type: none"> <li>No change from fares proposed under existing and committed system</li> </ul>	<ul style="list-style-type: none"> <li>No change from fares proposed under existing and committed system</li> </ul>

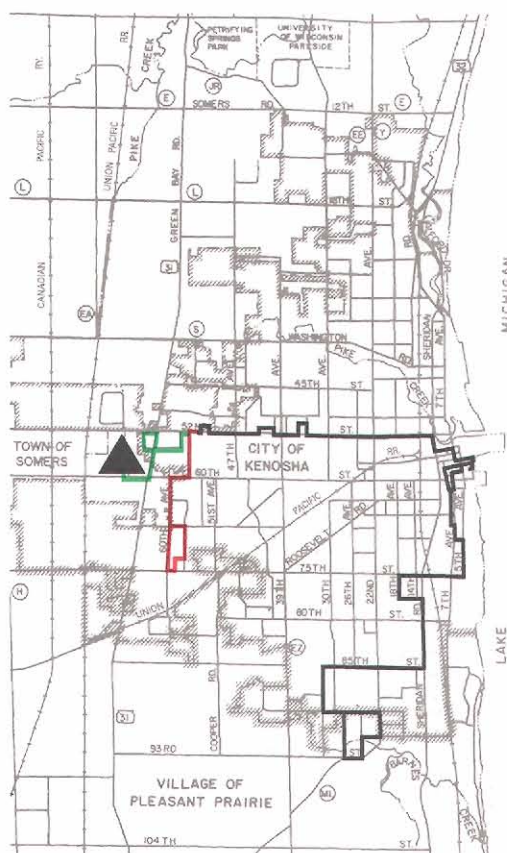
Source: SEWRPC.

## CHANGES TO BUS ROUTES PROPOSED UNDER ALTERNATIVE 1

ROUTE NO.1



ROUTE NO. 2



## LEGEND

- EXISTING SEGMENTS TO BE RETAINED
- - - EXISTING SEGMENTS TO BE RETAINED WITH LIMITED SERVICE
- EXISTING SEGMENTS TO BE DROPPED
- NEW SEGMENTS TO BE ADDED
- ▲ PROPOSED WEST SIDE TRANSFER POINT

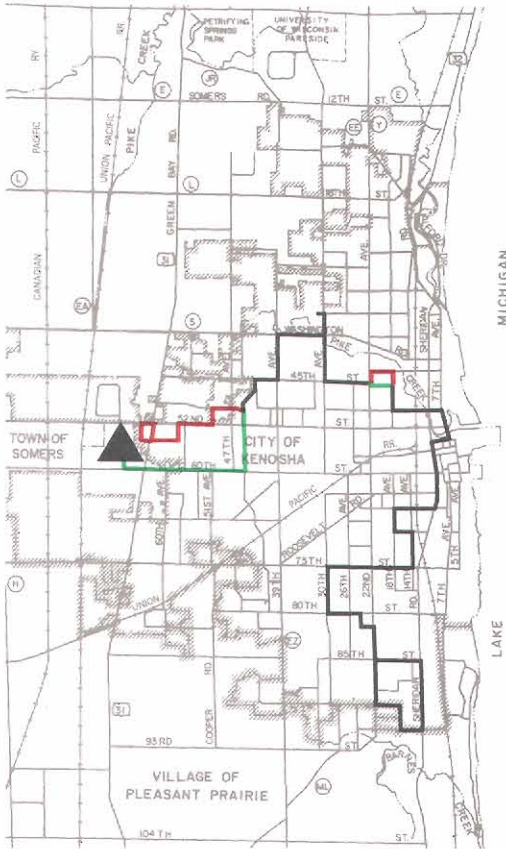


the west-side transfer point for access to the eastern portion of the City. Service directions over the loop segments would be reversed in the afternoon. To provide service to the industrial parks, weekday service would start at 6:25 a.m. instead of 8:35 a.m. and would be increased from the current six round trips to seven and one-half round trips. Additional special trips would also be added on weekdays to serve only the two industrial parks. The first weekday bus trip at

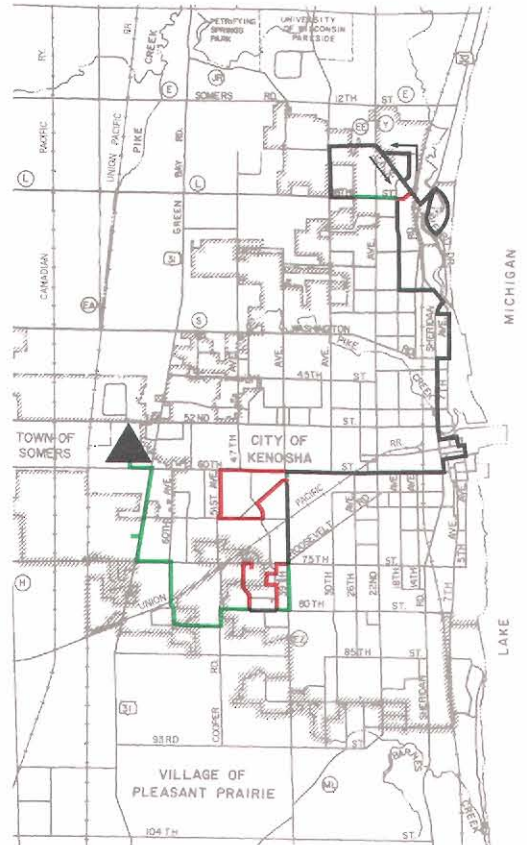
6:25 a.m. would continue to originate from the common transfer point in downtown Kenosha to enable workers to reach jobs with 7:00 a.m. starting times. Saturday service levels would remain at six round trips.

4. New segments would be added to Route No. 8 to expand service to businesses in the LakeView East portion of LakeView Corporate Park south of 104th

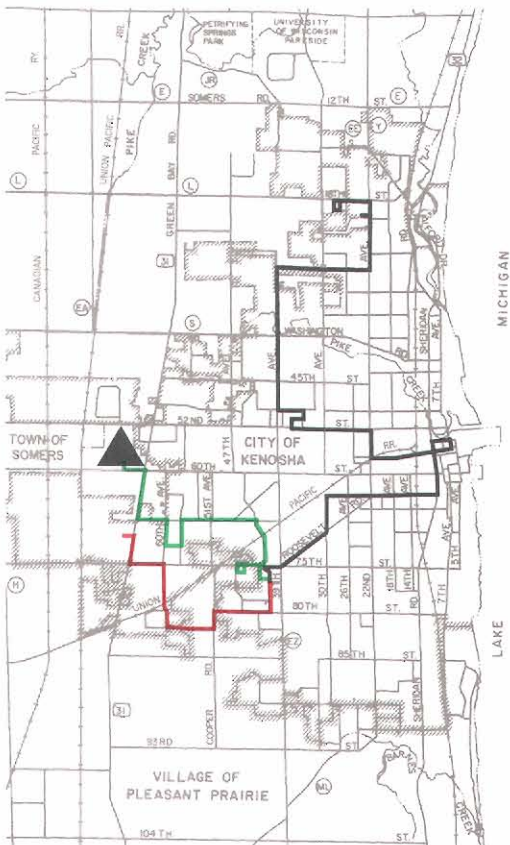
ROUTE NO. 3



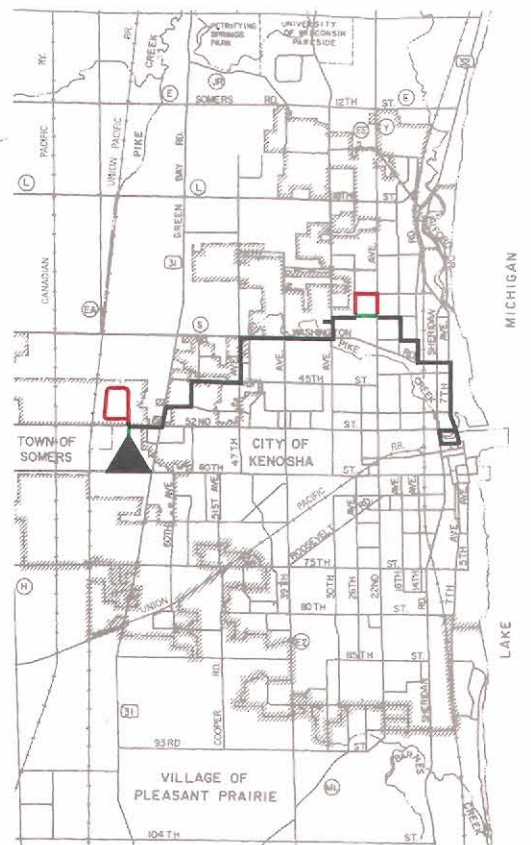
ROUTE NO. 4



ROUTE NO. 5



ROUTE NO. 6





## ROUTE NO. 7



-  EXISTING SEGMENTS TO BE RETAINED
-  EXISTING SEGMENTS TO BE RETAINED WITH LIMITED SERVICE
-  EXISTING SEGMENTS TO BE DROPPED
-  NEW SEGMENTS TO BE ADDED
-  PROPOSED WEST SIDE TRANSFER POINT

Source: SEWRPC.

Street. Weekday service would be increased from the current four round trips to seven round trips by adding one morning and one afternoon round trip scheduled between the two existing trips during each period plus one round trip during weekday middays. As with Route No. 7, the first bus trip at 6:25 a.m. would continue to originate from the common transfer point in downtown Kenosha.

### ***Analysis of Expected Impacts on Service, Ridership, and Costs***

The changes in the route-miles and vehicle requirements from the existing and committed transit system to Alternative 1 are presented in Table 62. The anticipated average annual ridership, operating characteristics, costs, and revenues for the Alternative 1 system from 1998 through 2002 are compared with those for the existing and committed system in Table 63, while detailed annual forecasts of this information for the Alternative 1 system are provided in Appendix B. The forecasts are predicated on the basic assumptions and determinations presented in Table 59. The forecasts also assume that all the changes would be implemented in August 1998 so that service is in place when the new high school opens at the start of the 1998-1999 school year. The following observations should be made concerning this information:

- Round-trip route-miles for the regular routes of the system would increase from the 201 route-miles for the existing and committed system to about 220 miles under Alternative 1, or by about 10 percent. The new segments added to Route No. 7 would account for almost all of this increase. In many places, a particular segment of one route will continue to be served, but by a different route. Where the elimination of all service has been proposed for some existing route segments, most such segments were identified as unproductive segments in the route performance evaluation presented in Chapter V.<sup>3</sup>
- With the proposed service changes, the transit system would provide about 80,400 revenue vehicle-hours

and about 1,110,200 revenue vehicle-miles of service annually. This would represent increases of about 700 vehicle-hours and 13,800 vehicle-miles, or about 1 percent, over the existing and committed transit system. The expanded operation of Route Nos. 7 and 8 would account for virtually all the additional service. One additional vehicle would be needed during weekday peak periods to provide service over these routes and could be furnished from the spare buses in the transit system fleet.

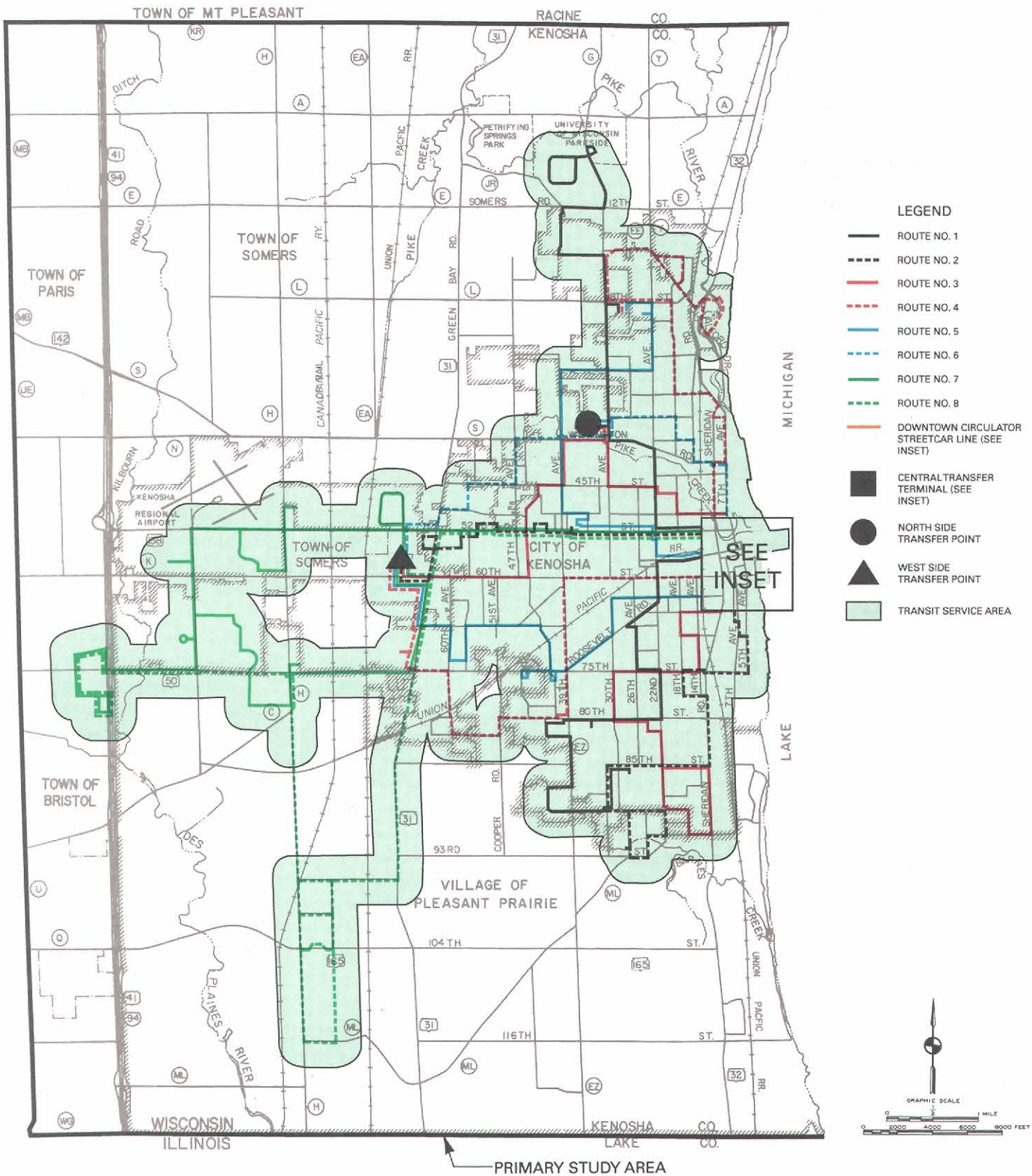
- The creation of a west-side transfer point would make it more convenient to use transit in the portion of the City lying east of Green Bay Road. The need for some bus patrons to travel east to transfer in downtown Kenosha when their ultimate destination was to the west would be reduced, as would travel times. The greatest benefits would be for bus patrons with both origins and destinations west of 39th Avenue, such as residents in this area who travel to the shopping centers along 52nd Street, to the Southport Plaza and surrounding area, or to the employment centers served by Route Nos. 7 and 8.
- With the proposed changes, the transit system may be expected to carry about 1,440,400 revenue passengers annually, an increase of about 27,800 passengers, or about 2 percent, over the ridership under the existing and committed system. Factors contributing to the forecast increase in ridership would include the following: the extension of service to new employment locations in the Business Park of Kenosha and the southern portion of LakeView Corporate Park-East; the extension of service to currently unserved residential areas west of Green Bay Road, particularly for student transportation; the extension of service to the proposed facilities for the elderly in the Village of Pleasant Prairie for both residents and employees; more convenient travel in the portion of the City between 39th Avenue and Green Bay Road; and better access to the Southport Plaza shopping center.
- The total cost of providing transit service, including operating and capital costs, for the system proposed under Alternative 1 would be about \$7,417,000 annually, including about \$4,078,600, or about 55 percent, for service operation and about \$3,338,400, or about 45 percent, for capital projects. Of this total, about \$914,900, or about 12 percent, may be expected to be recovered by operating revenues. The total required average annual operating and capital subsidies would approximate \$6,502,100.

<sup>3</sup>Just over five miles of existing route would be totally eliminated. According to passenger counts taken by Commission staff in March 1996 and weekday total route ridership figures for November 18, 1997, provided by the transit system, about 70 passengers per day were estimated to use these segments, representing an average of about seven passengers per round-trip route-mile. This may be compared with an average ridership about 20 passengers per round-trip route-mile estimated for all eight regular routes.



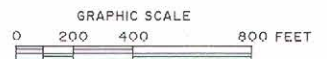
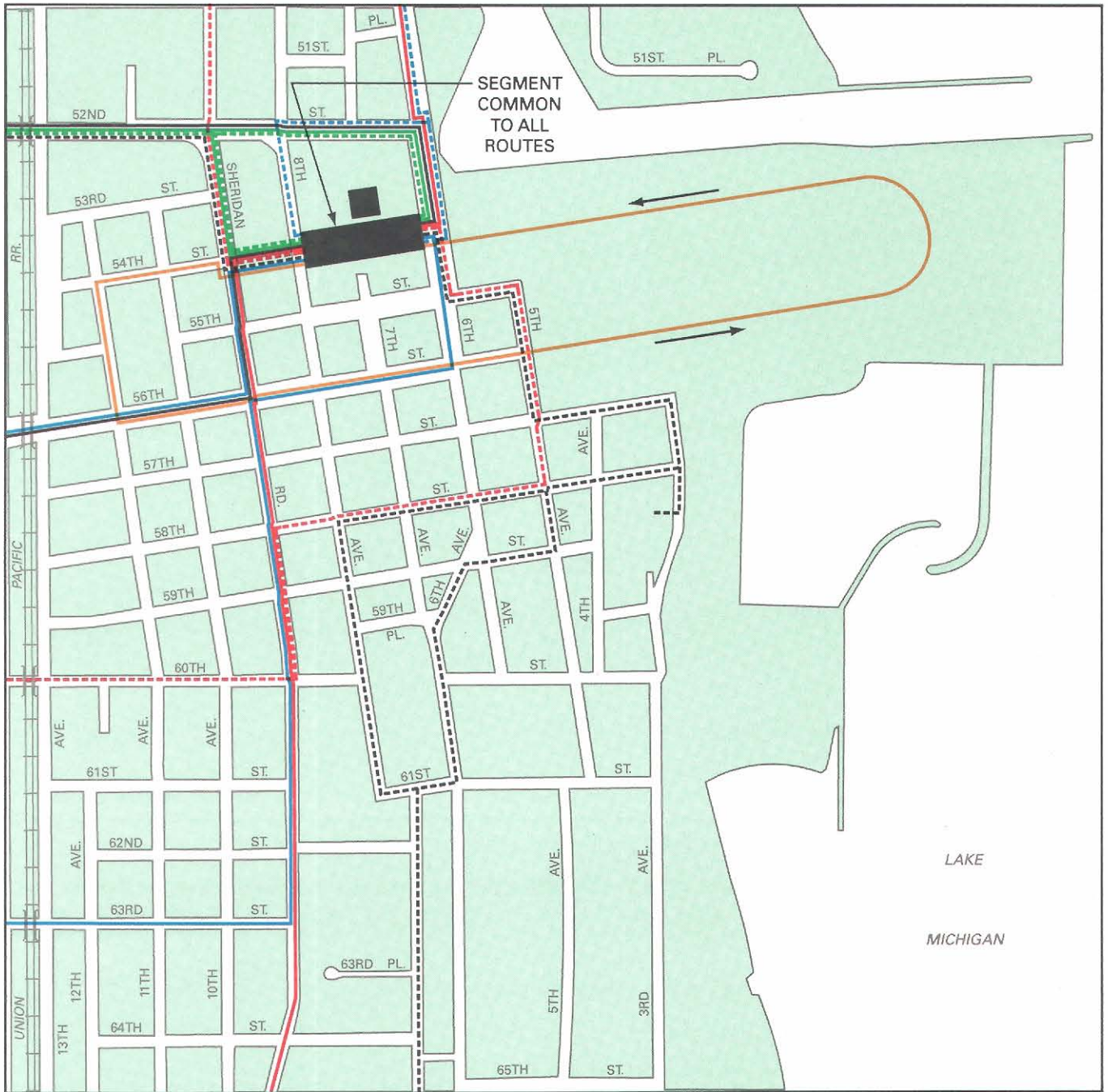
Map 30

FIXED-ROUTE TRANSIT SERVICE PROVIDED BY THE KENOSHA TRANSIT SYSTEM UNDER ALTERNATIVE 1



Source: SEWRPC.

Inset to Map 30



- The total average annual costs for the Alternative 1 system would be about \$40,200, or less than 1 percent, higher than for the existing and committed transit system. This would include additional operating costs of about \$38,200 annually for expanded services and additional capital costs of about \$2,000

annually for the construction of passenger shelters at the west-side transfer point. On an incremental per trip basis, the additional operating costs would amount to about \$1.37 per incremental trip, less than one-half of the average operating cost per trip of about \$2.86 for the existing and committed transit



Table 62

**CHANGE IN ROUND-TRIP ROUTE MILES AND VEHICLE REQUIREMENTS  
FOR THE KENOSHA TRANSIT SYSTEM UNDER ALTERNATIVE 1**

Characteristic	Under Existing and Committed System	Change		Under Alternative 1 System
		Number	Percent	
<b>Number of Routes</b>				
Regular Bus Routes .....	8	--	--	8
Peak-Hour Tripper Bus Routes .....	11	--	--	11
Circulator Route .....	1	--	--	1
<b>Total</b>	<b>20</b>	<b>--</b>	<b>--</b>	<b>20</b>
<b>Round Trip Route-Miles</b>				
Regular Bus Routes				
Route No. 1 .....	31.4	--	--	30.7
Route No. 2 .....	26.3	-0.1	-0.4	26.2
Route No. 3 .....	27.4	0.4	1.5	27.8
Route No. 4 .....	29.8	1.9	6.4	31.7
Route No. 5 .....	28.2	0.2	0.7	28.4
Route No. 6 .....	15.5	-0.5	3.2	15.0
Route No. 7 .....	20.3	15.3	75.4	35.6
Route No. 8 .....	21.8	2.7	12.4	24.5
Subtotal	200.7	19.9	9.9	219.9
Peak-Hour Tripper Bus Routes .....	269.0	--	--	269.0
Circulator Route .....	1.7 <sup>a</sup>	--	--	1.7 <sup>a</sup>
<b>Total</b>	<b>471.4</b>	<b>19.9</b>	<b>4.1</b>	<b>490.6</b>
<b>Vehicle Requirements</b>				
Buses				
Weekdays				
Peak periods .....	34-38 <sup>b</sup>	1	2.9	35-39
Middays .....	12	--	--	12
Saturdays .....	12	--	--	12
Streetcars				
Weekdays .....	1	--	--	1
Saturdays and Sundays .....	1	--	--	1
Holidays and Special Events .....	1-4	--	--	1-4

<sup>a</sup>Refers to miles of directional trackage.

<sup>b</sup>During the school year, 34 buses are needed to provide weekday peak service except on Wednesdays, when four extra buses are required to accommodate early dismissal times.

Source: SEWRPC.

system. The total additional costs would amount to about \$1.45 per incremental trip, or about one-fourth the average total cost per trip of about \$5.22 for the existing and committed transit system.

would have to be provided by the City of Kenosha. The City's share of costs would be virtually the same as under the existing and committed transit system.

### **Recommendation**

The routing and service changes proposed under Alternative 1 are recommended by Commission staff to be included in the final system plan. The creation of a west side transfer point would facilitate the extension of bus service to employment centers and residential areas lying west of Green Bay Road in both the City of Kenosha and the Village

Table 63

**AVERAGE ANNUAL RIDERSHIP, SERVICE LEVELS, AND COSTS FOR THE KENOSHA  
TRANSIT SYSTEM WITH THE CHANGES PROPOSED UNDER ALTERNATIVE 1: 1998-2002**

Operating Characteristic	1997 Estimated	Forecast Average Annual: 1998-2002/a			
		With Existing and Committed System	Difference		With Changes Proposed under Alternative 1
			Number	Percent	
<b>Service</b>					
Revenue Vehicle-Hours of Service .....	67,700	79,700	700	0.9	80,400
Revenue Vehicle-Miles of Service .....	952,000	1,096,400	13,800	1.3	1,110,200
<b>Ridership</b>					
Total System Revenue Passengers .....	1,356,400	1,412,600	27,800	2.0	1,440,400
Revenue Passengers per Revenue Vehicle-Hour .....	20.0	17.7	0.2	1.1	17.9
Revenue Vehicle-Mile .....	1.42	1.29	0.01	0.7	1.30
<b>Operating Costs, Revenues, and Subsidies</b>					
Expenses .....	\$3,357,800	\$4,040,400	\$38,200	0.9	\$4,078,600
Passenger and Other Revenues .....	756,100	897,900	17,000	1.9	914,900
Subsidy .....	2,601,700	3,142,500	21,200	0.7	3,163,700
Percent of Expenses Recovered through Operating Revenues .....	22.5	22.2	0.2	0.8	22.4
<b>Anticipated Sources of Public Subsidy</b>					
Federal .....	\$ 563,200	\$ 768,100	\$ 3,400	0.4	\$ 771,500
State .....	1,370,400	1,675,000	15,900	0.9	1,690,900
Local .....	668,100	699,400	1,900	0.3	701,300
<b>Capital Costs</b>					
Total Costs .....	\$1,313,700 <sup>b</sup>	\$3,336,400	\$2,000	0.1	\$3,338,400
<b>Anticipated Sources of Public Subsidy</b>					
Federal .....	1,031,900 <sup>b</sup>	2,694,900	1,600	0.1	2,696,500
State .....	16,000 <sup>b</sup>	11,200	--	--	11,200
Local .....	265,800 <sup>b</sup>	630,300	400	0.1	630,700

<sup>a</sup>The following assumptions were made in preparing the annual forecasts of ridership, revenues and costs:

1. All service changes proposed under Alternative 1 will be implemented in August 1998.
2. A 3.5 percent per year increase in operating expenses per unit of service.
3. The 10 percent fare increase in 2000, raising base adult cash fares from \$1.00 to \$1.10 per trip, will decrease annual system ridership by 3.3 percent. However, new ridership generated by the operation of the downtown circulator streetcar service will partially offset some the ridership loss resulting from the fare increase.
4. The 9 percent fare increase in 2002, raising base adult cash fares from \$1.10 to \$1.20 per trip, will decrease annual system ridership by 3.0 percent.
5. Federal funds used as operating assistance, including formula funds provided to cover operating expenses and the capital component of maintenance costs, and funds provided through the Congestion Mitigation and Air Quality (CMAQ) Improvement Program, will not keep pace with inflation and will decrease from about 23 percent of operating percent of operating costs in 1998 to about 16 percent of operating costs by 2002. Sufficient Federal capital assistance will be available to cover 80 percent of total capital project costs.
6. State operating assistance will be available to cover about 43 percent of operating expenses over the period. A limited amount of State oil overcharge funds will be available for the capital costs of the downtown circulator project.

<sup>b</sup>Average annual capital costs for the period 1993-1997.

Source: SEWRPC.

of Pleasant Prairie; it would enable the transit system to respond to existing, as well as future, development in these areas with appropriate services at reasonable cost. The routing changes needed to create the west-side transfer point would also eliminate service over many unproductive route segments while reducing indirect travel and increasing the convenience of using transit for transit patrons traveling to and from areas between 39th Avenue and Green Bay Road.

## **Alternative 2: Expanded Industrial Park Service**

### **Description**

This alternative includes all of the routing and service changes proposed under Alternative 1. Building upon those services, this alternative would also provide for an expansion of service to the major industrial employment centers in the study area lying west of Green Bay Road, including the following: the Kenosha Industrial Park, the Business Park of Kenosha, and the LakeView East portion of LakeView Corporate Park. The expansion would entail adding two new special industrial park routes, shown on Map 31, operating outside the existing weekday service hours of the transit system, and adding additional trips to Route No. 7 on Saturday and to Route No. 8 on both weekdays and Saturdays.

The need for additional transit service for these employment centers was suggested by representatives of the Kenosha business community who assisted in developing Kenosha County's Temporary Assistance to Needy Families (TANF) Employment Transportation Grant Proposal. The County's grant application proposes transit services designed to address service problems faced in placing individuals at outlying employment sites in the Kenosha area. The problems stem from the transit system's current weekday service hours of about 6:00 a.m. to 7:30 p.m. and the need for passengers to transfer between routes to reach jobs in the outlying industrial parks, conditions which would continue even with the changes recommended under Alternative 1. Consequently, even with the recommended service changes, 7:00 a.m. would be the earliest first-shift starting time which could be served. Second-shift starting times would be partially served during the afternoon peak period, but no service would be available in the evenings for second-shift ending times. On Saturdays, the only service available would be that provided during the midday over Route No. 7 to the Kenosha Industrial Park and the Business Park of Kenosha.

This alternative proposes a significant expansion of service to these industrial parks to address problems with serving first- and second-shift work times. The proposed services would be operated as an integral part of regular transit system operations. The additional services beyond those under Alternative 1 proposed under Alternative 2 would include of the following:

1. Two special weekday industrial park routes would be created to serve the specific shift change times at job concentrations in the Kenosha Industrial Park, at Business Park of Kenosha, and at the LakeView East portion of LakeView Corporate Park, which cannot be served by the Alternative 1 transit system. The routes would be operated to serve first-shift starting times of 6:00 and 6:30 a.m. and second-shift ending times of 11:00 p.m. and 12:00 midnight. Two morning trips and two late-evening trips would be operated over the route serving LakeView Corporate Park and one morning trip and one late-evening trip would be operated over the route serving the Kenosha Industrial Park and the Business Park of Kenosha. Within the central portion of the City of Kenosha, the routes would operate like the other regular routes, with frequent stops to pick up and drop off workers. Between the City and the targeted industrial parks, the routes would operate like express routes with limited stops or no stops. The suggested alignments for these routes, shown on Map 31, were developed to serve directly those areas with the highest concentrations of zero-auto and low-income households identified by 1990 census data. The alignments could be refined and customized to reflect concentrations of unemployed individuals, individuals placed in jobs by the Kenosha County Job Center, or employees at a particular employer. Although it was assumed that the routes would be operated with conventional buses already in the existing bus fleet, small buses or vans could also be used to provide the service.
2. Three additional bus trips would be added to Route No. 8 on weekday afternoons between 2:00 and 3:30 p.m. to serve the afternoon shift-change times of the largest employers in the LakeView East portion of LakeView Corporate Park. The anticipated weekday service levels on Route No. 7 would adequately serve afternoon shift-change times at employers in the Kenosha Industrial Park and in the Business Park of Kenosha. Limited Saturday service, with one morning outbound trip on Route No. 7 and one morning outbound trip and one afternoon inbound trip on Route No. 8, would also be added to provide some service for both regular and overtime shifts at the largest employers. Regular Saturday service on Route No. 7 would provide service for afternoon shift changes.

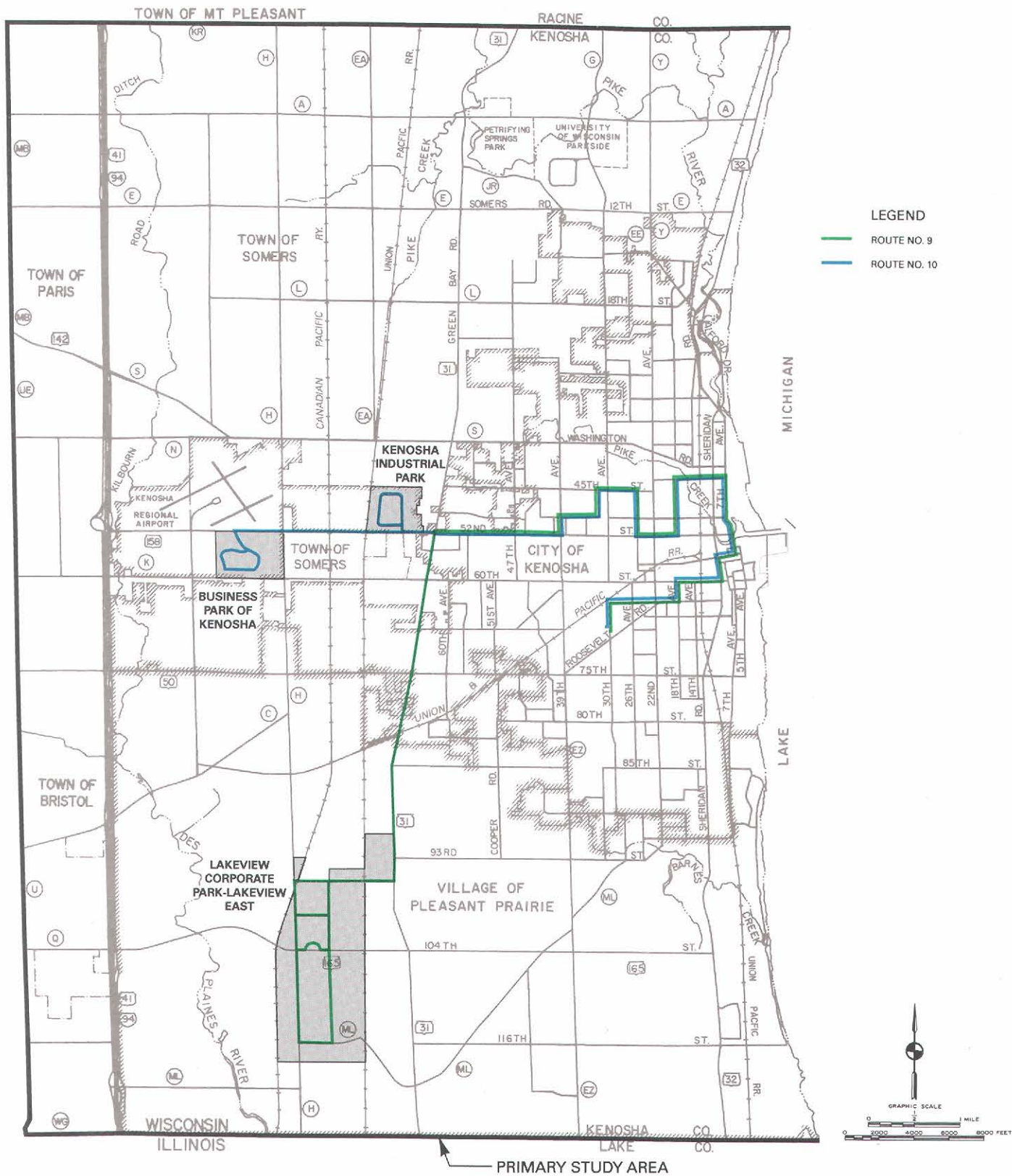
### ***Analysis of Expected Impacts on Service, Ridership, and Costs***

The changes in the route-miles and vehicle requirements from the system recommended under Alternative 1 to the Alternative 2 system are presented in Table 64. The anticipated average annual ridership, operating characteris-



# Map 31

## NEW INDUSTRIAL PARK ROUTES PROPOSED UNDER ALTERNATIVE 2



Source: SEWRPC.

Table 64

**CHANGE IN ROUND-TRIP ROUTE MILES AND VEHICLE REQUIREMENTS  
FOR THE KENOSHA TRANSIT SYSTEM UNDER ALTERNATIVE 2**

Characteristic	Under Recommended Alternative 1 System	Change		Under Alternative 2 System
		Number	Percent	
<b>Number of Routes</b>				
Regular Bus Routes .....	8	2	25.0	10
Peak-Hour Tripper Bus Routes .....	11	--	--	11
Circulator Route .....	1	--	--	1
<b>Total</b>	<b>20</b>	<b>2</b>	<b>10.0</b>	<b>22</b>
<b>Round Trip Route-Miles</b>				
Regular Bus Routes				
Route Nos. 1-8 .....	219.9	--	--	219.9
Route No. 9 .....	--	24.8	--	24.8
Route No. 10 .....	--	29.6	--	29.6
Subtotal	219.9	54.4	24.7	274.3
Peak-Hour Tripper Bus Routes .....	269.0	--	--	269.0
Circulator Route .....	1.7 <sup>a</sup>	--	--	1.7
<b>Total</b>	<b>490.6</b>	<b>54.4</b>	<b>11.1</b>	<b>545.0</b>
<b>Vehicle Requirements</b>				
Buses				
Weekdays				
Peak periods .....	35-39 <sup>b</sup>	--	--	35-39
Middays .....	12	--	--	12
Saturdays .....	12	--	--	12
Streetcars				
Weekdays .....	1	--	--	1
Saturdays and Sundays .....	1	--	--	1
Holidays and Special Events .....	1-4	--	--	1-4

<sup>a</sup>Refers to miles of directional trackage.

<sup>b</sup>During the school year, 35 buses would be needed to provide weekday peak service under Alternative 1 except on Wednesdays, when four extra buses would be required to accommodate early dismissal times.

Source: SEWRPC.

tics, costs and revenues for transit system from 1998 through 2002 connected with implementation of the industrial park services proposed under Alternative 2 are compared with the forecasts for the Alternative 1 system in Table 65, while detailed annual forecasts of this information for the Alternative 2 system are provided in Appendix B. The forecasts are predicated upon the basic assumptions and

determinations presented in Table 59. The forecasts also assume that implementation of the new industrial park services would not occur until January 1, 1999, to enable the additional costs to be incorporated into the transit system's 1999 operating budget and in applications for Federal and State operating assistance. The cost forecasts assume that the City would obtain a Federal CMAQ grant to fund

Table 65

**AVERAGE ANNUAL RIDERSHIP, SERVICE LEVELS, AND COSTS FOR THE KENOSHA  
TRANSIT SYSTEM WITH THE CHANGES PROPOSED UNDER ALTERNATIVE 2: 1998-2002**

Operating Characteristic	1997 Estimated	Forecast Average Annual: 1998-2002 <sup>a</sup>			
		With Changes Recommended under Alternative 1	Difference		With Changes Proposed under Alternative 2
			Number	Percent	
<b>Service</b>					
Revenue Vehicle-Hours of Service .....	67,700	80,400	1,600	2.0	82,000
Revenue Vehicle-Miles of Service .....	952,000	1,110,200	31,200	2.8	1,141,400
<b>Ridership</b>					
Total System Revenue Passengers .....	1,356,400	1,440,400	20,600	1.4	1,461,000
Revenue Passengers per Revenue Vehicle-Hour .....	20.0	17.9	-0.1	-0.5	17.8
Revenue Vehicle-Mile .....	1.42	1.30	-0.02	-1.34	1.28
<b>Operating Costs, Revenues, and Subsidies</b>					
Expenses .....	\$3,357,800	\$4,078,600	\$99,900	2.4	\$4,178,500
Passenger and Other Revenues .....	756,100	914,900	12,700	1.4	927,600
Subsidy .....	2,601,700	3,163,700	87,200	2.8	3,250,900
Percent of Expenses Recovered through Operating Revenues .....	22.5	22.4	-0.2	-0.9	22.2
<b>Anticipated Sources of Public Subsidy</b>					
Federal .....	\$ 563,200	\$ 771,500	\$52,400	6.8	\$ 823,900
State .....	1,370,400	1,690,900	16,400	1.0	1,707,300
Local .....	668,100	701,300	18,400	2.6	719,700
<b>Capital Costs</b>					
Total Costs .....	\$1,313,700 <sup>b</sup>	\$3,338,400	--	--	\$3,338,400
<b>Anticipated Sources of Public Subsidy</b>					
Federal .....	1,031,900 <sup>b</sup>	2,696,500	--	--	2,696,500
State .....	16,000 <sup>b</sup>	11,200	--	--	11,200
Local .....	265,800 <sup>b</sup>	630,700	--	--	630,700

<sup>a</sup>The following assumptions were made in preparing the annual forecasts of ridership, revenues and costs:

1. All service changes proposed under Alternative 2 will be implemented January 1, 1999.
2. A 3.5 percent per year increase in operating expenses per unit of service.
3. The 10 percent fare increase in 2000, raising base adult cash fares from \$1.00 to \$1.10 per trip, will decrease annual system ridership by 3.3 percent. However, new ridership generated by the operation of the downtown circulator streetcar service will partially offset some the ridership loss resulting from the fare increase.
4. The 9 percent fare increase in 2002, raising base adult cash fares from \$1.10 to \$1.20 per trip, will decrease annual system ridership by 3.0 percent.
5. Federal funds used as operating assistance, including formula funds provided to cover operating expenses and the capital component of maintenance costs, and funds provided through the Congestion Mitigation and Air Quality (CMAQ) Improvement Program, will not keep pace with inflation and will decrease from about 23 percent of operating percent of operating costs in 1998 to about 15 percent of operating costs by 2002. Sufficient Federal capital assistance will be available to cover 80 percent of total capital project costs.
6. State operating assistance will be available to cover about 43 percent of operating expenses over the period. A limited amount of State oil overcharge funds will be available for the capital costs of the downtown circulator project.

<sup>b</sup>Average annual capital costs for the period 1993-1997.

Source: SEWRPC.

the special service for three years through 2001,<sup>4</sup> after which the service would be funded through the existing Federal and State transit operating assistance programs and with City funds. The following observations should be made concerning the information presented in these tables:

- As a result of creating the new Route Nos. 9 and 10, round-trip route-miles for the regular routes of the system would increase, under Alternative 2, to about 274 miles, or by about 25 percent, from the 220 route-miles recommended under Alternative 1. Most of the new route-miles would, however be on streets already served by other regular routes during other times of the day.
- With the operation of the proposed new industrial park routes on weekdays, along with the additional service provided on Route Nos. 7 and 8, the transit system would provide about 82,000 revenue vehicle-hours and about 1,141,400 revenue vehicle-miles of service annually. This would represent increases of about 1,600 vehicle-hours and 31,200 vehicle-miles, or between 2 and 3 percent, over the service levels recommended under Alternative 1. The new routes would not increase system vehicle requirements because service would be operated outside the current service hours of the system when the entire bus fleet could be drawn upon.
- With the proposed changes, the transit system may be expected to carry about 1,461,000 revenue passengers annually, an increase of about 20,600 passengers, or about 1 percent, over the recommended Alternative 1

system. The principal reason for the forecast increase in ridership would be the extension of service to new jobs with shift times outside the current service hours of the transit system.

- The total cost of providing transit service for the system proposed under Alternative 2 would be about \$7,516,900 annually, including about \$4,178,500, or about 56 percent, for service operation and about \$3,338,400, or about 44 percent, for capital projects. Of this total, about \$927,600, or about 12 percent, may be expected to be recovered by operating revenues. The total required average annual operating and capital subsidies would approximate \$6,589,300.
- The total average annual costs for the Alternative 2 system would be about \$99,900, or about 2 percent, higher than for the recommended Alternative 1 transit system. All these additional costs would be for service operation, because no additional capital projects above those proposed under Alternative 1 are envisioned. On a per trip basis, the total additional operating costs would amount to about \$4.85 per incremental trip. This would be approximately 71 percent more than the average operating cost per trip of \$2.83, but about 6 percent less than the average total cost per trip of \$5.15, for the recommended Alternative 1 system.
- Federal and State funds totaling over \$5,238,900 may be expected to be available to cover about 70 percent of the total operating and capital costs and about 80 percent of the total required subsidy. About \$1,350,400, representing about 18 percent of the total costs and about 20 percent of the required subsidy, would have to be provided by the City of Kenosha. The City's share of total annual system costs under Alternative 2 would increase by about \$18,400, or by about 1 percent, over its share with the recommended Alternative 1 transit system.

---

<sup>4</sup>At the time the transit service alternatives were under review by the study Advisory Committee, Kenosha County had an application pending for approximately \$87,400 in State TANF employment transportation assistance funds to provide transit services to link job seekers with employers. The approximately \$3 million in TANF funds available statewide were to be distributed on a competitive basis among applicant agencies for the Wisconsin Works, or "W-2," welfare replacement program. Given the potential need for such funds for employment transportation services in the greater Milwaukee area for the substantial number of unemployed individuals residing in Milwaukee County, and the past success which the City of Kenosha has had in obtaining Federal CMAQ funds for transit service improvements, it was assumed that the employment transit services proposed under Alternative 2 would have a better chance for funding through the Federal CMAQ Program. It was assumed that if the County's State TANF grant was approved, the funds would be used to supplement the Federal CMAQ funds.

### **Recommendation**

The special industrial park services proposed under Alternative 2 are recommended by the Commission's staff to be included in the final system plan, provided that Federal CMAQ and/or State TANF funds are made available for operation of the services on a demonstration basis. This recommendation recognizes that the additional services would enable the transit system to improve access to jobs at the largest employment centers in the study area. This could prove to be a valuable service to the local community given reforms being pursued in the current welfare system requiring welfare recipients to work to retain eligibility for benefits. At the same time, the forecast per trip costs of the

additional services indicate the services would not be among the systems best performers. Operation of the services on a trial basis with the Federal or State funds potentially available would allow the City of test the services for a reasonable period while minimizing local costs.

### **Alternative 3: Expanded Weekday Service Hours for Regular Bus Routes**

#### **Description**

This alternative includes all the routing and service changes proposed under Alternatives 1 and 2. Building upon those services, this alternative would also provide for the expansion of the current weekday service hours of the system's regular routes to include both early-morning and evening hours. These actions would be undertaken principally to provide better service to job sites in the portion of the City lying east of Green Bay Road by enabling the system to improve service to first-shift starting times and to begin serving second shift ending times.

The additional service over Alternatives 1 and 2 proposed under Alternative 3 would include of the following major elements:

1. Early-morning bus service on weekdays would be added on Route Nos. 1 through 6 by moving up the starting time for service from 5:55 a.m. to 5:25 a.m., extending the service day by one-half hour and adding one round trip to the schedule for each route. Early-morning service would be provided at 30-minute headways, with one additional pulse time at 5:55 a.m. provided at the central transfer terminal in downtown Kenosha. The additional service would allow individuals residing anywhere in the service area of these routes to use the transit system to access jobs with 6:30 a.m. shift-start times. Individuals with 6:00 a.m. shift-start times could also use the system if their residence and job were both along the same route.
2. Evening bus service on weekdays would be added on Route Nos. 1 through 5 by extending the service from about 7:30 p.m. to about 12:00 midnight, some four and one-half hours. Evening service would be provided at 60-minute headways. The existing schedules which provide for buses to meet at the downtown transfer terminal on the hour at 6:00 and 7:00 p.m. would be adjusted so that buses would meet on the half-hour beginning at 6:30 p.m. This adjustment would bring workers with shift-change times on the hour inbound to the central transfer terminal to transfer to other routes. The proposed evening service schedule would provide for six pulse times at the central transfer terminal in downtown

Kenosha, with buses departing from downtown for the last time at 11:30 p.m.

3. Weekday service over Route Nos. 7, 8, and 10 would be modestly adjusted in response to the earlier starting time for Route Nos. 1 through 6. Because the earlier starting time would move up the first arrival time for the routes serving the west-side transfer point by 30 minutes, from 6:55 a.m. to 6:25 a.m., the bus trips on Route Nos. 7 and 8 which would have departed from the central transfer terminal in downtown Kenosha at 6:25 a.m. would thus depart from the west-side transfer point instead. The additional 5:55 a.m. pulse time at the common transfer terminal for Route Nos. 1 through 6 would eliminate the need for the second morning outbound trip on Route No. 10, which would be replaced by one additional bus trip operated over Route No. 8, departing from downtown Kenosha at 5:55 a.m. The proposed early-morning and evening service would not affect the operation of Route No. 9.

#### ***Analysis of Expected Impacts on Service, Ridership, and Costs***

The system proposed under Alternative 3 would have the same number of route-miles and the same vehicle requirements for the system recommended under Alternative 2 as presented in Table 64. The anticipated average annual ridership, operating characteristics, costs and revenues for the transit system from 1998 through 2002, assuming implementation of the extended service hours proposed under Alternative 3, are compared with the forecasts for the Alternative 2 system in Table 66, while detailed annual forecasts of this information for the Alternative 3 system are provided in Appendix B. The forecasts are predicated upon the basic assumptions and determinations presented in Table 59. The forecasts also assume the extended service hours would not be implemented until January 1, 1999, to enable the additional costs to be incorporated into the transit systems 1999 operating budget and into applications for Federal and State operating assistance. The cost forecasts assume that the City would obtain a Federal CMAQ grant to fund the extended weekday service hours for three years through 2001, after which the service would be funded through the existing Federal and State transit operating assistance programs and with City funds. The following observations should be made concerning the information presented in these tables:

- With the proposed expanded weekday service hours, the transit system would provide about 94,500 revenue vehicle-hours and about 1,320,400 revenue vehicle-miles of service annually. This would represent increases of about 12,500 vehicle-hours and 179,000 vehicle-miles, or between 15 and 16 percent,



Table 66

**AVERAGE ANNUAL RIDERSHIP, SERVICE LEVELS, AND COSTS FOR THE KENOSHA  
TRANSIT SYSTEM WITH THE CHANGES PROPOSED UNDER ALTERNATIVE 3: 1998-2002**

Operating Characteristic	1997 Estimated	Forecast Average Annual: 1998-2002 <sup>a</sup>			
		With Changes Recommended under Alternative 2	Difference		With Changes Proposed under Alternative 3
			Number	Percent	
<b>Service</b>					
Revenue Vehicle-Hours of Service .....	67,700	82,000	12,500	15.2	94,500
Revenue Vehicle-Miles of Service .....	952,000	1,141,400	179,000	15.7	1,320,400
<b>Ridership</b>					
Total System Revenue Passengers .....	1,356,400	1,461,000	66,400	4.5	1,527,400
Revenue Passengers per Revenue Vehicle-Hour .....	20.0	17.8	-1.7	-9.3	16.2
Revenue Vehicle-Mile .....	1.42	1.28	-0.12	-9.63	1.16
<b>Operating Costs, Revenues, and Subsidies</b>					
Expenses .....	\$3,357,800	\$4,178,500	\$555,400	13.3	\$4,733,900
Passenger and Other Revenues .....	756,100	927,600	41,000	4.4	968,600
Subsidy .....	2,601,700	3,250,900	514,400	15.8	3,765,300
Percent of Expenses Recovered through Operating Revenues .....	22.5	22.2	-1.7	-7.7	20.5
<b>Anticipated Sources of Public Subsidy</b>					
Federal .....	\$ 563,200	\$ 823,900	\$308,200	37.4	\$1,132,100
State .....	1,370,400	1,707,300	93,100	5.5	1,800,400
Local .....	668,100	719,700	113,100	15.7	832,800
<b>Capital Costs</b>					
Total Costs .....	\$1,313,700 <sup>b</sup>	\$3,338,400	--	--	\$3,338,400
<b>Anticipated Sources of Public Subsidy</b>					
Federal .....	1,031,900 <sup>b</sup>	2,696,500	--	--	2,696,500
State .....	16,000 <sup>b</sup>	11,200	--	--	11,200
Local .....	265,800 <sup>b</sup>	630,700	--	--	630,700

<sup>a</sup>The following assumptions were made in preparing the annual forecasts of ridership, revenues and costs:

1. All service changes proposed under Alternative 3 will be implemented January 1, 1999.
2. A 3.5 percent per year increase in operating expenses per unit of service.
3. The 10 percent fare increase in 2000, raising base adult cash fares from \$1.00 to \$1.10 per trip, will decrease annual system ridership by 3.3 percent. However, new ridership generated by the operation of the downtown circulator streetcar service will partially offset some the ridership loss resulting from the fare increase.
4. The 9 percent fare increase in 2002, raising base adult cash fares from \$1.10 to \$1.20 per trip, will decrease annual system ridership by 3.0 percent.
5. Federal funds used as operating assistance, including formula funds provided to cover operating expenses and the capital component of maintenance costs, and funds provided through the Congestion Mitigation and Air Quality (CMAQ) Improvement Program, will not keep pace with inflation and will decrease from about 23 percent of operating percent of operating costs in 1998 to about 15 percent of operating costs by 2002. Sufficient Federal capital assistance will be available to cover 80 percent of total capital project costs.
6. State operating assistance will be available to cover about 43 percent of operating expenses over the period. A limited amount of State oil overcharge funds will be available for the capital costs of the downtown circulator project.

<sup>b</sup>Average annual capital costs for the period 1993-1997.

Source: SEWRPC.

over the annual service levels with the recommended Alternative 2 system.

- The transit system including the proposed extended weekday service hours would be expected to carry about 1,527,400 revenue passengers annually, representing an increase of about 66,400 revenue passengers, or almost 5 percent, over the recommended Alternative 2 system. However, the number of passengers carried per vehicle-hour and per vehicle-mile of service would decrease by between 9 and 10 percent. This would be expected given that during the early-morning and late-evening periods, the number of passengers per vehicle-hour and per vehicle-mile would be only about one-third of daytime levels.
- The total cost of providing transit service for the system with the extended service hours proposed under Alternative 3 would be about \$8,072,300 annually, including about \$4,733,900, or about 59 percent, for service operation and about \$3,338,400, or about 41 percent, for capital projects. Of this total, about \$968,600, or about 12 percent, would be expected to be recovered by operating revenues. The total required average annual operating and capital subsidies would approximate \$7,103,700.
- The total average annual costs for the Alternative 3 system would be about \$555,400, or about 7 percent, higher than for the recommended Alternative 2 transit system. All these additional costs would be for service operation, as no additional capital projects from those proposed under Alternative 1 are envisioned. On an incremental per trip basis, the total additional operating costs would amount to about \$8.36 per incremental trip. This would be nearly three times the average operating cost per trip of \$2.86, and about 62 percent more than the average total cost per trip of about \$5.15, for the recommended Alternative 2 system.
- Federal and State funds totaling over \$5,640,300 would be expected to be available to cover about 70 percent of the total operating and capital costs and about 79 percent of the total required subsidy. About \$1,463,500, representing about 18 percent of the total costs and about 21 percent of the required subsidy, would have to be provided by the City of Kenosha. The City's share of total annual system costs under Alternative 3 would increase by about \$113,100, or by about 8 percent, over its share with the recommended Alternative 2 transit system.

### ***Recommendation***

The expansion of weekday service hours proposed under Alternative 3 are not recommended by Commission staff to be included in the final system plan. While the longer service day would enable the transit system to improve access to jobs and services throughout the most densely developed portions of the City, the additional service proposed under Alternative 3 would be very inefficient in comparison to the services previously recommended under Alternatives 1 and 2. The additional service proposed under Alternative 3 would be expected to carry about five passengers per revenue vehicle-hour, at an incremental operating cost of about \$8.36 per incremental trip, and recover about 7 percent of its incremental costs through passenger revenues. This compares with about 13 passengers per revenue vehicle-hour, an incremental operating cost of about \$4.85 per incremental trip, and a farebox recovery rate of about 13 percent for the additional services recommended under Alternative 2 and about 40 passengers per revenue vehicle-hour, an incremental operating cost of about \$1.37 per incremental trip, and a farebox recovery rate of about 45 percent for the additional services recommended under Alternative 1.

### **Alternative 4: Reduced Weekday Midday Operating Headways for Regular Bus Routes**

#### ***Description***

This alternative includes all of the routing and service changes proposed under Alternatives 1 and 2. Building upon those services, Alternative 4 also proposes that the 60-minute headways operated on Route Nos. 1 through 6 between 8:30 a.m. and 2:00 p.m. on weekdays be reduced to 30 minutes. This action would result in shorter waiting times for bus service and would make it more convenient to use transit service in the portion of the City lying east of Green Bay Road.

#### ***Analysis of Expected Impacts on Service, Ridership, and Costs***

The system proposed under Alternative 4 would have the same route-miles and vehicle requirements as the system recommended under Alternative 2 as presented in Table 64. The anticipated average annual ridership, operating characteristics, costs and revenues for the transit system from 1998 through 2002, assuming implementation of the reduced midday headways proposed under Alternative 4, are compared with the forecasts for the Alternative 2 system in Table 67. Detailed annual forecasts of this information for the Alternative 4 system are provided in Appendix B. The forecasts are predicated upon the basic assumptions and determinations presented in Table 59. The forecasts also assume the reductions in midday headways would not be implemented until January 1, 1999, to enable the additional

Table 67

**AVERAGE ANNUAL RIDERSHIP, SERVICE LEVELS, AND COSTS FOR THE KENOSHA  
TRANSIT SYSTEM WITH THE CHANGES PROPOSED UNDER ALTERNATIVE 4: 1998-2002**

Operating Characteristic	1997 Estimated	Forecast Average Annual: 1998-2002 <sup>a</sup>			
		With Changes Recommended under Alternative 2	Difference		With Changes Proposed under Alternative 4
			Number	Percent	
<b>Service</b>					
Revenue Vehicle-Hours of Service .....	67,700	82,000	12,400	15.1	94,400
Revenue Vehicle-Miles of Service .....	952,000	1,141,400	178,200	15.6	1,319,600
<b>Ridership</b>					
Total System Revenue Passengers .....	1,356,400	1,461,000	97,800	6.7	1,558,800
Revenue Passengers per Revenue Vehicle-Hour .....	20.0	17.8	-1.3	-7.3	16.5
Revenue Vehicle-Mile .....	1.42	1.28	-0.10	-7.71	1.18
<b>Operating Costs, Revenues, and Subsidies</b>					
Expenses .....	\$3,357,800	\$4,178,500	\$498,800	11.9	\$4,677,300
Passenger and Other Revenues .....	756,100	927,600	61,200	6.6	988,800
Subsidy .....	2,601,700	3,250,900	437,600	13.5	3,688,500
Percent of Expenses Recovered through Operating Revenues .....	22.5	22.2	-1.1	-5.0	21.1
<b>Anticipated Sources of Public Subsidy</b>					
Federal .....	\$ 563,200	\$ 823,900	\$263,000	31.9	\$1,086,900
State .....	1,370,400	1,707,300	82,000	4.8	1,789,300
Local .....	668,100	719,700	92,600	12.9	812,300
<b>Capital Costs</b>					
Total Costs .....	\$1,313,700 <sup>b</sup>	\$3,338,400	--	--	\$3,338,400
<b>Anticipated Sources of Public Subsidy</b>					
Federal .....	1,031,900 <sup>b</sup>	2,696,500	--	--	2,696,500
State .....	16,000 <sup>b</sup>	11,200	--	--	11,200
Local .....	265,800 <sup>b</sup>	630,700	--	--	630,700

<sup>a</sup>The following assumptions were made in preparing the annual forecasts of ridership, revenues and costs:

1. All service changes proposed under Alternative 3 will be implemented January 1, 1999.
2. A 3.5 percent per year increase in operating expenses per unit of service.
3. The 10 percent fare increase in 2000, raising base adult cash fares from \$1.00 to \$1.10 per trip, will decrease annual system ridership by 3.3 percent. However, new ridership generated by the operation of the downtown circulator streetcar service will partially offset some the ridership loss resulting from the fare increase.
4. The 9 percent fare increase in 2002, raising base adult cash fares from \$1.10 to \$1.20 per trip, will decrease annual system ridership by 3.0 percent.
5. Federal funds used as operating assistance, including formula funds provided to cover operating expenses and the capital component of maintenance costs, and funds provided through the Congestion Mitigation and Air Quality (CMAQ) Improvement Program, will not keep pace with inflation and will decrease from about 23 percent of operating percent of operating costs in 1998 to about 15 percent of operating costs by 2002. Sufficient Federal capital assistance will be available to cover 80 percent of total capital project costs.
6. State operating assistance will be available to cover about 43 percent of operating expenses over the period. A limited amount of State oil overcharge funds will be available for the capital costs of the downtown circulator project.

<sup>b</sup>Average annual capital costs for the period 1993-1997.

Source: SEWRPC.

costs to be incorporated into the transit system's 1999 operating budget and applications for Federal and State operating assistance. The costs assume that the City would obtain a Federal CMAQ grant to fund the additional service for three years through 2001, after which the service would be funded through the existing Federal and State transit operating assistance programs and with City funds. The following observations should be made concerning the information presented in these tables:

- With the reduced weekday midday headways, the transit system would provide about 94,400 revenue vehicle-hours and about 1,319,600 revenue vehicle-miles of service annually. This would represent increases of about 12,400 vehicle-hours and 178,200 vehicle-miles, or between 15 and 16 percent, over the annual service levels with the recommended Alternative 2 system.
- With the extended weekday service hours, the transit system would be expected to carry about 1,558,800 revenue passengers annually, representing an increase of about 97,800 revenue passengers, or about 7 percent, over the recommended Alternative 2 system. However, the number of passengers carried per vehicle-hour and per vehicle-mile of service would decrease by between 7 and 8 percent. This would be expected, given the fact that the additional midday ridership per incremental vehicle-hour and vehicle-mile of service would be about one-half the average for the existing midday service.
- The total cost of providing the services proposed under Alternative 4 would be about \$8,015,700 annually, including about \$4,677,300, or about 58 percent, for service operation and about \$3,338,400, or about 42 percent, for capital projects. Of this total, about \$988,800, or about 12 percent, would be expected to be recovered by operating revenues. The total required average annual operating and capital subsidies would approximate \$7,026,900.
- The total average annual costs for the Alternative 4 system would be about \$498,800, or about 6 percent, higher than for the recommended Alternative 2 transit system. All these additional costs would be for service operation, because no additional capital projects from those proposed under Alternative 1 are envisioned. On an incremental per trip basis, the total additional operating costs would amount to about \$5.10 per incremental trip. This would be about 78 percent above the average operating cost per trip of \$2.86, but about the same as the average total cost

per trip of about \$5.15 for the recommended Alternative 2 system.

- Federal and State funds totaling over \$5,583,400 would be expected to be available to cover about 70 percent of the total operating and capital costs and about 79 percent of the total required subsidy. About \$1,443,000, representing about 18 percent of the total costs and about 21 percent of the required subsidy, would have to be provided by the City of Kenosha. The City's share of total annual system costs under Alternative 4 would increase by about \$92,600, or by about 7 percent, over its share with the recommended Alternative 2 transit system.

### ***Recommendation***

The reduction of weekday midday headways on Route Nos. 1 through 6 proposed under Alternative 4 is not recommended by Commission staff to be included in the final system plan. The additional service would increase the convenience of using transit service during the midday offpeak period and would be expected to have a similar incremental cost per trip to the special industrial park services which have been previously recommended. The absolute amount of additional local subsidy required would also be relatively modest, averaging about \$92,600 per year, or about 7 percent more than with the recommended Alternative 2 transit system. However, the estimated additional average annual local subsidy, reflects Federal CMAQ funding to cover 80 percent of the operating deficit for the additional midday service during its first three years of operation from 1999 through 2001. In 2002, after the CMAQ demonstration period has ended, the service would be subject to the Federal and State assistance levels provided for under existing operating assistance programs. At that time, the total local operating subsidy for the transit system would be expected to increase by about \$279,200, or about 29 percent, from about \$961,100 under the recommended Alternative 2 transit system to about \$1,240,300 with the Alternative 4 transit system (see Tables B-5 and B-7 in Appendix B). The Commission staff recommendation not to implement the more frequent weekday midday service proposed under Alternative 4 was based on this substantial increase in local funding, which would ultimately need to be borne by City taxpayers.

## **ADVISORY COMMITTEE RECOMMENDATIONS**

Following careful review of the alternative local transit service improvements, the Kenosha Area Public Transit Planning Advisory Committee, unanimously concurred with the Commission staff recommendations calling for

implementation of the restructuring of local bus routes proposed under Alternative 1 and the operation of new industrial park routes proposed under Alternative 2. The Committee also concurred with the Commission staff recommendation not to implement the expansion of weekday service hours into early morning and evening periods proposed under Alternative 3.

With respect to the reduction of headways during weekday midday periods proposed under Alternative 4, the Committee chose to modify the Commission staff recommendation opposing implementation of the headway reductions, determining that the plan should reflect implementation of the headway reductions no sooner than January 2001, rather than in January 1999, as originally proposed. While recognizing the significant local costs associated with this service change, the Committee supported the overall improvement in the convenience of using transit service which would result from reducing midday headways and cited the success of recent headway reductions during the afternoon peak period in generating additional ridership on the transit system. The Committee, therefore, believed that the plan should not totally foreclose on the option of reducing weekday midday headways at sometime during of the planning period.

## SUMMARY

This chapter has described a set of four transit service improvement alternatives for the primary study area considered in the preparation of a new transit system development plan for the Kenosha transit system. Each alternative was evaluated in terms of its anticipated operating characteristics, ridership, costs, and revenues over the five-year planning period from 1998 through 2002. Commission staff recommendations pertaining to each alternative were then made to the Advisory Committee.

### Existing and Committed Transit System

To serve as a baseline for the transit service improvement alternatives, an existing and committed Kenosha transit system was defined which included service changes, improvements, and capital projects to which the City has made a reasonable commitment for their continued operation or implementation. These existing and committed services and projects included:

- The bus routes, service levels, and service periods of the existing transit system operated as of January 1, 1998.
- The expanded weekday afternoon service on Route Nos. 1 through 6 which was implemented on a trial basis in August 1997.

- A new electric circulator streetcar line, to serve the Kenosha CBD and the Harborpark area, to be constructed in 1998 and 1999 as part of the Harborpark plan for the redevelopment of the Kenosha lakefront.
- The relocation of the common transfer point for the regular routes of the transit system in the Kenosha CBD from its current location on 56th Street between 7th and 8th Avenues to a new terminal facility located on the north side of 54th Street between 6th and 8th Avenues.

The existing and committed transit system would be expected to carry about 1,412,600 revenue passengers annually, or about 4 percent more than the estimated 1997 level of 1,356,400 revenue passengers. The total cost of providing transit service, including the operating and capital costs of both bus service and the proposed downtown circulator streetcar line, would be expected to be about \$7,376,800 annually, of which about \$4,040,400, or about 55 percent, would be for service operation and about \$3,336,400, or about 45 percent, would be for capital projects. About \$1,329,700 would have to be provided annually by the City of Kenosha, of which about \$699,400, or about 53 percent, would be for service operation and about \$630,300, or about 47 percent, would be for capital projects.

### Alternative 1

Alternative 1 proposed routing and service changes affecting seven of the eight regular City bus routes to facilitate improved service delivery and expansion of service into new areas. The proposed changes included the following:

- Alignment changes for all regular routes except Route No. 1 to create a new west-side transfer point at the site of the new Kenosha high school, Indian Trail Academy, near 60th Street and 68th Avenue, with the new transfer point to be served by all regular routes except Route No. 1.
- Alignment changes at the north end of Route No. 4 to provide for more logical route operation.
- Alignment and service changes for Route Nos. 7 and 8 to extend or expand service to developing areas west of Green Bay Road, including the Business Park of Kenosha, the White Caps residential development, two proposed facilities for the elderly in the Village of Pleasant Prairie, and the LakeView East portion of LakeView Corporate Park south of 104th Street.



With the proposed changes, the transit system would be expected to carry about 1,440,400 revenue passengers annually, an increase of about 27,800 passengers, or about 2 percent, over the ridership under the existing and committed system. The total operating and capital costs for the system proposed under Alternative 1 would be about \$7,417,000 annually, an increase of about \$40,200, or less than 1 percent, over the average annual costs of the existing and committed system. The City's share of the average annual costs would be about \$1,332,000, or about the same as under the existing and committed transit system.

The routing and service changes proposed under Alternative 1 were recommended by Commission staff to be included in the final system plan. This recommendation recognized that the proposed west-side transfer point would facilitate the extension of bus service to developing areas lying west of Green Bay Road in both the City of Kenosha and the Village of Pleasant Prairie while reducing indirect travel and increasing the convenience of using transit for transit patrons traveling to and from locations east of Green Bay Road between 39th Avenue and Green Bay Road.

### **Alternative 2**

Alternative 2 included all the routing and service changes recommended under Alternative 1 and proposed an expansion of service for major industrial employers in the Kenosha Industrial Park, the Business Park of Kenosha, and the LakeView East portion of LakeView Corporate Park. The service expansion would address problems associated with serving first- and second-shift jobs at these centers which have starting and ending times which cannot be served with the existing operating hours of the transit system. The additional services would initially be funded as a Federal Congestion Mitigation and Air Quality Improvement (CMAQ) Program demonstration project from 1999 through 2001, after which time existing Federal and State transit operating assistance programs and City funds would provide the necessary operating subsidy. The proposed changes included:

- Creating two special weekday industrial park routes, Route Nos. 9 and 10, to be operated to serve first-shift starting times of 6:00 and 6:30 a.m. and second-shift ending times of 11:00 p.m. and 12:00 midnight at places of employment in the outlying areas. These routes would operate like the other regular routes with frequent stops to pick up and drop off workers in the central portion of the City of Kenosha and operate like express routes with limited or no stops, between the City and the targeted industrial park.
- Addition of bus trips on Route No. 8 on weekdays afternoons and on Route Nos. 7 and 8 on Saturdays.

With these proposed changes, the transit system would be expected to carry about 1,461,000 revenue passengers annually, an increase of about 20,600 passengers, or about 1 percent, over the recommended Alternative 1 system. The total operating and capital costs of providing transit service under Alternative 2 would be about \$7,516,900 annually, an increase of about \$99,900, or about 2 percent, over the average annual costs of the recommended Alternative 1 system. The City's share of the average annual costs would be about \$1,350,400, an increase of about \$18,400, or about 1 percent, over its share under Alternative 1.

The routing and service changes proposed under Alternative 2 were recommended by Commission staff to be included in the final system plan, provided that Federal CMAQ and/or State Temporary Assistance to Needy Families (TANF) Employment Transportation Program funds would be made available for operation of the services on a demonstration basis. This recommendation recognized that the additional services proposed under Alternative 2 would not be among the systems best performers, because they would be expected to have an incremental operating cost of about \$4.85 per incremental trip, compared with a system average operating cost of about \$2.83 per trip under Alternative 1. However, because they would provide a valuable service to individuals seeking work, the operation of the services on a trial basis, using Federal and/or State funds, was recommended so as to allow the City to test the services for a reasonable period while minimizing local costs.

### **Alternative 3**

Alternative 3 included all the routing and service changes recommended under Alternatives 1 and 2 and also proposed the expansion of the current weekday service hours of the system's regular routes to include early-morning and evening service. This expansion would enable the transit system to serve first-shift starting times better and to begin serving second-shift ending times at locations in that portion of the City lying east of Green Bay Road. The expanded service hours would initially be funded as a Federal CMAQ demonstration project from 1999 through 2001, after which time existing Federal and State transit operating assistance programs and City funds would provide the necessary operating subsidy. The proposed changes included the following:

- Adding early-morning weekday bus service to Route Nos. 1 through 6 by moving up the starting time for service from 5:55 a.m. to 5:25 a.m., extending the service day by one-half hour. Weekday service over Route Nos. 7, 8, and 10 would be modestly adjusted in response to the earlier starting time for Route Nos. 1 through 6.

- Adding evening bus service on weekdays to Route Nos. 1 through 5 by moving the end of service from about 7:30 p.m to about 12:00 midnight, extending the service day by four and one-half hours.

With the proposed changes, the transit system would be expected to carry about 1,527,400 revenue passengers annually, an increase of about 66,400 passengers, or almost 5 percent, over the recommended Alternative 2 system. The total operating and capital costs of providing transit service under Alternative 3 would be about \$8,072,300 annually, an increase of about \$555,400, or about 7 percent, over the average annual costs of the recommended Alternative 2 system. The City's share of the average annual costs would be about \$1,463,500, an increase of about \$113,100, or about 8 percent, over its share under Alternative 2.

The service changes proposed under Alternative 3 were not recommended by Commission staff to be included in the final system plan. This recommendation recognized that the expanded weekday service proposed under Alternative 3 would be very inefficient in comparison to the services previously recommended under Alternatives 1 and 2. The additional service proposed under Alternative 3 would be expected to have an incremental operating cost of about \$8.36 per additional trip, compared with incremental operating costs of about \$1.37 and \$4.85 per incremental trip for the additional services recommended under Alternatives 1 and 2, respectively.

#### **Alternative 4**

Alternative 4 included all the routing and service changes recommended under Alternatives 1 and 2 and also proposed reducing operating headways on Route Nos. 1 through 6 from 60 minutes to 30 minutes during the weekday midday service period. This would reduce waiting times for bus service and increase the convenience of using transit service within the portion of the City lying east of Green Bay Road. The reduced headways would initially be funded as a Federal CMAQ demonstration project from 1999 through 2001, after which existing Federal and State transit operat-

ing assistance programs and City funds would provide the necessary operating subsidy.

With the proposed change, the transit system would be expected to carry about 1,558,800 revenue passengers annually, an increase of about 97,800 passengers, or about 7 percent, over the recommended Alternative 2 system. The total operating and capital costs of providing transit service under Alternative 4 would be about \$8,015,700 annually, an increase of about \$498,800, or about 6 percent, over the average annual costs of the recommended Alternative 2 system. The City's share of the average annual costs would be about \$1,443,000, an increase of about \$92,600, or about 7 percent, over its share under Alternative 2.

The service changes proposed under Alternative 4 were not recommended by Commission staff to be included in the final system plan. This recommendation was made in light of the substantial increase in local funding which would ultimately be needed in 2002, after the trial period of operation and Federal CMAQ funding expired. At that time the total local operating subsidy for the transit system would be expected to be about \$1,240,300 with the Alternative 4 transit system, an increase of about \$279,200, or about 29 percent, over the \$961,100 forecast for the recommended Alternative 2 transit system.

#### **Advisory Committee Recommendations**

Following careful review of the alternative local transit service improvements, the Kenosha Area Public Transit Planning Advisory Committee unanimously concurred with the Commission staff recommendations supporting the restructuring of the existing local bus routes and the operation of new industrial park routes proposed under Alternatives 1 and 2, and opposing the expansion of weekday service hours into early morning and evening periods proposed under Alternative 3. The Committee chose to modify the Commission staff recommendation opposing the reduction of headways during weekday midday periods proposed under Alternative 4, determining that the plan should reflect implementation of the headway reductions no sooner than January 2001, rather in January 1999, as originally proposed.

## Chapter VIII

# ALTERNATIVE COMMUTER TRANSIT SERVICE IMPROVEMENTS

## INTRODUCTION

This chapter describes alternative commuter transit service improvements that were considered and recommended by the Advisory Committee to be included in a final system plan together with the recommended local transit services identified in Chapter VII. Commuter transit service improvements were considered to address travel patterns between the Kenosha area and Lake County, Illinois, and between the Kenosha area and the Racine and Milwaukee areas.

## COMMUTER TRANSIT SERVICE IMPROVEMENTS TO SERVE TRAVEL BETWEEN THE KENOSHA AREA (PRIMARY STUDY AREA) AND LAKE COUNTY (SECONDARY STUDY AREA)

The potential for providing transit services connecting the Kenosha area and Lake County, Illinois, was addressed in response to a request made by the Mayor of the City of Kenosha in July 1994 as part of the City's comments on the Commission's year 2010 long-range transportation system plan. The City requested that the Commission conduct a study which would address travel needs caused by the increasing amount of commuter travel occurring between the Kenosha area and Northeastern Illinois, particularly Lake County, Illinois. The issue has been incorporated into the new Kenosha area transit system development plan so it could be addressed in conjunction with other transit issues currently facing the Kenosha area.

### Land Use and Travel Patterns

An understanding of the areas to be served and the travel patterns between them is required in order to effectively design new transit services. For the analysis of potential commuter transit services between the Kenosha area, the primary study area, and Lake County, Illinois, the secondary study area, the land use and travel characteristics which were considered to be of most importance were the existing employment characteristics of Lake County, Illinois, including existing employment levels and concentrations, and the amount and purposes of existing travel between the Kenosha area and Lake County.

### *Employment Characteristics*

The secondary study area has a diverse and growing employment base. Employment trends in the secondary study area for the period 1980 through 1990 are set forth in Table 68. The distribution of jobs in the study area in 1990 is shown on Map 32. The following observations may be made on the basis of an examination of the following information:

- The employment base of the secondary study area has experienced significant growth over the past two decades. The employment of the secondary study area increased by about 67,700 jobs, or about 42 percent, from a 1980 level of 160,800 jobs to a 1990 level of 228,500 jobs.
- The areas with the largest amounts of employment are in the east-central and southeastern portions of the secondary study area. About 170,200 jobs, or about 74 percent of all employment in the secondary study area in 1990, were located in the Gurnee, Waukegan, Libertyville, North Chicago-Lake Forest, Vernon Hills-Buffalo Grove, and Deerfield-Highland Park secondary study area analysis areas.

### *Major Employment Centers*

The secondary study area contains numerous major employment centers, each consisting of an individual employer with at least 500 employees or a major development park or retail commercial center with numerous employers located in close proximity to each other. The major employers are listed in Table 69, and their locations are displayed on Map 33. The major industrial and office development parks are listed in Table 70, and their locations are displayed on Map 34. As may be seen from these tables and maps, the greatest concentrations of major employment are in the east-central and southeastern portions of the secondary study area. Shopping centers considered major employment centers include the Gurnee Mills Shopping Center in Gurnee, Illinois, and the Lakehurst Mall Shopping Center in Waukegan, Illinois.

### **Travel Patterns between the Primary and Secondary Study Areas**

Information on the quantity and characteristics of travel between the primary and secondary study areas was based upon the findings of a regional resident household

Table 68

**SECONDARY STUDY AREA EMPLOYMENT BY  
SECONDARY STUDY AREA ANALYSIS AREA: 1980-1990**

Secondary Study Area Analysis Area	Employment				Change in Employment	
	1980		1990		1980-1990	
	Number	Percent	Number	Percent	Number	Percent
Northwestern Lake County .....	17,170	10.7	19,810	8.7	2,640	15.4
Southwestern Lake County .....	20,430	12.7	31,070	13.6	10,640	52.1
Wadsworth .....	410	0.3	960	0.4	550	134.1
Zion .....	6,720	4.2	6,440	2.8	-280	-4.2
Gurnee .....	11,220	7.0	17,650	7.7	6,430	57.3
Waukegan .....	38,310	23.8	32,470	14.2	-5,840	-15.2
Libertyville .....	18,000	11.2	37,220	16.3	19,220	106.8
North Chicago-Lake Forest .....	14,840	9.2	20,230	8.9	5,390	36.3
Vernon Hills-Buffalo Grove .....	7,170	4.4	28,050	12.3	20,880	291.2
Deerfield-Highland Park .....	26,560	16.5	34,590	15.1	8,030	30.2
<b>Total</b>	<b>160,830</b>	<b>100.0</b>	<b>228,490</b>	<b>100.0</b>	<b>67,660</b>	<b>42.1</b>

Source: Lake County Department of Planning, Zoning, and Environmental Quality and SEWRPC.

travel survey, an external cordon survey, and a survey of Metra commuter rail passengers, all conducted by the Regional Planning Commission in the fall of 1991. The surveys were part of a comprehensive inventory of regional travel, including surveys similar to those conducted by the Commission in its 1963 and 1972 regional travel inventories.

In the tables and maps in this section presenting the volume of trip making on an average weekday, all trips are presented as trips from the place of trip production to the place of trip attraction. For trips with one end of the trip at home the place of trip production is always the home; the place of trip attraction is always the other end of the trip, be it work, shopping, personal business, social activity, recreation, or other. For a trip which neither begins or ends at home, the place of trip production is the origin of the trip; the place of trip attraction is the destination of the trip.

There was a significant amount of person travel, particularly work-purpose travel, between the primary and secondary study areas in 1991. To facilitate analysis of the person trip movements, the primary study area was divided into three analysis areas, and the secondary study area was divided into ten analysis areas. Tables 71 and 72 display the distribution of average weekday work-

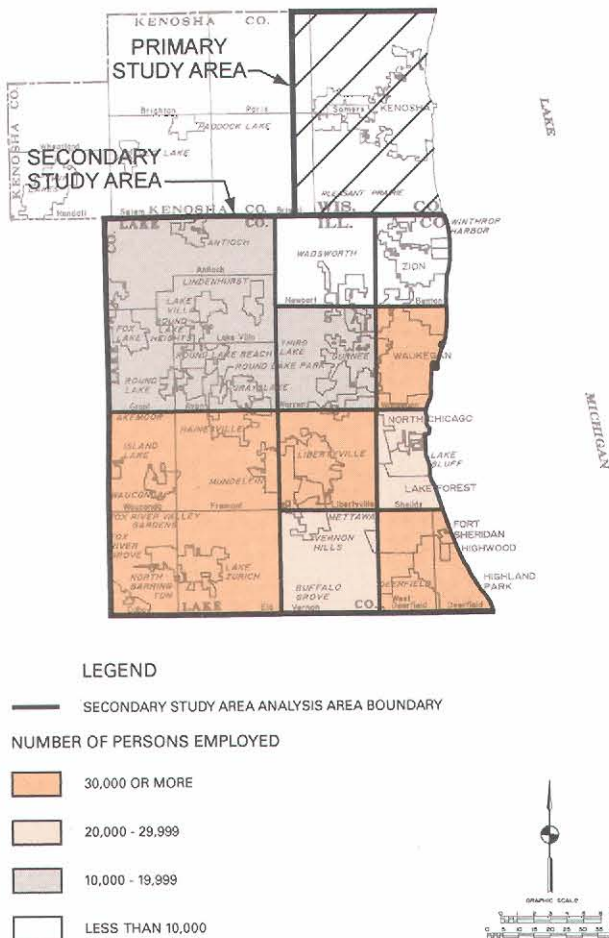
purpose person trips,<sup>1</sup> and total weekday person trips, respectively, between these analysis areas. Maps 35 and 36 graphically illustrate the flow of average weekday work-purpose person trips, and total weekday person trips, respectively, between the analysis areas within the primary and secondary study areas. Table 73 displays the change in total average weekday person trips and average weekday work-purpose person trips between the primary and secondary study areas from 1972 to 1991. Table 74 presents the distribution of average weekday Metra commuter rail trips between the Southeastern Wisconsin Region and Northeastern Illinois. The following observations may be made based upon an examination of this information:

- A total of about 36,100 person trips were made on an average weekday between the study areas in

<sup>1</sup>A person trip was defined as a one-way journey between a point of origin and a point of destination by a person five years of age or older traveling as an auto driver or as a passenger in an auto, taxi, truck, motorcycle, school bus, or other mass transit carrier. To be considered, the trip must have been at least the equivalent of one full city block in length.

Map 32

**EMPLOYMENT DISTRIBUTION IN THE  
SECONDARY STUDY AREA: 1990**



Source: Lake County Department of Planning, Zoning, and Environmental Quality and SEWRPC.

1991. About 27,400 of these person trips, or about 76 percent, were made by persons residing in the primary study area and traveling to the secondary study area.

- A total of about 22,800 work-purpose person trips, representing about 63 percent of the 36,100 total person trips, were made on an average weekday between the study areas. By comparison, approximately 31 percent of the person trips made between the primary study area and other external areas were for work purposes. About 20,100 work-purpose person trips, or about 88 percent, of all work-purpose person trips between the study areas were made by persons residing in the primary study area traveling to jobs in the secondary study area.

- The number of work-purpose person trips produced in the primary study area and attracted to the secondary study area increased significantly between 1972 and 1991. The total number of person trips increased by about 14,000, or about 104 percent, while the number of work-purpose person trips increased by about 12,400, or about 161 percent. Approximately 89 percent of the increase in the total is attributable to the increase in work-purpose trips. The increase in average weekday person trips produced in the primary study area and attracted to the secondary study area was significantly greater than the increase of person trips produced in the secondary study area and attracted to the primary study area.
- The person trips produced in the primary study area and attracted to the secondary study area were focused on the east-central portion of the secondary study area. About 13,300 work-purpose person trips, or about 66 percent of all work-purpose person trips attracted to the secondary study area on an average weekday, were attracted to the four analysis areas of Gurnee, Waukegan, Libertyville, and North Chicago-Lake Forest.
- The Metra commuter rail service, which is described in the following section, was not heavily utilized for traveling between the primary and secondary study areas. As may be seen in Table 74, travel between the primary and secondary study areas made up only a small portion of the average weekday transit trips made on the service between the Region and Northeastern Illinois. The majority of all transit trips originating at the Kenosha station were made by primary study area residents commuting to Cook County, Illinois. On an average weekday, about 60 transit trips were produced in the primary study area and attracted to the secondary study area; about 20 transit trips were produced daily in the secondary study area and attracted to the primary study area. Approximately 73 percent of all transit trips carried on Metra between the primary and secondary study areas were work-purpose trips.

### Existing Transit Services

An understanding of the existing transit services available to persons traveling between the primary and secondary study areas is required in order develop new or improved transit services. Table 75 includes the characteristics of the transit services available to persons traveling between the primary and secondary study areas in 1997; Map 37 displays the locations of these services.



Table 69

## MAJOR EMPLOYERS IN THE SECONDARY STUDY AREA: 1996

Number on Map 33	Employer	Municipality	Approximate Employment <sup>a</sup>			
			500-999	1,000-1,999	2,000-2,999	3,000 +
	<b>Industrial and Manufacturing</b>					
1	Abbott Laboratories	North Chicago	--	--	--	X
2	Abbott Laboratories	North Chicago	--	--	--	X
3	Abbott Laboratories, K-Complex	North Chicago	X	--	--	--
4	American Roller Company	Bannockburn	X	--	--	--
5	Baxter Healthcare Corporation	Round Lake	--	--	X	--
6	Cherry Electrical Products Corporation	Waukegan	--	X	--	--
7	Complete Packaging Corporation	Waukegan	X	--	--	--
8	Decorel, Inc.	Mundelein	X	--	--	--
9	Medline Industries, Inc.	Mundelein	X	--	--	--
10	Moore Business Forms & Systems	Lake Forest	X	--	--	--
11	Motorola, Inc.	Grayslake	X	--	--	--
12	Motorola Lighting, Inc.	Buffalo Grove	--	--	--	X
13	Outboard Marine Corporation	Waukegan	X	--	--	--
14	Recon/Optical, Inc.	Barrington	X	--	--	--
15	Solo Cup Company	Highland Park	X	--	--	--
16	The Solar Corporation	Libertyville	X	--	--	--
17	W.W. Grainger	Lincolnshire	X	--	--	--
18	WMS Games, Inc.	Waukegan	X	--	--	--
	<b>Retail and Service</b>					
19	Ameritech	Waukegan	X	--	--	--
20	Baxter Healthcare Corporation	Deerfield	--	X	--	--
21	Coleman Cable Systems, Inc.	North Chicago	X	--	--	--
22	GE Capital Auto Financial Services	Barrington	X	--	--	--
23	Hewitt Associates	Lincolnshire	--	--	X	--
24	Kemper National Insurance Company	Long Grove	--	--	X	--
25	Marine Power Products	Waukegan	X	--	--	--
26	Quill Corporation	Lincolnshire	--	X	--	--
27	Six Flags Great America	Gurnee	--	--	--	X
28	Trustmark Insurance Company	Lake Forest	--	X	--	--
29	Walgreen Company	Deerfield	--	X	--	--
30	Washington National Insurance Company	Lincolnshire	X	--	--	--
	<b>Government/Institutional</b>					
31	Condell Memorial Hospital	Libertyville	X	--	--	--
32	Good Shepherd Hospital	Barrington	X	--	--	--
33	Highland Park Hospital	Highland Park	--	X	--	--
34	Lake Forest Hospital	Lake Forest	--	X	--	--
35	St. Therese Medical Center	Waukegan	X	--	--	--
36	Victory Memorial Hospital	Waukegan	--	X	--	--
	<b>Educational</b>					
37	College of Lake County	Grayslake	--	X	--	--

<sup>a</sup>Only major employment centers employing 500 or more persons are listed.

Source: Lake County Economic Development Commission and SEWRPC.

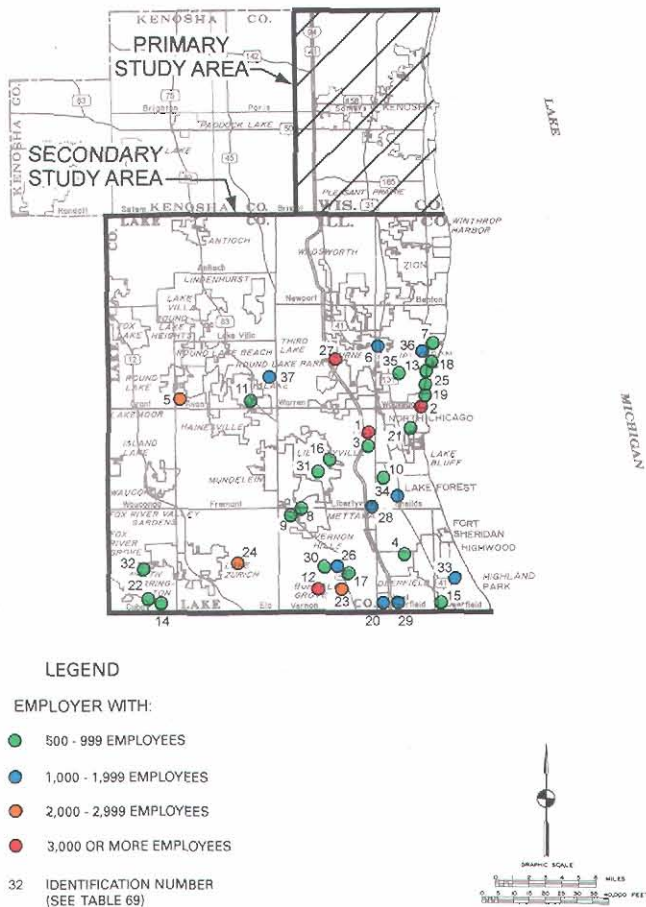
### Metra Commuter Rail Service

Metra, the commuter rail division of the Regional Transportation Authority of Northeastern Illinois, currently provides publicly subsidized commuter passenger train service to six counties in Northeastern Illinois and the City of Kenosha. There are four Metra commuter rail lines operating in the secondary study area. Three of them include stops in the secondary study area. Two of the lines with stops in the secondary study area terminate in the secondary study area, while the third provides service to the City of Kenosha.

Metra provides service between Kenosha and Chicago over the Union Pacific North Line. The City of Kenosha owns the Kenosha Metra station facility and operates a park-ride lot located immediately east of the station. The station, located at 5414 13th Avenue, is the only stop in the primary study area and is the northern terminus of the Metra Union Pacific North Line. There are 13 stops located in the secondary study area on this line. The route's principal outlying station is in Waukegan, Illinois; only some of the runs on the line include the Kenosha stop. The current schedules provide for nine trains originating

Map 33

### MAJOR EMPLOYERS IN THE SECONDARY STUDY AREA: 1996



Source: Lake County Economic Development Commission and SEWRPC.

and terminating at the Kenosha station on weekdays, five on Saturdays, and three on Sundays and holidays. The service schedule is oriented toward commuters residing in the primary study area, with most of outbound trains departing Kenosha during the morning peak period, between about 6:00 a.m. and 8:00 a.m., and most inbound trains arriving in Kenosha in the early evening, between about 5:30 p.m. and 8:00 p.m. Not all the trains providing service to Kenosha stop at all the stations in the secondary study area. The public subsidies required to provide this service are provided by the Regional Transportation Authority of Northeastern Illinois (RTA).

Although the Metra service over the Union Pacific North Line between Kenosha and Chicago is the only service which connects the primary and secondary study areas directly, two additional Metra lines' northern termini lie

Table 70

### MAJOR INDUSTRIAL AND OFFICE DEVELOPMENT PARKS IN THE SECONDARY STUDY AREA: 1991

Number on Map 34	Major Development Park	Municipality	Total Acres
1	Allanson Industrial Park	Mundelein	140
2	Amhurst Lake Business	Waukegan	430
3	Arbor Creek Business	Buffalo	70
4	Bannockburn Lake Office Plaza	Bannockburn	90
5	Chevy Chase Business Center	Buffalo Grove	130
6	College Park	Bannockburn	40
7	Continental Executive Park	Vernon Hills	500
8	Conway Park	Lake Forest	230
9	Corporate Grove	Buffalo Grove	200
10	Corporate Woods	Vernon Hills	350
11	Covington Corporate Center	Buffalo Grove	100
12	Delany Business Center	Gurnee	30
13	Elgin, Joliet and Eastern	Lake Zurich	40
14	Grand Tri-State Business Park	Gurnee	280
15	Green Oaks Corporate Center	Green Oaks	40
16	Gurnee Center for Commerce and Industry	Gurnee	110
17	Gurnee Business Center	Gurnee	N/A
18	Hyatt Deerfield Campus	Deerfield	30
19	Lake Bluff Business Center	Lake Bluff	70
20	Lake County Corporate Park	Deerfield	40
21	Lake Zurich Industrial Center	Lake Zurich	200
22	Libertyville Center for	Libertyville	100
23	Lincoln Commerce Center	Libertyville	100
24	Lincolnshire Corporate Center	Lincolnshire	300
25	North Point Business Center	Waukegan	100
26	Parkway North Center	Deerfield	70
27	Riverwalk Office Park	Buffalo Grove	30
28	Riverwoods Corporate Place	Riverwoods	80
29	Tri-State International Office Center	Lincolnshire	40
30	Wauconda Industrial Park	Wauconda	240
31	Zion Industrial Park	Zion	120

Source: Lake County Economic Development Commission and SEWRPC.

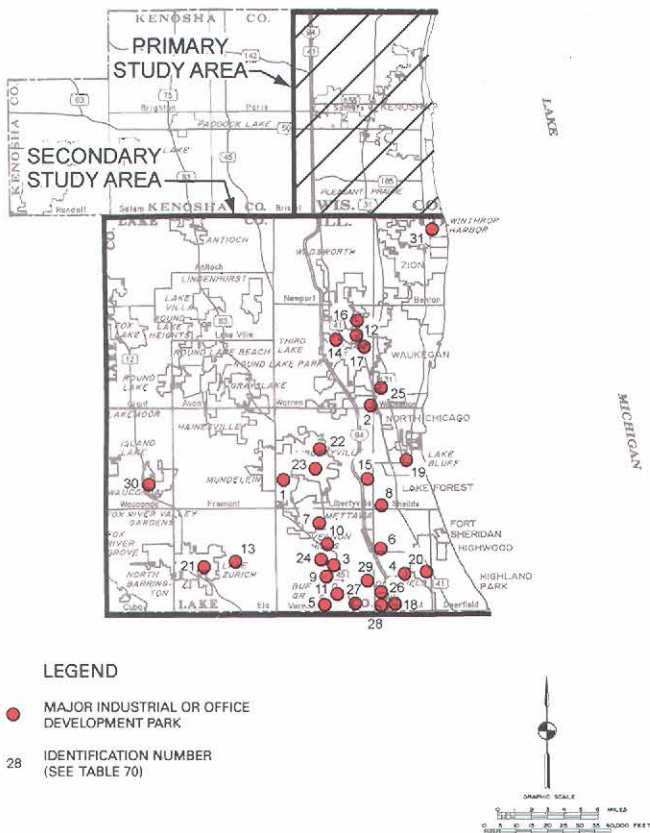
in the secondary study area. The general characteristics of these two lines are as follows:

- Service is provided over the North Central Service Line between Antioch and Chicago with weekday-only service of five trains per day. There are eight stations on the line within the secondary study area.
- Service is provided over the Milwaukee District North Line between Fox Lake and Chicago. There are 29 trains per weekday, ten per Saturday, and nine per Sunday and Holiday. Although most trains provide service to Fox Lake, some operate only to other stations in the secondary study area, but do not travel the entire length of the line. There are eight stations on the line within the secondary study area.



Map 34

**MAJOR INDUSTRIAL AND OFFICE DEVELOPMENT PARKS IN THE SECONDARY STUDY AREA: 1991**



Source: Lake County Economic Development Commission and SEWRPC.

***Intercity Bus Service***

Intercity bus service between the primary and secondary study areas is provided by two providers, Greyhound Lines, Inc., and United Limo, Inc. The characteristics of these services are as follows:

- Greyhound Lines, Inc., operates one intercity bus route through the western portion of the study area, providing service over IH 94 between Milwaukee and Chicago. This service consists of 16 southbound runs and 14 northbound runs daily. Only two of the southbound runs and two of the northbound runs stop in the primary study area, near downtown Kenosha at a private travel agency, which functions as a passenger terminal, located at 2105 Roosevelt Road. The runs that stop near downtown Kenosha also stop in the secondary study area in the City of Waukegan, Illinois. The remaining northbound and southbound runs pass through the primary study area on IH 94, with no stops in the primary or

secondary study areas. The company's Milwaukee-Chicago service is strongly oriented towards providing connections for Milwaukee area passengers to other long-distance buses at its Chicago hub, as well as accommodating Milwaukee-Chicago trips; the service is not conducive to work or general travel between the primary and secondary study areas. Greyhound Lines, Inc., currently does not receive public financial assistance for the bus services they provide through the primary and secondary study areas.

- United Limo, Inc., operates one intercity bus route through the western portion of the study area, providing service over IH 94 between the Milwaukee central business district (CBD) and Chicago's O'Hare International and Midway Airports. This service consists of 12 southbound runs and 12 northbound runs daily, with the only stop within the study area to serve Kenosha area passengers, at IH 94 and STH 50. There is one stop in the secondary study area, at Grand Avenue and IH 94 in Gurnee, Illinois. The company's service is directed principally toward serving airport-related trips and is not conducive to work or general travel between the primary and secondary study areas. United Limo, Inc., currently does not receive public financial assistance for the bus services it provides through the primary and secondary study areas.

***Local Bus Service***

Local transit services are often required to complete a trip which involves intercity travel on a fixed-route transit service because of the limited number of stops made by intercity services, which results in a need for other transit services to reach the specific trip origin or destination. The local transit services which are available for this purpose in the primary and secondary study areas include the Kenosha transit system, described in detail in Chapter III of the report, and Pace, the suburban bus division of the RTA. The public subsidies required to subsidize the Pace bus service are provided through the RTA.

Pace operates a system of bus routes providing service in six counties in Northeastern Illinois, including 25 in the secondary study area. Within the Cities of North Chicago and Waukegan and the immediate vicinity, Pace operates 13 routes, most serving a common transfer point in downtown Waukegan, like the routes serving the City of Kenosha. Service on these routes is available generally between approximately 6:00 a.m. and 10:00 p.m. Monday through Saturday, although night service is available on less than half of the routes. Operating headways typically

Table 71

**DISTRIBUTION OF AVERAGE WEEKDAY WORK-PURPOSE PERSON TRIPS  
BETWEEN THE PRIMARY AND SECONDARY STUDY AREAS: 1991**

Area of Trip Production in Primary Study Area	Area of Trip Attraction in Secondary Study Area										
	Northwestern Lake County	Southwestern Lake County	Wadsworth	Zion	Gurnee	Waukegan	Libertyville	North Chicago- Lake Forest	Vernon Hills- Buffalo Grove	Deerfield- Highland Park	Total
Somers .....	20	10	70	180	250	440	260	200	110	190	1,730
Kenosha .....	230	120	160	2,060	2,070	3,370	2,130	2,350	710	1,300	14,500
Pleasant Prairie ...	140	40	30	670	450	930	520	560	300	260	3,900
Total	390	170	260	2,910	2,770	4,740	2,910	3,110	1,120	1,750	20,130

Area of Trip Production in Secondary Study Area	Area of Trip Attraction in Primary Study Area			
	Somers	Kenosha	Pleasant Prairie	Total
Northwestern Lake County .....	70	240	20	330
Southwestern Lake County .....	10	20	10	40
Wadsworth .....	--	--	20	20
Zion .....	100	830	200	1,130
Gurnee .....	10	170	40	220
Waukegan .....	70	480	50	600
Libertyville .....	10	80	40	130
North Chicago-Lake Forest .....	30	50	10	90
Vernon Hills-Buffalo Grove ...	--	70	30	100
Deerfield-Highland Park .....	--	50	10	60
<b>Total</b>	<b>300</b>	<b>1,990</b>	<b>430</b>	<b>2,720</b>

NOTE: Trips are shown in produced-attracted format; that is, from the area of production to the area of attraction.

Source: SEWRPC.

range from 30 to 60 minutes during weekday peak periods and are typically 60 minutes during all other times of operation.

Eight of the remaining 12 Pace routes serve the southeastern corner of the secondary study area, with the service oriented toward travel between that area and Cook County, Illinois. These routes principally serve major trip generators, including employment, retail commercial, and educational centers. Four of these routes provide service only during weekday peak periods and five operate six days a week, generally between about 6:00 a.m. and 7:00 p.m. The operating headways of these routes vary from 15 to 30 minutes during weekday peak periods and from 30 to 60 minutes at all other times of operation. A ninth route is an express route which provides service during weekday peak periods between the Gurnee Mills Shopping Center and employment centers in the southern portion of the secondary study area. Service over this route consists of eight southbound trips each morning and six northbound

trips each afternoon. The remaining three routes include one which extends into the northwestern portion of the secondary study area from McHenry County and two routes which parallel the Metra commuter rail service between Antioch and Chicago.

Several stops in the secondary study area on the Metra commuter rail line operated between the study areas are served by Pace bus routes. Eight bus routes serve the stations in the Cities of North Chicago and Waukegan; four routes serve the five stations immediately north of Cook County. Although the routes allow for transfers between the services, the usefulness of the local service is limited by its orientation toward serving commuters using the Metra service to commute to jobs in Cook County, Illinois. The usefulness of the local bus service is also limited by the fact that many of the identified employment centers are not served by Pace bus routes. For example, the Abbot Laboratories complex, near IH 94 and Buckley

Table 72

**DISTRIBUTION OF TOTAL AVERAGE WEEKDAY PERSON TRIPS  
BETWEEN THE PRIMARY AND SECONDARY STUDY AREAS: 1991**

Area of Trip Production in Primary Study Area	Area of Trip Attraction in Secondary Study Area										
	Northwestern Lake County	Southwestern Lake County	Wadsworth	Zion	Gurnee	Waukegan	Libertyville	North Chicago-Lake Forest	Vernon Hills-Buffalo Grove	Deerfield-Highland Park	Total
Somers .....	130	30	120	320	320	510	260	230	100	200	2,220
Kenosha .....	390	170	250	4,660	2,750	4,460	2,350	2,660	740	1,440	19,870
Pleasant Prairie ...	170	40	80	1,510	620	1,090	620	580	320	270	5,300
Total	690	240	450	6,490	3,690	6,060	3,230	3,470	1,160	1,910	27,390

Area of Trip Production in Secondary Study Area	Area of Trip Attraction in Primary Study Area			
	Somers	Kenosha	Pleasant Prairie	Total
Northwestern Lake County .....	110	410	230	750
Southwestern Lake County .....	10	50	70	130
Wadsworth .....	10	90	100	200
Zion .....	310	3,110	680	4,100
Gurnee .....	80	430	370	880
Waukegan .....	230	1,260	190	1,680
Libertyville .....	40	170	110	320
North Chicago-Lake Forest .....	50	200	20	270
Vernon Hills-Buffalo Grove ...	10	70	80	160
Deerfield-Highland Park .....	10	110	40	160
<b>Total</b>	<b>860</b>	<b>5,900</b>	<b>1,890</b>	<b>8,650</b>

NOTE: Trips are shown in produced-attracted format; that is, from the area of production to the area of attraction.

Source: SEWRPC.

Road, is not connected to a Metra commuter rail station by Pace bus service.

### Proposed Commuter Services

The development of the proposed commuter transit services was based on the major findings of the preceding information describing the employment levels and concentrations within the secondary study area, existing commuter travel patterns between the primary and secondary study areas, and the transit services currently provided between the two areas. These findings may be summarized as follows:

1. Over the past three decades, employment centers in the secondary study have attracted an increasing number of work-purpose trips from residents of the primary study area. By 1991, about 20,100 person trips to work and back were made on an average weekday by persons residing in the primary study area and traveling to the secondary study area. The significance of this number is clear when

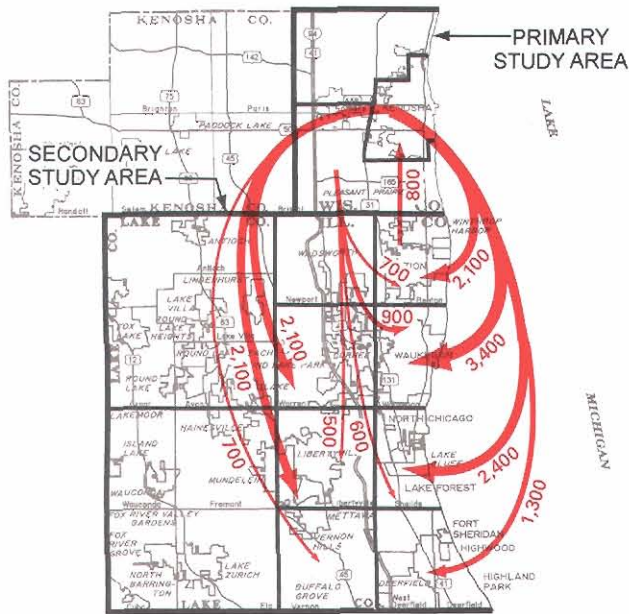
compared with the number of person trips made for work purposes by primary study area residents to other external areas, including about 1,600 person trips to Milwaukee County, about 7,600 person trips to Racine County, and a total of about 21,000 person trips to all areas within the seven-county Southeastern Wisconsin Region.

2. The existing public transit services provided between the primary and secondary study areas can be used to make only a very small portion of the existing work-purpose travel made by primary study area residents to jobs in the secondary study area. Intercity bus service is too infrequent to be considered as a transit option. Metra commuter rail service could be used to travel to jobs within convenient walking distance of a station. However, Metra's existing Kenosha service schedule is limited and designed to serve persons with long commutes to and from the Chicago CBD, not short trips to and from the Cities of Waukegan and North



### Map 35

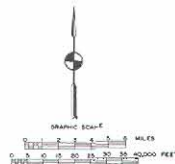
**AVERAGE WEEKDAY WORK-PURPOSE  
PERSON TRIPS BETWEEN THE PRIMARY  
AND SECONDARY STUDY AREAS: 1991**



### LEGEND

ANALYSIS AREA BOUNDARY

NOTE: TRIPS ARE SHOWN IN PRODUCED-ATTRACTED FORMAT; THAT IS, FROM AREA OF PRODUCTION TO AREA OF ATTRACTION. WORK-PURPOSE TRIPS BETWEEN THE PRIMARY AND SECONDARY STUDY AREAS LESS THAN 500 TRIPS ARE NOT SHOWN.



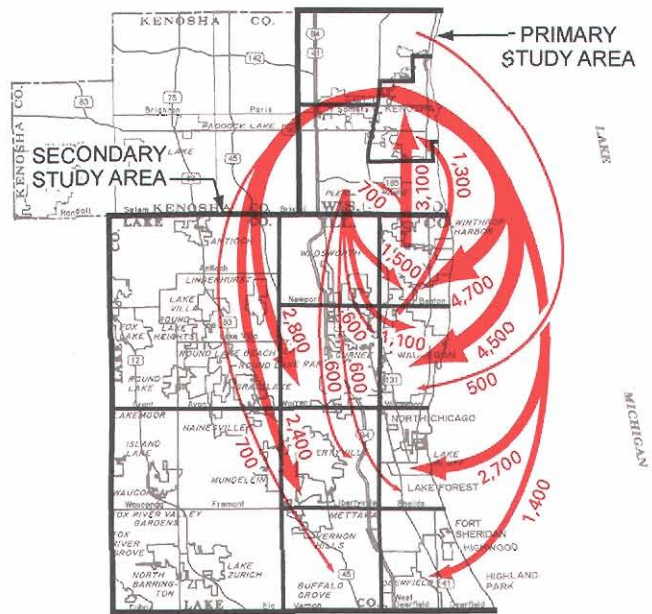
Source: SEWRPC.

Chicago. Pace fixed-route bus services which connect with the Metra service in Waukegan and North Chicago are designed primarily to provide feeder service for persons commuting to the Chicago CBD, and do not provide convenient transfer connections for persons traveling from the primary study area to most of the identified employment centers in the secondary study area.

3. Virtually all person trips currently made for work purposes between the primary and secondary study areas by primary study area residents are made by personal auto. Organized ridesharing programs sponsored by public agencies in Illinois and Wisconsin promote the creation of carpools and vanpools by employees at the larger employers in the secondary study area. Notably, there are currently no publicly constructed park-ride facilities

### Map 36

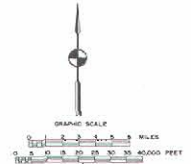
**TOTAL AVERAGE WEEKDAY  
PERSON TRIPS BETWEEN THE PRIMARY  
AND SECONDARY STUDY AREAS: 1991**



LEGEND

ANALYSIS AREA BOUNDARY

NOTE: TRIPS ARE SHOWN IN PRODUCED-ATTRACTED FORMAT; THAT IS, FROM AREA OF PRODUCTION TO AREA OF ATTRACTION. TRIPS BETWEEN THE PRIMARY AND SECONDARY STUDY AREAS LESS THAN 500 TRIPS ARE NOT SHOWN.



Source: SEWRPC.

in the primary study area to facilitate the formation of carpools.

To address these issues, a commuter service plan with the following three elements is proposed: 1) ridesharing, 2) subscription transit services, and 3) conventional commuter bus transit services. The proposed commuter transit services are "staged" in order to allow for a logical expansion of service as demand increases. The service proposed under a later stage would be implemented only after the preceding service is deemed successful and additional demand is generated. The three stages may be briefly described as follows:

1. Given the reliance on the automobile for work travel between the primary and secondary study areas, the first stage of the plan proposes an effort to promote carpooling and vanpooling for commuting to and from work. These actions would provide

Table 73

**CHANGE IN AVERAGE WEEKDAY PERSON TRIPS FOR ALL PURPOSES AND  
WORK-PURPOSE BETWEEN THE PRIMARY AND SECONDARY STUDY AREAS: 1972 AND 1991**

Production and Attraction Areas	Person Trips									
	1972			1991			Change 1972-1991			
	All Purposes	Work- Purpose	Work-Purpose Trips as a Percentage of All Purposes	All Purposes	Work- Purpose	Work-Purpose Trips as a Percentage of Total	All Purposes		Work-Purpose	
							Number	Percent	Number	Percent
Produced in the Primary Study Area and Attracted to the Secondary Study Area . . . . .	13,400	7,700	57	27,400	20,100	73	14,000	104	12,400	161
Produced in the Secondary Study Area and Attracted to the Primary Study Area . . . . .	8,000	2,300	29	8,700	2,700	31	700	9	400	17
<b>Total</b>	<b>21,400</b>	<b>10,000</b>	<b>47</b>	<b>36,100</b>	<b>22,800</b>	<b>63</b>	<b>14,700</b>	<b>69</b>	<b>12,800</b>	<b>128</b>

NOTE: Trips are shown in produced-attracted format; that is, from the area of production to the area of attraction.

Source: SEWRPC.

for service which is the most similar to personal auto use and would have a better chance of acceptance among current commuters than conventional transit services. Table 76 lists the existing rideshare services which are currently available to primary study area residents commuting to the secondary study area.

The promotion and establishment of ridesharing activities could be enhanced through the construction of park-ride facilities in the primary study area. The construction of a park-ride lot near the intersection of Green Bay Road and STH 158 has long been recommended in the adopted regional transportation system plan as part of the rapid transit element of the plan. A facility in this location could also provide parking for carpoolers, as is done at all other park-ride lots in the Region served by transit. A second facility near IH 94 and STH 50 would also be needed.<sup>2</sup> The implementation of the park-ride

lots would facilitate the increased use of existing services by providing a convenient meeting and parking point for commuters.

- The second stage of the plan proposes the establishment of subscription transit services to serve major employers or employment centers with high levels of carpooling and vanpooling. The subscription transit service would entail the operation of one or more routes designed specifically to serve stops within the primary study area, including the park-ride lots established for carpoolers, along with concentrations of employee home residences. Schedules would be designed to serve the work shift times of participating employers at the principal employment centers in the secondary study area. The routes could be operated directly by existing public transit operators, like the City of Kenosha and Pace, or by a private transit operator under contract by one or more employers. The size of the vehicles used to provide the service would be based on demand for the service. The design of such services would be based on experience with the carpooling and vanpooling activities and input from employers in the secondary study area. Participating employers in the secondary study area would be expected to assist in designing the service, marketing the service to their employees, and funding operating costs.
- The third stage of the plan envisions the implementation of conventional commuter bus services,

<sup>2</sup>The City of Kenosha has been awarded a Federal grant through the Congestion Mitigation and Air Quality (CMAQ) Improvement Program for the construction of a park-ride facility on the west side of the City. However, the City has been unable to identify a suitable location for the facility within the City. It is anticipated that responsibility for implementation of the project will be transferred to the Wisconsin Department of Transportation if the facility is sited outside the City.

Table 74

**DISTRIBUTION OF AVERAGE WEEKDAY METRA TRANSIT TRIPS  
BETWEEN THE REGION AND NORTHEASTERN ILLINOIS: 1991**

Area of Trip Production in the Region		Area of Trip Attraction in Northeastern Illinois						
		Secondary Study Area					Cook County	Total
Area	Description of Analysis Area	Zion	Waukegan	North Chicago-Lake Forest	Deerfield-Highland Park	Subtotal		
Primary Study Area	Kenosha .....	3	23	14	9	49	344	393
	Pleasant Prairie .....	--	2	2	4	8	24	32
	Somers .....	--	2	--	2	4	50	54
	Subtotal	3	27	16	15	61	418	479
Other Area in the Region	Kenosha County-Western .....	--	--	--	--	--	17	17
	Milwaukee County .....	--	--	--	--	--	19	19
	Racine County .....	--	3	--	--	3	128	131
	Walworth County .....	--	--	--	--	--	6	6
	Waukesha County .....	--	--	--	--	--	4	4
--	Total	3	30	16	15	64	592	656

Area of Trip Production in Northeastern Illinois		Area of Trip Attraction in the Region									
		Primary Study Area				Other Area in the Region					Total
Area	Description of Analysis Area	Kenosha	Pleasant Prairie	Somers	Subtotal	Kenosha County- Western	Milwaukee County	Racine County	Walworth County	Waukesha County	
Secondary Study Area	Zion .....	--	--	--	--	--	--	--	--	--	--
	Waukegan .....	10	--	--	10	--	--	--	--	--	10
	North Chicago-Lake Forest ..	4	--	2	6	--	--	--	--	--	6
	Deerfield-Highland Park .....	2	--	2	4	--	--	--	--	--	4
	Subtotal	16	--	4	20	--	--	--	--	--	20
Cook County	Entire County .....	32	1	6	39	--	2	14	2	--	57
--	Total	48	1	10	59	--	2	14	2	--	77

NOTE: Trips are shown in produced-attracted format; that is from the area of production to the area of attraction.

Source: SEWRPC.

which would be developed on the basis of successful subscription transit services. The commuter bus services would be designed to serve not only the needs subscription transit service patrons, but also to extend transit service to employment centers not served by the subscription transit services but in close proximity to the subscription service routes and having sufficient employment to support a service extension. The service envisioned would consist of a limited level of commuter bus trips operated between the primary study area and the secondary study area which would either serve employment concentrations directly or connect with special shuttle routes and existing Pace bus routes serving employment locations. Map 38 displays the alignments of the commuter bus route, connecting shuttle routes, and Pace bus route which

would potentially be needed to serve the principal concentrations of employment in the secondary study area. The proposed operating characteristics of the commuter bus and shuttle services are presented in Table 77.

The service provided over the commuter bus and shuttle routes would, at least initially, concentrate on serving first-shift jobs. Buses operating over the main commuter bus route would circulate through the primary study area to pick-up and discharge passengers at stops, including those of intersecting local bus routes and the park-ride lots established under the first stage. In the secondary study area, the commuter bus would stop at two transfer points at major employment centers, where connections could be made with special route-deviation shuttle

Table 75

**TRANSIT SERVICES AVAILABLE FOR TRAVEL BETWEEN THE  
PRIMARY STUDY AREA AND THE SECONDARY STUDY AREA: 1997**

Name of Service Provider	Type of Provider	Type of Service	Days and Hours of Operation	Fares <sup>a</sup>	Service Area	Vehicles Used
Greyhound Lines, Inc.	Private	Intercity bus	Daily Service Consisting of: 16 southbound bus trips and 14 northbound bus trips	Distance-based	Two northbound and southbound buses stop at a passenger terminal at 2105 Roosevelt Road; all other buses do not stop in either the primary or secondary study area	Long-distance over-the-road motor coaches
Metra (Union Pacific North Line)	Public	Commuter rail	Weekdays: 6:00 a.m. - 9:00 a.m. 2:15 p.m. - 11:30 p.m. Saturdays: 5:45 a.m. - 8:45 a.m. 12:15 p.m. - 2:15 a.m. Sundays/Holidays: 6:45 a.m. - 8:45 a.m. 4:15 p.m. - 2:15 a.m.	Distance-based; fare for one-way travel between Kenosha and Lake County is \$2.75 - \$4.30	One stop at a passenger terminal at 5414 13 <sup>th</sup> Avenue serving eastern Kenosha County, 13 stops in the Secondary Study Area	Standard intercity single-level passenger train coaches
Pace	Public	Local bus	Weekdays: 6:00 a.m. - 10:00 p.m. Saturdays: 6:30 a.m. - 10:30 p.m.	Adults (age 12 and over): \$1.00 Children (age 7-11), elderly (age 65 and over) and disabled: \$.50 Additional fares charged on a zone-based system and for express service	Portions of the secondary study area (See Map 37)	Urban transit buses
United Limo, Inc.	Private	Intercity bus	Daily Service Consisting of: 11 southbound bus trips 11 northbound bus trips	Distance-based	One stop at IH 94 and STH 50	Long-distance over-the-road motor-coaches

<sup>a</sup>Fares shown are cash fares per trip.

Source: SEWRPC.

routes or a Pace express route. The special shuttle routes would distribute passengers to employment centers in the east-central portion of the secondary study area; the Pace buses would distribute passengers to employment centers in the south-central portion of the secondary study area. The commuter bus route would serve additional employment centers in the east-central portion of the secondary study area directly.

Forecasts of the annual ridership and costs for the potential commuter bus and shuttle services are shown in Table 78. The forecasts assume that sufficient demand for establishment of conventional transit services would not be generated until the end of the planning period. At that time, the annual operating costs for the service would be estimated at about \$297,000, or about \$11.42 per trip and the total operating subsidy could be estimated at about \$237,000, or about \$9.11 per trip. The distribution of the required subsidy would need to be negotiated among the City of Kenosha, the private businesses served, the Wisconsin Department of Transportation, and the RTA.

### ***Other Options Considered***

Other options were considered for providing transit service to serve primary study area residents commuting to jobs in the secondary study area. Those options included the immediate implementation of conventional commuter bus services, more extensive use of existing Pace bus services, and the incorporation of Metra commuter rail service into the plan.

A 1999 start-up of the commuter bus and shuttle services proposed under the third stage was considered, possibly as a three-year demonstration project funded with Federal CMAQ funds to test the interest of current commuters in using transit. Initial ridership on the service would, however, be low, resulting in operating costs and subsidies per passenger which would be expected to be significantly higher than those forecast for 2002. Reliance upon ride-sharing activities in the initial years to build demand for the conventional transit services was considered to be a more reasonable approach.

The more extensive use of existing Pace bus services instead of special shuttle routes was also considered. However, it was found that existing bus services could not be conveniently used to access many of the employ-



**TRANSIT SERVICES AVAILABLE FOR TRAVEL BETWEEN  
THE PRIMARY AND SECONDARY STUDY AREAS: 1997**

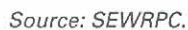




Table 76

**EXISTING VANPOOL AND CARPOOL SERVICES AVAILABLE TO PRIMARY STUDY  
AREA RESIDENTS COMMUTING TO JOBS IN THE SECONDARY STUDY AREA: 1997**

Characteristic	Program Name			
	Wisconsin Department of Transportation (WisDOT) Rideshare Program	Share the Drive Ridesharing Program	Milwaukee County Transit System Vanpool Program	VIP Vanpool Program
Program Administration	WisDOT Transportation District 2	Chicago Area Transportation Study (CATS)	Milwaukee County Transit System (MCTS)	Pace
Eligible Users	Anyone	People with one trip end located within the six counties served by CATS	People living within a six county area of Kenosha, Milwaukee, Ozaukee, Racine, Washington, and Waukesha Counties	People with either origin or destination located within the six counties served by Pace
User Costs/Fees	Fee is determined by those persons participating in the carpool	Fee is determined by those persons participating in the carpool	User cost is based on van size, number of people in the vanpool, and daily miles traveled	User cost is based on van size, number of people in the vanpool, and daily miles traveled
Special Requirements	None	None	Either origin or destination must be beyond the regular MCTS service area. Each vanpool must have a primary driver and at least one back-up driver who meet the MCTS selection criteria	Either origin or destination must be within the six counties served by Pace. Each vanpool must have a primary driver and at least one back-up driver who meet the Pace selection criteria

Source: SEWRPC.

ment concentrations in the secondary study area outside the Cities of North Chicago and Waukegan, Illinois. Use of the Pace bus services by commuters from the primary study area would also be inconvenient because of the need for transfers with Pace bus routes, which operate on 30- to 60-minute headways.

The use of the existing Metra commuter rail service was also considered instead of the proposed commuter bus route over IH 94. However, the existing Metra schedules do not provide the level of service required to serve employment centers in the secondary study area adequately, particularly for afternoon return trips to the primary study area. Other factors which limit the usefulness of the existing Metra service include the lack of convenient bus service between Metra stations and many of the job locations identified in the secondary study area; the size of the park-ride facility at the City of Kenosha Metra station, which may not be able to accommodate the potential additional demand; and the high fares which would be associated with using the Metra and Pace services.

## **COMMUTER TRANSIT SERVICE IMPROVEMENTS TO SERVE TRAVEL BETWEEN THE KENOSHA AREA AND THE CITIES OF RACINE AND MILWAUKEE**

The potential for improving the existing commuter-bus service connecting the Cities of Milwaukee, Racine, and Kenosha was also addressed during the preparation of the new Kenosha transit system development plan. The need to provide faster transit services between the Racine and Kenosha areas and the Milwaukee CBD has long been identified in the Commission's adopted long-range transportation system plans. An interest in examining improvements to the existing commuter bus service which could be proposed for immediate implementation as part of the short-range recommendations of the new Kenosha plan was expressed by the Kenosha Area Public Transit Planning Advisory Committee. A similar interest was expressed by the advisory committee guiding the preparation of the new plan for the City of Racine transit

Map 38

COMMUTER TRANSIT BUS SERVICES PROPOSED TO SERVE PRIMARY STUDY AREA  
RESIDENTS COMMUTING TO JOBS IN THE SECONDARY STUDY AREA

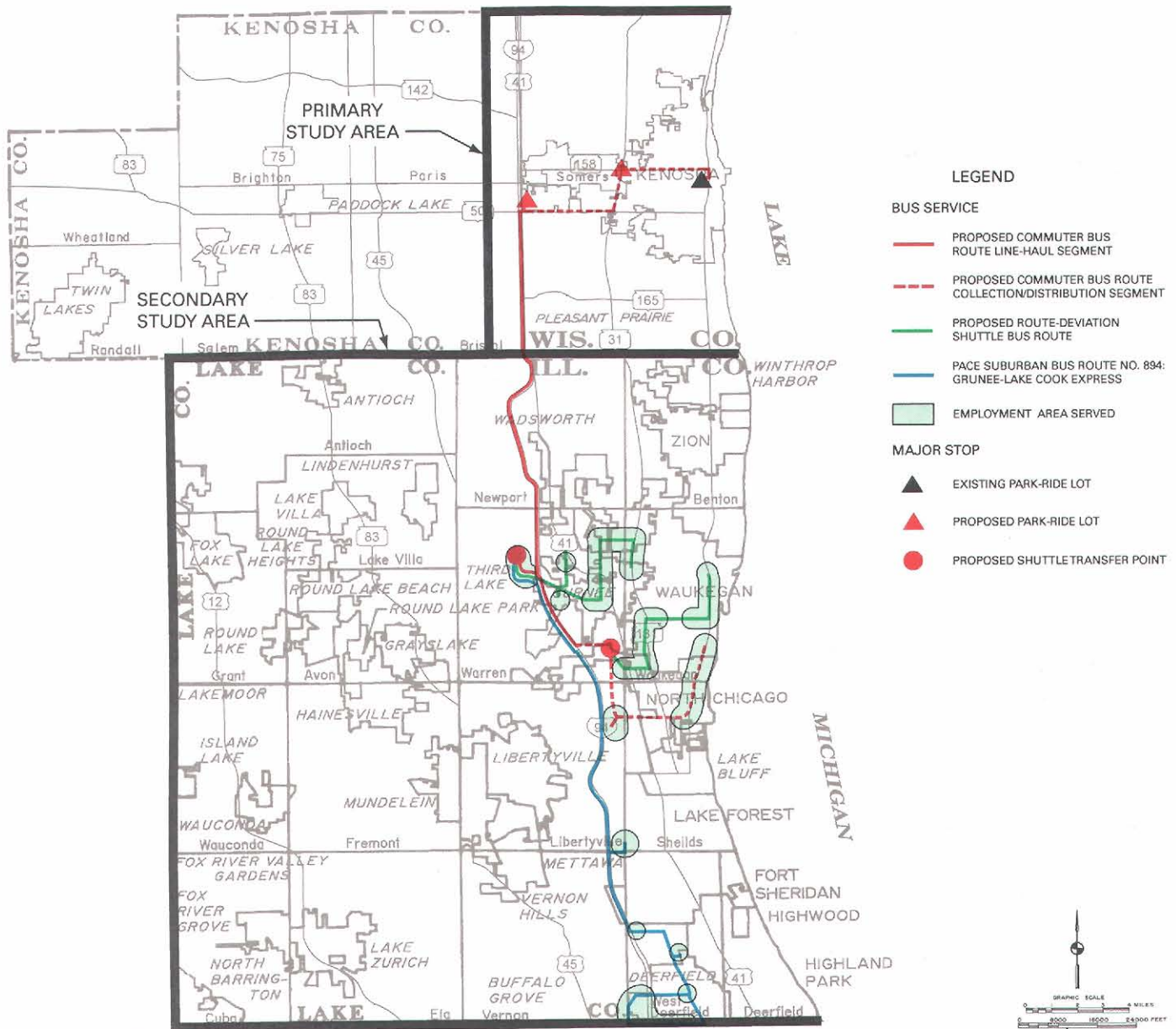


Table 77

**OPERATING CHARACTERISTICS OF THE COMMUTER TRANSIT BUS SERVICES PROPOSED TO SERVE  
PRIMARY STUDY AREA RESIDENTS COMMUTING TO JOBS IN THE SECONDARY STUDY AREA: 2002**

Operating Characteristics	Commuter Bus Service	Shuttles Connecting with Commuter Bus Service
Service Administration .....	Public administration, with service provided through contract with private bus operator	Public administration, with service provided through contract with private bus operator
Total Route-Miles (round trip) .....	70	35 <sup>a</sup>
Service Levels .....	Three morning outbound trips Three afternoon inbound trips	Three morning trips to employers Three afternoon trips from employers
Vehicle Requirements for Peak Service ...	3	2
Passenger Fares (cash fare per one-way trip) <sup>b</sup> .....	\$2.50	No charge with transfer from commuter bus route

<sup>a</sup>Figure is an estimate as shuttles would operate as route-deviation services.

<sup>b</sup>Special convenience fares which provide for discounts from regular cash boarding fares would also be made available.

Source: SEWRPC.

system at the conclusion of its effort in October 1997. In addition, the City of Kenosha has been awarded Federal and State grants for the operation of express bus service between the downtown Kenosha and downtown Racine. This new transit system development plan was viewed as the appropriate document to set forth the need for this service and a proposed operating plan.

To provide a basis for identifying potential commuter transit service improvements in the corridor, the existing commuter bus service was examined with respect to its operating characteristics, ridership trends and characteristics, and operating costs. Information was also examined on the relevant service characteristics of other connecting public transit services used by existing patrons of the commuter bus service. Finally, the existing travel patterns within the corridor served by the existing commuter bus route in eastern Kenosha and Racine Counties and southeastern Milwaukee County were examined to provide information on the principal travel markets for which service improvements should be targeted. This information is documented in the following sections.

#### **Existing Milwaukee-Racine-Kenosha Commuter Bus Service**

Commuter bus service in the Milwaukee-Racine-Kenosha corridor is currently provided by Wisconsin Coach Lines, Inc., a private transit operator. Racine and Kenosha

Counties and the Cities of Racine and Kenosha have jointly sponsored the service since 1985 so that State transit operating assistance could be used to subsidize its operation. Prior to 1985, the route was operated without public subsidy. The City of Racine is the lead agency in the joint partnership arrangement, acting as the applicant-grantee for necessary State funds.

Wisconsin Coach Lines, Inc., currently provides commuter-oriented express bus service over one route, shown on Map 39, between the Milwaukee CBD and the Cities of Racine and Kenosha. The route's southern terminus is a private travel agency at 2105 Roosevelt Road, in the City of Kenosha; its northern terminus is the Greyhound Bus Depot at N. 7th Street and W. Michigan Avenue, in the Milwaukee CBD. Between the route's southern terminus and Milwaukee County's General Mitchell International Airport buses operate primarily over arterial streets. Between Mitchell International Airport and the Milwaukee CBD, buses operate over the Airport Spur and IH 94 freeways. A few of the scheduled weekday bus trips bypass the airport and operate over IH 94 between the Airport Spur and Ryan Road in Milwaukee County. A limited amount of service is also provided over the route to the Dairyland Greyhound Park, in the City of Kenosha.

On the nonfreeway route segments, buses stop at the scheduled timepoints identified in the route timetable and

Table 78

**ANNUAL RIDERSHIP AND  
FINANCIAL PERFORMANCE FORECAST  
OF THE COMMUTER TRANSIT BUS SERVICES  
PROPOSED TO SERVE PRIMARY STUDY AREA  
RESIDENTS COMMUTING TO JOBS IN THE  
SECONDARY STUDY AREA: 2002**

Operating Characteristic	Forecast <sup>a</sup>
<b>Service</b>	
Revenue Vehicle Hours of Service	
Commuter-Bus Service .....	2,100
Shuttle Service .....	2,000
All Service .....	4,100
Revenue Vehicle Miles of Service	
Commuter-Bus Service .....	54,300
Shuttle Service .....	19,400
All Service .....	73,700
<b>Ridership</b>	
Total System Revenue Passengers .....	26,000
Revenue Passengers per	
Revenue Vehicle Hour .....	6.3
Revenue Vehicle Mile .....	0.35
<b>Operating Costs, Revenues, and Subsidies</b>	
Expenses <sup>a</sup> .....	\$297,000
Passenger Revenues .....	60,000
Subsidy .....	237,000
Percent of Expenses Recovered through	
Operating Revenues .....	20.2
<b>Per Trip Data</b>	
Operating Cost .....	\$11.42
Operating Revenue <sup>b</sup> .....	2.31
Operating Deficit .....	9.11

<sup>a</sup>Expenses are in estimated 2002 dollars.

<sup>b</sup>Revenue per trip assume commuter fares providing for a 10 percent discount would be used by 75 percent of the revenue passengers on the service.

Source: SEWRPC.

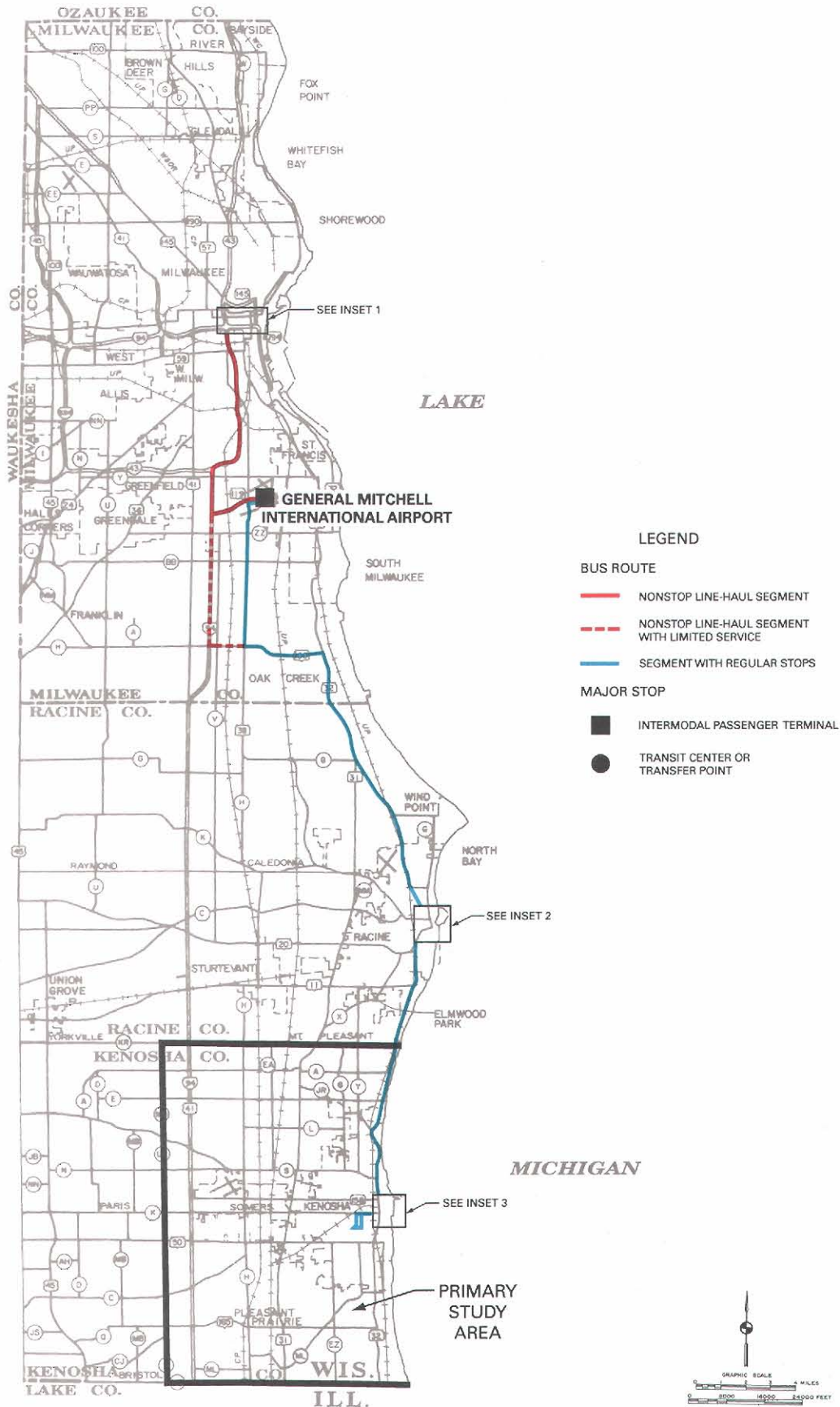
at the bus stops of the Kenosha, Milwaukee County, and Racine transit systems along the route. These stops include the central transfer point for the Kenosha transit systems and the Metra commuter rail station, both in downtown Kenosha; the central transfer point for the Racine transit system in downtown Racine; and the downtown transit center for the Milwaukee County Transit System and the Badger Bus Depot, both in downtown Milwaukee. While providing direct connections to the other transit systems, transferring passengers must pay the appropriate regular fare because no special transfer fares have been established. Buses stop at Mitchell International Airport and at S. 4th Street and Lapham Street only upon request. Buses will also stop at points in rural areas upon request if it is deemed safe and practical. Notably, the route does

not serve any park-ride facilities aside from the park-ride facility at the Kenosha Metra station.

The operating characteristics of the existing commuter bus service are summarized in Table 79. The historic trends in transit ridership and service levels for the service since 1984 are shown in Figure 16. Information on trends in the ridership, service levels, and operating costs of the service for the most recent five-year period, 1993 through 1997, are shown in Table 80. On the basis of this information, the following observations may be made:

- The company's service is oriented principally toward serving Racine and Kenosha passengers commuting to and from the Milwaukee CBD, with the most frequent weekday service, on approximately 40- to 45-minute headways, provided during the morning peak period to take passengers to the Milwaukee CBD and during the afternoon peak period to take passengers from the Milwaukee CBD. Service at all other times on weekdays, as well as on weekend and holidays, is provided at two to three hour headways.
- While the service can also be used to travel between Racine and Kenosha, the schedules are of limited use for work-commuting between these cities, in particular for Racine residents commuting to jobs in the Kenosha area. Only one bus trip to Kenosha and one bus trip from Kenosha are available during the morning and afternoon peak periods.
- Ridership on the service decreased each year from 1984 through 1989. This decline mirrors the ridership declines experienced on similar Milwaukee CBD-focused commuter services operated by Waukesha and Milwaukee Counties over this period. The declines may be attributed, in part, to continued low fuel prices, ample and reasonably priced parking in the Milwaukee CBD, and the continued decentralization of jobs to outlying communities. Since 1990, ridership on the service has fluctuated. The total of 73,800 revenue passengers on the service in 1997 is about 10 percent below the recent high of about 82,600 revenue passengers in 1992, but is still about 3 percent above the recent low of about 72,100 revenue passengers carried in 1995.
- During 1997, the average weekday ridership on the route was approximately 220 revenue passengers. Ridership on Saturdays was about 210 revenue passengers, or about 95 percent of the average weekday ridership, while Sunday and holiday

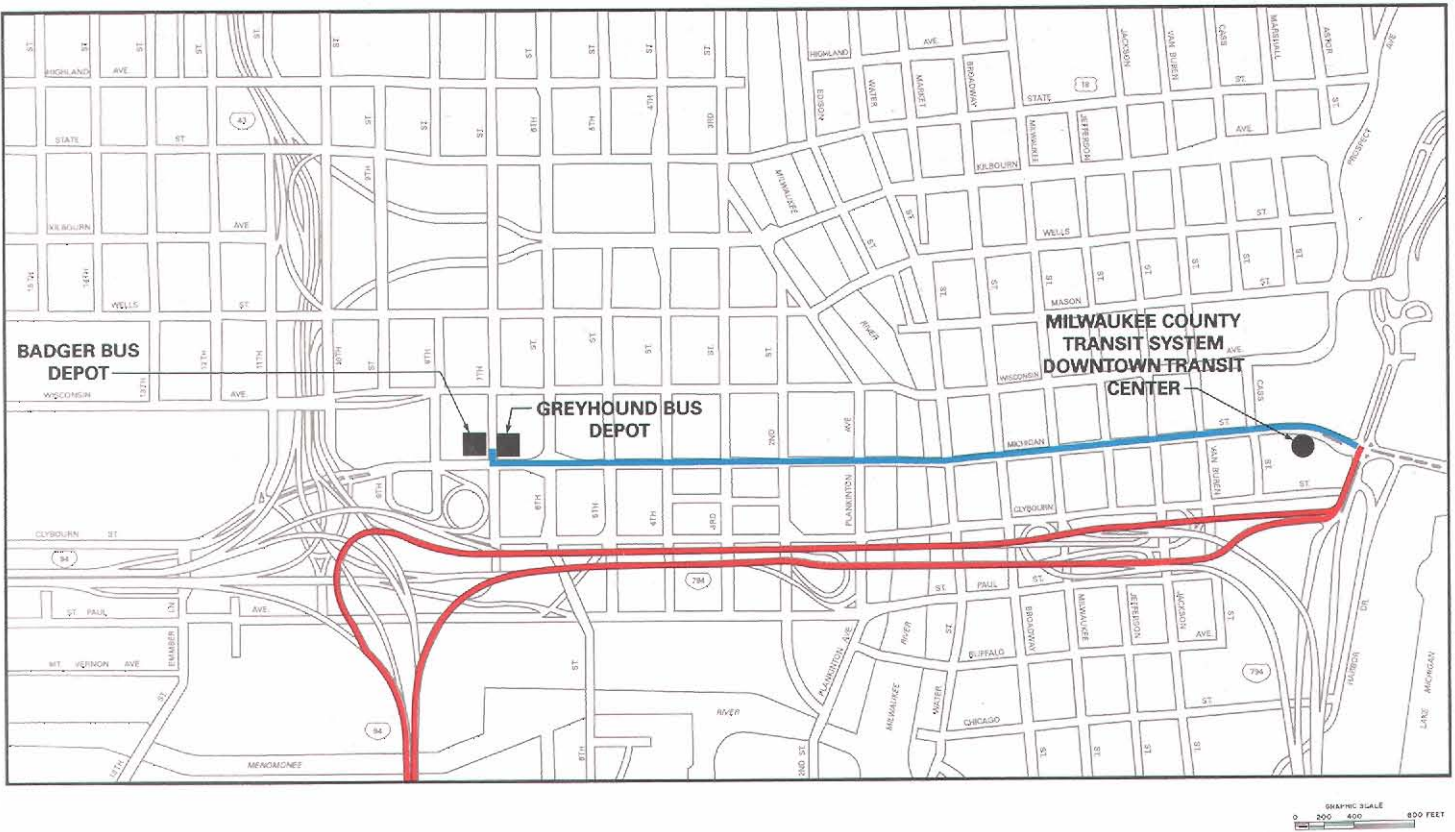
EXISTING MILWAUKEE-RACINE-KENOSHA COMMUTER BUS ROUTE: 1997



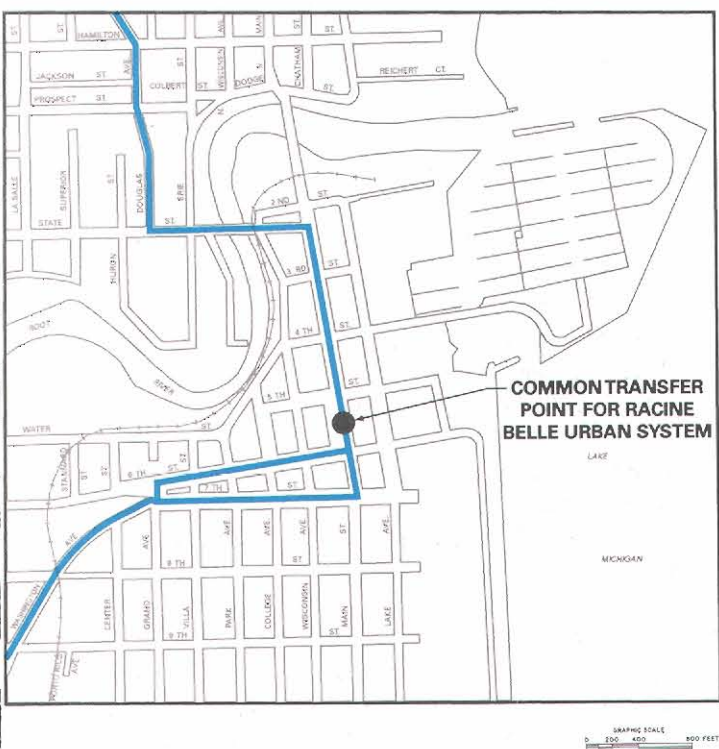
Source: SEWRPC.



INSET 1 TO MAP 39



INSET 2 TO MAP 39



INSET 3 TO MAP 39

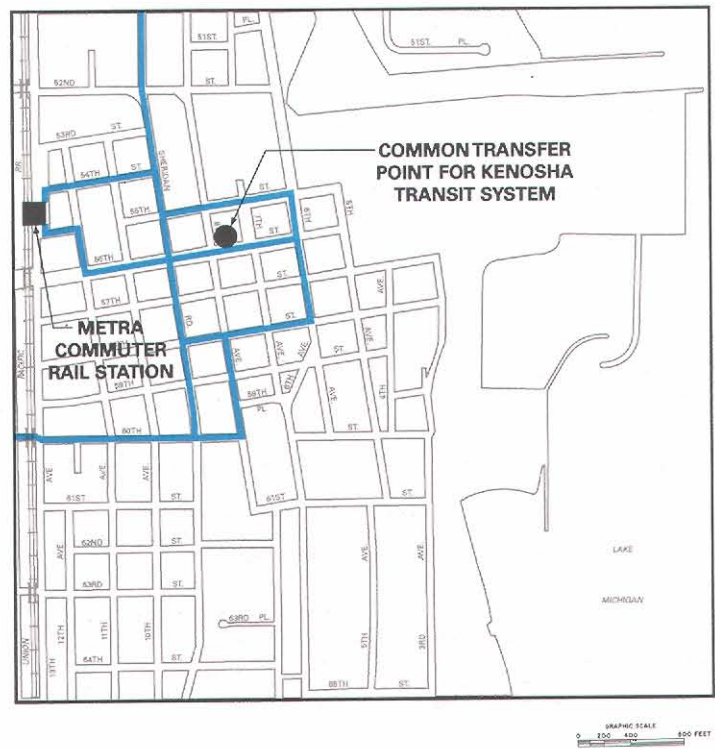


Table 79

**OPERATING CHARACTERISTICS  
OF EXISTING MILWAUKEE-RACINE-  
KENOSHA COMMUTER BUS SERVICE: 1997**

Operating Characteristic	Description
Service Administration .....	Service provided by a private transit operator, Wisconsin Coach Lines, Inc., under joint sponsorship of Kenosha and Racine Counties, and the Cities of Kenosha and Racine <sup>a</sup>
Total Route Miles (round trip) .....	91.0
Service Periods	
Weekdays	
Northbound from Kenosha .....	5:30 a.m. - 8:30 p.m.
Southbound from Milwaukee CBD .....	7:00 a.m. - 11:00 p.m.
Saturdays, Sundays, Holidays	
Northbound from Kenosha .....	8:15 a.m. - 8:30 p.m.
Southbound from Milwaukee CBD .....	9:45 a.m. - 11:00 p.m.
Service Levels	
Weekdays	
Northbound from Kenosha	
Morning peak period .....	3
Midday offpeak period .....	3
Afternoon peak period .....	1
Evenings .....	1
Total .....	8
Southbound from Milwaukee CBD	
Morning peak period .....	1
Midday offpeak period .....	3
Afternoon peak period .....	3
Evenings .....	1
Total .....	8
Saturdays, Sundays, Holidays	
Northbound from Kenosha .....	4
Southbound from Milwaukee CBD .....	4
Vehicle Requirements for Peak Service	
Weekdays .....	4
Saturdays, Sundays, and Holidays ..	1
Passenger Fares (adult cash fares per one-way trip) <sup>b</sup>	
Between Kenosha and Milwaukee CBD .....	\$4.20
Between Racine and Milwaukee CBD .....	3.10
Between Racine and Kenosha .....	1.80
Average Daily Ridership	
Weekdays .....	220
Saturdays .....	207
Sundays and Holidays .....	125

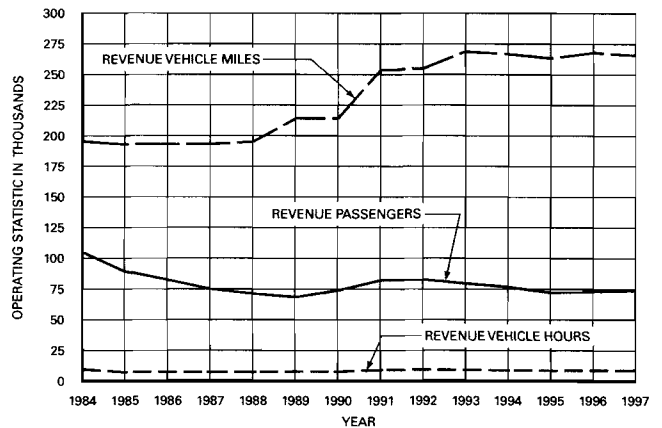
<sup>a</sup>Since 1984, the City of Racine has assumed responsibility as the lead public agency by acting as the applicant-grantee for the State urban mass transit operating assistance funds used to subsidize the service.

<sup>b</sup>A discount of ten percent from regular cash fares is offered to passengers who purchase ten-ride commuter books. Special fares equal to one-half the regular cash fare are also offered for children five through 12 years of age, and elderly or disabled individuals with appropriate identification. Children under five years of age ride for free with an adult.

Source: City of Racine Department of Transportation and SEWRPC.

Figure 16

**HISTORIC RIDERSHIP AND  
SERVICE LEVELS ON THE MILWAUKEE-RACINE-  
KENOSHA COMMUTER BUS SERVICE: 1984-1997**



Source: SEWRPC.

ridership was about 125 revenue passengers, or about one-half of the average weekday ridership.

- Over the five-year period from 1993 through 1997, the commuter service has cost about \$551,400 on an average annual basis to operate. Of this total, about \$224,500, or 41 percent, came from farebox revenues. The remaining \$326,900, or 59 percent, constituted the total average annual operating subsidy and was covered by funds from the State urban transit operating assistance program. No public funds from any of the four municipal sponsors were required.

At the request of the City of Racine, the transit operator conducted counts of boarding and alighting passengers on the route between October 4 and 12, 1997. Passengers were assigned to the nearest stop location in the route timetable and the ridership data was averaged for the nine-day period. The ridership counts indicated the following:

- That about 39 percent of the boarding and alighting passenger activity occurred in Milwaukee County, with about 35 percent occurring within the Milwaukee CBD.
- That about 39 percent of the boarding and alighting passenger activity occurred at the stops in Eastern Racine County, with about 23 percent occurring at the central transfer point for the Racine transit system in downtown Racine.

Table 80

**ANNUAL RIDERSHIP, SERVICE LEVELS, AND OPERATING EXPENSES FOR  
THE MILWAUKEE-RACINE-KENOSHA COMMUTER BUS SERVICE: 1993-1997**

Operating Characteristic	Year					Five-Year Average
	1993	1994	1995	1996 <sup>a</sup>	1997 <sup>a</sup>	
<b>Service</b>						
Revenue Vehicle Miles of Service .....	268,300	266,400	263,000	267,500	265,400	266,100
Revenue Vehicle Hours of Service .....	9,100	8,700	8,600	8,700	8,700	8,800
<b>Ridership</b>						
Total Revenue Passengers .....	79,500	76,600	72,100	72,900	73,800	75,000
Revenue Passengers per:						
Revenue Vehicle Mile .....	0.30	0.29	0.27	0.27	0.28	0.28
Revenue Vehicle Hour .....	8.7	8.8	8.4	8.4	8.5	8.5
<b>Operating Costs, Revenues, and Subsidies</b>						
Expenses <sup>b</sup> .....	\$516,800	\$514,000	\$492,400	\$611,200	\$622,700	\$551,400
Passenger and Other Revenues .....	238,500	230,000	215,600	217,800	220,400	224,500
Public Subsidy .....	278,300	284,000	276,800	393,400	402,300	326,900
Percent of Operating Costs Recovered through Operating Revenues .....	46.1	44.7	43.8	35.6	35.4	40.7
Sources of Public Subsidy						
Federal .....	--	--	--	--	--	--
State <sup>c</sup> .....	\$278,300	\$284,000	\$276,800	\$393,400	\$402,300	\$326,900
Local .....	--	--	--	--	--	--
<b>Total</b>	<b>\$278,300</b>	<b>\$284,000</b>	<b>\$276,800</b>	<b>\$393,400</b>	<b>\$402,300</b>	<b>\$326,900</b>
<b>Per Trip Data</b>						
Estimated Operating Costs .....	\$6.50	\$6.71	\$6.83	\$8.38	\$8.44	\$7.35
Operating Revenue .....	3.00	3.00	2.99	2.98	2.99	2.99
Subsidy .....	3.50	3.71	3.84	5.40	5.45	4.36

<sup>a</sup>Financial data for 1996 and 1997 are estimates.

<sup>b</sup>Operating expenses have been adjusted to reflect the estimated actual costs of the service by subtracting funds provided by the private contract service operator.

<sup>c</sup>Represents funds obtained through the WisDOT Section 85.20 Urban Public Transit Operating Assistance Program.

Source: Wisconsin Department of Transportation; City of Racine Department of Transportation; and SEWRPC.

- That about 22 percent of the boarding and alighting passenger activity occurred at the stops in Eastern Kenosha County. There was no single dominant stop location as found for eastern Racine County.
- That a number of stops and route segments, shown on Map 40, were identified as being very unproductive and as possible candidates for elimination.

### Connecting Public Transit Services

The following three other publicly operated bus systems provide service within the Milwaukee-Racine-Kenosha travel corridor: the Kenosha transit system, owned and operated by the City of Kenosha; the Belle Urban System, owned and operated by the City of Racine; and the Milwaukee County Transit System, owned and operated

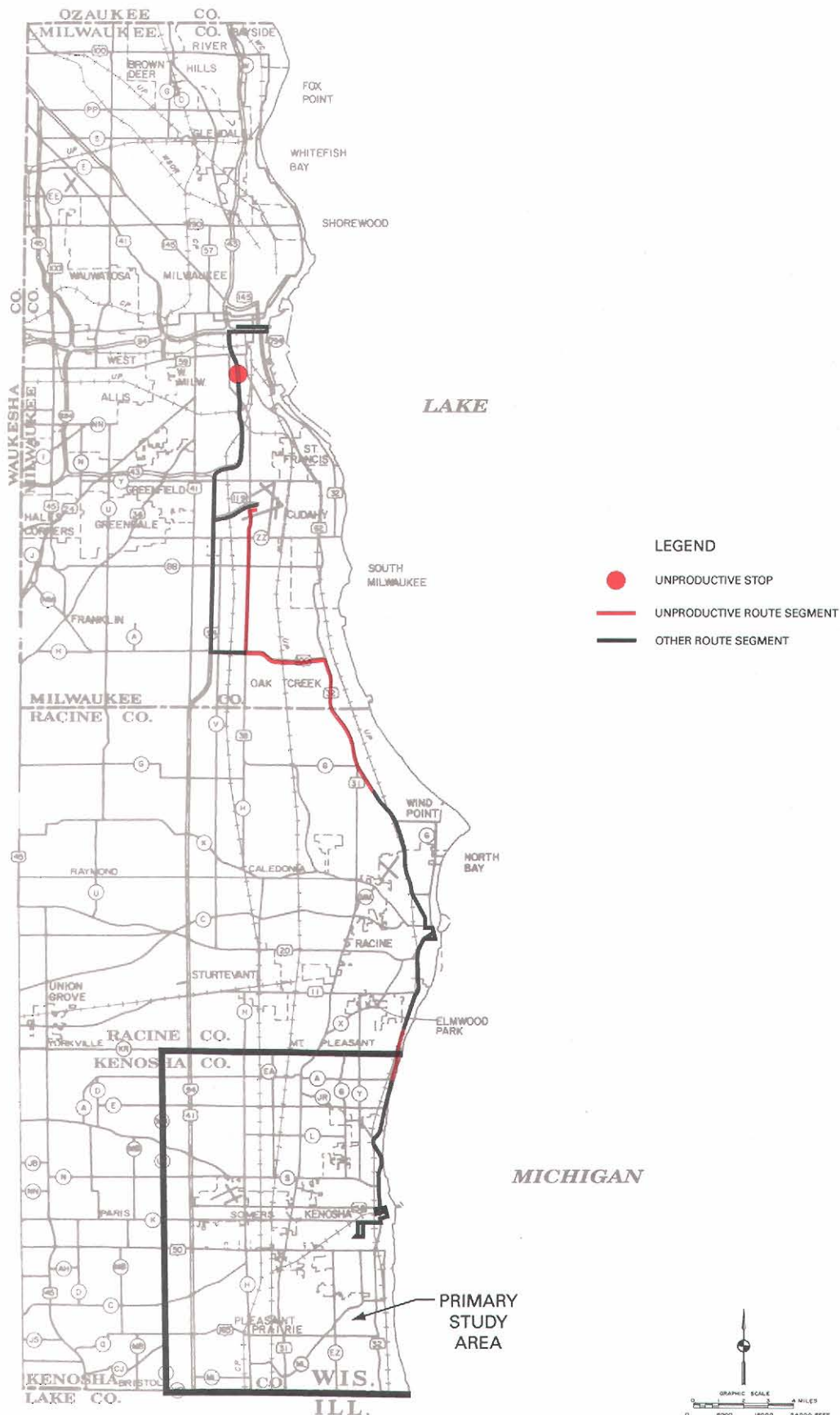
by Milwaukee County. These systems provide connecting bus service with the Wisconsin Coach Lines, Inc., service. The alignments of the bus routes and local transit service area for each operator within the corridor in 1997 are shown on Map 41. The important characteristics of each of these other bus services with respect to connections with the existing commuter bus service and service for commuter travel in the corridor may be briefly described as follows:

- City of Kenosha Transit System

The service characteristics of the Kenosha transit system were described in detail in Chapter III of the report. To provide for connections with the Kenosha bus routes, the Wisconsin Coach Lines, Inc., commuter bus service stops at the common transfer point for the transit system, on 56th Street

# Map 40

## UNPRODUCTIVE STOPS AND ROUTE SEGMENTS ON THE EXISTING MILWAUKEE-RACINE-KENOSHA COMMUTER BUS SERVICE: OCTOBER 1997

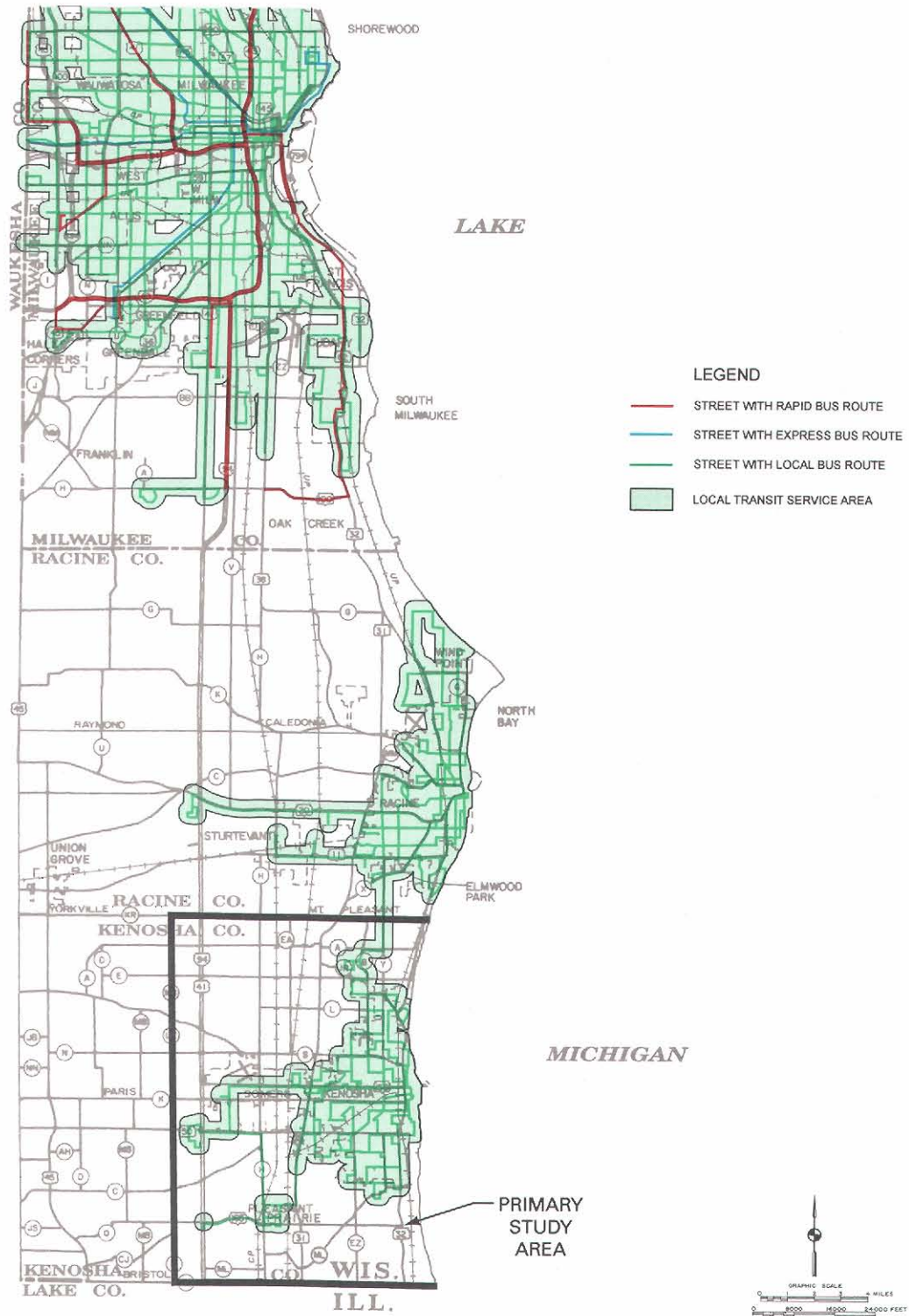


Source: Wisconsin Coach Lines, Inc., and SEWRPC.



Map 41

OTHER PUBLICLY OPERATED TRANSIT SERVICES  
IN THE MILWAUKEE-RACINE-KENOSHA CORRIDOR: 1997



Source: SEWRPC.



between 7th and 8th Avenues, in downtown Kenosha. The City intends to relocate the common transfer point to a new terminal on 54th Street between 6th and 8th Avenues by the summer of 1999.

Route No. 1 of the Kenosha transit system serves the University of Wisconsin-Parkside. Transit patrons who desire to travel between the Cities of Racine and Kenosha can do so by transferring between this route and Route No. 9 of the City of Racine Bell Urban System which also serves University on weekdays when classes are in session. With the current weekday schedules of the Kenosha and Racine transit systems, this transfer connection at the University can be made between about 8:00 a.m. and 5:30 p.m., resulting in travel times of 60 to 90 minutes between downtown Kenosha and downtown Racine. Based on the 1991 Commission surveys of passengers on both the Racine and Kenosha bus systems, it is estimated that only about 20 passengers per day, or less than 1 percent of the ridership on the systems, make such a transfer to travel between Racine and Kenosha.

- Milwaukee County Transit System

The Milwaukee County Transit System provides service over a total of 70 fixed bus routes plus special routes operated on a limited basis for sporting events, fairs, and festivals. These routes together formed a system that provides service throughout the developed urban area of Milwaukee County and into some adjacent areas of Waukesha County. Service over most routes is provided seven days a week, including all holidays, typically from 5:00 a.m. to 1:00 a.m. On most major routes, peak-period headways range from 10 to 20 minutes and offpeak-period headways range from 15 to 30 minutes. Headways of 30 to 60 minutes are operated on some local routes providing connecting or shuttle services. The base adult cash fares for service are currently \$1.35 per one-way trip for local and express service and \$1.60 per one-way trip for "freeway flyer" rapid bus service.

About one-half of the Milwaukee County Transit System bus routes stop within the Milwaukee CBD, many at its downtown transit center, at E. Michigan Street and Cass Street, directly served by a stop on the Wisconsin Coach Lines, Inc., commuter bus route. The commuter bus route in the CBD is located only one block south of E. and W. Wisconsin Avenue, which serves as the major east-west spine for County bus routes serving the Milwaukee

CBD, and also intersects with the County's north-south routes serving the CBD along E. and W. Michigan Street.

Over the last ten years, the Milwaukee County Transit System has extended limited bus service to the southeastern portion of Milwaukee County and now serves portions of the City of Oak Creek also served by the existing Wisconsin Coach Lines, Inc., commuter bus route. Freeway flyer routes currently serving this area include Route No. 40, which serves a park-ride lot at IH 94 and Ryan Road, and Route No. 48, which operates over Ryan Road between S. Howell Avenue and S. Chicago Avenue (STH 32). Local shuttle service is also currently provided over S. Howell Avenue to W. Puetz Road by Route No. 80 and over S. 13th, 10th, and 6th Streets to W. Drexel Avenue by Route No. 219.

- City of Racine Belle Urban System

The City of Racine operates the Belle Urban System, the local bus system serving the City of Racine and environs. Service is provided over 11 fixed bus routes, nine of which are radial in design and emanate from downtown Racine to provide direct, nontransfer service from downtown to all areas of the City and immediate environs, including the University of Wisconsin-Parkside campus. The tenth route is a cross-town route lying to the west of downtown Racine and the eleventh route is a feeder route serving the Town of Caledonia. Service is provided on most routes on weekdays from about 5:30 a.m. to 7:00 p.m. and on Saturdays from about 7:00 a.m. to 6:00 p.m. Operating headways on most routes are 30 minutes on weekdays and Saturdays, with the following exceptions: Route Nos. 3, 4, and 7, which operates on weekday, peak-period headways of 20 minutes during nonsummer months; Route No. 10, which operates on a headway of 45 minutes throughout the entire day; and Route No. 20, which operates only during weekday peak periods on headways of 60 minutes. No service is operated by the system on Sundays or major holidays. The base adult cash fare for the service is currently \$1.00 per one-way trip.

Nine of the 11 City bus routes serve a common transfer point in downtown Racine, at Monument Square, near 5th and Main Streets. Buses on these nine routes do not all meet at the same time because their schedules are developed independently to best serve the trip generators along each route. For the most part, the schedules of the routes provide

for convenient transfers between routes, because buses from the various routes typically meet within 15 minutes of one another. The Wisconsin Coach Lines, Inc., commuter bus service serves the transfer point to provide connections with these City bus routes. The City's new transit system development plan has proposed the relocation of the transfer point to a new terminal in the block bounded by Park Avenue, Water Street, College Avenue, and 6th Street.

Route No. 9 of the Belle Urban System operates between the Racine CBD and the University of Wisconsin-Parkside. Service is provided only on weekdays during the fall, spring, and summer class sessions at the University. The availability and use of connecting service provided by Route No. 1 of the Kenosha transit system for transit patrons who desire to travel between the Cities of Racine and Kenosha was discussed under the section describing the service provided by the Kenosha transit system.

### **Existing Travel Habits and Patterns**

Information on the quantity and characteristics of travel in the Milwaukee-Racine-Kenosha corridor was based on the findings of regional resident household travel survey and a survey of users of the commuter bus service, both conducted by the Regional Planning Commission in the fall of 1991. The surveys were part of a comprehensive inventory of regional travel, including surveys similar to those conducted by the Commission in its 1963 and 1972 regional travel inventories. In the tables and maps in this section presenting the volume of trip making on an average weekday, all trips are presented as trips from the place of trip production to the place of trip attraction.

### **Total Person Travel Characteristics**

To facilitate analysis of 1991 person-travel, the corridor was divided into 14 analysis areas, including three analysis areas within the primary study area, three analysis areas within eastern Racine County, and eight analysis areas in southern and central Milwaukee County. The distribution of 1991 person travel between the analysis areas within the corridor is shown in Table 81 for all trips and in Table 82 for work-purpose trips only. The generalized pattern and volume of intercounty person travel between the analysis areas within the corridor is shown on Map 42 for all trips and on Map 43 for work-purpose trips only. Intracounty person trip movements have not been displayed on the maps because such trips are not the primary focus of the existing commuter bus service, nor should they be if faster bus service is desired. The following

points should be noted concerning 1991 person travel within the corridor:

- On an average weekday in 1991, about 1.69 million person trips were made between origins and destinations within the corridor. In 1991 the largest proportion of these trips, about 31 percent, were made for medical, personal business, or social-recreational purposes. The remaining person trips were relatively evenly distributed, with about 22 percent made for work, 14 percent made for shopping, 20 percent were nonhome-based, and 13 percent were school trips.
- Of the 1.69 million average weekday corridor person trips, about 986,000 trips, or about 58 percent, were made entirely within individual analysis areas in the corridor. The remaining 708,900 trips, or about 42 percent, were made between analysis areas.
- The vast majority of the 708,900 person trips made between analysis areas were intracounty trips, made entirely within one of the three counties within the corridor. Only about 83,300 trips, or about 12 percent, were intercounty trips crossing one or more county lines. About 43,600 of the intercounty trips, or about 52 percent, were produced from residences in the Racine County portion of the corridor; about 29,200 trips, or about 35 percent, were produced from residences in the Kenosha County portion of the corridor; and about 10,600 trips, or about 13 percent, were produced from residences in the Milwaukee County portion of the corridor.
- The largest volume of average weekday intercounty person trips within the corridor occurred between eastern Racine and Kenosha Counties, with about 46,300 trips, or about 56 percent of the 83,300 total intercounty trips, occurring between these areas. About 22,000 of these trips, or about 26 percent of all intercounty trips, occurred between the two analysis areas containing the Cities of Racine and Kenosha.
- About 44 percent of the intercounty travel made on an average weekday in 1991 was focused on Milwaukee County portion of the corridor. Eastern Racine County accounted for about 30,900 trips, or about 37 percent of all intercounty trips, while eastern Kenosha County accounted for about 6,100 trips, or about 7 percent of all intercounty trips. About 5,600 trips, or about 7 percent of all inter-

Table 81

**DISTRIBUTION OF AVERAGE WEEKDAY TOTAL  
PERSON TRIPS BETWEEN ANALYSIS AREAS WITHIN  
THE MILWAUKEE-RACINE-KENOSHA TRAVEL CORRIDOR: 1991**

Area of Trip Production	Area of Trip Attraction														Total
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	
1 Milwaukee-North	208,000	56,740	36,400	8,320	980	1,870	2,400	730	50	140	590	--	120	100	316,440
2 Milwaukee-CBD	13,680	14,540	6,250	2,020	340	240	700	70	390	140	80	--	--	--	38,450
3 Milwaukee-South	29,760	23,400	151,970	29,380	4,860	4,830	6,180	1,760	480	220	750	--	180	60	253,830
4 Milwaukee-Airport	6,360	9,720	35,820	50,230	4,390	5,600	11,780	660	550	240	700	70	330	60	126,510
5 St. Francis	1,130	730	4,330	2,560	6,510	4,350	1,040	960	--	--	110	--	--	--	21,720
6 Cudahy	1,760	2,380	5,900	5,270	5,150	26,150	5,140	5,300	490	--	50	60	70	60	57,780
7 Oak Creek	3,170	3,800	7,690	8,630	880	4,220	35,840	5,540	1,160	610	1,160	230	120	250	73,300
8 South Milwaukee	1,790	2,710	4,070	4,220	780	7,840	6,640	26,710	320	60	340	90	60	70	55,700
9 Caledonia	870	1,210	2,060	2,440	--	690	4,560	740	39,640	9,060	50,550	1,080	2,020	140	115,060
10 Mount Pleasant	220	500	410	250	30	70	670	20	4,370	14,110	27,960	1,520	1,790	210	52,130
11 Racine	1,060	1,950	700	1,460	40	130	1,920	260	23,620	29,280	200,050	5,160	7,750	1,620	275,000
12 Somers	120	110	120	--	--	60	70	--	650	1,000	4,760	3,010	12,940	1,230	24,070
13 Kenosha	630	950	590	710	80	--	280	--	400	1,870	14,280	15,850	203,130	14,090	252,860
14 Pleasant Prairie	70	260	--	140	--	--	20	--	--	470	1,590	1,150	22,230	6,160	32,090
Total	268,620	119,000	256,310	115,630	24,040	56,050	77,240	42,750	72,120	57,200	302,970	28,220	250,740	24,050	1,694,940

NOTE: Trips are shown in produced-attracted format; that is from the area of production to the area of attraction. Shaded cell indicate trips made entirely within an individual subarea analysis area.

Source: SEWRPC.

Table 82

**DISTRIBUTION OF AVERAGE WEEKDAY WORK-PURPOSE  
PERSON TRIPS BETWEEN ANALYSIS AREAS WITHIN  
THE MILWAUKEE-RACINE-KENOSHA TRAVEL CORRIDOR: 1991**

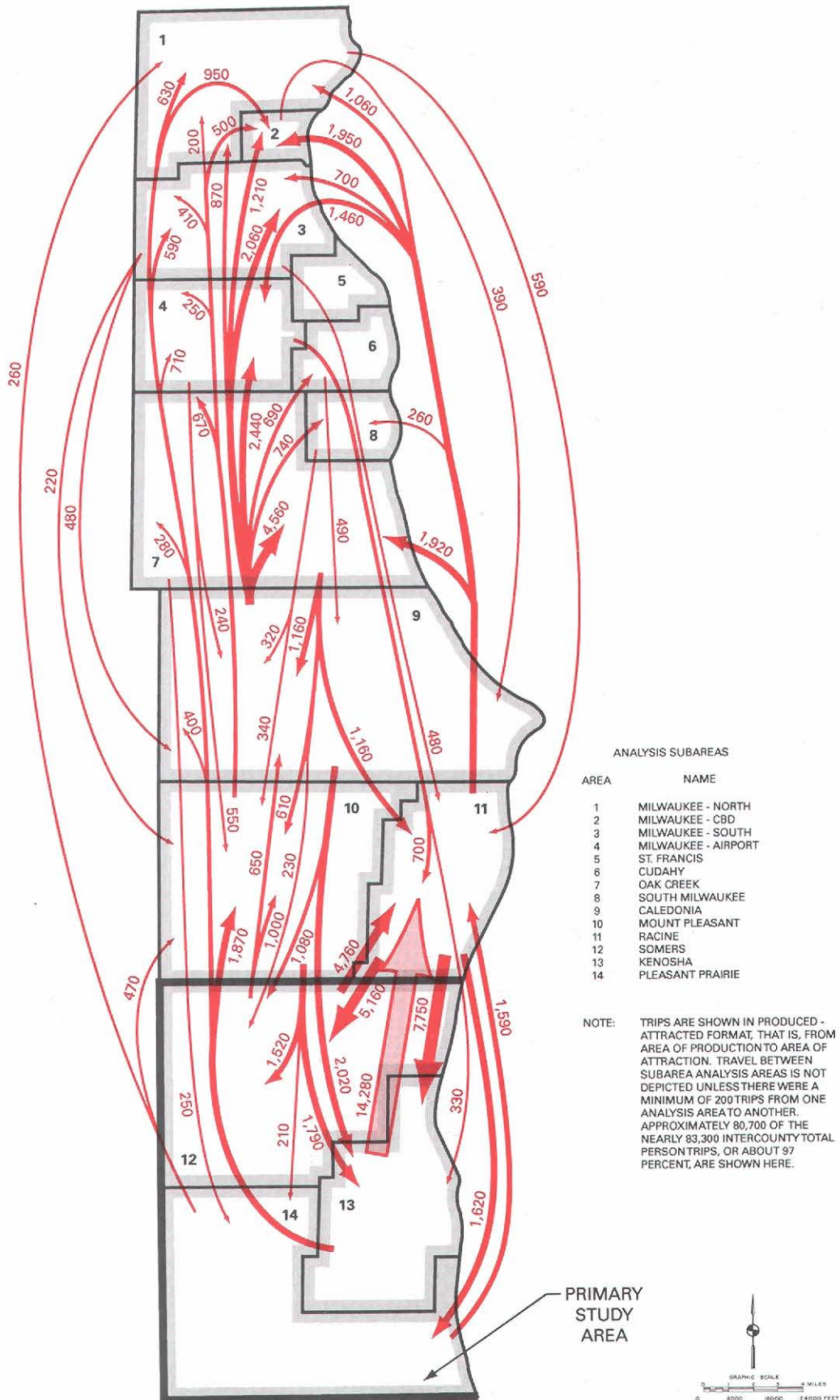
Area of Trip Production	Area of Trip Attraction														Total
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	
1 Milwaukee-North	44,910	22,750	12,040	2,460	280	610	1,200	340	--	30	360	--	80	60	85,120
2 Milwaukee-CBD	1,150	2,730	300	160	--	--	--	--	--	--	--	--	--	--	4,340
3 Milwaukee-South	12,560	12,180	30,190	5,850	640	1,470	2,070	300	90	110	280	--	50	--	65,790
4 Milwaukee-Airport	3,110	5,900	8,580	6,980	290	1,100	2,230	50	120	80	320	70	210	--	29,040
5 St. Francis	700	470	1,270	490	970	870	370	220	--	--	--	--	--	--	5,360
6 Cudahy	710	1,600	2,060	1,180	560	3,500	1,350	1,090	220	--	--	--	70	--	12,340
7 Oak Creek	1,570	2,330	2,930	2,100	230	810	5,750	1,030	300	370	770	120	50	70	18,430
8 South Milwaukee	920	1,600	1,700	980	80	1,690	1,350	3,400	30	--	170	--	60	40	12,020
9 Caledonia	350	960	1,080	550	--	130	2,030	250	5,510	2,510	13,740	170	1,050	140	28,470
10 Mount Pleasant	50	170	60	140	30	--	210	--	1,000	2,260	6,110	200	410	170	10,810
11 Racine	330	780	180	530	--	90	810	130	4,810	6,480	35,910	1,060	2,470	460	54,040
12 Somers	--	110	--	--	--	--	--	--	420	170	1,320	1,020	3,070	220	6,330
13 Kenosha	150	210	230	140	80	--	150	--	190	350	2,940	2,600	30,160	4,610	41,810
14 Pleasant Prairie	40	240	--	80	--	--	--	--	--	80	680	540	3,890	890	6,440
Total	66,550	52,030	60,620	21,640	3,160	10,270	17,520	6,810	12,690	12,440	62,600	5,780	41,570	6,660	380,340

NOTE: Trips are shown in produced-attracted format; that is from the area of production to the area of attraction. Shaded cell indicate trips made entirely within an individual subarea analysis area.

Source: SEWRPC.

Map 42

INTERCOUNTY AVERAGE WEEKDAY TOTAL PERSON TRIPS BETWEEN ANALYSIS  
AREAS WITHIN THE MILWAUKEE-RACINE-KENOSHA TRAVEL CORRIDOR: 1991

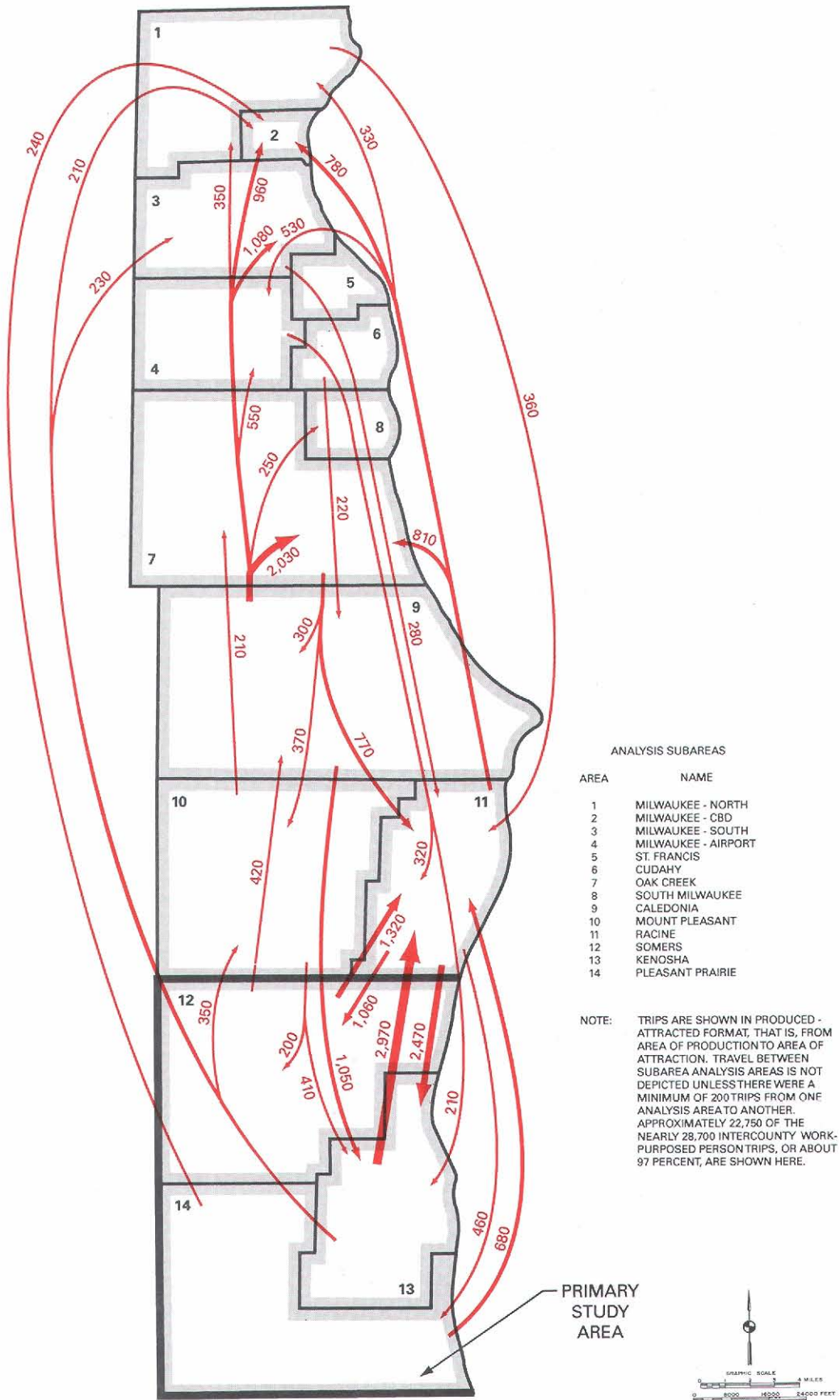


Source: SEWRPC.



Map 43

**INTERCOUNTY AVERAGE WEEKDAY WORK-PURPOSE PERSON TRIPS BETWEEN ANALYSIS AREAS WITHIN THE MILWAUKEE-RACINE-KENOSHA TRAVEL CORRIDOR: 1991**



Source: SEWRPC.



Table 83

**PERCENTAGE DISTRIBUTION OF RIDERSHIP  
ON THE MILWAUKEE-RACINE-KENOSHA  
COMMUTER BUS SERVICE FOR VARIOUS  
RIDERSHIP CHARACTERISTICS: 1991**

Ridership Characteristic	Percent of Revenue Passengers
<b>Age</b>	
Under 16 .....	--
16-24 .....	17.2
25-34 .....	35.4
35-44 .....	30.7
45-54 .....	6.9
55-64 .....	4.4
65 and Older .....	5.4
<b>Total</b>	<b>100.0</b>
<b>Sex</b>	
Male .....	46.9
Female .....	53.1
<b>Total</b>	<b>100.0</b>
<b>Licensed Driver</b>	
Yes .....	75.1
No .....	24.9
<b>Total</b>	<b>100.0</b>
<b>Household Income</b>	
Under \$10,000 .....	10.9
\$10,000-\$19,999 .....	23.0
\$20,000-\$29,999 .....	25.2
\$30,000-\$39,999 .....	22.3
\$40,000 and Over .....	18.6
<b>Total</b>	<b>100.0</b>
<b>Trip Purpose</b>	
Home-Based Work .....	53.8
Home-Based Shopping .....	1.4
Home-Based Other .....	14.0
Nonhome-Based .....	9.1
School Based .....	21.7
<b>Total</b>	<b>100.0</b>
<b>Vehicles Available per Household</b>	
No Vehicle .....	19.1
One Vehicle .....	52.6
Two or more Vehicles .....	28.3
<b>Total</b>	<b>100.0</b>

Source: SEWRPC.

county trips, were made between eastern Racine and Kenosha Counties and the City of Milwaukee CBD.

**Transit Person Travel Characteristics  
of Wisconsin Coach Lines, Inc., Users**

Survey data indicate that about 270 transit revenue passenger trips were made on an average weekday in 1991

on the Wisconsin Coach Lines, Inc., commuter bus service in the Milwaukee-Racine-Kenosha travel corridor. These 270 transit trips represented less than 1 percent of the estimated 83,300 average weekday intercounty person trips within the corridor. Table 83 summarizes the socio-economic characteristics of the passengers on the service. The distribution of transit travel between subareas within the corridor is shown in Table 84. The following observations may be made based upon the examination of this information:

- The characteristics of users of the service reflect the orientation of the service toward serving commuting travel patterns. About 54 percent of the trips were made for work purposes; about 66 percent of the trips were made by individuals between 25 and 44 years of age; between 75 and 80 percent of the users were licensed drivers and had at least one vehicle available in their household; and about 66 percent of the users came from households with annual incomes of \$20,000 or more. These values are significantly higher than observed for riders of the local transit services provided by the Kenosha, Milwaukee County, and Racine transit systems.
- Over three-fourths of the trips made on the service were attracted to locations in Milwaukee County, with about 60 percent of such Milwaukee County trips, and about 47 percent of all trips, attracted to the Milwaukee CBD. About 30 percent of the trips attracted to Milwaukee County were attracted to locations within the City of Milwaukee which were just outside the Milwaukee CBD or within a reasonable ride time on connecting local bus service.
- About one-half of the trips attracted to Milwaukee County, and about 63 percent of the trips attracted to the Milwaukee CBD, were produced from home residences in the Racine County portion of the corridor. About 56 percent of all trips were either produced within or attracted to eastern Racine County. The majority of these trips accessed the commuter bus service at the common transfer point for the Racine transit system in downtown Racine.
- Only about 10 percent of the trips on the service were made between eastern Kenosha and Racine Counties.
- Approximately 20 percent of the average weekday ridership transferred to or from connecting local bus services serving the Cities of Racine and Kenosha or Milwaukee County.

Table 84

**DISTRIBUTION OF AVERAGE WEEKDAY TRANSIT TRIPS ON THE  
MILWAUKEE-RACINE-KENOSHA COMMUTER BUS SERVICE: 1991**

Area of trip Production		Area of Trip Attraction											
		Kenosha County			Milwaukee County				Racine County			Waukesha County	Total
		City of Kenosha	Remainder of County	Subtotal	City of Milwaukee CBD	City of Milwaukee outside CBD	Remainder of County	Subtotal	City of Racine	Remainder of County	Subtotal		
Kenosha	City of Kenosha	--	--	--	39	36	3	78	9	6	15	--	93
	Remainder of County	--	--	--	--	12	--	12	3	--	3	--	15
	Subtotal	--	--	--	39	48	3	90	12	6	18	--	108
Milwaukee	City of Milwaukee CBD	--	--	--	--	--	--	--	3	--	3	--	3
	City of Milwaukee outside CBD	6	10	16	--	--	--	--	12	--	12	--	28
	Remainder of County	--	--	--	9	6	--	15	--	--	--	--	15
	Subtotal	6	10	16	9	6	--	15	15	--	15	--	46
Racine	City of Racine	9	--	9	68	10	12	90	--	3	3	3	105
	Remainder of County	--	--	--	12	3	--	15	--	--	--	--	15
	Subtotal	9	--	9	80	13	12	105	--	3	3	3	120
Waukesha	Entire County	--	--	--	--	--	--	--	--	--	--	--	--
--	Total	15	10	25	128	67	15	210	27	9	36	3	274

NOTE: Trips are shown in produced-attracted format; that is from the area of production to the area of attraction.

Source: SEWRPC.

## Proposed Service Improvements

### Description

Improvements to the existing commuter bus service in the Milwaukee-Racine-Kenosha travel corridor were developed to address deficiencies with the existing service in serving existing commuter travel. The major deficiencies which were identified included the following:

1. Long transit travel times for commuting between the Racine and Kenosha areas and the Milwaukee CBD, as well as between Racine and Kenosha, which restrict consideration of the use of the existing commuter bus and local transit services. In-vehicle transit travel times to the Milwaukee CBD during the morning peak period are currently 76 to 80 minutes from downtown Kenosha and 51 to 53 minutes from downtown Racine. The elimination of the unproductive route segments operated over arterial streets between downtown Racine and General Mitchell International Airport would allow rerouting of the service to operate over the IH 94 freeway, thereby proving faster travel times.

Transit travel times between downtown Kenosha and downtown Racine currently range from 60 to 90 minutes over the service day, reflecting the indirect routing between the two downtowns which the two

local bus routes follow, along with the wait time involved in transferring between the local routes. Providing direct, no-transfer service between downtown Kenosha and downtown Racine would greatly reduce the required travel time.

2. A lack of formally designated park-ride facilities along the route to allow passengers to access the service with their personal automobile. While the route does serve the park-ride facility at the Kenosha Metra station, this lot is perceived as being only for Metra users, is generally filled to capacity with Metra riders, and has a daily parking charge. The development of other formal park-ride facilities, either as publicly constructed facilities or as privately owned shared-use lots, could also generate additional use of the service.
3. A low level of service between the Cities of Racine and Kenosha which restricts the use of transit to travel between the communities. The existing commuter bus schedules provide service which is too infrequent to be of practical use for commuting between Racine and Kenosha. The alternative local bus service between the two communities is available only when classes are in session at the University of Wisconsin-Parkside, or about 200 of the 255

weekdays in an average year. On the basis of the existing commuter bus transit travel times and the volume of person travel between the two communities, more frequent, regular weekday bus service at the appropriate times over the direct commuter bus route connecting the two cities could be expected to generate significantly higher ridership levels.

4. High total fares per trip for passengers of the existing commuter bus route who also use connecting bus services. Using one of the connecting bus services can currently add between \$1.00 and \$1.35 per trip to commuter passenger fares shown in Table 79. Special fare agreements which would offer transfer passengers a discount in the total costs of commuting by transit could serve to encourage more use of the commuter bus service.

To address these problems and deficiencies, a restructuring of the existing commuter service is proposed which will separate the service provided to serve travel between Racine and Kenosha and the Milwaukee CBD from that provided to serve travel between Racine and Kenosha. The routes to be operated under the restructured service are shown on Map 44. The proposed service changes would include the following major elements:

1. The existing Milwaukee-Racine-Kenosha route would be restructured between downtown Racine and Mitchell International Airport in Milwaukee County. The existing route segments using Douglas Avenue in Racine County and Ryan Road and Howell Avenue in Milwaukee County would be eliminated. Service would instead be provided over Washington Avenue (STH 20) and the IH 94 freeway. A new peak-period Kenosha express route would also be established to provide service in Kenosha County over 52nd Street (STH 158) and Green Bay Road (STH 31) to Washington Avenue in Racine County, where it would continue to the Milwaukee CBD over the revised routing proposed above for the existing route.

Service levels and schedules over the two routes would be modestly adjusted from those under the existing single-route during weekday peak periods. It is proposed that a total of four bus trips from downtown Kenosha to the Milwaukee CBD be provided in the morning peak period and four return trips in the afternoon peak period. This would be an increase of one bus trip in each direction from the existing weekday service. Two of the four peak-period bus trips in each direction would operate through downtown Racine over the restructured

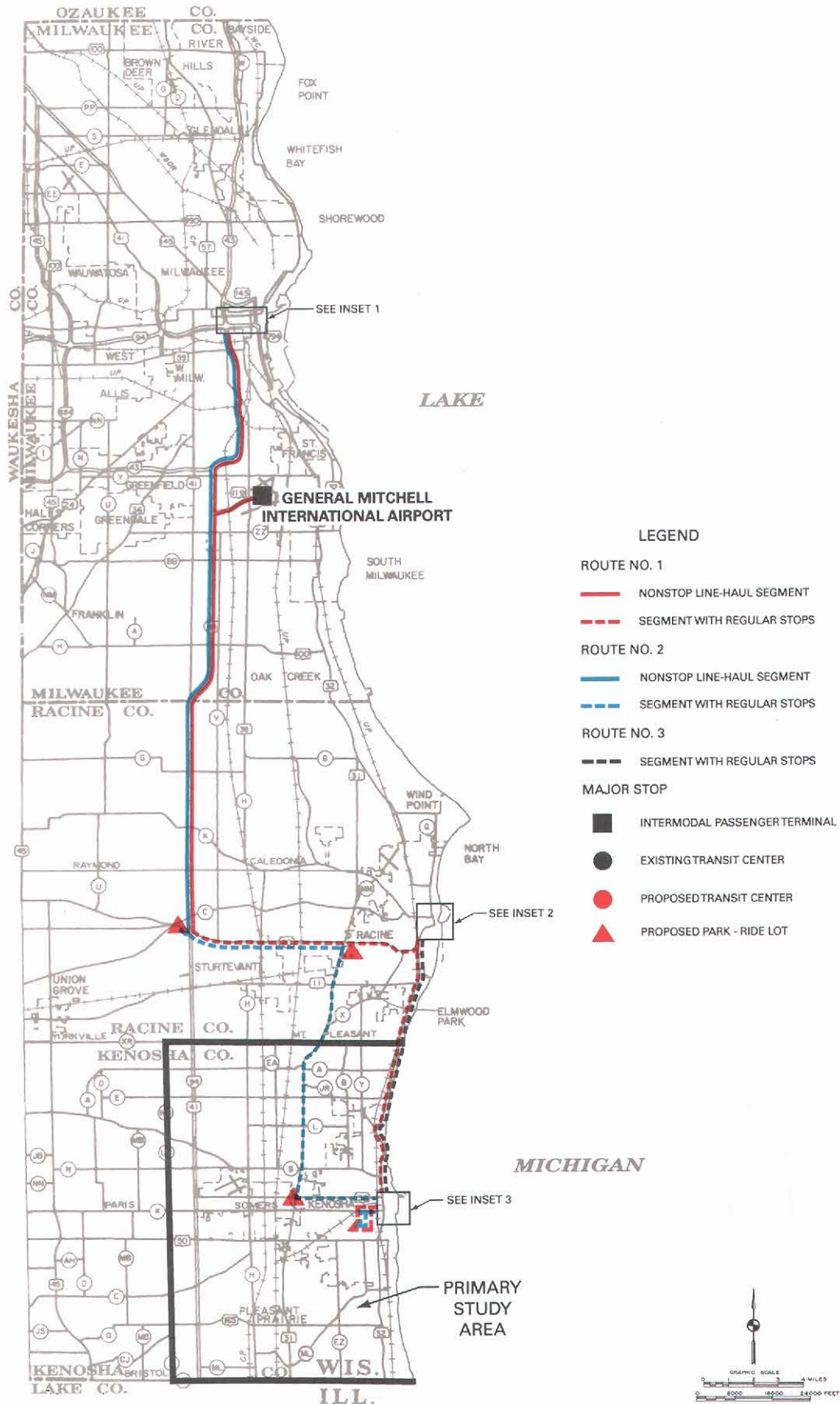
route. The other two trips would operate over the proposed new route, bypassing downtown Racine. The existing service would be adjusted so that the four morning bus trips would arrive at the Greyhound Depot in the Milwaukee CBD at approximately 6:50 a.m., 7:20 a.m., 7:50 a.m., and 8:20 a.m.; and the four afternoon bus trips would depart from the Greyhound Depot at approximately 4:10 p.m., 4:40 p.m., 5:10 p.m., and 5:40 p.m. To provide faster travel times, all four peak trips in each direction would bypass Mitchell International Airport. No service or scheduling changes are proposed for the other weekday trips or for weekend and holiday service. All trips at these times would continue to serve downtown Racine.

The restructured service could continue to be provided either by the existing contract service operator or a different operator selected on the basis of competitive bids.

2. Park-ride terminal facilities would be established and identified in the timetables for the service to make it more convenient for passengers to use automobiles to get to and from the service. The following three potential locations for park-ride lots (see Map 44) were identified:
  - Green Bay Road (STH 31) and 52nd Street (STH 158) in the City of Kenosha;
  - Green Bay Road (STH 31) and Washington Avenue (STH 20) in the City of Racine; and
  - STH 20 and IH 94 in the Town of Yorkville;

Park-ride lots have long been recommended for these locations in the adopted regional transportation system plan as part of the rapid-transit bus service proposed under the plan. A park-ride lot near the intersection of STH 20 and IH 94 is currently being constructed by Racine County and is expected to be completed in the spring of 1998. New park-ride facilities would need to be constructed at the other two locations. Each facility should accommodate approximately 50 cars for transit commuters and be configured to accommodate bus service. The routes, however, could be operated to serve a nearby temporary park-ride facilities created by leasing space in existing parking lots owned by cooperating individual private businesses or shopping centers in the area. The responsibility for negotiating for the lease of such facilities

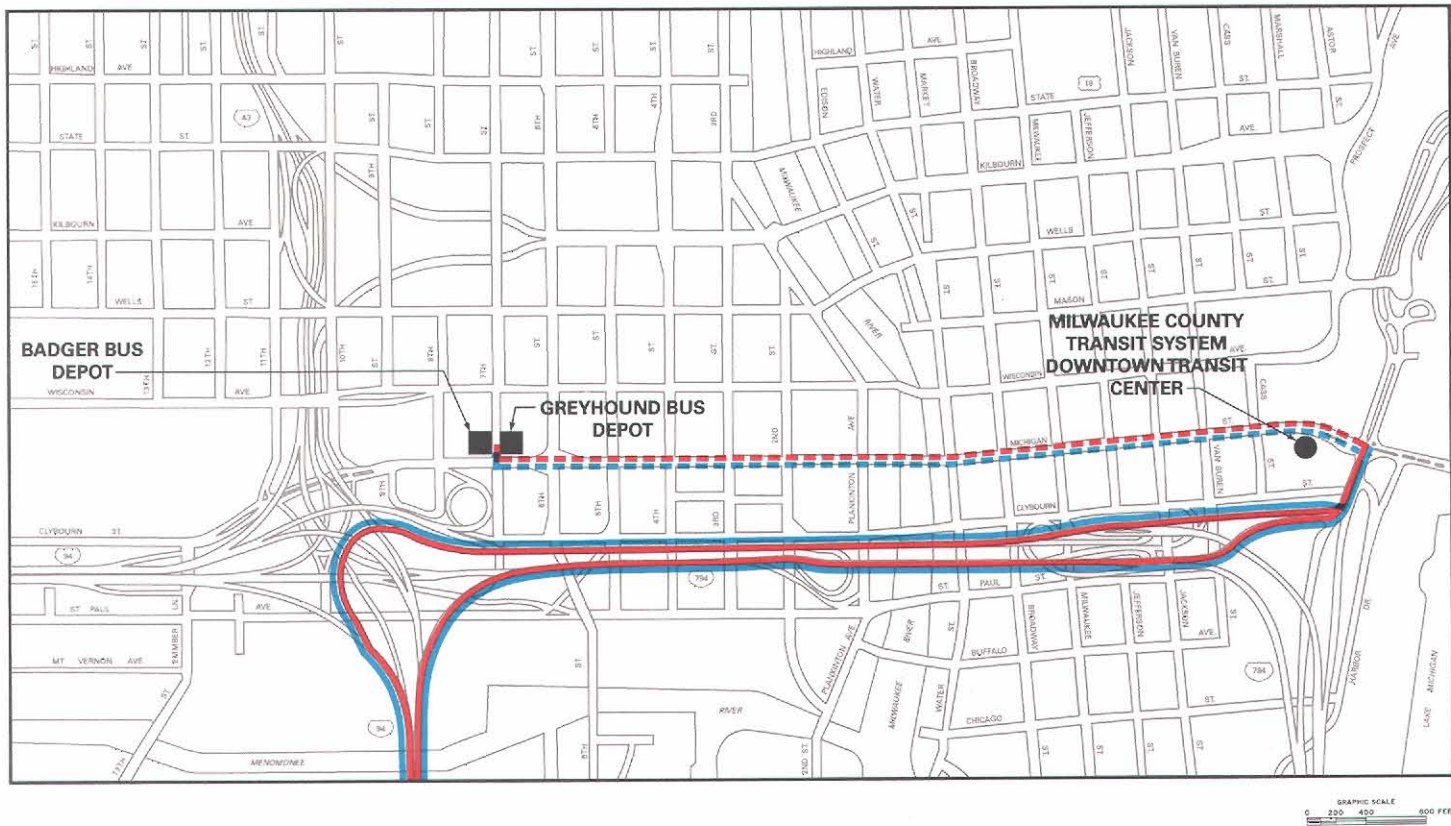
PROPOSED MILWAUKEE-RACINE-KENOSHA COMMUTER BUS ROUTES FOR THE CORRIDOR



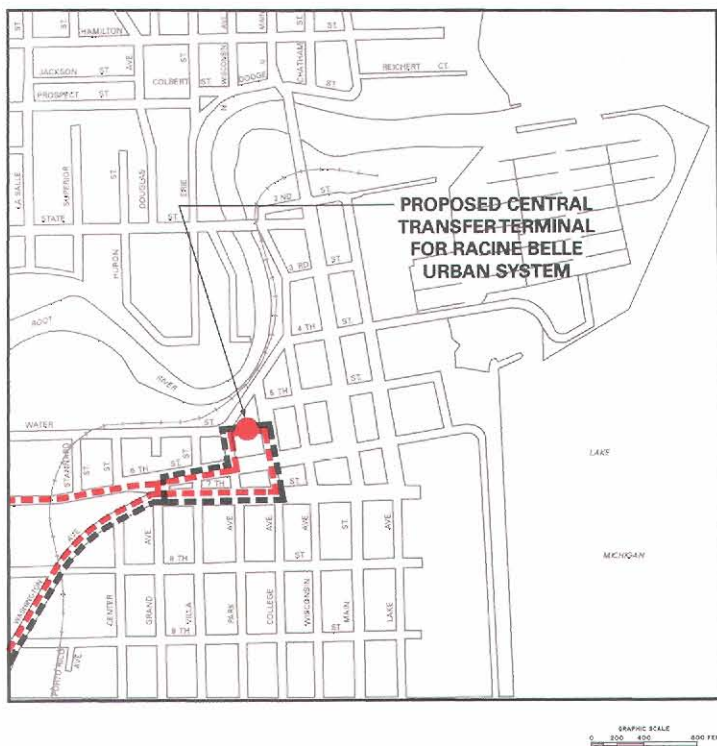
Source: SEWRPC.



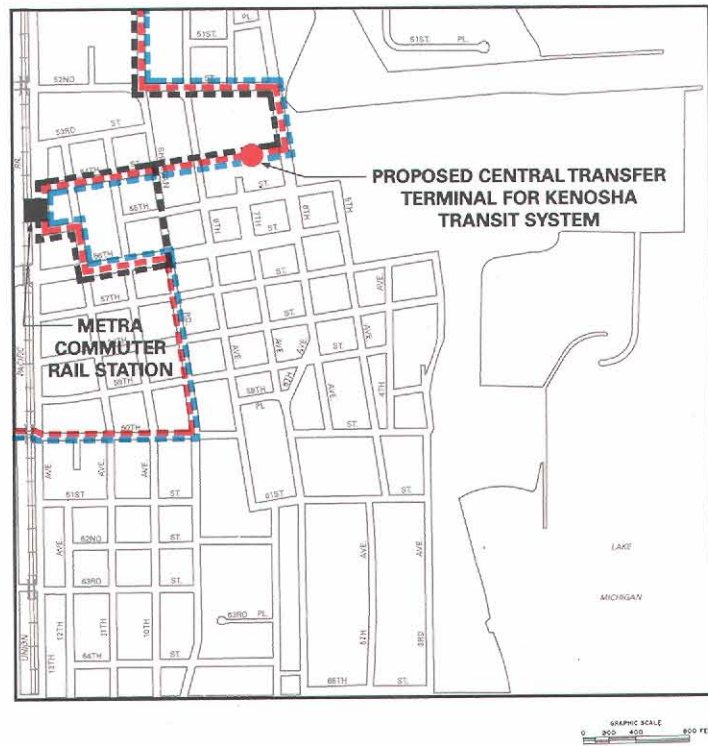
INSET 1 TO MAP 44



INSET 2 TO MAP 44



INSET 3 TO MAP 44





would be placed with the Cities of Racine and Kenosha and the contract service operator.

3. A new weekday route designed to provide express service for travel between the Cities of Racine and Kenosha would be established. The proposed express route would operate between the new central transfer terminals for the Racine and Kenosha local bus systems which have been proposed to be constructed in the near future in downtown Racine and Kenosha, and would follow the same direct route used with the existing commuter bus service. The route would serve the existing common transfer points for the two bus systems (see Map 39) until the new transit centers and the Metra commuter rail station in downtown Kenosha are completed.

Service over the new route would be provided on weekdays only between approximately 6:00 a.m. and 7:00 p.m. to coincide with the weekday hours of operation of the Kenosha transit system. Operating headways would be 30 minutes during peak periods (6:00 a.m. until 9:00 a.m. and 3:00 p.m. until 6:00 p.m.) and 60 minutes at all other times. The service schedules would be coordinated with the pulsed arrival and departure times of the Kenosha transit system at its central transfer terminal. Because the Racine transit system does not operate with pulse scheduling, full coordination with the schedules for each Racine bus route serving downtown Racine will not be possible. With the 30-minute headways operated on most Racine bus routes serving downtown Racine, transferring passengers could expect to wait 10 to 20 minutes. Providing convenient connections with Metra commuter rail service for Racine passengers would also be a priority during the proposed service hours, allowing connections with four of the five morning peak-period trains departing from the Kenosha station between 5:55 and 7:53 a.m. and three of the five afternoon peak-period trains arriving at the Kenosha station between 5:39 and 7:51 p.m.

To maximize coordination with connecting local bus services, the new Racine-Kenosha route should be operated by either the Kenosha or the Racine transit system.

4. Reduced-fare programs for passengers transferring between the proposed commuter bus routes and the connecting bus routes of the Kenosha, Milwaukee County, and Racine transit systems would be established. Without any reduced-fare transfer programs, the total fares for the commuter bus

services would be high, particularly for commuting to and from the Milwaukee CBD if a connecting local bus service is needed to complete the trip. The proposed fares for the restructured commuter bus services in the corridor and suggested transfer fares are presented in Table 85. The proposed transfer fares would result in somewhat lower fares over the entire length of a trip to encourage use of the services. They are modeled after existing transfer fares currently in place for the public transit services in Milwaukee and Waukesha Counties.

#### ***Forecast Service Levels, Ridership, and Costs***

A comparison of selected operating characteristics of the existing and proposed commuter bus services in the corridor is presented in Table 86. The anticipated average annual ridership, operating characteristics, costs, and revenues for the proposed commuter bus services from 1998 through 2002 are compared with those for the existing service in 1997 in Table 87, while detailed annual forecasts of this information for the proposed commuter bus services are provided in Appendix C. The forecasts are predicated upon the basic assumptions and determinations presented in Table 88. The forecasts assume that the proposed Racine-Kenosha commuter bus service would be initiated on a three-year trial, or demonstration, basis extending from 1999 through 2001, funded with Federal funds available through the Congestion Mitigation and Air Quality Improvement (CMAQ) Program and State funds available through the Transportation Demand Management (TDM) Program.<sup>3</sup> The forecasts assume that the restructured Milwaukee-Racine-Kenosha commuter bus service would continue to be funded solely with State transit operating assistance, as is the existing service. The following observations should be made concerning the information presented in these tables:

---

<sup>3</sup>The City of Kenosha was awarded a State TDM grant of approximately \$49,000 in 1994, and a Federal CMAQ grant of approximately \$58,000 in 1995 for a demonstration of express bus service between the Cities of Kenosha and Racine. It was assumed that the City would apply for additional CMAQ funds to extend the demonstration period to the maximum three-year period allowed under the program and that the State TDM grant would be used to fund a portion of the nonFederal share of the operating deficit of the service during the first two years of the demonstration period. Continuation of the Racine-Kenosha service beyond 2001 would be dependent on actual service performance during the demonstration period.

Table 85

## FARES FOR THE PROPOSED COMMUTER BUS SERVICES IN THE MILWAUKEE-RACINE-KENOSHA CORRIDOR

Category	Milwaukee-Racine-Kenosha Route	Racine-Kenosha Route
<b>Cash Fares (per one-way trip)</b>		
Adult .....	\$1.00 - \$4.20	\$1.50
Elderly or Disabled .....	\$0.50 - \$2.10	\$0.75
Student or Youth .....	\$0.50 - \$2.10 <sup>a</sup>	\$1.00 <sup>b</sup>
Children (under age 5) .....	Free	Free
<b>Proposed Transfer Fares</b>		
From connecting local bus service		
Milwaukee County Transit System .....	\$0.85 discount from adult fare	--
Kenosha and Racine Transit Systems .....	\$0.50 discount from adult fare	\$0.75
To connecting local bus service		
Milwaukee County Transit System .....	\$0.50	--
Kenosha and Racine Transit Systems .....	\$0.50	\$0.25
Between connecting corridor commuter bus services ....	\$0.85 discount from adult fare	\$0.65

<sup>a</sup>Ages 5 through 12.

<sup>b</sup>Ages 5 through high school.

Source: SEWRPC.

- Route miles of the commuter bus services in the corridor would increase by almost 50 percent with the proposed service restructuring, mostly as a result of separating the Racine-Kenosha service from the existing Milwaukee-Racine-Kenosha service. Relocating the Milwaukee-Racine-Kenosha route to the IH 94 freeway north of downtown Racine would lengthen the existing route.
- The restructuring Milwaukee-Racine-Kenosha service would be expected to provide reduced commuting times to and from the Milwaukee CBD. Peak-period in-vehicle travel times between the downtown Racine transit center and the Milwaukee CBD would be expected to decrease by as much as four minutes, or 8 percent; and in-vehicle travel times between the downtown Kenosha transit center and the Milwaukee CBD would be expected to decrease by as much as 14 minutes, or 19 percent. In-vehicle travel times between downtown Racine and downtown Kenosha would be expected to increase slightly because of higher passenger activity along the route.
- With the proposed service changes, the commuter bus services would provide about 13,000 revenue vehicle-hours and about 395,900 revenue vehicle-miles of service annually. These are increases of about 4,300 vehicle-hours and about 130,500 vehicle-miles, or about 50 percent, over the existing 1997 commuter service. Most of these increases would be attributable to the operation of the new Racine-Kenosha route. Three additional vehicles would be needed during weekday peak periods to provide these service; they would be provided from existing vehicle fleets.
- With the proposed changes, the commuter bus services may be expected to carry about 129,000 revenue passengers annually, an increase of about 55,200 passengers, or about 75 percent, over the 1997 ridership on the existing bus commuter service. About 83 percent of this additional ridership would occur on the new Racine-Kenosha route, which would be expected to carry an average of about 46,000 revenue passengers annually. The average annual ridership on the restructured Milwaukee-Racine-Kenosha service would be expected to increase by about 9,200, or about 12 percent, over 1997 ridership levels.
- The estimated operating cost for providing the proposed commuter bus services would be about \$1.0 million annually. Of this total, about \$307,700, or about 31 percent, may be expected to be recovered by operating revenues. The total required average annual operating subsidy would approximate \$693,100.

Table 86

**CHANGE IN SERVICE CHARACTERISTICS FOR MILWAUKEE-RACINE-KENOSHA  
COMMUTER BUS SERVICES WITH PROPOSED SERVICE IMPROVEMENTS**

Characteristic	Existing Service	Change		Proposed Service
		Number	Percent	
Number of Routes	1	2	200.0	3
Round Trip Route Miles				
Milwaukee-Racine-Kenosha Route .....	91.0	15.7	17.2	106.7
Milwaukee-Kenosha Route .....	--	97.6	--	97.6
Racine-Kenosha Route .....	--	22.1	--	22.1
Total	91.0	135.4	48.8	226.4
Service Levels (bus trips)				
Weekdays				
Milwaukee-Racine-Kenosha Route				
Northbound				
Morning Peak Period .....	3	-1	-33.3	2
Remainder of Day .....	5	--	--	5
Subtotal	8	-1	-12.5	7
Southbound				
Afternoon Peak Period .....	3	-1	33.3	2
Remainder of Day .....	5	--	--	5
Subtotal	8	-1	-12.5	7
Total	16	-2	-12.5	14
Milwaukee-Kenosha Route				
Northbound				
Morning Peak Period .....	-- <sup>a</sup>	2	--	2
Remainder of Day .....	-- <sup>a</sup>	--	--	--
Subtotal	-- <sup>a</sup>	--	--	--
Southbound				
Afternoon Peak Period .....	-- <sup>a</sup>	2	--	2
Remainder of Day .....	-- <sup>a</sup>	--	--	--
Subtotal	-- <sup>a</sup>	--	--	--
Total	-- <sup>a</sup>	4	--	4
Racine-Kenosha Route				
Northbound .....	-- <sup>a</sup>	18	--	18
Southbound .....	-- <sup>a</sup>	19	--	19
Total	-- <sup>a</sup>	37	--	37
Saturdays, Sundays, Holidays				
Milwaukee-Racine-Kenosha Route				
Northbound .....	4	--	--	4
Southbound .....	4	--	--	4
Total	8	--	--	8
Milwaukee-Kenosha Route .....	--	--	--	--
Racine-Kenosha Route .....	--	--	--	--
Peak Vehicle Requirements				
Milwaukee-Racine-Kenosha Route .....	4	-1	-25.0	3
Milwaukee-Kenosha Route .....	--	2	--	2
Racine-Kenosha Route .....	--	2	--	2
Total	4	3	75.0	7
Travel Time (minutes) <sup>b</sup>				
Between Kenosha Transit Center and Milwaukee CBD .....	76 to 80	-6 to -14	-9 to -19	61 to 73
Between Racine Transit Center and Milwaukee CBD .....	48 to 53	-1 to -4	-2 to -8	47 to 49
Between Racine and Kenosha Transit Centers .....	25 to 27	2	7 to 8	27 to 29

<sup>a</sup>Bus trips are included in the Milwaukee-Racine-Kenosha route.

<sup>b</sup>Times shown are for weekday morning peak periods. The timepoint in the Milwaukee CBD used for existing and proposed services was E. Michigan Street and N. Water Street. The timepoints used in Racine and Kenosha were at Monument Square at 5th Street and Main Street in the City of Racine and at 56th Street and 7th Avenue in the City of Kenosha for the existing service; and at proposed new transit centers at Water Street and Park Avenue in the City of Racine and at 54th Street and 8th Avenue in the City of Kenosha for the proposed service.

Source: SEWRPC.

Table 87

**AVERAGE ANNUAL RIDERSHIP, SERVICE LEVELS, AND COSTS FOR  
MILWAUKEE-RACINE-KENOSHA COMMUTER BUS SERVICES: 1998-2002**

Operating Characteristic	1997 <sup>b</sup>	Forecast Average Annual: 1998-2002 <sup>a</sup>		
		Milwaukee- Racine- Kenosha Service	Racine- Kenosha Service	Total
<b>Service</b>				
Revenue Vehicle Hours of Service .....	8,700	9,200	3,800	13,000
Revenue Vehicle Miles of Service .....	265,400	312,500	83,400	395,900
<b>Ridership</b>				
Total Revenue Passengers .....	73,800	83,000	46,000	129,000
Revenue Passengers per:				
Revenue Vehicle Hour .....	8.5	9.0	12.1	9.9
Revenue Vehicle Mile .....	0.28	0.27	0.55	0.33
<b>Operating Costs, Revenues, and Subsidies</b>				
Expenses <sup>c</sup> .....	\$622,700	\$785,800	\$215,000	\$1,000,800
Passenger and Other Revenues .....	220,400	259,100	48,600	307,700
Public Subsidy .....	402,300	526,700	166,400	693,100
Percent of Operating Expenses Recovered through Operating Revenues .....	35.4	33.0	22.6	30.7
<b>Anticipated Sources of Public Subsidy</b>				
Federal .....	--	--	\$108,400	\$ 108,400
State <sup>d</sup> .....	\$402,300	\$526,700	36,200	562,900
Local .....	--	--	21,800	21,800
<b>Total</b>	<b>\$402,300</b>	<b>\$526,700</b>	<b>\$166,400</b>	<b>\$693,100</b>
<b>Per Trip Data</b>				
Estimated Operating Costs .....	\$8.44	\$9.47	\$4.67	\$7.76
Operating Revenue .....	2.99	3.12	1.05	2.39
Subsidy .....	5.45	6.35	3.62	5.37

<sup>a</sup>The following assumptions were made in preparing the forecasts of ridership, revenues and costs:

1. A 3.5 percent per year increase in operating expenses per unit of service.
2. A 7 percent fare increase will be implemented on both commuter services in 2000 and again in 2002. These increases will decrease annual ridership by about 2.3 percent in the fare increase years.
3. Federal funds will be available through the Congestion Mitigation and Air Quality (CMAQ) Improvement Program to fund 80 percent of the operating deficits of the proposed new Racine-Kenosha commuter bus route as a demonstration project from 1999 through 2001. In 2002, Federal funds provided through the FTA Section 5307 urban formula transit assistance program would replace the CMAQ demonstration funds and fund a lower percent of operating expenses. As with the existing service, no federal funds would be used for the Milwaukee-Racine-Kenosha commuter routes.
4. State funds through the Transportation Demand Management (TDM) Program and the urban transit operating assistance program will cover a portion of the nonfederal share of operating deficit of the proposed new Racine-Kenosha bus route during the CMAQ demonstration period from 1999 through 2001. In 2002, State operating assistance will cover about 43 percent of the total operating expenses of the Racine-Kenosha service. State operating assistance will be available to cover 59 percent of the total operating expenses of the restructured Milwaukee-Racine-Kenosha service over the entire period.

<sup>b</sup>Financial data are estimates.

<sup>c</sup>Operating expenses have been adjusted to reflect the estimated actual costs of the service by subtracting funds which are expected to be provided by the private contract service operator. Such funds were estimated at about \$115,000 in 1997. With the proposed service changes, such funds would be expected to average about \$107,000 between 1998 and 2002.

<sup>d</sup>State operating assistance funds are based on the gross costs of the service including funds provided by the private contract operator.

Source: SEWRPC.

Table 88

**ASSUMPTIONS AND DETERMINATIONS AFFECTING FORECAST TRANSIT  
RIDERSHIP, COSTS, AND SUBSIDIES FOR THE PROPOSED COMMUTER BUS SERVICES**

Forecast Area	Assumptions and Determinations
Costs	<ul style="list-style-type: none"> <li>Costs are expressed in projected "year of expenditure" dollars and assume a 3.5 percent per year increase in annual operating costs per unit of service due to general price inflation.</li> </ul>
Passenger Fares	<ul style="list-style-type: none"> <li>Fares in all categories would be increased over the period in response to inflationary increases in operating costs, with adult cash fares increased by about 7 percent in 2000 and again in 2002.</li> <li>The increases would be expected to result in a decrease in ridership on the commuter bus service about 2.3 percent in both 2000 and 2002.</li> </ul>
Federal Transit Assistance	<ul style="list-style-type: none"> <li>No Federal funds would be used as operating assistance for the Milwaukee-Racine-Kenosha commuter bus service over the period.</li> <li>Federal funds for the proposed Racine-Kenosha commuter bus service would be available through the Congestion Mitigation and Air Quality Improvement (CMAQ) Program to fund a portion of operating deficits during a three-year demonstration period from 1999 through 2001. In 2002, Federal operating assistance funds would be available through the Federal Transit Administration Section 5307 urban formula transit assistance program to cover about 16 percent of the total operating expenses.</li> </ul>
State Transit Assistance	<ul style="list-style-type: none"> <li>State operating assistance for the restructured Milwaukee-Racine-Kenosha commuter bus service would be available to cover about 59 percent of the total operating expenses annually, compared with about 54.5 percent of total operating expenses of the existing service during 1997.</li> <li>State funds for the proposed Racine-Kenosha commuter bus service would be available from the Transportation Demand Management (TDM) Program to fund part of the nonFederal share of operating deficits during the CMAQ demonstration period from 1999 through 2001. In 2002, State operating assistance funds would be available to cover about 43 percent of the total operating expenses.</li> </ul>

Source: SEWRPC.

- The average annual operating costs for the proposed commuter bus services would be about \$378,100, or about 61 percent, higher than costs for the existing service in 1997. On a per trip basis, the additional operating costs would amount to about \$6.85 per incremental trip, or about 19 percent less than the \$8.44 per trip for commuter bus service in 1997.

all be attributed to the proposed new Racine-Kenosha service, and, in the interest of equity, should be divided between the Cities of Racine and Kenosha as the chief beneficiaries of this service.

### **ADVISORY COMMITTEE RECOMMENDATIONS**

- Federal and State funds totaling about \$671,300 may be expected to be available to cover about 67 percent of the estimated operating costs and about 97 percent of the total required public subsidy. The average annual local public subsidy would amount to about \$21,800, representing about 2 percent of the total costs and about 3 percent of the total public subsidy. This local subsidy would

Following careful review of the alternative commuter transit service improvements, the Kenosha Area Public Transit Planning Advisory Committee unanimously concurred with the Commission staff recommendations concerning ridesharing activities and potential commuter bus service proposed to address travel patterns between the Kenosha area and Lake County, Illinois, and also the restructuring of the existing Milwaukee-Racine-Kenosha



commuter bus service to address travel patterns between the Kenosha area and the Cities of Racine and Milwaukee.

## SUMMARY

This chapter has described the proposed service improvements for commuter transit considered to address travel patterns between the Kenosha area, the primary study area, and Lake County, Illinois, the secondary study area, and between the Kenosha area and the Racine and Milwaukee areas. The proposed services were designed to address the commuter transit service needs of primary study area residents.

### **Commuter Transit Service Improvements to Serve Travel between the Primary and Secondary Study Areas**

The development of improvements in commuter transit between the primary and secondary study areas was based on the major findings describing the employment levels and concentrations within the secondary study area, existing work-commutation travel patterns between the primary and secondary study areas, and the transit services currently provided between the two areas. These findings may be summarized as follows:

1. Employment in the secondary study area increased by about 67,700 jobs, or about 42 percent, over the past two decades, from its 1980 level of 160,800 jobs to its 1990 level of 228,500 jobs. Most employers are currently located in the east-central and southeastern portions of the secondary study area.
2. Over the past two decades, the employment centers in the secondary study have attracted an increasing number of work-purpose trips made by residents of the primary study area. Between 1972 and 1991, the number of such trips between the two areas increased by about 161 percent, with most of the increase being made by primary study area residents traveling to jobs in the secondary study area. By 1991, about 20,100 person trips were made on an average weekday for work purposes by persons residing in the primary study area and traveling to secondary study area jobs.
3. The existing public transit services between the primary and secondary study areas can be used to make only a very small portion of the existing work-purpose travel made by primary study area residents to jobs in the secondary study area. Intercity bus service is too infrequent to be considered as a transit option. Metra commuter rail

service could be used to travel to employers within convenient walking distance of a station. However, Metra's existing Kenosha service schedule is limited and designed to serve persons with long commutes to and from the Chicago CBD, not short trips to and from the Cities of Waukegan and North Chicago. Pace fixed-route bus services which connect with the Metra service in Waukegan and North Chicago are primarily designed to provide feeder service for persons commuting to the Chicago CBD, and do not provide convenient transfer connections for persons traveling from the primary study area to most of the employment centers identified in the secondary study area.

4. Virtually all person trips currently made for work purposes between the primary and secondary study areas by primary study area residents are made by personal auto. Organized ridesharing programs sponsored by public agencies in Illinois and Wisconsin promote the creation of carpools and vanpools to employees at the larger employers in the secondary study area. Notably, there are currently no publicly constructed park-ride facilities in the primary study area to facilitate the formation of carpools.

To address these issues, a commuter service plan was developed which would provide a logical expansion of services as demand increases, with service proposed to occur in stages. The stages may be briefly described as follows:

1. Given the current reliance upon the automobile for commuting to work between the primary and secondary study areas, the first stage of the plan proposes an effort to promote carpooling and vanpooling. Existing rideshare programs operated by public agencies located in Southeastern Wisconsin and Northeastern Illinois would be used to promote the ridesharing activities. The use of these services would be facilitated through the development two park-ride lots in the western portion of the primary study area for carpool and vanpool participants, with one sited near the intersection of Green Bay Road and STH 158 and the other near IH 94 and STH 50.
2. The second stage would build upon the first-stage ridesharing activities to develop subscription transit service. Such services would include the operation of one or more routes which would transport commuters from park-ride lots and concentrations of employee residences in the primary study area to

principal employment centers in the secondary study area. The routes could be directly operated by the existing public transit operators, like the City of Kenosha and Pace, or by a private transit operator under contract by one or more employers. Participating employers in the secondary study area would be expected to assist in design of the service, marketing of the service to their employees, and funding operating costs.

3. The third stage of the plan envisions the implementation of conventional commuter bus services to replace successful subscription transit services and extend service to unserved employment centers close to the subscription service routes. The service envisioned would consist of a three round trips operated between the primary study area and the secondary study area over a new commuter bus route which would either directly serve employment concentrations or connect with special shuttle routes and an existing Pace bus route serving employment locations. The distribution of the required subsidy for the service would need to be negotiated among the City of Kenosha, the private businesses served, the Wisconsin Department of Transportation, and the Regional Transportation Authority of Northeastern Illinois.

### **Commuter Transit Service Improvements to Serve Travel between the Kenosha Area and the Cities of Racine and Milwaukee**

The development of improvements to the existing commuter bus service connecting the Cities of Milwaukee, Racine, and Kenosha was undertaken to address deficiencies with the existing service in serving existing commuter travel. The major deficiencies which were identified included the following:

1. Long transit travel times for commuting between the Racine and Kenosha areas and the Milwaukee CBD, as well as between Racine and Kenosha, which restrict consideration of the use of the existing commuter bus and local transit services. The elimination of the unproductive route segments operated over arterial streets between downtown Racine and General Mitchell International Airport to allow rerouting of the service over the IH 94 freeway was identified as a way of providing faster travel times to and from the Milwaukee CBD. Providing direct, no-transfer service between downtown Kenosha and downtown Racine was identified as a way of reducing the travel time between these points.

2. A lack of formally designated park-ride facilities along the route to allow passengers to access the service with their personal automobile. The development of other formal park-ride facilities, either as publicly constructed facilities or as privately owned shared-use lots, was identified as a way of generating additional use of the service.
3. A low level of service between the Cities of Racine and Kenosha which restricts the use of transit to travel between the communities. On the basis of the existing commuter bus transit travel times and the volume of person travel between the two communities, providing more frequent, regular weekday bus service at the appropriate times over the direct commuter bus route connecting the two cities could be expected to generate significantly higher ridership levels.
4. High total fares per trip for passengers of the existing commuter bus route who also use connecting bus services. Establishing special fare agreements which would offer transfer passengers a break in the total costs of commuting by transit could serve to encourage more use of the commuter bus services.

A restructuring of the existing commuter service was proposed to separate the service provided to serve travel between Racine and Kenosha and the Milwaukee CBD from that provided to serve travel between Racine and Kenosha. The proposed service changes would include the following major elements:

1. The existing Milwaukee-Racine-Kenosha bus route would be restructured between downtown Racine and Mitchell International Airport in Milwaukee County to operate over Washington Avenue (STH 20) and the IH 94 freeway. A new peak-period Kenosha express route would also be established which would provide service in Kenosha County over 52nd Street (STH 158) and Green Bay Road (STH 31) to Washington Avenue in Racine County, where it would continue to the Milwaukee CBD over the revised routing proposed above. Weekday peak-period service levels and schedules over the two routes would be modestly adjusted from those on the existing single route so that a total of four bus trips from downtown Kenosha to the Milwaukee CBD would be provided in the morning peak period and four return trips be provided in the afternoon peak period, an increase of one bus trip in each direction from the existing weekday service. To provide for faster travel times,

all four peak bus trips in each direction would bypass Mitchell International Airport. No service or scheduling changes are proposed for the other weekday trips or for weekend and holiday service.

2. Park-ride terminal facilities would be established and identified in the service's timetables to make it more convenient for passengers to use automobiles to get to and from the service. The following three potential locations for park-ride lots were identified: at Green Bay Road (STH 31) and 52nd Street (STH 158), in the City of Kenosha; at Green Bay Road (STH 31) and Washington Avenue (STH 20), in the City of Racine; and at STH 20 and IH 94, in the Town of Yorkville.
3. A new weekday route would be established to provide express bus service between the Cities of Racine and Kenosha. The proposed express route would operate between downtown Racine and Kenosha, following the same direct route used on the existing commuter bus service. Service over the new route would be provided on weekdays only, with service hours and headways similar to the routes of the Kenosha transit system. The proposed service would be initiated on a three-year trial, or demonstration, basis extending from 1999 through 2001, during which it would be funded with Federal funds available through the Congestion Mitigation and Air Quality Improvement (CMAQ) Program and State funds available through the Transportation Demand Management (TDM) Program.
4. Reduced-fare programs for passengers transferring between the proposed commuter bus routes and the connecting routes of the Kenosha, Milwaukee County, and Racine transit systems would be established. The proposed transfer fares would

result in somewhat lower fares over the entire length of a trip to encourage use of the services; they would be modeled after existing transfer fares currently in place for the public transit services in Milwaukee and Waukesha Counties.

With the proposed changes, the commuter bus services may be expected to carry about 129,000 revenue passengers annually, an increase of about 55,200 passengers, or about 75 percent, over the 1997 ridership on the existing commuter-bus service. The estimated operating cost for providing the proposed commuter bus services would be about \$1.0 million annually. Of this total, about \$307,700, or about 31 percent, may be expected to be recovered by operating revenues, leaving a total required average annual operating subsidy of about \$693,100. Federal and State funds totaling about \$671,300 may be expected to be available to cover about 67 percent of the estimated operating costs and about 97 percent of the total required public subsidy. The average annual local public subsidy would amount to about \$21,800, about 2 percent of the total costs and about 3 percent of the total public subsidy. This local subsidy would all be attributed to the proposed new Racine-Kenosha service, and, in the interest of equity, should be divided between the Cities of Racine and Kenosha as the chief beneficiaries of this service.

#### **Advisory Committee Recommendations**

Following careful review of the alternative commuter transit service improvements, the Kenosha Area Public Transit Planning Advisory Committee unanimously concurred with the Commission staff recommendations concerning ridesharing activities and potential commuter bus service proposed to address travel patterns between the Kenosha area and Lake County, Illinois, and also the restructuring of the existing Milwaukee-Racine-Kenosha commuter bus service to address travel patterns between the Kenosha area and the Cities of Racine and Milwaukee.

(This page intentionally left blank)

## Chapter IX

# RECOMMENDED TRANSIT SYSTEM DEVELOPMENT PLAN

## INTRODUCTION

This chapter describes the transit system development plan for the Kenosha area as recommended by the Kenosha Area Public Transit Planning Advisory Committee. The plan has the following two elements: 1) a local service element, which identifies transit service improvements for the Kenosha transit system the better to serve existing travel within the City of Kenosha and environs; and 2) a commuter service element, which identifies transit service improvements the better to serve existing travel between the Kenosha area and Lake County, Illinois, and between the Kenosha area and the Racine and Milwaukee areas. The plan is for the five-year period from 1998 through 2002.

The remainder of this chapter consists of four sections. The first describes the two plan elements. The second summarizes the anticipated performance of the recommended services, including information on ridership, farebox revenues, and costs. The third sets forth recommended plan implementation responsibilities. The fourth is a brief summary.

## RECOMMENDED TRANSIT SERVICES

### Local Transit Service

The local transit service element of the recommended plan calls for a number of changes in the existing service provided by City of Kenosha transit system. The basic operating characteristics for the Kenosha transit system with the recommended local service changes are presented in Table 89. The recommended changes and resulting service may be summarized as follows:

- Adjustments to Alignments of Existing Routes  
Routing changes are recommended to be implemented for all regular routes except Route No. 1. The specific routing changes were described in Chapter VII under Alternative 1 (see Map 30). Route Nos. 2 through 8 would be extended to the site of the new Kenosha high school, Indian Trail Academy, near 60th Street and 68th Avenue, to create a new west-side transfer point, where buses would meet at regular intervals to facilitate transfers. The routing changes needed to create the transfer point would also eliminate service over many unproductive route segments while reducing indirect travel and increasing the convenience of using transit for transit patrons traveling to and from

locations between 39th Avenue and Green Bay Road. The routing changes proposed for Route Nos. 7 and 8 would move the eastern terminus for these routes from downtown Kenosha to the west-side transfer point. This would facilitate operation of the routes with more frequent service, as well as the extension of the routes to serve new developments west of Green Bay Road, including the Business Park of Kenosha, the White Caps residential development, two proposed facilities for the elderly in the Village of Pleasant Prairie, and the LakeView East portion of LakeView Corporate Park south of 104th Street, all without significantly increasing operating costs. Changes are also proposed for the north end of Route No. 4 to eliminate a route segment along Birch Road where the route currently "doubles-back" on itself, thereby providing for a more logical operation. The route alignments and service area for the regular routes with the recommended alignment changes are shown on Map 45.

All these changes would be implemented in August 1998 so that service is in place when the new high school opens at the beginning of the 1998-1999 school year.

- Expanded Industrial Park Service

The plan proposes an expansion of service to the major industrial centers lying west of Green Bay Road, as described in Chapter VII under Alternative 2. Two new weekday industrial park routes, as shown on Map 46, would be operated to serve first-shift starting times of 6:00 and 6:30 a.m. and second-shift ending times of 11:00 p.m. and 12:00 midnight at employers in the Kenosha Industrial Park, the Business Park of Kenosha, and the LakeView East portion of LakeView Corporate Park. Jobs with these starting and ending times at these outlying employment centers cannot be served during the existing operating hours of the transit system. The new routes would operate outside the existing operating hours and would provide local service with frequent stops to pick up and drop off workers in the central portion of the City of Kenosha and express service with limited stop or no stops between the City and the targeted employment centers. Additional bus trips would also be added to Route No. 8 on weekday afternoons and to Route Nos. 7 and 8 on Saturdays to make service available at the times needed to serve shift changes at the largest employers adequately.



Table 89

**ROUND-TRIP ROUTE MILES AND VEHICLE REQUIREMENTS FOR THE EXISTING AND  
PROPOSED BUS SERVICE UNDER THE LOCAL SERVICE ELEMENT OF THE RECOMMENDED PLAN**

Characteristic	With Existing Kenosha Transit System	Change		Under Recommended Plan
		Number	Percent	
Number of Routes				
Regular Bus Routes . . . . .	8	--	--	8
Special Industrial Park Routes . . . . .	--	2	--	2
Peak-Hour Tripper Bus Routes . . . . .	11	--	--	11
Downtown Circulator Streetcar Line . . . . .	--	1	--	1
<b>Total</b>	<b>19</b>	<b>3</b>	<b>15.8</b>	<b>22</b>
Round-Trip Route Miles				
Regular Bus Routes . . . . .	191.9	8.8	4.6	200.7
Special Industrial Park Routes . . . . .	--	54.3	--	54.3
Peak-Hour Tripper Bus Routes . . . . .	269.0	--	--	269.0
Downtown Circulator Streetcar Line . . . . .	--	1.7	--	1.7 <sup>a</sup>
<b>Total</b>	<b>460.9</b>	<b>64.8</b>	<b>4.1</b>	<b>525.7</b>
Total System Vehicle Requirements				
Buses				
Weekdays				
Peak periods . . . . .	34-38 <sup>b</sup>	1	2.9	35-39
Middays . . . . .	12	11	91.7	23
Saturdays . . . . .	12	--	--	12
Streetcars				
Weekdays . . . . .	--	1	--	1
Saturdays and Sundays . . . . .	--	1	--	1
Holidays and Special Events . . . . .	--	1-4	--	1-4

<sup>a</sup>Refers to miles of directional trackage.

<sup>b</sup>During the school year, 34 buses are needed to provide weekday peak service except on Wednesdays, when four extra buses are required to accommodate early dismissal times.

Source: SEWRPC.

The plan assumes that the expanded industrial park service will be implemented by late September 1998, using funds made available through a State Temporary Assistance for Needy Families (TANF) grant for employment transportation services awarded in April 1998 to Kenosha County. This grant is expected to provide funding for the service through December 1999. For 2000 and beyond, the plan assumes the TANF grant program will continue to be funded in the State budget and Kenosha County will continue to be awarded grants to cover a similar portion of the costs of the service. The City of Kenosha could also explore using funds potentially available through the Federal Congestion Mitigation and Air Quality (CMAQ) Improvement Program to support improvement or expansion of the service.

● Headway Reductions

The plan proposes to retain the expanded weekday afternoon service on the regular routes of the system implemented on a trial basis in August 1997, as described in Chapter VII, under the existing and committed transit system. This service expansion extended the afternoon period when service is provided with 30-minute headways by one hour, starting 30-minute service at 2:00 p.m., rather than 3:00 p.m., and also lengthened the service day by about one and one-half hours, ending service at 7:30 p.m. rather than 6:00 p.m.

The Advisory Committee also recommended that the plan include reducing headways from 60 to 30 minutes during the weekday midday period, from 9:00 a.m. to

2:00 p.m., as described in Chapter VII under Alternative 4. This change would not be implemented until the later part of the planning period and then only if further review by City officials indicates that the additional midday service is warranted and sufficient Federal, State, and City funds can be obtained to defray the additional service costs. The plan, therefore, assumes the headway reduction would not occur until 2001 and that the additional service would initially be funded as a demonstration project through the Federal CMAQ Program. Should the City decide not to pursue reducing midday headways, the existing 60-minute midday headways would continue over the entire period.

- Downtown Electric Circulator

The City's plans to construct a new electric circulator streetcar line to serve the Kenosha central business district (CBD) and the Harborpark area have been incorporated into the recommended transit system development plan. The downtown circulator project is part of the Harborpark Plan<sup>1</sup> for development of the Kenosha's Lakefront, described in Chapter VII under the existing and committed transit system. The Harborpark Plan was completed and was approved by the City Common Council and Mayor in September 1997; the City is currently working with the Wisconsin Department of Transportation and Federal Transit Administration on securing the necessary funding.

The one-mile circulator (see Map 28) will consist of a local streetcar line to be constructed along 54th and 56th Streets between the Metra commuter station at 54th Street and 11th Avenue and the eastern end of 56th Street, in the proposed Harborpark development. The trackage will be constructed at the same time street improvements are made in the Harborpark area. The tracks will be on publicly owned land, along with other facilities including a storage and light maintenance facility and transit information center. Five historic PCC streetcars purchased by the City in 1997 will be used to provide service, chiefly between mid-May and mid-September. A final decision by the City on the potential extent of service is currently pending.

The tentative timetable for the circulator project calls for construction of the streetcar line to be completed, and limited service operation to begin,

by the fall of 1999, with operation at full service levels envisioned for the spring of 2000.

- Relocation of Common Transfer Point

The plan recommends that the common transfer point for the regular routes of the transit system in downtown Kenosha be relocated from the current site on 56th Street between 7th and 8th Avenues to a new terminal facility on the north side of 54th Street between 6th and 8th Avenues. The new terminal will be on the proposed downtown circulator streetcar line, allowing bus and streetcar services to be fully integrated. The City's tentative timetable calls for the construction of the new terminal to be completed by mid-1999.

- Increases in Passenger Fares

The plan proposes that the transit system implement fare increases in 2000 and again in 2002 to raise the base adult cash fare by 10 cents per one-way trip in each of those years. The resulting base adult cash fares for the transit system would consequently increase from the current \$1.00 per one-way trip to \$1.20 per one-way trip by the end of the planning period, an increase of about 20 percent. Fares in other categories and charges for monthly passes should also be increased by similar proportions. The fare increases for the transit system are proposed so that fares keep pace with anticipated increases in operating expenses, generating additional passenger revenue to maintain a stable farebox recovery rate. The additional passenger revenue would be needed to minimize increases in the annual local public funding requirement for the transit system caused by inflationary increases in transit system operating expenses, the additional operating costs for the proposed expansion of service, and uncertain levels of Federal transit operating assistance.

- Transit Services for Disabled Individuals

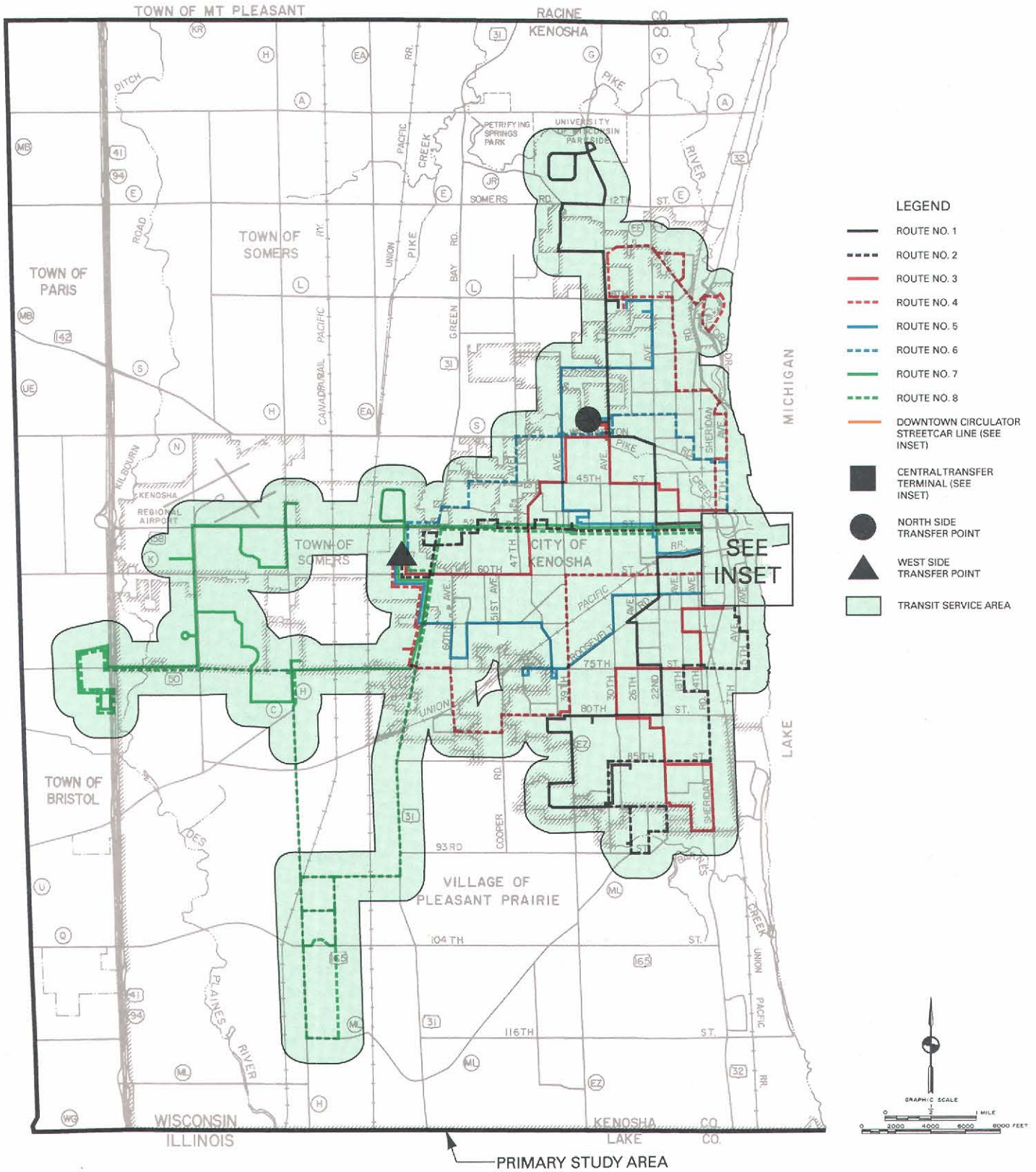
The plan proposes no significant changes to the City's complementary paratransit service for disabled individuals in response to the local service changes described in the preceding sections. The current service area and service hours for the paratransit service adequately cover the areas to which regular local bus service will be extended; the service hours of regular bus service for which paratransit service must be provided in accordance with Federal regulations. It is recommended that passenger fares for the paratransit service be increased in 2000 and 2002, when fares for fixed-route bus service are increased.

---

<sup>1</sup>See *City of Kenosha, Harborpark Master Plan-Kenosha, Wisconsin, September 1997*.

Map 45

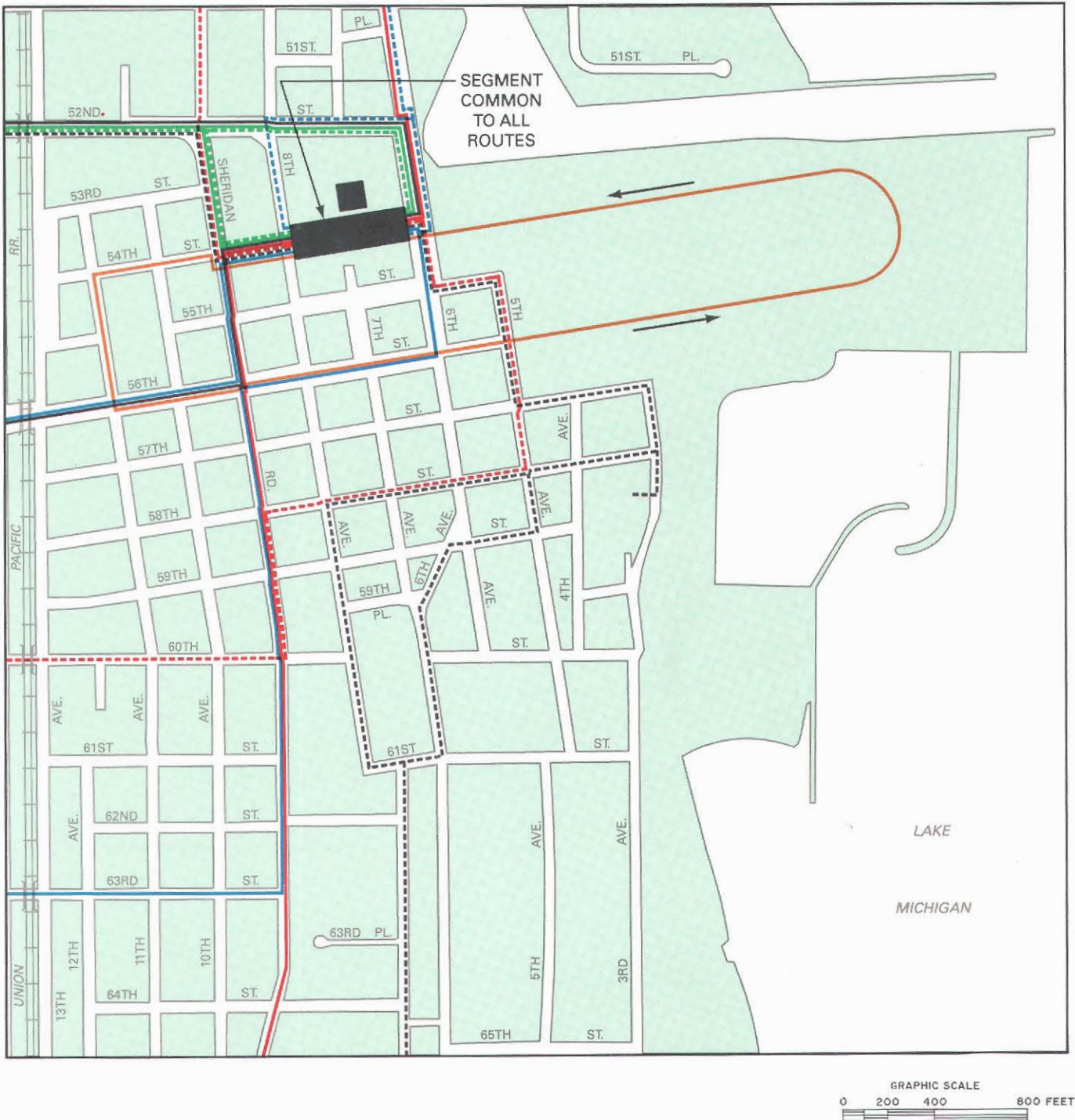
RECOMMENDED REGULAR ROUTES FOR THE KENOSHA TRANSIT SYSTEM



Source: SEWRPC.



Inset to Map 45

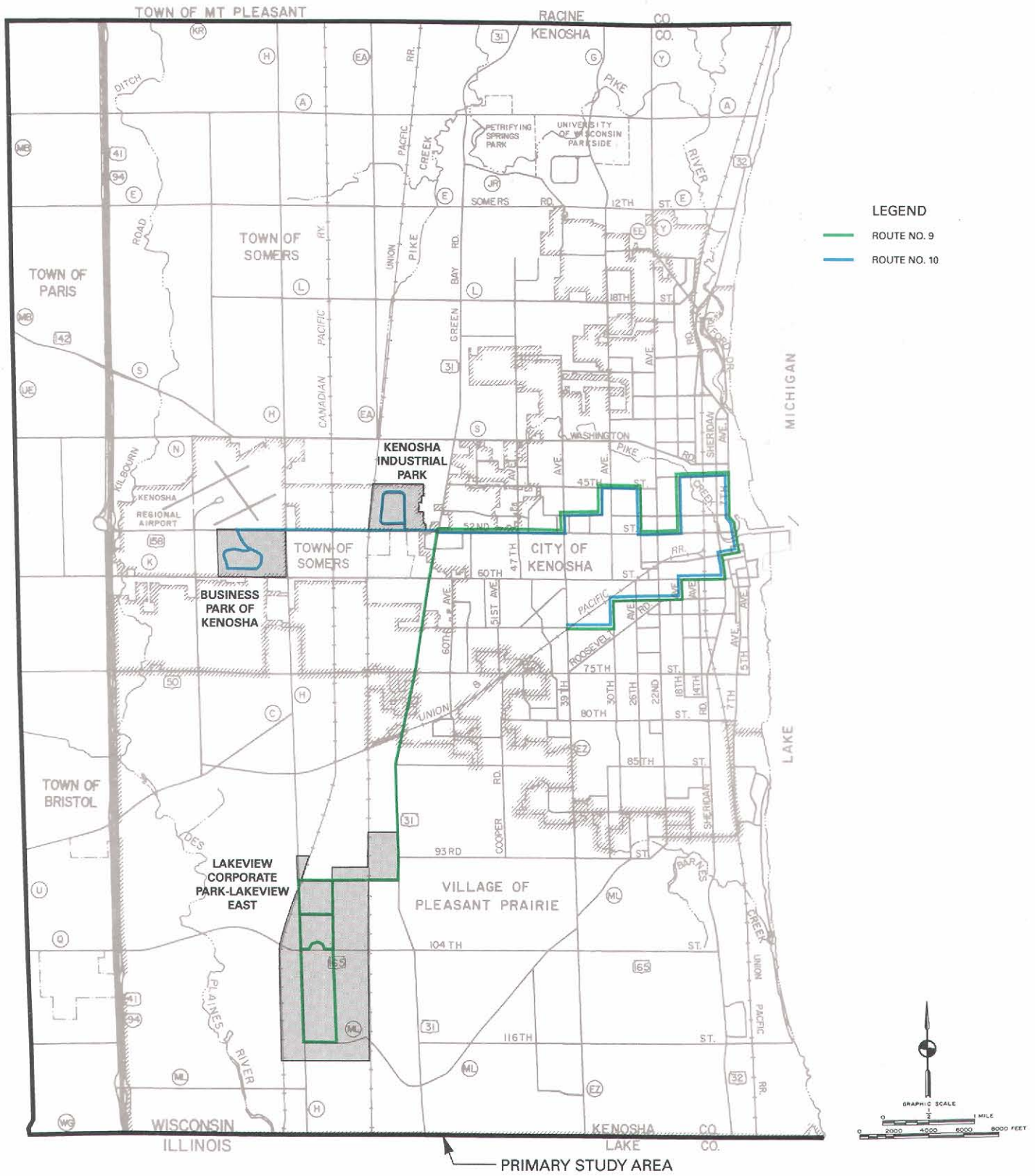


The plan also proposes that the City acquire 15 new accessible buses by the end of the planning period in 2002 as replacements for the oldest vehicles in the existing bus fleet. At that time the entire bus fleet of the Kenosha transit system and all of its fixed-route bus service will be accessible to disabled individuals using wheelchairs.

### Commuter Transit Services

The commuter service element of the recommended plan calls for changes in the existing commuter-bus service connecting the Cities of Milwaukee, Racine, and Kenosha to separate service between Racine and Kenosha and the Milwaukee CBD from that provided for travel between Racine and Kenosha. The commuter element also envi-

**PROPOSED INDUSTRIAL PARK ROUTES  
FOR THE KENOSHA TRANSIT SYSTEM**



Source: SEWRPC.



Table 90

**ROUND-TRIP ROUTE MILES AND VEHICLE REQUIREMENTS FOR THE EXISTING AND  
PROPOSED BUS SERVICE UNDER THE COMMUTER ELEMENT OF THE RECOMMENDED PLAN**

Characteristic	With Existing Milwaukee-Racine- Kenosha Commuter Bus Service	Change		Under Recommended Plan
		Number	Percent	
<b>Number of Routes</b>				
Milwaukee-Racine-Kenosha Commuter Bus Routes .....	1	1	100.0	2
Racine-Kenosha Express Bus Route .....	--	1	--	1
Kenosha-Lake County, Illinois, Commuter Bus and Shuttle Routes .....	--	1	--	1 <sup>a</sup>
<b>Total</b>	<b>1</b>	<b>3</b>	<b>300.0</b>	<b>4</b>
<b>Round Trip Route Miles</b>				
Milwaukee-Racine-Kenosha Commuter Bus Routes .....	91.0	113.3	124.5	204.3
Racine-Kenosha Express Bus Route .....	--	22.1	--	22.1
Kenosha-Lake County, Illinois, Commuter Bus and Shuttle Routes .....	--	105.0	--	105.0
<b>Total</b>	<b>91.0</b>	<b>240.4</b>	<b>264.2</b>	<b>331.4</b>
<b>Total Vehicle Requirements</b>				
<b>Weekdays</b>				
Peak periods .....	4	8	200.0	12 <sup>b</sup>
Middays .....	1	1	100.0	2 <sup>c</sup>
<b>Weekends and Holidays</b>	<b>1</b>	<b>--</b>	<b>--</b>	<b>1</b>

<sup>a</sup>The proposed Kenosha-Lake County, Illinois, commuter bus and shuttle routes shown on Map 38 would be implemented only if sufficient demand for establishment of conventional transit services to serve work-commute travel was generated by the end of the planning period.

<sup>b</sup>Weekday peak period vehicle requirements assume five buses for the Milwaukee-Racine-Kenosha commuter service; two buses for the Racine-Kenosha express service; and five buses and vans for the Kenosha-Lake County, Illinois, commuter service.

<sup>c</sup>Weekday midday vehicle requirements assume one bus for the Milwaukee-Racine-Kenosha commuter service and one bus for the Racine-Kenosha express service.

Source: SEWRPC.

sions a combination of expanded ridesharing activities and new transit service to address travel by Kenosha area residents commuting to jobs in Lake County, Illinois. The basic operating characteristics of the proposed commuter and express bus services are presented in Table 90. The recommended services were described in detail in Chapter VIII and may be summarized as follows:

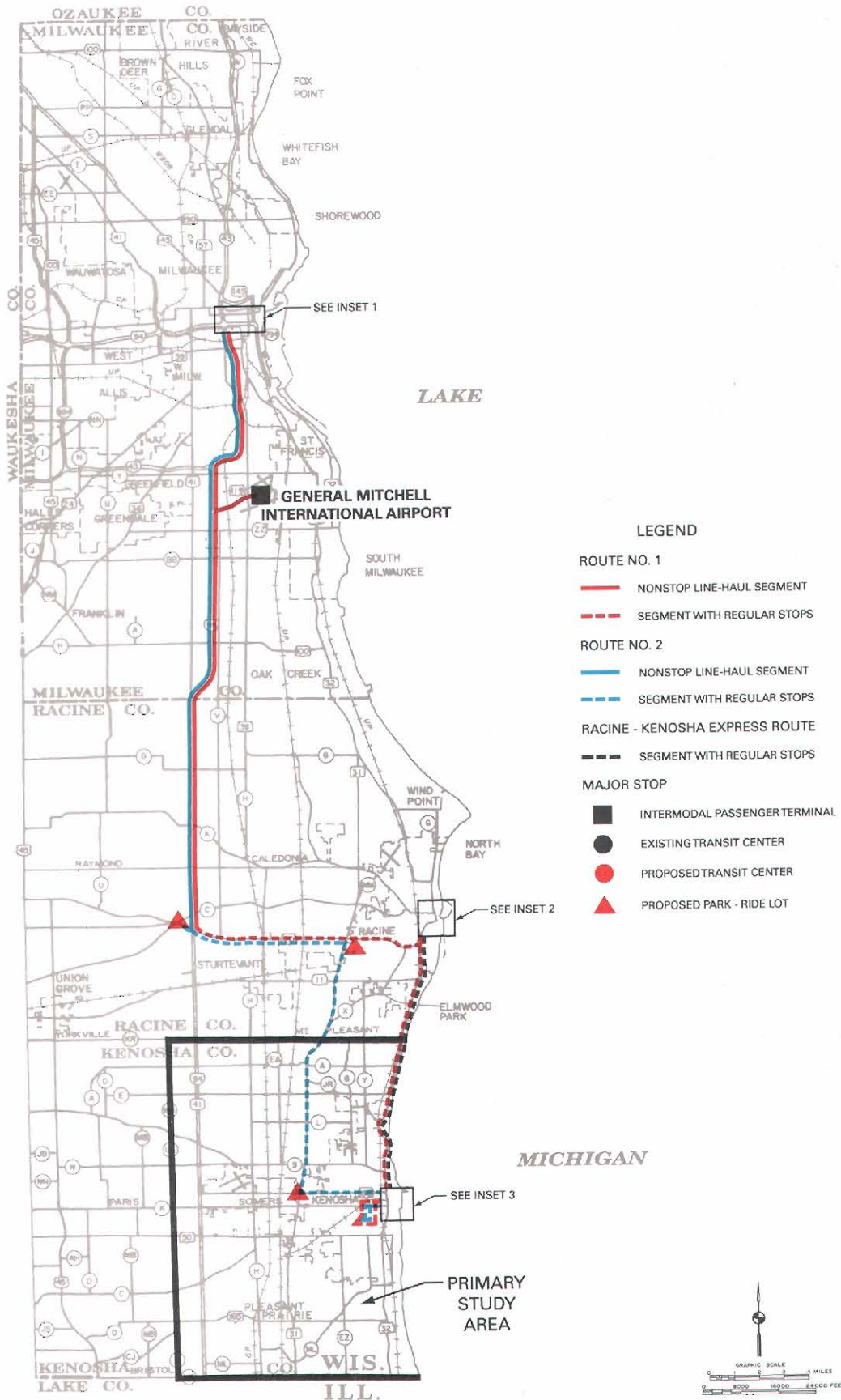
- **Restructured Milwaukee-Racine-Kenosha Commuter Bus Service**

The plan recommends restructuring the existing publicly subsidized Milwaukee-Racine-Kenosha bus route operated by Wisconsin Coach Lines, Inc., to eliminate unproductive route segments and to provide faster travel between downtown Racine and Kenosha and the Milwaukee CBD. The route alignment would be relocated between downtown

Racine in Racine County and Mitchell International Airport in Milwaukee County to operate over Washington Avenue (STH 20) and the IH 94 freeway instead of over Douglas Avenue (STH 32), Ryan Road, and Howell Avenue. The restructured commuter service would also include a new peak-period Kenosha express route to bypass downtown Racine, operating over 52nd Street (STH 158) and Green Bay Road (STH 31) to Washington Avenue in Racine County, where it would continue to the Milwaukee CBD over the revised routing proposed above for the existing route. The proposed Milwaukee-Racine-Kenosha routes are shown on Map 47.

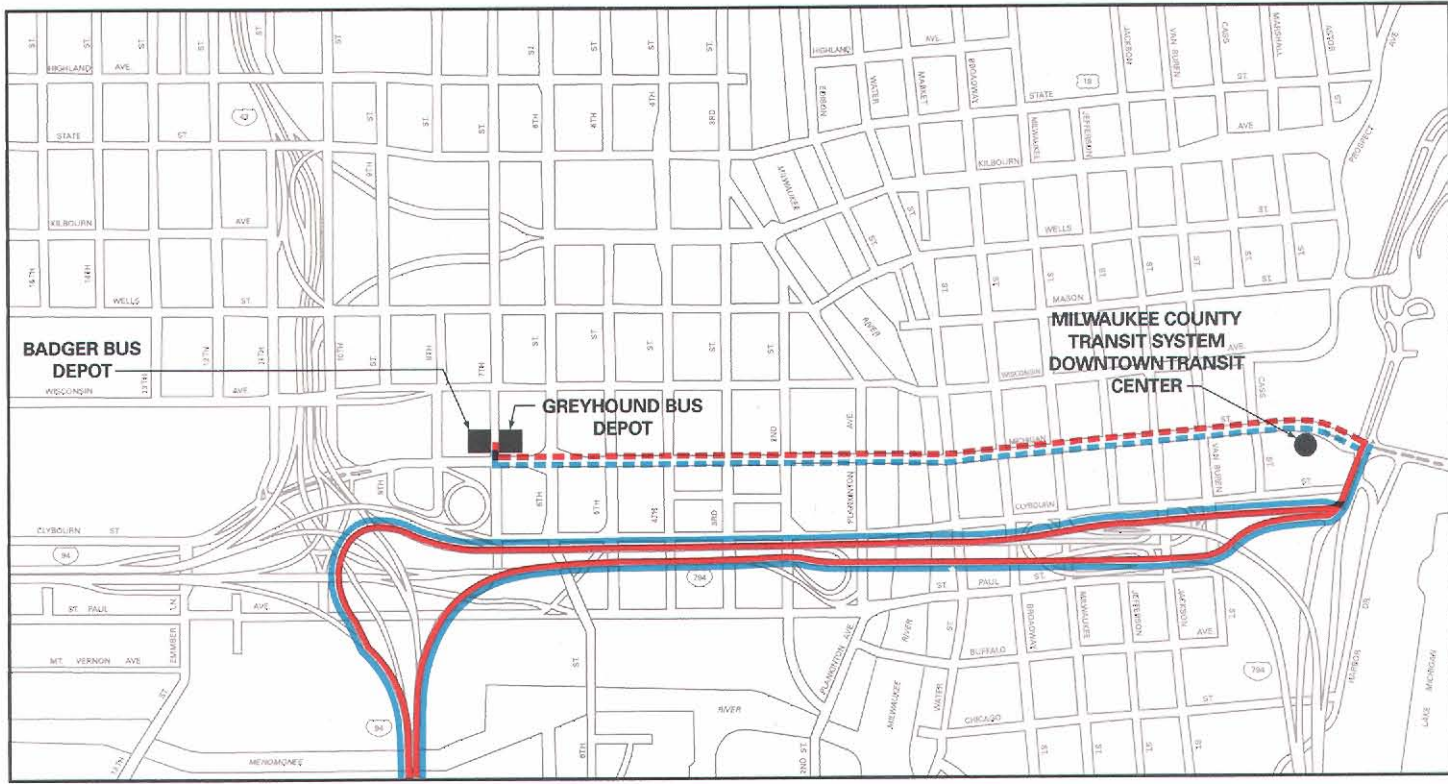
Weekday service levels would be adjusted to include one additional peak-period bus trip in each direction. The revised weekday schedule would

PROPOSED COMMUTER AND EXPRESS BUS ROUTES FOR THE MILWAUKEE-RACINE-KENOSHA CORRIDOR



Source: SEWRPC.

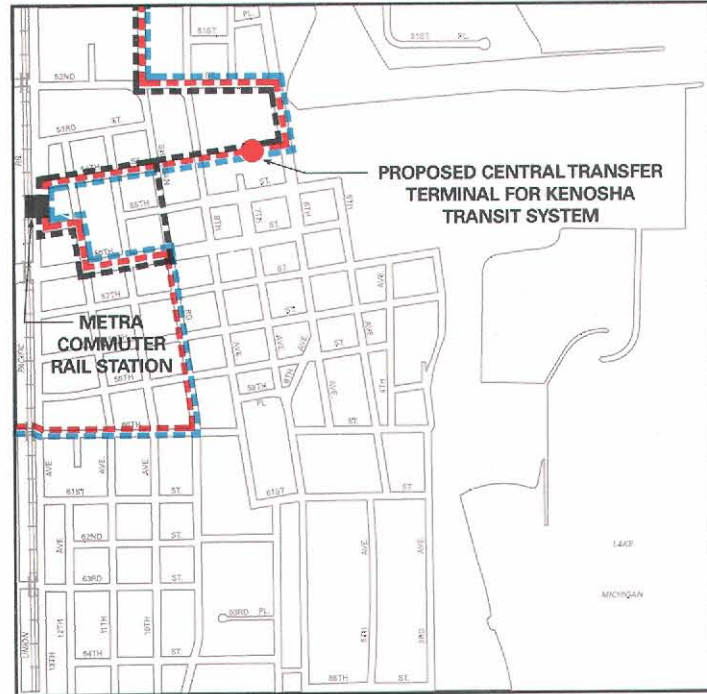
INSET 1 TO MAP 47



INSET 2 TO MAP 47



INSET 3 TO MAP 47



provide a total of four peak-period bus trips, including two through downtown Racine and two over the new Kenosha express route, between downtown Kenosha and the Milwaukee CBD. The schedules would also be adjusted so that morning trips would arrive at the Greyhound Depot in the Milwaukee CBD at approximately 6:50 a.m., 7:20 a.m., 7:50 a.m., and 8:20 a.m.; afternoon trips would depart from the Greyhound Depot at approximately 4:10 p.m., 4:40 p.m., 5:10 p.m., and 5:40 p.m. To provide for faster travel times, all four peak bus trips in each direction would bypass Mitchell International Airport. Park-ride terminal facilities would also be established, as discussed below, and identified in the timetables for the service. No service or scheduling changes are proposed for the other weekday bus trips or for weekend and holiday service. The plan proposes implementation of these changes by January 1999.

- Racine-Kenosha Express Bus Service

The plan also proposes that a new route be established to provide express bus service on weekdays between the Cities of Racine and Kenosha. The proposed express route, shown on Map 47, would follow the same direct route used by the existing commuter bus service and would serve proposed new downtown transfer terminals for the Racine and Kenosha local bus systems, as well as the Kenosha Metra commuter rail station. Service over the new route would be provided on weekdays only between approximately 6:00 a.m. and 7:00 p.m., with operating headways of 30 minutes during peak periods (6:00 a.m. until 9:00 a.m. and 3:00 p.m. until 6:00 p.m.) and 60 minutes at all other times, to coincide with the weekday hours of operation and headways of the Kenosha transit system. Service schedules for the express bus route would be coordinated, to the maximum extent practical, with the arrivals and departures of local buses serving the downtown terminals of the Racine and Kenosha transit systems and of the Metra commuter trains serving the Kenosha station.

The plan proposes that the new express service be implemented by January 1999. The City of Kenosha has already assumed a lead role in service implementation by securing grants under the Federal CMAQ and State Transportation Demand Management (TDM) programs to support a portion of the anticipated costs. In recognition of these actions, the plan recommends that the new express route be operated by the Kenosha transit system.

- Complementary Paratransit Service for Disabled Individuals

The plan recommends that complementary paratransit service for disabled individuals be provided to serve trips made in the corridor between downtown Racine and downtown Kenosha along the proposed express bus route. The existing complementary paratransit services for the Racine and Kenosha transit systems are currently available to serve local trips made within eastern Racine and Kenosha Counties, respectively. The Racine program also provides service between eastern Racine County and the University of Wisconsin-Parkside, in Kenosha County. Consequently, the plan proposes that an agreement to allow paratransit users to transfer between the separate paratransit services at the University of Wisconsin-Parkside be negotiated between the Cities of Racine and Kenosha and Racine and Kenosha Counties, which administer the paratransit programs for the two cities. Such an agreement would in effect formalize the process by which a disabled individual could use the two paratransit services to travel between the Cities of Racine and Kenosha, as provided for under the Americans with Disabilities Act (ADA) of 1990, just as a bus patron might use the Racine and Kenosha fixed-route bus services to make a similar trip. The agreement would provide for coordination of the separate paratransit services to ensure that the various elements of the trips made by disabled persons, including trip reservations, fares, and service periods, would meet all Federal ADA paratransit service requirements.

- Special Commuter Transfer Fares

The plan proposes that reduced-fare programs be established for passengers transferring from connecting routes of the Kenosha, Milwaukee County, and Racine transit systems to the proposed Milwaukee-Racine-Kenosha commuter or the Racine-Kenosha express bus routes. The proposed transfer fares (see Table 85) would result in somewhat lower fares over the entire length of a trip to encourage use of the services; they would be modeled after existing transfer fares for the public transit services in other parts of the Region.

- Kenosha-Lake County, Illinois Ridesharing and Transit Services

To address travel by Kenosha area residents to and from jobs in Lake County, Illinois, the plan proposes a combination of ridesharing and transit service which would be staged to provide for a logical expansion of services as demand increases.



The stages as envisioned under the plan include the following:

1. Continued promotion of carpooling and vanpooling for commuting to work, using the existing rideshare programs operated by public agencies including the Wisconsin Department of Transportation; the Milwaukee County Transit System; the Chicago Area Transportation Study; and Pace, the suburban bus division of the Regional Transportation Authority (RTA) of Northeastern Illinois. These actions would provide service which is the most similar to personal auto use and would have a better chance of acceptance among current commuters than conventional transit services, given the current reliance on the automobile for travel between to work these areas. The use of these services would be facilitated through the development of two new park-ride lots in the western portion of the primary study area, which could be used by carpool and vanpool participants, as discussed below.
2. Development of subscription transit services for employers with significant employee ridesharing activity. Such services would include the operation of one or more routes to transport commuters from park-ride lots and concentrations of residences in the Kenosha area to the principal Lake County employment centers. The routes could be directly operated by such existing public transit operators as the City of Kenosha and Pace or by a private transit operator under contract by one or more employers. Participating employers in the secondary study area would be expected to assist in designing the service, marketing of the service to their employees, and funding service costs.
3. Implementation of conventional commuter bus services. The plan envisions that such services would replace successful subscription transit services and extend service to unserved employment centers in close proximity to the subscription service routes. The initial service level envisioned would consist of three round trips operated between the Kenosha area and Lake County, Illinois, over a new commuter bus route which would either directly serve employment concentrations or connect with special shuttle routes and an existing Pace bus route serving Lake County employment centers (see Map 38). It is likely that sufficient demand

to warrant establishment of such services would not be generated before 2002.

- **Park-Ride Lots**

The plan recommends the establishment of park-ride terminals to make it more convenient for transit patrons to use automobiles to get to and from the Milwaukee-Racine-Kenosha commuter bus service and to facilitate ridesharing activities and access to commuter bus services for commuting to jobs in Lake County, Illinois. A need was identified for such park-ride lots near the following intersections:

1. Green Bay Road (STH 31) and 52nd Street (STH 158), in the City of Kenosha;
2. 75th Street (STH 50) and IH 94, in the City of Kenosha or Village of Pleasant Prairie;
3. Green Bay Road (STH 31) and Washington Avenue (STH 20), in the Town of Mt. Pleasant; and
4. STH 20 and IH 94, in the Town of Yorkville.

The establishment of park-ride lots or transit stations at these locations has long been recommended in the Commission's adopted regional transportation system plan to serve work-commute travel by transit patrons and carpoolers. A park-ride lot with a capacity of about 80 spaces is currently being constructed by Racine County near the intersection of STH 20 and IH 94; it is expected to be completed in the spring of 1998. New facilities would need to be constructed at the other three locations. Each facility should be sized to accommodate approximately 75 cars for carpoolers and transit commuters and should be configured to accommodate bus service. Until the new facilities are constructed, temporary park-ride facilities near these locations could be created by leasing space in existing parking lots owned by cooperating individual private businesses or at shopping centers in the area.

## **PLAN PERFORMANCE AND COSTS**

### **Basic Assumptions and Determinations**

The analyses attendant to the anticipated performance of the recommended local and commuter transit services for the Kenosha area and the cost and funding estimates associated with those services are predicated upon the following assumptions and determinations:

- Implementation of the recommended service changes will be phased in over the planning period on the basis of the anticipated dates provided in



the previous sections<sup>2</sup> to allow for the time needed to obtain local approval and for the costs of new and restructured services to be incorporated into transit system operating budgets and applications for Federal and State operating assistance.

- All costs are expressed in projected “year of expenditure” dollars and assume a 3.5 percent per year increase in annual operating and capital costs due to general price inflation. The cost and funding estimates shown in the accompanying tables represent average annual costs over the five-year implementation period from 1998 through 2002. Detailed information on the anticipated annual ridership and service levels, along with operating and capital costs, over the period are provided in Appendix D.
- The costs of constructing properly configured park-ride lots at the three locations in eastern Kenosha and Racine Counties where new facilities are needed, estimated at approximately \$775,000, have not been included in the costs of implementing the plan. Those costs were included in the adopted regional transportation system plan. While not essential to providing the recommended commuter transit services, the park-ride lots would facilitate use of those services and should be put in place under a cooperative effort by Kenosha and Racine Counties and the Wisconsin Department of Transportation as soon as possible.
- The fare increases recommended for 2000 and 2002 on both the local and commuter services, which will raise the base adult cash fares by between 7 and 10 percent, will reduce annual ridership on the local and commuter services by between 2 and 3 percent in those years.

<sup>2</sup>For the recommended local service, the proposed adjustments to existing route alignments were assumed to be implemented in August 1998, the expanded industrial park service in September 1998, the downtown circulator streetcar service in September 1999, and the reduction of weekday midday operating headways in January 2001. For the recommended commuter services, the restructuring of the existing Milwaukee-Racine-Kenosha commuter service and the proposed new Racine-Kenosha express service were assumed to be implemented in January 1999 and the Kenosha-Lake County commuter and shuttle bus service in January 2002.

- The Federal and State governments will significantly change neither the transit and transit-related capital and operating assistance programs now in place nor the level of funding made available under those programs during 1998.

## **Ridership, Service Levels, and Financial Performance**

### **Local Transit Element**

The anticipated average annual operating characteristics, ridership, costs, and revenues associated with the recommended local transit services are set forth in Table 91. The following observations may be made based upon an examination of the information presented in this table:

- The recommended local service changes will increase the route-miles for the regular routes of the Kenosha transit system from about 192 to about 201 miles, or by about 5 percent. The changes will also increase the peak vehicle requirements for the system by one vehicle, from 34 to 35.
- With the recommended local service changes, the Kenosha transit system will operate about 88,300 revenue vehicle-hours of service and 1,232,800 revenue vehicle-miles of service annually. This would be an increase of about 20,600 vehicle-hours and about 280,800 vehicle-miles, or about 30 percent, from the service levels operated in 1997. However, almost 60 percent of the proposed increase over 1997 service levels is attributable to committed service changes and improvements, including continued operation of the expanded weekday afternoon service initiated in August 1997 and the implementation of the new downtown circulator streetcar service assumed for the fall of 1999.
- The Kenosha transit system may be expected to carry about 1,511,000 revenue passengers annually over the period, an increase of about 154,600 revenue passengers, or about 11 percent, over the 1997 ridership level on the system. Only about one-third of this increase would be attributable to the committed service changes and improvements. The ridership increase under the plan largely reflects the expected effects of the proposed routing changes, expanded industrial park service, and reduction of midday headways.
- Over all, the recommended local transit system may be expected to carry about 17 passengers per vehicle-hour of service, somewhat less than the 20 passengers per vehicle-hour carried on the existing

Table 91

**AVERAGE ANNUAL RIDERSHIP, SERVICE  
LEVELS, AND COSTS FOR THE KENOSHA  
TRANSIT SYSTEM UNDER THE LOCAL SERVICE  
ELEMENT OF THE RECOMMENDED PLAN: 1998-2002**

Operating Characteristic	1997 Estimated	1998-2002 under Recommended Plan <sup>a</sup>
<b>Service</b>		
Revenue Vehicle-Hours of Service .....	67,700	88,300
Revenue Vehicle-Miles of Service .....	952,000	1,232,800
<b>Ridership</b>		
Total System Revenue Passengers .....	1,356,400	1,511,000
Revenue Passengers per Revenue Vehicle-Hour .....	20.0	17.1
Revenue Vehicle-Mile .....	1.42	1.23
<b>Operating Costs, Revenues, and Subsidies</b>		
Expenses .....	\$3,357,800	\$4,443,100
Passenger and Other Revenues .....	756,100	960,100
Subsidy .....	2,601,700	3,483,000
Percent of Expenses Recovered through Operating Revenues .....	22.5	21.6
<b>Anticipated Sources of Public Subsidy</b>		
Federal .....	\$ 563,200	\$ 955,300
State .....	1,370,400	1,801,000
Local .....	668,100	726,700
<b>Capital Costs</b>		
Total Average Annual Costs .....	\$1,313,700	\$3,338,400
<b>Anticipated Sources of Public Subsidy</b>		
Federal .....	1,031,900	2,696,500
State .....	16,000	11,200
Local .....	265,800	630,700

<sup>a</sup>The following assumptions were made in preparing the annual forecasts of ridership, revenues and costs:

1. The service changes proposed under the plan will be phased in between 1998 and 2001 as described in Chapter IX.
2. A 3.5 percent per year increase in operating expenses per unit of service.
3. The 10 percent fare increase in 2000, raising base adult cash fares from \$1.00 to \$1.10 per trip, will decrease annual system ridership by 3.3 percent. However, the ridership generated by the operation of the downtown circulator streetcar service will partially offset some the ridership loss resulting from the fare increase.
4. The 9 percent fare increase in 2002, raising base adult cash fares from \$1.10 to \$1.20 per trip, will decrease annual system ridership by 3.0 percent.
5. Federal funds used as operating assistance—including formula funds provided to cover operating expenses and the capital component of maintenance costs, and funds provided through the Congestion Mitigation and Air Quality (CMAQ) Improvement Program—will be available to cover between 20 and 23 percent of operating costs between 1998 and 2002. Sufficient Federal capital assistance will be available to cover 80 percent of total capital project costs.
6. State operating assistance will be available to cover about 43 percent of operating expenses over the period. A limited amount of State oil overcharge funds will be available for the capital costs of the downtown circulator project.
7. State funds through the Temporary Assistance to Needy Families (TANF) Program will continue to be available to Kenosha County for the expanded industrial park services provided by the Kenosha transit system at the 1998 funding level.

Source: SEWRPC.

system in 1997, but about the same as on the existing and committed transit system.

- The total cost of providing the recommended local transit service, including the operating and

capital costs of both bus service and the proposed downtown circulator streetcar line, would be expected to be about \$7,781,500 annually, including about \$4,443,100, or about 57 percent, for service operation and about \$3,338,400, or about 43 percent, for capital projects. Of this total, about \$960,100, or about 12 percent, may be expected to be recovered by operating revenues. The required average annual operating and capital subsidies would amount to approximately \$6,821,400. Notably, about 95 percent of these costs would be attributable to maintaining the existing system with committed service changes and improvements.

- Federal and State funds amounting to approximately \$5,463,000 may be expected to be available to cover about 70 percent of the total operating and capital costs and about 80 percent of the total required subsidy.
- About \$1,357,400, representing about 18 percent of the total costs and about 20 percent of the required subsidy, would have to be provided by the City of Kenosha and other local units of government in the study area. This would be an increase of about \$424,000, or 45 percent, over the estimated total local cost of about \$933,400 for the transit system in 1997. About 97 percent of the total local subsidy would be attributable to maintaining the existing system with committed service changes and improvements.

### **Commuter Transit Element**

The anticipated average annual operating characteristics, ridership, costs, and revenues associated with the recommended commuter bus and express transit services are set forth in Table 92. The following observations may be made based upon an examination of the information presented in this table:

- Total route-miles for the commuter bus services for the primary study area would increase from about 91 to about 331 miles, or by about 264 percent. Most of the additional route-miles would result from the new Kenosha-Racine-Milwaukee commuter route and the potential commuter service between the Kenosha area and Lake County, Illinois.
- With the proposed service changes, an average of about 13,800 revenue vehicle-hours and about 410,600 revenue vehicle-miles of commuter service would be provided annually. This would be increases of about 5,100 vehicle-hours and about 145,200 vehicle-miles, or between 55 and 60 per-

Table 92

**AVERAGE ANNUAL RIDERSHIP, SERVICE LEVELS, AND COSTS FOR THE BUS SERVICES  
PROPOSED UNDER THE COMMUTER SERVICE ELEMENT OF THE RECOMMENDED PLAN: 1998-2002**

Operating Characteristic	1997 <sup>b</sup>	Forecast Average Annual: 1998-2002 <sup>a</sup>			
		Milwaukee-Racine-Kenosha Commuter Bus	Racine-Kenosha Express Bus	Kenosha-Lake County, Illinois Commuter Bus and Shuttles	Total
<b>Service</b>					
Revenue Vehicle-Hours of Service .....	8,700	9,200	3,800	800	13,800
Revenue Vehicle-Miles of Service .....	265,400	312,500	83,400	14,700	410,600
<b>Ridership</b>					
Total Revenue Passengers .....	73,800	83,000	46,000	5,200	134,200
Revenue Passengers per:					
Revenue Vehicle-Hour .....	8.5	9.0	12.1	6.5	9.7
Revenue Vehicle-Mile .....	0.28	0.27	0.55	0.35	0.33
<b>Operating Costs, Revenues, and Subsidies</b>					
Expenses <sup>c</sup> .....	\$622,700	\$785,800	\$215,000	\$59,400	\$1,060,200
Passenger and Other Revenues .....	220,400	259,100	48,600	12,000	319,700
Public Subsidy .....	402,300	526,700	166,400	47,400	740,500
Percent of Operating Expenses Recovered through Operating Revenues .....	35.4	33.0	22.6	20.2	30.2
<b>Anticipated Sources of Public Subsidy</b>					
Federal .....	--	--	108,400	-- <sup>d</sup>	108,400
State <sup>e</sup> .....	402,300	526,700	36,200	-- <sup>d</sup>	562,900
Local .....	--	--	21,800	-- <sup>d</sup>	21,800
Other (to be determined) <sup>d</sup> .....	--	--	--	47,400	47,400
<b>Total</b>	<b>\$402,300</b>	<b>\$526,700</b>	<b>\$166,400</b>	<b>\$47,400</b>	<b>\$ 740,500</b>
<b>Per Trip Data</b>					
Estimated Operating Costs .....	\$8.44	\$9.47	\$4.67	\$11.42	\$7.90
Operating Revenue .....	2.99	3.12	1.05	2.30	2.38
Subsidy .....	5.45	6.35	3.62	9.12	5.52

<sup>a</sup>The following assumptions were made in preparing the forecasts of ridership, revenues and costs:

1. The changes to the Milwaukee-Racine-Kenosha commuter route and the new Racine-Kenosha express route proposed under the plan will be implemented in 1999. The proposed Kenosha-Lake County, Illinois, commuter bus and shuttle routes would be implemented in 2002 only if sufficient demand is generated for conventional transit service by the proposed ridesharing and subscription transit service
2. A 3.5 percent per year increase in operating expenses per unit of service.
3. A 7 percent fare increase will be implemented on both commuter services in 2000 and again in 2002. These increases will reduce annual ridership by about 2.3 percent in those years.
4. Federal funds will be available through the Congestion Mitigation and Air Quality (CMAQ) Improvement Program to fund 80 percent of the operating deficits of the proposed new Racine-Kenosha commuter bus route as a demonstration project from 1999 through 2001. In 2002, Federal funds provided through the FTA Section 5307 urban formula transit assistance program would replace the CMAQ demonstration funds and fund a lower percent of operating expenses. As with the existing service, no federal funds would be used for the Milwaukee-Racine-Kenosha commuter routes.
5. State funds through the Transportation Demand Management (TDM) Program and the urban transit operating assistance program will cover a portion of the nonFederal share of operating deficit of the proposed new Racine-Kenosha bus route during the CMAQ demonstration period from 1999 through 2001. In 2002, State operating assistance will cover about 43 percent of the total operating expenses of the Racine-Kenosha service. State operating assistance will be available to cover 59 percent of the total operating expenses of the restructured Milwaukee-Racine-Kenosha service over the entire period.

<sup>b</sup>Financial data are estimates for the existing Milwaukee-Racine-Kenosha commuter bus service.

<sup>c</sup>Operating expenses for the Milwaukee-Racine-Kenosha commuter bus service have been adjusted to reflect the estimated actual costs of the service by subtracting funds which are expected to be provided by the private contract service operator. Such funds were estimated at about \$115,000 in 1997. With the proposed service changes, such funds would be expected to average about \$107,000 between 1998 and 2002.

<sup>d</sup>The distribution of the required subsidy for the Kenosha-Lake County, Illinois, commuter service cannot be determined at this time. Should this service be implemented, funding of the subsidy would need to be negotiated among the City of Kenosha, the private businesses served, the Wisconsin Department of Transportation, and the Regional Transportation Authority of Northeastern Illinois.

<sup>e</sup>State operating assistance funds for the Milwaukee-Racine-Kenosha commuter bus service are based on the gross costs of the service, including funds provided by the private contract operator.

Source: SEWRPC.

cent, over the service levels for the existing commuter bus service in 1997. Nearly 60 percent of the additional service would be attributable to the operation of the new Racine-Kenosha express route.

- With the proposed changes, about 134,200 revenue passengers would be carried annually on the commuter and express bus services, an increase of about 60,400 passengers, or about 82 percent, over the 1997 ridership level on the existing bus commuter service. About three-fourths of this additional ridership would occur on the new Racine-Kenosha express route. The average annual ridership on the restructured Milwaukee-Racine-Kenosha service would be expected to increase by about 9,200 passengers, or about 12 percent over the 1997 ridership level.
- The estimated operating cost for providing the proposed commuter and express bus services would be about \$1,060,200 annually. Of this total, about \$410,600, or about 30 percent, may be expected to be recovered by operating revenues. The total required average annual operating subsidy would approximate \$740,500.
- Federal and State funds totaling about \$671,300 annually may be expected to be available to cover about 63 percent of the estimated operating costs and about 91 percent of the total required public subsidy.
- The subsidy for the Kenosha-Lake County, Illinois, commuter service, estimated at about \$47,400 annually, would need to be negotiated among the City of Kenosha, the private businesses served, the Wisconsin Department of Transportation, and the RTA, should this service ultimately be implemented.
- The remaining average annual local public subsidy would amount to about \$21,800, or about 2 percent of the total costs and about 3 percent of the total public subsidy. This subsidy would be attributed entirely to the proposed new Racine-Kenosha express service. In the interest of equity, this subsidy should be shared by the Cities of Racine and Kenosha as the chief beneficiaries of this service.

## PLAN ADOPTION AND IMPLEMENTATION

### Plan Adoption

Adoption or endorsement of the recommended Kenosha area transit system development plan is important to ensuring a common understanding among the concerned units and agencies of government and to enable the staffs of those governments to work cooperatively toward plan implementation. Accordingly, the following plan adoption actions are recommended:

- City of Kenosha  
The City of Kenosha Common Council should act to formally adopt the plan as a guide to the provision of transit services in the greater Kenosha area. The adoption action should be certified to the Southeastern Wisconsin Regional Planning Commission with a request that the plan be incorporated into the regional transportation system plan.
- Southeastern Wisconsin Regional Planning Commission  
Upon receipt of notification of adoption of the plan from the City of Kenosha, the Southeastern Wisconsin Regional Planning Commission should adopt the plan as an amendment and extension of the regional transportation system plan and formally certify such adoption to all of the local units of government in that portion of Kenosha County east of IH 94, to the Wisconsin Department of Transportation, and to the Federal Transit Administration.
- Wisconsin Department of Transportation  
Upon receipt of the certification by the Regional Planning Commission, the Wisconsin Department of Transportation should act to endorse the plan as a guide for the programming, administration, and granting of State transit assistance funds.
- Federal Transit Administration  
Upon endorsement of the plan by the Wisconsin Department of Transportation, the Federal Transit Administration should endorse the plan as a guide for the programming, administration, and granting of Federal transit funds.
- Local Units of Government  
Upon receipt of the certified plan, Kenosha County and the other concerned village and town boards in

eastern Kenosha County, along with the City of Racine and Racine County, should act to adopt the plan, thereby indicating support to the City of Kenosha in the implementation of that plan. Such actions on the part of the Kenosha County, the Village of Pleasant Prairie, and the Town of Somers would indicate general agreement with services proposed under the plan's local transit service element and, on the part of Kenosha and Racine Counties and the City of Racine, would indicate agreement with services proposed under the plan's commuter service element.

### **Plan Implementation—Local Service Element**

It is recommended that the City of Kenosha have the primary responsibility for implementing the service changes proposed under the local service element of the recommended plan. The City's actions should include the following:

- **Refinement of Recommended Local Service Changes**

Subject to the approval of the Kenosha Transit Commission, City staff in the Kenosha Department of Transportation should prepare detailed operating plans which refine the local service changes proposed by the plan. Such refinements of the plan recommendations are envisioned for the following:

1. The routing adjustments needed to create the new west-side transfer point. This service change has been targeted for implementation in August 1998 to coincide with the opening of the new high school. The details for serving the transfer point should be completed and approved by late spring 1998.
2. The proposed expanded industrial park services, including the new industrial park routes and the scheduling changes to Route Nos. 7 and 8. These services have been targeted for implementation in September 1998. The details of this service should be completed and approved early in the summer of 1998. City staff should work with the employers in the Kenosha Industrial Park, the Business Park of Kenosha, and the LakeView East portion of LakeView Corporate Park, along with the Kenosha County Job Center, in establishing the specific operating characteristics and local funding for the service.
3. The service periods and operating headways for the new downtown circulator streetcar line.

The City has already identified in detail several service options for the circulator and will need to make a final decision on the specific option prior to the start-up of service in the fall of 1999.

4. The proposed headway reductions for the weekday midday service period. The plan forecasts assume this service change would not occur until 2001, and then only if City officials decide at that time that the additional midday service is warranted. An analysis of the potential ridership, costs, and funding requirements from Federal, State, and City sources associated with the headway reduction should be completed by City staff during 2000 to serve as the basis for this decision.

- **Public Hearings**

Federal regulations require transit systems using Federal funds to conduct public hearings prior to the implementation of significant service changes. The City will need to conduct one or more public hearings for the specific service changes noted above.

- **Federal and State Grant Applications**

The City of Kenosha should prepare operating and capital budgets to support applications for the Federal and State funds needed over the planning period to implement the recommended plan. Such applications would need to be prepared annually on a schedule to meet the requirements of the agencies concerned.

### **Plan Implementation—Commuter Service Element**

Both the City of Kenosha and the City of Racine would have responsibilities for implementing the restructured and new bus services proposed under the commuter service element of the recommended plan. The specific actions for each body would be as follows:

- **City of Kenosha**

By securing grants under the Federal CMAQ Program and State TDM programs to support a portion of the anticipated costs, the City of Kenosha has assumed the role as lead agency responsible for implementing the proposed new Racine-Kenosha express bus service. The new express route is proposed to be directly operated by the Kenosha transit system beginning in January 1999. The City should work with the City of Racine during 1998 to prepare a detailed operating plan for the new



express service providing service schedules that are coordinated, to the maximum extent practical, with those for the Racine and Kenosha transit systems. The City of Kenosha will also need to prepare annually the operating and capital budgets to support applications for the additional Federal and State funds needed over the planning period to implement the service. It should also negotiate with the City of Racine for funding of a portion of the annual local operating deficit for the service.

It is recommended that the City of Kenosha also be the principal agency in Wisconsin responsible for cooperating with, and supporting the lead efforts of, the RTA of Northeastern Illinois or its suburban bus division, Pace, and Lake County employers or employer organizations in implementing the proposed subscription and commuter bus services for Kenosha area residents commuting to jobs in Lake County, Illinois. If requested, the City should also work with Lake County employers and employer organizations which express interest in establishing such services for their employees residing in the City of Kenosha and environs, conveying to such employers the need to inform the RTA and Pace of their service needs and the probable need for the private sector to provide the requisite local funding to implement and maintain continued operation of the service. City staff could also consult with the RTA, Pace, and employers concerning an appropriate operating plan for the service, including identifying the appropriate vehicle, bus or van, and service provider. Finally the City should also act, as needed, to facilitate discussions among the Wisconsin Department of Transportation and the RTA on the use of other funds potentially available through Federal and State transit assistance programs or the RTA.

- City of Racine

The City of Racine should be the lead agency responsible for implementing the proposed restructuring of the Milwaukee-Racine-Kenosha commuter bus service. The City is currently the lead agency in the joint partnership arrangement with the City of Kenosha and Kenosha and Racine Counties for subsidizing the service, acting as the applicant-grantee for necessary State funds. The plan recommends continuing to contract with a private transit operator for route operation, with the proposed routing and scheduling changes to be implemented in January 1999. The City of Racine, in conjunction with the City of Kenosha and Kenosha and Racine Counties, should negotiate with the private

operator during 1998 to arrange for implementation of the service changes. The City of Racine will also need to prepare annually applications for the State funds needed to cover the subsidy for the service over the planning period.

### **Plan Implementation—Park-Ride Lots**

The Wisconsin Department of Transportation, Kenosha County, and Racine County should undertake a cooperative effort directed at the construction of park-ride lots near the intersections of Green Bay Road (STH 31) and 52nd Street (STH 158), in the City of Kenosha; 75th Street (STH 50) and IH 94, in the City of Kenosha or Village of Pleasant Prairie; and Green Bay Road (STH 31) and Washington Avenue (STH 20), in the Town of Mt. Pleasant. These facilities should be properly configured to facilitate the provision of the recommended commuter bus services. The establishment of park-ride lots or transit stations at these locations has long been recommended in the Commission's adopted regional transportation system plan to serve work-commute travel by transit patrons and carpoolers.

## **SUMMARY**

This chapter has set forth the recommended transit system development plan for the Kenosha area as approved by the Kenosha Area Public Transit Planning Advisory Committee. The plan may be summarized as follows:

1. The plan includes a local service element which calls for a number of changes in the existing service provided by City of Kenosha transit system, the most significant of the which are:
  - Alignment and schedule changes for all regular routes except Route No. 1 to create a new west-side transfer point at the site of the new Kenosha high school near 60th Street and 68th Avenue, to extend service to developing areas west of Green Bay Road, and to eliminate unproductive route segments or improve route operation;
  - An expansion of service to the major industrial centers located west of Green Bay Road to serve jobs that cannot be served during the existing operating hours of the transit system;
  - Continued operation of the expanded weekday afternoon service on the regular routes of the system implemented in August 1997 and the

reduction of headways from 60 to 30 minutes during the weekday midday period;

- The construction of a new electric circulator streetcar line to serve the Kenosha CBD and the Harborpark area; and
  - The relocation of the common transfer point for the regular routes of the transit system in the downtown Kenosha to a new terminal facility on the proposed downtown circulator.
2. The plan also includes a commuter service element which identifies transit service improvements to better serve travel between the Kenosha area and the Racine and Milwaukee areas, and between the Kenosha area and Lake County, Illinois. The recommended service improvements include:
    - Restructuring the existing publicly subsidized Milwaukee-Racine-Kenosha bus route operated by Wisconsin Coach Lines, Inc., to eliminate unproductive route segments and to provide for faster travel between downtown Racine and Kenosha and the Milwaukee CBD;
    - Establishing a new express bus service on weekdays between the downtown transfer terminals for the Racine and Kenosha local bus systems; and
    - Using a combination of ridesharing, subscription transit service, and conventional commuter transit service to serve travel by Kenosha area residents to and from jobs in Lake County, Illinois.
  3. With the recommended local service changes, service levels on the Kenosha transit system would increase by about 30 percent over the service levels operated in 1997; system ridership may be expected to approximate 1,511,000 revenue passengers annually over the period, or about 11 percent more than the 1997 system ridership of 1,356,400 revenue passengers. The total annual cost of the recommended local transit service, including the operating and capital costs of both bus service and the proposed downtown circulator streetcar line, is estimated at about nearly \$7.78 million, of which about 12 percent may be expected to be recovered by operating revenues. About 70 percent of the total costs, and about 80 percent of the total required subsidy of approximately \$6.82 million, may be expected to be provided by Federal and State funds

assuming no significant changes in existing transit aid programs. About \$1,357,400 annually would have to be provided by the City of Kenosha and other local units of government in the study area. This represents an increase of about \$424,000, or 45 percent, over the estimated total local cost of about \$933,400 for the transit system in 1997. About 97 percent of the total annual local subsidy for the proposed local transit service would be attributable to maintaining the existing system with committed service changes and improvements.

4. Under the commuter service element of the plan, service levels on the proposed commuter and express bus services would be between 55 and 60 percent above the 1997 service level for the existing Milwaukee-Racine-Kenosha commuter bus route, with about 60 percent of the additional service attributable to the operation of the proposed new Racine-Kenosha express bus route. Ridership on all services may be expected to approximate 134,200 revenue passengers annually over the period, or about 82 percent more than the 1997 ridership level of 73,800 for the existing service. The total annual cost of the recommended commuter and express bus services is estimated at about \$1.1 million, of which about 30 percent may be expected to be recovered by operating revenues. About 63 percent of the total costs, and about 91 percent of the total required subsidy of approximately \$740,500, may be expected to be provided by Federal and State funds assuming no significant changes in existing transit aid programs. Of the total local subsidy of about \$69,200, about \$21,800 annually would be shared by the Cities of Kenosha and Racine for operation of the new Racine-Kenosha express bus route. The remaining subsidy of about \$47,400 annually for the Kenosha-Lake County, Illinois, commuter bus service would need to be negotiated among the City of Kenosha, the private businesses served, the Wisconsin Department of Transportation, and the RTA of North-eastern Illinois.
5. Following adoption of the transit system development plan, the City of Kenosha will have the primary responsibility for implementation of the local service element of the plan. City staff will need to refine the recommended routing adjustments and scheduling changes and prepare detailed operating plans for approval by the Kenosha Transit Commission. One or more public hearings will need to be conducted prior to implementation of the specific service changes. The City will also need to

prepare operating and capital budgets to support applications for the Federal and State funds needed over the planning period.

6. The City of Kenosha will also have the primary responsibility for implementing the new Racine-Kenosha express bus service proposed under the commuter service element of the plan. While the plan proposes that the new express route be directly operated by the Kenosha transit system, the City of Kenosha should work with the City of Racine to prepare a detailed operating plan for the express service to ensure that its schedule is coordinated, to the maximum extent practical, with the schedules for both the Racine and Kenosha transit systems. The City of Kenosha should negotiate with the City of Racine for funding of a portion of the annual local operating deficit for the express service.
7. The City should also cooperate with the RTA or its suburban bus division, Pace, and Lake County employers or employer organizations in implementing the subscription and commuter bus services proposed under the plan's commuter service element for Kenosha area residents commuting to

jobs in Lake County, Illinois. If requested, the City should work with Lake County employers and employer organizations which express interest in establishing such services for their Kenosha area resident employees, conveying to such employers the need to inform the RTA and Pace of their service needs and the probable need for the private sector to provide the requisite local funding to implement and maintain continued operation of the service. The City should also act, as needed, to facilitate discussions among the Wisconsin Department of Transportation and the RTA on the use of other funds potentially available through Federal and State transit assistance programs or the RTA.

8. The Wisconsin Department of Transportation, Kenosha County, and Racine County should undertake a cooperative effort directed at the construction of park-ride lots configured to facilitate transit service near the following intersections: Green Bay Road (STH 31) and 52nd Street (STH 158), in the City of Kenosha; 75th Street (STH 50) and IH 94, in the City of Kenosha or Village of Pleasant Prairie; and Green Bay Road (STH 31) and Washington Avenue (STH 20), in the Town of Mt. Pleasant.

(This page intentionally left blank)

## Chapter X

# SUMMARY AND CONCLUSIONS

## INTRODUCTION

This report sets forth a transit system development plan for the City of Kenosha transit system. The study was carried out over the period of May 1997 to April 1998 within the context of the adopted design year 2010 regional transportation system plan. The plan includes a public transit element which recommends that improved transit services be provided both in the Kenosha area and to connect the Kenosha area with other areas in the Region. The Kenosha area study was designed to refine, detail, and, as may be found desirable, amend and extend the regional transportation system plan.

In conducting the study, several tasks were performed, including an inventory and analysis of the existing land uses and of the current travel habits, patterns, and needs of the residents of the area; an evaluation of the performance of the existing City transit system; an evaluation of alternative local transit service changes for the existing City transit system; and an evaluation of alternative commuter transit service improvements to serve residents of the Kenosha area. The study culminated in the preparation of a recommended transit system development plan.

## PURPOSE OF THE TRANSIT SYSTEM DEVELOPMENT PLAN

The study was intended to serve the following purposes:

1. To evaluate the effectiveness of the existing route structure and schedules, along with the financial performance of the current City of Kenosha transit system;
2. To identify and evaluate route structure, service schedules, and service periods for both local and commuter transit services and to recommend potential transit service changes;
3. To develop appropriate responses, in terms of the transit services provided and their attendant service levels, to recent changes in State and Federal funding programs in order to assure adequate financing of existing and planned transit services; and

4. To provide a sound basis for monitoring the implementation status of the plan and the updating required to maintain a valid plan through the five-year planning period.

## STUDY ORGANIZATION

The preparation of this transit system development plan was a joint effort by the staffs of the City of Kenosha and of the Southeastern Wisconsin Regional Planning Commission. Additional staff assistance was obtained from certain other agencies concerned with transit development in the Kenosha area, including the Wisconsin Department of Transportation.

To provide guidance to the technical staffs in the preparation of this plan and to involve concerned and affected public officials and citizen leaders more directly and actively in the development of transit service policies and improvement proposals, the City of Kenosha created the Kenosha Area Public Transit Planning Advisory Committee. The full membership of the Committee is listed on the inside front cover of this report.

The primary study area considered in this report comprised the eastern portion of Kenosha County, including all of the City of Kenosha, the Village of Pleasant Prairie, and the Town of Somers, as well as the eastern one-sixth of the Towns of Bristol and Paris (see Map 1). The primary study area included the entire area served by the fixed-route bus system operated by the City of Kenosha in 1997 and the entire Kenosha urbanized area as defined by the 1990 U. S. Census. A secondary study area consisting of Lake County, Illinois, (see Map 2) was identified for that element of the study which focused on employee travel from the Kenosha area to jobs in Lake County.

## LAND USE AND TRAVEL PATTERNS

The planning effort included the conduct of a number of inventories of land use, population, employment, and travel patterns. The key findings of these inventories may be summarized as follows:

- The primary study area's population has grown steadily since 1960, when the population level stood at about 85,800 persons. From 1960 to 1995, the



primary study area's population increased by about 25 percent, to about 106,900 persons. Most of the population growth occurred in the City of Kenosha and the Village of Pleasant Prairie, which experienced increases of about 25 and 27 percent, respectively. The population of these communities has continued to increase in recent times, with increases of between 6 and 8 percent observed between 1990 and 1995. The number of households in the primary study area has increased more than twice as fast as the resident population in the primary study area between 1960 and 1995.

- Population subgroups whose dependence on, and use of, public transit service historically has been greater than that of the general population as a whole include school-age children (age 10 through 18), the elderly (age 60 and older), the disabled, persons in low-income households, and households with no vehicles available. Since 1960, both the elderly and the low-income populations have increased significantly in terms of absolute numbers and in terms of their proportions of the total primary study area population, while the school-age population and zero-auto households have remained stable in absolute numbers and actually declined as a part of the total population. Comparable data permitting a trend analysis for the disabled population since 1960 was not available. The transit-dependent population in the primary study area was concentrated primarily in the City of Kenosha in 1990.
- The number of jobs in the primary study area has increased from about 39,500 jobs in 1970 to about 43,600 jobs in 1990, or by about 10 percent. Virtually all of the increase occurred outside the City of Kenosha, in the Village of Pleasant Prairie and the Town of Bristol. Employment opportunities at new employment centers in these communities and at centers in the City of Kenosha which have been completed since 1990 or are currently under way have helped to offset the job losses which occurring during the 1980s as a result of a severe nationwide recession and the closing of Chrysler Motors automobile body assembly plants in the City of Kenosha. At present, the principal concentrations of employment in the primary study area are in the central portion of the City of Kenosha and in the outlying areas which contain the University of Wisconsin-Parkside, the commercial development surrounding the intersection of IH 94 and STH 50, and the LakeView Corporate Center.
- The amount of land in the primary study area devoted to urban land uses increased from about 16.6 square miles in 1963 to about 24.8 square miles in 1990, an increase of about 50 percent. Over the same period, the population density in the developed urban areas decreased from 4,606 to 3,805 persons per square mile, or by about 17 percent. Despite the steady increase of urban development observed since 1963, only about 25 percent of the land in the primary study area is currently fully developed for urban land uses. (see Map 7 in Chapter II).
- Certain major land uses in the primary study area, including commercial centers, educational centers, medical centers, governmental and public institutional centers, employment centers, and recreational areas, generate a large number of person trips on a daily basis. In 1997, these land uses, along with housing and care facilities for elderly and disabled persons and low-income housing, were identified as major potential transit trip generators in the primary study area (see Maps 10 and 11 in Chapter II) and were found to be scattered throughout the areas of urban development.
- As indicated by travel surveys undertaken by the Regional Planning Commission in 1991, average weekday total person travel entirely within the primary study area and between the primary study area and other external areas has increased by about 35 percent, from about 300,400 person trips in 1963 to about 406,200 trips in 1991. About 69 percent of these person trips were made internal to the primary study area in 1991, with the largest proportion being home-based other trips, such as trips made for medical, personal business, or social and recreational purposes. The distribution of person-trip productions and attractions within the primary study area (see Maps 12 and 13 in Chapter II) reflects the concentrations of population, employment, and major trips generators in the City of Kenosha. The remaining 31 percent of all person trips were made with one trip end external to the primary study area; the largest proportion were made for work purposes. Trips made between the primary study area and Racine County accounted for the largest volume of external person travel, with about 40 percent of all external trips, followed by trips between the primary study area and Lake County, Illinois, with about 29 percent of all external trips (see Map 14 in Chapter II). Other significant volumes of person trips were also identified from the primary study area to western Kenosha County and to Milwaukee County. Notably, about 60 percent of the observed

increase in person travel between 1963 and 1991 occurred as external trips, which increased by about 103 percent over this period.

- Commission survey data indicate that about 3,600 transit revenue passenger trips were made on an average weekday in 1991 on the Kenosha transit system. Passengers using regular routes of the system were predominantly female, without a valid drivers license, 34 years of age and younger, and from households with incomes below \$20,000 per year. Most of the trips made by these passengers were for school and work purposes. Passengers using the system's peak-hour tripper routes were school-age children traveling to and from school. Almost two-thirds of the system ridership occurred during two peak periods, coinciding with the starting and ending of classes at local schools and first-shift jobs at employers. As would be expected, the distribution of transit trip productions and attractions (see Maps 15 and 16 in Chapter II) reflects the service area for the transit system which is principally in the City of Kenosha.

## EXISTING PUBLIC TRANSIT SYSTEM

The planning effort also collected information regarding the existing Kenosha transit system and other major public and private transit services operating in the primary study area. The key findings of these inventories may be summarized as follows:

- The major supplier of local public transit service in the Kenosha area is the City of Kenosha, which has operated the City of Kenosha transit system since September 1971. The City of Kenosha owns the facilities and equipment for its fixed-route transit system and operates it with public employees under the direct supervision of the City Department of Transportation.
- During 1997, fixed-route bus service was provided by the City of Kenosha transit system over a system of 8 regular bus routes (see Map 18 in Chapter III). Six of these routes provided direct service to the Kenosha central business district (CBD) where the City has established a common stop to facilitate transfers between routes. All these routes operated on a cycle, or pulse, schedule to further facilitate transfers between routes. A seventh local bus route extended outside the City's corporate limits into the Town of Bristol to serve the Factory Outlet Center. The eighth regular route provided service with limited stops between the Kenosha CBD and

businesses located in the LakeView Corporate Park in the Village of Pleasant Prairie and in the Factory Outlet Center in the Town of Bristol.

Service over the regular routes was provided between 5:55 a.m. and 7:35 p.m. on weekdays and between 5:55 a.m. and 5:35 p.m. on Saturdays, with operating headways of 30 minutes for Route Nos. 1 through 6 during weekday peak periods, 60 minutes during weekday middays, and 60 minutes all day Saturday. Route Nos. 7 and 8 operated less frequently and Route No. 8 did not operate on Saturdays. The system also operated a system of peak-hour tripper routes during the school year designed to accommodate the movement of junior and senior high school students. The base adult cash fare charged for all service was \$1.00 per trip, with reduced fares of \$0.50 per trip charged for elderly and disabled individuals and \$0.60 per trip charged for students. The transit system maintained a fleet of 43 buses to provide service over the regular and peak hour tripper routes.

- The transit system also provided a paratransit service directed at serving the travel needs of disabled individuals who are unable to use the City's fixed-route bus service. The door-to-door service was operated during the same hours as the fixed-route service and was available throughout the transit system service area. The service was provided by Kenosha Achievement Center, Inc., through a contract with the Kenosha County Department of Human Services, Division of Aging Services. Disabled individuals could also use the accessible bus service provided over the regular routes of the transit system.
- Ridership on the Kenosha transit system increased steadily in each year from 1971 through 1980 before experiencing a general trend of declining ridership from 1981 through 1992. Systemwide ridership increased steadily during the period of 1993 to 1996. By 1996, the transit system carried about 1.35 million revenue passengers, or about 22 percent more than the 1992 level. Currently, Route Nos. 2 and 5 are the most heavily used of the 8 regular routes in the transit system.
- From 1992 through 1996, the City expended on an average annual basis a total of about \$3,749,000, or about \$3.08 per trip, for transit system operations and for capital projects. Of this total, about \$576,000, or about \$0.47 per trip, was recovered through farebox and other miscellaneous revenue.

The remaining \$3,173,000, or about \$2.61 per trip, constituted the total average annual public subsidy which needed to be funded through Federal and State transit assistance programs and local property taxes. The total average annual subsidy from the City of Kenosha amounted to about \$694,000, or about \$0.57 per trip. The local share of the public operating subsidy for the transit system increased by 112 percent between 1992 and 1996 partly due to a decrease in Federal transit operating assistance and partly due to an increase in service introduced during this period.

- Other transit services for the general public were also identified which either operated in the study area or connected with the City of Kenosha transit system outside the study area. The City of Racine Belle Urban System operated one local bus route between the Racine CBD and the University of Wisconsin-Parkside, where connections could be made with Route No. 1 of the City of Kenosha transit system. A commuter-oriented express bus route was operated by Wisconsin Coach Lines, Inc., between the Milwaukee CBD and the Cities of Racine and Kenosha, and provided for several intermediate stops in the City of Kenosha and the Town of Somers. Two private carriers, Greyhound Lines, Inc., and United Limo, Inc., operated intercity bus routes between Milwaukee and Chicago which provided for a stop along IH 94, with a limited number of the Greyhound bus runs also stopping in the City of Kenosha. Commuter rail service was operated between downtown Kenosha and Chicago by Metra. Taxicab service was provided by the following three companies: Excalibur Cab Company, Kenosha Cab Company, and Peppie's Courtesy Cab.
- Several agencies and private companies provided specialized transportation services for elderly and disabled individuals. The most significant service was offered by the Kenosha County Department of Human Services, Division of Aging Services, which administered two programs offering service county-wide, the Care-A-Van Program, which provided door-to-door transportation services to elderly and disabled individuals for general travel purposes, and the Volunteer Escort Program which provided service principally for medical trips with volunteer drivers using their own vehicles. Other private nonprofit agencies and organizations providing service included the following: the Kenosha Achievement Center, Inc., which provided transportation for participants in its training and rehabilitative programs; and the Brookside Care Center, which

provided transportation for the residents of their care facility as dictated by their needs. Eight private for-profit companies also provided service to a significant number of passengers in the study area.

- The Kenosha Unified School District provided yellow school bus service for about 6,500 students residing in the District through a contract with a private company, Laidlaw Transit, Inc. The District also provided about 1,800 students who reside in the service area of the Kenosha transit system with special schoolday bus passes so they could travel to and from school on the transit system.

## **PUBLIC TRANSIT SERVICE OBJECTIVES AND STANDARDS**

The Advisory Committee formulated four transit service objectives to guide the preparation of a transit system plan:

1. Public transit should be provided to those areas of the City and its immediate environs which can be efficiently served, including those areas which are fully developed to medium or high densities, and, in particular, the transit-dependent populations in those areas.
2. The public transit system should promote effective utilization of public transit services and provide for user convenience, comfort, and safety.
3. The public transit system should promote efficiency in the total transportation system.
4. The transit system should be economical and efficient, meeting all other objectives at the lowest possible cost.

Each objective was linked to a supporting principle and a set of specific service and design standards (see Table 37).

## **EVALUATION OF THE EXISTING TRANSIT SYSTEM**

A performance evaluation of the Kenosha transit system was conducted at both a systemwide level and on a route-by-route basis using specific performance measures related to the attainment of key transit system objectives and standards.

The conclusions reached from the performance assessment included:

- The existing transit system provided excellent areal coverage of the existing residential areas in the City of Kenosha, together with good coverage of the most densely populated residential areas outside the City and the residential concentrations of transit-dependent population groups in the primary study area identified through 1990 U. S. Census data. About 96 percent of the resident population in the City and about 82 percent of the total resident population in the primary study area were located in the transit system service area.
- The transit system also provided excellent areal coverage of the employment concentrations in the City of Kenosha. About 98 percent of the jobs in the City and about 86 percent of the jobs in the primary study area were within the transit system service area.
- The transit system provided good coverage of the potential transit trip generators identified in the primary study area, serving 128 of the 140 major land use trip generators and 59 of the 61 major transit-dependent population trip generators. Most of the centers not served were located west of Green Bay Road (STH 31), outside the area which has historically been the primary service area for the transit system. For a similar reason, only about one-half, 30 of 66, of the new residential and commercial development identified in the primary study area was served by the transit system.
- The transit system's existing service for disabled individuals unable to use fixed-route bus service meets all of the paratransit service requirements of the Americans with Disabilities Act of 1990. This paratransit service is provided throughout the primary study area, serving an area larger than required by Federal regulations.
- In terms of ridership and financial performance, the Kenosha transit system compared favorably to other urban bus systems in Wisconsin communities of a similar size. The trends observed for the Kenosha transit system during the period 1992 through 1996 with respect to the rate of increase in operating expenses per vehicle-mile and per vehicle-hour, as well as in operating costs and deficits per passenger, were found to be about 40 to 80 percent less than those observed for the other systems. With respect to farebox recovery rates, the rate for the Kenosha transit system was found to be about 6 to 10 percent higher than the average for the group of urban bus systems Statewide over the period.
- Certain regular bus routes had weekday performance levels consistently above the specified minimum performance standard of at least 80 percent of system-wide average effectiveness levels. These routes included Route Nos. 2, 3, 4, and 5, with Route Nos. 2, 3, and 5 clearly being the best performers, having weekday effectiveness levels which exceeded 100 percent of the systemwide average for all measures of performance. Based solely on their ridership and financial performance, these routes could continue to be operated without change.
- The remaining four routes, including Route Nos. 1, 6, 7, and 8, had weekday performance levels below 80 percent for most or all of the specified performance standards. Of the 25 least productive route segments identified on the system, 15 were accounted for by these four routes. While Route Nos. 6, 7, and 8 had the most unproductive route segments, at least one unproductive route segment was also found on each of the other routes of the system. This information should be viewed as an indicator of where routing changes should be considered in the current route structure.
- The existing headways operated on the regular routes of the transit system were capable of accommodating existing levels of passenger demand at the recommended load standards and headway reductions were not warranted on any routes. The observed passenger loads resulted in load factors which exceeded the maximums specified in the transit service standards in only one case for all weekday bus trips examined.
- According to random spot checks of schedule adherence, the on-time performance of the existing transit system was found to be somewhat below the performance level of 90 percent on time specified in the transit service objectives and standards. Problems with schedule adherence were found to exist only at bus stops located away from the downtown transfer center, and were found to be almost equally divided between early and late departures at bus stops. To correct such problems, the scheduled running time between timepoints along each route should be reviewed and, possibly, modified to reflect different passenger loading and traffic conditions which occur throughout the day and which affect actual running time between stops.
- The existing alignments of the bus routes of the transit system were relatively direct for trips

between the downtown central transfer point and outlying locations, but resulted in inconvenient travel for many crosstown trips. The in-vehicle travel times for crosstown travel were consistently higher than the in-vehicle travel time for automobile travel, with rates in excess of 3.0 for Route Nos. 1 through 5. The inconvenience is a result of the orientation of the routes serving the downtown transfer terminal and intermediate satellite transfer centers. Alternatives which would improve the convenience of crosstown travel should be explored.

## **ALTERNATIVE TRANSIT SERVICE IMPROVEMENTS**

Transit service improvement alternatives were considered to identify local service improvements for the Kenosha transit system the better to serve existing travel within the City of Kenosha and environs and to identify commuter service improvements the better to serve existing travel between the Kenosha area and Lake County, Illinois, and between the Kenosha area and the Racine and Milwaukee areas.

### **Local Transit Service Alternatives**

Four local transit service alternatives were considered by the Advisory Committee. The changes to the Kenosha transit system proposed under each alternative may be summarized as follows:

1. Alternative 1 proposed alignment and schedule changes for all regular routes on the system except Route No. 1 to create a new west-side transfer point at the site of the new Kenosha high school near 60th Street and 68th Avenue, to extend service to developing areas west of Green Bay Road, and to eliminate unproductive route segments or improve route operation;
2. Alternative 2 proposed an expansion of service to the major industrial centers west of Green Bay Road to serve jobs that cannot be served during the existing operating hours of the transit system;
3. Alternative 3 proposed an expansion of weekday service hours into early morning and late evening periods. Service would commence one-half hour earlier, at 5:25 a.m. instead of 5:55 a.m., for Route Nos. 1 through 6 and end about four and one-half hours later, at about 12:00 midnight instead of at about 7:30 p.m., for Route Nos. 1 through 5; and

4. Alternative 4 proposed the reduction of headways from 60 minutes to 30 minutes during the weekday midday period between about 9:00 a.m. and 2:00 p.m.

To serve as a baseline for preparing estimates of the ridership and costs of the local transit service improvement alternatives, an existing and committed Kenosha transit system was defined which included service changes, improvements, and capital projects to which the City has made a reasonable commitment for their continued operation or implementation over the period 1998-2002. Such services and projects included the new electric circulator streetcar line approved by the City as part of the Harborpark plan for the redevelopment of the Kenosha lakefront serving the Kenosha CBD and the Harborpark area.

### **Commuter Transit Service Alternatives**

Two commuter transit service alternatives were considered by the Advisory Committee. The new or improved commuter services proposed under these alternatives may be summarized as follows:

1. Restructuring the existing publicly subsidized Milwaukee-Racine-Kenosha bus route operated by Wisconsin Coach Lines, Inc., to eliminate unproductive route segments and to provide for faster travel between downtown Racine and Kenosha and the Milwaukee CBD. A new weekday bus service would also be established to provide express bus service between the downtown transfer terminals of the Racine and Kenosha local bus systems; and
2. Using a combination of ridesharing, subscription transit service, and conventional commuter transit service to serve travel by Kenosha area residents to and from jobs in Lake County, Illinois.

### **Advisory Committee Recommendations**

Following careful review of the alternative local and commuter transit service improvements, the Advisory Committee made the following recommendations regarding the alternatives:

- The Advisory Committee recommended the restructuring of the existing local bus routes and the operation of new industrial park routes as proposed under local service Alternatives 1 and 2. The Advisory Committee also supported the reduction of headways during weekday midday periods as proposed under local service Alternative 4, but recommended that the plan reflect implementation of the headway reductions no sooner than January 2001.



- The Advisory Committee recommended the implementation of the proposed commuter transit service improvements as proposed under both alternatives considered.

## THE RECOMMENDED PLAN

The recommended transit system development plan for the Kenosha area as approved by the Advisory Committee includes both a local service element and a commuter service element. The services proposed under each element are described below.

### Local Transit Service Element

The plan includes a local service element which calls for a number of changes in the existing service provided by City of Kenosha transit system, the most significant of the which are:

- Alignment and schedule changes for all regular routes except Route No. 1 to create a new west-side transfer point at the site of the new Kenosha high school, near 60th Street and 68th Avenue; to extend service to developing areas west of Green Bay Road; and to eliminate unproductive route segments or improve route operation;
- An expansion of service to the major industrial centers west of Green Bay Road to serve jobs that cannot be served within the existing operating hours of the transit system;
- Continued operation of the expanded weekday afternoon service on the regular routes of the system implemented in August 1997 and the reduction of headways from 60 minutes to 30 minutes during the weekday midday period by the end of the planning period;
- The construction of a new electric circulator streetcar line to serve the Kenosha CBD and the Harborpark area; and
- The relocation of the common transfer point for the regular routes of the transit system in the downtown Kenosha to a new facility on the proposed downtown circulator.

### Commuter Transit Service Element

The plan also includes a commuter service element which identifies transit service improvements to better serve travel between the Kenosha area and the Racine and Milwaukee areas, and between the Kenosha area and

Lake County, Illinois. The recommended service improvements include:

- Restructuring the existing publicly subsidized Milwaukee-Racine-Kenosha bus route operated by Wisconsin Coach Lines, Inc. to eliminate unproductive route segments and to provide for faster travel between downtown Racine and Kenosha and the Milwaukee CBD;
- Establishing a new express bus service on weekdays between the downtown transfer terminals for the Racine and Kenosha local bus systems; and
- Using a combination of ridesharing, subscription transit service, and conventional commuter transit service to serve travel by Kenosha area residents to and from jobs in Lake County, Illinois.

## PLAN PERFORMANCE AND COST

### Local Transit Service Element

With the recommended local service changes, service levels on the Kenosha transit system would increase by about 30 percent over the service levels operated in 1997, and system ridership may be expected to approximate 1,511,000 revenue passengers annually over the period, or about 11 percent more than the 1997 system ridership of 1,356,400 revenue passengers. The total annual cost of the recommended local transit service, including the operating and capital costs of both bus service and the proposed downtown circulator streetcar line, is estimated at about \$7.78 million, of which about 12 percent may be expected to be recovered by operating revenues. About 70 percent of the total costs, and about 80 percent of the total required subsidy of approximately \$6.82 million, may be expected to be provided by Federal and State funds assuming no significant changes in existing transit aid programs. About \$1,357,400 annually would have to be provided by the City of Kenosha and other local units of government in the study area. This represents an increase of about \$424,000, or 45 percent, over the estimated total local cost of about \$933,400 for the transit system in 1997. About 97 percent of the total annual local subsidy for the proposed local transit service would be attributable to maintaining the existing system with committed service changes and improvements.

### Commuter Transit Service Element

Under the commuter service element of the plan, service levels on the proposed commuter and express bus services would be between 55 and 60 percent above the 1997 service level for the existing Milwaukee-Racine-Kenosha commuter bus route, with about 60 percent of the

additional service attributable to the operation of the proposed new Racine-Kenosha express bus route. Ridership on all services may be expected to approximate 134,200 revenue passengers annually over the period, or about 82 percent more than the 1997 ridership level of 73,800 for the existing service. The total annual cost of the recommended commuter and express bus services is estimated at about \$1.1 million, of which about 30 percent may be expected to be recovered by operating revenues. About 63 percent of the total costs, and about 91 percent of the total required subsidy of approximately \$740,500, may be expected to be provided by Federal and State funds assuming no significant changes in existing transit aid programs. Of the total local subsidy of about \$69,200, about \$21,800 annually would be shared by the Cities of Kenosha and Racine for operation of the new Racine-Kenosha express bus route. The remaining subsidy of about \$47,400 annually for the Kenosha-Lake County, Illinois, commuter bus service would need to be negotiated among the City of Kenosha, the private businesses served, the Wisconsin Department of Transportation, and the Regional Transportation Authority (RTA) of Northeastern Illinois.

## **PLAN IMPLEMENTATION**

### **Local Transit Service Element**

Following adoption of the transit system development plan, the City of Kenosha will have the primary responsibility for implementation of the local service element of the plan. City staff will need to refine the recommended routing adjustments and scheduling changes and prepare detailed operating plans for approval by the Kenosha Transit Commission. One or more public hearings will need to be conducted prior to implementation of the specific service changes. The City will also need to prepare operating and capital budgets to support applications for the Federal and State funds needed over the planning period.

### **Commuter Transit Service Element**

The City of Kenosha would also have the primary responsibility for implementing the new Racine-Kenosha express bus service proposed under the commuter service element of the plan. While the plan proposes that the new express route be operated directly by the Kenosha transit system, the City of Kenosha should work with the City of Racine to prepare a detailed operating plan for the express service to ensure that its schedule is coordinated, to the maximum extent practical, with the schedules for both the Racine and Kenosha transit systems. The City of Kenosha should negotiate with the City of Racine for funding of a portion of the annual local operating deficit for the express service.

The City should also cooperate with the RTA or its suburban bus division, Pace, and Lake County employers or employer organizations in implementing the subscription and commuter bus services proposed under the plan's commuter service element for Kenosha area residents commuting to jobs in Lake County, Illinois. If requested, the City should work with Lake County employers and employer organizations which express interest in establishing such services for their Kenosha area resident employees, conveying to such employers the need to inform the RTA and Pace of their service needs and the probable need for the private sector to provide the requisite local funding to implement and maintain continued operation of the service. The City should also act, as needed, to facilitate discussions among the Wisconsin Department of Transportation and the RTA on the use of other funds potentially available through Federal and State transit assistance programs or the RTA.

### **Park-Ride Lots**

The Wisconsin Department of Transportation, Kenosha County, and Racine County should undertake a cooperative effort directed at the construction of park-ride lots configured to facilitate transit service near the intersections of: Green Bay Road (STH 31) and 52nd Street (STH 158), in the City of Kenosha; 75th Street (STH 50) and IH 94, in the City of Kenosha or Village of Pleasant Prairie; and Green Bay Road (STH 31) and Washington Avenue (STH 20), in the Town of Mt. Pleasant.

## **CONCLUSIONS**

The transit system development plan for the Kenosha area recommended by the Advisory Committee addresses the need to improve to both local and commuter transit services in the Kenosha area. At the same time, the plan attempts to minimize the attendant additional costs to the City of Kenosha for proposed new and improved services in acknowledgment that significant increases in City funds will be required over the planning period to fund committed service improvements and capital projects like the new electric circulator streetcar line for the Harborpark area. The development of the west-side transfer point proposed under the recommended local service improvements, would provide direct transit access to the new Kenosha high school, reduce indirect travel and increase the convenience of using transit for transit patrons traveling to and from locations between 39th Avenue and Green Bay Road, and facilitate service expansion into developing areas west of Green Bay Road, all without the need for significant increases in operating costs and local funds. Similarly, the proposed restructuring of commuter bus service in the Milwaukee-Racine-Kenosha

travel corridor would provide faster and more frequent service for weekday peak period commuting and, through increases in State aid over existing 1997 levels, still require no local funds for service operation. Where service improvements or new services which will entail substantial additional costs have been recommended, such as the

reduction of weekday midday headways or the creation of new services operated between Kenosha and Racine or Lake County, Illinois, the plan proposes that such services initially be undertaken on a trial, or demonstration, basis, either by using federal funds available for this purpose or by a partnership with the private sector.

(This page intentionally left blank)

## **APPENDICES**



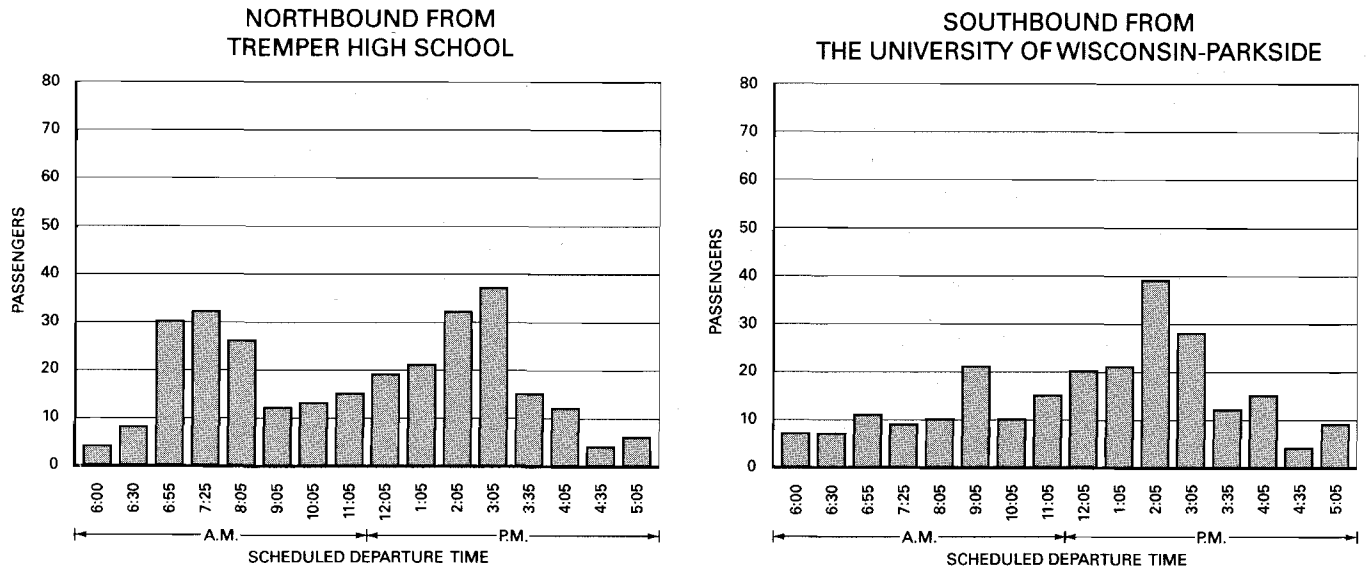
(This page intentionally left blank)

## Appendix A

### WEEKDAY BOARDING PASSENGERS BY BUS RUN ON THE REGULAR ROUTES OF THE KENOSHA TRANSIT SYSTEM: MARCH 5-7, 1996

Figure A-1

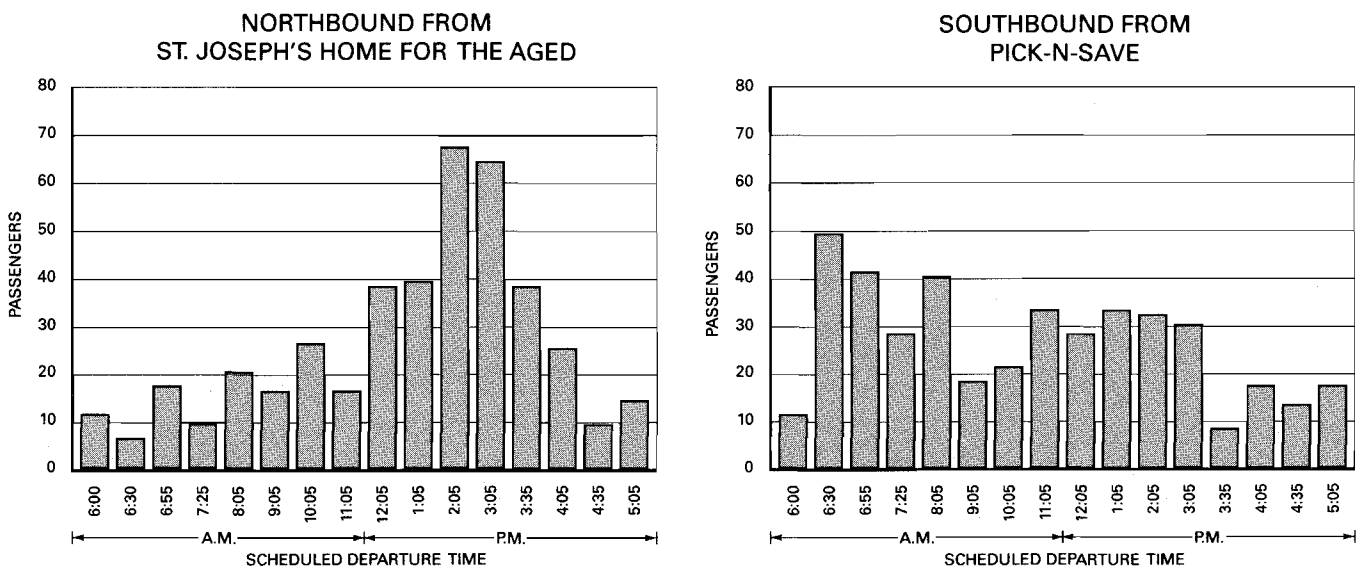
#### WEEKDAY BOARDING PASSENGERS ON ROUTE NO. 1



Source: SEWRPC.

Figure A-2

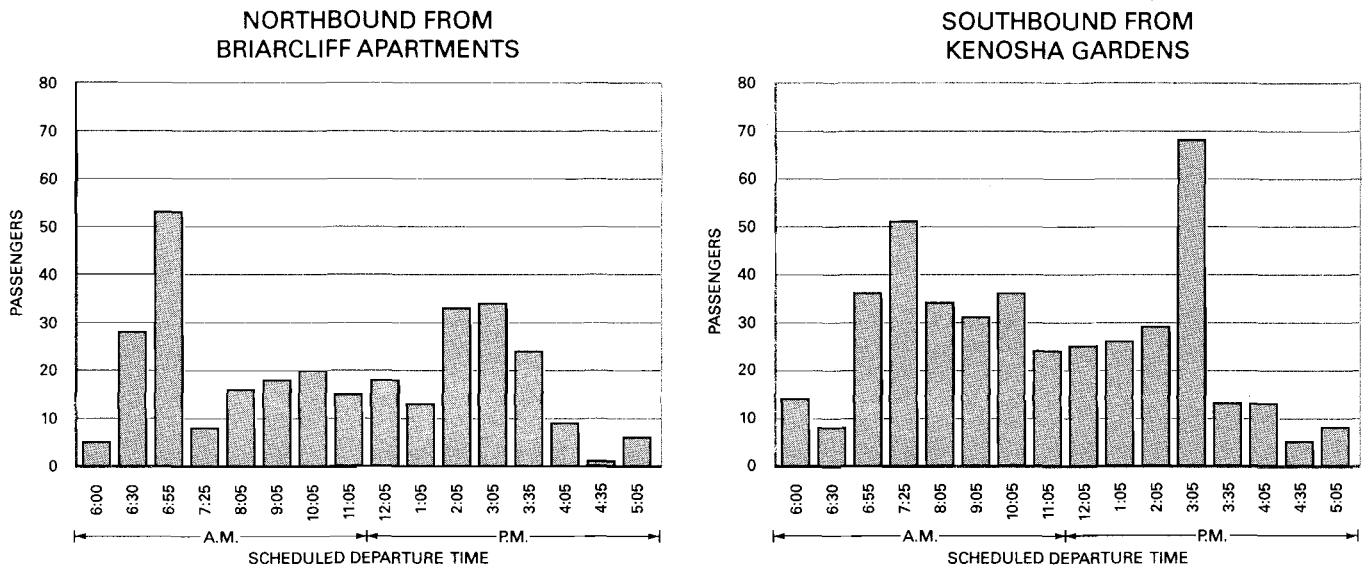
#### WEEKDAY BOARDING PASSENGERS ON ROUTE NO. 2



Source: SEWRPC.

Figure A-3

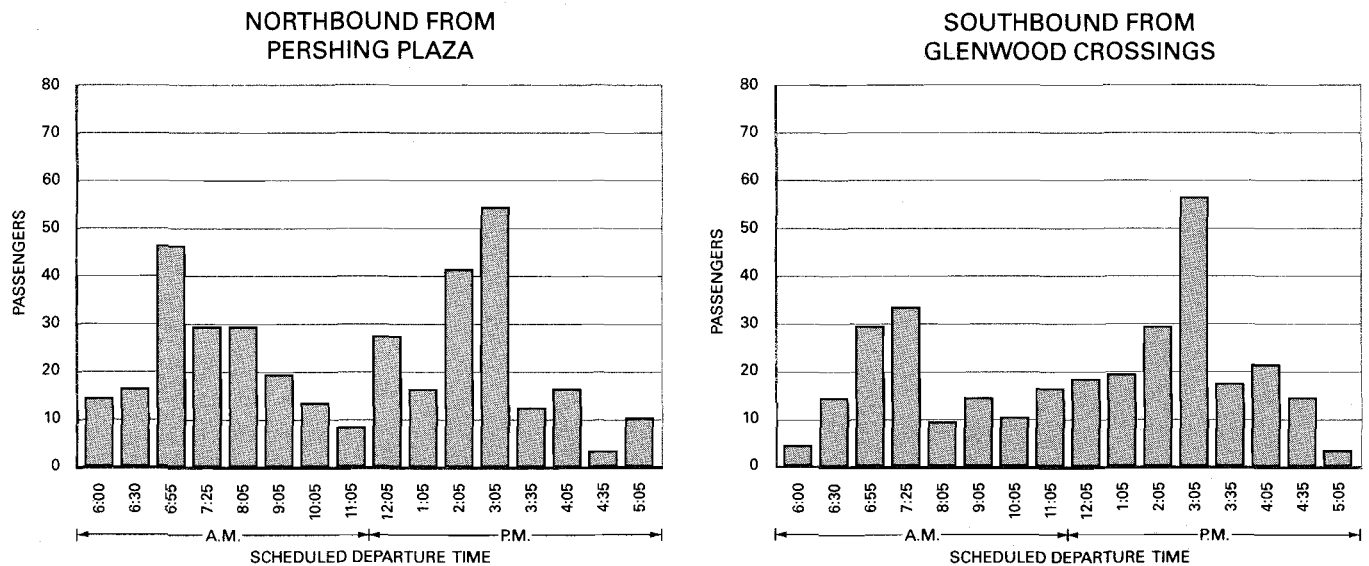
WEEKDAY BOARDING PASSENGERS ON ROUTE NO. 3



Source: SEWRPC.

Figure A-4

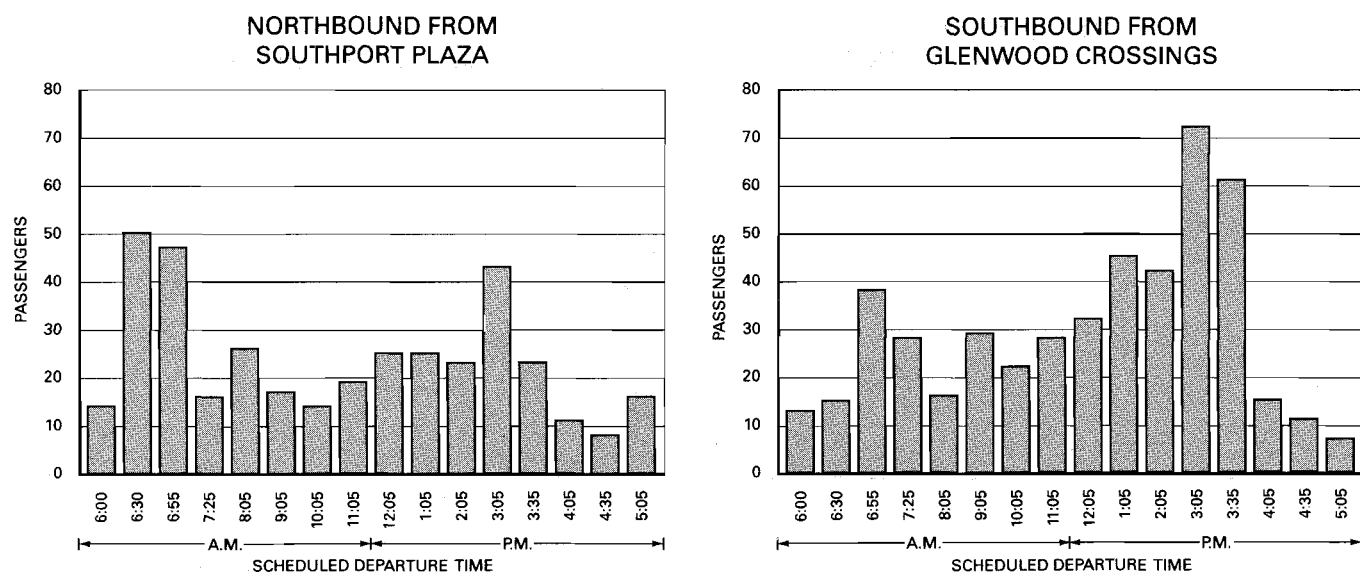
WEEKDAY BOARDING PASSENGERS ON ROUTE NO. 4



Source: SEWRPC.

Figure A-5

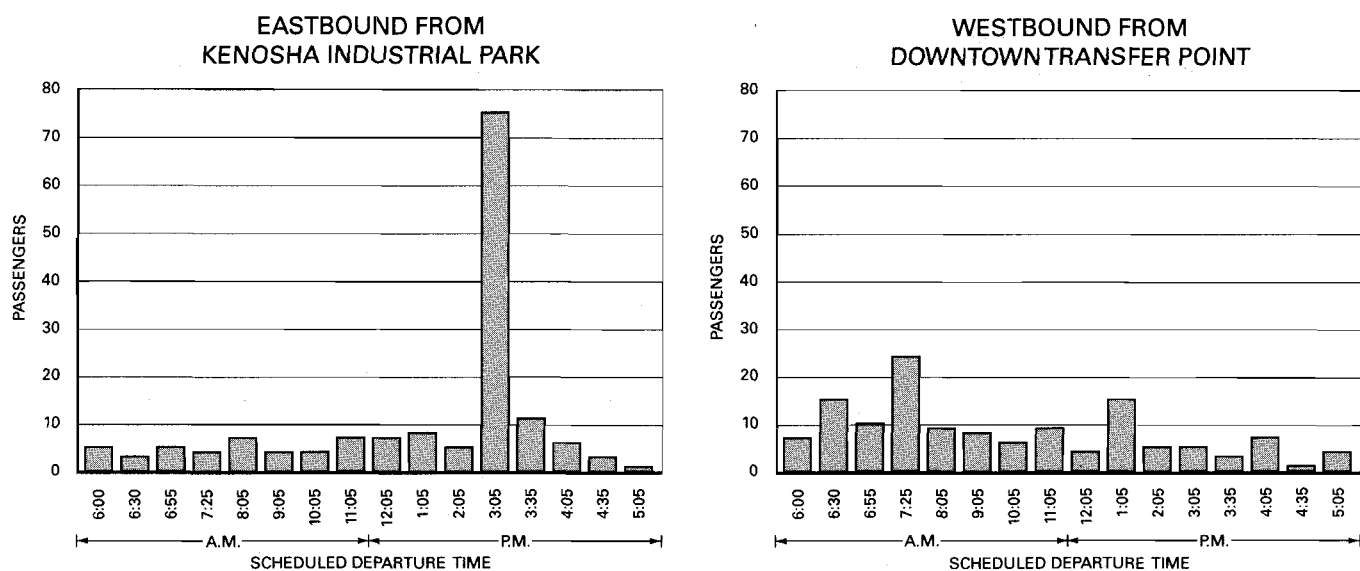
WEEKDAY BOARDING PASSENGERS ON ROUTE NO. 5



Source: SEWRPC.

Figure A-6

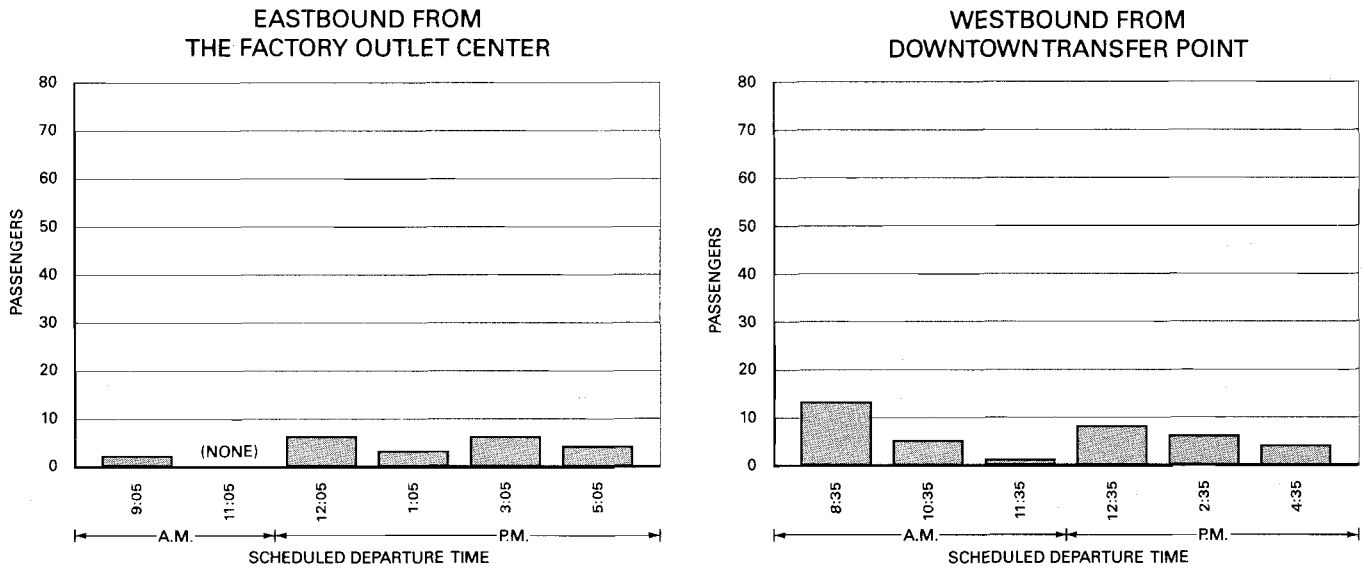
WEEKDAY BOARDING PASSENGERS ON ROUTE NO. 6



Source: SEWRPC.

Figure A-7

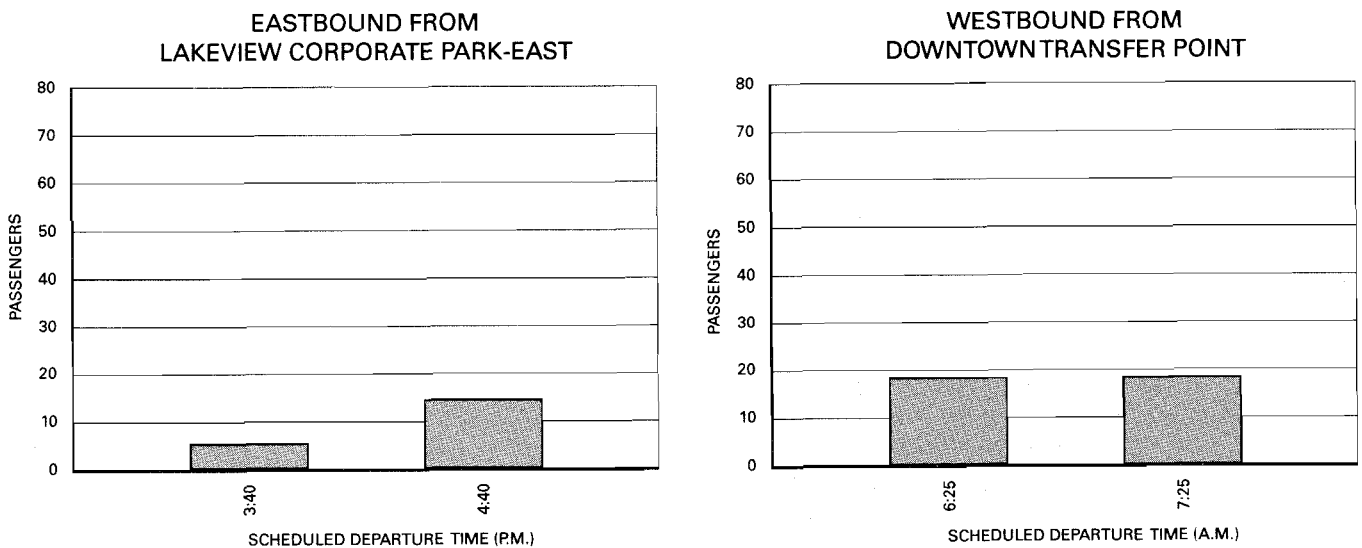
WEEKDAY BOARDING PASSENGERS ON ROUTE NO. 7



Source: SEWRPC.

Figure A-8

WEEKDAY BOARDING PASSENGERS ON ROUTE NO. 8



Source: SEWRPC.



## Appendix B

### FORECASTS OF ANNUAL SERVICE LEVELS, RIDERSHIP, AND COSTS FOR SERVICE IMPROVEMENT ALTERNATIVES

Table B-1

#### ANNUAL RIDERSHIP AND FINANCIAL PERFORMANCE OF THE KENOSHA TRANSIT SYSTEM UNDER THE EXISTING AND COMMITTED SYSTEM: 1997-2002

Operating Characteristic	1997 Estimated	Forecast <sup>a</sup>					
		1998	1999	2000	2001	2002	Average Annual
<b>Service</b>							
Revenue Vehicle-Hours of Service							
Bus Service .....	67,700	77,200	77,500	77,300	77,300	77,300	77,300
Downtown Circulator Service .....	--	--	600	3,400	4,100	4,100	2,400
All Service .....	67,700	77,200	78,100	80,700	81,400	81,400	79,700
Revenue Vehicle-Miles of Service							
Bus Service .....	952,000	1,075,000	1,077,800	1,076,600	1,076,800	1,076,800	1,076,600
Downtown Circulator Service .....	--	--	5,200	27,400	33,200	33,200	19,800
All Service .....	952,000	1,075,000	1,083,000	1,104,000	1,110,000	1,110,000	1,096,400
<b>Ridership</b>							
Total System Revenue Passengers .....	1,356,400	1,406,000	1,439,000	1,411,000	1,425,000	1,382,000	1,412,600
Revenue Passengers per							
Revenue Vehicle-Hour .....	20.0	18.2	18.4	17.5	17.5	17.0	17.7
Revenue Vehicle-Mile .....	1.42	1.31	1.33	1.28	1.28	1.25	1.29
<b>Operating Costs, Revenues, and Subsidies</b>							
Expenses .....	\$3,357,800	\$3,677,000	\$3,829,000	\$4,069,000	\$4,239,000	\$4,388,000	\$4,040,400
Passenger and Other Revenues .....	756,100	831,000	849,600	913,500	922,100	973,500	897,900
Subsidy .....	2,601,700	2,846,000	2,979,400	3,155,500	3,316,900	3,414,500	3,142,500
Percent of Expenses Recovered through Operating Revenues .....	22.5	22.6	22.2	22.5	21.8	22.2	22.2
<b>Anticipated Sources of Public Subsidy</b>							
Federal .....	\$ 563,200	\$ 839,600	\$ 843,600	\$ 779,900	\$ 686,700	\$ 690,700	\$ 768,100
State .....	1,370,400	1,523,100	1,586,300	1,687,300	1,758,300	1,820,200	1,675,000
Local .....	668,100	483,300	549,500	688,300	871,900	903,600	699,400
<b>Total</b>	<b>\$2,601,700</b>	<b>\$2,846,000</b>	<b>\$2,979,400</b>	<b>\$3,155,500</b>	<b>\$3,316,900</b>	<b>\$3,414,500</b>	<b>\$3,142,500</b>
<b>Per Trip Data</b>							
Operating Cost .....	\$2.48	\$2.62	\$2.66	\$2.88	\$2.97	\$3.18	\$2.86
Operating Revenue .....	0.56	0.60	0.59	0.64	0.64	0.71	0.64
Operating Deficit .....	1.92	2.02	2.07	2.24	2.33	2.47	2.22

<sup>a</sup> The following assumptions were made in preparing the annual forecasts of ridership, revenues and costs:

1. A 3.5 percent per year increase in operating expenses per unit of service.
2. The 10 percent fare increase in 2000, raising base adult cash fares from \$1.00 to \$1.10 per trip, will decrease annual system ridership by 3.3 percent. However, new ridership generated by the operation of the downtown circulator streetcar service will partially offset some the ridership loss resulting from the fare increase.
3. The 9 percent fare increase in 2002, raising base adult cash fares from \$1.10 to \$1.20 per trip, will decrease annual system ridership by 3.0 percent.
4. Federal funds used as operating assistance—including formula funds provided to cover operating expenses and the capital component of maintenance costs and funds provided through the Congestion Mitigation and Air Quality (CMAQ) Improvement Program—will not keep pace with inflation and will decrease from about 23 percent of operating costs in 1998 to about 16 percent of operating costs by 2002.
5. State operating assistance will be available to cover about 43 percent of operating expenses over the period.

Source: SEWRPC.

Table B-2

**CAPITAL PROJECT EXPENDITURES REQUIRED FOR THE KENOSHA  
TRANSIT SYSTEM UNDER THE EXISTING AND COMMITTED TRANSIT SYSTEM: 1998-2002**

Year	Quantity	Capital Equipment or Project Description	Unit Cost	Total Cost	Average Annual
1998	5	35 foot-long, air-conditioned urban transit coaches equipped with wheelchair lifts or ramps and fueled with compressed natural gas .....	\$276,000	\$ 1,380,000	\$ 276,000
	--	Downtown circulator streetcar line .....	--	4,058,000	811,600
	--	Design new maintenance and operating facility .....	--	500,000	100,000
	1	Replace service vehicle .....	28,000	28,000	5,600
		Subtotal	--	\$ 5,966,000	\$1,193,200
1999	--	Construct new maintenance and operating facility ...	--	\$ 5,250,000	\$1,050,000
	--	Construct new downtown central transfer terminal	--	400,000	80,000
	--	Install new or remanufactured engines in 1987	--		
	--	GMC buses .....	--	150,000	30,000
	--	Purchase miscellaneous shop equipment .....	--	100,000	20,000
		Subtotal	--	\$ 5,900,000	\$1,180,000
2000	5	35 foot-long, air-conditioned urban transit coaches equipped with wheelchair lifts or ramps and fueled with compressed natural gas .....	\$310,000	\$ 1,550,000	\$ 310,000
	--	Purchase miscellaneous shop equipment .....	--	100,000	20,000
		Subtotal	--	\$ 1,650,000	\$ 330,000
2001	5	35 foot-long, air-conditioned urban transit coaches equipped with wheelchair lifts or ramps and fueled with compressed natural gas .....	\$321,000	\$ 1,605,000	\$ 321,000
	--	Purchase miscellaneous shop equipment .....	--	100,000	20,000
		Subtotal	--	\$ 1,705,000	\$ 341,000
2002	4	35 foot-long, air-conditioned urban transit coaches equipped with wheelchair lifts or ramps and fueled with compressed natural gas .....	\$332,000	\$ 1,328,000	\$ 265,600
	--	Purchase miscellaneous shop equipment .....	--	100,000	20,000
	1	Replace service vehicle .....	33,000	33,000	6,600
		Subtotal	--	\$ 1,461,000	\$ 292,200
Total Capital Project Costs			--	\$16,682,000	\$3,336,400
Federal Share of Costs <sup>a</sup> .....			--	13,474,700	2,694,900
State Share of Costs <sup>b</sup> .....			--	55,900	11,200
Local Share of Costs <sup>c</sup> .....			--	3,151,400	630,300

<sup>a</sup>Assumes 80 percent of eligible capital costs could be funded through the Federal Transit Administration Section 5309 capital or 5307 formula grant programs, or Federal Congestion Mitigation and Air Quality Improvement (CMAQ) Program.

<sup>b</sup>Assumes funds available through oil overcharge fund for the downtown circulator project.

<sup>c</sup>Represents the 20 percent local matching funds required under the Federal Transit Administration grant programs.

Source: City of Kenosha Department of Transportation and SEWRPC.

Table B-3

**ANNUAL RIDERSHIP AND FINANCIAL PERFORMANCE OF THE KENOSHA  
TRANSIT SYSTEM WITH THE CHANGES PROPOSED UNDER ALTERNATIVE 1: 1997-2002**

Operating Characteristic	1997 Estimated	Forecast <sup>a</sup>					
		1998	1999	2000	2001	2002	Average Annual
<b>Service</b>							
Revenue Vehicle-Hours of Service							
Bus Service .....	67,700	77,500	78,300	78,100	78,100	78,100	78,000
Downtown Circulator Service .....	--	--	600	3,400	4,100	4,100	2,400
All Service .....	67,700	77,500	78,900	81,500	82,200	82,200	80,400
Revenue Vehicle-Miles of Service							
Bus Service .....	952,000	1,082,000	1,093,800	1,092,600	1,091,800	1,091,800	1,090,400
Downtown Circulator Service .....	--	--	5,200	27,400	33,200	33,200	19,800
All Service .....	952,000	1,082,000	1,099,000	1,120,000	1,125,000	1,125,000	1,110,200
<b>Ridership</b>							
Total System Revenue Passengers .....	1,356,400	1,418,300	1,470,400	1,442,900	1,457,200	1,413,200	1,440,400
Revenue Passengers per Revenue Vehicle-Hour .....	20.0	18.3	18.6	17.7	17.7	17.2	17.9
Revenue Vehicle-Mile .....	1.42	1.31	1.34	1.29	1.30	1.26	1.30
<b>Operating Costs, Revenues, and Subsidies</b>							
Expenses .....	\$3,357,800	\$3,693,000	\$3,870,400	\$4,111,700	\$4,283,100	\$4,434,800	\$4,078,600
Passenger and Other Revenues .....	756,100	837,900	867,100	933,100	941,900	994,400	914,900
Subsidy .....	2,601,700	2,855,100	3,003,300	3,178,600	3,341,200	3,440,400	3,163,700
Percent of Expenses Recovered through Operating Revenues .....	22.5	22.7	22.4	22.7	22	22.4	22.4
<b>Anticipated Sources of Public Subsidy</b>							
Federal .....	\$ 563,200	\$ 842,800	\$ 846,800	\$ 783,100	\$ 689,900	\$ 694,700	\$ 771,500
State .....	1,370,400	1,529,500	1,603,600	1,705,300	1,776,800	1,839,500	1,690,900
Local .....	668,100	482,800	552,900	690,200	874,500	906,200	701,300
<b>Total</b>	<b>\$2,601,700</b>	<b>\$2,855,100</b>	<b>\$3,003,300</b>	<b>\$3,178,600</b>	<b>\$3,341,200</b>	<b>\$3,440,400</b>	<b>\$3,163,700</b>
<b>Per Trip Data</b>							
Operating Cost .....	\$2.48	\$2.60	\$2.63	\$2.85	\$2.94	\$3.14	\$2.83
Operating Revenue .....	0.56	0.59	0.59	0.65	0.65	0.71	0.63
Operating Deficit .....	1.92	2.01	2.04	2.20	2.29	2.43	2.20

<sup>a</sup>The following assumptions were made in preparing the annual forecasts of ridership, revenues and costs:

1. A 3.5 percent per year increase in operating expenses per unit of service.
2. The 10 percent fare increase in 2000, raising base adult cash fares from \$1.00 to \$1.10 per trip, will decrease annual system ridership by 3.3 percent. However, new ridership generated by the operation of the downtown circulator streetcar service will partially offset some the ridership loss resulting from the fare increase.
3. The 9 percent fare increase in 2002, raising base adult cash fares from \$1.10 to \$1.20 per trip, will decrease annual system ridership by 3.0 percent.
4. Federal funds used as operating assistance--including formula funds provided to cover operating expenses and the capital component of maintenance costs and funds provided through the Congestion Mitigation and Air Quality (CMAQ) Improvement Program--will not keep pace with inflation and will decrease from about 23 percent of operating costs in 1998 to about 16 percent of operating costs by 2002.
5. State operating assistance will be available to cover about 43 percent of operating expenses over the period.

Source: SEWRPC.

Table B-4

**CAPITAL PROJECT EXPENDITURES REQUIRED FOR THE KENOSHA  
TRANSIT SYSTEM UNDER ALTERNATIVE 1: 1998-2002**

Year	Quantity	Capital Equipment or Project Description	Unit Cost	Total Cost	Average Annual
1998	2	Bus Passenger Shelters .....	\$5,000	\$ 10,000	\$ 2,000
	--	Projects proposed under the existing and committed system .....	--	6,366,000	1,273,200
		Subtotal	--	\$ 6,376,000	\$1,275,200
1999- 2002	--	Projects proposed under the existing and committed system .....	--	\$10,316,000	\$2,063,200
Total Capital Project Costs			--	\$16,692,000	\$3,338,400
Federal Share of Costs <sup>a</sup> .....			--	13,482,700	2,696,500
State Share of Costs <sup>b</sup> .....			--	55,900	11,200
Local Share of Costs <sup>c</sup> .....			--	3,153,400	630,700

<sup>a</sup>Assumes 80 percent of eligible capital costs could be funded through the Federal Transit Administration Section 5309 capital or 5307 formula grant programs, or Federal Congestion Mitigation and Air Quality Improvement (CMAQ) Program.

<sup>b</sup>Assumes funds available through oil overcharge fund.

<sup>c</sup>Represents the 20 percent local matching funds required under the Federal Transit Administration grant programs.

Source: City of Kenosha Department of Transportation and SEWRPC.

Table B-5

**ANNUAL RIDERSHIP AND FINANCIAL PERFORMANCE OF THE KENOSHA  
TRANSIT SYSTEM WITH THE CHANGES PROPOSED UNDER ALTERNATIVE 2: 1997-2002**

Operating Characteristic	1997 Estimated	Forecast <sup>a</sup>					
		1998	1999	2000	2001	2002	Average Annual
<b>Service</b>							
Revenue Vehicle-Hours of Service							
Bus Service	67,700	77,500	80,300	80,100	80,100	80,100	79,600
Downtown Circulator Service	--	--	600	3,400	4,100	4,100	2,400
All Service	67,700	77,500	80,900	83,500	84,200	84,200	82,000
Revenue Vehicle-Miles of Service							
Bus Service	952,000	1,082,000	1,132,800	1,131,600	1,130,800	1,130,800	1,121,600
Downtown Circulator Service	--	--	5,200	27,400	33,200	33,200	19,800
All Service	952,000	1,082,000	1,138,000	1,159,000	1,164,000	1,164,000	1,141,400
<b>Ridership</b>							
Total System Revenue Passengers	1,356,400	1,418,300	1,494,400	1,468,900	1,484,200	1,439,200	1,461,000
Revenue Passengers per Revenue Vehicle-Hour	20.0	18.3	18.5	17.6	17.6	17.1	17.8
Revenue Vehicle-Mile	1.42	1.31	1.31	1.27	1.28	1.24	1.28
<b>Operating Costs, Revenues, and Subsidies</b>							
Expenses	\$3,357,800	\$3,693,000	\$3,988,400	\$4,236,800	\$4,409,100	\$4,565,100	\$4,178,500
Passenger and Other Revenues	756,100	837,900	880,600	949,200	958,600	1,011,900	927,600
Subsidy	2,601,700	2,855,100	3,107,800	3,287,600	3,450,500	3,553,200	3,250,900
Percent of Expenses Recovered through Operating Revenues	22.5	22.7	22.1	22.4	21.7	22.2	22.2
<b>Anticipated Sources of Public Subsidy</b>							
Federal	\$ 563,200	\$ 842,800	\$ 930,400	\$ 870,300	\$ 777,300	\$ 698,700	\$ 823,900
State	1,370,400	1,529,500	1,612,600	1,714,700	1,786,200	1,893,400	1,707,300
Local	668,100	482,800	564,800	702,600	887,000	961,100	719,700
<b>Total</b>	<b>\$2,601,700</b>	<b>\$2,855,100</b>	<b>\$3,107,800</b>	<b>\$3,287,600</b>	<b>\$3,450,500</b>	<b>\$3,553,200</b>	<b>\$3,250,900</b>
<b>Per Trip Data</b>							
Operating Cost	\$2.48	\$2.60	\$2.67	\$2.88	\$2.97	\$3.17	\$2.86
Operating Revenue	0.56	0.59	0.59	0.64	0.65	0.70	0.63
Operating Deficit	1.92	2.01	2.08	2.24	2.32	2.47	2.23

<sup>a</sup>The following assumptions were made in preparing the annual forecasts of ridership, revenues and costs:

1. A 3.5 percent per year increase in operating expenses per unit of service.
2. The 10 percent fare increase in 2000, raising base adult cash fares from \$1.00 to \$1.10 per trip, will decrease annual system ridership by 3.3 percent. However, new ridership generated by the operation of the downtown circulator streetcar service will partially offset some the ridership loss resulting from the fare increase.
3. The 9 percent fare increase in 2002, raising base adult cash fares from \$1.10 to \$1.20 per trip, will decrease annual system ridership by 3.0 percent.
4. Federal funds used as operating assistance—including formula funds provided to cover operating expenses and the capital component of maintenance costs and funds provided through the Congestion Mitigation and Air Quality (CMAQ) Improvement Program—will not keep pace with inflation and will decrease from about 23 percent of operating costs in 1998 to about 15 percent of operating costs by 2002.
5. State operating assistance will be available to cover about 43 percent of operating expenses over the period.

Source: SEWRPC.



Table B-6

**ANNUAL RIDERSHIP AND FINANCIAL PERFORMANCE OF THE KENOSHA  
TRANSIT SYSTEM WITH THE CHANGES PROPOSED UNDER ALTERNATIVE 3: 1997-2002**

Operating Characteristic	1997 Estimated	Forecast <sup>a</sup>					
		1998	1999	2000	2001	2002	Average Annual
<b>Service</b>							
Revenue Vehicle-Hours of Service							
Bus Service .....	67,700	77,500	95,900	95,800	95,700	95,700	92,100
Downtown Circulator Service .....	--	--	600	3,400	4,100	4,100	2,400
All Service .....	67,700	77,500	96,500	99,200	99,800	99,800	94,500
Revenue Vehicle-Miles of Service							
Bus Service .....	952,000	1,082,000	1,356,800	1,356,600	1,353,800	1,353,800	1,300,600
Downtown Circulator Service .....	--	--	5,200	27,400	33,200	33,200	19,800
All Service .....	952,000	1,082,000	1,362,000	1,384,000	1,387,000	1,387,000	1,320,400
<b>Ridership</b>							
Total System Revenue Passengers .....	1,356,400	1,418,300	1,572,400	1,551,900	1,571,200	1,523,200	1,527,400
Revenue Passengers per							
Revenue Vehicle-Hour .....	20.0	18.3	16.3	15.6	15.7	15.3	16.2
Revenue Vehicle-Mile .....	1.42	1.31	1.15	1.12	1.13	1.10	1.16
<b>Operating Costs, Revenues, and Subsidiaries</b>							
Expenses .....	\$3,357,800	\$3,693,000	\$4,645,500	\$4,922,500	\$5,113,700	\$5,294,600	\$4,733,900
Passenger and Other Revenues .....	756,100	837,900	924,300	1,000,300	1,012,200	1,068,400	968,600
Subsidy .....	2,601,700	2,855,100	3,721,200	3,922,200	4,101,500	4,226,200	3,765,300
Percent of Expenses Recovered through Operating Revenues .....	22.5	22.7	19.9	20.3	19.8	20.2	20.5
<b>Anticipated Sources of Public Subsidy</b>							
Federal .....	\$ 563,200	\$ 842,800	\$1,421,100	\$1,378,000	\$1,298,100	\$ 720,300	\$1,132,100
State .....	1,370,400	1,529,500	1,665,400	1,769,300	1,842,200	2,195,500	1,800,400
Local .....	668,100	482,800	634,700	774,900	961,200	1,310,400	832,800
<b>Total</b>	<b>\$2,601,700</b>	<b>\$2,855,100</b>	<b>\$3,721,200</b>	<b>\$3,922,200</b>	<b>\$4,101,500</b>	<b>\$4,226,200</b>	<b>\$3,765,300</b>
<b>Per Trip Data</b>							
Operating Cost .....	\$2.48	\$2.60	\$2.95	\$3.17	\$3.25	\$3.48	\$3.10
Operating Revenue .....	0.56	0.59	0.58	0.64	0.64	0.71	0.63
Operating Deficit .....	1.92	2.01	2.37	2.53	2.61	2.77	2.47

<sup>a</sup>The following assumptions were made in preparing the annual forecasts of ridership, revenues and costs:

1. A 3.5 percent per year increase in operating expenses per unit of service.
2. The 10 percent fare increase in 2000, raising base adult cash fares from \$1.00 to \$1.10 per trip, will decrease annual system ridership by 3.3 percent. However, new ridership generated by the operation of the downtown circulator streetcar service will partially offset some the ridership loss resulting from the fare increase.
3. The 9 percent fare increase in 2002, raising base adult cash fares from \$1.10 to \$1.20 per trip, will decrease annual system ridership by 3.0 percent.
4. Federal funds used as operating assistance—including formula funds provided to cover operating expenses and the capital component of maintenance costs and funds provided through the Congestion Mitigation and Air Quality (CMAQ) Improvement Program—will not keep pace with inflation and will decrease from about 23 percent of operating costs in 1998 to about 14 percent of operating costs by 2002.
5. State operating assistance will be available to cover about 43 percent of operating expenses over the period.

Source: SEWRPC.

Table B-7

**ANNUAL RIDERSHIP AND FINANCIAL PERFORMANCE OF THE KENOSHA  
TRANSIT SYSTEM WITH THE CHANGES PROPOSED UNDER ALTERNATIVE 4: 1997-2002**

Operating Characteristic	1997 Estimated	Forecast <sup>a</sup>					Average Annual
		1998	1999	2000	2001	2002	
<b>Service</b>							
Revenue Vehicle-Hours of Service							
Bus Service .....	67,700	77,500	95,800	95,600	95,500	95,500	92,000
Downtown Circulator Service .....	--	--	600	3,400	4,100	4,100	2,400
All Service .....	67,700	77,500	96,400	99,000	99,600	99,600	94,400
Revenue Vehicle-Miles of Service							
Bus Service .....	952,000	1,082,000	1,355,800	1,355,600	1,352,800	1,352,800	1,299,800
Downtown Circulator Service .....	--	--	5,200	27,400	33,200	33,200	19,800
All Service .....	952,000	1,082,000	1,361,000	1,383,000	1,386,000	1,386,000	1,319,600
<b>Ridership</b>							
Total System Revenue Passengers .....	1,356,400	1,418,300	1,609,400	1,590,900	1,612,200	1,563,200	1,558,800
Revenue Passengers per							
Revenue Vehicle-Hour .....	20.0	18.3	16.7	16.1	16.2	15.7	16.5
Revenue Vehicle-Mile .....	1.42	1.31	1.18	1.15	1.16	1.13	1.18
<b>Operating Costs, Revenues, and Subsidies</b>							
Expenses .....	\$3,357,800	\$3,693,000	\$4,581,700	\$4,851,900	\$5,041,400	\$5,218,700	\$4,677,300
Passenger and Other Revenues .....	756,100	837,900	945,800	1,025,300	1,038,500	1,096,400	988,800
Subsidy .....	2,601,700	2,855,100	3,635,900	3,826,600	4,002,900	4,122,300	3,688,500
Percent of Expenses Recovered through Operating Revenues .....	22.5	22.7	20.6	21.1	20.6	21.0	21.1
<b>Anticipated Sources of Public Subsidy</b>							
Federal .....	\$ 563,200	\$ 842,800	\$1,352,900	\$1,301,500	\$1,219,200	\$ 717,900	\$1,086,900
State .....	1,370,400	1,529,500	1,658,000	1,761,100	1,833,700	2,164,100	1,789,300
Local .....	668,100	482,800	625,000	764,000	950,000	1,240,300	812,300
<b>Total</b>	<b>\$2,601,700</b>	<b>\$2,855,100</b>	<b>\$3,635,900</b>	<b>\$3,826,600</b>	<b>\$4,002,900</b>	<b>\$4,122,300</b>	<b>\$3,688,500</b>
<b>Per Trip Data</b>							
Operating Cost .....	\$2.48	\$2.60	\$2.85	\$3.05	\$3.13	\$3.34	\$3.00
Operating Revenue .....	0.56	0.59	0.59	0.64	0.65	0.70	0.63
Operating Deficit .....	1.92	2.01	2.26	2.41	2.48	2.64	2.37

<sup>a</sup> The following assumptions were made in preparing the annual forecasts of ridership, revenues and costs:

1. A 3.5 percent per year increase in operating expenses per unit of service.
2. The 10 percent fare increase in 2000, raising base adult cash fares from \$1.00 to \$1.10 per trip, will decrease annual system ridership by 3.3 percent. However, new ridership generated by the operation of the downtown circulator streetcar service will partially offset some the ridership loss resulting from the fare increase.
3. The 9 percent fare increase in 2002, raising base adult cash fares from \$1.10 to \$1.20 per trip, will decrease annual system ridership by 3.0 percent.
4. Federal funds used as operating assistance--including formula funds provided to cover operating expenses and the capital component of maintenance costs and funds provided through the Congestion Mitigation and Air Quality (CMAQ) Improvement Program--will not keep pace with inflation and will decrease from about 23 percent of operating costs in 1998 to about 14 percent of operating costs by 2002.
5. State operating assistance will be available to cover about 43 percent of operating expenses over the period.

Source: SEWRPC.

(This page intentionally left blank)

# Appendix C

## FORECASTS OF ANNUAL SERVICE LEVELS, RIDERSHIP, AND COSTS FOR COMMUTER TRANSIT SERVICE IMPROVEMENT ALTERNATIVES

### ANNUAL RIDERSHIP AND FINANCIAL PERFORMANCE OF MILWAUKEE-RACINE-KENOSHA COMMUTER BUS SERVICES WITH PROPOSED SERVICE IMPROVEMENTS: 1997-2002

Operating Characteristic	1997 <sup>b</sup>	Forecast <sup>a</sup>															
		1998	1999			2000			2001			2002			Average Annual		
			Milwaukee-Racine-Kenosha Service	Racine-Kenosha Service	Total	Milwaukee-Racine-Kenosha Service	Racine-Kenosha Service	Total	Milwaukee-Racine-Kenosha Service	Racine-Kenosha Service	Total	Milwaukee-Racine-Kenosha Service	Racine-Kenosha Service	Total	Milwaukee-Racine-Kenosha Service	Racine-Kenosha Service	Total
Service																	
Revenue Vehicle-Hours of Service . . .	8,700	8,600	9,200	4,800	14,000	9,400	4,800	14,200	9,400	4,800	14,200	9,400	4,800	14,200	9,200	3,800	13,000
Revenue Vehicle-Miles of Service . . .	265,400	264,300	321,500	104,300	425,800	325,500	104,300	429,800	325,500	104,300	429,800	325,500	104,300	429,800	312,500	83,400	395,900
Ridership																	
Total Revenue Passengers . . . . .	73,800	75,000	84,000	57,000	141,000	82,000	56,000	138,000	88,000	59,000	147,000	86,000	58,000	144,000	83,000	46,000	129,000
Revenue Passengers per:																	
Revenue Vehicle-Hour . . . . .	8.5	8.7	9.1	11.9	10.1	8.7	11.7	9.7	9.4	12.3	10.4	9.1	12.1	10.1	9.0	12.1	9.9
Revenue Vehicle-Mile . . . . .	0.28	0.28	0.26	0.55	0.33	0.25	0.54	0.32	0.27	0.57	0.34	0.26	0.56	0.34	0.27	0.55	0.33
Operating Costs, Revenues, and Subsidies																	
Expenses <sup>c</sup> . . . . .	\$622,700	\$671,100	\$765,600	\$255,000	\$1,020,600	\$794,900	\$264,000	\$1,058,900	\$832,700	\$273,000	\$1,105,700	\$864,800	\$283,000	\$1,147,800	\$785,800	\$215,000	\$1,000,800
Passenger and Other Revenues . . . . .	220,400	224,300	247,000	56,400	303,400	258,000	59,100	317,100	276,900	62,300	339,200	289,500	65,100	354,600	259,100	48,600	307,700
Public Subsidy . . . . .	402,300	446,800	518,600	198,600	717,200	536,900	204,900	741,800	555,800	210,700	766,500	575,300	217,900	793,200	526,700	166,400	693,100
Percent of Operating Expenses Recovered through Operating Revenues . . . . .	35.4	33.4	32.3	22.1	29.7	32.5	22.4	29.9	33.3	22.8	30.7	33.5	23.0	30.9	33.0	22.6	30.7
Anticipated Sources of Public Subsidy																	
Federal . . . . .	--	--	--	\$158,900	\$158,900	--	\$163,900	\$163,900	--	\$168,600	\$168,600	--	\$50,400	\$50,400	--	\$108,400	\$108,400
State <sup>d</sup> . . . . .	\$402,300	\$446,800	\$518,600	31,800	550,400	\$536,900	17,600	554,500	\$555,800	18,100	573,900	\$575,300	113,400	688,700	\$526,700	\$36,200	\$562,900
Local . . . . .	--	--	--	7,900	7,900	--	23,400	23,400	--	24,000	24,000	--	54,100	54,100	--	21,800	21,800
Total	\$402,300	\$446,800	\$518,600	\$198,600	\$717,200	\$536,900	\$204,900	\$741,800	\$555,800	\$210,700	\$766,500	\$575,300	\$217,900	\$793,200	\$526,700	\$166,400	\$693,100
Per Trip Data																	
Estimated Operating Costs . . . . .	\$8.44	\$8.95	\$9.11	\$4.47	\$7.24	\$9.69	\$4.71	\$7.67	\$9.46	\$4.63	\$7.52	\$10.06	\$4.88	\$7.97	\$9.47	\$4.67	\$7.76
Operating Revenue . . . . .	2.99	2.99	2.94	0.99	2.15	3.14	1.05	2.29	3.14	1.06	2.31	3.37	1.12	2.46	3.12	1.05	2.39
Subsidy . . . . .	5.45	5.96	6.17	3.48	5.00	6.55	3.66	5.38	6.32	3.57	5.21	6.69	3.76	5.51	6.35	3.62	5.37

<sup>a</sup>The following assumptions were made in preparing the annual forecasts of ridership, revenues and costs:

1. A 3.5 percent per year increase in operating expenses per unit of service.
2. A 7 percent fare increase will be implemented on both commuter services in 2000 and again in 2002. These increases will decrease annual ridership by about 2.3 percent in the fare increase years.
3. Federal funds will be available through the Congestion Mitigation and Air Quality (CMAQ) Improvement Program to fund 80 percent of the operating deficits of the proposed new Racine-Kenosha commuter bus route as a demonstration project from 1999 through 2001. In 2002, Federal funds provided through the FTA Section 5307 urban formula transit assistance program would replace the CMAQ demonstration funds and fund a lower percent of operating expenses. As with the existing service, no federal funds would be used for the Milwaukee-Racine-Kenosha commuter routes.
4. State funds through the Transportation Demand Management (TDM) Program and the urban transit operating assistance program will cover a portion of the nonfederal share of operating deficit of the proposed new Racine-Kenosha bus route during the CMAQ demonstration period from 1999 through 2001. In 2002, State operating assistance will cover about 43 percent of the total operating expenses of the Racine-Kenosha service. State operating assistance will be available to cover 59 percent of the total operating expenses of the restructured Milwaukee-Racine-Kenosha service over the entire period.

<sup>b</sup>Financial data are estimates.

<sup>c</sup>Operating expenses have been adjusted to reflect the estimated actual costs of the service by subtracting funds which are expected to be provided by the private contract service operator. With the proposed service changes, such funds would be expected to range from about \$113,000 in 1999 to about \$110,000 in 2002. These funds would be expected to average about \$107,000 between 1998 and 2002.

<sup>d</sup>State operating assistance funds are based on the gross costs of the service including funds provided by the private contract operator.

Source: SEWRPC.

(This page intentionally left blank)



## Appendix D

### FORECASTS OF ANNUAL SERVICE LEVELS, RIDERSHIP, AND COSTS FOR THE RECOMMENDED KENOSHA AREA TRANSIT SERVICES

Table D-1

#### ANNUAL RIDERSHIP AND FINANCIAL PERFORMANCE OF THE KENOSHA TRANSIT SYSTEM UNDER THE LOCAL SERVICE ELEMENT OF THE RECOMMENDED PLAN: 1998-2002

Operating Characteristic	1997 Estimated	Forecast <sup>a</sup>					
		1998	1999	2000	2001	2002	Average Annual
<b>Service</b>							
Revenue Vehicle-Hours of Service							
Bus Service .....	67,700	78,200	80,300	80,100	95,500	95,500	85,900
Downtown Circulator Service .....	--	--	600	3,400	4,100	4,100	2,400
All Service .....	67,700	78,200	80,900	83,500	99,600	99,600	88,300
Revenue Vehicle-Miles of Service							
Bus Service .....	952,000	1,095,000	1,132,800	1,131,600	1,352,800	1,352,800	1,213,000
Downtown Circulator Service .....	--	--	5,200	27,400	33,200	33,200	19,800
All Service .....	952,000	1,095,000	1,138,000	1,159,000	1,386,000	1,386,000	1,232,800
<b>Ridership</b>							
Total System Revenue Passengers .....	1,356,400	1,426,300	1,494,400	1,468,900	1,607,304	1,558,200	1,511,000
Revenue Passengers per							
Revenue Vehicle-Hour .....	20.0	18.2	18.5	17.6	16.1	15.6	17.1
Revenue Vehicle-Mile .....	1.42	1.30	1.31	1.27	1.16	1.12	1.23
<b>Operating Costs, Revenues, and Subsidies</b>							
Expenses .....	\$3,357,800	\$3,730,300	\$3,988,400	\$4,236,800	\$5,041,400	\$5,218,700	\$4,443,100
Passenger and Other Revenues .....	756,100	842,400	880,600	949,200	1,035,400	1,093,000	960,100
Subsidy .....	2,601,700	2,887,900	3,107,800	3,287,600	4,006,000	4,125,700	3,483,000
Percent of Expenses Recovered through Operating Revenues .....	22.5	22.6	22.1	22.4	20.5	20.9	21.6
Anticipated Sources of Public Subsidy							
Federal .....	563,200	843,600	850,800	787,100	1,138,300	1,156,700	955,300
State .....	1,370,400	1,558,400	1,706,400	1,813,100	1,934,400	1,992,700	1,801,000
Local .....	668,100	485,900	550,600	687,400	933,300	976,300	726,700
<b>Total</b>	<b>\$2,601,700</b>	<b>\$2,887,900</b>	<b>\$3,107,800</b>	<b>\$3,287,600</b>	<b>\$4,006,000</b>	<b>\$4,125,700</b>	<b>\$3,483,000</b>
<b>Per Trip Data</b>							
Operating Cost .....	\$2.48	\$2.62	\$2.67	\$2.88	\$3.14	\$3.35	\$2.94
Operating Revenue .....	0.56	0.60	0.59	0.64	0.65	0.70	0.63
Operating Deficit .....	1.92	2.02	2.08	2.24	2.49	2.65	2.31

<sup>a</sup>The following assumptions were made in preparing the annual forecasts of ridership, revenues and costs:

1. The service changes proposed under the plan will be phased in between 1998 and 2001 as described in Chapter IX.
2. A 3.5 percent per year increase in operating expenses per unit of service.
3. The 10 percent fare increase in 2000, raising base adult cash fares from \$1.00 to \$1.10 per trip, will decrease annual system ridership by 3.3 percent. However, new ridership generated by the operation of the downtown circulator streetcar service will partially offset some the ridership loss resulting from the fare increase.
4. The 9 percent fare increase in 2002, raising base adult cash fares from \$1.10 to \$1.20 per trip, will decrease annual system ridership by about 3 percent.
5. Federal funds used as operating assistance—including formula funds provided to cover operating expenses and the capital component of maintenance costs, and funds provided through the Congestion Mitigation and Air Quality (CMAQ) Improvement Program—will be available to cover between 20 and 23 percent of operating costs between 1998 and 2002.
6. State operating assistance will be available to cover about 43 percent of operating expenses over the period.
7. State funds through the Temporary Assistance to Needy Families (TANF) Program will continue to be available to Kenosha County for the expanded industrial park services provided by the Kenosha transit system at the 1998 funding level.

Source: SEWRPC.

Table D-2

**CAPITAL PROJECT EXPENDITURES REQUIRED FOR THE KENOSHA TRANSIT SYSTEM  
UNDER THE LOCAL SERVICE ELEMENT OF THE RECOMMENDED PLAN: 1998-2002**

Year	Quantity	Capital Equipment or Project Description	Unit Cost	Total Cost	Average Annual
1998	5	35-foot-long, air-conditioned urban transit coaches equipped with wheelchair lifts or ramps and fueled with compressed natural gas .....	\$276,000	\$ 1,380,000	\$ 276,000
	--	Downtown circulator streetcar line .....	--	4,058,000	811,600
	--	Design new maintenance and operating facility .....	--	500,000	100,000
	1	Replace service vehicle .....	\$ 28,000	28,000	5,600
		Subtotal	--	\$ 5,966,000	\$1,193,200
1999	--	Construct new maintenance and operating facility ....	--	\$ 5,250,000	\$1,050,000
	--	Construct new downtown central transfer terminal ...	--	400,000	80,000
	2	Construct new passenger shelters at west-side transfer point .....	\$ 5,000	10,000	2,000
	--	Install new or remanufactured engines in 1987 GMC buses .....	--	150,000	30,000
	--	Purchase miscellaneous shop equipment .....	--	100,000	20,000
		Subtotal	--	\$ 5,910,000	\$1,182,000
2000	5	35-foot-long, air-conditioned urban transit coaches equipped with wheelchair lifts or ramps and fueled with compressed natural gas .....	\$310,000	\$ 1,550,000	\$ 310,000
	--	Purchase miscellaneous shop equipment .....	--	100,000	20,000
		Subtotal	--	\$ 1,650,000	\$ 330,000
2001	5	35-foot-long, air-conditioned urban transit coaches equipped with wheelchair lifts or ramps and fueled with compressed natural gas .....	\$321,000	\$ 1,605,000	\$ 321,000
	--	Purchase miscellaneous shop equipment .....	--	100,000	20,000
		Subtotal	--	\$ 1,705,000	\$ 341,000
2002	4	35-foot-long, air-conditioned urban transit coaches equipped with wheelchair lifts or ramps and fueled with compressed natural gas .....	\$332,000	\$ 1,328,000	\$ 265,600
	--	Purchase miscellaneous shop equipment .....	--	100,000	20,000
	1	Replace service vehicle .....	\$ 33,000	33,000	6,600
		Subtotal	--	\$ 1,461,000	\$ 292,200
Total Capital Project Costs .....			--	\$16,692,000	\$3,338,400
Federal Share of Costs <sup>a</sup> .....			--	13,482,700	2,696,500
State Share of Costs <sup>b</sup> .....			--	55,900	11,200
Local Share of Costs <sup>c</sup> .....			--	3,153,400	630,700

<sup>a</sup> Assumes 80 percent of eligible capital costs could be funded through the Federal Transit Administration Section 5309 Capital or 5307 Formula Programs, or Federal Congestion Mitigation and Air Quality Improvement (CMAQ) Program.

<sup>b</sup> Assumes funds available through oil-overcharge fund for the downtown circulator project.

<sup>c</sup> Represents the 20 percent local matching funds required under the Federal Transit Administration grant programs.

Source: City of Kenosha Department of Transportation and SEWRPC.

Table D-3

**ANNUAL RIDERSHIP AND FINANCIAL PERFORMANCE FOR THE BUS SERVICES PROPOSED  
UNDER THE COMMUTER SERVICE ELEMENT OF THE RECOMMENDED PLAN: 1998-2002**

Operating Characteristic	1997 <sup>b</sup>	Forecast/a																	
		1998	1999			2000			2001			2002				Average Annual			
			Milwaukee-Racine-Kenosha Service	Racine-Kenosha Service	Total	Milwaukee-Racine-Kenosha Service	Racine-Kenosha Service	Total	Milwaukee-Racine-Kenosha Service	Racine-Kenosha Service	Total	Milwaukee-Racine-Kenosha Service	Racine-Kenosha Service	Kenosha-Lake County, Illinois Commuter Service	Total	Milwaukee-Racine-Kenosha Service	Racine-Kenosha Service	Kenosha-Lake County, Illinois Commuter Service	Total
Service																			
Revenue Vehicle-Hours of Service .....	8,700	8,600	9,200	4,800	14,000	9,400	4,800	14,200	9,400	4,800	14,200	9,400	4,800	4,100	18,300	9,200	3,800	800	13,800
Revenue Vehicle-Miles of Service .....	265,400	264,300	321,500	104,300	425,800	325,500	104,300	429,800	325,500	104,300	429,800	325,500	104,300	73,700	503,500	312,500	83,400	14,700	410,600
Ridership																			
Total Revenue Passengers .....	73,800	75,000	84,000	57,000	141,000	82,000	56,000	138,000	88,000	59,000	147,000	86,000	58,000	26,000	170,000	83,000	46,000	5,200	134,200
Revenue Passengers per:																			
Revenue Vehicle-Hour .....	8.5	8.7	9.1	11.9	10.1	8.7	11.7	9.7	9.4	12.3	10.4	9.1	12.1	6.3	9.3	9.0	12.1	6.5	9.7
Revenue Vehicle-Mile .....	0.28	0.28	0.26	0.55	0.33	0.25	0.54	0.32	0.27	0.57	0.34	0.26	0.56	0.35	0.34	0.27	0.55	0.35	0.33
Operating Costs, Revenues, and Subsidies																			
Expenses <sup>c</sup> .....	\$622,700	\$671,100	\$765,600	\$255,000	\$1,020,600	\$794,900	\$264,000	\$1,058,900	\$832,700	\$273,000	\$1,105,700	\$864,800	\$283,000	\$297,000	\$1,444,800	\$785,800	\$215,000	\$59,400	\$1,080,200
Passenger and Other Revenues .....	220,400	224,300	247,000	56,400	303,400	258,000	59,100	317,100	276,900	62,300	339,200	289,500	65,100	60,000	414,800	259,100	48,600	12,000	319,700
Public Subsidy .....	402,300	446,800	518,600	198,600	717,200	536,900	204,900	741,800	555,800	210,700	766,500	575,300	217,900	237,000	1,030,200	526,700	166,400	47,400	740,500
Percent of Operating Expenses Recovered through Operating Revenues .....	35.4	33.4	32.3	22.1	29.7	32.5	22.4	29.9	33.3	22.8	30.7	33.5	23.0	20.2	28.7	33.0	22.6	20.2	30.2
Anticipated Sources of Public Subsidy																			
Federal .....	--	--	--	158,900	158,900	--	163,900	163,900	--	168,600	168,600	--	50,400	-- <sup>d</sup>	50,400	--	108,400	-- <sup>d</sup>	108,400
State <sup>e</sup> .....	402,300	446,800	518,600	31,800	550,400	536,900	17,800	554,500	555,800	18,100	573,900	575,300	113,400	-- <sup>d</sup>	688,700	526,700	36,200	-- <sup>d</sup>	562,900
Local .....	--	--	--	7,900	7,900	--	23,400	23,400	--	24,000	24,000	--	54,100	-- <sup>d</sup>	54,100	--	21,800	-- <sup>d</sup>	21,800
Other (to be determined) <sup>d</sup> .....	--	--	--	--	--	--	--	--	--	--	--	--	--	237,000	237,000	--	--	47,400	47,400
Total	\$402,300	\$446,800	\$518,600	\$198,600	\$ 717,200	\$536,900	\$204,900	\$ 741,800	\$555,800	\$210,700	\$ 766,500	\$575,300	\$217,900	\$237,000	\$1,030,200	\$526,700	\$166,400	\$47,400	\$ 740,500
Per Trip Data																			
Estimated Operating Costs .....	\$8.44	\$8.95	\$9.11	\$4.47	\$7.24	\$9.69	\$4.71	\$7.67	\$9.46	\$4.63	\$7.52	\$10.06	\$4.88	\$11.42	\$8.50	\$9.47	\$4.67	\$11.42	\$7.90
Operating Revenue .....	2.99	2.99	2.94	0.99	2.15	3.14	1.05	2.29	3.14	1.06	2.31	3.37	1.12	2.30	2.44	3.12	1.05	2.30	2.38
Subsidy .....	5.45	5.96	6.17	3.48	5.09	6.55	3.66	5.38	6.32	3.57	5.21	6.69	3.76	9.12	6.06	6.35	3.62	9.12	5.52

<sup>a</sup>The following assumptions were made in preparing the annual forecasts of ridership, revenues and costs:

- The proposed changes to the Milwaukee-Racine-Kenosha commuter route and the new Racine-Kenosha express route will be implemented in 1999. The proposed Kenosha-Lake County, Illinois, commuter bus and shuttle routes would be implemented in 2002 only if sufficient demand is generated for conventional transit service by the proposed ridesharing and subscription transit service.
- A 3.5 percent per year increase in operating expenses per unit of service.
- A 7 percent fare increase will be implemented on both commuter services in 2002 and again in 2002. These increases will decrease annual ridership by about 2.3 percent in the fare increase years.
- Federal funds will be available through the Congestion Mitigation and Air Quality (CMAQ) Improvement Program to fund 80 percent of the operating deficits of the proposed new Racine-Kenosha commuter bus route as a demonstration project from 1999 through 2001. In 2002, Federal funds provided through the FTA Section 5307 urban formula transit assistance program would replace the CMAQ demonstration funds and fund a lower percent of operating expenses. As with the existing service, no Federal funds would be used for the Milwaukee-Racine-Kenosha commuter routes.
- State funds through the Transportation Demand Management (TDM) Program and the urban transit operating assistance program will cover a portion of the nonfederal share of operating deficit of the proposed new Racine-Kenosha bus route during the CMAQ demonstration period from 1999 through 2001. In 2002, State operating assistance will cover about 43 percent of the total operating expenses of the Racine-Kenosha service. State operating assistance will be available to cover 59 percent of the total operating expenses of the restructured Milwaukee-Racine-Kenosha service over the entire period.

<sup>b</sup>Financial data are estimates for the existing Milwaukee-Racine-Kenosha commuter bus service.

<sup>c</sup>Operating expenses for the Milwaukee-Racine-Kenosha commuter bus service have been adjusted to reflect the estimated actual costs of the service by subtracting funds which are expected to be provided by the private contract service operator. Such funds were estimated at about \$115,000 in 1997. With the proposed service changes, such funds would be expected to range from about \$113,000 in 1999 to about \$110,000 in 2002, and average about \$107,000 over the five-year planning period.

<sup>d</sup>The distribution of the required subsidy for the Kenosha-Lake County, Illinois commuter service cannot be determined at this time. Should this service be implemented, funding for the service would need to be negotiated among the City of Kenosha, the private businesses concerned, the Wisconsin Department of Transportation and the Regional Transportation authority of Northeastern Illinois.

<sup>e</sup>State operating assistance funds for the Milwaukee-Racine-Kenosha commuter bus service are based on the gross costs of the service including funds provided by the private contract operator.

Source: SEWRPC.

**SOUTHEASTERN WISCONSIN REGIONAL  
PLANNING COMMISSION STAFF**

Philip C. Evenson, AICP ..... Executive Director

Kenneth R. Yunker, PE ..... Assistant Director

Robert P. Biebel, PE ..... Chief Environmental Engineer

Monica C. Drewniany, AICP .... Chief Community Assistance Planner

Leland H. Kreblin, RLS ..... Chief Planning Illustrator

Elizabeth A. Larsen ..... Administrative Officer

Donald R. Martinson, PE ..... Chief Transportation Engineer

John G. McDougall ..... Geographic Information Systems Manager

John R. Meland ..... Chief Economic Development Planner

Donald M. Reed ..... Chief Biologist

Bruce P. Rubin ..... Chief Land Use Planner

Special acknowledgment is due Mr. Albert A. Beck, SEWRPC Principal Planner, and Mr. Patrick A. Pittenger, SEWRPC Planner, for their contributions to the preparation of this report.